




EXECUTIVE CHAMBERS  
HONOLULU

LINDA LINGLE  
GOVERNOR

August 20, 2003

TO: The Honorable Peter T. Young, Chairperson

FROM: Governor Linda Lingle 

SUBJECT: Acceptance of the Final Environmental Impact Statement for Kekaha Kai State Park

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With this memorandum, I accept the Final Environmental Impact Statement for Kekaha Kai State Park on the island of Hawai'i as a satisfactory fulfillment of the requirements of Chapter 343, Hawai'i Revised Statutes. The economic, social and environmental impacts, which will likely occur should this project be implemented, are adequately described in the statement. The analysis, together with the comments made by the reviewers, provides useful information to policymakers and the public.

My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws, but does not constitute an endorsement of the proposed action.

I find the mitigation measures proposed in the environmental impact statement will minimize the negative impacts of the project. Therefore, if this project is implemented, the Department of Land and Natural Resources, Division of State Parks and/or its agents should perform these, or alternative and at least equally effective, mitigation measures at the discretion of the permitting agencies. The mitigation measures identified in the environmental impact statement are listed in the attached document.

Attachment

cc: Honorable Chiyome L. Fukino, M.D.  
Office of Environmental Quality Control

2003 FEIS HAWAII  
KEKAHA KAI STATE PARK CONCEPTUAL PLAN  
1 OF 3

JUN 8 2003

FILE COPY

## Kekaha Kai State Park

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North Kona, Island of Hawai'i

### Park Development Report and Final Environmental Impact Statement



**Applicant:**

Department of Land and Natural Resources  
Division of State Parks  
State of Hawai'i

**Prepared By:**

Group 70 International, Inc.  
Architecture • Planning • Interior Design • Environmental Services  
Honolulu, Hawai'i

May 2003

**Kekaha Kai State Park**

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North Kona, Island of Hawai'i

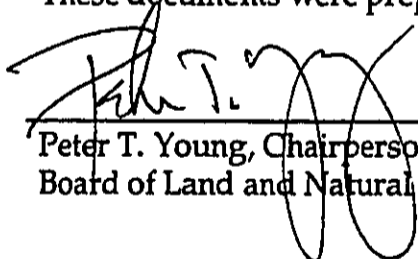
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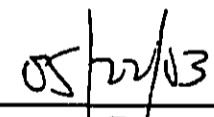
**Park Development Report  
and  
Final Environmental Impact Statement**

This environmental document is prepared pursuant to Chapter 200 of Title 11,  
Administrative Rules, Department of Health, "Environmental Impact Statement Rules."

**Proposing Agency:**  
Department of Land and Natural Resources  
Division of State Parks  
State of Hawai'i

These documents were prepared under my direction.

  
\_\_\_\_\_  
Peter T. Young, Chairperson  
Board of Land and Natural Resources

  
\_\_\_\_\_  
Date

**Accepting Authority:**  
Governor  
State of Hawai'i

**Prepared By:**  
Group 70 International, Inc.  
Architecture • Planning • Interior Design • Environmental Services  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813

**May 2003**

KEKAHA KAI STATE PARK

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### TECHNICAL APPENDICES

The Technical Appendices are not reproduced in this Final EIS report, due to the substantial volume of material. The reports are printed in full in the Draft EIS, which are available at State Parks and State Public Libraries. No changes have been made to these reports.

Appendix A: Glossary of Terms Used

Appendix B: Utilities

Appendix C: Day Use Moorings

Appendix D: Survey of Wildlife Resources. Tim J. Ohashi. (January 1997)

Appendix E: Botanical (Flora) Studies. Char & Associates. (June 1995)

Appendix F: Traffic Impact Assessment Report for Kona Coast State Park. Pacific Planning & Engineering Inc. (December 1996)

Appendix G: Traffic Impact Analysis. Manini'owali Development. Parsons Brinckerhoff. (March 2002)

Appendix H: Ala Kahakai National Trail Study – Record of Decision. U.S. Department of Interior. (June 1998)

Appendix I: Second Quarterly Baseline Period. Water Quality Monitoring Report in Support of the Development at Manini'owali. Richard Brock, PhD. (December 2001).

Appendix J: Kekaha Kai State Park Community and Task Force Meetings 1994-2002

Appendix K: Archaeological Reconnaissance Survey: Kekaha Kai State Park, Mahai'ula Section, Kaulana & Mahai'ula Ahupua'a. DLNR, Division of State Parks. (April 1998)

Appendix L: Kekaha Wai 'Ole o Na Kona – A Report on Archival & Historical Document Research, and Oral History Interviews. Kumu Pono Associates. (March 1998)

Appendix M: Archaeological Inventory Survey – Portions of Kekaha Kai State Park. T.S. Dye & Colleagues, Archaeologists, Inc. (December 2002)

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**CHANGES FROM DECEMBER 2002 DRAFT PDR AND EIS REPORT**

Changes to this document from the Draft PDR and EIS dated December 2002 are highlighted. Other considerations of note include the following:

- Information contained between the front and back cover is considered part of the entire EIS. Therefore, responses to public comments are to be considered as part of the entire report.
- The appendix materials have not be reproduced in this Final EIS, since no changes have been made to these reports and because of the sheer volume of material. Please refer to the Draft EIS report dated December 2002 for these reports. They are available in the public libraries and at the State Parks office.
- The preparers of this document recognize that discrepancies exist in the use of Hawaiian place names on maps, particularly in the use of the U.S.G.S. maps.
- Reference to the landowner/developer of Kūki'o 1 is WB Kūki'o Resorts, LLC. Reference to landowner/developer of Kūki'o 2 / Manini'ōwali is WB Manini'ōwali.

# **PARK DEVELOPMENT REPORT**

## **Section 1.0**

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### PDR-Introduction

## KEKAHA KAI STATE PARK

• Park Development Report •

### 1.0 INTRODUCTION

This report consists of the Kekaha Kai State Park Development Report (PDR) and the Environmental Impact Statement (EIS) for these park improvements. The Park Development Report details the improvements provided in the Kekaha Kai State Park Conceptual Plan which was accepted by the State Board of Land and Natural Resources in 1998. The PDR consists of seven chapters, outlining implementation strategies of the Conceptual Plan, resource management plans and cost estimates. The EIS relating to these planned improvements are provided in subsequent chapters.

#### 1.1 INTRODUCTION

The Kekaha Kai State Park is a large (1642 acre) park along the Kona Coast of the Island of Hawai'i (Figures 1-1 and 1-2). Kekaha Kai State Park, formerly called the Kona Coast State Park, will be developed in accordance with its companion document the Kekaha Kai State Park Conceptual Master Plan (June 1998) (Figure 1-3).

This park is envisioned as one jewel in a string of parks along the coast from Kawaihae to Kailua-Kona. It is predominantly a wilderness park that will preserve the natural landscape of this Kona shoreline with park development to provide increased recreational opportunities, support the development of cultural and educational programs, and preserve and enhance valuable natural and cultural resources. To this end infrastructure and facility development will be relatively small and dispersed.

For park planning purposes the site has been divided into three sections along ahupua'a boundaries: Mahai'ula/Kaulana, Awake'e and Manini'owali / Kūki'o. Different levels of use are proposed for each of these sections, which will provide slightly different park experiences.

Each section will have a mauka-makai access/trail and be crossed by the lateral coastal trail system known as the Ala Kahakai. Each section will be managed according to the sustainability of existing resources and the park concept for that section. This development plan will be used to guide the development of facilities in each section of the park.

Mahai'ula is proposed for a higher level of use than the other two sections. Manini'owali is projected for a moderate level of use and Awake'e is proposed for the lowest intensity of use. This decision is largely due to existing conditions, the size and resilience of the resources and the level of use pressure for the respective sections.

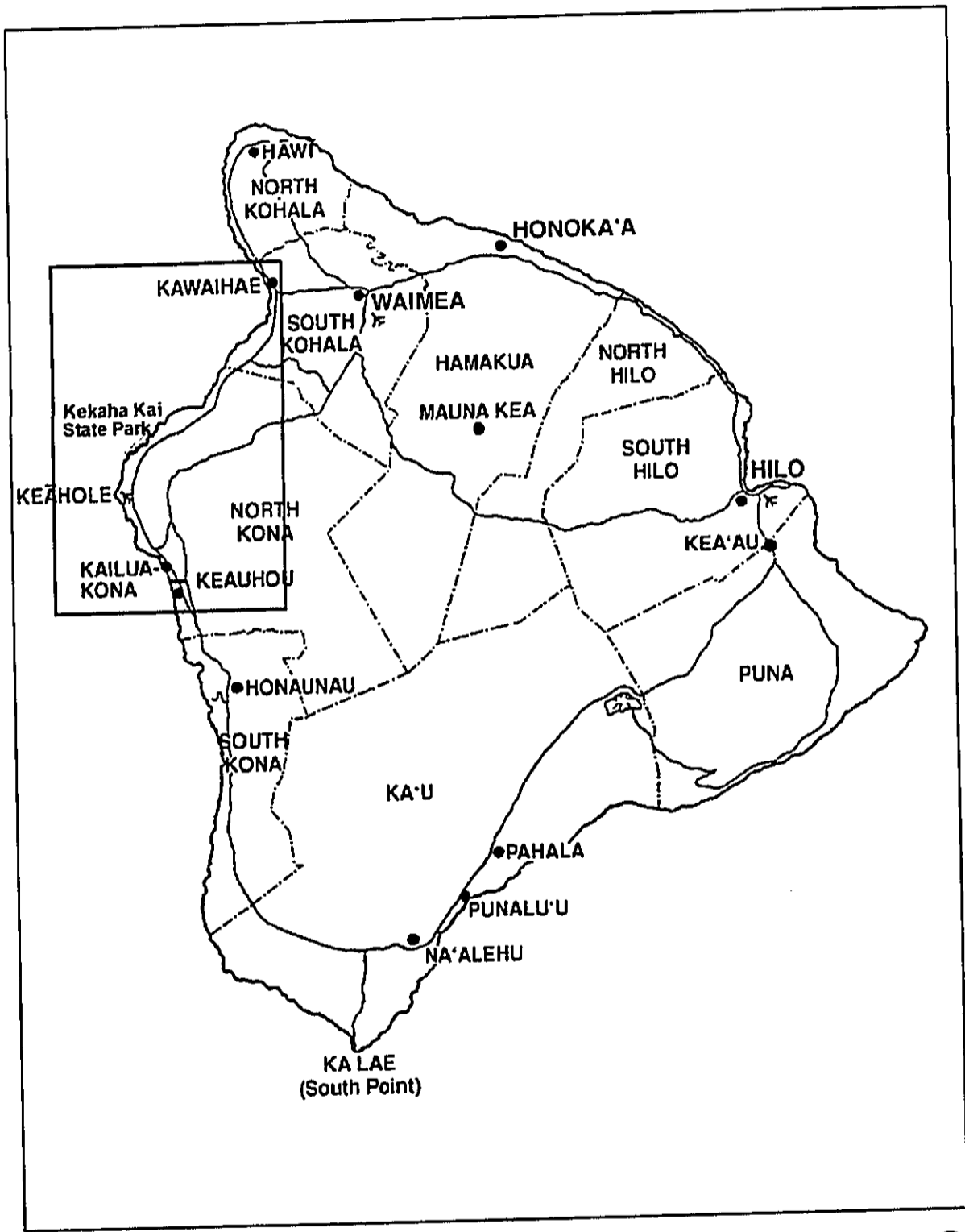
Each section will have a cluster of park visitor facilities comparable to a settlement in the old ahupua'a system. These clusters will have different levels of amenities and maintenance depending on the park plan and anticipated levels of use. Clusters will be located within vegetated areas along the shoreline with access to the ocean.


The Kona community, represented at public meetings and through a citizen's advisory task force (a list of members is provided as Appendix J) provided public input into the plan and focused on the Mahai'ula and Manini'owali sections of the park. The general consensus was to plan the entire park for low levels of use and consider more intensive uses in future phases when facilities, manpower, and management systems are in place to preserve and sustain the resources in the face of increasing demand. It is important to understand that levels of use are relative terms and not pre-established standards. They are related to current levels of use and are relative between different sections within the park. Notes from the public meetings and task force recommendations are included as Appendix J.



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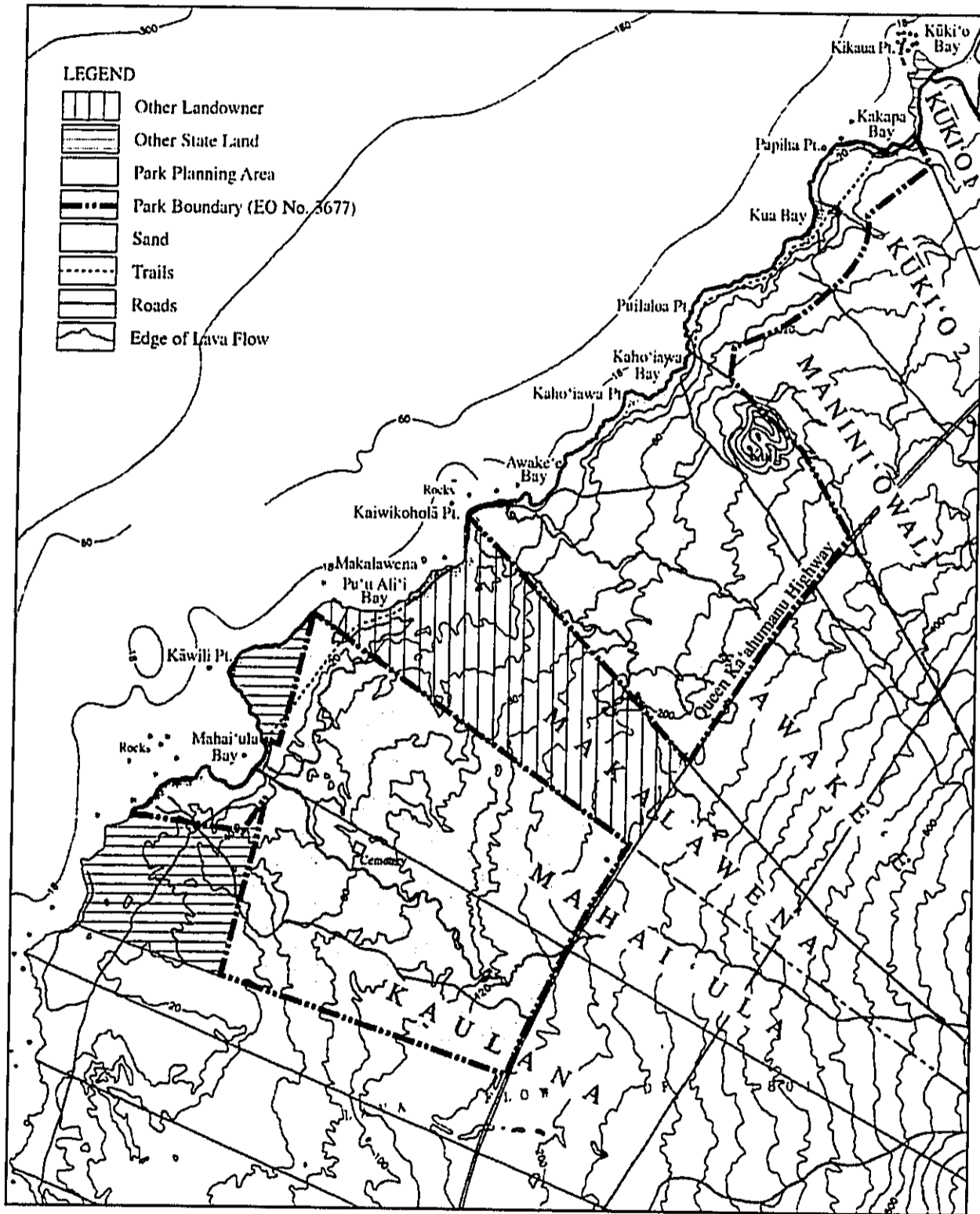
Kekaha Kai State Park

Vicinity Map

Figure 1-1

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Kekaha Kai State Park

Location Map

Figure 1-2



## KEKAHA KAI STATE PARK

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### 1.1.1 Relationship to the Region

The Kekaha Kai State Park is one of the State's coastal parks in North Kona. The park setting and facilities will enhance the community's lifestyle and maintain resources for the enjoyment of future generations. Located on the edge of the growing urban communities of Kailua-Kona, it provides a welcome, desirable open space. Its proximity to the largest urban concentration in West Hawai'i makes it accessible to a large residential population and Kona resort communities placing an increasing burden on the park to accommodate the growing pressures for more recreational opportunities.

Within the regional context, Kekaha Kai State Park is one of two planned "wilderness" parks along the Kona Coast. These wilderness parks emphasize the sustainability of natural and cultural resources in balance with public use. Cultural landscapes will be preserved within the park. Modern amenities, facilities and conveniences will be limited. Wide-open natural spaces will be preserved and enhanced as much as possible. Recreational uses will be more passive, such as hiking, camping, and beachgoing, rather than active recreation associated with improved facilities. Access to many areas will remain "unimproved" or "managed for low impact". Landscape improvements will be kept at a minimal level. *This is a place for retreat; a place for meditation; a place for renewal of the spirit and soul. This is a place to touch the earth, feel the sea and breathe the air. This is a park to re-establish our connection to the natural world.*

Kekaha Kai is one of several parks along the Kona Coast connected by the Ala Kahakai trail, a National Historic Trail. The Ala Kahakai is a continuous coastal trail which includes a 35-mile segment from Kawaihae to Kailua-Kona. Major parks in this network include: Pu'u Koholā Heiau National Historic Site, Spencer Beach County Park, Hāpuna Beach State Recreation Area, 'Anaeho'omalū Park, Kīholo State Park Reserve, Kekaha Kai State Park, Natural Energy Laboratory - Hawai'i (NELH) Park, Kaloko-Honokōhau National Historical Park and Old Kona Airport State Recreation Area (Figure 1-4).

### 1.1.2 Ahupua'a Concept

Kekaha Kai State Park crosses six traditional ahupua'a boundaries in North Kona; they are Kaulana, Mahai'ula, Makalawena, Awake'e, Manini'ōwali and Kūki'o. An ahupua'a is a traditional land division that became part of the old tax and land management system of the Hawaiian kingdom. The ahupua'a was managed as an integrated unit following principles of sharing and sustainability of resources. Each ahupua'a consisted of a land section stretching from the mountains to the coast and its adjacent waters with a diversity of resources. Each was managed by a konohiki (a kind of land manager) for a chief. The settlement patterns within each ahupua'a were based on available resources but typically involved coastal and upland uses that complemented each other. Each ahupua'a was independent in its management and some were wealthier than others in resources. Sharing between residents of different ahupua'a was commonplace.

Because of the harsh, dry, volcanic landscape on the Kona Coast, the ahupua'a concept resulted in small, dispersed, coastal settlements which occurred where there was fresh water and a canoe landing. The wealth of the region was based on its ocean resources and fertile upland areas rather than its coastal plains. A broad uninhabited or sparsely inhabited open area separated the coastal area from the cultivated and forested uplands which were located in the precipitation zone. Mauka-makai trails connected the coast to the uplands and residents of both areas traded and shared their respective goods. Each ahupua'a had its own coastal settlement except in a few places where site conditions were inhospitable. The sizes of the coastal settlements varied with the geography and available resources. Kekaha Kai State Park contains the coastal settlements of the ahupua'a of Kaulana, Mahai'ula, Awake'e, Manini'ōwali and Kūki'o. (A glossary of Hawaiian terms used in this report is included as Appendix A.)



## KEKAHA KAI STATE PARK

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### 1.1.3 "Wilderness" Park Concept

Consistent with the wilderness theme and the concepts of sustainable resources, the overall park scheme begins with a baseline of low intensity use. Recognizing that there is no set definition of low levels of use, the definition will be based on an evaluation of current conditions, resource sustainability and the policy focus for that specific section of the park. Increases in use will be coordinated with a resource monitoring program and levels of maintenance and protection provided for the resources.

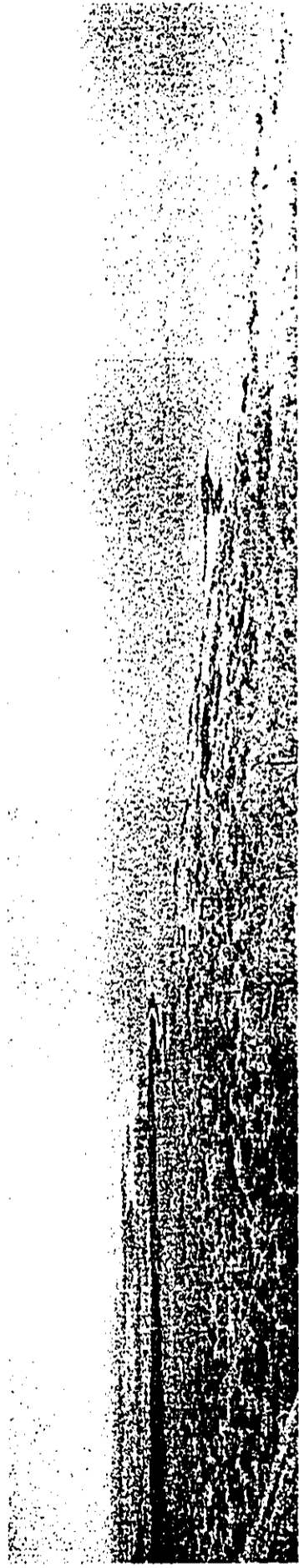
Some have questioned the use of the term "wilderness" in relation to Kekaha Kai and there is some validity to it. The landscape has been impacted by human activity. Vegetation is mainly introduced *kiawe*, *koa haole* and fountain grass. Queen Ka'ahumanu Highway forms the eastern boundary of the park and it is the largest and most heavily traveled corridor in West Hawai'i. Kona International Airport at Keāhole forms the southern boundary and jets fly frequently over the southern (Kaulana/Mahai'ula) portion of the Park. Urban development is also expanding from its core in Kailua-Kona along the mauka slopes of Hualālai towards the Park. The most recent proposal is a raceway park just mauka of the Airport approaching the entrance to the Park. The Hualālai and Kūki'o residential developments with golf are under construction along the northern park boundary at Manini'ōwali section. Within such a context it is difficult to call this a wilderness site. However, the term is more symbolic than descriptive. It is essentially an open space with intact landforms and vegetation patterns and is relatively free of built structures. It is clearly not a place distant from urban development. Part of its attraction and value is its proximity to urban areas. However, it is a place to re-connect to nature: the sea, sand, open skies, winds, lava and plant forms. The large park size offers opportunities to feel "separate" from the neighboring urban developments.

Natural landforms, flora and fauna and open spaces are the heart of wilderness experiences. The park is blessed with many such resources and these features will be highlighted. Sandy beaches at Manini'ōwali and Mahai'ula along with intervening rocky coastlines create a variety of coastal environments. Pu'u Kuili stands as a wonderful resource; a sentinel and landmark over the coast. Dark lava flows and coastal pockets of dryland and strand vegetation create a variety that one would not expect in such a landscape. This is projected to be enhanced with a botanical garden and a gradual restoration of endemic and Polynesian introduced flora. Pond areas at Manini'ōwali, Awake'e, Mahai'ula and Ka'elehuluhulu will be restored or enhanced through proper maintenance. Figure 1-5 illustrates the coastal beauty of the Park. The pre-contact cultural landscape is interwoven with the natural landscape. These resources will be highlighted through interpretive programs and a cultural resource management plan.

Paved or graded areas such as roads and parking areas will be buffered with appropriate xeriscape. Graded roads and paved areas will be minimized except to accommodate projected usage, ADA requirements and maintenance and emergency requirements.

Comfort stations and new park structures will be clustered to minimize the visual impact. Facility designs will seek to blend the structures into the landscape with appropriate scales, form, color and materials.

Camping can enhance the wilderness experience. The major limitations for camping sites are the sustainable capacity of the resource, security, and maintenance. The Kekaha Kai State Park will provide camping experiences at assigned locations to accommodate backpackers and other campers. The level and number of campsites will be contingent on available resources and park personnel. Camping facilities will range from "primitive" unimproved sites where the only facilities are portable toilets and trash receptacles to improved sites with water and comfort stations.



View from Pu'u Kūili - Mahai'ūla, Makalawena, Awak'e, Kaho'iawa



View from Pu'u Kūili - Kaho'iawa, Manini'ōwahi, Kaka'apa, Kikaha Point

## KEKAHA KAI STATE PARK

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### 1.1.4 Interpretation

The park will have a strong educational orientation through the development of an interpretive program. The program will emphasize natural science (especially geology, ecology and marine biology), culture and history and include interactive hands on experiences. The park is an ideal place to interpret the themes of island geology and volcanoes, the special character of arid leeward climates, cultural adaptation to the leeward environment, and the special nature of Hawai'i's marine life and ocean ecology, especially anchialine pond complexes.

Management practices in the current climate of environmental awareness can be presented with an appreciation of the wisdom of the old ahupua'a management system. Protection of endangered species in both the terrestrial and marine environments can emphasize the flow, balance and interrelationships of natural processes. Aquatic programs and ecological programs will focus on the lessons of modern science and their parallels in native cultural practices. Mullet release programs, fishing and canoeing techniques could all be part of a curriculum for programs in the park. The fishing heritage and richness of marine resources could be a focus for additional programs. Dry land gardening and traditional agricultural practices could be taught.

Technical experts and respected kūpuna should become part of the 'ohana associated with the park. The park will be a community resource. It is envisioned that the community will embrace the park and develop an 'ohana that will help with the development and long term care of the park and its resources.

### 1.2 PARK SECTIONS

The Mahai'ula/Kaulana section is closest to the growing urban communities developing around Kailua-Kona and is the most accessible based on current road conditions and the provision of restrooms. This section contains Ka'elehuluhulu, the largest open sandy area in the park, offering a range of recreational opportunities. Mahai'ula is the best known section of the Park and has the largest bay with reasonably calm waters. This section has existing park facilities and two recreational nodes, Ka'elehuluhulu and Mahai'ula Bay. As such, it was selected to have higher levels of use relative to the other sections. Photos of the Mahai'ula section of the park are presented in Figure 1-6 and 1-7.

Makalawena, owned by Kamehameha Schools, is not a part of the Kekaha Kai State Park (Land ownership is presented in Figure 1-8). Within Makalawena, state ownership includes the portion of land below the high water mark and public trails within the ahupua'a. While the state will assure that access is provided to the shoreline by public trails crossing the ahupua'a or paths below the high water mark, it will not provide any facilities in this ahupua'a. No development plan will be prepared for this privately owned parcel of land.

It is recommended that the DLNR work with Kamehameha Schools to protect natural and cultural resources and provide the appropriate interface between public and private lands.

Awake'e is accessible by a very rough four-wheel drive road and is the least accessible portion of the park. This section encompasses the dominant cinder cone in the region, Pu'u Kuili, and is adjacent to the largest wetland/pond along this segment of the coast; Kapo'ikai in Makalawena (also known as 'Ōpae'ula). This section is designated for low levels of use with very limited and "primitive" types of facilities. This section will have more of a wilderness character. Photos of the Awake'e section of the park are shown in Figure 1-9. Photos of and from Pu'u Kuili are shown in Figure 1-10.



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Ka'elehuluhulu Beach



Mahai'ula Bay



Magoon/Ka'elemakule Houses Complex

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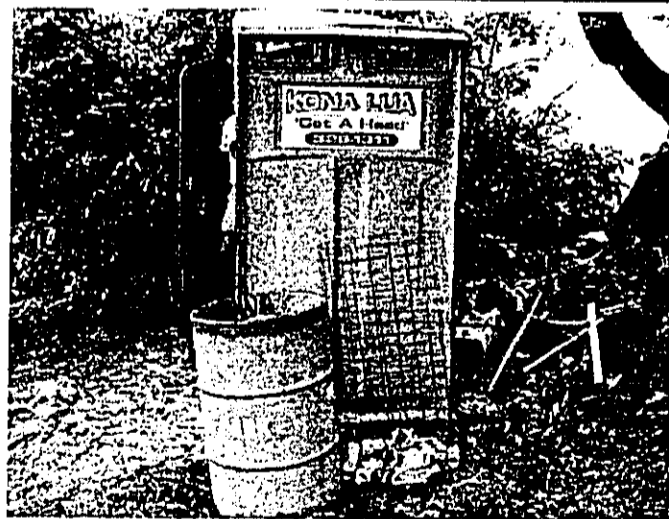
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Parking along access road



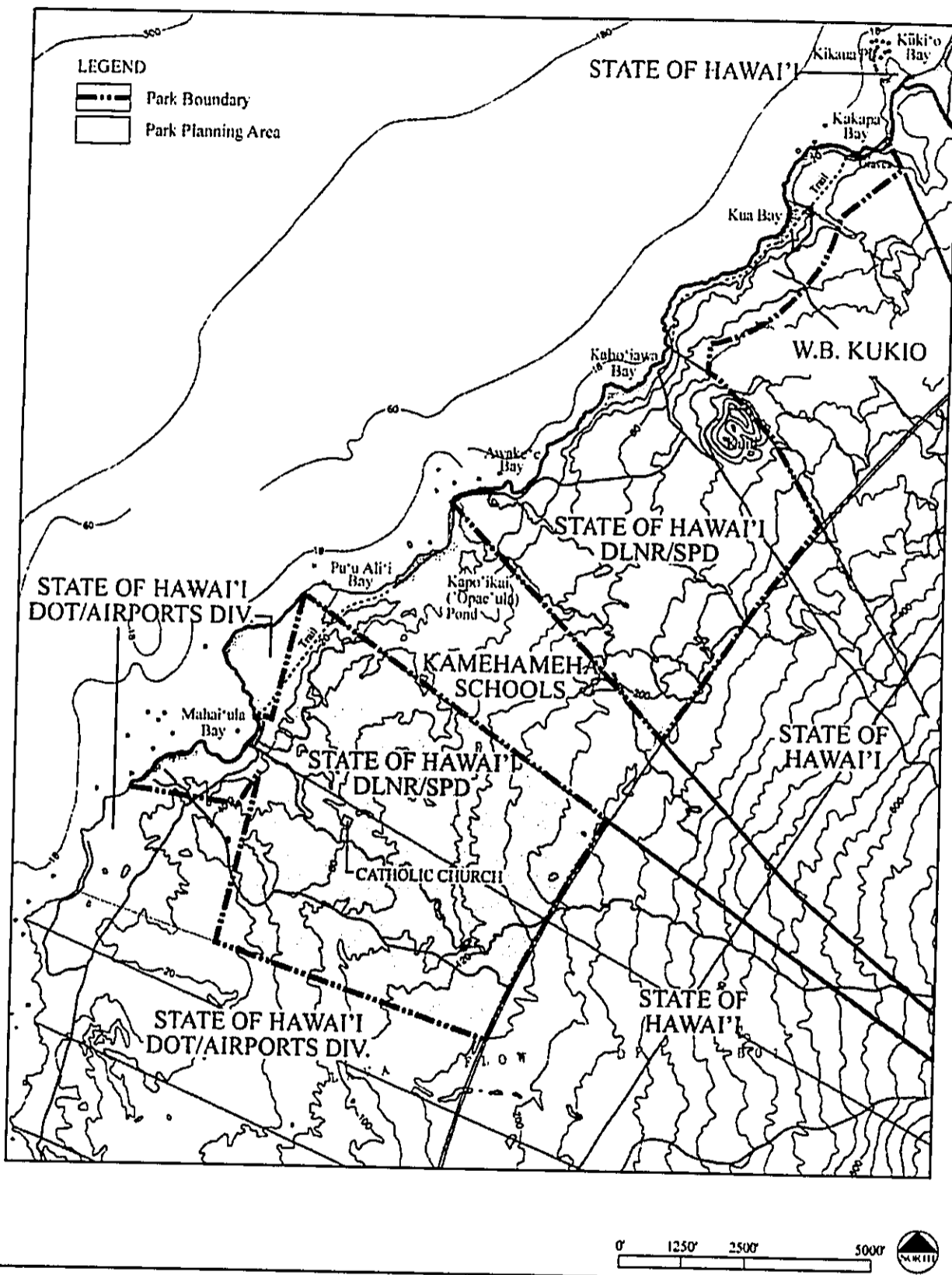
View from proposed scenic post



Existing restroom facilities

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Kekaha Kai State Park

Land Ownership

Figure 1-8

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View to Hualālai



Awake'e



View towards Pu'u Kuli

Kekaha Kai State Park

Awake'e

Figure 1-9

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View along Summit



View from Kua Bay



Jeep Trail to Summit

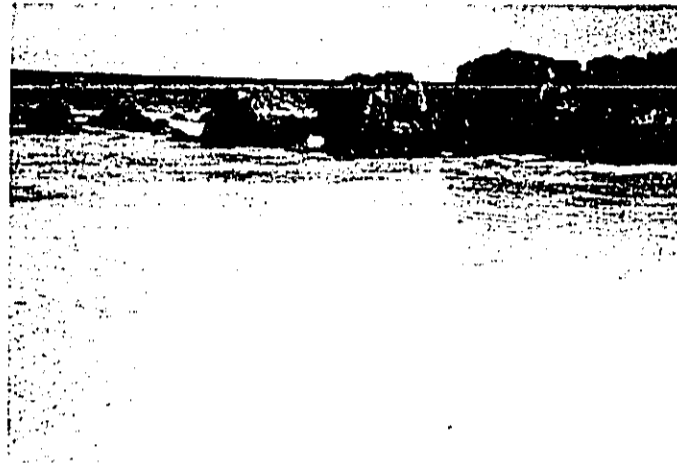
## KEKAHA KAI STATE PARK

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The Manini'ōwali / Kūki'o portion is also currently difficult to access but the road is shorter and it is also closer to an access road from W.B. Kūki'o lands to the north. Additionally, the recreational value of Kua Bay and its proximity to the resort developments of Kona Village and the Four Seasons has resulted in increased visitor traffic in this section of the park. These visitors access the area by sailing, hiking, driving, and kayaking. The pressure on the resource is expected to increase even more as lands adjacent to the park are developed for resort, commercial and residential uses. This section of the park is designed for moderate levels of use due to the lower carrying capacity of the resources. The beach and bay are smaller and there are significant archaeological features in the area. Photos for the Manini'ōwali / Kūki'o are presented in Figure 1-11. This segment connects to the State owned park developed at Kikaua Point by W.B. Kūki'o.

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Kua Bay Looking North



Kua Bay Looking South



Existing Campers  
at Kua Bay

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### 1.3 THE ROLE OF THE COMMUNITY

During the initial planning phases, the Department of Land and Natural Resources conducted an introductory community meeting on September 27, 1994 to present the park concept to the public. A second community meeting followed (April 1995) to present preliminary plans for public comment. These plans represented different intensities of use within each geographic section of the park. The community was asked to select the level of use (high, medium or low) they would like to see occur at the park. Community members selected the low level of use options throughout the park and suggested assembling a task force made up of community organizations to fine-tune the conceptual plan for the whole park and prepare a development plan for the Mahai'ula section. A community-based task force was convened with representatives of area landowners, cultural/interpretive organizations, natural resources management interests, recreation groups, and commercial recreation interests. A number of government agencies were made available as resource organizations to the Task Force.

The Task Force met four times between November 1995 and July 1996 to refine the development plan for the Mahai'ula section of the park. The Task Force was divided into a number of committees which also met during this time. Committees include the Cultural Resources Committee, Aquatic Resources Committee, and the Visitor Orientation Center Committee. The work of these committees and the Task Force as a whole guided the evolution of the development plan for Mahai'ula.

Beginning in September 1996 the Task Force began to focus on the implementation of their planning recommendations. For the implementation work, the Task Force has arranged itself into five subcommittees: Marine Education Committee, Cultural Committee, Renovation Committee, Fundraising Committee, and a Recreation Committee. Four implementation meetings were held. Recommendations from the Task Force are included in Appendix J.

In July and September 2001, the Task Force met two times to focus on the road alignment and location of improvements for the access road to the Manini'owali / Kūki'o Section.

In addition to Task Force meetings, two community workdays have been held (November 1996 and January 1997). At the first workday, 45 community members, DLNR staff and other volunteers removed over 7 tons of rubbish and debris from the Mahai'ula area. In January 1997, another workday was organized. This time the Magoon house was painted on the interior and exterior, and over 3 tons of rubbish and debris were removed from the site.

Community participation in the planning and implementation of plans for Kekaha Kai State Park has been extensive. The participation of the Task Force and community as a whole has and will continue to be vital to the successful development of the park.

As a demonstration of community commitment to continue to care for this area, a citizens group has formed as Hui Lailima O Kekaha Kai. This community group has the potential to further the park management goals.

### 1.4 PLANNING ASSUMPTIONS

In developing plans for the park, several assumptions were made. They include the following:

Airport Land Holdings at Kaulana: It is assumed that the DLNR Division of State Parks will eventually acquire permanent use rights, or joint management authority, over several parcels within and adjoining Mahai'ula, which are currently controlled by the State Department of Transportation, Airports Division. This land includes a small parcel at Kāwili Point and an additional 150 acres encompassed by the extension of the park's southern boundary line straight out to the coast. This area includes lands that are already crossed by the existing park access road and a lateral 4-wheel drive road used by fishermen. A Memorandum of Understanding (MOU) or similar agreement will likely be the mechanism for joint use and management of the State DOT-owned parcels.



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Makalawena/Kapo'ikai Pond: All the land features within one ahupua'a of Makalawena are not included as part of any long range planning for the park. Management and access to Kapo'ikai Pond and the sandy beaches of the area would continue to be controlled by the landowner, Kamehameha Schools. However, plans for the Ala Kahakai would include lateral coastal access along the Makalawena shoreline between Mahai'ula and Awake'e. The mauka-makai trail through Makalawena is also a widely recognized trail and its role is currently being reviewed by the State of Hawai'i and Kamehameha Schools.

Kikaua Point: Kikaua Point is owned by the State but leased to a non-profit group for park purposes, and managed and maintained by the group. This parcel will be placed under Executive Order to the Division of State Parks, but will not have a "State Park" name nor be incorporated into Kekaha Kai State Park.

Landscaping: Where additional landscaping is proposed, xeriscapes will be preferred to minimize watering requirements. Lawn areas are not generally proposed in the master plan. Also, endemic, indigenous and Polynesian introduction plant materials will be priority choices in areas of increased plantings.

Trails: Various types of trails run throughout the park connecting Kekaha Kai State Park to the larger region. Plans recommend continuation of the Ala Kahakai by way of a continuous coastal foot trail running the entire length of the park. While designated as a National Historic Trail, many segments of the trail have not been specifically described. The plan adopted in this PDR recommends portions of the coastline trails be part of the Ala Kahakai. This trail will include segments of pre-contact trails where these alignments can be identified. Other trails include mauka-makai and shorter local trails emanating from coastal kipuka to mauka areas various points of interest. Throughout Kekaha Kai State Park pre-contact trails and historic trails will be identified. Trails within the park will be maintained and utilized as cultural and recreational resources.

### 1.5 PARK DEVELOPMENT PLAN SUMMARY

Each section of the park is designed to provide a different focus and experience for park users based on the section's resources. It was agreed to plan the park for lower intensities of use and consider heavier levels in future phases when facilities, manpower, management systems and other resources are in place to preserve the resources in the face of increasing demand. Limited facilities are sited throughout the park with more concentrated development at Mahai'ula. An activity center, Interpretive Park Technician residence, and interpretive center are sited at Mahai'ula along with picnic tables, grills, restrooms, a dry land botanical garden, and parking area. Awake'e will remain as the wilderness area of the park. Manini'owali will be an intermediate level activity area adjacent to the resort and residential developments of Kūki'o and Manini'owali. Park facilities will be provided by the adjacent landowner at Manini'owali.

Kekaha Kai State Park will be developed in phases, as funding becomes available. Although the Mahai'ula section is indicated as Phase I in the Conceptual Plan, new private funding has become available for the Manini'owali / Kūki'o section as provided by earlier land exchange agreements. This section will now be developed first due to available funding.

**Section 2.0**

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PDR - Natural Resources

## 2.0 NATURAL RESOURCES

### 2.1 GEOLOGICAL HISTORY

The predominant natural force shaping the landscape of North Kona is Hualālai Volcano. The area of the park is framed by the two major flows from the 1801 eruption. These and prior flows have created a harsh landscape of great beauty. These multiple flows of differing ages overlapping each other create a layered landscape with different lava colors reflecting differences in age, chemical composition and the impact of subsequent weathering. This underlying complexity merges together into a Zen-like simplicity of rock and sky, which reflects spirituality close to nature. These flows are excellent examples of the geological processes that have created the Hawaiian Islands and Pu'u Kuili, the dominant cinder cone in the park. Rising 342 feet above sea level, it stands as a silent sentinel and symbol of the region. One old timer has called it the "ahu" or marker for the region. Its name, which has been interpreted as "memorized temple prayer" by Mary K. Pukui, also signifies its character and importance to the Hawaiians of old. Pu'u Kuili has been likened to a flying bird when viewed from the ocean (Springer, 1989).

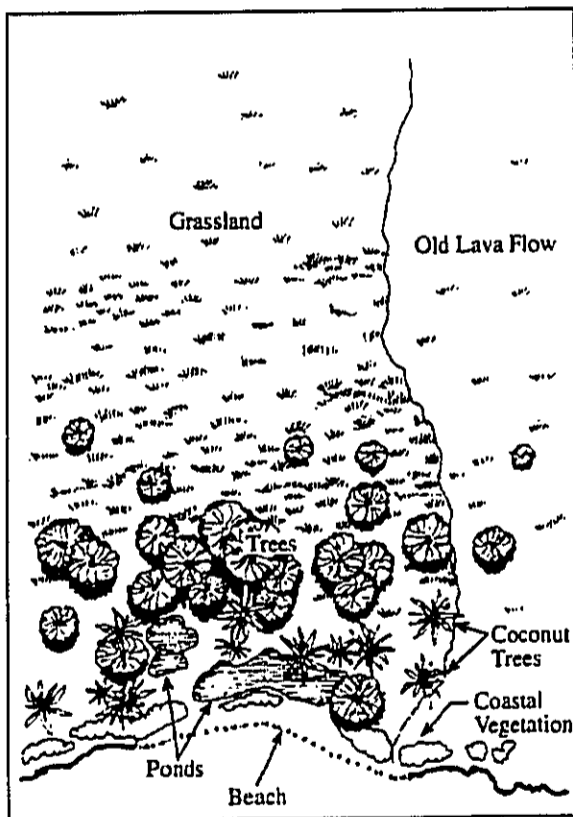
Another natural feature of the region is the series of *kipuka*, oasis-like stands of vegetation, which remain isolated and untouched by lava flows (Figure 2-1). *Kipuka* are often associated with spring or pond complexes. These clusters of vegetation form a welcome relief in the hot lava landscape. It is in these *kipuka* that ancient Hawaiians often created small settlements and rest stops.

The final major natural feature is the coastline. It is a rocky coastline reflective of the newness of the Hawaii Island. Lava flows that have reached the ocean have not yet eroded and form sharp, rocky coastlines. There are salt and pepper shorelines made of a mixture of lava rock and coral limestone in differing levels of erosion and mixing from the action of the sea. Some are sandy black and white beaches such as those found at Ka'ūpūlehu around Kona Village. Others are black and white rock and boulder beaches such as those found at Kaho'iawa and Kakapa Bays. Then there are the classic sandy beaches found in small crescent pockets along the coast from Mahai'ula to Kua Bay. The sandy beaches are scarce on the Kona coast and attract large numbers of users.

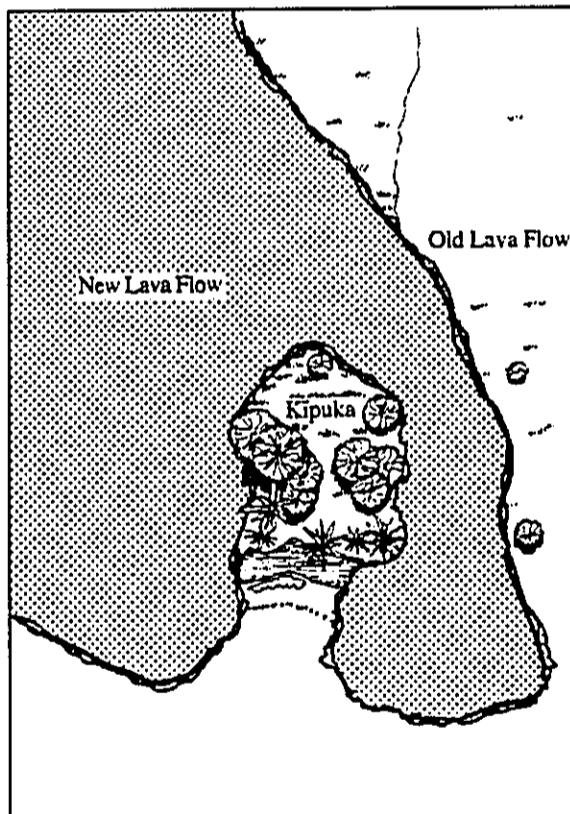
Soil types in the area are related to volcanic activities and coastal processes. There are a few areas where the soil depth is a few inches and supports some vegetation. The land is an overlapping mosaic of several lava flows. Generally, vegetation has grown more densely on the older flows.

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Original Form



Kipuka Formed by New Lava Flow

Kekaha Kai State Park

Coastal Kipuka

Figure 2-1

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### 2.2 MARINE ENVIRONMENT AND ANCHIALINE PONDS

#### 2.2.1 Marine Environment

Public park uses will have a strong connection to the water. The quality of this marine environment is an integral and important part of the resource inventory for the park.

The waters off of Kekaha Kai State Park are classified AA by the State Department of Health and can be considered pristine. Lack of suspended material results in extremely clear waters. Offshore water quality has been investigated as part of several EIS reports for projects in the area. There are no perennial streams in the region but there are high volumes of groundwater extrusion. Increased nutrient concentrations and lowered salinity in some places are evidence of this large fresh water inflow.

Within the shoreline area (from high splash zone to subtidal breaker zone) there is a variety and abundance of marine life determined largely by wave energy and the topography and bathymetry of the area. The type of lava flow, 'a'ā or pāhoehoe, markedly affects the habitat in the intertidal zone. The shorelines along the coast are mainly of three types: 'a'ā flow, pāhoehoe flow or sandy beach. Boulders from an 'a'ā flow will increase vertical relief and shelter from the surf.

Near-shore subtidal areas are generally defined by the substrate. Along this coastline, due to the relatively young geological age of the Big Island, coral growth is generally on hard lava, calcareous substrate, or unconsolidated sand or rubble. As such, true coral reefs have not formed but there is a diversity of coral communities. Under prevailing conditions, no single coral species is able to monopolize the substrata.

#### 2.2.2 Anchialine Ponds

Anchialine ponds are brackish water ponds with no visible connection to the ocean. Traditional human habitation tended to focus around ponds as sources of water for drinking or the growth of trees and plants, which provided food and shelter in this hot dry coastline. Signs of pre-contact and post-contact human habitation often are found clustered near or around these ponds. These ponds also function as habitats for endangered species. (Figure 2-2).

The park planning area is dotted with ponds; especially near the coastline. Many of these are brackish, anchialine ponds unique to Hawai'i. With their underground connections to the ocean and delayed tidal influences, they are home to a unique flora and fauna composed of lower order algae and tiny mollusks and crustaceans. A characteristic feature of these ponds is the existence of red shrimp (*Halocardia* sp and others) which have migrated from the ocean through cracks in the basaltic lava flows. These ponds go through a unique evolutionary pattern. Created by lava flows that have reached the coastal areas they begin as depressional areas mixing fresh water and salt water. Eventually they silt in and become dry areas with deeper soils in the middle of rocky lava flows. The largest anchialine pond in the region is Kapo'ikai Pond, commonly known as 'Ōpae'ula, in Makalawena.

These ponds vary in their character, size, and quality but all are of value from an environmental or recreational standpoint. Water quality in these ponds has been a problem and, due to their size and fragility, many of the ponds have been negatively impacted by human and animal use.

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Brackish Water Pond  
at Manini'ōwali



Kapo'ikai (Makalawena)



Anchialine Pond  
at Awake'e

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At Ka'elehuluhulu, there is a fairly large pond by the main parking area and another in a grove of kiawe in the direction of Keāhole Airport. At Mahai'ula, there is a small complex of ponds by the coconut grove and a larger cluster out at Kāwili Point. Kapo'ikai in Makalawena is a significant resource and, whether it remains in the ownership of Kamehameha Schools or is ultimately managed by a government agency, it is likely to function as a wildlife preserve. Eighteen ponds were numbered and surveyed in the 1986 EIS for Awake'e (Helber, Hastert, Van Horn, and Kimura). They vary in size from small tidal pool-like pockets in the 'a'ā flow to a large complex behind the *kiawe* and *milo* trees at Awake'e Bay. Four of the ponds are larger with surface areas greater than 1,000 square feet. These ponds are of moderate to shallow depths and have fragile ecosystems. At Manini'ōwali only one pond is noted; the shallow pond at Kua Bay about 250 feet behind the beach. The pond is a mature anchialine pond with an area of about 150 square feet.

### 2.3 PLANT COMMUNITIES

Vegetation is sparse on the Kona Coast. Denser and taller stands of trees and coconut palms are generally found along the coastline and near pond areas where trees can obtain water from groundwater sources. Other areas are barren or sparsely vegetated with grasses, bushes or short trees. Botanical surveys (Char 1995) have identified six vegetation community types in the Mahai'ula section: 1) Coastal, 2) Pond, 3) Fountain grass grassland, 4) *kiawe* forest, 5) Sparse 'a'ā, and 6) Roadside. Photographs of these vegetation types are presented in Figure 2-3. Full report is in Appendix E.

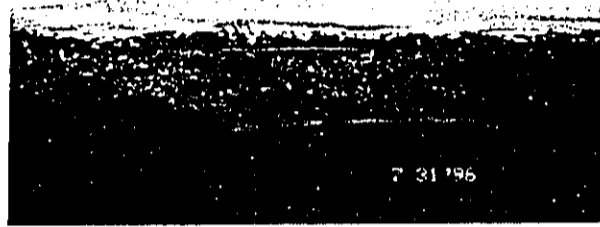
Coastal Vegetation: These include several subtypes depending on the shoreline composition. Most of the coastline is rocky, wave swept, and comprised of boulder beaches and headlands. Vegetation is sparse and concentrated in small clumps. A variety of grasses, strand vegetation such as *pā'ū o Hi'iaka* (*Jacquemontia ovalifolia* ssp *sandwicensis*) and low, windswept *kiawe* (*Prosopis pallida*) and *pluchea* shrubs (*Pluchea symphytifolia*). Along exposed 'a'ā, flow coastline clumps of *hinahina* (*Heliotropium anomalum* var. *argenteum*), *naupaka* (*Scaevola sericea*), tree heliotrope (*Tournefortia argentea*) and mats of *pōhuehue* (*Ipomea pes-caprae*) are found. Along sandy beaches, several native species are found. Besides those native coastal species mentioned above they include 'aki'aki (*Sporobolus virginicus*), *kauna'oa* (*Cuscuta sandwichiana*) and *alena* (*Boerhavia repens*). On many beaches, large groves of trees have been planted by former residents, which include ironwood (*Casuarinas equisetifolia*), *milo* (*Thespesia populnea*), coconut (*Cocos nucifera*), false *kamani* (*Terminalia catappa*) and *kou* (*Cordia subcordata*). Except for Kua Bay, all of the beach areas have a dense band of *kiawe* where the sand beaches interface the inland rocky substrates.

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Fountaingrass Community



Sparse 'a'i Community



Pond Vegetation



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**Pond Vegetation:** This kind of community is found in and around the anchialine pond complexes and wetlands that dot the coastline. Kapo'ikai, the largest pond in the area, is well vegetated and home to many wetland plants and animals. Smaller ponds with emergent vegetation are found along the entire length of the coastline. Some of the ponds support orange colored algae crusts (*Schizothrix* sp) and floating mats of filamentous blue-green algae. Widgeon grass (*Ruppia maritima*) is present in some ponds and *makaloa* and *'ākulikuli* are also common in some ponds.

**Fountain Grass Grassland:** This community is the most common cover in Mahai'ula. This community occurs predominantly on weathered, oxidized *pāhoehoe* flows. Although other grasses are found in this grassland community, fountain grass is the most common. Scattered in this community are bunches of small shrubs both native and introduced. Some of the more common ones are *'uhaloa* (*Waltheria Americana*) and *'ilima* (*Sida fallax*). Widely scattered individual or small clumps of *kiawe* trees also form part of this community. Plant cover is variable and tends to be sparser on the less weathered flows.

**Kiawe Forest:** This cover is found on very weathered *pāhoehoe* and *'a'ā* flows around the pond areas of Mahai'ula and Makalawena. In Awake'e this community covers extensive areas of the parcel. In places the trees are 18-25 feet tall and form a closed canopy forest. The under story is sparse due to the shade and includes small patches of grass and shrubs. Where there is very little soil, the *kiawe* forest is open with a canopy cover between 30 to 50 percent.

**Sparse Vegetation:** This category is for plant communities on newer lava flows. Vegetation cover is almost non-existent on the dark lava rock with coverage between 3 to 5 percent of the surface area. What little is found is located in small depressions and cracks within the flows. The few plants found here include pluchea, fountain grass, *'uhaloa*, *kiawe*, and *maiapilo* (*Capparis sandwichiana*). Noni (*Morinda citrifolia*) also grows in small crevices and cracks in the lava flow. The density and variety of vegetation increase where newer flows intersect older flows.

**Roadside Vegetation:** This group describes a type that occurs along Queen Ka'ahumanu Highway and some of the roadways within the park site. While some of the common species of the fountain grass community are also located here, roadside vegetation is made up predominantly of annual species whose composition and number fluctuate with the seasons. Many are introduced species well adapted to disturbed conditions.

**Endangered Species:** One listed endangered species, the *loulou* palm (*Pritchardia affinis*), and two category 2 candidate endangered species, the *maiapilo* or native caper (*Capparis sandwichiana*) and (*Fimbristylis hawaiiensis*), a small sedge, are present on the Mahai'ula site.

### 2.4 WILDLIFE

Marine species, followed by birds and small mammals are typical of fauna found throughout this region (Ohashi 1995).

Avifauna found in the park planning area are species commonly found along this coast. They include common introduced and migratory species such as the Zebra dove, common myna and northern cardinal. Three endangered waterfowl are reported in the region: the Hawaiian duck, *koloa* (*Anas wyvilliana*), Hawaiian stilt, *ae'o* (*Himantopus mexicanus knudseni*) and Hawaiian coot, *'alae ke'oke'o* (*Fulica americana alai*). These birds are found at Kapo'ikai and other wetland complexes in the area. Other native birds such as the night heron, *auku'u* (*Nycticorax nycticorax hoactli*) and Hawaiian owl, *pueo* (*Asio flammeus sandwichensis*) are also found in the region.

With regard to mammals, two endemic species have been recorded in the area. The Hawaiian hoary bat (*Lasiurus cinereus semotus*) is listed as an endangered species and found sporadically along the Kona Coast. Recently the Hawaiian Monk Seal (*Monachus shauinslandi*) has been sighted basking on the beach at Mahai'ula. Other mammals include feral cats and goats, mice, rats and mongoose. One introduced but unusual mammal in Kona is the feral donkey (*Equus asinus*). Nicknamed Kona Nightingales, these

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donkeys have a special history in Kona. A wild herd has been observed in neighboring Ka'ūpūlehu and the Ka'elemakule family of Mahai'ula has traditionally been associated with raising donkeys. In addition to the Ka'elemakule family, the Punihaole family of Makalawena continue to be a resource of information for this area.

Traditionally, the pristine waters of the Kona coast supported a wide variety and diverse multitude of marine fauna. Fish are still plentiful although there have been reports of declining catches and loss of diversity in recent years. The variety and quantity of fish, crustaceans, mollusks and echinoderms in coastal waters is a resource closely associated with this land. Communities along the coast have traditionally been associated with fishing and the ocean is both a cultural as well as a physical resource for the park. 'Ōpetu, moi and aku are some of the fish for which the region is famous. In olden times, fishponds provided a steady source of cultivated fish, such as mullet and āholehole, which added to what was caught in the ocean.

The waters off the coast are also feeding, resting and foraging grounds for the endangered Green Sea and Hawksbill turtles and sometimes the turtles come ashore at isolated beach areas. Dolphins and whales frequent the waters in this area, where they can be seen from the coast at varying distances from the shore.

### 2.5 SCENIC RESOURCES

Magnificent scenic views of the coastline can be enjoyed from lookouts along Queen Ka'ahumanu Highway, from the Pu'u Koholā National Historic Site, and from other high points along the coast. Within the Kekaha Kai State Park, Pu'u Kuili offers expansive views of the shoreline to the north and south, and of Hualālai to the east (Figure 1-5).

### 2.6 RESOURCES VALUED FOR PRESERVATION, INTERPRETATION & RECREATION

Resources at Kekaha Kai are typical of this region: sandy shores, coastal *kīpuka*, stark lava fields, marine resources, cultural and historic sites. Resources throughout the Park are valued from three perspectives: preservation, interpretation and recreation.

**Preservation:** The substance and importance of these criteria varied according to the nature of the resource. Strong cultural values may be tied to a structure or feature. Others had associative value tied to memories and events. Some have high ecological or natural environmental values based on endemism, scarcity or uniqueness. Others provide aesthetic, spiritual or other qualities that encourage preservation. Whatever the reason for significance, the highest value for these resources would be preservation.

**Interpretation:** Interpretation seeks to heighten visitor awareness and understanding of the resources, thereby promoting respect, protection, and preservation of these resources. There is a range of interpretive opportunities from passive signage to active programs involving guided tours, demonstrations and hands-on exhibits. The nature of the resources, as well as staffing and funding determine which interpretive techniques are appropriate. Opportunities for different types of interpretive activities were evaluated within the constraints of resource sustainability and cultural and social sensitivity. The practicality of implementation was also reviewed.

**Recreation:** Recreation values also range from active to passive recreation. The nature of the activity, its scarcity in the area and its impact on the resource, which sustains it all, play a role in determining its value. Providing recreational opportunities is a major responsibility for the Division of State Parks. The bills, resolutions and other public policy decisions related to the Kekaha Kai State Park have all stated the importance of recreation. The compatibilities of different uses were assessed in evaluating the plan for this criterion.

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Each park section was divided into sub-sections and evaluated for preservation, interpretation, and recreation value.

The sub areas identified at Mahai'ula include the following:

1. Entrance/Visitor Center
2. Open Space: 1801 Flow and Grasslands
3. Kāwili Point and Coastal Open Lands
4. Ka'elehuluhulu
5. Mahai'ula
6. Marine/Aquatic Components

(Note: Mahai'ula includes the shoreward portion of the ahupua'a of Kaulana as indicated by the sub area of Ka'elehuluhulu).

The sub areas at Awake'e include:

1. Kaho'iawa
2. Pu'u Kuili
3. Awake'e Bay
4. Anchialine Ponds
5. Marine/Aquatic Components

The sub areas identified at Manini'ōwali include the following:

1. Kua Bay
2. Kakapa Bay
3. Kikaua Point

(Note: Manini'ōwali includes the shoreward portion of the ahupua'a of Kūki'o 2 and 1 as indicated by the sub areas of Kakapa Bay and Kikaua Point).

In each section the resources were identified and opportunities to address these values were evaluated and established.

### 2.7 NATURAL RESOURCE INTERPRETIVE THEMES

The landscape of Kekaha is dominated by lava flows, both ancient and recent, and the features associated with volcanic eruptions, such as the cinder cone Pu'u Kuili. Few plants and land animals have adapted to this harsh dry climate but near shore waters provide a relative abundance of life including Hawai'i's unique anchialine ponds.

#### 2.7.1 Geological Themes

Hualālai Volcano played a major role in the formation of Hawai'i Island and the natural landscape of North Kona.

- Mid-ocean ridges and hotspots.
- Shield volcanoes and their formation.
- Deep ocean depths at short distances from the shore allowing OTEC development.

The 1801 Lava Flow. This lava flow from Hualālai destroyed settlements, fields, and fishponds, leaving behind a black sheet of *pāhoehoe* lava running down the slope of Hualālai to the ocean. This flow serves as a classroom to observe and study several themes related to lava flows and volcanic eruptions:

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- Dynamics of lava flow – the distinction between 'a'ā and pāhoehoe.
- Features created in a flow – tubes, bubbles.
- Where lava meets the sea – anchialine ponds.
- *Kīpuka* – where the old meets the new.
- Volcanic Shorelines
- Pu'u Kuili and later volcanism.
- Hydrologic cycles.
- Winds and Climate: Diurnal changes, Kona storms and predominant trade winds.
- Historic properties associated with the *kīpuka* and anchialine ponds.

#### 2.7.2 Biological Themes

- Succession – Over time, there is a succession of life on a lava flow. Slowly, plants become established and eventually flourish.
- *Ethnobotany* – Adoption to an environment with Polynesian introductions.
- Animal Life on the Lava – Introduction of goats and donkeys.
- Endangered Species.
- Endemism.

#### 2.7.3 Marine & Aquatic Themes

- Beginnings of a Reef – offshore environmental evolution.
- Fish Nurseries old and new: Hawaiian fishponds and recent nurture and release programs.
- Management of Marine Resource – From the kapu system in early Hawai'i to the fishing rules and regulations of today, an effort has been made to sustain the marine resources.
- Surfing.
- Shipwrecks.
- Navigation, voyaging and vessels.
- Fish Koa and traditional fishing practices.

**Section 3.0**

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PDR - Cultural Resources

## KEKAHA KAI STATE PARK

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### 3.0 CULTURAL RESOURCES

#### 3.1 CULTURAL HISTORY OF KEKAHA

Kekaha is the traditional place name given to the lava fields which extend north of Kailua in the district of North Kona to the boundary with South Kohala (Kelly, 1971). These lava fields range in age from ancient to relatively recent (1801 and 1859). The name Kekaha is believed to describe the dry, sun-baked land from Honokōhau, North Kona to 'Anaeho'omalū, South Kohala. This shoreline was known for its wealth of fishponds, including Kaloko Fishpond at the southern end, the expansive Pa'aiea Fishpond that ran from Keāhole to Ka'elehuluhulu, and the complex of ponds at Kalāhuipua'a (Puakō) at the northern end. (Clarifying note: Kalāhuipua'a is NOT at the northern part of the area described by Kelly. Also, Kalāhuipua'a is NEAR to Puakō NOT at it or synonymous with it.)

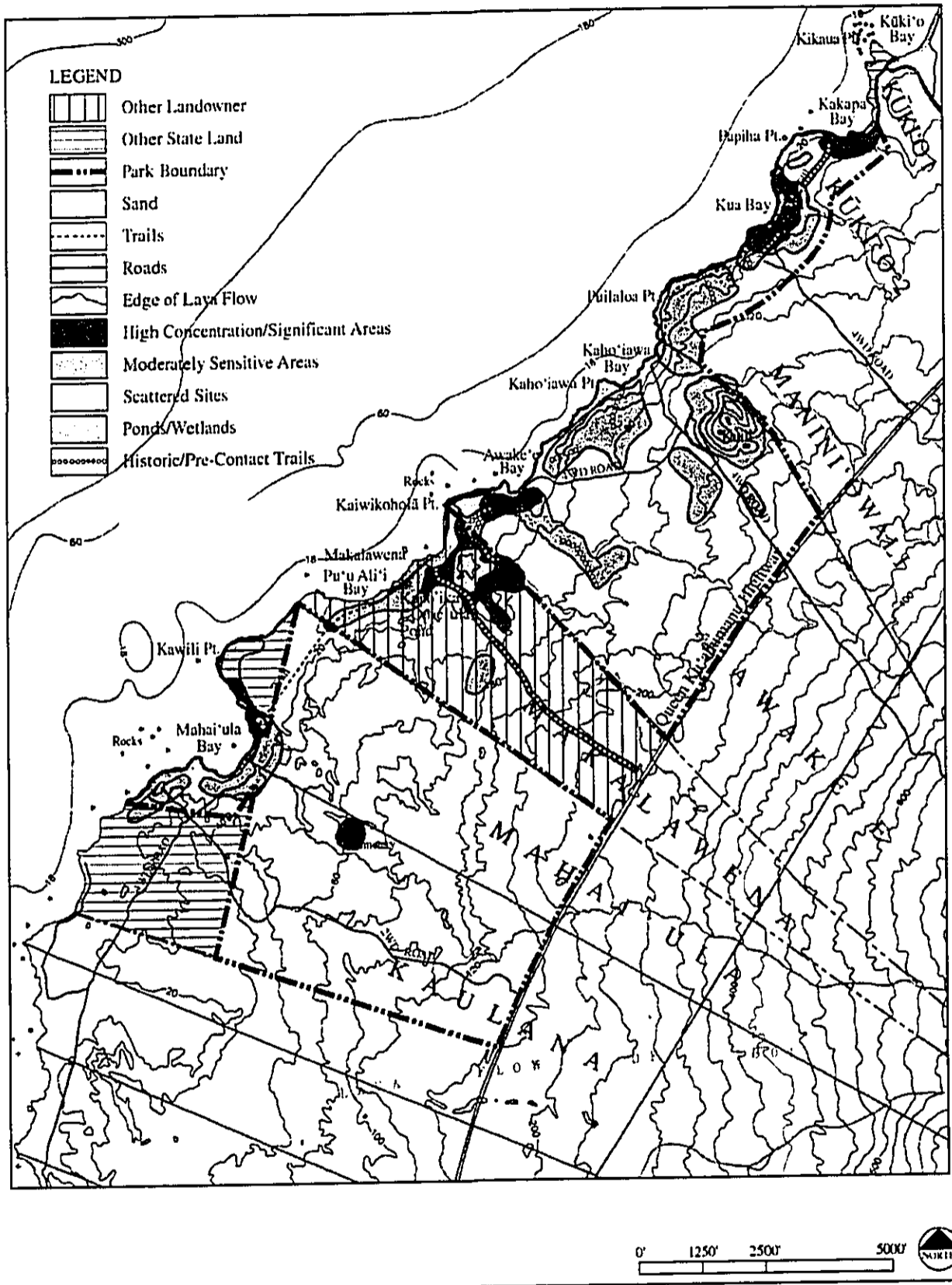
The land is the cultural site, and place names and landforms reflect many of the values and traditions of the place. Manini'ōwali refers to the schooling behavior of *manini* (surgeonfish) in the waters off Kua Bay. Kuili means silent memorialized prayer. Ka'elehuluhulu refers to the scraping of canoe hulls as they are dragged over the pāhoehoe of this beach. Many place names have multiple meanings and origins and reflect a richness and depth of the culture. Starting with the regional name Kekaha and *ahupua'a* names that make up the park segments the project site is full of meaning that will be incorporated into Park planning and programs.

#### 3.2 PRE-CONTACT PERIOD ARCHAEOLOGICAL SITES

Cultural resources identified in the area reflect the settlement patterns of the Hawaiians of old. Concentrated in former settlement areas and scattered along old traveling paths, they are located throughout the Kekaha Kai State Park (Figure 3-1). Remnants of house enclosures, trails, salt pans, etc., reflect remnants of the coastal lifestyle of old Hawai'i along the arid Kona coast. Along the coast are remnants of the pre-contact foot trails that linked settlements and resource zones. Examples of North Kona Trails are shown in Figure 3-2. Each *ahupua'a* usually had lateral coastal trails connecting it to adjacent *ahupua'a* and providing access to ocean resources as well as *mauka-makai* trails that provided connections to settlements in the wetter, upland areas. An *ala loa* and/or *ala aupuni* (government road) crossed *ahupua'a* and accommodated the activities associated with tributes to the ali'i and inter-*ahupua'a* travel.

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Kekaha Kai State Park

Historic and Cultural Resources

Figure 3-1

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Kūki'o/Manini'ōwali - Trail Note: Coral Cobbles recently placed along the trail.



Kaloko Honokōhau National Historic Park -  
Trail Across Fishpond Wall  
(View Towards Visitor Kiosk Area)



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### 3.2.1 Mahai'ula / Kaulana

Mahai'ula was the site of a small but well known fishing hamlet in the 19th century, and a traditional stopping place for canoes along the Kona Coast (Maly, 1997). It is near the northern terminus of the old Pa'aiea fishpond which was used as an inland passage for canoes traveling along the coast. A site next to the Magoon/Ka'elemakule complex has been used for canoe and boat landings into the 1970s and early 1980s. Behind the crescent dune formations of Mahai'ula lie burial and habitation features. Canoe landing areas and the residential compound around the Magoon and Ka'elemakule houses form a complex with historic values associated with the first half of the 20th century. Beyond this compound are more archaeological features, including possible burials and some anchialine ponds in association with older house platforms and possible fishing *ko'a*.

The legendary cave Kolomikimiki is located in this section (Keawe nui a 'Umi, or 'Umiokalani) of the Park. Famous legends are told about this cave including a fishing story involving the ali'i-nui Umi. The cave complex is in a parcel land owned by the Catholic Diocese of Hawai'i and associated with burials and the Ka'elemakule family.

Ka'elehuluhulu has traditionally been associated with fishing and fishermen. It was well known for the abundance of fish and was part of the outer edge of Pa'aiea pond. The abundance was associated with both the marine resources and the pond. The smaller pond at Ka'elehuluhulu which maybe the sole remnant of Pa'aiea pond also shows signs of internal partition walls that indicate active cultivation of some sort. Behind Ka'elehuluhulu Beach there is an area with many *papamū* (platforms for a Hawaiian game *kōnane*, which is similar to checkers) etched into the lava in the *kiawe* forest area and on the bare pāhoehoe. It was probably a popular shaded resting area out from the hot Kona sun.

A three-mile long fishpond named Pa'aiea, belonging to Kamehameha the Great, is said to have existed near Ka'elehuluhulu until it was covered by the 1801 flow. The pond started from Keāhole and ended near Ka'elehuluhulu Beach. While this area is now barren lava flows, there are lava tubes and shelters located along the coastline.

Old timers speak of larger fishing *ko'a* features along the coast at Ka'elehuluhulu and Kāwili which were destroyed within living memory.

Off Kāwili Point and Ka'elehuluhulu, the waves are famous for their size and form. Folk tales report perfect 25-foot waves that one could ride into the bay, especially in olden times. Reports indicate the 1946 tidal wave may have altered the bay and changed this character.

### 3.2.2 Awake'e

Pu'u Kuili is the most prominent cultural resource in this *ahupua'a*. It is a symbol and landmark of the region and has been used by fishermen to orient themselves while navigating offshore. Resources involving human activities in Awake'e are clustered in two areas and scattered in the *kiawe* forest and grasslands. Dense concentrations are located near the coastal areas along Kaho'iawa Bay and Awake'e Bay. Trails connect the anchialine ponds and other resource areas. The first cluster area is the southern edge of Awake'e and *mauka* along the edge of the lava flow. The *mauka-makai* trail for this area begins from this location and many features are clustered on both sides of this trail until about halfway to Queen Ka'ahumanu Highway. Mākālei Cave, a valuable source of drinking water (scarce in this region), is known in local folklore and possibly located in this area (although its exact location is not known).

The second area of concentration is around Kaho'iawa Bay and the *makai* shoreline at the base of Pu'u Kuili. Many shelters, midden areas, trail remnants platforms, and other features are located here. Recent

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and pre-contact references associate Kaho'iawa with fishing. There are fishing *ko'a*, shelter platforms and midden sites scattered throughout this area.

#### 3.2.3 Manini'ōwali / Kūki'o

This area is rich in cultural resources. Although the park area only encompasses the 1,000-foot strip along the shore, this is the area that is richest in historical and cultural resources. The rich cluster of sites at the base of Pu'u Kuili and along the shoreline of Kaho'iawa Bay extends into the Manini'ōwali *ahupua'a*.

There is a rich complex around Kua Bay; especially around the anchialine pond and the dune area near the shore. Intact canoe shed walls (*hale wa'a*), burials, and shelters are found in this area. Many lava tubes used for shelter, storage, and burials area also located in this area. While the density of features diminishes as one moves *mauka*, agricultural mounds, shelters, and burials are located near the historic *mauka-makai* trails that run through the area. Some intact burial sites were discovered in recent archaeological investigations and were re-sealed after study.

Past Kua Bay, on the old lava flow and the edge of Kakapa Bay, are other very significant structures. Included here are burial platforms, a *heiau*-like structure, *ko'a*, and *papamū*. The historic trail continues on to Kikaua Point and Kūki'o Bay (Uluweu Bay) which along with the offshore rocks and the smaller cinder cone *mauka* of Kua Bay, Po'opo'omino, have important associations with the place name legends surrounding Manini'ōwali. The features at Manini'ōwali-Kūki'o are important and require protection and, possibly, interpretation.

#### 3.3 POST-CONTACT SITES

There has never been extensive post contact development within the project area. The only structures now in the park are the group of buildings which make up the old Magoon/Ka'elemakule house complex at Mahai'ula Bay and old *lū'au* facilities at Ka'elehuluhulu Beach. The house complex at Mahai'ula is impressive with many accessory structures around it. They include water tanks, animal enclosures, boat/canoe sheds, windmills, and a pre-empted tennis platform. Historic period walls and enclosures now in ruins are found on the lava fields between Mahai'ula and Ka'elehuluhulu. Structural platforms and walls are also found south of Ka'elehuluhulu. Salt (*pa'akai*) production was an important activity in pre and post contact periods. Salt production pans are found scattered in the area. Remnants of historic period saltpans made of concrete remain south of the beach activity area at Ka'elehuluhulu. The *mauka-makai* trail behind Mahai'ula is a historic period trail that probably replaced an older trail which was destroyed by the flow of 1801. The tsunami of 1946 destroyed many of the historic period structures. A historic jeep road is evident and used frequently by people walking to Makalawena. The jeep road is the main link between Mahai'ula Bay and Makalawena.

While Makalawena is not part of the Park, within the historic period and possibly before, it was the main population center of this district. The area school was located there along with a small village. Except for a few isolated individuals, the 1946 tidal wave essentially ended the cluster settlements along this section of the coast.

Existing infrastructure includes an unimproved two wheel-drive access road at Mahai'ula and four wheel-drive roads in Awake'e and Manini'ōwali leading from Queen Ka'ahumanu Highway to the coast.

#### 3.4 UNDERWATER ARCHAEOLOGICAL SITES (Shipwreck, ko'a)

The waters off Mahai'ula also contain two well-known fishing *ko'a* (*'ōpelu* and *aku*). These sites are places in the ocean where specific species of fish gather in greater abundance. Local fishermen know these places and respect their importance in the ecology of the resource. Others have been referred to in legend and folklore, but their locations are less certain. Two shipwrecks are known in the near-shore

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waters with a third possibly nearby. The two wrecks have been photographed and their locations identified.

### 3.5 SIGNIFICANT RESOURCES EVALUATION

Detailed assessments of significance and value are identified in the report *Kekaha Wai 'Ole O Na Kona* by Kumu Pono Associates and various archaeological studies. At this point, it is important to emphasize that the policy of the Division of State Parks is to preserve all of these features. Park planning and development will design around the features and relocate new facilities if necessary.

One of the recurring themes of the native and early historic narratives of Kekaha is the wealth of the marine resources and fisheries – those of the deep sea, near-shore, and inland fishponds – of the region. While this is generally known, it is often not captured in planning for a land-based park. Planning for Kekaha Kai recognizes the importance of offshore and pond resources in the region, and the plan will include programs and facilities that are related to these resources.

#### 3.5.1 Culturally Sensitive Sites

Indigenous values make burial sites important and sensitive areas. Shrines and other religious or spiritual places can also be culturally sensitive. The burial compound of the Ka'elemakule family is one such location. Although it is not a part of the park, parklands surround it and park uses and practices will need to respect its value. Descendants of the Ka'elemakule family continue to access and pay respect to their ancestors.

The trail to Kāwili Point has a high concentration of intact structures associated with habitation. It needs to be treated in a careful way and managed to retain its integrity.

The Magoon/Ka'elemakule complex has been heavily impacted in historic times. However, the association of people and place make this area a significant site. Memories and songs associated with this place and the ongoing ambiance of this location make it a site that needs to be treated with sensitivity.

There are caves and lava tubes in the area that still contain midden, artifacts and burials. A complete inventory has not been done. In the future, this inventory needs to be completed and specific sites treated according to their level of sensitivity.

The cluster around Kua Bay and the trail and complexes at Kakapa Bay are also very important and fragile. These sites are doubly sensitive because they are located near areas of high human activity and it is difficult to separate recreational uses from these areas. Interpretive programs, monitoring and enforcement will become increasingly necessary as a way to mitigate the impact of increased human activity. Some of these areas are already showing signs of deterioration and these actions should be put in place soon.

#### 3.5.2 Cultural Interpretive Themes

The archaeological survey and historical research conducted for Kekaha Kai have indicated a cultural continuity in the occupation of this coastline from the pre-contact period into the early 20th Century. Much of the cultural history revolves around fishing, as this dry, lava-covered, leeward shoreline offered little opportunity for farming or other subsistence activities. The long history of fishing is reflected in the artifacts (technology), the sites (*ko'a*/shrines), the midden (food remains), and the traditional cultural practices (*kapu* system). A strong association with the sea is a prominent theme in the memories of the *kūpuna*. Access to this shoreline area was by canoe or overland trails, emphasizing the importance of cultural traditions such as navigation and cultural sites such as the Ala Kahakai. The story of Kekaha is

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one of rich cultural traditions that have been passed down through many generations. However, our knowledge of the early occupation is limited and additional archaeological research is recommended to assist in telling the story of Kekaha Kai.

#### 3.5.3 Resource Themes

Kekaha – A land of limited resources . . . or so it seems. Kekaha translates as the dry, sun-baked land ('*aina malo'o*). Today, the hot, dry, barren lava landscape of Kekaha Kai would not appear to be a welcome site for early inhabitants. However, the complex at Kāwili Point suggests that native Hawaiians made frequent and regular use of this shoreline for its abundance of marine resources. Based on studies from other parts of the Kona coast, this occupation was probably semi-permanent and seasonal.

Living from the Sea: Hawaiians adapted their fishing technology to the diverse shoreline and offshore environments of the Hawaiian Islands. From the fishhooks of bone and shell to the uniquely Hawaiian fishponds, fish were caught, raised, and harvested as an integral part of the subsistence economy. In addition to fish, shellfish and *limu* (seaweed) were collected from the near-shore zone.

Water: Water would be necessary to sustain life along this shoreline but there is little evidence of freshwater sources. Underground seeps provide much of this vital resource.

Fish and Poi: The fishermen of Kekaha Kai would trade with the farmers *mauka* in the *ahupua'a* to provide a subsistence base of fish and *kalo* (which was made into *poi*). This exchange of resources between the environmental zones was a major basis of the *ahupua'a* land division.

Settlement: Descriptions of settlements along the Kona coast in the early 1800s suggest that the shoreline was lined with thatched houses and shaded with coconut and kou trees. Small gardens were cultivated among the barren rocks. Today, stone platforms are reminders of the people who once lived along this shoreline.

Ensuring Abundance: The importance of fishing to the economy of the *ahupua'a* is reflected in the sites and cultural traditions. They indicate the importance of ensuring the abundance and sustainability of these resources.

Ko'a (fishing shrines): Offerings made at these sites attracted fish and insured an adequate supply in the future.

Kapu System: Seasonal restrictions on certain resources insured their sustainability and/or reproduction.

Farming the Sea: Pa'aiea, a massive inland fishpond, is said to have covered 3 miles from Keāhole to Ka'elehuluhulu. This great pond offered a ready supply of fish and a safe inland water route when the ocean was too rough for canoe travel. Much of the pond was covered by the 1801 lava flow. Kapo'ikai in Makalawena is commonly called 'Ōpae'ula for the red shrimp that was previously harvested from this large pond. Many of the bays in the area were known as spawning grounds and carefully managed by the *konohiki* to insure continued productivity.

Salt Production: The drying and salting of fish preserved this food source for times when the weather and ocean conditions prevented fishing and for travel and trade inland. In the 20th century, drying and salting facilitated the sale of fish in Kailua-Kona and shipping to Honolulu.

Travel and Trade: Sharing the resources within and between the *ahupua'a* ensured accessibility to the resources from all the environmental zones. Ocean routes and overland trails facilitated this exchange.

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Navigation: A working knowledge of the ocean, weather conditions, and the offshore environment was the foundation for safe canoe travel.

Trails: Coastal trails linked *ahupua'a* while *mauka-makai* trails linked resources zones within an *ahupua'a*. The *ala loa* (long road), or *ala aupuni* (government road), provided lateral access between *ahupua'a*.

### 3.5.4 Families

The Kamehameha Line in Kona: Kamehameha I is one of the most prominent figures in Hawaiian history and is closely associated with North Kona in the period of transition from the pre-contact to early contact period. Pa'aiea Fishpond is often referred to as Kamehameha's Fishpond. Legendary accounts state that the 1801 flow would not stop until Kamehameha himself appealed to Pele by offering and throwing a lock of his own hair into the flow. From 1812 to 1819, Kamehameha resided at Kamakahonu in Kailua, Kona.

During the Great Māhele of 1848, the Kamehameha family recognized the value to the ponds along the shoreline of Kekaha. Kamehameha III (son of Kamehameha I) claimed Kekaha lands at Haleohiu and Pu'uwa'awa'a which included the ponds at Kīholo. Kamehameha V (grandson of Kamehameha I) claimed Kekaha lands at Kaloko and Ka'ūpūlehu, including Kaloko Fishpond. Kekauonohi (granddaughter of Kamehameha I) claimed Honokōhau-nui, including 'Aimakapā Fishpond.

A Sense of Place: The 20th century lifestyle of Kona has been characterized as one of grace and generosity. This spirit of graciousness is reflected in the songs and the memories of *kūpuna*. Generosity is evident in the sharing of resources between families in the Kekaha area. Two such family summaries are presented here as examples but there are many more and the interpretive programs of the Park will highlight this legacy.

Story of the Ka'elemakule Family: The Ka'elemakule family has a long association with Mahai'ula. Their family cemetery compound is located in the grasslands behind the bay.

The elder John Ka'elemakule was born in 1854 at Kaumalumu, and his mother was a descendent of the Kinimaka line. He was born when Kinimaka was in Kona, living at Makapiko, Kaumalumu, supervising construction of the road, now called Judd Trail.

In 1936, John Ka'elemakule Senior passed away. Pursuant to his wishes, his remains and those of close to 20 other family members, who had been previously interred elsewhere, were brought to the family burial cave at Kaulana. There, the remains were set in place with others that had been originally interred in the cave, and at John Ka'elemakule Senior's instruction, the cave was sealed. On September 28, 1936, the elder of Ka'elemakule's surviving children consolidated the title of the Mahai'ula property under the ownership of Solomon Ka'elemakule. On October 16, 1936, Solomon Ka'elemakule sold the 40-acre beach lot to Ruth Dorothy Magoon, wife of A.K. Magoon, retaining the one-acre cemetery lot for the Ka'elemakule family.

Story of the Magoon family: The sale of Mahai'ula-Kaulana to Ruth D. Magoon in the 1930s began an ownership tradition which lasted for approximately 55 years. The Magoon family appreciated the significance of the land to its former tenants and they assumed a stewardship responsibility for some of the sacred sites on the land.

In a 1997 interview, Tessa Gay Kamākia Magoon Dye, granddaughter of A.K. Magoon provided her memories of the property. Nearly every summer, between 1948 to the 1960s, Tessa visited Mahai'ula with her family and numerous friends that converged at the house in August to celebrate A.K. Magoon's birthday.

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After A.K. Magoon passed away, his son George Magoon operated a diving center out of the home from 1968-1971 (Clark 1985). Diving operations tapered off and today the Magoon house sits abandoned overlooking Mahai'ula Bay. When George Magoon died in 1986, he was cremated and his ashes were scattered in Mahai'ula Bay as he desired.

### 3.6 CULTURAL RESOURCE MANAGEMENT AND INTERPRETIVE PROGRAMS

This report will outline the cultural resource management and interpretive programs which will be developed as separate, more detailed plans by the Division of State Parks.

#### Baseline Studies

Inventory Level surveys have been conducted for all the areas projected for development of park facilities. These studies will guide development in these areas to ensure that all features are protected to the maximum extent possible. These studies will also form the basis for the signage and interpretive programs in the park (Dye, 2002).

It should be noted that there are many sections of the park that have not been inventoried. Should recreational activities or new facilities be considered for these areas and inventory level survey will be conducted before the use or facility is allowed.

#### Interpretive Areas

Several areas in the park have been identified as interpretive areas in this project development report. These are areas where high concentrations of archaeological features within relatively easy access of day use areas or roadways and trails are found. A detailed management plan for each of these areas will be developed since each site is different and the potential mitigation and interpretive proposals will be different. The interpretive park technician will develop these plans with the assistance of community advisory groups and *kūpuna* from the area. The plan will include signage and restoration plans for many of the features in these complexes. It is felt that education and local ownership are the best protection for resources in such areas because the presence and impact of people are unavoidable in these areas. These areas are identified for each section of the park.

#### Mitigation

While the policy of the Division of State Parks is the protection of all archaeological resources, protection is a dynamic activity requiring different levels of baseline study, maintenance and restoration. The mitigation plan identified in the approved inventory survey will guide the treatment of archeological and historical features within the Park. The various inventory level surveys conducted for the different areas of the park are included as part of the PDR by reference. The mitigation plans of these surveys shall be followed to the maximum extent practicable. As new areas are covered by inventory level surveys, their recommendations will also be added to this PDR.

Ka'elemakule House: This historic house is projected to facilitate the docent program for the park. It will also serve as the oral history center for the history and culture of the region. A docent program is an important part of any cultural resource management program. Funding from private sources should be pursued to augment State Parks budgets to provide salaries and expenses for the *kūpuna* and others that work for this program. A combination of public and private funding seems best due to its flexibility and potential for enhancing a sense of community ownership of the resources.

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### Entrance Visitor Museum:

This facility was projected as a future depository of artifact and implements found in the Kona region from various projects along the coast. At present, there is no good comprehensive venue for the curatorship or display of items associated with the Coast. This is a long-term goal and this facility is planned for the main entrance to the Park in Mahai'ula / Kaulana.

Iwi Burial Program: Periodically during construction or due to natural or human-induced erosion *iwi kūpuna* are exposed. Whenever this occurs, the State Historic Preservation Office should be notified as required by law. In anticipation for these instances, several sites within each *ahupua'a* for the reinterment of the *iwi* should be identified and added to this plan. This should be done in collaboration with lineal descendants of the land and the Hawai'i Island Burial Council. Proper protocol should be observed during the reinterment ceremony. The question of signage should be determined by this group. There should also be developed, a Burial Treatment Plan for treatment of known burials as well as for inadvertent finds.

Restoration and Renovation: Some historic and archaeological features will be recommended for restoration. Restoration activities will be reviewed and approved by the SHPD with consultation from local *kūpuna* and community groups. Trail restoration will be a specific and large subset of this kind of activity. Some special features in this class of action include the Ka'elemakule House and the salt pans at Ka'elehuluhulu. Restoration will also include revegetation of sites known in oral traditions for specific plants. Examples of this include the coconut palms at Keawaula and the *kou* trees in the dune behind Mahai'ula. Addition of *Pritchardia affinis* near anchialine ponds and *Capparis sandwichiana* as groundcover will be considered as a part of this program.

Education Programs: Resource protection, management and education are inextricably linked. The docent and education programs will all include programs and information on cultural resources with value messages about their importance and fragility. An ethic of cultural sensitivity and stewardship will be emphasized in these programs. Educational programs will be headquartered in the Magoon House/Education Center at Mahai'ula.

Dry land Botanical Garden: This facility will be primarily an educational facility but the knowledge gained and transmitted will aid in the preservation and interpretation of cultural resources of the entire Park. Samples of dry land gardening techniques and plants will make visitors more conscious of the resources in the rest of the Park.

**Section 4.0**

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PDR - Recreational and Educational Opportunities



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### 4.0 RECREATIONAL AND EDUCATIONAL OPPORTUNITIES

#### 4.1 PARK USERS/AUDIENCE AND RESOURCES

Park users include island residents and visitors. Existing recreational and natural resources throughout the park are presented in Figure 4-1. It includes a wide range of outdoor resources for both active and passive recreational uses. Kekaha Kai represents an opportunity to expand outdoor amenities for the growing resident population of West Hawai'i and its expanding visitor industry. The northern part of the Park will have regular use from the adjacent residential developments of Hualālai and Kūki'o.

The Kona Coast has an extreme scarcity of coastal camping facilities. The cabins at Hāpuna Beach Park and grounds at Spencer Beach Park in South Kohala provide camping opportunities north of the Kekaha Kai State Park. There are no coastal camping areas to the south until well past Kailua-Kona. The absence of legally approved campsites will become an increasing problem as the Ala Kahakai is developed and popularized. The major limitations to the provision of camping sites are the sustainable capacity of the resources and the potential security and maintenance problems that may arise.

Camping is presently not allowed at Kekaha Kai State Park. Access to the shore is controlled with a gate located on the access road near Queen Ka'ahumanu Highway.

As a wilderness park, Kekaha Kai State Park will provide opportunities for a variety of hiking experiences. Lateral coastal trails and *mauka-makai* trails provide visitors with varied wilderness experiences. Currently, trails in the park are unmarked and hikers must rely on their personal knowledge of the area. Caution is needed as the terrain is rough, the sun hot, and emergency help is far away.

Kekaha Kai State Park is not conducive to extensive biking. The rough lava fields and sandy shore are better experienced on foot. Queen Ka'ahumanu Highway is a popular route for bikers in Kona and especially for athletes training for the world-famous Ironman Triathlon. Park resources and facilities can support bicyclists; however, there will not be extensive bike trails within the park.

Beach areas naturally provide a 'get away' from the business of everyday life. Seasonally calm waters, warm sand and limitless views are qualities which enhance relaxation for park users. As a wilderness park, this section provides many areas with the relaxing atmosphere valued by residents and visitors.

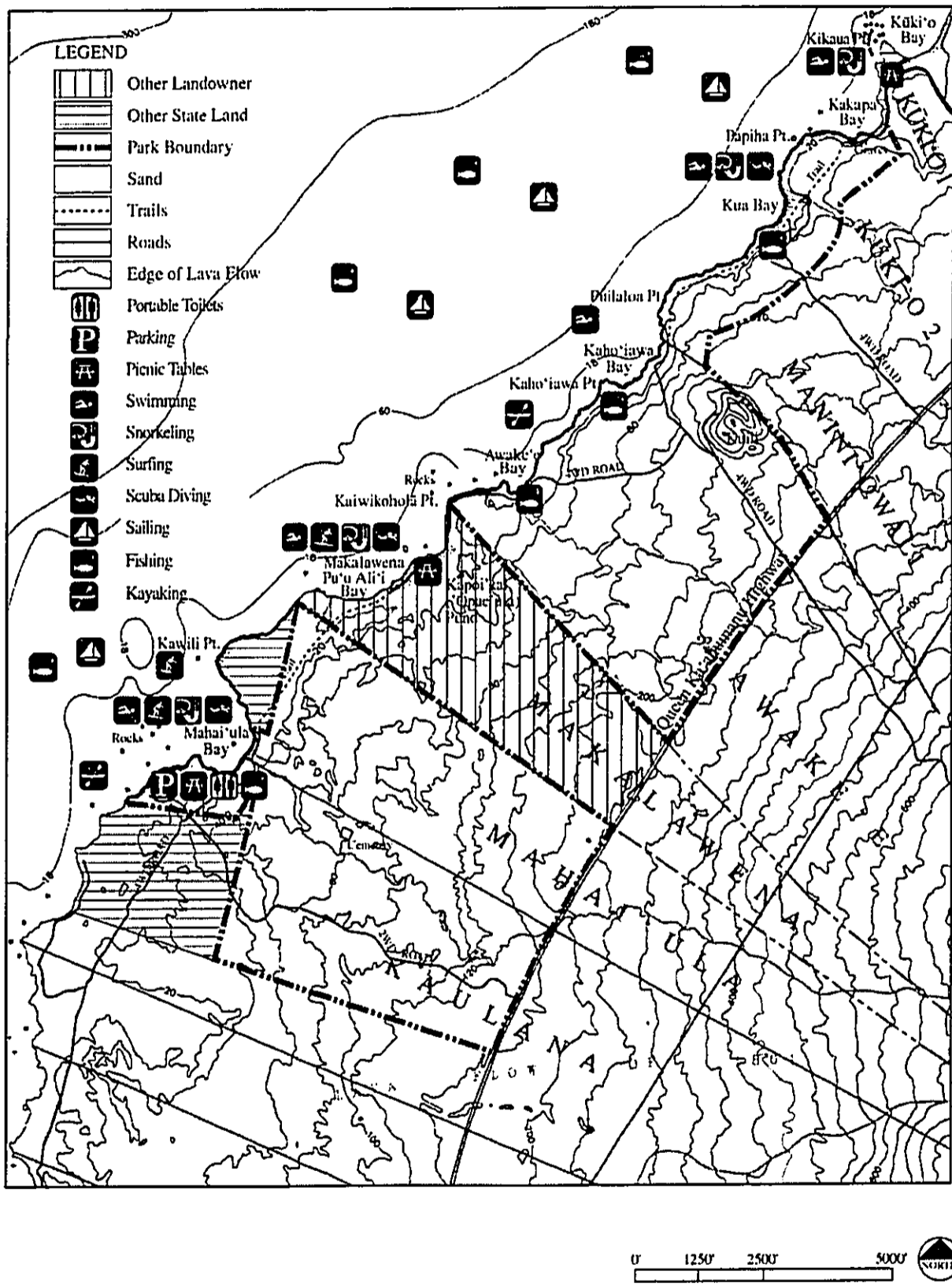
Interpretive programs are designed to enhance the visitor experience by provoking a sense of understanding and awareness about the natural and cultural history of a place. Using various interpretive devices and materials, these programs can also encourage proper behavior and respect for the fragile and irreplaceable resources. The programs at Kekaha Kai will focus on environmental education and Hawaiian cultural adaptation to the Kekaha region. The facilities and themes for the proposed program are summarized in this development plan and will be detailed in a separate interpretive plan for the park.

One of the major objectives of the interpretive program voiced by the Task Force is to promote the use of traditional place names. These names tie a people to a place and its history. The translation of place names can give clues to the significance, history, and use of a location. As much as possible traditional place names will be incorporated in all interpretive talks, written interpretive materials, maps and *ahupua'a* boundary signs.

Another important concern raised by the Task Force was the need for ongoing consultation with the *kūpuna* and resource persons during the development and implementation of the interpretive programs. Various program activities will seek the participation of these persons as docents, teachers, and *kūpuna* which will promote historical accuracy and interpretations closer to source references.

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Kekaha Kai State Park

Existing Recreational Resources

Figure 4-1

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Signs are considered a passive form of interpretation and are developed to provide the park visitors with information that will orient them to the park and enhance their understanding of the park features. These signs often include information about the natural and cultural resources, the activities and facilities available in the park, park rules, and safety precautions.

The Park is ideal as an outdoor classroom. The resources readily illustrate interrelationships in nature and the potential impact of man. The anchialine ponds are an excellent example of this relationship between the land and the ocean, and how this fragile resource can be threatened by human actions. In this outdoor classroom, the student not only learns about the resources but also understands the goals of resource management and sustainability. When the *ahupua'a* concept is presented in this outdoor setting, the student can appreciate the environmental strategies developed by the early Hawaiians.

#### 4.2 MAHAI'ULA/KAULANA

With one of the larger sand beaches in West Hawai'i, Ka'elehuluhulu will continue to attract a number of beach goers. With improved facilities and parking capacity, the Mahai'ula section of the park will be even more popular with Kona residents.

##### 4.2.1 Ocean-related Activities

The ocean-related activities available at Mahai'ula and Ka'elehuluhulu appeal to residents and visitors, and to families and individuals. The Mahai'ula section of the Kekaha Kai State Park has long been a favorite sunbathing, swimming, and snorkeling area. In the winter months, surfing at Kāwili Point is popular. Snorkeling is also popular within the protected areas of Mahai'ula Bay.

Fishing is popular all along the coast.

A kayak launching area has recently been designated at Ka'elehuluhulu. In addition, a day mooring site is planned for boaters in the waters off Mahai'ula.

The waters and shore of the Mahai'ula / Kaulana section of the park provide a range of recreational opportunities in a very beautiful setting.

##### 4.2.2 Picnicking

With a shaded backshore area, Ka'elehuluhulu beach is already a favorite picnicking location. Several picnic tables are available for these occasions. There are also a limited number of picnic tables at Mahai'ula. There is potential to expand picnic areas at Mahai'ula and Ka'elehuluhulu. New picnic areas will be enhanced with landscaping for comfort and enjoyment.

##### 4.2.3 Camping

Mahai'ula is a logical place to have camping facilities. However, it is recognized that camping must be properly managed or the natural resources may be impacted. The back dune area, within the *kiawe*, *kou* and coconut groves behind Mahai'ula Bay seems the appropriate place for camping. The vegetation in this area provides protected shaded areas.

##### 4.2.4 Hiking

There is an existing foot trail running around Kāwili Point and a jeep trail leading north from Mahai'ula to Makalawena. The Ala Kahakai will be developed through Kekaha Kai State Park. In some sections there will be two pathways; the older, traditional coastal trails used by the ancient Hawaiians and the more recent jeep trails used in the 19<sup>th</sup> and early 20<sup>th</sup> century. A *mauka-makai* trail starts at the back of Mahai'ula Bay and crosses over the 1801 flow to the highway.

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### 4.2.5 Biking

The access road to Mahai'ula will be accessible to bikes. The lateral coastal trails and four wheeled drive roads are useable by mountain bikes.

### 4.2.6 Relaxation

The Mahai'ula / Kaulana section of the park is ideal for relaxation. It is relatively accessible and has many quiet areas for relaxation and medication. The only negative of this part of the park for this purpose is the proximity of the airport. However, the natural environment partially masks the sounds and mitigates the intrusion.

### 4.2.7 Interpretive Programs

The concept of the outdoor classroom was a subject of discussion during task force meetings over the last several years. This idea stems partly from the existence of the Magoon and Ka'elemakule houses as bases from which such programs could be held. From a classroom format in these buildings, students and visitors could immediately walk into an outdoor learning experience. The classroom becomes the lava fields, the ocean, the anchialine ponds, and the archaeological sites.

Mahai'ula is already the site of a mullet release program. These aquatic programs can be expanded and tied into educational programs.

Dry land botany and cultivation practices can be developed into educational and cultural programs. Existing and cultivated plants may be used for these programs.

Fishing and navigational programs may be developed. Mahai'ula Bay and the offshore resources provide a rich outdoor laboratory for these skills and programs.

### 4.2.8 Interpretive Signs

The interpretive signs designed for Kekaha Kai State Park should conform to the general guidelines established for interpretive signs within the state park system. Likewise, design elements for the park should be carried out in all the signs.

## 4.3 AWAKE'E

The concept for this part of the park is true wilderness and park users are expected to be fishermen and hikers rather than sunbathers and picnickers. Also, kayakers may also stop by along their route up and down the coast.

### 4.3.1. Ocean Related Activities

Ocean recreation at Awake'e is expected to center around fishing. Swimming and sunbathing will be limited because the shore at Awake'e is generally rocky and because there are more accessible, sandy beaches in other areas of the park.

Kaho'iawa is very popular among local fishermen as a good place for fishing; especially night fishing. Ad hoc camping sites for fishing are found in this area and are generally well-maintained by local fishermen. Fishing will be supported with a small parking area and primitive campsites. There are some small sandy patches where canoes and kayaks could land and wading would be enjoyable.

The shoreline in this area is a good place to view marine mammals. Spinner dolphins abound in the waters off the coast and are often visible towards the entrance to Makalawena. The name of the point at Makalawena, Kaiwikoholā, also indicates the presence of whales off the coast.

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### 4.3.2 Picnicking

Accommodations will be Spartan; reflecting the wilderness quality and concept of this area. Facilities will be designed and access managed to maintain the natural, wilderness quality of the area. People who want to picnic here may select picnic sites to take advantage of natural places in the rocks, bushes and kiawe forest to enjoy the site.

### 4.3.3 Camping

At present, fishermen have created an ad hoc overnight area around Kaho'iawa. Cleared camping areas and circles of rocks for fireplaces have been created (Figure 4-2). Fishermen use these areas for multiple day and night fishing. These activities will be supported in this location with new facilities and increased maintenance for convenience and sanitary purposes.

The forested area behind the sandy beach at Awake'e is a good location for another camping area. Placement of the site will respect archaeological sites nearby.

### 4.3.4 Hiking

The Ala Kahakai is well established through much of this section of the coast. Where appropriate, trails should be marked. In the future, sections of the trails that have disappeared can be recreated in a manner similar to sections that have been preserved. The old *mauka-makai* trail that starts behind Awake'e Bay may be marked and enhanced. This trail may be designated and maintained to retain its historic character. A connection can be developed to tie the historic trail to the parking area near the entrance to Awake'e by the highway. Additional trails will be designated from the parking area to Pu'u Kuili. Trails are intended to provide access to significant wilderness features such as Pu'u Kuili or resources such as good fishing areas.

The existing jeep road to the summit of Pu'u Kuili will be closed and turned into a pedestrian trail. This trail will be enhanced into a loop hike from a parking area along the mauka base of the *pu'u*.

### 4.3.5 Biking

As discussed in the Mahai'ula Section, Kekaha Kai State Park is not conducive to extensive biking. The access road to Awake'e will be accessible to bikes.

### 4.3.6 Relaxation

Beach areas naturally provide a 'getaway' from the business of everyday life. Calm waters, warm sand and limitless views are qualities which enhance relaxation for park users. As a wilderness park, this section provides many areas with the relaxing atmosphere valued by residents and visitors.

### 4.3.7 Interpretive Programs

The Awake'e complex of anchialine ponds is the best example of this unique ecosystem within the park boundaries. These ponds are also good examples of the geological evolutionary pattern of these ecosystems.

### 4.3.8 Interpretive Signs

Since Awake'e will be the most wilderness-like section of the park, signage should be minimized. Detailed, explanatory displays are more appropriately developed at the visitor center or Education Center at Mahai'ula. Signage at Awake'e should identify resources and give precautionary notices to people so that they will treat the features with respect. The summit of Pu'u Kuili provides an unobstructed view of the Kona shoreline and *mauka* areas. While the familiar profile of Pu'u Kuili should remain free of structures, a small in-ground or low profile marker could provide valuable information and orientation from the *pu'u*.

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Camping areas being used



Camping areas being used

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### 4.4 MANINI'ŌWALI / KŪKI'O

#### 4.4.1 Ocean Related Activities

Ocean recreation in Manini'ōwali consists of fishing along the rocky shoreline and swimming, snorkeling, and sunbathing in Kua Bay. Kua Bay is one of the most beautiful bays along the coast and is very popular with residents and visitors alike. It needs to be protected. Maintenance and enforcement activities must be constant and proactive. Surfing is also popular during the winter months at Kua Bay. Because the Bay is so picturesque, private boats often anchor offshore with people swimming, snorkeling and fishing from the boat.

Much of the coastline is rocky boulder beaches or sharp lava escarpments. Fishing and gathering occur along these rocky edges. These rocky coastlines have an aesthetic beauty of their own highlighted by crashing ocean waves and aquamarine patchworks of coral, boulders and sand.

#### 4.4.2 Picnicking

The area *mauka* of Kua Bay is a popular day area for visitors. The site is fairly level and can be readily developed into a day use area with picnic facilities. The density of archaeological features in this area will require careful site planning and management.

#### 4.4.3 Camping

As the Ala Kahakai becomes more popular and the population of South Kohala and North Kona continues to grow, there will be a growing demand for coastal camping facilities, along the length of the Ala Kahakai. There will be a need to designate several places for people to stop and camp, otherwise people will camp in undesignated places which will have a detrimental impact on the resources and make enforcement and cleanup difficult. The closest recreation area (currently undeveloped) is Kīholo, to the north about seven miles away. The trek from Kīholo is very hot. Much of the walk is over the 1801 Ka'ūpūlehu lava flow; a rough coastal terrain with very little vegetation or cover. Currently there are public access facilities and enhanced landscaping at Hualālai Resort and Kūki'o along this shoreline trek. At Manini'ōwali, the availability of water will provide for another place to wash up, use the restrooms, replenish water, and rest for the next segment of the trail. Easy access from the highway and water availability will also make this site a logical place for family camping. A sandy area near the shoreline at the southern end of Kua Bay provides a soft spot for campers. Some people already camp in this area. The amount of camping allowed will depend on the support facilities developed and the level of management provided.

#### 4.4.4 Hiking

The Ala Kahakai is the main trail along the coast and clearly designated along this length of the park. A network of new trails could be connected to the main trail. Some old historic trails running through the Kūki'o project site will also connect up to the Ala Kahakai.

#### 4.4.5 Biking

As discussed in the Mahai'ula Section, Kekaha Kai State Park is not conducive to extensive biking. Of course, the access road to Kua Bay will be paved making it readily accessible to bikers.

#### 4.4.6 Relaxation

Beach areas naturally provide a 'get away' from the business of everyday life. Calm waters, warm sand and limitless views are qualities which enhance relaxation for park users. This section of the Park provides many areas with the relaxing atmosphere valued by residents and visitors. Easy access and improved facilities will greatly enhance these activities at Manini'ōwali.

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### 4.4.7 Interpretive Programs

Manini'ōwali / Kūki'o is rich in archeological resources. A danger to the resources exists because the concentration of features is high and their location is near activity areas and pathways. The park is narrow in this area and there is not much flexibility in moving circulation pathways away from sensitive archeological sites. In this context, the best approach is to create clear vehicular and pedestrian pathways and install landscaping and signage in a manner that minimizes ignorant destruction of resources. Features should be identified with signs and requests for respect. Access should be limited to some features such as burial platforms at *heiau* at Kakapa, canoe shed features, and lava tube entrances. While barriers will not stop vandals, they are clear signals that most people respect.

The coastal section of Manini'ōwali around Kua Bay is a precious resource but it is a small resource with limited capacity. It needs to be managed effectively. The archeological features are significant and also need to be managed for protection. Security and management cannot be overemphasized for this part of the park.

### 4.4.8 Interpretive Signs

Signage should be developed. Sensitive areas should be designated but specific features should probably not be identified as this may bring attention to them. Interpretive signs will be important because this will be a highly accessible area.



## **Section 5.0**

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### **PDR - Planning Considerations**

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### 5.0 PLANNING CONSIDERATIONS

This section presents the planning framework for Kekaha Kai State Park. Guiding principles, individual development plans, the role of the community, and a summary of the park conceptual plan are included.

#### 5.1 STATE PARK GOALS AND GUIDING PRINCIPLES

The concept and desire for a regional park in North Kona have existed for quite a long time. Two major policy directions have been at the core of all park development efforts in the West Hawai'i region. The first is the desire to provide public access to coastal recreational and natural areas. The second is a focus on the sustainability, protection and preservation of cultural and natural resources.

Based on these policy directions, several basic principles and concepts guided the development of the conceptual plan. They are:

- Recreational opportunities will be provided in balance with resource protection.
- The principles of resource conservation and sustainability will guide development and management.
- The park is part of a network of parks along the Kona coast and serves a larger region and community.
- Designs will incorporate the *ahupua'a* concept reflective of the early settlement patterns and management practices of indigenous Hawaiians.
- This is a wilderness park and its character will reflect wilderness values such that much of the Park lands will be left in an undeveloped state.
- Educational programs will be emphasized in the design and management of the park.

#### 5.2 DEVELOPMENT PLAN PROCESS

The Kekaha Kai State Park Conceptual Plan developed a vision for the entire park. For planning purposes the park is divided into three sections: Mahai'ula / Kaulana, Awake'e, and Manini'owali / Kūki'o. Existing conditions, resource capacities, traditional *ahupua'a* concepts for planning and management, historic settlement patterns and projected demand for recreational use were considered in developing the conceptual plan. Each section of the park is designed to provide a different focus and experience for park visitors.

While the Park Development Report is freestanding, the Conceptual Plan Report and the Development Plan are considered companion documents and should be used together.

#### 5.3 INFRASTRUCTURE AND FACILITIES

##### 5.3.1 Infrastructure

There is no utility service to the Kekaha Kai State Park.

Water System: There are no Hawai'i County waterlines near the Kekaha Kai State Park. However, the water lines will be installed at the Kūki'o development near the Manini'owali / Kūki'o section of the park. The Park will connect to Kūki'o's water facilities at Manini'owali. The nearest Department of Water Supply reservoir is the Keāhole Reservoir located across Queen Ka'ahumanu Highway *mauka* of Keāhole airport (approximately 3 miles south of the project).

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Wastewater: There are no wastewater treatment and disposal facilities in the park area. There are several portable toilets at Mahai'ula and vault toilets at Ka'elehuluhulu. There are no toilets at Kua Bay or in Awake'e.

The closest public sewage system to Mahai'ula is a small 0.04 million gallon per day (mgd) package treatment plant maintained by the State of Hawai'i to serve airport operations at the Keāhole Airport. A new wastewater treatment facility with a design capacity of 2.8 mgd is currently being designed for a site near Honokōhau Harbor. The distance between Mahai'ula and the future sewage treatment facility is approximately 8 miles. A sewage system will also be developed as part of the Kūki'o development adjacent to the Manini'ōwali / Kūki'o section of the park.

Most of the park area is a Critical Wastewater Disposal Area where the construction of new cesspools is prohibited. Areas of the park that are at a minimum of 1000 feet from the shoreline and at an elevation of 100 or more are considered non-critical wastewater disposal areas. As a State facility, cesspools are not permitted in these areas. All wastewater should be treated and reused wherever possible to minimize the discharge of wastewater to the ground and near shore waters.

However, the wastewater lines will be installed at the Kūki'o development near the Manini'ōwali / Kūki'o section of the park. The Park will connect to Kūki'o's water facilities at Manini'ōwali.

Storm Water Drainage: The geology of the subject area is generally comprised of highly permeable rocks of the Hualālai volcanic series. This highly permeable formation lacks definitive drainage ways, indicating that surface runoff is virtually non-existent. There are no drainage improvements onsite.

Electrical Power: Existing electrical service in the area surrounding the park is provided by Hawai'i Electric Light Company (HELCO) via a 69-KV overhead transmission line located approximately 3,000 to 3,300 feet *mauka* of the Queen Ka'ahumanu Highway. However, there are no power lines within the park.

### 5.3.2 Facilities

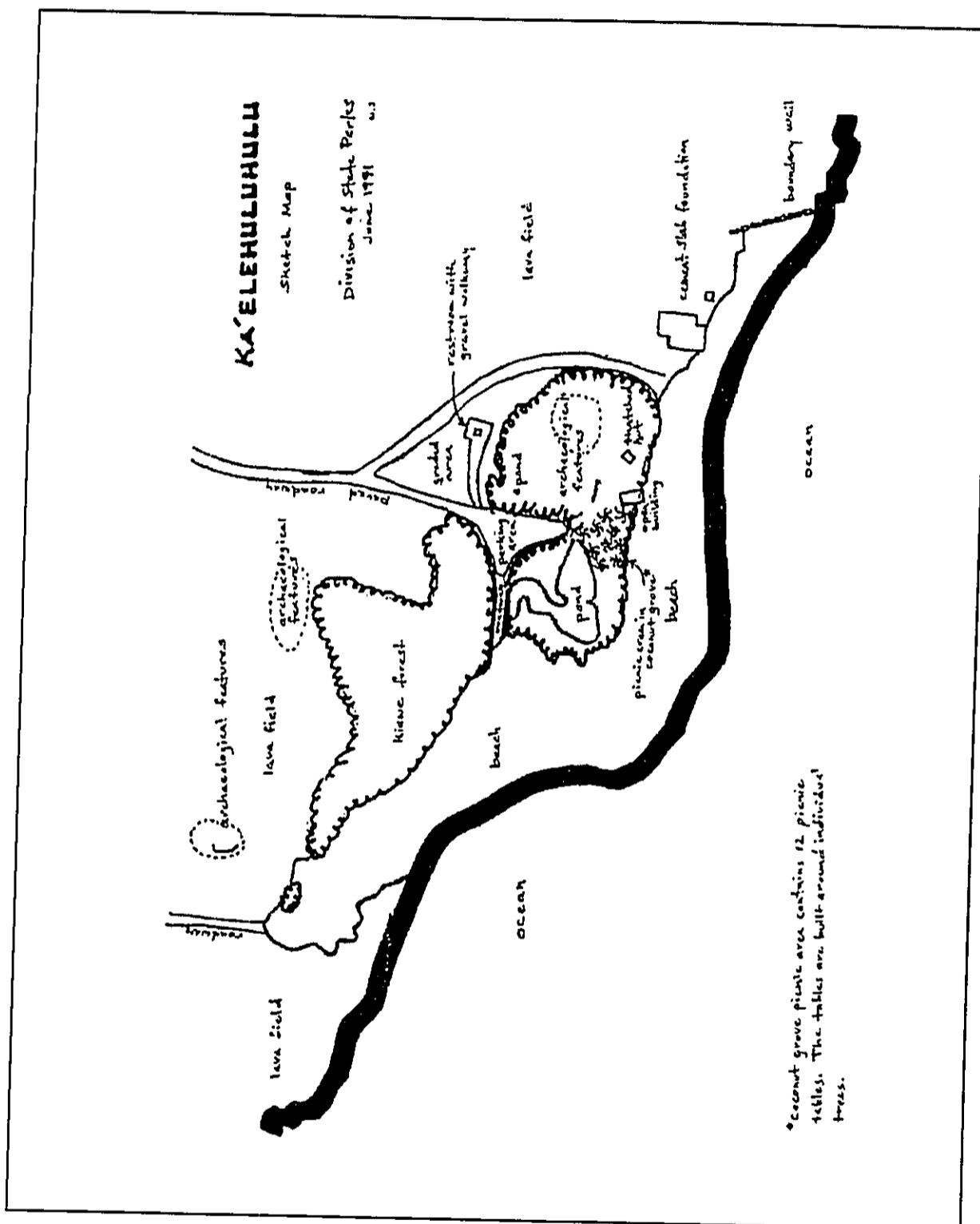
Roadways: The Queen Ka'ahumanu Highway is the primary arterial highway between Kailua-Kona and Kawaihae and provides the main access route to the park. The only two-wheel drive road within the Kekaha Kai State Park site is a rough poorly-paved road leading from Queen Ka'ahumanu Highway through Kaulana, including a section of State Department of Transportation land, to a parking area at Ka'elehuluhulu Beach and Mahai'ula Bay. Access to Mahai'ula on this road is controlled by a locked gate near the highway. There are chains controlling the secondary spurs to Mahai'ula and Mākole'ā Beach. The state park at Mahai'ula is currently open six days a week. There is a four-wheel drive road at Awake'e which leads from the highway to Pu'u Kuili, Kaho'iawa Bay, Awake'e Bay, and the locked gate at the border of Makalawena. A four-wheel drive road through private lands in Manini'ōwali / Kūki'o links the highway with Kua Bay and the coastline. Access to Kikaua Point is currently provided by a paved, public access roadway through the WB Kūki'o development.

Other Facilities: Existing facilities in the park are minimal. Trash receptacles are provided in a few places. Graded, unpaved parking areas are provided at both Ka'elehuluhulu and Mahai'ula. Picnic tables and benches are also provided in the two areas. There are no facilities in Awake'e or Manini'ōwali / Kūki'o. The Magoon / Ka'elemakule house complex and Division of State Parks maintenance/storage sheds at Mahai'ula are the only structures in the park (Figure 5-1 and 5-2). Note that these figures are 1991 conditions.



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Kekaha Kai State Park

Ka'elehuluhulu

Figure S-2

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### 5.4 HAZARDS

#### 5.4.1 Natural Hazards

##### 5.4.1.1 Flood Hazard

According to the Federal Insurance Rate Map (FIRM) Community Panel Number 55166 0466 C September 16, 1988 the coastal areas are in Zones AE and VE (Figure 5-3). The coastal VE zone directly fronting the ocean is generally 8 to 9 feet above mean sea level while just behind this area the AE zones range from 6 to 8 feet above mean sea level. The VE zones have the additional hazard of wave velocity added to the flood elevation. The width of this flood zone varies along the coast with bathymetry, topography and land surface friction. The widths range from 100 feet to 1,000 feet from the shoreline. Facility development within these zones should meet appropriate elevation and design standards for these districts. Coastal evacuation plans should be in place in the event of a hurricane, storm surge or tsunami.

##### 5.4.1.2 Volcanic

Kekaha Kai State Park is subject to volcanic hazards posed by Hualālai. Building locations and design will need to address these issues.

Hualālai is a shield volcano located on the west side of the island of Hawaii. The last historical eruption at Hualālai ended in 1801. This eruption produced two very fluid, high velocity lava flows that entered the ocean, one of which includes property now known as Kekaha Kai State Park and the Keāhole (Kona) International Airport. (Figure 5-4).

While it's been 200 hundred years since the last eruption of Hualālai, volcanologists say that it will almost certainly erupt again, posing a volcanic hazard to this region. The U.S. Geological Service (USGS) volcanic hazard zones map has determined all of Hualālai to be in Zone 4 based chiefly on the location and frequency of both historic and prehistoric eruptions, on a scale of 1 through 9, with 1 as the highest severity of hazard. Since Hualālai flanks are steep and the distance from the vents to the coast is short, Hualālai continues to present a volcanic hazard to nearby populated areas. For example, should a lava flow as voluminous as the 1800 eruption recur, it could cover the distance from the summit to Kailua-Kona town in a few hours.

##### 5.4.1.3 Lava Flows

Parts of the park include lava tubes with thin roofs that may collapse if stepped on. If people wander off trails into these barren areas there may be some danger of injury. This hazard is heightened where there are few people nearby or the site is inaccessible to emergency vehicles.

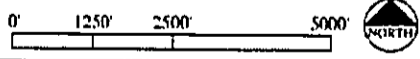
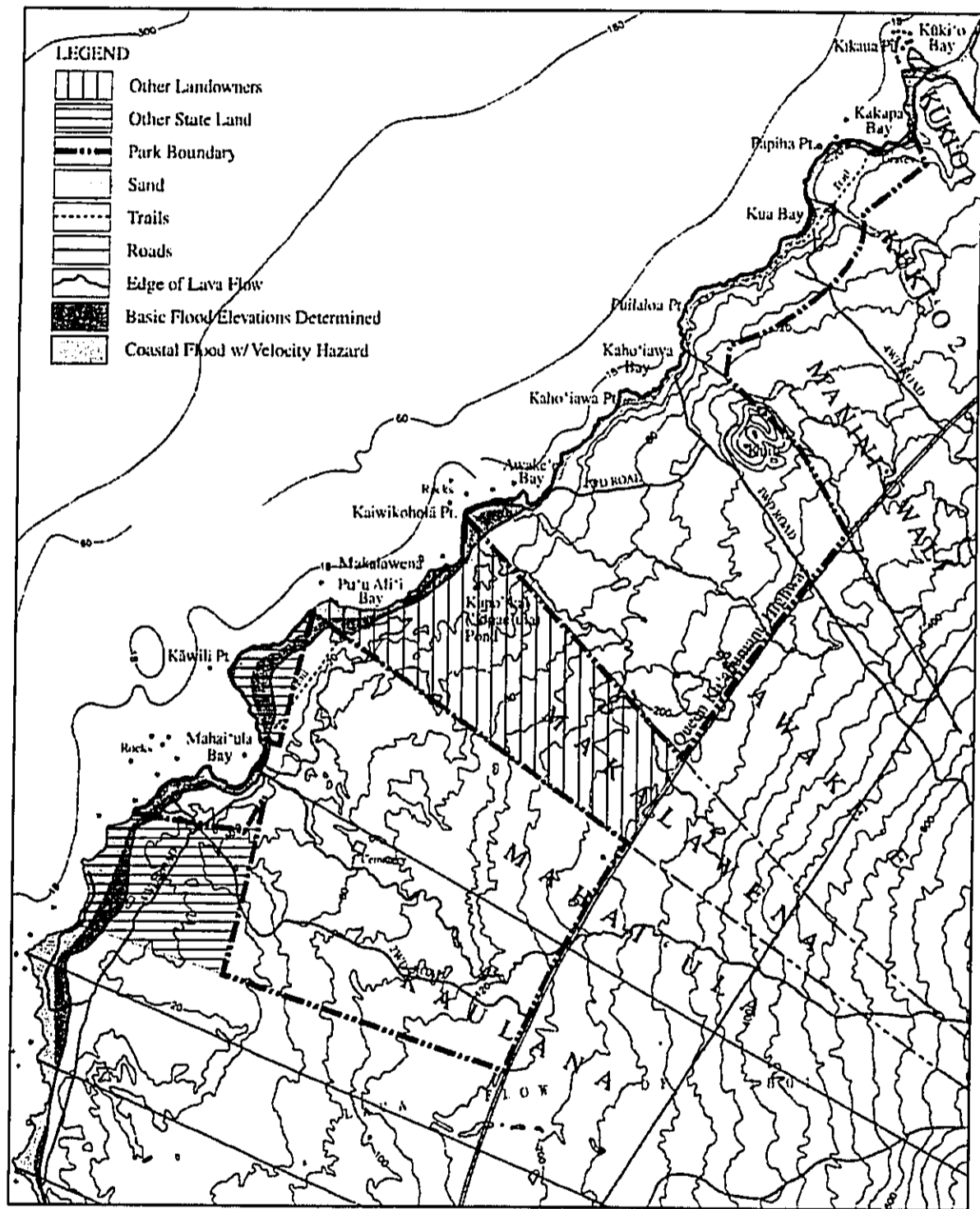
In addition, lava is often sharp, abrasive, hard to walk on, and wears out shoes. The dark unvegetated landscape absorbs heat and increases risks of heat stroke and dehydration.

##### 5.4.1.4 Hot Arid Climate

Hiking in hot arid climates without potable water can be hazardous. Walkers may become overheated and develop heat stroke. Hikers should be cautioned to take necessary precautions to prevent overheating. In wilderness areas with poor access these emergencies can become very serious.

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Kekaha Kai State Park

Flood Zones

Figure S-3

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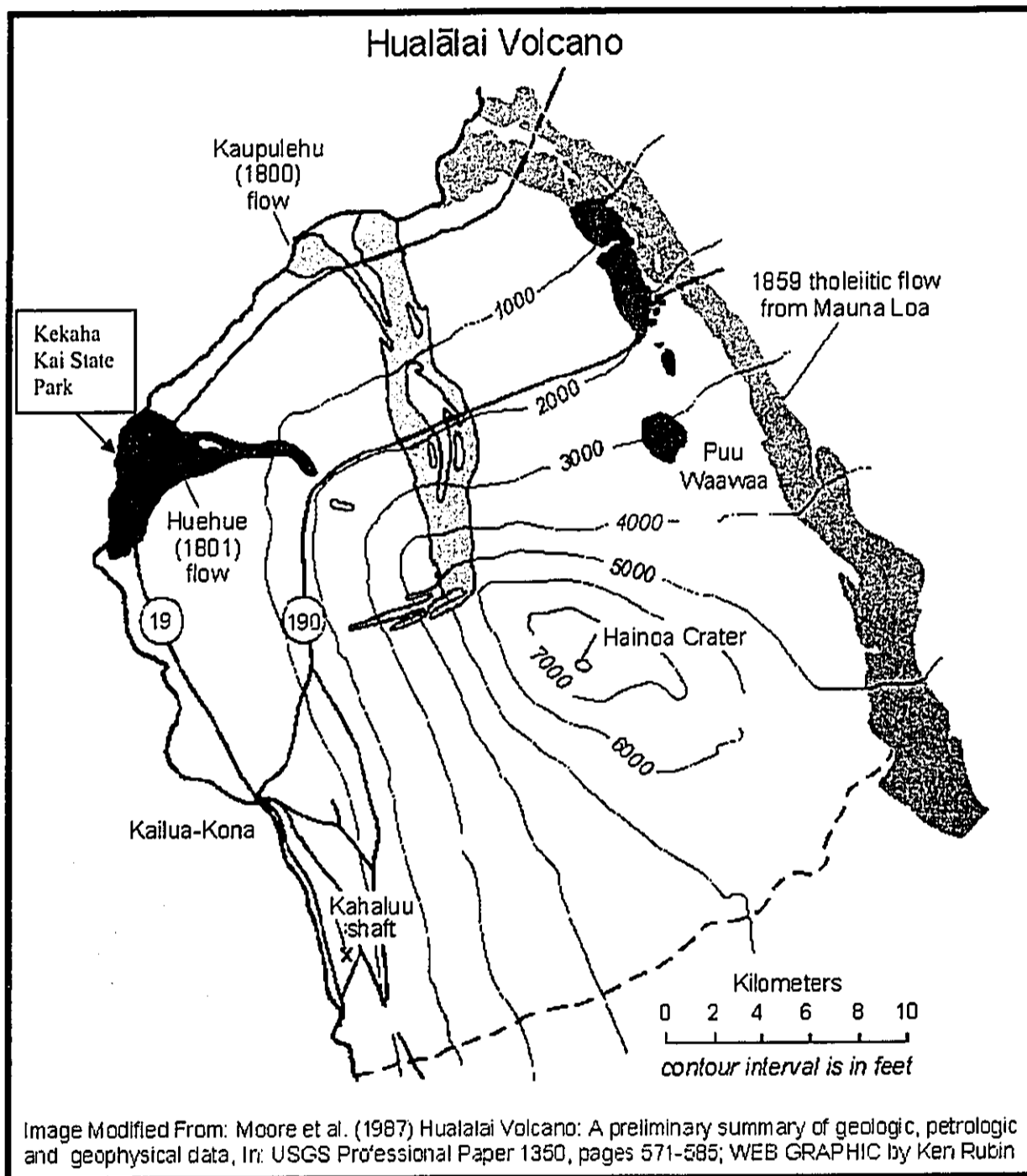


Image Modified From: Moore et al. (1987) Hualalai Volcano: A preliminary summary of geologic, petrologic and geophysical data, In: USGS Professional Paper 1350, pages 571-585; WEB GRAPHIC by Ken Rubin

Kekaha Kai State Park

Hualālai Volcano

Figure 5-4



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### 5.4.1.5 Ocean and Beaches

The ocean and beaches are the main attraction in coastal parks. However, they can also be places of danger. This danger is heightened in wilderness areas where people are scarce and emergency vehicles may take some time to arrive. Storm surge and high wave washes can be notoriously unpredictable in their patterns and create dangerous conditions. Currents can sometimes cause people to drift beyond their depth. Slips and falls along boulder beaches and jagged lava shorelines are common occurrences that can sometimes lead to serious injury.

### 5.4.1.6 Hazardous Plants and Animals

While Hawai'i has few native poisonous or venomous plants, or animals, some introduced and native species should be treated with caution. On land, scorpions, centipedes, wasps, and bees are the major outdoor hazards. In the water, Portuguese Man o' War, jellyfish, and other similar animals occasionally become problems. Sharks, eels, some sea urchins, and similar creatures need to be treated with caution when encountered.

### 5.4.2 Man-Made Hazards

#### 5.4.2.1 Noise and AICUZ

According to the Air Installation Compatibility Use Zone (AICUZ) maps for Keāhole Airport the southwestern section of the Mahai'ula / Kaulana is in the noise contour portions of the AICUZ (Figure 5-5). Since this portion of the park is in the approach path to Keāhole Airport ground noise levels at parts of Ka'elehuluhulu are in the 65 LDn zone. Everything to the west/southwest of the Magoon / Ka'elemakule complex falls in the 55 LDn zone. While the park is not in the accident potential zone (APZ) of the airport and these levels are not hazardous to human health, 55 LDn or quieter is usually the preferred level for a residential subdivision. The noise does take away some of the wilderness character of the place.

#### 5.4.2.2 Fire

In hot arid climates, fires may start very quickly and burn large acreage of grasslands or forests. While the large patches of lava may limit the spread of the fire somewhat, the hazard remains significant. The danger is to ecosystems and natural resources as well as to people. Most fires are man-made through carelessness, ignorance or deliberate vandalism. A fire protection plan is an important emergency precaution for the park.

#### 5.4.2.3 Other Man-Made Hazards

In the Mahai'ula area, some remnants of past habitation are potentially hazardous to park users. At the Magoon / Ka'elemakule complex water tanks, water lines, a derelict windmill and pump, abandoned pits, old buildings and smaller structures are potential hazards. Unless retained for interpretation purposes or repaired to utility, these structures should be targeted for removal. Volunteers and park personnel have completed some of this work.

### 5.5 CONSTRAINTS

Development of park facilities should be guided by several constraints. The constraints are related to the park concept and regional geography, and serve to guide the general development of support facilities in the park:

- Park facilities should be generally limited to one story in height and lower than tree height.
- Where practicable, construction materials should encourage the use of natural materials native to the Kona coast, or materials compatible to natural materials.



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- Operational practices should minimize or avoid the use of outside resources such as imported fresh water or power from the utility grid.
- Systems and designs should avoid or minimize impacts on the natural environment.
- The carrying capacity of the resource is crucial and a monitoring program should be developed to ensure that the supporting infrastructure does not lead to a degradation of park resources. The assessment of the level of use will be an ongoing responsibility of the Department.
- Disruption to archaeological and historical sites will be avoided to the maximum extent possible.

The visual impact of facility development will be assessed early in the development process. View planes and important lines of sight will be preserved.

### 5.6 ADA GUIDELINES AND COMPLIANCE

Planning for Kekaha Kai State Park seeks to retain the natural wilderness quality of the land by keeping facility development to a minimum and keeping trails and roads in as natural a state as possible. Part of the strategy is to keep things unimproved to limit access and impacts as well as to retain the natural quality.

The Americans with Disabilities Act (ADA) access policies and guidelines call for facilities to enhance accessibility. The Americans with Disabilities Act requires all state and local government facilities such as parks to be accessible to people with disabilities. The State of Hawaii adopted the current "Americans with Disabilities Act Accessibility Guidelines" (ADAAG) to implement this requirement under HRS Section 103-50 and has also adopted Hawaii Administrative Rules Title 11, Chapter 219. Development Plans for the Kekaha Kai State Park facility must be designed implementing these requirements by using the best design practices to reach compliance to the maximum extent feasible.

The ADAAG is an evolving document with the portions most in the evolutionary stage affecting outdoor recreation areas. Currently ADAAG applies to the environment of buildings and facilities. To the extent that this plan addresses restrooms, visitor centers, parking lots, etc., ADAAG has provisions which currently apply.

The U.S. Architectural and Transportation Barriers Compliance Board also provides recommendations and various proposed guidelines which reflect the current best design practices for outdoor facilities. Since the park's long range plan is just at the start of developing a final master plan that may not be fully implemented for many years, we anticipate these evolving final guidelines to ultimately impact all future designs.

All designs of Kekaha Kai State Park shall adhere to the Americans with Disabilities Act Accessibility Guidelines (ADAAG), as current. Where guidelines for outdoor recreation sites have been issued by the U.S. Architectural and Transportation Barrier Compliance Board are either as final but not enforceable guidelines, interim guidelines, or advisory recommendations, those guidelines shall be followed as best design practices to the maximum extent feasible. At this time of this Master Plan, the documents relevant to this plan are:

- U.S. Architectural and Transportation Barriers Compliance Board, Recreation Guidelines. Final Rule, September 3, 2002. There is limited application of these guidelines to the park, as they cover pools, sports facilities, golf courses, boating and fishing facilities and amusement rides. Nonetheless, they should be referenced.
- U.S. Architectural and Transportation Barriers Compliance Board, Recommendations for Accessibility Guidelines, Outdoor Developed Areas; Final Report published in September 1999.

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These recommendations affect camping sites, picnic sites, trails, and beach access. These recommendations have not been crafted into guidelines, but they do represent the state of the art for environments such as Kekaha Kai State Park.

- U.S. Architectural and Transportation Barriers Compliance Board, Accessibility Guidelines for Public Rights of Way – Draft Guidelines, June 17, 2002.

Throughout this document, when the term “accessible” is used, it means “compliant with current ADAAG and designed to interim or recommended ADAAG for outdoor recreation facilities, as best practices.

### 5.7 REGULATORY REQUIREMENTS

*In addition to ADA requirements, the following regulatory requirements pertain to the development of the Park improvements.*

Flood: The project sites are located in Zones AE and VE. Zones AE is an area where flood elevations are determined, while Zone VE is an area of coastal flooding with velocity hazard (wave action) and base flood elevations are determined. The proposed project must comply with rules and regulations of the National Flood Insurance Program and all applicable County Flood Ordinances.

Cultural Impact: Act 50, SLH 2000 requires an assessment of the project’s impacts on cultural practices. This is provided in Section 10 of this EIS.

Noise, Radiation and Indoor Air Quality: All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on “Community Noise Control”.

Wastewater Plans: All wastewater plans must conform to applicable provisions of the Department of Health’s Administrative Rules, Chapter 11-62, “Wastewater Systems”.

Dust Control: Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, “Air Pollution Control,” Section 11-60.1-33, Fugitive Dust.

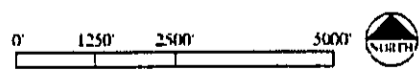
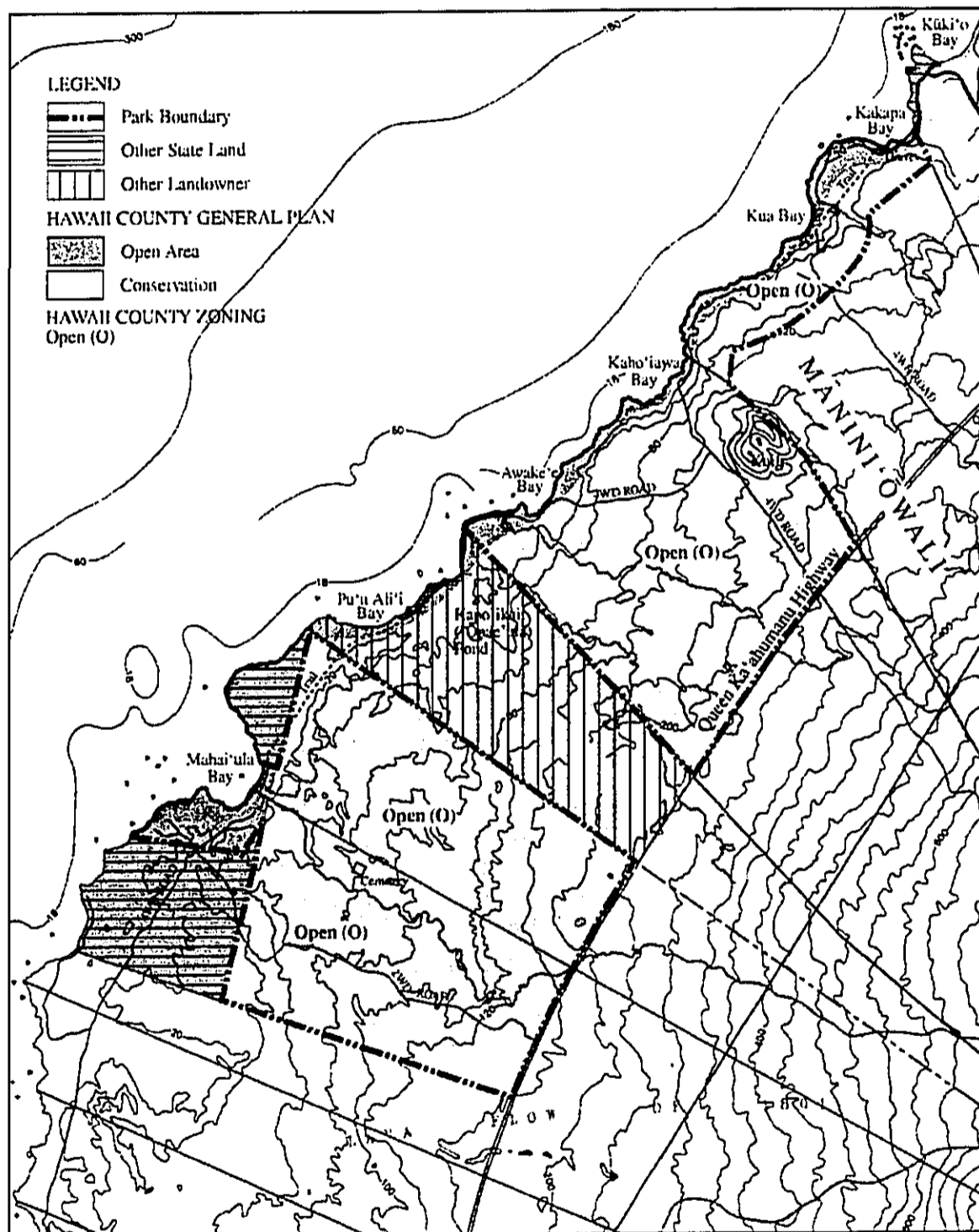
Historic Preservation: The project will require approval under Chapter 6E-8 before it can be implemented.

Land Use Permits: The properties are situated within an area designed Conservation and / or Urban by the State Land Use Commission and zoned Open by the County. (Figures 5-6 and 5-7). A portion of TMK 7-3-43: Por. 1 is designated Urban by the State Land Use Commission, and zoned Industrial (MG-1a) by the County. Park improvements will be located in the portion of the property designated Conservation/Open. A Conservation District Use Permit will be required.

The properties are also situated within the County’s Special Management Area (SMA). Any development in the SMA must be consistent with the SMA guidelines set forth in Section 205A, HRS and the SMA guidelines contained in Planning Commission Rule 9. A SMA Major Use Permit will be required to construct the proposed improvements. A Shoreline Setback Variance may also be required depending on the type and location of the proposed improvements, as identified in Planning Commission Rule 8 and Planning Department Rule 11.

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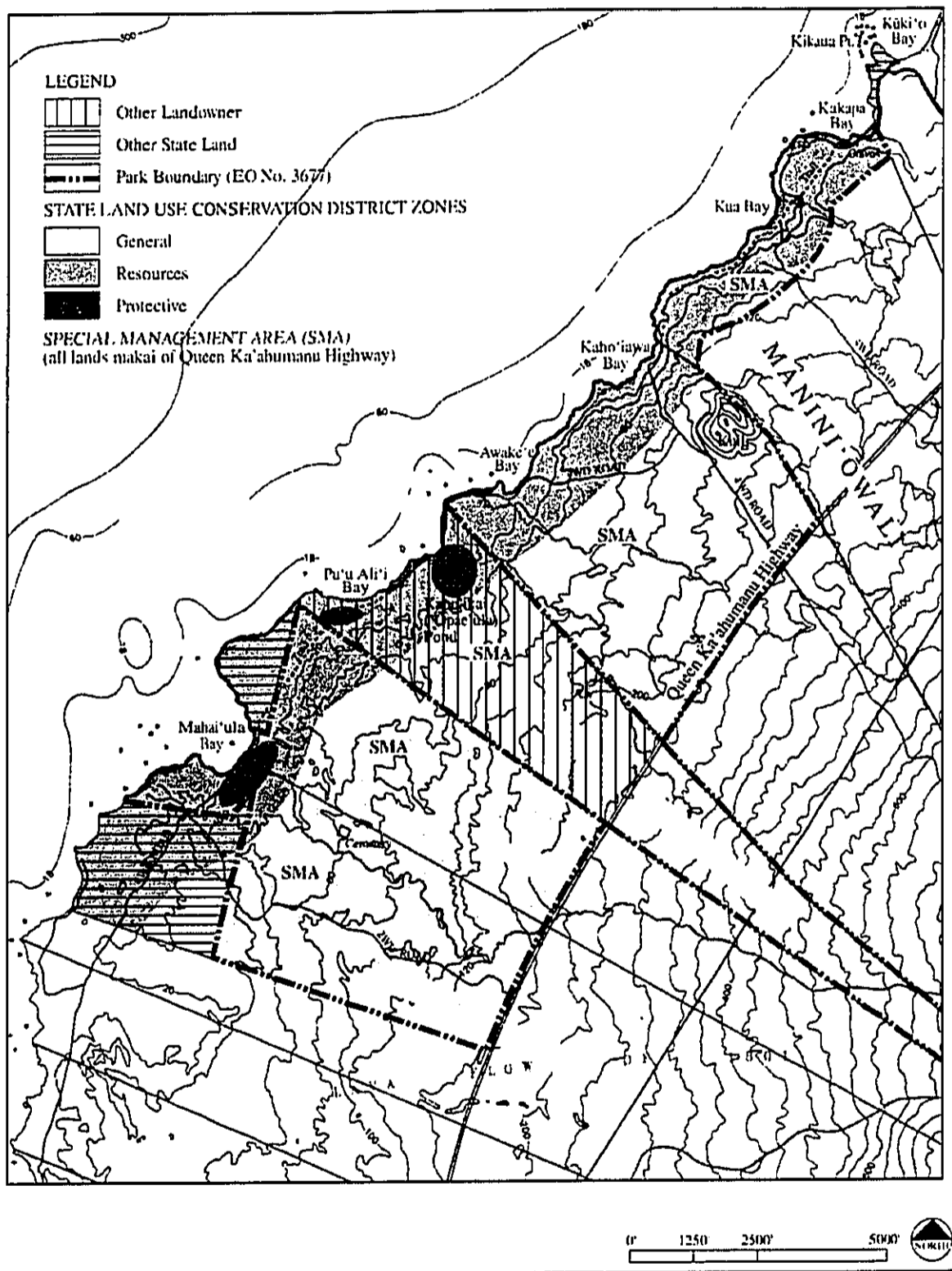
Kekaha Kai State Park

County Zoning and General Plan

Figure 5-6

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Kekaha Kai State Park

State Land Use Districts  
and Special Management Areas

Figure 5-7

**Section 6.0**

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PDR – Development Plan

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### 6.0 DEVELOPMENT PLAN

The proposed development plan (Figure 6-1) is an extension of the Conceptual master plan adopted by the Board of Land and Natural Resources in 1998. The Conceptual Plan and subsequent concepts for this development plan is a result of many community meetings and discussions with resource people, agencies and the Kekaha Kai State Park Advisory Task Force. The initial Task Force completed its draft recommendations for the Mahai'ula Section in May 1996 and concluded their original mission during the summer of 1996. Their recommendations are included as Appendix J. Park planning for the Awake'e and Manini'owali sections was also begun in the 1996 Task Force meetings and continued until 2002. Notes from these meetings are included in Appendix J.

#### GENERAL DEVELOPMENT GUIDELINES

The following general guidelines apply to all sections of the Park.

Water: Water is scarce in Kekaha. There was general consensus among Task Force members to limit the availability of water in the park. The scarcity of water is a quality of the land that people must see as a base reality. As the people of old said, Kekaha *wai 'ole* (waterless Kekaha). Part of the identity of this park is the scarcity and wise use of water. There is no water infrastructure in the park at this time. The water plan should emphasize capture and wise use of existing sources.

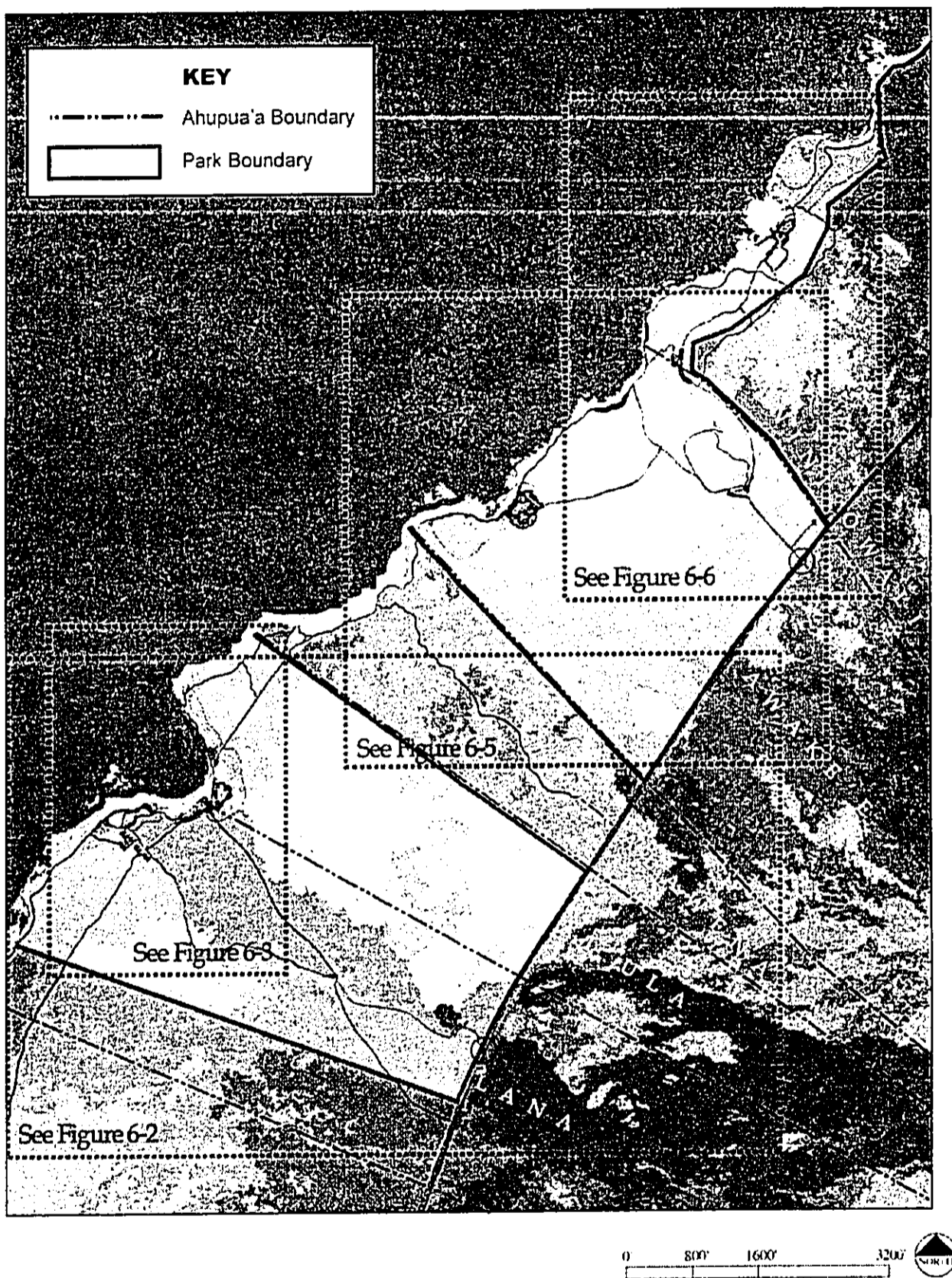
Potable Water: There will be no drinking water at Ka'elehuluhulu. Drinking water may be provided in the Activity Center buildings and the staff's residence. Drinking water will also be provided at the Visitor Center/park headquarters. In all places where it is provided at Mahai'ula, the water may be trucked in. No water will be provided in Awake'e. In Manini'owali, connection will be provided to the water system at the WB Manini'owali development. This will be the only area where potable water will not have to be trucked in.

Brackish Water: The use of brackish water sources is compatible with arid climates. Kekaha is no exception. Brackish water in the park will come primarily from two sources: brackish wells, springs and ponds or catchments systems. The park should utilize both. Wind and solar energy should be used to power any equipment that may be needed for the system. Shallow brackish wells may be dug. Previous studies about water sources at Makalawena indicate that there is a thin basal lens about one to two feet above sea level. The salinity ranges roughly from 3 to 6 parts per thousand. This is sufficient to sustain plants which have adjusted to this climate. The people of old were ingenious in the way they used catchments systems. This concept should be resurrected at Kekaha Kai. Buildings and site plans should maximize the amount of catchment that is retained.

Where shower water is provided, except for the staff residence, it will be from brackish water sources. While the landscaping will be a xeriscape it will still be necessary to irrigate a little in the grow-in period. Also, periodic irrigation is helpful even for dryland plants; especially until they mature. Irrigation water will all come from brackish water sources. The brackish water sources can also be used for fire protection.



KEKAHA KAI STATE PARK



Kekaha Kai State Park

Development Plan Overview

Figure 6-1

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#### Landscaping

The landscape of Kekaha is dry. The vegetation is predominantly coastal dryland species with a mix of wetland sedges and strand vegetation. The following summarizes the general landscape policies of the Park.

- Show a preference for endemic, indigenous and Polynesian introductions: Native dryland species should be highlighted. Well known trees such as *'iliahi*, *wiliwili* and *'ōhi'a* should be included. Bushes such as *maiapilo*, *nai'o*, *noni* and *a'ali'i* should be part of the landscape palette. Beach strand vegetation such as *pōhuehue* and *pau o Hi'iaka* should be included. Where there are brackish water sources, *milo* and coconuts would be appropriate. A complete list should be developed in consultation with ethnobotanists, educators and the community. Some exceptions to this policy should be allowed for long established trees such as *kiawe* and beach heliotrope which provide valuable functions and have their own history in the islands.
- Predominantly Xeriscape: This is a corollary to the first point. Plants should be xeriscape and salt tolerant. They should "belong" in this landscape. Otherwise they would not look natural. This trait also reduces irrigation and maintenance costs.
- Eradication of Alien Species: While the previous paragraphs discuss enhancement and plantings, this policy focuses on eradication of weedy species. The 1801 flow is still relatively clear of vegetation and there is a chance that the introduced fountain grass can be controlled on this section of the park. These efforts support several basic values. First, it would contain and limit an introduced weed. Second, it would preserve the character of the 1801 flow. Finally, by limiting the competition from an aggressive foreign species it allows traditional native species such as *noni*, *maiapilo*, *pili* and *'ōhi'a* a greater chance to colonize the flow and other areas that are cleared.
- Enhance the Recreational Values of Kekaha Kai State Park: In Kekaha, plants provide shade from the hot sun and comfortable microclimates. They create variety in the landscape and aesthetically soften the land. They make the harsh arid landscape inviting by creating a cooler contrast. They enhance picnic areas and are generally pleasing to the eye. The recreational value of this coastline is greatly enhanced by the available vegetation. The landscape plan will eliminate unwanted weedy species and enhance desirable ones. Better recreational areas will be created, thereby increasing both the quality and quantity of the spaces available for recreational purposes.

#### New Facilities and Infrastructure

In general, construction within the park should be limited and small in scale in keeping with the natural wilderness focus of the park. Color, design and material should seek to blend buildings into the natural setting. They should be sited in clusters to minimize their visual and physical impacts. Site planning should incorporate the natural topography as much as possible to minimize grading. The following guidelines generally apply:

- Facilities will be developed before the need develops.
- They will be developed as funding allows.
- Staff support will be sufficient to upkeep and maintain the facilities.
- The technology will be appropriate for the expected demand.
- The construction and operation will not have a negative impact on the environment.

The concept of sustainability will guide the type and equipment that is selected. Restroom facilities should be made of materials and colors that blend into the natural scenery as much as possible. Structures should be designed to merge into the landscape and vegetation.

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Power requirements will be evaluated for each facility. Sources that are naturally available such as solar and wind will be the suggested sources unless economic, technical or environmental reasons dictate otherwise. A portable generator should be available for emergency and backup purposes.

Telecommunications will be via wireless systems. Cellular phones and small satellite dishes are recommended. In the future, satellite linkage may be pursued such that some of the educational and cultural activities and events from the activity center may be linked to educational program networks around the world.

### Trails

Trails are a major part of Kekaha Kai. A coastal trail will run through Kekaha Kai State Park, linking all the *ahupua'a* associated with the park. The shoreline trail will provide public access across private land at Makalawena. The coastal trail through Kekaha Kai State Park may become a section of the Ala Kahakai Trail which is part of a 175-mile National Historic Trail. The trail itself will be a means of access, and a recreational and interpretive resource. The trail will continue to provide access to ocean recreation opportunities and fishing/gathering sites in coastal areas and near shore waters.

*Mauka-makai* trails are located in each *ahupua'a* and these will be highlighted. They will be identified and rebuilt as necessary. Where alignments of historic trails are uncertain new connections will be developed and recorded properly.

It is the policy of the Division of State Parks to generally use existing historic and pre-contact trails and rehabilitate them so they are useable today to retain their original trail functions. New trail construction will use historic trail building designs and techniques as much as practicable. A more detailed Trail Management Plan is presented in Chapter 7. The purpose of the trail plan is to:

- Provide public access to the resources of the park for recreational, educational and cultural purposes.
- Provide an opportunity for the public to understand and appreciate various natural and cultural features along the coast while protecting these features and their environment.
- Monitor and control public use and alleviate public health and safety concerns.
- Coordinate government agency, landowner/manager and community interests including native Hawaiian interests, in the management of the trail corridor.
- Preserve historic trails.

### ADA Access

The requirements for accessibility under the Federal Americans with Disabilities Act and Hawai'i Law, Section 103-50 Hawai'i Revised Statutes, are described in Section 5.6. It is understood that the design guidelines will differ for new construction versus alteration. As stated in Section 5.6.

Throughout this document, when the term "accessible" is used, it means "compliant with HRS Section 103-50 and Hawai'i Administrative Rules Title 11, Chapter 219."

Throughout this document, when the term "ADAAG" is used, it means "compliant with current ADAAG and designed to interim or recommended ADAAG for outdoor recreation facilities, as best practices."

In addition to the information provided in Section 5.6, generally, the following guidelines will be applied and highlight some of the policy directions for Kekaha Kai State Park:

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- All day use areas and major activity areas will have at least one accessible path from parking areas. Facilities at Day use areas including picnic tables, utility sinks, grills and trash containers will meet Americans with Disabilities Act Accessibility Guidelines (ADAAG).
- Overlooks and viewing areas will be designed for accessibility. Viewing equipment placement and design will comply with ADAAG.
- All designated parking areas shall be designed to ensure that accessible parking stalls and access aisles connect to an accessible route to one of each type of accessible amenities provided at each site.
- At least a portion of all designed camping areas will be accessible from the adjacent parking area. A portion of all campsites will be surfaced and designed to accommodate wheelchairs and other handicapped requirements.
- All new restroom facilities shall be fully accessible and on an accessible route.
- There will be at least one accessible route to the major beaches in the Park from the nearest parking area, including Ka'elehuluhulu, Mahai'ula Awake'e and Kua Bay. Surface type and route will be developed on a case-by-case basis.
- Paths to interpretive areas will be made ADA accessible to the maximum extent practicable. While not all sections may be accessible due to limitations of terrain or potential alteration of the features since most interpretive. Those paths and trails that are not fully accessible shall be designed to address accessibility to the maximum extent feasible using best design practices, including program access.
- A portion of all trails will be made accessible. As a "wilderness" park it is understood that not all areas will be accessible. However, every effort will be made to include portions close to activity areas, significant features and resources into the network of accessible pathways. These portions will comply with ADAAG.
- Those designated to be accessible paths to amenities, the beach, or other park areas, when not all paths are accessible, should be within close proximity to the accessible parking spaces and the accessible restrooms.
- Signage will inform people of accessible routes and facilities.

Facilities for accessibility will be developed incrementally with the rest of Park development. Availability of funding will determine the speed with which these improvements will be developed. New activity areas will be opened when there are sufficient management resources to maintain the facility.

The following Development Plans provided in this Chapter are schematic and will be refined with more detailed site planning to respond to localized topographic conditions and to insure that archaeological features are not impacted.

### **6.1. MAHAI'ULA / KAULANA SECTION**

The Conceptual Plan identified the Mahai'ula / Kaulana section for the highest level of use in the Park. In recent months there has been some suggestions that the Manini'ōwali section receive the highest level of use because of the paved road and adjacent residential development. However, the natural resources at Manini'ōwali are smaller and the space available for Park development is more limited. The beaches at Mahai'ula and Ka'elehuluhulu are permanent and larger. Parking areas are larger and located in places where archaeological and cultural resources can be more easily avoided.

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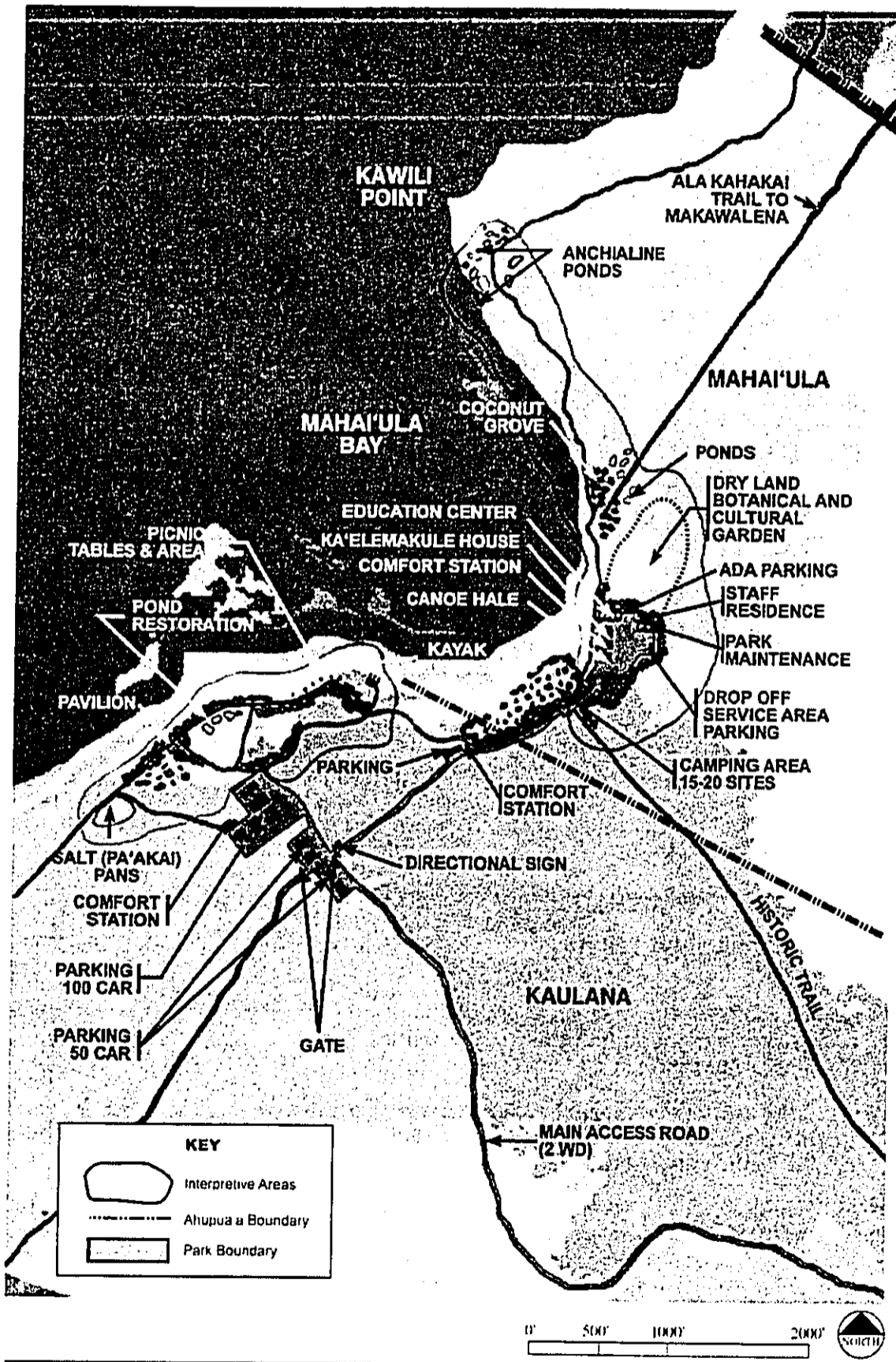
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The project development plan for Mahai'ula / Kaulana is shown in Figure 6-2 (and in detail in Figure 6-3). Within the Mahai'ula / Kaulana section there are six subsections. 1) Entrance/Visitor Center, 2) Open Lands: 1801 Flow and Grasslands, 3) Kāwili Point and Coastal Open Lands, 4) Ka'elehuluhulu, 5) Mahai'ula, and 6) Marine/Aquatic Components. Each of these subsections represents a distinct combination of natural and cultural resources, and park visitors will utilize each in a different way. Within each subsection are several distinct natural resources and planned man-made improvements. While several of these park subsections have varying levels of proposed development, others will be maintained as undeveloped open space to preserve scenic view corridors and the natural wilderness setting.



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Kekaha Kai State Park

Development Plan - Mahai'ula Detail

Figure 6.3

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### 6.1.1. Entrance/Visitor Center Subsection

#### Entryway Improvements

The highway entrance to the park has been improved. Additional improvements should be considered. The pavement widths and shoulders should be expanded to provide more space free flowing traffic in both directions. The left turn storage lane should be complemented with a deceleration lane in the southbound direction. The slope of the road off the highway should be made more gradual and the pavement width widened.

The gate to Mahai'ula will be the main entrance to the park. It is important both symbolically and functionally. Materials and designs used in the gate area should use local materials where practical and be compatible with the surrounding landscape. The signage at the gateway should also follow these guidelines.

#### Visitor Center/Museum

Located at the entry to the park, the visitor center will be the major interpretive facility of the park. The location of the structure at the park entry will encourage visitors to stop and receive an orientation prior to their visit. By placing the structure on the slopes at the *mauka* edge of the park, the scenic view corridors can be incorporated into this orientation of the park and the larger Kekaha region. The architecture should be integrated into the landscape.

The primary purpose of this facility is to orient visitors to the natural and cultural history of the Kekaha region of North Kona. Through such interpretive techniques as audio-visual presentations, interpretive talks, exhibits, and demonstrations, the visitor will gain a greater understanding and awareness of this dry, leeward environment on the island of Hawai'i and the people who lived here. Additional information will assist the visitor in planning their visit to North Kona and South Kohala, including maps and various recreational opportunities.

The visitor center should be designed and programmed to be a regional visitor center. It should orient the visitor to Kekaha Kai State Park and the entire West Hawai'i region. Its architecture should reflect the regional culture and geology in design and use of materials. The structure should integrate harmoniously and blend naturally into the surrounding setting. It should be a *kipuka* in the lava flow of the site. The center should include the following:

- An Administrative/Enforcement Center for the overall Park.
- A small commercial area providing refreshments, and the sale of maps, postcards, some crafts and memorabilia.
- Orientation and display area to the recreational resources in the region. Parks, environmental and cultural resources should be mapped and identified. Landmarks and visitor attractions of the region should be highlighted.
- Restrooms sufficient to accommodate buses traveling up and down the coast should be developed. Restrooms would also serve people going down to the shoreline area and FIT (free independent traveler) traffic along Queen Ka'ahumanu Highway.

Museum: A museum should be developed to house artifacts collected in the region. There has been much development in West Hawai'i over the last two decades and in the process much archaeological work has been conducted and many items and information of historical and cultural interest have been unearthed. These items are scattered in various places; including warehouses and miscellaneous offices and houses. There is no unified plan or place to display them and this resource is essentially dormant. Although the vision is ambitious, the visitor center museum could become a repository for artifacts from the region. Its full development will be dependent on the degree of public and private support. The facility should be



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developed incrementally and designed for future expansion as resource needs and financial support continue to develop.

#### Park Maintenance

The Park Maintenance Baseyard should be relocated to this site when the Visitor Center/Museum is constructed. This location is more central to the overall park and would have easy access to the highway for deliveries and other transportation needs.

Park maintenance facilities should be designed as a "back of house" function with the Visitor Center as the front of house. These facilities are usually not attractive and walls and landscaping should be used to soften, mask and mitigate its visual character. Site location should literally place it back of the Visitor Center. In the interim, the maintenance base for the Park should remain at Mahai'ula by the Bay.

#### Parking and Wayside

The parking lot for the area will serve multiple functions. First, it will accommodate people driving along the highway who want a rest stop wayside and a regional information center. Second, it will provide spaces for cars and buses with passengers visiting the center itself. These people would use restrooms, see displays, stop for orientation programs or attend classes. Third, it will serve as a terminus for people who will hike the trails in the area. Finally, it will accommodate people who may engage in traditional practices. Parking should accommodate stalls for at least two school buses and twenty five cars in addition to staff parking. This complex should be paved, and fully ADA accessible.

#### Utilities

A brackish well should be considered to provide a source for irrigation and grey water uses such as toilets. Package treatment plants such as living machines should be considered along with traditional septic tank and leach-field systems. Freshwater should be trucked in for drinking purposes. Building design and site design should utilize catchments and detention systems. A package wastewater treatment plant should be developed with a contained effluent reuse system. Power will be drawn from the transmission line running parallel to the highway on the *mauka* side. Site grading for the complex should result in ground conditions that will facilitate the growth of plants.

#### Landscaping

Landscaping at this site should be developed with a *kipuka* concept using xeriscape material and practices.

#### **6.1.2 Lava Field Subsection**

Structures are not proposed in the central portion of Mahai'ula between the highway and the shoreline. Much of this area is covered by the 1801 lava flow which promotes the feeling of open space and wilderness.

#### Viewing Pullovers

A viewing site should be graded along the side of the access road about a third of the way down to the beach and possibly one or two more locations. Several points of interest can be highlighted from these pullovers such as Pu'u Kuili to the north and Hualālai to the east. At these pullovers, interpretive signs can be used to interpret the 1801 lava flow, including the dynamics of a *pāhoehoe* flow, the associations with Kamehameha I and the goddess Pele, and the succession of vegetation on a lava flow. The dryland plant community, consisting largely of bunch grasses on the lava flow, can also be interpreted on *makai* side where colonization of the lava is noticeable.

A fountain grass eradication program should be considered from the access road since the barren lava has limited the progress of this invasive species. From this location, the task is partially manageable. In

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pockets where grasses have grown, native grasses such as *pili* should be considered as a way preempting reintroduction by invasive alien species.

### Interpretive Trail

The *mauka-makai* historic trail traverses the 1801 lava flow from the shoreline to the highway. A sign kiosk at the *makai* trailhead is proposed. Because the foot trail is only a worn, discolored alignment over the *pāhoehoe* flow, it is often difficult to follow. Therefore, it is recommended that *ahu* be constructed along the trail as markers. The petroglyph cluster at the *mauka* end of the trail needs to be monitored regularly for impacts from visitor traffic. This trail offers an opportunity to experience the lava flow, the plant communities, and the cultural history associated with this landscape.

### Resource Reserves-Ka'elemakule Cemetery (Kolomikimiki)

This site was transferred to the Catholic Diocese and is technically not part of the park. In respect for the nature of the site, there will be no signs or markers denoting the location of the site. However, a small, unobtrusive sign at the site is recommended to inform the inadvertent visitor that this site is not public and they should not enter the walled enclosure.

### **6.1.3 Kāwili Point Subsection**

#### Interpretive Area

The Kāwili Point archaeological sites comprise a well-preserved complex of platforms and walled enclosures related to the settlement of this leeward shoreline. An archaeological map of this complex has been drafted but no excavations have been conducted which would provide additional information about the occupation of these sites. An interpretive trail beginning at the coconut grove of Keawehala would utilize the historic trail running through the complex toward the point. An interpretive sign kiosk at the joint trailhead for the Kāwili Point trail and jeep trail would introduce the visitor to both trails, including the themes of fishing and shoreline habitation. A self-guided brochure for the complex would discuss selected sites. In program related activities, this trail would also be used for guided tours. This area and the area including the Magoon / Ka'elemakule complex should be designated as an interpretive area.

#### Trails

The trail to Makalawena begins at Keawehala. When this trail crosses over into Makalawena it presently goes over the dunes at Pu'u Ali'i Beach. A dune pocket vegetated with *kiawe* and *pōhuehue* forms an attractive microclimate in this field of lava just before the beach. This is a sensitive archaeological area. Coordination with Kamehameha Schools is needed to re-direct the trail to avoid negatively impacting this area. Signage and boardwalks along with realignment of the road should be considered. A *makai* realignment would bring it closer to an earlier coastal trail that is rarely used.

The coastal trail along Kāwili Point should be restored to provide an alternate path to Makalawena and also improve access to Kāwili Point.

#### Outdoor Classroom

Keawehala would serve as an outdoor classroom location for the educational programs operated out of the Education Center. From this locale, students and visitors can be given an orientation to the Kāwili Point Complex and the resources in the adjacent lava field.

There are significant anchialine ponds at both Keawehala and Kāwili Point. These ponds are readily accessible as outdoor classrooms to illustrate the formation of these features and the aquatic life within them. Their use by native Hawaiians could also be highlighted.

At Kāwili Point and the area north of the Education Center are 2 distinct flows that can be used to illustrate the difference between 'a'ā and *pāhoehoe* flows, the ages of different flows, the creation of

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*kīpuka*, the succession of plant growth on flows, and some of the features associated with these different types of lava.

### Historic Water Sources

At Keawehala, there are several historic features related to gathering and transporting water to the houses at Mahai'ula, including the wells, windmill, pump and water tank. Those that can be retrieved should be restored and used as part of the outdoor classroom concept. They represent older methods of using renewable resources. These could be added to newer technologies used in the restoration and development of the education center complex to teach sustainable methods of life in arid leeward climates. These facilities could also be re-developed to provide brackish water for non-potable uses such as irrigation and washing.

### **6.1.4 Ka'elehuluhulu**

The Ka'elehuluhulu area begins at the crossroads intersection to Mahai'ula.

#### Crossroads

The existing parking area at this intersection should be improved to a 50 car parking area. The parking lots should be an unstriped level graded area in keeping with the natural character of the park. Signage should indicate major features and destinations.

A visitor orientation kiosk is planned here. It will be an unmanned structure with a detailed map of this section of the park. Photos and text will highlight points of interest and suggested paths. Restrooms and parking locations will be identified.

A locked chain will control vehicular access to the Mahai'ula direction. The Keāhole access road should also be gated but remain unlocked to accommodate area fishermen. All facilities such as kiosks must be ADA accessible.

#### Restrooms

Vault toilets have been recently developed at Ka'elehuluhulu. Comfort stations equipped with eco-friendly self-composting toilets should be considered when additional restrooms are considered. These may be composting toilets or some other design that minimizes or eliminates water use and ground water contamination. New comfort stations should be ADA accessible from the parking lot and designed to blend into the grove of trees.

#### Parking

The parking lot at Ka'elehuluhulu should be a 100-car facility. The lot should be framed by walls made of local materials to control the number of cars. The site is large enough for expansion during special events that may require some overflow space. These overflow areas should be mildly graded and specifically designed as future expansion areas as needed. These areas should be chained off and only opened during such events. On a normal basis, the 100-car limit should be maintained. A small section of this parking area should be paved with handicapped stalls. A paved pathway should be developed from the parking lot to the comfort stations.

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#### Day Use Area

The day use area will focus around the beach and remnant pond area. The paved pathway from the parking lot will be ADA accessible. This area has coconut trees, *milo* and *kiawe* cover. Additional day use facilities proposed include a pavilion or shelter within the expanded landscape area. There will also be additional picnic benches and tables, barbecue grills and trash containers.

A kayak launching site has been designated at the Mahai'ula edge of Ka'elehuluhulu Beach. This site will be used by individual kayakers and is not for commercial operations. Commercial kayak operations are not allowed in the Park. The path to the kayak launch area will be ADA accessible.

#### Landscape

Ka'elehuluhulu will remain the most extensively used area of the park. Additional landscaping could be planted in this area. Plant material will include: *milo*, *kou*, coconut palms, *loulu*, and *hala*. Some later introductions such as *kiawe*, ironwood and beach heliotrope which have become naturalized in the area will be used in conjunction with native species and Polynesian introductions. This emphasis on native plants would be carried out throughout the landscaping plan through the shrub and vine levels and on into the wetlands around the ponds.

#### Interpretive Sign Kiosk

Signs are proposed at Ka'elehuluhulu to 1) orient visitors to the features of the park, 2) heighten visitor awareness about the natural and cultural resources and the opportunities available to learn more about these resources, and 3) inform visitors of the park rules and hazards (safety concerns). A sign kiosk shelter consisting of several interpretive signs is proposed at a central location by the parking lot and pond where it is readily accessible and visible to visitors getting out of their vehicles and walking to the beach. Themes and resources to be highlighted on these signs include:

**Ka'elehuluhulu – The Significance of the Name:** This place name translates as frayed hull and refers to the canoes being dragged over the rocks at low tide.

**A Changing Landscape – The Covering of Pa'aiea Fishpond by Lava:** Much of the fishpond was covered by the 1801 lava flow but a remnant is believed to still exist as the pond at Ka'elehuluhulu. Located just inland of the shoreline, the pond is being silted in by decaying vegetation and deposition during periods of high surf. Today, the pond is a water bird habitat and contains several wetland plants, including *makaloa* and *'akulikuli*. Restoration of the pond for interpretive purposes is being considered and the work has been initiated by Sea Grant staff on the island.

**Salt for Drying Fish:** The historic period salt works at the southern end of Ka'elehuluhulu beach consist of concrete slabs divided and terraced by low concrete walls. Saltwater would be piped to these low walled enclosures where the water would evaporate leaving the salt crystals. Gravity and the sun provided the energy for this system. With fishing being the major economic and subsistence activity along this shoreline, drying and salting was necessary to preserve the fish until it could be taken to market in Kailua town or to Kawaihae for shipping to Honolulu.

#### Resource Preserves

**Petroglyphs.** A complex of *papamū*, historic name petroglyphs, and midden scatters exists on the lava flow behind the *kiawe mauka* of Ka'elehuluhulu beach. This site has future research potential and the current practice of "coral graffiti" needs to be discouraged in this site area.

**Enclosure.** This imposing structure on the lava flow at the north end of Ka'elehuluhulu beach should be stabilized and managed for visitor impact. Possible burials are associated with this site which may require additional protection.

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The effect of the 1946 tsunami is still evident in this area and signage of this event could be placed at the parking area at the edge of this preserve. Stories of shipwrecks may also be a compatible theme.

### 6.1.5 Mahai'ula

This name conjures up memories of an earlier, slower and more gracious era for Kona. It is the name by which kama'āina identify this part of the Park.

#### Interpretive Education Center

This interpretive facility will encompass the complex of structures at Mahai'ula Bay, including the renovated Magoon House, the Ka'elemakule House slated for future renovation, a warehouse building, and the reestablishment of the canoe *hālau*. This facility will highlight the natural and cultural history of the Mahai'ula and Kaulana *ahupua'a* through exhibits and hands-on educational experiences. This facility will cater to special groups on a pre-arranged basis, such as school classes and educational organizations. However, the facility will not exclude other visitors when not in use by these groups.

The former Magoon House, constructed in the 1930s, is a 2-story structure that may be renovated for use as an interpretive education center while maintaining the building as an example of period architecture and the general ambience of Kona. Within the facility will be a small auditorium area for interpretive talks and audio-visual presentations. A second space will be devoted to hands-on displays where children and others can learn first-hand about the marine life of Mahai'ula Bay and the coastal anchialine ponds. Outside the facility will be the tanks and wet labs which will expand upon the hands-on experience. The programs offered at this facility will be coordinated with the Division of Aquatic Resources and the Sea Grant Extension Service.

The former Ka'elemakule House, constructed in the late 1800s, is a single story structure that is scheduled for future renovation as a Hawaiian Cultural Center. This facility will highlight the cultural history of Mahai'ula/Kaulana from prehistoric settlement until the 1940s. Graphic displays and exhibits with artifacts and replicas will cover such themes as fishing technology, food preparation, domestic tools, games such as *kōnane*, and appropriate arts and crafts as well as a small display on the videos incorporating oral history interviews with the *kūpuna* and hands-on workshops.

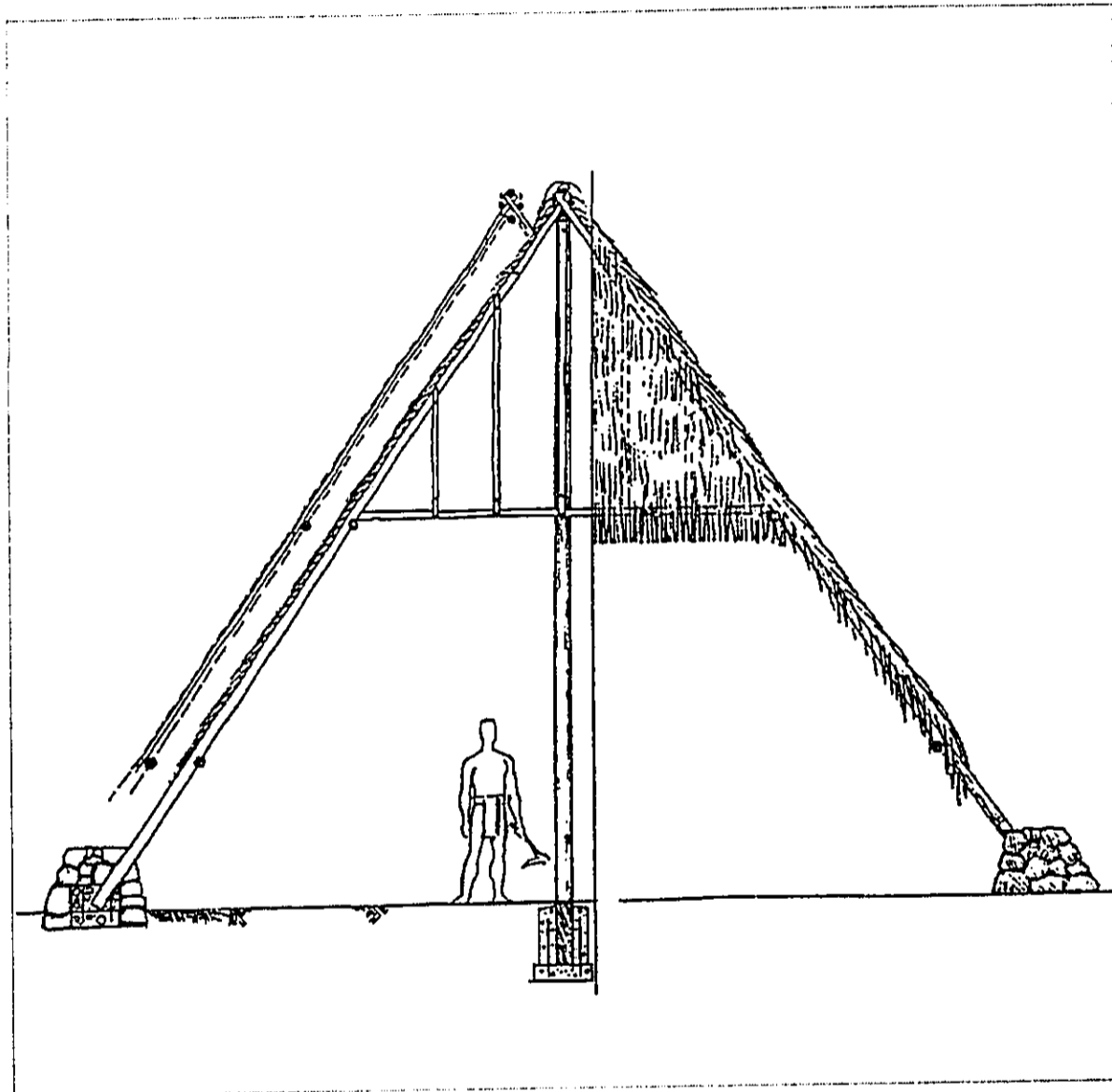
The warehouse structure is a wooden structure on a concrete slab with large sliding doors and a window on the south side. The large open space is divided into 2 rooms by a central wall. One room will be used as the interpretive headquarters and office for the staff running the educational programs. This space may also operate as an information center for park visitors and a meeting place for guided tours and other organized activities. The second room is designated for storage.

A wooden canoe *hālau* structure located *makai* of the Ka'elemakule House was dismantled by park personnel for safety reasons. A traditional canoe *hālau* constructed with *'ōhi'a* poles and *pili* thatching is proposed along the shoreline in the same general area. A canoe would be kept in the *hālau* as in interpretive exhibit. At this location, the themes of canoe building, navigation, fishing, and shoreline travel will be presented (Figure 6-3).

The construction of an open *hālau* structure is proposed atop the existing large stone platform to the north the Magoon house structure. This rock-filled platform measures approximately 75 feet by 50 feet and could support a pole and thatch structure that is in keeping with the nature of the Hawaiian Cultural Center. This *hālau* would be used for demonstrations, groups' orientation gatherings, and special events. One suggestion is to hold a *kōnane* tournament since so many *papamū* are located in the park area.

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Canoe Hālau

Figure 6-4

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### Outdoor Classroom

Closely associated with these facilities is the concept of the park as an outdoor classroom. The Interpretive Education Center serves as the indoor classroom to orient students with the basic background knowledge which is then related through the outdoor activities at the site of the resource. In close proximity to the Education Center is the complex of archaeological sites, anchialine ponds, and shoreline access between Mahai'ula Bay and Kāwili Point that provide a venue for this outdoor classroom.

A dryland botanical garden is proposed for this area. It will function as an interpretive facility for self guided tours, an outdoor classroom and a nursery for Kekaha Kai State Park. Beyond plantings of dryland vegetation (both native and introduced) there will be displays of old and new dryland agricultural practices going back to the ancient Hawaiians. Sweet potato was grown in swirling mounds by the Kanaka maoli and these practices can be shown in the garden. Conservation techniques related to dryland gardening will be taught.

A hula platform should be constructed allowing for performances and classes. A section of the site will be reserved for recreational features. *Hōhū* slides, *ulu maika* and *papamū* should be recreated and classes and tournaments held in this area around the educational center. Similar, compatible features should be considered in this area.

### Interpretive Signs and Trails

Interpretive signs/kiosks are proposed at the 2 trailheads in the vicinity of the Interpretive Education Center to interpret the historic trails of Mahai'ula and Kaulana. One kiosk at the joint trailhead to the north of the Interpretive Education Center at Keawehala would serve to interpretive both the Kāwili Point complex and the coastal trail. The second kiosk to the southeast of the Interpretive Education Center would denote the trailhead of the *mauka-makai* trail. The interpretive use of these historic trails offers an opportunity for the visitor to "walk in footsteps of those who came before". The interpretive themes to be highlighted on the trails include their age, function, and construction style. Additional signs may be placed at selected sites along the trails to highlight significant cultural or natural features, such as petroglyphs, *papamū*, and anchialine ponds.

The coastal trail probably dates to the prehistoric period with continued use and modification into the historic period as a horse trail, cart road, and now a jeep road. To accommodate these new modes of transportation, the trail was widened, leveled, and stone paved. This trail is now used to access Makalawena beach from Mahai'ula and will be incorporated into the larger Ala Kahakai. *Ahu* with *ahupua'a* name signs are proposed along this trail to heighten visitor awareness about the traditional place names within Kekaha.

The *mauka-makai* trail on the 1801 lava flow dates to sometime after 1801. This trail linked the coastal fishermen with the upland farmers and is still evident in the Mahai'ula section of the park. It appears as a worn, discolored path that runs diagonally from Mahai'ula Bay to Ka'ahumanu Highway in Kaulana over the 1801 flow. A petroglyph cluster exists at both ends of this trail within the park.

Lava Shelters. East of the Education Center is a complex of lava tube shelters and platforms believed to date to the prehistoric occupation of Mahai'ula. These features may be shared on guided tours but should be monitored and managed for future research.

### Resource Preserve – Mahai'ula Bay Beach Area

The resource preserve for Mahai'ula will connect to the Kāwili Point preserve. It will include the northern portion of the Bay by Keawehala and the historic period structures built by the Magoons and Ka'elemakule. Pōhaku O Lama will be a special feature located in the Bay and a special *kapu* should be placed on it.

### Camping

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The forest grove area is the ideal area for camping in this section of the park. The future camp area should be separated from the active day use area. As such it should be located on the back edge of the dune area closer to the Ka'elehuluhulu side of the grove. An additional area may need some grading and landscape improvements to accommodate the use and keep the desired separation. Added tree cover would be desirable in this climate. The area should be within a reasonable walking distance to the restroom facilities. Proximity to the activity center will improve security.

### Parking

Access and parking should be provided at the complex. The road should be improved to allow school buses and Handi-vans to travel to and park at the site. Parking and turnaround spaces for these vehicles should be provided. Additionally, a parking area for 25 vehicles should be developed adjoining the complex. Pathways from the parking area to the buildings should be designed and improved for ADA accessibility.

### Visitor Center

Until the Visitor Center area at the park entrance at Mahai'ula is developed, this area will also serve as a visitor center, and be the administrative and maintenance center of the park.

### Restrooms

Restroom facilities should be developed to accommodate groups at the activity center. Additionally, the staff's residence will need wastewater services. An eco-friendly restroom such as a compost toilet should be developed near the camping area.

### Landscaping

*Milo*, heliotrope, *kiawe* grove: The grove of trees behind the Bay is a major asset. Areas under the larger trees should be cleared to provide better-shaded environments for park users. The lower limbs of these trees should be pruned to improve the quality of the shaded space. Rubbish containers should be dispersed at appropriate intervals to help keep the area clean. The shaded area should be slowly expanded over time with the planting of native trees and plants suited to the climate.

One lone *Pritchardia* palm grows in front of the house at Mahai'ula. *Pritchardias* should be propagated around the Magoon and Ka'elemakule houses.

It has been stated in oral tradition that the *kou* trees at Mahai'ula were huge and formed a large grove. Stories talk of the fine *kou* wood made of trees larger than the circumference of a man's arms. A *kou* grove should be replanted along the Bay.

### Staff's Residence

This residence should be developed in association with the complex. The architecture should complement the existing style in scale, color, material and design. This residence could be assigned to a DOCARE officer.

### Park Maintenance Facility

Some of the existing facilities at Mahai'ula and Ka'elehuluhulu are used for maintenance purposes. Until the maintenance base yard at the park entrance is developed, this site should continue to be used as the base yard for the park. Its location next to the residence and education center clearly makes this a good location for coordination purposes.



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### 6.1.6 Marine/Offshore Subsection

Coastal areas are beyond the jurisdiction of the Division of State Parks. However, DLNR and the community recognize the continuity of nature and understand the need to manage and plan coastal areas in conjunction with adjacent land use plans. Efforts to designate Mahai'ula Bay and possibly the entire offshore area as a Marine Life Conservation District (MLCD) or Marine Fisheries Management area (MFMA) were discussed by Task Force members. These discussions should continue until some designation and mechanism for the proper management of adjacent ocean resources is developed with community consensus.

#### Mahai'ula Bay Management

While the ocean areas are not within the jurisdiction of Kekaha Kai State Park, community members felt near-shore areas should be managed as one entity at least up to the mouth of Mahai'ula Bay. The idea is similar to the old *ahupua'a* management system which generally extended to the outer edge of the reef. With that concept in mind, a marine fisheries management area was suggested for the waters off Mahai'ula. The purpose of the designation is to protect the offshore resources which are already overtaxed.

The bay is a breeding ground for fish, especially mullet. The State's Division of Aquatic Resources conducted a marine life survey of the bay in 1995. The results identified the resources that would be protected by a MFMA designation. Aquatic Resources will also conduct a mullet release program in the bay. Endangered sea turtles and monk seals have been seen in the bay. Reefs are fragile ecosystems and need protection. Besides the MFMA designation, there is a plan to place day use moorings in the area. Day use moorings are generally positive features in a marine landscape, because they minimize the potential damage from dragging anchors. However, because of the location of various fishing *ko'a* in the area the location of these moorings is important. The moorings need to be placed in a location that does not interfere with the *ko'a*. Day mooring information is provided in Appendix C.

#### Outdoor Classroom

The protected bay is a natural outdoor classroom. Educational programs and signage should seek to inform visitors of the rules that need to be followed in near shore areas and in the water to promote the continued use of the area by these marine species. The waves in the bay also attract many surfers. This resource and use should be protected. Fishing techniques both ancient and modern can be taught in these waters.

#### Resource Preserves

Pōhaku O Lama, the female goddess whose menstrual cycle is referenced in the place name, is located a little offshore. This story should be retold in the myths and legends of Mahai'ula.

#### Interpretive Underwater Trails

There are two known shipwrecks in the area. The locations are recorded and the history investigated. Any salvaged items should be placed on display and included in the nautical marine history of the place. One interpretive theme would be:

**Dangerous Waters – Story of Shipwrecks.** Two shipwrecks from the 20<sup>th</sup> Century have been documented in shallow waters off the point to the north end of Ka'elehuluhulu beach. An underwater trail for snorkelers and scuba divers could be developed along with an exhibit in the Education Center.

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### 6.2 AWAKE'E

This is the most remote portion of the Park. The Development Plan for Awake'e is shown as Figure 6-5. Guidelines for development of park facilities in this area are to keep things limited in terms of scale and amount. The natural character of the land should be preserved as much as possible. This segment should have the lowest intensity of use.

#### 6.2.1 Kaho'iawa

##### Campsite

At present, fishermen have created an ad hoc overnight area around Kaho'iawa. Cleared camping areas and circles of rocks for fireplaces have been created. Fishermen use these areas for multiple day and night fishing. These activities will be supported in this location with new facilities and increased maintenance for convenience and sanitary purposes.

##### Recreation Facilities

Trash receptacles and some portable toilets or possibly a self-composting toilet will be installed to serve fishermen who stay for longer periods at Kaho'iawa.

##### Access and Parking

Vehicular access to Kaho'iawa would be redirected to the Manini'owali coastal location. A small parking area will be created near the bend in the road to Kua Bay to allow access to the Kaho'iawa area. Sixteen parking stalls and an overflow parking area will be created at this location. A trail will connect this parking area with the fishing areas. A lookout area with signage will also be developed.

The existing road to Kaho'iawa will be gated and limited to service vehicles, but will still be open for pedestrians.

#### 6.2.2 Pu'u Kuili

##### Parking

Parking will be available at the trailhead area at the base of Kuili. Parking for 25 stalls should be developed to accommodate hikers into Awake'e and up Pu'u Kuili.

##### Interpretive Trail

Additional trails will be designated from the parking area to Pu'u Kuili. The summit of Pu'u Kuili provides an unobstructed view of the Kona shoreline and *mauka* areas. While the familiar profile of Pu'u Kuili should remain free of structures, a small in-ground or low profile marker could provide information and orientation from the *pu'u*. Information provided at the summit should also be provided at the trailhead. This is true everywhere there is an inaccessible destination.

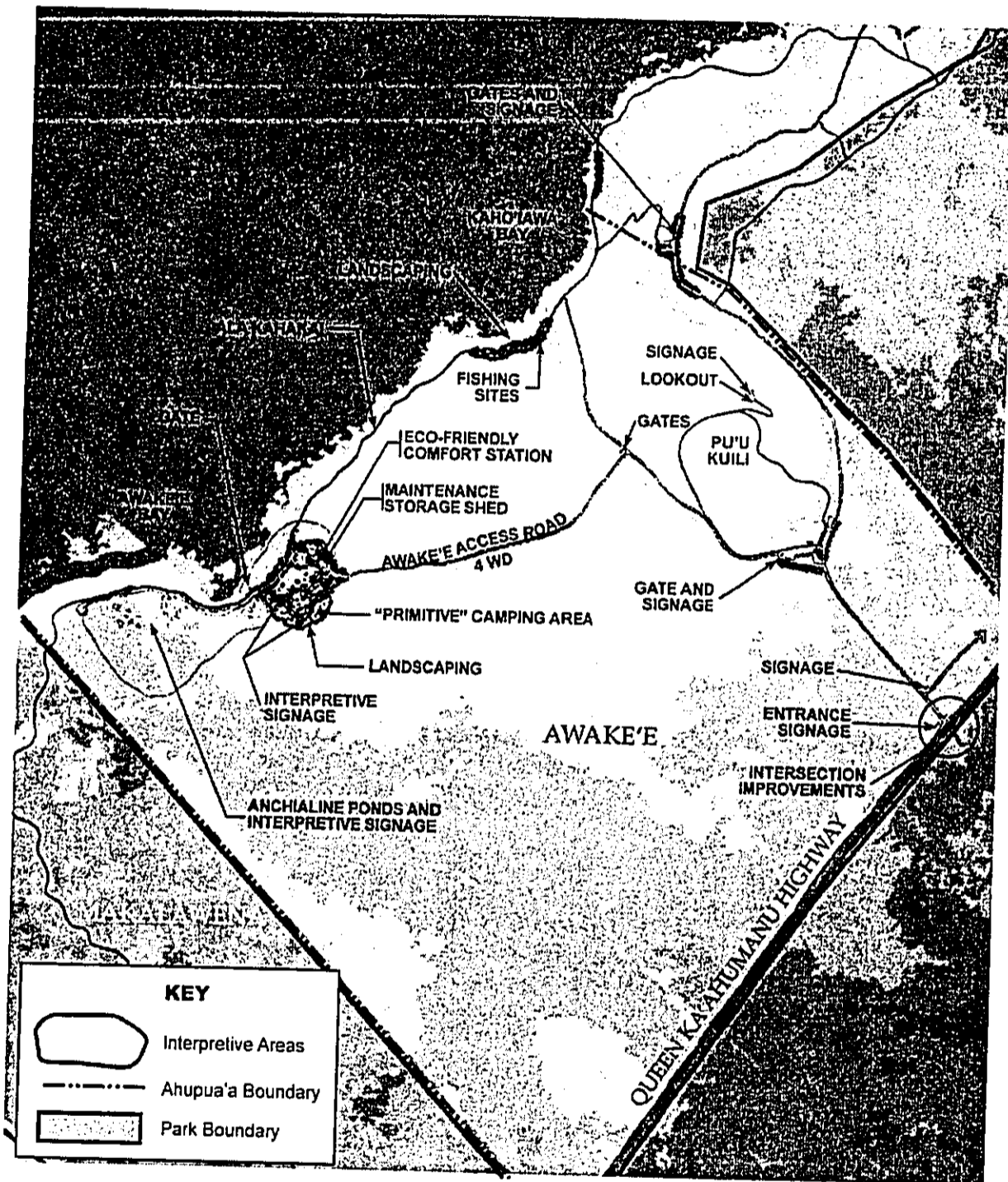
#### 6.2.3 Awake'e Bay

##### Recreation Facilities

Picnicking, sun bathing, relaxation, nature appreciation and fishing will be the predominant day uses in the area. Picnic areas will be identified and cleared in the Awake'e Beach area. A few benches, tables, and single barbeque pit areas will be located in this area.

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### Parking

Twenty parking spaces will be available at the "primitive, wilderness" campsite near Awake'e Bay. The campsite parking area will be used by park personnel for maintenance purposes along with backpackers who prefer wilderness camping and some day users. Access to these parking areas will be available to park users through a permitting process. Parking areas are designed to balance the need to provide access to the coast and to service these areas with the objective of maintaining this section of the park as a primitive wilderness experience.

### Campsite

Camp sites will be developed in the forested *kiawe* behind the sandy beach at Awake'e. Camping areas will be designated and trash receptacles placed nearby. The compost toilet will be sited between the camp ground and the designated day use area. Camping will be limited to designated areas to control impact and limit maintenance costs. This campsite will be relatively primitive.

### 6.2.4 Anchialine Ponds

The Awake'e complex of anchialine ponds is the best example of this unique ecosystem within the park boundaries. These ponds are good examples of the geological evolutionary patterns of these ecosystems. Explanatory signage on the value of wetland habitats in arid coastal regions such as North Kona should be provided. Since Awake'e is the most wilderness-like section of the park, signage should be minimized. Detailed, explanatory displays are more appropriately developed at the visitor center or education center in Mahai'ula. Signage at Awake'e should identify resources and give precautionary notices to people so that they will treat the features with respect. This area should be designated as an ecological interpretive area.

### Marine Aquatic Components

Ocean recreation at Awake'e is expected to center around fishing. Swimming and sunbathing will be limited because the shore at Awake'e is generally rocky and because there are accessible pleasant beaches in other areas of the park. Fishing will be supported with a small parking area and primitive camp sites. There are some small sandy patches where canoes or kayaks could land and wading would be enjoyable.

## 6.3 MANINI'ŌWALI / KŪKI'Ō

This northern section of the Park is the northern end of Kekaha Kai State Park and adjacent to Kikaua Point. The Development Plan for this area is shown in Figure 6-6.

Due to agreements made during a land exchange in the early 1990s, the developer of the *mauka* lands of Kūki'o 2 and Manini'ōwali has agreed to pay for \$2.5 million dollars of Park planning, design, and improvements including the access road, restroom facilities including a water hook-up to the adjacent residential subdivision's private system. The developer has agreed to construct the intersection at Queen Ka'ahumanu Highway and the portion of the access road that it will share with the Park at its own cost. The secondary access of the Manini'ōwali development will utilize this intersection as a secondary access which will connect to the park access road.

### 6.3.1 Entrance

A new entrance and access roadway from Queen Ka'ahumanu Highway will be created across from the Veterans Cemetery access located *mauka* of the Highway. This will be a channelized intersection with associated signage, utilities/ electrical power and possibly irrigation water lines. The access roadway will be a two lane paved road beginning in Awake'e and winding down the slope to Kua Bay. The secondary access road to the Manini'ōwali Development will connect to this road a short distance from the Highway. A parking area at the *mauka* base of Pu'u Kuili will serve as the trailhead for the hike up to the summit of

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this Pu'u as well as the entry to the Awake'e section of the Park. The existing jeep access road to Awake'e will be closed and re-directed to this location. This access road will be gated.

It will remain open during normal park hours and closed at night. The existing road / trail utilized by the public to Kua Bay will remain open until the new road is built. The park access road is aligned north of the Pu'u Kuili to avoid disrupting the wilderness interior of Awake'e. In addition, this road alignment will not disrupt the view of the Kuili from the ocean by cutting across the front of Kuili nor will impact the many archeological sites located makai of the *pu'u*.

Improvements to the Manini'ōwali / Kūki'o entrance intersection at Queen Ka'ahumanu Highway include the installation of the associated infrastructure.

### 6.3.2 Kua Bay

#### Day Use Area

A day use area will be designated around Kua Bay.

A comfort station with a water hook-up from the adjacent Manini'ōwali Development private system will be constructed. Showers and picnic facilities will be developed next to the parking area. These facilities may include barbeque grills and small shelters. This area of the park will receive a lot of use with the improvements to this area and picnic tables. The water and wastewater systems will be connected to the system in the adjacent, private development. This facility will be ADA accessible. From this day use area, an ADA accessible path to the sandy beach will be created.

A shed will be located next to the comfort station for storage of park maintenance supplies and a small work area. A dumpster will be located in an enclosed area next to this shed.

#### Campsite

The camp area is proposed for a location on the southern end of Kua Bay near the main day use section. It will take advantage of the sandy pocket in this section of the park. At least five camping spots will be developed in this area. Currently, the number of campsites planned range from 6 to 12. Site designation allows for 10 – 12 additional camp sites. However, the amount of camping allowed will depend on the support facilities developed and the level of management provided. There will be an ADA accessible trail from the restrooms to this site, and an ADA accessible camp site.

#### Landscaping

The area around Kua Bay is very sparse in vegetation. Except for a few short coconut trees and stunted *kiawe* trees, the landscape is sparse grasslands or open lava fields. It is proposed that additional dry land trees, coconut palms, and landscaping be installed to provide some protection against the elements. The picnicking and camping areas should be landscaped with shade trees such as *milo*, *hau*, *wiliwili*, *kiawe*, and *kou* to provide shade protection. The gray water from the comfort stations should be considered for use in landscape irrigation. While the landscape around Kua could create a *kipuka* on the coast, xeriscapes is also an option that would minimize watering requirements.



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### Archeological and Natural Resources

The area is rich in archeological resources. A danger to the resources exists because the concentration of resources is high and their location is near activity areas and pathways. The park is narrow in this area and there is not much flexibility in moving circulation pathways away from the sensitive archeological sites. In this context, the best approach is to create clear vehicular and pedestrian pathways and install landscaping and signage in a manner that minimizes inadvertent destruction of the resources. Features should be identified with signs that informs and requests for respect. Access should be limited to some features.

An interpretive zone is recommended from the anchialine pond behind the beach and including a portion of the beach and the edge of the lava. This zone would include the edge of the lava flow and include the trail to Kakapa including 100-foot buffers on both sides and continue on to Kakapa Bay to include the areas of high site concentration *mauka* of that Bay. Off-road vehicles would be restricted from this area as well as any activity that would damage these resources.

The anchialine pond at Kua Bay and the area around it is proposed for restoration. Coconuts, *kou* and *milo* should be planted around the pond as part of the restoration.

The existing four-wheel drive road goes to the sand in front of the anchialine pond. No motorized vehicles will be permitted on this road which will be converted to an ADA accessible pedestrian path to the pond and beach.

### Parking Area

There will be a drop-off area near the comfort stations and parking for 50 cars and van parking. ADA parking stalls will be located next to the comfort station. To minimize the visual impact of a large parking area, the parking areas will be dispersed into smaller parking areas along the road.

A future expansion area will be located in a low, flat hollow area *mauka* of the day use area. It can be used as overflow parking if necessary.

The parking areas will be landscaped to blend them into the landscape and minimize the heat gain from asphalt surfaces.

### **6.3.3 Kakapa Bay**

No facilities are planned at Kakapa Bay. The only proposed improvement is to the existing pedestrian pathway that links it to Kua Bay. This will be the designated Ala Kahakai through this area. The areas of high concentration of archaeological features will be included in the interpretive zone that will stretch from Kua Bay to Kakapa along the existing trail. Interpretive signs should be placed at the trail near the public shoreline access point in the Kūki'o Development. These signs should inform people about the interpretive area without specifying sites. Further information will be available through docents and Park specialists. Proper behavior and treatment should be identified as well as penalties for damaging or destroying the features. ADA signage is needed at ADA accessible trail heads and/or the ADA accessible parking area at both ends of the trail to and through Kakapa area.

## **6.4 DEVELOPMENT PHASING**

Park development will occur in phases as funding becomes available. Criteria for phasing should be based on importance to public health and safety and protection of resources. Funding such as that provided by the adjacent Manini'ōwali Development should be used efficiently and leveraged for maximum benefit. Support from other corporate and non-profit entities should be solicited to support park development and maintenance.

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6.5 PARK DEVELOPMENT COST

Park Development will occur incrementally based on available funding. Some of the items in the Conceptual Master Plan adopted by the Board of Land and Natural Resources have been completed. Most of the highway improvements at the main park entrance to Mahai'ula were completed by the State Department of Transportation. Additional improvements such as the addition of a deceleration lane in the Kailua bound direction should be completed in future phases. Table 6-1 summarizes the overall development costs for the park. Detailed cost estimates for each area are listed in Tables 6-2 through 6-3. At full development the total development cost is anticipated to be approximately \$6.7 million. The estimate for the total development cost does not include the cost of extending water, power, and communication lines from the adjacent development to the park facilities.

<b>MAHAI'ULA</b>	<b>\$3,026,000</b>
<b>AWAKE'E</b>	<b>\$457,350</b>
<b>MANINI'OWALI</b>	<b>\$3,224,450</b>
<b>TOTAL</b>	<b>\$6,707,800</b>



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<b>TABLE 6.2 MAHA'I'ULA COST ESTIMATES</b>					
<b>Item</b>	<b>Details</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit cost</b>	<b>Cost</b>
Mahai'ula Entrance	Visitor Center	S.Q.	1800	250	\$450,000
Mahai'ula Entrance	Baseyard building	S.Q.	1500	175	\$262,500
Mahai'ula Entrance	Fencing around baseyard	LF	10,000	1.5	\$15,000
Mahai'ula Entrance	Gate	Each	2	12,000	\$24,000
Mahai'ula Entrance	Baseyard paving	S.Q.	6,000	6	\$36,000
Mahai'ula Entrance	Public parking (25 stall, 2 buses)	S.Q.	8,000	6	\$48,000
Mahai'ula Entrance	Entrance Gate	Each	1	20,000	\$20,000
	<b>SUBTOTAL</b>				<b>\$855,500</b>
Ka'elehuluhulu	Beach pavilion	S.Q.	1000	150	\$150,000
Ka'elehuluhulu	Picnic tables	Each	10	1,500	\$15,000
Ka'elehuluhulu	Graded parking (for 150 cars)	S.Q.	25,000	2	\$50,000
Ka'elehuluhulu	Comfort Stations	Each	1	185,000	\$185,000
Ka'elehuluhulu	Walkways	LF	3000	20	\$60,000
Ka'elehuluhulu	Information kiosk	Each	1	15,000	\$15,000
Ka'elehuluhulu	Gates	Each	2	12,000	\$24,000
	<b>SUBTOTAL</b>				<b>\$499,000</b>
Mahai'ula	Renovate Magoon	Each	1	200,000	\$200,000
Mahai'ula	Renovate Ka'elemakule	Each	1	100,000	\$100,000
Mahai'ula	Staff residence	Each	1	150,000	\$150,000
Mahai'ula	Maintenance building	S.Q.	750	150	\$112,500
Mahai'ula	Education Center	S.Q.	1500	150	\$225,000
Mahai'ula	Canoe Hale	Each	1	75,000	\$75,000
Mahai'ula	Parking (25 cars, 2 bus, 3 service)	Sq Ft.	10000	3	\$30,000
Mahai'ula	Campsites	Each	20	2,000	\$40,000
Mahai'ula	Comfort Station	Each	2	185,000	\$370,000
Mahai'ula	Dryland Garden	S.Q.	10000	2	\$20,000
Mahai'ula	Camp parking	S.Q.	2000	2	\$4,000
Mahai'ula	Trails/walkways	LF	2000	20	\$40,000
	<b>SUBTOTAL</b>				<b>\$1,366,500</b>
Mahai'ula	Main Access Road grading	LF	5000	30	\$150,000
Mahai'ula	General Trail Improvements	LF	3000	5	\$15,000
Mahai'ula	Signs	Each	100	150	\$15,000
Mahai'ula	General landscape Enhancements	NA			\$125,000
	<b>SUBTOTAL</b>				<b>\$305,000</b>
	<b>MAHA'I'ULA TOTAL</b>				<b>\$3,026,000</b>

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<b>TABLE 6.3 AWAKE'E COST ESTIMATES</b>					
<b>Item</b>	<b>Details</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit cost</b>	<b>Cost</b>
Awake'e	Main Road rough grading	LF	8000	10	\$80,000
Awake'e	Trail Development (Ala Kahakai)	LF	6000	8	\$48,000
Awake'e	Pu'u Kuli Trail Development	LF	1200	8	\$9,600
Awake'e	Gate	Each	2	12000	\$24,000
Awake'e	Signs	Each	25	150	\$3,750
Awake'e	General Landscape Enhancements	NA			\$50,000
	SUBTOTAL				\$215,350
Camp/Day Use Area	Compost Toilet	Each	1	125,000	\$125,000
Camp/Day Use Area	Storage shed	Each	1	75,000	\$75,000
Camp/Day Use Area	Graded parking	S.Q.	6000	2	\$12,000
Camp/Day Use Area	Primitive camp sites	Each	15	1000	\$15,000
Camp/Day Use Area	Picnic tables	Each	10	1500	\$15,000
	SUBTOTAL				\$242,000
	<b>AWAKE'E TOTAL</b>				<b>\$457,350</b>

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Item	Details	Unit	Quantity	Unit cost	Cost
Intersection	At grade channelized intersection, single left turn land (storage and decel lanes) per DOT	unit	1	1.1 to 1.6 million	\$1,600,000
Roadway	Roadway grading at perimeter of Pu'u Kuli	L.F.	?	?	?
Roadway	Roadway, 20 feet wide, between highway and the Kua Bay parking area, including Kaho'iawa spur (min. length 1 mile = \$550,000)	L.F.	8200 (1.5 miles)	\$120	\$984,000
Security Gate	Park Security Gate at highway entrance in place complete	gate	1	\$12,000	\$12,000
Security Gate	Park Security Gate at Awake'e road in place complete	gate	1	\$12,000	\$12,000
Security Gate	Park Security Gate at Kua Bay, in place complete	gate	1	\$12,000	\$12,000
Parking	Parking area at junction of Manini'owali - Awake'e roads (10 stalls at 180 sq+ turning area)	S.Q.	2000	\$120/20 sq.	\$12,000
Parking	Parking area at Pu'u Kuli Trail (10 stalls)	S.Q.	2000	\$120/20 sq.	\$12,000
Parking	Parking area at Kaho'iawa Area (10 stalls)	S.Q.	2000	\$120/20 sq.	\$12,000
Parking	Parking area at Kua Bay (50 stalls)	S.Q.	10000	\$120/20 sq.	\$60,000
Parking	Parking area expansion at Kua Bay (50 stalls)	S.Q.	10000	\$120/20 sq.	\$60,000
Signage	Park Sign at entrance at Highway	sign	1	\$1,000	\$1,000
Signage	Trail signs	sign	12	\$50	\$600
Comfort Station	Comfort Stations at Kua Bay, in place and complete	unit	2	\$185,000	\$370,000
Comfort Station	4" PVC Sewerline between comfort stations and the property line	L.F.	700	\$52	\$36,400
Picnic Tables	Picnic Area Tables, Kua Bay shoreline	table	10	\$1,500	\$15,000
Picnic Tables	Picnic Area Tables, Kua Bay mauka	table	10	\$1,500	\$15,000
Picnic Tables	Picnic Area Tables, Kaho'iawa shoreline	table	10	\$1,500	\$7,500
Call Box	Emergency Call Box, Pu'u Kuli Parking Area	unit	1	?	?
Call Box	Emergency Call Box, Kaho'iawa Area	unit	1	?	?
Call Box	Emergency Call Box, Kua Bay Parking Area	unit	1	?	?
Trash Container	Concrete / coral Trash Container (35 gal. Barrel)	unit	10	\$295	\$2,950
<b>TOTAL</b>					<b>\$3,224,450</b>
<b>Picnic Table Alternatives</b>					
	Wood				\$1,500
	Hollow Block and Wood				\$2,000
	Heavy Duty Wood & tubular steel			\$212. Plus shipping	
	Recycled Plastic Tables				\$5,000
	Concrete Tables				\$6,000

**Section 7.0**

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PDR – Park Management

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### 7.0 PARK MANAGEMENT

#### 7.1 PARK OPERATIONS

##### 7.1.1 Staffing

###### 7.1.1.1 State Parks Staffing

The Kona Interpretive Park Technician will be responsible for the development and implementation of interpretive and educational programs in a number of coastal Kona State Parks in addition to Kekaha Kai State Park. The Kona Interpretive Park Technician will initially be headquartered at the Education Center in Mahai'ula but will have park-wide responsibilities. This State-funded position operates the interpretive/educational program, assists agencies and resource professionals in the management of the park resources, interacts with park visitors, and oversees volunteer groups conducting various projects within the park.

The State Parks Interpretive Program Manager supervises the Park Technician, determines the direction of the interpretive program, and establishes policies for the operation of the program at Kekaha Kai. In some instances, the Departmental Volunteer Coordinator may assist in organizing large volunteer projects at the park but will coordinate these efforts with the Interpretive Program Manager and Park Technician.

Initially, it is anticipated that the Park Technician with a docent program will be able to operate the educational program from the Mahai'ula Education Center. However, as the interpretive program develops and the interpretive facilities are constructed, staffing needs will increase. The operation of the Visitor Center/Museum will involve a substantial staffing increase, including a park coordinator to oversee the program operations in the park, interpreters, a museum curator, and a support staff. One option to State-funded staff positions would involve turning over the operation of the facility to a non-profit organization or develop a partnership with the non-profit that would supplement the staff.

The maintenance of the park is conducted by groundskeeper and caretaker positions overseen by the State Parks Hawai'i District Superintendent and for organizational purposes, is separate from the Interpretive Program staffing and activities. Expanded park development and the increased visitor traffic will require additional staff to maintain and monitor facilities. Ideally there should be six staff for Kekaha Kai.

###### 7.1.1.2 DLNR Technical Staff

The technical and professional staff within the Department of Land and Natural Resources, including archaeologists, botanists, and biologists, will be asked to assist in developing and implementing the various resource management programs and policies of the park. Along with the staff of State Parks, the Divisions of Aquatic Resources and Historic Preservation will be most directly involved in the development of the educational and interpretive programs. Aquatic Resources has standard transects that they normally monitor. This information should be routinely shared with State Parks such that it becomes part of the regular reports tracked by Park maintenance staff for their management decisions. The Division of Conservation and Resource Enforcement will provide enforcement and security.

###### 7.1.1.3 Docent Program

A docent program will be developed to assist with the operation of the educational and interpretive programs. Some of the docents may be volunteers trained to assist with the marine and cultural education programs. These docents may give the interpretive talks, supervise the hands-on activities in the Education Center, and lead the outdoor classroom activities. *Kūpuna* will be asked to participate in various program activities to promote an understanding and knowledge of the cultural traditions associated the park and its resources. For example, some *kūpuna* may demonstrate the traditional fishing techniques while others may demonstrate traditional art and crafts in the Hawaiian Cultural Center. As

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the program develops, these *kūpuna* may also be willing to host various workshops and training opportunities in the park to perpetuate these cultural traditions. A good docent program is crucial to the long-term health of the community. Docents form a strong link to the surrounding community through a network of respected elders and interested parties. Due to its importance it should be funded to some extent if possible. Again, because of public sector resource limitations a public/private partnership in the form of a foundation would help develop and maintain this program. The program should be coordinated by the DLNR volunteer coordinator but should have a Kona coast presence. The Ka'elemakule House would be an appropriate headquarters for this program.

#### 7.1.1.4 Volunteers

In addition to the docents, volunteers will be sought to assist with a range of projects in the park. Some of these projects may involve resource management, such as participation in fish transect surveys, trail maintenance, and monitoring of the anchialine ponds. A good example of a volunteer group that could assist in long term monitoring are people who have been trained through the UH Sea Grant program. Over a thousand people have been trained to recognize ocean and coastal resources and how to monitor and assess their condition. Through this program volunteers go to places where they normally like to go and monitor conditions. If this information were routinely brought into the Park management program it could be used to assess conditions and determine needs for resource protection and rest periods for portions of the Park and coastal areas. Other projects may entail litter clean up, vegetation control, and minor facility repairs. These volunteer projects will be organized and coordinated by the Park Technician with assistance from the DLNR Volunteer Coordinator.

#### 7.1.1.5 Park 'Ohana

A growing number of community groups with interests in Park development are forming. The size of this 'ohana is expected to grow as its new programs are developed and the park evolves. A park 'ohana called Hui o Laulima o Kekaha Kai has been formed. The organization has applied for 501C3 status and is involved in maintenance and fund raising efforts at this time. The organization has a set of governing rules that are inclusive and open. There is a need to develop a formal relationship between this group and the Division of State Parks. This relationship should identify areas where Hui Laulima can support resource protection and education. This relationship with Hui Laulima is not intended to exclude participation by other groups.

Within the larger park 'ohana, smaller groups of stakeholders should be encouraged to take ownership of specific resources. For example, if a Marine Fisheries Management Area is designated a citizens advisory committee should be formed to help monitor and enforce the rules of the MFMA. Another example would be to establish a permanent cultural committee to oversee the development of a cultural plan, pursue its implementation and assist in the management of cultural resources with the oversight, and coordination with State Parks. Sensitivity increases when there is an official presence, even if the presence is voluntary personnel.

There should be regular meetings between the park 'ohana and staff from the Division of State Parks. These meetings should identify upcoming issues, serve as a clearinghouse for problems and propose solutions to issues and problems.

#### 7.1.2 Park Safety and Security

The safety of park visitors is paramount. The protection of park facilities and resources is also vitally important. In large, open areas security is difficult to ensure. The poor road access to the sites in the park also makes emergency response times longer. In order to address these and other issues several components make up the security system for the park.

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### 7.1.2.1 Live in Park Employee

There will be a staff residence in the Park. It will be located near the Education Center at Mahai'ula. The employee's presence will discourage vandalism in the park. The presence of live-in staff also provides a single point of contact for emergencies. The staff person should have an off-road vehicle to patrol the park. A back-up plan is needed to provide coverage when the resident staff person is unavailable due to vacation, illness or other personal reasons.

The enforcement of park rules is primarily the role of the DLNR Division of Conservation and Resources Enforcement (DOCARE). Unless the resident is a DOCARE officer, his or her role in this area is primarily to inform visitors about the resources in the park and the park rules and assist the maintenance staff in resource management.

### 7.1.2.2 Gates

Gates are included in the Park Plan to enhance management of the Park. The purpose of this management is to handle visitor traffic, hours of operation and protect resources. New gates should be heavy duty and resistant to weather. The areas immediately adjacent to the gates should be properly reinforced to restrict illegal entry by off road vehicles around the gated area. Walls and large boulder barriers should be considered. Gates should be routinely checked for security, proper operation and maintenance.

The main entry to the Mahai'ula / Kaulana section is gated. A newer, stronger gate should be installed. The two carved kii, by Clarence Medeiros Sr. currently placed at the Kona International Airport, will be relocated to this entrance when the proper pedestals and gate improvements are made. This gate will be managed from the visitor entrance facility when that structure is built. Signage at this gate should include hours of operation and general rules about the entire Park, not just the Mahai'ula portion.

Chains will continue to be used to control access at the crossroads area near the beach. The spur in the road to Mahai'ula will usually remain closed and will be managed for activities at the educational complex.

A gate is proposed at the fork in the road mauka of Pu'u Kuili which directs traffic into Manini'owali and Awake'e. The fork that branches into Awake'e will be controlled and vehicular access will be limited to Park staff and visitors with access rights to Makalawena.

A gate will be installed at the bend of the new road into Manini'owali. This gate will be open during normal park hours and closed at night. Hours of operation will be posted at the gate.

### 7.1.2.3 Telecommunications

Park personnel will use cellular phones to get in touch with the police or fire department.

### 7.1.2.4 Volunteers

While volunteers will not be officially deputized, it is suggested that selected members of the park 'ohana be given uniforms and can be trained to educate the public regarding park regulations. The mere presence of official uniforms would help improve security. Training and instruction should be provided to these volunteers and the volunteer coordinator should coordinate their activities. Volunteer activities will be coordinated through the Park caretaker and interpretive programs specialists.

### 7.1.2.5 Natural Hazards

In wilderness areas, natural hazards create safety problems. The conditions of trails, intensity of the Kona sun, high waves, strong currents and collapsing lava tubes all pose potential hazards. Signage for dangerous areas and educational programs and brochures available at the entrance to the park would all aid in minimizing potential accidents. An informational kiosk should be developed at the entrance to the park even before the visitor center complex is developed. Safety brochures and general informational

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brochures should be stocked at the kiosk. Similar brochures should be located at the crossroads kiosk, Ka'elehuluhulu Beach and the Activity Center. Emergency procedures will include standard 911 calls and training of park personnel. Civil Defense warning system effectiveness in the more remote areas of the Park such as Awake'e should be tested. Campers and fishermen in the more remote areas should be able to hear sirens and similar warnings that may be triggered by earthquakes and tsunamis. Instructions for appropriate responses in such emergencies should be included at the educational kiosks and handed out with permit applications.

#### **7.1.2.6 Fire Plan**

Being a dry landscape, fire is a potential problem. This is especially true of the grassland areas and the public picnic areas. The dry grass and branches could potentially ignite like tinder. The Activity Center area and the future visitor center area need fire protection as well. Since there is no water system that can be used for fire protection purposes, an alternate system needs to be developed.

Camp areas are also potential fire hazard areas and rules need to be clearly stated. Portable stoves and burners should be strictly controlled and limited to specific areas.

The ocean will serve as the water source for helicopter drops on brushfires. Near the designated picnic and activity areas brackish water wells and tanks should be developed and brackish water should be available to rinse off after swimming and to wash down equipment. This water can be used for fire protection. Signage should clearly indicate that this is not drinking water.

All structures should have chemical fire extinguishers.

A landscape maintenance program should keep barbecue areas free of debris and dry trimmings. These areas should be specifically located away from vegetated areas. Enough separation should be provided to minimize dangers from windblown sparks and ashes. Designated picnic areas should also be kept free of dry vegetation and flammable debris. Yard trimmings should be chopped and composted and used to enhance the limited soil in the vegetated areas and the botanical garden.

#### **7.1.3 Maintenance**

Maintenance is a major part of park management. Because of the size of the park a small maintenance base yard should be developed. The permanent location of this base yard should be adjacent to the visitor center in a well-screened equipment enclosure and an office/storeroom structure. This location would be ideal as the rest of the park develops and the Queen Ka'ahumanu Highway becomes the service spine. In the interim, the Activity Center at Mahai'ula area should function as the maintenance base yard.

##### **7.1.3.1 Solid Waste**

Solid waste will be handled by park personnel in regular pick ups. Trash receptacles will be placed in all areas with high traffic volumes. These include toilet facilities, picnic areas, parking lots, trailheads, popular beach or beachside areas and fishing places.

Policies requiring trail users to pack out what they bring in will also be instituted to minimize volumes and foster a new ethic about impacting the environment. Educational programs to minimize waste generation, encourage recycling and mitigating personal waste will hopefully reduce the potential volumes.

Park facilities and operations will also seek to minimize the generation of solid waste in its operations and in the construction of new facilities and renovation of older structures. Cradle to grave assessments will be made for materials and minimization and recycling strategies such as recycling and reuse will be implemented.



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The community will also be asked to work with Park employees in keeping trash to a minimum through education and community clean-up days. Several organizations will be asked to adopt the park and help in its maintenance. Even though parts of this park will be developed, a public ethic of "pack it in, pack it out" should be encouraged for all sections of the park; not just the more "wilderness" sections. This will reinforce a public ethic of sustainability by reducing waste generation, encourage appreciation for the natural environment and make work easier for maintenance personnel.

Green waste and other vegetation waste should be chopped up and composted for reuse within the park. Organic material should be recycled or composted. The base yard should be developed to chip and compost green waste.

Marine debris that drifts in with tides and currents will be a target for clean-ups. This is an ideal area for community group participation.

#### **7.1.3.2 Restroom Facilities**

Restroom facilities must be designed to accommodate projected use. Eco-friendly facilities such as compost toilets are recommended as long as they can be operated without excessive maintenance requirements. All systems will be operated to avoid contamination to groundwater resources. Locations and type of restroom facilities are identified in the development plans. Instructions for use will be placed prominently at each facility. Park personnel will make daily inspections of all restroom facilities.

The Manini'ōwali facility will be connected to a water source and will be a standard restroom with flush toilets and faucets. Waterless urinals should be considered for this facility. All other facilities will be self-contained or composting toilets.

Roof catchments systems and brackish water sources should be considered for wash water systems for restroom facilities. Wash water drainage will be small and should be accommodated in properly designed dry wells and landscape plots nearby to avoid groundwater contamination.

#### **7.1.3.3 Vandalism**

Vandalism increases the cost of maintenance. The control of vandalism will be closely tied to the security and safety management programs for the park. While ideally staff maintenance schedules should cover the needed maintenance this is not always possible in these times of limited budgets. Periodic community workdays may be needed to keep the park facilities in good order. The park 'ohana should be actively solicited to support the regular maintenance of park facilities.

Community ownership of a resource will reduce the level of vandalism with a kind of self-policing effect. The more the community feels they own the park; the less likely it will be that vandalism will be a major problem.

#### **7.1.3.4 Long Term Facility Maintenance**

Salt air accelerates the weathering of structures and equipment. High use increases the need to periodically repair and replace facilities. While a certain casualness is part of the local lifestyle and a typical coastal atmosphere exists, a regular maintenance program is needed. Recognizing realities, the support of the broader community should be solicited and incorporated into the regular maintenance program. As broad a spectrum as possible should be included from elementary school children to senior citizen groups.

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### 7.2 PARK OPERATING COSTS

Information regarding operating costs for Kekaha Kai State Park is unavailable at this time.

### 7.3 ACCESS AND VEHICULAR TRAFFIC

All vehicles must remain on roadways or parking areas designated for vehicles. Areas identified as sensitive or interpretive are off limits to vehicles of any kind. The Park will be closed to vehicular traffic during after hours.

### 7.4 TRAIL MANAGEMENT PLAN

#### 7.4.3 Purpose of Trails and Trail Development in Kekaha Kai

Trails in Kekaha Kai serve three main purposes.

1. To provide pedestrian and hiking linkages that integrate the park. The trails will connect three sections of the Park as well as mauka makai directions. One should be able to walk to all sections of the park.
2. Establish a section of the Ala Kahakai. This section will become part of the 175-mile National Historic Trail. The trail will be both a recreation and interpretive experience. It will link Kekaha Kai with a broader regional network of trails and wilderness/recreational areas.
3. Provide a means of access to various resources in the park and the adjacent ocean areas. Whether it is to mediate at the summit of Pu'u Kuili or to fish at Kaho'iawa, the trails should provide safe access and a pleasant natural experience to the park user.

An additional purpose of the trails in the Park will be to serve as educational tools related to the lifestyles of the native Hawaiians of old. For this purpose, where possible, known historic trails will be used as part of the active trail system.

Where practicable trails will be made ADA accessible. Signage will identify trails that are accessible. Degrees of challenge and difficulty will be described in signs at trailheads. Recognizing that this is a "natural" park, there will be limitations to the degree of accessibility. However, all reasonable efforts will be made to make higher use areas and major resources or attractions in the park accessible.

#### 7.4.2 Purpose of the Trail Management Plan

The Trail Management Plan serves the following purposes:

1. Provides an opportunity for the public to understand and appreciate the various natural and cultural features along this coast while protecting it from overuse and insensitive behavior.
2. To monitor and maintain the trail systems to alleviate health concerns and maintain safety for hikers and walkers.
3. To coordinate the use and maintenance of the trails to accommodate and balance the needs and demands of various user and interest groups.

#### 7.4.3 Management of Resources Along Trails.

While the trail is a resource in itself (especially historic trails), they often pass along or through important natural and cultural resources.

1. Sensitive sites should be protected with signage, barriers or buffers. Natural buffers are preferred to artificial ones. Site-specific plans should be developed from the inventory surveys that have been conducted for the Park.

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2. Rules should be posted at trailheads to caution hikers and clarify penalties.
3. A monitoring program should be developed for the more important sites and resources. Community groups and docents should be invited to become de facto observers to help the monitoring program. A periodic inventory status should be part of this program.
4. If restoration activity is needed, this should be done immediately.

#### 7.4.4 Trail Development and Maintenance

Trails perform many functions and have been created over many hundreds of years. As a general practice existing historic trails will be rehabilitated to serve either their original function or comparable modern uses. New trails will be developed accommodate the uses identified in the Conceptual Master Plan.

Pre-contact and Early Historic Period Trails: Historic Trails have been identified in the inventory survey. Many of the traditional trails are disconnected. In some places they are in good condition and in other places they have faded completely and are no longer in existence. Some sections have been eroded by the ocean. Others have been obliterated by newer paths and off road vehicles. The following guidelines shall direct the management of trails:

1. Existing historic trails will be restored and rehabilitated as much as possible. The method of restoration will match the construction methodology and materials found in the historic trail as much as practicable. Existing alignments will respect known alignments as much as possible.
2. Where the trail has disappeared, a connecting link should be created with the advice of the State archaeologist, *kūpuna* and other advisory groups from the area.
3. Keep track of historic sections and new sections.
4. Add signage to educate the public of trails and their importance to culture and lifestyle. Signage should also identify safety issues.
5. Historic trails do not need to be made ADA accessible if the change alters the historic character of the trail.

Later Historic Period and Newer Trails: Newer trails have been created during the last hundred years to access different parts of the Park. Some of these have a historic significance of their own and these should be treated similar to older historic trails. The same rules for restoration should apply.

Some of the newer trails create undesirable access to sensitive sites. These should be closed off and abandoned or deliberately erased and the site restored, if possible. Many trails should be re-routed away from sensitive areas.

New Trails: New Trails will be developed as part of the Park Conceptual Master Plan. These trails will generally focus on the more intensively uses day use and camping areas. As much as possible these trails/walkways will be made ADA accessible. Where areas are too steep or rocky, an alternative ADA accessible route will be identified if possible.

These trails/pathways will connect parking areas with comfort stations, day use and camping areas.

Where practicable, new trails will be routed away from sensitive sites. Buffers and barriers will be established where these are possible and desirable.

Side trails for short distances will be developed to areas of special interest.

While the surfaces of new trails need not be the same as historic trails, the use of native materials (*'Ili'Ili*, coral, local woods or basalt) is encouraged. However, ADA accessibility will generally be a more compelling criterion in the design and specification of new trails.

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Boardwalks may be considered where it is necessary to traverse sensitive areas such as sand dunes or wetland areas.

Ala Kahakai: The Ala Kahakai will be a combination of historic and new trail segments. The Ala Kahakai will be identified by signage. Because of the anticipated increased use in the future the newer segments will be designed to withstand heavier foot traffic with less maintenance. As much as practicable, the long-term goal of the design and maintenance of the Ala Kahakai will be to make it ADA accessible.

Trail Through Makalawena: The Ahupua'a of Makalawena belongs to Kamehameha Schools and is not part of Kekaha Kai State Park. However, the Coastal Trail is a public trail and it is anticipated that people continue to walk along the coastal areas of Makalawena as they travel between the Mahai'ula and Awake'e sections of the Park. A cooperative agreement with Kamehameha should be developed to facilitate the use of this connection between the segments of Kekaha Kai. Efforts should also be made to protect the sand dune area from impacts (Figure 7-1).

#### **7.5. CULTURAL RESOURCE MANAGEMENT PLAN**

A separate Cultural Resource Management Plan will be prepared for the Park. While the details will be specified in the plan that will be prepared by the Division of State Parks, some general guidelines are identified in this report.

With regard to historic sites, it is the general policy of the Division of State Parks to save everything. Generally, this is possible because parks are low-density developments and there is room to re-site facilities or to avoid development altogether. If, for some reason this is not possible because of another compelling reason, site development will seek to minimize impacts as much as possible.

#### **7.6 ENDANGERED SPECIES MANAGEMENT PLAN**

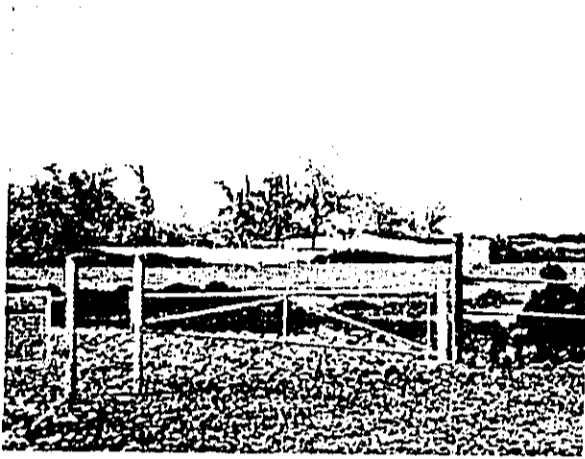
Endangered and threatened species will be protected. Signage will inform visitors of endangered species that may be found in the Park and proper protocols for response. Habitat restoration as part of the development plan will encourage the propagation of rare botanical species and protect habitat such as the anchialine ponds that may contain endangered species or serve as feeding and foraging grounds for such species. When periodic visitors such as a monk seal come ashore, park personnel will ensure that they are not disturbed. Aquatic nursery programs and capture and release programs will be accommodated in the Park, and these programs should consider endangered species.

#### **7.7 COMMERCIAL USES**

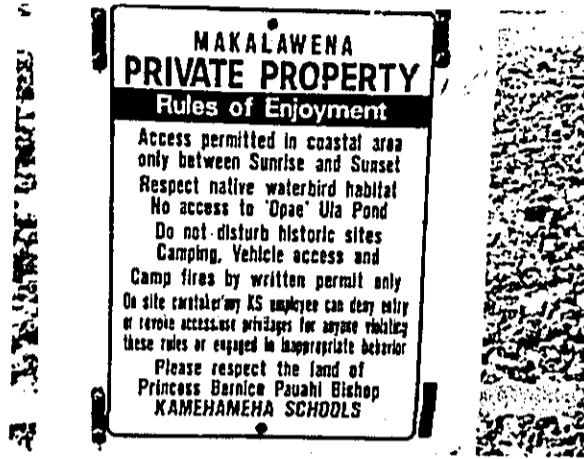
Commercial uses are generally prohibited in Kekaha Kai State Park. Exceptions to this rule will require action by the Board of Land and Natural Resources.

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Boundary from Awake'e



Kapo'ikai Pond



Sand Dunes



Existing Trails through Sand Dunes

Kekaha Kai State Park

Makalawena

Figure 7-1

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ENVIRONMENTAL IMPACT STATEMENT

## Addendum to Kekaha Kai State Park Final Environmental Impact Statement June 2003

This addendum to the Kekaha Kai State Park Final EIS is provided to clarify and reiterate our compliance with HRS 343 relating to Environmental Impact Statements and specifically with Act 50 which extends the coverage of the assessment to address the effects on Hawaii's culture, traditional and customary rights.

The Kekaha Kai State Park plan has been specifically designed to protect natural and cultural resources and to minimize any potential negative impacts upon the cultural, traditional and customary rights of active and potential practitioners. The Kekaha Kai State Park Final EIS identifies and addresses effects on Hawaii's culture, and traditional land customary rights. The EIS addresses cultural impacts of the effects of the proposed Kekaha Kai State Park Conceptual Plan on the cultural practices of the community and the state, which is summarized here.

Resources related to traditional practices and activities which exist on the property include: coastal trails, mauka and makai trails, salt pans, anchialine ponds, native plants, fish, legends, a family cemetery, as well as many historic sites. Information gathered regarding these practices and activities were provided from traditional cultural practitioners and family descendants through direct oral interviews as well as through archaeological research and documentary research.

Detailed oral interviews are included in Appendix L completed by Kumu Pono Associates. Extensive archival searches have been completed for the property. These searches include references to traditional cultural practices dating to pre-contact times. Throughout the long process of plan development, the DLNR worked with community participants and area kupuna to identify and protect physical and non-physical aspects of the park. Some of the non-physical items included place names, myths and legends and the character and ambiance of the sites. The physical research includes natural resources such as anchialine ponds, fish and vegetation. It also includes historic sites, from both pre and post-contact times.

Consultation included community groups, especially with expert and responsible cultural practitioners within the ahupua'a of the project site. Documentary research included the analysis of mahele and land records and a review of transcripts of previous ethnographic interviews. Once all the information was collected, and verified by the community experts, the Kekaha Kai State Park Plan included activities to protect and preserve these valuable traditional practices. Throughout the planning process, all the elements identified in Act 50 were considered with a policy of preserving all features to the maximum extent possible. Citizen participation by people from the region was an integral part of the process from day one. This ensured that the wisdom from people and cultural practitioners would be an integral part of the plan. Throughout the course of 9 years the community was included and informed through a series of advisory meetings open to the general public. Elderly kupuna and lineal descendants were specifically identified, interviewed and encouraged to participate in the process. Over all we have had good participation and feel the plan reflects the voice of the community and meets the requirements of Act 50.

**Section 8.0**

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EIS - Summary



KEKAHA KAI STATE PARK

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8.0 SUMMARY

8.1 INTRODUCTION / BACKGROUND

This document was prepared by Group 70 International, Inc. to assist the State of Hawai'i Department of Land and Natural Resources Division of State Parks to develop the Kekaha Kai State Park. This Final Environmental Impact Statement (EIS) was prepared pursuant to Chapter 343, Hawai'i Revised Statutes, and Chapter 200 Title 11 Department of Health Administrative Rules. The format of this EIS is unique since it refers to portions of the Planned Development Report to fulfill its content requirements.

8.2 PROJECT INFORMATION SUMMARY

<b>Proposing Agency:</b>	State of Hawai'i Department of Land and Natural Resources Division of State Parks 1151 Punchbowl Street, Suite 310 Honolulu, Hawai'i 96813 Contact: Daniel S. Quinn, State Parks Planning Branch Telephone: (808) 587-0290
<b>Accepting Authority:</b>	State of Hawai'i Governor Linda Lingle
<b>Planning/Environmental Consultant:</b>	Group 70 International, Inc. 925 Bethel Street, 5th Floor Honolulu, Hawai'i 96813 Contact: George Atta, AICP (808) 523-5866
<b>Tax Map Keys:</b>	7-2-05:02,03,07 7-3-43: por. 1 7-2-04: 03, 17, 19
<b>Area:</b>	Kekaha Kai State Park is approximately 1,700 acres
<b>Location:</b>	North Kona, Island of Hawai'i Consisting of the following <i>ahupua'a</i> : Kaulana, Mahai'ula, Awake'e, Manini'owali, and Kūki'o
<b>Ownership:</b>	State of Hawai'i
<b>State Land Use District:</b>	Conservation
<b>Hawai'i County General Plan:</b>	Open and Conservation
<b>Zoning:</b>	Open
<b>Special Management Area:</b>	The entire park area is located within the Special Management Area

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**Permits Required:** SMA, CDUA, Shoreline Setback Variance, Flood Hazard Variance

**EIS Triggers:** Use of State lands, State funds and conservation lands

### 8.3 PROJECT SITE

Kekaha Kai State Park consists of approximately 1642 acres along about four miles of the Kona coast of the island of Hawai'i. Specifically, the Park includes lands within five *ahupua'a makai* of Queen Ka'ahumanu Highway: Kaulana, Mahai'ula, Awake'e, Manini'owali, and Kūki'o 2. (See Figure 1). For planning purposes, the Kekaha Kai State Park Conceptual Plan also includes Kikaua Point and portions of State Department of Transportation (DOT) lands along Queen Ka'ahumanu Highway. Makalawena, located between Mahai'ula and Awake'e, is owned by The Kamehameha Schools and is not part of the park. Impacts to Makalawena are addressed in this Draft EIS.

Kekaha Kai State Park is owned and managed by the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks. A portion of the southern section in Kaulana belongs to the State Department of Transportation.

### 8.4 PROPOSED ACTIONS

The Department of Land and Natural Resources, Division of State Parks, in collaboration with the Kona community has developed a Conceptual Plan to improve the Kekaha Kai State Park. The Conceptual Plan envisions a major State Park of approximately 1,642 acres encompassing natural, cultural, wilderness and coastal recreation features located on the Kona Coast of the island of Hawai'i, stretching between the *ahupua'a* of Kaulana and Kūki'o 2.

The Plan seeks to provide improved access and parking, educational and interpretive programs, picnic areas, camping areas, and support facilities such as recreational pavilions, comfort stations, an educational center and visitor orientation facilities to the State Park area. Detailed project descriptions are provided in the Park Development Report (Sections 1.0 - 7.0).

### 8.5 REASONS FOR PREPARING THIS ENVIRONMENTAL IMPACT STATEMENT

The proposed actions that are described in this Environmental Impact Statement (EIS) involve the use of State land and funding, uses in the Conservation District and within the Shoreline Area. These actions trigger the application of Chapter 343, Hawai'i Revised Statutes, and the Environmental Impact Statement Rules, Title 11, Chapter 200 of the Hawai'i Administrative Rules.

This EIS has been filed with the State of Hawai'i's Office of Environmental Quality Control for publication in the Environmental Notice, and copies have been distributed to concerned and interested parties, as required under the EIS Rules.

### 8.6 SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

The planned developments for Kekaha Kai State Park are intended to improve access and expand outdoor recreational facilities on the Kona Coast of the island of Hawai'i.

As such, the significant impacts of these improvements are anticipated to be largely beneficial to the public. These are briefly enumerated below. Also listed below are the few adverse impacts that are expected to occur. Relative to the benefits that will occur, the adverse impacts are not considered significant.

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### 8.6.1 Beneficial Impacts

- The new facilities and improvements will expand recreational opportunities offered at Kekaha Kai State Park, while providing increased maintenance and management of park resources.
- Access to the shoreline will be improved in a manner that is desirable by the community.
- New jobs will be created to staff the recreational park.
- Designated camping and parking areas will reduce shoreline impacts caused by unregulated vehicular traffic on the shore.
- Increase awareness of the cultural landscape of the area through interpretive educational programs
- Preservation of archaeological sites throughout the park.
- Revitalization of historic pedestrian coastal trails
- Private partnerships in funding and managing state park improvements and programs

### 8.6.2 Adverse Impacts

- Use and enjoyment of the Park may be disrupted by construction activities.
- Increased access will require additional management and monitoring of resource use.
- Increased access may place greater pressure on park resources.

### 8.7 PROPOSED MITIGATIVE MEASURES

Few potential adverse impacts are anticipated to result from the planned improvements and relative to the benefits that will occur, they are not considered significant. Mitigative measures that will be implemented to minimize these potential impacts, as well as to address and eliminate other potential adverse impacts, are as follows:

**Construction Impact Mitigation** – Potential impacts due to construction activities will be limited by following best management practices. Project phasing will be implemented to minimize the closure of the entire Park as much as possible during construction.

**Management Plans** – Management plans will be developed which outline measures and strategies to protect and preserve natural and cultural resources throughout the park. These include trail management plans as well as educational and interpretive program plans.

### 8.8 ALTERNATIVES

Alternatives to the planned improvements included a do nothing alternative as well as a multi-level analysis of development intensity alternatives.

**No Action** – This alternative was reviewed and rejected early in the planning process because it would not protect the resources nor provide increased access to recreational resources.

**High, Moderate or Low Intensity Development** - Three concept plans were developed, which reflect High, Moderate and Low intensity uses for the development of the park resources within each of the *ahupua'a*. The alternatives addressed the following park development activities: Parking, Support Facilities, Vehicular Roadways, Camping, Landscape, Interpretive Areas, and Pedestrian Paths.

The alternatives were developed in three levels of intensity with the understanding that any option could be chosen in each planning area, and that specific features or elements could be added or withdrawn from each section. With this framework, the alternatives were presented to the Kona Community in a public

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meeting on April 25, 1995 at Kealakehe Intermediate School. After several public meetings and discussions with various groups a low intensity, incremental development approach was recommended.

### 8.9 UNRESOLVED ISSUES

The unresolved issues identified include:

1. Extent to which the *mauka-makai* historic trail located in the *ahupua'a* of Makalawena will be part of the Kekaha Kai State Park remains an unresolved issue and open for further discussion with the landowner, Kamehameha Schools.
2. The trail entering Makalawena from Mahai'ula crosses over sensitive dune areas. Discussion with Kamehameha Schools is needed to protect this resource.
3. The degree to which the road leading down to Mahai'ula will be improved is expected to continue to be a focus of discussion amongst community members.
4. Management of the park will depend heavily on the availability of financial resources. It is not clear at this time whether the State has sufficient funds to implement the planned improvements and necessary management tools.
5. While commercial uses are generally prohibited from the park, periodic activities and non-traditional activities with possible commercial uses still need to be discussed and evaluated.
6. Establishing a marine fisheries management area to protect water quality and protect fish population and other marine resources is an issue that will require further discussion.

### 8.10 COMPATIBILITY WITH LAND USE POLICIES AND PLANS

The planned improvements are compatible with State and County of Hawai'i land use policies, plans and regulations related to the natural environment and recreation. They are consistent with, and permitted by applicable land use designations, and will contribute in a wide variety of ways to the implementation of State Park goals, objectives and policies.

### 8.11 REQUIRED APPROVALS AND PERMITS

Four major approvals and permits are required in order for this project to proceed.

1. Acceptance of the Final Environmental Impact Statement by the County of Hawai'i
2. Approval of a Special Management Area Use Permit by the Governor of Hawai'i
3. Issuance of a Conservation District Use Permit by the State Board of Land and Natural Resources
4. Approval of a Historic Preservation Management Plan by the State Department of Land and Natural Resources Historic Preservation Division

**Section 9.0**

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EIS - Environmental Setting

## KEKAHA KAI STATE PARK

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### 9.0 ENVIRONMENTAL SETTING

#### 9.1 OVERVIEW

The Kekaha Kai State Park is a large (1642-acre) park along the Kona Coast of the Island of Hawai'i. Kekaha Kai State Park is owned and managed by the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks and is surrounded by the Kona International Airport to the south, Kūki'o Development to the north, Queen Ka'ahumanu Highway and Manini'ōwali *mauka*, the Pacific Ocean *makai*, and Makalawena in between.

The Kekaha Kai State Park is an integral part of a series of parks along the Kona Coast. At present, Kekaha Kai State Park is the largest park in the series.

Geographically, the park is composed of three areas containing a variety of cultural and natural resources within five *ahupua'a*. The sections of the park include the following *ahupua'a* areas makai of the Queen Ka'ahumanu Highway: Mahai'ula and the northern portion of Kaulana; Awake'e; and a one thousand foot wide coastal parcel in Manini'ōwali and Kūki'o 2.

- The Mahai'ula-Kaulana area contains two popular beaches (Ka'elehuluhulu and Mahai'ula) accessed via an existing unimproved two-wheel-drive road.
- The Awake'e area is noted for its fishing spots, anchialine ponds and the prominent Pu'u Kuili.
- Makalawena is owned by The Kamehameha Schools and while it is not included in the park, it is discussed because public access will be provided through the area near the shoreline on the historic public right-of-way.
- Manini'ōwali / Kūki'o includes a white sand beach at Kua Bay. Kakapa Bay and a rich cluster of cultural features are located in this *ahupua'a*.
- Kikaua Point has a sandy cove and shaded picnic area. Kikaua Point Park is state-owned, but leased by WB Kūki'o for recreational use. It is included in the park plan, but is not part of the Executive Order for Kekaha Kai State Park. Kikaua Point Park will be operated and maintained by WB Kūki'o.
- There are significant archaeological and natural features throughout the park, including the lava flows and green coastal kīpuka.

The Conceptual Plan seeks to protect these natural and cultural resource areas, including the open space and views, while providing improved recreational opportunities for residents and visitors. Details of these area and descriptions of their existing uses and planned developments are described in previous chapters of this report.

#### 9.2 TERRESTRIAL CONDITIONS

The following areas will be covered: climate, geology and soils, topography, flora, and fauna.

##### 9.2.1 Climate

The climate in West Hawai'i is semi-tropical and arid, with an average annual precipitation of 17 inches. Rainfall increases with elevation and reaches a peak between the 1,200 and 3,000-foot elevations of Hualālai and Mauna Loa volcanoes. Average annual temperature is 78 degrees F and relative humidity ranges from between 71 to 77 percent year round. Winds follow a typical diurnal pattern with on-shore winds (westerly and southwesterly) in the morning and early afternoon hours. Cloudbanks often form along the higher elevation slopes during the day, and offshore breezes occur in the late afternoon and evening. Typical wind velocities range from 3 to 14 knots.

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### 9.2.2 Topography

Kekaha Kai State Park is situated on the gentle western slopes of Hualālai. The topography is gently to moderately sloping. Average slopes in the park range between three and seven percent. The single noticeable exception is Pu'u Kuili, a 342-foot cinder cone in the Awake'e section of the park. Most of the shoreline areas are generally flat with slopes less than five percent.

### 9.2.3 Geology

Kekaha Kai State Park is located on the western slope of Hualālai, a dormant shield-type volcano. The Keāhole Point area was formed by progressive layering of prehistoric lava flows from Hualālai. The lava is primarily *pāhoehoe* with thicknesses varying from six inches to 100 feet. Lava layers are very porous and contain numerous lava tubes, cracks and fissures. The geologic formation in the park area is generally comprised of highly permeable rocks of the Hualālai volcanic series.

As described earlier in Section 2.1, the predominant natural force shaping this landscape is Hualālai Volcano, mother of Pu'u Kuili, the dominant cinder cone in the park. Pu'u Kuili is an excellent example of later stage cinder cones which are created through flank eruptions. As with most flank eruptions, Pu'u Kuili is the most seaward cone along the northwest rift zone of Hualālai. As one looks mauka along the rift outside of the park boundaries one sees many higher elevation cones going all the way to the summit. Other cinder cones along this line include Puhī'apele, Akahipu'u and Moanu'ahea. Other natural features of the region is the series of kīpuka and the coastline, which are described in Section 2.1

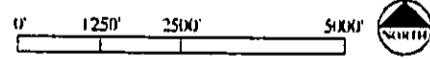
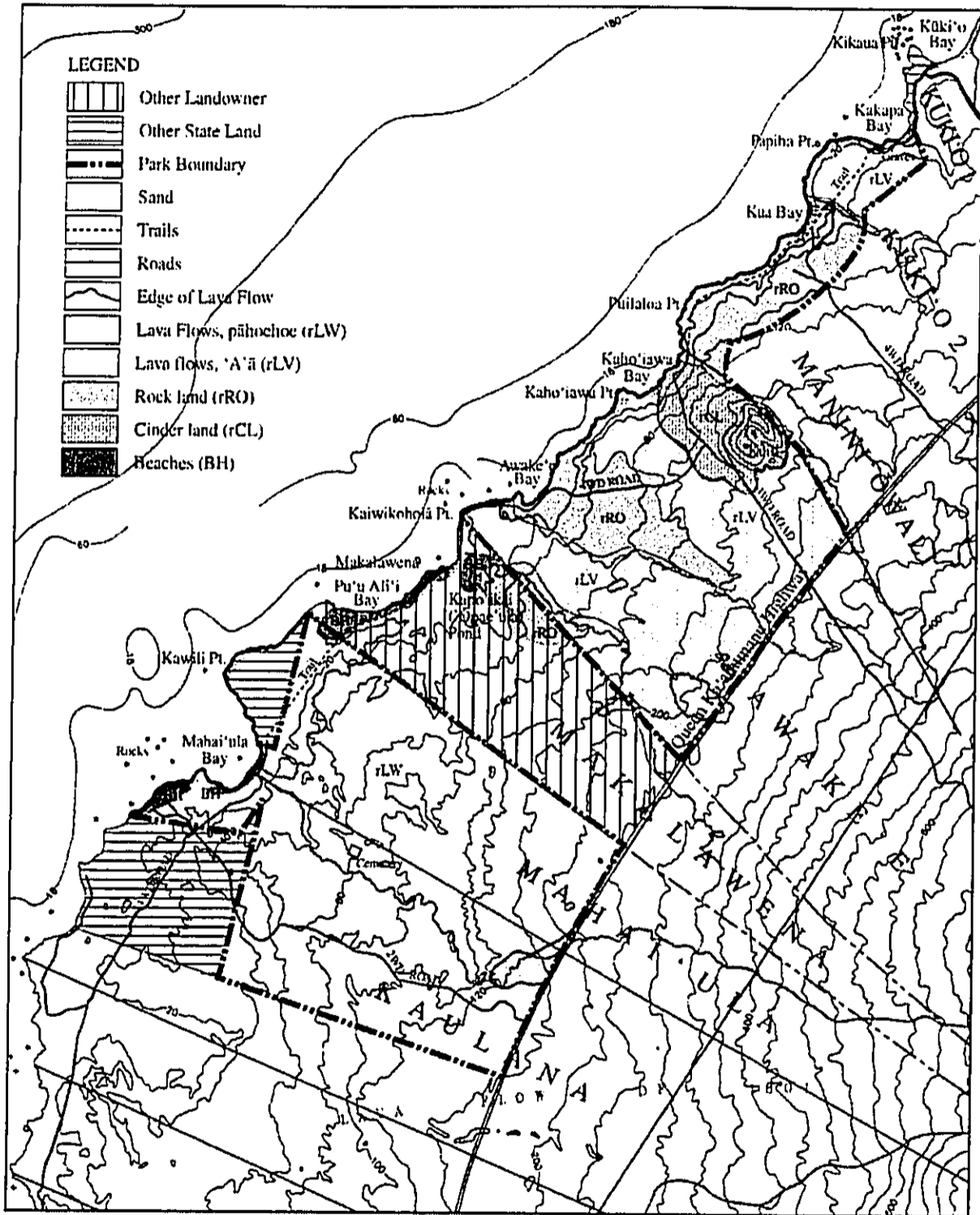
Anchialine ponds are unusual geological features unique to the State of Hawai'i. They are brackish water ponds with no visible connection to the ocean. An identifying feature of these ponds is the existence of red shrimp (*Halocardia* sp. and others) that have migrated from the ocean through cracks in the basaltic lava flows. These ponds go through a unique evolutionary pattern. Created by lava flows that have reached the coastal areas they begin as depressional areas mixing fresh water and salt water. Eventually they silt in and become dry areas with deeper soils in the middle of rocky lava flows. The largest anchialine pond in the region is Kapo'ikai Pond, commonly known as 'Ōpae'ula. Kapo'ikai is on private land owned by the Bishop Estate which bisects Kekaha Kai State Park. It received its common name ('Ōpae'ula) from the red shrimp in the pond which were harvested by fisherman for bait.

### 9.2.4 Soils

Soil types in the area are related to volcanic activities and coastal processes. Soils have been mapped as part of the U.S. Department of Agriculture, Soil Conservation Service (1972) Soil Survey for the State (Figure 9-1). Along the shoreline in the sandy beach areas the classification is BH (Beaches). Although not mapped, transient seasonal beaches are found at Awake'e and Kua Bays. The beach at Mahai'ula is permanent. The remaining classifications are rLW (*pāhoehoe* lava flows), rCL (cinder lands), rRO (rock lands) and rLV ('*a'ā* flows). The land is an overlapping mosaic of several lava flows, the most recent of which is from the Hualālai flank eruption of 1801. This layering of lava flows has created a geology of multi-colored rocky areas of different colors and ages. Generally, vegetation has grown more densely on the older flows.

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Kekaha Kai State Park

Soils

Figure 9-1



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The predominant soil types of Kekaha Kai State Park are 'a'ā lava flows and rock land. There are generally few sections of the site which have soil depths exceeding a few inches. These soil areas are able to support a few species of dry land grasses and trees.

According to the U.S. Department of Agriculture (1972), soil at Kekaha Kai State Park has been determined as not suitable for agricultural use. *Pāhoehoe* lava flows, cinder land and 'a'ā lava flows have an agricultural capability class rating of VIII, which is defined as soils and land forms whose limitations preclude the cultivation of commercial plants. Rock land is given a capability class rating of VII, which includes soils which have very severe limitations that make them unsuitable to cultivation, and restrict their use largely to pasture or range, woodland, or wildlife habitat. Kekaha Kai State Park consists primarily of lava rock and is generally unsuitable for agricultural uses.

Two other land classification systems are used to rate the agricultural potential of soils in Hawai'i on a scale ranging from A (best) to E (poorest). The University of Hawai'i Land Survey Bureau (1972) classifies the soils of the property as category E soils, which indicates they are not suited for agricultural uses. The State of Hawai'i Department of Agriculture has also mapped *Agricultural Lands of Importance to the State of Hawai'i* (ALISH). The Park does not contain soils rated as "prime", "unique" nor "other important" agricultural lands, as defined by ALISH.

#### 9.2.5 Surface and Groundwater Resources

Rainfall in the area is light – approximately 17 inches annually – and groundwater recharge is restricted to seasonal storms or through higher elevation precipitation on the upper slopes of Hualālai. Due to the highly permeable volcanic soil and geologic subsurface, there is very rapid storm water drainage into the lava layers, and runoff is essentially non-existent. The existing soil type would be classified as Class A by the U.S. Soil Conservation Service, meaning that it has the highest water intake rate. The incident precipitation travels briefly over land as sheet flow before it percolates into the soil to become groundwater. There are no drainage improvements onsite. Except for localized site-specific cases, there are no plans for drainage improvement.

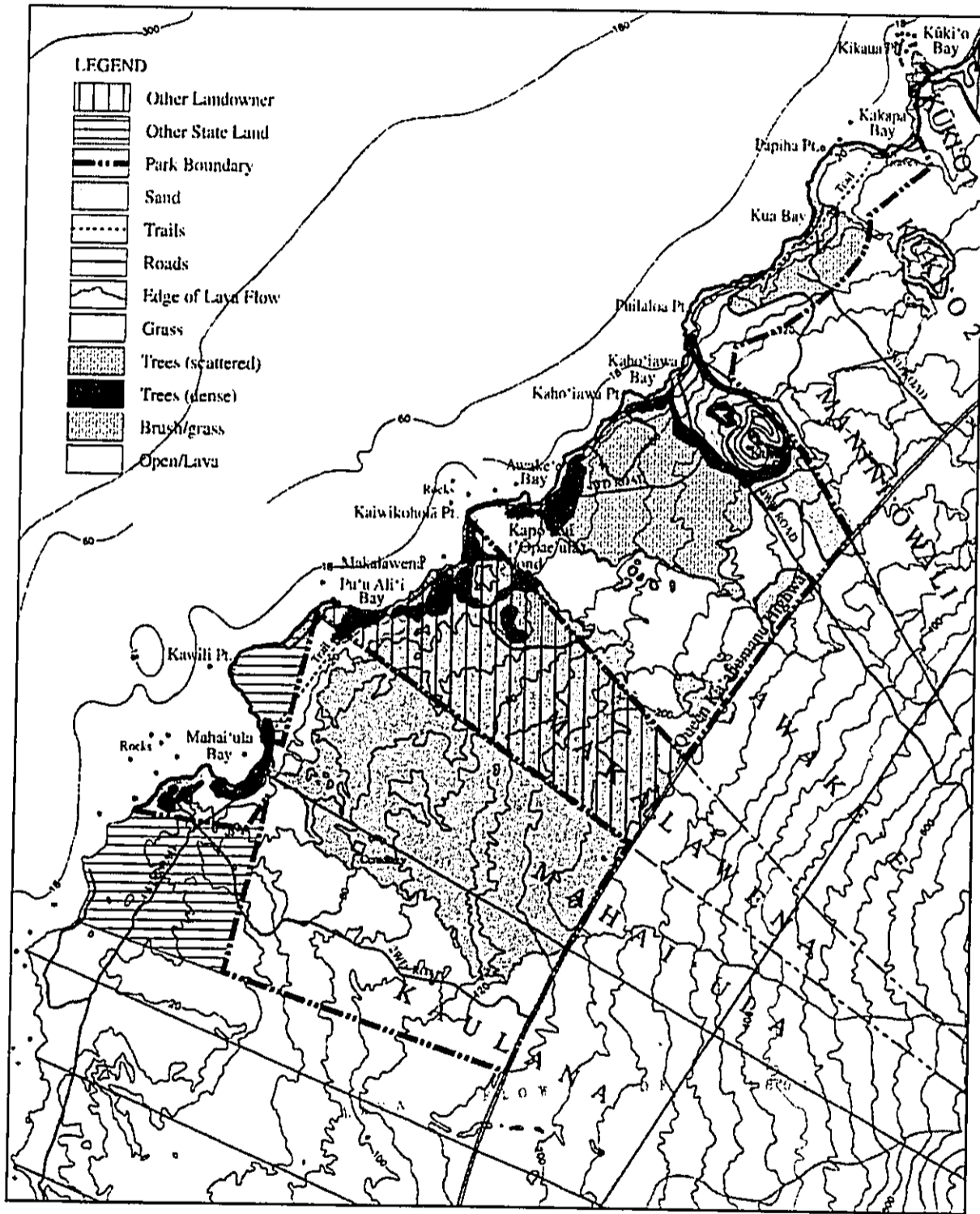
There are no potable groundwater sources in the park planning area. Studies done for Manini'ōwali and Makalawena show that salinity ranges are likely to be between 1,500 and 3,000 mg/liter total chlorides. Although there are no universal standards for drinking water quality, the EPA standard for potable water is 250 mg/liter total chlorides. Groundwater inflow from upslope areas has not been calculated but accounts of management practices by native Hawaiians indicate they reserved some specific upslope ponds for drinking water and used the lower ponds for a variety of other purposes. These ponds are all fed primarily by groundwater as rainfall is low and evapotranspiration is high. There are no sources of external surface water from streams.

#### 9.2.6 Vegetation

Vegetation is sparse on the Kona Coast. Denser and taller stands of trees and coconut palms are generally found along the coastline and near pond areas where trees can obtain water from groundwater sources. Other areas are barren or sparsely vegetated with grasses, bushes or short trees. Botanical surveys (Char 1995) have identified six vegetation community types: 1) Coastal, 2) Pond, 3) Fountain grass grassland, 4) Kiawe forest, 5) Sparse 'a'ā, and 6) Roadside. Detail descriptions of these vegetation types are described in Section 2.3 (Figure 9-2).

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Kekaha Kai State Park

Vegetation

Figure 9-2

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### 9.2.7 Wildlife: Birds, Fauna and Insects

Fauna in the park area is typical of fauna found throughout this region (Ohashi 1995). Details of the avifauna and marine fauna are described in Section 2.4.

## 9.3 MAN MADE ENVIRONMENT

### 9.3.1 Visual Resources

The total area of the Park is not visible from Queen Ka'ahumanu Highway because the section of the highway corridor and the adjoining land are relatively level. Various portions of the Park are visible from the highway. In these sections, there are excellent ocean views from the Highway and of Pu'u Kuili.

The shoreline is characterized by lava, rock outcrops and white cobble beaches. Besides the shoreline areas, the primary visual feature is the Pu'u Kuili cinder cone. It is prominently visible from the north and south approaches along the Queen Ka'ahumanu Highway.

From Pu'u Kuili, there is an expansive view of the shoreline to the north and south and of Hualālai to the east (Figure 1-8).

### 9.3.2 Air Quality

There are no air quality monitoring stations in the West Hawai'i region. The Department of Health maintains monitoring stations in Hilo and Honoka'a, about 60 miles east-southeast of the site, but the data collected are specific to those localities and cannot be correlated to the subject properties. There are no large stationary sources or heavy vehicular traffic in the area. The County does not monitor key automobile pollutants, such as carbon monoxide and nitrogen oxide. At present, the largest intermittent contributor to air pollution is eruptive activity at Kilauea volcano.

Air circulation patterns on the western side of the island are self-contained because the area is sheltered from the full impact of the northeast trade winds. Land-sea breezes dominate air movement patterns: east-southeast winds prevail during the early morning and evening hours while west-northwest sea breezes occur during the remaining daylight hours. Air quality conditions may be more vulnerable here than elsewhere on the island.

### 9.3.3 Noise / AICUZ

Sources of noise will be from coastal "surf" noise and vehicular traffic noise along Queen Ka'ahumanu Highway. As with all developments which are located in close proximity to the shoreline, a primary source of noise is that naturally caused by wave action crashing against the beaches and lava boulders. A minor source of noise will be vehicular traffic moving along the Queen Ka'ahumanu Highway mauka of the Park.

Air traffic from Keāhole Airport is another source of noise imposed on park users. According to the Air Installation Compatibility Use Zone (AICUZ) maps for Keāhole Airport the southwestern section of the Mahai'ula / Kaulana is in the noise contour portions of the AICUZ (Figure 5-4). Since this portion of the park is in the approach path to Keāhole Airport ground noise levels at parts of Ka'elehuluhulu are in the 65 LDn zone. Everything to the west/southwest of the Magoon / Ka'elemakule complex falls in the 55 LDn zone. While the park is not in the accident potential zone (APZ) of the airport and these levels are not hazardous to human health, 55 LDn or quieter is usually the preferred level for a residential subdivision. The noise does take away some of the wilderness character of the place and is loud enough to force people to stop speaking.

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The State Department of Transportation, Airports Division and State Land Use Commission have set standards for developments situated near airports. The standards require a noise easement for areas where LDn levels exceed 55. Note, the AICUZ noise maps in this section are prepared for military installations. KOA, FAR Part 150 Noise Compatibility Program dated December 1997 is more pertinent.

### 9.4 NATURAL HAZARDS

Kekaha Kai State Park is subject to natural hazards, as are similar lands along this stretch of Kona coastline. These include the possibility of seismic activity, lava flow and tsunami inundation.

#### 9.4.1 Flood, Tsunami and Storm Wave Hazard

The 100-year flood hazard boundary closely follows the coastline except near Kakapa Bay (at Kūki'o) and Kaiwikoholā Point (at Makalawena / Awake'e boundary), where the boundary extends mauka for approximately 750 feet. The Flood Insurance Rate Maps (FIRM) shows VE zones ranging up to 9 feet above mean sea level along the shoreline from Mahai'ula to Kikaua Point. See Figure 5-3. A VE zone is a coastal flood area with a velocity hazard (wave action) where flood elevations have been measured. The width of the VE zone varies along the coast depending on coastal and offshore topography. The width ranges from very narrow areas of a few feet to zones as wide as 900 feet by Kāwili Point. The highest calculated elevation is just over 9 feet above mean sea level at Kakapa Bay.

Tsunami inundation is a possibility at the park. Within historic times, the Hawaiian Islands have been subjected to at least 50 tsunami occurrences. The highest tsunami run-up wave heights ever recorded in the Kona region resulted from the 1960 tsunami, which caused extensive damage throughout the State. The 1946 tidal wave destroyed the village or settlement of Makalawena.

#### 9.4.2 Volcanic, Earthquake and Seismic Hazards

The U.S. Geological Survey (USGS) has identified "zones of overall risk" associated with volcanic activity on the island of Hawai'i. These zones take into account both direct volcanic activity hazards (lava flow inundation, rock fragments and gases) and indirect volcanic hazards (subsidence, surface rupture, earthquake and tsunami). Six zones (A-F) are classified in this system, ranging from low risk (A) to high risk (F). Both Awake'e and Manini'ōwali which lie downslope of Mt. Hualālai are located in zone "DE", indicating a relative degree of risk from volcanic action.

Hualālai, the dominant volcano in the North Kona region has been dormant for over 200 years. Its last eruption was the Puhī'apele eruption of 1801. One of the flows from this eruption covered the area around the Kona Village and the other major flow covered the northern section of Keāhole Airport up to Mahai'ula. The park area represents flows over many centuries, in different states of erosion and revegetation. Although Hualālai has not erupted in nearly 200 years underground movement of the magma has caused numerous earthquakes from time to time. The largest recent quake associated with Hualālai was the 1929 quake which registered 6.5 on the Richter scale. While earthquake hazards do not appear imminent, historic records indicate a 62-year frequency for earthquakes of magnitude 6.4 on the Richter scale.

In fact, the entire island of Hawai'i is susceptible to earthquakes originating in fault zones under and adjacent to the island. Within the Kona region, two fault zones have been identified. The Kealakekua and Kaloko faults are both located in South Kona, which is distant from the park. For the purposes of structural building design, the island of Hawai'i has been classified as having the highest potential for seismic occurrence and danger. The Hawai'i County Building Code requires that all new structures be designed to resist these forces.

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### 9.5 NEAR-SHORE WATER CONDITIONS

#### 9.5.1 Shoreline Area Conditions

The physical structure of the shoreline consists predominantly of low basaltic boulder slopes interspersed with crescent-shaped pocket beaches. The beaches are composed of rounded cobbles and coarse sands which extend into the intertidal area. The southern extreme of Awake'e, near Makalawena, is somewhat anomalous in that a berm of coral rock separates the ocean from a low-lying back-beach area containing a complex of anchialine ponds. The coral rocks have apparently been thrown up on the shoreline after being broken loose by storm action. The most prominent beach of this type occurs along the margin of Awake'e Bay. The shoreline of the northern portion of Awake'e towards Kaho'iawa is somewhat elevated, preventing the formation of tidepools and anchialine ponds.

#### 9.5.2 Coastal Water Quality

Water quality is excellent offshore of Kekaha Kai State Park.

A long-term database for surface water chemical parameters has been collected at the Natural Energy Laboratory of Hawai'i (NELH) at Keāhole Point located approximately four miles south of Awake'e and Manini'ōwali. Because of the homogeneity of the coastline and the lack of shoreline development between Keāhole Point and Kekaha Kai State Park, it is likely that water chemistry off the subject parcels is similar.

Water quality standards have been established by the State Department of Health and are defined in Title 11, Chapter 54 of the Hawai'i Administrative Rules. According to these standards, the coastline along Kekaha Kai State Park is designated as AA, and considered pristine.

The definition of Class AA waters in Hawai'i Administrative Rules §11-54-03 is as follows:

"It is the objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected. No zones of mixing shall be permitted in this class: (A) Within a defined reef area, in waters of a depth less than 18 meters (ten fathoms); or (B) In waters up to a distance of 300 meters (one thousand feet) off shore if there is no defined reef area and if the depth is greater than 18 meters (ten fathoms). The uses to be protected in this class of waters are oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment. The classification of any water area as Class AA shall not preclude other uses of the waters compatible with these objectives and in conformance with the criteria applicable to them"

Lack of suspended material results in extreme water clarity. There are no streams entering the sea along Kekaha Kai State Park, but there is evidence of high volumes of ground water extrusion. At Awake'e Bay, evidence of groundwater discharge is in the form of a visible surface lense of low salinity water and increased nutrient concentrations.

There are several programs to monitor groundwater and ocean water quality. NELH, Nansay Hawai'i Inc. (developers of Kohanaiki) and Kūki'o (developers of Manini'ōwali / Kūki'o) are all involved in water quality monitoring programs. Baseline data on the status of water quality and anchialine resources at Manini'ōwali are being provided on a quarterly basis to insure that the development at Manini'ōwali

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will not impact the quality of the ground, anchialine pools and near shore marine waters fronting the project site. A copy of the second quarter findings from April 2002 is attached in Appendix I.

### 9.5.3 Marine Environment

Within the shoreline area (from high splash zone to subtidal breaker zone) there is a variety and abundance of marine life determined largely by wave energy, and by the topography and bathymetry of the shoreline that affords shelter to aquatic life. The type of lava flow ('a'ā or pāhoehoe) affects the character of habitat in the surf and intertidal zones. Boulders from an 'a'ā flow provide increased vertical relief and more shelter from the surf. Bays formed from headlands also vary in the type of biota they support depending upon their age, depth, and type of bottom.

The shoreline at Manini'ōwali is characterized by three main types: 'a'ā flow, pāhoehoe flow, and sandy beach. The distribution of large boulders and lava outcroppings forms a series of tidal pools which support intertidal seaweeds such as Turbinaria ornate, Anfelia concinna, Sargassum echinocarpum, and Porphyra sp. Sea urchins, including Echinometra matheai, and Echinostrephus aciculatus, are plentiful in protected cracks between boulders. Several small coral heads, Pocillopora meandrina, were present in deeper tidal pools.

The white sand of Manini'ōwali Beach (at Kua Bay) stretches for approximately 450 feet along the coastline, but appears to be seasonally variable in size. A few Ghost Crab (Ocypode ceratophthalma) burrows were visible along the beach. Because of lack of cover, marine life over the sand patch offshore of the beach is largely limited to transient fish species and other fish or invertebrate species that are adapted to hide in, or just above, the sand. One school of ōpelu (Decapodus sp.) was seen, but no cryptic or sand dwelling species were noted during the survey.

The older pāhoehoe flow characteristic of the shoreline south of Manini'ōwali Beach forms a ledge at the waterline, dropping immediately into five to ten feet of water along most of the coast. Tidepools here are not so numerous or richly populated as those at the tip of the 'a'ā lava flow. Dominate algae include Turbinaria ornate and Sargassum echinocarpum.

Baseline studies of the marine environment off Awake'e and coastal anchialine ponds were conducted by Steven Dollar, Ph.D., in 1986 and again in 1990. The studies showed pond conditions and inventory of composition to be identical.

#### Benthic Community Structure – Corals and Invertebrates:

Near-shore subtidal marine communities are generally defined by the physical nature of the bottom substrate. Unconsolidated sand or rubble will support a relatively low population of surface dwelling invertebrates and fish. Hard substrate may either be basalt (lava) or calcareous in nature and in general provides more niches for fish and invertebrate habitation. Often on the Kona coast the solid basaltic flow is covered by a thin veneer of consolidated limestone sand.

Because of the relatively young geologic age of Hawai'i Island lava flows and the relatively slow growth of corals in these subtropical waters, most corals are growing on a substrate of basalt and do not form true coral reefs, but rather coral communities. Each zone is characterized by a depth range, substrate type, and primary coral species. Down to a depth of approximately 25 feet, the high-surge, Boulder-Zone, Pocillopora meandrina thrives. From 20 to 45 feet depth, the Reef Building Zone, is Pocillopora lobata. This is a zone of moderate surge. The same coral community, however, is also found at 100 feet and below; a depth experiencing low surge. Pocillopora compressa lives in the Slope Zone, from 40 to 100 feet, characterized by moderate surge.

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The benthic communities located offshore of Manini'ōwali are much like other nearby near-shore benthic communities in that coral cover is generally lowest in the near-shore reef zone (15 feet). However, the species diversity is greater in shallow regions compared to the deeper areas. This kind of distribution pattern reflects the relative harshness of physical conditions in the near-shore area, primarily in response to wave stress. Under prevailing conditions, no single coral species is able to monopolize substrata.

The major groups of benthic organisms occurring on the reefs offshore both of the parcels, other than corals, are sea urchins and sea cucumbers.

#### Reef Fish Community:

In general, reef fish are abundant along the coastline of the Kekaha Kai State Park. The reef fish community is typical of that found along most of the Kona Coast and can be grouped into six general categories: juveniles, planktivorous damselfishes, herbivores, rubble-dwelling fishes, swarming tetrodons and surge-zone fishes.

The offshore fish community structure is also fairly typical of the assemblages found in undisturbed Hawaiian reef environments. The presence of large game fish including parrotfish (*Scarus* sp.), *ulua* (*Caranx* sp.), goatfish (*Parupeneus* sp. and *Mulloidichthys* sp.), and squirrel fishes (*Holocentrus* and *Myripristis* sp.) indicate that this area has not yet been subjected to heavy fishing pressure. The apparent low levels of fishing are undoubtedly a function of the remote location of the site with respect to shoreline access and the distance from the nearest harbor or boat launching facility.

#### Threatened or Endangered Species:

Three species of marine animals that occur in Hawaiian waters have been declared threatened or endangered by Federal jurisdiction. The threatened green sea turtle is commonly seen along the Kona Coast, and is known to feed on selected species of macroalgae. The endangered hawksbill turtle is known infrequently from waters off the Kona coast.

Populations of endangered humpback whale are known to winter in the Hawaiian Islands from December to April. Whales have been observed from Kekaha Kai State Park as recently as April 2002.

There has also been one recorded observation of the Hawaiian monk seal.

#### **9.5.4 Anchialine Ponds**

Brackish water pools separated from direct contact with the ocean, termed "anchialine ponds", constitute unique coastal features in Hawai'i that are inhabited by rare organisms. There are a number of anchialine ponds throughout the Park.

At Awake'e, a series of ponds is located between Awake'e Bay and Kaiwikoholā Point. The pond system continues farther south into Makalawena. Eighteen ponds were numbered and surveyed within the Awake'e property. The ponds are concentrated in a small geographical area, and are surprisingly diverse in size and type. Four of the Awake'e ponds are large (>1000 sq. ft.), 11 ponds are medium (100- 1000 sq. ft.) and four are small (<100 sq. ft.). Four of the Awake'e ponds have "apparent" bottoms (depth to rock bottom) classified as shallow (<20 in.), 14 are moderate in depth (20-60 in.) and none can be classified as deep (>60 in.).

Awake'e ponds are classified by type according primarily to composition of the bottom. 'A'ā ponds are depressions in lava rock with no growth of benthic macroalgae, and no sediment accumulation. 'A'ā ponds are the most abundant type at Awake'e (12 of 18). Three ponds are "orange crust" ponds which are similar to 'a'ā ponds except that the bottom rock is covered at least in part, by orange-brown mineralize

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crusts of the blue-green algae *Schizothrix* sp. Three ponds are "sediment" ponds which contain bottom layers of unconsolidated mushy sediment up to 2 feet deep.

A common characteristic of all pond types is evidence of cultural modification. Many of the 'a'ā ponds contained walls that divided the ponds into sub-sectors, or modified pond boundaries. Dating cultural modification of ponds may not be possible, but it is probable that much of the activity was conducted by populations of Hawaiians who inhabited the area in the early 1900s.

The most ubiquitous plant group occurring in the Awake'e ponds is the orange algal crusts that occur in shallow, low salinity ponds. The undersides of rocks from 'a'ā ponds contain small algal cells that constitute the only plant material in some ponds.

The most obvious characteristic of the Awake'e pond biota is that relative lack of shrimp and native fish species, and the overwhelming domination by introduced fish. Typically, the most abundant fauna of anchialine ponds are snails and shrimp. Shrimp were extremely scarce at Awake'e ponds and only one species, *Halocardinia ruba* (ōpae'ula) was observed. Snails typically found in tide pools and anchialine ponds, especially on the undersides of rocks, were also ubiquitous in the Awake'e pond system. Nor were there any representative pond fish observed in any of the Awake'e ponds. Exotic fish, such as topminnows and guppies were observed in all ponds.

The absence of many of the representative species indicates that the faunal makeup of the Awake'e ponds was found to be somewhat atypical of pond ecosystems.

At Manini'ōwali, the single anchialine pond is approximately 250 feet behind the beach. The pond is approximately 16 square yards in surface area and may be classified as a mature pond. Its salinity is about six parts per thousand (35 ppt = full seawater) which is on the high side of normal for a mature anchialine pond. Both the nitrogen level and silicate level were slightly higher than those of an average anchialine pond, but entirely within the normal range for a mature pond.

The shallow bottom of the pond at Manini'ōwali is covered with sandy mud that supports a rich colony of blue green algae (*Schizothrix* sp.) along with the other unidentified freshwater algae. The pond supports a large population of mosquito fish (*Poecilia* sp.) and at least one species of shrimp, probably *Palaemon debilis*. No other shrimp species were seen.

Some of the ponds have been damaged. Diapers and plastic trash have been sited in the anchialine pond at Kua Bay. Rehabilitation of the ponds is planned.

### 9.6 INFRASTRUCTURE

#### 9.6.1 Roadways

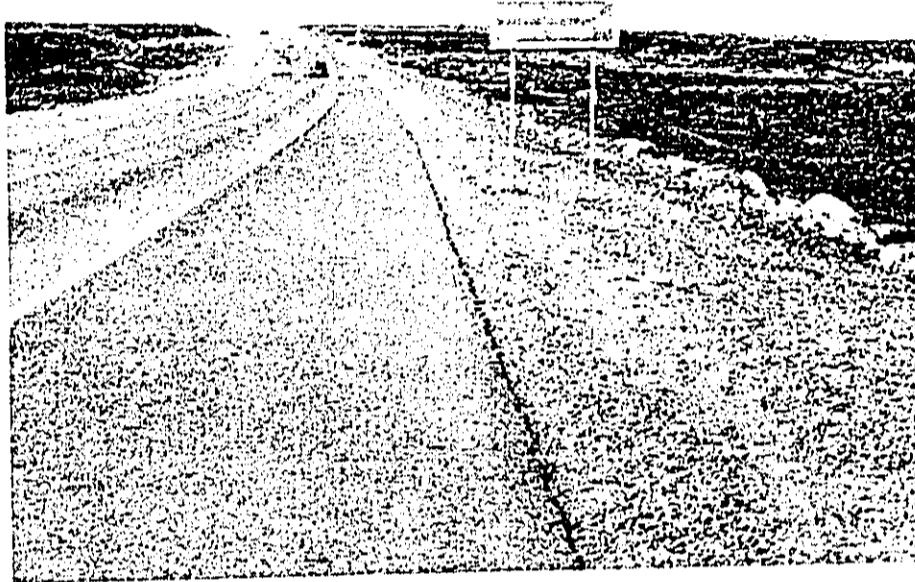
The Queen Ka'ahumanu Highway is the primary arterial highway between Kailua-Kona and Kawaihae and provides the main access route to the park. The only two-wheel drive road within the Kekaha Kai State Park site is a rough poorly-paved road leading from Queen Ka'ahumanu Highway through Kaulana, including a section of State Department of Transportation land, to a parking area at Ka'elehuluhulu Beach and Mahai'ula Bay. Access to Mahai'ula on this road is controlled by a locked gate near the highway.

There is a four-wheel drive road at Awake'e which leads from the highway to Pu'u Kuili, Kaho'iawa Bay, Awake'e Bay, and the locked gate at the border of Makalawena. A four-wheel drive road through private lands in Manini'ōwali / Kūki'o links the highway with Kua Bay and the coastline. An unimproved dirt road through W.B. Kūki'o land accesses Kikaua Point (Figure 9-3). There is no internal road connecting the entire park.

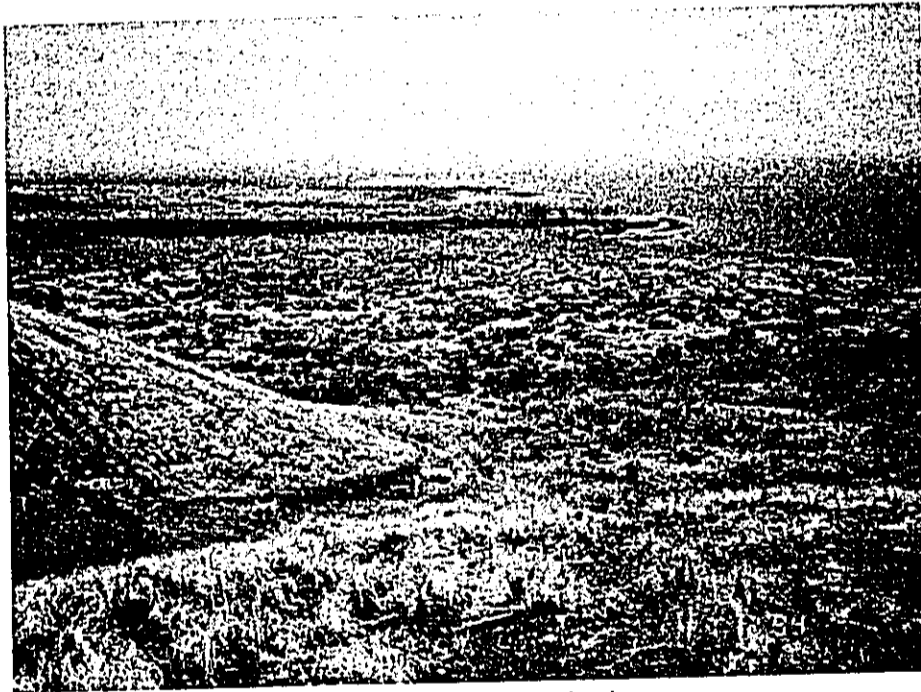


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Road to Mahai'ula from Queen Ka'ahumanu Highway



Jeep road along Pu'u Kuili. To be closed and used for pedestrians.

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### 9.6.2 Traffic

The Queen Ka'ahumanu Highway is the primary arterial highway between Kailua-Kona and Kawaihae and provides the main access route to the park. The major arterial connection to the park is Queen Ka'ahumanu Highway. Queen Ka'ahumanu Highway is the main highway in the South Kohala and Kona districts, running in a north-south direction along the coastline between Kailua-Kona and Kawaihae. It is a State maintained two-lane undivided highway with a 24-foot wide pavement and a posted speed limit varying between 35 to 55 miles per hour (mph). Queen Ka'ahumanu Highway (State Highway 19) provides both regional mobility and access to coastal development in this area. Queen Ka'ahumanu is usually widened where there area at-grade intersections to provide exclusive left-turn lanes and deceleration and acceleration for right-turning movements.

The main park access road at Mahai'ula is of poor quality with numerous potholes and large rocks along the road. The north access roads (to Kua Bay and Awake'e) are suitable for four-wheel drive vehicles only.

### 9.6.3 Trails

There are several trails throughout the Park which exist in varying conditions. There are older trails which run along the coast, historic trails which run *mauka* to *makai*, as well as more recent jeep trails. Portions of the coastal trail have been eroded. Details of existing trails are described earlier in the PDR portion of this report.

### 9.6.4 Drainage Facilities

The highly permeable geologic formation in the park area lacks definitive drainage patterns, indicating that surface runoff is virtually non-existent. There are no drainage improvements onsite. Except for localized site-specific cases, there are no plans for drainage improvement.

The park area is generally comprised of highly permeable rocks of the Hualālai volcanic series. Drainage is not considered a problem and aside from grading plans there are no drainage improvements proposed for the park.

At Mahai'ula, site grading of new facilities will be planned to drain rainfall runoff away from buildings. When the main access road is graded, the shape of the roadway prism and the edge of the roadway grading will seek to minimize erosion from the infrequent but periodically severe rainstorms that affect the Kona Coast.

### 9.6.5 Water Supply and Wastewater Facilities

Water supply and wastewater facilities are described earlier in Section 5.3.

### 9.6.6 Solid Waste Disposal Facilities

Transfer stations, which have replaced open pit dumping stations, are operated at various locations in the Kona region. The Kona Sanitary Landfill receives solid waste from the area. Park maintenance crews will continue to provide solid waste pick up service in the future.

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### 9.6.7 Power and Communications

There is no electrical service within the park boundaries. Existing electrical service in the area surrounding the park is provided by Hawai'i Electric Light Company (HELCO) via a 69-KV overhead transmission line located approximately 3,000 to 3,300 feet mauka of the Queen Ka'ahumanu Highway.

Power requirements will be evaluated for each facility. Sources that are naturally available such as solar and wind will be the suggested sources unless economic, technical or environmental reasons dictate otherwise. A portable generator should be available for emergency and backup purposes.

Telecommunications will be via wireless systems. Cellular phones and small satellite dishes are recommended. In the future, satellite linkages may be pursued such that some of the educational and cultural activities and events from the activity center may be linked to educational program networks around the world.

## 9.7 SOCIO-ECONOMIC CONDITIONS

### 9.7.1 Demographic Characteristics

Kekaha Kai State Park is located in a fast growing region of the State. Between 1990 and 2000, North Kona had a 28.1 percent increase in population. South Kohala showed a population increase of 43.7 percent growth over the same period. Overall, Hawai'i County has grown faster than the State as a whole in the last decade. The 2000 State Data Book reports that the population of Hawai'i County increased 23.6 percent from 1990 to 2000 compared with a 9.3 percent increase for the State (DBEDT, 2000).

### 9.7.2 Economic Characteristics

The expanding population of the North Kona District is largely attributed to growth in the visitor industry which is expected to continue its expansion. It is also important to note that visitors account for about 12% of the State's de facto population in 1997. Agriculture in the region includes coffee production, cattle ranching, fruit production, macadamia nuts, and vegetable cultivation. Smaller industries include timber, fishing, quarrying operations, construction and printing.

### 9.7.3 Recreation Demand

The 1989 West Hawai'i Regional Plan, published by the Office of State Planning, states the following:

"There is a critical need for more public outdoor recreation parks, particularly beach parks, in the Kona-Kohala region for use by island residents and visitors. There is and will continue to be a high demand for outdoor recreational facilities." (p. 26)

The West Hawai'i Regional Plan notes that the region's parks are unevenly distributed, generally small, and typically situated at fair or marginal shoreline locations. These factors result in a limited range of recreational opportunities for residents and visitors. While the supply of outdoor recreation resources is limited, demand for them has rapidly increased. The State Comprehensive Outdoor Recreation Plan (SCORP) (DLNR, 1996) states that the primary component of recreational demand is population trends. Demand for recreational resources has grown with the above-mentioned population growth. Tourism also contributes to the use and demand for recreational facilities. The 1996 SCORP notes that the tourism market is changing and diversifying. Travelers are seeking alternate recreation opportunities with a focus on nature, wellness and cultural and educational activities. Golf and ocean related activities are expected to remain in high demand. During the preparation of the 1996 SCORP a telephone survey was conducted of State residents, with 400 interviews of O'ahu residents and 200 interviews of neighbor island residents.

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Residents were asked about recreation areas, facilities needs, and perceived problems. Of the four counties, respondents from the Big Island most strongly voiced the need for additional recreation facilities. Current resident surveys and recent visitor surveys indicate that individuals are most interested in the availability of recreation facilities and the condition of these facilities. Residents and visitors would like more facilities including beach parks, playgrounds, and paths for biking and jogging. Important management issues include park maintenance and cleanliness, safety, and overcrowding at popular recreation sites.

## 9.8 PUBLIC AND SOCIAL SERVICES AND FACILITIES

### 9.8.1 Schools

The Kona public school system consists of the Konawaena School complex, Ho'okena Elementary/Intermediate, Kahakai complex, and Kealakehe complex. Private schools also serve students in the region. Park development will positively impact area schools by providing support facilities and outdoor educational opportunities developed for students.

### 9.8.2 Libraries

The North Kona region is currently served by three public libraries.

### 9.8.3 Police

The Hawai'i County Police Department provides police protection for the park service area. Park enforcement is also provided by State Department of Land and Natural Resources Division of Conservation and Recreation Enforcement (DOCARE).

### 9.8.4 Fire

The Hawai'i County Fire Department would provide fire protection services to the park area out of the Kailua-Kona Station. This station is located on Palani Road above Queen Ka'ahumanu intersection approximately 11 miles from the project site. The State Airports Division maintains a crash/rescue unit at Keāhole Airport; however, the equipment and personnel are restricted to airport emergencies.

### 9.8.5 Health Care Services

The State Department of Health provides emergency ambulance service. Advanced life support ambulance units are located at the Lucy-Henriques Medical Center in Waimea, the Kailua-Kona Fire Station, the South Kohala Fire Station in Waimea, and the Captain Cook Fire Station. The Kailua-Kona Fire Station is equipped for offshore emergencies. The Kona Hospital, operated by the State Department of Health, and the nearest to the project site, has 61 licensed beds, 44 of which are for acute care. The hospital also houses a basic life support ambulance unit.

### 9.8.6 Postal Services

A total of 33 post offices and stations are located around the island. The federal post office nearest to the project area is located in Kailua-Kona.

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**9.8.7 Newspapers**

Hawai'i Island residents receive the two Honolulu daily newspapers in addition to the daily Hawai'i Tribune Herald and West Hawai'i Today newspapers.

**9.8.8 Recreational Facilities**

Kekaha Kai State Park provides a variety of outdoor recreational opportunities including swimming, snorkeling, surfing, fishing, camping and hiking. Details are described in Section 4.1

**Section 10.0**

**EIS - Cultural Impact Assessment**

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### 10.0 CULTURAL IMPACT ASSESSMENT

The State of Hawai'i recognizes that Kekaha Kai State Park is rich with cultural history and resources. Archaeological and ethnological studies have been conducted in efforts to better understand the rich history and resource uses throughout Kekaha Kai State Park and to preserve and perpetuate them in the development of the park.

Information in this chapter is also provided in accordance to regulatory requirements of Chapter 343, Hawai'i Revised Statutes, as amended by H.B. No. 2895, H.D. 1 of the State of Hawai'i Twentieth Legislature and approved as Act 50 which requires that environmental impact statements include the disclosure of the effects of proposed actions on the cultural practices of the community and the State, specifically addressing the effects on Hawai'i's culture, and traditional and customary rights.

The following sections in this chapter highlight the impacts of the proposed project on the cultural resources in this area. A general assessment finds that the collection of the archaeological and ethnological information related to Kekaha Kai provides a beneficial impact of the proposed development by increasing public access and awareness to the rich history of this area. The information gathered through these studies will directly benefit the community through its inclusion into the development of public educational and interpretive programs planned for the park.

#### 10.1 ARCHAEOLOGICAL STUDIES

A number of archaeological studies have been conducted relating to the properties of Kekaha Kai State Park.

An archaeological Reconnaissance Survey: Kekaha Kai State Park, Mahai'ula Section, Kaulana and Mahai'ula *ahupua'a*, North Kona Island of Hawai'i was conducted by Alan Carpenter of State Parks in 1998. (Appendix K). This report includes detailed discussion on settlement, based on archaeological evidence in the park and larger Kekaha region.

An archaeological inventory survey was conducted by Tom Dye & Colleagues in 2002 covering the Awake'e *ahupua'a makai* of Queen Ka'ahumanu Highway, and an approximately 1,000 foot wide strip of land that takes in the seaward ends of Manini'owali and Kūki'o 2 *ahupua'a*. (Appendix M).

In addition previous archaeological surveys of the project area have been conducted by Soehren (1982), Cordy (1986), and Athens (1989).

This DEIS report includes details of the archaeological surveys covering Mahai'ula / Kaulana conducted by State Parks and the archaeological inventory of Awake'e, Manini'owali and portions of Kūki'o 2 conducted by Tom Dye & Colleagues. Both reports are included in the Appendices. Highlights of their findings are provided in this chapter. Previous survey reports are available at the State Parks Honolulu Division.

#### 10.2 MAHAI'ULA AND KAULANA

In conjunction with the preparation of a park conceptual plan and a Phase I park development plan, an archaeological reconnaissance survey was conducted of the Mahai'ula section of Kekaha Kai State Park (formerly Kona Coast State Park), North Kona, Hawai'i Island. The Mahai'ula section of the park, which the survey addresses, includes all of the *ahupua'a* of Mahai'ula and larger portion of the *ahupua'a* of Kaulana *makai* of the Queen Ka'ahumanu Highway. The reconnaissance survey provides preliminary baseline archaeological information to allow for better resource management, planning and interpretation of the cultural resources within this area of the park. Prior to the implementation of any park improvements, the need for an archaeological inventory survey should be evaluated for the proposed areas of development within the park.

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Seventy-one sites were identified during the reconnaissance survey of Mahai'ula and Kaulana. The majority of the sites (41) consist of a single feature, but the remainder (30) are composed of multiple features, and the total number of features which make up those sites is at least 368. The types of features identified are listed in Table 10-1.

**TABLE 10-1 FORMAL FEATURE TYPE, AHUPUA'A OF MAHAI'ULA AND KAULANA**

Sinkhole Shelter	Paved trail	U-shaped shelter	Ground stone depression
Enclosure	Stepping-stone trail	Excavated/cleared pool	Well
Platform	Cleared/paved area	Natural pool	Midden scatter
C-shaped shelter	Wall	Curbed trail	Natural Stone
Rock lined pit	Walled pond	L-shaped shelter	Papamū
Ahu	Cupboard	Burial platform	Petroglyph
Worn foot/horse trail	Shipwreck remnant	Historic salt pan complex	Mortared stone foundation

Inland sites in Mahai'ula, predominately sinkhole shelters and small walled shelters appear to represent prehistoric temporary habitation features. Some of the shelters closest to the shore were utilized for other purposes historically, most notably as trash dumps. All of these temporary habitation features were found within 500 meters of the shoreline. Inland trail remnants paralleling the shoreline appear to have gone out of use before western contact. The near-shore sites back of Mahai'ula Bay appear to have suffered greatly from both natural forces and historic disturbances. This area was the primary settlement area throughout the 20th century. Several sites in this area are obscured by heavy vegetation and will require further investigation to evaluate their condition, function and age. Site T70 appears to be a habitation complex representing the late prehistoric / early historic period. Some features at the southern end of this site complex were utilized well into the 20th century. Historic use is indicated by the limestone mortar used in Features K1 and M1. Additional shoreline sites north to T70 need further evaluation to make temporal and functional determinations. See Appendix K for details regarding feature locations and descriptions.

The most common features recorded in Kaulana are petroglyphs (about 156) and papamū (22). This indicates that these features continued to be fashioned in the historic period (which is also indicated by the numerous name petroglyphs). The vast majority of sites in Kaulana are within 200 meters of the shoreline, and indicate historic habitation in this area. The shoreline of Kaulana appears to have been abandoned as a settlement by the end of the 19th century. However, the area continued to be used for activities such as salt manufacture and commercial recreation activities well into the 20th century. Several sites in this area are heavily overgrown with vegetation and need further work before assumptions can be made as to their age and function. Some of the sites nearest the shore may have been spared the wrath of the 1801 lava flow and may therefore date from the prehistoric period. The only inland site recorded on the 1801 flow are *mauka-makai* trails and a petroglyph field along one of those trails. North of the historic lava flow, several temporary habitation sites were located. This would seem to indicate that



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use of inland features ceased at or prior to 1801, as no similar features were reconstructed following the lava flow event.

Virtually all of the recorded sites have important cultural and interpretive value that will greatly enhance park programs. It is recommended that all the sites recorded be preserved for their cultural value.

The development of interpretive materials will emphasize both the natural marine and geological features of the area, as well as the cultural features, and efforts will focus on educating the public about the importance of preserving and protecting those resources for future generations. Development of a scale necessary to accomplish the park goals can easily be planned around all existing cultural sites.

In addition, the need for an inventory level of investigation should be evaluated prior to the development of park improvements. Specifically in the area surrounding the parking lot at Ka'elehuluhulu beach, where the heaviest park use presently occurs. Sites have been identified in this area and should be further studied to determine whether or not subsurface testing is possible and / or required.

It is unlikely that construction activities planned in or near the historic house complex situated at the northern end of Mahai'ula Bay will impact any archaeological sites, since the area immediately surrounding the house complex is heavily disturbed by historic activities related to development of the Magoon house complex. Additional surveying may not be necessary.

However, after the project areas are more accurately defined through completion of construction plans, an inventory level survey of these two areas (Ka'elemakule and Mahai'ula complex), including test excavation where possible, will be conducted by the State Parks archaeologists. A research design for proposed archaeological testing in conjunction with the inventory survey will be submitted to the Historic Preservation Division for approval prior to any excavations taking place. The remainder of the sites in this section of the park should be monitored for impacts due to park use and evaluated for additional research value in conjunction with the development of an overall interpretive plan for Kekaha Kai State Park. In particular, archaeological testing should occur at Site T70 in the future in order to answer research questions and to aid in the preparation of interpretive materials for the area. Additionally, sites that are outside of the proposed inventory survey areas, but are within anticipated heavy-use areas of the park, should be more adequately recorded and mapped in order to appropriately monitor the impacts of park use and site visitation.

If the *mauka-makai* trail traversing Kaulana is opened up to public foot traffic, a complete documentation of the extensive historic petroglyph field along this path should be conducted prior to allowing heavy site visitation.

Several features have been tentatively identified as burials. They should be monitored for site disturbances, and protective devices should be used to minimize public disturbances of these areas.

### 10.3 ARCHAEOLOGICAL INVENTORY SURVEY - AWAKE'E, MANINI'ŌWALI / KŪKI'Ō 2

At the request of Group 70 International, T.S. Dye & Colleagues, Archaeologist Inc. in cooperation with the Hawai'i State Parks Division has completed an archaeological inventory survey of portions of Kekaha Kai State Park in the North Kona District of Hawai'i Island. Fieldwork was carried out between March 6 and April 30, 2002 and June 19--21, 2002 by experienced four-person crews. The goal of the survey project was to collect baseline data needed by the State Parks Division to manage historic sites in the park. This was done primarily by drawing 1:100 and 1:50 scale plane table maps of habitation feature clusters, supplemented by descriptions and photographs of isolated features. Maps and descriptions were geo-referenced using global positioning system equipment and software. The goal of the State Parks Division is to preserve all of the identified archaeological features.

The project area of approximately 583 acres comprises the northern portion of Kekaha Kai State Park, north of the privately held *ahupua'a* of Makalawena. It includes the Awake'e *ahupua'a makai* of Queen Ka'ahumanu Highway, and an approximately 1,000 ft.\ wide strip of land that takes in the seaward ends of

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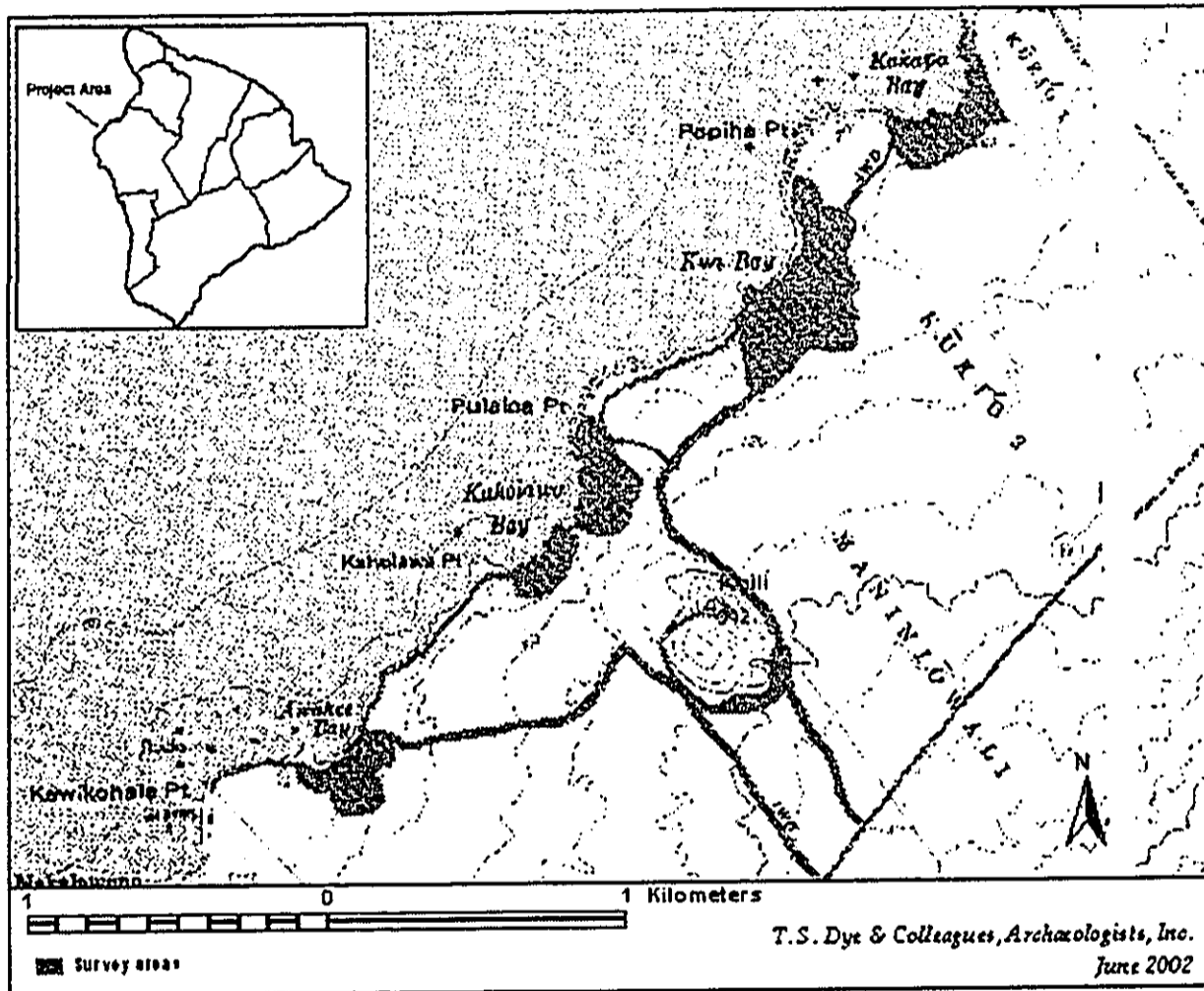
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Manini'ōwali and Kūki'o 2nd *ahupua'a*. The survey areas are portions of the park that have been identified as potentially desirable locations for public park facilities. They include planned improvement areas and road and trail corridors (Figure 10-1) with a combined area of approximately 120 acres.

A total of ten sites comprising more than 1,000 features were recorded (Figure 10-2). Five of the sites are traditional Hawaiian settlements, which range in size from small villages to settlements of one or a few households. The largest and best-preserved site, 50--10--18--23355, is located at Kakapa Bay. A total of 359 features was recorded here. Settlement pattern analysis indicates that this site comprises seven household clusters preferentially located on 'a'ā lava flows near the cobble and white sand beach. Also present are a *heiau* reported to have been one of Kamehameha's and several large boulders and lava slabs that have been bashed with cobble hammerstones to expose an interior layer of red, often ropy, lava. These features, which lack an obvious function but which required considerable effort to complete, are tentatively interpreted as *ku'ula*, fishing shrines, important features of a coastal settlement in which the bulk of economic activities were directed toward fishing. The *heiau*, which is the largest religious structure recorded during the survey, is one indication of the local importance of the Kakapa Bay community. Another is the network of transportation routes that serve the settlement. Four major trails terminate at the village: trail site 50--10--18--16059 originates inland and enters the village from Kūki'o 1st *ahupua'a* to the north; two branches of trail site 50--10--18--5337, which originates inland and south of the village, enter over the 'a'ā lava immediately *mauka*; and the coastal trail serves the village from both the north and the south. The remnants of a canoe shed near the *heiau* indicate that the village was also a terminus for travel over water. A traditional Hawaiian cemetery, located outside the survey area, immediately *mauka* of the site's residential core, is marked on the USGS Makalawena quadrangle map. A small anchialine pond at the toe of an 'a'ā flow likely provided fresh water. Site 50--10--18--23355 is significant as a well-preserved example of a traditional Hawaiian coastal village and for the information on Hawaiian history and prehistory that it has yielded and is likely to yield in the future. It might also be significant for its association with the life of Kamehameha I, although this association needs to be substantiated through the discovery of additional information about Kamehameha's relationship to the *heiau* and the village. The entire site offers an outstanding opportunity for interpretation and display.

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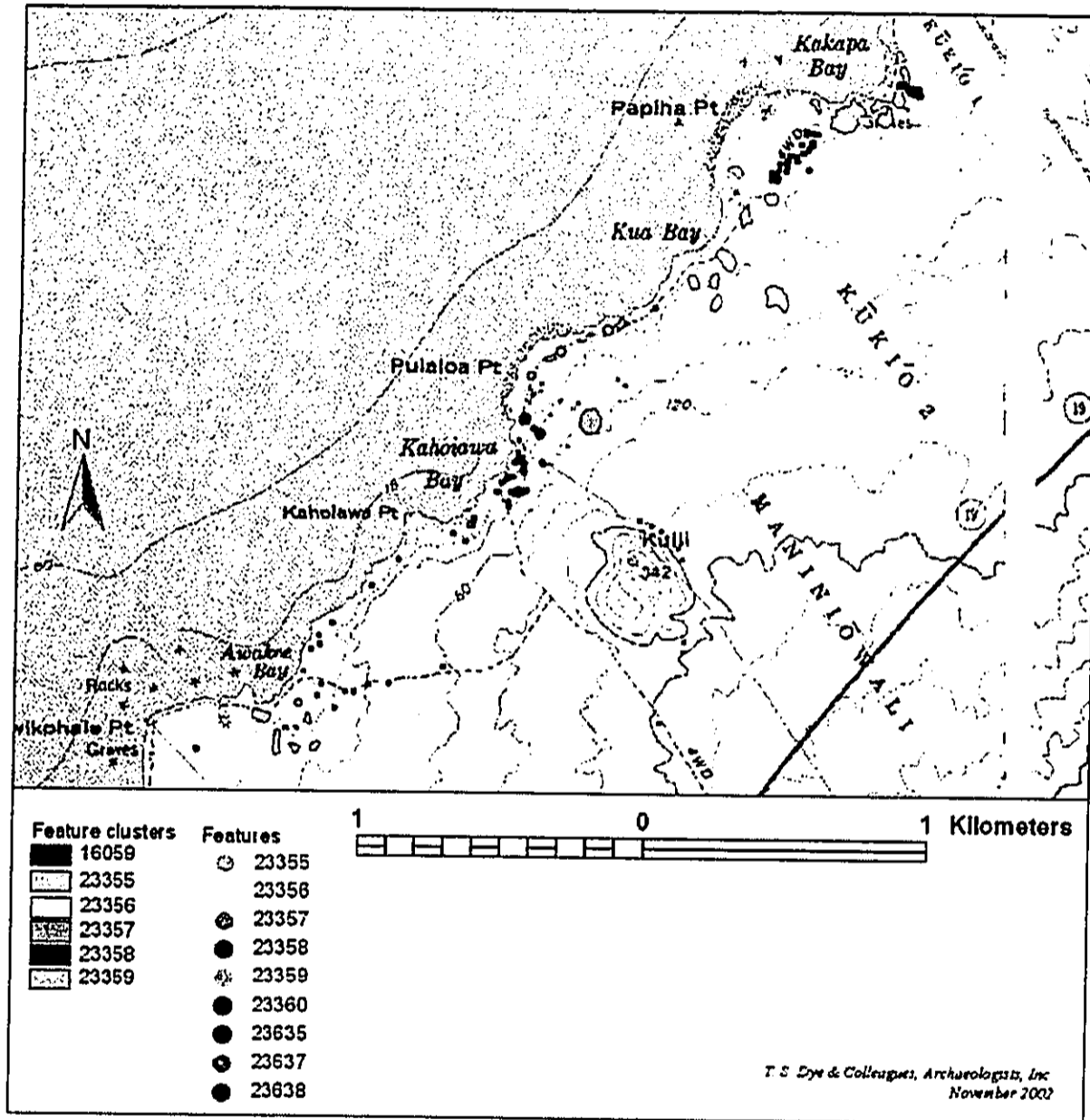
Kekaha Kai State Park

Kekaha Inventory Survey Areas

Figure 10-1

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Site 50--10--18--23356 is the remains of a small village now badly disturbed by bulldozing, off-road excursions by four-wheel drive vehicles, and the activities of campers and others at the recently popular sand beach at Manini'ōwali, or Kua, Bay. A total of 348 features was recorded here. Settlement pattern analysis identified nine residential clusters located on the 'a'ā flow at the north end of the bay, along the sandy margin of the *pāhoehoe* flow at the central and southern ends of the bay, and on the *pāhoehoe* flow itself generally associated with relatively large lava tube caves. The habitation clusters here are more dispersed than at Kakapa Bay, but the focus of settlement seems to have been the north end of the bay where a canoe shed at the edge of an 'a'ā flow overlooks a relatively large, but now partially filled, anchialine pond, and a small, stratified cultural deposit is preserved at the edge of a sand dune. Religious structures consist of several small shrines, the most prominent of which is located well inland, away from the coast. No large *heiau* are present today. Human burial seems to have been dispersed, as well, with interment in a lava tube cave, under a large 'a'ā boulder, and probably at several small above-ground structures, which were not dismantled to search for bones. The village was served by the coastal trail from the north and south, but no known *mauka-makai* trail terminates at Manini'ōwali Bay. The settlement pattern information suggests that site 50--10--18--23356 was less important traditionally than site 50--10--18--23355 at Kakapa Bay, and the site's integrity has been compromised by a range of modern activities. It is significant for the information on Hawaiian history and prehistory that it has yielded and is likely to yield. Portions of the site offer some potential for interpretation and display, although the level of previous disturbance and the fragility of the disturbed cultural remains at the north end of the bay and behind the south end, where looters have ransacked habitation caves, place limits on what might be done. The portion of the site with the greatest potential for interpretation and display is the *mauka* cluster, which includes a well-built enclosure that incorporates upright *pāhoehoe* slabs probably imported from some distance, and a shrine with several water-worn boulders, one of which vaguely resembles a stylized human face.

Site 50--10--18--23357 was assigned to eight small clusters of mostly small, probably temporary habitation features and some isolated features located along the coastal trail at Puilaloa Point. A total of 75 features were recorded. The coastline here is rocky, making canoe access difficult; a canoe shed, however, is located on a small patch of sand on the point, indicating that the place was regularly accessed from the sea. In addition to the coastal trail, which enters the site from the north and south, several well-worn *mauka-makai* trails lead inland from individual clusters, beyond the survey area, and have not been followed out. The survey area here was limited to the area surrounding the coastal trail, but observations during fieldwork indicate that the *pāhoehoe* flows inland are heavily modified through the construction of numerous pits, which appear here to have supplied stone for building material. An inventory survey of these inland areas is needed to establish the cultural context for the recorded features along the coast. One cluster of features along the trail, now in poor condition, might have been a *heiau*, but the evidence in support of this interpretation is slim. This site is significant for the information on Hawaiian history and prehistory that it has yielded and is likely to yield. The coastal features offer some limited opportunities for interpretation and display; the canoe shed is readily visible and visitors hiking the coastal trail will appreciate the small patch of sand upon which it was built. Although the inland pit areas are outside the survey area, and were not recorded in detail, they appear to be good examples of *pāhoehoe* quarries and would likely yield good opportunities for interpretation and display.

Traditional Hawaiian habitation at site 50--10--18--23358 at Kaho'iawa Bay differs from the sites farther north. Habitation here centers on single, relatively large structures, rather than the clusters of smaller features recorded at Manini'ōwali and especially Kakapa Bay. Sixty-six features were recorded and grouped into a dozen clusters. The site is located on and adjacent to the cinderlands *makai* of Pu'u Kuili, a unique environment along this section of coast. Although the cinderlands offer some agricultural potential, especially in contrast to the barren lava flows that flank the Pu'u, evidence for traditional Hawaiian agriculture is limited and equivocal. If agriculture were important here in traditional Hawaiian times, then it has left little or no trace in the cinderlands. Instead, the features here are oriented to the sea and its resources, exemplified most strongly by two features, one with a conch shell trumpet, interpreted as fishing lookouts. The site is served by the coastal trail and probably by trail site 50--10--18--5351,

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which originates inland and crosses an 'a'ā flow to the north flank of Pu'u Kuili, where the trail is lost in the cinders before it reaches the *mauka* edge of the site. The integrity of features at this site has been compromised by modern activities, including the construction of new features by fishermen and campers and cultivation of marijuana. The site is significant for the information on Hawaiian history and prehistory that it has yielded and is likely to yield. The site offers little opportunity for interpretation and display.

Site 50--10--18--23359 at the south end of Awake'e Bay is located adjacent to a large set of anchialine ponds near the boundary with Makalawena *ahupua'a*. Features here are grouped into nine clusters at the south end of the bay, following a scheme used during a reconnaissance survey of the property in the 1980s. The features evidence a mix of traditional Hawaiian and modern habitation; a large complex of enclosures at the southern end of the bay, now being destroyed by four-wheel drive vehicle traffic to Makalawena, includes a mortar-lined cistern that was built sometime prior to the first time it was recorded in the 1930s. Inland from the coast, on and extending from the edge of an 'a'ā flow, is a large habitation platform and associated graves and/or shrines, a well-built, nearly square enclosure, and a 75 m long, narrow structure described as a causeway for lack of a better term. The function of this latter feature is enigmatic; the ground around it is not wet so it seems certain that it did not function as a causeway, and the traditional Hawaiian feature that it most resembles, the *hōlua* slide, is generally situated on more steeply sloping ground. This feature deserves further, in-depth study. Inland from the site, outside the survey area, is a habitation cluster built primarily on the edge of an 'a'ā flow adjacent to a very large, thoroughly looted habitation cave. The inland location of this habitation cluster, some 400 m from the shore, is unusual for the Kekaha coast, and was undoubtedly determined by the location of the cave. The site is served by the coastal trail and by a *mauka-makai* trail that enters Awake'e *ahupua'a* from the south, well inland of the site. The site is significant as a well-preserved example of a traditional Hawaiian settlement that was inhabited into the historic period, and for the information on Hawaiian history that it has yielded and is likely to yield. The site presents good opportunities for interpretation and display, although additional research into the function of specific features is needed to yield evidence for interpretation. An inventory-level survey of the many habitation features located inland of the site should also be completed before the area is opened further to the public.

The trail that connects the coastal habitation sites, short branches off the main trail to habitation clusters, and the many small features found on either side of the trail in between inhabited areas, were assigned to site 50--10--18--23360. The trail is not marked along much of its traverse of the project area. Short paved sections are present in several areas, but large sections appear to have been washed out by waves. The longest intact section cuts across the 'a'ā flow that formed Papiha Point between Kakapa and Manini'ōwali Bays, well inland from the coast. This section of trail is maintained and modified by pedestrians, many of whom are fond of marking the trail with white coral cobbles. This section of the trail through the 'a'ā flow is associated with many small features, primarily small overhang shelters that yield some shade for a portion of the day and small pits excavated into the 'a'ā clinkers. These features might represent temporary rest spots or storage features, used by travelers, but such functions seem odd given the short distances to presumably inhabited villages both north and south. Lack of cultural deposit at these small features makes them more difficult to interpret; they do, however, indicate that travel along the trail was often interrupted by short forays off the trail. The trail extends out both ends of the project area, connecting its settlements with other settlements both north and south. The site is significant because it has yielded and is likely to yield information on Hawaiian history and prehistory, and because of its important value to native Hawaiians owing to its association with the cultural practice of traveling along the Kekaha coast. The site is an important component of any program of interpretation and display at the park.

Four other site numbers were assigned to isolated features and groups of features. Site 50--10--18--23635 is an isolated probable burial platform located well outside the survey area. It was described, but no excavations were carried out to test the possibility that the platform contains human bones.

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Site 50--10--18--23636 is a mound at the top of Pu'u Kuili that might represent a burial site indicated on historic maps. This mound has been modified repeatedly and extensively over the last two years and there is no solid evidence linking it to the historically recorded burial here, and it might represent the remains of an old survey point established at the top of the Pu'u. No excavations were carried out to determine whether the mound contains human bones. Until further information on the location of the historic burial at Pu'u Kuili is obtained, this site should be treated as significant for its important value to native Hawaiians as a burial site of ancestral bones.

Site 50--10--18--23637 is a group of small features located along a proposed road corridor near Pu'u Kuili. One of the features is a burial site in which secondarily deposited human bones have been loosely covered with stones. The secondary burial feature does not appear to be ancient and it might be that the bones were moved here after they were uncovered elsewhere. Although the bones are located distant from modern settlements, the nature of their interment is not typical of traditional Hawaiian burials and it might be that they are the remains of an ethnic group other than native Hawaiian. The features in this cluster are significant for the information on Hawaiian prehistory and history that they have yielded and are likely to yield. The secondary burial feature might have important value to native Hawaiians or to another ethnic group of the state.

Site 50--10--18--23638 is another group of small features located along a proposed road corridor leading from Pu'u Kuili to Awake'e Bay. These features are significant for the information on Hawaiian history and prehistory that they have yielded and are likely to yield.

Information on the chronology of settlement and the nature of subsistence activities was collected at excavations carried out at three looted caves and at habitation features at Kakapa and Manini'ōwali Bays. 14C dates on short-lived materials support the idea established by previous archaeological work along the coast that settlement here occurred relatively late in traditional Hawaiian times, around A.D. 1400, or perhaps later. Subsistence activities were geared almost exclusively to fishing, and a diverse catch of mostly small inshore fishes comprised the bulk of the meat diet. Seabirds, primarily Bulwer's petrel, played a relatively minor role in subsistence, and the only remains of pig and dog were probably brought to the site as raw materials for fishhook manufacture. Large faunal collections from the looted caves yielded evidence interpreted as indicating operation of a long-standing *kapu* against the capture of āholehole, a fine food fish that is abundant in near-shore waters along the coast.

#### 10.4 ORAL HISTORY

"Kekaha Wai 'Ole O Na Kona," a report on archival and historical documentary research, and oral history interviews for Kekaha Kai State Park, *ahupua'a* of Kaulana, Mahai'ula, Makalawena, Awake'e, Manini'ōwali, and Kūki'o – District of North Kona, Island of Hawai'i was prepared by Kepa Maly, Kumu Pono Associates. This historical and archival documentary research was conducted from August 7th to October 17th, 1997. The study focuses on recently translated native Hawaiian accounts – written by former residents of Kekaha and historical records which have been recently identified as valuable sources of information for the study area lands. The study provides readers with a general overview of Hawaiian colonization, population expansion, and land management practice in the Hawaiian Islands and includes interviews from several oral history studies conducted or transcribed by the author. The complete report is provided in Appendix L.

The oral interviews focused on eliciting information from knowledgeable individuals regarding traditional Hawaiian lore and practices, spiritual beliefs, the presences of traditional sites, land and resource use, and subsistence practices. Interviewees were encouraged to offer recommendations for long-term protection and interpretation of the cultural and natural resources of Kekaha Kai State Park. Transcriptions of accounts from native residents of Kekaha, published in the Hawaiian language newspaper also provide a description of the resources and history, and a glimpse of how people could have carried on a satisfactory existence in such a rugged land.

Highlights of the findings and recommendations are reiterated here.

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As a result of the literature research and oral historical interviews, a rich ethnographic resource has been collected for the lands Kaulana, Mahai'ula, Makalawena, Awake'e, Manini'owali and Kūki'o. Legendary and historical accounts provide *ahupua'a*-specific documentation of sites, practices, and customs associated with the families and lands now included within Kekaha Kai State Park. The interviews also demonstrate the continuation of certain aspects of traditional knowledge and practices associated with the lands, as handed down over the generations. Interviewees express deep "cultural attachment" to the lands, sites, resources, and place names of Kekaha.

Cultural attachment: embodies the tangible and intangible values of a culture – how a people identify with, and personify the environment around them. It is the intimate relationship developed over generations of experience that people of a particular culture feel for the sites, features, phenomena, and natural resources etc. that surround them, their sense of place. This attachment is deeply rooted in the beliefs, practices, cultural evolution, and identity of a people. The significance of cultural attachment in a given culture is often overlooked by others whose beliefs and values evolved under a different set of circumstances (cf. James Kent, Cultural Attachment: Assessment of Impacts to Living Culture, September 1995).

Recommendations elicited during the oral history interview discussions provide the Division of State Parks with suggestions for long-term management objectives, including historic site preservation, protection of natural resources, and interpretive programs in the park:

1. "Kekaha Kai" is not a name that the *kūpuna* used for the land – the name "Kekaha" already tells people that it is a coastal zone. It is requested that the Division of State Parks simply use the regional name "Kekaha" – i.e. Kekaha State Park.
2. There is a strong cultural attachment and historical pride among the *kūpuna* for the native place names of lands within the park – be they *ahupua'a* names or names which identify specific locations. It is requested that the Division of State Parks use the individual *ahupua'a* and other place names throughout the park – at interpretive wayside situations and in interpretive and educational materials.
3. Protect Kolomikimiki, the Ka'elemakule burial cave parcel. The parcel was conveyed to the Catholic Church without full family concurrence. It is requested that the State of Hawai'i and Division of State Parks monitor land tenure of the "Burial Lot". Should the Catholic Church ever seek to dispose of Kolomikimiki, Ka'elemakule family members would like to be notified. The Ka'elemakule descendants and *kūpuna* who participated in the study support any efforts that the State of Hawai'i may make to incorporate Kolomikimiki into the larger Park parcel and protecting it in perpetuity. Because of the sensitive nature of the site, it is asked that Kolomikimiki be monitored and that visitation to the site be limited to family members. But, because of the rich traditions of Kolomikimiki, its stories – without specific location references – should be a part of the parks interpretive program.
4. It is urged that all additional archaeological sites including others that are tentatively identified as burial features be protected (cf. Carpenter et al. 1998).
5. It is noted that "Kalāhikiola," the c. 1882 Ka'elemakule house is an important historical / cultural feature – a part of the cultural landscape of Mahai'ula – with a rich history attached to it. Its restoration and protection is important to the history of the land.
6. The resident park steward program which has been initiated in the park is a good one. The on-site presence will help park users understand the unique history of Kekaha, and inform them of appropriate use and visitation of the park's natural and cultural resources. It is requested that the Division of State Parks continue to support the program.
7. Pohakuolama (also referred to as "Pohakuwahine" the female rock), situated offshore, fronting the old Ka'elemakule house, is a sacred site and important cultural feature. It is requested that Pohakuolama



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- be protected – e.g. there be no diving and playing from the stone, and boats not be allowed to anchor to the stone etc.
8. It is requested that the Division of State Parks work with other State Agencies to ensure protection of the Kekaha fisheries. Marine resources in the park:
    - a) need to be protected from commercial aquarium fish collectors; and
    - b) subsistence fishing as practiced by native Hawaiian fishermen needs to be protected.
  9. Sites and resources of the coastal region are directly tied to those of the uplands. It is recommended that interpretation of the *cultural and natural* resources of the park include the broader, native *ahupua'a* management system – an integrated resources management approach. It is also urged that the interpretation of the traditions and history of Kekaha and the park lands be inclusive of the diverse accounts of the land. Even in cases, where one account may differ from another, there is richness in the diversity, and the accounts help to demonstrate the dynamic qualities of the culture.
  10. Caution is urged in development of a landscaping plan. Should native species be planted to replace alien plants, prudent thinning of the existing overstory should be undertaken so as to protect the new plantings, giving them time to become established. It is also noted that the *kiawe* has become a part of the landscape, and that it has a role in the lands of Kekaha.
  11. The Division of State Parks is to be commended for its efforts in working with *kūpuna* and families who have generational residency ties to Kekaha and the park lands. It is asked that this work be continued, and that consultation occur as a part of the management and decision-making processes in Kekaha Kai State park.

Another important concern raised by the Task Force was the need for ongoing consultation with the *kūpuna* and resource persons during the development and implementation of the interpretive programs. Various program activities will seek the participation of these persons as docents, teachers, and *kūpuna* which will promote historical accuracy and interpretations closer to source references.

**Section 11.0**

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EIS - Relationship to Land Use Plans, Policies and Controls

## 11.0 RELATIONSHIPS OF THE PROPOSED PROJECT TO EXISTING PLANS AND POLICIES

### 11.1 OVERVIEW

An important consideration in evaluating the potential effects of a proposed action on the environment is how it may conform to or conflict with approved or proposed land use plans, policies and controls for the affected area. The evaluation of the relationship of the planned Park improvements to State and County land use plans, policies and controls is presented below. These include the Hawai'i State Plan, the Hawai'i State Plan Functional Plans, the County of Hawai'i General Plan, the Hawai'i Coastal Zone Management Program, and the County of Hawai'i Special Management Area policies and rules. Selection of specific objectives and policies to be addressed are based on their relevance to the proposed project in terms of land, use location and planning.

### 11.2 HAWAII STATE PLAN

It is the goal of the Hawai'i State Plan to achieve "a desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people." (Hawai'i State Plan, Chapter 226, Hawai'i Revised Statutes) Objectives and policies of the State Plan which are relevant to Kekaha Kai State Park include the following:

#### Sect. 226-11: Physical Environment – Land-based, Shoreline, and Marine Resources

- (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:
  - (1) Prudent use of Hawai'i's land-based shoreline and marine resources.
  - (2) Effective protection of Hawai'i's unique and fragile environmental resources.
- (b) To achieve the land, air, and water quality objectives, it shall be the policy of the State to:
  - (1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.
  - (3) Take into account the physical attributes of areas when planning and designing activities.
  - (4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
  - (5) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
  - (6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.
  - (8) Pursue compatible relationships among activities, facilities, and natural resources.
  - (9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.

#### Sect. 226-12: Physical Environment – Scenic, Natural Beauty, and Historic Resources

- (a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.
- (b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:
  - (1) Promote the preservation and restoration of significant natural and historical resources.
  - (2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.
  - (3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean scenic landscapes, and other natural features.

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- (4) Protect those special area, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.
- (5) Encourage the design of developments and activities that complement the natural beauty of the islands.

### Sect. 226-13: Physical Environment – Land, Air and Water Quality

- (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:
  - (1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.
  - (2) Greater public awareness and appreciation of Hawai'i's environmental resources.
- (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:
  - (1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.
  - (2) Promote the proper management of Hawai'i's land and water resources.
  - (3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.
  - (8) Foster recognition of the importance and value of the land, air and water resources to Hawai'i's people, their cultures and visitors.

### Section 226-23: Socio-Cultural Advancement – Leisure

- (a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.
- (b) To achieve the leisure objective, it shall be the policy of this State to:
  - (1) Provide a wide range of activities and facilities to fulfill the cultural, artistic, recreational needs of all diverse and special groups effectively and efficiently.
  - (3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.
  - (4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historic, geological, or biological values while ensuring that their inherent values are preserved.
  - (5) Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.
  - (6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.
  - (10) Assure adequate access to significant natural and cultural resources in public ownership.

### Section 226-25: Socio-Cultural Advancement – Culture

- (a) Planning for the State's socio-cultural advancement with regard to culture shall be directed towards the achievement of the objective of the enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.
- (b) To achieve the culture objective, it shall be the policy of this State to:
  - (1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i
  - (2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.
  - (3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawai'i.

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### Section 226-27: Socio-Cultural Advancement – Government

- (a) Planning for the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the objectives:
- (b) To achieve the culture objective, it shall be the policy of this State to:
  - (5) Assure that government attitudes, actions and services are sensitive to community needs and concerns.

#### Discussion:

Planning for Kekaha Kai State Park was conducted with all these policies in mind. As a wilderness park, these values are inherent in the conceptual master plan. Site planning considered all the constraints in designating developments and their placement. Management policies will ensure resource protection and long-term sustainability.

An ethnographic study was conducted in addition to the normal archaeological study to deepen the understanding of the resources. The protection and enhancement of these resources were one of the key guiding principles in park development.

The land and water resources of the project will be properly managed. All planned improvements will be consistent with and contribute to the implementation of these objectives and policies. Their basic intent is to support prudent use and management of natural resource areas for recreational purposes. New facilities are being planned and designed in a manner that takes into account and is compatible with the physical attributes of the different areas throughout Kekaha Kai State Park and that avoids any costly or irreparable environmental damage. Existing views and vista points will be preserved.

### 11.3 STATE FUNCTIONAL PLANS

The Hawai'i State Plan Functional Plans include objectives and policies to implement the broad goals of the Hawai'i State Plan.

#### 11.3.1 State Conservation Lands Functional Plan

- Objective IIC: Enhancement of natural resources
- Policy IIC(2): Expand and enhance outdoor recreation opportunities and other resource uses.
- Action IIC(2)a: Upgrade and enhance the State's outdoor recreational infrastructure of roads, trails, and shelters.
- Action IIC(2)e: Provide and improve public access to the shoreline and to mauka areas as condition on leases, executive orders, easements, and other encumbrances on lands with recreation[al] and/or educational potential.
- Policy IID(1): Develop and expand resources to protect natural shorelines and wilderness recreation areas.
- Policy IID(3): Develop recreational and archaeological resources on the shoreline and mauka areas.
- Action IID(3)a: Acquire and/or develop areas for historic preservation.
- Action IID(3)b: Establish a State-wide trails and access system.
- Objective IIIA: Expansion and promotion of a public conservation ethic through education.
- Action IIIA(1)b: Develop and implement ongoing interpretive program to promote an appreciation and understanding of unique natural and cultural resources.

#### 11.3.2 State Recreation Functional Plan

- Policy I-A(1): Acquire additional beach parkland and rights-of-way to remaining undeveloped shorelines to provide increased capacity for future public recreational use.
- Policy II-A(3): Proceed with planning, acquisition, and developments of trails.
- Policy III-D(3): Effectively manage and maintain existing public access ways.

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- Policy IV-B(2): Protect, preserve, restore, and enhance recreational fishery resources.  
Policy V-C(3): Explore innovative ways to manage and maintain recreational resources.  
Action V-C(3)b: Expand "adopt-a-park", "adopt-a-beach", and "adopt-a-trail" programs to get the public involved in caring for public recreation facilities.  
Objective VI-A and Policy VI-A(1): Increase recreational access and opportunities in Hawai'i's wetlands. Identify existing wetlands with the potential for recreational development without significantly affecting wetland resources, with an emphasis on passive recreation and education.  
Policy VI-C(1): Assure the protection of the most valuable wetlands in the state through fee acquisition, land banking, cooperative agreements, conservation easements, cooperation with private landowners, public education, and/or other strategies. Ōpae'ula Pond at Makalawena is listed as a Top-priority wetland to be protected.

### 11.3.3 State Historic Preservation Functional Plan

- OBJECTIVE C: Management and Treatment of Historic Properties.  
Policy C.2.: Encourage the preservation and maintenance of historic properties through economic incentives and support.  
Action C.2.d: Encourage State and County agencies to maintain and preserve historic buildings under their administration.

### 11.3.4 State Tourism Functional Plan

- Policy II.A.7: Improve the quality of existing parks and recreational areas, and ensure that sufficient recreational areas—including scenic byways and corridors—are available for the future.  
Action II.A.7.c: Acquire beaches (list includes Kua Bay) for expansion of existing beach parks, and development of future beach parks.  
Objective III.A: Enhancement of respect and regard for the fragile resources which comprise Hawai'i's natural and cultural environment. Increased preservation and maintenance efforts.  
Policy III.A.2: Assist in preserving, perpetuating, and interpreting cultural, historic and archaeological resources.

#### Discussion:

Kekaha Kai State Park provides outdoor recreational opportunities to the public. The plan outlines strategies to preserve natural and cultural resources throughout the Park while providing enhanced and educated outdoor recreational opportunities. Interpretive programs will be provided to promote an appreciation and understanding of the natural and cultural resources of Kekaha Kai. Archaeological and recreational resources will be protected. Facility improvements will expand opportunities for ocean and related coastal recreational activities. Improved maintenance and management of trails will facilitate the development of the Ala Kahakai as part of the statewide trail and access system.

## 11.4 COUNTY OF HAWAI'I GENERAL PLAN

The County of Hawai'i General Plan designates the entire Kekaha Kai State Park site as open lands. This designation promotes parks and natural area usage. Additionally, the following General Plan goals and policies support the development of the park.

### Historic Sites

#### Goals:

- Access to significant historic sites, buildings and objects of public interest should be made available.

#### Policies:

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- Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.
- The County of Hawai'i shall require both public and private developers of land to provide a historical survey to the clearing or development of land when there are indications that the land under consideration has historical significance.
- The County of Hawai'i shall also aid in the development of a program of public education concerning historic sites.
- Signs explaining historic sites, buildings and objects shall be in keeping with the character of the area or the cultural aspects of the feature.

### Natural Beauty

#### Goals:

- Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.
- Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

#### Policies:

- Increase public pedestrian access opportunities to scenic places and vistas.
- Access easement to public or private lands which have natural or scenic value shall be provided or acquired for the public.

### Natural Resources and Shoreline

#### Goals:

- Provide opportunities for the public to fulfill recreational, economic, and educational needs without despoiling or endangering natural resources.
- Protect and promote the prudent use of Hawai'i's unique, fragile, and significant environmental and natural resources.

#### Policies:

- The shoreline of the island of Hawai'i shall be maintained for recreational, educational, and/or scientific uses in a manner that is protective of resources and is of the maximum benefit to the general public.
- The shoreline shall be protected from the encroachment of man-made improvements and structures.
- The County shall encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.

### Recreation

- Public access to the shoreline shall be provided in accordance with an adopted program of the County of Hawai'i.
- Establish public access to and the development of shoreline regions along the North Kona Coast so as to provide recreational opportunities in areas such as Kūki'o and Kakapa Bays, Kua Bay, Kaho'iawa, Makalawena and Mahai'ula.
- Protect Ōpae'ula...Ponds as natural areas.
- Encourage the development of historic trails

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### Economy

- The natural beauty of the area should be recognized as a major economic and social asset. This resource should be protected through appropriate review processes when development is proposed.

### Discussion:

Kekaha Kai State Park will be maintained as an open natural park. The natural beauty throughout the park is recognized as an asset. A number of improvements to public shoreline access are planned, including vehicular access from Queen Ka'ahumanu Highway to Kua Bay and Mahai'ula; pedestrian access along the coastal shore and from nearby residential developments. The plan calls for the protection and education of the anchialine ponds throughout the park.

An archaeological reconnaissance survey has been conducted by the Division of State Parks and its findings and recommendations are being submitted to the State Department of Land and Natural Resources (DLNR) Historic Preservation Division for review and approval. The general policy of the State Parks is to preserve cultural and historic resources throughout the Park to the maximum extent possible. In addition to preservation, interpretive educational programs regarding the cultural and environmental resources of the Park are also planned.

### 11.5 HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM

The objectives of the Hawai'i Coastal Zone Management Program, Section 205A-2, HRS, are to protect valuable and vulnerable coastal resources such as coastal ecosystems, special scenic and cultural values, and recreational opportunities. The objectives of the program are also to reduce coastal hazards and to improve the review process for activities proposed within the coastal zone.

Portions of the project site are within the Special Management Area and will require the County of Hawai'i's approval of a Special Management Program Area Use Permit. Issuance of an SMA Use Permit is based on a development proposal's consistency with the objectives, policies and review guidelines specified in CZM Law. Relevant objectives, policies and guidelines, and the relationship of the proposed improvements to them, are presented and discussed below.

#### Recreational Resources

- Objective: Provide coastal recreational opportunities to the public.
- Policy B: Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:
- (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas.
  - (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value.
  - (iv) Encouraging expanded public recreational use of county, State and federally owned or controlled shoreline lands and waters having recreational value.

#### Historical Resources

- Objective: Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
- Policy A: Identify and analyze significant archaeological resources.
- Policy B: Maximize information retention through preservation of remains and artifacts or salvage operations.



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### Scenic and Open Space Resources

- Objective: Protect, preserve and, where desirable, restore, or improve the quality of coastal scenic and open space resources.
- Policy A: Identify valued scenic resources in the coastal zone management area;
- Policy B: Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
- Policy C: Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.

### Coastal Ecosystem

- Objective: Protect valuable coastal ecosystems from *disruption and minimize adverse impacts* on all coastal ecosystems.
- Policy B: Preserve valuable coastal ecosystems of significant biological or economic importance.

### Coastal Hazards

- Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion and subsidence.

#### Discussion:

The proposed plans for the Kekaha Kai State Park will expand recreational opportunities for the public. No substantive alteration of existing natural landforms will result. None of the planned improvements will affect the Park's existing public views or shoreline open space and scenic resources.

An archaeological reconnaissance survey and an ethnographic study were conducted for the park. Historic preservation and interpretation is a key guiding principle in park planning. As a wilderness park open space and view protection were critical constraints to the overall concept of the park. Resource management and long-term sustainability of this resource clearly form the heart of the design and management policies. Minimization of hazards will also be a significant factor in siting new facilities.

### 11.6 SPECIAL MANAGEMENT AREA RULES AND REGULATIONS OF THE COUNTY OF HAWAII

The Special Management Area (SMA) extends along Queen Ka'ahumanu Highway in the area of the project. Portions of the project are located within the SMA. The County Planning Department and Planning Commission will review this proposed development according to the County's rules and guidelines. These guidelines are derived from Section 205A-26, HRS. The consistency of the proposed project with the guidelines are discussed below.

#### HRS. 9-7(A)

The council shall seek to minimize, where reasonable:

- (1) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;
- (2) Any development which would reduce the size of any beach or other area usable for public recreation;
- (3) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;
- (4) Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and

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- (5) Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.

**HRS.9-7(C.)**

All development in the Special Management Area shall be subject to reasonable terms and conditions set by the Council in order to ensure that:

- (1) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles.
- (2) Adequate and properly located public recreation areas and wildlife preserves are reserved.
- (3) Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources;
- (4) Alterations to existing *landforms and vegetation*, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.
- (5) Adverse environmental or ecological impacts are minimized to the extent practicable; and
- (6) The proposed development is consistent with the objectives, goals, policies, and standards of the General Plan.

No development shall be approved unless the council has first found that:

- (1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;
- (2) The development is consistent with the county general plan, development plans and zoning.

Discussion:

Adverse environmental or ecological impacts are minimized to the extent practicable. None of the planned improvements will directly affect ocean water quality, views of open water, or existing fish or other wildlife habitats. Educational programs will be provided to increase awareness of the resources of the area. The improvements at the Park will expand recreational opportunities. These will be done in a manner that reflects sound conservation principles. Alterations to existing landforms will be minimal and will not adversely affect ocean water resources or scenic and recreational amenities. All new facilities and improvements will be constructed in a manner that avoids creating, either individually or cumulatively, dangers from floods, landslides, erosion, siltation or failure in the event of an earthquake.

**Section 12.0**

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EIS - Probable Impacts and Mitigative Measures

## 12.0 PROBABLE IMPACTS AND MITIGATIVE MEASURES

Two types of probable effects on the environment are discussed in this section: potential short-term or construction-related effects, and potential long-term or operational-related effects. Also described are mitigative measures that are proposed for implementation, where appropriate and feasible, to minimize any adverse effects. In addition, areas where there could potentially be adverse effects, but where none are actually anticipated, are discussed.

There are some types of impacts where the potential short-term impacts of constructing a new facility, or of improving an existing facility, will be different or distinct from the potential long-term impacts that would be due to changes resulting from the existence of that new facility or improvement. In other cases, impact concerns will be related more to the permanent change that is being made, rather than to any distinction that could be made between impacts of the temporary or short-term construction process and the long-term impacts of the completed improvement. Where there could be significant differences between short-term and long-term impacts – e.g., in the case of noise impacts– separate discussions of both types of impacts are provided. Where little or no difference is anticipated, or is not considered to be significant – e.g., in the case of impacts on views -- the entire discussion is included in the sections addressing long-term impacts.

### 12.1 POTENTIAL SHORT-TERM IMPACTS

Construction of the facilities planned for the Kekaha Kai State Park will create some local short-term construction-related impacts on the environment. These will include temporary changes to drainage and runoff patterns, soil disturbance, dust and erosion due to clearing and grading; traffic in the project's vicinity due to construction equipment and trucks; and increased noise due to construction-related operations. There will also be some temporary disruptions to recreation use of the State Park. Short-term beneficial impacts related to construction will include employment-related expenditures and the purchase of services and materials related to the design and construction of the various projects. Local retail businesses may also indirectly benefit through direct and multiplier effects associated with construction activities. The probable short-term effects related to constructing the planned improvements and, where applicable, proposed mitigative measures are described in the following sections.

#### 12.1.1 Topography, Soils and Drainage

The short-term impact of the proposed action on soils is limited to the small potential for erosion during construction. All grading operations will be conducted in compliance with dust and erosion control requirements of the County of Hawai'i. A Grading Permit must be obtained from the County of Hawai'i in order to begin construction. During Grading Permit review and approval the grading plans for the site are reviewed by the Department of Public Works and specific conditions may be attached.

The topography of the Kekaha Kai State Park will be only slightly affected by short-term construction. There will be no substantive alterations to existing drainage patterns.

Mitigative Measures – Strict erosion control measures, as required by the regulations, standards and guidelines cited below, will be followed in order to ensure that any significant adverse effects are avoided. This will include the preparation and obtaining approval of an Erosion Control Plan prior to initiating any construction. Erosion control measures will, where appropriate, include the use of cut-off ditches, temporary ground cover, and detention/sedimentation basins. Dust controls will include the frequent watering of exposed areas, good housekeeping at the job sites, and paving or landscaping of exposed areas as quickly as possible.

The following documents specify erosion and dust control measures that will be adhered to during construction of the planned improvements:

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U. S. Soil Conservation Service's "Erosion and Sediment Control Guide for Hawai'i". This is more of a "how to" manual on ways to reduce erosion and sedimentation and conserve our soil resources. It is intended for use by farmers and ranchers as well as urban developers. It provides a wealth of technical information on such things as crop planting practices, soil properties related to their susceptibility to erosion, rainfall data and charts by island for estimating runoff, and types of plants to use in different erosion control situations. [This agency has been renamed the "U.S. Natural Resources Conservation Service".]

#### 12.1.2 Surface Water Quality

No improvements are planned that will directly affect coastal waters or water quality. However, project improvements are situated near the coastline. Development of these improvements could have potential short-term impacts to surface water quality and discharge to the ocean. It is possible that there will be soil erosion and loss during construction, with transport of suspended sediment to the marine environment. The potential for impacts is minimal due to the scale of the improvements. Additionally, other than some trails, all facilities are located well inland from the shoreline and are not likely to cause runoff into the ocean or adjacent ponds.

Mitigative Measures – Adherence to the erosion control measures discussed immediately above will be critical in preventing any adverse effects on coastal water quality, as well as to controlling erosion and dust. In addition to those listed above, the following regulations and guidelines will be followed in order to minimize any possible water quality effects:

- State Department of Health's "Water Quality Standards", Chapter 11-54 in the Public Health Regulations.
- Section II "Best Management Practices" in the State Department of Health's "Nonpoint Source Water Pollution Management Plan"
- U. S. Environmental Protection Agency/National Oceanic and Atmospheric Administration's "Guidance Specifying Control Measures for Sources of Nonpoint Pollution to Coastal Waters"

In addition, there are on going water quality monitoring activities along this coastal area.

#### 12.1.3 Vegetation and Wildlife

Minor short-term effects to vegetation, wildlife and insects can be anticipated wherever site clearing and grading or excavation is necessary. Of particular concern would be any disturbance that would occur to the habitats for endangered species of vegetation or wildlife.

Mitigative Measures – The endangered loulou palm found at Mahai'ula should be preserved. Park programs also include revegetation of some areas with native and Polynesian introductions.

#### 12.1.4 Cultural, Historic and Archaeological Resources

Significant effort was made to identify cultural, historic and archaeological resources throughout the park in order to plan intensity and location of park facilities. The general policy of the plan is to preserve these resources and where appropriate, develop educational and interpretive programs to broaden public awareness of their significance in the cultural landscape of the area. Nevertheless, increased access to the park will mean increased use and impact upon these resources.

Mitigative Measures – Management plans will be developed to ensure preservation and monitoring of the cultural, historic and archaeological resources. Section 10 of the EIS describes recommended mitigation plans.

In addition, if during the course of construction any cultural or archaeological deposits are unearthed, all work in the area will be halted and the State Historic Preservation Office and Hawai'i Island Burial

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Council will be notified in case of human remains. The following cultural recommendations are made as to how to respond in the event that burials are encountered during subsurface work in the project area.

The following recommendations speak to cultural concerns the Hawaiian community in general regarding proper handling of iwi, or ancestral remains, consultation with appropriate parties and final disposition of any burial should they be encountered within the project area. It is stressed that utmost sensitivity, caring and understanding be employed when dealing with burial issues and iwi.

1. In the event of an inadvertent discovery of ancestral remains, the applicable processes outlined in existing State regulations, specifically those provided in the Hawai'i Administrative Rules, Title 13, Chapter 300, Section 40 and Section 33, will be employed.
2. If, for some reason, iwi must be moved or touched, it is highly recommended that this be conducted by a cultural monitor, a lineal/cultural descendant or someone of Hawaiian ancestry.
3. Notify and consult with known and potential lineal and cultural descendants related to any burial discovery.
4. Consult with appropriate agencies and organizations including: State Department of Land and Natural Resources, Historic Preservation Division (DLNR/SHPD), SHPD Burial staff, the Hawai'i Island Burial Council (OIBC), the Office of Hawaiian Affairs (OHA), Hui Mālama I Nā Kūpuna o Hawai'i Nei, and other interested Hawaiian organizations.
5. Prepare and implement a Burial Treatment Plan to be developed in consultation with the above agencies, the appropriate organizations and parties wishing to be consulted, including lineal and/or cultural descendants.

#### 12.1.5 Air Quality

Park improvements in general are not expected to impact air quality. However, it is standard that during construction, three potential types of air pollution emissions will likely occur, resulting in short-term air quality effects:

1. Fugitive dust from soil excavation and vehicle movement;
2. Carbon monoxide and nitrogen oxide emissions from on-site construction equipment and from vehicles of construction workers and motorized construction equipment traveling to and from the worksite; and
3. Vehicular emissions resulting from traffic along Queen Ka'ahumanu Highway due to disruption of traffic flow by construction-related vehicles.

Factors favoring good air quality in the vicinity of the project site include good exposure to trade winds and ample open space. Moreover, except for vehicles traveling along Queen Ka'ahumanu Highway, there are no other sources of air pollution in the immediate vicinity.

Mitigative Measures – The short-term effects on air quality during construction will be mitigated by compliance with State Department of Health Administrative Rules, Title 11, Chapter 60. Potential control measures to reduce fugitive dust include frequent wetting down of loose soil areas with water, use of windscreens, covering of open-bodied trucks during materials transport, and the washing down of tires on construction equipment. A dust control management plan will be developed which identifies and addresses activities. If necessary, increased vehicular emissions due to disruption of peak-hour traffic by construction equipment and/or commuting construction workers can be alleviated by moving the equipment and personnel to the site during off-peak traffic hours.

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### 12.1.6 Visual Quality

Plans intend to improve visual quality. The Visitor Center will offer a safe area to stop and visit the landscape. A hiking trail near Pu'u Kuili will also provide panoramic viewing of the Park. Construction activities will create some adverse effects on the views of the project site. Potential effects are expected to be visible from Queen Ka'ahumanu Highway, the ocean, and upslope areas. Cleared areas and stored construction equipment will be evident on-site until construction is completed.

Mitigative Measures – To minimize a variety of impacts including visual effects, work on the most visible areas along existing roadways will be completed in the shortest possible time period. Construction dust control measures will be implemented to avoid dust generation and off-site impacts.

### 12.1.7 Noise

Unavoidable, but temporary, noise impacts may occur during the construction period. Audible construction noise will be unavoidable during the construction of the new facilities and infrastructure at the Park.

Mitigative Measures – Construction vehicles and activities must comply with State Department of Health Administrative Rules, Title 11, Chapter 42 and Title 11, Chapter 46. The State of Hawai'i Department of Health's noise control regulation requires a permit for construction activities which emit noise in excess of 95 decibels. Mitigation measures to minimize construction noise include the use of mufflers to suppress loud equipment and limitations on the hours of heavy equipment operation.

### 12.1.8 Recreational Resources

Operations and recreational use of the Park will be affected in that users may be occasionally inconvenienced by construction activities. Portions of the Park may need to be shut down to accommodate road and facility improvements.

Mitigative Measures – With proper scheduling and phasing, it will be possible to minimize the inconvenience and allow continued use of the Park at substantially current levels during most of the construction period.

### 12.1.9 Employment

Planned improvements will generate short-term direct employment, both on- and off-site, during the construction period. The number of jobs at any given time will vary considerably, depending on the level of construction activity. Construction activity will also generate indirect and induced employment opportunities and multiplier effects. Those affected will be local material suppliers and retail businesses.

Mitigative Measures – The short-term employment effects will be beneficial to both the overall Hawai'i and local economies. While the magnitude of the effects on the local economy cannot be accurately projected, it should not be at a level that would generate any significant expansion or structural changes that could lead to negative effects when construction is completed. No mitigative measures are considered necessary.

### 12.1.10 Roadways and Traffic

Construction activities will create some short-term effects primarily from trucks, heavy equipment and other vehicles that will use existing roads - primarily Queen Ka'ahumanu Highway - to access construction areas, especially for the purpose of delivering construction materials and hauling away demolition debris. While construction vehicles are relatively slow and difficult to maneuver, it is anticipated that they will only marginally affect overall traffic flow, especially since there is little to demolish.

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Commuting construction workers will slightly increase traffic levels, although their effect is anticipated to be negligible. There is sufficient space within the Park for parking all construction workers' cars and for other construction-related vehicles.

### 12.2 POTENTIAL LONG-TERM IMPACTS

The improved facilities at Kekaha Kai State Park will have the potential to generate some long-term effects on the natural and human environment. In addition to the subject areas discussed above with respect to short-term impacts, areas where long-term impacts are possible include improved recreational access, visual resources, roads and preservation of cultural resources. Probable long-term impacts related to completion and operation of the planned improvements and, where applicable, proposed mitigative measures are described in the following sub-sections.

#### 12.2.1 Climate

The proposed project will not have an affect on climatic conditions and no mitigative measures are required.

#### 12.2.2 Topography, Soils and Drainage

Proposed improvements at Kekaha Kai State Park are not expected to alter drainage patterns significantly.

Mitigative Measures – Overall, there will be no major change in existing drainage conditions at the Park. Runoff from parking lots and paved areas will be directed to grassland areas.

#### 12.2.3 Flood and Tsunami Inundation Hazards

Portions of Kekaha Kai State Park are located along the shoreline, subjecting park areas to tsunami inundation hazards.

Mitigative Measures – Potential mitigative measures include complying with recommended building design standards that will help to maintain the structural integrity during the course of a hurricane. Additionally, new facilities will be sited outside inundation zones to the maximum extent practicable.

#### 12.2.4 Surface and Ground Water Quality

No improvements are planned that will directly affect surface, ground and coastal waters. Increase access to the shoreline will result in greater enjoyment of the coastal area, such as fishing, surfing and snorkeling. Increase use will also mean increase impact on the shoreline resources including impacts on the coral, fish and marine life.

There is an ongoing water quality monitoring program for this area that will keep tract of the impacts of land activities generate on the shoreline water quality. Consideration of establishing a marine fisheries management area to protect marine resources was discussed amongst community task force members.

#### 12.2.5 Vegetation and Wildlife

Section 6 describes general developmental guidelines for Kekaha Kai State Park, including policies regarding landscaping. These include a preference for endemic, indigenous and Polynesian introductions; a focus on xeriscape; eradication of Alien Species; and landscaping which enhances recreational value. Large green lawns are not planned. Vegetation and wildlife inventory studies were conducted for the park. Reports are included in the Appendices. Recommendations for the protection of endangered species are echoed in the studies.



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### 12.2.6 Cultural, Historic and Archaeological Resources

The improvements planned for Kekaha Kai State Park will have both negative as well as beneficial impacts on the cultural, historic and archaeological resources. Increased human access to these resources could pose a negative impact if used improperly and disrespectfully.

Mitigative Measures – Signage, educational programs and interpretive programs are planned to increase awareness of the cultural, historic and archaeological resources throughout the park and of the Kekaha region. Section 3 describes some of the educational resource themes targeted for the park.

The park policy is to protect and preserve these resources. All physical improvements will be sited in areas that minimize impacts to existing cultural, historic and archaeological resources in the park. Specific information has been gathered regarding existing cultural, historic and archaeological resources. Section 10 highlights the findings and recommendations of these studies. Full copies are available in the Appendices.

Through the dissemination of this EIS and future EIS reports, education of the rich resources at Kekaha are already beginning.

Increased staff, docent and volunteer presence will add a protective presence that is currently unavailable.

### 12.2.7 Air Quality

A slight increase in vehicular traffic and emissions is expected, but the effect on air quality will be minor. None of the new facilities will affect the air quality.

Mitigative Measures – Overall the air quality at Kekaha Kai State Park is very good due to the low intensity of use, the expanse of open space and the trade winds that blow most of the time. The planned improvements will not change these conditions. No mitigative measures beyond existing vehicle emission controls are considered necessary. Air Quality impacts caused by the neighboring activities of the Kona International Airport will remain.

### 12.2.8 Noise

Noise levels generated from park usage is expected to be minimal since park usage is geared toward preservation and passive recreational uses. Noise generated from activities adjacent to the park will continue to be part of the park experience. This includes noise from the airplanes traveling to and from the Kona International Airport and noise from the ocean.

Mitigative Measures – A buffer zone between the Park and the adjacent Manini'ōwali Development has been designed which should minimize noise impacts to and from the park.

### 12.2.9 Visual Resources

The planned improvements are intended to increase visual appreciation for the scenic resources of Kekaha Kai. Vehicular pullouts are planned at Mahai'ula for park users to stop and enjoy the beauty of the region. The view of Pu'u Kuili will be enhanced by the restriction of vehicular access to the summit. Pedestrian trails to the summit will provide rim views of the park coastal areas as well as views of Hualālai. No high rises are planned in the park. All facility improvements are one story and will be designed appropriately to the surrounding environment.

### 12.2.10 Roadways and Traffic

Improved access into Mahai'ula and Manini'ōwali from Queen Ka'ahumanu Highway will lead to increased use of the resources at Kekaha Kai State Park. Additional vehicles will be able to drive directly and more comfortably down to the shoreline. The provision of a paved roadway system to Kua Bay will presumably increase public use of the shoreline area and camping opportunities. Entrance improvements

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at Mahai'ula will provide more space for free flowing traffic in both directions along Queen Ka'ahumanu Highway. Road improvements at Mahai'ula will lead to increased use of the resources by the public, including increased access to community members, including kūpuna, schoolchildren and educational programs, as well as by tourist.

Mitigative Measures – Egress and ingress traffic impacts along Queen Ka'ahumanu Highway will be minimized by planned intersection improvements at both the Veteran's Cemetery (Manini'ōwali access) and the Mahai'ula entrance. At Manini'ōwali, the existing painted median on Queen Ka'ahumanu Highway is proposed to be widened to 30 feet. Included in this median would be left-turn lanes in directions, a 6-foot separator, and median refuge areas for vehicles turning left out of the West Hawai'i Veterans Cemetery. Intersection control would be STOP-sign control on the West Hawai'i Veterans Cemetery and *makai* leg approaches (Figure 12 – 1). Further details are provided in the traffic report in Appendix G. The Manini'ōwali entrance from Queen Ka'ahumanu Highway will also serve as an entrance to the Manini'ōwali Development. Funding for this improvement will be provided by the developer. In addition, a traffic-monitoring plan is proposed that would review traffic conditions at this intersection after half of the Manini'ōwali Development has been implemented. If the monitoring indicates the need for a traffic signal system, the developer will install it at no cost to the State of Hawai'i.

Additional improvements to the entrance to Mahai'ula are proposed for consideration. This includes expanding pavement widths and shoulders. Such improvements would provide more space for free flowing traffic in both directions.

Access to the shoreline will be monitored by the use of gates and administrative controls such as operating hours. The provision of educational programs, signage and interpretive programs are intended to lead to better awareness of proper use and respect for the resources throughout the park. In addition, location of the roadways and the parking areas are sited in areas that do not impact cultural features. Designated parking areas are provided to deter vehicles from driving and parking directly on resources areas such as the shoreline.

#### 12.2.11 Public Safety

The relative isolation of the park site due to its distance from population centers, as well as potential safety hazards inherent in the rugged terrain, raises concerns for public safety if greater access to the area is provided. The presence of more people will probably increase demands on services such as emergency medical, police, ocean rescue and fire protection services. A fire protection plan (an important emergency safety precaution for the park), will be prepared. Comments from the Fire, Police and Civil Defense Department have not been received.

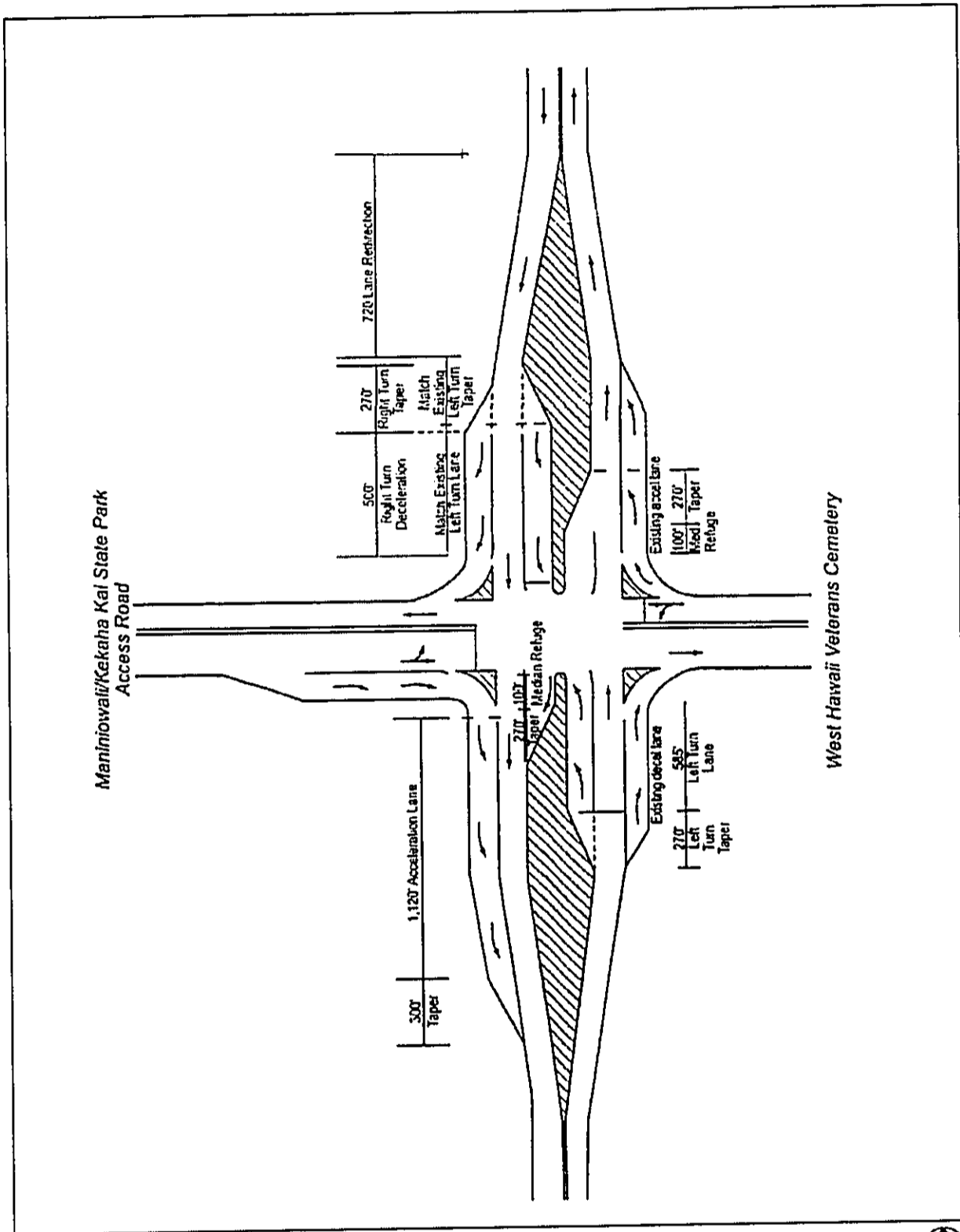
#### 12.2.12 Recreational Resources

The planned improvements at the Kekaha Kai State Park will greatly expand access to recreational resources along the shore. The effect of these planned improvements on recreational resources will be beneficial. This is primarily because these facilities were requested by the community and will improve recreational resources.

Mitigative Measures – The primary purpose of the planned improvements at Kekaha Kai State Park is to increase the recreational opportunities and facilities in the area. As such, there should be no adverse effects on recreational resources that require mitigation.

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Proposed Intersection Configuration

Figure 12 - 1

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### 12.2.13 Population and Employment

The planned improvements are not expected to generate any population effects. The increase will definitely not be at a level that could cause any shift in resident population growth from other areas of Hawai'i to the Kona region, much less have any effect on Hawai'i's overall population growth rate. New jobs may be created as the Park as facilities are developed. For example, additional caretakers may be hired along with the interpretive technician.

Mitigative Measures – Employment effects will be small, but beneficial. No other mitigative measures are considered necessary.

### 12.2.14 Utilities

As described in the Development Plan, general improvements for connection to local public water, wastewater, electrical and telephone systems will be minimal. Utility resources will be provided on site. Water lines will be installed at the Kūki'o development near the Manini'ōwali / Kūki'o section of the park. A sewage system will be developed as part of the Kūki'o development adjacent to Manini'ōwali / Kūki'o park.

## 12.3 SUMMARY OF PROBABLE IMPACTS

### 12.3.1 Interrelationships and Cumulative Environmental Impacts

Cumulative and interrelated impacts are those associated with existing, approved and foreseeable future projects that may produce related or additive impacts.

The project site lies within the North Kona Judicial District, one of nine judicial districts in Hawai'i County. The North Kona District lies on the western coast of the island of Hawai'i within the larger region known as West Hawai'i. Anaeho'omalu Bay marks the district's northern boundary and Kealakekua Bay marks its southern boundary. The inland boundaries are defined by the land masses of Mauna Loa and Hualālai. The North Kona Judicial District includes Census Tracts 215 (Kailua-Kona) and 216 (the remainder).

The primary commercial center of the region is located at Kailua-Kona, the third largest town on the island of Hawai'i, with a 2000 population of 17,288 (U.S. Census Bureau, 2000). Secondary urban centers are found in the communities of Hōlualoa, Kainaliu, Keauhou and Kalaoa.

Development over the past two decades and anticipated future development are shaping the Kailua-Kona region into a major urban growth area for the Island of Hawai'i. Fueled by tourism, development in the Kona area includes light industrial facilities, residential areas, resorts, commercial and governmental centers, and educational facilities.

The service area of Kekaha Kai State Park includes the visitors and residents of West Hawai'i from Kawaihae south to Kailua-Kona and Keauhou. Within this region, the urban areas around Waikoloa and Kailua-Kona are growing very rapidly. This growth is reflected in the County of Hawai'i's General Plan which shows several thousands of acres designated as urban expansion areas around these existing communities. The expansion area north of Kailua-Kona covers the area *mauka* of Keāhole Airport and Honokōhau and includes the Kealakehe area. Kealakehe is the nearest planned, residential community to Kekaha Kai State Park. Its northern boundary is about one and a half miles from the proposed southern edge of the park. The Waikoloa urban expansion area includes the existing communities of Puakō and Waikoloa. The southern edge of this urban expansion area is about twenty miles from the project site.

The project site sits adjacent to a smaller urban resort/residential node that includes parts of Manini'ōwali, Kūki'o 2 and Ka'ūpūlehu. Existing developed area of this urban node is the Kona Village Resort in Ka'ūpūlehu and the other resort development, the Four Seasons at Ka'ūpūlehu.

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W. B. Kūki'o Project is currently being developed. These developments will create greater demand for outdoor recreational resources in the region. The development of the Manini'ōwali project will have a direct impact on the development of Kekaha Kai State Park in that, according to present agreements, the access roads, parking and some of the facilities for Kua Bay will be provided by the landowner.

Other development proposals in the vicinity of the Kekaha Kai State Park, including residential, commercial, industrial and public sector, that may produce related or additive effects include:

- The Department of Hawaiian Home Lands Plans at Kealakehe involves developing 400 homes on 200 acres, commercial development on 3.7 acres and industrial development on 29.2 acres.
- TSA International Ltd. Plans a 102-acre expansion of the Kaloko Industrial Park which involves a rezoning from conservation to urban district. Plans involve adding 82 improved industrial and commercial lots.
- Lanihou Properties LLC plans to construct a 337-acre Kaloko-Honokōhau Business Park for industrial and commercial use *mauka* of Honokōhau Harbor. Plans involve expanding quarrying and quarry-related activities.
- Queen Lili'uokalani Trust plans to urbanize nearly 315 acres of its property in the area. In 2000, the trust started with a 50-acre parcel that now houses Kmart, Macy's and Wallace Theatres. Later, it undertook development of a 101-parcel, which includes about 40 acres for commercial use, 29 acres for industrial and 21 acres for outdoor commercial activities.
- Honokōhau Properties, the company plans to build 70 single-family homes and develop 45 acres for commercial use.
- The County of Hawai'i is pursuing development of a 200-acre golf course at Kealakehe, where, in the early 1990s, a Japanese developer was awarded the contract to build the course.
- Natural Energy Laboratory of Hawai'i (NELH). A gateway project to add alternative energy and marine biology research facilities is in the works.
- University of Hawai'i plans to build a 30-acre footprint for the first phase of UH expansion in West Hawai'i that could accommodate 1,500 students. Plans call for a 500-acre campus.
- Department of Transportation (DOT) Airports Division will work on expanding Kona International Airport. DOT will also undertake future road construction as part of a county transportation corridor plan.

The Kekaha Kai State Park will provide open space and recreational opportunities for these proposed developments.

### 12.3.2 Potential Secondary Effects

Kekaha Kai State Park will function synergistically with other parks and outdoor recreational resources in the area. There is a shortage of sandy beaches and coastal recreational facilities in the area and this park is an important link in the string of recreational facilities along the coast. Improvements at Kekaha Kai State Park will add to the regional recreational resources along the coast. Three other parks which have influenced and will be influenced by Kekaha Kai State Park include the following.

#### **Kaloko - Honokōhau National Historic Park**

Kaloko-Honokōhau is a National Historical Park managed by the National Park Service. Authorized in 1978 by Public Law 95-625 "to provide a center for the interpretation and perpetuation of traditional native Hawaiian activities, and culture, and to demonstrate historic land use patterns as well as provide needed resources for the education, enjoyment, and appreciation of such traditional native Hawaiian

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activities and culture by local residents and visitors." The park area includes two fishponds ('Aimakapā and Kaloko), and several agricultural, religious and habitation structures. Park plans call for restoration and recreation of native Hawaiian facilities (including a native Hawaiian village), cultural practices and land use patterns for education and enjoyment. Currently there are two major access routes to the park via four-wheel-drive roadways. There is an information kiosk at Kaloko Pond and compost toilet comfort stations at both pond areas. The ponds also serve as wildlife preserves for endangered native water birds such as the coot and stilt. Some tagging of native vegetation has also been completed.

Kaloko-Honokōhau NHP is about three and a half miles south of Kekaha Kai State Park. Located north of Honokōhau Harbor, south of Keāhole Airport, and *makai* of Kaloko Industrial Park, the park is close to urban areas and convenient for educational and recreational purposes. Due to its size and the quality of its resources the park is a significant recreational, educational and environmental resource for the community.

Proposed park facilities include an orientation center where basic information and artifacts would be presented (National Park Service, 1994). The center would also include a library, research laboratory, and museum, as well as administrative and support areas. A live-in cultural education complex would combine working, meeting, educational, living, and ceremonial areas. This complex would be secluded from daily park visitors, providing an opportunity for individuals to recreate the traditional environment of the area. Areas outside the live-in complex would be set aside for traditional activities such as tending fishponds, subsistence shoreline fishing, and subsistence horticulture.

The Kaloko-Honokōhau National Historical Park, as it develops in the coming years, will provide West Hawai'i with sophisticated interpretive/education programs and a treasured cultural resource. Park development of Kekaha Kai State Park should complement rather than duplicate facilities at Kaloko-Honokōhau National Historical Park.

### Kīholo Bay

The proposed Kīholo Bay State Park Reserve (PR) and surrounding land is a large State-owned property, with several private shoreline residence inholdings. At present it is undeveloped with vehicular access possible through unimproved non-exclusive easement roadways. The area is predominantly made up of lava lands which have been impacted by the extensive Ka'ūpūlehu flow of 1859. A large grove of coconut palms cover the area spared by the 1859 flow. Some people feel that the existing sand bar in Kīholo Bay is the remnant of Kamehameha's great fishpond which was destroyed in the 1859 flow. The Kīholo area is also the site of the famous freshwater pond, Luahinewai, mentioned in many tales of the region.

Located about four miles north of Kekaha Kai State Park, Kīholo Bay is being considered for future development as a State park and would be the major public park along the Ala Kahakai between the Hāpuna Beach State Recreation Area and Kekaha Kai State Park.

### Ala Kahakai

The Ala Kahakai is another important element in the planning of Kekaha Kai State Park. According to a memo by the U.S. Department of the Interior, "the Ala Kahakai is a new trail, a concept which links old fisherman's trails into a continuous trail. It is a series of historic trails linked by recreational trails to make a continuous shoreline trail. It includes the ocean and the lands beside the trail. It is a living path which connects people and places and changes over time". The 35-mile segment from Kawaihae to Kailua-Kona is the first increment of the Ala Kahakai planned for development and registration of the Ala Kahakai as part of the National Trail System. In January 1998, Final Environmental Impact Statement, the NPS recommended this become a National Historical Trail. The trail was designated as a National Historic Trail. The historic portions of the Ala Kahakai have been identified within the park through archaeological research.

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Future development will connect all the historic sections into a continuous network with the Ala Kahakai serving as the spine of this trail system. The Ala Kahakai will also connect the island's coastal parks allowing hikers to walk between parks with camping facilities and comfort stations. Hikers will be able to walk on this trail from Spencer Beach Park and Hāpuna SRA in the north to Kekaha Kai State Park and south to Kailua-Kona.

### 12.3.3 Relationship Between Local Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity

These relationships are described below in the context of the following four specific areas of potential concern:

- Narrowing of the range of beneficial uses of the environment;
- Long-term risks to health and safety;
- Foreclosure of future options; and
- Trade-offs among short-term and long-term gains and losses.

The planned improvements are considered to be beneficial uses of the environment. They utilize areas that have been previously disturbed for several beneficial purposes, including:

- Adding and improving recreational facilities in the area; and
- Preservation of cultural resources.

The improvements will improve the overall human use of the natural resources throughout the Park. No long-term risks to health and safety are anticipated from the proposed improvements to the Park.

The only potential substantive "trade-off among short-term and long-term gains and losses" that is apparent would be the commitment of funds to complete these improvements in the near-term. The other option would be waiting to make these improvements in the future, or simply leaving this potential "funding source" for use on another project at some time in the future.

### 12.3.4 Irreversible and Irretrievable Commitments of Resources

The construction and operation of the planned new improvements and facilities will involve the irretrievable commitment of certain natural and fiscal resources. There will be a permanent commitment of funds and resources to plan, design, construct and operate the new improvements and facilities. Planning, design and construction of the planned improvements will require the expenditure of approximately \$6.7 million dollars. Construction will also involve the use of labor and materials, most of which is non-renewable and irretrievable.

### 12.3.5 Adverse Environmental Effects That Cannot Be Avoided

Adverse impacts can be divided into short- and long-term effects. Short-term effects are generally associated with construction, and prevail only for the duration of the construction period. Long-term effects generally follow completion of the improvements, relate either simply to their existence or to the operation of the new facilities, and are permanent. Effects that can be considered both adverse and unavoidable are as follows:

### 12.3.6 Unavoidable Adverse Short-term Effects

- Soils will be temporarily disturbed by grading, excavation and mounding activities at the project sites during construction.

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- Temporary increases in soil erosion will also result from construction operations, and minor amounts of soil may be carried beyond construction sites, in surface runoff water.
- A small amount of natural vegetation will be removed to allow construction of the planned improvements.
- Wildlife utilizing the project sites and immediate adjacent areas will be displaced, most likely into nearby undeveloped lands, by construction activities.
- Operation of construction equipment, trucks and worker vehicles may temporarily impede traffic in the areas during the construction period.
- Negligible releases of air contaminants will occur from construction equipment emissions. Small amounts of dust may be generated during dry periods as a result of construction operations.
- Minor increases in noise levels may result from construction activities.

#### **12.3.7 Unavoidable Adverse Long-term Effects**

- Increased use of the resources at the park.
- The added emissions from an increase in traffic to the area will have a negligible effect on air quality in the area.



## **Section 13.0**

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EIS - Alternatives to the Proposed Actions

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**13.0 ALTERNATIVES TO THE PROPOSED PROJECT**

Alternative schemes evaluated include three levels of intensity of development along with a no-action alternative.

**13.1 NO-ACTION ALTERNATIVE**

The "no-action" alternative would involve no changes to the existing park. Unpaved roads would remain unimproved. Existing facilities which include portable toilets, picnic tables and trash cans would not be improved or expanded. Access to the park would continue to be controlled by a gate near Queen Ka'ahumanu Highway and limited to daytime use. No additional management practices would be initiated at the park. This alternative was reviewed and rejected early in the planning process because it would not protect the resources nor provide increased access to recreational resources.

**13.2 HIGH, MEDIUM AND LOW INTENSITY ALTERNATIVES**

Three concept plans were developed, which reflect High, Moderate and Low intensity uses for the development of the park resources within each of the *ahupua'a*. The alternatives addressed the following park development activities: Parking, Support Facilities, Vehicular Roadways, Camping, Landscape, Interpretive Areas, and Pedestrian Paths.

Evaluations of existing natural/cultural resources as well as interpretations of the historic land use and settlement patterns of the Hawaiians who inhabited the region in the past were considered in the development of alternative development plans. As a general methodology, a series of resource/constraint maps were developed to guide park planning. These included natural geological features such as Pu'u Kuili, Kapo'ikai, sandy shorelines, and existing vegetation, and man-made constraints such as airport noise. Finally, known wetland, archaeological and historic areas were mapped by degrees of concentration and significance. Shoreline and topographical considerations were also assessed.

The detail of each scenario is described in Appendix B of the Kekaha Kai State Park Conceptual Plan.

**13.2.1 High Intensity Use**

The high intensity use is distinguished by the degree of vehicular access into the park. Within this scenario, car to activity areas and parking intensities are indicated at the high end of the expected capacities for beach areas, trailheads and other activities. Additionally, the capacity of facilities reflects a relatively high level of use.

	<b>Mahai'ula</b>	<b>Awake'e</b>	<b>Manini'owali</b>
Parking stalls	300	75	120
Paved Road	Continuous	None	Yes
Comfort Station	3	1	1
Picnic Areas	Improved	Unimproved	Improved

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**13.2.2 Medium Intensity Use**

Medium intensity alternative reflects a reduction in overall facilities and a middle ground in the opposing pressures for access and protection of the resources. Parking counts are less, access is partially limited and facility plans are scaled back in comparison to the high intensity schemes.

	<b>Mahai'ula</b>	<b>Awake'e</b>	<b>Manini'owali</b>
Parking stalls	130	40	100
Paved Road	Partly	None	Yes
Comfort Station	2	0	1
Picnic Areas	Limited areas	Unimproved	Improved

**13.2.3 Low Intensity Use**

The low intensity alternative generally takes existing conditions and adds maintenance. There are only limited facility additions. Maintenance would be on an as needed basis.

	<b>Mahai'ula</b>	<b>Awake'e</b>	<b>Manini'owali</b>
Parking stalls	95	25	50
Paved Road	None	None	Yes
Comfort Station	2	0	1
Picnic Areas	Unimproved	Unimproved	Limited areas

The alternatives were developed in three levels of intensity with the understanding that any option could be chosen in each planning area, and that specific features or elements could be added or withdrawn from each section. With this framework, the alternatives were presented to the Kona Community in a public meeting on April 25, 1995 at Kealakehe Intermediate School. After several public meetings and discussions with various groups, a low intensity, incremental development approach was recommended.

**Section 14.0**

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EIS - Summary of Unresolved Issues

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## **14.0 SUMMARY OF UNRESOLVED ISSUES**

Several unresolved issues are discussed below that are related to the planning and development of Kekaha Kai State Park. The discussion focuses on the lack of a need to resolve them prior to completion of the planned improvements, and/or the overriding reasons for proceeding without resolving the issues.

### **14.1 PUBLIC TRAILS ON PRIVATE LANDS**

Discussions have been held regarding future use of the mauka makai historic trail located in the *ahupua'a* of Makalawena. The Kamehameha Schools holds title to the portion of the *ahupua'a* of Makalawena in which the trail is situated. The State Attorney General's office has opined in 1987 regarding state ownership of the mauka-makai trail shown on older Tax Maps as the "Makalawena-Akahipu'u Trail." The extent to which the trail will be part of the Kekaha Kai State Park will remain an unresolved issue and open for further discussions with the landowner. However, there is no need to resolve this issue before proceeding with the planned improvements discussed in this EIS.

### **14.2 DEGREE OF ROAD IMPROVEMENT TO MAHA'I'ULA**

Differences of opinion about the level of improvement to the road leading down to Mahai'ula continues to exist among members of the Kekaha Kai Task Force. While the plan is not to pave the road for the foreseeable future, potholes and future deterioration of the roadway may keep the issue of improvement a continuing public concern.

### **14.3 FUNDING RESOURCES**

Management of the park will depend heavily on the availability of financial resources. It is not clear at this time whether the State has sufficient funds to implement the planned improvements and necessary management tools. W.B. Kūki'o funding is more certain – so development of the Manini'ōwali / Kūki'o section would be likely.

### **14.4 COMMERCIAL USES**

While there will be no regular commercial uses in the Park, the definition of commercial use and the types of commercial operation are very diverse. Also other state priorities and shortages of funds to maintain the park generate pressures to review other potential uses that may have a commercial element. This issue will require further discussion and more detailed policies need to be developed. A copy of the Board of Land and Natural Resources "Policy on Commercial Activities on State Owned and Managed Lands and Waters" (1998) is provided in the Draft EIS comment letters and response section. State Parks follows these general guidelines when considering Special Permit requests.

### **14.5 POTENTIAL IMPACTS TO CULTURAL RESOURCES ON PRIVATE LANDS (PU'U ALI'I DUNES AND KOLOMIKIMIKI)**

Development of the park will increase activity and traffic to sensitive areas in private parcels. Further discussion with Kamehameha Schools is needed to protect the Pu'u Ali'i Dune in Makalawena. Inadvertent visits to Kolomikimiki will occur and discussions with the Catholic Church are needed to proactively protect this site.

## **Section 15.0**

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EIS - Required Approvals and Permits

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**15.0 REQUIRED APPROVALS AND PERMITS**

The proposed improvements are intended to be consistent with and support the intent of the State Conservation District, the County's General Plan, Community Plans, and provisions of the Special Management Area. The following is an approximate list of major approvals and permits and their status required for implementation of the planned improvements. Ministerial permits will be obtained such as building, grading, etc. This project falls within the scope of the HRS Section 103-50 that contains a requirement for a review process by the Disability and Communication Access Board.

**TABLE 15-1: REQUIRED APPROVALS AND PERMITS  
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<b>Approval or Permit</b>	<b>Approving Authority</b>	<b>Status</b>
Conceptual Plan Approved	Board of Land and Natural Resources	Approved
Environmental Impact Statement Acceptance	State of Hawai'i, Governor	In Preparation
Special Management Area Use Permit	HRS Chpt. 205, County Planning Commission	In Preparation
Conservation District Use Permit	Board of Land & Natural Resources	In Preparation
Grading and Building Permits	Hawai'i County, Planning Department	Future

## **Section 16.0**

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EIS - References



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**Section 17.0**

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EIS - Agencies And Parties Consulted

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**17.0 AGENCIES AND PARTIES CONSULTED**

The following agencies, organizations and individuals were contacted during the preparation of the Environmental Impact Statement Notice of Preparation (EISPN), and the Draft Environmental Impact Statement (DEIS) for the proposed Kekaha Kai State Park project. Copies of the comment letters and responses are included in this report. Direct community input was also provided through the Kekaha Kai State Park Task Force community meetings. Details regarding the meetings and discussions are included in Appendix J of the Draft EIS.

Respondents and Distribution	Received EISNP	Comments Received	Received DEIS	Comments Received	Received FEIS
<b>A. Federal Agencies</b>					
U.S. Army Corps of Engineers – Pacific Ocean Division	x		x	x	x
U.S. Department of the Interior – National Park Service Pacific Island Support Office	x		x		
National Park Service – Kaloko Honokōhau			x		
National Park Service – Puuhonua o Honaunau			x		
U.S. Department of the Interior – Fish and Wildlife Service	x		x		
National Marine Fisheries Service			x		
Natural Resources Conservation Service	x		x		
Federal Aviation Administration	x		x	x	
<b>B. State Agencies</b>					
Office of the Governor, State of Hawai‘i			x		x
Office of Environmental Quality Control	x	x	x (5)	x	x (5)
Department of Agriculture			x		
Department of Accounting and General Services	x		x	x	
Department of Business, Economic Development & Tourism (DBEDT) – Director’s Office	x		x		
DBEDT, Energy, Resources & Technology Division	x		x	x	x
DBEDT Planning Office	x		x		
Department of Defense	x		x	x	x
Department of Education			x	x	
Department of Land and Natural Resources (DLNR) – Aquatic Resources Division	x		x	x	x
DLNR, Historic Preservation Division	x	x	x	x	x
DLNR, Land Management Division Planning and Technical Services Engineering Branch Hawai‘i District Land Office	x	x	x		
DLNR, Division of Forestry & Wildlife	x		x	x	x

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Respondents and Distribution	Received EISNP	Comments Received	Received DEIS	Comments Received	Received FEIS
DLNR, Na Ala Hele Program	x		x	x	x
DLNR, Commission on Water Resources Management	x	x	x		
DLNR, Division of State Parks	x		x		x
DLNR, Division of Boating and Ocean Recreation	x	x	x		
Department of Health (DOH)	x		x		
DOH, Clean Water Branch	x	x	x	x	x
DOH, Environmental Planning Office	x		x (2)	x	
Department of Hawaiian Homelands	x		x	x	
Department of Transportation (DOT) Airports Division	x		x	x	x
DOT, Highway Division	x	x	x		
Office of Hawaiian Affairs (OHA)	x	x	x	x	X (2) Kona & Oahu
University of Hawai'i – Environmental Center	x		x (4)	x	x (2)
University of Hawai'i – Sea Grant	x	x	x		
University of Hawai'i Water Resources Research Center	x		x		
Disability & Communication Access Board			x	x	x
<b>C. County of Hawaii</b>					
Department of Water Supply	x		x		
Department of Parks and Recreation	x	x	x	x	x
Planning Department	x	x	x	x	x
Department of Public Works	x		x		
<b>D. Elected Officials</b>					
Senator Lorraine Inouye			x		
Senator Russell Kokubun			x		
Senator Paul Whalen			x		
Representative Robert Herkes			x		
Representative Mark Jerrigan			x		
Councilman Curtis Tyler			x		
<b>E. Media</b>					
Honolulu Advertiser			x		x
Honolulu Star Bulletin			x		x
Hawai'i Tribune Herald			x		x
West Hawai'i Today			x		x
<b>F. Public Libraries</b>					
Hōlualoa Public Library			x		x
Kailua-Kona Public Library			x		x
Thelma Parker Memorial Public Library			x		x
Kealakekua Public Library			x		x
Hilo Regional Library			x		x

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Respondents and Distribution	Received EISNP	Comments Received	Received DEIS	Comments Received	Received FEIS
Kaneohe Regional Library			X		X
Lihue Regional Library			X		X
Kahului Regional Library			X		X
Hawai'i Kai Regional Library			X		X
Pearl City Regional Library			X		X
Kaimuki Regional Library			X		X
DBEDT Library			X		X
Hawai'i State Library			X		X
Legislative Reference Bureau			X		X
UH Mānoa Hamilton Library			X		X
UH Hilo Library			X		X
<b>G. Community Organizations, Non-Profit Special Interest Organizations &amp; Individuals</b>					
Conservation Council for Hawaii				X	X
Ellison Onizuka Space Museum	X		X		
Hui Laulima O Kekaha Kai	X		X		
Kamehameha Schools	X	X	X		X
Ka'ūpūlehu Land Company	X		X		
Kekaha Kai State Park Task Force	X		X		
Kona Hawaiian Civic Club	X		X		X
Kona-Kohala Chamber of Commerce					X
Manini'ōwali Equity Company	X		X		X
PBR Hawai'i	X		X	X	
Protect Kohanaiki Ohana					X
Pulama ia Kona (Kona Historical Society)	X		X		
Puukohola Heiau, NHS					X
W.B. Kūki'o Resorts, LLC	X		X	X	X
W.B. Manini'ōwali, LLC	X		X		
West Hawai'i Sierra Club	X	X	X	X	X
Janice Palma – Glennie	X	X	X	Sierra Club	X
Carol Fuller	X	X	X		
Bobby Camara				X	X
Betsy Morrigan				X	X
Clarence Medeiros				X	X
David Tarnas					X
Deborah Chang				X	X
Ellen Schomer				X	X
Gary Eoff				X	
Hannah Springer				X	X
Jim Burrison				X	
Kepa & Onaona Maly					X
Mark Colter				X	
Marjene Erway				X	X
Marlin Parker				X	
Mary Ann Maigret					X



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Michael Varney				X	X
Robert, Edna & Cindi Punihaole					X
Ron & Sue Aronson					X
Sidney Fuke					X
Scott Mandel					X
Tracy Lewis				X	
Tod Bollinger				X	

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**Section 18.0**

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EIS – Preparers of the EIS

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**18.0 PREPARERS OF THE EIS**

This environmental impact statement was prepared for the applicant, the State Department of Land and Natural Resources Parks Division, by Group 70 International, Inc. The following list identifies the individuals and organizations involved in the preparation of this EIS and their respective contributions.

**Group International, Inc.**

Francis Oda, AIA, AICP	Conceptual Master Plan
George Atta, AICP:	Project Manager
Kim Evans:	Planner
Joy Rabara:	Graphics Preparation
John McClain	Document/Graphics Preparation

**Other Consultants**

Dennis Hirota  
Winona Char, Char and Associates  
Tom Dye & Colleagues  
Kepa Maly, Kumu Pono Associates  
Tim J. Ohashi  
Pacific Planning & Engineering, Inc.  
W.B Kūki'o  
State Parks

**Technical Area**

Civil Engineer  
Botanical Studies (Flora)  
Archaeology  
Ethnology  
Wildlife Resources  
Traffic  
Manini'ōwali Area  
Archaeology

**Kekaha Kai State Park Task Force**

Members of the Kekaha Kai State Park Task Force contributed to the development of the Conceptual Plan and elements of the Park Development Plan. The Task Force represents a range of community interest. A list of Task Force Participants are provided in Appendix J of the DEIS.

## **Appendix A**

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### Glossary of Terms Used

KEKAHA KAI STATE PARK

• Final Environmental Impact Statement •

APPENDIX A. GLOSSARY

- 'A'ā*: A rocky, stony, rough form of lava flow.
- ADA: Americans with Disabilities Act (1990). Law requiring access for people with disabilities to certain types of facilities.
- Ahu*: Heap, pile, collection, mass, altar, or shrine of stones; cairn; a trap-like enclosure made by fishermen for fish to enter.
- Ahupua'a*: A land division of old Hawai'i generally stretching from the mountains to the sea; so called because the boundary was marked by a heap (*ahu*) of stones surmounted by an image of a pig (*pua'a*), or because a pig or other tribute was laid on the altar as a tax to the chief. The landlord or owner of an *ahupua'a* might be a *konohiki*.
- Ala Kahakai: "Trail by the Sea" A coastal trail running from Kawaihae to Hawai'i Volcanoes National Park proposed for designation as a National Historic Trail. It would incorporate remnants of older historic trails and more recent paths to create a continuous walk.
- Ali'i*: Royalty or chiefly rank.
- Anchialine Ponds: Brackish water ponds with no direct connection to the ocean; often populated with indicator flora or fauna such as red shrimp of the genus *Halocardina*.
- Carrying Capacity: Concept referring to the sustainable capacity of a system. The capacity varies with many factors such as use, technology and the type of resource base.
- Day moorings: Buoy moorings anchored permanently to the ocean floor. Allows boats to tie up and stay in one location without dropping anchors to the ocean floor.
- Eco-friendly: Facilities and methods that have minimal or no impact on the receiving environment. Blends smoothly into the existing landscape.
- Endemic: Native only to Hawai'i, found native nowhere else in the world.
- Historic: Post contact period in Hawaiian history; since 1778.
- 'Ili'i*: Small, smooth, weather worn pebbles.
- Indigenous: Native to Hawai'i and some other parts of the world.

## KEKAHA KAI STATE PARK

• Final Environmental Impact Statement •

- Kahuna lā'au lapa'au:* Teacher, medicine man knowledgeable in the arts of healing and native flora, fauna and natural history.
- Kanaka maoli:* Native Hawaiian, the indigenous people, original settlers of Hawai'i.
- Kapu:* Restricted.
- Kekaha:* The region of land in which the Kekaha Kai State Park is located. The meaning of the place name is barren or desolate.
- Kīpuka:* Variation or change in form as in a calm at sea or an opening in a forest- *puka* (hole). A pocket of land left untouched by a lava flow.
- Ko'a:* Fishing grounds usually identified by lining up with nearby landmarks; Shrine, often consisting of circular piles of coral or stone, built along the shore or by ponds or streams , used in ceremonies as to make fish multiply.
- Kōnane:* A Hawaiian game similar to checkers played with stones on a flat stone surface.
- Konohiki:* Person who manages the *ahupua'a* under a chief. Usually a lower ranking *ali'i*.
- Kupuna:* Family elder.
- Makai:* Towards the ocean.
- Mana:* Spirit, power, life force.
- Mauka:* Towards the mountain.
- MFMA:* Marine Fisheries Management Area.
- Moi:* Chief *ali'i* of the island; king.
- 'Ohana:* Family, relative, kin group.
- Pāhoehoe:* Smooth form of lava flow often with rope-like forms. A generally faster moving lava flow than the rougher *'a'ā* flows.
- Papamū:* *Kōnane* game platform; checkered, plaid.
- Polynesian Introduction:* Not endemic or indigenous to Hawai'i but brought in by the early Polynesian settlers of the island.
- Xeriscape:* Very arid landscape. Dry land plants and forms.
- W. B. Kukio:* Private company. W.B. Kukio Resorts LLC.

KEKAHA KAI STATE PARK

• Final Environmental Impact Statement •

Hawaiian Spelling used in FEIS

<b>A</b>	Kahuna lā'au lapa'au	Makai
'A'ā	Kakapa	Makalawena
Āholehole	Kalāhikiola	makaloa
Ahu	Kalo	Malo'o
Ahupua'a	Kamākia	Mana
'āina	Kamani	Manini'ōwali
'aki'aki	Kamehameha	Mauka
'ākulikuli	Kanaka maoli	Milo
Ala Kahakai	Kapo'ikai	Mō'ī (king)
Ali'i	Kapu	Moi (fish)
'Anaeho'omalu	Kaulana	
Anchialine Ponds	kauna'oa	<b>N</b>
Awake'e	Kāwili	Noni
	Keāhole	
<b>H</b>	Keawehala	<b>O</b>
Hala	Kekaha Kai Wai 'ole	'Ohana:
Hālau	Kekaha	'Ōpae'ula
Hale	Kiawe	'ōpelu
Hawai'i	Kikaua	
heiau	Kīpuka	<b>P</b>
hinahina	Ko'a	Pa'akai
Hōlualoa	Kolomikimiki	Pāhoehoe
Hualālai	Kōnane	Papamū
	Konohiki	Pili
<b>I</b>	Kou	Po'ominomino
'Ili'ili	Kua bay	Pōhaku
	Kūki'o	Pu'u alii
<b>K</b>	Kūpuna	Pu'u Kuili
Ka'ahumanu		Pūku'i
Ka'elehuluhulu	<b>L</b>	Punihaole
Ka'elemakule	Loulu	
Kaiwikoholā		'Ulu maika
Ka'ūpūlehu	<b>M</b>	
Kaho'iawa	Mahai'ula	
	Maiapilo	

**EIS – PreConsultation Comment and Responses**



BENJAMIN J. CAYetano  
GOVERNOR



GENEVIEVE SAUNDERS  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 586-4185  
FACSIMILE (808) 586-4186

April 16, 2002

RECEIVED

APR 17 2002

GROUP 70

Daniel Quinn, Administrator  
State Parks Division  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Attention: Sherrie Samuels

Dear Mr. Quinn:

Subject: Environmental Impact Statement (EIS) Preparation Notice  
Kekaha Kai State Park Conceptual Plan, North Kona

Please include the following in the draft EIS:

Two-sided pages: In order to reduce bulk and save on paper, please print on both sides of the pages in the EIS

Acronyms list: Such a list will make it easier for the reviewer. Pages 5, 7 and 8, for example, contain "WB Manini'owali," "WB Kuki'o," UIC, NPDES and FEMA. Terms such as these should be spelled out in the text and included in an acronyms list.

Kekaha Kai State Park task force input: Include a description of the group sessions, how often they met and over what period of time, and the issues that were discussed.

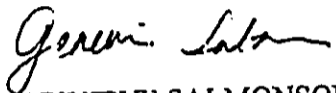
Project cost: Disclosure of expenditure of state funds, including federal funds flowing through the state, is required by law. If exact amounts are not known, give a potential range of expenditure.

Contacts: In the draft EIS be sure to document all contacts made during the entire EIS process, including the pre-consultation phase, and enclose copies of any correspondence.

If you have any questions, call Nancy Heinrich at 586-4185.

Daniel Quinn  
April 16, 2002  
Page 2

Sincerely,



GENJ:VIEVI: SALMONSON  
Director

c: George Atta, Group 70



November 21, 2002

Francis S. Oda, AICP  
Aron D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Szaman, AIA, AICP  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Genevieve Salmonson, Director  
State Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Salmonson:

Thank you for your April 16, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

**Double sided:** In an effort to reduce the bulk, the Draft EIS will be printed on both sides of the pages.

**Acronyms:** A glossary of acronyms and terms used in the EIS will be provided in the draft report.

**Kekaha Kai State Park task force input:** Minutes from the Kekaha Kai State Park Task Force are included in the Draft EIS.

**Project costs:** The draft report will disclose known expenditures of state funds and federal funds relating to the development of the Kekaha Kai State Park.

**Contacts:** Copies of correspondence relating to the EIS process are included in the draft report, including minutes from community task force meetings.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sudobin Halim  
Jeremy C. Hsu, AIA  
Roy A. Inoué, AIA, CSI  
Stuart M. Jew, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ructola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

BENJAMIN J. CAYETANO  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

RECEIVED  
MAY 17 2002  
GROUP 15

OFFICE OF THE SUPERINTENDENT

May 15, 2002

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawai'i 96813-4307

Dear Mr. Atta:

Subject: Kekaha Kai State Park  
Environmental Impact Statement Preparation Notice (EISPN)

The Department of Education has no comment on the EISPN.

Thank you for the opportunity to respond.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Patricia Hamamoto".

Patricia Hamamoto  
Superintendent

PH:hy

cc: A. Suga, OBS  
S. Samuels, State Parks Division, DLNR



November 21, 2002

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASIC  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Raiph E. Portmore, AIA  
Stephen H. Yuen, AIA  
Linda C. Mori, AIA

Patricia Hamamoto, Superintendent  
State Department of Education  
P.O. Box 2360  
Honolulu, Hawaii 96804

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Hamamoto:

Thank you for your May 15, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CSI  
Philip T. Cuccia  
Suzanne Hall  
Jeremy C. Holt, AIA  
Roy A. Hodge, AIA, CSI  
Stuart M. Jovan, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ruotola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Turner, AIA  
Suzanne Ching Williams, AIA

BENJAMIN J. CAYETANO  
GOVERNOR



BRUCE S. ANDERSON, Ph.D., M.P.H.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. BOX 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to  
EMD / CWB

05022PKP.02

May 8, 2002

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

RECEIVED  
MAY 10 2002  
GROUP 70

Dear Mr. Atta:

Subject: **Kekaha Kai State Park  
Environmental Impact Statement Notice of Preparation**

The Department of Health, Clean Water Branch (CWB) has reviewed your submittal and has the following comments:

1. The Army Corps of Engineers should be contacted to determine whether a Federal permit is required for the subject project. If it is determined that a Federal permit is required, then a Section 401 Water Quality Certification would be required from our office.
2. A National Pollutant Discharge Elimination System (NPDES) individual permit would be required if the project involves any of the following discharges into State waters:
  - a. Storm water runoff associated with construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five acres of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale.  
  
*Note: After March 10, 2003, an NPDES permit will be required for discharges of storm water associated with construction activities, including clearing, grading, and excavation that result in the disturbance of one acre or more.*
  - b. Hydrotesting water; and
  - c. Construction dewatering effluent.

Mr. George Atta  
May 8, 2002  
Page 2

3. The project scope should be reviewed by the State Historic Preservation Division of the Department of Land and Natural Resources and consideration of native Hawaiian rights.

NPDES individual permit applications should be submitted at least 180 days before the discharge is to occur. NPDES application forms can be downloaded from the CWB website at <http://www.state.hi.us/doh/eh/cwb/forms/index.html>.

Should you have any questions, please contact Ms. Kris Poentis of the Engineering Section, CWB, at 586-4309.

Sincerely,



DENIS R. LAU, P.E., CHIEF  
Clean Water Branch

KP:cu

c: Ms. Sherrie Samuels, Division of State Parks, Department of Land and Natural Resources



November 21, 2002

Denis R. Lau, Chief  
Clean Water Branch, Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Mr. Lau:

Thank you for your May 8, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Federal Permit:** The Army Corps of Engineers will be contacted to identify whether a federal permit (including a Department of Army permit) is required for this project. If applicable, a Section 401 Water Quality Certification will be obtained from the State Department of Health, Clean Water Branch.

**National Pollutant Discharge Elimination System (NPDES) individual permit:** Thank you for the information regarding NPDES individual permit. The State will address these requirements in the design and construction phase for different elements in the plan.

**Review by State Historic Preservation:** The State Historic Preservation Division of the Department of Land and Natural Resources has received and reviewed the EIS Preparation Notice which describes the scope of this project. Their comments will be published in the Draft EIS. The Office of Hawaiian Affairs Hawaiian Rights Division shares your concerns regarding consideration of the project scope on native Hawaiian rights. A chapter in the EIS dedicated to Cultural Resources and Impacts will address this issue.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, AICP  
Arch. D., AIA, AICP  
Norman G. Y. Hong, AIA  
Sheryl B. Seaman, AIA, AICP  
Hitoshi Hida, AIA  
Roy H. Nishi, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yarr, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccio  
Satchin Haim  
Jeremy C. Hsu, AIA  
Roy A. Houye, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McGuire  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ruotola, AICP  
James L. Stone, AIA  
Scott Taniguchi  
Wesley N. Ujiono, AIA  
Sharon Ching Williams, AIA



BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



BRUCE S. ANDERSON, Ph.D., M.P.H.  
DIRECTOR OF HEALTH

RECEIVED

MAY 22 2002

GROUP 70

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. BOX 3378  
HONOLULU, HAWAII 96801

May 21, 2002

In reply, please refer to:  
File:  
02-102/epo

Mr. George Atta, AICP, Chief Planner  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

Subject: Environmental Impact Statement Preparation Notice (EISPN)  
Kekaha Kai State Park Recreational Facilities Improvement Project  
North Kona, Hawaii  
Tax Map Keys: 7-2-005: 02, 03, 07; 7-3-043: 01; 7-2-04: 03, 17, 19

Thank you for the opportunity to review and comment on the subject proposal. The EISPN was routed to the various branches of the Environmental Health Administration. We have the following comments.

Clean Water Branch (CWB)

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. A Section 401 Water Quality Certification is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...", pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act");
2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following discharges to waters of the State:
  - a. Discharge of storm water runoff associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);

Mr. George Atta, AICP, Chief Planner  
May 21, 2002  
Page 2

- b. Discharge of storm water runoff associated with construction activities that involve the disturbance of five (5) acres or greater, including clearing, grading, and excavation;
- c. Discharge of treated effluent from leaking underground storage tank remedial activities;
- d. Discharge of once through cooling water less than one million gallons per day;
- e. Discharge of hydro-testing water;
- f. Discharge of construction dewatering effluent;
- g. Discharge of treated effluent from petroleum bulk stations and terminals; and
- h. Discharge of treated effluent from well drilling activities.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department of Health, Clean Water Branch (CWB) at least thirty (30) days prior to commencement of any discharges to State waters;

- 3. If construction activities involve the disturbance of one acre or greater, including clearing, grading, and excavation, and will take place or extend after March 10, 2003, an NPDES general permit coverage is required for discharges of storm water runoff into State waters; and
- 4. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Clean Air Branch (CAB)

*Fugitive Dust Control*

There is a significant potential for fugitive dust emissions during the phases of construction activities. The proposed construction activities may occur in close proximity to existing residential and retail establishments, major thoroughfares, and environmentally and culturally sensitive areas, thereby exacerbating potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses activities having a potential to generate fugitive dust. Implementation of adequate dust control measures during all phases of construction is warranted.

Mr. George Atta, AICP, Chief Planner  
May 21, 2002  
Page 3

Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

- a. Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. Providing an adequate water source at the site prior to start up of construction activities;
- c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. Controlling of dust from shoulders and access roads;
- e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f. Controlling of dust from debris being hauled away from project site.

If you have any questions regarding these issues on fugitive dust, please contact the Clean Air Branch at (808) 586-4200.

#### Wastewater Branch (WWB)

Wastewater treatment and disposal has not been addressed in the EISPN. Most of the park area is a Critical Wastewater Disposal Area where the construction of new cesspools is prohibited. Areas of the park that are at a minimum of 1000 feet from the shoreline and at an elevation of 100 or more are considered non-critical wastewater disposal areas. However, as this is a State facility, cesspools are not permitted in these areas. It is recommended that all wastewater be treated and reused wherever possible to minimize the discharge of wastewater to the ground and near shore waters.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

If you have any questions, please contact the Wastewater Branch at (808) 586-4294.

Mr. George Atta, AICP, Chief Planner  
May 21, 2002  
Page 4

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Sincerely,



GARY GILL  
Deputy Director  
Environmental Health Administration

c: CWB  
CAB  
WWB  
NRIAQ



Francis S. Oda, AIA, AICP  
Aron D. AIA, AICP  
Norman G.Y. Hong, AIA  
Sheril B. Seaman, AIA, AICP  
Hitoshi Hida, AIA  
Roy H. Nishi, AIA, AICP  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, AICP  
Philip T. Cuccia  
Sutodin Halim  
Jeremy C. Hsu, AIA  
Roy A. Inoué, AIA, AICP  
Stuart M. Low, AIA  
Charles Y. Kamezuru, AIA  
Dean H. Kitamura  
Kathleen M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Makimoto  
Kathryn A. Nam  
Lillian H. Overton  
Christine M. Ruckman, AIA  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Ching Whang, AIA

November 18, 2002

Gary Gill, Deputy Director  
Environmental Health Administration  
State Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801

Dear Mr. Gill:

Subject: Kekaha Kai State Park  
EIS Preparation Notice

Thank you for your May 21, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

**Clean Water Branch:** The Army Corps of Engineers will be contacted to identify whether a federal permit (including a Department of Army permit) is required for this project. If applicable, a Section 401 Water Quality Certification will be obtained from the State Department of Health, Clean Water Branch. In addition the State will address NPDES requirements in the design and construction phase.

**Clean Air Branch:** Fugitive dust control measures will be taken during construction phase of the project.

**Wastewater:** Wastewater treatment and disposal will be addressed in the draft EIS. Thank you for pointing out that areas of the park located 1000 feet from the shoreline are located in a critical wastewater disposal area where construction of new cesspools is prohibited. Where possible, wastewater will be treated and reused to minimize discharge of wastewater to the ground and near shore waters. A comfort station is planned at Maniniowali. Wastewater utility lines will be provided and connected to the Maniniowali residential development. In the interim, comfort stations at Mahai'ula will be of the porto-potty type of treatment facility. Wastewater plans will be developed in the design phases of the project. Compost toilets are considered for some sections of the Park. Septic tank and leachfield systems are being considered for other sections. We understand that all these alternatives must be approved by the DOH before implementation and the Division of State Parks will work with your office on this.

**Noise, Radiation and Indoor Air Quality Branch:** Project activities will comply with regulations relating to Community Noise Control.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

GEORGE ATTA, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



GILBERT S. COLOMA-AGARAN  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY DIRECTOR  
ERIC T. HIRANO

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF BOATING AND OCEAN RECREATION  
74-380 KEALAKEHE PARKWAY  
KAILUA-KONA, HAWAII 96740  
PHONE: (808) 329-4215  
FAX: (808) 326-7896

May 13, 2002

RECEIVED  
MAY 16 2002  
GROUP 10

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

Thank you for your interests and intention to improve outdoor recreational facilities at Kekaha State Park along the Kona coast of the Big Island.

While we are not requesting to be a consulted party in the preparation of the Draft Environmental Impact Statement, unless of course, the Division of Boating and Ocean Recreation would be directly involved, we want to say mahalo for including us in the environmental review process for this project.

Sincerely,

A handwritten signature in cursive script that reads "Nancy E. Murphy".

Nancy E. Murphy  
Hawaii District Manager

cc: Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, Suite 310  
Honolulu, HI 96813



November 21, 2002

Francis S. Oda, AIA, AICP  
Archi D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nibel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Nancy E. Murphy, Hawaii District Manager  
Division of Boating and Ocean Recreation  
Department of Land and Natural Resources  
74-380 Kealahou Parkway  
Kailua-Kona, Hawaii 96740

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Murphy:


Thank you for your May 13, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We appreciate your support for the proposed park improvements. We will contact you should your direct involvement be needed.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sutodin Halim  
Jeremy C. Hsu, AIA  
Roy A. Irizyan, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nami  
Jeffrey H. Overton, AICP  
Christine M. Rucola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujirori, AIA  
Sharon Ching Williams, AIA



STATE OF HAWAII  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 LAND DIVISION  
 P.O. BOX 621  
 HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
 BOATING AND OCEAN RECREATION  
 CONSERVATION AND  
 RESOURCES ENFORCEMENT  
 CONVEYANCES  
 FORESTRY AND WILDLIFE  
 HISTORIC PRESERVATION  
 LAND DIVISION  
 STATE PARKS  
 WATER RESOURCE MANAGEMENT

June 12, 2002

LD-NAV  
 L-3340/3175

KEKAHAKAISTATEPARK.RCM

RECEIVED  
 JUN 13 2002

Group 70 International, Inc.  
 George Atta, AICP  
 925 Bethel Street, 5<sup>th</sup> Floor  
 Honolulu, Hawaii 96813

Dear Mr. Atta:

GROUP 70

SUBJECT: Environmental Impact Statement Preparation Notice  
 Consultant: Group 70 International, Inc.  
 Applicant: Department of Land and Natural Resources' Division  
 of State Parks  
 Project: Kekaha Kai State Park Conceptual Plan and  
 Development Plan. North Kona, Hawaii

Thank you for the opportunity to review and comment on the Environmental Impact Statement Preparation Notice (EISPN) covering the subject project.

A copy of the subject EISPN was distributed to the Department of Land and Natural Resources' (DLNR) Land Division Planning and Technical Services, Land Division Engineering Branch and Hawaii District Land Office for their review and comment. Also, a copy of the EISPN was distributed to the Commission on Water Resource Management for their review and comment.

The DLNR Land Division Planning and Technical Services and Commission on Water Resource Management have no comment to offer based on their attached responses. Should additional comments be received, they will be forwarded to your office at that time.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at (808) 587-0438.

Very truly yours,

*Chalene E. Mamiya*  
 for DIERDRE S. MAMIYA  
 Administrator

C: Division of State Parks





RECEIVED  
2002 JUN -6 A 8: 62

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
P.O. BOX 621  
HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND DIVISION  
STATE PARKS  
WATER RESOURCE MANAGEMENT

May 28, 2002

LD-NAV  
KEKAHAKAI STATEPARK.CMT

Suspense Date: 6/7/02

MEMORANDUM:

- From:*
- 000 Division of Aquatic Resources (RD)
  - 000 Division of Forestry & Wildlife (RD)
  - 000 Na Ala Hele Trails (RD)
  - 000 Division of State Parks (APPLICANT)
  - Division of Boating and Ocean Recreation
  - 000 Historic Preservation Division (RD)
  - ✓ XXX Commission on Water Resource Management
  - Land Division Branches of:**
  - XXX Planning and Technical Services
  - XXX Engineering Branch
  - XXX Hawaii District Land Office

*To:* FROM: Dierdre S. Mamiya, Administrator *Dierdre*  
Land Division

SUBJECT: Environmental Impact Statement Notice of Preparation  
Applicant: DLNR Division of State Parks  
Authority: Governor, State of Hawaii  
Project: Kekaha Kai State Park Conceptual Plan and  
Development Plan, North Kona, Hawaii

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead (signed and dated) within the time requested above. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

We have no comments.

Comments attached.

Signed: *[Signature]*

Date: 6/5/02

RECEIVED  
MAY 29 2002

2002 MAY 29 P 1:06



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
P.O. BOX 821  
HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND DIVISION  
STATE PARKS  
WATER RESOURCE MANAGEMENT

May 28, 2002

LD-NAV  
KEKAHAKAISTATEPARK.CMT

Suspense Date: 6/7/02

MEMORANDUM:

- TO: 000 Division of Aquatic Resources (RD)  
 000 Division of Forestry & Wildlife (RD)  
 000 Na Ala Hele Trails (RD)  
 000 Division of State Parks (APPLICANT)  
 Division of Boating and Ocean Recreation  
 000 Historic Preservation Division (RD)  
 XXX Commission on Water Resource Management  
**Land Division Branches of:**  
 ✓ XXX Planning and Technical Services  
 XXX Engineering Branch  
 XXX Hawaii District Land Office

*TRAILER  
ETA-ELIS*

FROM: *for* Dierdre S. Mamiya, Administrator *DMamiya*  
Land Division

SUBJECT: Environmental Impact Statement Notice of Preparation  
 Applicant: DLNR Division of State Parks  
 Authority: Governor, State of Hawaii  
 Project: Kekaha Kai State Park Conceptual Plan and  
 Development Plan, North Kona, Hawaii

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead (signed and dated) within the time requested above. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

We have no comments.

Comments attached.

Signed: *Trave Rupp*

Date: 5-29-02



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
P.O. BOX 621  
HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND DIVISION  
STATE PARKS  
WATER RESOURCE MANAGEMENT

July 2, 2002

LD-NAV  
Ref.: KEKAHAKAISTATEPARK.RCM2  
L-3340/3175/3745/3563

Group 70 International, Inc.  
George Atta, AICP  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Atta:

SUBJECT: Environmental Impact Statement Preparation Notice  
Consultant: Group 70 International, Inc.  
Applicant: Department of Land and Natural Resources' Division  
of State Parks  
Project: Kekaha Kai State Park Conceptual Plan and  
Development Plan, North Kona, Hawaii

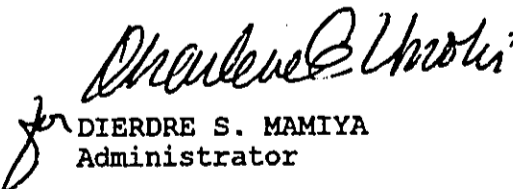
This is a follow-up to our letter (Ref.: KEKAHAKAITATEPARK.RCM) to you dated June 12, 2002, pertaining to the subject matter.

Attached herewith is a copy of the Land Division Engineering Branch comment and a copy of the Land Division Hawaii District Land Office response.

The Department of Land and Natural Resources' Land Division has no other comment to offer on the subject matter.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at (808) 587-0438.

Very truly yours,

  
DIERDRE S. MAMIYA  
Administrator

C: Hawaii District Land Office

DEPARTMENT OF LAND NATURAL RESOURCES  
Land Division  
Engineering Branch

**COMMENTS**

Please note that the project sites are located in Zones AE and VE. Zone AE is an area where flood elevations are determined, while Zone VE is an area of coastal flooding with velocity hazard (wave action) and base flood elevations are determined.

The proposed project must comply with rules and regulations of the National Flood Insurance Program (NFIP) and all applicable County Flood Ordinances. If there are questions regarding the NFIP, please contact the State Coordinator, Sterling Yong, of the Department of Land and Natural Resources at 587-0248. If there are questions regarding flood ordinances, please contact the applicable County representative.

The Draft Environmental Impact Statement should include project water demand and infrastructure required to meet water demands.

Signed: Andrew M. Monden  
ANDREW M. MONDEN, CHIEF ENGINEER

Date: 6/18/02

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LAND DIVISION

2002 JUN 18 PM 12:07



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION  
P.O. BOX 621  
HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND DIVISION  
STATE PARKS  
WATER RESOURCE MANAGEMENT

May 28, 2002

LD-NAV  
KEKAHAKAI STATE PARK.CMT

Suspense Date: 6/7/02

MEMORANDUM:

TO: 000 Division of Aquatic Resources (RD)  
000 Division of Forestry & Wildlife (RD)  
000 Na Ala Hele Trails (RD)  
000 Division of State Parks (APPLICANT)  
Division of Boating and Ocean Recreation  
000 Historic Preservation Division (RD)  
XXX Commission on Water Resource Management  
Land Division Branches of:  
XXX Planning and Technical Services  
XXX Engineering Branch  
XXX Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator *Dierdre Mamiya*  
Land Division

SUBJECT: Environmental Impact Statement Notice of Preparation  
Applicant: DLNR Division of State Parks  
Authority: Governor, State of Hawaii  
Project: Kekaha Kai State Park Conceptual Plan and  
Development Plan, North Kona, Hawaii

02 MAY 29 PM 08:42 ENTER & LAND

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead (signed and dated) within the time requested above. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

( ) We have no comments.

(X) Comments attached.

Signed: *AM*

Date:



November 21, 2002

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ACO  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James J. Nishimoto, AIA  
Ralph E. Portinore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Dierdre S. Mamiya, Administrator  
Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Mamiya:

Thank you for your June 12, 2002 letter and the July 2, 2002 follow-up letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We would appreciate your circulating the EISPN to appropriate DLNR Land Division branches, offices and related commissions for further review. We have also received the memo attachments from the Land Division Planning and Technical Services and Commission and the Water Resource Management which indicates that they have no comments to offer at this time. We have also received comments from the Land Division Engineering Branch indicating the need for Park improvements to comply with National Flood Insurance Program regulations as well as County Flood Ordinances. Information regarding water demand and infrastructure required to meet water demands will be addressed in the draft report. We will discuss the question of conformance with Mr. Sterling Young and revise our plans if necessary.

Your letter and attachments along with this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



STATE OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTIES  
ERIC T. HIRANO  
LINNEL NISHIOKA

April 25, 2002

DEPARTMENT OF LAND AND NATURAL RESOURCES

Mr. George Atta  
Chief Community Planner  
Group 70 International  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

HISTORIC PRESERVATION DIVISION  
KAKUHIWEWA BUILDING, ROOM 555  
601 KAMOKILA BOULEVARD  
KAPOLEI, HAWAII 96707

RECEIVED  
MAY - 1 2002

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
CONSERVATION AND RESOURCES  
ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND  
STATE PARKS

Dear Mr. Atta:

GROUP 70

LOG NO: 29744 ✓  
DOC NO: 0204RC51

SUBJECT: EIS Preparation Notice – Kekaha Kai State Park  
Multiple Lands, North Kona, Hawaii  
TMK: 7-2-05: 2-3, 7; 7-3-43: por. 1; 7-2-4: 3, 17, 19

We received a copy of this notice on April 22, 2002. We definitely wish to be a consulted party in the preparation of the Draft EIS for this undertaking. In fact, this undertaking must get our approval under Chapter 6E-8, before it can be implemented, as it is an undertaking that will clearly impact significant historic sites.

We do support the concept of the park. We have been unable to attend most of the public conceptual planning sessions on this park which were held on Hawaii Island, due to timing and cost factors. But, we have supplied comments to State Parks several times, and we have spoken with State Parks' archaeologists about our concerns prior to their recent archaeological survey work. However, we do not believe that your firm has consulted with our office in the preparation of this EISPN, in contrast to the statement on page 13.

Also, for your information, the Na Ala Hele program of our department cannot open the Ala Kahakai to the public until approved historic preservation management plans are in place (Chapter 6E-8 review), and plan approval for this area of the trail has not been given. It will be possible to open the Ala Kahakai in portions of this park, if the park's planning efforts cover the key elements of needed management plans for this trail (trail impacts and mitigation, nearby historic sites impacts and mitigation, and identification of native Hawaiian resource uses along the shore and mitigation for their protection).

If you have any questions, please feel free to contact our Hawaii Island Archaeologist (Dr. Patrick McCoy, 692-8029) or our Branch Chief for Archaeology (Dr. Ross Cordy, 692-8025).

Aloha,

DON HIBBARD, Administrator  
State Historic Preservation Division

c. State Parks  
Na Ala Hele Program, DLNR





November 25, 2002

Francis S. Opa, AICP  
Aichi D., AIA, AICP  
Norman G. Y. Hong, AIA  
Suzette S. Seaman, AIA, ASO  
Mitsuhiko, AIA  
Roy H. ...  
James ...  
Keith E. ...  
Stephen ...  
Linda C. ...

Don Hibbard, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawai'i 96707

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Mr. Hibbard:

Thank you for your May 1, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We recognize the Project will require Chapter 6E-8 approval before implementation. As agent of this project, Group 70 International, has been working collaboratively with DLNR State Parks staff in developing the conceptual and management plans as well as mitigative strategies. We understand that you have been in consultation with the Archaeologist of the Division of State Parks. Consultation by the Parks Archaeologist with your offices has been viewed as consultation by the team. Also, periodically, Mr. Mark Smith of your office has attended our task force meetings. We hope the Hawaii Island Archaeologist continues to participate in our meetings.

A historic preservation management plan is being developed to address the use of the Ala Kahakai within Kekaha Kai State Park including the following: trail impacts and mitigation; nearby historic sites impacts and mitigation; and identification of native Hawaiian resource uses along the shore and mitigation for their protection. A broad concept plan will be included in the EIS. A more detailed plan will be developed by a new parks interpretive technician currently being hired. The Parks archaeologist and the interpretive technician will continue to work with your office.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

**FILE**

George A. Atta, AICP  
Paul P. ...  
Wendy ...  
Phil ...  
Sandra ...  
John ...  
Pat ...  
Lynn ...  
James ...  
Dean ...  
Katherine ...  
Frank ...  
Kore ...  
Kathleen ...  
Jeff ...  
Christine ...  
Janet ...  
Scott ...  
Wesley ...  
Shirley ...

BENJAMIN J. CAYETANO  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

MAY 16 2002

BRIAN K. MINAAI  
DIRECTOR  
DEPUTY DIRECTORS  
JEAN L. OSHITA  
JADINE Y. URASAKI

IN REPLY REFER TO:

HWY-PS  
2.6574

RECEIVED  
MAY 17 2002

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. *George* Atta

Subject: Kekaha Kai State Park, Environmental Impact Notice of Preparation, North Kona,  
Island of Hawaii

Thank you for your transmittal of April 11, 2002, regarding the subject project.

The Department of Transportation would like to have the opportunity to review the Draft Environmental Impact Statement (DEIS) when it is available.

If you have any questions, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

*Brian K. Minaii*  
BRIAN K. MINAAI  
Director of Transportation

c: Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, Suite 310  
Honolulu, Hawaii 96813

Attn: Sherrie Samuels



November 21, 2002

Francis S. Oda, AIA, AICP  
Arch D. ... AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Brian K. Minaai, Director  
State Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Mr. Minaai:

Thank you for your May 16, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

A handwritten signature in cursive script that reads "George Atta".

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sutobin Haim  
Jeremy C. Hsu, AIA  
Roy A. Inoue, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McGuire  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ructola, AICP  
James L. Stone, AIA  
Scott Tangeman  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

RECEIVED  
JUN 04 2002

GROUP 70

May 30, 2002

Group 70 International, Inc.  
925 Bethel St., 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307  
Attn: George Atta

RE: Environmental Impact Statement Notice of Preparation (EISPN) for Kekaha Kai State Park.

Dear Mr. Atta,

Thank you for the opportunity to comment on the above referenced EISPN. I apologize for the lateness of my response.

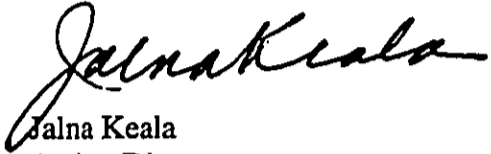
Overall, OHA believes that the Park will have a beneficial impact on the Kona Coast. We note that our Kona Community Resource Coordinator, Ruby McDonald is a member of your planning committee.

To ensure that the project accomplishes this beneficial impact, OHA asks that the draft EIS address cultural impacts. The notice's list of criteria for evaluating the significance of the project's impact does not include the park's impact on cultural practices as required by Act 50, SLH 2000. The impact of a project on culture is not the same as the social or economic impact of a project on a community and should be addressed separately. OHA is particularly concerned that the cultural impact of the project be assessed so that adverse impacts can be adequately addressed prior to project implementation. An assessment of cultural impacts should include an analysis of the project's impact on gathering practices, use of the trails for traditional and cultural practices, historic sites and possible burials in the area. Based on this assessment, the draft EIS should examine alternatives and propose appropriate mitigation.

OHA looks forward to commenting on the draft EIS upon its completion.

If you have further questions, please contact Pua Aiu, Acting Assistant Director,  
Hawaiian Rights Division, at 594-1931 or e-mail her at [paiu@oha.org](mailto:paiu@oha.org).

Sincerely,



Jalna Keala  
Acting Director  
Hawaiian Rights Division

CC: BOT  
ADM  
Ruby McDonald.



November 21, 2002

Francis S. Oda, AICP  
ARCH. D., AIA, ACP  
Norman GY. Hong, AIA  
Sheri B. Seaman, AIA, ASIL  
Hitoshi Hida, AIA  
Roy H. Nishi, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AIA  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Jalna Keala, Acting Director  
Hawaiian Rights Division  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Keala:

Thank you for your May 30, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Address Cultural Impact:** We recognize that an impact of a project on culture is not the same as the social or economic impact of a project on a community. A separate section in the EIS will address cultural impacts as required by Act 50, SLH 2000. This includes an analysis of the project's impact on gathering practices, use of the trails for traditional and cultural practices, historic sites and possible burials in the area.

The Draft EIS will include oral historical interviews with knowledgeable individuals, familiar with the lands, cultural resources and families of the ahupua'a of Kaulana, Mahai'ula, Makalawena, Awake'e, Maniniowali, Kukio, Kaupulehu and the aina kaha of North Kona, Hawaii. The interviews document traditional values and practices that are still retained in the lives of Hawaiian families associated with the lands of Kekaha. In addition, information regarding historical sites and possible burials in the area have been recorded through several archaeological studies. Alternatives and appropriate mitigation plans will also be examined and discussed in the Draft report.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chornzy, AIA  
Wendy Lee Cook, AIA, CDF  
Philip T. Cuccia  
Stacy D. Hill  
Jerome C. Hill, AIA  
Roy A. Inoué, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitanaka  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Rustola, AICP  
James J. Stone, AIA  
Scott Taniguchi  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

RECEIVED

MAY 14 2002

GROUP 70

County of Hawai'i

DEPARTMENT OF PARKS AND RECREATION

101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

May 13, 2002

Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Attn: George Atta

Re: Kekaha Kai State Park, Hawaii  
EIS Notice of Preparation

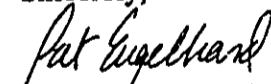
Dear Mr. Atta:

We have no adverse comments to offer on the EISPN and agree that the project will have a beneficial impact on the environment.

We support the State's efforts to improve existing and develop new recreational opportunities for the West Hawaii region.

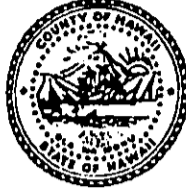
Thank you for the opportunity to review the EISPN.

Sincerely,

  
Patricia Engelhard  
Director

cc DLNR, Division of State Parks  
1151 Punchbowl St., Suite 310  
Honolulu, HI 96813  
Attn: Sherrie Samuels

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai'i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

June 26, 2002

Daniel S. Quinn, Administrator  
Division of State Parks  
Department of Land and Natural Resources  
PO Box 621  
Honolulu, HI 96809

Re: Kekaha Kai State Park, North Kona, Hawaii  
Draft Development Plans for the Mahai'ula, Manini'owali-Kuki'o  
And Awake'e Section


Dear Mr. Quinn:

We applaud the State's effort to provide shoreline recreational opportunities in the West Hawaii region.

The County of Hawaii provides camping at Spencer Beach Park in South Kohala and at Ho'okena Beach Park in South Kona, which are about fifty five miles apart. The proposed State camping facilities at Mahai'ula Bay, Awake'e Bay, and Kua Bay will provide camping facilities between these two distant sites, as well as greatly increase opportunities for camping for the County's residents and visitors.

Thank you for the opportunity to review your Kekaha Kai Park plans.

Sincerely,

  
Patricia Engelhard  
Director





November 21, 2002

Francis S. Oda, Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuzel, AIA  
Linda C. Aiki, AIA

Patricia Engelhard, Director  
Department of Parks and Recreation  
County of Hawaii  
101 Pauahi Street, Suite 6  
Hilo, Hawaii 96720

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Engelhard:

Thank you for your May 13, 2002 and June 26, 2002 letters regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We appreciate your support for the State's efforts to develop new recreational opportunities for the West Hawaii region.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

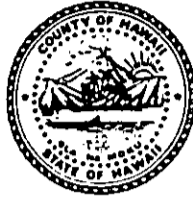
GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Choiney, AIA  
Wendy Lee Cook, AIA, CDT  
Philo T. Cuccia  
Sutoon Halim  
Jeremy C. Hsu, AIA  
Roy A. Inouye, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ruetola, AIA  
James L. Stone, AIA  
Scott Tangorai  
Wesley N. Ujimoto, AIA  
Sharon Ching Willett, AIA

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

## County of Hawaii

### PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252  
(808) 961-8288 • Fax (808) 961-8742

RECEIVED

MAY 15 2002

GROUP 70

May 3, 2002

Mr. George Atta  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

Subject: EIS Notice of Preparation (EISPN)  
Request: Request for Comments for improvements at Kekaha Kai State Park  
TMK: 7-2-4: 3, 17, 19; 7-2-5: 2, 3, 7; 7-3-43: Por. 1

This is to acknowledge receipt of your letter dated April 11, 2002 requesting comments on the Environmental Impact Statement Notice of Preparation for various park improvements at Kekaha Kai State Park.

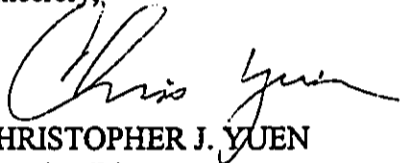
The properties are situated within an area designated Conservation and/or Urban by the State Land Use Commission and zoned Open by the County. A portion of TMK 7-3-43: Por. 1 is designated Urban by the State Land Use Commission, and zoned Industrial (MG-1a) by the County. We understand that the park improvements will be located in the portion of the property designated Conservation/Open.

The properties are also situated within the County's Special Management Area (SMA). Any development in the SMA must be consistent with the SMA guidelines set forth in Section 205A, HRS and the SMA guidelines contained in Planning Commission Rule 9. We concur that a SMA Major Use Permit will be required to construct the proposed improvements. A Shoreline Setback Variance may also be required depending on the type and location of the proposed improvements, as identified in Planning Commission Rule 8 and Planning Department Rule 11.

Mr. George Atta  
Group 70 International, Inc.  
Page 2  
May 3, 2002

Thank you for the opportunity to provide comments. Please provide us with a copy of the DEIS upon its availability. If you have any questions, please call our office at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

PF:cps

p:\wpwin60\Ch343\2002\EISPN02-07KekahaKai.doc

cc: Long Range Planning  
Planning Dept. - Kona



November 21, 2002

Francis S. Oda, AIA, AICP  
Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nishi, AIA, CSI  
James I. Hashimoto, AIA  
Ralph E. Portmore, AIA  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sutodin Halim  
Jeremy C. Hsu, AIA  
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Dean H. Kikamura  
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Frank B. McCue  
Kyle K. Nakamero  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ruotolo, AICP  
James L. Stone, AIA  
Scott Taniguchi  
Wesley N. Ujimoto, AIA  
Sharon Ching Withers, AIA

Christopher J. Yuen, Director  
Hawaii County Planning Department  
25 Aupuni Street, Room 109  
Hilo, Hawaii 96720-4252

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Mr. Yuen:

Thank you for your May 3, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

Kekaha Kai State Park is located in State Conservation designated lands and the County Special Management Area (SMA). We acknowledge that implementation of the planned improvements will require both a Conservation District Use Permit as well as a County SMA Major Use Permit. The Planning Commission Rule 8 and Planning Department Rule 11 will be reviewed regarding the need for a Shoreline Setback Variance.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

University of Hawaii Sea Grant Extension Service  
School of Ocean Engineering, Science and Technology

---

George Atta, AICP  
Chief Community Planner  
Group 70 International  
925 Bethel St., 5<sup>th</sup> floor  
Hololulu HI 96813-4307

RECEIVED

APR 26 2002

GROUP 70

April 22, 2002

Dear Mr. Atta,

I have been unable to attend the public scoping meetings you have held, however I have attended some of the community group meetings. I thank you for sending me materials generated for the Kekaha Kai State Park.

The low intensity, incremental development approach is preferred. One consideration was apparently not addressed during the last review of the alternatives, according to reports from attendees. The concern is the impact providing better access to the shoreline in areas where access has been rough 4 wheel drive will have on the shoreline fishery. David Chai may have already mentioned the remarkably quick depletion of fish and he'e (up to 70%) off the Four Seasons Resort when public access was provided. If you have not heard from him on this situation, please do contact him for his scientific records, which prove without a doubt the steady decline in abundance and species.

I would hope that your plan does not make it possible for truck with nets and coolers to get close enough to shore to do the same damage at along that stretch from Kekaha Kai to Kua Bay. Please give this your most astute attention.

Thank you for soliciting my input.

Sincerely,



Sara Peck, Extension Agent  
UH Sea Grant Extension Service, West Hawaii

UH Sea Grant Extension Service, West Hawaii  
PO Box 489 • Kailua-Kona HI 96745  
PH: (808)329-2861 • FX: (808)329-6998 • Email: [peck@hawaii.edu](mailto:peck@hawaii.edu)  
An equal opportunity employer serving the communities of West Hawaii

November 25, 2002

Sara Peck, Extension Agent  
University of Hawai'i  
Sea Grant Extension Services, West Hawai'i  
P.O. Box 489  
Kailua-Kona, Hawai'i 96745

Subject: Kekaha Kai State Park- EIS Preparation Notice

Dear Ms. Peck:

Thank you for your April 22, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We recognize your preference for a low intensity, incremental development approach and your concern over the increased access and potential impacts on shoreline resources.

We recognize the road improvements to Manini'owali Bay will provide better access to the shoreline. By designating parking areas away from the shore, vehicles will be restricted from driving directly onto the beach, as is the current situation.

We have contacted David Chai regarding his scientific record of declining ocean resources due to the development of the Four Seasons Resort.

While increased access will clearly affect marine resources, the best protection is some form of Marine Life Conservation District (MLCD) or Marine Fisheries Management Area (MFMA). This was discussed for Mahai'ula and may be considered for Kua Bay and Kakapa Bay. We will consider this for an accessory recommendation since State Parks does not have jurisdiction over marine resources.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

**FILE**

Francis S. Cde, AICP  
Norman G. HONG, AIA  
Shirley E. Scanlon, AIA, AIA  
Helen H. Hise, AIA  
Roy H. Hise, AIA, CS  
James H. Hise, AIA  
Eugene P. Hise, AIA  
Stephen H. Hise, AIA  
Linda C. Hise, AIA  
  
George Atta, AICP  
Paul H. Hise, AIA  
Walter J. Hise, AIA, AIA  
Robert H. Hise  
Susan H. Hise  
Robert H. Hise, AIA  
Linda C. Hise, AIA  
Linda C. Hise, AIA  
Susan H. Hise  
Katherine H. Hise, AIA  
Tracy H. Hise  
Katherine H. Hise  
Katherine H. Hise  
James H. Hise, AIA  
Christopher H. Hise, AIA  
Linda C. Hise, AIA  
Susan H. Hise  
Walter J. Hise, AIA  
Susan H. Hise, AIA



## KAMEHAMEHA SCHOOLS

May 21, 2002

Mr. George Atta  
Group 70 International  
925 Bethel Street, Fifth Floor  
Honolulu, HI 96813

Dear Mr. Atta,

Subject: EIS Preparation Notice, Kekahakai State Park, North Kona, Hawaii

Kamehameha Schools is an adjoining landowner to the proposed Kekahakai State Park. As such we wish to be consulted in the EIS process and receive copies of all pertinent documents and communications. Please mail material to:

Kamehameha Schools  
Land Assets Division  
P.O. Box 495,  
Pa'auilo, HI 96776  
Attention: Jeffrey Melrose

We have several issues that we feel need to be addressed in the EIS. These are as follows:

1. Project Park Usage and Carrying Capacity

As a basis for proposed park improvement we would like some discussion of the projected utilization and carrying capacity of the various segments of the coast. What kinds of utilization is anticipated and how are the proposed facilities (i.e. restrooms, parking, campsites etc.) intended to service these needs? We anticipate expanded use of the shoreline at Makalawena to result from surrounding park improvements. We will need a better understanding for the projected park usage to determine the kinds of measures we need to take to protect the natural, cultural and private resources at Makalawena.

2. Historic Ma uka/Ma kai Trail

The Park master plan indicates the existence of a public trail through Makalawena from the Queen Ka'ahumanu Highway to the shoreline. We acknowledge this historical and traditional use; however, we are unclear about the history of this as a government trail. We believe that Kamehameha Schools owns the fee simple interest in the land under this

May 21, 2002

Mr. George Atta

Page 2: EIS Preparation Notice, Kekahakai State Park, North Kona, Hawaii

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trail. We ask that the EIS process seek to clarify the legal circumstances under which the State asserts its right to include the trail as a public access to the shore at Makalawena.

3. Sand Dunes at Pu'u Ali'i

The sand dunes on the southern side of Pu'u Ali'i Bay are sensitive resources, both for their native ground covers and as a possible location for burial sites. The Kekahakai Park plan indicates that the trail from Mahaiula leads directly into the dunes area. We would ask that the EIS clarify alternatives to mitigate public impact on these dunes and to direct public use more directly to the shoreline in this area.

Thank you for the opportunity to comment on the EIS Preparation Notice. We anticipate further discussion on these and other issues in the months to come.

Sincerely,



Jeffrey Melrose, Land Planner  
Land Assets Division, Hawaii Island

JM:ah

Cc: Bob Lindsey, LAD Hawaii Island  
Neil Hannahs, LAD Director  
Sherri Samuels, DLNR, State Parks





November 25, 2002

Francis S. Ode, AIA, AICP  
Aech D. AIA, AICP  
Norman G. Wong, AIA  
Sheryl B. Seaman, AIA, AICP  
Hitoshi Hida, AIA  
Roy H. Hiner, AIA, CSI  
James I. Hironaka, AIA  
Ralph E. Brumby, AIA  
Stephen M. ...  
Linda C. ...

Jeffrey Melrose, Land Planner  
Land Assets Division, Hawai'i Island  
Kamehameha Schools  
P.O. Box 495  
Pa'auilo, Hawai'i 96776

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Mr. Melrose:

Thank you for your May 21, 2002 letter regarding the Environmental Impact Statement Notice of Preparation (EISP) for the Kekaha Kai State Park project.

We recognize that Kamehameha Schools is the landowner of the adjacent Makalawena property and will be impacted by the proposed plans for the State Park.

We have the following responses to your comments:

**Project Park Usage and Carrying Capacity:** There is no way to accurately assess projected use unless visitors are counted at the entrance. We have used the projected parking capacity as the general projected demand and carrying capacity for the parks. We understand that use is also affected by turnover and length of stay at the park. We do not have accurate numbers for this at the moment and will consider user surveys as possible future management tools. The parking demand numbers were based on community and park maintenance personnel comments about peak usage during high usage weekends. For Mahai'ula/ Ka'elehuluhulu we are projecting peak demand at 250 cars averaging two people per car spread over both beaches. We have projected average stays at 2 - 3 hours. We are uncertain about how many of the people who come to the Mahai'ula section actually walk over to Makalawena.

The question of the capacity of the park to carry the projected demand is a complex issue. Capacity is dependent on many factors: the size of the resource, the frequency of use, the nature of the impact, the resilience of the resource and the degree of maintenance and technology. We have used parking capacity as a proxy for park capacity. We understand that this is a very rough measure which is further affected by frequency of turnover. The only way to address this question is to establish a monitoring program on the number of visitors and the frequency of trash pick-up and wastewater pumping that is needed to maintain park facilities. These monitoring programs will be a part of the park maintenance plans.

**FILE**

Response letter to Jeff Melrose, Land Planner  
Land Assets Division  
Kamehameha Schools  
Kekaha Kai State Park DEIS  
September 25, 2002  
page 2

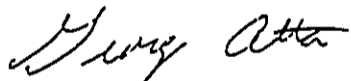
Historic Mauka / Makai Trail: Regarding the Mauka makai trail, property records and archival records have been reviewed. The opinion stated is obviously a preliminary position and will be the subject of further discussion with Kamehameha Schools. Preliminary findings will be included in future drafts of the EIS.

Sand Dunes at Pu'u Ali'i: We appreciate your sensitivity regarding the sand dunes at Pu'u Ali'i. Unfortunately, the current trail alignment reflects pathways developed by the old historical carriage path during the early part of the century. We appreciate the opportunity for further discussions with Kamehameha Schools regarding options to either avoid the dunes or mitigate the impact of increased traffic to Makalawena that may result from Park development at Mahai'ula. Re-aligning the trail makai to the a'a flow may be a consideration although this may be difficult to enforce since it forces people to take a longer route over rough terrain. A boardwalk over the dunes may direct traffic to a certain path and redirect walking on the dunes. In either case since the solution will include lands in Makalawena, the effort must be a mutual project between Kamehameha Schools and the State of Hawai'i.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



Phil Barnes  
<greenhi@interpac  
.net>

To: <Sherrie\_L.Samuels@exec.state.hi.us>  
cc:  
Subject: Re: Kekaha Kai State Parks EIS Prep Notice Comments

05/23/02 04:37 PM

Sherrie,

My phone number is 965-9695. Thanks for the email I will paste my letter.

DINR

State Parks Historic Division

Dear Ms. Sherry Samuels:

The Moku Loa group of the Sierra Club would like to go on record in support of the work of the task force working on the plan for Kekaha Kai State park. We would like to be included in the preparation of the upcoming EIS process for the park.

Some issues that we would like to see focused upon in the EIS are as follows. Cultural sites throughout the park should be preserved and in general isolated from areas of heavy activity. There is a real shortage of legal camping sites on the west coast of the Big Island. No public sites are available between Hookena in the South and Spencer Park to the North. We feel that the northern portion of the Park near Kua Bay would be an excellent spot for showers and an extensive number of camp sites. The exact number of sites could be determined in the study. By focusing most of the activity in this Northern sector of the park, the Southern sector could be relatively less developed to preserve it's wilderness characteristics. In light of this fact we do not feel the the Southern road should be paved. This would help to maintain the balance of the park with the sometimes difficult issues of access versus preservation. We would like to see the park as being an area free from commercial development.

We look forward to our representative Janice Palma-Glennie continuing to work with you to a successful resolution of a master plan for the park.

Sincerely,

Dr. Phil Barnes  
Moku Loa Chair  
Sierra Club

RR 2 Box 4756  
Kehena Beach, HI 96778  
(808) 965-9695  
greenhi@interpac.net



November 25, 2002

Francis S. Oda, AIA, AICP  
Alicia D. Oda, AIA, AICP  
Norman GY. Hong, AIA  
Sharon B. Sullivan, AIA, AIAA  
Hitoshi Inada, AIA  
Kiyohiko Hong, AIA, AIAA  
James R. Sullivan, AIA  
Robert F. Sullivan, AIA  
Richard H. Sullivan, AIA  
Linda T. Sullivan, AIA

Dr. Phil Barnes, Moku Loa Chair  
Sierra Club  
RR 2 Box 4752  
Kehena Beach, Hawai'i 96778

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Dr. Barnes:

George A. Aia, AIA, AICP  
Paul P. Cheney, AIA  
Wendy Lee Cook, AIA, AIAA  
Philip T. O'Connell  
Susan M. O'Connell  
Jeremy J. O'Connell, AIA  
Roy A. O'Connell, AIA, AIAA  
John M. O'Connell, AIA  
Linda Y. O'Connell, AIA  
Debra H. O'Connell  
Katherine M. O'Connell, AIA  
Linda B. O'Connell  
Kyle A. O'Connell  
Kathleen A. O'Connell  
Linda H. O'Connell, AIA  
Dorinda M. O'Connell, AIA  
James J. O'Connell, AIA  
Scott O'Connell  
Wesley H. O'Connell, AIA  
Sarah O'Connell, AIA

Thank you for your May 23, 2002 email regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

We appreciate your support for the project and concerns. We have prepared the following responses to your comments:

**Preservation of Cultural Sites:** In general, the cultural sites throughout the park are being preserved. Specifically, facility improvements for the park have been planned in a manner that accounts for existing cultural features. Furthermore, the Division of State Parks plans to develop interpretive programs to educate the public about the cultural sites and resources of Kekaha.

**Camping Sites:** Camping sites and restroom facilities are being planned for Kua Bay. The draft report will identify the number of camp sites planned for the park as well as the planned locations. Park plans will definitely increase the number of legal camping areas along the West Coast of the Big Island. Sites will be opened as the resources for managing them are developed.

**Mahai'ula access road:** A general level of road improvement to the existing gravel and pot-hole filled access road is planned to support interpretive educational programs and general maintenance of the Mahai'ula area. For the foreseeable future, the road to Mahai'ula will be improved but not paved. This issue will probably be revisited periodically as demands for park use increase.

**Non Commercial, Low Impact Activities Only:** Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Improvements planned are designed to have a low impact. As discussed in task force meetings, routine commercial activities in the park is generally prohibited especially in the active use areas. However, these are broader regulator and policy requirements that may amend some of the prohibition for short term or special occasions and events. This issue will be a subject of ongoing discussions at a broader statewide level.

**FILE**

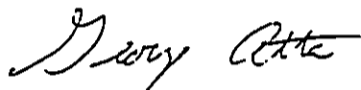
Response letter to Dr. Phil Barnes  
Sierra Club  
Kekaha Kai State Park DEIS  
November 25, 2002  
Page 2

We will continue to work with Sierra Club representative Janice Palma-Glennie and other task force members in the development of the Kekaha Kai State Park .

Your letter and attachments along with this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George Attu  
Group 70 International  
Fax 808-523-5874

and

Sherry Samuels, Dept of Land and Natural Resources  
Division of State Parks

Re: Kekaha Kai State Park, EISPN

To whom it may concern:

As a member of the Kekaha Kai Task Force for several years and as an interested member of the community and park user since the park was originally planned, I would like to make the following brief comments on the upcoming preparation of the EIS:

1) I support the original vision for the park as a noncommercial, wilderness park. I feel that commercial filming should be excluded from the park as it does not fit the noncommercial restrictions.

2) The road into Mahai'ula should remain unpaved for safety as well as to maintain a wilderness feel to the park. Pavement in other areas on the north end of the park will make those areas accessible to those who want a quicker way into the park.

3) It would seem most appropriate to concentrate the highest use and density at the north end of the park since, this will be most impacted by the adjacent and surrounding development at Kukio.

I would like to remain involved in the planning of the park and appreciate your consideration of my views in this important community matter.

Sincerely,  
  
Carol Fuller



November 22, 2002

Carol Fuller  
Kekaha Kai Task Force Member  
Fax: (808) 329-7359

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Fuller:

Thank you for your May 23, 2002 fax regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

Your participation as a member of the Kekaha Kai Task Force has helped to create a State Park reflective of the community. We acknowledge your comments regarding the proposed park plans including your desire for the park to be a noncommercial, wilderness park; the desire for the road into Mahai'ula to remain unpaved and for the concentration of use to be located at the north end of the park.

A general level of road improvement to the existing gravel and pothole filled access road is planned to support interpretive educational programs and general maintenance of the Mahai'ula area. For the foreseeable future, the road to Mahai'ula will not paved.

Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Improvements planned are designed to have a low impact. We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities.

With the provision of a paved road to Maniniowali Bay, it is expected that the north end of Kekaha Kai State Park will attract a higher density of users, as you desire. Improvements to accommodate such activity include the provision of a comfort station and parking areas. However, the Conceptual Plan adopted by the Board of Land & Natural Resources projects the highest use for the Mahai'ula portion because the resources there are larger and can absorb the most demand without damaging the resource.

Your letter and this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

GEORGE ATTA, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, AICP  
Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sherry B. Seaman, AIA, AICP  
Hiroshi Hida, AIA  
Roy H. Nadel, AIA, AICP  
James I. Nishimoto, AIA  
Raion E. Pominde, AIA  
Stephen H. Yuen, AIA  
Linda C. Vail, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, MA, AICP  
Philip T. Cuccia

Sharon L. Hahn  
Joseph C. Hsu, AIA  
Roy A. Inoué, AIA, AICP

William M. Jovi, AIA  
Charles Y. Keneshiro, AIA  
Dean H. Kikawa

Kathleen M. MacNeil, AIA  
Felix B. McGuire  
Kyo K. Nakamoto

Kathryn A. Neri  
Jeffrey H. Overton, AIA  
Christine M. Ruzicka, AICP

James L. Stone, AIA  
Scott Tamponari  
Wesley H. Timmon, AIA  
Sarah Ching Williams, AIA

From



Thu, May 23, 2002

3:27 PM  
Page 1 of 4

Janice Palma-Glennie  
P.O. 4849  
Kailua-Kona, Hawai'i 96745  
Tel#808-324-0093

---

FAX TO:

George Atta  
Group 70 International  
Fax 808-523-5874, 4 pages

May 22, 2002

Re: EISPN; Kekaha Kai State Park

Aloha, George:

I have been participating in the Kekaha Kai State Park planning process since its inception, first as an individual at open public meetings, and then have sat the park's Task Force first as a representative of the Protect Kohanaiki Ohana and now for the Sierra Club. Overall, there has been satisfying progress made in park planning. We also appreciate your sensitive approach to creating a long-lasting plan that is well suited to Hawai'i's resident community.

The Sierra Club's main appeal to you and those State officials in charge of drawing up an EIS for Kekaha Kai State Park is that the original tenets of the park plan must be maintained. The park should remain noncommercial and wilderness in nature as agreed upon at all of the park's earliest discussions. The following comments in one way or another reflect that sentiment.

1) Mahai'ula access road . Though there are some pockets of resistance to leaving the road into Mahai'ula unpaved, the Sierra Club feels that it would be a large mistake to pave the road at this time. We believe strongly that as the north end of the park reaches its completed development, calls for streamlined access into all areas of the park will diminish\*. It is difficult for people not involved in this long process to imagine what the final result



From



Thu, May 23, 2002

3:27 PM  
Page 2 of 4

will be. But it must be noted that during well-attended public hearings in the mid-'90s and later at task force meetings, the public and task force members came out strongly in favor of retaining the park in "as is" condition (including a "go slow" road) with maintenance of what is already there being the highest priority. As this and other islands in the Hawaiian chain are built out, having a place that feels less contrived and less controlled by man (the present, workable definition of "wilderness") will become a unique and irreplaceable (for lack of better words) oddity and attraction in itself (as is seen, for better or worse, even from "reality" TV shows, as humans clamber to get into increasingly rare and vanishing natural surroundings).

2) Noncommercial, low impact activities only. A compromise to the wilderness credo for the park included possible erection of a small, educational kiosk at the main highway similar to the one at Pu'u honua o Honaunau. That seems acceptable to us.

Using the Magoon House as an informational (museum-type facility) or meeting place for community groups can also work unobtrusively. However, we see a danger of the park's overall ambiance changing as special interest or nonprofit groups form around too much purposeful increased use of the park. We see that widely publicizing (i.e., trying too hard to use the park facilities to a full capacity) will result in what was never planned for the park from the beginning: over-impact of park resources and a disintegration of its wilderness qualities.

3) We feel strongly that commercial filming (i.e., anything that is used to make a profit for private companies, individuals or corporations) as well any other commercial activity (other than described in #2) should be banned from all areas of Kekaha Kai State Park. As there is no other State park of this kind on Hawai'i Island, it is fair and even visionary to maintain a natural place where those who appreciate the increasingly unique qualities of peace and quiet can enjoy, especially since all other parks and beach areas have (or will have) facilities where less nature-oriented users can feel at home (i.e., Hapuna Beach, Kailua and Hilo town beach parks, resort beach facilities, etc.).



4) Focus higher density use at north end. The focus of "improvements" in both facilities and access fit best in the northern area of the park as it is connected to what will soon be a vast urbanized, resort area. Because of this, more concentrated use of the park should be focused at the north end and diverted from other areas of the park. Maintaining an unpaved road to Mahai`ula and using walking trails as sole access to other more remote park areas will help to achieve this (though creation of a large but unpaved parking area at Mahai`ula seems sensible). Unpaved roadways and parking lots are generally the most environmentally friendly as they use the natural filtration of soil to prevent direct runoff into the sea. It appears that the future needs for parking might be lacking at the north end of the park from conceptual plans recently presented. Providing more parking at Manini`owali and other areas along the paved roads into that end of the park are essential, especially when no parking is allowed along the Queen Kaahumanu Highway that could otherwise allow relatively convenient pedestrian access to the park.

In recent task force meetings, the focus has seemed to shift higher use of the park to the south, Mahai`ula end. This shift can be partly attributed to subtle pressure to keep the north end of the park more exclusive for guests and owners at the exclusive Kuki`o/Kaupulehu developments. Though archeological sites at the north end should be rightly protected from public impact, it is still our belief that the major focus of "improvements" and overall use of the park should be the northern end.

6) Increased, easily accessible camping . To protect community interests, the original park plan should be supported by adding more camping spaces than have so far been discussed, both near Makalawena/Awake`e and Kua Bay, and to a lesser degree at the Mahai`ula end. Camping should not require elaborate, off-site, preplanned permitting. Preplanning, driving to inconvenient offices for permits, etc. takes away from the spontaneous camping activity which is an integral part of the Hawaiian lifestyle and quality of life, and is a core activity for many island families. Fishing should not be required as a part of the more impromptu allowance of camping. Limits should be made on how long

From



Thu, May 23, 2002

3:27 PM  
Page 4 of 4

parties may camp.

7) Kite surfing and other sport activities . Though Kekaha Kai State Park is the ideal setting for recreational activities, there are some, like kite surfing, which require far more space than is available in the park for safe and unobtrusive enjoyment. Additionally, the growing impact of surfing and kite surfing lessons, which increasingly clog the finite surf and beach areas of West Hawai'i (with equipment and students--often tourists), should be disallowed in the park as commercial activities (even if money is not exchanged at the beach).

8) Park closure . It is acceptable that the park be closed one day a week due to financial constraints and/or to give the park's resources a day to rest, as was decided earlier by task force members. However, it is unacceptable a) to limit pedestrian access into the park (a large parking area should be maintained at the highway entrance) and/or b) to allow the park to be used on a closed day for special interest activities, whether they are commercial or not. This is a publicly supported, resident-focused facility. Giving special treatment to certain park uses on closed days gives the appearance of impropriety and the insincerity of park management.

Mahalo for your attention to our thoughts on the upcoming EIS. We look forward to being useful participants in upcoming planning and discussions regarding the park's fruition.

Sincerely,  
*Janice Palma-Glenn*

\*It has come to our attention that access at Kua Bay is sometimes not possible due to construction by next door land owners. This will naturally increase calls for better access to Mahai'ula. The task force and State must remain strong in our resolve to match the park's original tenets through the park's completion.



November 25, 2002

Francis S. Oda, Arch. D., AIA, ACP  
Norman GY. Hoang, AIA  
Sherril B. Seaman, AIA, FASD  
Hiroshi Hida, AIA  
Roy H. Niimi, AIA, CGP  
James I. Nishimoto, AIA  
Ralph E. Perreault, AIA  
Stephan H. Yeh, AIA  
Linda C. Maki, AIA

George J. Atta, AICP  
Paul P. Chernick, AIA  
Wendy Lee Cook, AIA, CGP  
Philip T. Guedes  
S. John Hahn  
Jerome C. Hsu, AIA  
Roy A. Inoué, AIA, CGP  
Liam M. Jow, AIA  
James J. Kanehiro, AIA  
Dean H. Kitamura  
Katharine M. MacNeil, AIA  
Frank B. MacNeil  
Kye K. Nakamura  
Harold A. Nani  
Jeffrey H. Overton, AICP  
Christine M. Riddick, AIA  
James L. Stone, AIA  
Scott Tongonan  
Wesley H. Upton, AIA  
Sharon Cheng Williams, AIA

Janice Palma-Glennie  
P.O. Box 4849  
Kailua-Kona, Hawai'i 96745

Subject: Kekaha Kai State Park - EIS Preparation Notice

Dear Ms. Palma-Glennie:

Thank you for your May 22, 2002 fax regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Kekaha Kai State Park project.

Your continued participation as an individual and as representative of community organizations to the Kekaha Kai State Park Task Force has added value to the vision of the park and assures the plans reflect community concerns and interests.

We acknowledge the plea of the Sierra Club that the original tenets of the park plan must be maintained and that the park should remain noncommercial and wilderness in nature as agreed upon at all of the park's earliest discussions.

We have prepared the following responses to your comments:

**Mahai'ula access road:** As you are aware, there has been much discussion at the Task Force Meetings regarding the level of improvement for the Mahai'ula access road. A general level of road improvement to the existing gravel and pot-hole filled access road is planned to support interpretive educational programs and general maintenance of the Mahai'ula area. For the foreseeable future, paving is not planned for the main road to Mahai'ula.

**Non Commercial, Low Impact Activities Only:** Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Improvements planned are designed to have a low impact. As discussed in task force meetings, routine commercial activities are generally prohibited in the Plan. A minor exemption at the entrance facility has always been a part of the State Parks activities.

**Commercial Filming:** We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities. This issue raises larger questions and expands the issue to broader policy areas than those covered by our plan.

**North End Higher Density:** With the provision of a paved road to Manini'owali Bay, it is expected that the north end of Kekaha Kai State Park will attract a higher density of users as you desire. Improvements to accommodate such activity include the provision of a comfort station and parking areas.

I must assert one correction to your statement about higher intensity uses in the Northern section of the Park. The Conceptual Plan adopted by the Board of Land and Natural

**FILE**

Response letter to Janice Palma-Glennie  
Kekaha Kai State Park DEIS  
November 25, 2002  
Page 2

Resources divides the park into 3 general areas: 1) Mahai'ula / Kaulana; 2) Awake'e; and 3) Manini'owali / Kuki'o. Levels of intensity identified in that plan considered Mahai'ula as the highest intensity area with Manini'owali as the moderate and Awake'e as the lowest impact. The pressure on the south side always existed since it is closest to the growing urban developments moving north from Kailua-Kona. I can re-assure you that the higher end housing at Kuki'o and Hualalai have had no influence on the designation of intensity of use. Finally, it was always recognized that the natural resources at Kua Bay and Manini'owali were smaller and had less carrying capacity than those on the southern end. The land is narrower and the beach seasonal and smaller than at Mahai'ula and Ka'elehuluhulu. A final consideration was the intensity of archaeological features at Kakapa and Manini'owali.

**Camping:** The Park improvements have designated additional camp grounds throughout the coastal areas of Kekaha Kai. Camping permits will continue to be managed and regulated by the State Parks office.

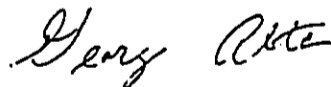
**Kite Surfing and Other Sport Activities:** We acknowledge your objections to sports activities that take up a lot of space and have a commercial connection. However at this time we have not determined a policy on kite-surfing and similar activities. State Parks has no jurisdiction in the water and policies and regulations must come from the Division of Aquatic Resources. The land side relationship to these activities will be reviewed further to assess the role played by the Division of State Parks.

**Park Closure:** The Division of State Parks does not generally object to pedestrian access to parks unless it interferes with Park "resting" and maintenance activities. As you are aware, we are revising the site plans to provide more parking at or near entrance location to the park so that the activities you mention can occur.

Your letter and attachments along with this response will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

**Draft EIS Comment and Responses**

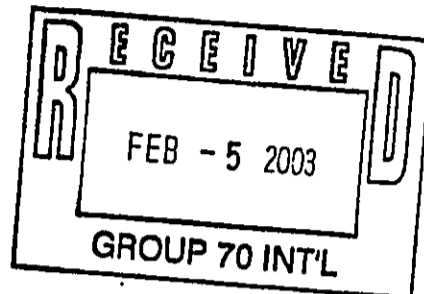


DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF

February 3, 2003

Regulatory Branch



Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

This letter responds to your request for comments on the draft Environmental Impact Statement (EIS) Kekaha Kai State Park project, dated December 2002. Based on the information you provided I am unable to determine if a Department of the Army (DA) permit will be required for this project. Please include information in the final EIS concerning what effect, if any, the project will have on the ponds within the park. Please place us on the mailing list for the final EIS.

If you have any questions concerning this matter, please contact William Lennan of my staff at 438-6986 or FAX 438-4060, and reference File No. 200300206.

Sincerely,

George P. Young, P.E.  
Chief, Regulatory Branch



February 27, 2003

Mr. George P. Young, P.E.  
Chief, Regulatory Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Ft. Shafter, Hawaii 96858-5440

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Young:

Thank you for your February 3, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

Environmental and archaeological restoration work of the ponds will be conducted under nationwide permits #13 and #27. No work is planned below the ordinary high water mark at the present time and we do not anticipate a need for any additional Department of the Army (DA) permit. If there are any revisions to the plan which trigger the need for a DA permit the Department of the Army Corps of Engineers will be notified.

The Kekaha Kai State Park Plan recognizes the ponds as valuable natural resources of the park. The Plan seeks to preserve existing ponds throughout the park. Educational and interpretive programs are planned to increase public awareness of the ecological and cultural importance of the ponds. In addition, where necessary, the plan encourages restoration efforts to stabilize and prevent further deterioration to the existing pond communities.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator  
Kukio  
Tom Witten of PBR Hawaii

Francis S. Onda, AICP, AIA, ACP  
Alicia D. Onda, AIA, ACP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Tabei, AIA, CFI  
James J. McInerney, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yarn, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
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Suzanne Hahn  
Jeremy C. Hsu, AIA  
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James L. Stone, AIA  
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Sharon Ching Williams, AIA

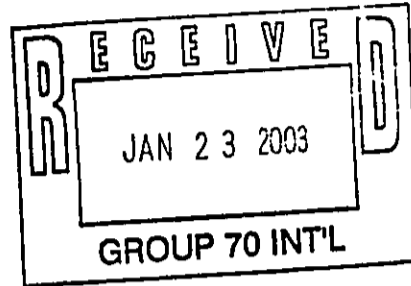




U.S. Department  
of Transportation  
Federal Aviation  
Administration

Western-Pacific Region  
Real Estate and Utilities Section, AHNL-54B

P. O. Box 50109  
Honolulu, Hawaii 96850-5000



January 22, 2003

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

Your letter in behalf of the Department of Land and Natural Resources of January 2, 2003, requested our agency's review of the Draft Environmental Impact Statement (DEIS) regarding plans to improve the outdoor recreational facilities at Kekaha Kai State Park, Kona, Hawaii.

The Federal Aviation Administration (FAA) has no objection to the subject project as it does not appear that any of its facilities are impacted. The proponent of the project may submit a FAA Form 7460-1 "Notice of Construction or Alteration" for the development within 18 months of the start of construction for a further determination once specific design and construction requirements are known. This form is available at our website at <http://www.faa.gov>.

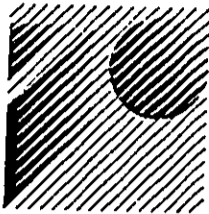
We appreciate this opportunity to comment on your DEIS. Please contact me at (808) 541-1236, if there are any questions.

Sincerely,

Darice B. N. Young  
Realty Contracting Officer

cc:  
Identical copies of letter sent  
to:  
Department of Land and Natural  
Resources  
Division of State Parks  
Attn: Daniel S. Quinn  
1151 Punchbowl Street, Suite 310  
Honolulu, HI 96813

State of Hawaii  
Office of Environmental Quality  
Control  
Attn: Genevieve Salmonson  
235 South Beretania Street, Suite  
702  
Honolulu, HI 96813



**GROUP 70**  
INTERNATIONAL

- Francis S. Oda, AIA, AICP
- Norman G.Y. Hong, AIA
- Sheril B. Seaman, AIA, AICP
- Hitoshi Hida, AIA
- Roy H. Niner, AIA, CSI
- Tanner I. Nishimoto, AIA
- Ralph F. Pomphrey, AIA
- Stephen H. Wain, AIA
- Linda C. Miller, AIA
  
- George I. Atta, AICP
- Paul P. Chorney, AIA
- Wendy Lee Cook, AIA, LEED
- Philip T. Ciccia
- Susan R. Hahn
- Jeremy C. Hill, AIA
- Roy A. Johnson, AIA, LEED
- Stuart M. Jovi, AIA
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- Frank B. McGuire
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- Kathryn A. Nien
- Jeffrey H. Overton, AICP
- Christine M. Rutter, AICP
- James L. Stone, AIA
- Scott Tingeman
- Weston N. Quinzi, AIA
- Sharon Chung-Huang, AIA

February 18, 2003

Mr. Darice B. N. Young  
Realty Contracting Officer  
U.S. Department of Transportation  
Federal Aviation Administration  
Western-Pacific Region  
Real Estate and Utilities Section  
P.O. Box 50109  
Honolulu, Hawaii 96850-5000

**Subject: Kekaha Kai State Park - Draft EIS**

Dear Mr. Young:

Thank you for your January 22, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize that the Federal Aviation Administration has no objections to the project at this time. Should further determination be necessary, the FAA Form 7460-1 "Notice of Construction or Alteration" will be processed.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

LINDA LINGLE  
GOVERNOR



GENEVIEVE SALMONSON  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENT QUALITY CONTROL  
235 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 586-4186  
FACSIMILE (808) 586-4188

February 19, 2003

Daniel Quinn, Administrator  
State Parks Division  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Attention: Sherrie Samuels

Dear Mr. Quinn:

Subject: Draft Environmental Impact Statement (EIS) for Kekaha Kai State Park

We have the following comments to offer:

Table of contents:

- a. Inclusion of the list of appendices at the beginning of the Appendix volume would be helpful for reviewers.
- b. The title for Appendix L, *Kekaha Wai 'Ole o Na Kona*, should also be given in English, or indicate that this appendix contains oral histories.

Comment letters:

The Environmental Planning Office of the Dept. of Health is included in your list in section 17 as a commenter, but the both the letter and the response are missing. In the final EIS include both letters or correct your list.

Only page one of the letter from the Hawaii County Dept. of Planning is reproduced. In the final EIS reproduce the complete letter.

Utilities: Section 5.3.1 states that the nearby Kukio development will have water and wastewater facilities. Will the park tap into these lines?

Alternatives: The last sentence of section 13.2 on alternative scenarios refers the reader to Appendix B, but Appendix B discusses utilities. In the final EIS correct this reference.

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0030

Daniel Quinn  
April 16, 2002  
Page 2

Unresolved Issues:

Section 13.2.3 notes that the low intensity development was recommended by the community groups. If this is not selected as the preferred alternative by the time the final EIS is prepared, include this in section 14 on unresolved issues and in the summary in section 8.9.

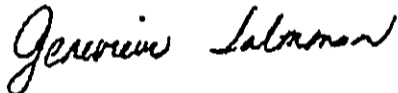
The community task force discussed establishment of a marine fisheries management area to protect water quality. If a decision is made to proceed with this, include it in the section on mitigation measures. Otherwise include this in the unresolved issues section and in the summary in section 8.

Impacts to cultural resources: Act 50 requires an analysis of a project's impacts on cultural resources. Although extensive background material on cultural issues has been provided, the analysis is lacking. Please include this in section 10. If you believe the project will provide beneficial impacts, summarize this also in section 8.6.1.

EIS preparers: In the final EIS include a list of persons, firms or agencies involved in the preparation of the EIS.

If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,



GENEVIEVE SALMONSON  
Director

c: George Atta, Group 70



Francis S. Oda, Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nirei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sutodin Hakim  
Jeremy C. Hsu, AIA  
Roy A. Inoué, AIA, CSI  
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Christine M. Rucicola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Chung Williams, AIA

May 22, 2003

Ms. Genevieve Salmonson, Director  
State of Hawaii  
Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. Salmonson:

Thank you for your February 19, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

#### Table of Contents

a: A list of appendices will be added to the beginning of the Appendix volume.  
b: Appendix L will be clarified by adding the full title: "Kekaha Wai 'Ole o Na Kona" A Report on Archival and Historical Documentary Research, and Oral History Interviews for Kekaha Kai State Park.

#### Comment Letters

The Environmental Planning Office of the Department of Health did not send written comments on the EIS Preparation Notice. The indication that they did was an error on our part. We did, however, receive written comments from the Clean Water Branch (CWB) of the Department of Health. Both the comments and response of CWB is included in the Draft EIS. We will make the correction to the table in Section 17.

Page 2 of the County of Hawaii Department of Planning written comments is reproduced in the Draft EIS. Unfortunately, it was placed out of order. We will fix this error in the Final EIS.

#### Utilities

Yes, the Park will connect to Kukio's water and wastewater facilities.

#### Alternatives

The reference to Appendix B in section 13.2 is not to the Appendix of the Draft EIS. Rather the reference is to the Appendix of a separate report, Kekaha Kai State Park Conceptual Plan. Copies of this plan are available at State Parks.

#### Unresolved Issues

The proposed development plan selected is a reflection of the recommended low intensity plan, presented in the Draft EIS document. Therefore, this is not an unresolved issue. The term "low intensity" is a relative term and the proposed use levels are all "low" relative to the size and capacity of the existing resources and national park standards on the mainland USA. The establishment of a marine fisheries management area to protect water quality and protect fish population and other marine resources, however, is an unresolved issue. This will be noted in the unresolved section and in the summary in section 8.

Genevieve Salmonson, OEQC  
Kekaha Kai State Park DEIS response letter  
May 22, 2003  
Page 2

**Impacts to Cultural Resources**

An analysis of the project's impact on cultural resources has been added to Chapter 10. Beneficial impacts are summarized in section 8.6.1

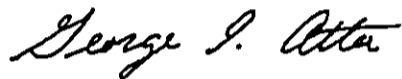
**EIS Preparers**

A list of persons, firms or agencies involved in the preparation of the EIS will be added to the Final EIS report.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

LINDA LINGLE  
GOVERNOR



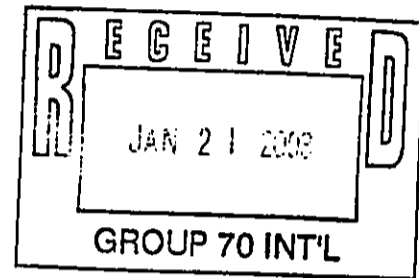
**STATE OF HAWAII**  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810

RUSS K. SAITO  
COMPTROLLER

KATHERINE H. THOMASON  
DEPUTY COMPTROLLER

(P)1021.3

JAN 17 2003



Mr. George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

Subject: Kekaha Kai State Park, Hawaii  
Draft Environmental Impact Statement

Thank you for the opportunity to review the subject project's Draft Environmental Impact Statement. The project does not directly impact any of the Department of Accounting and General Services' projects or existing facilities. Therefore, we have no comments to offer.

If there are any questions regarding the above, please have your staff call Mr. Bruce Bennett of the Planning Branch at 586-0491.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tadashi Yoshizawa".

TADASHI YOSHIZAWA  
Acting Public Works Administrator

BB:jo

c: Ms. Genevieve Salmonson, OEQC  
Mr. Daniel S. Quinn, DLNR, Division of State Parks





February 18, 2003

Mr. Tadashi Yoshizawa  
Acting Public Works Administrator  
Department of Accounting and General Services  
P.O. Box 119  
Honolulu, Hawaii 96810

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Yoshizawa:

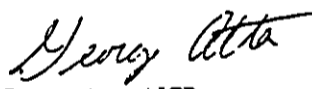
Thank you for your January 17, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize the State Department of Accounting and General Services has no comments at this time.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

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✓  
LINDA LINGLE  
GOVERNOR  
THEODORE E. LIU  
DIRECTOR

January 22, 2003

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel St., 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

Subject: Kekaha Kai State Park, Draft Environmental Impact Statement

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park, a 1,642 acre predominantly wilderness park. We would like to call your attention to: (1) State energy conservation goals, (2) energy saving design practices and technologies, and (3) recycling and recycled-content products.

1. **State energy conservation goals.** Project buildings, activities, and site grounds should be designed with energy saving considerations. The mandate for such consideration is found in Chapter 344, HRS ("State Environmental Policy") and Chapter 226 ("Hawaii State Planning Act"). In particular, we would like to call to your attention HRS 226 18(c)(4) which includes a State objective of promoting all cost-effective energy conservation through adoption of energy-efficient practices and technologies.

We also would like to call your attention to Act 77, SLH 2002, "Relating to Energy Resources" which took effect on May 31, 2002. Part II of Act 77 establishes energy efficiency goals and identifies requirements for State agencies.

If you plan to provide hot water in the park, we would like to call your attention to Administrative Directive No. 98-03 "Policy Governing the Use of Solar Water Heating Systems for State Facilities." This Directive requires that:

All plans and designs for new or renovated facilities using state funds or located on state land and incorporating the use of hot water shall include a comparative analysis to determine the cost-benefit of using a conventional water heating system or a solar water heating system. The analysis shall be based on the projected life-cycle costs to purchase and operate the water heating systems. If the life-cycle analysis is positive, the facility shall incorporate solar water heating. If water heating entirely by solar is not cost-effective, the analysis shall also evaluate the

Mr. George Atta  
Page 2  
January 22, 2003

life-cycle, cost-benefit of solar water heating for preheating water. Each Department shall be responsible for conducting an analysis for every facility that provides hot water.

We recommend that you consult the Hawaii County Energy Code early on in your project. Hawaii Electric Light Co., Inc may also have demand-side management programs that offer rebates for installation of energy efficient technologies.

2. **Energy saving design practices and technologies.** We note your statement on page 6-3 that you will be using the concept of sustainability to guide the type and equipment that is selected. We encourage that energy efficient design practices and technologies be specifically addressed. Some of the methods and technologies that could be considered, as appropriate, include:

- Use of natural ventilation to increase comfort of occupants;
- Use of daylighting
- Maximum use of natural lighting without heat gain;
- Use of high efficiency compact fluorescent lighting;
- Use of photovoltaics or wind in accordance with your statement on page 6-4; and
- Use of landscaping for dust control and to minimize heat gain to area.

3. **Recycling and recycled-content products.**

- Develop a job-site recycling plan for construction and recycle as much construction and demolition waste as possible;
- Incorporate provisions for recycling into the project – a collection system and space for bins for recyclables; and
- Specify and use products with recycled content such as: steel, concrete aggregate fill, drywall, carpet and glass tile.

Please refer to the attached *Guidelines for Sustainable Building Design In Hawaii: A planner's checklist* and *A Contractor's Waste Management Guide* for additional information.

Sincerely,



Maurice H. Kaya  
Energy, Resources, and Technology  
Program Administrator

Enclosures

c: OEQC  
Department of Land and Natural Resources, Division of State Parks

# Guidelines for Sustainable Building Design in Hawai'i

## *A planner's checklist*

(Adopted by the Environmental Council on October 13, 1999)

### Introduction

Hawai'i law calls for efforts to conserve natural resources, promote efficient use of water and energy and encourage recycling of waste products. Planning a project from the very beginning to include sustainable design concepts can be a critical step toward meeting these goals.

The purpose of the state's environmental review law (HRS Ch. 343) is to encourage a full, accurate and complete analysis of proposed actions, promote public participation and support enlightened decision making by public officials. The Office of Environmental Quality Control offers the following guidelines for preparers of environmental reviews under the authority of HRS 343 to assist agencies and applicants in meeting these goals.

These guidelines do not constitute rules or law. They have been refined by staff and peer review to provide a checklist of items that will help the design team create projects that will have a minimal impact on Hawai'i's environment and make wise use of our natural resources. In a word, projects that are *sustainable*.

A sustainable building is built to minimize energy use, expense, waste, and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawai'i's residents and visitors today without compromising the needs of future generations. Compared to conventional projects, a resource-efficient building project will:

- I. Use less energy for operation and maintenance
- II. Contain less *embodied* energy (e.g. locally produced building products often contain less *embodied* energy than imported products because they require less energy-consuming transportation.)
- III. Protect the environment by preserving/conserving water and other natural resources and by minimizing impact on the site and ecosystems
- IV. Minimize health risks to those who construct, maintain, and occupy the building
- V. Minimize construction waste
- VI. Recycle and reuse generated construction wastes

- VII. Use resource-efficient building materials (e.g. materials with recycled content and low embodied energy, and materials that are recyclable, renewable, environmentally benign, non-toxic, low VOC (Volatile Organic Compound) emitting, durable, and that give high life cycle value for the cost.)
- VIII. Provide the highest quality product practical at competitive (affordable) first and life cycle costs.

In order to avoid excessive overlapping of items, the checklist is designed to be read in totality, not just as individual sections. This checklist tries to address a range of project types, large scale as well as small scale. Please use items that are appropriate to the type and scale of the project.

Although this list will help promote careful and sensitive planning, mere compliance with this checklist does not confirm sustainability. Compliance with and knowledge of current building codes by users of this checklist is also required.

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## **I. Pre Design**

- \_\_\_ 1. Hold programming team meeting with client representative, Project Manager, planning consultant, architectural consultant, civil engineer, mechanical, electrical, plumbing (MEP) engineer, structural engineer, landscape architect, interior designer, sustainability consultant and other consultants as required by the project. Identify project and sustainability goals. Client representatives and consultants need to work together to ensure that project and environmental goals are met.
- \_\_\_ 2. Develop sustainable guideline goals to insert into outline specifications as part of the Schematic Design documents. Select goals from the following sections that are appropriate for the project.
- \_\_\_ 3. Use Cost-Benefit Method for economic analysis of the sustainability measures chosen. (Cost-Benefit Method is a method of evaluating project choices and investments by comparing the present and life cycle value of expected benefits to the present and life cycle value of expected costs.)
- \_\_\_ 4. Include "Commissioning" in the project budget and schedule. (Building "Commissioning" is the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained in accordance with specifications that meet the owner's needs, and recognize the owner's financial and operational capacity. It improves the performance of the building systems, resulting in energy efficiency and conservation, improved air quality and lower operation costs. *Refer to Section IX.*)

## **II. Site Selection & Site Design**

### **A. Site Selection**

- \_\_\_ 1. Analyze and assess site characteristics such as vegetation, topography, geology, climate, natural access, solar orientation patterns, water and drainage, and existing utility and transportation infrastructure to determine the appropriate use of the site.
- \_\_\_ 2. Whenever possible, select a site in a neighborhood where the project can have a positive social, economic and/or environmental impact.
- \_\_\_ 3. Select a site with short connections to existing municipal infrastructure (sewer lines, water, waste water treatment plant, roads, gas, electricity, telephone, data communication lines and services). Select a site close to mass transportation, bicycle routes and pedestrian access.

### **B. Site Preparation and Design**

- \_\_\_ 1. Prepare a thorough existing conditions topographic site plan depicting topography, natural and built features, vegetation, location of site utilities and include solar information,

rainfall data and direction of prevailing winds. Preserve existing resources and natural features to enhance the design and add aesthetic, economic and practical value. Design to minimize the environmental impact of the development on vegetation and topography.

- \_\_\_2. Site building(s) to take advantage of natural features and maximize their beneficial effects. Provide for solar access, daylighting and natural cooling. Design ways to integrate the building(s) with the site that maximizes and preserves positive site characteristics, enhances human comfort, safety and health, and achieves operational efficiencies.
- \_\_\_3. Locate building(s) to encourage bicycle and pedestrian access and pedestrian oriented uses. Provide bicycle and pedestrian paths, bicycle racks, etc. Racks should be visible and accessible to promote and encourage bicycle commuting.
- \_\_\_4. Retain existing topsoil and maintain soil health by clearing only the areas reserved for the construction of streets, driveways, parking areas, and building foundations. Replant exposed soil areas as soon as possible. Reuse excavated soils for fill and cut vegetation for mulch.
- \_\_\_5. Grade slopes to a ratio of less than 2 : 1 (run to rise). Balance cut and fill to eliminate hauling. Check grading frequently to prevent accidental over excavation.
- \_\_\_6. Minimize the disruption of site drainage patterns. Provide erosion and dust controls, positive site drainage, and siltation basins as required to protect the site during and after construction, especially, in the event of a major storm.
- \_\_\_7. Minimize the area required for the building footprint. Consolidate utility and infrastructure in common corridors to minimize site degradation, and cost, improve efficiency, and reduce impermeable surfaces.
- \_\_\_8. For termite protection, use non toxic alternatives to pesticides and herbicides, such as Borate treated lumber, Basaltic Termite Barrier, stainless steel termite barrier mesh, and termite resistant materials.

### **III. Building Design**

- \_\_\_1. Consider adaptive re-use of existing structures instead of demolishing and/or constructing a new building. Consult the State Historic Preservation Officer for possible existing historic sites that may meet the project needs.
- \_\_\_2. Plan for high flexibility while designing building shell and interior spaces to accommodate changing needs of the occupants, and thereby extend the life span of the building.
- \_\_\_3. Design for re-use and/or disassembly. (For recyclable and reusable building products, see Section VII).
- \_\_\_4. Design space for recycling and waste diversion opportunities during occupancy.
- \_\_\_5. Provide facilities for bicycle and pedestrian commuters (showers, lockers, bike racks, etc.) in commercial areas and other suitable locations.
- \_\_\_6. Plan for a comfortable and healthy work environment. Include inviting outdoor spaces, wherever possible. (*Refer to Section VIII.*)

- \_\_\_ 7. Provide an Integrated Pest Management approach. The use of products such as Termi-mesh, Basaltic Termite Barrier and the Sentricon "bait" system can provide long term protection from termite damage and reduce environmental pollution.
- \_\_\_ 8. Design a building that is energy efficient and resource efficient. (See Sections IV, V, VII.) Determine building operation by-products such as heat gain and build up, waste/gray-water and energy consumption, and plan to minimize them or find alternate uses for them.
- \_\_\_ 9. For natural cooling, use
  - a. Reflective or light colored roofing, radiant barrier and/or insulation, roof vents
  - b. Light colored paving (concrete) and building surfaces
  - c. Tree Planting to shade buildings and paved areas
  - d. Building orientation and design that captures trade winds and/or provides for convective cooling of interior spaces when there is no wind.

#### IV. Energy Use

- \_\_\_ 1. Obtain a copy of the State of Hawai'i Model Energy Code (available through the Hawai'i State Energy Division, at Tel. 587-3811). Exceed its requirements. (Contact local utility companies for information on tax credits and utility-sponsored programs offering rebates and incentives to businesses for installing qualifying energy efficient technologies.)
- \_\_\_ 2. Use site sensitive orientation to :
  - a. Minimize cooling loads through site shading and carefully planned east-west orientation.
  - b. Incorporate natural ventilation by channeling trade winds.
  - c. Maximize daylighting.
- \_\_\_ 3. Design south, east and west shading devices to minimize solar heat gain.
- \_\_\_ 4. Use spectrally selective tints or spectrally selective low-e glazing with a Solar Heat Gain Coefficient (SHGC) of 0.4 or less.
- \_\_\_ 5. Minimize effects of thermal bridging in walls, roofs and window systems.
- \_\_\_ 6. Maximize efficiencies for lighting, Heating, Ventilation, Air Conditioning (HVAC) systems and other equipment. Use insulation and/or radiant barriers, natural ventilation, ceiling fans and shading to avoid the use of air conditioning whenever appropriate.
- \_\_\_ 7. Eliminate hot water in restrooms when possible.
- \_\_\_ 8. Provide tenant sub-metering to encourage utility use accountability.
- \_\_\_ 9. Use renewable energy. Use solar water heaters and consider the use of photovoltaics and Building Integrated Photovoltaics (BIPV).
- \_\_\_ 10. Use available energy resources such as waste heat recovery, when feasible.



### **A. Lighting**

1. Design for at least 15% lower interior lighting power allowance than the Energy Code.
2. Select lamps and ballasts with the highest efficiency, compatible with the desired level of illumination and color rendering specifications. Examples that combine improved color rendering with efficient energy use include compact fluorescents and T8 fluorescents that use tri-phosphor gases.
3. Select lighting fixtures which maximize system efficacy and which have heat removal capabilities
4. Reduce light absorption on surfaces by selecting colors and finishes that provide high reflectance values without glare.
5. Use task lighting with low ambient light levels.
6. Maximize daylighting through the use of vertical fenestration, light shelves, skylights, clerestories, building form and orientation as well as through translucent or transparent interior partitions. Coordinate daylighting with electrical lighting for maximum electrical efficiency.
7. Incorporate daylighting controls and/or motion activated light controls in low or intermittent use areas.
8. Avoid light spillage in exterior lighting by using directional fixtures.
9. Minimize light overlap in exterior lighting schemes.
10. Use lumen maintenance procedures and controls.

### **B. Mechanical Systems**

1. Design to comply with the Energy Code and to exceed its efficiency requirements.
2. Use "Smart Building" monitor/control systems when appropriate.
3. Utilize thermal storage for reduction of peak energy usage.
4. Use Variable air volume systems to save fan power.
5. Use variable speed drives on pumping systems and fans for cooling towers and air handlers.
6. Use air-cooled refrigeration equipment or use cooling towers designed to reduce drift.
7. Specify premium efficiency motors.
8. Reduce the need for mechanical ventilation by reducing sources of indoor air pollution. Use high efficiency air filters and ultraviolet lamps in air handling units. Provide for regular maintenance of filtration systems. Use ASHRAE standards as minimum.
9. Locate fresh air intakes away from polluted or overheated areas. Locate on roof where possible. Separate air intake from air exhausts by at least 40 ft.
10. Use separate HVAC systems to serve areas that operate on widely differing schedules and/or design conditions.
11. Use shut off or set back controls on HVAC system when areas are not occupied.
12. Use condenser heat, waste heat or solar energy. (Contact local utility companies for information on the utility-sponsored Commercial and Industrial Energy Efficiency

Programs which offer incentives to businesses for installing qualifying energy efficient technologies.)

- \_\_\_13. Evaluate plug-in loads for energy efficiency and power saving features.
- \_\_\_14. Improve comfort and save energy by reducing the relative humidity by waste reheat, heat pipes or solar heat.
- \_\_\_15. Minimize heat gain from equipment and appliances by using:
  - a. Environmental Protection Agency (EPA) Energy Star rated appliances.
  - b. Hoods and exhaust fans to remove heat from concentrated sources.
  - c. High performance water heating that exceeds the Energy Code requirements.
- \_\_\_16. Specify HVAC system "commissioning" period to reduce occupant exposure to Indoor Air Quality (IAQ) contaminants and to maximize system efficiency.

## V. Water Use

### A. Building Water

- \_\_\_1. Install water conserving, low flow fixtures as required by the Uniform Plumbing Code.
- \_\_\_2. If practical, eliminate hot water in restrooms.
- \_\_\_3. Use self closing faucets (infrared sensors or spring loaded faucets) for lavatories and sinks.

### B. Landscaping and Irrigation

(See Section VI.)

## VI. Landscape and Irrigation

- \_\_\_1. Incorporate water efficient landscaping (xeriscaping) using the following principles:
  - a. Planning, Efficient irrigation: Create watering zones for different conditions. Separate vegetation types by watering requirements. Install moisture sensors to prevent operation of the irrigation system in the rain or if the soil has adequate moisture. Use appropriate sprinkler heads.
  - b. Soil analysis/improvement: Use (locally made) soil amendments and compost for plant nourishment, improved water absorption and holding capacity.
  - c. Appropriate plant selection: Use drought tolerant and/or slow growing hardy grasses, native and indigenous plants, shrubs, ground covers, trees, appropriate for local conditions, to minimize the need for irrigation.
  - d. Practical turf areas: Turf only in areas where it provides functional benefits.

- e. Mulches: Use mulches to minimize evaporation, reduce weed growth and retard erosion.

Contact the local Board of Water Supply for additional information on xeriscaping such as efficient irrigation, soil improvements, mulching, lists of low water-demand plants, tours of xeriscaped facilities, and xeriscape classes.

- \_\_\_ 2. Protect existing beneficial site features and save trees to prevent erosion. Establish and carefully mark tree protection areas well before construction.
- \_\_\_ 3. Limit staging areas and prevent unnecessary grading of the site to protect existing, especially native, vegetation.
- \_\_\_ 4. Use top soil from the graded areas, stockpiled on the site and protected with a silt fence to reduce the need for imported top soil.
- \_\_\_ 5. Irrigate with non-potable water or reclaimed water when feasible. Collect rainwater from the roof for irrigation.
- \_\_\_ 6. Sub-meter the irrigation system to reduce water consumption and consequently water and sewer fees. Contact the local county agency to obtain irrigation sub-metering requirements and procedures. Locate irrigation controls within sight of the irrigated areas to verify that the system is operating properly.
- \_\_\_ 7. Use pervious paving instead of concrete or asphalt paving. Use natural and man-made berms, hills and swales to control water runoff.
- \_\_\_ 8. Avoid the use of solvents that contain or leach out pollutants that can contaminate the water resources and runoff. Contact the State of Hawai'i Clean Water Branch at 586-4309 to determine whether a NPDES (National Pollutant Discharge Elimination System) permit is required.
- \_\_\_ 9. Use Integrated Pest Management (IPM) techniques. IPM involves a carefully managed use of biological and chemical pest control tactics. It emphasizes minimizing the use of pesticides and maximizing the use of natural process
- \_\_\_ 10. Use trees and bushes that are felled at the building site (i.e. mulch, fence posts). Leave grass trimmings on the lawn to reduce green waste and enhance the natural health of lawns.
- \_\_\_ 11. Use recycled content, decay and weather resistant landscape materials such as plastic lumber for planters, benches and decks.

## **VII. Building Materials & Solid Waste Management**

### **A. Material Selection and Design**

- \_\_\_ 1. Use durable products.
- \_\_\_ 2. Specify and use natural products or products with low embodied energy and/or high recycled content. Products with recycled content include steel, concrete with glass,

- drywall, carpet, etc. Use ground recycled concrete, graded glass cullet or asphalt as base or fill material.
- \_\_\_3. Specify low toxic or non-toxic materials whenever possible, such as low VOC (Volatile Organic Compounds) paints, sealers and adhesives and low or formaldehyde-free materials. Do not use products with CFCs (Chloro-fluoro-carbons).
  - \_\_\_4. Use locally produced products such as plastic lumber, insulation, hydro-mulch, glass tiles, compost.
  - \_\_\_5. Use advanced framing systems that reduce waste, two stud corners, engineered structural products and prefabricated panel systems.
  - \_\_\_6. Use materials which require limited or no application of finishing or surface preparation. (i.e. finished concrete floor surface, glass block and glazing materials, concrete block masonry, etc.).
  - \_\_\_7. Use re-milled salvaged lumber where appropriate and as available. Avoid the use of old growth timber.
  - \_\_\_8. Use sustainably harvested timber.
  - \_\_\_9. Commit to a material selection program that emphasizes efficient and environmentally sensitive use of building materials, and that uses locally available building materials. (A list of Earth friendly products and materials is available through the Green House Hawai'i Project. Call Clean Hawai'i Center, Tel. 587-3802 for the list.)

#### **B. Solid Waste Management, Recycling and Diversion Plan**

- \_\_\_1. Prepare a job-site recycling plan and post it at the job-site office.
- \_\_\_2. Conduct pre-construction waste minimization and recycling training for employees and sub-contractors.
- \_\_\_3. Use a central area for all cutting.
- \_\_\_4. Establish a dedicated waste separation/diversion area. Include Waste/Compost/Recycling collection areas and systems for use during construction process and during the operational life cycle of the building.
- \_\_\_5. Separate and divert all unused or waste cardboard, ferrous scrap, construction materials and fixtures for recycling and/or forwarding to a salvage exchange facility. Information on "Minimizing C&D (construction and demolition) waste in Hawai'i" is available through Department of Health, Office of Solid Waste Management, Tel: 586-4240.
- \_\_\_6. Use all green waste, untreated wood and clean drywall on site as soil amendments or divert to offsite recycling facilities.
- \_\_\_7. Use concrete and asphalt rubble on-site or forward the material for offsite recycling.
- \_\_\_8. Carefully manage and control waste solvents, paints, sealants, and their used containers. Separate these materials from C&D (construction and demolition) waste and store and dispose them of them carefully.
- \_\_\_9. Donate unused paint, solvents, sealants to non-profit organizations or list on HIMEX (Hawai'i Materials Exchange). HIMEX is a free service operated by Maui Recycling

- Group, that offers an alternative to landfill disposal of usable materials, and facilitates no-cost trades. See web site, [www.himex.org](http://www.himex.org).
- \_\_\_10. Use suppliers that re-use or recycle packaging material whenever possible.

## VIII. Indoor Air Quality

- \_\_\_1. Design an HVAC system with adequate supply of outdoor air, good ventilation rates, even air distribution, sufficient exhaust ventilation and appropriate air cleaners.
- \_\_\_2. Develop and specify Indoor Air Quality (IAQ) requirements during design and contract document phases of the project. Monitor compliance in order to minimize or contain IAQ contaminant sources during construction, renovation and remodeling.
- \_\_\_3. Notify occupants of any type of construction, renovation and remodeling and the effects on IAQ.
- \_\_\_4. Inspect existing buildings to determine if asbestos and lead paint are present and arrange for removal or abatement as needed.
- \_\_\_5. Supply workers with, and ensure the use of VOC (Volatile Organic Compounds)-safe masks where required.
- \_\_\_6. Ensure that HVAC systems are installed, operated and maintained in a manner consistent with their design. Use UV lamps in Air Handling Units to eliminate mold and mildew growth. An improperly functioning HVAC system can harbor biological contaminants such as viruses, bacteria, molds, fungi and pollen, and can cause Sick Building Syndrome (SBS).
- \_\_\_7. Install separate exhaust fans in rooms where air polluting office equipment is used, and exhaust directly to the exterior of the building, at sufficient distance from the air intake vents.
- \_\_\_8. Place bird guards over air intakes to prevent pollution of shafts and HVAC ducts.
- \_\_\_9. Control indoor air pollution by selecting products and finishes that are low or non-toxic and low VOC emitting. Common sources of indoor chemical contaminants are adhesives, carpeting, upholstery, manufactured wood products, copy machines, pesticides and cleaning agents.
- \_\_\_10. Schedule finish application work to minimize absorption of VOCs into surrounding materials e.g. allow sufficient time for paint and clear finishes to dry before installing carpet and upholstered furniture. Increase ventilation rates during periods of increased pollution.
- \_\_\_11. Allow a flush-out period after construction, renovation, remodeling or pesticide application to minimize occupant exposure to chemicals and contaminants.

## **IX. Commissioning & Construction Project Closeout**

- 1. Appoint a Commissioning Authority to develop and implement a commissioning plan and a preventative maintenance plan. Project Manager's responsibilities must include coordination of commissioning activities during project closeout.
- 2. Commissioning team should successfully demonstrate all systems and perform operator training before final acceptance.
- 3. Provide flush-out period to remove air borne contaminants from the building and systems.
- 4. Provide as-built drawings and documentation for all systems. Provide data on equipment maintenance and their control strategies as well as maintenance and cleaning instructions for finish materials.

## **X. Occupancy and Operation**

### **A. General Objectives**

- 1. Develop a User's Manual for building occupants that emphasizes the need for Owner/Management commitment to efficient sustainable operations.
- 2. Management's responsibilities must include ensuring that sustainability policies are carried out.

### **B. Energy**

- 1. Purchase EPA rated, Energy Star, energy-efficient office equipment, appliances, computers, and copiers. (Energy Star is a program sponsored by U.S. Dep. Of Energy. Use of these products will contribute to reduced energy costs for buildings and reduce air pollution.)
- 2. Institute an employee education program about the efficient use of building systems and appliances, occupants impact on and responsibility for water use, energy use, waste generation, waste recycling programs, etc.
- 3. Re-commission systems and update performance documentation periodically per recommendations of the Commissioning Authority, or whenever modifications are made to the systems.

### **C. Water**

- 1. Start the watering cycle in the early morning in order to minimize evaporation.
- 2. Manage the chemical treatment of cooling tower water to reduce water consumption.

### **D. Air**

- 1. Provide incentives which encourage building occupants to use alternatives to and to reduce the use of single occupancy vehicles.

- \_\_\_ 2. Provide a location map of services within walking distance of the place of employment (child care, restaurants, gyms, shopping).
- \_\_\_ 3. Periodically monitor or check for indoor pollutants in building.
- \_\_\_ 4. Provide an IAQ plan for tenants, staff and management that establishes policies and documentation procedures for controlling and reporting indoor air pollution. This helps tenants and staff understand their responsibility to protect the air quality of the facility.

#### **E. Materials and Products**

- \_\_\_ 1. Purchase business products with recycled content such as paper, toners, etc.
- \_\_\_ 2. Purchase Furniture made with sustainably harvested wood, or with recycled and recycled content materials, which will not off gas VOC's.
- \_\_\_ 3. Remodeling and painting should comply with or improve on original sustainable design intent.
- \_\_\_ 4. Use low VOC, non-toxic, phosphate and chlorine free, biodegradable cleaning products.

#### **F. Solid Waste**

- \_\_\_ 1. Collect recyclable business waste such as paper, cardboard boxes, and soda cans.
- \_\_\_ 2. Avoid single use items such as paper or Styrofoam cups and plates, and plastic utensils.

## **XI. Resources**

Financing: Energy Efficiency in Buildings. U.S. Department of Energy, DOE/EE-0152, May, 1998 (Call Tel.1-800-DOE-EREC or visit local office)

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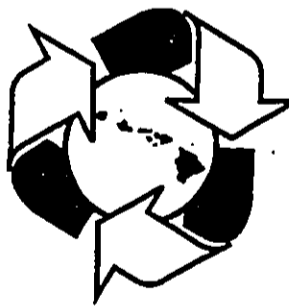
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# A Contractor's Waste Management Guide

*Best Management Practices and  
Tools for Job Site Recycling and  
Waste Reduction in Hawaii*



*Prepared by O'Brien & Company*

*for*

*The State of Hawaii, Department of Business, Economic  
Development, and Tourism's Clean Hawaii Center*

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Environmental Protection  
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Iron Waste  
Landfill Space  
Build a Better  
Kitsap County  
—Model  
Living and Using  
Governments,  
Strain

Protection  
Development and  
Included herein are  
by the EPA, State

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## Introduction

When we build, we do well  
when we are guided by  
the State motto:

"UA MAU KE EA O KA  
AINA I KA PONO"

(The life of the land is  
perpetuated in  
righteousness.)

*A Contractor's Waste Management Guide* provides practical methods contractors can use to practice responsible construction waste management in Hawaii. It contains checklists, tips, and tools for use in residential, commercial, and remodeling projects. While its primary focus is on job site construction practices, the *Guide* identifies opportunities to reduce waste through design, such as through material selection and specification. In particular the *Guide* provides specific ways to help you:

- ◆ Reduce the amount of construction waste generated.
- ◆ Divert waste from disposal
- ◆ Use recycled-content or salvaged building materials
- ◆ Use least-toxic building materials (to minimize hazardous waste)

The primary goal of the practices in this *Guide* is to protect against environmental degradation by reducing the amount of C&D waste disposed in Hawaii. However, many of the practices recommended in this *Guide* have the added benefit of saving you or your client money. Incorporating material efficiencies in design and operation can reduce the overall cost of materials. Job site recycling or reuse can save on disposal fees. In addition, waste reduction techniques can protect you from long term liability or other long-term costs.

## Building With Vision

Worldwide, buildings are responsible for 12 percent of freshwater withdrawals, 25 percent of wood harvest, and 40 percent of material and energy flows. In Hawaii, we can help protect the water we drink, the air we breathe, and the natural beauty of our islands by using resource-efficient construction methods, including job site waste reduction and recycling.

In particular, responsible construction waste management can more effectively utilize limited resources, help preserve a unique and fragile environment, and help protect a tourist economy that thrives on an aesthetically pleasing built and natural environment. By reducing the amount of construction and demolition C&D waste disposed in Hawaii, we work together to foster a sustainable environment and economy.

- This *Guide* is a part of Clean Hawaii Center's efforts, in partnership with the construction industry, to promote resource-efficient construction. It focuses on one facet of resource-efficient construction. For more information about how to build with the environment in mind, we refer you to the *Guide to Resource-Efficient Building in Hawaii*, a publication of the Hawaii Advanced Building Technologies (HABiT) program.

## Not Just for Contractors

Although this *Guide* is primarily for use by contractors, it is also useful for:

- ♦ **Design Professionals**—As a design professional, you play a key role in waste management. The *Guide* will help further your overall understanding of job site production processes, and Appendix G will provide guidance in using design specifications to reduce construction waste.
- ♦ **Solid Waste Planners**—As a solid waste planner, you will find this document useful to increase your understanding of current practices and as a tool in shaping future policies and programs.

## How to Use The Guide

This *Guide* is organized as follows:

**Fundamentals**—The *Introduction*, *Start With A Plan*, the *Strategies and Developing Your Own Specifications* sections of *Appendix G*, *Appendix H (Resource List)*, and the *Glossary* cover the basics. You may want to take a look at these before you get into the “tools” provided in the guide, which include:

**Checklists**—The checklists provide specific actions for putting waste management practices in place. The body of the *Guide* provides three checklists for use by contractors in the field—one each for general practices, solid waste management, and hazardous waste management. Other checklists include *Appendix E*, a contractor's checklist for job site training, and the *Specification Options* design checklist of *Appendix G*.

**Tips**—You'll find these quick “pointers” in bordered boxes in the margin of the *Guide*. They provide additional helpful information related to specific topics, such as how to estimate the amount of waste you will generate for a project and how to make recycling convenient and efficient.

**Case Studies**—These illustrate successes and lessons learned with several “real-life” job site recycling and waste reduction programs in Hawaii and on the mainland. You'll find them throughout the *Guide*, in shaded boxes at the bottom of the page.

**Forms**—These are forms you can use to carry out checklist items such as performing a pre-project walk-thru (*Appendix A*), developing a job site waste management plans (*Appendix B*), performing a waste audit (*Appendix C*), and assessing the effectiveness of your waste management program (*Appendix F*).

**Samples**—These provide ideas for job site signage you can use to inform your field personnel and to market your program.

## Start With A Plan

### The Job Site Action Plan

#### Tips for a Cost-Effective Job-Site Action Plan

- ◆ Keep it simple.
- ◆ Target only high-potential materials for recycling and reuse.
- ◆ Collect and recycle a specific material when the volume justifies it. This may vary with different phases of construction.
- ◆ Specify methods for storing and collecting recycled materials. Methods should be as convenient as disposal, protect materials from damage, and require no additional expense (such as container rental) if avoidable. For example, you may want to stockpile cardboard in a garage, use a roped-off area for metal, and use containers for wood

The purpose of the Job Site Action Plan is to help you incorporate the Three "R's" of effective construction waste management:

- ◆ **Reduce** (or "source reduction") means to prevent waste before it happens. It is highest on the construction waste management hierarchy because it has the most positive environmental impact. Many design and job site practices can significantly reduce waste and cost of materials on a construction project while requiring only slight modifications of standard procedures. One example is the use of efficient framing techniques that can reduce up to 20 percent of your wood framing material costs. *Effective source reduction begins during design.*
- ◆ **Reuse** means to reuse materials as much as possible in your construction project. This includes materials removed during demolition, scrap generated on site, and used materials or scraps from other jobs.
- ◆ **Recycling** means to separate recyclable materials from non-recyclable materials and supply them to a hauler or business so they can be processed and used to make new products. Another aspect of recycling is to "Buy Recycled." Buying building materials with recycled-content helps develop a market for the waste materials you recycle from your job site and "closes the loop."

Appendix B provides sample Job Site Action Plans (one for larger jobs and one for smaller jobs).



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## General Practices Checklist

### Materials Selection & Purchase Options

#### Sourcing

- Choose suppliers who use reusable, recyclable, or recycled-content packaging. Let your suppliers know what you are looking for.
- As much as possible, arrange for "just-in-time" deliveries

#### Selection

- When possible, make sure recycled-content or resource-efficient building and landscaping materials are specified and installed.
- Substitute recycled-content or resource-efficient building and landscaping products as equivalents when cost-effective. See Appendix H for resources providing specific information on recycled-content materials available.
- Install recycled or reused materials and equipment.
- Select low-toxic alternatives to conventional materials whenever possible. Examples include organic fertilizers, low-toxic solvents, paints, sealants, and wood preservatives, rot-resistant woods, and pest- and water-proof plastic lumber. Other examples include formaldehyde-free sheathing, fiberglass, and low-mercury lighting fixtures.

#### A Tip on High Potential Recyclables

Demolition and remodeling activities generate many materials that have high recycling potential. These materials include:

- ⊗ Concrete
- ⊗ Asphalt
- ⊗ Concrete/asphalt rubble
- ⊗ Drywall
- ⊗ Metal (ferrous and non-ferrous)
- ⊗ Wood
- ⊗ Building components and specialty items
- ⊗ Other (See Appendix A)

### Waste Reduction Options

#### Pre-Project Walk-Thru (Demolition and Remodels Only)

- Prior to start of demolition or re-model, perform a walk-thru of the site with an experienced recycler/demolition or remodel contractor to identify high-potential recyclable materials. Appendix A provides a sample form to use for this walk-thru. (See "Sourcing" below for information on recyclers.)
- Use results of the walk-thru to develop your waste management plan. (Appendix B)

#### Signage

- Clearly mark material storage areas and post storage recommendations.
- Clearly mark areas for cutting, recycling and other waste management operations. See Appendix D for sample signage.
- Post the job site waste reduction plan (with waste reduction goals) in material storage area and other central locations, such as the job site trailer. Provide specific examples of ways to reduce or reuse waste materials generated on the job.

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### Training

- Use a meeting to inform on-site contractors, subcontractors, and laborers about the importance of waste reduction (including reuse) and techniques that reduce waste. This meeting can be combined with other training meetings on recycling and site protection. Be sure to ask for ideas from participants. See Appendix E for a suggested checklist to use during the meeting.
- Provide positive incentives to crews to encourage waste reduction. Incentives. (For example: hats, T-shirts, pizza)
- Direct crews to make use of scraps and use less materials overall.

**Good waste management goes hand in hand with an effective safety program.**

With slight modifications, a clean, safe site can become a "waste-busting" site. The effective use of signage, education at weekly meetings, and incentives is a common thread throughout this *Guide* and is based on the safety program model.

### A Tip on Incentives

Train forklift operators to help educate people in the proper way to handle recyclable materials.

Require people who mis-sort or mishandle recyclable materials to resort the materials themselves.

Charge a fee to individuals who continually contaminate loads.

### Storage

- Store materials in a dry, protected place.
- Use manufacturers' recommendations for storage.

### Operations

- Set up specific areas for cutting, recycling, and other waste management operations.
- Estimate as accurately as possible. Suppliers can often provide tips on estimating specific materials to help you avoid over-ordering.
- Prepare and use detailed take-offs and provide as a reference for crews.

### A Case Study: The Kauai Resource Exchange & BuyBack Center

The Kauai Resource Exchange and BuyBack Center diverts used consumer goods from Kauai's public landfills and gives them new life through reconditioning, repair, and recycling. The Center itself was constructed as a waste management project. The complex was constructed with a combination of locally recycled materials, locally manufactured materials, and conventional building materials. Examples of this blending of "green" and conventional materials include:

- ⊕ Retaining wall constructed from used tires, stacked and backfilled with crushed glass. (Over 1000 tires were used, saving the County an estimated \$5000 in transport and disposal costs.)
- ⊕ Ground cover made from crushed glass in lieu of gravel.
- ⊕ Exterior walls of concrete masonry units manufactured on Kauai using local materials.
- ⊕ Roof framing system made from galvanized steel made from recycled scrap.

(Contact: William Bess, AIA, Architects Kauai, phone 838-2880.)

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### A Tip on Residential Waste Generation Rates

Use the following ballpark figures to get a sense of how much construction waste may be generated on your jobs:

Material	Lbs./sq.ft.
Wood*	1.3-2.1
Drywall	1.0-1.2
Cardboard**	0.1-0.5
Metals	0.02-0.13
Other waste (plastic, shingles, etc.)	0.5-1.3

\*Range for wood waste depends on material used for wall sheathing, siding, trim, and roofing

\*\*Range for cardboard depends on type of siding and whether windows, doors, and cabinetry are locally manufactured.

Source—*Residential Construction Waste Management, A Builder's Field Guide*

- Use quality tools and clean thoroughly between uses.
- Reuse materials whenever possible.
- Donate or sell reusable materials from your job.
- Use reusable form-work, such as steel and aluminum forms.
- Balance cut and fill.
- Reuse excavated soils and vegetation and grind landclearing wood and stumps for reuse on-site as fill or mulch.
- Preserve existing native vegetation and reuse as landscaping.
- Donate unused existing vegetation for use as landscaping.
- Use transplanted native vegetation if available.
- If you must use hazardous products, keep their wastes separate from C&D waste, and dispose of them properly.

## Job Site Recycling Options

### Signage

- Post waste reduction goals in material storage areas and other central locations, such as the job site trailer. Provide specific examples of significant ways to reduce or reuse waste materials generated on-site.
- Prominently display your progress in meeting recycling goals, both for both public visibility and to keep site crews updated. See Appendix D for sample signage.

### Training

- For demolition only—Conduct a pre-demolition briefing to inform demolition contractors of salvage/recycling goals identified by the pre-project walk-thru. Emphasize the importance of sorting and avoiding mixing of demolition waste.
- Use a meeting to inform on-site contractors, subcontractors, and laborers about the importance of recycling, the types of materials that can be recycled, potentially hazardous materials, and any restrictions. This meeting can be combined with other training meetings on waste reduction and site protection. Be sure to ask for ideas from participants. See Appendix E for a suggested checklist to use during the meeting.
- Provide positive incentives to crews to encourage recycling. (For example: hats, T-shirts, pizza)

**A Tip on Volume  
to Weight  
Conversions**

**Material  
Conversion Rate**

Wood  
300 lbs./cu.yd.  
5.7 cu.yd./ton

Cardboard (loose)  
30-100 lbs./cu.yd.  
20-50 cu.yd./ton

Drywall  
400 lbs./cu.yd.  
5 cu.yd./ton

Mixed waste  
350 lbs./cu.yd.  
5.7 cu.yd./ton

Source—*Residential  
Construction Waste  
Management, A Builder's  
Field Guide*

**Sourcing**

- Refer to *Minimizing Construction & Demolition Waste* (available from the Department of Business, Economic Development, and Tourism, Clean Hawaii Center, phone 587-3802, to identify recycling services on Oahu. For facilities on neighboring islands, see Appendix H.

**Cleanup & Disposal Options**

**Sourcing**

- Reduce your liability by using only responsible haulers who deliver the materials generated at your site to properly permitted facilities. Verify this by requiring receipts.

**Site Maintenance & Cleanup**

- Regularly clean around storage and recycling bins.
- Manage bins to minimize leakage or spillage.
- Use only storage bins that are watertight, rodent-proof, and easily cleaned.
- Do not burn, bury or otherwise dispose of rubbish and waste materials on project site.
- Ensure *all* wastes are removed from the site upon completion of the project.
- Restrict the use of water for cleanup where sweeping is sufficient.
- Properly dispose of treated wood waste through a certified landfill or municipal solid waste incinerator. Do not burn scraps of treated wood on-site or as kindling in a wood stove or fireplace.

**A Case Study: The Liholani Golf Village Job Site-Recycling Program**

The Liholani Golf Village development in Pukalani, Maui comprises 26 housing units on a condominiumized property of 3.5 acres. A project of the Smith Development Company and Dilloway Construction Company, construction began in early September 1998. At the time of this writing, the Maui Recycling Group is midway through a pilot program to investigate the feasibility of on-site, source-separation recycling for residential construction sites.

Preliminary data indicate that the project is exceeding its goals—approximately 25 percent of the total weight of waste generated is being diverted, and actual hauling costs are well under budget. The project is also experiencing unanticipated efficiencies in construction process, attributed to the convenient placement of the recycling tipsters.

Based on projected totals, savings for tipping costs for drywall alone (at \$37.00 per ton) are \$1,110. This is approximately equivalent to the original bid for recycling services. This savings alone offsets the cost of recycling. (Contact: Jeff Stark, Maui Recycling Group, phone 579-9109.)

## Solid Waste Management Checklist

### Materials Selection & Purchase Options

#### Tips to Reduce

- ⊗ Avoid damage. Train crews to handle and store materials properly.
- ⊗ Avoid contamination. Train site crews to separate materials properly and avoid mixing recyclable and non-recyclable materials.
- ⊗ Use materials efficiently. Encourage site crews to make use of scraps and use less materials overall.
- ⊗ Estimate as accurately as possible. The more accurate, the less waste. Suppliers can often provide tips on estimating specific materials.
- ⊗ Purchase precut and prefab components.
- ⊗ Choose strong materials and exploit structural advantages.
- ⊗ Purchase high-grade materials. These will get more use and generate less waste.
- ⊗ Reduce packaging waste. Use suppliers who take back packaging.
- ⊗ Coordinate just in time deliveries.

Source—The Recycling Plus Program manual.

#### Selection

- Consider used building materials. Most used building materials can be installed provided they do not act as structural components or otherwise compromise safety. Materials purchased at salvage yards usually cost only 10 percent to 50 percent of the cost of new materials. For best results, the use of salvaged materials should be incorporated during design.
- If you are involved in building design, use standard dimensions to reduce wasted lumber, drywall, and other materials.
- Use recycled concrete as aggregate for fill or to make new concrete.
- Use recycled aggregate containing crushed brick, concrete block, or glass cullet.
- Use compost and mulch in landscaping.
- Use crushed/ground gypboard as a soil amendment.
- Use cold-formed steel framing. Select steel framing with a minimum of 25 percent recycled-content. (Caution: Use galvanized steel and assemble with good quality connectors to prevent corrosion.)
- Use engineered lumber products.
- Use concrete in the foundation with flyash content up to 30 percent.
- Use lightweight concrete in the foundation made with pumice and perlite from expanded volcanic materials.
- Use insulation with recycled-content. Examples include cellulose, fiberglass, expanded polystyrene (EPS or rigid foam), and mineral wool.
- Install materials that can be recycled, such as low-mercury lighting fixtures.
- Use locally-produced, recycled-content finishes, where available. Examples include cabinet pulls, glass blocks, and tiles manufactured from recycled glass.
- Use durable finishes.
- Use recycled gypsum board.
- Use plastic lumber for exterior applications such as fences, benches, decking, docks, retaining walls, picnic tables, and landscape borders.
- Use counter tops and cabinets constructed from recycled material.
- Use recycled-content or recyclable carpet and carpet pads.
- Use recycled-content ceramic tile.
- Use recycled-content ceiling tiles.

### Sourcing

- Use suppliers who use less packaging, such as cardboard, plastic shrink wrap, Kraft paper, wood pallets or frames, and metal bands.
- Use suppliers who take their packaging back after delivery.
- If the building design calls for a non-standard dimensions (try to avoid), and you have sufficient dry storage, order in bulk from a supplier who will produce the dimension for you.

## Waste Reduction

### Training and Enforcement

- Require or encourage solid waste reduction in subcontractor agreements.
- Provide reminders at safety or other regular meetings of the project's waste reduction goals. Use these meetings to report progress, discuss problems, and discuss specific actions that can be taken. See Appendix E for a suggested checklist to use during the meeting.

### Operations

- Set up a central area for cutting and storage of scraps for reuse. Studies of construction sites with a centralized cutting area show total waste from the sites were reduced by as much as 15 percent.
- Avoid throw-away equipment. Clean and maintain properly to get the full life out of the equipment. Examples of reusable equipment include construction fences, tarps, and refillable propane tanks.
- Set up labeled bins for different sized nails, screws, and other fasteners to reduce wasted hardware. Provide weather protection for bins.
- Maintain a dedicated area for recycling metals, cardboard, drywall, wood, and other recyclable waste.
- Sell or give away any untreated wood scraps.
- Divert other untreated wood scrap to a composting facility.
- Keep treated wood scraps separate from other C&D waste.
- Save larger treated wood scraps and re-use on a future project. Be sure to protect from the weather.
- Create a board-by-board take-off from your order list and provide as cut list to framer.
- Reuse materials used to build temporary structures. To make reuse easier, use assembly methods that make dismantling convenient (for example, fasten with screws instead of nails).
- Reuse small or warped pieces of dimensional lumber as blocking, bracing, shims, back framing, or form stakes. (Store in a central cutting and storage area.)

### Tips to Reuse

- ⊕ Use salvaged materials from other jobs.
- ⊕ Reuse job-site materials such as concrete forms and site fencing.
- ⊕ For temporary construction, use methods that allow for reuse, such as screws rather than nails.
- ⊕ Reuse scrap on site.
- ⊕ In demolition and renovation jobs, plan to salvage. Donate or sell salvaged materials.
- ⊕ Allow for local scavenging, if it is not a site safety issue.

Source—The *Recycling Plus* Program manual.

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- Donate or sell reusable items from your job. Contact HIMEX (Hawaii Materials Exchange, phone 808-586-4240 or web site [www.himex.org](http://www.himex.org)) or other non-profit organizations regarding donated materials.
- Move materials leftover from job to job.

### *Application—Termite Control*

Termite control is an issue key to waste reduction because termites represent a significant threat to the integrity of the building structure. Repairs are not only expensive, but often generate large amounts of waste that cannot be recycled or reused. Methods of termite control include ground treatment, both chemical and non-chemical, wood treatment, preventive design and construction strategies, and regular maintenance measures. Here are some specific, environmentally-preferred actions for termite-prevention:

- Thoroughly remove all roots when clearing vegetation.
- Inspect lot for termites when clear.
- Keep the site and work area clear of all organic debris, wood scraps, cardboard, and paper.
- Frequently inspect site for signs of termite activity.
- Use materials that are impervious or unattractive to termites such as concrete, masonry, steel, and plastic lumber. (Caution: When using steel, use galvanized steel and assemble with good quality connectors to prevent corrosion.)
- If wood is used, use only wood with adequate chemical treatment. Use the least toxic method suitable for the application. (If possible, use borate-treated or other non-toxic treated lumber, which has higher recycling potential.)
- Keep drainage flow routed away from building by using appropriate grading and root and site drainage systems. Use french drains or mini-dry wells when appropriate.
- Provide easy access for termite inspection by the owner.
- Install a 4-inch basalt termite barrier (BTB) around, and in some cases, below footings and beneath all slab on grade construction.
- Protect the BTB protective layer during construction. Dirt and wood dust can mix with the basalt and diminish its effectiveness as a termite barrier.
- Install a non-chemical termite control system. An example uses marine grade stainless steel screen as a physical termite barrier around the building perimeter.
- Use concrete in place of wood or concrete masonry units (CMUs) for building foundations.
- Fill all cracks in concrete foundations that are larger than 1/32-inch in foundations to eliminate avenues for termites.
- If CMUs are used, fill shrinkage cracks in the grout to eliminate termite entry points, especially around slab pipe penetrations. If



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- unsealed, these points provide termites with entry opportunities.
- Use copper or galvanized metal termite pans to separate foundations from wooden structures.
- Treat field cuts and drill holes with a brush-on wood treatment such as copper naphthenate. (CCA treated wood only.)
- Keep plantings at least 24 inches from the building perimeter.

### Application—Advanced Framing

- Use wood-saving advanced framing techniques, including one or more of the following:
  - ◆ Drywall stops or clips for backing eliminate the need for extra studs, for example, where one wall abuts another, or where two walls intersect at corners. A box of clips cost about \$160 and supplies three average homes.
  - ◆ Two-stud corners. With two-stud corners, drywall clips spaced two feet apart can provide back-up for interior finish materials.
  - ◆ Insulated headers. Insulated headers reduce thermal transfer (bridging) found in standard construction using solid wood headers for exterior window and door openings.
  - ◆ 24-inch on-center framing. (Because there's more room for insulation, your customer will also benefit from greater energy-efficiency.) Refer to the Uniform Building Code for stud sizing requirements. When using this method, apply plywood on a horizontal axis (making the system similar to roof assembly) to eliminate "wavy" walls. This has been shown to provide structural integrity while reducing wood use by 15 percent.

(For more information on advanced framing, see *Advanced Framing: Techniques, Troubleshooting and Structural Design*, Journal of Light Construction, Richmond, VT: Phone 1-800-375-5981.)

### A Case Study: The Moanalua Terrace Demolition Project

On a recent military housing upgrade project, Transcend, Inc., subcontractor to Harper Construction, removed 516 homes, complete with concrete slabs, floors, roofs, masonry block walls, and existing trees and vegetation. The \$90 million demolition took approximately six months to complete. Nearly 80,000 tons of material was diverted, saving approximately \$800,000 in landfill fees. The material recycled comprised:

- ⊕ 45,000 tons of concrete, crushed on site and used as aggregate for utilities
- ⊕ 2,700 tons of scrap iron, rebar, and 300 tons of non-ferrous copper/aluminum
- ⊕ 3,500 tons of trees and vegetation, ground and converted into fuel
- ⊕ 7,500 tons of cold plain and A/C for use as road base
- ⊕ 20,000 tons of fill material used to grade and improve agricultural land.

Also salvaged were electrical switches, panels, and breakers (shipped to Los Angeles, CA), power poles, doors, and water heaters.

The new design housing features termite-resistant steel construction using waste-saving, prefabricated walls. (Contact: Jeff Harper, Harper Construction Company, phone 422-1931.)

## Job Site Recycling Options

**In Hawaii, you can recycle concrete, asphalt, wood (clean lumber and green waste), cardboard, and metals.**

Some companies, such as scrap metal dealers, will pay for recyclable material. Others charge fees to accept or pick up recyclables, but still generally less than fees for landfill disposal. Be aware that recyclers have specifications for the types and grades of materials they accept. To avoid wasted effort, call first to find about their requirements. See the directory in *Minimizing Construction & Demolition Waste* for a list of haulers and recycling businesses.

### Tips on Recycling

- ⊕ Look for a member of your staff/crew who has high interest in recycling. Most recycling plans succeed if someone in the company takes responsibility for the program.
- ⊕ Work through your trade association. A job-site recycling committee can provide the forum for information/options you might otherwise miss.
- ⊕ You may feel that any cost savings recycling tipping will not cover the extra time required for separation. Keep in mind that extra time spent on recycling normally decreases as the crews and subcontractors get used to a new system of waste management.
- ⊕ Avoiding contamination is the key to successful recycling. Be sure that your idea of a "clean" load is the same as your recyclers'.

Source—The *Recycling Plus* Program manual.

### Planning

- Identify materials that can be recycled cost-effectively in your area, and target them in your plan.
- Prepare a job site recycling plan and post it on-site.
- Set a measurable goal for recycling. For example, "We will attempt to recycle 50 percent of the waste generated on this job."

### Signage

- Clearly mark recycling areas and containers (interior and exterior) to prevent contamination. Make sure the signage provides information on what is acceptable. (For example, "No, wood with paint," "Yes, wood with nails.") See Appendix D for sample signage.

### Training and Enforcement

- Include a requirement to recycle as much as possible in all subcontractor agreements. Identify target materials, those that are cost-effectively recycled in the project area.
- Inform new personnel where the recycling containers are located and which materials are recyclable.
- Periodically check recycling and garbage bins for mis-sorted materials. Provide training to people who are mis-sorting recyclable materials or ask your superintendent or safety manager to inform them.
- Provide reminders at safety or other regular meetings of the project's waste reduction goals. Use these meetings to review where, when, and how materials will be source separated and collected, report progress, discuss problems, and discuss specific actions to take. Also use these meetings to exchange ideas as to how to accomplish this with highest efficiency. See Appendix E for a suggested checklist to use during the meeting.
- Track and promote recycling results. See Appendix D for sample signage to use to advertise your success.

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### Tips for Making Recycling Convenient and Efficient

- ⊕ Provide clear, easy-to-read signs on bins. (Bilingual or pictorial, if appropriate)
- ⊕ Provide signs for bins that are also sturdy and removable so that they can be quickly removed and re-attached as bins are changed out.
- ⊕ Avoid contamination of recyclables by making sure there's a convenient trash receptacle near recycling bins.
- ⊕ Avoid unnecessary pickups (and charges) by making sure containers are full and packed down before starting to use empty or half-full ones.

Source—The *Recycling Plus* Program manual.

### Sourcing

- Evaluate your options for transporting recycled materials to appropriate facilities. Local options are provided in the *Minimizing Construction & Demolition Waste* directory. Options include:
  - ◆ Garbage Hauler—Your hauler may provide bins and pick-up for certain materials.
  - ◆ In-House Recycling—You work with individual recyclers, arrange bins and pick-up and/or self-haul
  - ◆ Subs Recycling—Sub-contractors work with individual recycler, arrange bins, pick-up, or self-haul.
- Maintain regular contact with your haulers or recycling service providers to make sure you benefit from cost savings and buy-back opportunities.

### Operations

- Locate trash and recycling containers close to each other, making it convenient to recycle.
- Use your waste disposal bills and recycling receipts to determine your progress towards your recycling goals. Your hauler should be able to provide you with a summary of the results. Advertise your success!
- Divert untreated wood waste to a composting facility. On average, about 25 percent of discarded construction material is dimensional lumber and another 10 percent is waste from manufactured wood products.
- Keep treated wood scraps separate from other C&D waste.

### A Case Study: Using Waste Audits to Improve Your Recycling Program

Fletcher Wright Construction saved \$70,000 through recycling and waste reduction during the construction of two new Microsoft Campus office buildings in Redmond, Washington. The general contractor used periodic waste audits to check and "tweak" recycling operations.

Using an audit form similar to Appendix C, project managers were able to identify problems, including instances where recyclables were being thrown in the dumpster instead of the recycling bin, and trash was thrown into the recycling bin. The project's safety manager conducted the audits on a weekly basis as part of his regular routine. The audit helped raise awareness and demonstrated that the general contractor was serious about recycling.

A more in-depth waste audit on one dumpster by an environmental building consultant hired for the project revealed that nearly 70 percent of its contents were recyclable! Slides of the materials, shown at a job site pizza meeting, motivated the crew to "do better." Later that week, the crew set up areas for metals and cardboard. The recycling contractor estimates that after this audit, recycling increased between 5 and 10 percent.

(Contact: Kathleen O'Brien, O'Brien & Company, phone 206-842-8995.)

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### A Tip for Job Site Recycling

You will want to target only high potential materials in your Job Site Action Plan. These are the materials you generate the most volume of, that have the most market value (and as a result can be successfully recycled in the job site area), and can be most easily source-separated.

- Save larger treated wood scraps and reuse on a future project. Be sure to protect from the weather.
- Properly dispose of treated wood waste through a certified landfill or municipal solid waste incinerator. Do not burn scraps of treated wood on-site or as kindling in a wood stove or fireplace.
- Recycle cardboard. Most volume occurs during the finish phase of the project, when electrical and mechanical fixtures are being installed. Depending on the market, cardboard can represent a buy-back opportunity.
- Recycle metal scraps. In addition to high-value copper, other metals are now being recycled, some representing buy-back opportunities. Separated metals have a higher value than mixed metals.
- Recycle drywall. Recycling fees for drywall are slightly less than disposal fees at local landfill facilities. Items that could be considered contaminants include paint, joint compound, screws, lath and plaster, or moisture. If your drywall subcontractor handles his or her own waste, work with the sub to develop a recycling program.
- Reuse site-generated concrete/asphalt rubble.
- Divert reusable waste materials, such as fixtures, to a salvage exchange facility, such as HIMEX (Hawaii Materials Exchange), phone 808-586-4240 or web site [www.himex.org](http://www.himex.org). The directory in *Minimizing Construction & Demolition Waste* also lists other agencies that accept donations of used building materials.

## Cleanup & Disposal Options

- See General Practices

### A Case Study: Island Demo, Inc., Honolulu's C&D Transfer Station

At the this time, Island Demo Inc. is Oahu's only City- and County-permitted C&D debris facility transfer station. Disposal of C&D at Island Demo undergoes 27 percent reduction by weight from low technology segregation and recycling methods, reducing the amount of material destined for the landfill. Materials recovered/diverted comprise:

- ⊕ Cement aggregated (16%)
- ⊕ Metal (7%)
- ⊕ Miscellaneous hardware, fittings, fixtures (3%)
- ⊕ Paper (1%)

(Contact: John Mike Leary, phone 839-5522.)

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## Hazardous Waste Management Checklist

Contractors and subcontractors are responsible for knowing whether materials or items they use are hazardous and or may be considered hazardous waste when disposed. Common job site materials that can become hazardous waste include paints and other finishes, solvents, adhesives, and oils. Other hazardous waste items might include vehicle batteries and other petroleum products such as gasoline, diesel, or kerosene. Hazardous materials must be treated with special care to avoid contamination of other non-hazardous materials as well as the site itself.

### To determine if a material or item is potentially hazardous waste:

- Check label and shipping papers.
- Look for words such as hazardous, danger, caustic or corrosive (dissolves skin, metal or other materials); flammable or ignitable (catches fire easily) carcinogenic (causes cancer); and toxic or poisonous (harms people and animals). A list of hazardous waste and criteria are found in Hawaii Administrative Rules (HAR) Title 11 Chapter 26.
- Check the material safety data sheet (MSDS) the manufacturer must prepare for the product. Ask your supplier for a copy.
- For questions and additional information including fact sheets and flyers, call the Hazardous Waste Program Office at 586-4225.

### A Tip on Generator Classifications

Most builders meet the State's definition of a Conditionally Exempt Small Quantity Generator (CESQG). A CESQG generates no more than 220 pounds of hazardous waste per month (about half of a 55-gallon drum) and never accumulates more than 2,200 pounds. CESQGs must send their waste to a site permitted to manage hazardous waste. There are fewer regulations and less paperwork required for CESQGs.

If you generate more than 220 pounds, you are classified as a Small or Large Quantity Generator (SQG or LQG) and must contract to have your hazardous waste sent to a site permitted to manage hazardous waste. There are more regulations that SQGs and LQGs must follow, including obtaining an EPA ID number and tracking of the waste from "cradle to grave."

## Material Selection and Purchase Options

### Selection

- Substitute less or non-toxic materials for toxic products when cost-effective. Examples include formaldehyde-free sheathing and fiberglass, and low-mercury fluorescent tubes, which are not classified as hazardous waste. Other examples are organic fertilizers, low-toxic wood preservatives, rot-resistant woods, and pest- and water-proof plastic lumber.
- Avoid toxic wood treatment with arsenic compounds such as CCA (copper chromium arsenic compound) and ACZA (ammoniac copper zinc arsenate). Select less toxic treatments such as borate (Hi-Bor) and ACQ (alkaline copper quaternary). These less toxic treatment may also render the products more recyclable.
- Use less pesticides and fertilizers and install a landscaping scheme that will require less of these polluting substances. A low-maintenance landscaping scheme uses less of these toxic substances *and* uses less water for maintenance.
- Use water-based instead of oil-based solvents, paints, and sealants.
- Purchase and use low-toxic or non-toxic cleaners for the job.
- Purchase and use less toxic form releasers.
- Avoid chlorinated solvents. Consider using citrus-based solvents.

### Sourcing

- Ask suppliers for MSDS as a routine part of purchasing materials that have been identified as potentially hazardous. Inform your suppliers that you prefer cost-effective least-toxic alternatives.

**To determine your status as a regulated hazardous waste generator:**

- Check with your local supplier for low or non-toxic alternatives.
- ◆ At the start of the project, work with your owner and any subcontractors to determine the types and amounts of hazardous waste likely to be generated during the project. Will any of the potentially responsible parties (owner, general contractor, sub-contractors) be a regulated generator (CESQG or SQG)?
- ◆ If so, determine who should accept the responsibility for the designation as the generator. This designee is often the person who pays for hauling—normally the general contractor. However, other factors such as the number and nature of other ongoing projects, may make indicate that designating the owner or a sub-contractor(s) is more prudent and cost-effective.
- ◆ Once the designation is agreed upon, the general contractor should contact both the MSW landfill and the C&D landfill to discuss the landfill's waste screening requirements. This will identify any additional requirements of the landfill that must be met.
- ◆ For assistance, contact the Hazardous Waste Program Office at 586-4225.

## Waste Reduction Options

### Signage

- Post signage to remind field personnel of the goal to reduce hazardous waste on the project. See Appendix D for sample signage.

### Training

- Provide reminders at safety or other regular meetings of the project's waste reduction goals. Use these meetings to report progress, discuss problems, and discuss specific actions. See Appendix E for a suggested checklist to use during the meeting.

### A Tip on Liability

Builders can reduce their liability exposure by requiring their painting subcontractor to show proof of proper disposal or to switch to more benign paints, stains, caulks, and solvents.

### Operations

- Label hazardous waste containers properly to avoid mixing incompatible wastes or contaminating clean materials.
- Avoid overstocking hazardous materials.
- Adopt a "first-in, first-out" policy to prevent raw materials from becoming out-dated.
- Store wastes separately to avoid contamination.
- Reject vendor samples you don't need.
- Reuse spent solvent for cleaning.
- Donate extra paint to someone who can use it. List large quantities with the HIMEX (Hawaii Materials Exchange), phone 808-586-4240 or web site [www.himex.org](http://www.himex.org). The directory in *Minimizing Construction & Demolition Waste* also lists other agencies that accept donations of used building materials.
- Dispose of non-recyclable hazardous waste at legally permitted facilities.
- Require and retain receipts to document proper disposal/recycling of all hazardous materials.

### Tips for Reducing Hazardous Waste

- ⊗ Use cleaners wisely—use heavy duty, more toxic cleaners only for heavy duty jobs.
- ⊗ Buy only the amount of product that you need. Use up the products or give leftovers to someone who will.
- ⊗ Inspect containers upon receipt, and reject leaking or damaged containers.
- ⊗ Adopt a "first-in, first-out" policy to prevent raw materials from becoming obsolete.
- ⊗ Label hazardous waste containers properly to avoid mixing incompatible wastes or contaminating clean materials.
- ⊗ Control access to storage areas and routinely inspect containers.
- ⊗ Be prepared to respond promptly to spills.
- ⊗ Reuse solvents. Allow solids to settle, then pour off the clear top layer and reuse it. Solids can also be strained from spent solvents using many different types of paper or cloth filters. Note: The solids so removed (settled or strained) are often hazardous waste.
- ⊗ Recycle all recyclable hazardous wastes, such as used motor oil.

## Job Site Recycling Options

### Training

- Provide reminders at safety or other regular meetings of the potential to recycle hazardous waste. Use these meetings to report progress, discuss problems, and suggest specific actions. See Appendix E for a suggested checklist to use during the meeting.

### Operations

- Recycle as much as possible. Consult the *Minimizing Construction & Demolition Waste* directory for businesses and facilities that accept hazardous waste for recycling.
- Recycle fluids, such as oil or antifreeze and vehicles removed from vehicles at approved facilities.
- Recycle solvents from paint gun washers.

## Cleanup and Disposal Options

### Operations

- Follow manufacturers' recommendations for the disposal of paints, stains, and other controlled materials.
- Dry latex paint in the can, and remove the lid before discarding in covered dumpsters.
- After reusing solvents, dispose of them as hazardous waste.
- Keep hazardous waste separate. Do not mix different wastes.
- Promptly dispose of hazardous items and waste materials not identified for recycling or reuse.

### Sourcing

- Dispose hazardous waste through a permitted facility (as required).

## Safety & Control

### Storage

- Control access to hazardous material storage areas, and routinely inspect containers for signs of deterioration. Store hazardous waste left on site in waste containers that are in good condition and suitable for the waste (as required by law).
- Clearly label hazardous waste containers.
- Store volatile liquids, including fuels and solvents, in closed containers.



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### A Tip on Penalties for Improper Disposal

Contractors, beware of low disposal bids! Haulers who are convicted of improper disposal of solid waste face fines from the State of up to \$1000 per day. If the waste included hazardous waste, the potential liability is even more severe and far-reaching.

Unpermitted landfills that accept hazardous waste for dumping are in violation of EPA hazardous waste regulations and solid waste regulations. These regulations encompass the "cradle-to-grave" process of the material, making the project owner and general contractor vulnerable to EPA liability actions, including fines exceeding \$500,000 and costs for clean-up and remediation.

### Operations

- Do not clean rollers and brushes in sinks, lawns, catch basins. Painting companies should comply with Department of Health regulations. See *Reducing & Managing Painting Contractor Wastes*. (See Appendix H).
- All vehicles and equipment used during construction should be fueled off-site or at a designated fueling pad. Any on-site fueling area must be constructed with proper containment and safety features.
- Properly maintain vehicles and equipment to reduce gaseous pollutant emissions and fluid leakage.
- Inspect containers upon delivery. Reject leaking or damaged containers.

## Appendix A—Pre-Project Walk-Thru (Demolitions and Re-Models)

Use this form to identify materials and estimated quantities for salvage and recycling for demolition and re-modeling projects.

Material	Est. Qty.	S, R, D (Note 1)	Salvage/ Recycling or Disposal Co.	Est. Tons (Note 2)	Comments
Drywall					
Concrete					
Wood					
Ferrous Metal					
Non-ferrous Metal					
Glass					
Asphalt					
C/A Rubble					
Mixed loads (trash, plastic, packaging)					
Landclearing debris					
Cardboard					
<b>Building Components/Specialty Items (list):</b>					

Note 1—Indicate S (Salvage), R (Recycle), or D (Dispose)

Note 2—Average volume-to-weight conversions are:

Mixed Waste	5.7 yds/ton
Wood	6.7 yds/ton
Cardboard	20 yds/ton
Drywall	4 yds/ton
Rubble	1.4 yds/ton

## Appendix B—Job Site Waste Management Action Plans

Includes:

1. *Job Site Waste Management Action Plan for Large Jobs*
2. *Job Site Recycling Plan for Smaller Jobs*

## Job-Site Waste Management Action Plan Form for Large Jobs

Project Name: \_\_\_\_\_ City and County: \_\_\_\_\_

Recycling Site Coordinator: \_\_\_\_\_ Date: \_\_\_\_\_

**REDUCE, REUSE AND BUY RECYCLED ACTION ITEMS**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**RECYCLING GOAL - To recycle \_\_\_\_\_% of waste generated on the site.**

**RECYCLING SERVICE PROVIDERS AND TARGETED MATERIALS.**  
 Action Items  Evaluate Cost and Services Offered  Service Provider Agreements in Place

Company #1			Company #2		
<b>Materials</b>	<b>Peak Generation *</b>	<b>Mtts. Recipient **</b>	<b>Materials</b>	<b>Peak Generation *</b>	<b>Mtts. Recipient **</b>
<input type="checkbox"/> Wood	_____	_____	<input type="checkbox"/> Wood	_____	_____
<input type="checkbox"/> Metal	_____	_____	<input type="checkbox"/> Metal	_____	_____
<input type="checkbox"/> Cardboard	_____	_____	<input type="checkbox"/> Cardboard	_____	_____
<input type="checkbox"/> Drywall	_____	_____	<input type="checkbox"/> Drywall	_____	_____
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/> _____	_____	_____

\* Point in project (week, phase, dates) when most volume will be generated in material category.  
 \*\* Only applicable if you are handling all recycling activities with in-house staff.

**RECYCLING OPERATIONS - Consult Planning Sections for more information.**

Action ***	Who/What/When
<input type="checkbox"/> Choose bins/collection methods	_____
<input type="checkbox"/> Order bins - oversee delivery	_____
<input type="checkbox"/> Site bins/collection sites for optimum convenience	_____
<input type="checkbox"/> Label/sign bins/collection sites	_____
<input type="checkbox"/> Sort or process wood	_____
<input type="checkbox"/> Sort or process metal	_____
<input type="checkbox"/> Sort or process drywall	_____
<input type="checkbox"/> Sort or process cardboard	_____
<input type="checkbox"/> Sort or process _____ (material)	_____
<input type="checkbox"/> Sort or process _____ (material)	_____
<input type="checkbox"/> Schedule material pickups/dropoffs	_____
<input type="checkbox"/> Document material pickups/dropoffs	_____

\*\*\* Depending on the service option you choose, action items may be the responsibility of your field personnel, your hauler, a full-service recycling contractor, or your subcontractors.

## Job-Site Waste Management Action Plan Form for Large Jobs

### COMMUNICATION ACTION ITEMS - Check only items you plan to use.

Action	Who/What/When	Completed
<input type="checkbox"/> Complete Job Site Action Plan	_____	<input type="checkbox"/>
<input type="checkbox"/> Hold Orientation/Kick-off Meeting	_____	<input type="checkbox"/>
<input type="checkbox"/> Mention Program & Progress in Weekly Job Site Meetings	_____	<input type="checkbox"/>
<input type="checkbox"/> Use Implementation Checklist	_____	<input type="checkbox"/>
<input type="checkbox"/> Post Goals/Progress (Signage)	_____	<input type="checkbox"/>
<input type="checkbox"/> Post Targeted Materials (Signage)	_____	<input type="checkbox"/>
<input type="checkbox"/> Distribute Tip Sheets for Job Site Personnel	_____	<input type="checkbox"/>
<input type="checkbox"/> Distribute Subcontractor Kit with Tip Sheets	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	<input type="checkbox"/>

### MOTIVATION ACTION ITEMS - Check only items you plan to use.

Action	Who/What/When	Completed
<input type="checkbox"/> Use Formal Agreements Committing Subs to Program	_____	<input type="checkbox"/>
<input type="checkbox"/> Fork-Lift Operations Police Site	_____	<input type="checkbox"/>
<input type="checkbox"/> Require Mls-Sorters to Re-Sort Bin	_____	<input type="checkbox"/>
<input type="checkbox"/> Charge Individuals Contaminating Bins	_____	<input type="checkbox"/>
<input type="checkbox"/> Provide Stickers, T-shirts, or Hats	_____	<input type="checkbox"/>
<input type="checkbox"/> Public Recognition of Participating Subs	_____	<input type="checkbox"/>
<input type="checkbox"/> Serve Refreshments at Meetings	_____	<input type="checkbox"/>
<input type="checkbox"/> Award T-shirts (if not used as incentives)	_____	<input type="checkbox"/>
<input type="checkbox"/> Letters of Recognition	_____	<input type="checkbox"/>
<input type="checkbox"/> Awards Luncheon	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	<input type="checkbox"/>

### EVALUATION ACTION ITEMS - Check only items you plan to use.

Action	Who/What/When	Completed
<input type="checkbox"/> Perform Short Form Waste Audit ("Know What's in Your Dumpster", Appendix C)	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Mid-Course Assessment	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Monthly Cost and Materials Tracking	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Final Evaluation	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	<input type="checkbox"/>

### PROGRAM BENCHMARKS - 10 STEPS

Action	Who/What/When	Completed
<input type="checkbox"/> Develop Job Site Action Plan	_____	<input type="checkbox"/>
<input type="checkbox"/> Ensure Buy-In of Field Personnel and Subs	_____	<input type="checkbox"/>
<input type="checkbox"/> Implement Your Plan On-Site	_____	<input type="checkbox"/>
<input type="checkbox"/> Implement Communication Action Items	_____	<input type="checkbox"/>
<input type="checkbox"/> Implement Motivational Action Items	_____	<input type="checkbox"/>
<input type="checkbox"/> Evaluate/Track Progress	_____	<input type="checkbox"/>
<input type="checkbox"/> Reward Successes	_____	<input type="checkbox"/>
<input type="checkbox"/> Incorporate Improvements in Company Program	_____	<input type="checkbox"/>
<input type="checkbox"/> Develop a Plan for Your Next Project	_____	<input type="checkbox"/>

*Job-Site Recycling Plan for Smaller Jobs*

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**Recyclable Materials**

<b>What material will you target?</b>	<b>Condition of material*</b>	<b>How will it be handled on site?</b>	<b>Who will haul it?</b>	<b>Where will it be taken?</b>
<input type="checkbox"/> Wood				
<input type="checkbox"/> Cardboard				
<input type="checkbox"/> Ferrous metal				
<input type="checkbox"/> Non-ferrous metal				
<input type="checkbox"/> Drywall				
<input type="checkbox"/> Concrete / Asphalt Rubble				
<input type="checkbox"/> Other				

*\*Check with your recycler or hauler to see if any specifications or conditions exist regarding the material being recycled. Examples include size restrictions and non-acceptable materials (for example, treatments, finishes, or fasteners).*

**Action Items**

- Complete this Job Site Recycling Plan and post on site.
- Commit subcontractors to recycle in Subcontractor Agreement.
- Keep subcontractors and workers aware and informed of Recycling Program.
- Require individuals to properly sort recyclables and hold them responsible for mis-sorted loads.
- Track and promote recycling results.

*Follow these procedures to maximize recycling at your job site.*

- Separate and recycle wood, cardboard, metal, drywall and other recyclable materials.
- Make sure both interior containers and exterior recycling dumpsters are convenient and clearly labeled.
- Train new personnel where the recycling containers are located and which materials are recyclable.
- Move trash and recycling containers close to each other, making it convenient to recycle.
- Store materials to prevent loss from damage.
- Check recycling and garbage bins daily for mis-sorted materials.
- Provide training to people who are mis-sorting recyclable materials or ask your superintendent or safety manager to inform them.
- Identify large quantities of waste that are not being recycled, and ask your superintendent if they can be recycled.

# Appendix C—Know What's in Your Dumpster

The most effective waste reduction programs will include some method of monitoring the program while the project is in progress. This appendix provides a waste audit form that you can use to get feedback about how well the program is working. It will help you know whether you are recycling all you can or whether appreciable amounts of recyclables are ending up in the dumpster.

## Know What's in Your Dumpster

Project Name \_\_\_\_\_ Date \_\_\_\_\_

On-Site Recycling Coordinator \_\_\_\_\_

Major Subcontractors On site: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

1. Indicate the volume of each garbage and recycling container on site and indicate the percent full in the following chart. Then indicate the three bins to be used for the audit.

Container	Cubic Yds	Percent Full	Audit
Garbage Receptable # 1			
Garbage Receptable # 2			
Garbage Receptable # 3			
Garbage Receptable # 4			
Wood Recycling Container			
Metal Recycling Container			
Cardboard Recycling Container			
Other Recycling Container ( )			
Other Recycling Container ( )			
<b>TOTAL WASTE (CY)</b>			

2. Estimate the percentage and amount of recyclables ending up in one garbage receptacle and the percentage and amount of mis-sorted materials in two recycling bins.

Material Types	Garbage Receptacle		Recycling Container		Recycling Container	
	Show % & CY of recyclable materials		Show % & CY of mis-sorted materials		Show % & CY of mis-sorted materials	
	% of total	CY (approx)	% of total	CY (approx)	% of total	CY (approx)
Wood						
OCC cardboard						
Gypsum						
Metal						
Asphalt paving						
Concrete (includes block)						
Bricks						
Composition shingles						
Plastic (#1 and #2)						
Other recyclable						
Other recyclable						
Garbage (waste not targeted)						
<b>Total</b>	<b>100%</b>	<b>CY</b>	<b>100%</b>	<b>CY</b>	<b>100%</b>	<b>CY</b>



## Know What's in Your Dumpster

3. Mark the areas you feel need attention to help you meet the project's recycling goals.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Lack of space to place containers                       | <input type="checkbox"/> Pick-ups not frequent enough | <input type="checkbox"/> Job schedule is prohibitive     |
| <input type="checkbox"/> Lack of close-by work containers                        | <input type="checkbox"/> Pick-ups too frequent        | <input type="checkbox"/> In-house crew not knowledgeable |
| <input type="checkbox"/> Lack of totes to carry materials to bins                | <input type="checkbox"/> Recycler not responsive      | <input type="checkbox"/> In-house crew not responsive    |
| <input type="checkbox"/> Materials not recyclable                                | <input type="checkbox"/> Costs prohibitive:           | <input type="checkbox"/> Subs not knowledgeable          |
| <input type="checkbox"/> Recycling bins are not available (list material types): | _____ Hauler  | <input type="checkbox"/> Subs not cooperative            |
| _____  | _____ Labor   | <input type="checkbox"/> Other _____                     |
| _____  | _____ Space   |  |
| _____  | _____ Bin   |  |

4. Waste Reduction—Below is a list of actions you can take to prevent waste generation on site. Mark the practices currently being used with a (C) and those you plan to implement on this project with a (P).

- |  |  |
|--|--|
| _____ Use less material                              | _____ Order in bulk  |
| _____ Prevent materials damage during handling       | _____ Coordinate just-in-time deliveries                       |
| _____ Store materials properly                       | _____ Use products with recycled-content                       |
| _____ Make use of scraps                             | _____ Use accurate materials estimating procedures             |
| _____ Avoid contaminating waste with toxic materials | _____ Use precut and prefab components                         |
| _____ Plan to salvage                                | _____ Reduce toxic materials use                               |
| _____ Reuse salvaged materials                       | _____ Choose strong materials and exploit structural advantage |
| _____ Sell or donate salvaged materials              | _____ Use high grade materials                                 |
| _____ Reduce packaging waste                         | _____ Other: _____   |

Other Comments:

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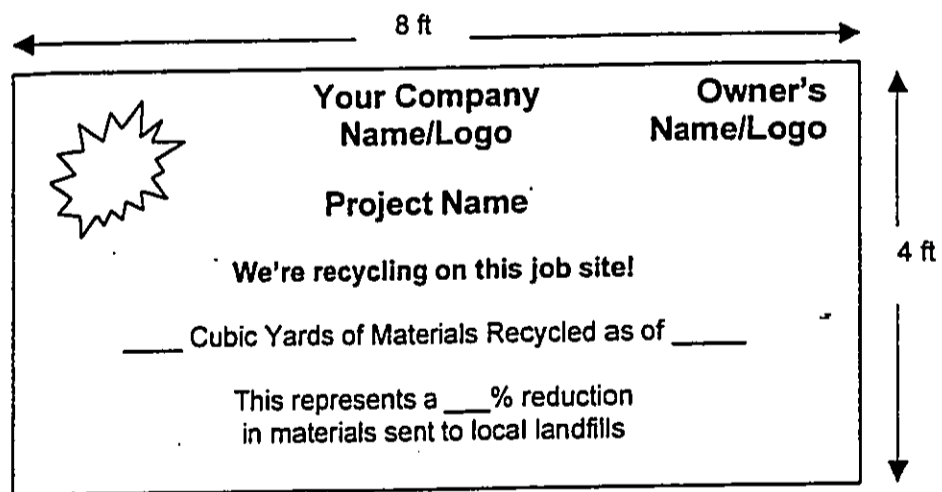
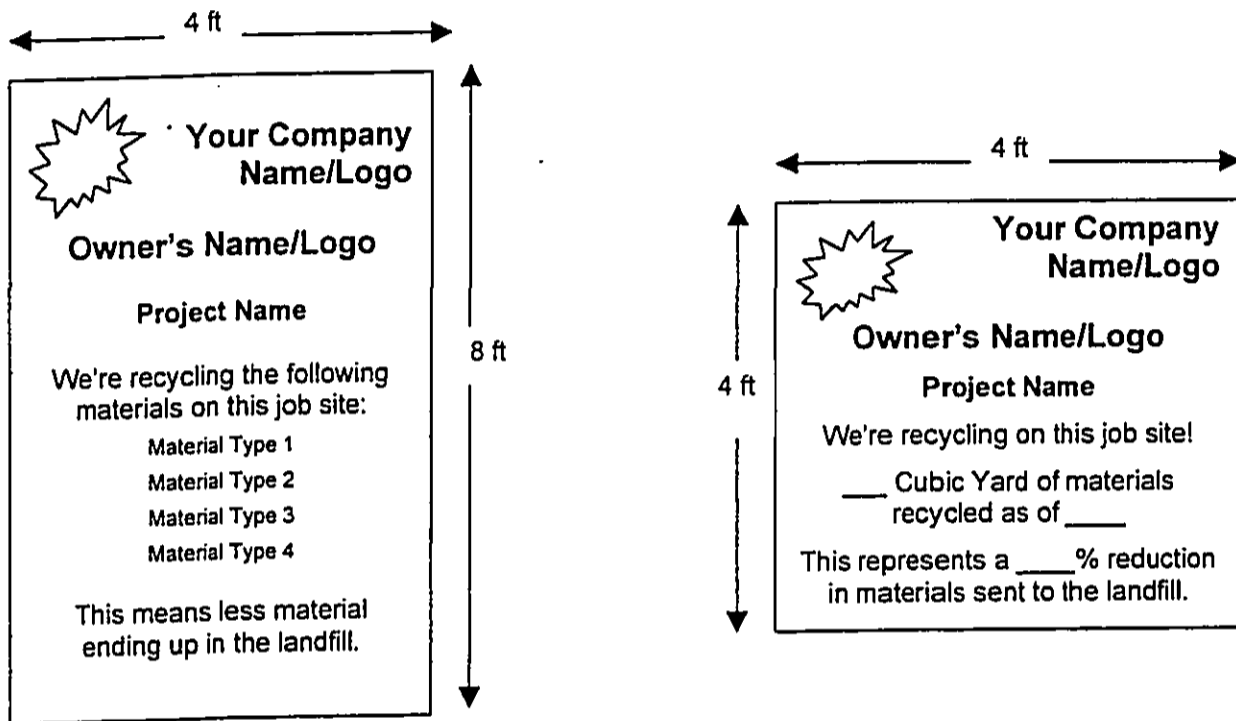


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## Appendix D—Sample Job Site Signage



Here are some ideas for "Targeted Materials Definitions" signage. Check all categories that apply and post prominently on the job site trailer or on/near recycling bins. These signs should be large enough to be visible from a distance.

**OK to Recycle WOOD that is:**

- Painted or Stained
- Pressure Treated
- Laminated
- Engineered (contains glue or other non-wood materials.)
- Contaminated with nails or screws.
- No longer useful for any purpose on the job site.
- \_\_\_\_\_

✓ Only Checked Categories Apply.

**OK to Recycle DRYWALL that is:**

- Painted
- Contaminated with joint compound
- Contaminated with nails or screws
- Contaminated with lath and plaster
- Wet
- No longer useful for any purpose on the job site.
- \_\_\_\_\_

✓ Only Checked Categories Apply.

**OK to Recycle CARDBOARD that is:**

- Waxed
- Broken down (flat)
- Wet
- Contaminated with metal banding or strapping
- No longer useful for any purpose on the job site.
- \_\_\_\_\_

✓ Only Checked Categories Apply.

**OK to Recycle METAL that is:**

- Ferrous (iron and steel) such as rebar, misc. iron
- Non-ferrous, such as aluminum siding, gutters, brass, copper, nickel, and stainless steel
- No longer useful for any purpose on the job site.
- \_\_\_\_\_

✓ Only Checked Categories Apply.

## Appendix E—Job Site Training Checklist

Here are some items to cover during job site training sessions to get a quick assessment of your recycling progress.

- As of \_\_\_\_\_ (date), what percentage of our "waste" are we recycling?
- Does everyone know what materials are being recycled on this job?
- Does everyone know what materials are acceptable for recycling? (Refer to posted definitions for targeted materials.)
- What's in the garbage and shouldn't be? (Refer to waste audits, including slides if you have them).
- Does everyone know where different materials go? (Refer to signs, color codes, or other means of determining collection sites.)
- How can we reduce waste in the first place? (Refer to job personnel and subcontractor tip sheets.)
- Does anyone have any suggestions for improving our operations?

### Tips for Site Crews

- Make sure recycling containers are full before using empty or half-full ones.
- Make sure bins are as close as possible to where material is being generated.
- Use bins that suit the site. For example:
  - ◆ **cranable**: for multi-story buildings
  - ◆ **smaller or mobile**: for quick-moving or hard-to-get-at projects
  - ◆ **sectioned with dividers**: for smaller quantities or hard-to-get-at projects

## Appendix F—How Well Did You Do?

Here are two worksheets that you can use to see how much money you are saving through your recycling efforts, one for small jobs and one for large jobs. You can also purchase software that will perform these calculations for you. One software package, the *Business Recycling Cost Model*, automatically calculates your savings, provides a cost-benefit analysis for waste-prevention activities, and evaluates the effect of substituting materials, using data that you enter. (For more information, see Appendix H—Resources.)

You will notice that the *estimated cost savings* will be fairly modest in terms of your overall budget. This is because current C&D disposal fees in Hawaii (\$25 per ton) are relatively inexpensive. In addition, the *cost differential between disposal and recycling* in Hawaii is not significant. This situation is not one you can count on, however. Builders in other parts of the U.S. have experienced “sticker shock” when faced with sharp increases in tipping fees that occurred almost overnight. You can prevent this by making waste reduction a part of your everyday practice.

For small jobs especially, the *actual cost savings* are likely to be primarily the result of source reduction strategies such as efficient framing design, careful take-offs, and centralized cutting. You can estimate material cost savings by comparing material purchase receipts to those from similar projects you completed using conventional methods. For example, you may see a drop of 10% or more in your budget for framing materials by using an efficient framing design. Since most building materials are imported to Hawaii, this could represent substantial savings, and increased profit margin.



## Calculate Your Savings for Recycling—Large Jobs<sup>1</sup>

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### 1. Determine how much you would have paid if you had not recycled:

How much material did you dispose *and* recycle? \_\_\_\_\_ Tons  
(weight will be on bills and receipts, (See conversion tips on page 7 to convert from volume to weight for recycled materials.)

Multiply this amount by the tipping fee per ton X \$ \_\_\_\_\_ per ton

Cost if you had disposed entire amount, with no recycling = \$ \_\_\_\_\_

### 2. Determine how much it cost you for waste management, including recycling:

Total fees for disposal and recycling \$ \_\_\_\_\_  
(Check vendor bills and receipts)

Add estimate for any extra labor costs due to recycling (may not be applicable) + \$ \_\_\_\_\_  
(Estimate 1 to 2 extra hours per project week times the labor rate. Will vary depending on phase of job. Some weeks will be minimal.)

Add estimate for any extra rental costs for recycling containers or equipment + \$ \_\_\_\_\_  
(May be included in bills)

Add estimate for any extra trucking costs for recycling + \$ \_\_\_\_\_  
(May not be applicable)

Subtract any revenues for recycling - \$ \_\_\_\_\_  
(May be applicable for some materials, such as metals)

Cost for waste management, including recycling = \$ \_\_\_\_\_

### 3. Compare cost of disposal vs. a waste management program, including recycling:

Cost without recycling \$ \_\_\_\_\_

Minus cost with recycling - \$ \_\_\_\_\_

**That's Your Savings!** = \$ \_\_\_\_\_

<sup>1</sup> You can estimate your savings beforehand by:

- ♦ estimating the amounts of waste you typically generate (see your previous disposal bills)
- ♦ estimating how much material you will be recycling (by type)
- ♦ calculating the cost (fees) of recycling those materials
- ♦ estimating other recycling costs (labor, containers/equipment, trucking)
- ♦ estimating revenues from recycling
- ♦ and using the same method above for calculating the savings

# Appendix G—Using Specifications to Reduce Construction Waste

## Introduction

Increasingly, architects preparing project specifications are including provisions waste reduction, reuse, recycling, and use of recycled-content building materials. Between 50 and 80 percent of construction waste is reusable or recyclable, and specifications for waste management can help ensure project managers will efficiently manage these resources.

This appendix provides information about ways that project specifications can be used to reduce construction waste. Although project specifications are developed by design professionals during the design phase, contractors frequently have input in their development. Contractors may also want to include some of these ideas in requests for changes and substitution. You can also include some of these in your subcontractor agreements.

## Strategies

Proven strategies in developing effective specifications for construction waste management are:

1. *Using bid alternates*—Requiring submission of bid alternates for undertaking specific reduction/recycling/reuse measures as an alternative to landfilling waste. This option allows the owner to determine whether these alternative measures are economically feasible.
2. *Requiring waste reduction/recycling/reuse/use of recycled-content to the extent practical*—This option uses language that requires waste reduction, reuse, recycling, and use of recycled-content materials to the fullest extent possible. The effectiveness of this approach can be strengthened with additional requirements for tracking and reporting and verbal encouragement at pre-project and project progress meetings.
3. *Requiring a construction waste management plan*—This option requires the successful bidder to submit a construction waste management plan for approval by the owner. The specifier can choose which items must be included in the draft, and the parties can negotiate prior to agreeing upon a final plan.
4. *Requiring recycling/reuse/use of specific items*—Another option foregoes the waste management plan and instead directly specifies that certain items will be recycled, reused, and certain resource efficient (including recycled-content) materials will be used.
5. *Subtracting waste costs and substituting a waste manager*—With this approach, each subcontractor is required to include a line item in their bid for disposal costs. This amount is subtracted from the final bid, and an independent waste manager is hired to handle all waste management.

Strategies 2 through 5 have been used in published case studies that demonstrate the waste minimization effectiveness of the approach used at reduced or unchanged costs.<sup>1</sup> Numerous case studies document the successful use of recycled-content and other resource efficient building materials.

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<sup>1</sup> For more information and case studies, contact Triangle J Council of Governments, phone (919) 549-0551, fax (919) 549-9390.



## Specification Options

Here are some ways to use your bid documents to get results:

### Source Reduction

- Take-Offs:** Require detailed take-offs. In addition to acting as an order list for building materials, a detailed take-off will identify the intended location and use in the structure. This reduces the risk of unplanned and potentially wasteful cuts.
- Tools, Equipment, Supplies:** Include a goal to use good quality (durable) and/or reusable tools equipment, and supplies. For example, concrete forms can be reused, as can durable site fencing, tarp, and temporary barriers and controls.
- Supplier Packaging:** Minimize packaging waste by requiring provisions for returnable or reduced packaging in supply agreements, particularly for items purchased in large quantities. Seek bulk packaging.
- Waste Management Plan:** Require provision of a waste management plan that incorporates source reduction during build-out. It would describe:
  - Waste audit (required for remodels and demolition).
  - Source reduction goals.
  - The means to be used to track progress towards those goals.
  - The method to be used for communicating those goals to field personnel and subcontractors (such as inclusion in subcontractor agreements and training at safety meetings).
- Materials Storage:** Require proper storage of materials (including hazardous materials) to avoid damage and outdating.
- Termite Control.** Require specific, environmentally-preferred actions for termite-prevention.

### Recycling

- Waste Audit.** For remodels and demolitions, provision for performance of a waste audit to identify high potential recyclable materials.
- Waste Management Plan:** Require provision of a waste management plan that incorporates recycling during build-out. It would describe:
  - The types of materials that will be generated during construction in significant amounts, and that can be recycled cost-effectively.
  - Recycling goals. Reasonable recycling goals based on current field research include:
    - 20% for remodeling waste
    - 40% for new construction waste
    - 50% for demolition waste
  - The means to be used to track progress towards those goals, including providing tonnage of materials disposed/recycled and associated savings
  - The method to be used for communicating goals to field personnel and subcontractors (such as inclusion in subcontractor agreements and training at safety meetings).

### *Recycled-Content and Salvaged Building Materials*

- **Recycled-Content Materials:** Set a goal for the use of recycled-content in the building, such as: "Use at least five materials that have x% of post-consumer or recycled-content." Alternatively or in addition, specify particular building materials with recycled-content. Examples of building material options that meet industry standards and include recycled-content are:
  - ◆ Expansion Joint Filler—available with 100% post-consumer content (newspaper).
  - ◆ Concrete Aggregate—locally produced to specifications from concrete waste.
  - ◆ Compost—locally produced from processed yard, food, and other organic waste.
  - ◆ Carpet and Pad—commercial grades available with up to 100% recycled plastic; also available with recovered fibers from recycled textiles.
  - ◆ Steel Framing—all steel framing includes a minimum of 25% recycled-content. Some framing systems are targeting much higher levels of recycled-content.
  - ◆ Plastic lumber—manufactured in Hawaii from recycled milk jugs and soda bottles.
  - ◆ Insulation—cellulose, polystyrene, fiberglass, and mineral wool insulation include varying amounts of recycled-content.
  - ◆ Ceramic Tile—available in various recycled-contents (up to 70 percent).
  - ◆ Ceiling Tiles—typically include significant amounts of recycled fiber and/or mineral waste.
  - ◆ Drywall—available with recycled gypsum.
  - ◆ Floor Tile—ceramic tiles, rubber, and vinyl tiles are available with recycled-content.
  - ◆ Cabinet pulls, glass blocks, and glass tiles—manufactured in Hawaii from recycled glass.
  - ◆ Paint—available with recycled or reworked (from mis-tints) content for both primer and finish coat.
  - ◆ Glass Cullet—use as fill or filter medium; see DOT specifications.
  - ◆ Playground Surfacing—available with 100% recycled rubber.
  - ◆ Parking Stops—available with 100% recycled plastic.
  - ◆ Roofing—shingles, tiles, and panels are available with a variety of recycled materials, including plastic, rubber, metal, fiber, and flyash slag.
  
- **Salvaged Materials:** These materials may be available from the existing structure (if applicable) or an outlet for used building materials or architectural salvage. Some commonly salvaged materials are:
  - ◆ Landscaping materials
  - ◆ Concrete, brick, masonry (as site furnishings)
  - ◆ Finishes, such as tile, carpet, millwork (trim and flooring), and cabinets
  - ◆ Dimensional lumber, timbers
  - ◆ Windows, doors, and associated hardware
  - ◆ Electrical fixtures and lamps (subject to code approval)
  - ◆ Sinks, bathtubs, and accessories
  - ◆ Broken concrete and asphalt from demolition (can be used as fill per DOT specifications) or for retaining walls at project site or other building sites)
  - ◆ Insulation
  - ◆ Appliances

### *Resource-Efficient Materials*

- Steel framing.** Specify cold-formed steel framing with a minimum of 25 percent recycled-content.
- Wood-Efficient Materials:** Set a goal for the use of wood-efficient materials in the building. Examples include:
  - ◆ Engineered wood products, such as I-beams, LVL, finger-jointed studs and trims.
  - ◆ Wood products produced from fast-growing species or particle board, produced from shavings.
- Certified Wood Products:** Wood products produced from sustainably harvested timber. (Certified sustainably harvested timber is locally available.)
- Durable Materials:** Set a goal for the use of durable materials in the building. Examples include:
  - ◆ Metal roofing
  - ◆ *Linoleum sheet flooring*
- Standard Dimension Materials:** Set a goal for the use of materials available in standard sizes and/or provide modular dimensioning. Both structural and non-structural options (including finishes) are available. Design to accommodate these standard dimensions.
- Locally-Produced Materials:** Set a goal for the use of locally produced materials. This will save on the energy used to transport the material from manufacturing site to building site.
- Low Maintenance and Easily Replaced Materials:** Set a goal for the use of materials that require less maintenance or are easily replaced or repaired. For example, carpet tiles, which can be selectively replaced in high-wear areas, are an option that saves money and resources. A durable finish that requires no coating is another option.
- Other Emerging Product Selection Criteria:** As technology develops, there may be other criteria that can be used in your design and specifications to determine environmental preferability. For example, the issue of recyclability is one area being investigated. The additional resources listed are updated from time to time and should include information about additional criteria you may use.
- Post-Occupancy Purchases:** For building materials selected for resource-efficient criteria, require the provision of information (including MSDSs and other product literature) to owner's representatives for post-occupancy replacements.

## Developing Your Own Specifications

Several resources are available for use in developing your own project waste management specifications, including generic specifications such as WasteSpec<sup>2</sup> and Green Spec.<sup>3</sup> In practice, waste management specifications are often derived from a number of sources. You will likely find the best approach is to develop a set of generic specifications suited to your types of projects and location, which you can then adapt for individual project use.

Two sample waste management specifications follow: a the Job Site Waste Reduction Specification section of waste management specifications developed by the Natural Resources Defense Council (NRDC) and a Department of the Navy Guide Specification for waste management.

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<sup>2</sup> To order WasteSpec (\$28.00), contact the Triangle J Council of Governments, PO Box 12276, Research Triangle Park, NC 27709. Phone (919) 549-0551, fax (919) 549-9390.

<sup>3</sup> To order Green Spec, contact Siegel & Strain Architects, 1295 59<sup>th</sup> Street, Emeryville, California, Phone (510) 547-8092; email [info@siegelstrain.com](mailto:info@siegelstrain.com).

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# WASTE MANAGEMENT SPECIFICATIONS —

## GENERAL PROVISIONS

The sample specification that follows is adapted from *Solid Resources Management Specification: Contractor Guidelines and Requirements for Reuse, Salvage, and Recycling of Construction, Demolition, and Landclearing Materials*, courtesy of the City of Los Angeles Integrated Solid Waste Management Office (213-847-4321). Additional provisions were adapted from *Waste Reduction and Recycling Demonstration Project Final Report*, submitted to Seattle Solid Waste Utility by O'Brien & Company. To order this specification on disk, call NRDC at 415-777-0220 and ask for the Wood-Use Efficiency Department.

### Job-Site Waste Reduction Specification

#### 1. DESCRIPTION

1.1 This section includes procedures for ensuring optimal diversion of solid resources generated by the Work within the limits of the Construction Schedule, Contract Sum, and available materials, equipment, and products.

1.1.1 Assembly Bill 939, California Solid Waste Management Act, requires that localities throughout the state develop source reduction, reuse, recycling, and composting programs to reduce the tonnage of solid waste disposed of in landfills by 50 percent by the year 2000. Construction, demolition, and landclearing debris generated by the development are among the materials targeted by [city] to achieve these diversion rates, and the Developer supports these initiatives.

1.1.2 The Contractor shall participate in promoting efforts of the Developer or its representative to create a resource-efficient and environmentally sensitive Project and to effect optimum control of solid waste and recoverable resources generated in the Work.

1.1.3 The Developer has adopted recycled product procurement policies and the Contractor shall use products with post-consumer recycled content to the greatest extent feasible. Refer to the most recent issue at the date of bid of *A Resource Guide to Recycled-Content Construction Products*, published by the Los Angeles Integrated Solid Waste Management Office (call 213-847-1444 to obtain a copy).

1.2 Related Sections: Documents affecting work of this Section include, but are not necessarily limited to, the following Contract Specifications:

- Site Clearing, 02230
- Demolition, 02220
- Asbestos Removal, 13280
- Earthwork, 02300

#### 2. DEFINITIONS

2.1 Class III landfill: A landfill that accepts non-hazardous resources such as household, commercial, and industrial waste resulting from construction, remodeling, repair, and demolition operations. A Class III landfill must have a solid waste facilities permit from the California Integrated Waste Management Board (CIWMB) and is regulated by the Local Enforcement Agency (LEA).

2.2 Construction and demolition waste: Includes all non-hazardous solid resources resulting from construction, remodeling, alterations, repair, and demolition operations.

2.3 Disposal. Acceptance of solid wastes at a legally operating facility for the purpose of landfilling. Includes Class III landfills and inert fills.

2.4 Inert backfill site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring, or other soils engineering operation.

2.5 Inert fill: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.

2.6 Inert solids/inert waste: Non-liquid solid resources including, but not limited to, soil and concrete, that do not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional Water Board pursuant to Division 7 (Section 13000 et seq.) of the California Water Code and do not contain significant quantities of decomposable solid resources.

2.7 Mixed debris: Commingled recyclable and non-recyclable materials generated at the construction site.

2.8 Mixed debris recycling facility: A solid resources processing facility that accepts commingled construction and demolition debris for the purpose of recovering reusable and recyclable materials and disposing of the non-recyclable residual materials.

2.9 Permitted waste hauler: A company that possesses a valid and current permit from the [name] County Department of Public Health to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal in the [name] County.

2.10 Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating, or thermally destroying solid waste.

2.10.1 On-site recycling: Sorting and processing materials for use in an altered form in the Work (e.g., concrete is crushed for use as base for a parking lot on the site).

2.10.2 Off-site recycling: Hauling materials to a location off the Project site for use in an altered form in the manufacture of a new product.

2.11 Recycling facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a Solid Waste Facilities permit from the CIWMB or be regulated by the LEA.

2.12 Reuse: Making new use of a material without altering its form.

2.13 Salvage: Recovery of materials for on-site reuse or to sell or donate to a third party.

2.14 Source-separated materials: Materials that are sorted at the site of generation by individual material type for the purpose of reuse or recycling, e.g., demolished concrete that is separated at the Project site for delivery to a base course recycling facility.

2.15 Solid waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.

2.16 Transfer station: A facility that can legally accept solid wastes for the purpose of temporarily storing the materials for reloading onto other trucks and transporting to a landfill for disposal, or recovering some materials for reuse or recycling. Transfer stations must be permitted by the CIWMB and regulated by the LEA.

### 3. SUBSTITUTIONS

Should the Contractor desire to use procedures, materials, equipment, or products which meet the requirements of these specifications but are more environmentally sensitive, the Contractor shall submit these substitutions in accordance with Substitutions and "Or Equal" Submittal of the General Requirements.

### 4. SOLID RESOURCES MANAGEMENT PLAN

4.1 Contractor shall conduct a site assessment and estimate the types and quantities of materials under the Work that are anticipated to be feasible for source separation for recycling or reuse, either on-site or off-site, and shall note the procedures intended for a recycling, reuse, and salvage program. Refer to the most recent issue of *Construction and Demolition Waste Recycling Guide*, and *Wood You Recycle?*, published by the Los Angeles Integrated Solid Waste Management Office, for a partial list of facilities that accept these materials for recycling.

4.2 After award of Contract and prior to the commencement of the Work, the Developer or its representative shall schedule and attend a meeting with the Contractor to discuss the Contractor's proposed Solid Resources Management Plan. Not more than 20 working days after the meeting, the Contractor shall draft and submit to the Developer or its representative a written Solid Resources Management Plan, formatted as shown in Attachment A. This Plan shall be submitted to allow the Developer or its representative and the Contractor an opportunity to develop a mutual understanding regarding the recycling, reuse, and recycled-content procurement programs and shall include, but not be limited to, the following:

- Contractor and project identification information
- Types of solid resource materials and wastes that will be produced
- Materials to be salvaged, reused, and recycled, both on-site and off-site
- Procedures to be used
- Estimated quantities of materials
- Names and locations of salvage, reuse, and recycling facilities/sites
- Names and locations of waste disposal facilities/sites

4.3 Incorporating the review and comments of the Developer or its representative, Contractor shall revise and resubmit the Solid Resources Management Plan. The Developer/representative's review and comment on the Solid Resources Management Plan will not otherwise relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.

### 5. RECYCLING, REUSE, AND SALVAGE PROCEDURES

#### 5.1 Recycling, Reuse, and Salvage Facilities

The most recent issues of *Construction and Demolition Waste Recycling Guide* and *Wood You Recycle?*, published by the Los Angeles Integrated Solid Waste Management Office, are incorporated herein by reference. For more information, contact the L.A. Integrated Solid Waste Management Office, Room 1450 City Hall East, 200 N. Main St, Los Angeles, CA 90012, 213-847-1444; fax 213-847-3054. These guides are updated regularly.

#### 5.2 Development and Implementation of Procedures

Based upon the Contract Documents, the Contractor's Solid Resources Management Plan, estimated quantities of materials, and availability of salvage, reuse, and recycling facilities, Contractor shall develop and implement procedures to reuse, salvage, and recycle materials to the greatest extent feasible. Procedures shall include source-separated recycling as well as mixed recycling efforts. On-site recycling shall be considered.

#### 5.3 Salvage and Reuse

5.3.1 Contractor shall perform a site pre-assessment, identify materials that are feasible for salvage, and determine requirements for site storage and transportation to salvage facilities. A salvage/reuse program shall be implemented to the greatest extent feasible. A partial list of facilities is included in the most recent issue of *Construction and Demolition Waste Recycling Guide*, published by the Los Angeles Integrated Solid Waste Management Office.

5.3.2 Where practicable and cost-effective, wood shall be carefully dismantled and sold to a reuser, salvage dealer, or wood recycler. Fixtures, furnishings, and equipment shall be removed from the facility intact and sold or donated to an appropriate organization. Any additional items (e.g., windows and doors), when feasible, shall be salvaged, source-separated, and taken to a recycling company, materials exchange, or similar facility.

5.3.3 The following salvage options shall be considered at a minimum:

- California Materials Exchange (CALMax) — a free program sponsored by the CIWMB designed to help businesses find markets for materials that traditionally would be discarded. To obtain a current listing, call 916-255-2369 or 800-553-2962.
- LA Shares — a non-profit materials exchange that accepts excess reusable materials from private donors and distributes them to various non-profit organizations throughout the City. 213-485-1097.
- Habitat for Humanity Los Angeles (HFH-LA) — a non-profit housing organization that rehabilitates and builds housing for low income families. HFH-LA sites requiring donated materials vary. 213-975-9757.

#### 5.4 Source-Separated Recycling

5.4.1 The Contractor shall develop and implement a program to include on-site separation, to the greatest extent feasible, of the following materials:

- Asphalt
- Brick
- Cardboard
- Concrete, concrete block, masonry, rocks, and rubble
- Dirt (clean dirt will be taken to a clean fill site)
- Drywall (source-separated and recycled or ground and used as soil amendment on-site)
- Metal, ferrous and non-ferrous (including HVAC equipment, fasteners, piping, chillers, generators, boilers, doors, aluminum paneling)
- Wood
- Green materials (e.g., tree trimmings)

5.4.2 Recycling plans shall estimate the amount of recyclable materials to be used on-site in the Work and include a program for off-site recycling of any excess material that cannot be used in the Work.

5.4.3 Each recycling facility or waste processor has requirements as to the way materials must be prepared to be accepted and to what degree materials can be contaminated. The Contractor shall provide separate containers or enclosures to facilitate its own recycling efforts and those of Subcontractors in order to meet those requirements and to meet specifications identified in the Contract Documents. A separate container shall be provided for non-recyclable, non-reusable trash.

5.4.4 Subcontractors shall be required to recycle the above materials, follow source separation requirements for each material, and use the appropriate on-site container/enclosure for each material.

5.4.5 Separation arrangements are subject to approval of the Developer or its representative.

#### 5.5 Mixed Debris Recycling

Contractor shall develop and implement a program for commingled recycling of construction and demolition materials that cannot be feasibly source-separated. Such materials shall be legally transported to a mixed recycling facility. These facilities are listed in the most recent issue of *Construction and Demolition Waste Recycling Guide*, published by the Los Angeles Integrated Solid Waste Management Office.

#### 5.6 Waste Disposal

5.6.1 Using a permitted waste hauler or its own trucking services, the Contractor shall legally transport non-recyclable, non-reusable materials to a transfer station or disposal facility that can legally accept the materials for the purpose of disposal.

5.6.2 The Contractor shall not burn, bury, or otherwise dispose of solid waste on the project job site.

#### 5.7 Hauling

5.7.1 Contractor shall arrange for delivery of materials, by a permitted waste hauler or using its own trucks, to facilities that can legally accept construction and demolition materials for purpose of reuse, recycling, or disposal.

5.7.2 Prior to delivering materials, Contractor shall familiarize itself with the specifications for acceptance of construction and demolition materials at recycling facilities. The most recent issue of *Construction and Demolition Waste Recycling Guide*, published by the Los Angeles Integrated Solid Waste Management Office, includes a partial list of these facilities.

#### 6. MATERIALS TRACKING FORM

6.1 To each application for progress payment submitted to the Developer or its representative, the Contractor shall attach a Materials Tracking Form; a sample is shown as Attachment B. The Materials Tracking Form shall quantify all materials generated in the Work and document their disposition (salvage, reuse, recycling, or disposal) as specified herein.

6.2 The Materials Tracking Form shall identify materials sent to:

- Source-separated recycling facilities
- Mixed debris recycling facilities
- Class III landfills (including inert materials accepted as daily cover)
- Inert fills
- Inert backfill sites other than inert fills
- Other diversion sites (specify)

6.3 Contractor shall complete each Materials Tracking Form as described below.

6.3.1 Fill in the project title; project work order number; progress payment number; name of company submitting the Materials Tracking Form; the printed name, signature, and daytime phone number of the person completing the form; the beginning and ending dates of the period covered; and the date that the form is completed.

6.3.2 Report disposal/recycling either in tons or in cubic yards; if scales are available at facility, report in tons; otherwise, report in cubic yards. Indicate zero (0) if there is no quantity to report for a type of material.

6.3.3 Indicate locations to which materials are delivered.

6.3.4 Attach to the form legible copies of weigh tickets, receipts, invoices, or other documents that specifically identify the Project generating the materials. Said documents must be from sites and/or facilities that can legally accept the materials for purposes of reuse, recycling, or disposal.

6.4 Failure to submit the Materials Tracking Form and supporting documentation may render the application for progress payment incomplete and delay progress payments.

#### 7. REVENUE

Revenues or other savings obtained from recycled, reused, or salvaged materials shall accrue to Contractor unless otherwise noted in the Contract Documents.



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NAVY

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DEPARTMENT OF THE NAVY NFGS-01572A  
NAVAL FACILITIES 30 September 1998  
ENGINEERING COMMAND -----  
GUIDE SPECIFICATION Superseding NFGS-01572 (06/97)  
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SECTION 01572  
WASTE MANAGEMENT  
09/98

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-- End of Section Table of Contents --

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DEPARTMENT OF THE NAVY NFGS-01572A  
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ENGINEERING COMMAND -----  
GUIDE SPECIFICATION Superseding NFGS-01572 (06/97)  
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NFGS-01572A

WASTE MANAGEMENT

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\*  
\* Preparing Activity: SOUTHNAVFACENGCOM \*  
\*  
\* Typed Name & Reg. Signature Date \*  
\*  
\* Prepared by: R. E. Bostain, P.E. /s/ 08/01/98 \*  
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\* Prepared by: R. E. Bostain, P.E. /s/ 08/01/98 \*  
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\* Planning & Design \*  
\* Department Head \*  
\*  
\* Approved for NAVFAC: /s/ 09/30/98 \*  
\* Carl E. Kersten, R.A. \*  
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*****
DEPARTMENT OF THE NAVY           NFGS-01572A
NAVAL FACILITIES                 30 September 1998
ENGINEERING COMMAND             -----
GUIDE SPECIFICATION              Superseding NFGS-01572 (06/97)
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SECTION 01572

WASTE MANAGEMENT  
09/98

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*****
NOTE: This guide specification requires
implementation of a waste management program for
recycling non-hazardous construction and demolition
debris. It is intended to reduce the amount of
waste requiring landfill disposal and to promote
more efficient use of construction materials.
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NOTE: This revision "A" to NFGS-01572 revalidates
the issue dated 30 June 1997.
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PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Construction and Demolition Waste

Solid wastes such as building materials, packaging and rubble resulting from construction, remodeling, demolition and repair of buildings/facilities, paving and infrastructure.

1.1.2 Recyclable Materials

Products and materials that can be recovered and remanufactured into a new product. Recyclable materials include, but are not limited to, the following:

- a. Metals (ferrous and non-ferrous), including banding, metal studs, ductwork, piping
- b. Asphaltic concrete paving
- c. Portland cement concrete
- d. Land clearing debris including trees and plant materials
- e. Native rock and granular fill
- f. Gypsum products
- g. Paper and cardboard
- h. Wood products, including structural, finish, crates and pallets

- i. Brick and masonry
- j. Carpet and padding
- k. Plastics
- l. Copper wiring
- m. Mechanical and electrical products and equipment

1.1.3 Recycling Facility

A business that specializes in collecting, handling, processing, distributing, or remanufacturing waste materials generated by demolition and new construction projects, into products or materials that can be used for this project or by others.

1.1.4 Salvage and Reuse

Existing usable product or material that can be saved and reused in some manner on the project site. Materials that can be salvaged and reused must comply with the applicable technical specifications and include, but are not limited to, the following:

- a. Dimensional lumber and other wood products
- b. Structural steel
- c. Soil
- d. Masonry products

1.1.5 Salvage for Resale

Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.

1.1.6 Trash

Product or material unable to be salvaged for resale, salvaged and reused, returned, or recycled.

1.1.7 Waste Materials

Product or material that can be salvaged for resale, salvaged and reused, returned to vendors, or recycled.

1.2 SUBMITTALS

\*\*\*\*\*

NOTE: Where a "G" in submittal tags follows a submittal item, it indicates Government approval for that item. Add "G" in submittal tags for items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the QC organization.

\*\*\*\*\*

Submit the following in accordance with Section 01330, "Submittal Procedures."

1.2.1 SD-08 Statements

- a. Waste Management Plan G

1.3 CONSTRUCTION WASTE MANAGEMENT

1.3.1 General Intent

The Contractor shall use all means available to divert to the greatest extent practical and economically feasible, construction and demolition waste from landfills and incinerators.

1.3.2 Construction Waste Management Operations

Take a pro-active, responsible role in management of construction waste and require all subcontractors, vendors, and suppliers to participate in the effort. Establish a construction waste management program that includes the following categories:

- a. Minimizing Packaging Waste
- b. Salvage and reuse
- c. Salvage for resale or donation
- d. Recycling
- e. Disposal

Salvage and reuse is a better waste management method than recycling because little or no reprocessing is necessary, thus less pollution is created when items are reused in their original form. Therefore, a diligent effort shall be made to salvage and reuse products and materials. Waste materials that cannot be salvaged and reused, and have value as being recyclable, shall be recycled. Only trash shall be transported to a landfill or incinerator. The Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling construction waste for this project. Revenues or other savings obtained for recycling or returns shall accrue to the Contractor.

1.3.3 Construction Waste Management Plan

Perform a waste analysis to determine the types and quantity of construction waste anticipated and identify salvage for resale, salvage and reuse, recycling and disposal options available. Within 30 days after contract award and prior to performing any demolition work, submit a Waste Management Plan for review and approval. The Waste Management Plan shall include the following:

- a. Project waste analysis.
- b. Projected cost of disposing of all trash and waste materials as if there would be no salvage or recycling on this project.

- c. Name, address and phone number for each landfill or incinerator facility to be utilized.
- d. Tipping fee for each landfill or incinerator.
- e. A list of waste materials that will be salvaged for resale, salvaged and reused, and recycled.
- f. Identification of each recycling facility to be utilized.
- g. Anticipated net cost savings determined by subtracting the cost of separating and recycling from the following:
  - 1. Savings due to reuse of demolished materials.
  - 2. Revenue from the sale of salvaged and recycled materials.
  - 3. Landfill or incinerator tipping fees saved due to diversion of materials to recycling.
- h. Description of the method to be employed in recycling waste materials and description of the method that will be used to protect recycled materials from contamination.
- i. Description of the means of transportation of recyclable materials and the destination of the materials.

## PART 2 PRODUCTS

Not Used.

## PART 3 EXECUTION

### 3.1 PROGRAM IMPLEMENTATION AND MONITORING

Implement and maintain, for the duration of the project, the construction waste management program. Establish a method of monitoring and documenting the program, and submit a periodic report with each application for payment that includes the following:

- a. Amount (by weight) and type of waste materials disposed of in a landfill or incinerator, the tip fee per ton, and the total cost of disposal including transportation costs, container rental costs, etc.
- b. Amount (by weight) and type of materials salvaged for sale, salvaged for reuse, and recycled. Provide destination, means of transportation, cost of transportation and handling, tipping fee savings and revenue generated for each material.
- c. Cost savings due to salvaging, reusing, and recycling materials.

#### 3.1.1 Hazardous Materials/Hazardous Wastes

If any non-acceptable materials such as hazardous materials or hazardous wastes are encountered, notify the Contracting Officer.

### 3.2 SALVAGE AND REUSE

Encourage the practice of efficient waste management when, sizing, cutting, and installing products and materials.

3.3 SEPARATION OF RECYCLABLE WASTE MATERIALS

Provide the necessary containers and bins, to facilitate the waste management program, that are clearly and appropriately marked. Prevent contamination of recyclable materials from incompatible products and materials. Separate construction waste at the project site by one of the following methods:

- a. Source Separated Method: Waste products and materials, that are recyclable, are separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Trash is transported to a landfill or incinerator.
- b. Co-Mingled Method: All construction waste is placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed and the remaining trash is transported to a landfill or incinerator.
- c. Other methods proposed by the Contractor and approved by the Contracting Officer.

\*\*\*\*\*

NOTE: Suggestions for improvement of this specification will be welcomed using the Navy "Change Request Forms" subdirectory located in SPECSINTACT in Jobs or Masters under "Forms/Documents" directory or DD Form 1426. Suggestions should be forwarded to:

Officer In Charge  
Seabee Logistics Center  
NAVFAC 15G/SLC 15E  
4111 San Pedro Street  
Port Hueneme, CA 93043-4410

FAX: (805) 985-6465/982-5196 or DSN 551-5196

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-- End of Section --



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## Appendix H—Resource List

### General References

*Business Recycling Cost Model*, software that can help you evaluate what to recycle, what it means to the "bottom line," cost-benefit analysis for waste-prevention activities, and evaluate effect of substituting materials. The software includes: software, manual, technical assistance through an 800 phone number, and case studies. The cost is \$99.00 plus \$5.00 shipping up to three copies. (A free demo is available). To order, call 360-897-9533.

*Guide to Resource-Efficient Building in Hawaii*, A publication of Hawaii Advanced Building Technologies Program. Available from the State Department of Business, Economic Development & Tourism, Clean Hawaii Center, call 587-3802.

### Buy Recycled and Resource-Efficient Building Materials

*Business Guide to Waste Prevention, Recycling, and Buying Recycled-Content Products*. City and County of Honolulu, Department of Environmental Services, Refuse Division, Recycling Office. 527-5335.

*Earth-friendly Products and Materials*—A list of materials available through the Green House Hawaii Project. Call Clean Hawaii Center, phone 587-3802, to obtain the current list.

*The Green House Hawaii Project*. An exhibit of building materials and systems designed to promote an awareness of the resource-efficient, water-conserving, and waste-reducing products and systems currently available. A partnership of the A.I.A.-Honolulu and the University of Hawaii School of Architecture with support from the State Office of Solid Waste Management, Clean Hawaii Center, American Lung Association, the Honolulu City and County Recycling Office, and others. For more information, call Gail Suzuki-Jones at 524-0620.

*Where to Buy Recycled Products and Recycling Services in Hawaii Guide*. State Department of Business, Economic Development & Tourism, Clean Hawaii Center, phone 587-3802.

### Recycling and Waste Reduction

*Business Guide to Waste Prevention, Recycling, and Buying Recycled-Content Products*. City and County of Honolulu, Department of Environmental Services, Refuse Division, Recycling Office. 527-5335.

*Environmental Services in Hawaii 1997 Directory*. Hawaii State Department of Health, Solid and Hazardous Waste Branch, phone 586-4226.

*Hazardous Waste Minimization News* Vol. 6, No. 1, Spring 1997 (Construction). Hawaii State Department of Health, Solid and Hazardous Waste Branch, phone 586-4226.

*Hazardous Waste Minimization News* Vol. 5, No.1, Spring 1996 (Fluorescent Light Disposal). Hawaii State Department of Health, Solid and Hazardous Waste Branch, phone 586-4226.

*Minimizing Construction & Demolition Waste*. February 1998. Published jointly by the State of Hawaii, Department of Health, Office of Solid Waste Management; State of Hawaii, Department of Business, Economic Development and Tourism (DBEDT), Clean Hawaii Center; Environmental Building Coalition of Hawaii; Building Industry Association of Hawaii; and the General Contractors Association of Hawaii. Contains a directory of C&D Waste Management Facilities on Oahu. Call DBEDT for a copy, 586-4240.

*Recycling Plus Program Manual*. Produced by Clean Washington Center with O'Brien & Company and Fletcher Wright Construction (for commercial or other large-scale projects). Manual includes Field Guide and Subcontractors Kit, camera-ready art and forms for customizing your own recycling program. Based on a traditional safety program approach. Available through DBEDT, call 586-4240.

*Reducing & Managing Painting Contractor Wastes.* Hawaii State Department of Health, Solid & Hazardous Waste Branch, phone 586-4226.

*Residential Construction Waste Management, A Builder's Field Guide—How to Save Money and Landfill Space,* published by the National Association of Home Builders (NAHB) Research Center, 400 Prince George's Boulevard, Upper Marlboro, Maryland 22074. (301) 249-4000. [www.nahbrc.com](http://www.nahbrc.com).

*The Hawaii Guide to Alternatives and Disposal of Household Hazardous Waste.* Hawaii State Department of Health, Solid & Hazardous Waste Branch, phone 586-4226.

*Waste Minimization in Action #12: Construction Industry.* Hawaii State Department of Health, Solid and Hazardous Waste Branch, phone 586-4226.

*Waste Minimization in Action #2a: Painting Contractor's Bulletin.* Hawaii State Department of Health, Solid and Hazardous Waste Branch, phone 586-4226.

## Neighbor Island C&D Recyclers and Landfills

(Note: for facilities on Oahu, see the Clean Hawaii Center publication *Minimizing Construction & Demolition Waste*). Also contact HIMEX (Hawaii Materials Exchange, phone 808-586-4240 or web site [www.himex.org](http://www.himex.org)).

### KAUAI

Facility	Phone	Services
Kauai Nursery and Landscaping Puhi	Lelan Nishek 808-245-7747	Green waste, clean lumber, new drywall, some scrap metal
Garden Island Disposal Nawiliwili	Dean Kawasaki 808-245-2372  Genevieve Salmonson 808-842-3602	Cardboard
Puhi Auto Recycling Puhi (under construction)	Troy Tanigawa 808-241-6880	Scrap metal

### MAUI

Facility	Phone	Services
Maui Scrap Metal Waikapu	Roger Apana 808-244-0305	Scrap metal and cardboard
Maui Composting Puunene	Tim Gunter 808-877-0403	Green waste and new drywall
Eko Systems Central Maui Landfill	Rubens Da Fonseca 808-283-5019	Green waste (at Central Maui Landfill) and clean lumber
Campaign Recycle Waikapu	Charles Davidson 808-244-0722	Green waste and clean lumber
De Coite C&D Landfill Maalaea	Richard De Coite 808-871-7496	C&D waste

### HAWAII

Facility	Phone	Services
Hawaii Metals Recycling Hilo Landfill	Jim Bannigan III 808-682-5810	Scrap metal
Renew Hawaii Hilo Landfill	Andrea Alonzo 808-963-6850	Green waste
Hilo Business Service Hilo	Margaret Pahio 808-959-1436	Cardboard
Environmental Recycling Kono	Michael Allen 808-935-9328	Cardboard

## Glossary

Best Management Practices (BMPs)	Defined by the U.S. Environmental Protection Agency as "the use of materials, processes or practices that reduce or eliminate the creation of pollutants or wastes at the source. It includes practices that reduce the use of hazardous materials, energy, water, or other resources, and practices that protect natural resources through conservation or more efficient use.
Construction and Demolition (C&D) waste	<p>For the purposes of this guide, C&amp;D waste includes all non-hazardous solid wastes resulting from construction, remodeling, renovation, and demolition activities.</p> <p>The regulatory definition of construction waste includes concrete, drywall, masonry, roofing, siding, structural metal, wire, insulation, and other building material; and plastics, Styrofoam, twine, baling and strapping materials, can buckets, and other packaging materials and containers. It also includes sand, rocks, and dirt that are used in construction. In no event shall construction waste include dangerous or extremely hazardous waste or any kind of garbage, sewerage waste, animal carcasses, or asbestos.</p>
Hazardous Waste	A waste that is solid or liquid material with certain properties that could pose dangers to human health, property, or the environment.
Landfill	Disposal facility at which solid waste is permanently placed in or on land as permitted by the jurisdictional health department and other appropriate agencies, accepting non-hazardous waste including non-recycled construction, remodeling, repair, and demolition debris.
Recycling	Either source separation or the processing of solid waste mechanically or by hand to segregate materials for sale or reuse. Materials that can be removed through recycling include, but are not limited to, mixed paper, newsprint, cardboard, aluminum, glass, plastics, chemicals, oil, wood, compostable organics (food and yard/land clearing debris), ferrous metal, and inorganics (rubble and inert material). Recycling does not include combustion of solid waste or preparation of fuel from solid waste.
Recycling Facility	An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Recycling facilities have their own specifications for accepting materials.
Reuse	Making use of a material without altering its form
Salvage	Recovery of materials for on-site reuse or donation to a third party
Source-separated materials	Materials that are sorted at the site by material for the purpose of reuse or recycling.



February 27, 2003

Mr. Maurice H. Kaya  
Energy, Resources and Technology Program Administrator  
Department of Business, Economic Development and Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Kaya:

Thank you for your January 22, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We appreciate you calling attention to the following items: (1) State energy conservation goals, (2) energy saving design practices and technologies, and (3) recycling and recycled-content products and for providing a copy of the *Guidelines for Sustainable Building Design in Hawaii: A planner's checklist* and *A Contractor's Waste Management Guide*. These materials will be referred to when appropriate. In addition, we have prepared the following in response to your comments:

**State energy conservation goals:** The Park is designed for low-impact outdoor experience. Project buildings, activities and site grounds will be designed with energy saving consideration where practical. The guidelines you provided will be consulted as well as HECO.

**Energy saving design practices and technologies:** For the most part, the park is an outdoor recreational area which utilizes natural sunlight as its primary source of lighting and open areas as natural ventilation. In the few facilities that are planned, natural ventilation and use of natural lighting will be considered in the design of the facility. Energy saving design practices and technologies will be considered during the design phase of the project. The Park will be landscaped for dust control and to minimize heat gain in areas where this is practical.

**Recycling and recycled-content products:** The information you provided regarding recycling and recycled-content products will be made available to the designers of the facilities. Where appropriate, provisions for recycling such as collection bins will be utilized. In addition, construction activities will be mindful to develop a job-site recycling plan to the extent possible. In general recycling efforts are encouraged as part of the outdoor park user responsibility philosophy.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

- Francis S. Oda, AICP, AIA
- Norman G.Y. Hing, AIA
- Sheri B. Boehm, AIA, ASO
- Hitoshi Hida, AIA
- Roy H. Nihei, AIA, CFA
- James J. ...
- Sabine E. ...
- Stephen H. ...
- Linda C. ...
- George I. Atta, AICP
- Paul P. Cheney, AIA
- Wendy Lee Cook, AIA, AIA
- Philip T. Cuccia
- William Hallin
- Jeremy C. ...
- Roy A. ...
- Stuart M. ...
- Charles M. ...
- Diana M. ...
- Katherine M. ...
- Frank B. ...
- Kyle K. ...
- ...
- James H. ...
- Christina ...
- Janece S. ...
- Scott Tangeman
- Wanda S. ...
- Sharon ...

LINDA LINGLE  
GOVERNOR

BRIGADIER GENERAL ROBERT G. F. LEE  
DIRECTOR OF CIVIL DEFENSE

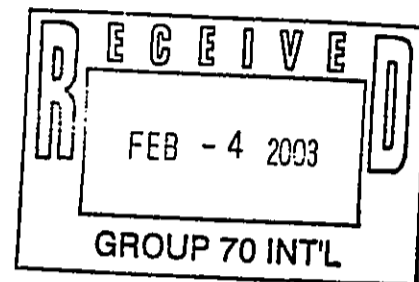
EDWARD T. TEIXEIRA  
VICE DIRECTOR OF CIVIL DEFENSE



PHONE (808) 733-4300  
FAX (808) 733-4287

**STATE OF HAWAII**  
DEPARTMENT OF DEFENSE  
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

January 31, 2003



Mr. George Atta  
Group 70 International, Inc.  
925 Bethel Street  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

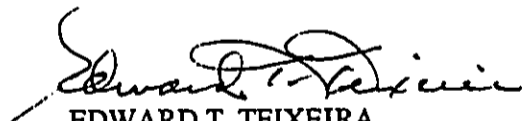
Kekaha Kai, Draft Environmental Impact Statement  
North Kona, Island of Hawaii, State of Hawaii

After reviewing the Draft Environmental Impact Statement for the Kekaha Kai State Park, we have noted that there is little or no outdoor siren warning coverage throughout the area of the park. Park development plans should at least include the installation of one 115db solar powered warning siren in the vicinity of a major designated parking lot.

When final plans are drawn, we will reevaluate and propose a location with better accuracy.

State Civil Defense (SCD) technicians and planners are available to assist. Should you have any questions, please call Mr. Norman Ogasawara, SCD, at 733-4300, extension 531.

Sincerely,

  
EDWARD T. TEIXEIRA  
Vice Director of Civil Defense

c: Hawaii Civil Defense Agency  
Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, Suite 310  
Honolulu, Hawaii 96813  
Attn Daniel S. Quinn

State of Hawaii  
Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813.  
Attn: Genevieve Salmonson



February 18, 2003

Mr. Edward T. Teixeira  
Vice Director of Civil Defense  
Department of Defense  
Office of the Director of Civil Defense  
3949 Diamond Head Road  
Honolulu, Hawaii 96816-4495

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Teixeira:

Thank you for your January 31, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

Thank you for bringing to our attention the need for a 115b solar powered warning siren. Public safety is always a concern at public recreational centers such as this one. Your office will be consulted to evaluate site localities for the siren.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

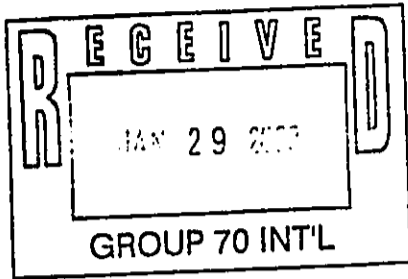
George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scarnan, AIA, AND  
Hitoshi Hida, AIA  
Roy H. Nihet, AIA, AICP  
James I. Nishimoto, AIA  
Ralph E. Pormore, AIA  
Stephan H. Kueh, AIA  
Linda C. Miki, AIA  
George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Coon, AIA, AICP  
Philip T. Cuccia  
Stephen Egan  
Jeremy C. Hsu, AIA  
Roy A. Hsu, AIA  
Stuart M. Low, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kamura  
Katherine M. MacNeil, AIA  
Frank B. McGee  
Kyle K. Nakamoto  
Kathryn A. Neri  
Jeffrey H. Overton, AICP  
Christine M. Roston, AICP  
James L. Stone, AIA  
Scott Tangorau  
Wesley H. Ujima, AIA  
Sharon Ching Winters, AIA



LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

PATRICIA HAMAMOTO  
SUPERINTENDENT

OFFICE OF BUSINESS SERVICES

January 27, 2003

Mr. George Atta  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawai'i 96813-4307

Dear Mr. Atta:

Subject: Kekaha Kai State Park  
Draft Environmental Impact Statement (DEIS)  
North Kona, Hawai'i  
TMK: 7-2-05: 02, 03, 07; 7-3-43: por. 1; & 7-2-04:03, 17, 19

The Department of Education (DOE) has reviewed the DEIS for a 1,700-acre State park in North Kona. The park is being proposed by the Department of Land and Natural Resources, Division of State Parks. The DOE has no comment on the DEIS as there appears to be little or no impact to the public schools serving the region.

Thank you for the opportunity to review and comment on the park plans.

Should you have any questions, please call Ms. Heidi Meeker of our branch at 733-4862.

Sincerely yours,

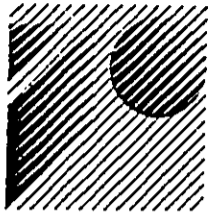
A handwritten signature in cursive script, appearing to read "Raynor M. Minami".

Raynor M. Minami, Director  
Facilities and Support Services Branch

RMM:hy

cc: Alfred K. Suga, OBS  
Daniel S. Quinn, State Parks/DLNR  
Genevieve Salmonson, OEQC

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER



**GROUP 70**  
INTERNATIONAL, INC.

February 18, 2003

Mr. Raynor M. Minami, Director  
Facilities and Support Services Branch  
Department of Education  
P.O. Box 2360  
Honolulu, Hawaii 96804

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Minami:

Thank you for your January 27, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize that the Department of Education has no comment at this time.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

- Francis S. Oda, AIA, AICP
- Norman G.Y. Hong, AIA
- Shenli B. Seaman, AIA, ASID
- Hitoshi Hida, AIA
- Roy H. Minz, AIA, CSI
- James T. Higamoto, AIA
- Ralph E. Portmore, AICP
- Stephen H. Auer, AIA
- Linda C. Mei, AIA
- George T. Atta, AICP
- Paul P. Chorney, AIA
- Wendee Cook, AIA, COT
- Philip J. Tuzza
- Jerrell C. How, AIA
- Roy A. Inoué, AIA, CSI
- Stuart M. Ueda, AIA
- Charles A. Kaneshiro, AIA
- Dean H. Kitamura
- Catherine M. MacNeil, AIA
- Frank E. McCue
- Kyle K. Nakamoto
- Kathy A. Tain
- Jeffrey H. Overton, AICP
- Christine W. Ructola, AICP
- James L. Stone, AIA
- Scott Tangeman
- Wesley N. Ujimoto, AIA
- Sharon Chung Williams, AIA

✓  
2/19/03 696 -

STATE OF HAWAII  
Department of Land and Natural Resources  
Division of Aquatic Resources

SUSPENSE DATE: February 22, 2003

MEMORANDUM

To: William Devick, Administrator *W.D.*  
From: Richard Sixberry, Aquatic Biologist  
Subject: Comments on Draft Environmental Impact Statement (DEIS)  
Comments Requested By: Division of State Parks  
Date of Request: 1/2/03                      Date Received: 1/8/03

Summary of Project

Title: Kekaha Kai State Park  
Proj. By: Division of State Parks  
Location: North Kona Coast, Hawaii

Brief Description:

The applicant has provided a Draft Environmental Impact Statement for improving outdoor recreational facilities at Kekaha State Park along the Kona coast of the Big Island. The park consists of three sections along ahupua'a boundaries: Mahai'ula/Kaulana, Awake'e and Manini'owali/Kuki'o. Different levels of use are proposed for each of these sections, which will provide slightly different park experiences.

Comments:

Significant impacts adverse to aquatic resource values are not expected from the proposed improvements and modifications. The site improvements would expand and enhance public recreational opportunities at the park.

The mitigation measures recommended for the project are adequate and would limit or prevent excessive impact to aquatic resource values. We suggest that those mitigation measures be incorporated, as conditions, into the permit process, including Best Management Practices, Water Quality Standards, and Guidance Specifying Control Measures for Sources of Nonpoint Pollution to Coastal Waters.

Some nutrient loading of anchialine ponds or coastal waters is likely to occur due to groundwater extrusion, although no fresh water streams occur in the area.

A major concern is continuing deterioration of the unique anchialine pond life due to introduced exotics and other man-made factors. We have determined that the loss of substantial number of ponds along coastal sites make the remaining anchialine pond complexes more valuable. Further comments on potential adverse impacts to these ponds must be reserved until additional information becomes available.

Page 2.

The value of preserving the ponds may be ephemeral unless some type of management is effective (cumulative degradation may become irreversible unless detected in time), and adequate implementation of remedial measures are established.

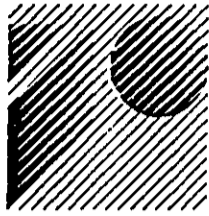
A report of an archaeological survey (West Hawaii Coral Reef Atlas), describes "a coastal trail...also demonstrates movement of people and produce along the coast". Court decisions on the Big Island have held that ancient historical trails establish public right to traditional access to the coastline.

Construction activities should occur mauka of the park's certified shoreline and precautions taken to prevent debris, landscaping chemicals, eroded soil, petroleum products and other potential contaminants from flowing blowing or leaching into anchailine ponds or coastal waters.

Any planned future activity that could occur makai of the certified shoreline should be adequately described and the Department should have the opportunity to review all proposals that may affect or impact aquatic resources in this vicinity.

Richard Sixberry  
Aquatic Biologist

cc: Dr. Bill Walsh, Aquatic Biologist, Kona  
Dr. Bob Nishimoto, Aquatic Biologist, Hilo



GROUP 70  
INTERNATIONAL

Francis S. Oda,  
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James L. Stone, AIA  
Scott Tarigan  
Wesley N. Sijmori, AIA  
Sharon Chung Williams, AIA

May 22, 2003

William Devick, Administrator  
State of Hawaii  
Department of Land and Natural Resources  
Division of Aquatic Resources  
1151 Punchbowl Street, Room 330  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Devick:

Thank you for your February 22, 2003 memorandum regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Impact Assessment:** We appreciate your assessment that significant adverse impacts to aquatic resource values are not expected from the proposed improvements and modifications. Your assessment has been eagerly awaited by other public reviewers.

**Mitigation measures:** Mitigation measures identified in the PDR/Environment Impact Statement are acceptable to State Parks.

**Anchialine pond:** We recognize that the anchialine ponds have been impacted due to introduced exotics and other man-made and natural factors. It is the intention of the park plan to develop strategies to preserve and where possible, restore the anchialine pond communities. Implementation and remedial measures will be developed to ensure that the anchialine ponds are preserved. Buffers will be developed around sensitive or intact pond complexes. Additionally, ponds at Kaeleluluhulu, Mahaiula and Maniniowali have been designated for restoration.

**Coastal Trail:** We appreciate your reference to the court decision which holds that ancient historical trails establish public right to traditional access to the coastline. Throughout the Park there are historical trails marking the traditional access to the coastline. These trails will be identified with appropriate signage.

**Shoreline improvements:** Construction activities within the certified shoreline will take precautions to prevent debris, landscaping chemicals, eroded soil, petroleum products and other contaminants from flowing blowing or leaching into anchialine ponds or coastal waters. In addition, any planned future activity within the certified shoreline will be available for review for any affects or impacts on aquatic resources in the vicinity.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

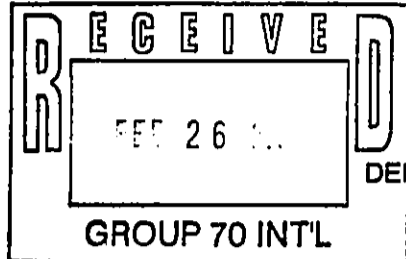
Sincerely,

GROUP 70 INTERNATIONAL, INC.

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING, ROOM 555  
601 KAMOKILA BOULEVARD  
KAPOLEI, HAWAII 96707

PETER T. YOUNG, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTY  
ERNEST Y. W. LAU

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
CONSERVATION AND RESOURCES  
ENFORCEMENT  
CONVEYANCES  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND  
STATE PARKS

February 24, 2003

Mr. George Atta  
Chief Community Planner  
Group 70 International  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawai'i 96813

LOG NO: 31727  
DOC NO: 0302SC07

Dear Mr. Atta:

**SUBJECT: Chapter 6E-8 Historic Preservation Review of a Park Development Report (PDR) and Draft Environmental Impact Statement (DEIS) for the Proposed Kekaha Kai State Park Maha'iula, Kaulana, Awake'e, Manini'owali & Kūki'o, North Kona, Hawai'i**  
**TMKs: (3)-7-2-005:002,003 & 007; 7-3-043: por. 001; 7-2-004: 003, 017 & 019**

Thank you for the opportunity to review and comment on the PDR and DEIS prepared for the proposed development of the Kekaha Kai State Park along the North Kona coast on Hawai'i Island. Our review is based on historic maps, aerials photographs, reports, and records maintained at the State Historic Preservation Division; no field inspections were made of the subject parcels. We received the subject document on January 9, 2003, and provide the following comments.

Although we have not yet completed our review of the two most recent archaeological inventory survey reports, submitted as Appendices K and M to the subject DEIS, we can say that they are generally acceptable. We will complete our review shortly and provide more comments in detail on the reports (Carpenter et al. 1998. *Archaeological Reconnaissance Survey Kekaha Kai State Park, Mahai'ula Section Kaulana and Mahai'ula Ahupua'a North Kona, Island of Hawai'i*; Dye et al. 2002. *Archaeological Inventory Survey of Portions of Kekaha Kai State Park, Volumes I and II*).

In general, we find the PDR and DEIS to be vague and lacking in the detail necessary for informed decision-making or even recommendations on the treatment of the significant historic sites known to be present in the various park development parcels. For example, while the description of cultural resources in the project areas (Chapter 3 of the PDR) evokes the long history of human settlement along this

Mr. George Atta  
Page Two

section of the Kona coastline, there is no specific information on where the historic site complexes are, where the proposed developments will go, and how the developments might affect the significant historic sites known to be present in the three park development areas. Similarly, Chapter 10 on Cultural Resources in the DEIS lacks sufficient information on the location of known historic sites in relation to proposed developments. Without this level of detail, we cannot, at this time, concur or disagree with any of the proposed alternatives for park development. We provide specific comments on these general concerns in the following Attachment.

Should you have any questions, please feel free to contact Sara Collins at 692-8026 or Patrick McCoy at 692-8029.

Aloha,

*P. Holly McEldowney*

P. Holly McEldowney, Acting Administrator  
State Historic Preservation Division

SC:jk

c: Mr. Daniel S. Quinn, Administrator, State Parks  
Ms. Genevieve Salmonsens, Director, Office of Environmental Quality Control

ATTACHMENT: SPECIFIC COMMENTS ON THE DEIS FOR  
KEKAHA KAI STATE PARK

Park Development Report (PDR)

Chapter 1.0, PDR, Introduction, Section 1.1.1, Relationship to Region

Page 1-5: We believe that an explicit statement concerning cultural landscapes and their preservation within the proposed parks areas needs to be added here. In addition to encouraging visitors to appreciate their connection to the natural world, we believe that the park development, as proposed, will also provide an opportunity to see and appreciate the traditional cultural landscape of Hawai'i.

Section 2.2.2 Anchialine Ponds

Page 2-3: According to our understanding, anchialine ponds are fairly stable features of the landscape. Furthermore, as you have noted, the ponds were frequently the nucleus of human settlement or land use along this portion of the Kona Coast. Consequently, we wonder why there is no discussion here or elsewhere of how many such ponds are present within each of the three development parcels. Also, maps showing the locations of these features on each development parcel would be a very useful addition.

Section 2.7 Natural Resource Interpretive Themes

Section 2.7.1, Geological Themes: We recommend including the mention of the historic properties associated with the *kipuka* and the anchialine ponds. A map of these various cultural and natural features should be included for each park development parcel. Also, it should be indicated, if not here then elsewhere, approximately how many anchialine ponds are still present within each park area.

Chapter 3.0, PDR, Cultural Resources

General: The lack of specific information on the numbers and locations of significant historic sites identified within each development parcel renders this chapter ineffective for planning purposes. The archaeological survey reports found in Appendices K and M, while thorough in and of themselves, only present specific data on some, not all, portions of the project area. For example, the generalized discussions of what kinds of historic sites are present at the Maha'iula development parcel (Section 3.2.1 on page 3-4) cannot be usefully compared with the development plans shown (Figure 6-2 on page 6-6) and discussed in Chapter 6. While the cultural importance of the landscape is acknowledged (paragraph 2), we also believe that a number of places, such as Pu'u Pu'ili or Po'opo'omino, may be Traditional Cultural Properties, which are also a type of historic property. These properties should also be identified as such in the PDR and DEIS.

Chapter 6.0, PDR, Development Plan

General: As noted above, there is too little specific information provided on the significant historic sites known to be present in the three development parcels to be able to evaluate the proposed improvements. For example, while the archaeological



report in Appendix M contains considerable information on the significant historic sites identified in the Manini`ōwali development parcel, Figure 6-5 (page 6-21) does not show where these hundreds of features are in relation to park developments like the maintenance facility or comfort station. Furthermore, trails – historic, modern, and those to be constructed – are an important component of park development in all three areas, yet there is very little detailed information, particularly on the historic trails and trail segments, in relation to proposed development.

#### Chapter 9.0, DEIS, Environmental Setting

##### Section 9.5.4, Anchialine Ponds

Page 9-10: We appreciate the inclusion of more specific information on the numbers and types of anchialine ponds present but still wonder why there is no map showing where these natural features are, especially since, as you have noted on page 9-11, "A common characteristic of all pond types is evidence of cultural modification."

##### Section 9.6.3, Trails

Page 9-13: Again, there is insufficient information here for us to evaluate historic trails known to be present and the proposed development activities.

#### Chapter 10.0, Cultural Resources

General: As noted above, we have not reviewed the two most recent archaeological survey reports. We note, first of all, that the 1998 survey of the Mahai`ula development parcel will need to have Statewide Inventory of Historic Places (SIHP) numbers assigned to the 71 historic sites identified through the survey. We also note that in our comment on the EIS preparation notice that we requested that the Na Ala Hele program develop acceptable historic preservation management plans for the historic trails within the park for our review and approval. In your response you indicated that such a management plan is under development and will not be implemented without prior review by SHPD. Finally, while the site descriptions for each development parcel are adequate, the presentation would be strengthened by the inclusion of detailed maps for each parcel showing the locations of identified historic sites.



May 22, 2003

Ms. P. Holly McEldowney, Acting Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. McEldowney:

Thank you for your February 24, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

It is the general principle that all known cultural resources and historic sites throughout Kekaha Kai State Park will be preserved. Improvements are being sited to avoid known cultural and historic sites.

We regret that you have not been able to review the cultural assessment and archaeological inventory survey reports, submitted as Appendices K, L and M to the subject Draft EIS. These reports provide the detailed information regarding the cultural resources and historic site complex locations in relation to the proposed developments. The park development will preserve these known archaeological and significant historic sites and the information provided regarding the significance of these features will be used to guide management of the sites so that they might educate and inspire visitors to the park and at the same time be preserved for that enjoyment of future generations. To the maximum extent possible, planned improvements, such as roadways, trails, comfort stations, and parking areas are sited away from known sites.

We have prepared the following responses to your specific comments:

**Park Development Report:** The preservation of cultural landscapes within the park will be explicitly stated in the Introduction Section, 1.1.1 regarding the Relationship to the Region.

**Section 2.2.2 Anchialine Ponds:** The locations of the anchialine ponds are noted on the development plans of Figure 6-2 Mahai'ula, Figure 6-4 Awakee and Figure 6-5 Maniniowali. Basically there are four anchialine pond complexes at the park:

1. Kua Bay (behind the north side of the beach)
2. Awake'e (a large complex on the south, mauka of the road to Makalawena)
3. Mahai'ula (coconut grove to Kawili point); and
4. Ka'elehuluhulu (makai of 1801 lava flow and behind the sand dune)

Response letter to DLNR Historic Preservation Division  
Kekaha Kai State Park FEIS  
May 22, 2003  
Page 2

At Awakee, a series of ponds occur at the southwestern corner of the property and continues farther south on the adjacent Makalawena property. They lie in an area of low topography behind a coastal berm composed mainly of coral rock. A range of eighteen (18) to 35 ponds have been identified in previous surveys.

At Maniniowali, there is a single anchialine pond at the north end of Kua Bay approximately 250 feet behind the beach. Figure 6 from the Maniniowali/Awakee Land Exchange EIS is attached which identifies the anchialine ponds in these areas.

The anchialine pond complex at Awakee (T-179, T-180, T181) has been interpreted as having recreational and or aquacultural functions. These features are recognized as having a potentially high research, interpretive, and cultural values, especially in association with the habitation complex (T-101) which is located along the shoreline of Awakee. This type of information will be used in the development of the interpretive programs for the park.

The complex at Mahai'ula stretches from the coconut grove at Keawehala to Kawili Point. The families at Mahai'ula used these ponds until the 1960s. A windmill was used to pump the water.

The complex at Ka'elehuluhulu seems to be remains of the old Pai'ea Fish Pond, but this has not been verified. Makali'i and other wetland vegetation grows in these ponds.

Section 2.7 Natural Resource Interpretive Themes: Historic properties associated with the kipuka and the anchialine ponds will be mentioned in section 2.7.1. As the interpretive programs develop, maps of these various cultural and natural features will be included for each park development parcel.

Chapter 3.0, PDR, Cultural Resources: Specific information regarding the numbers and locations of significant historic sites identified with each development parcel is provided in Appendix reports K, L and M. Highlights of their findings and recommendations are presented in section 10 of the DEIS. These include specific suggestions regarding preservation and interpretation of the resources in the park. In addition, archaeological reports conducted and published in previous EIS reports and submitted to Historic Preservation regarding these parcels.

Chapter 6.0, PDR, Development Plan: Maps illustrating the relationship between known cultural resources and planned developments have been added.

Section 9.6.3 Trails: A Trails Management Plan is being developed in collaboration with the Na Ala Hele Program. Section 7.4 of the DEIS report identifies the guiding principles and purposes of the management plan. Descriptions of known historic trails are described in detail in the archaeological reports provided in the appendix of the DEIS report. For example, on page 43 of Appendix M, the description of the historic trail site 50-10-18-16059 is provided along with a narrative explaining its possible uses and associated features. Page 270 283 and 290 of Appendix M describes the network of trails including the alaloa coastal trail site 50-10-18-23360. Maps, photos and details relating to the features associated along the trail system are described. Figure 128 on page 207 of Appendix M shows segments identified in the field and are probably the location of destroyed sections of trail feature 50-10-18-23360.

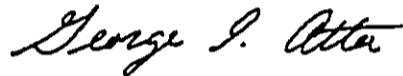
Response letter to DLNR Historic Preservation Division  
Kekaha Kai State Park FEIS  
May 22, 2003  
Page 3

**Chapter 10, Cultural Resources:** We look forward to your review of the two most recent archaeological survey reports, as much effort and respect has been put into collecting this information. We recognize that the 1998 survey of the Mahai'ula development parcel will need to have Statewide Inventory of Historic Places numbers assigned to the 71 historic sites identified through the survey. A historic preservation management plan for the historic trails will be developed with input by Na Ala Hele and will not be implemented without prior review by SHPD. Inclusions of detailed maps for each parcel showing the locations of identified historic sites are included.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

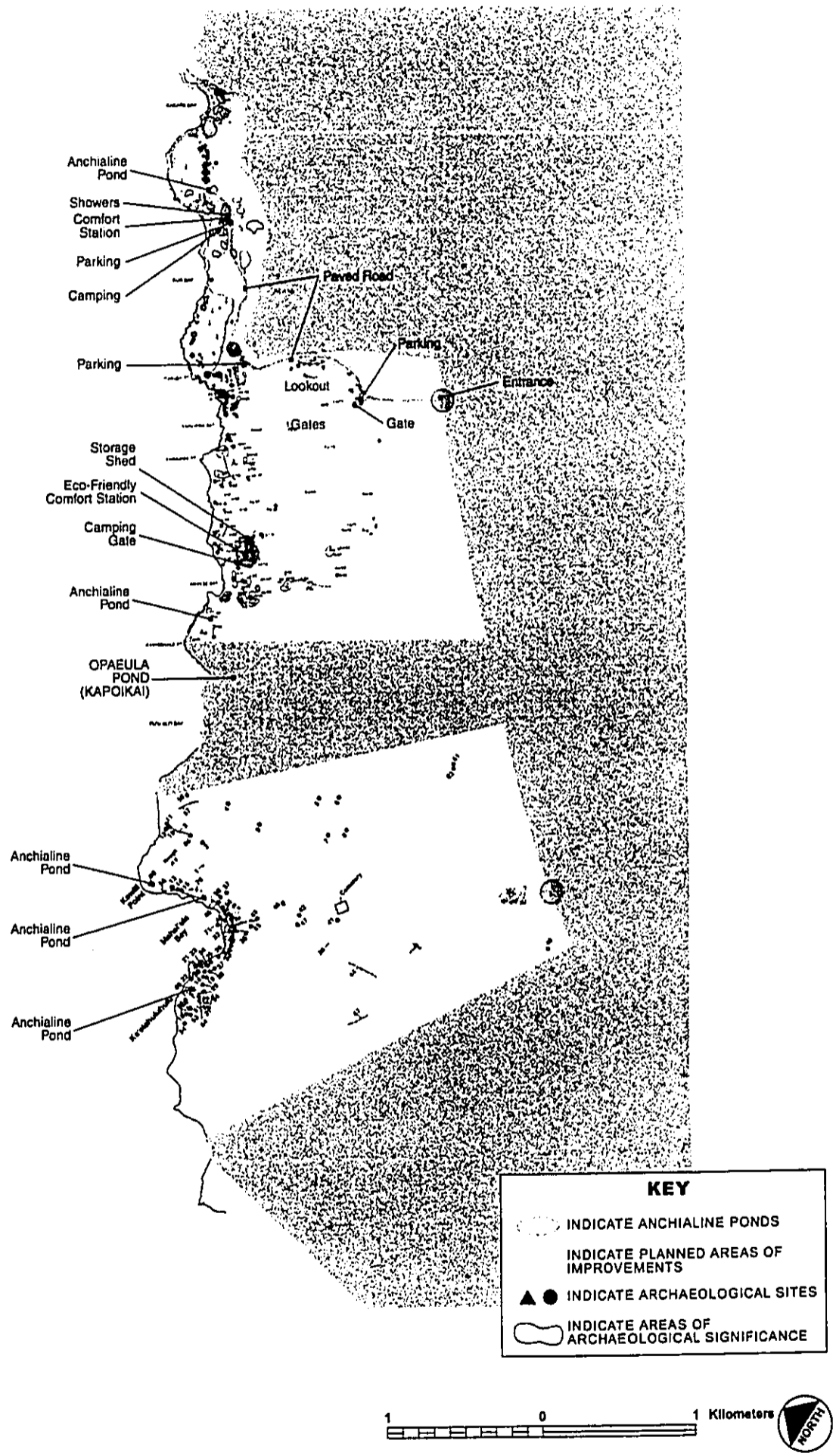
Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator  
encl.



**Kekaha Kai State Park**

Relationship of Planned Improvements to Known Archaeological Sites

RECEIVED  
DIVISION OF FORESTRY & WILDLIFE  
JAN 15 2003 10:50 AM

## Division of Forestry & Wildlife


1151 Punchbowl Street, Rm. 325 • Honolulu, HI 96813 • (808) 587-0166 • Fax: (808) 587-0160

January 15, 2003

### MEMORANDUM

TO: Lauren Tanaka, Planner  
State Parks Division

THRU: Dan Quinn, Administrator  
State Parks Division

FROM: Michael G. Buck, Administrator  
Division of Forestry and Wildlife 

SUBJECT: Kekaha Kai State Park Draft EIS.

We have reviewed the subject Draft EIS for Kekaha Kai State Park, North Kona, Island of Hawaii and provide the following comments for your consideration. The endangered loulu palm is found on the Mahai'ula parcel and it should be protected. Wherever possible, native or polynesian plants are recommended for landscaping. This mandate follows Act 73, SLH that directs new or renovated landscapes to use native Hawaiian plants whenever possible. Several native plants are already found on the parcel and are well adapted to the local conditions requiring less water and soil for their survival (a'ali'i, maiapilo, naupaka, 'ilima, pa'u o Hi'iaka, nehe). Polynesian introduced plants like kou, kamani, noni, and milo are appropriate species that can be used to landscape the beach areas. We appreciate the opportunity to comment on this project. Should you have any questions regarding our review of the subject document, please call Ms. Vickie Caraway, DOFAW State Botanist at 587-0165.

C: DOFAW Hawaii Branch  
Vickie Caraway, DOFAW Administration



February 27, 2003

Mr. Michael G. Buck, Administrator  
Division of Forestry and Wildlife  
Department of Land and Natural Resources  
1151 Punchbowl Street, Room 325  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Buck:

Thank you for your January 15, 2003 memorandum regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize, as you do, that the existing native plants are well adapted and appropriate for the hot coastal conditions at Kekaha Kai State Park. Continued use of these plants as well as the protection of the endangered loulou at Mahaiula are planned. In addition, where possible, the use of natives or Polynesian introductions for landscaping will be preferred.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

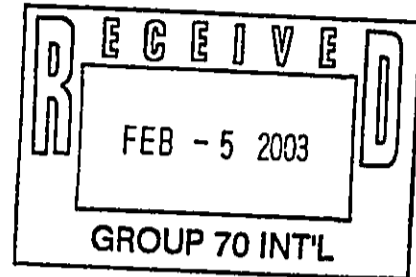
George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

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- Linda C. Wai, AIA
  
- George I. Atta, AICP
- Paul P. Cheney, AIA
- Wendy Lee Cook, AIA, ADF
- Philip F. Gibson
- Suzanne Harris
- Jeremy L. Hsu, AIA
- Peggy A. Inoué, AIA, AIA
- Stuart M. Low, AIA
- Charles Y. Kashiwagi, AIA
- Sean H. Kitamura
- Katherine M. MacNeil, AIA
- Frank B. McGuire
- Kyle K. Nakamura
- Kathryn A. Nam
- Jeffrey H. Overton, AICP
- Christine M. Rostale, AICP
- James L. Stone, AIA
- Scott Tangonan
- Wesley H. Upton, AIA
- Sharon Ching Williams, AIA



**NA ALA HELE**  
Hawai'i Trail & Access System



February 4, 2003

George Atta  
Group 70 International  
925 Bethel Street, Fifth Floor  
Honolulu, HI 96813

**SUBJECT: Draft Environmental Impact Statement  
Kekaha Kai State Park**

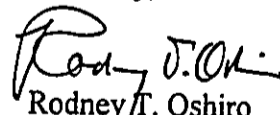
Dear Mr. Atta,

Na Ala Hele strongly supports the effort to provide additional shoreline recreational opportunities and stand ready to assist in the development of a functional and culturally sensitive trail system within the park.

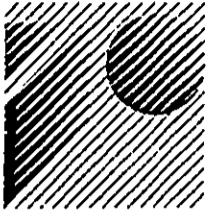
We are requesting a copy of the Final Environmental Impact Statement.

Thank you for the opportunity to comment.

Sincerely,

  
Rodney T. Oshiro  
Na Ala Hele





**GROUP 70**  
INTERNATIONAL, INC.

- Francis S. Oda, Arch. D., AIA, AICP
- Norman S.Y. Hong, AIA
- Sheryl B. Seaman, AIA, ASID
- Hitoshi Hida, AIA
- Ray H. Tanel, A.A. AIA
- James I. Nishimura, A.A.
- Patricia E. Portwood, AIA
- Stephanie H. Kwon, AIA
- Judith C. Miller, AIA
- George I. Atta, AICP
- Paul P. Chermak, AIA
- Wendy Lee Cook, AIA, ACP
- Philip J. Gaudin
- Stephanie H. Kwon
- Jerome J. Hsu, AIA
- John A. Kasper, AIA, ACP
- Shawn M. Kelly, AIA
- Charles V. Karachuk, AIA
- Debra H. Kramura
- Carmaine M. MacNeil, AIA
- Frank B. McGee
- Yuki K. Nakamoto
- Kathryn A. Nash
- Jeffrey H. Overton, AICP
- Christine M. Ruckel, AICP
- James L. Stone, AIA
- Scott Taneone
- Wesley N. Johnson, AIA
- Sharon Chung H. Jones, AIA

February 18, 2003

Mr. Rodney T. Oshiro  
 Na Ala Hele  
 Department of Land and Natural Resources  
 Division of Forestry and Wildlife  
 P.O. Box 4849  
 Hilo, Hawaii 96720-0849

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Oshiro:

Thank you for your February 4, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. Your ongoing participation in our planning process is much appreciated.

Your support will help in developing a functional and culturally sensitive trail system for the park and for the public.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

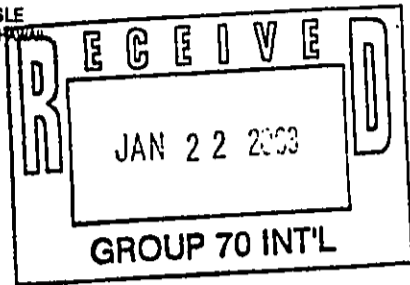
Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. BOX 3378  
HONOLULU, HAWAII 96801-3378

CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to:  
EMD / CWB

01045PJS.03

January 16, 2003

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

**Subject: Kekaha Kai State Park  
Park Development Report and Draft Environmental Impact Statement (DEIS)**

The Department of Health, Clean Water Branch (CWB) has reviewed the subject submittal (three (3) bound documents) and notes that this project is located adjacent to Class AA Open Coastal Marine Waters and includes various anchialine ponds. The CWB has the following comments:

1. The Army Corps of Engineers should be contacted to identify whether a Federal permit (including a Department of Army permit) is required for this project. If it is determined that a Federal permit is required for the subject project, then a Section 401 Water Quality Certification would also be required from our office.
2. If the project involves any of the following activities, a National Pollutant Discharge Elimination System (NPDES) permit coverage is required for each activity:
  - a. Construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five (5) acres of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.**

*Note: After March 10, 2003, an NPDES permit will be required for construction activities, including clearing, grading, and excavation that result in the disturbance of one (1) acre or more.*

Mr. George Atta, AICP  
January 16, 2003  
Page 2

- b. Discharges of hydrotesting water.
- c. Discharges of construction dewatering effluent.

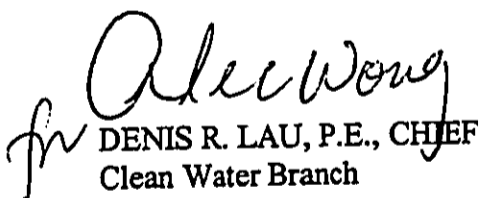
The CWB requires that an application for the NPDES permit be submitted 180 days before the commencement of the respective activities. The NPDES application forms may be picked up at our office or downloaded from our website at <http://www.state.hi.us/doh/eh/cwb/forms/index.html>.

The CWB understands that the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD) has reviewed the Environmental Impact Statement Notice of Preparation and has submitted comments published in the DEIS (Group 70 response, dated November 21, 2002, to CWB letter no. 05022PKP.02). Hawaii Administrative Rules, Section 11-55-38, also requires the owner to either submit a copy of the NPDES permit application to SHPD or demonstrate to the satisfaction of the Department of Health that the project, activity, or site covered by the application has been or is being reviewed by SHPD. A list of the submittals to and reviews by SHPD shall be submitted with your NPDES application.

Please provide CWB with a copy of the Final Environmental Impact Statement.

If you have any questions, please contact Ms. Joanna L. Seto of the Engineering Section, CWB, at 586-4309.

Sincerely,

  
DENIS R. LAU, P.E., CHIEF  
Clean Water Branch

JLS:rk

- c: Mr. Daniel S. Quinn, State Parks Planning Branch, Division of State Parks, Department of Land and Natural Resources - via fax 587-0311 only
- Ms. Genevieve Salmonson, Office of Environmental Quality Control - via fax 586-4186 only



February 27, 2003

Mr. Denis R. Lau, P.E.  
Clean Water Branch Chief  
Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Lau:

Thank you for your January 16, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Federal Permit:** The Army Corps of Engineers will be contacted to identify whether a federal permit is required for this project. If applicable, a Section 401 Water Quality Certification will be obtained from the State Department of Health, Clean Water Branch.

**National Pollutant Discharge Elimination System (NPDES) permit:** Thank you for the information regarding the NPDES permit. The State will address these requirements in the design and construction phase. Should a permit be necessary, the State Department of Land and Natural Resources, State Historic Preservation Division will be notified.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, AICP  
Arch. D., AIA, AICP  
Norman G. Hong, AIA  
Sheryl B. Seaman, AIA, AICP  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, AICP  
James I. Nishimoto, AIA  
Reich E. Robinson, AIA  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

George L. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, AICP  
Philo T. Guccia  
Suzanne Hahn  
Jerome T. Hsu, AIA  
Roy A. Inoué, AIA, AICP  
Stuart M. Iwata, AIA  
Charles M. Kamehira, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank S. McCue  
Kyo K. Nakamura  
Kathryn A. Nam  
Jeffrey H. Quinn  
James L. Smith, AIA  
Sharon Taborian  
Marianne Taborian, AIA  
Sharon Chung Williams, AIA

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
File:

03-012/epo

February 12, 2003

Mr. George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Atta:

Subject: Draft Environmental Impact Statement (DEIS)  
Kekaha Kai State Park Improvements  
TMK: 7-2-005:002, 003, 007; 7-3-043:001 (por); 7-2-004: 003, 017 & 019

Thank you for the opportunity to review and comment on the subject proposal. The DEIS was routed to the various branches of the Environmental Health Administration. We have the following comments:

Clean Water Branch (CWB)

1. The Army Corps of Engineers should be contacted to identify whether a Federal permit (including a Department of Army permit) is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act"), a Section 401 Water Quality Certification is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...."
2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following activities:
  - a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);

*(Note: After March 10, 2003, an NPDES permit will be required for construction activities, including clearing, grading, and excavation that result in the disturbance of one (1) acre or more.)*

- b. Construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five (5) acres of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.**
- c. Discharge of treated effluent from leaking underground storage tank remedial activities;
- d. Discharge of once through cooling water less than one (1) million gallons per day;
- e. Discharge of hydrotesting water;
- f. Discharge of construction dewatering effluent;
- g. Discharge of treated effluent from petroleum bulk stations and terminals;
- h. Discharge of treated effluent from well drilling activities;
- i. Discharges of treated effluent from recycled water distribution systems;
- j. Discharges of storm water from a small municipal separate storm sewer system; and
- k. Discharge of circulation water from decorative ponds or tanks.

The CWB requires that a Notice of Intent (NOI) to be covered by a NPDES general permit for any of the above activities be submitted at least 30 days before the commencement of the respective activities. The NOI forms may be picked up at our office or downloaded from our website at <http://www.state.hi.us/doh/eh/cwb/forms/genl-index.html>.

- 3. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters, and/or coverage of the discharge(s) under the NPDES general permit(s) is not permissible. An application for the NPDES permit is to be submitted at least 180 days before the commencement of the activities. The NPDES application forms may also be picked up at our office or downloaded from our website at <http://www.state.hi.us/doh/eh/cwb/forms/indiv-index.html>.
- 4. Hawaii Administrative Rules, Section 11-55-38, also requires the owner to either submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD) or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD.

If you have any questions, please contact the CWB at (808) 586-4309.

Clean Air Branch (CAB)

*Control of Fugitive Dust*

There is a significant potential for fugitive dust emissions during all phases of construction. Proposed construction activities will occur on school grounds and in close proximity to public beaches and major thoroughfares, thereby exacerbating potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. Implementation of adequate dust control measures during all phases of development and construction activities is warranted.

Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

- a. Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. Providing an adequate water source at the site prior to start up of construction activities;
- c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. Controlling of dust from shoulders and access roads;
- e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f. Controlling of dust from debris being hauled away from project site.

If you have any questions regarding these issues on fugitive dust, please contact the CAB at (808) 586-4200.

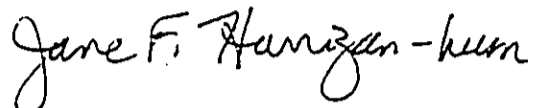
Wastewater Branch (WWB)

Wastewater treatment and disposal was not addressed in the EISPN for this project but has been briefly outlined in the DEIS which states that eco-friendly facilities such as compost toilets or other self contained facilities will be used. As the majority of the project lies in the critical wastewater disposal area and not within the County sewer system, the WWB has no major concern provided that wastewater systems such as compost toilets and other non-cesspool systems are used for wastewater treatment and disposal.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

If you have any questions, please contact the Wastewater Branch at (808) 586-4294.

Sincerely,



JUNE F. HARRIGAN-LUM

Manager

Environmental Planning Office

c: CWB  
CAB  
WWB





- Michael J. ...
- Norman ...
- Shane B. ...
- Washi ...
- Paul H. ...
- James ...
- Robert ...
- Margaret ...
- John ...
- George ...
- Paul ...
- Christopher ...
- Thomas ...
- Elizabeth ...
- John ...
- Michael ...
- Christina ...
- John ...
- Josephine ...
- John ...
- Wendy ...
- Kathryn ...
- Jeffrey ...
- Christina ...
- James ...
- Scott ...
- Wesley ...
- Sharon ...

April 25, 2003

Ms. June F. Harrigan-Lum, Manager  
 Environmental Planning Office  
 Department of Health  
 P.O. Box 3378  
 Honolulu, Hawaii 96801-3378

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. Harrigan-Lum:

Thank you for your February 12, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Clean Water Branch (CWB)**

1. **Federal Permit:** The Army Corps of Engineers will be contacted to identify whether a federal permit is required for this project. If applicable, a Section 401 Water Quality Certification will be obtained from the State Department of Health, Clean Water Branch.

2. **National Pollutant Discharge Elimination System (NPDES) permit:** Thank you for the information regarding the NPDES permit. The State will address these requirements in the design and construction phase. Should a permit be necessary, the State Department of Land and Natural Resources, State Historic Preservation Division will be notified.

**Clean Air Branch (CAB)**

Appropriate measures will be taken to control fugitive dust during construction. The specific measures indicated in your letter will be addressed.

**Wastewater Branch (WWB)**

The facilities at Mariniowali will be connected to the adjacent W.B. Kukio system. Facilities in the Awakee and Mahaiula portions will involve eco-friendly facilities mentioned in the DEIS.

Please call me if there are any further comments or questions.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,  
 GROUP 70 INTERNATIONAL, INC.

*George Atta*  
 George Atta, AICP  
 Chief Community Planner

cc: Dan Quinn, State Parks Administrator

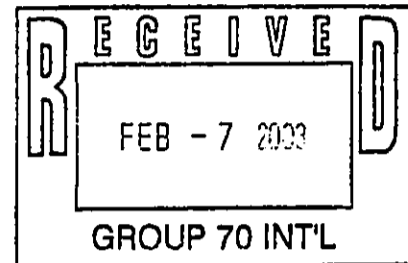
LINDA LINGLE  
GOVERNOR  
STATE OF HAWAII



MICAH A. KANE  
CHAIRMAN DESIGNATE  
HAWAIIAN HOMES COMMISSION

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS  
P O BOX 1879  
HONOLULU, HAWAII 96805

February 6, 2003



Mr. George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

Subject: Kekaha Kai State Park  
Draft Environmental Impact Statement

Thank you for allowing our review of the December 2002 reports for the subject project.

The Department of Hawaiian Home Lands has no comment, and will not need a copy of the Final Environmental Impact Statement.

If you have any questions regarding this matter, please call me at 586-3801, or contact Joe Chu of our Planning Office at 586-3836.

Mahalo and aloha,

*Micah A. Kane*  
for Micah A. Kane, Chairman Designate  
Hawaiian Homes Commission

c: Department of Land and Natural Resources, State Parks  
Office of Environmental Quality Control



February 18, 2003

Mr. Micah A. Kane  
Chairman Designate, Hawaiian Homes Commission  
Department of Hawaiian Home Lands  
P.O. Box 1879  
Honolulu, Hawaii 96805

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Kane:

Thank you for your February 6, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize the Department of Hawaiian Home Lands has no comment at this time.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda  
Aron D. Aikawa  
Norman G. Hongo, III  
Sheryl B. Seaman, AIA, FAS  
Hitoshi Hada, AIA  
Roy H. Nishi, AIA, AS  
Jethro A. Hironaka  
Katherine A. Hironaka  
Robert A. Hironaka  
M. Duane

George A. Atta, AICP  
Paul R. Quinlan, AIA  
Wendy A. Quinlan, AIA  
Philip J. Quinlan  
John A. Quinlan  
John A. Quinlan  
Charles A. Quinlan, AIA  
Dean A. Quinlan  
Katherine A. Quinlan  
Francis S. Oda  
Aron D. Aikawa

George A. Atta  
John A. Quinlan  
Wendy A. Quinlan  
Philip J. Quinlan  
John A. Quinlan  
Dean A. Quinlan  
Katherine A. Quinlan  
Francis S. Oda  
Aron D. Aikawa

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LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS DIVISION  
400 Rodgers Boulevard, Suite 700  
Honolulu, Hawaii 96819-1880

February 19, 2003


ROONEY K. HARAGA  
DIRECTOR

Acting Deputy Director  
GLENN M. OKIMOTO

IN REPLY REFER TO:

AIR-P  
03.0064

TO: DANIEL S. QUINN, STATE PARKS ADMINISTRATOR  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF STATE PARKS

FROM: DAVIS K. YOGI   
AIRPORTS ADMINISTRATOR

SUBJECT: KEAKAHA KAI STATE PARK  
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Thank you for permitting us to review your Draft Environmental Statement (EIS) for Kekeha Kai State Park on the Kona coast of the Big Island. We have the following comments to the Draft EIS:

1. Page 1-18, Section 1.4, Planning Assumptions, Airport Land Holdings at Kaulana. The State Department of Transportation (DOT), Airports Division has not yet received a formal request from the State Department of Land and Natural Resources (DLNR) Division of State Parks for the land described in this section to be acquired by DLNR.
2. Page 5-2, Section 5.3.2, Facilities, describes an access route to the park on a section of a road owned by the DOT. Please provide us the traffic impact, if any, on the access route to the park controlled by DOT, Airports Division.
3. Page 6-13, Section 6.1.5, Mahai'ula, Interpretive Education Center. Although Kekaha Kai State Park is not in the high noise contours of over 60 DNL from our Noise Exposure Maps for Kona International Airport at Keahole (KOA), it may be in the approach path to KOA. The aircraft noise may impact the classroom activities at this facility if the facility is not insulated for sound.

Mr. Daniel S. Quinn  
February 19, 2003  
Page 2

AIR-P  
03.0064

4. Page 6-16, Landscaping. What will be the maximum height of the kou trees which are planned to be replanted along the Bay? These trees could become an obstruction to the Airport.
5. Page 9-6, Section 9.3.3, Noise/AICUZ. Please review the KOA, FAR Part 150 Noise Compatibility Program dated December 1997. AICUZ noise maps, which are referred to in this section, are prepared for military installations.

If you may have any questions, please contact Mr. Stephen Takashima, Senior Planner, at 838-8810.



April 25, 2003

Mr. Davis K. Yogi, Airports Administrator  
State of Hawaii, Department of Transportation  
Airports Division  
400 Rodgers Boulevard, Suite 700  
Honolulu, Hawaii 96819-1880

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Yogi:

Thank you for your February 19, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. We appreciate you sharing your concerns and support for the Park.

We have prepared the following responses to your comments:

**Airport Land Holdings:** The assumption is that the Department of Land and Natural Resources Division of State Parks will eventually pursue acquisition or joint management of appropriate airport land holdings at Kaulana that are contiguous to the Park. Formal requests have not yet been processed at this time.

**Access Road owned by DOT:** Figure 1-8 illustrates the existing two-wheel drive road from Queen Kaahumanu Highway to Mahai'ula Bay that crosses property currently owned by the Department of Transportation. This unpaved roadway serves as the primary vehicular access to Mahai'ula. A general level of road improvement is planned. However, for the foreseeable future, paving is not planned for this road.

A Traffic Impact Assessment was conducted for the intersection of this road with Queen Kaahumanu Highway, not for the specific portion of the roadway that is owned by DOT. A copy of that report is found in Appendix F of the Draft EIS report.

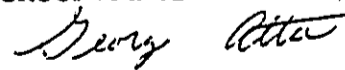
**Mahai'ula Interpretive Education Center:** Thank you for clarifying that the Kona International Airport at Keahole (KOA) Noise Exposure Map does place the approach path to KOA over portions of the park. We recognize that the aircraft noise may impact the classroom activities at the Mahai'ula Interpretive Educational Center if the facility is not insulated for sound.

**Landscaping:** Mature Kou trees grow to about 30-35 feet in height. Existing Kiawe trees and coconut palms exceed the anticipated future height of the Kou trees. It is not expected that these trees will grow to heights to become obstructions to airport activities. State Parks will address these issues should such planting pose public safety concerns.

**Noise/AICUZ:** Thank you for providing reference to KOA, FAR Part 150 Noise Compatibility Program dated December 1997. This material will be reviewed.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read "George Atta", is written over the typed name.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

M. J. O'Neil, AIA  
A. J. O'Neil, AIA  
N. J. O'Neil, AIA  
S. B. O'Neil, AIA  
H. O'Neil, AIA  
P. O'Neil, AIA  
J. O'Neil, AIA  
D. O'Neil, AIA  
C. O'Neil, AIA  
B. O'Neil, AIA  
R. O'Neil, AIA  
W. O'Neil, AIA  
T. O'Neil, AIA  
L. O'Neil, AIA  
K. O'Neil, AIA  
J. O'Neil, AIA  
M. O'Neil, AIA  
D. O'Neil, AIA  
S. O'Neil, AIA  
K. O'Neil, AIA  
J. O'Neil, AIA  
C. O'Neil, AIA  
J. O'Neil, AIA  
S. O'Neil, AIA  
W. O'Neil, AIA  
S. O'Neil, AIA

PHONE (808) 594-1888

FAX (808) 594-1885



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

RECEIVED

'03 MAR -4 P2:30

OFF. OF ENVIRONMENTAL  
QUALITY CONTROL

February 22, 2003

HRD 03/6

Genevieve Salmonson  
Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park  
Draft Environmental Impact Statement

Dear Ms. Salmonson:

This is in response to your request to the Office of Hawaiian Affairs to review and comment on the Draft Environmental Impact Statement for the Kekaha Kai State Park. The Office of Hawaiian Affairs has no comment on the proposed project at this time. However, we would like to request a copy of the Final Environmental Impact Statement when it is available. Please feel free to contact Leimana DaMate, Hawaiian Rights Division, at 594-1944, or email her at [leimanad@oha.org](mailto:leimanad@oha.org), should you have any questions.

Sincerely,

Ernest M. Kimoto  
Acting Director, Hawaiian Rights Division



May 30, 2003

Mr. Ernest M. Kimoto  
Acting Director, Hawaiian Rights Division  
State of Hawaii  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Kimoto:

Thank you for your February 22, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We recognize the Office of Hawaiian Affairs has no comment at this time.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). A copy of the Final EIS will be sent to you. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Ota  
Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Ninei, AIA, CSI  
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Dzer H. Kitamura  
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Jeffrey H. Queman, AICP  
Christine M. Scola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Upton, AIA  
Sharon Ching Williams, AIA



**UNIVERSITY OF HAWAII AT MĀNOA**  
Environmental Center

February 21, 2003  
RE: 0730

Mr. Daniel S. Quinn  
Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, Suite 310  
Honolulu, HI 96813

Dear Mr. Quinn:

Draft Environmental Impact Statement  
Kekaha Kai State Park  
North Kona, Hawaii

The Department of Land and Natural Resources, Division of State Parks, in collaboration with the Kona community has developed a Conceptual Plan to improve Kekaha Kai State Park. The Conceptual Plan envisions a major State Park of approximately 1,700 acres encompassing natural, cultural, wilderness and coastal recreation areas located on the Kona Coast of the island of Hawaii, stretching between the ahupua'a of Kaulana and Kuki'o.

Existing infrastructure includes an unimproved two wheel-drive access road at Mahai'ula and four wheel-drive roads in Awake'e and Manini'owali leading from Queen Ka'ahumanu Highway to the coast. The only structures present in the park are the Magoon/Ka'elemakule house complex at Mahai'ula Bay and new comfort station behind Ka'elehuluhulu Beach. Despite unimproved access and limited facilities, Kekaha Kai State Park is widely used for swimming, fishing, picnicking and general viewing enjoyment.

The few improvements that are proposed in the Kekaha Kai State Park Plan include parking areas, picnic areas, camping areas, and support facilities such as recreational pavilions, comfort stations, an educational center and visitor orientation facilities. Access improvements are also planned for the Ala Kahakai, a lateral coastal trail system, other pedestrian trails, four-wheeled drive service roads, two-wheeled drive roads and entrance gates.

The project involves the use of state property and state funds, and is located in the State Conservation District and Special Management Areas requiring both CDUA and SMA permits.

The Environmental Center reviewed this document with the assistance of Ms. Sara Peck of the Sea Grant Extension Service and Mr. Kevin Polloi of the Environmental Center.

February 21, 2003  
Page 2 of 3

### General Comments

The Environmental Center applauds the efforts of the Division of State Parks in involving the community in the planning for the Kekaha Kai State Park project. Early participation of the public facilitates a more comprehensive planning process. More agencies should follow suit to adequately meet the needs of the community.

The document was well written, however we feel that it did not effectively address cumulative impacts resulting from the development of the Park, specifically long-term indirect impacts from increased access to near-shore areas (Section 12.2 - Probable Impacts and Mitigative Measures, Potential Long-Term Impacts).

The State has seen drastic decline in marine resources due to over-harvesting, habitat destruction, pollution and other factors. This is further compounded by inadequate marine protected areas (MPA's) to ensure sufficient stocks to replenish adjacent areas. Therefore, any development, especially ones near the coast must consider this situation along with the other usual conditions. Fishing pressure will without doubt increase dramatically with the improvement of roads into the proposed Kekaha Kai State Park.

Although the near-shore waters adjacent to the entire seaward side of the proposed park do not fall under the jurisdiction of the Division of State Parks, responsibility toward the natural resources living therein is, by virtue of access, an indirect responsibility. Commercial fishers (not subsistence fishers) will literally harvest hundreds of pounds of fishes and other marine resources at a number of points along the coastline if the project allows access as described in the Draft EIS.

Your response to this issue in Section 17 - Agencies and Parties Consulted of the draft document indicated that your firm and State Parks felt this concern should be dealt with by the State Division of Aquatic Resources (DAR). Unfortunately, DAR has apparently been unable to assess and address immediate resource depletion scenarios. For example, the Division has still not addressed two carefully researched and crafted recommendations made by the West Hawaii Fisheries Council over four years ago in one case and one year in the other case. The reason for this delay in making fishery management decisions is not clear but suggests that greater attention must be given to protecting these known sensitive areas by other agencies with related resource management responsibilities. The Division of State Parks has the power and the responsibility to limit access until sustainable fishing rules are in place. Given the apparent inability of DAR to respond to the immediate depletion of resources afforded by convenient access, it is essential that the Division of State Parks use their management authority.

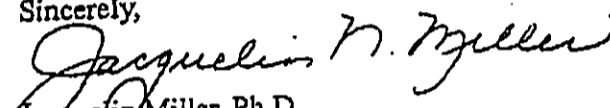
To ensure that adequate resource protection is maintained we urge that the Division of State Parks delay the construction of convenient access to all proposed coastal areas in this park, except the Kua Bay area adjacent to Kuki'o. Funding for access improvement to Kua Bay is already committed through the private sector (Kuki'o Development) and therefore

February 21, 2003  
Page 3 of 3

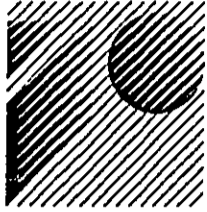
should be continued as scheduled. All other access improvements should be phased to occur after the West Hawaii Fisheries Council and DAR have determined sustainable use regulations for all other areas not readily accessible at this time.

Thank you for the opportunity to review this draft environmental impact statement.

Sincerely,

  
Jacquelin Miller, Ph.D.  
Associate Environmental Coordinator

Cc: OEQC  
George Atta, Group 70 International, Inc.  
James Moncur  
Sara Peck  
Kevin Polloi



**GROUP 70**  
INTERNATIONAL

Francis S. Oda,  
Arch. D., AIA, AICP

Norman G.Y. Hong, AIA

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Jeffrey H. Overton, AICP

Christine M. Rucola, AICP

James L. Stone, AIA

Scott Tangonan

Wesley N. Ujimoto, AIA

Sharon Ching Williams, AIA

May 22, 2003

Ms. Jacqueline Miller, Ph.D.  
Associate Environmental Coordinator  
University of Hawaii Environmental Center  
2500 Dole Street, Krauss Annex 19  
Honolulu, Hawaii 96822-2312

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. Miller:

Thank you for your February 21, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We appreciate your inclusion of Ms. Sara Peck and Mr. Kevin Polloi in the review of the document. Ms. Peck has been a participant in the Kekaha Kai State Park Task Force and is familiar with project developments in the area. Her participation, like others throughout the community, have lead to the development of a Plan that represent community desires.

One of the community elements expressed during the development of the park plan, was a designation of a marine protective area. However, as marine resources are outside the purview of the division of State Parks no further effort was directed towards this recommendation.

As you recognize, the responsibility of management for sea area fronting Kekaha Kai State Park is not the direct kuleana of the Division of State Park, rather the responsibility of the Division of Aquatic Resources (DAR).

Adequate resource management and protection of coastal resources is necessary and the Division of State Parks does care about the proper management of the ocean resources and the impacts that are created by the development of the Kekaha Kai State Park. State Parks will continue to manage access through park hours.

State Parks will continue to communicate with the Division of Aquatic Resources regarding this matter, and a copy of your letter and this response will be forwarded to the Division of Aquatic Resources. State Parks will also assist in management efforts by signage and an educational and interpretive program that will emphasize the fragility of the resources and encourage practices that protect and sustain the long term viability of marine resources. This issue will also remain on the agenda of future community meetings related to the Park.

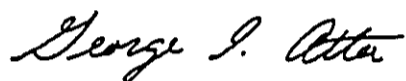
Jacqueline Miller, UH Environmental Center  
Kekaha Kai State Park DEIS response letter  
May 22, 2003  
Page 2

State Parks, however, does not feel that a delay in the construction of park improvements should be contingent upon resolve of use regulations by the West Hawaii Fisheries Council and DAR.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

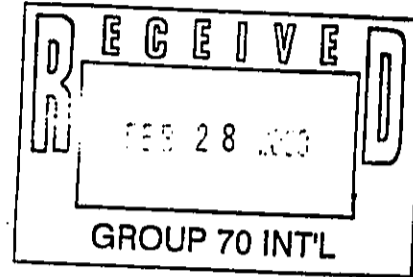
cc: Dan Quinn, State Parks Administrator  
DLNR, Division of Aquatic Resources



## DISABILITY AND COMMUNICATION ACCESS BOARD

919 Ala Moana Boulevard, Room 101 • Honolulu, Hawaii 96814  
Ph. (808) 586-8121 (V/TDD) • Fax (808) 586-8129

February 26, 2003



Mr. George Atta  
Group 70 International, Inc.  
925 Bethel Street  
Fifth Floor  
Honolulu, HI 96813

Regarding: Kekaha Kai State Park Park Development Report and Draft Environmental Impact Statement, December 2002

Dear Mr. Atta,

Thank you for providing us the opportunity to review and respond to this environmental document prepared pursuant to Chapter 200 of Title 11, Hawaii Administrative Rules, Department of Health, "Environmental Impact Statement Rules." The report consists of the Kekaha Kai State Park Development Report (PDR) and the Environmental Impact Statement (EIS) addressing the Conceptual Master Plan accepted by the Board of Land and Natural Resources in 1998 for the proposed improvements within the park. The purpose of our comments is to ensure that the PDR and the EIS have taken into account the accessibility requirements as required by Hawaii Revised Statutes 103-50 (HRS §103-50) and the additional parking design requirements as required by the Department of Health's "Hawaii Administrative Rules, Title 11, Chapter 219 Parking For Persons with Disabilities."

Listed below are recommendations for clarity as well as accuracy.

### **PARK DEVELOPMENT REPORT**

#### **Sections 1.0 – 7.0**

#### **Section 5.0 Planning Considerations**

#### **5.6 ADA Guidelines and Compliance, Page 5-9:**

The State of Hawaii's Outdoor Recreation Design Guidelines (1994), referenced in this subsection, is an obsolete document. We suggest you delete this subsection in its entirety and replace with the following:

*Planning for Kekaha Kai State Park seeks to retain the natural wilderness quality of the land by keeping facility development to a minimum and keeping trails and roads in as natural a state as possible. Part of the strategy is to keep things unimproved to limit access and impacts as well as to retain the natural quality.*

*The Americans with Disabilities Act (ADA) access policies and guidelines call for facilities to enhance accessibility. The Americans with Disabilities Act requires all state and local government facilities such as parks to be accessible to people with disabilities. The State of Hawaii adopted the current "Americans with Disabilities Act Accessibility Guidelines"*

Mr. George Atta  
Re: Kekaha Kai State Park Development Report  
February 26, 2003  
Page 2

(ADAAG) to implement this requirement under HRS §103-50 and has also adopted Hawaii Administrative Rules Title 11, Chapter 219. Development plans for the Kekaha Kai State Park facility must be designed implementing these requirements by using the best design practices to reach compliance to the maximum extent feasible.

The ADAAG is an evolving document with the portions most in the evolutionary stage affecting outdoor recreation areas. Currently, ADAAG applies to the environment of buildings and facilities. To the extent that this plan addresses restrooms, visitor centers, parking lots, etc., ADAAG has provisions, which currently apply.

The U.S. Architectural and Transportation Barriers Compliance Board also provides recommendations and various proposed guidelines which reflect the current best design practices for outdoor facilities. Since the park's long range plan is just at the start of developing a final master plan that may not be fully implemented for many years, we anticipate these evolving final guidelines to ultimately impact all future designs.

All designs of Kekaha Kai State Park shall adhere to the Americans with Disabilities Act Accessibility Guidelines (ADAAG), as current. Where guidelines for outdoor recreation sites have been issued by the U.S. Architectural and Transportation Barriers Compliance Board are either as final but not enforceable guidelines, interim guidelines, or advisory recommendations, those guidelines shall be followed as best design practices to the maximum extent feasible. At the time of this Master Plan, the documents relevant to this plan are:

- U.S. Architectural and Transportation Barriers Compliance Board, Recreation Guidelines, Final Rule, September 3, 2002. There is limited application of these guidelines to the park, as they cover pools, sports facilities, golf courses, boating and fishing facilities, and amusement rides. Nonetheless, they should be referenced.
- U.S. Architectural and Transportation Barriers Compliance Board, Recommendations for Accessibility Guidelines: Outdoor Developed Areas: Final Report published in September 1999. These recommendations affect camping sites, picnic sites, trails, and beach access. These recommendations have not been crafted into guidelines, but they do represent the state of the art for environments such as Kekaha Kai State Park.
- U.S. Architectural and Transportation Barriers Compliance Board, Accessibility Guidelines for Public Rights of Way – Draft Guideline, June 17, 2002.

Throughout this document, when the term "accessible" is used, it means "compliant with HRS §103-50 and Hawaii Administrative Rules Title 11, Chapter 219."

Throughout this document, when the term "ADAAG" is used, it means, "compliant with current ADAAG and designed to interim or recommended ADAAG for outdoor recreation facilities, as best practices."

For further information contact the Office of Technical and Informational Services, U.S. Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, D.C. 2004-1111; phone numbers (202) 272-5434 (V), (202) 272-0082 (TTY), email address and to access publications: [www.access-board.gov](http://www.access-board.gov).

## Section 6.0 General Development Guidelines

ADA Access, pages 6-4 and 6-5. This section needs clarity, although there is no significant factual error. We suggest you replace the entire first paragraph with the following wording:

*The requirements for accessibility under the Federal Americans with Disabilities Act and Hawaii Law, §103-50 Hawaii Revised Statutes, are described in Section 5.6. It is understood that the design guidelines will differ for new construction versus alteration. As stated in Section 5.6.*

*Throughout this document, when the term "accessible" is used, it means "compliant with HRS §103-50 and Hawaii Administrative Rules Title 11, Chapter 219."*

*Throughout this document, when the term "ADAAG" is used, it means, "compliant with current ADAAG and designed to interim or recommended ADAAG for outdoor recreation facilities, as best practices."*

We suggest you reword the bullets as follows:

*In addition to the information provided in Section 5.6, generally, the following guidelines will be applied and highlight some of the policy directions for Kekaha State Park:*

- All day use areas and major activity areas will have at least one accessible path from parking areas. Facilities at day use areas including picnic tables, utility sinks, grills, and trash containers will meet ADAAG.*
- Overlooks and viewing areas will be designed for accessibility. Viewing equipment placement and design will comply with ADAAG.*
- All designated parking areas shall be designed to ensure that accessible parking stalls and access aisles connect to an accessible route to one of each type of accessible amenities provided at each site.*
- At least a portion of all designed camping areas will be accessible from the adjacent parking area. A portion of all campsites will be surfaced and designed to accommodate wheelchairs and other accessibility requirements.*
- All new restroom facilities shall be fully accessible and on an accessible route.*
- There will be at least one accessible route to the major beaches in the park from the nearest parking area, including Ka'elehulu, Mahai'ula, Awake'e, and Kua Bay. Surface type and route will be developed on a case by case basis.*
- Paths to interpretive area will be made ADA accessible to the maximum extent practicable. While not all sections may be accessible due to limitations of terrain or potential alteration of the feature since most are interpretive. Those paths and trails that are not fully accessible shall be designed to address accessibility to the maximum extent feasible using best design practices, including program access.*
- A portion of all trails will be made accessible. As a wilderness park, it is understood that not all areas will be accessible. However, every effort will be made to include portions close to activity areas, significant features and resources into the network of accessible pathways. These portions will comply with ADAAG.*
- Those designated to be accessible paths to amenities, the beach, or other park areas, when not all paths are accessible, should be within close proximity to the accessible parking spaces and the accessible restrooms.*

Retain the last paragraph but delete the term "handicapped." "Accessible" is sufficient.



Mr. George Atta  
Re: Kekaha Kai State Park Development Report  
February 26, 2003  
Page 4

**EIS - ENVIRONMENTAL IMPACT STATEMENT**  
**Sections 8.0 -17.0**

**Section 15.0 Required Approvals and Permits**

This project falls within the scope of the HRS §103-50 that contains a requirement for a review process by the Disability and Communication Access Board. Ensure to include this requirement.

**Section 16.0 REFERENCES**

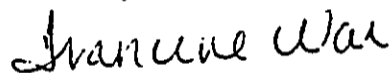
Delete the reference on page 16-4 to the State of Hawaii, Architectural Access Committee, Outdoor Recreation Guidelines.

**Section 17.0 AGENCIES AND PARTIES CONSULTED**

Add to State Agencies Consulted on page 17-1: Disability and Communication Access Board.

The above reflects staff's technical assistance comments. They do not reflect our Board's approval or disapproval of the plan. Should you have any questions or concerns, please feel free to contact Mr. Gary L. Batcheller, Facility Access Specialist or Mr. Ben Gorospe, Access Coordinator, at 586-8121.

Sincerely,



FRANCINE WAI  
Executive Director



May 22, 2003

Ms. Francine Wai, Executive Director  
State of Hawaii  
Disability and Communication Access Board  
919 Ala Moana Boulevard, Room 101  
Honolulu, HI 96814

Subject: Kekaha Kai State Park – Draft EIS

Dear Ms. Wai:

Thank you for your February 26, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. We appreciate your input and clarification regarding accessibility requirements.

We have prepared the following responses to your comments:

**Section 5.6 ADA Guidelines and Compliance:** We will delete this subsection in its entirety and replace it with the language you provided.

**Section 6.0 ADA General Development Guidelines:** We will replace the entire first paragraph with the language you provided as well as reword the bullets as you noted. In addition we will retain the last paragraph but delete the term "handicapped."

**Section 15.0 Required Approvals and Permits:** We will include the need for a review process by the Disability and Communication Access Board.

**Section 16.0 Reference:** The reference on page 16-4 will be deleted.

**Section 17.0 Agencies and Parties Consulted:** Consultation with the Disability and Communication Access Board will be added.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

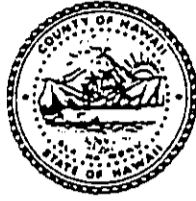
George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
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Sharon Ching Williams, AIA

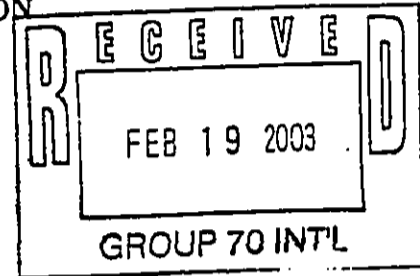
Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

County of Hawai'i  
DEPARTMENT OF PARKS AND RECREATION  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411



February 14, 2003

George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

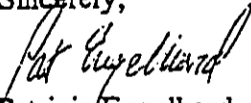
Re: Kekaha Kai State Park, North Kona  
Draft Environmental Impact Statement

Dear Mr. Atta:

As previously noted, we support the State's efforts to improve existing and to develop recreational opportunities for residents of and visitors to the West Hawaii region.

Thank you for the opportunity to review the Draft EIS. A copy of the Final EIS will be appreciated.

Sincerely,

  
Patricia Engelhard  
Director

Cc DLNR-Division of State Parks  
Office of Environmental Quality Control



April 11, 2003

Francis S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Suzuki B. Seaman, AIA, ASCE  
Hitoshi Hida, AIA  
Roy H. Nihel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portincuso, AICP  
Stephen H. Yuen, AIA  
Linda C. Miller, AIA

George I. Atta, AICP  
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Philip T. Cuccia  
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Jeremy C. Hsu, AIA  
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F. W. B. McCue  
Tadashi Takamoto  
Kathryn A. Nani  
Jeffrey H. Overton, AICP  
Christine M. ...  
James L. ...  
Scott Tangeman  
Wesley N. ...  
Sharon Ching Williams, AIA

Patricia Engelhard, Director  
Department of Parks and Recreation  
County of Hawaii  
101 Pauahi Street, Suite 6  
Hilo, Hawaii 96720

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. Engelhard:

Thank you for your February 14, 2002 letter regarding the Draft Environmental Impact Statement for the Kekaha Kai State Park project.

We appreciate your continued support for the State's efforts to develop new recreational opportunities for the West Hawaii region.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

May 30 03 12:35p

Dept. of Health (OEQC)

(808) 586-4186

P.2

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252  
(808) 961-8288 • Fax (808) 961-8742

RECEIVED

03 JAN 22 P2:23

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

January 13, 2003

Mr. George Atta  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

**Subject: Draft Environmental Impact Statement (DEIS)**  
**Request: Request for Comments for improvements at Kekaha Kai State Park**  
**TMK: 7-2-004: 03, 17, 19; 7-2-005: 02, 03, 07; 7-3-043: Por. 1**

This is to acknowledge receipt of your letter dated January 2, 2002 requesting comments on the Draft Environmental Impact Statement for various park improvements at Kekaha Kai State Park.

As we stated in our letter dated May 3, 2002, the properties are situated within an area designated Conservation and/or Urban by the State Land Use Commission and zoned Open by the County. A portion of TMK 7-3-43: Por. 1 is designated Urban by the State Land Use Commission, and zoned Industrial (MG-1a) by the County. The park improvements will be located in the portion of the property designated Conservation/Open.

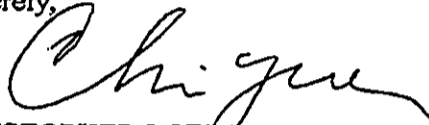
The properties are also situated within the County's Special Management Area (SMA). Any development in the SMA must be consistent with the SMA guidelines set forth in Section 205A, HRS and the SMA guidelines contained in Planning Commission Rule 9. A SMA Major Use Permit will be required to construct the proposed improvements. A Shoreline Setback Variance may also be required depending on the type and location of the proposed improvements, as identified in Planning Commission Rule 8 and Planning Department Rule 11.

We would like to note that contrary to statements on Page 11-11 of the DEIS, the Planning Department and Planning Commission, and not the County Council, is involved in the review of the proposed development.

Mr. George Atta  
Group 70 International, Inc.  
Page 2  
January 13, 2003

Thank you for the opportunity to provide comments. Please provide us with a copy of the FEIS upon its availability. If you have any questions, please call our office at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

NH/PF:pak  
p:\wpwin60\Ch343\2002\DEISK\kahaKai.doc

cc: Long Range Planning  
West Hawaii Office  
DLNR – Division of State Parks  
State of Hawaii Office of Environmental Quality Control



GROUP 70  
INTERNATIONAL, INC.

Michael J. ...  
Thomas ...  
Charles ...  
Hiroshi ...  
Ray ...  
James ...  
Ralph ...  
Stephen ...  
Craig ...

George ...  
Paul ...  
Wanda ...  
Philip ...  
John ...  
Robert ...  
Sharon ...  
John ...  
David ...  
James ...  
Linda ...  
David ...  
John ...  
George ...  
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May 30, 2003

Christopher J. Yuen, Director  
Hawaii County Planning Department  
25 Aupuni Street, Room 109  
Hilo, Hawaii 96720-4252

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Yuen:

Thank you for your January 13, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

Kekaha Kai State Park is located in State Conservation designated lands and the County Special Management Area (SMA). We acknowledge that implementation of the planned improvements will require both a Conservation District Use Permit as well as a County SMA Major Use Permit. The Planning Commission Rule 8 and Planning Department Rule 11 will be reviewed regarding the need for a Shoreline Setback Variance. Changes have been made to Section 11.6 to clarify that the Planning Department and Planning Commission, and not the County Council, is involved in the review of the proposed development. Thank you for providing such clarification.

Your letter and this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

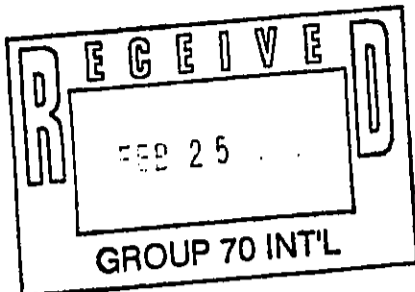
GROUP 70 INTERNATIONAL, INC.

*George I. Atta*

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

February 18, 2003



Conservation Council  
for Hawaii  
Douglas Blake  
73-4504 Kohanaiki Rd., #10  
Kailua-Kona, HI 96740

Group 70 International Inc.  
Dept. of Land and Natural Resources  
Office of Environmental Quality Control

SUBJECT; Kekaha Kai State Park  
Draft E.I.S. Comments

As a participant in the Kekaha Kai State Task Force and as someone involved in the land use initiatives which secured most of the land that today makes up the park, I am offering commentary on behalf of Conservation Council of Hawaii.

From the earliest community efforts on behalf of the park's long range planning, the consensus concept of a "non-commercial" "Wilderness Park" has been the guiding edict for Kekaha Kai's configuration, operation, and policy making. CCH is concerned about a number of points which need clarification in the final E.I.S.

Although some minor commercial activity has been discussed as appropriate at the Mahaiula entrance, there needs to be a clear conception and definition of what constitutes a "commercial use" in the park. For instance, when and under what conditions of time and numbers of people involved will film production be deemed an obtrusive use of this public park resource and be disallowed? These issues need to be resolved in operational policy determined now in this stage of the parks development. Failure to do so will only result in more difficulty and divisiveness in our community over such issues in the future.


Second; it has long been a consensus decision that the access road to Mahaiula should remain unpaved. Please insert into the E.I.S. the infrastructural caveat that this will remain park policy.

Third, since hours of operation are of critical concern to the public which has paid for these important wilderness passive use land resources, these should be spelled out in developmental policy along the lines of what the original operational hours were envisioned to be by the park's planning task force.

Fourth, we feel it is essential that the E.I.S. describe more fully the original vision for the parks development. A Dept. of States Parks acknowledgement and recommitment to the original wilderness and non-commercial status of park operational policy will only serve to fulfill it's professed goal of protection and preservation of the passive use resources in the park.

Thank you for conducting the review and we look forward to the inclusion of these concerns in the preparation of the final E.I.S.

Yours truly,

  
Douglas Blake  
Conservation Council for Hawaii





May 22, 2003

Mr. Douglas Blake  
Conservation Council for Hawaii  
73-4504 Kohanaiki Rd., #10  
Kailua-Kona, HI 96740

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Blake:

Thank you for your February 18, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project and your continued participation in the Kekaha Kai State Task Force.

We have prepared the following responses to your comments:

**Commercial Use:** Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai. Activities such as film production will continue to be regulated through special permits by the Division of State Parks under authorization of the State Board of Land and Natural Resources (BLNR). This issue extends beyond Kekaha Kai and any specific prohibitions will require a decision by the BLNR.

**Mahai'ula road:** A general level of road improvement to the existing gravel and pot-hole filled access road is planned. For the foreseeable future, paving is not planned for the main road to Mahai'ula.

**Hours of Operation:** The hours of operation are set by the Division of State Parks. For the foreseeable future, existing park hours will be maintained.

**Original Vision:** The original vision of the park is described in full in the Kekaha Kai State Park Conceptual Plan, which is a separate document available at the Division of State Parks. The EIS includes highlights and details of the Plan Development of the Conceptual Plan and describes the impacts of these visions and plans upon the natural and human environment. Nevertheless, to reiterate, the Kekaha Kai State Park is planned to be an outdoor park for public recreational purposes with guiding principles based on preservation and protection of natural resources. The Park is envisioned to provide a wilderness type of experience and routine commercial activities are generally prohibited in the Plan.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Francis S. Oda, Arch. D., AIA, AICP  
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LAND PLANNING  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL STUDIES

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HILO OFFICE

VINCENT SHIGEKUNI  
SENIOR ASSOCIATE

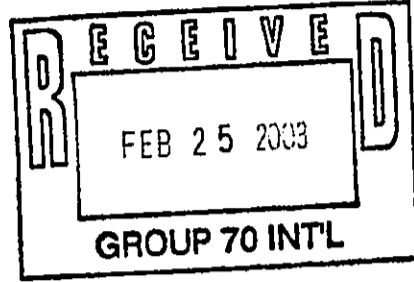
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February 22, 2003



Mr. George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

**SUBJECT: COMMENTS TO THE KEKAHA KAI STATE PARK – PARK DEVELOPMENT REPORT (PDR) AND DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)**

Dear Mr. Atta:

We appreciate the opportunity to provide these comments to the subject report. As planners for the Maniniowali and Kukio developments that are adjacent to the Kehaha Kai Park (Park), we appreciate the opportunity of working with your firm and the State Parks Division on the ongoing planning for the Park improvements. Our comments to the PDR and DEIS are as follows:

In Section 1.3, The Role of the Community, a discussion of the formation of the citizens group, Hui Laulima O Kekaha Kai, their objectives and potential role in furthering the park management goals would seem appropriate here.

Under Section 5.1 or the PDR, State Park Goals and Guiding Principles, one of the stated policy directions includes the following:

“ The principles of resource conservation and sustainability will guide development and management.”

Also, in Section 5.5, Constraints, one of the constraints cited to guide the development includes the following:

“The carrying capacity of the resource is crucial and a monitoring program should be developed to ensure that the supporting infrastructure does not lead to a degradation of park resources. The assessment of the level of use will be an ongoing responsibility of the Department.”

Further on, Section 6.3.2, pertaining to the Parking Area at Kua Bay includes the following statement:

“A future expansion area will be graded in a low, flat hollow area, mauka of the day use area. It can be used as overflow parking, as necessary.”

Mr. George Atta, AICP

**SUBJECT: COMMENTS TO THE KEKAHA KAI STATE PARK - PARK DEVELOPMENT REPORT (PDR) AND DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)**

February 22, 2003

Page 2

We note that with such overflow parking, the capacity of Kua Bay and the Department's ability to manage these resources could easily be exceeded. In concert with the above planning principles, we recommend that the overflow parking not be developed or provided until Phase I is completed and a more detailed assessment can be made on the carrying capacity of Kua Bay.

In Section 6.0, Development Plan, it should be noted that the development plans provided for each section are schematic and will be refined with more detailed site planning to respond to localized topographic conditions and to insure that the archaeological features are not impacted.

In Section 6.3.1, Maniniowali/Kukio Entrance, it should be noted that part of the improvements to the intersection at Queen Kaahumanu Highway may include the installation of the associated infrastructure.

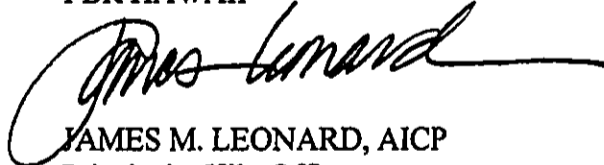
In Section 6.3.2, Kua Bay Campsite, it states that 10-20 camping spots will be developed in this area, however, in prior discussions with the Kekaha Kai Park Advisory Task Force approximately 6 camping sites, rather than 10-20, were described for this area.

Lastly, Section 6.5, Park Development Costs, makes reference to Tables 6-1 through 6-4 and provides a total development cost, however, Table 6.4 does not include the cost of extending water, power, and communication lines from the adjacent development to the park facilities, which could have a notable impact on the total development costs.

Again, we thank you for the opportunity to comment on the Draft document and look forward to the receipt of the Final PDR and EIS. Should you have any questions or require clarification regarding these comments, you can contact me at 961-3333.

Sincerely,

PBR HAWAII



JAMES M. LEONARD, AICP  
Principal - Hilo Office

Cc: T. Witten, PBR HAWAII  
R. Mori, WB Maniniowali  
M. Morinaga, WB Maniniowali  
G. Salmonson, OEQC



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Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

May 22, 2003

Mr. James M. Leonard, AICP  
Principal - Hilo Office  
PBR Hawaii  
101 Aupuni Street  
Hilo Lagoon Center, Suite 310  
Hilo, Hawaii 96720-4276

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Leonard:

Thank you for your February 22, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Section 1.3.** A paragraph describing the formation of the citizens group, Hui Lailima O Kekaha Kai, their objectives and potential role in furthering the park management goals will be added.

**Overflow parking at Kua:** It is not the intention of the plan to develop the overflow parking area immediately. Rather the plan identified the area where overflow parking could be located should there be a need in the future. Therefore, we expect that the overflow parking area designated at Kua will not be developed until Phase 1 is completed and a more detailed assessment on the carrying capacity is conducted.

**Development Plans:** The development plans provided in section 6.0 are schematic and will be refined with more detailed site planning to respond to localized topographic conditions and to insure that the archaeological features are not impacted. This will be clarified in Section 6.0.

**Maniniowali/Kukio Entrance:** We will note in Section 6.3.1 that the improvements to the Maniniowali/Kukio entrance intersection at Queen Kaahumanu Highway may include the installation of the associated infrastructure.

**Kua Bay Campsites:** Additional campsites at Kua Bay are desired by the Kekaha Kai State Task Force. The numbers of campsites range from 6 to 12. Site designation allows for 10-12 additional campsites to be provided at Kua Bay. However, the amount of camping allowed will depend on the support facilities developed and the level of management provided.

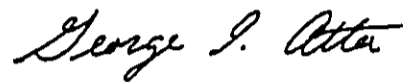
**Development Costs:** Section 6.5 will be amended to state that the estimate for the total development cost does not include the cost of extending water, power, and communication lines from the adjacent development to the park facilities.

James Leonard, PBR Hawaii  
Kekaha Kai State Park DEIS response letter  
May 22, 2003  
Page 2

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



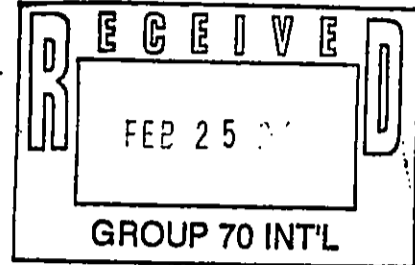
George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator  
Tom Witten, PBR Hawaii Honolulu Office  
Christine Bean, Kukio

kūki'o

February 21, 2003

Mr. George Atta, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307



**RE: COMMENTS ON THE KEKAHA KAI STATE PARK – PARK  
DEVELOPMENT REPORT (PDR) AND DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (DEIS)**

Dear Mr. Atta:

Thank you for the opportunity to review and comment on the subject report. Our comments are as follows:

**1.1 Introduction:** *"Mahai`ula is proposed for a higher level of use than the other two sections. Manini`owali is projected for a moderate level of use and Awake`e is proposed for the lowest intensity of use. This decision is largely due to existing conditions, the size and resilience of the resources and the level of use pressure for the respective sections."*

**1.2 Park Sections:** *"The Manini`owali/Kuki`o portion....this section of the park is designed for moderate levels of use due to the lower carrying capacity of the resources. The beach and bay are smaller and there are significant archaeological features in the area."*

Based on the above excerpts, consideration should be given to emphasizing the need to "balance" out the development of these areas to best "fit" the capacities of each area, and the Park as a whole. With the improvements that will be developed at the Manini`owali/Kuki`o section of the Park by WB Manini`owali LLC, there will be the potential to "exceed" the capacity of this area due to the improved access and facilities. Improvements to the Mahai`ula section should be the focus of the State Parks resources in an effort to "balance" out use levels and minimize impacts to the areas resources.

**5.3.2 Facilities:** *"Roadways: ....An unimproved dirt road through W.B. Kuki`o land accesses Kikaua Point."*

Access to Kikaua Point is currently provided by a paved, public access roadway through the WB Kuki`o development.

P.O. Box 5349 KAILUA-KONA, HAWAI'I 96745 TEL: 808-325-2711 FAX: 808-325-2511  
COURIER: 87 MILE MARKER QUEEN KA'AHUMANU HIGHWAY KAILUA-KONA, HAWAI'I 96740

**6.0 Development Plan – General Development Guidelines:** *“Potable Water:....In Manini`owali, access [connection] will be provided to the water system at the Kuki`o development [WB Manini`owali development]...”*

Edits as noted.

*“Brackish Water: Where shower water is provided....it will be from brackish water sources...”*

The water source provided by WB Manini`owali for the Manini`owali section improvements will be potable water. There is no provision for brackish water.

**7.1.2.2 Gates:** *“A gate is proposed at the fork in the road mauka of Pu`u Kuili which directs traffic into Manini`owali and Awake`e....A gate will be installed at the bend of the new road into Manini`owali. This gate will be open during normal park hours and closed at night.”*

The above leads one to believe there will be two gates: one at the fork to Awake`e and Manini`owali, which will restrict access to Awake`e only for maintenance vehicles and those with permission to visit Makalawena, and a second gate at the bend to Manini`owali [at Kaho`iawa]. Table 4 (*Manini`owali Cost Estimates*) lists three gates: one at the highway entrance, one at the Awake`e Road, and one to Kua Bay. It is important that a gate at the highway (which is not reflected in Fig. 6-5) be addressed because of the potential for the two parking areas at the base of Pu`u Kuili and at Kaho`iawa to be used as gathering places for abusive “after dark” activities.

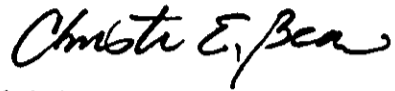
Please note that reference to the landowner/developer of Kuki`o 1 should be noted as WB Kuki`o Resorts, LLC. Reference to landowner/developer of Kuki`o 2/Manini`owali should be noted as WB Manini`owali, LLC.

Also, please note the following typos/edits:

- p. 1-13 (fig. 1-8) Land area for Kuki`o 2/Manini`owali should be listed as WB Manini`owali.
- p. 6-7, 4<sup>th</sup> para.: correct “South Kohola” to “South Kohala”
- p. 6-8, 3<sup>rd</sup> para.: correct “South Kohola” to “South Kohala”
- p. 9-11, last para.: correct “W.S. Kuki`o” to “W.B. Kuki`o”
- p. 14-1, 4<sup>th</sup> para.: correct “W.B. Kuki`o funding...” to “W.B. Manini`owali funding”

Again, we appreciate this opportunity to comment. Should you have any questions or require clarification on any of our comments, please do not hesitate to contact me or Randy Mori, Project Manager, at (808)325-2711.

Sincerely,



Christine E. Bean  
Executive Assistant

cc: Randy Meri  
Milton Morinaga  
James Leonard, PBR  
G. Salmonson, OEQC





May 22, 2003

Ms. Christine Bean, Executive Assistant  
Kuki'o  
P.O. Box 5349  
Kailua-Kona, Hawaii 96745

Subject: Kekaha Kai State Park - Draft EIS

Dear Ms. Bean:

Thank you for your February 21, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**1.1 Introduction and 1.2 Park Sections:** The proposed improvements at Kua, such as the comfort station and especially the pave roadway to Kua Bay will indeed increase the level of use currently experienced at the Maniniowali portion of the park. Mahai'ula will continue to be developed with higher levels of use in mind. The proposed visitor center at the entrance of Mahai'ula is expected to attract a large population of visitors, even if the impact of the user is passive in activity. In addition, educational programs geared for the public and possibly for school buses are envisioned to be held at Mahai'ula. We understand and concur with your concerns about balanced use of the entire Park. State Parks will continue to pursue funding for improvements at Mahai'ula and Awakee in order to achieve this balance.

**5.3.2 Facilities:** The road improvements to Kikaua Point will be noted.

**6.0 Development Plans:** Edits regarding potable water connection and use will be incorporated. References to brackish water use will remain relevant for other sections of the Park.

**7.1.2.2 Gates:** Reconsideration will be given to the location of gates leading to Maniniowali and Awakee, to avoid the provision of unintended gathering places which may attract abusive "after dark" activities. Changes in gate locations will be made to the text and respective graphics within this section.

**Landowner:** Clarification regarding the landowner/developer are noted and the appropriate changes will be made.

**Typos and Edits:** Typographical errors will be corrected and suggested edits will be made.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.

George I. Atta, AICP  
Chief Community Planner

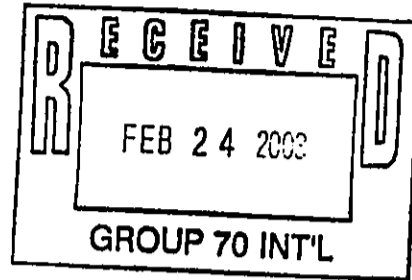
cc: Dan Quinn, State Parks Administrator  
Tom Witten, PBR Hawaii Honolulu Office

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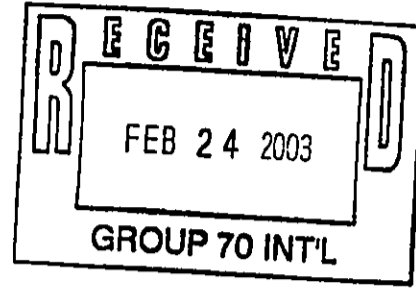
Comments on the Draft Environmental Impact Statement, Kekaha Kai State Park

Defining Wilderness

"The National Park Service has described 'wilderness' as a place where the impacts of nature are greater than those of man.... And as for the *experience* of wilderness...: 'Natural land forms, flora and fauna in open spaces are the heart of wilderness experiences.' ... We acknowledge...that, in this age of increased human impact, wilderness is ever more precious, rare, and difficult to find, no less define. It's value, it seems, is, therefore, even greater, and the goal of preserving it that much more important."

Attention:  
George Atta, Group 70 International, Inc.  
925 Bethel St., 5th Floor  
Honolulu, Hawai'i 96813-4307

Moku Loa Group, Hawai'i Chapter, P.O. Box 1137, Hilo, HI 96721



Comments on the Draft Environmental Impact Statement, Kekaha Kai State Park

Defining Wilderness

"The National Park Service has described 'wilderness' as a place where the impacts of nature are greater than those of man.... And as for the *experience* of wilderness...: 'Natural land forms, flora and fauna in open spaces are the heart of wilderness experiences.' ... We acknowledge...that, in this age of increased human impact, wilderness is ever more precious, rare, and difficult to find, no less define. It's value, it seems, is, therefore, even greater, and the goal of preserving it that much more important."

Attention:  
George Atta, Group 70 International, Inc.  
925 Bethel St., 5th Floor  
Honolulu, Hawai'i 96813-4307

Moku Loa Group, Hawai'i Chapter, P.O. Box 1137, Hilo, HI 96721



February 18, 2003

Re: Kekaha Kai State Park Draft Environmental Statement (DEIS)

Aloha

Kekaha Kai State Park is a gem. In combination with Makalawena, its natural beauty and integrity is unsurpassed. It remains one of the last public, open, coastal areas in West Hawai'i. Its uniqueness begs a higher/different level of protection from overuse and abuse than has been seen in the creation of other shoreline parks.

There can be no doubt that the overall public sentiment expressed in the mid-1990s regarding development of Kekaha Kai State Park was that it was best left "as is." The island's Sierra Club agrees that that "as is" condition is the appropriate baseline for use and "development" in any discussion of proposed park plans. *The most critical guidelines to park development are that the park remain noncommercial and wilderness in nature.* in accordance with the desired "as is" baseline. (Discussions of wilderness and commercialism are included included later in our comments.)

Proposed intensity of uses:

In general, we support a combined "Low" and "Medium" Intensity Alternative for development of Kekaha Kai State Park as put forth in Sec. 13-2 of the Park Development Report and Draft Environmental Impact Statement (DEIS). We feel that this combination best reflects a) the sentiments of the public as expressed in preliminary public hearings, b) the information and consensus of Task Force members throughout the park's planning process, and c) a balance which protects the natural

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and cultural resources of the park with its ongoing use.

*We do not agree with statements in the DEIS that lead to the conclusion that the Mahai`ula section should be of highest intensity use.* It is debatable whether Kailua-Kona's urban development to the south will be of greater impact on park resources than the upward of thousands of private residences and resort dwellings already in existence, planned and/or being built to the north side of the park (i.e., Kuki`o, Ka`upulehu, Kona Village, Four Seasons). In fact, the airport may, in the future, be seen as a buffer from higher intensity development near park borders.

We agree that, as the DEIS states, access to many areas of the park should remain "unimproved" or "managed for low impact." However, Page 1-19, section 1.5 says that, "It was agreed to plan the park for lower intensities of use and *consider heavier levels in future phases* when facilities, manpower, management systems and other resources are in place to preserve the resources in the face of increasing demand." (Italics ours) In public and task force discussions, higher use was not described as a goal to be achieved through the park's creation (though greater use has come naturally from the opening of the road to Mahai`ula to the public, greater amounts of campers and day users accessing Kua Bay with four-wheel drive vehicles, and an increase of residents and visitors in West Hawai`i). There is some confusion in the DEIS when higher use and future plans for development expansion in the park are described as a *goal*. As stated on Page 1-5 of the DEIS, "sustainability of natural and cultural resources in alliance with public use" is ideally to be the main focus of park planning. Carrying capacity of park resources will not increase in the future. Plans should be made based on that capacity (or, actually, much lower) with the baseline "as is" and the guideline that the park remain "wilderness" being paramount in deciding park development. Bending carrying capacity later to fit some desired level of future use should be avoided. Plans should be made at this time to mitigate the threat of overuse of park resources as well as degradation of wilderness atmosphere (like keeping unpaved roads, closing the park to vehicular traffic one day a week, not allowing motorized pleasure craft or jet skis at any time, disallowing commercial uses, setting limits on the size of groups that can be brought at one time to the park, excluding PUC licensed and/or oversized vehicles from accessing the park except for maintenance, etc.). Otherwise, future pressures (especially commercial, or even those proposed to bring money to park coffers) could initiate Hanama Bay-, Hapuna Beach-level impact plans, thereby destroying any hope of having this type of state park (*low-level use, wilderness style*) anywhere on Hawai`i Island.

From the low intensity alternative:

- All roads except those to and near Manini`owali would remain unpaved yet partially "improved" (i.e., large potholes filled in). Roads at the north end of the park will be paved. This makes sense, since that end is abutted by the large developments at Kuki`o, etc.. *Keeping the road to Mahai`ula unpaved is the most effective way to minimize extreme impact and overuse.*

The question of paving becomes more understandable and balanced when one sees the overall picture of Hawai`i Island park facilities existing now and in the future. The Mahai`ula road may be the only public road on the island that isn't paved in the near future. An "unimproved road" allows for the wilderness experience to start as soon as one turns off the highway, discourages speeding, is much less costly for maintenance, discourages crowds, and helps mitigate toxic runoff far better than does a paved surface.

Graveling the road to a smooth condition (as seen during the production of "Wind on Water") caused dangerous conditions of speeding which created more security and funding issues.

- Existing conditions of the park can be supported by added maintenance, which will add security. Besides adding restrooms, basic camping, and picnicking facilities, minor maintenance of the Magoon House, and restoration/protection of sensitive cultural sites, we see this as the only real intervention (added to security) needed to keep the park in its present overall, excellent condition\*.

\*Clean-up of areas like Kua Bay and road entrances where unrestricted overuse and abuse have occurred have been exceptions.

- To protect park resources and park users, we support increased park security and/or park personnel presence. However, at low intensity use, personnel do not need to be stationed in the park 24 hours a day nor even during a majority of park hours. Security personnel could continue to be an overlap of DOCARE officials with the same people charged with park maintenance (able to call DOCARE if there are problems in the park). The mere presence of park maintenance personnel prevents vandalism. A problem of theft from vehicles has been ongoing, especially of pedestrians' cars parked outside the park gate on Wednesdays and other hours when the gate to the park is locked, as well as in

- Internal parking areas. This will be somewhat alleviated by having a kiosk at the gate (during the hours it is manned).
- The parking spaces allowed for in the three designated sections of the park seem appropriate for those sites. More should be planned for the Manini'owali side, since easier access and high intensity development are already being created at that side of the park. We suggest that, due to runoff and wilderness considerations, that all parking areas remain unpaved (unless dust is a notable problem in specific areas, in which case gravel should be used).

We would also suggest that future planning allows parking for greater pedestrian access to all areas of the park. *This overflow parking would ideally come from distant areas rather than increased parking near the beach parking lots.* Parking is not currently allowed on Queen Ka'ahumanu Highway nor any other place within miles of the park which will someday preclude park use (as it does at Hapuna Beach, in California's coastal recreation areas, and in privately-controlled beach areas like Mauna Kea Hotel's beach). We do not want to see the public waiting in long lines to access the park in the future. Shuttle access to the park might be a consideration for this purpose.

- Section 5-9 "The carrying capacity of the resource is crucial and a monitoring program should be developed to ensure that the supporting infrastructure does not lead to a degradation of park resources." We agree that there is the need to monitor resources as stated in Section 1-7.

From the Medium Intensity format:

- Improved picnic areas are appropriate in several locations as outlined in the medium density format.
- Various camping facilities should be scattered throughout the park (in areas at Awake'e, Kua Bay, Mahai'ula) as proposed. Manini'owali sites should be developed as soon as possible. (Since camping has been stopped at Kohanaiki and Kua Bay, an already gaping lack of camping facilities plagues West Hawai'i. As stated in the DEIS, studies and surveys have shown that expansion of this type of facility has been long desired and is long overdue). Camping also may be appropriate in a possible park expansion planned at Kawili Point ( sec. 1-18) that is south of park's southern boundary line.

- As noted in the DEIS, the desire of the resident and visiting public to have more hiking opportunities makes it imperative that a system of trails be opened up around and near the park (including mauka/makai *which would tie into the nearby urban and open space*). The trail system should allow for both day and overnight hikers, especially those who will be walking the Ala Kahakai Trail when it is opened up to the public. Some of these trails might be jogger-friendly as well.
- We agree that amenities that require fresh water and electricity should be excluded from all areas of the park other than a highway kiosk and Manini`owali. Environmentally sound technology should, as planned and is already the case at Mahai`ula, be used for those amenities. We also support putting any utilities, including electricity, underground or otherwise hidden since view planes are an important aspect of the overall wilderness experience of this park.

More on the following topics:

Access / Educational activities:

- Section 1-10 states that the park will have a "strong educational orientation through the redevelopment of an interpretive program." We support protection of the ambiance and natural and cultural resources of the park and encourage educational, nonprofit organizations to bring visitors to the park. However, we feel that this should be done in the most low-key way possible in fitting with overall park plans. We feel that the impacts of bringing large groups to the park on a regular basis, even if only for nonprofit purposes, could nevertheless diminish the experience of a unique, natural refuge for which the park is, and hopefully will continue to be, known. Only smaller vehicles, vans and buses should be brought into the park rather than large school or tour buses. *Park access should not be made to conform to vehicles.* Rather, vehicles brought into the park should be appropriate to the park, the area's access and its atmosphere. It must be remembered that there is a lot to be learned from traveling an unpaved road.

(An interesting web site related to this can be found at [http://web3.foxinternet.net/safe/dirtroads/dirt\\_roads.htm](http://web3.foxinternet.net/safe/dirtroads/dirt_roads.htm))



### Wilderness

- The National Park Service has described "wilderness" as a place where the impacts of nature are greater than those of man. In the case of Kekaha Kai State Park, this definition and the "as is" baseline can help dispel what is seen in the DEIS as a "problem" of determining what wilderness is. And as for the experience of wilderness, the DEIS describes it well in Section 1-7: "Natural land forms, flora and fauna in open spaces are the heart of wilderness experiences." We feel that the use of the word "problem" may not be the best way to describe the question of what wilderness is. We acknowledge, however, that in this age of increased human impact, wilderness is ever more precious, rare, and difficult to define. Its value, it seems is, therefore, even greater and the goal of preserving it that much more important.

### Commercial Activity

- Clearly, the impact of film making and other organized, commercial activity will override the sought-after wilderness scheme/theme of Kekaha Kai State Park. There has been a lame attempt throughout the state to mitigate the impact of commercial ventures by having money change hands for these activities off-site. Anyone who has gone snorkeling or tried to read a book on the beach during surf school hours at Kahaʻulu or has tried to access the peace and tranquility of Mahaʻula during the NBC filming of the "Wind on Water" TV series knows that commercial activity is usually easy to spot and, more importantly, sense. Even if commercial ventures leave no trace of disturbance after they are finished, the impact of their activity is felt when they occur. The experience of wilderness is impossible under Hollywood, concessionaire, or surf camp conditions. At Kealakekua, the lesson was learned the hard way when commercial kayaking wasn't properly controlled to protect resources and the natural/cultural resources of the area, creating huge rifts in the community.

As population pressures increase on West Hawai'i's people and coastline, a refuge from wrangling for resources is needed. Section 4-1 states: "Beach areas naturally provide a 'get away' from the *business* (italics ours) of everyday life." This park is to meant to provide a "relaxing atmosphere." Organized groups and commercial ventures like film making make it impossible to experience the natural surroundings of places like Kekaha Kai in a relaxed way. Yes, you may spend some time watching the "event," but that is not the purpose of this park,

nor is that what park users want or should be coerced into thinking is beneficial to them and their community. All of those things can be found--maybe all too easily--outside of this wilderness area.

### Funding

- No "improvements" should be made in the park until adequate funding is available. Otherwise, park resources will be left vulnerable without proper security and maintenance.
- Proper funding should be allocated by the State, not sought after through outside, private sources (i.e., commercial or commercial activities). Private funding will compromise park conceptual plans (i.e., NBC tells the state how the park should be designed).

### Landscaping and fountain grass

- Fountain grass should be removed immediately. The longer it is allowed to spread, the more difficult and expensive fountain grass will be to remove. It is quickly changing the landscape and viewplanes of this park (hence, even the spiritual nature of the park's lava flows and its mauka views). This seems a good project for both volunteer groups and maintenance personnel already in the park. We agree that native plants and coconut trees should be the major landscaping materials used in all sections of the park, though it may be unnecessary/undesirable to rid park of all keawe and other exotics at least until other plants (milo, kou, more coconuts and shrubs, groundcovers) are established. Pohuehue should be protected as a strand vegetation that holds sand in place during storms, wind, etc.

### Signage

- Well-done, appropriate ("aloha" in nature and made of materials that fit into the natural terrain) interpretive signage helps passively educate visitors and hikers and, if done properly, can help discourage vandalism.

### Kiosk at Main Entrance

- Page 6-7, sec. 6.1.1 Restrooms should not be sufficient to accommodate buses traveling up and down the coast. Nor should the kiosk sell refreshments (kept along the lines of the educational/welcoming facilities of Volcanoes National

Park and Pu`uhonua o Honaunau).

### Park Hours

- Park hours should not change whimsically nor necessarily be in sync with Oahu hours (i.e., park closed early on New Year's Day due to potential fireworks hazard.). At present, hours are set from 9:00 a.m. to 8:00 pm. This schedule is not enforced or allowed, as it is meant to be.
- Any exceptional changes in park hours should not be handwritten on obscure, handmade signs and should be advertised well ahead of time in the newspaper and other sources. (People are being locked into the park due to this confusion and arbitrary decisions being made by local park personnel regarding park closing.)

### Park Staff

Sections 7.0 7.1.1.1, 7.1.1.2, 7.1.1.3

- It seems that too large a program staff and too much focus on Mahai`ula as a center for staffing is being considered. A Kona Interpretive Program Manager shouldn't necessarily be headquartered at Mahai`ula; and a Park Technician and live-in Ambassador as well as maintenance and security staff seem a bit too much live-in and full-time staffing for the foreseeable future, and, once again, concentrate the most intensive park activities in that section.

### Aquatic Nursery Programs

- Sec. 7-8, 7.7: "Aquatic nursery programs and capture and release programs" are targeted as possible activities for the park. With controversial new technology (bioengineering, at-sea fish farming, etc.), these must be studied in depth before being allowed to proceed in and around the park's Class AA waters.

### Proposed adjacent (mauka) Drag Strip and "Motorsport Park"

Noise sec. 9-6, 9.3.3

Visual quality (12.1.7) pg. 12-4

Coastal water quality 9-8, 9.5.2 Definition of Class AA

- Viewplanes, noise, and runoff are just a few of the myriad reasons why this

- proposed facility should not be allowed to be built on that State property.
- For all reasons of the park's integrity and development, we feel that the state and park advisory task force, as well as other government and private entities should take a clear position against the development of a drag strip/motorsport facility being built on 450 acres mauka and adjacent to the park. The racetrack does not appear (as marketers claim) to be a bonafide opportunity to use the ahupua`a concept in a way that protects the integrity of natural land forms, community, and other natural resources or which connects modern life to Hawaiian values. Rather, a system of passive biking/walking trails connecting residential areas to mauka open space and even commercial areas would more appropriately embody this concept.

We are grateful for being able to take part in the park's planing process with several of our members attending public and task force meetings since the mid-'90s. We feel that, overall, the work done by the various, diverse entities involved in the park's plan has been excellent and a great distillation of the values that make Hawai'i the wonderful place it is. We fear, however, that the varied interests which may rear their heads or who have already seen the potential for making money from park resources could become ever more at odds. As the quest for State funding sources intensifies, and the need and hope for protection of the park's resources intensifies as well, we hope that the State, especially the BLNR, will realize the benefits over time of sticking to the original vision of the park plan. This way we can rest assured that Kekaha Kai State Park will remain a priceless, one-of-a-kind, wilderness area — a resource that we can be proud to pass along to future generations.

Sincerely,



Janice Palma-Glennie  
for the Sierra Club



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May 9, 2003

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**Subject: Kekaha Kai State Park - Draft EIS**

Dear Ms. Palma-Glennie:

Thank you for your February 18, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

We agree with the Sierra Club that the natural beauty of Kekaha Kai State Park is unsurpassed and worthy of protection from overuse and abuse. We recognize the Sierra Club's interest that the Park remain non commercial and wilderness in nature and appreciate your support for the low and medium intensity alternatives.

In regards to your comment regarding higher levels of use in the future needs clarification. Higher intensity use of the park in the future is NOT a goal. However, it is reasonable to expect increased future public demand for park use. Where such demand can be accommodated without negatively impacting the resource, we have considered a phasing approach that allows some expansion of facilities. Plans are not static. Nor are they fixed in time. As such, improvements will occur with the caveat that park management policy will be guided by a philosophy that the resource will not be opened unless the support facility is there and the management manpower and resources are available. Additionally, we need to clarify the point that existing conditions were never the baseline for the plan; it was the starting point. The consensus opinion was a low to moderate intensity with planning beginning in the low intensity options. The clarification is needed because the selection of existing conditions as the baseline implies a "no action" alternative as the preferred option and this was never the case because people generally understood that this would mean the continued degradation of the resource.

The Sierra Club's preference for the North End of the Park for higher intensity uses is noted. However, in evaluating the resource from its capacity to absorb higher levels of use it is clear that Kua Bay and Manini'owali are smaller, seasonal and have less ability to receive larger numbers of visitors. The Mahai'ula and Kaelehuluhulu beaches are larger, more permanent and have mauka support areas that allow greater use. This was recognized in the original conceptual plan that was adopted by the Board of Land and Natural Resources.

We also recognize the truth of your comments about population pressures coming from the north. However, that does not negate the fact that pressures from the south are also increasing with lower and middle income developments being proposed on this side. The developments on the north tend to be higher income developments. This points out the unfortunate reality that our wilderness areas are feeling pressures from every direction. We agree on the need to control this pressure to maintain the natural and wilderness qualities of Kekaha Kai.

Response letter to Sierra Club, Hawaii Chapter  
Kekaha Kai State Park FEIS  
May 9, 2003  
Page 2

We recognize that maintenance and security are necessary. Management Plans will be developed by State Parks regarding the administration of the park, including maintenance and security services. We appreciate your support for improved picnic areas, additional camping facilities, access to pedestrian trail systems and limited use of fresh water and electricity. We recognize your interest in limiting organized educational, non profit organizational programs to small scale and size as to minimize the impact on the environment through the limitation of small vehicles, vans and buses rather than large school or tour buses.

We have received the definition of wilderness that you have offered. While we also use this term to describe the concept of the park, we are aware that there are other opinions in the community regarding the use of this term. Some do not consider the term "wilderness" to be appropriate for this park for cultural and physical reasons because it is already too impacted or because kanaka maoli have used this coast for centuries. We have decided to leave it loosely defined.

The park is not being developed to support commercial activities. Requests to conduct commercial activities at State Parks will continue to be regulated by the Division of State Parks and some requests go all the way to the Board of Land and Natural Resources. We understand and appreciate your concern that commercial activity detracts from the natural and recreational values of the park. This issue remains unresolved in that other State policies and mandates are involved and this debate goes beyond this PDR and EIS.

One of the issues that go beyond this project are the condition of the State's finances and the limitation on public funding. While more can be done with less, up to a point, it is clear that more resources are needed to maintain the park even at the present time without any improvements. This need will only increase in the future with a growing population and increasing scarcity of accessible park lands. Private funding has been secured for the provision of improvements at Manini'ōwali. Other improvements and programs must come from other sources. While we understand your concerns that private funding sources tend to erode the public interest we think this is not always the case and with the proper controls and review other sources of income can and will be needed to achieve and maintain Kekaha Kai as it is envisioned. DLNR is tasked to generate monies in addition to the general funds it receives to assist in park maintenance and development. This is not possible without looking at other sources of funding. The vigilance of groups like the Sierra Club will be helpful in maintaining the proper balance of fiscal responsibility and public purpose.

Activities such as the immediate removal of fountain grass will be executed to the extent possible. However, resource limitations of money and manpower will limit what can be done. The support will be needed to make an impact of this problem.

The details of the future entrance facility are still at the conceptual stage. It will be defined further with the assistance of the community and some of the specific issues you mention will be addresses in that process. While the restrooms at the proposed Visitor Center are designed to support visitors to the park, it is rational to expect use by travelers along Queen Kaahumanu Highway. Park Hours and enforcement will be established and clearly defined by the Division of State Parks.

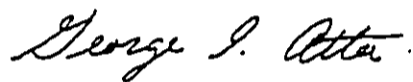
Response letter to Sierra Club, Hawaii Chapter  
Kekaha Kai State Park FEIS  
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Page 3

Your concern about bioengineered stock is noted. Since this program is connected to the Department's Division of Aquatic Resources, we will transmit your concern to them. The intent of the release program is to enhance stocks of existing species; not to nurture an aquaculture industry.

We appreciate your input into the planning of this park, and encourage your continued participation. Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



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June 3, 2003

Janice Palma-Glennie  
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Subject: Kekaha Kai State Park - Draft EIS  
Supplemental response

Dear Ms. Palma-Glennie:

This is a supplemental response to your February 18, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. We overlooked a couple of concerns raised in your letter and would like to address them at this time:

**Park Hours:** We recognize your interest in having stable, enforced park hours with ample public notification of any park hour changes. Park Hours and enforcement is an operational matter that will be established and clearly defined by the Division of State Parks. Park hours are not set to synchronize with Oahu. The issue of printed versus hand written signs will be addressed by the Division of State Parks.

**Park Staff:** We recognize your concern that the proposed program staff is too large and too focused on Mahai'ula. Efforts will be made to ensure staff support is developed at a level to support the implementation of the proposed programs and safety needs where appropriate throughout the park. There is only one live-in staff position designated for Mahai'ula. The other staff positions relate to daytime activities and staff who have responsibilities for the entire park as well as other parks along the Kona Coast.

**Drag strip/ motorsport park:** We recognize that there are number of proposed developments in the region neighboring Kekaha Kai State Park. You point to a myriad reasons why the proposed adjacent Drag Strip and "Motorsport Park" facility should not be constructed on State property. We recognize your interest in having the state and park advisory task force, as well as other government and private entities taking a position against the development of a drag strip/motorsport facility adjacent to the park. However, the Kekaha Kai EIS is not the appropriate vehicle for expressing opposition to the motorsport park. Your sentiment will be made public through the inclusion of this letter in the Final EIS report. Should you desire to advocate your position beyond this avenue, please contact the public and private organizations directly.

Again, we appreciate your input into the planning of this park, and encourage your continued participation. This supplemental response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

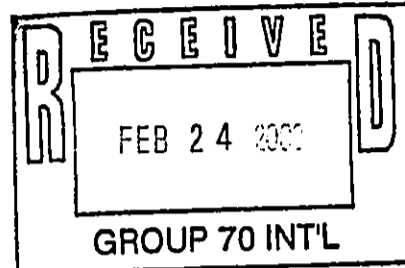
Sincerely,

GROUP 70 INTERNATIONAL, INC.

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator





21 February 2003

George Atta  
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Honolulu HI 96813-4307

Aloha,

I wish to comment on the Draft Environmental Impact Statement prepared by Group 70 International for Kekaha Kai State Park, North Kona, Island of Hawaii. The 45 day public comment period ends on 22 February 03.

1. I strongly disagree with Kekaha Kai State Park being characterized as a "wilderness park". While the DEIS (1.1.3) presents a rationale for calling it "wilderness", I believe calling it that diminishes the meaning of "wilderness" as it is applied to places which are much wilder and more remote. Additionally, it doesn't seem appropriate for us to impose our values or ideas of "wilderness" on the landscape of Kekaha Kai, because the entire area has been utilized in some fashion for centuries by native Hawaiians and others.

I suggest that another primary descriptor be used for the Park if necessary. "Coastal", "Regional", or simply "Kekaha Kai" would all work.

2. Regarding 6.3.2 Kua Bay:

I agree with the siting of the camping area, though I think "10 - 20 camping spots" are too many, give the finite space as well as the nearby archeological features. It would be better to say "at least five campsites will be developed, taking into account area resources and siting to provide a quality experience."

I very, very strongly disagree with the statement "The landscape around Kua should create a verdant kipuka on the coast." The area already receives heavy visitor use, despite having no modern amenities. No one seems to complain about the lack of shade, water, or lawn. Perhaps that's one reason people gravitate there: it's undeveloped. There is absolutely no reason to create a "verdant kipuka" in a region known as Kekaha-wai-ole (Kekaha without water). How can we expect people to conserve resources when the State advocates exploiting resources (water) unnecessarily? The waters of Kua Bay are spectacularly clear. Plantings which require water and fertilizer (necessary to produce verdure) will likely have a detrimental effect on the water quality of Kua Bay. Please rethink the landscaping.

Regarding the statement "The existing four-wheel drive (road) goes to the sand in front of the anchialine pond. This road will be restricted to vehicles and converted to an ADA accessible pedestrian path to the pond and beach."

That portion of the present roadway which parallels the coast and "goes to the sand in front of the anchialine pond" was bulldozed illegally in August 1985 when the easement from Queen Kaahumanu Highway was graded in. At that time, portion of the anchialine pond was filled in, and archeological sites in that area were destroyed, including part of the ancient trail from Maniniowali to Kakapa.

"...the sand in front of the anchialine pond" was formerly a small sand dune covered with pohuehue (beach morning glory). Today, the dune does not exist, and the area around the pond is polluted with human excrement. Please refer to the bottom photo in Figure 1-11 of the DEIS, "Existing Campers at Kua Bay". The trucks are parked on the former dune. A bluff area immediately to the north which was archeologically rich has also been severely impacted by people driving their four-wheel drive vehicles onto the bluff. It is known that sand dunes were utilized as burial places.

To help mitigate the serious damage already caused, I urge that that portion of the access road described in the quoted statement above be closed and restored to as natural a condition as possible. Rest rooms and other facilities are proposed on the presently bulldozed high point which overlooks the central portion of Kua Bay. An ADA accessible path can be developed at points immediately north and/or south of that high point. The Park area at Maniniowali is small enough that there is no need for a road in the area described. If the pond is to be restored, a road immediately adjacent to the pond would be inappropriate.

3. Please correct section 9.4.2, Volcanic, Earthquake and Seismic Hazards.

There are excellent resources available from USGS Hawaiian Volcano Observatory, including maps and various reports which will serve to inform the writers of current thinking regarding the geology of the region.

The most glaring error of several in that section regards the 1801 eruption. One vent of the 1801 eruption of Hualalai created Puhiapele. Lava issuing from that and another vent entered the sea along the coast between Keahole and Kaulana, filling in Paaiea Fishpond.

A separate eruption in 1800 (or perhaps up to several decades earlier according to a recent paper by Kauahikaua et al) on Hualalai issued from vents at about the 6,000' elevation. Those flows reached the sea in two primary arms, north of what is now the Kona Village Resort.

Additionally, in 12.3.2, under "Kiholo Bay", the description poorly reflects reality. Kiholo Bay is bounded on the south by the ca1800 lava flow of Hualalai, and on the north by the 1859 lava flow of Mauna Loa.

I presume that the Park will, among other things, serve to educate visitors about the various resources of the region. Thus it is imperative that the DEIS reflect current thinking about those resources.

4. To avoid confusion, I urge you to clarify or correct the differences in the usage of specific place names on USGS maps and in the text of the DEIS. The text correctly spells various names which appear incorrectly on some USGS maps. For example, "Puialoa Point" on a map, is correctly spelled Punaloa in the text of various reports, and "Kawikohale" on a map is properly Kaiwikohola.

5. Finally, throughout the DEIS and the Park Development Report, it is said that there are many archeological sites and other cultural resources in the region, and that they need to be protected because of their importance. I have repeatedly pointed out to various State officials in DLNR, State Parks, and SHPD, instances where those sites on State lands in Kekaha Kai and at Kiholo are being destroyed because of unrestricted and unmanaged access. There is no staff to effectively manage those resources, and features continue to be damaged or destroyed.

I wonder how it is that this DEIS was written talking about what will happen when the plan is approved, with little mention that there are no funds to implement the plan, and no resources available or plan in place to protect the resources that are currently being damaged and destroyed.

Gating off specific roads and prohibiting vehicular access while allowing access by walking or hiking, would do much to help protect various resources until such time that a plan is in place and funding is available to effectively manage these areas.

The protection of natural and cultural resources on State lands by the State of Hawaii must be of the highest importance if future generations of the people of Hawaii as well as visitors are to be able to enjoy and learn from those resources.

I appreciate the opportunity to provide input to the DEIS, and hope that my comments will be useful.

Sincerely, and with aloha,



Bobby Camara  
PO Box 485  
Volcano HI 96785  
(808)967.7787

cc: Daniel Quinn, DLNR Division of State Parks  
Genevieve Salmonson, State of Hawaii, OEQC



May 22, 2003

Francis S. Oda, Arch. D., AIA, AICP  
Norman GY Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
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Paul P. Chorney, AIA  
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Christine M. Ructola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

Bobby Camara  
P.O. Box 485  
Volcano, Hawaii 96785

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Camara:

Thank you for your February 21, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Wilderness terminology:** We recognize your disagreement over the use of the term “wilderness park.” We recognize your points and will de-emphasize its use. However, the concept has some relevance and will be used descriptively and relatively for lack of a better alternative.

**Camping at Kua Bay:** Your suggestion to rephrase the number of camping sites to “at least five” rather than “10 -20 camping spots” will be considered. We may consider a secondary site nearby if site conditions and demand justify the increase.

**Verdant Kipuka:** Landscaping plans for the area around Kua will be reconsidered. While it is not necessary to create a verdant kipuka at Kua for existing users, it is expected that W.B. Kukio will want to create a comfortable coastal environment for its adjacent residential community users. Water resources for landscaping activities as well as for the comfort station planned at Kua will be provided by connections to the adjacent Maniniowali residential development. The term “verdant” may be misleading and we will remove it. However, the notion of a Kipuka is consistent with the geography and settlement patterns along the coast. Anchialine Pond and escape species often create such pockets and part of the Kua Bay landscape may be appropriate for this. Your concerns about fertilizers and water quality is understood. Best managed practices should address your concerns.

**Road at end of Kua:** The sentence relating to the use of the existing four-wheel drive access road at the end of Kua Bay will be reworded for clarification purposes. It will read “No motorized vehicles will be permitted on this road which will be converted to an ADA accessible pedestrian path to the pond and beach.”

**Geology:** Current information from the USGS Hawaiian Volcano Observatory has been added to section 9.4.2 of the EIS.

**Place Names:** Where known discrepancies about place names used on the USGS maps have been clarified by local knowledge, the local names will be used in the graphics and text. These include those you have already indicated:

USGS:	Local knowledge:
Kawikohale	Kaiwikohola
Puialoa Point	Punaloa

Response letter to Mr. Bobby Camara  
Kekaha Kai State Park FEIS  
May 22, 2003  
Page 2

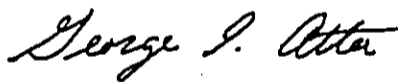
**Protection of archaeological sites and cultural resources:** It is the intent of the Park Plan to improve protection of the archaeological sites and cultural resources which are currently subject to destruction due to unrestricted and unmanaged access, as you have noted. The Plan does include the provision of gates and hours of operation to manage access to park resources. In addition, educational and interpretive programs, including signage, are planned to broaden awareness of the park's valuable resources. Active participation by Hui o Laulima will also help with resource protection. Clearly a public/private partnership is needed and this will be pursued by State Parks.

**Lack of Funds to Implement Plan:** Financial resources to implement the Kekaha Kai State Park plan are subject to the availability of public and private funds. At this time private funds are committed to implementing portions of the Kekaha Kai State Park plan. Like other public service agencies, the Department of Land and Natural Resources and the Division of State Parks are competing for limited resources. As noted earlier, some areas will be gated off. Temporary closures will also be considered. Roadway and parking area designs will seek to restrict off road vehicles and signage and buffers will protect specific resources. Funding remains a challenge and other sources will be sought.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

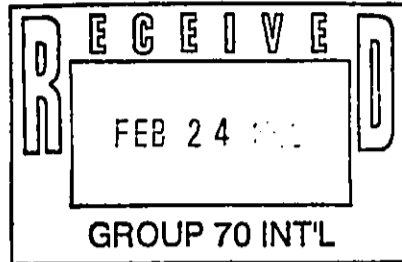


George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

87-3187 Honu Moe Rd.  
Captain Cook, HI 96704

Feb. 21, 2003



To the Regulating Agencies:

I am writing concerning the Kekaha Kai Park plan. I believe very strongly that the state of Hawaii needs to expand its state parks offering, especially with camping, and I am glad that a number of camping sites will be offered in this park.

*First of all I would like to see this park a model of attractive and informative signage. The current signs are ugly and negative. Make the signs pleasant, positive, and educational, as well as attractive. The signs should cover all the major cultural sites in the park as well.*

I would like to see the present road into Mahai`ula left unpaved but maintained as needed.

Develop camp site areas for different needs—both small and larger groups, and work out a state parks reservation system that includes both on-line reservations and in-person, last minute onsite sign-ins at the park itself with a ranger or honor system pay box.

I am also very concerned about the preservation of all the anchialine ponds in the park.

I encourage maximum cooperation with the National Park Service as it continues to develop the Ala Kahakai National historic trail which traverses the entire length of Kekeha Kai State Park. Because the NPS will very likely designate hiking tour operators eventually for its national trail, it is not logical or feasible to intend to close off all commercial activity at this state park. Instead, commercial activity must be small scale, regulated to x number of operators with x carrying capacity (very small) per day and no commercial activity on certain days (weekends) and benefit the state or park users wherever possible. The state Na Ala Hele already does this with its hiking tour operators on state trails. I am in favor of a very limited number of small scale commercial activities such as hiking tours and kayak/Hawaiian canoe tours where the payment and bookings are all done off site. I am not in favor of movie making or any kind of on-site concessions. Eventually I would like to see a marine trail parallel the park where small non motorized boats such as sailboats, kayaks, and Hawaiian canoes will have a few spots to land and camp at this park.

Sincerely,

Betsy Morrigan  
Hawaii Pack and Paddle



GROUP 70  
INTERNATIONAL

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
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Sharon Ching Williams, AIA

May 22, 2003

Betsy Morrigan  
Hawaii Pack and Paddle  
87-3187 Honu Moe Rd.  
Captain Cook, Hawaii 96704

Subject: Kekaha Kai State Park – Draft EIS

Dear Ms. Morrigan:

Thank you for your February 21, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. We appreciate you sharing your concerns and support for the Park.

We have prepared the following responses to your comments:

**Signage:** Educational and interpretive programs are planned for the park, which will include appropriate signage regarding cultural sites in the park.

**Mahai'ula road:** A general level of road improvement to the existing gravel and pot-hole filled access road is planned. For the foreseeable future, paving is not planned for the main road to Mahai'ula.

**Camp Sites:** Camping is planned throughout the park, with new designated sites at Kua Bay. There are no plans at this time to change the current camping permitting system for the park. However, your suggestion for on-line, in-person and last minute on-site registration with a ranger or honor system pay box will be noted.

**Anchialine ponds:** To the maximum extent possible, the anchialine ponds throughout the park will be preserved. There are no plans to destroy any of the ponds. There will also be restoration work on the ponds at Kaelehuluhulu and Mahai'ula. Educational and interpretive programs are planned to broaden the awareness of the anchialine ponds.

**Trails:** Efforts to collaborate with the National Park Service in developing the Ala Kahakai National historic trail system which traverses the entire length of the park will continue. The relationship and authority of the National Parks Service is limited along the Ala Kahakai because ownership is segmented. Within the State Parks section the Department of Land and Natural Resources (DLNR) will control permitted activities including camping, paid tours and other commercial activities.

**Small Scale Commercial Activities:** We note your support for small scale commercial activities at Kekaha Kai State Park. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai. If there is strong community support for these activities the decision may be revisited by the DLNR.

**Commercial Filming:** We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities. This issue raises larger questions and expands the issue to broader policy areas than those covered by our plan. This issue will remain a continuing discussion item with the Board of Land and Natural Resources.

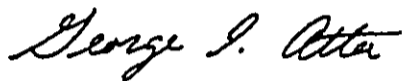
Response letter to Betsy Morrigan  
Kekaha Kai State Park DEIS Response letter  
May 22, 2003  
Page 2

**Marine Trail:** A marine trail parallels the park where small non motorized boats such as sailboats, kayaks, and Hawaiian canoes with landing and camping areas has not be planned. Offshore resources are the purview of the Division of Aquatic Resources. However, the idea is intriguing and consistent with the overall purpose of the Park and will be forwarded to the Division of Aquatic Resources for consideration.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

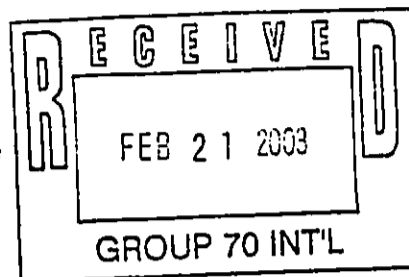


George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



February 19, 2003



Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813-4307  
ATTN: George Atta

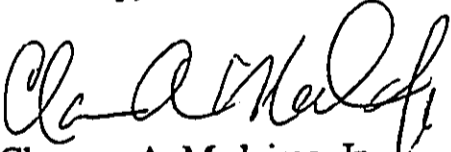
RE: Kekaha Kai State Park  
Draft Environmental Impact Statement

Dear Mr. Atta,

Thank you for the Draft Environmental Impact Statement for my review.

I do not have any comments on the DEIS at this time and would appreciate receiving a copy of the Final Environmental Impact Statement when completed.

Sincerely,



Clarence A. Medeiros, Jr.



April 11, 2003

Francis S. Oda, Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, AS D  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
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Christine M. Ruotola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimon, AIA  
Sheron Ching Williams, AIA

Clarence A. Medeiros, Jr.  
86-3672 Government Main Road  
Captain Cook, Hawaii 96704

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Medeiros:

Thank you for your February 19, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

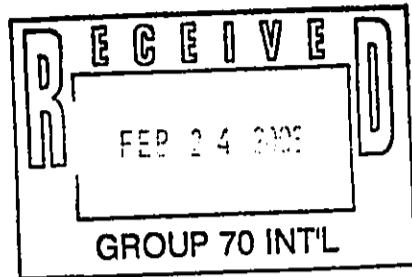
We acknowledge that you do not have any comments at this time.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



✓  
Deborah L. Chang  
72-1009 Māmalahoa Hwy.  
Kailua-Kona, HI 96740  
February 20, 2003

Mr. George Atta, AICP  
Chief Community Planner  
Group 70 International, Inc.  
925 Bethel St., 5<sup>th</sup> Floor  
Honolulu, HI 96813-4307

Dear *George* Mr. Atta:

SUBJECT: Park Development Report and Draft Environmental  
Impact Statement

Thank you for giving me the opportunity to review the above-named document. Here is a summary of my comments and concerns:

**How will over-use and over-crowding be prevented? [An Unresolved Issue (p. 14-1) and Probable Impact (p. 12-9)]**

- The DEIS rightfully recognizes that the Mahai'ula/Kaulana (M/K) section of the park can accommodate more people than the Awake'e and Manini'ōwali sections. However, the Manini'ōwali section in the foreseeable future will be more easily accessible than the M/K section with a nicely paved, 2-wheel drive access and ADA-accessible beach access, restroom, picnic, and possibly camping facilities. The EIS should suggest management actions to protect the Manini'ōwali section from becoming degraded from over-use. Who will be responsible for monitoring conditions and taking action should restrictive measures be needed? What protective measures could be considered?
- Similarly, the DEIS identifies the number of parking stalls planned for the M/K, Awake'e and Manini'ōwali sections. Once those stalls are filled, overflow parking will likely occur wherever one can manage to squeeze one's vehicle. Ways of protecting the park's natural environment and the park experience from over-crowding should be addressed in the EIS. For example, if Awake'e is to be a more "wilderness" area, how will that be assured? Should the park's resources suffer from over-use, can certain sections be closed to give the area a chance to recover? Which agency (ies) will be responsible?
- How will use of park areas be controlled until funding is available to develop and maintain facilities? (p. 6-3)

**Controlling the numbers of people in the park is challenging. Commercial uses add to the impacts. The Board of Land & Natural Resources has adopted seven policies (enclosed) in 1/98 which are intended to provide guidance to the Department when adopting appropriate standards for commercial activities on lands under its jurisdiction.**

- Policy #1 refers to a "hierarchy of priorities" in which the protection of natural and cultural resources is given first priority. The next priority is to accommodate the general public's needs as long as undue damage to the resources does not occur as a result. Commercial activities should be considered only if their impacts will not negatively impact the resources or use by the general public. The EIS should point out the existence of these policies which relate directly to park management.
- There is support and opposition in the community to conducting commercial activities in the park. It has already been a highly controversial and divisive issue. State Parks should propose guidelines as to what kinds of commercial activities, if any, they would consider by Special Permit.

**Anchialine ecosystems in West Hawai'i are unique natural treasures requiring utmost protection. While many anchialine ponds are in private ownership, Kekaha Kai State Park is fortunate to have a few of these precious, fragile resources within its boundaries.**

- The DEIS is silent regarding the existing jeep road that leads into Makalawena from the Awake'e section. This road passes through an anchialine area which cannot be fully restored and protected until that road is eliminated and the area re-naturalized.
- The DEIS recommends use of anchialine resources for irrigation, showers and even fire protection (p. 6-1). How will this affect the supply of water in the ponds and the endemic fauna that may be swept up into the water lines? Careful assessment of the brackish water supply is needed to determine if the proposed uses are sustainable. Although brackish water was traditionally used by the "people of old," the water demand in modern times would be significantly greater and may harm the anchialine ecosystem.

**Use of public restroom facilities at the proposed visitor center/museum must be managed carefully. (p. 6-7)**

- Use of the visitor center/museum restrooms by bus groups should only be allowed if the bus group is truly utilizing the educational facility. Any bus groups that include the visitor center/museum as a regular part of their program should be charged a fee that will be used to stock the restrooms with needed supplies as well as to repair and maintain the bathroom facilities and septic systems. It would be a serious mistake to invite bus tour groups, members of the public, and independent travelers to use the center's restroom facilities for their own sake, as implied on p. 6-7.

**With a gated entry, park entrance fees should be considered if the funds collected can be earmarked to go into a maintenance fund specifically for Kekaha Kai State Park.**

- Hopefully the current gubernatorial administration which has expressed opposition to special funds will see the clear nexus of funding park needs with park entrance fees and fees to use public restroom facilities at the visitor center/museum.
- If the visitor center/museum is developed into a visitor center for the "entire West Hawai'i region," as recommended in the DEIS, sufficient and stable funding will be needed to make it a reality.

**The trail opportunities in Kekaha Kai State Park are representative of trail issues and challenges which commonly exist along the West Coast of Hawai'i island. This provides fertile opportunity for demonstration projects.**

- Standards for buffer widths and buffer treatments (i.e., landscaping in the buffers) for all historic trails should be established with input from State Historic Preservation Division, the State's Nā Ala Hele program, and the Federal Ala Kahakai NHT. Buffers help to protect the historic trail sites as well as the trail ambiance for trail users. This is important for trail segments that are near to the Kūki'o-Manini'ōwali private developments, future camping areas, and other park-related improvements.
- Landscaping in the park should consist of plants that historically existed there. The archaeological record contains that information. This includes landscaping in the privately owned buffer areas.
- P. 6-10 refers to the inland trail that leads north from Keawehala. (It would be good to note that place name as well as Ka'elehuluhulu on Fig. 6-2.) That inland route is a short-cut to Makalawena that people will commonly prefer over the trail that follows the coast around Kāwili Pt. I agree with the DEIS recommendation that the inland route be rerouted so that it remains within the park's lands and avoids the sand dune area. Also restoration of the coastal trail around Kāwili Pt. would be ideal.
- Historic trails should be authentically restored. As it is, people are taking it upon themselves to "improve" the coastal trail inappropriately.
- There is a short section of the former trail on the north side of Kua Bay that was never restored by those responsible for its destruction. That short section should be restored so that there is a clear link between the beach and the beginning of the ancient trail leading north to Kakapa.
- Clarification: the language in the DEIS, p. 6-22, last sentence, should be changed from "This road will be restricted to vehicles..." to "No motorized vehicles will be permitted on this road which will be converted to an ADA accessible pedestrian path to the pond and beach."

- The statement on p. 14-1, "The State Attorney General's office has opined that historic trails are public property." implies that all historic trails are public property. This is misleading. The determination of which historic trails are publicly owned can be a complex process, involving extensive land title research, kama'aina witness testimony and archaeological study. If the statement is referring to the specific declaration made by the State in 1987 regarding state ownership of the mauka-makai trail shown on older Tax Maps as the "Makalawena-Akahipu'u Trail," please make that clear.
- The State's Nā Ala Hele program in cooperation with State Parks and Kamehameha Schools should study the historic significance of the "Makalawena-Akahipu'u Trail," determine its location, and assess its potentials for public use.

**Care must be taken to protect the off-shore water quality.**

- Runoff from landscape irrigation and restrooms/showers must be controlled so as not to affect the off-shore water quality of Kua Bay and other locations.

**Private management of publicly owned parks must be fair and equitable.**

- Proper park development and management depends on availability of funds. It seems that increasingly the private sector is being looked to for help in this area. When private management over publicly owned parks occurs, the public's interests need to be defended. That is, rules and regulations over the subject park need to apply to all. The rules should not be written in a way that the private managing entity is able to write itself permits that in effect give it exclusive privileges within the public park.

Mahalo for considering my input and recommendations for the final EIS.

Sincerely,

*Debbie*

**Policy for Commercial Activities**  
**on State Owned and Managed Lands and Waters**  
**Department of Land and Natural Resources**

**RECOMMENDATIONS APPROVED ON 1/30/98:**

1) The Board accepted the final report of *Findings and Recommendations* from the Department's Commercial Use Task Force, and acknowledged the fine work of the Task Force in establishing the basis for the Department's commercial use policies.

2) The Board adopted the following commercial activity policies and directed the Department to develop appropriate standards and processing mechanisms to implement these policies as needed with the following caveats:

- ◆ This should be done in a timely but transparent manner to assure that all affected constituencies are aware and participate where appropriate;
- ◆ It should not unreasonably affect outstanding permits, licenses, and existing memoranda of understanding;
- ◆ The diversity of resources managed by the Department will require different implementation approaches;
- ◆ The current funding constraints will delay some actions needed for full implementation of these policies; and
- ◆ All relevant commercial activity proposals brought forward for Board approval will have considered these commercial activity policies.

**POLICY # 1:**

The Department, when considering commercial activity proposals or management actions on state owned lands and waters, will use the following hierarchy of priorities:

- a. The Natural or Cultural Resource - The highest priority should go to the conservation of the resource. Only if an activity can be done in a way that does not unduly damage the resource, should it be allowed.
- b. The General Public - If use or activity by the public can be done without undue damage to the resource, it should be the next priority.

- c. **Commercial Activities** - Commercial activities should be considered only if their impacts do not impinge on the resource, #a above, or use by the general public, #b, above.

If public and commercial activities are occurring, and resource impacts indicate that restrictions or controls need to be imposed, these should first be levied on commercial operators. The general public is the last group to have restrictions and controls imposed on them.

**POLICY # 2:**

The principles of *Limits of Acceptable Change* should be used to monitor and manage intensities of use.

**POLICY # 3:**

Any new permits for commercial activity should have explicit conditions to allow DLNR ability to change levels or terminate certain activities based upon stated limits of acceptable change. This will insure that managing agencies have timely opportunities to remedy any problems that occur as a result of that permit.

**POLICY #4:**

The *Managing Agency* has the lead responsibility to coordinate an applicant's activity application. The *Managing Agency* is responsible to inform other appropriate agencies and solicit comments much in the way present CDUA applications are handled by the Lands Division. Any environmental documentation (e.g. environmental impact statements and/or assessments) needed to process any commercial activity will be the responsibility of the applicant.

**POLICY #5:**

The *Managing Agency* can issue activity permits for routine activities and not for profit organizations without Board approval. Memoranda of understanding can be established for not for profit organizations to cover a range of activities. Very significant activities and/or those requesting multiple years should go to the Board for approval.

**POLICY #6:**

Reasonable fees for commercial users should be assessed based either on a percentage of gross revenues, per user, or expected impacts of their activity. While any group conducting an activity should be encouraged to also perform work that improves the



## RECEIVED AS FOLLOWS

resource, or mitigates their presence, there should be no guaranteed waiver of all fees for service of this kind.\* Not for profit groups that charge fees only to cover administrative costs can be exempted from fees.

### **POLICY #7:**

The Department will compile a list of eligible sites for commercial activity. The list will also note the intensity of commercial activity that will be permitted. The list will be periodically reviewed and updated.

### **Definitions:**

**Activity** - A pursuit that does not involve the changing or alteration of land or water areas, or existing structures on those land or water areas. In general, activities are those things that take place on the resources in a passive way, do not involve any resource extraction, or do not require the imposition of change on the resource.

**Commercial Activity** - The collection by a party or their agent of any fee, charge, or other compensation shall make the activity commercial except when such fee, charge, or other compensation is for the sale of literature allowed under Chapter 13-7-7, HAR. Nonprofit status of any group or organization under Internal Revenue or Postal Laws or regulations does not in itself determine whether an event or activity arranged or managed by such a group or organization is noncommercial. Not for profit groups that charge only a nominal fee for administrative costs that utilize a public facility or resource at a frequency and/or magnitude that does not significantly contribute to the degradation of the facility and/or resource will be considered non-commercial.

**Ecotourism** - Travel to Hawaii's natural, cultural, and historic attractions to experience and study Hawaii's unique environment, heritage and culture in a manner which is ecologically responsible and sustainable, and sustains the well-being of local communities.

**Group** - A collection of people that assemble for the same purpose or event.

**Limits of Acceptable Change** - A concept of assessing impacts to the resource. Under this concept, descriptors are established indicating what level of change or impact is tolerable, or what level it takes to trigger some kind of remedial action. If a resource is unduly impacted, restrictions are imposed, regardless of the number of users.

**Managing Agency** - The Managing Agency is that lead Division or office that has jurisdictional responsibility for the area being considered for an activity. If a proposed activity takes place on more than one jurisdiction, the division or office having the greatest area of resource will be considered as the Managing Agency.

**Undue Damage or Impact** - Includes excessive damage, or those impacts which cannot be economically remedied, given a managing agency's resources.

**Use** - If a proposed action will involve a change or construction, this is considered a use.



Francis S. Oda,  
Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
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Christine M. Rucolo, AICP  
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Scott Tangeman  
Wesley N. Ujirneri, AIA  
Sharon Ching Williams, AIA

May 22, 2003

Deborah L. Chang  
72-1009 Mamalahoa Highway  
Kailua-Kona, Hawaii 96740

Subject: Kekaha Kai State Park – Draft EIS

Dear Ms. Chang:

Thank you for your February 20, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Management of Use:** The Department of Land and Natural Resources, Division of State Parks is the agency responsible for monitoring conditions and taking action should restrictive measures be needed to protect degradation of resources at Kekaha Kai State Park. Protective measures considered include limiting access through hours of operations and camping permits, and limiting designation of uses such as camping areas, parking areas, vehicular and pedestrian pathways. In addition, increasing awareness of use rights and responsibilities through educational and interpretive programs, including signage are planned.

**New gates in the Awakee and Maniniowali sections** will control vehicular access. Parking areas will be designated to restrict over flow parking in most areas; there are a few exceptions. Police can assist DOCARE personnel when the new road to Maniniowali is constructed. Should temporary closure of the park become necessary to protect resources, State Parks will be the responsible agency for enabling that action. Park areas will continue to be controlled by existing State Park and community resources until additional funding is available to develop and maintain facilities.

**Commercial Use Policy:** The copy of the Board of Land and Natural Resources "Policy on Commercial Activities on State Owned and Managed Lands and Waters" (1998) which you enclosed will be referenced in the Final EIS. State Parks follows these general guidelines when considering Special Permit requests. Some decisions go up to the Land Board.

**Anchialine Protection:** The portion of the jeep road that leads to Makalewena from the Awakee's day use/camp area is planned to be closed once Kamehameha Schools has developed their own access road. Until then, the use of that portion of the shoreline area remains limited to travel by Makalewena users, namely, caretakers of Kamehameha Schools and people with 4 wheel drive due to the poor condition of the road. Vehicles of the general public will be restricted from using this road to prevent further degradation of the resources located along this shoreline, including the nearby anchialine ponds.

The impact on the anchialine ecosystem will be carefully assessed prior to the use of brackish water for park activities. Direct use of pond water may be limited. Shallow wells may be dug for water use to prevent negative impacts to the ponds.

**Visitor Center Restroom:** It will be difficult to determine whether or not public use of the restrooms at the planned visitor center is authentic to the purpose of the orientation facility. Since the availability of rest-stops with public restroom facilities along Queen Kaahumanu is rare, and the availability of comfort stations at Awakee is unavailable, and Mahai'ula is provided with a porta-potty, it is probable that the restroom facility planned for the visitor center may generate high

Response letter to Deborah Chang  
Kekaha Kai State Park FEIS  
May 22, 2003  
Page 2

use. The capacity of the facility along with maintenance of supplies will need to accommodate the predicted level of use and the facility must be designed accordingly.

**Entrance fees:** We acknowledge your support to charge park entrance fees. We recognize that stable funding will be needed to maintain operations of the park facilities. However, at this time, there are no plans to develop a policy to charge entrance fees to Kekaha Kai State Park. This may be reconsidered in the future as the situation demands.

**Trails:** The Department of Land and Natural Resources will continue to collaborate with the Federal National Parks, SHPD and Na Ala Hele in developing the Ala Kahakai. It is expected that trail plans will include elements such as buffers to maintain proper use of the trails. State Parks will develop a more detailed trail plan to guide trail development in the park.

Restoration of the trail systems throughout the park are envisioned, including the short section of the former trail on the north side of Kua Bay and to the extent possible include the coastal trail around Kawili Point. Recognizing that there are portions of historic trails that have eroded into the sea, all trail restorations are to be made as authentically as possible. References to Keawehala and Ka'elehuluhulu will be made to Figure 6-2. The statement on page 14-1 refers to a specific declaration. This clarification will be made. The verification of the Makalawena-Akahipuu Trail will be part of the discussions between Kamehameha Schools and State Parks.

**Landscaping:** In general, landscaping will be minimal. However, where necessary, generally, plants to be used for landscaping will be native or Polyensian introductions and appropriate for the environmental conditions of Kekaha Kai State Park.

**Page 6-22 Wording:** The changes to the wording of the last sentence will be made as you suggested.

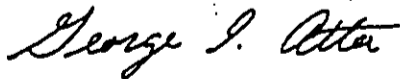
**Off-shore water quality:** Drainage and runoff will be designed using best management practices and will follow federal, state and county regulations regarding erosion as to avoid and minimize impact to off-shore water quality fronting the park. There are ongoing water quality monitoring activities of Kua Bay.

**Private management of publicly owned parks:** The Division of State Parks will maintain authority and responsibility of Kekaha Kai State Park. Should there be private management of portions of Kekaha Kai State Park, rules and regulations over the park will continue to be maintained for public use, as provided by Hawaii Administrative Rules. Private management is not allowed to have exclusive privileges of park use.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

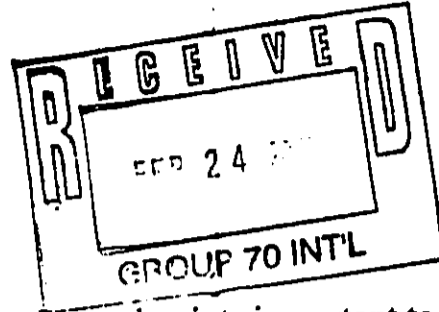
GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

Ellen Schomer  
87-3187 Honu Moe Rd.  
Captain Cook, HI 96704  
Feb. 21, 2003



TO WHOM IT MAY CONCERN:

I am writing concerning the Kekaha Kai Park plan. Several points important to me are as follows:

1. No commercial activity of any kind and an immediate end to the filmmaking currently occurring.
2. Keeping the park "as is" – WILDERNESS park, only making improvements such as better maintenance of the Ala Kahakai Trail, and better trash pickup by the park attendants.
3. The road should not be paved but potholes filled. We do not need another Hapuna Beach State Park; one is bad enough. The Kukio end (north end) or resort and developed end can accommodate those who desire a more conventional access with paved roads and better amenities. So please give that area the bulk of the parking spaces.
4. Cultural sites throughout should be cleaned up with simple signs explaining their significance.
5. No private funding should be used for any of this as it sets dangerous precedents. Only make improvements when public funding is available.
6. A bike trail along the unpaved road to Mahai`ula with safe parking along the highway and more trails throughout the park would be great!
7. Dogs should absolutely be allowed on leashes.
8. Please make available camping in several areas and I suggest a self-checkin /honor box system as in many campgrounds on the mainland with a ranger or guard making the rounds each evening. This would allow for spontaneous camping versus the awkward current method of campground reservations whose inconveniences include being unable to book on the weekends.

Thanks you for taking my comments to heart and for creating this park system.

Sincerely,

Ellen Schomer



Francis S. Oda,  
Arch. D., AIA, AICP  
Norman GY Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
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Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

May 22, 2003

Ellen Schomer  
87-3187 Honu Moe Rd.  
Captain Cook, Hawaii 96704

**Subject: Kekaha Kai State Park – Draft EIS**

**Dear Ms. Schomer:**

Thank you for your February 21, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project. We appreciate you sharing your concerns for the Park.

We have prepared the following responses to your comments:

**No Commercial Activities:** We acknowledge your support that the park should remain noncommercial and wilderness in nature. Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai.

**Commercial Filming and Special Permit Activities:** We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities. This issue raises larger questions and expands the issue to broader policy areas than those covered by our plan. This issue will remain a continuing discussion item with the Board of Land and Natural Resources.

**Roadway Improvements:** A general level of road improvement to the existing gravel and pot-hole filled access road at Mahai'ula is planned. For the foreseeable future, paving is not planned for the main road to Mahai'ula. Parking at the Maniniowali section will remain limited because of the fragility and small size of the resource a Maniniowali.

**Cultural Sites:** Educational and interpretive programs are planned to inform the public of the significance of the historical and cultural resources throughout the park. Preservation and protection of cultural sites and resources includes providing signage and general maintenance.

**Public Funding:** The planned road improvements from Queen Kaahumanu Highway to Kua Bay is expected to be funded by the private sector and implemented immediately following acquisition of necessary permits and approvals. Waiting for the availability of public funds prior to implementing private funding improvements is not a feasible alternative. Even without improvements park resources are being negatively impacted and new sources of funding must be explored. No action means deterioration.

**Bike Trail:** It is possible for mountain bikes to travel along the unpaved road to Mahai'ula without the designation of a separate bike trail. Additional trails for bike recreation throughout the park is not a priority. Trails are primarily pedestrian oriented.

**Dogs:** Hawaii Administrative Rules regulates the provision of dogs at public parks.

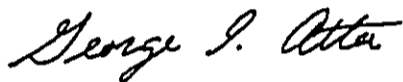
Response letter to Ellen Schomer  
Kekaha Kai State Park FEIS  
May 22, 2003  
Page 2

Camping: Camping is planned throughout the park, with new designated sites at Kua Bay, Awakee and Mahai'ula. There are no plans at this time to change the current camping permitting system for the park. However, your suggestion for a self-check in / honor box system will be noted. It is unlikely that the Park will have the resources to provide a ranger or guard to make rounds each evening to check spontaneous camping activities. Camping will be allowed after sites are developed and management resources are provided.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

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PAGE 01

February 19, 2003

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honolulu, hi 96813-4307  
Attn: George Atta  
tel #808-523-5866 ext 103  
Fax #808-523-5874

State of Hawai'i  
Office of Environmental Quality Control  
235 South Beretania St., Suite 702  
Honolulu, HI 96813  
Attn: Genevieve Salmonson  
tel#808-586-4185


Dept. Land and Natural Resources  
Division of State Parks  
1151 Punchbowl St, Suite 310  
Honolulu, HI 96813  
Attn: Daniel Quinn  
Tel#808-587-0290  
Fax#808-587-0311

RE: COMMENTS ON DRAFT FIS FOR KEKAHA KAI STATE PARK

Aloha,

I am for the Kekaha Kai State Park at Maihula to remain a wilderness park. I have used the park regularly since it opened and enjoy the area as it is. I don't want to see commercial activity in the park or the road paved. Improvements should be made at the Kua Bay end of the park with funds from the developer used for a road, bathrooms, camping and more parking for guests on that side.

Thank you,

  
Gary Eoff



April 25, 2003

Francis S. Oda, AIA, AICP  
Norman GY Hong, AIA  
Sneri B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihel, AIA, CSI  
James T. Hishimoto, AIA  
Rishi E. Portmore, AIA  
Stephan H. Yuan, AIA  
Linda C. Mack, AIA

George A. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, AICP  
Philip T. Cuccia  
Sudhin Mahant  
Jeremy C. Hill, AIA  
Rob A. Inoué, AIA  
John M. Jones, AIA  
Charles V. Kanders, AIA  
Dean H. Kitamura  
Catherine M. MacNeil, AIA  
John B. McGuire  
Cye K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ralston, AIA  
James L. Stone, AIA  
Scott Tangeman  
Wesley W. Tjibjeb, AIA  
Snerin Ching Williams, AIA

Gary Eoff  
Fax: 808-325-6322

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Eoff:

Thank you for your February 19, 2003 fax regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We appreciate your support of the park.

We have prepared the following responses to your comments:

Kekaha Kai State Park is planned as a wilderness park.

The Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai.

Improvements to the park are generally targeted to improve access and comfort at the north end, Kua Bay, are of the park, some of which will be funded by the private developer, W.B. Kukio. However, the Conceptual Plan adopted by the State Board of Land and Natural Resources also includes improvements at Mahaiula as well as nominal facilities at Awakee.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



Hannah Kihalani Springer  
Kukui'ohiwi, Ka'upulehu  
72-3403 Mamalahoa Highway  
Kailua, Kona, Hawaii  
HI 96740  
ph# 808-325-5126  
fax#808-325-7989

FAX 4 PAGES TO:

George Atta  
Group 70 International  
fax# 808-523-5874

Daniel S. Quinn  
Division of State Parks  
fax# 808-587-0311

Genevieve Salmonson  
Office of Environmental Quality  
Control  
(no fax # given - please forward)

February 22, 2003

RE: Kekaha Kai State Park - North Kona, Island of Hawaii - Park Development Report  
and Draft Environmental Impact Statement

Me ka ha'aha'a,

It is with some satisfaction that we arrive at this point, of review and comment on the DEIS, in the Park Development process. Over the years since September of 1994 when the first public meeting on the subject of the Park Development was held, we have met and commented as individuals, as a collective, as small groups and no doubt will continue to do so. Mahalo to all of those who have maintained commitment and interest in this process and who have conducted themselves with sensitivity and respect for the other participants as well as for the resources which comprise the Kekaha Kai Park. Thank you.

My comments and questions follow.

Page 1-7 \* section 1.1.3 \* paragraph 2 \* line 4: "Hawaii" - should have 'okina between the two "i".

Page 2-7 \* section 2.4: in the previous section on plant communities, Hawaiian names are indicated for the various species, could the same be done for the birds?

Page 2-8 \* section 2.4: in addition to the Ka'elemakule family of Mahai'ula, the Punihaole family of Makalawena deserve mention.

Page 2-9 \* section 2.6: the subsection of the park identified as

"Mahai'ula also includes the shoreward portion of Kaulana as indicated by the sub area of Ka'e'ehuluhulu, and the subsection identified as "Manini'owali" also includes the shoreward portions of Kūki'o 2 and 1 as indicated by the sub areas of Kakapa Bay and Kikaua Point. I do not necessarily have an objection to using Mahai'ula and Manini'owali to identify sub sections of the park, I am concerned about the possible loss of use of the names Kaulana and Kūki'o in the context of park planning and routine use. The narrative may indicate the inclusion of more than one *ahupua'a* in a subsection.

Page 3-1 \* section 3.1 \* paragraph 1 \* line 2 and line 4: "Koholā" should read "Kohala".

Page 3-1 \* section 3.1 \* paragraph 1: while some of the old folks consider the ponds and area at Kalahuipua'a to be a part of Kekaha by virtue of the geographic conditions, Kekaha as described by Kelly is consistent with the census district of Kekaha as described in The Missionary Censuses of Hawaii by Robert Schmitt, on page 31, as being from "Kapalaoa to Kealakehe". I do not offer this as a correction per se, but do suggest that the narrative not confuse the uninformed reader with the suggestion that Kalahuipua'a is at the northern part of the area described by Kelly. Also, Kalahuipua'a is near to Puakō not at it or synonymous with it.

Page 3-3 \* Figure 3-2 \* top photo: the caption, "Kūki'o/Manini'owali - Trail", might be expanded to identify the coral cobbles recently placed along the trail. This has been done recently and is not a traditional trail treatment. A managerial decision must be made as to what treatments will be used where.

Page 3-4 \* section 3.2.2 \* paragraph 1 \* line 8: is the cave named Mākālei possibly located in this coastal part of the *ahupua'a* of Awake'e, or at a higher elevation in Mahai'ula on the slopes of Akahipu'u? Perhaps the source of this comment could be cited to avoid confusion with other sources such as Maly in Appendix L, Kekaha Wai 'Ole o Na Kona, page 58.

Page 3-10 \* section 3.6 \* *Iwi* Burial Program: there should be a Burial Treatment Plan for treatment of known burials as well as for inadvertent finds

Page 4-1 \* section 4.1 \* paragraph 6 \* line 1: "Calm waters" might be amended to "seasonally calm waters". The danger of seasonally high surf was made clear again this winter season after several years of relative calm. Those unfamiliar with big waves

should be alerted to the danger they present at every opportunity, including the planning process.

Page 4-3 \* section 4.2: "MAHAIULA" should read "MAHAI'ULA".

Page 5-5 \* section 5.4.1.2 \* line 7: the Puhiapele geologic unit is very specific and distinct from that which "covered the area around the Kona Village". The Geologic Map Of Hualalai Volcano, Hawaii by Richard Moore and David Clague may be referred to for accuracy.

Page 5-9 \* section 5.4.2.2: Yes! A fire management plan is essential.

Page 5-10 \* section 5.7 \* Cultural Impact: at what point is this prepared? Is this submitted separately from the EIS?

Page 6-3 \* section 6.0 \* Eradication of Alien Species: Yes! Every opportunity to control fountain grass should be pursued and the Puhiapele geologic unit offers an excellent opportunity to do so.

Page 6-7 \* section 6.1.1 \* paragraph 4 \* line 4: "Koholā" should read "Kohala".

Page 6-7 \* section 6.1.1: the Entryway Improvements and Visitor Center/Museum sections are printed twice.

Page 6-9 \* Section 6.1.1 \* Park Maintenance \* paragraph 1 \* line 2: "freeway" would be better referred to as the Ka'ahumanu Highway or simply the highway.

Page 6-12 \* 6.1.4 \* Interpretive Sign Kiosk \* paragraph 3: is the pond at Ka'elehuluhulu a "remnant" of Pa'alea or a new pond created by forces and circumstances similar to those which created Pa'alea?

Page 6-23 \* section 6.5 \* line 5: "Kailua/Kona" may be written as "Kailua". Kailua, Kona is used to differentiate when necessary, from Kailua, O'ahu.

Page 6-24 \* Table 6-1: "Maniniowali" should be "Manini'ōwali".

Page 7-8 \* section 7.7: does this include commercial film production? Years ago, the Task Force did not anticipate and thus

did not address commercial filming. When commercial filming did occur, community response ranged from outrage to support and included much confusion. May commercial film making be addressed Administratively or does it require Board action?

Page 8-4 \* section 8.9 \* 1: in December of 1986, the Final Environmental Impact Statement for Makalawena Resort was submitted to the Hawai'i County Planning Department as part of a General Plan Amendment Application. On page 139 of Appendix C, the "Informant Concerns and Considerations" section indicates, "There should be clarification as to which of the trails in the area are still public and subject to the Highway Act of 1892. This Act may still pertain to any remaining sections of *ala kahakai* and/or the Makalawena - Akahipu'u Trail." At a public hearing held in Kona on the matter, Glen Taguchi representing the Department of Land and Natural Resources testified that the State of Hawai'i claimed the trail.

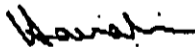
Page 9-9 \* section 9.5.3 \* paragraph 3 \* line 1: "Maniniowali" should read "Manini'owali".

Page 9-9 \* section 9.5.3 \* paragraph 8 \* line 1: same as above.

Page 10-10 \* section 10.4 \* recommendation 1: the region of Kekaha is not limited to the coastal area encompassed by the park. The use of "Kai" as a directional descriptor for the park, emphasizes the coastal nature of the park. Kepa Maly should be consulted on this matter if further discussion is necessary.

Thank you for the opportunity to review and comment on the DEIS and also for your attention to our responses to it. I look forward to our continuing discussions on, planning for, and implementation of our park.

'O au nō me ka'oiā'i'o,



Hannah Kihalani Springer



GROUP 70  
INTERNATIONAL

May 9, 2003

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Hannah Kihalani Springer  
72-3404 Mamalahoa Highway  
Kailua, Kona, Hawaii 96740

Subject: Kekaha Kai State Park – Draft EIS

Dear Ms. Springer:

Thank you for your February 22, 2003 fax regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Spelling corrections:** Spelling corrections will be made throughout the document, particularly to the specific pages you have mentioned.

**Bird names:** Hawaiian names for the birds will be included. These include the koloa, ae'o, 'alae ke'oke'o (presumably, or it may be 'alae 'ula'ula), auku'u, and pueo.

**Punihaole family:** Proper mention of the Punihaole family relationship to Makalawena will be added.

**Ahupua'a clarifications:** Clarification will be made regarding to locations of the sub areas of the park to its proper ahupua'a.

**Kalahuipua'a:** Clarification will be made regarding the location of Kalahuipua'a relative to Puako.

**Trail caption:** The caption for the trail will be clarified to indicate the recent addition of the coral cobbles upon the trail.

**Makalei Cave:** Location is not specifically known, only by legendary references.

**Iwi Burial Program:** Text will be edited to indicate the need for a Burial Treatment Plan for known burials as well as for inadvertent finds. State Parks will work with local Kupuna and the Island Burial Council to develop a treatment plan.

**Calm waters:** Text will be amended to "seasonally" calm waters.

**Puhiapele Geologic Unit:** Current information from the USGS Hawaiian Volcano Observatory regarding the Puhiapele geologic unit will be added to section 9.4.2. of the EIS.

**Cultural Impact:** Is included in this EIS as supported by the information collected by the archaeological and ethnological reports, discussion of possible impacts and mitigation strategies related to cultural resources throughout the area.

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Sutodin Halim  
Jeremy C. Hsu, AIA  
Ron A. Inoué, AIA, CSI  
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Response letter to Ms. Hannah Springer  
Kekaha Kai State Park FEIS  
May 9, 2003  
Page 2

Duplication of Text: Duplication error will be corrected.

Freeway: Use of the term freeway is incorrect. This will be changed to Highway.

Ka'elehuluhulu Pond: Is it not clear whether or not the pond at Ka'elehuluhulu is a "remnant" of Pa'aiea or a new pond created by forces and circumstances similar to those which created Pa'aiea. Some features in the remaining pond imply that it is part of the old pond but this is by no means certain. More archeological research is needed.

Kailua: Text change will be made to reference Kailua singularly.

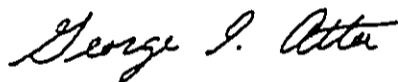
Commercial Film Production: Decisions regarding commercial film production on State Parks is made Administratively.

Trail Issue: There have been public statements regarding public trails in the area. However, we expect that this topic will continue to attract discussions in the future.

Kekaha Kai: Thank you for your clarification regarding this term.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

2-20-05 ✓

Dear Mr. Atta,

It has come to my attention that improvements to the area now known as Kekaha Kai State Park are under consideration. I am writing to you to express my desire that the Park remain, as it was designated to be, wilderness in nature.

In particular, I am concerned that paving the road to the Mahiula end of the Park will alter the fragile balance that now exists, and fly in the face of the "low impact" concept that was the original intent of the designation.

I am hopeful that you will agree that leaving this particular area undeveloped is the best option.

Thank you for your consideration.

Sincerely,

Jim Burister  
Kapaa, HI



April 11, 2003

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman G. Y. Hong, AIA  
Sheryl B. Seaman, AIA, AS-ID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AIA  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Stephen H. Hahn  
James H. Hahn  
David M. Judd, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. Madigan, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christina M. Pardo, AICP  
James L. Stank, AIA  
Scott Tangor, AIA  
Wesley M. Ujima, AIA  
Sharon Ching Williams, AIA

Jim Burrison  
P.O. Box 1545  
Kapaa, Hawaii 96755

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Burrison:

Thank you for your February 20, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

Kekaha Kai State Park is planned as a wilderness park. We recognize your desire to keep the park "as is."

Mahai'ula access road: A general level of road improvement to the existing gravel and pot-hole filled access road is planned to support interpretive educational programs and general maintenance of the Mahai'ula area. For the foreseeable future, paving is not planned for the main road to Mahai'ula.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We appreciate your input for the environmental review process.

Sincerely,  
GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator



ALOHA,

LET MY MESSAGE BE CLEAR.

AS DEVELOPMENT COVERS OUR ISLAND HOME, OPEN SPACE IS BECOMING MORE OF A RARITY THAN THE NORM.

ISLAND PEOPLE NEED WILDERNESS AND SPACE TO OFFSET THE STRESS OF DEALING WITH TRAFFIC, CONGESTION, CONSTRUCTION, AND ALL THE MALADIES OF ENCULTURAZATING SUBURBIA.

LOCAL FOLKS AND KAMAAINA ALIKE HAVE ALMOST NO PLACE LEFT TO BE ALONE WITH NATURE AND TO REKINDLE THEIR SPIRITS.

KEKAHA KAI WOULD BE BETTER OFF FOR PUBLIC BENEFIT TO BE LEFT IN IT'S MOST NATURAL STATE, DEVOID OF ALL THE TRAPPINGS, SUCH AS EASY ACCESS, CAMPING (GOD FORBID), AND COMMERCIAL ACTIVITY (DOUBLE GOD FORBID).

THE NATURAL LIFE THAT ABOUNDS IN MAHA'I'LA DESERVES BETTER AND SO DO THE PEOPLE THAT LOVE HER.

I ASK WITH COMPLETE RESPECT THAT YOU WILL GIVE MY OPINIONS YOUR KINDEST CONSIDERATIONS.

FINEST REGARDS,

MARK A. COLTER

ATT: GEORGE ATKA  
GENEVIEVE SALMONSON  
DANIEL QUINN



May 22, 2003

Francis S. Oda, Arch. D., AIA, AICP  
Norman GY Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Mr. Mark A. Colter  
No Address  
Fax: 808-775-1268

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Colter:

Thank you for your February 20, 2003 fax regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We respect your opinion that Kekaha Kai would be better off left in its most natural state, devoid of easy access, camping and commercial activity. While few improvements are planned for the coastal area of the park, the vast majority of the park will remain void of improvements. However the adopted plan for Kekaha Kai does include a moderate number of improvements. No improvement is not a desirable option because the resources are being trashed as it is. The adopted plan hopes to balance resource use and resource protection. The plan was selected as a balance intensity alternative with a focus on resource preservation.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

A handwritten signature in cursive script that reads "George I. Atta".

George I. Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

From Duane Erway



Sun, Feb 16, 2003



10:50 PM  
Page 1 of 1

**PO Box 2807  
Kailua-Kona, HI 96745  
February 15, 2003**

**Mr. George Atta  
Group 70 International, Inc.  
925 Bethel St., 5<sup>th</sup> floor  
Honolulu, HI 96813**

**Re: Kekaha Kai State Park DEIS**

**Aloha Mr. Atta!**

**Since Kekaha Kai State Park was designated as a noncommercial, wilderness park, from the earliest public meetings, it is vital that there be NO commercial activity at all. As the DEIS points out, the park is meant "to . . . . . re-establish our connection to the natural world." That means, NO commercial film-making, no surf schools, etc. - nothing commercial at all. There should be no money-making ventures for private companies for little or no benefit to the general public. There can be no "place for renewal" if there are commercial ventures of any kind there, ever.**

**The Park is to remain "wild," and since the north end of the park will be paved it is especially important to keep the road to Mahai'ula unpaved (although some filling of large pot holes, etc. would be appreciated!).**

**No "improvements" should be made in the Park until adequate public funding is available. Private funding could compromise park conceptual plans and allow commercial activities to enter.**

**More than 10-20 developed camp spaces near Kua Bay are needed. There needs to be substantial camping allowed for Awakee and Manini'owali (Kua Bay) with other nodes available as well.**

**There needs to be greater public use at the northern end near Kukio/Manini'owali. This is where a huge development will impact the many cultural/archeological sites in that area. Great care needs to be taken to protect those sites. And more parking at the Kukio end (northern) of the park would protect other, less urbanized areas of the park. Future parking there, might include distant parking lots with walkways, small shuttles to certain areas (like Kua Bay), coastal and/or mauka-makai biking/hiking paths from residential Kona areas.**

**Mahalo nui loa for your consideration of my views.**

**Sincerely yours,**

*Marjane Erway*



February 27, 2003

Francis S. Oda, Arch. D., AIA, AICP  
Norman GY. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimura, AIA  
Ralph E. Portmore, AIA  
Stephen H. Yuen, AIA  
Linda C. Miki, AIA

Marjene Erway  
P.O. Box 2807  
Kailua-Kona, Hawaii 96745

Subject: Kekaha Kai State Park – Draft EIS

Dear Ms. Erway:

Thank you for your February 16, 2003 fax regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**No Commercial Activities:** We acknowledge your support that the park should remain noncommercial and wilderness in nature. Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai.

**Commercial Filming and Special Permit Activities:** We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities. This issue raises larger questions and expands the issue to broader policy areas than those covered by our plan. This issue will remain a continuing discussion item with the Board of Land and Natural Resources.

**Mahai'ula access road:** A general level of road improvement to the existing gravel and pot-hole filled access road is planned. For the foreseeable future, paving is not planned for the main road to Mahai'ula.

**Public Funding:** The planned road improvements from Queen Kaahumanu Highway to Kua Bay is expected to be funded by the private sector and implemented immediately following acquisition of necessary permits and approvals. Waiting for the availability of public funds prior to implementing private funding improvements is not a feasible alternative. Even without improvements park resources are being negatively impacted and new sources of funding must be explored. No action means deterioration.

**Additional Camping:** The Park improvements have designated additional camp grounds throughout the coastal areas of Kekaha Kai.

**Preservation of archaeological sites:** The Plan is to protect and preserve the archaeological sites throughout the park. Educational and interpretive programs will be developed to enhance preservation efforts of the cultural treasures throughout the park.


**Parking at Kua:** Currently there are no designated parking areas at Maninowali. The Park plan includes designated parking areas to support coastal activities such as fishing and camping. Additional parking near the highway entrances to the park is planned which link to pedestrian trail systems.

Response letter to Marjene Erway  
Kekaha Kai State Park FEIS  
February 27, 2003  
Page 2

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

February 19, 2003

Group 70 International, Inc.  
925 Bethel St., 5th floor  
honolulu, hi 96813-4307  
Attn: George Atta  
tel #808-523-5866 ext 103  
Fax #808-523-5874

State of Hawai'i  
Office of Environmental Quality Control  
235 South Beretania St., Suite 702  
Honolulu, HI 96813  
Attn: Genevieve Salmonson  
tel#808-586-4185

Dept. Land and Natural Resources  
Division of State Parks  
1151 Punchbowl St, Suite 310  
Honolulu, HI 96813  
Attn: Daniel Quinn  
Tel#808-587-0290  
Fax#808-587-0311

RE: COMMENTS ON DRAFT EIS FOR KEKAHA KAI STATE PARK

Aloha,

The Kekaha Kai State Park was originally designated to be a wilderness park. I am in favor of it being "kept as is". As a wilderness park it should be maintained as a low public impact area with no commercial activity, no camping and no road improvements. Park improvements should be to the north end, Kua Bay, of the park.

Thank you,



Marlin Parker



April 25, 2003

Andrew S. Ditts, AIA, AICP  
Arch. D. AIA, AICP  
Norman G. Berg, AIA  
Sheryl B. Seaman, AIA, AICP  
Hilary H. Hill, AIA  
Ray H. Nible, AIA, AICP  
James L. Stone, AIA  
Patrick E. Portwood, AIA  
Stephen H. Allen, AIA  
Craig C. Miller, AIA

Marlin Parker  
Fax: 808-325-6322

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Parker:

Thank you for your February 19, 2003 fax regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

Kekaha Kai State Park is planned as a wilderness park. We recognize your desire to keep the park "as is." During the planning of the park, several alternative scenarios were considered, including higher intensity uses. However, like you, the community expressed an interest in having the park proceed with the lower intensity plan. The Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai. While improvements to the north end, Kua Bay, area of the park are generally targeted to improve access and comfort, the Board of Land and Natural Resources has already approved additional improvements to the Awakee and Mahaiula portions as well.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

George J. Atta, AICP  
Paul P. Gonzalez, AIA  
John W. Lee Cook, AIA, AICP  
Philip T. Quasha  
Eugene J. Fenn  
Joseph G. Hill, AIA  
Ray A. Hill, AIA, AICP  
Sheryl B. Seaman, AIA, AICP  
Thomas V. Kanehiro, AIA  
Terry H. Kitzman  
Katherine M. Wachter, AIA  
Felix B. McCue  
Craig K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Ruotola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Craig Williams, AIA

RECEIVED AS FOLLOWS

FEB-23-2003 07:56 AM SUNDOT MARINE FLAGS

1 808 887 1157

P.01

Attn: George Atta

**Michael Varney**  
**P.O. Box 2891 Kamuela, HI 96743**  
**808-885-8022**

D.L.N.R.  
Division of State Parks  
Honolulu, Hawaii 96813  
attn: Dan Quinn

Feb. 17, 2003

Re: Kekaha Kai State Park

Aloha Mr. Quinn,

Thanks you for sending me a copy of the draft E.I.S. for the Kekaha Kai State Park.

I would like to comment on the subject of camping in the area surrounding Manniniowall beach.

The proposed camping area will be welcomed by many as no legal camping areas exist between Spencer Beach Park near Kawaihae and Hookena in South Kona.

The local community and visitors alike will benefit from this new beach park and campground.

The County's current permit system for camping can be a hassle for most folks as distances to the nearest State Parks Office could be an hour or more away.

I would like to suggest a system used in Australia where you arrive at a campsite, pick your numbered camp area and submit your permit payment w/ name and camp number to a locked box. Every evening a worker would collect permits and payments and verify your location. Standard State Park camping permits purchased online would also be accepted. When the designated camp areas are full no one else will be allowed.

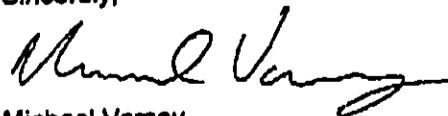
Suggested payment would be single person, 5.00 family, 10.00.  
This money would go directly to beach park and campground maintenance.

I would also support privatizing the maintenance for this park area if the State cannot provide the workers. I DO NOT support completely privatizing this park - This should be a State Beach Park open to all.

I would also like to add that during the winter months the sandy beach completely washes away and the park layout and design should consider this fact. During this time the sand can be just offshore and still provide good swimming and body surfing. Other times it's too rocky and dangerous for safe ocean access.

Mahalo to the Group 70 Intl. team who put the Draft E.I.S. together and all the members of the Kekaha Kai State Park task force.

Sincerely,



Michael Varney





April 25, 2003

Francis S. Oda, Arch. D., AIA, AICP  
Norman G.V. Hong, AIA  
Sheryl B. Seaman, AIA, ASD  
Hitoshi Hida, AIA  
Roy H. Nihel, AIA, CSI  
James I. Hishimoto, AIA  
Paul E. Portman, AIA  
Stephanie H. Yuan, AIA  
Linda C. Mills, AIA

Michael Varney  
P.O. Box 2891  
Kamuela, Hawaii 96743

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Varney:

Thank you for your February 17, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**Additional Camping:** We appreciate your support for additional camping areas at the Park.

**Camping Permit System:** Your suggestion to improve the current permit system for camping on the island of Hawaii, and your support for privatizing the maintenance of this park area is appreciated. The State Parks office will consider your comments when addressing these issues regarding the management of the park. Camping will not be altered until the management system is in place.

**Shifting Sands:** State Parks is aware of the ephemeral nature of the sandy beach at Maniniowali. We appreciate your concerns about this phenomenon. Signage and park rules will be designed to maintain public safety.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We will forward a copy of the Final EIS for your review upon its completion. We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

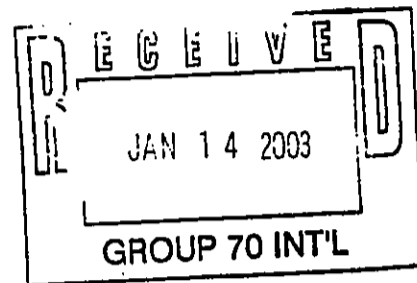
cc: Dan Quinn, State Parks Administrator

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, AICP  
Philip T. Cuccia  
Stephanie H. Yuan  
Jeremy C. Hill, AIA  
Roy A. Hishimoto, AIA, CSI  
Bridget M. Dowling  
Charles Y. Kato, AIA  
Dean H. Kitamura  
Catherine M. MacNeil, AIA  
Ken B. McFie  
Guy K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Rucola, AICP  
James L. Stone, AIA  
Scott Tangonan  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

# Tracy Lewis Realtors

January 10, 2003

Group 70 International Inc.  
925 Bethel St., 5<sup>th</sup> Floor  
Honolulu, HI 96813



Aloha,

My name is Tracy Lewis. I am a life long resident of Hawaii and have resided in Hilo since 1970.

I have been a surfer all my life. Surf in Hilo is very limited so I frequently drive to West Hawaii, specifically to Kekahakai State Park, to surf.


I strongly support improvements to the road form Queen Kaahumanu Highway to the park.

The area's natural setting is very nice and needs no improving in my opinion. I do not feel an improved access road will have any negative impact on the beach or adjacent sites.

Thank you for your consideration.

Sincerely,

**Tracy Lewis Realtors**

  
Tracy Lewis, Realtor, GRI, CRS, CRB  
Principal Broker



February 18, 2003

Mr. Tracy Lewis, Realtor  
Principal Broker  
Tracy Lewis Realtors  
586 Kanoelehua Avenue, Suite 201  
Hilo, Hawaii 96720

Subject: Kekaha Kai State Park - Draft EIS

Dear Mr. Lewis:

Thank you for your January 10, 2003 letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

Thank you also for your support and perspective regarding the planned improvements at Kekaha Kai State Park. We recognize that surfing is a valued recreational activity at Kekaha Kai and we therefore appreciate input from a surfer like yourself who travels from Hilo to enjoy this sport.

For your information, there are some maintenance type improvements planned, but no paving of the road to Mahai'ula is planned at the present time. Pavement might be considered in the future depending on maintenance requirements, public sentiment, user needs and resource protection for that road. The road to Awakee will remain unimproved, whereas the road to Kua Bay is planned to be paved. Special consideration was given to surfers needs for access to the shoreline and parking.

Your letter and this response will be included in the Final Environmental Impact Statement (FEIS). We appreciate your input for the environmental review process.

Sincerely,

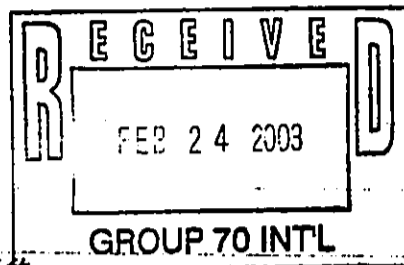
GROUP 70 INTERNATIONAL, INC.

George Atta, AICP  
Chief Community Planner

cc: Dan Quinn, State Parks Administrator

- Francis S. Coo
- Arch. D., AIA, AIA
- Norman G. Young, AIA
- Sheryl B. Seaman, AIA, AIA
- Hitoshi Hida, AIA
- Rev. H. Naha, AIA, AIA
- James I. Nightingale
- Ralph E. Matthews, AIA
- Stephen H. K... AIA
- Uwila C. ... AIA
- George I. Atta, AIA
- Paul P. Ch... AIA
- Wendy Lee... AIA
- Philip T. ...
- Sutobin Hal... AIA
- Jeremy C. ... AIA
- Rev. A. ... AIA
- Stuart M. ... AIA
- Charles M. ... AIA
- Dean H. ... AIA
- Katherine M. ... AIA
- Frank B. ... AIA
- Kyle K. ... AIA
- Kathryn A. ... AIA
- Jeffrey H. ... AIA
- Christine M. ... AIA
- James L. ... AIA
- Scott ... AIA
- Wesley M. ... AIA
- Sharon ... AIA

✓  
AST G. ATTA



DEAR George ATTA

④ AS A long time resident OF KONA  
I FEEL very strongly on the points  
Regarding "Maunaloa to Kua Ika".

⑤ THERE SHOULD NEVER BE ANY COMMERCIAL  
USE AT ALL WITHIN THE PARK AREA'S.

Leave the "film making" to other areas etc.

⑥ The park should protect (for future  
generations)

the natural resources. Do NOT

increase the park "access". IT SHOULD

Be kept as a wilderness type area.

"Old Hawaii as we use to know it." There

won't be much of that left in other

Area's very soon.

③ Leave the road unimproved. This keeps the public "Impact" low. Leave the ~~town~~ physiography out! Tourists can go to Hapuna etc., some \$ for pot holes etc!

④ State should keep it "as is". Forget large restroom facilities etc. No bulldozing with modern improvements. Leave the "old Mission House as is". It gives the beach area a sense of "History" and charm (old Hawaii)

No Improvements. Once you start, it's hard to stop. Leave it Alone!!!

⑤ Camping should be allowed in some

AREAS OF THE "CINDER CONE" (Kerka)

AND SHOULD BE CONTINUED TO SOME EXTENT.

THE PARK AREAS THAT HAVE "CAMPING"

SHOULD HAVE "CERTAIN" PARKING. LIMIT

PAVED PARKING. LOW IMPACT PARKING

WOULD BE DIRT, NOT PAVED.

WE WILL LOSE KUKIO/MANINIOWALI TO

DEVELOPERS. LET'S STOP AT THAT!

NO MORE COMPROMISING TO AREA.

LEAVE THE IFS + ANDS + BUTS OUT OF

THIS COMMITMENT TO THE FUTURE.

WE WON'T HAVE MUCH COASTLINE LEFT

OF EITHER SIDE OF THIS PARK.

PROTECT THE HISTORIC SITES!!

= TOD Bollinger 326-1636 =



June 2, 2003

Francis S. Oda,  
Arch. D., AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nihei, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuén, AIA  
Linda C. Miki, AIA

George I. Atta, AICP  
Paul P. Chorney, AIA  
Wendy Lee Cook, AIA, CDT  
Philip T. Cuccia  
Surobin Halim  
Jeremy C. Hsu, AIA  
Roy A. Inouye, AIA, CSI  
Stuart M. Jow, AIA  
Charles Y. Kaneshiro, AIA  
Dean H. Kitamura  
Katherine M. MacNeil, AIA  
Frank B. McCue  
Kyle K. Nakamoto  
Kathryn A. Nam  
Jeffrey H. Overton, AICP  
Christine M. Riotole, AICP  
James L. Stone, AIA  
Scott Tanageran  
Wesley N. Ujimoto, AIA  
Sharon Ching Williams, AIA

Tod Bollinger  
72-4008 Mamalahoa Highway  
Kailua-Kona, Hawaii 96740

Subject: Kekaha Kai State Park – Draft EIS

Dear Mr. Bollinger:

Thank you for your letter regarding the Draft Environmental Impact Statement (DEIS) for the Kekaha Kai State Park project.

We have prepared the following responses to your comments:

**No Commercial Activities:** We acknowledge your support that the park should remain noncommercial and wilderness in nature. Kekaha Kai State Park is planned as an outdoor park to serve public recreational purposes. Routine commercial activities are generally prohibited in the Plan. A minor exception at the entrance facility has always been a part of the plans for Kekaha Kai. We recognize your opposition to commercial filming at Kekaha Kai State Park. Improvements to the Park have not been designed to service commercial filming industry. However, that does not preclude the use of the park for such activities. This issue raises larger questions and expands the issue to broader policy areas than those covered by our plan. This issue will remain a continuing discussion item with the Board of Land and Natural Resources.

**Access:** We acknowledge your preference not to increase the park "access." The planned provisions of road improvements will increase vehicular access to the park. Efforts to manage such access is being made through the provision of gateways, limited parking spaces, rest day and reduced park hours.

**Keep As Is:** We recognize your desire to keep the park "as is." During the planning of the park, several alternative scenarios were considered, including higher intensity uses. Fortunately, the community expressed an interest in having the park proceed with the lower intensity plan. Such plans, however, do include restroom facilities and the need to bulldoze small areas for modern improvements. The history of the place, including the old Magoon House, is intended to be kept and shared through the preservation of the facility as well as through the educational and interpretive programs planned for the Park.

**Camping:** Camping is not allowed in the areas of the "cinder cone." Access to Puu Kuili are planned to be altered to restrict vehicular access along the puu and replace its use as a pedestrian trail. Parking areas are planned to service park areas including camping sites. The intention is to provide gravel parking lots. This is short of paving, but more improved than dirt.

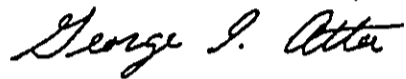
Response letter to Mr. Bollinger  
Kekaha Kai State Park FEIS  
June 2, 2003  
Page 2

**Protection of Historic Sites:** Historic sites will be protected and preserved throughout the park. In addition, educational and interpretive programs are being planned to broaden public awareness about their significance in the landscape of the park.

Your letter along with this response will be included in the Final Environmental Impact Statement (EIS). We appreciate your input for the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



George I. Atta, AICP  
Chief Community Planner

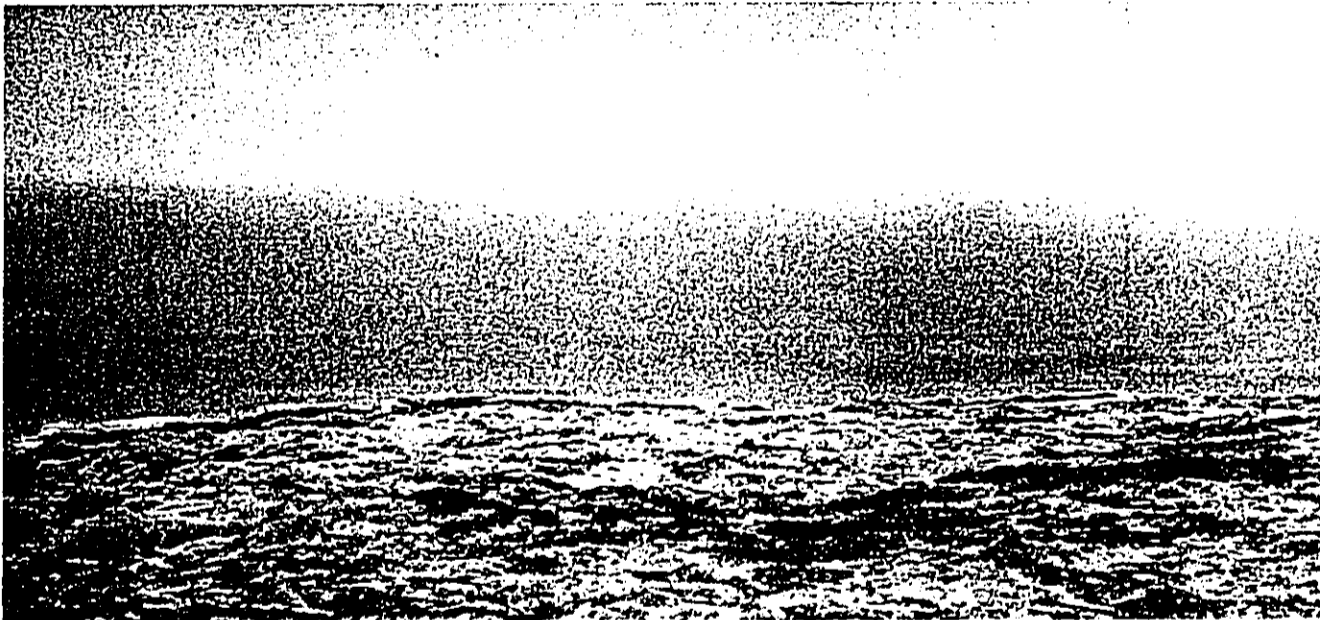
cc: Dan Quinn, State Parks Administrator



REDUCED IN FILE



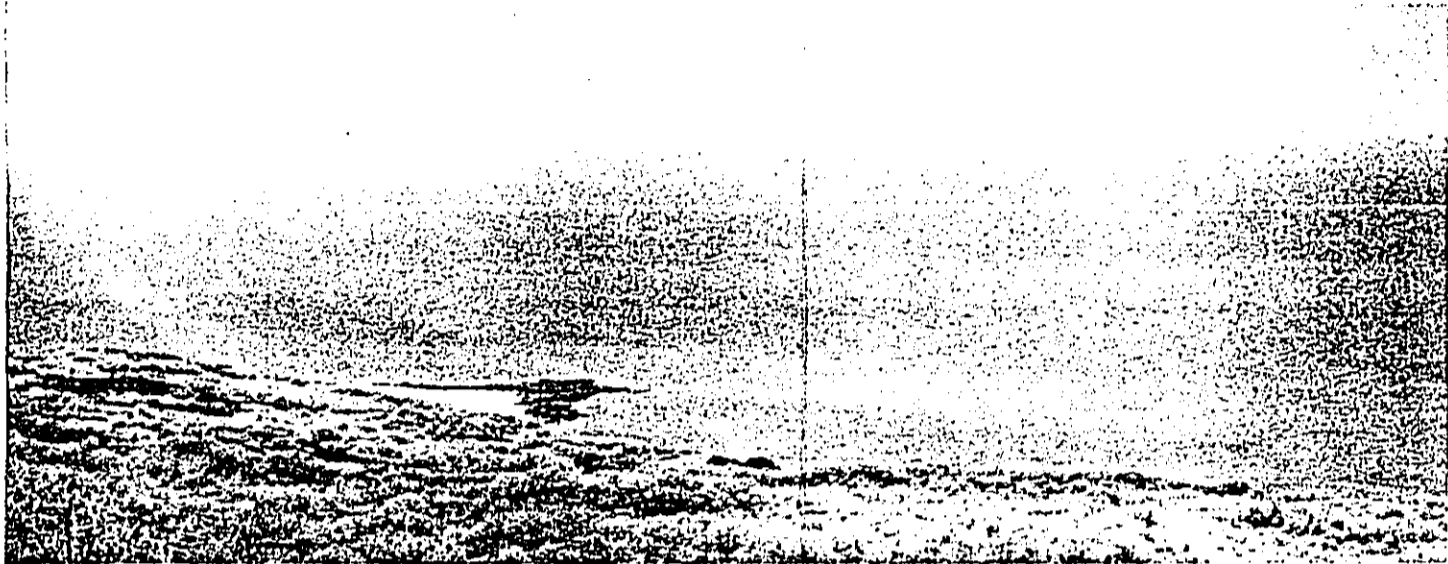
View from Pu'u Kuili - Mahai'ula, Makalawena, Awake'e, Kaho'iawa



View from Pu'u Kuili - Kaho'iawa, Manini'owali, Kakapu, Kikaua Point

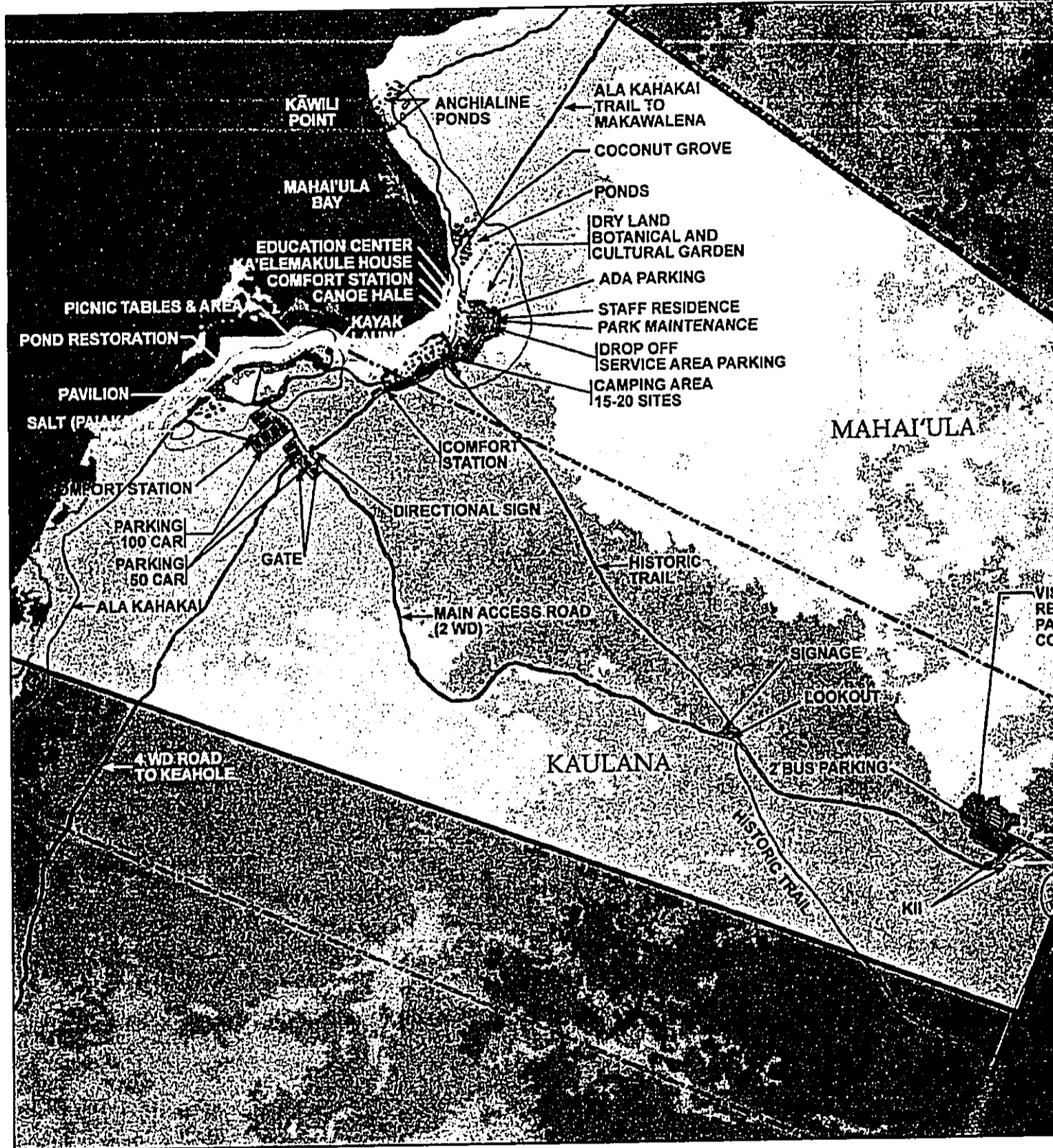
AI STATE PARK

lopment Report •



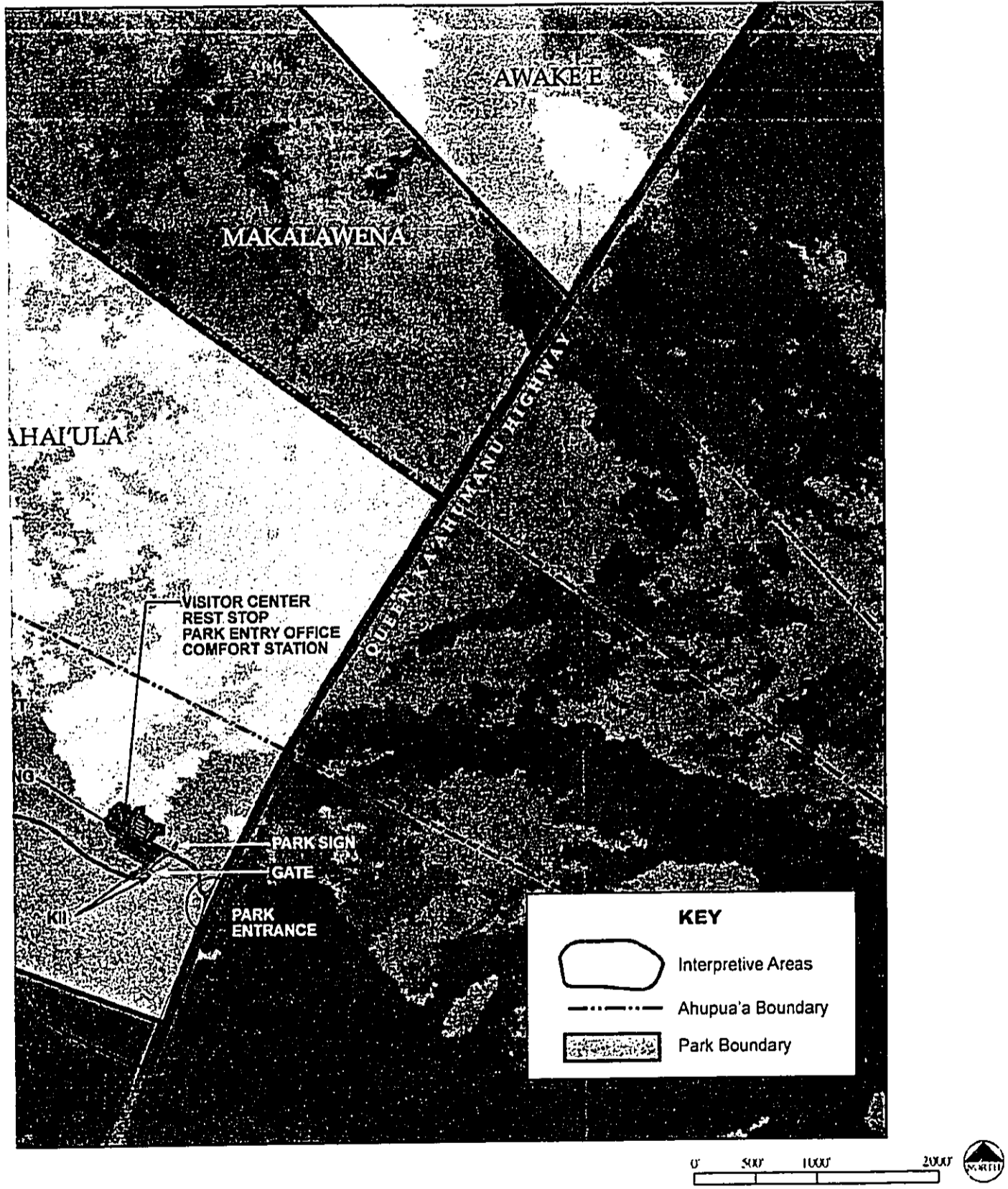
astline

Figure 1-5



MAHAI'ULA STATE PARK

Development Report •



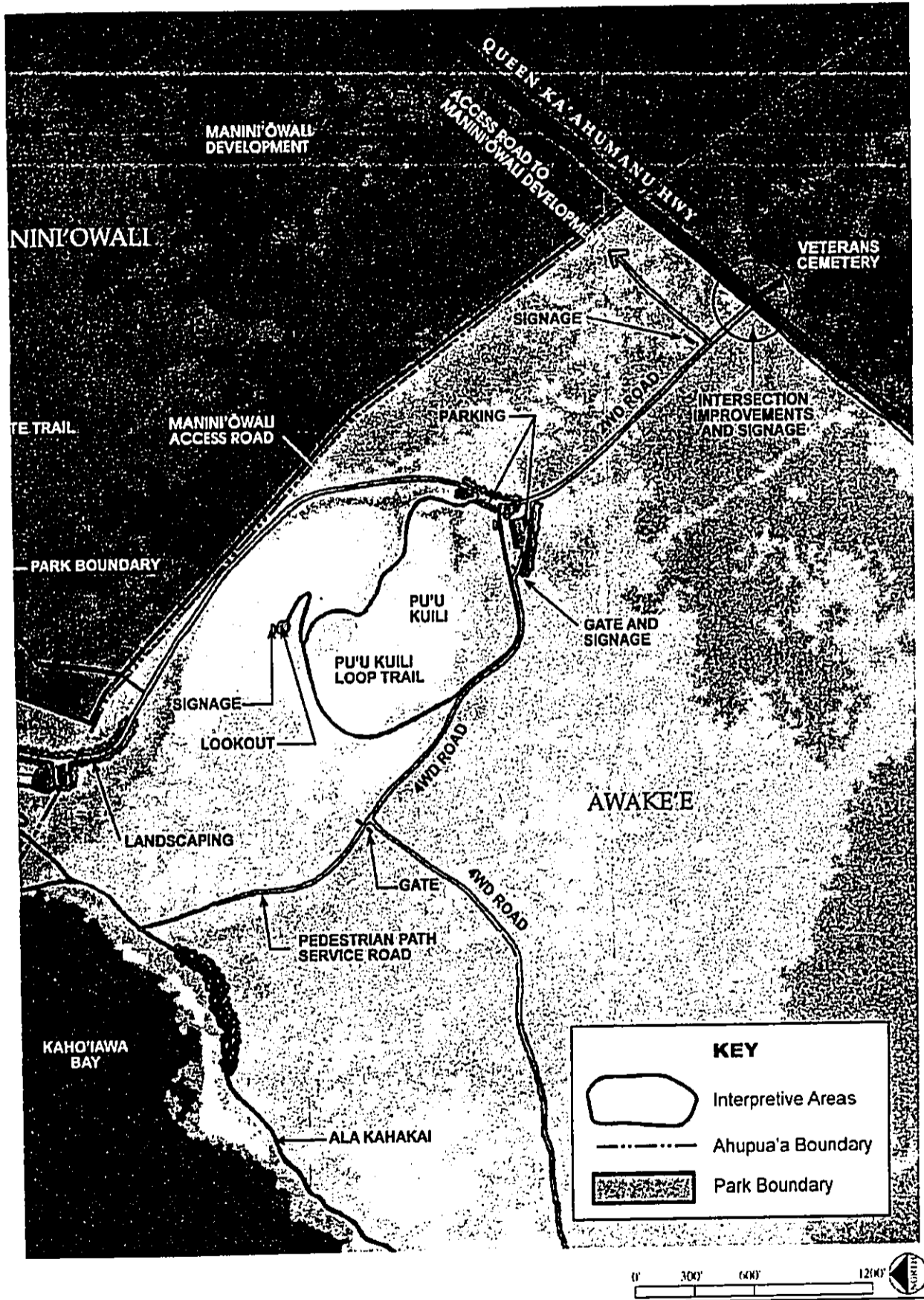
Plan - Mahai'ula

Figure 6-2



AI STATE PARK

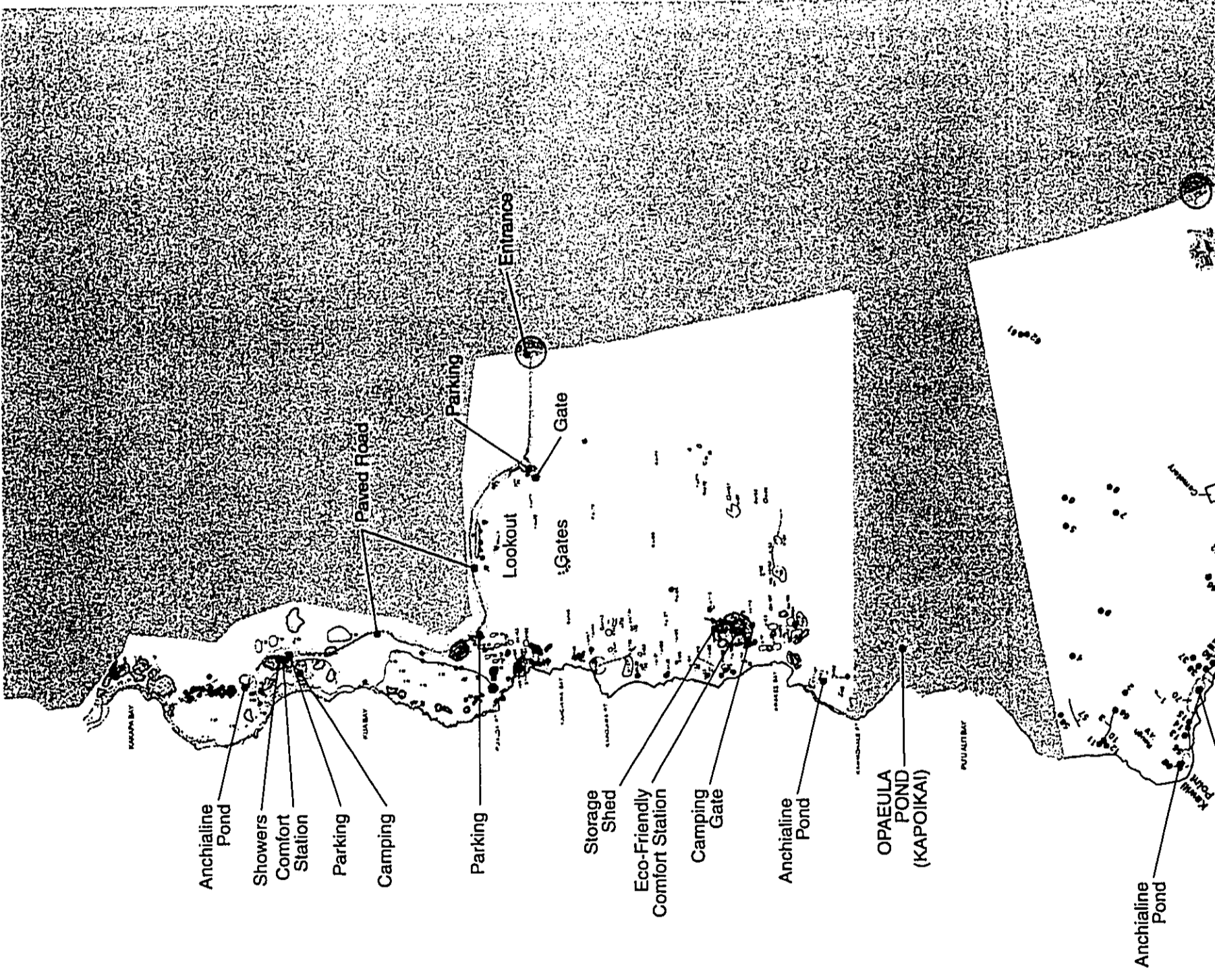
Development Report •



Manini'owali

Figure 6-5





Anchialine Pond

Showers

Comfort Station

Parking

Camping

Parking

Storage Shed

Eco-Friendly Comfort Station

Camping Gate

Anchialine Pond

OPAEULA POND (KAPOIKAI)

Anchialine Pond

Entrance

Parking

Gate

Lookout

Gates

Paved Road

KAPAI BAY

PULAI BAY

KAPOI BAY

KAPOI BAY

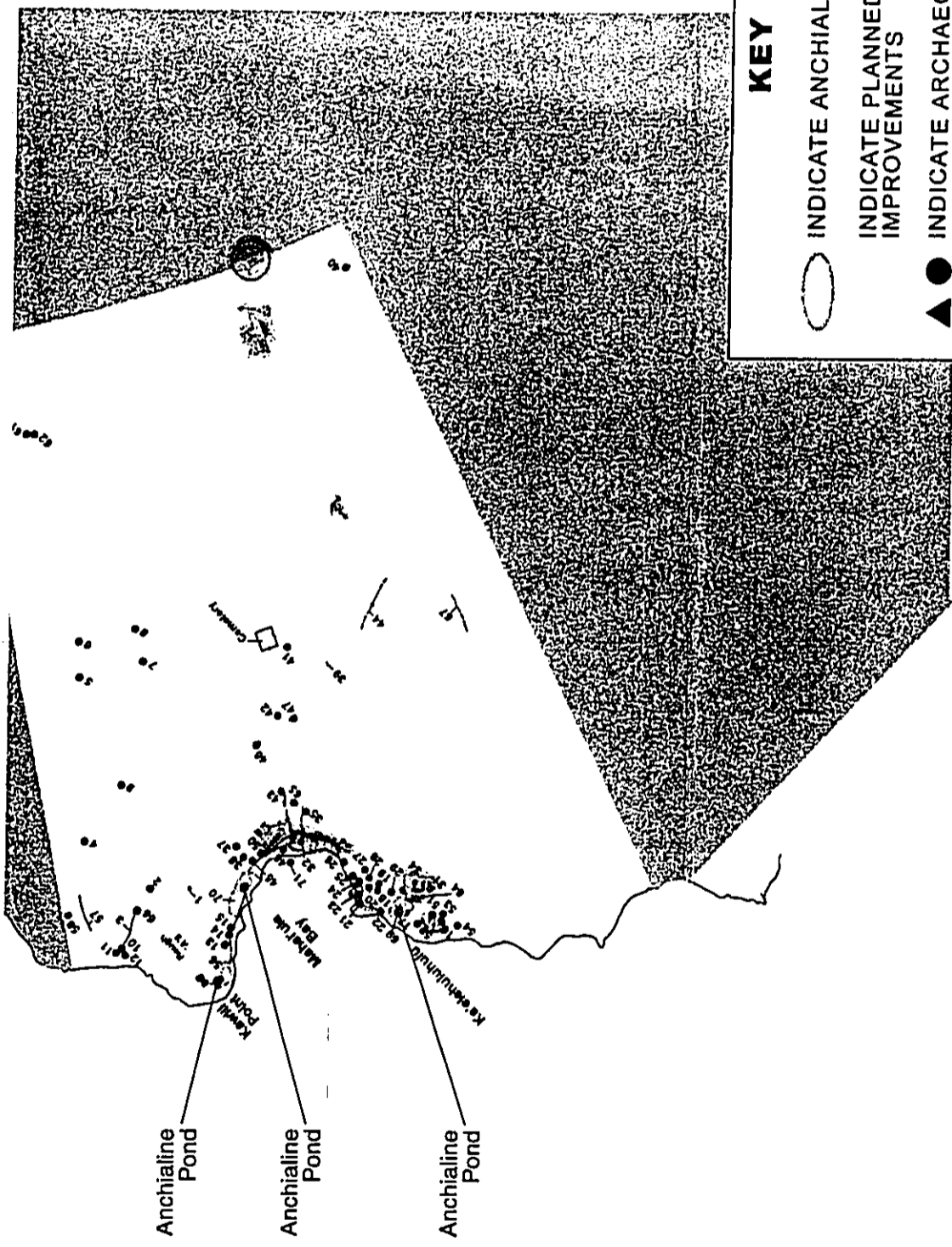
KAPOI BAY

KAPOI BAY





PULAI BAY

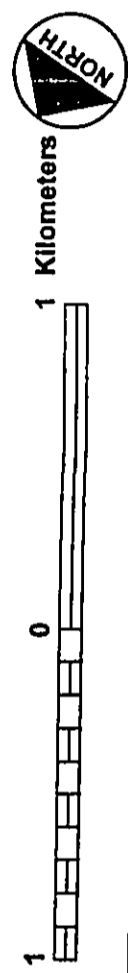
KAPAI BAY





**KEY**

-  INDICATE ANCHIALINE PONDS
-  INDICATE PLANNED AREAS OF IMPROVEMENTS
-  INDICATE ARCHAEOLOGICAL SITES
-  INDICATE AREAS OF ARCHAEOLOGICAL SIGNIFICANCE



**Kekaha Kai State Park**

Relationship of Planned Improvements  
to Known Archaeological Sites