





## Mālaekahana State Recreation Area, Kahuku Section

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**Mālaekahana State Recreation Area, Kahuku Section****EXECUTIVE SUMMARY**

In 2001, at the request of the Board of Land and Natural Resources, the Department of Land and Natural Resources initiated an update of the Master Plan for the Mālaekahana State Recreation Area (SRA), Kahuku Section. This request was based on significant park changes that affected the recommendations and guidelines of the 1977 Master Plan.

In the 1977 plan, the park consisted of all areas makai of Kamehameha Highway between the Mālaekahana and Lā'iewai Streams. Since the plan, the park has been divided into two sections for management- the Kalanai Section on the south end of Mālaekahana Bay and the Kahuku Section on the north end of Mālaekahana Bay (Figure 1).

The current use at the Kalanai Section is similar to the proposal identified as "Plan C" of the 1977 Master Plan Report. Presently, the Kalanai Section provides camping in the area south of Kalanai Point and picnic areas to the northwest of the point. This park section is operated by the Division of State Parks. Improvements to the site include parking areas, comfort stations, campsite improvements such as barbeques, picnic tables and water supply, and a secured access point. No on-site management is provided, however, the site is maintained regularly by State Parks staff and State Parks rules and regulations are enforced.

The Kahuku Section, which is the focus of this report, is currently operated on a month-to-month permit issued to the Friends of Mālaekaha, a private non-profit group since 1994. A review of the condition of the existing park facilities shows that significant improvements are required for the public's safe use of the park. All structures located in this park exhibit extreme wear from age and environmental conditions. Consequently, preparation of a development plan was recommended prior to the commencement of any park improvements.

The Kahuku Section presently offers a variety of camping and cabin options that are provided on a user rental fee basis. The current operator has made a number

## Mālaekahana State Recreation Area, Kahuku Section

of improvements to the site. The condition of the existing structures and infrastructure are however extremely poor and in need of replacement.

To facilitate the planning process for this section of the State Park, to determine the public's interest and need for recreational facilities and to ascertain usage of the area by park visitors, a Traffic and Visitor Use Survey was conducted at both park sections. Surveys of both park sections, community meetings and a community workshop were conducted to determine public opinion about the use and improvements of the two park sections. Survey results, interviews with the current operator and existing park records, were analyzed for the purpose of coming up with three master plan alternatives. A no-action alternative was also considered.

Each of the master plan alternatives share a number of common elements. These include centralized access for security purposes, common area facilities, natural material driveways, an office and on-site manager's residence, pavilions, comfort stations, informal activity area, day use areas, landscaping with native plants and use of the Mālaekahana Stream as a recreational and educational resource. It is important that any improvements considered preserve the open, natural setting and be in keeping with the ambience and rural character that currently exists.

The three Master Plan alternatives are: 1) for tents only; 2) cabins only; and 3) mixed cabin and tent use. Each was reviewed by DLNR staff, the community and the consultant team with a consensus for the mixed cabin and tent use alternative. The tents only alternative will not provide the highly desirable cabins which function as a "base" for many large group activities. The cabin only alternative did not allow for the higher densities sought and would preclude a true camping experience in favor of a cottage vacation rental facility. The mixed cabin and tent plan follows the existing, well-utilized plan with improvements to the layout, and conforms to current regulatory constraints.

Based on the existing use and the development scenarios evaluated under the subject study, it was determined that the park has a peak capacity of approximately 440 overnight users per day. This capacity is validated by the existing operation and by modeled infrastructure solutions for the site.





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## Mālaekahana State Recreation Area, Kahuku Section

contiguous park site that would include the long, narrow, linking stretch that would connect these recreational resources. Since the inception of the Mālaekahana SRA, many parcels of land located between Makahoa Point and Kalanai Point have been developed with single-family dwellings, precluding the acquisition of this area for park consolidation.

## Kalanai Section

The Kalanai Section consists of approximately 74 acres operated by the Department of Land and Natural Resources, Division of State Parks. This park section features expansive beach frontage with designated campsites, common area facilities such as comfort stations, improved parking, water supply and refuse collection. The park is secured by a gate along Kamehameha Highway. The park is very popular as a camping and picnicking location.

## Kahuku Section

The Kahuku Section of the Mālaekahana SRA is presently operated under a month-to-month permit by a private non-profit group. While similar in environment, the Kahuku Section has less beach frontage but is bounded along one side by Mālaekahana Stream. The rental of cabins, as well as campsites are offered for a fee in this section. The site is permanently staffed and their presence for much of the day and evening hours results in a secure camp experience. Several non-traditional uses are also found on-site. These include a semi-permanent classroom facility (yurts), horticulture planting beds, and an equipment base yard for vehicles and appliances.

Immediately south of the Kahuku Section lies a beach access parcel that includes a restroom building, parking lot and maintained grounds. This parcel is under the jurisdiction of the Department of Land and Natural Resources and is limited to day use only.

## Mālaekahana State Recreation Area, Kahuku Section

**1.3 Project Limits**

The project limits consist of 19 tax map parcels that were formerly in residential use (see Figure 2). These parcels are identified as follows: TMK 5-6-01: 24, 45, 47, 49, 51, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65. All parcels except TMKs 5-6-01: 24 and 53 are leased to the current concessionaire. Parcels 24 and 53 are under active State of Hawai'i management.

Tax Map Plat	Parcel Number	Area (in acres)
5-6-001	024	2.313
5-6-001	025	0.143
5-6-001	045	1.624
5-6-001	046	0.205
5-6-001	047	5.850
5-6-001	049	1.047
5-6-001	051	1.072
5-6-001	054	0.043
5-6-001	055	3.985
5-6-001	056	1.248
5-6-001	057	1.433
5-6-001	058	0.080
5-6-001	059	2.739
5-6-001	060	1.104
5-6-001	061	1.000
5-6-001	062	1.356
5-6-001	063	1.122
5-6-001	064	3.232
5-6-001	065	4.666
<b>Total Acreage</b>		<b>36.169 acres</b>

The Kahuku Section's entrance is located approximately one mile north of the entrance to the Kalanai Section of the Mālaekahana SRA. The entrance to the Kahuku Section is fairly discrete and is not as readily identifiable from Kamehameha Highway as the Kalanai Section. The Kahuku Section is not secured by fencing nor does it discourage public access through the site.



## Mālaekahana State Recreation Area, Kahuku Section

Presently, access through the site is directed along a primary road that leads to an interior circulation road and a primary parking area fronting the park office. Secondary access is available through a service road located along Kamehameha Highway on the northern portion of the site. Lockable gates secure the vehicular access points. Roads are unpaved or are covered with crushed, compacted coral.

Seven former single-family homes are located throughout the site. These structures are presently used as cabins. Two additional dwellings serve as the field office and park manager's residence. Other notable structures include a round, elevated semi-permanent tent-like structure (yurt) that serves as a classroom, maintenance sheds, and a barracks like structure that serves as staff housing. Other structures were observed but appear to be of short-term construction. These function as lounging areas or shelters. A total of three existing comfort stations for park users are located mid-site and north of the sand dune area.

The southern portion of the site is adjacent to the Division of Conservation & Resources Enforcement (DOCARE) security officer's residence and a separate parking area for the adjacent day use/beach access parcel. These areas are maintained by the State but are included within the scope of this study. It was observed that this access point is frequented by day users/beach goers.

### Land Use and Ownership

The study area is owned by the State of Hawai'i and is presently operated on a month-to-month revocable permit by a private non-profit organization. The present use of the site is a fee based camping and park facility. Camping and cabin rental fees are charged by the operator based on a prescribed fee schedule. Cabin rental rates range from \$55.00 to \$250.00 per night, depending on weekday and weekend rates and the size of the cabin. Trailer accommodations are available at \$40.00 per night, and campsites are available at a rate of \$5.00 per night per person. Children under eight years of age are not charged. Those desiring access through the site to the beach are not charged.

## Mālaekahana State Recreation Area, Kahuku Section

The project area is designated as Urban on the State Land Use Maps and R-5 Residential on the City and County of Honolulu Zoning Maps. Park use is permitted under these designations. The long term park use of the site suggests that lot consolidation and P-2 General Preservation zoning should be considered for the site to preserve and manage this major open space and recreation site.

Surrounding areas are under private ownership and are generally consistent with the existing underlying State and County zoning designations.

### 1.4 Background History of the Park's Development

Around 1974-1975, Grosvenor International Inc. (GCI) submitted a petition to the State Land Use Commission to reclassify 10 acres of agricultural lands to the Urban District. GCI's plans were to build the infrastructure for a future second-home leisure community. Substantial opposition to the project was expressed by a number of community organizations and an umbrella organization called Koolauloa Council of Community Associations was formed. Together with the Sierra Club, Life of the Land, and the Council of Presidents, the members sought to block the proposed residential development. However, in spite of the opposition to this project, the State Land Use Commission approved a Special Use Permit for the development of water and sewer facilities with a condition that if by a certain date, there was no legal government action to acquire the land for public use, the approval would be valid.

In 1976, 74 acres of coastal lands at Kalanai Point was purchased by the State for public use. In 1977, a Master Plan for the park was prepared that outlined the development of the entire 155 acres of coastal lands at Mālaekahana Bay in three phases. Construction of day use and tent camping facilities, a roadway into the park, a parking area, pavilion, restrooms, a maintenance building, and water and sewage facilities were completed for the Kalanai Section with the Division of State Parks responsible for the operations and maintenance.

In 1980 following condemnation proceedings, the State purchased 34 acres of Campbell Estate lands on the Kahuku portion of Mālaekahana Bay for Phase II.



## Mālaekahana State Recreation Area, Kahuku Section

However, the lack of financial resources available to the State precluded construction of additional improvements for recreational use. In 1988, the State sought proposals from private organizations to develop, operate and maintain this section of the park in exchange for a lease.

During the period of 1988 through 1994, several organizations were given short-term leases to operate and maintain the Kahuku Section. In 1994, the Friends of Mālaekahana assumed the lease on behalf of the Ko'olaupia Hawaiian Civic Club and with it, nine structures to be used as rentals for camping. The experience provided by the cabins is much desired by residents as well as visitors to Hawaii and offers a different recreational activity than is found on the Kalanai Section.

In 1999, funds appropriated for a Master Plan were sufficient to update information about the facilities and resources for the Kahuku Section.

## 1.5 Summary of the Park's Master Plan

The 1977 park plan incorporated the single-family residential area that preceded the park. Single-family units are now used as cabins that are connected by a former roadway system that is reflected in both the park plan and the City and County of Honolulu Tax Map. Campsites are located throughout the park, as are toilet facilities, showers and areas for parking. All park visitors arriving through the main entrance are required to pass the park office. Areas located along the stream are generally used for special events, staff housing, maintenance, and storage.

## 1.6 The Role of the Community and Public Information Meetings

**Community involvement was a consideration in the development of the proposed alternatives. This involvement was provided by two different venues, surveys, two public information meetings and a community workshop.**



## Mālaekahana State Recreation Area, Kahuku Section

Traffic and visitor use surveys were conducted in July 2002 at both the Kalanai and Kahuku Sections of Mālaekahana SRA. According to the survey, both sites are heavily used for a variety of activities. Camping is the primary activity in both park sections, and users also participated in surfing, swimming, sunbathing, fishing and beachcombing. On the survey date, it was noted that approximately half of the campers in the Kahuku Section were from the mainland or Europe. Survey participants stated that in the Kahuku Section amenities such as improved access to electricity, ice machines, private indoor showers, and laundry facilities would be appreciated. Expectations for amenities such as these are generally beyond those associated with camping activities mentioned in the survey.

Additionally, two public information meetings and a community workshop were held to inform the public of the master planning process and to present three preliminary concepts for development of the Kahuku Section. These meetings were held in October 2002, and February and March 2003 and conducted by DLNR staff. Presentations of the Master Plan alternatives were also made to the Ko'olaupia Neighborhood Board, Lā'ie Community Association, and Mālama 'Ohana. Comments from these meetings that were particularly notable were twofold.

Several of the attendees noted that the Mālaekahana SRA Kahuku Section is heavily used by local and community residents for large group functions. Activities that take place there include birthday and graduation parties, luaus and large family gatherings. This is deemed as an important part of the operation of the park and must be considered in any planning effort.

As such, the attendees stated that the Kahuku Section is an important part of the Kahuku-Lā'ie community. This sense of community ownership of the park provides for the secure environment provided at the site. It was repeatedly stated that management of the park should be community based to ensure that the needs of the local community are addressed. The park should also remain affordably priced to remain available to the local community. Community members also stressed that the park should maintain the natural, open setting and ambience that define the camp experience.



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The comments received during this meeting resulted in the development of Conceptual Plan 3, which includes cabin, tent and large group functions.

The largest number of comments received were related to the Request for Proposal Process. Many community members expressed concern that community based management was essential to maintaining the park as a community resource. Support for the current operator was noted and it was presented to the community that the current operator will be allowed to submit a proposal for the proposed master development plan.

## Mālaekahana State Recreation Area, Kahuku Section

## CHAPTER 2. NATURAL ENVIRONMENT

## 2.1 Topography

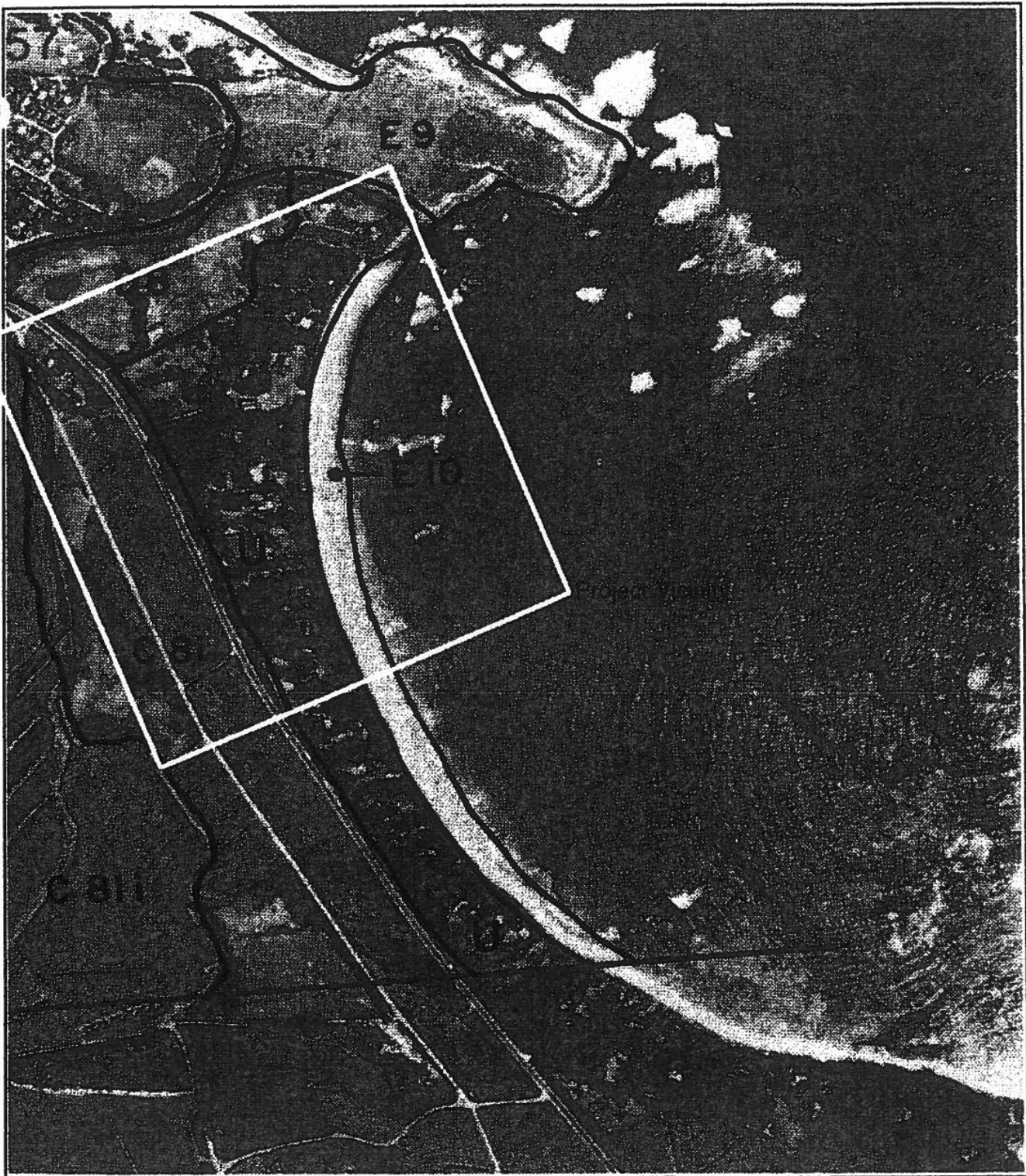
The topography of the site consists of ocean shore and Mālaekahana Stream bank areas, flat open spaces, smaller heavily canopied forest like areas and old sand dune formations. The site could be categorized as gently rolling with areas of overgrowth interspersed with expansive open lawns. From Kamehameha Highway, the site is relatively flat and rises slightly at mid-site. From mid-site, the grade gently slopes toward the shore except along the northern shoreline where sand dune formations cause a second rise. Areas along the stream are generally flat with a drop-off along the stream bank. The stream is accessible near its mouth but provides restricted access along the inland areas where it is overgrown by weedy species and has steeper banks. The stream is perennial and shallow except under heavy rain and runoff conditions.

## 2.2 Soils

Soils on the site are classified as beach sand (BS) and Jaucus sand (JaC) according the *Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i*, published by the U.S. Department of Agriculture Soil Conservation Service. Beach sand has no farming value but where it is accessible and free of stones; it is highly suited for recreational uses. Jaucus sand occurs on slopes of 0 to 15% and is represented by a single grain, pale brown, sandy soil that is more than 60 inches deep. The soil is moderately alkaline and provides rapid permeability. Runoff on this soil type is slow to very slow with low water erosion hazard but high wind erosion where vegetation is removed. This soil is suitable for pasture, sugar cane, truck crops and urban development.

The *Detailed Land Classification – Island of O'ahu* published by the University of Hawai'i Land Study Bureau designates the site as land type D8 along the Mālaekahana Stream and type E10 for the remainder of the site. Land type D8 consists of grazing and orchard uses that are only moderately suitable for certain





**Mālaekahana State Recreation Area  
Kahuku Section Development Plan**

**Soils Map  
Exhibit 4**

Source: Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i and Lāna'i , State of Hawai'i



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crops and grazing. Land type E10 is poorly suited for any crop or grazing use but is well suited for recreation use.

### 2.3 Climate and Wind Conditions

The Kahuku area is characterized by its dry, mild climate. The average annual rainfall is approximately 38 inches with the highest rainfall occurring during the month of December through March. Temperatures generally range from the lower 70's to the upper 80's with a mean of 74.9° F. The mean relative humidity is approximately 70%. Prevailing northeasterly trade winds are very noticeable on site and have had significant effect on the evolution of the site topography.

Strong and consistent prevailing trade winds have created a wind swept topography. Dunes created by the constant winds have accreted near shore. It was noted that the dunes are vegetated and stabilized however some movement continues to occur due to high surf and wind conditions. This results in the need for routine sand clearing maintenance for the cabins located closes to the shoreline. Many trees located along the shoreline are wind sheared and sculpted in marked contrast to the trees located along the Kalanai Section of the bay.

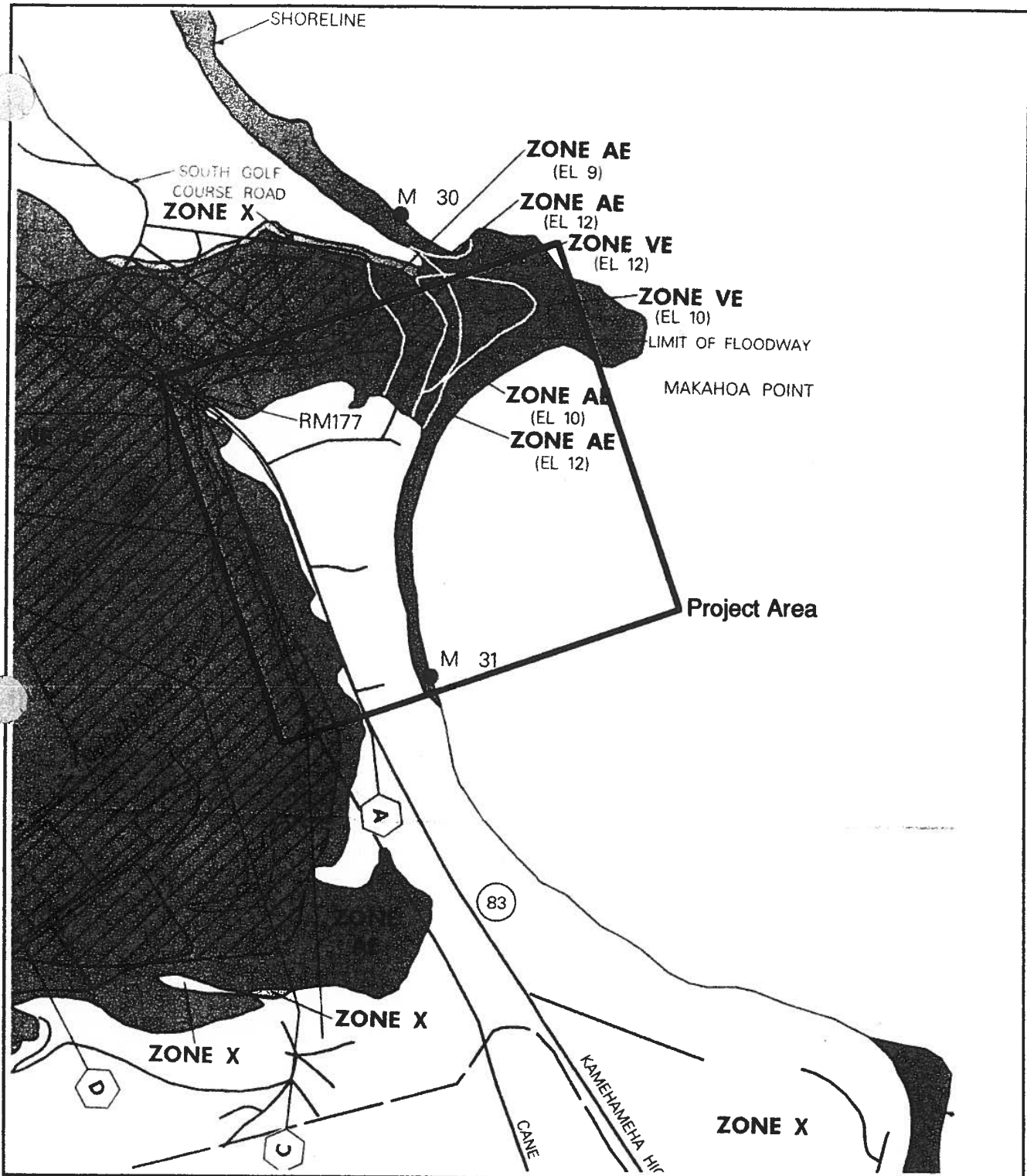
### 2.4 Coastal Resources

The shoreline and sandy beach area is constantly variable and is dictated by surf conditions. Winter months typically experience high surf and results in the formation of a steeper, smaller beach. Summer months bring smaller surf resulting in a gentler sloping and expansive beach.

Mālaekahana Stream is easily accessible from the mouth to the near shore areas. The stream is perennial and shallow except under heavy rain and runoff conditions. Stream banks tend to become steeper along the inland areas.

It is also recognized that the shoreline and near shore areas should be cultivated with native plants. Presently the shore and near shore areas are dominated by





Mālaekahana State Recreation Area  
Kahuku Section Development Plan

Flood Insurance Rate Map (FIRM)  
Exhibit 6

Source: Federal Emergency Management Agency



## Mālaekahana State Recreation Area, Kahuku Section

**CHAPTER 3. HISTORIC/ARCHAEOLOGICAL/CULTURAL RESOURCES****3.1 Historic Resources/Sites**

The project site is not designated as a historic site nor are any of the structures on the site listed on the National or Hawaii Register of Historic Places. An archaeological investigation conducted in 1980 by the Division of State Parks concluded that the potential for archaeological artifacts remains high in the area mauka of the sand dunes. No surface structures were identified and it is unlikely that any remain as the site has been extensively altered by its former residential use and by its current public recreational use.

Historic sites have been identified in surrounding areas. Particularly notable are three sites referenced in the 1977 Master Plan Report which stated that two sites were located in the study area. These are a fishing shrine (site 274) which is located near Kalanai Point, and a house foundation (site 273) that was identified near Kamehameha Highway. Another fishing shrine (site 272) is also located on Makahoa Point. None of the sites was found to be of significant interpretive value.

“According to legend, Malaekahana is puuhonua ( a place of refuge) and was named for the mother of the sacred princess Laiekawai (laie in the water), who’s father was the chief of the northern islands. Hearing that her husband wanted a son to be born before any daughters, upon the birth of female twins, Malaekahana gave them to a close relative who hid them in a cavern in Laie. There is a pool called Waiapuka, oval in shape and measuring 30-60’ that has a small crevice which is said to open into the cavern where Laiekawai was hidden. Today, the pool is silted in and it is no longer possible to reach the cavern where they were hidden.

Older Hawaiian fishermen say that Makahoa Point is a well know place for Anae-holo, the ocean-going mullet. It is said that the

## Mālaekahana State Recreation Area, Kahuku Section

anae-holo living in Pearl Harbor would journey every year around the eastern end of Oahu, passing through the waters of each district until they reached Mālaekahana. For reason unknown, the anae-holo always stopped at Makahoa Point and reversed their direction following the same path back to Pearl Harbor.

Kamehameha the Great, who by 1810 had conquered most of the chiefs and unified the islands under his rule, never conquered Mālaekahana. Manuahi, the keeper of gods in Laie, and said to have supernatural powers, defended Mālaekahana against Kamehameha's strongest war chiefs. After three unsuccessful attempts to conquer Mālaekahana, Kamehameha I's soldiers decided to stay in Laie and be Manuahi's apprentices and to help Manuahi grow *awa*."

### 3.2 Archaeological Resources

The potential for sub-surface artifacts remains high and it is recommended that an intensive survey with subsurface testing be conducted in areas proposed for development. The current operator has stated that *iwi* (bones) have been found on site and have been reported to the Burials Council. Archaeological impacts are beyond the scope of this report but should be examined and addressed prior to the start of any new construction.

As previously stated, the closest known sites are located in the Kalanai Section and at Makahoa Point. Improvements or development on the project site will not have any impact on these known sites.

### 3.3 Cultural Resources

Viewed from a historic perspective, the Mālaekahana and Kahuku-Lā'ie areas can be considered culturally significant. According to the Historic/ Cultural/ Economic section on page four of the 1977 Mālaekahana State Park Master Plan

Mālaekahana State Recreation Area, Kahuku Section

Report, the Kahuku-Lā'ie area was once a large Hawaiian settlement. The following excerpt taken from the report provides an overview of the history of the area.

"The Lā'ie area was a "Pu'uhonua" or city of refuge. At that time, most of the area was cultivated in sugar cane and taro introduced by the early Hawaiians. The relatively level areas between the hills and the coast were planted in wet taro, with the more undulating land used for cane.

Mormon missionaries arrived in 1850 and in 1864 purchased a plantation of 6,600 acres in the Lā'ie area. Later in 1876, James Campbell purchased 15,000 acres in the Kahuku region. By the 1880s the region's economy began to center around the sugar industry, particularly in Kahuku and mauka of the proposed park site.

Following World War II, the sugar mainstay began to be supplemented by other industries such as livestock and truck farming. By 1968 the Kahuku Sugar Plantation (leased from the estate of James Campbell since 1933 by Alexander and Baldwin) began reducing its operations and finally closed in 1971. At the time of its closing, Alexander and Baldwin withdrew from the lease, and future lease stipulations stated that the land must be leased only to agricultural tenants until 1983."



Mālaekahana State Recreation Area, Kahuku Section

## CHAPTER 4. PLANNING/DEVELOPMENT CONSIDERATIONS

### 4.1 State Parks Goals and Objectives

The mission of the State Parks system is to provide and preserve unique places of natural, cultural, and scenic importance for appreciation, study and recreation by residents and visitors. In addition, Chapter 184, section 6, Hawaii Revised Statutes (HRS), states:

"The department of land and natural resources shall preserve the parks in the state park system in their natural condition so far as may be consistent with their use and safety, and improve them in such a manner as to retain to a maximum extent their natural, scenic, historic, and wildlife values for the use and enjoyment of the public."

The State Comprehensive Outdoor Recreation Plan (SCORP) is a technical document that provides the planning assumptions for making decisions on State and County recreation programs based on public demand and needs. Particularly relevant to the current project is the section addressing ocean and shoreline areas. The report states that the need for ocean related activities remains high both among residents and visitors. Competition for limited recreational facilities continues to grow and should be met whenever possible.

With respect to the Kahuku Section, the objective of the proposed project is to ensure that the resources of this site and its improvements are available to the residents and visitors of the State of Hawai'i in a safe and fair manner.

### 4.2 Recreational and Educational Opportunities

The 1977 Master Plan prepared for Mālaekahana SRA addressed the unique qualities of the project site and the opportunities it provided to the State. Page 29 of the 1977 Master Plan stated that:

## Mālaekahana State Recreation Area, Kahuku Section

“The physical properties of Mālaekahana have remained largely intact, making it a ‘naturally landscaped’ and resourceful area for park development. The development of Mālaekahana State Park will hopefully ensure the protection and preservation of its natural resources, and at the same time add to the State’s inventory of beach oriented recreational areas.”

Mālaekahana’s mixture of resources will enable the future park to provide a variety of ocean/beach and land activities, including surfing, swimming, diving, sunbathing, fishing, camping, and picnicking. The challenge is to attempt to incorporate these recreational activities within the framework of the existing and natural conditions.”

Since that time, the Kalanai Section has been developed and fulfilled a part of this need. Operated by the State, it provides a low-cost tent camping and picnicking location along a spectacular shoreline.

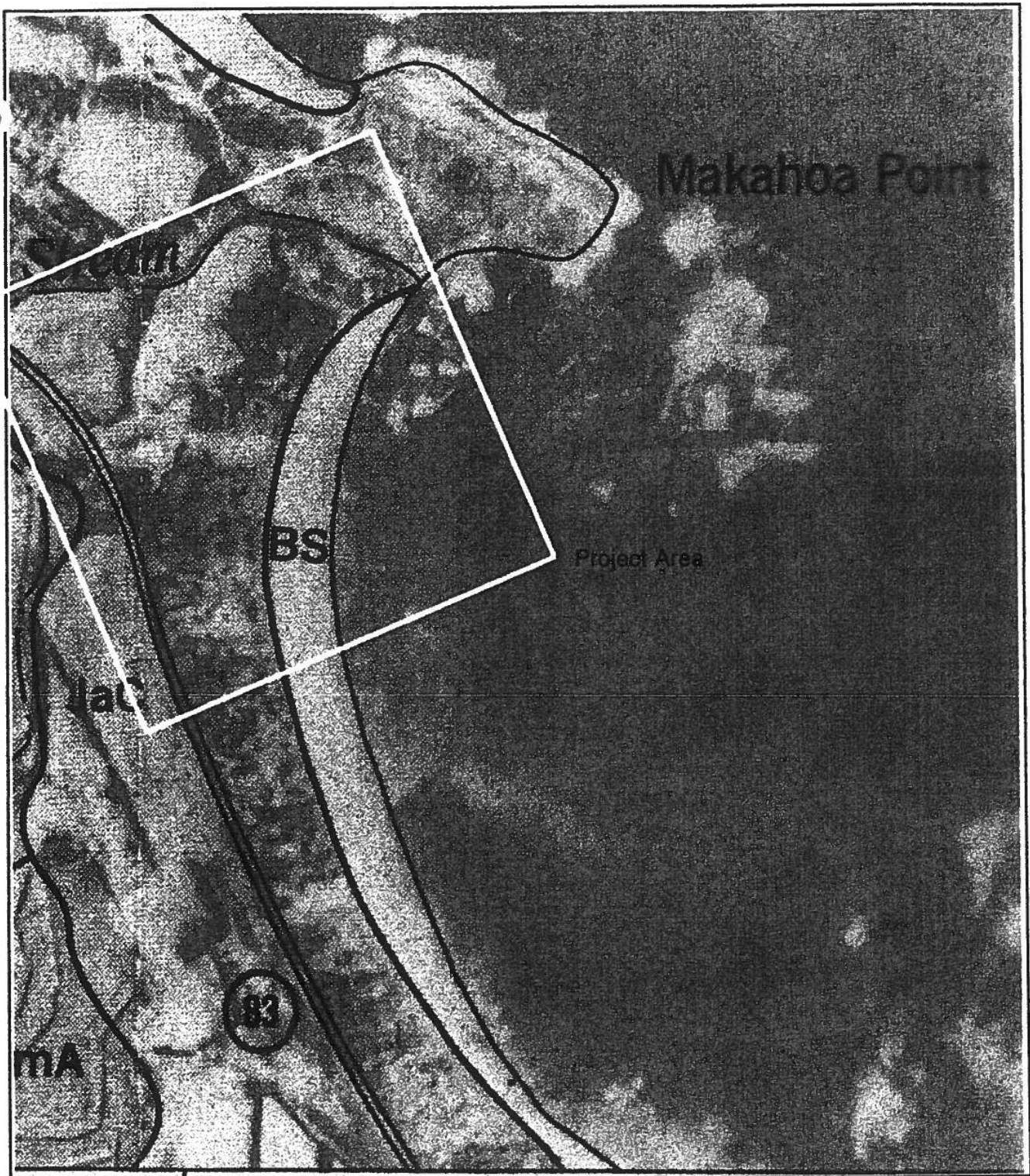
The Kahuku Section, with its complement of cabins and active on-site management, offers a different camping and recreation experience. Taken collectively, the two sites offer a range of activities and amenities that offer much to the residents and visitors of Hawai‘i.

### 4.3 Development Plan Process/Constraints

#### Americans with Disabilities Act (ADA) Requirements

Currently, none of the existing structures, parking areas, or pathways is compliant with the Americans with Disabilities ACT (ADA). In accordance with the Disabilities Act of 1990, all newly constructed and altered State and local government buildings, places of public accommodation, and commercial facilities shall be readily accessible to and usable by individuals with disabilities.





Mālaekahana State Recreation Area  
Kahuku Section Development Plan

Land Use Classification  
Exhibit 5

Source: Detailed Land Classification - Island of O'ahu, Land Study Bureau



## Mālaekahana State Recreation Area, Kahuku Section

Parking areas, pedestrian loading areas and comfort stations and certain cabins shall conform to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Day use facilities, outdoor access routes, certain camping areas and associated signage shall follow the Accessibility Guidelines for Outdoor Developed Areas, Final Report.

## Regulatory Requirements/Permits

Implementation of any significant park improvements will require a number of regulatory approvals and permits. These approvals and permits will vary according to the scope of improvements; however, the following are likely to be required in all cases:

Permit/Approval

### Administrative Authority

## Environmental Assessment or Environmental Impact Statement

State of Hawai'i  
Office of Environmental Quality Control

## Special Management Area Permit

City and County of Honolulu  
Department of Planning and Permitting

## Building Permit

**City and County of Honolulu**  
**Department of Planning and Permitting**

## Grading Permit

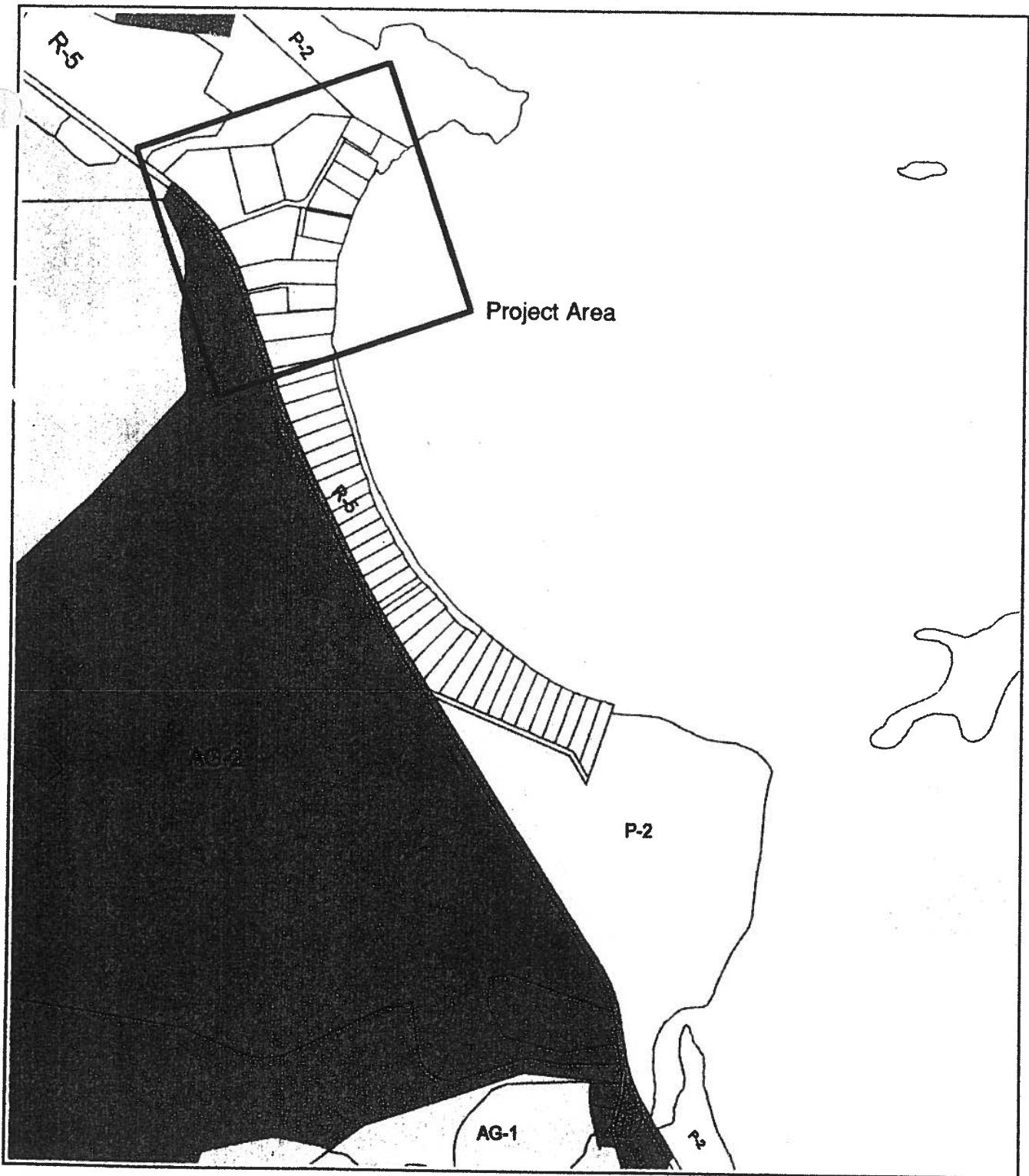
**City and County of Honolulu**  
**Department of Planning and Permitting**

## Shoreline Setback Variance

**City and County of Honolulu**  
**Department of Planning and Permitting**

### Existing Plans, Policies and Controls

The underlying zoning of the site according to County zoning regulations is R-5 residential. The existing single-family dwelling structures found onsite and adjacent (south) to the project site are evidence of this zoning. It is highly unlikely that the site will revert back to residential use since its acquisition by the State. The area north of Mālaekahana Stream is zoned P-2 General Preservation.



**Mālaekahana State Recreation Area  
Kahuku Section Development Plan**

**Land Use Classification  
Exhibit 7**

Source: Kahuku Zoning Map, City and County of Honolulu

Mālaekahana State Recreation Area, Kahuku Section

Lands west of the site, across Kamehameha Highway are zoned Ag-2 General Agriculture, and further west, Ag-1 Restricted Agriculture.

Discussions with the City and County of Honolulu Department of Planning and Permitting indicated that a change in zoning to P-2 General Preservation would clarify public policy regarding the use of the site. The site can remain in "public use" under the current R-5 residential zoning, however redevelopment of the site through a "use variance" would be difficult. It is recommended that a zone change be initiated to resolve this long-term use policy and to facilitate any improvements taken by the State or a private operator.

The State Land Use Boundary designation for the site is Urban District. Surrounding areas consist of urban and agriculture designations. Areas mauka of Kamehameha Highway remain in active agricultural use. The area immediately north of Mālaekahana Stream was observed to be used as a grazing field. Areas south of the project site and north of the Kalanai Section are in residential use.

Any future improvements are likely to require a Special Management Area (SMA) Major Permit (SMP) from the City and County of Honolulu. Presently, all areas seaward of Kamehameha Highway are located within the SMA. Any development over \$125,000 within this special district is subject to an SMP. It is assumed that any substantive improvements to the site will exceed this dollar value and will consequently require this discretionary approval.

An Environmental Assessment (EA) or Environmental Impact Statement (EIS) will also be required under Chapter 343, Hawai'i Revised Statutes (HRS) and Chapter 205, Revised Ordinances of Honolulu. The requirement for environmental review is triggered by two factors; the use of State lands and/or funds, and by the application process for the SMP described above.



## Mālaekahana State Recreation Area, Kahuku Section

### **State Comprehensive Outdoor Recreation Plan (SCORP)**

The *State Comprehensive Outdoor Recreation Plan (SCORP)* provides the technical basis for future recreation planning decisions. Originally adopted in 1965 and subsequently updated every five years, the most recent update was prepared in 2003. The SCORP document assesses: existing resources and programs, the existing outdoor recreation setting, identifies priority issues, develops an action program, and establishes a wetland resources plan. The SCORP is prepared to qualify for L&WCF grant funds from the National Park Service.

The Mālaekahana SRA is identified as a State recreation facility. While no specific recommendations are made for the Mālaekahana State Recreation Area, the plan does address the demand for ocean and camping activities. The report also addresses the concern that limited fiscal resources hamper public agencies from expanding or improving existing facilities. The report further states that partnerships with the private sector should be considered. This is consistent with the intent of the Department of Land and Natural Resources to issue a Request for Qualifications (RFQ) and a Request For Proposals (RFP) to expand public agency capabilities while providing recreation services. The Kahuku Section is presently operated under a month-to-month revocable permit to the "Friends of Mālaekahana".

### **Land and Water Conservation Fund (L&WCF)**

Central to any improvement actions for the project is the consistency of the proposed action with the Land and Water Conservation Fund (L&WCF). Grants from L&WCF were critical in the acquisition of the Kahuku Section.

All of the proposed alternatives are compliant with the guidelines set forth by the L&WCF grants manual in the event that grant funds are sought from the L&WCF in conjunction w/park construction. In relation to the criteria for development, the project scope provides the following:

### Mālaekahana State Recreation Area, Kahuku Section

1. Basic facilities for outdoor recreation access and safety.
2. The scope of the project will include, construction, renovation, site planning, demolition, site preparation, and architectural services, all of which are eligible for funding.
3. Plans for development of the site are based on the needs of the public, the expected use, and the character of the project area.
4. The project site is owned in fee by the State of Hawai'i.
5. The project has been identified as a unique resource worthy of investment and development in the public interest.
6. The plan includes playfields, day use facilities, trails, fishing access points, camping facilities, and facilities to accommodate people with disabilities, all of which are eligible for L&WCF grants.
7. Public use facilities, operation and maintenance facilities, beautification projects, and roads are all components of the planning alternatives and are eligible for L&WCF grants.

Overall, the proposed plans are consistent with L&WCF guidelines and with current State policies regarding public recreational facilities available to the residents and visitors of the State of Hawai'i.

### **1977 Master Plan Report**

The existing Mālaekahana State Park Master Plan Report was prepared in 1977 as a large-scale resource management guide. While the report covered the current project area as well as all lands south to Lā'iewai Stream, the emphasis of the report was on an area identified as Phase I. This Phase I area is now known as the Kalanai Section and has since gone through park development and operates as a State managed camping and day use site. Other areas, including the present project site, were addressed as future development areas without any definitive timetable for improvement.





## Mālaekahana State Recreation Area, Kahuku Section

### 4.4 Existing Conditions

The site is presently minimally improved and conveys the natural character of the location. Areas have been cleared for various group activities and a pathway/roadway system within the site is evident. Certain areas within the site are reserved for operational and maintenance functions and are not intended for general public use but are not treated as restricted area.

- Six wood and concrete dwelling structures for public use
- Two wood dwelling structures for staff use
- One wood structure serving as a central office
- Three toilet facilities
- Three shower areas (central location offers hot water)
- Unpaved roadways through site
- Unmarked parking areas throughout site
- Special events area
- Education building (yurt)
- Horticulture area
- Maintenance shed
- Temporary shelter buildings open to park users

In addition, the DOCARE facility and public access site located immediate south or the Kahuku Section is also considered to be part of the project planning scope. This facility is used for services provided to all State parks in the area and serves as a monitoring point for the adjacent day use beach access site. This area includes the following:

- One wood dwelling unit serving as DOCARE staff housing
- One concrete toilet facility
- One shower area
- Unmarked parking area

## Mālaekahana State Recreation Area, Kahuku Section

- Open lawn

According to the current operator, the site remains in good demand. During the survey period, a high level of traffic was observed to and within the site and other site visits indicate that the site is well used. The operator has indicated that the site has reach peak occupancy of between 400 and 500 users during special group functions. These peak occupancy periods as well as during the high demand summer and vacation periods over tax the existing sewage system and sewage pumping is required frequently.

It has also been observed that it is common practice for the cottage units to serve as a base building for large groups that use supplemental tents to accommodate their group. Small parties of one or two people were also noted on the property.

## 4.5 Existing Facilities

As previously stated, seven former single-family residences are located in the study area. These structures are in poor condition in spite of the on-going efforts of the current park operator. Of wood and concrete construction, the structures do not meet current building codes, and are not salvageable due to age, construction materials and adverse climatic conditions.

All of the original residential structures are at least 50 years old. None appear to be architecturally or historically significant or unique. None are listed on the National or Hawaii Register of Historic Places. All consist of single wall wood frame construction with composite shingle roofing. One of the residences appears to have a metal roof. Foundations for the buildings consist of slab on grade or post and pier. Due to the salt laden winds that buffet the site, extensive corrosion can be found on all buildings. The structures that are located closer to the shoreline exhibit a larger degree of distress while the buildings located inland are in better condition.

Mālaekahana State Recreation Area, Kahuku Section

Other structures on site are of less substantial construction. Three comfort stations are located on site. These are simple shed like buildings that house toilets and potable water. Hot water showers are provided at the central, open air shower facility.

Between the main entrance and the service access point is a round building called a yurt, framed in wood with walls and a roof made of nylon that is being used as a classroom.

Adjacent to the existing special events area is a long barracks like structure that is presently used for staff housing but does not have indoor plumbing.

Three open shed structures identified as *hale* on the current operators site plan are centrally located and serve as small function areas or shelters. These are open and do not include any plumbing fixtures.

None of the structures appears to be worthy of repair or significant investment. The location of many of these structures in the shoreline setback area and/or flood zone preclude their replacement. All of the structures are of wood construction and will continue to decay and deteriorate.

Currently cabins 4, 5, and 6/7 are within the VE area of the flood zone. This indicates that these structures are potentially subject to flooding caused by wave action. Following the demolition of these cabins, replacement at the same locations will not be possible due to the flood hazard restricts in effect.

None of the existing structures, parking areas, or pathways will meet with the requirements of the Americans with Disabilities Act of 1990. Any improvements and all new structures will be required to meet the program and facility accessibility requirements of this Act.

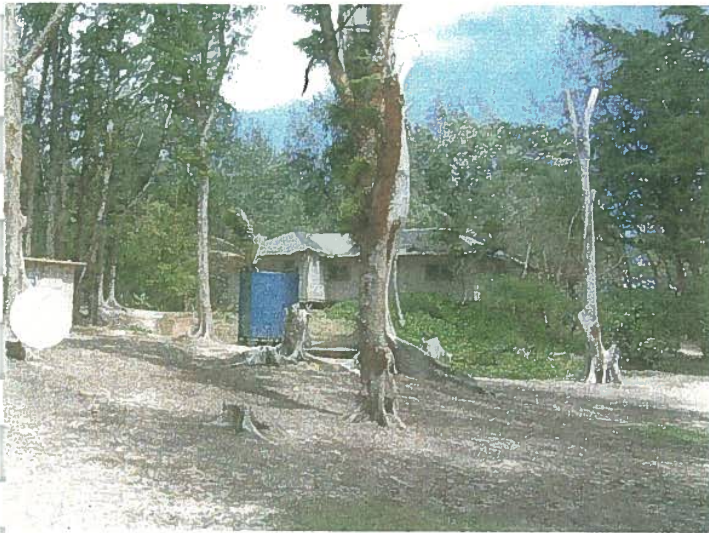




**Alternate Entry Road - PH92.JPG**



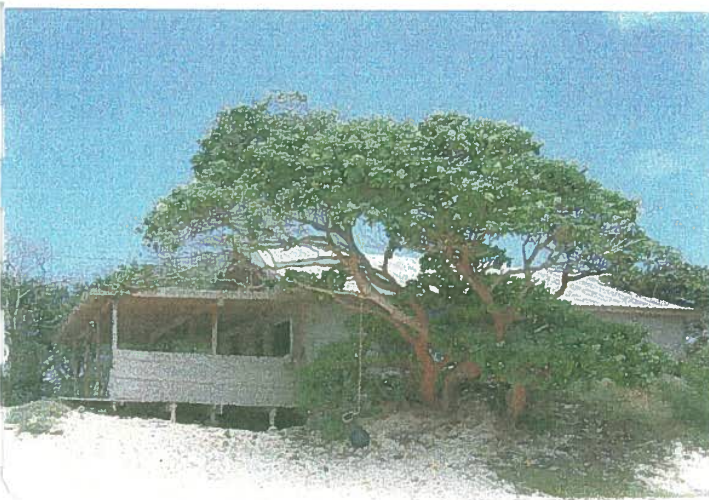
**Cabin #1 - Ph7 .JPG**



**Cabin #2 - PH42.JPG**



**Cabin #3 - Tent Site #4 - PH45.JPG**



**Cabin #4 - PH112.JPG**



**Cabin #5 - PH111.JPG**





Cabin #6 & #7 - PH122.JPG



Cabin #6 & #7 - PH80.JPG



Coastal Dune - PH110.JPG



Coastal Winds - PH109.JPG



Coastal Winds - PH118.JPG



Comfort Station - PH98.JPG





Service Road - PH101.JPG



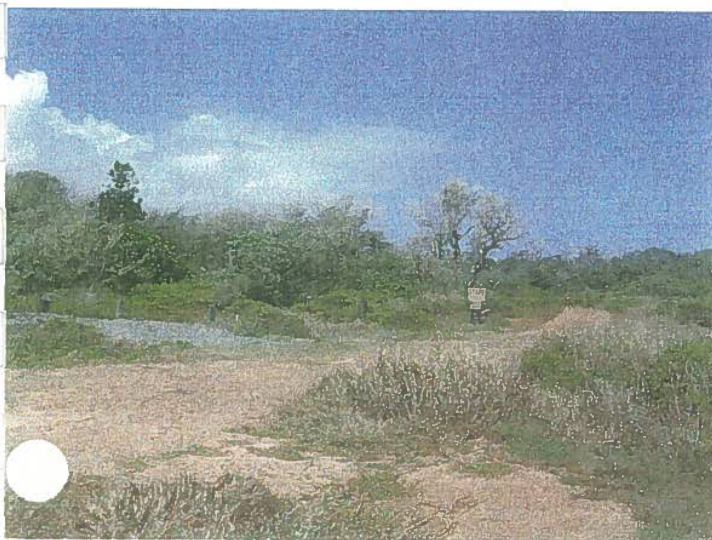
Special Events - PH84.JPG



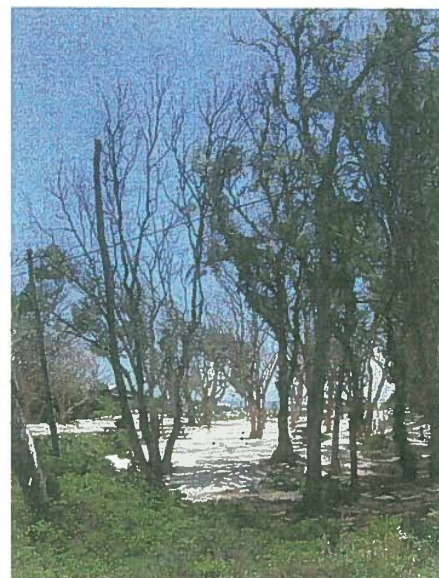
Special Events - PH86.JPG



Staff Housing - PH88.JPG



Tent Site #1 - PH77.JPG



Tent Site #2 - PH73.JPG





Tent site #3 - PH64.JPG



Tent Site #3 - PH67.JPG



Tent Site #4 - PH39.JPG



Tent Site #4 - PH40.JPG



Tent site #4 - PH41.JPG



Tent Site #4 - PH44.JPG





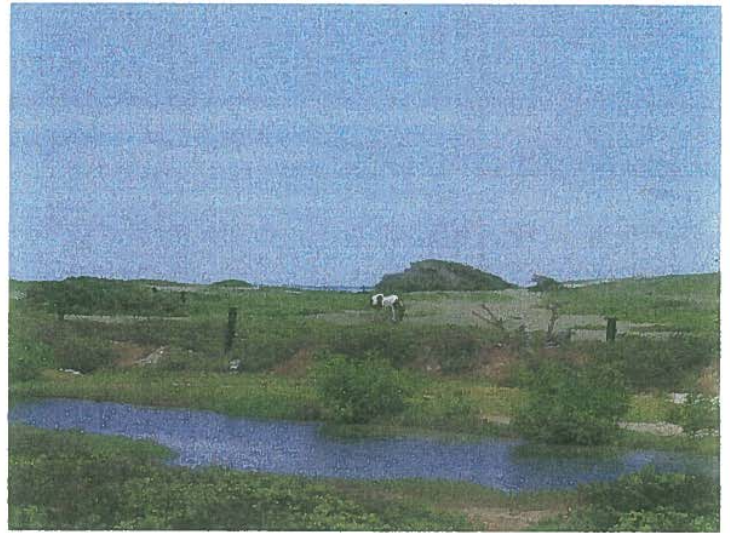
2 -Yerts - PH34.JPG



Field Office & Entry Road - PH124.JPG



Green House - PH36.jpg



Mālaekahana Stream - PH121.JPG



Managers Home at West Side.jpg



Picnic - PH48.JPG





## Mālaekahana State Recreation Area, Kahuku Section

Cabins – 100 people (100 gal/day/person\*)

**Tents – 400 people (35 gal/day/person)**

$$100 \text{ people} \times 100 \text{ gal/day/person} = 10,000 \text{ gal/day}$$
$$400 \text{ people} \times 35 \text{ gal/day/person} = 14,000 \text{ gal/day}$$

Existing total estimated flow = 24,000 gal/day

The Friends of Mālaekahana noted that the current waste disposal system is inadequate for the site's current capacity. The waste disposal system is comprised of several cesspools scattered throughout the property. Periodically, the seven cesspools are pumped out. According to the Friends of Mālaekahana, seven cesspools are periodically pumped with variations in the pumping schedule based on tidal influence.

A geotechnical report was prepared for Mālaekahana SRA, Phase I, entitled, "Geotechnical Investigation, Mālaekahana State Recreation Area, Water and Sewer Improvements, Kahuku, Oahu, Hawai'i," dated June 2, 1988 by Harding Lawson Associates. Mālaekahana SRA, Phase I, is located south of the subject area and is referred to as the Kalanai Section. According to the report, groundwater levels were discovered at elevations between 0 and +3. The investigation further revealed several varying percolation rates and recommended percolation rates for the leach field design. In the absence of percolation rate results for the subject project, the recommended rate used for the Mālaekahana SRA, Phase I will be used for the waste disposal system design. To be conservative, the higher of the two recommended rates will be used, at 15 min/in.

\* Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 62 Wastewater Systems, Table I

## Mālaekahana State Recreation Area, Kahuku Section

## Proposed Wastewater Design

The existing cesspools will be replaced due to EPA and DOH regulations, which call for the replacement of all large capacity cesspools by April 2005. Large capacity cesspools are defined as a wastewater system serving design flows larger than 1000 gallons per day. Since there is no existing City and County sewage system nearby, construction of new septic tanks and leach fields will be required. The septic tanks and leach fields shall be designed to accommodate the new flows generated from the planned construction.

The design of the septic system is based on prudent standard engineering practice and maximum recommended limits of 15,000 gpd total flow per site by the State of Hawai'i, Department of Health's Hawai'i Administrative Rules, Title 11, Chapter 62, *Wastewater Systems*. The design for each individual wastewater system alternative includes flows from the proposed campsite and cabins and day users. The flows do not include demands common to all alternatives: the DOCARE residence and the manager's residence.

The 2-Bedroom manager's residence would have its own IWS with the following requirements:

Design flow,  $Q = 4 \text{ people} \times 100 \text{ gal/person/day} = 400 \text{ gpd}$   
Minimum capacity septic tank = 750 gallons  
1 leach field

The DOCARE residence has an existing cesspool; therefore, no additional flows are anticipated. Future expansion would require replacing the existing cesspool with an equivalent or greater capacity IWS. Requirements for the DOCARE residence would be similar to the 2-Bedroom manager's residence:

Design flow,  $Q = 4 \text{ people} \times 100 \text{ gal/person/day} = 400 \text{ gpd}$   
Minimum capacity septic tank = 750 gallons  
1 leach field

# **Mālaekahana State Recreation Area, Kahuku Section**

Accounting for the flows of the DOCARE residence, the manager's residence, and day users (800 gpd), the amount of available capacity of each alternative is reduced to 14,200 gpd.

No information is available for the current day user usage. The day user usage is estimated at 50 people per day, which is extrapolated from data provided by the Ocean Safety Division, City and County of Honolulu for an equivalent site. Required additional capacity is shown as follows. Day user flows are assumed 5 gallons per person per Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 62 Wastewater Systems, Table I.

$$50 \text{ people} \times 5 \text{ gal/person/day} = 250 \text{ gal/day}$$

The design flow is,  $Q = 250 \text{ gal/day}$

## **Proposed Individual Wastewater System (IWS)**

### **Flow and Tank Sizing:**

The wastewater from this project will be generated from the cabins and the tent campers. The estimated flows to be generated for the three schemes are as shown below.

Based on Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 62 Wastewater Systems, Table I, Campgrounds with central comfort stations and Cottages and small dwellings with seasonal occupancy are calculated at 35 gal/person/day and 100 gal/person/day, respectively. The design will be based on the three different schemes.

The calculation rate of 5 gal/person/day for day users, 35 gal/person/day for Campgrounds with central comfort stations and 100 gal/person/day for Cottages and small dwellings with seasonal occupancy from Table I, HAR 11-62-08 will be used to determine the design flow for the septic tank.



**Mālaekahana State Recreation Area, Kahuku Section****Alternative 1 – Tents Only**

50 day users x 5 gal/person/day = 250 gal/day

35 camp sites @ 10 people per site = 350 people

350 people x 5 gal/person/day = 1,750 gal/day

The design flow is,  $Q = 12,500$  gal/day

The septic tank size is based on a 24-hour period, or the daily design flow.  
The required liquid volume for the septic tank is 12,500 gallons.

Required tank volume (with safety factor):

$$1000 + [(Q - 800) \times 1.25]$$

$$1000 + [(12,500 - 800) \times 1.25] = 15,625 \text{ gallons}$$

This formula is based on the Ten States Standards as referenced by HAR Chapter 11-62 (Recommended Standards for Individual Sewage Systems, a report by the committee of the Great Lakes-Upper Mississippi River Board of State Sanitary Engineers on the policies for review and approval of plans and specifications for individual wastewater systems).

Using 1250 gallon capacity septic tanks, 13 septic tanks will be required.  
As an alternative, larger capacity septic tanks, such as 4000 or 5000 gallons, can be used.

**Leach Field Sizing:**

The "equivalent bedroom" method will be used to determine the required absorption area for effluent disposal. This method assumes a 200 gal/day/bedroom rate.

A percolation test was not conducted for this project. Based on the geotechnical report for the Mālaekahana SRA, Kalanai Section, a rate of 15 minutes per inch will be used.

### Mālaekahana State Recreation Area, Kahuku Section

Table I, page 40 of the Ten States Standards, Chapter 10, as referenced by HAR Chapter 11-62, yields a value of 190 square feet of required absorption area per bedroom for a percolation rate of 15 minutes per inch.

$$12,500 \text{ gal/day} + 200 \text{ gal/day/bedroom} = 62.5 \text{ bedrooms}$$

$$62.5 \text{ bedrooms} \times 190 \text{ ft}^2/\text{bedroom} = 11,875 \text{ ft}^2$$

The required absorption area for this alternative is 11,875 square feet. The leach field can be broken up into 3 fields of 4000 square feet.

### Alternative 2 – Cabins Only

$$50 \text{ day users} \times 5 \text{ gal/person/day} = 250 \text{ gal/day}$$

$$20 \text{ cabins @ } 6 \text{ people per cabin} = 120 \text{ people}$$

$$120 \text{ people} \times 100 \text{ gal/person/day} = 12,000 \text{ gal/day}$$

$$\text{The design flow is, } Q = 12,250 \text{ gal/day}$$

The septic tank size is based on a 24-hour period, or the daily design flow. The required liquid volume for the septic tank is 12,250 gallons.

Required tank volume (with safety factor):

$$1000 + [(Q - 800) \times 1.25]$$

$$1000 + [(12,250 - 800) \times 1.25] = 15,313 \text{ gallons}$$

Using 1250 gallon capacity septic tanks, 13 septic tanks will be required. As an alternative, larger capacity septic tanks, such as 4000 or 5000 gallons, can be used.

### Leach Field Sizing:

The "equivalent bedroom" method will be used to determine the required absorption area for effluent disposal. This method assumes a 200 gal/day/bedroom rate.

### Mālaekahana State Recreation Area, Kahuku Section

A percolation test was not conducted for this project. Based on the geotechnical report for the Mālaekahana SRA, Kalanai Section, a rate of 15 minutes per inch will be used.

Table I, page 40 of the Ten States Standards, Chapter 10, as referenced by HAR Chapter 11-62, yields a value of 190 square feet of required absorption area per bedroom for a percolation rate of 15 minutes per inch.

$$12,250 \text{ gal/day} + 200 \text{ gal/day/bedroom} = 61.25 \text{ bedrooms}$$

$$61.25 \text{ bedrooms} \times 190 \text{ ft}^2/\text{bedroom} = 11,640 \text{ ft}^2$$

The required absorption area for this alternative is 11,640 square feet. The leach field can be broken up into 3 fields of 3900 square feet.

### Alternative 3 – Combination Cabins and Tents

$$50 \text{ day users} \times 5 \text{ gal/person/day} = 250 \text{ gal/day}$$

$$10 \text{ cabins @ 6 people per cabin} = 60 \text{ people}$$

$$60 \text{ people} \times 100 \text{ gal/person/day} = 6,000 \text{ gal/day}$$

$$17 \text{ camp sites @ 10 people per site} = 170 \text{ people}$$

$$170 \text{ people} \times 35 \text{ gal/person/day} = 6,000 \text{ gal/day}$$

$$\text{The design flow is, } Q = 12,250 \text{ gal/day}$$

The septic tank size is based on a 24-hour period, or the daily design flow. The required liquid volume for the septic tank is 12,250 gallons.

Required tank volume (with safety factor):

$$1000 + [(Q - 800) \times 1.25]$$

$$1000 + [(12,250 - 800) \times 1.25] = 15,313 \text{ gallons}$$



**Mālaekahana State Recreation Area, Kahuku Section**

Using 1250 gallon capacity septic tanks, 13 septic tanks will be required.  
As an alternative, larger capacity septic tanks, such as 4000 or 5000 gallons, can be used.

**Leach Field Sizing:**

The "equivalent bedroom" method will be used to determine the required absorption area for effluent disposal. This method assumes a 200 gal/day/bedroom rate.

A percolation test was not conducted for this project. Based on the geotechnical report for the Mālaekahana SRA, Kalanai Section, a rate of 15 minutes per inch will be used.

Table I, page 40 of the Ten States Standards, Chapter 10, as referenced by HAR Chapter 11-62, yields a value of 190 square feet of required absorption area per bedroom for a percolation rate of 15 minutes per inch.

$$\begin{aligned} 12,250 \text{ gal/day} + 200 \text{ gal/day/bedroom} &= 61.25 \text{ bedrooms} \\ 61.25 \text{ bedrooms} \times 190 \text{ ft}^2/\text{bedroom} &= 11,640 \text{ ft}^2 \end{aligned}$$

The required absorption area for this alternative is 11,640 square feet. The leach field can be broken up into 3 fields of 3900 square feet.

**Design Constraints:**

Ten (10) feet minimum bed separation (if more than one bed is required)  
An alternate area needs to be set aside, but not developed, for 100% backup  
Absorption bed floor must be level

**Summary and Recommendation:**

The proposed wastewater system will treat and dispose of the wastewater generated by the users of the campsite.

Septic tanks satisfying the liquid capacity of 15,625 gallons, 15,313 gallons, and 15,313 gallons, respectively for the three alternatives are required. A leach field with an absorption area of 11,875 square feet, 11,640 square feet, and 11,640

**Mālaekahana State Recreation Area, Kahuku Section**

square feet, respectively for the three alternatives are required to dispose of the effluent from the septic tank.

**Recommended leach field dimensions:****Leach field dimensions**

Two beds, 70 feet by 100 feet each for an absorption area of 14,000 square feet

**Water System****Domestic Water**

A 12-inch waterline was recently installed by DLNR along Kamehameha Highway fronting Mālaekahana SRA, Kahuku Section. This new 12-inch water line should be adequate to meet the proposed water demands.

The current water system pressure and flow is reportedly adequate for the demand generated by the current demand. However, the onsite waterlines are old and are in need of replacement.

Based on Board of Water Supply guidelines, the average daily demand for parks is 4000 gallons per acre. Based on 36 acres and approximately 350 people (maximum amount for all alternatives), the average daily demand is 144,000 gallons per day. The peak demand is 432,000 gallons per day or 300 gpm. Current usage figures were not currently available.

The cabins, comfort station, field office, manager's residence, maintenance yard, as well as the informal activity area will receive water service. For the cabin only alternative, the main facility waterline will follow the roadway and branch off to each cabin. In the tent only alternative, the main waterline will again follow the roadway and will branch off to each comfort station or water station. The tent and cabin combination alternative will follow the alignment of both the cabin and tent alternatives.

## Mālaekahana State Recreation Area, Kahuku Section

### Fire Protection Water

There is presently no onsite fire protection water. To meet the Board of Water Supply requirements, fire hydrants will likely be spaced 350 feet apart to protect the cabins and dwelling units (based on single family and duplex uses). Therefore, five fire hydrants would be required for the cabin only alternative and four fire hydrants would be required for the cabin and tent combination alternative. Road access will need to accommodate the fire trucks. Fire flow is 1000 gpm with a 1-hour duration. Requirements will need to be reconfirmed with the Board of Water Supply and the Fire Department during design.

### Roadways, Parking, and Accessible Routes

#### Existing Conditions

Currently, gravel roads lead to the cabins, field office, manager's house, staff quarters, and most of the tent sites. The roads appear to follow the path of the old subdivision road. Unpaved parking areas are strategically placed near each cabin, the field office, and near major tent sites. The number of stalls could not be determined but is estimated to be between 50 and 100. At other tent sites, cars are allowed to park near the tent areas. There are currently no accessible routes leading to tents and cabins.

#### Proposed Design

To minimize clearing and grading as well as associated costs, the existing roadway alignment will be used for all three alternatives. However, to facilitate the control of traffic, the main entrance will be relocated to an area nearer the center of the park.

**Mālaekahana State Recreation Area, Kahuku Section**

The proposed roadways will be of compacted crushed coral with widths of about 24 feet. Parking areas will also be compacted crushed coral. The parking areas will be sized to accommodate 9 feet wide by 19 feet long stalls and 24-foot wide aisles between the stalls. Due to the unpaved surfaces, these dimensions will not be delineated on the ground.

The current Land Use Ordinance does not specifically list off-street parking requirements for parks of this use. However, choosing a similar use type such as schools, the requirement is 1 stall per 10 students. This amounts to 35 stalls for a maximum park population of 350 people. Looking at the stall requirements from a more practical viewpoint, 1 car per 3 persons appears to be more realistic. Therefore approximately 116 stalls should be provided for overnight users. With an average of 50 day users per day, a peak should be at least 100, therefore, at a minimum, an additional 33 stalls should be provided for day users.

Parking areas, pedestrian loading areas and comfort stations and certain cabins shall conform to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Day use facilities, outdoor access routes, certain camping areas and associated signage shall follow the Accessibility Guidelines for Outdoor Developed Areas, Final Report.

The entrance at Kamehameha Highway will need to be evaluated. Consultation with the State Department of Transportation will be required during the design stage of the project. An improved entrance will allow easy identification of the park with turn lanes and sight distance improvements.

Approval by the Fire Department will be required in the design phase. The acceptance of the coral surface and turnaround requirements for fire control vehicles are the major concerns.



**Mālaekahana State Recreation Area, Kahuku Section****4.7 Control, Security and Public Safety**

Control, security and public safety are key elements in creating a desirable recreational experience. These concepts are particularly important in relatively secluded sites where visibility from well-trafficked areas is minimal. The project site is particularly affected by these considerations in that the site is minimally visible from Kamehameha Highway and does not have the same enclosed appearance that the Kalanai Section exhibits.

Presently, the site maintains three vehicular access points. Two service entrances are gated at their respective entry points off Kamehameha Highway. The third entry point is located within the site, adjacent to the park office. The service entrances are usually locked and most vehicular traffic travels through the central internal gate that is secured in the evening. With the existing centralized vehicle access point, traffic can be carefully monitored. Parking for the site is located within line-of-sight from the park office and all park visitors generally pass this control point.

The park is not secured by fencing except along the beach access parcel adjacent to the DOCARE residence. Access from the beach is available through the day use area adjacent to the DOCARE residence. The beach access parcel and DOCARE residence were not considered for redevelopment but it should be noted that the DOCARE residence could be used as a cabin or other park facility in the future.

The Kahuku Section is notable for its lack of on-site criminal activity. While not as secure as the Kalanai Section, the operator and a police officer visiting the site have noted that the park has a particularly low incidence of reported crime. This is largely attributable to the active management of the park and the full time security provided by park staff.

The location of the park office, single control point, and a full-time presence is very effective in providing a great deal of control and security at this site and should be considered in other recreational areas.

## Mālaekahana State Recreation Area, Kahuku Section

All park visitors renting the camping sites and cabins are required to sign in at the park office where reservations and site assignments are issued. The requirement allows the park management to visually connect names with faces and to explain the park rules.

It is recommended that vehicular access within the site be located along a realigned central spine to provide for easier line-of site observation by security personnel and to provide park users with easy and quick access to the office and park staff. While vehicles entering the site are not required to stop at the office to sign in, it should be made apparent that the park is a secured facility and all park users are under the supervision of the park operator.

Park users should also be notified by signage and park regulations that the property located across Mālaekahana Stream is not park property. While use of the stream as a recreational resource should be encouraged, the adjacent property is under private ownership and should be respected as such.

It is also important that these measures do not discourage day users from entering the facility. Parking should be made available to day users with convenient access to the beach. There is an area for day use with a comfort station located mauka of the DOCARE residence where day users, beach goers, surfers, and fishermen can park their vehicles.

The beach is not monitored by City and County of Honolulu or private lifeguards. While no public lifeguards are available in the vicinity, it should be recommended that future operators of the park be prepared to provide assistance to beach users.

## Mālaekahana State Recreation Area, Kahuku Section

**CHAPTER 5. DEVELOPMENT PLAN OPTIONS****5.1 Common Elements**

All alternatives under consideration share a number of common elements that remain desirable under each scenario. These elements consist of a new two-way entry exit road, a separate check-in point, a common field office and manager's residence, a baseyard, and shoreline picnic area.

**New Entry-Exit Road**

The primary entry-exit road presently serving the site is located along the eastern boundary of the project area. While effective in controlling on-site traffic, the current location forces traffic across the site and can be confused with the day use area located immediately east of the site. This collocation alternative does not allow the site to distinguish itself as a separate park site. A new road located closer to the middle of the project area is recommended. An existing stand of coconut trees along an existing interior road should be reincorporated into the site plan to create a more formal and distinguished entry into the park. The road should be gated and locked during evening hours.

**Parking**

All parking areas are located off the central spine road and within close proximity to the areas they are intended to service. This spread of parking will minimize the amount of hauling required to reach each cabin or campsite, and provides the vehicle owners with a degree of assurance that their automobiles can be easily monitored. Scenic vistas will not be disrupted by the proposed parking locations. Furthermore, the interior roads and parking areas are to be covered with compacted crushed gravel that will not detract from the rugged natural environment.

**Security Station**

It is recommended that a security control point be provided along the entry road. While this station need not be manned, it should provide the site with a reference

## Mālaekahana State Recreation Area, Kahuku Section

point that the site is actively operated and that park users or visitor will be monitored. This security point should be in view of the field office and the manager's residence.

### Field Office/Manager's Residence

A field office should serve as central management and common area facility. This structure is envisioned as an office for the park operators, a reservation and logistics office and a communications center. The facility may also serve as a central maintenance center for housekeeping functions. This facility may also include a snack/ice/accessories store for the convenience of the park users. The building is not envisioned as a group meeting facility and will be serviced by a small, dedicated parking area fronting the structure.

A resident manager's residence should be located in the vicinity of the field office. This location will allow the manager a degree of privacy from the park users yet will place the residence within sight lines of all incoming and outgoing traffic. This will enhance the monitoring of park use as well as ensure immediate response to any park needs.

### Maintenance/Base Yard

All alternatives incorporate a maintenance/base yard in the Kahuku-mauka corner of the project area. This area is intended to serve as the central storage and maintenance for location for all park operations. Services designated for this area include maintenance equipment, housekeeping supplies, equipment repair and parts storage, and materials for site maintenance. This area will be served by a separate entrance to prevent the mixing of visitor and maintenance related traffic. It also ensures that trucks and heavy equipment traffic will not be required to travel through the site. Additionally, it provides a controlled secondary ingress/egress point should access through the main public access be limited or impeded.

### Stream Resource

Each of the alternatives have been designed to incorporate the Mālaekahana Stream as a natural resource amenity. Significant recreational and educational



## Mālaekahana State Recreation Area, Kahuku Section

opportunities exist in and around the stream however the lack of access, except at the stream mouth, limits the use of the stream as a park feature. It is recommended that the stream bank on the park side be cleared and softened with native plants and vegetation to create more accessible stream banks. This will also increase the scenic value of the stream. Presently, a significant portion of the stream bank is overgrown and is not visible for the existing field area.

Concern was expressed at public meetings that recreational users may cross the stream to the adjacent privately owned property. This should be discouraged through the provision of signs stating that the adjacent site is not part of the park and will be considered trespassing.

### Pavilions

Small pavilions should be interspaced throughout the day use area. These simple shelters will provide some cover from the sun and will feature a cooking area with a sink. Individual cooking areas will be also be allowed within the campsite areas however these will consist of simple open grills. Picnic tables should also be provided near each pavilion.

A building that can be used for large group functions was suggested by a number of community members. To minimize intrusion into the tent and cabin camping areas, the structure should be located with good or dedicated access to Kamehameha Highway.

### Comfort Stations

Comfort stations should also be provided throughout the site. Heavier demand for these facilities is expected in the tent areas and the picnic areas. The comfort stations should be located so that access to the facilities will not require crossing of adjacent zones (e.g. day users should not have to cross cabin sites to reach the comfort station).

## Mālaekahana State Recreation Area, Kahuku Section

### Day Use Areas

Shoreline areas are prime spots that should be reserved for day use activities such as picnics. Aside from access to pavilions and comfort stations, no other improvements in these areas will be required.

### Informal Activity Area

In all alternatives considered, an informal activity area was designated along Mālaekahana Stream. This area is planned for large group gatherings and group activities such as picnic games, open space group events, or activities that require an expansive, relatively flat area. The current operator has noted that groups such as the Boy Scouts and school summer vacation programs have used this area successfully for their activities.

### Landscaping

The natural beauty of Mālaekahana must be preserved to maintain it's unique and tranquil environment. The vegetative patterns and landforms are expressions of the coastal climate. Future development proposals must appropriately identify, preserve and enhance the areas natural character by plantings of native trees, shrubs and ground covers.

Sensitive siting of utilities, roadways and buildings should preserve mature trees. Selective clearing of undergrowth and trees should be done under professional direction to recognize environmental and aesthetic concerns. Landscape 'buffer zone' improvements enrich the surroundings and create natural partitions between the different use areas. Proposed plantings must be able to thrive under Mālaekahana coastal conditions of high winds, sandy soils and salt spray. Native Hawaiian plants are to be given high consideration. A list of suggested plant material include the following:

## Mālaekahana State Recreation Area, Kahuku Section

**Common and Scientific Names of Plants**  
**Development Plan for Mālaekahana State Recreation Area, Kahuku Section**

Trees

False Kamani, Indian Almond	<i>Terminalia catappa</i>
Hala, Screwpine	<i>Pandanus tectorius</i> S. Parkinson ex Z
Hau	<i>Hibiscus tiliaceus</i>
Tree Heliotrope	<i>Tournefortia argentea</i> L. fil.
Plumeria	<i>Apocynaceae</i>
Christmas Berry	<i>Schinus terebinthifolius</i> Raddi
Madagascar Olive	<i>Noronia emarginata</i>
Milo	<i>Thespesia populnea</i>
Seagrape	<i>Coccoloba uvifera</i>
Wiliwili (native)	<i>Erythrina sandwicensis</i>
Wiliwili Haole (native to India)	<i>Erythrina variegata</i>
False Wiliwili (Southeast Asia)	<i>Adenanthera pavonina</i>
Kiawe	<i>Prosopis pallida</i>
Dwarf Poinciana, 'Ohai Ali'i	<i>Caesalpinia pulcherrima</i>
Common Ironwood	<i>Casuarina equisetifolia</i>
Indian Banyan	<i>Ficus benghalensis</i>
Kou	<i>Cordia subcordata</i> Lam
Autograph	<i>Clusia rosea</i>

Palms

Coconut, Niu	<i>Cocos nucifera</i> L.
Loulu	<i>Pritchardia hillebrandii</i>
Manila	<i>Veitchia merrillii</i>
Silver	<i>Coccothrinax argentea</i>
Areca	<i>Dypsis lutescens</i>
Thurston Fan	<i>Pritchardia thurstonii</i>
Washington	<i>Washingtonia robusta</i>
Jamaican Thatch	<i>Thrinax parviflora</i>



## Mālaekahana State Recreation Area, Kahuku Section

Shrubs

Beach Naupaka, Naupaka Kahakai	<i>Scaevola taccada</i>
Hawaiian Cotton, Ma'o	<i>Gossypium tomentosum</i>
Beach Sandalwood, 'Iliahialo'e	<i>Santalum ellipticum</i> var. <i>littorale</i>
Noni, Indian Mulberry	<i>Morinda citrifolia</i>
Kuluī	<i>Notorichium sandwicense</i>
Natal Plum	<i>Carissa macrocarpa</i>
Tahitian Gardenia, Tiare Tahiti	<i>Gardenia taitensis</i>
Spider Lily	<i>Crinum asiaticum</i>
Agave	<i>Agave attenuata</i>
Oleander, 'Oliana	<i>Nerium oleander</i>
Indian Hawthorn	<i>Raphiolepis indica</i>
Wax Fig	<i>Ficus microcarpa</i> var. <i>crassifolia</i>

Ground Covers

Beach Morning Glory, Pōhuehue	<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>
Hinahina, Nena, Seaside Heliotrope	<i>Heliotropium curassavicum</i>
'Ohelo-kai, 'ae'ae	<i>Lycium sandwicense</i>
'Ilima Papa (flat 'ilima)	<i>Sida fallax</i>
Pōhinahina, Beach Vitex	<i>Vitex rotundifolia</i>
Nehe	<i>Lipochaeta integrifolia</i>
'Akulikuli-Kai, Pickleweed	<i>Batis maritima</i> L.
'Akulikuli	<i>Sesuvium portulacastrum</i>
Ice Plant	<i>Aizoaceae</i>
Wedelia	<i>Wedelia trilobata</i>
Asystasia, Chinese Violet	<i>Asystasia gangetica</i>
Aloe, Pānini 'Awa 'Awa	<i>Aloe vera</i>

## Mālaekahana State Recreation Area, Kahuku Section

### 5.2 Alternative 1 – Tent Only

#### Intent and Goals

This alternative considers the site's use for tent camping and day use activities, similar to the popular Kalanai Section. Development costs will be minimal and lower financial returns could be expected compared to the other alternative that combines tents and cabins.

#### Concept

- 44 camp sites (3.8 units per acre/ 10 occupants per site)
- 440 overnight users per day
- Unrestricted day users
- Tent sites approximately 1,000 square feet with 10-foot buffer between sites (based on observation at existing site)
- Tent sites clustered in 2 zones; stream zone and ocean zone
- All tents located inland of shoreline for wind protection and shoreline preservation
- Shoreline picnic zone serves as buffer zone
- Informal activity area centrally located
- Day use areas have direct access to shoreline.
- Public/facility user access served by a check-in control point
- Maintenance/Baseyard located close to highway with separate access point
- Approximately 300 parking stalls.

#### Advantages

- Encourages a high level of activity on-site

### **Mālaekahana State Recreation Area, Kahuku Section**

- Most inclusive by virtue of lowest use cost
- Maintains the greatest amount of open space
- Lowest development and operations cost
- Least affected by government regulations and flood boundary parameters

### **Disadvantages**

- Does not provide any recreational alternative to the Kalanai Section
- Low financial return unlikely to draw operators
- Harsher environmental conditions may make the central shoreline areas a less desirable site for tent camping

### **Discussion**

The use of the site as an all tent park represents a logical extension of the nearby Kalanai Section of the Mālaekahana SRA. This use would maintain the integrity of the site, limit site improvements and maintain the greatest flexibility of use.

Minimal improvement costs are associated with this alternative. Consequently, user costs are expected to be lower. This does however limit the recreational uses of the site and may be limiting a potentially high demand use. While it will expand the recreational resources available to the public, it will also be competing with a similar facility located nearby. This may create an undesirable situation of preferred and secondary parks. This option does provide the most inviting picnicking opportunity since the site is likely to be viewed as a very public space operated in a similar manner to other State and County parks.

From a regulatory perspective, this option has greater flexibility since tents are not restricted from using the floodway areas. As a matter of public policy it may still be desirable for the State to rezone the site from R-5 residential to Preservation use. Infrastructure improvements will require a Special Management Permit.





**Mālaekahana State Recreation Area, Kahuku Section****Recommendations**

This alternative provides the lowest cost model however it sacrifices some existing uses that are highly desirable. A key component to the success of the current operation is the availability of cabins. These cabins often function as a central facility for group camping where several tents are placed around a single cabin. The loss of cabins also decreases the recreational opportunities for those who are unable to use tent accommodations. In light of these considerations and the fact that the Kalanai Section offers tent only facilities, this alternative is not preferred.

## Mālaekahana State Recreation Area, Kahuku Section

### 5.3 Alternative 2 – Cabin Only

#### Intent and Goals

This alternative for cabin and day use only was created as a low density, high improvement development resulting in a complex of cabin accommodations. While it may be the most restrictive in terms of public access and will require a high level of on-site management, it is also the most secure and capital intensive of the three alternatives.

#### Concept

- 20 cabins (2.0 units per acre / 6 occupants per cabin)
- 120 overnight users per day
- Unrestricted day users
- Cabins approximately 800 to 1,000 square feet
- Group user and amenity oriented (recreation center)
- Cabins clustered in two zones; stream zone and ocean zone
- All cabins located inland of shoreline for wind protection and shoreline preservation
- Shoreline picnic zone serves as buffer zone
- Informal activity area located along Mālaekahana Stream
- Day use areas have direct access to shoreline.
- Public/facility user access served by a check-in control point at entrance to park
- Maintenance/Baseyard located close to highway with separate access point
- Approximately 300 parking stalls could be accommodated but are not required



## Mālaekahana State Recreation Area, Kahuku Section

### Advantages

- Highest degree of control over site
- Highest income potential
- Alternative likely to draw large group or organizational users
- Maximizes use of the under story environment in the heavily canopied area
- Differentiates Kahuku Section from Kalanai Section

### Disadvantages

- Flood boundary constrains cabin location and quantities
- Highest demand on infrastructure
- Highest cost to develop
- Serves the smallest constituency
- Greatest number of regulatory permits required

### Discussion

The use of the site as an all cabin park will fill a unique niche in the recreation oriented "soft camp" market. This use would maintain the integrity of the site through the implementation of a highly controlled environment but would also limit its appeal to a less casual or high price point market.

Under this concept, cabins would be spaciouly grouped throughout the site but setback from the shoreline and floodway areas. The cabins should be simply constructed and in character with the environment. A "plantation" style cottage or a design that conveys the local character is considered appropriate. The design should be durable and easily maintained but should avoid an institutional appearance or distract from the natural setting. Each cabin should be equipped with a bathroom and kitchen. The units may include separate

## Mālaekahana State Recreation Area, Kahuku Section

bedrooms or can be left as a larger open room. A lanai is desirable and ample windows providing good ventilation should be incorporated.

The cost of this type of park will be significantly higher than other options considered and would likely require high rental fees, which may discourage local residents from using the facility. From an operators perspective, the higher capital cost involved may result in creating a more restrictive environment that would discourage casual beach and picnic activities.

The carrying capacity of the park is also significantly higher than the 120 overnight users that are accommodated under this plan. While this may create a desirable experience for those staying on site, it also severely limits the number of residents and visitors that can be accommodated at the site at any given time.

Finally, a development of this nature, unless developed by the State of Hawai'i, will require a significant amount of time and resources to obtain the rezoning or conditional user permits required by the City and County of Honolulu. The project is within the Special Management Area and a Special Management Permit (SMP) is required.

### Development Cost

Development costs associated with this alternative are estimated as follows:

Infrastructure and Utilities	\$1,416,000
Site work and Landscaping	\$1,371,000
Structures	<u>\$2,703,000</u>
Total	\$5,490,000

**Mālaekahana State Recreation Area, Kahuku Section****Recommendations**

The cabin only alternative is appealing in the unique recreational opportunities it presents. No similar or comparable facilities are found on O'ahu. The use of cabins only also provides the camp with a high level of security. These advantages come at the cost of being less accessible to a number of potential users in both higher price and limited availability. In the event that the cabins do not retain a fairly high level of occupancy, it is also likely that the financial costs to operate the facility would be prohibitive. Lastly, the cabin camp would, to a degree, compete with other visitor lodgings in the area. For these reasons, this alternative is not preferred.



## Mālaekahana State Recreation Area, Kahuku Section

### 5.4 Alternative 3 – Tent and Cabin Combination

#### Intent and Goals

This alternative includes tent and cabin camping and day use. While similar to the existing use of the site, this alternative would accommodate higher densities and greater services. The cost of development would be moderate to high but may be attractive enough to encourage private development. The intent of this alternative also provides services to a broader mix of existing and potential park users. Occupant capacities were determined by engineering guidelines promoted by the State of Hawaii Department of Health, existing operations at the site, and with consideration to preserving the natural environment.

#### Concept

- 38 tent camp sites (3.0 units per acre / 10 occupants per site)
- Tent sites approximately 1,000 square feet with 10-foot buffer between sites
- Cabins approximately 800 to 1,000 square feet
- 10 cabins (2.8 units per acre / 6 occupants per cabin)
- 440 overnight users per day
- Unrestricted day users
- Tent sites clustered along calm stream zone and around cabins
- Cabins located setback off buffered shoreline area
- Shoreline picnic zone serves as buffer zone
- Informal activity area centrally located
- Day use areas have direct access to shoreline.
- Picnic areas
- Public / facility user access served by a check-in control point
- Maintenance / Baseyard located close to highway with separate access point

## Mālaekahana State Recreation Area, Kahuku Section

informal activity areas. Current park users and community members have stated that it is common practice to cluster a group of tents around a cabin. For this reason, several cabins are designated for adjacent clustered tent use. Some of the cabins are recommended to be kept in cabin only use.

Establishing uses for colocation of cabin and tent users will offer a unique recreational experience and one that is desired by residents and members of the community. Pricing for group use will allow the private operator to collect greater revenues to provide increased services to the public.

From an operations standpoint, this alternative offers the potential developer the most flexibility in operations and revenue generation. The number of overnight users that can be accommodated (440) is within the peak loads presently experienced at the site under the existing conditions. Infrastructure requirements to accommodate this number can also be easily integrated into the site.

## Development Cost

Development costs associated with this alternative are estimated as follows:

Infrastructure and Utilities	\$1,363,000
Site work and Landscaping	\$1,199,000
Structures	<u>\$1,875,000</u>
Total	\$4,437,000

## Recommendations

Mixed tent, cabin and day use functions are presently located on site. While these facilities remain in demand, the present state of repair for this eclectic inventory of substandard facilities does not approach the potential that the park could offer. The structures are former single-family homes that were relocated in less than optimal sitings. This configuration places tent camping and higher

## Mālaekahana State Recreation Area, Kahuku Section

activity uses between buildings. The largest cleared area within the park is presently off limits to park users and is underutilized as a base yard and maintenance area.

Park improvements under this alternative will require substantial investment albeit at a significantly lower level than an all cabins alternative. The co-location of the cabin sites does, however, offer the opportunity to create a very different camp experience between tent users and cabin users. This may allow premium pricing or group use structuring that assist camp operators in providing a higher level of service throughout the site. It should be noted that the DOCARE residence could be considered for cabin use and would effectively consolidate the southern most portion of the site into the Master Plan.

Based on the flexibility, product differentiation, attractiveness for development and accessibility to residents, this alternative is recommended as the preferred alternative for long-term use of the project site.



## Mālaekahana State Recreation Area, Kahuku Section

### 5.5 No Action

#### Intent and Goals

The intent of the no action alternative is to minimize any effort or expense by the State of Hawai'i with the reliance that the current or future operators or the park will manage and maintain the facility with minimal or no involvement by DLNR. Goals would be operator selected under the conditions of the lease in effect at the time. Conditions would remain as existing with no improvements by the State. No additional costs would be incurred by the State. Any improvements undertaken would occur solely at the operators expense with the approval of the State.

#### Concept

- No State funds or improvements involved.
- All improvements to be funded, developed and maintained by the operator.
- A long-term lease should be extended to facilitate operator financing.

#### Advantages

- Minimal or no costs to the State.
- No "down time" will be required for development.

#### Disadvantages

- Development costs may too high for operators without State assistance.
- Condition of existing facilities and infrastructure unacceptable for continued use.
- Does not provide increased recreational opportunities.

## Mālaekahana State Recreation Area, Kahuku Section

- Cabins located within the flood hazard zone will be uninsurable and any improvements to the structures within the flood zone will be limited.
- The park will not be ADA compliant unless it is brought up to code by the operator.

## Discussion

The park will continue to operate under a month-to-month permit issued to the Friends of Mālaekahana. Without a long-term lease, it is difficult for any operator to secure the financing that is needed to make improvements to the site. To have the facilities remain as they are, past their useful life would be of no benefit to the public. Further, as the cabins exceed their useful life, they cannot be replaced in the same location due to the flood zone restrictions.

### Development Cost

None

## Recommendations

Continued use of the park and facilities under their present condition is not desirable. An assessment of the park indicates that the structures and infrastructure are sorely in need of improvement to maintain a safe, secure and healthy environment. Costs associated with site improvements make this an unlikely alternative for a private operator and is, therefore, not recommended.

## Mālaekahana State Recreation Area, Kahuku Section

### 5.6 Preferred Alternative

All alternatives were reviewed by the Department of Land and Natural Resources, the community through two information meetings and a community workshop, and by the consultant team. **Alternative 3 was selected as the preferred alternative.** This alternative incorporates both tent and cabin camping uses and provides improved access for day users. The proposed mix of uses is similar to the existing plan but modifies it slightly to conform with current regulatory conditions, a modest change in cabin sites, and improved access to common areas including a new common area facility. It is noted that community members and regular park users recognized the similarity of the proposed plan with the existing plan, validating the ongoing success of the existing facilities and programs.

## Mālaekahana State Recreation Area, Kahuku Section

**CHAPTER 6. PARK MANAGEMENT AND OPERATIONS****6.1 Site Resource Sharing and Maintenance**

Potential synergies between the Kalanai and Kahuku Sections of the Mālaekahana SRA exist although the sites are not contiguous. Potentially, each park can be cross-marketed if each establishes a clear and unique identity. This is most likely to occur if the Kahuku Section is operated by the State. Reservations should be easily accommodated through the existing State Parks system. Maintenance schedules would be consistent with the Kalanai Section schedule although additional staffing and equipment may be required. Possibly, maintenance facilities could be located on either section, freeing on site of maintenance buildings.

If the site remains in operation by a private organization, site resource sharing is less likely to occur since private operators will be held responsible for maintenance of the leased site. Conversely, it is possible that both sections could be operated by a private concession, allowing the concessionaire the opportunity to obtain a degree of efficiency in the maintenance of two sites.

**6.2 Park Regulations and Governmental Considerations**

Presently, park regulations consist of those listed as conditions of the lease agreements with the park concessionaire and any additional regulations that have been prescribed by the concessionaire/operator. As such, the regulations in effect presently may be even more restrictive than those found in other State parks. Additionally, these regulations/conditions are presented at the park office during the check-in process. This system is beneficial and is probably a factor in the low rate of crime or public disturbance on site. This is also largely attributable to the fact that on-site management and security monitors activity and enforces any breach of regulations.

In the event that the park is operated under the State Parks system, standard rules of operations that are in effect for similar sites would be in effect. A key to



## Mālaekahana State Recreation Area, Kahuku Section

the successful enforcement of these regulations is on-site monitoring. This scenario, however, is unlikely due to the demands on State Parks personnel and due to the fiscal constraints presently in effect.

### 6.3 Public Agency Operations and Management

Park operations and staffing at Mālaekahana SRA, Kahuku Section is largely dependant on whether the facility continues to be managed by a community and/or private organization, or State Parks.

Historically, the site has been privately run as a concession and has never been under the active management of State Parks. This scenario allowed for the development of a different recreational experience from standard State Park facilities and appears to be fairly successful based on anecdotal remarks from community members and park users. It is also clearly evident that the park will be in need of substantial renovation and repair due to the condition of the existing infrastructure and buildings. Improvements of this nature are beyond the means of the current operator due to the short-term lease conditions presently in effect.

As the park must be considered for major improvements, methods of operating the park should be revisited.

Given the extremely tight fiscal constraints in effect, it is unlikely and not recommended that the State undertake such an effort on its own.

Operating the park under a concessionaire would result in conditions similar to those in effect now. A concessionaire would be selected through a request for proposals process where all interested operators are invited to submit proposals based on the framework provided by the Kahuku Section development plan. Criteria for evaluation of these proposals would be developed by the Department of Land and Natural Resources through a committee that may consists of DLNR staff and community members. Upon selection of a winning

## Mālaekahana State Recreation Area, Kahuku Section

proposal, the selected operator would pay a fee to State Parks, provide the park improvements, or both as prescribed by the negotiated lease agreement.

Having the park operated and managed by a private entity means the improvements that need to be made will be done with private funds in exchange for a long term lease. Until such time the private entity begins to recover a portion of the financial investment, no revenues will be coming to the State. If it is evident that some improvements that the State would like to have are not economically feasible, the possibility of paying a portion of the costs for the infrastructure may be pursued. Given the fiscal constraints the State has been under for a number of years, with little hope for significant revenues, initiation of the RFQ/RFP process is recommended.

### 6.4 Development and Management by a Private Entity

The project area is presently leased from the State by a private non-profit organization and operated as a fee based campsite. It has been made clear by the Department of Land and Natural Resources (DLNR) that it is unlikely that the park will be operated by the State due to fiscal limitations. The State presently operates the Kalanai Section in a manner consistent with other State parks.

Furthermore, the maintenance of existing facilities has become increasingly difficult for public agencies due to decreased fiscal resources.

Given these financial and operational constraints, DLNR intends to establish a set of guidelines that will serve as the basis for a RFQ/RFP process. This process will publicly solicit proposals from interested parties based on a set of accepted guidelines. Typically the criteria for evaluation of these proposals will include, but will not be limited to, conformance with the RFQ/RFP design guidelines, management experience, financial resources, and understanding of the project requirements.

## Mālaekahana State Recreation Area, Kahuku Section

### 6.5 Park Development Cost and Phasing

Cost for the three development alternatives considered are attached as appendices.

### 6.6 Request for Proposal Process

The Department of Land and Natural Resources intends to issue a Request for Qualifications/Request for Proposals (RFQ/RFP) process pursuant to Chapter 103D, Hawaii Revised Statutes. This process will assist the State in finding an offeror who meets the following evaluation criteria: 1) community based management; 2) accommodation of resident and visitor recreational needs; 3) landscaping; 4) cabin appearance/durability; 5) preservation of natural setting; 6) managerial capabilities; 7) financial resources; 8) rental fees; 9) local knowledge and experience; 10) revenues to the State; 11) compliance with the Master Plan; 12) qualifications for any procurement preference in accordance with Section 3-124 of the Procurement Code, i.e. State contractor's preference; and use of Hawaii products; 13) technical capability and approach to meeting performance requirements; 14) unique or innovative features.

A business plan should be included when soliciting offerors for the RFQ/RFP.

**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
**Malaekahana State Recreation Area**  
**ENGINEER'S OPINION OF PROBABLE COST - Prefinal**

September 2003

Prepared by: nsf

Item	Quantity	Unit	Unit Cost	Cost	Total Cost
<b>TENT ONLY ALTERNATIVE</b>					
<b>1. EARTHWORK</b>					
Clearing & Grubbing (Informal Play Area)	6.00	ac	4,000.00	24,000	
Clearing & Grubbing (Maintenance Area)	1.50	ac	4,000.00	6,000	
Excavation/Embankment (Informal Play Area)	2,400	cy	10.00	24,000	
Temporary Erosion Control	36.0	ac	2,000.00	72,000	
				Total:	\$ 126,000
<b>2. DEMOLITION</b>					
Cabins/Office/Managers Home	9	ea	5,000.00	45,000	
Abandon Cesspools	1	ls	20,000.00	20,000	
Other Structures/Features	25	ea	2,000.00	50,000	
				Total:	\$ 115,000
<b>3. PAVING AND PARKING LOT</b>					
Roadways (incl excavation/embankment)	6,000	sy	20.00	120,000	
Parking (300 stalls) (incl excavation/embankment)	10,000	sy	20.00	200,000	
Entrance/Exit Improvements	2	ea	25,000.00	50,000	
				Total:	\$ 370,000
<b>4. SITE IMPROVEMENTS</b>					
Trails	6,000	sy	15.00	90,000	
Picnic Tables/Benches	100.0	ea	1,500.00	150,000	
Site Improvements	36.0	ac	2,000.00	72,000	
				Total:	\$ 312,000
<b>5. WATER</b>					
FP Waterline (incl trenching)	1,200	lf	100.00	120,000	
Domestic Laterals (incl trenching)	3,600	lf	50.00	180,000	
Fire Hydrants	4	ea	6,000.00	24,000	
Connections	1	ea	10,000.00	10,000	
				Total:	\$ 334,000
<b>6. SEWER</b>					
Sewerlines	4,000	lf	60.00	240,000	
Septic Tank (5,000 gals)	4	ea	30,000.00	120,000	
Leach Field	11,700	sf	7.00	81,900	
				Total:	\$ 441,900
<b>7. ELECTRICAL</b>					
Power	36	ac	1,000.00	36,000	
				Total:	\$ 36,000
<b>8. BUILDING CONSTRUCTION</b>					
Comfort Stations (10 ea)	4,000	sf	50.00	200,000	
Pavilions (10 ea)	4,000	sf	50.00	200,000	
Field Office	3,000	sf	100.00	300,000	
Check-in Station	400	sf	50.00	20,000	
Manager's Home	1,500	sf	100.00	150,000	
				Total:	\$ 870,000
<b>9. LANDSCAPING</b>					
Site Landscaping	18.0	ac	25,000.00	450,000	
				Total:	\$ 450,000
<b>10. MISCELLANEOUS</b>					
Mobilization/General Conditions	36.0	ac	5,000.00	180,000	
				Total:	\$ 180,000
<b>SUBTOTAL (Rounded)</b>					<b>\$ 3,235,000</b>
<b>15% ESCALATION/CONTINGENCY</b>					<b>\$ 485,000</b>
<b>TOTAL CONSTRUCTION COST</b>					<b>\$ 3,720,000</b>

The Engineer does not have control over the following: the cost of labor, materials or equipment; the contractor's methods; or the competitive bidding market. Therefore the Engineer does not warrant or represent that any bid will not vary from the probable construction cost presented herein.



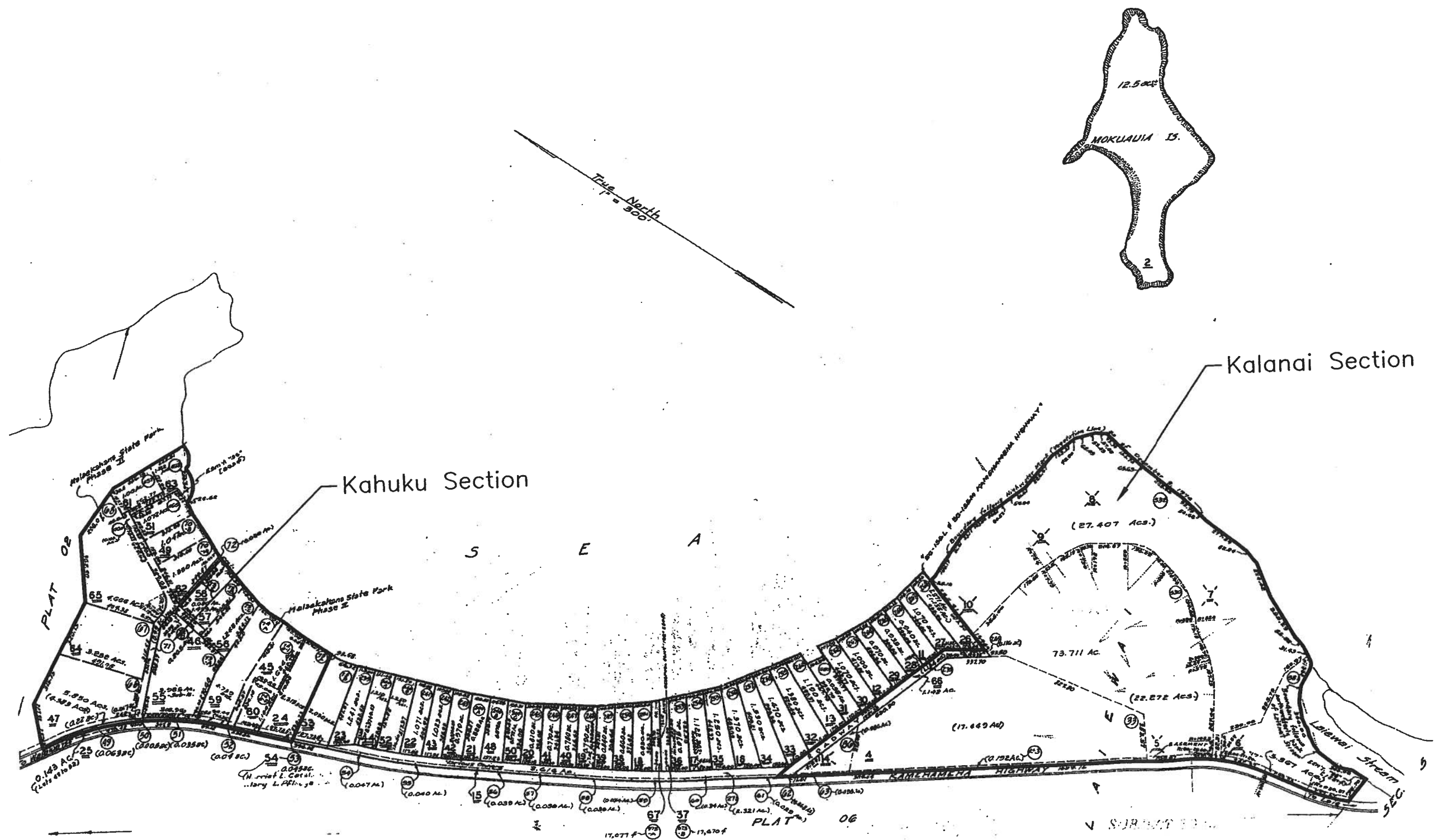
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DEPARTMENT OF LAND AND NATURAL RESOURCES					May 2003
Malaekahana State Recreation Area					Prepared by: nsf
ENGINEER'S OPINION OF PROBABLE COST - Prelinal					
Item	Quantity	Unit	Unit Cost	Cost	Total Cost
<b>TENT AND CABIN ALTERNATIVE</b>					
<b>1. EARTHWORK</b>					
Clearing & Grubbing (Informal Play Area)	6.00	ac	4,000.00	24,000	
Clearing & Grubbing (Maintenance Area)	1.50	ac	4,000.00	6,000	
Excavation/Embankment (Cabin Area)	1,000	cy	10.00	10,000	
Excavation/Embankment (Informal Play Area)	2,400	cy	10.00	24,000	
Temporary Erosion Control	36.0	ac	2,000.00	72,000	
				Total:	\$ 136,000
<b>2. DEMOLITION</b>					
Cabins/Office/Managers Home	9	ea	5,000.00	45,000	
Abandon Cesspools	1	ls	20,000.00	20,000	
Other Structures/Features	25	ea	2,000.00	50,000	
				Total:	\$ 115,000
<b>3. PAVING AND PARKING LOT</b>					
Roadways (incl excavation/embankment)	6,000	sy	20.00	120,000	
Parking (300 stalls) (incl excavation/embankment)	10,000	sy	20.00	200,000	
Entrance/Exit Improvements	2	ea	25,000.00	50,000	
				Total:	\$ 370,000
<b>4. SITE IMPROVEMENTS</b>					
Trails	6,000	sy	15.00	90,000	
Picnic Tables/Benches	100.0	ea	1,500.00	150,000	
Site Improvements	36.0	ac	2,000.00	72,000	
				Total:	\$ 312,000
<b>5. WATER</b>					
FP Waterline (incl trenching)	1,200	lf	100.00	120,000	
Domestic Waterlines (incl trenching)	1,150	lf	70.00	80,500	
Domestic Laterals (incl trenching)	2,700	lf	50.00	135,000	
Fire Hydrants	4	ea	6,000.00	24,000	
Connections	1	ea	10,000.00	10,000	
				Total:	\$ 369,500
<b>6. SEWER</b>					
Sewerlines	4,000	lf	60.00	240,000	
Septic Tank (5,000 gals)	3	ea	30,000.00	90,000	
Leach Field	11,400	sf	7.00	79,800	
				Total:	\$ 409,800
<b>7. ELECTRICAL</b>					
Power	36	ac	1,000.00	36,000	
				Total:	\$ 36,000
<b>8. BUILDING CONSTRUCTION</b>					
Cabins (10 ea)	8,000	sf	100.00	800,000	
Comfort Stations (8 ea)	3,200	sf	50.00	160,000	
Pavilions (10 ea)	4,000	sf	50.00	200,000	
Field Office	3,000	sf	100.00	300,000	
Check-In Station	400	sf	50.00	20,000	
Manager's Home	1,500	sf	100.00	150,000	
				Total:	\$ 1,630,000
<b>9. LANDSCAPING</b>					
Site Landscaping	12.0	ac	25,000.00	300,000	
				Total:	\$ 300,000
<b>10. MISCELLANEOUS</b>					
Mobilization/General Conditions	36.0	ac	5,000.00	180,000	
				Total:	\$ 180,000
				<b>SUBTOTAL (Rounded)</b>	<b>\$ 3,858,000</b>
				<b>15% ESCALATION/CONTINGENCY</b>	<b>\$ 579,000</b>
				<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 4,437,000</b>
The Engineer does not have control over the following: the cost of labor, materials or equipment; the contractor's methods; or the competitive bidding market. Therefore the Engineer does not warrant or represent that any bid will not vary from the probable construction cost presented herein.					



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Tax Map  
EXHIBIT 1

04/21/2011

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Palm Lined Service Road



Main Entry / Field Office



DOCARE Residence



Comfort Station @ DOCARE



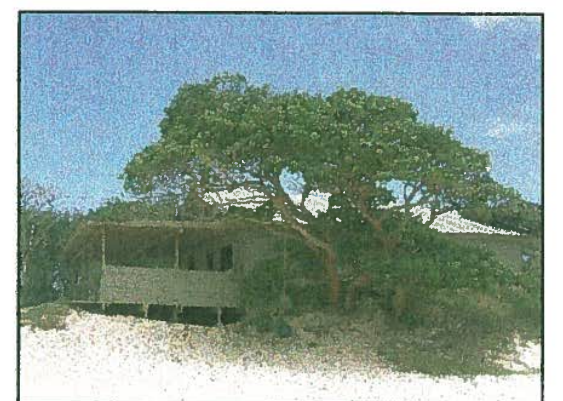
Coastal Sand Dune @ Cabin #5



Tent Site #4



Malaekahana Stream



Cabin #4

# MALAIEKAHANA STATE RECREATION AREA

## EXISTING CONDITIONS

SEPTEMBER 2003

SCALE: 1:200

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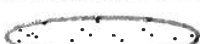



## CONCEPTUAL PLAN - ALTERNATIVE 1

### TENT ONLY

SCALE: 1:200



**WESLEY R. SEGAWA & ASSOCIATES, INC.**

Legend	
Symbol	Description
	44 Tent Sites
	Informal Activity Area
	Day Use
	Maintenance / Baseyard
	Ocean Activities
	Roadway
	Trail
	Pavilion / Comfort Station

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# MALAEKAHANA STATE RECREATION AREA

## CONCEPTUAL PLAN - ALTERNATIVE 1 TENT ONLY

SEPTEMBER 2003



WESLEY R. SEGAWA & ASSOCIATES, INC.

Legend	
Symbol	Description
	44 Tent Sites
	Informal Activity Area
	Day Use
	Maintenance / Baseyard
	Ocean Activities
	Roadway
	Trail
	Pavilion / Comfort Station





## CONCEPTUAL PLAN - ALTERNATIVE 2









### CABIN ONLY

SEPTEMBER 2003

SCALE: 1:200



**WESLEY R. SEGAWA & ASSOCIATES, INC.**

Legend	
Symbol	Description
	20 Cabin Structures
	Informal Activity Area
	Day Use
	Maintenance / Baseyard
	Ocean Activities
	Roadway
	Trail
	Pavilion / Comfort Station



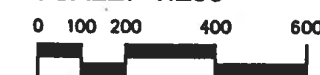


## CONCEPTUAL PLAN - ALTERNATIVE 3




### UTILITY PLAN

SEP 2003

**SCALE: 1:200**



**WESLEY R. SEGAWA & ASSOCIATES, INC.**

Legend	
Symbol	Description
	Trail
	Water Line
	Sewer Line

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