

NA ALA HELE

Hawai'i Trail & Access System

PROGRAM PLAN

**Prepared By
Division of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawaii**

May 1991



The Runner Tradition of Ancient Hawai'i

The logo of the Na Ala Hele Program represents a runner as he appears carved in the lava of Pōhue Bay, Hawai'i Island. A rich tradition associated with both the runners and the trails that they ran upon is revealed to us through the poetic sayings and history of Hawai'i. This tradition offers us insights to both the physical geography and the cultural heritage of Hawai'i.

References to the trails of the steep and precipitous district of Hāmākua, Hawai'i Island and the earthy medium of the trail at Kapu'ukolu, O'ahu, are found in *Ōlelo No'eau* by M. K. Pukui. Fornander recalls ruling chiefs such as Kiha'api'ilani of Maui as the patrons of prodigious trail building feats like "the difficult and often dangerous roads over the palis of Kaupō, Hāna and Ko'olau..." (Fornander 1969:206)

Some of the runners whose names are familiar to us today were members of chiefly families. One such runner was Makoa who was a direct descendent of Kakuhihewa, a ruling chief of O'ahu during the mid 16th century (Kalākaua 1979:31, 318). Makoa is also said to have accompanied William Ellis on his tour of Hawai'i in 1822 (McKinzie 1986: 79).

Runners were not only bearers of materials and information. The Kīpu'upu'u was a regiment of spearfighters and runners from Waimea, Hawai'i Island during the Kamehameha era. In addition, as related by Malo and Tīi, cross country running was associated with purely sporting endeavors upon which wagers were made.

It is appropriate that the logo for a program which seeks to preserve pre-historic trails for pedestrian accessways draw from the ancient past and incorporate the long standing tradition of cross country running. (Refer to the Appendix for further information on the use of trails, as depicted in Hawaiian tradition.)



EXECUTIVE CHAMBERS
HONOLULU

JOHN WAIHEE
GOVERNOR



Governor John Waihee

MESSAGE FROM GOVERNOR JOHN WAIHEE

Since Kamehameha I first decreed, "Let the old men, the old women, and the children go and sleep on the wayside; let them not be molested," Hawaii has sought to ensure safe land access for its people. Most recently, through the establishment of the Na Ala Hele program, the State of Hawaii reaffirms its commitment to this objective.

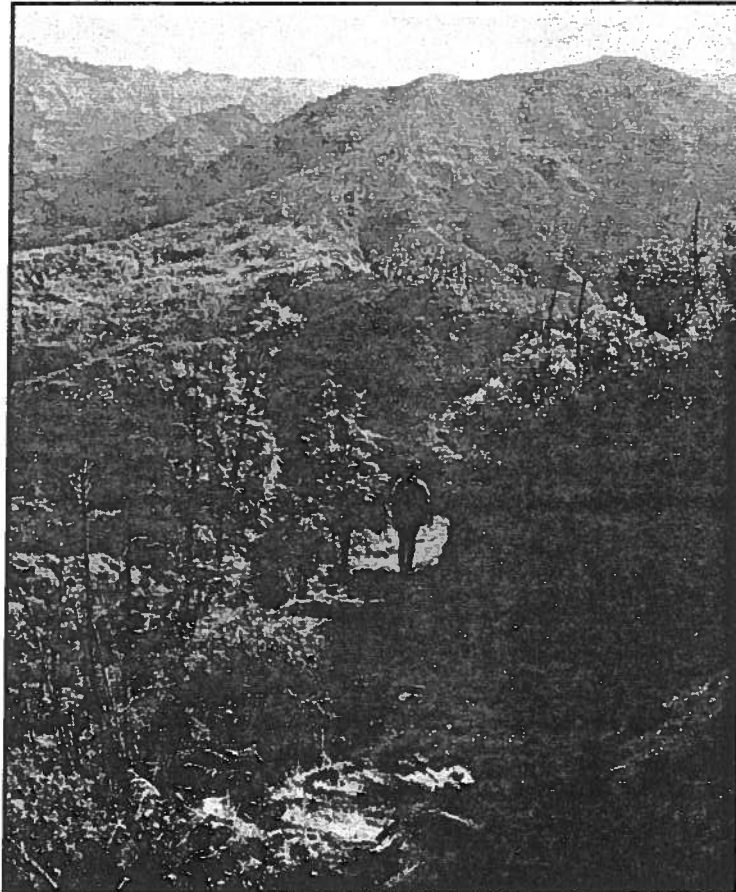
The Na Ala Hele program, within the Department of Land and Natural Resources, is a comprehensive one, addressing the preservation and maintenance of established trails and accesses, as well as defining mechanisms for adding new ones. It spans many jurisdictional entities, and provides for public involvement. It does all of this within the principles of sound land conservation.

This Na Ala Hele Program Plan is intended to guide the implementation of a program that will help all of our people to more fully experience and enjoy our very special Hawaii.



JOHN WAIHEE

Dedication



Kukui Trail, Waimea Canyon, Kauai

We dedicate this plan to Ralph Daehler, retired district forester of Kauai, who throughout his career has been a leader in the Division's outdoor recreation programs.

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INTRODUCTION

Greenways, linear parks, open space and recreation corridors, trail networks and systems, scenic and exercise byways, and urban trails, are among the words used to refer to America's growing interest in trails. These are not single pathways, but rather networks which link people to outdoor experiences.

National trends depict a population whose favorite outdoor pastime is walking. The fastest growing recreational activities are linear in nature, i.e., walking, bicycling, jogging, hiking, and horseback riding.¹

The President's Commission on Americans Outdoors, appointed in 1985, describes a vision "for allowing every American easy access to the natural world" through "fingers of green that reach out from and around and through communities all across America, created by local action," and linking these greenways through riversides, stream courses, abandoned railroad rights-of-way, neighborhood parks, utility corridors, and other open spaces.²

Residents of Hawaii have long had a tradition of using trails and accesses for subsistence activities, such as hunting and fishing. While Hawaii may lack the extensive railroad rights-of-way and river and stream corridors of the American continent, there are trail/access potentials, such as ancient Hawaiian trails, historic roads, old homestead roads, and lateral shoreline trails.

Hawaii recognized the people's need for a comprehensive trail and access system in 1988 with the passage of Act 236 (see copy and subsequent amendment, Act 53, in Appendix). "Na Ala Hele"³, the Hawaii Statewide Trail and Access System, was established to develop and improve mountain and shoreline trails and accesses throughout the State of Hawaii, while helping to conserve Hawaii's environment and cultural heritage. A successful trail and access system also contributes to Hawaii's economy by adding diversity to Hawaii's job market, enhancing Hawaii's attraction to visitors interested in outdoor recreation, stimulating recreation-oriented businesses, and purchasing a wide variety of supplies and services.⁴

Trails and accesses need to be made available to a wide range of user groups and skill levels. At the same time, traditional trail and access uses and sensitive resources unique to Hawaii must be protected.⁵ The demand for public access may conflict with the need to conserve limited and fragile resources, eg., numbers of people using an access may need to be limited through a permit system; certain areas may need to be closed to motorized vehicles. Disagreements arise when land development projects involve relocation or destruction of historic trails, or result in a loss of informal open space that was previously enjoyed by the public. Balancing these many and varied public interests and ensuring that trails and accesses are properly developed, maintained, and managed are major challenges for Na Ala Hele.

This plan is meant to be a guide and information source for Na Ala Hele staff. It is also intended to help other governmental agencies, legislators, and members of the public to understand what Na Ala Hele is trying to accomplish and how.

1. "The Urban Conscience Turns to the Environment." American Forests. July/August 1988.

2. Ibid.

3. Literal translation of "Na Ala Hele" is "Trails to Go"

"Na" - particle indicating a plural

"Ala" - trail, road, path

"Hele" - to go

4. For an in-depth discussion, see Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors. Rivers and Trails Conservation Assistance, National Park Service, 1990 Edition.

5. Hawaii has only .2% of the nation's land, 72.1% of the nation's extinct birds and plants, and 27.8% of its endangered birds and plants.

CHAPTER I. EXECUTIVE SUMMARY

A. HOW TO USE THIS PLAN

- The Table of Contents enables the reader to find major topics of interest. Keep in mind that many topics are interrelated and may also be discussed in other sections.
- Recommendations and Objectives are listed at the ends of the chapters on Organization, Planning, Management, Expansion, and Evaluation. The recommendations and objectives help to summarize conclusions and action plans based on chapter discussions. Recommendations and objectives are from Na Ala Hele's perspective and don't necessarily reflect the opinions of other agencies that have jurisdiction over trails and accesses.
- The Glossary is intended to provide an easy reference for translating acronyms and Hawaiian words used in the plan. It also contains definitions of selected trail/access terms.
- Diacritics (also called "diacriticals") are essential to the correct use of the Hawaiian language. Diacritics include glottal stops and macrons. Unfortunately, diacritics are not used in the plan due to computer, staff, and time constraints. Excepting Hawaiian place names, Hawaiian words are translated within the text and

in the glossary. "The Runner Tradition of Ancient Hawai'i" (see Appendix) is the only part of the plan with diacritics, due to its traditional and historic content.

- This plan should be updated in five years. Na Ala Hele is a new, actively evolving program. Plans, guidelines, and standards need to be flexible and are subject to change as field testing and program evaluations reveal improvements that can and should be made.

B. THE EARLY YEARS OF PROGRAM ESTABLISHMENT

Responding to the passage of Act 236 in 1988 (see copy in Appendix), the Division of Forestry and Wildlife (DOFAW) began to assemble the foundations for carrying out the mandates of the Hawaii Statewide Trail and Access System, known as "Na Ala Hele." Six island advisory councils and a Statewide Advisory Council were promptly formed. With extensive advisory council input, "demonstration trails" were selected, and visions for the program discussed. The data collection phase of the inventory of all trails and accesses in the State began in 1989 and is continuing. A warning and trail identification sign system was designed in 1990. Studies of liability issues and searches for solutions began in 1989 and are ongoing. A draft Na Ala Hele plan was released in December 1989, and extensive work on the final plan continued throughout 1990. Responding to trail/access issues on every island, identification and researching of old government roads and historic or traditionally used trails are ongoing activities.

C. NA ALA HELE'S VISION

Essential to the program's foundation is a vision: a guiding philosophy that will influence all aspects of program implementation. Na Ala Hele seeks to develop a trail and access **network and management system** which (1) provides a broad range of recreational, cultural, religious, and subsistence opportunities for all of Hawaii's people, and (2) helps to conserve Hawaii's cultural heritage and environment.

Simply stated, Na Ala Hele wants to ensure adequate public access to coastal and mountain areas consistent with sound conservation principles. The precious natural and cultural resources that are exposed to increased public use need to be protected. Lest we "love these resources to death," proper management and maintenance of trails and accesses must be an integral part of the Na Ala Hele program.

D. ORGANIZATION

Na Ala Hele's responsibilities go beyond DOFAW's jurisdiction. Typically, trail and access projects involve numerous governmental agencies with authority over certain aspects of the project. Na Ala Hele's successful implementation is dependent upon its cooperation with other State and county agencies as well as its ability to work with private individuals and organizations. Well-developed island and State advisory councils, comprised of private and governmental representatives, could serve as vehicles for the needed cooperation and partnerships.

E. PLANNING

How many trails and accesses exist statewide? What condition are they in? Where are they and are they open to public use? Which ones connect or could connect to form larger networks? What kinds of activities could be conducted, along which routes? These questions and many more are

being asked. The answers will become increasingly available as the major data collection phase of Na Ala Hele's inventory nears completion. Information contained in the inventory can be applied to trail type classifications, needs assessments, trail/access priority selections, and other planning activities. Inventory information will also be used to produce publications of trails and accesses that are open to public use. Not only will trail/access locations be published, but also information that will help the public know what to expect in a particular route.

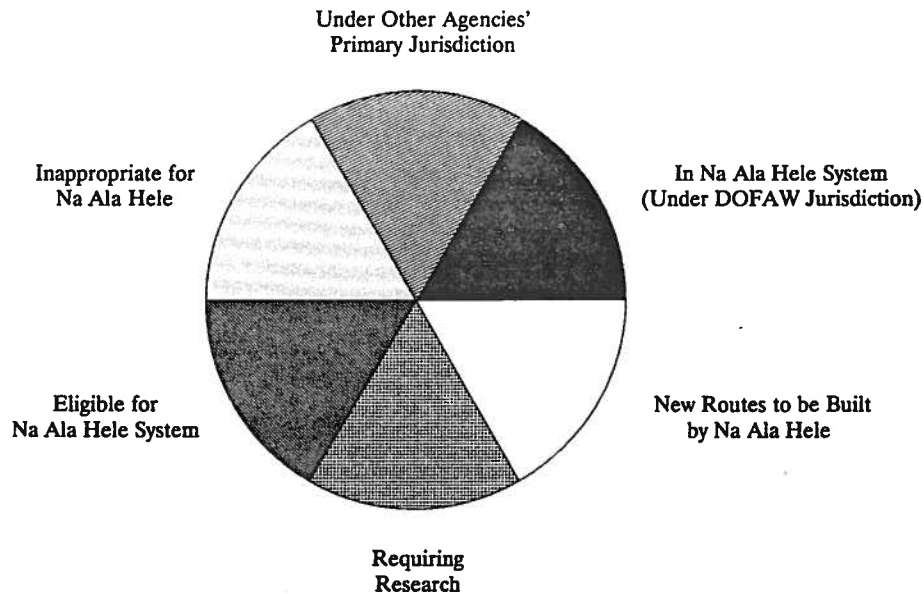
Out of the thousands of existing and potential trails and accesses statewide, which ones should receive Na Ala Hele's priority attention? In light of funding and staff limitations, Na Ala Hele needs to be selective in its resource allocation. The selection process described in the plan is designed to maximize public input while allowing DOFAW, the agency responsible for implementation, to make the final decision.

F. MANAGEMENT

Trails and accesses that are presently under DOFAW's jurisdiction are already part of the Na Ala Hele system. These trails/accesses vary in quality and are being improved with Na Ala Hele's resources. Trails and accesses that are new to the system should be properly constructed and managed. Utilizing the considerable experience and technical assistance materials of other national programs, Na Ala Hele has proposed guidelines for proper trail and access development, design, facilities, and maintenance. These guidelines will need to be field tested and improved. With the adoption of guidelines and standards, the public will be able to expect a certain level of quality in trails and accesses that are designated to be part of the Na Ala Hele system, i.e., the routes will be locatable, reasonably safe, and open to public use.

Conceptual View

All Trails and Accesses



Many trail programs in other states rely upon volunteers for trail building and maintenance assistance. However, volunteers require training and supervision from agency staff. Agency staff also need to plan volunteer programs with built-in incentives and integrate them into overall work objectives. Clearly a strong volunteer component requires agency commitment and staff time.

Through partnerships between Na Ala Hele and private organizations and individuals, volunteer and public education programs can be fostered. Public education is key to heightening public awareness of safety practices and stewardship responsibilities while fostering enjoyment of trails and accesses. Responsible behavior on the part of trail/access users can reduce

injuries and liabilities, vandalism of costly trail/access facilities and historic sites, and violations of hunting, fishing, and environmental regulations. The public needs to understand how irresponsible behaviors can lead to loss of trail and access opportunities.

Rules and regulations should be adopted that will help to govern commercial uses of Hawaii's trails and accesses and regulate the mixing and levels of use on multi-use trails/accesses in order to avoid injuries, user conflicts, and severe damage to trails/accesses and their environments.

G. EXPANSION

Trails/accesses which are already public need to be retained and improved.

Although resource limitations may prevent the opening of numerous, new trails/accesses, opportunities will arise for acquiring new ones when developments occur, or public claims are settled. Na Ala Hele should take advantage of these opportunities which may be lost if not acted upon immediately. This means a "land banking" approach whereby routes are set aside, awaiting funding, staffing, or cooperative agreements, prior to being opened to the public.

There are ways of acquiring trails/accesses, without major public funding, and Na Ala Hele staff should be trained in various acquisition methods. However, insufficient funds and staff and liability concerns will continue to hamper Na Ala Hele's ability to expand. Solutions to these problems will require persistence and collective effort.

H. PROGRAM EVALUATION

Program evaluations will help to guide program improvements. Advisory councils, trail/access users, and the staff of Na Ala Hele and other governmental agencies will be most actively involved in evaluations.

SUMMARY

Na Ala Hele is here to stay if the public continues to express the need for it. All people are members of the public, and all stand to benefit from a well-managed trail and access program. The program's success will depend on the degree to which everyone works together toward common goals.

CHAPTER II. NA ALA HELE'S VISION, GOALS, AND OBJECTIVES

A. VISION STATEMENT

To develop, via the Na Ala Hele program, a trail and access network and management system which:

1. provides a broad range of recreational, cultural, religious, and subsistence opportunities for all of Hawaii's people, and
2. helps to conserve Hawaii's cultural heritage and environment.

B. GOALS

This "Vision" has been translated into five basic goals. Chapters III - VII detail how the program will strive to implement these goals. In each chapter specific and measurable objectives are identified wherever possible. What follows is a brief overview of each goal.

Goal I - To Establish an Organization That Can Work to Achieve Na Ala Hele's Goals and Objectives. (See Chapter III, ORGANIZATION)

The scope of Na Ala Hele is such that no single agency or department has the authority, jurisdiction, or resources to effectively realize the program's goals. Na Ala Hele is currently administered by the Division of Forestry and Wildlife and has as part of its responsibility all trails and accesses under Forestry and Wildlife's jurisdiction. To include other trails and accesses in the system, Na Ala Hele must work in coordination with other divisions of the Department of Land and Natural Resources, other State, County, and Federal agencies, and private groups and individuals. The resulting organizational structure and relationships are complex, but vital if the program is to be effective.

Goal II - To Identify and Select Trails and Accesses for Acquisition, Development and Improvement. (See Chapter IV, PLANNING)

Na Ala Hele, like any program, has limited funding and staffing. Program planning must consider resource limitations. However, opportunities to acquire or protect trails and accesses could be lost forever through land development or neglect if not quickly acted upon. Program planning will utilize information contained in (1) the inventory and classification of all existing trails and accesses in the state, and (2) the evaluation and selection of trails and accesses which are given priority for inclusion in the Na Ala Hele system.

Goal III - To Provide Adequate Management of All Trails and Accesses Within Na Ala Hele. (See Chapter V, MANAGEMENT)

Acquisition of trails and accesses is only a small part of Na Ala Hele's job. It is critical that all trails and accesses are managed on an ongoing basis. Good management includes trail development, construction, and maintenance to appropriate standards, regulation of trail use, and working to ensure public safety on trails and accesses. To build support and understanding among the public for Na Ala Hele, the public should be involved in planning and management of the system whenever possible.

Goal IV - To Study and Utilize a Variety of Options and Approaches to Expanding The Trail and Access Network. (See Chapter VI, EXPANSION)

There are ways to acquire new trails or accesses, and to assert or secure rights of public access over existing trails and accesses which may be wholly or partly on public or private lands. Each option has its pros and cons, depending on the facts of each case. Staff need to make informed choices which will be influenced by the availability of money and staff resources. The legal complexities of public claims to historic trails and roads need to be better understood. In addition, liability issues impede trail and access expansion.

Goal V - To Evaluate All Aspects of the Program in Order to Identify Where Improvements Need to Be Made. (See Chapter VII, PROGRAM EVALUATION)

Na Ala Hele as a new program is treading new ground in many areas. It is inevitable that along with successes will come mistakes. The intent should be to recognize, acknowledge, and learn from these mistakes. Ongoing evaluation is an important part of a successful program. Staff, advisory councils, and affiliated agencies should be encouraged to review, analyze, and critique the program on an ongoing basis. Evaluative studies and assessments should be built into the program.

C. THE DEMONSTRATION TRAILS: EXPANDING HAWAII'S TRAIL AND ACCESS NETWORK

Na Ala Hele's initial trail and access network includes all trails and accesses currently under the jurisdiction of the Division of Forestry and Wildlife.

Expansion of this initial network is already underway through "demonstration trail" projects on each island. These have been chosen, following advisory council and Division of Forestry and Wildlife review, to demonstrate the program's potential in acquiring and managing trails in a variety of settings and governmental jurisdictions. The projects are serving to acquaint Na Ala Hele staff and advisory councils with the concerns, processes, and procedures involved in trail/access acquisition and development. As these trails are opened and new areas and recreational experiences become available, the public will personally experience the benefits of having a statewide trail and access system.

Each demonstration trail has an accompanying map. Refer to maps on pages II-8 to II-15.

1. KAUAI'S DEMONSTRATION TRAILS

Waioli Valley Access and Waioli Falls Trail

Located in Waioli, the proposed trail has an estimated total length of 3.25 miles. State-owned lands and some privately owned land would be affected. Part of the recommended route is currently a private gravel road approximately 0.6 miles long. Good routing can take advantage of the terrain's gentle slope.

The trail could be used for picnics, nature study, scenic forest reserve enjoyment, hunting, and hiking. The trail is within a very scenic watershed with waterfalls originating at the 4,000+ foot high Namolokama plateau. Rainfall in this area is approximately 75 to 150 inches annually.

The trail would ensure public access into the Halelea Forest Reserve. Currently the forest reserve lands are inaccessible to public recreation, and there is no adequate access for forest resource management, development, and improvement work.

It appears that the private roadway would need to be acquired as a public road or as a perpetual public easement before development of the Waioli Falls Trail could begin.

The proposed access and trail system has been recommended in State and County recreation plans.

Wailua Cart Road

Part of a historic road system of east Kauai, the proposed access along the Wailua Cart Road is less than 0.5 mile long and owned by the State. It is overgrown with bamboo, hau (*Hibiscus tiliaceus*), ferns and other vegetation. The road leads to the north fork of the Wailua River, which is in the Wailua River State Park. By opening the road, a part of the park not presently accessible to the public would become available. Cooperation between the Division of Forestry and Wildlife and the Division of State Parks is necessary, as trail development would directly impact the park. Trail management responsibilities need to be defined.

Recreational activities envisioned for the area include: hiking, swimming, and scenic enjoyment of a waterfall and stream. By developing this trail, the Wailua River State Park could be connected to the Nounou Forest Reserve.

2. OAHU'S DEMONSTRATION TRAIL

Koolaupoko Trail Complex

Located in Maunawili and Kaneohe, the trail complex is comprised of 15 miles of trails. Its elevations range from 200 to 1,643 feet above sea level. The major landowner is the State of Hawaii. The Luluku Banana Growers Association and Hawaii Sugar Planters Association are lessees of State-owned land in the areas affected. Other landowners within the trail complex are YY Valley Corporation, H. Castle Estate, Minami Group Inc., and Pacific UN Association.

The trails are moderately difficult to traverse. Some portions of the existing trails are graded but most are ungraded hunters' trails. Both the Kaneohe and Maunawili sections of the trail complex lie in a typical transition zone with mostly introduced vegetation in the lower elevations and a mixture of native and introduced vegetation in the higher elevations. Moderately heavy rainfall is common near the base of the Koolau Range where most of the trails are located. Uluhe fern predominates in the wetter areas.

Recreational activities envisioned for the trail complex include: hiking for a wide range of users, swimming (at Maunawili Falls), hunting, nature study, bird watching, and photography. Maunawili Valley contains archaeological sites such as a heiau (temple) and loi (taro terraces). Archaeological, flora, and fauna surveys of the proposed trail corridors are necessary prior to trail opening. The area's rich history would add to the interpretive potential of the trails.

One of the attractions at Maunawili Falls is cliff diving and jumping from various ledges into the plunge pool. Increasing recreational use of the falls may increase the possibility of injuries. There is also a flume system operating in Maunawili. The public will need to be prohibited from the flume areas due to concerns for vandalism of the flumes and water diversion systems. Proper management of the trail

complex will entail adequate signage to keep the public on the trails and warn them of dangers, restriction of the public from private and hazardous areas, and monitoring of the trails' condition and use. A number of trails, especially those in the vicinity of the Pali Highway, need to be reviewed for traffic safety, roadside walking, and parking concerns. Trail entry/exit points should be made accessible along bus routes. The trail complex's establishment would help to relieve some of the impact on other high-use trails, creating a trail complex near the urban windward areas similar to the Makiki Tantalus complex.

The trail complex would connect windward Oahu's two largest ahupuaa and two major centers of population, Kailua and Kaneohe. The complex would enhance recreational opportunities for the windward side and offer possibilities of connecting the old Pali Road to Nuuanu Valley and various Honolulu trails. The complex can be expanded in the future with potential trails to Lanikai, the ocean, and along the base of the pali in Waimanalo.

3. MOLOKAI'S DEMONSTRATION TRAIL

Maunahui - Makakupaia Trail

Located in central Molokai, the four-wheel drive trail is approximately 16 miles long with an elevation range from sea level to 3,700 feet. Although presently open to the public, the Maunahui road has no legal status as a public access way. Changes of ownership or termination of the area's game management status could result in closure of the road to the public and restriction of access to the Molokai Forest Reserve.

The major landowners involved are Hawaiian Home Lands, Molokai Ranch Ltd., and the State of Hawaii. The Nature Conservancy has a perpetual conservation easement at the Kamakou Preserve, and the preserve is a cooperative effort of Molokai Ranch, the State, and the Conservancy.

The Maunahui portion of the proposed public access way is open to the public and closed when a fire hazard exists and when road conditions become unsafe. Vegetation in the lower elevations of Maunahui consists of kiawe (algaroba) forest, koa haole (false koa), and grasses. The Kalamaula Game Management Area is located here through a cooperative agreement between the State and Hawaiian Home Lands. As one gains in elevation, the landscape first opens into pastures with silk oak, ironwood, guava, wattle, and eucalyptus trees, and then becomes a closed canopy eucalyptus forest as one enters the Molokai Forest Reserve. Increasing native vegetation occurs as one approaches the Waikolu Lookout which offers a magnificent view of Waikolu Valley. Well-known to Molokai residents is the Waikolu Picnic Grove with its picnic tables and outhouse facility. Camping permits are issued through the Maui District's Forestry and Wildlife Office. No camping is permitted in the adjacent Nature Conservancy's Kamakou Preserve. Dramatic changes in vegetation can be observed as one descends from the intersection of Maunahui and Makakupaia roads. The rainfall can vary about 75 inches a year between the road intersection and the southern coast. Native mesic rain forest at the trail's peak elevation quickly changes to open, native dryland scrub and wood lands where rare, native plants can be found. The final descent along Makakupaia road is rocky, dusty, dry, and dominated by kiawe trees and grasslands, prime habitat for axis deer and game birds. The Kamiloloa Game Management Area is located here and has been open only during hunting seasons from November to February. At the Makakupaia end of the trail by the shore is One Alii County Park, where there are bathroom and camping facilities.

It is recommended that the trail remain a four-wheel drive access. The Maunahui road is in good condition but can become impassable in rainy weather. The Makakupaia road is in poor condition and would need upgrading before being opened to the public. Along the proposed access are spectacular views of coastlines, dramatic valleys, waterfalls, and contrasting landscapes. The area is rich in scenic,

scientific, educational, and recreational values for all people of all ages. Environmental education programs would find a perfect setting here. A well-known historic site in the forest reserve, the sandalwood measuring pit ("Lua Na Moku Iliahi"), is adjacent to the Maunahui road. It is envisioned that rest stops and camp sites could be located along the access. Potentially a water system could be developed, enabling improved facilities and enhancement of the access system for public use. Proper management of the area is crucial to preserving its values.

Other four-wheel drive roads and hiking trails radiate from this established trail. Such a network of trails would enable comprehensive forest recreational and educational programs in the Molokai Forest Reserve. Securing this access would help to preserve as well as complement the present local lifestyle and contribute to a diversified economy on the island. It would also improve access for management of the surrounding natural resources.

4. LANAI'S DEMONSTRATION TRAIL

Kaiolohia - Kahue Coastal Trail

The trail is 3.5 miles long and ranges in elevation from sea level to 20 feet. It is part of a historic Hawaiian coastal trail that was reserved to the Hawaiian Government when the land was registered with the Land Court. A number of existing roads, trails and rights-of-way were reserved to government ownership for public use at the time of registration by Hawaiian Pineapple Company, Ltd. The trail would be accessible at both ends from existing four-wheel drive roads. The four-wheel drive road to Kahue is private. Access to the trail head at Kaiolohia is public. Presently there are no facilities along the trail which follows a remote shoreline.

The ancient trail is difficult to discern over much of its length, as the area is heavily vegetated with kiawe (algaroba) trees. Trail restoration and selective removal of vegetation will be necessary. Archaeological survey to help identify trail remnants and nearby historic sites is required. Long-term management and protection of archaeological sites are a concern, particularly if significant sites are located adjacent to the trail. Botanical survey of the trail's corridor and nearby surroundings will be necessary. A sufficient safety zone will need to be established along the trail route in order to distance bird, deer, and sheep hunting activities from trail users.

Activities that could be conducted along the trail include fishing, hiking for residents and visitors of all ages, picnicking, and sightseeing along what is popularly referred to as "Shipwreck Beach." The aim is to restore as much of the Hawaiian coastal trail network that once existed on the island as possible.

5. MAUI'S DEMONSTRATION TRAIL

Lahaina Pali Trail

Beginning near Honoapiilani Highway in Ukumehame and extending 4.5 miles to Maalaea, the trail ranges in elevation from 100 - 1,600 feet. At its lower elevations, the trail is in an arid area with scrub vegetation. The scrub vegetation thins and some endemic dryland plants occur at the higher elevations. The trail is located on land owned by the State of Hawaii and leased to a private rancher. C. Brewer & Co. Ltd. is also involved on the Maalaea end of the trail.

The trail is part of a historic route that once connected Lahaina to Wailuku. It may have been used by oxen and carts in the past, but as a demonstration trail will probably be restricted to pedestrian

use. Currently the trail is difficult to traverse and overgrown. Much of it is well-defined on the ground but needs improvement to make it safe for public use.

Archaeological survey of the trail and its immediate surroundings is being conducted prior to opening it to the public. Long-term protection and management of the historic trail and any adjacent sites are also part of the preparation prior to public use of the area. The trail is of interest to the Maui community and has received publicity in the past for its historic importance.

From the trail, one can enjoy excellent scenic vistas of Kahoolawe and Lanai, and whales can be observed during the winter months. It is located near population centers of Lahaina, Kihei, Wailuku, and Kahului, while offering a remote outdoor experience to trail enthusiasts. Native plants can be observed along the route as well as interesting geologic features. The trail has high potential for interpretive programs in archaeology, geology, and botany. The east end of the trail is near Maalaea Harbor where there are historic sites, refreshments, restrooms and other facilities. The west end is near a long, sandy beach where snorkeling and surfing are excellent, and one can find shade and picnic.

The Maui advisory council chose the historic, round-the-island trail network and access to the shoreline and mountain summits as its overall project. This demonstration trail is part of the historic, round-the-island trail system.

6. HAWAII'S DEMONSTRATION TRAIL

Ala Kahakai ("Trail by the Sea")

Ala Kahakai would be a shoreline trail extending from Puukohola Heiau National Historic Site in Kawaihae to the Old Kona Airport Park at Kailua-Kona. The route consists of about 50 miles of trails along approximately 35 miles of shoreline. Its elevations range from sea level to 60 feet.

The State is a major landowner along this coast. The State may have a public easement or fee simple interest in the trail itself where it incorporates ancient Hawaiian trails. Federal and county park sites and Honokohau Harbor are along the trail route in addition to several proposed State parks. Major resort developments (existing and proposed) along this coast include Mauna Kea Resort, Mauna Lani Resort, Waikoloa Beach Resort, Kona Village Resort, Kaupulehu Resort, Kukio Beach Resort, and Kohanaiki Resort. The trail route would be seaward of privately owned properties wherever possible, except where an established, ancient trail exists. Other landowners that will be affected include Bishop Estate, Liliuokalani Trust, and various landowners in Puako, Weliweli, Keawaiki, Maniniowali, Awakee, Mahaiula, and Honokohau.

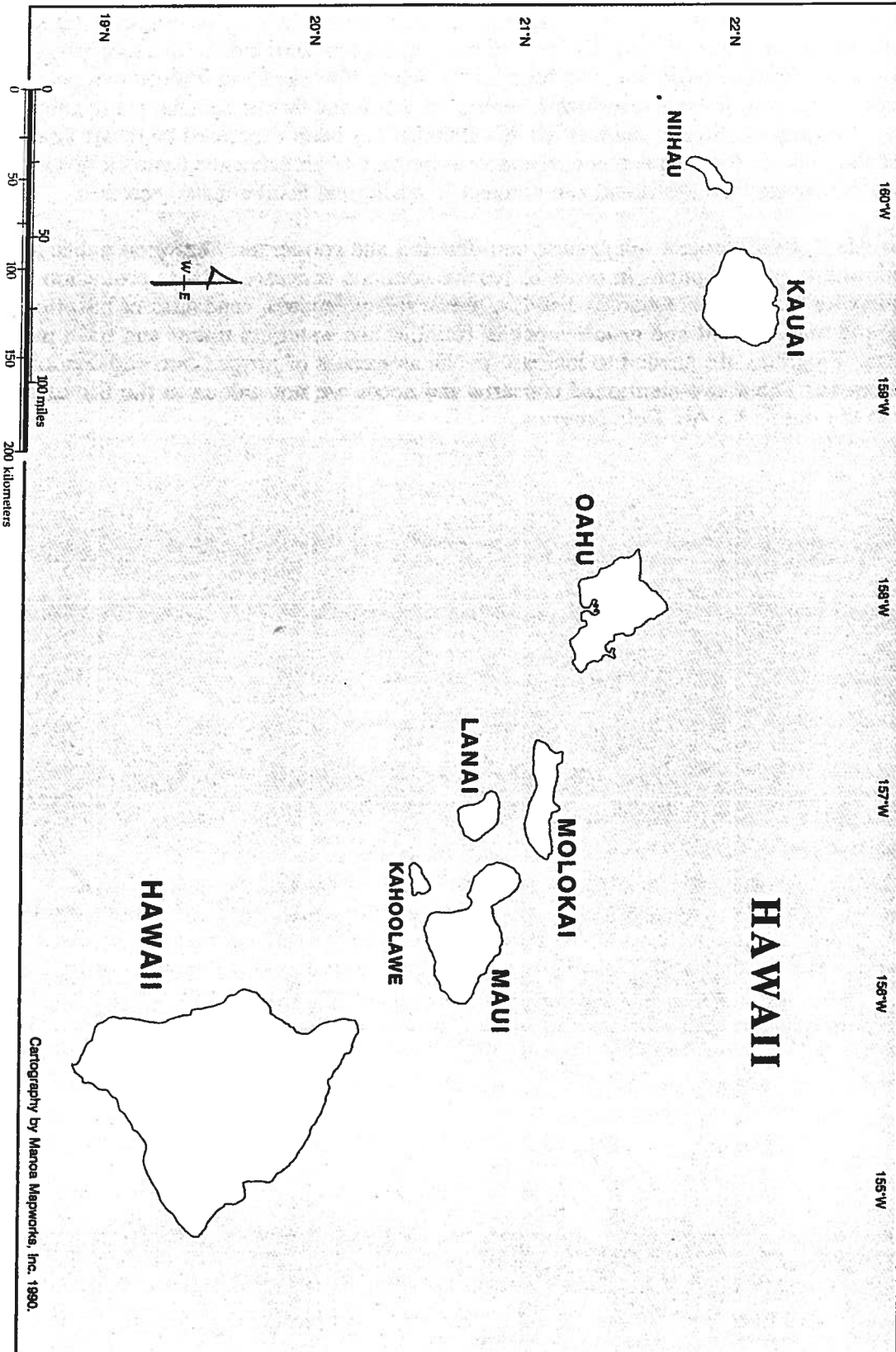
Although large sections of the ancient trail are in good condition, certain segments of it have been destroyed by wave action, four-wheel drive vehicles, and land clearing activities. Actual trail routing may need to follow roads, as in the cases of Mauna Kea Beach Hotel and parts of Puako. Some portions of the trail are already developed and maintained as public trails due to Hawaii County ordinances requiring that public shoreline access and related infrastructure be provided by resort developments. Certain parks have developed shoreline trails. By working on Ala Kahakai incrementally, as opportunities and resources become available, Na Ala Hele intends to eventually complete a continuous, pedestrian route along the coast.

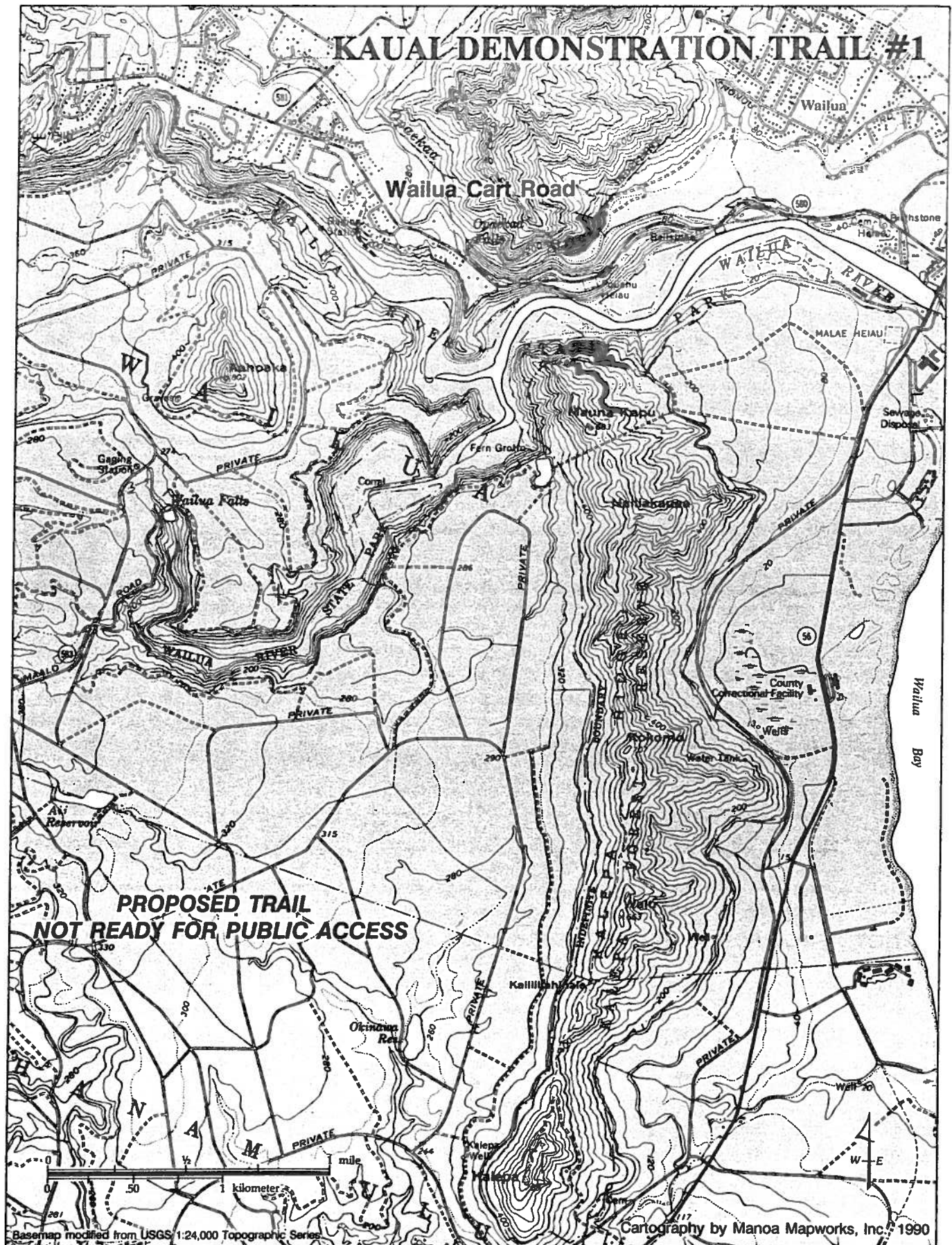
Most of the trail traverses arid, sunny areas with little or no vegetation. Some more remote areas have extensive kiawe (algaroba) growth while manicured landscapes can be seen at resort sites. Much of the trail's surface is rocky with minor elevation changes. Portions of the trail are along sandy and pebble

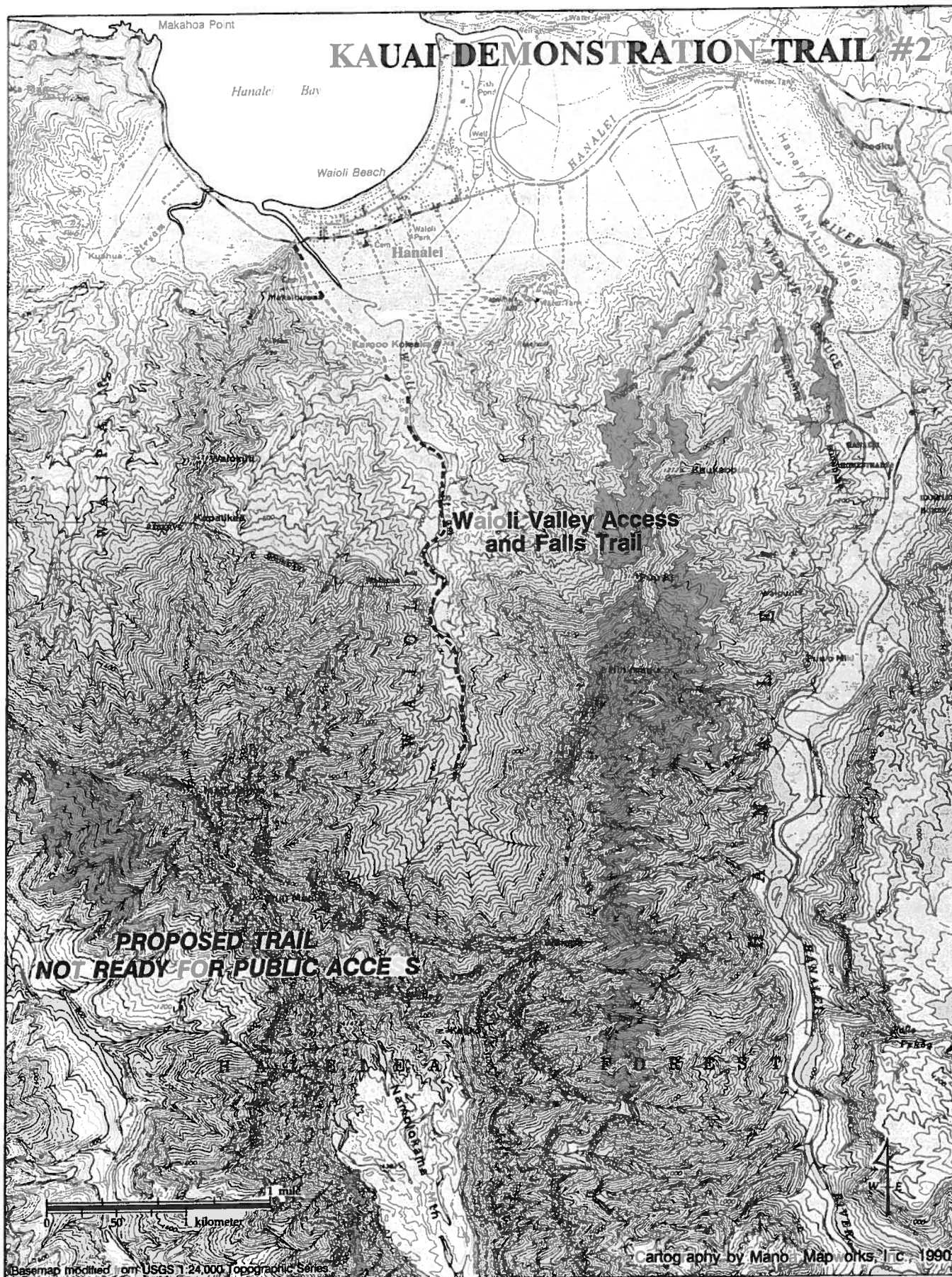
beaches while some coastal stretches have low cliffs. The majority of the Big Island's sandy beaches are located along the trail's route.

Activities that could be enjoyed along Ala Kahakai include fishing, surfing, swimming, snorkeling and other ocean sports, short or long distance hiking, picnicking, camping, nature study, sightseeing, photography, and scientific research. The coastline is rich in historical and interpretive potential. Located near the rapidly growing population centers of Kona and South Kohala, many people would benefit from this project. Strong support for Ala Kahakai has been expressed by resort interests and members of the public. Ala Kahakai is envisioned to be part of an extensive network of shoreline trails that would someday encircle the island and connect to traditional mauka-makai accesses.

The Ala Kahakai project will require coordination and cooperation between public agencies, private landowners, and the public in order to resolve common concerns such as protection of historically and environmentally sensitive resources, liability, public safety services, vandalism of historic sites, trespassing, and management and maintenance of facilities like waterless toilets and trash pick-up in remote areas. Programs are needed to increase public awareness of proper care and conduct in historic and natural areas. The above-mentioned concerns and needs are not unique to the Big Island and are applicable to the entire Na Ala Hele program.







OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

Pohakupu

0 1 mile
0 1 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

Pohakupu

0 1 mile
0 1 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

Pohakupu

0 1 mile

0 1.6 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

Pohakupu

0 1 mile
0 1 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

Pohakupu

0 1 mile
0 1 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

OAHU DEMONSTRATION TRAIL

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Koolau Trail Complex

Hoonahuli Park

Kahanaiki Stream

Maunawili

Olomana

Kukanono

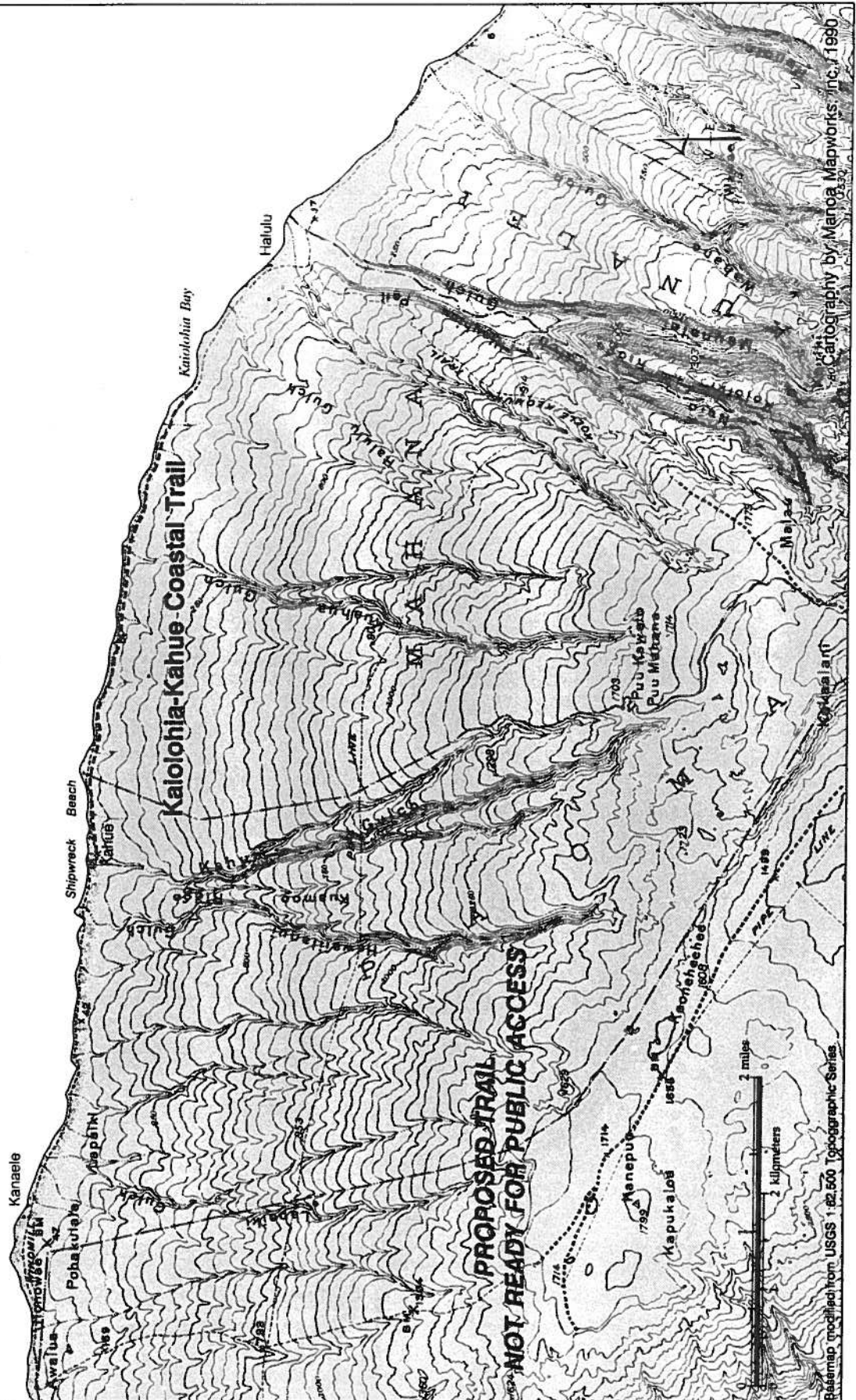
Pohakupu

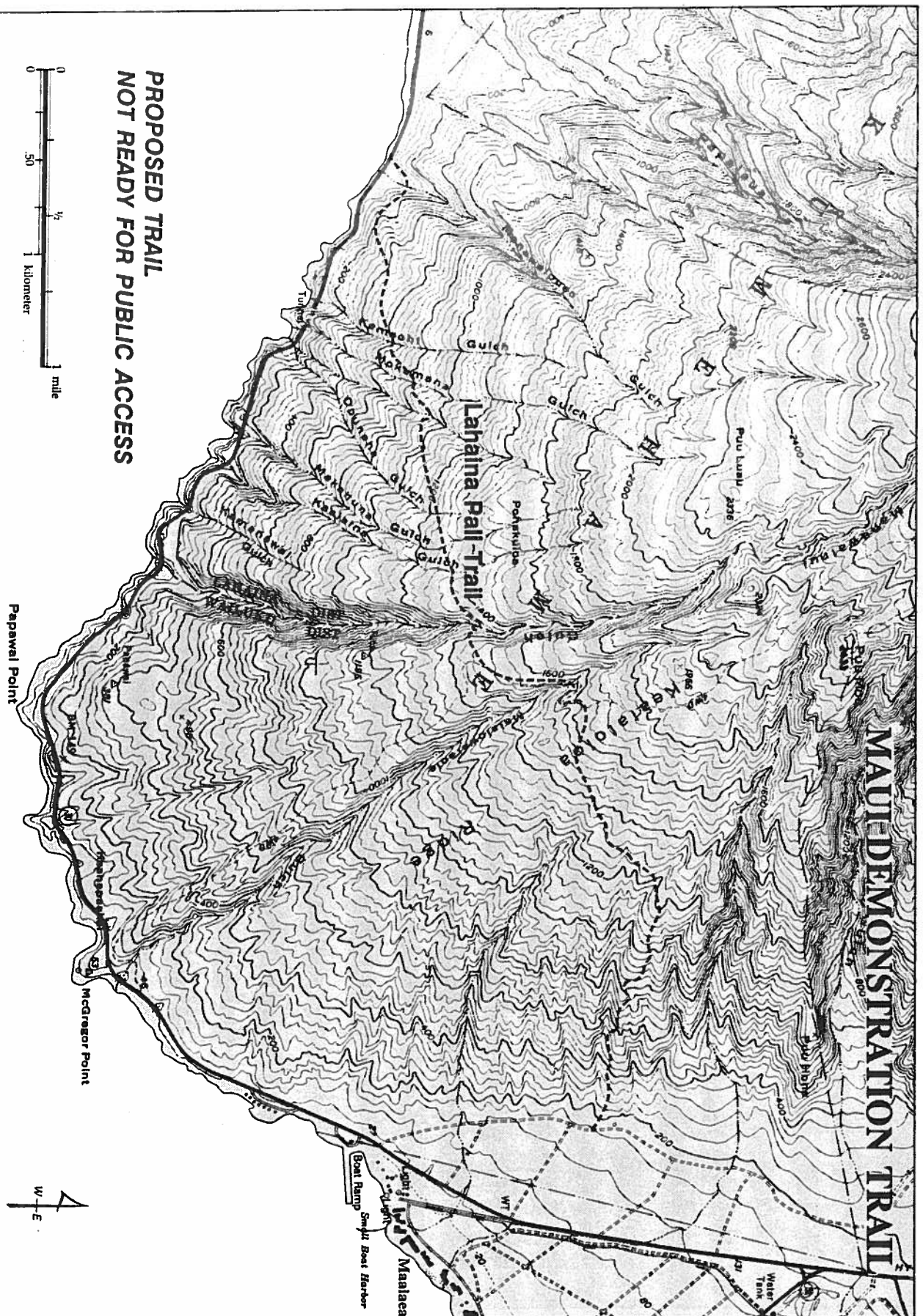
0 1 mile
0 1 kilometer

Basemap modified from USGS 1:24,000 Topographic Series

Cartography by Manoa Mapworks, Inc., 1990

LANAI DEMONSTRATION TRAIL





HAWAII DEMONSTRATION TRAIL

**PROPOSED TRAIL
NOT READY FOR PUBLIC ACCESS**

Ala Kahakai Trail

Mauna Lani Resort

Waikoloa Resort

**SOUTH KOWALA DIST
NORTH KOWA DIST**

**Kona Village Resort
Kaupulehu Resort
Kukui Beach Resort**

Ala Kahakai Trail

Kohala Resort

Kailua-Kona

Cartography by **Garrett H. H. H. H.** 1990

Base map modified from USGS 1:100,000 Topographic Series

CHAPTER III. NA ALA HELE'S ORGANIZATION: THE NEED FOR COORDINATION AND COOPERATION

A. INTRODUCTION

As the Na Ala Hele program matures, working relationships with other divisions, agencies, individuals, nonprofits and other community organizations will expand. Although now housed within the Division of Forestry and Wildlife (DOFAW), a multi-jurisdictional program like Na Ala Hele is dependent upon support and cooperation developed through both formal and informal channels. The following issues will be discussed in this chapter:

- **DIVISIONS AND OFFICES WITHIN DLNR** with which Na Ala Hele most often works
- **NA ALA HELE'S ORGANIZATION WITHIN DOFAW** including current staffing, recommended future staffing, advisory councils, and the Core Committee
- **INTER AND INTRA-AGENCY INVOLVEMENT** through which the goals of Na Ala Hele can be met
- **ORGANIZATIONAL RECOMMENDATIONS**

B. WHAT THE LAW REQUIRES

In 1974, the Hawaii State Legislature recognized the importance of an integrated, statewide trail and access system, and established Na Ala Hele through Act 69, Session Laws of Hawaii 1974. It wasn't until 1988 with the adoption of Act 236, now Chapter 198D of the Hawaii Revised Statutes (HRS), that the Legislature assigned to the Department of Land and Natural Resources (DLNR) the responsibilities of planning, developing, acquiring land or rights for public use of land, constructing, and engaging in coordinating activities to implement a statewide trail and access system.

The law is general in its assignment of the methods and roles of the DLNR in carrying out its responsibilities. Although allowing for innovation in the creation of Na Ala Hele, clear directions are provided.

Pursuant to Chapter 198D, HRS (copy in Appendix), the DLNR is mandated to:

1. Plan, develop, acquire land or rights for public use of land, construct, and engage in coordination activities to implement the statewide trail and access system.
2. Establish, maintain, and amend, as necessary, an inventory of all trails and accesses. The inventory is to include maps of each trail and access, a description of the trail or access including the agency with management jurisdiction over it, and its availability to the general public. The department must also publish and update periodically the portion of the inventory which identifies trails and accesses that are open to the public.
3. Classify each trail and access according to its function, type, theme, actual, and desired use.
4. Identify proposed, potential, and needed trails and accesses. This compilation is to include a listing of all recreational areas to which public access is unavailable or inadequate.

5. Examine in consultation with the Attorney General, legal issues such as theories, options and doctrines by which trails and accesses may be placed into or retained in public use, and the extent of liability exposure.
6. Establish volunteer advisory councils from whom advice and assistance should be solicited.
7. Act as a centralized information agency, as an advisor and assistant to other agencies, as an advocate, and as a coordinator for matters relating to the statewide trail and access system.
8. Submit an annual report to the Governor.

C. NA ALA HELE WITHIN DLNR

1. DIVISION OF FORESTRY AND WILDLIFE

The responsibility for carrying out the spirit and letter of Chapter 198D, HRS, has been assigned to the Division of Forestry and Wildlife (DOFAW). DOFAW directly manages approximately 900,000 of the one million acres of state-owned lands within the conservation district through a system of reserves, sanctuaries, and wilderness areas. DOFAW also provides technical input to the DLNR which has regulatory control for an additional million acres of private conservation land, much of which is forested. Game management, wildland fire suppression, endangered species, and wildlife protection responsibilities further extend DOFAW's area of responsibility to all corners of the State.

Although 4th smallest in size, DOFAW manages the seventh largest state-owned forest and natural area reserve system in the United States. The diversity of these reserves are unmatched in the world. There are bogs, grasslands, marine coastal reefs and dunes, estuaries, majestic rain forests, rugged lava flows, and snowy, ice-age terrain. Within these reserves is the greatest concentration of protected biological diversity in the nation.

Prior to the adoption of Na Ala Hele, much of the State's trail and access system already fell under DOFAW, which is responsible for the planning, maintenance, and development of trails and accesses within forest reserve areas. The goal of DOFAW's Outdoor Recreation Resource and Development Program is to enrich leisure time of people of all ages and capabilities by providing opportunities and facilities for developing outdoor skills and participating in recreational activities such as hiking, hunting, camping, photography, and nature study. In 1989, DOFAW constructed 8.4 miles of roads, 10.7 miles of trails, and 4 trail shelters. It also maintained 285 miles of road, 189 miles of trails, 1,062 acres of arboreta, 39 trail shelters, 34 picnic campsites, and 47 viewpoints.

Although Na Ala Hele is a natural extension to DOFAW's ongoing activities in wildland recreation, it brings new challenges and responsibilities. DOFAW's infrastructure and the comprehensiveness of its management programs provides excellent support medium for Na Ala Hele to grow. If Na Ala Hele continues to expand, it may one day need recognition as a separate division to fulfill its legal mandates. This has already occurred with the Historic Preservation Division which grew out of the State Parks Division.

2. OTHER DIVISIONS AND OFFICES OF DLNR

While administratively housed within DOFAW, Na Ala Hele must rely on the assistance of other divisions and offices in order to accomplish trail and access projects. The working relationship among the

top administrators in DLNR relies on the understanding of each division's and office's functions. The Chairperson of the Board of Land and Natural Resources (BLNR) conducts biweekly meetings with top administrators, during which pending issues are discussed. Certain division heads and their island representatives have been included as ex officio members of Na Ala Hele's island and statewide advisory councils to promote coordination between key divisions.

What follows is a brief description of those DLNR divisions and offices with which Na Ala Hele most often works:

- **Land Management Division** is responsible for managing State-owned lands. Within its jurisdiction are lands not otherwise encumbered for use by other government agencies. Na Ala Hele initiates requests for acquisition of trails and accesses through this Division.
- **State Parks and Outdoor Recreation Division** administers the State Parks system and has jurisdiction over trails and accesses within the Parks (e.g., Kahana Valley on Oahu and in the Kokee State Park on Kauai).
- **Historic Preservation Division** reviews impacts of development projects and the renovation and restoration of historic sites, fifty years or older, including historic trails. It advises Na Ala Hele in proper historic trail restoration and the management of public access to sensitive archaeological sites. The Division's Curator Program for historic sites enables public groups to be responsible for specific tasks including protection, care, and interpretation of significant historic sites.
- **Water and Land Development Division** administers the State's programs in water resources management, mineral resources assessment, flood prevention and control, water development, and irrigation services. This Division has jurisdiction over certain watershed lands and is responsible for the maintenance of instream flow standards.
- **Office of Conservation and Environmental Affairs (OCEA)** reviews and makes recommendations on all Conservation District Use Applications. OCEA acts as a clearinghouse for requests from other departments and agencies for DLNR input. OCEA refers to DOFAW for review, all applications, environmental assessments, and environmental impact statements for projects that might impact DOFAW program areas.
- **Division of Conservation and Resources Enforcement (DOCARE)** enforces conservation laws, rules, and regulations and administers the Hunter Education Program through which people are educated in outdoor safety and resource conservation.
- **Division of Aquatic Resources (DAR)** manages the State's marine and freshwater resources through programs that include enhancement of aquatic recreation, public education, and protection of aquatic resources. Marine Life Conservation Districts are under DAR's jurisdiction, and Na Ala Hele's involvement with DAR will primarily occur when developing trails/accesses along coasts and into public fishing areas.

D. NA ALA HELE'S ORGANIZATION IN DOFAW

1. DOFAW'S ORGANIZATION

DOFAW is managed under a system of District Managers on Kauai, Oahu, Maui, and Hawaii who report to the DOFAW Administrator. It is a decentralized organization with District Managers having the responsibility for the management of all forestry and wildlife programs within their district. The four major program areas are Forestry, Wildlife, Natural Areas, and Trails and Access (Na Ala Hele). Each program is represented, at both the staff and operational levels, by a program manager who serves as the Administrator's or District Manager's principle staff.

The Administrator's staff in Honolulu has no line authority over the districts but is linked through core groups made up of staff and district representatives in each major program area. The Na Ala Hele Core Committee brings together the Na Ala Hele Program Director with all the district representatives responsible for program implementation. This committee meets at least bi-monthly to review all program plans, budgets, and projects. It discusses important decisions prior to making recommendations to the DOFAW Administrator. The Na Ala Hele Core Committee brings all districts into the planning and decision-making process, resulting in greater cooperation, better program implementation, and more expeditious use of funds.

2. NA ALA HELE STAFFING

For two years, Na Ala Hele has operated with a combination of full-time and part-time consultants under the direction of the DOFAW Administrator. Through this temporary workforce, Na Ala Hele has progressed, and legislative approval has been granted for an initial number of permanent staff positions through a supplemental budget request adopted in 1990. The legislature approved six, full-time permanent positions, for a Program Director, a Clerk-Stenographer, three Trail and Access Specialists, and a Forestry and Wildlife (F&W) Technician. Another Trail and Access Specialist, three additional Forestry and Wildlife Technicians, and five Forestry and Wildlife Workers are needed in order to complete the first phase of statewide program establishment.

Figures III-1. and III-2. depict Na Ala Hele as it fits into DLNR's and DOFAW's organizations. Present and future Na Ala Hele staff are included in Figure III-2. While Na Ala Hele staff are decentralized in the same manner as other DOFAW staff, communication and coordination must be maintained with the Na Ala Hele Program Director.

The Na Ala Hele Program Director is a policy level position, responsible for the management of Na Ala Hele programs, including trails and access development, review of land use plans, public information and education, contract administration, and inter and intra-agency coordination. The Program Director serves as a liaison to the statewide advisory council.

The Trail and Access Specialist is responsible for the district level implementation of Na Ala Hele programs. The Forestry and Wildlife Technician assists the Specialist in implementation of the programs, with an emphasis on planning, organizing, and implementing volunteer programs. The Forestry and Wildlife Worker is responsible for the physical construction and maintenance of trails and accesses.

Additional positions may become necessary for future program development. For example, once the inventory now being compiled is completed, another Specialist may be needed to manage the inventory database and publication, improve the inventory's use as a planning and management tool, and work with cooperating agencies. The need for Forestry and Wildlife Technician and Worker positions

may also be increased as the program expands and as management agreements with other agencies and individuals are negotiated.

Consideration should also be given to the hiring of the following:

- An Assistant Director/Planner would assist the Program Director and would coordinate with the many other agencies whose permitting or planning functions affect trails and accesses.
- A full-time Abstractor will be required as Na Ala Hele continues to expand its efforts in locating and determining governmental jurisdiction over specific trails and accesses. Na Ala Hele's part-time consultant abstractors could be kept busy full-time with current program requests.
- The current, temporary paralegal position for Na Ala Hele in the Department of the Attorney General should be converted to a permanent position. The need for legal advice and representation will increase as Na Ala Hele becomes more fully staffed and implemented.

3. NA ALA HELE ADVISORY COUNCILS AND EX OFFICIO REPRESENTATION

The law requires that advisory councils be formed, but does not specify who shall be appointed or in what jurisdictions councils should be established. Advisory councils have been established on each island as well as statewide. Members are appointed by the Chairperson of DLNR and represent interested constituencies such as Hawaiian cultural representatives, trail and mountain clubs, mountain bikers, hikers, equestrians, hunters, fishers, environmentalists, landowners, and trail and access advocates.

The island councils of Kauai, Oahu, Maui, and Hawaii each consist of nine voting members and a varying number of ex officio members, representing governmental agencies and DLNR divisions. The island councils of Molokai and Lanai each have seven voting members. Ex officio members are non-voting. DOFAW District Managers and Na Ala Hele staff serve ex officio in council meetings. The councils operate under a set of guidelines and procedures established by DOFAW and the Attorney General. They are also bound by the requirements of Chapter 92, HRS, Hawaii's "Sunshine Law."

Councils meet on a monthly basis, take field trips as necessary, and are asked for their input on demonstration and priority trails, program plans, as well as the inventory. Councils are asked to advise Na Ala Hele on trail and access concerns and issues, discuss and make recommendations on legal issues, and promote communication and cooperation between government and community representatives.

An expanded ex officio membership of the statewide council now includes representatives from State Parks, Historic Preservation, Land Management, and DOCARE to promote effective communication between divisions. Ex officio members on island councils may include the district Land Agent of Land Management, State Parks or National Park Service representatives, DOCARE officer, and county planning and parks representatives.

The councils should form subcommittees as practical working groups in order to avoid bogging down the decision-making process. Councils should call upon additional individuals as resources on particular subjects or issues. Na Ala Hele is a program which requires public input as well as support, and the advisory councils can be helpful in that regard by holding public meetings to receive public

comments and recommendations. Council members also have a responsibility to consult with their constituencies when needed.

Advisory councils need assistance in carrying out their roles. Advisory council members are volunteers and are for the most part able to dedicate a limited amount of time to Na Ala Hele. With the assistance of Trail and Access Specialists and a Program Director, the statewide and island councils will receive more assistance in improving their structure, membership, and operations. Good communication between staff and advisory councils is essential. Voting council members provide recommendations, while governmental representatives are responsible for program implementation.

E. INTER AND INTRA-AGENCY INVOLVEMENT

To illustrate the multi-agency involvement which often characterizes trail and access projects, the examples of the Judd Trail and Koolaupoko Trail Complex are presented here:

EXAMPLE 1. - JUDD TRAIL, ISLAND OF HAWAII

BACKGROUND: In May 1990, the State claimed fee simple ownership of an approximately 16 mile long historic road built in 1849-1859, known as the Judd Trail. An application for a subdivision which included a portion of the Judd Trail was being reviewed by the Hawaii County Planning Department. This prompted the County to ask the State to study the trail's ownership status.

DESIRED OUTCOMES: The long-term objective is the eventual restoration of public access along the entire length of Judd Trail, utilizing the original historic trail route as much as possible. Recommended trail users would be pedestrians and equestrians. Na Ala Hele must work with the developer to negotiate the treatment of the trail in the subdivision site, obtain a survey of the entire length of the trail, inform adjacent landowners of its existence and the state's ownership claim, and work with landowners to realize eventual opening of the entire trail. It is also necessary to educate the public about the trail's historical significance and their responsibilities when using the trail.

AGENCIES/INDIVIDUALS INVOLVED:

- Department of the Attorney General
- Department of Transportation
- Department of Accounting and General Services- Land Survey Section
- Department of Land and Natural Resources - Divisions of Land Management, Historic Preservation, and Forestry and Wildlife - Na Ala Hele
- County of Hawaii - Departments of Planning, Public Works, and Board of Water Supply
- Private Developers and Landowners
- Long-time residents with personal knowledge of the trail's history

TASKS OF NA ALA HELE:

- Complete a land title search of the trail.
- Coordinate the study of the trail's status with the Department of the Attorney General, consultant abstractors, and the Historic Preservation Division.
- Coordinate with the Hawaii County Planning Department, keeping them informed of progress so that they will know how to proceed on subdivision application.
- Help to determine trail's original location through meetings with long-time residents knowledgeable of the trail, surveyors, Deputy Attorney General, an archaeologist, and the developer.
- Consult with the Hawaii Advisory Council.
- Assess the alternatives and what is in the public's best interest to negotiate in the proposed subdivision area.
- Negotiate with developer/landowner.
- Coordinate with Historic Preservation Division when historic sites are present.
- Request and obtain Land Management's assistance in circulating the trail proposal for comments from other agencies and divisions and in preparing submittals of the necessary documents for BLNR approval.
- Request Land Survey Section's assistance in plotting the trail on maps.

EXAMPLE 1. - JUDD TRAIL (CONTINUED)

PENDING TASKS:

- With private landowner's assistance, establish parking areas adjacent to highways in accordance with County and State requirements.
- Obtain survey of entire trail route by State surveyors and notify all adjacent landowners.
- Plan incremental opening of trail with provisions for parking, construction, restoration, management, and maintenance.
- Secure needed funding.
- Consult with the Attorney General in determining and resolving liability questions.

EXAMPLE 2. - KOOLAUPOKO TRAIL COMPLEX, ISLAND OF OAHU

BACKGROUND: Na Ala Hele's Oahu Advisory Council and DOFAW have set as a priority the development of a 15 mile Demonstration Trail traversing many jurisdictions, privately controlled lands, and neighboring residential communities.

DESIRED OUTCOME: The successful development of the Demonstration Trail complex as described in Chapter II.

AGENCIES/GROUPS INVOLVED:

- Department of Corrections
- Department of Transportation
- Department of the Attorney General
- Department of Accounting and General Services - Land Survey Section
- Department of Land and Natural Resources - Divisions of Land Management, Historic Preservation, Parks and Outdoor Recreation, and Forestry and Wildlife - Na Ala Hele
- Office of Environmental Quality Control
- City and County of Honolulu - Department of Parks & Recreation, and Board of Water Supply
- Maunawili Community Association
- Sierra Club
- Nature Conservancy
- Luluku Banana Growers' Association
- Hawaii Sugar Planters' Association
- YY Valley Corporation and Royal Hawaiian Country Club, Inc.
- H. Castle Estate
- Minami Group, Inc.
- Pacific U.N. Association
- Hawaii Service Trip Program

TASKS OF NA ALA HELE:

- Consult with community groups such as the Maunawili Community Association in the development of the trail.
- Include the Oahu Advisory Council in trail planning and implementation.
- Complete land title searches, as needed.
- Coordinate with the Land Survey Section to determine parcels affected.
- Gain the cooperation of a number of landowners and lessees to permit access.
- Coordinate with the Land Management Division in establishing agreements with private landowners and lessees.
- Prepare environmental assessments, as needed.
- Develop plan for maintenance with public and private agencies, including the Department of Corrections, City and County of Honolulu, DLNR's Division of Parks and Outdoor Recreation, and the Sierra Club.
- Involve volunteers in trail construction and maintenance.
- Develop a plan for recreational uses of the trail, working with both city and state parks, recreation experts, as well as private groups.
- Secure needed funding.
- Work with the Department of Transportation to establish parking areas.
- Consult with the Attorney General in determining and resolving liability questions.

1. NA ALA HELE AND OTHER AGENCIES

As the primary trail and access organization in the State, Na Ala Hele links DLNR's efforts and actions with those of other government agencies and private parties concerned with trails and accesses. There are presently few formal agreements between Na Ala Hele and agencies with which it must work. Informal networks on cabinet, division, and district levels have carried the program thus far. Na Ala Hele tries to keep other agencies and divisions informed through newsletters, status reports, correspondence on specific issues, and information on Na Ala Hele's priority and demonstration trails and accesses. Ex officio members of the advisory councils are in a position to be most informed about the program.

The Na Ala Hele Director and Specialists are responsible for reviewing and commenting on Conservation District Use Permits, land use boundary and zoning change requests, and county special management permits, as they relate to trails and accesses. The review processes are important to monitoring how trails and accesses might be affected by proposed land use activities.

A partial listing and description of agencies external to DLNR with which Na Ala Hele must work follows:

- **Office of State Planning (OSP)** is the chief land use planning agency for the State and advisor to the State Land Use Commission, and lead agency for the Coastal Zone Management (CZM) Program. The Land Use Commission may set conditions on land use changes which may affect either lateral shoreline access or mauka-makai access for the public. Those conditions will be transmitted to Na Ala Hele and other appropriate agencies for implementation. The CZM program supports the counties' shoreline access programs.
- **Department of Accounting and General Services - Land Survey Division (DAGS)** assists other state agencies with surveys. They are primarily involved with mapping and review of land surveys for the Department. The Land Survey Division has been assisting Na Ala Hele in conducting and reviewing surveys.
- **Office of Hawaiian Affairs (OHA)** represents the interests of the Native Hawaiian people. OHA is particularly concerned with native rights and the preservation of traditional access to trails for religious and cultural purposes.
- **Department of Hawaiian Home Lands (DHHL)** provides property and homes for Native Hawaiians. Na Ala Hele must work with DHHL in planning trails and accesses that might affect Hawaiian Home Lands and its beneficiaries. All decisions on access or trails through Hawaiian Home Lands must be approved by the Hawaiian Homes Commission which meets monthly.
- **Department of Transportation - Highways Division (DOT)** is responsible for the State's highways, as well as its bikeway system. The roles of Na Ala Hele and DOT interface as new highways and parking at trail heads are developed or expanded, as accesses to bike trails are developed, and as reopening of old government roads is considered. DOT is in the process of updating its statewide bikeways masterplan, a process which should be completed within the next eighteen months.

- **Department of the Attorney General (AG)** is the legal advisor to all departments within the State. Through the assistance of a paralegal hired under a contract from Na Ala Hele, the AG is assisting Na Ala Hele in certain administrative functions, and is working with Na Ala Hele's abstractors in researching and identifying historic trails and roads in which government has an interest.
- **Department of Health (DOH)** in its responsibilities for the environmental health of the community, establishes and enforces regulations for sanitary and waste disposal facilities such as toilets, cesspools, septic tanks, and sewers. Trails with sanitation facilities must meet DOH standards.
- **Office of Environmental Quality Control (OEQC)** is administratively attached to the Department of Health, and is involved in the review process to determine the environmental impacts of a project and any mitigation measures necessary to make the project environmentally acceptable. All notices of environmental assessments and impact statements are published by the OEQC, and all completed documents are filed with this office and the specific agency responsible for approval.
- **U.S. Department of the Interior - National Park Service** has extensive experience in trail development and maintenance and can be a valuable source of information and technical assistance. There are a number of National Parks in Hawaii encompassing many acres of land which are contributing significantly to the recreational and cultural needs of both local residents and tourists. Certain National Park representatives participate in the Na Ala Hele island advisory councils.
- **National Trails Systems Branch** was organized in 1988 to respond to increased interest in trails and trail-related activities. It is promoting the creation of a nationwide system of trails amongst all levels of Federal, State, local governments, and the private sector.
- **Rivers and Trails Conservation Assistance Program** under the National Park Service is particularly concerned with assisting states in the preservation of cultural and natural resources. Na Ala Hele has received technical assistance from this program in the form of information and referral, and studies pertaining to a variety of relevant topics.

2. NA ALA HELE AND THE COUNTIES

Through Na Ala Hele, DOFAW has an expanded role in shoreline access and urban trails, a role which overlaps with county jurisdictions. Na Ala Hele staff need to work closely with county staff in reviewing special management area permit applications as well as other county land use permits which may involve trails and accesses. Na Ala Hele's inventory (see Chapter IV.B.) could facilitate identification and review of land use permits that might affect known trails and accesses. Other county planning efforts, such as development and general plan reviews, can benefit from Na Ala Hele program input.

County agencies with land use planning functions include the Departments of Planning of the counties of Kauai, Maui, and Hawaii, and the City and County of Honolulu's Departments of General Planning, Land Utilization, and Parks and Recreation. Representatives from these county agencies serve as ex officio, non-voting members on Na Ala Hele's advisory councils.

Conditions, which can include setting aside land for trails and accesses, can be incorporated into recommendations to the counties' planning commissions and county councils. In Kauai, Maui, and Hawaii, both the planning commission and the county council have decision-making power. Decisions on proposed subdivisions, special management area permits, and zoning changes must come before these bodies. In Oahu, the planning commission, while important, is only advisory. The City Council is decision-making. Na Ala Hele's designated staff should receive planning commission agendas and should also be placed on the county councils' mailing list. Na Ala Hele staff may then review agendas and determine whether or not any item warrants closer examination.

Many land use approvals are administrative, requiring only internal review and approval by the counties. Subdivision applications, grading and grubbing permits, and building permits on lands with proper zoning for such uses or which are outside of the special management area, are all examples of land use applications which are administratively processed by the counties. By fostering collaborative working relationships between county agencies' and Na Ala Hele's staff, Na Ala Hele can increase its involvement in reviews which are done at the county level.

Na Ala Hele may be an applicant for a county permit, for example, as it becomes more directly involved with trail and access development. For example, the program may find it necessary to obtain a grading and grubbing permit which is administered by a county's Department of Public Works.

In addition, the Department of Water Supply, a semi-autonomous county agency, through its Land Division, maintains designated trails and accesses, some of which are in State watershed areas. The authority to permit public access on such trails is not clearly designated between DLNR and the Department of Water Supply.

The Hawaii Council of Planning Officials, the Hawaii State Association of Counties, and the Hawaii Parks and Recreation Association are composed of representatives of all counties. Together with the private sector these organizations hold annual meetings which include conferences on land use, environmental, and recreation issues which are of interest to Na Ala Hele.

3. NA ALA HELE AND COMMUNITY ORGANIZATIONS AND INDIVIDUALS

Na Ala Hele needs to encourage improved understanding of its entire program by working with community groups and individuals. Na Ala Hele's advisory councils can be effective vehicles for linking the program to communities, and established organizations are a source of candidates for advisory council membership. There are many types of community organizations concerned with trails and access issues, some being long time advocates for improved trails/accesses in Hawaii. In certain cases these same organizations have also planned, built, and maintained trails. The Sierra Club with its island chapters, the Hawaiian Trail and Mountain Club on Oahu, and the Na Ala Hele nonprofit on Hawaii are among the private entities with experience in trail development and maintenance. In addition, scouting organizations, equestrian and mountain biking clubs, hunters, fishers, schools, and civic clubs can be encouraged to contribute volunteer time to trail projects.

The Native Hawaiian Legal Corporation has been an advocate in historic trail issues and has participated in a legal advisory subcommittee of the Oahu Advisory Council. Organizations like the Nature Conservancy and land trusts which purchase or manage large tracts of conservation lands are also important to work with. Trail networks are sometimes developed in these lands to promote public awareness and stewardship of these special environments. Large and small private landowners are among the key players in establishing a statewide trail and access system, and it is essential that the landowner's perspective be included in the advisory councils.

E. ORGANIZATIONAL RECOMMENDATIONS AND OBJECTIVES

Staff

- Fill new positions as quickly as possible and request new positions, as needed.

Advisory Council Strengthening

- Continue to define and differentiate the statewide and island advisory councils' structure, membership, procedures, operations, and responsibilities in 1991.
- Set meeting dates of the statewide advisory council to coincide with BLNR meetings in order to enable better attendance by administrators of other divisions.
- Strengthen community representation on the councils through council membership, active participation at meetings by non-members representing important interest groups, and use of public meetings which are publicized to encourage public attendance.
- Provide relevant training opportunities to advisory council members.

Inter and Intra-Agency Coordination

- Use agreements to define the responsibilities of each cooperator in a trail/access project.
- Continue to utilize biweekly meetings of the Chairperson of BLNR with top administrators to discuss Na Ala Hele intra-departmental concerns.
- Use biweekly cabinet meetings with all department heads and the Governor to discuss inter-departmental concerns of Na Ala Hele.
- Network with government agencies through existing organizations, such as the Hawaii Council of Planning Officials, Hawaii State Association of Counties, and the Hawaii Parks and Recreation Association.
- Explore national sources of financial and technical assistance.
- Increase cooperation between Na Ala Hele and OSP in trail and access planning.
- Continue to improve ex officio representation on the Na Ala Hele advisory councils.
- Train Na Ala Hele staff in meeting the requirements of other agencies for trail and access projects.

Land Use Review Process

- Place appropriate staff offices on the mailing lists to receive Land Use Commission notices and agendas, OEQC Bulletins, and county planning commission and county council agendas.

- Assign specific staff people to review and comment on all land use applications and plans affecting trails and accesses.
- Provide all departments, divisions, and agencies that have jurisdiction over trails/accesses with information on Na Ala Hele's priority trails and accesses.
- Provide governmental cooperators in the inventory with copies of the inventory so that it can be used when permits and applications are reviewed.
- Examine existing rules and practices and pursue adoption of rules or policies which will ensure consistent referral of trail/access matters to Na Ala Hele by other departments, divisions, and agencies.

Private Sector

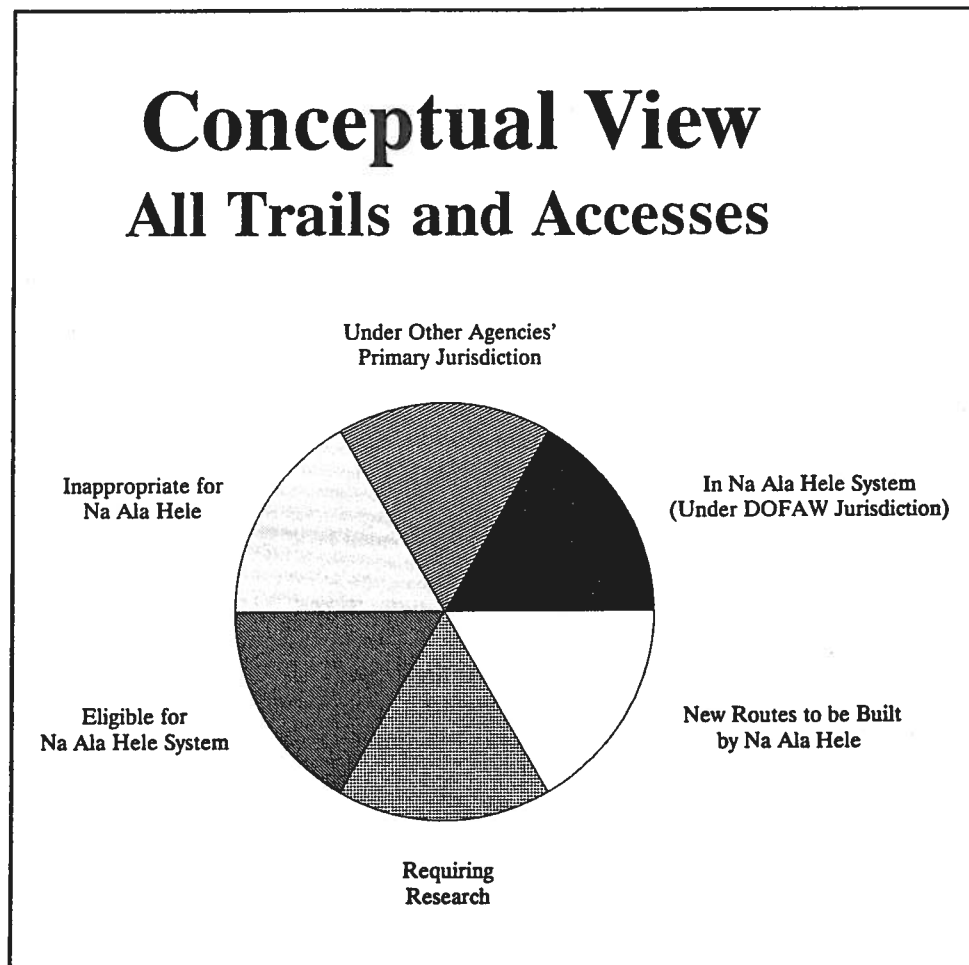
- Continue to keep community groups and individuals informed of program progress and activities through newsletters, publications, and reports.
- Keep property owners whose lands may include trails or accesses informed of Na Ala Hele's work and intentions.
- Encourage staff attendance of meetings with nonprofit organizations and interested individuals.
- Explore private sources of financial and in-kind support.

CHAPTER IV. PLANNING - HOW TRAILS AND ACCESSSES ARE IDENTIFIED FOR ACQUISITION, DEVELOPMENT, AND IMPROVEMENT

A. INTRODUCTION

Section 198D-2, HRS, directs Na Ala Hele to plan, develop, and otherwise implement a system which includes all of Hawaii's trails and accesses. To help depict this broad mandate in the context of funding, staffing, and jurisdictional realities, see Figure IV-1. **Conceptual View: All Trails and Accesses.** Utilizing an inventory of all trails and accesses in the State, Na Ala Hele can identify and select those trails and accesses that should become part of the Na Ala Hele system.

Figure IV-1.



Na Ala Hele's major planning components are:

- **IDENTIFICATION** of all existing trails and accesses with ongoing updates and corrections
- **CLASSIFICATION** of existing and candidate trails/accesses according to descriptive characteristics deemed of value to users and managers and use of a key tool of classification: **TRAIL TYPES**

- **EVALUATION, SELECTION AND PRIORITIZATION** of trails and accesses which should be included in the Na Ala Hele program.

B. IDENTIFICATION

1. WHAT THE LAW REQUIRES

Section 198D-3, HRS, directs the Department of Land and Natural Resources to "establish, maintain, and amend, as required, an inventory of all trails and accesses in the State, whether wholly or partly on public or private lands and whether or not under the jurisdiction of the department, and a separate inventory of all trails and accesses to public hunting areas in the State." The law specifies the kinds of information that must be included in the inventories. The department is further instructed to "publish and periodically update documents, which shall be available to the general public. The documents shall contain that portion of the inventories which include trails and accesses available for the use of the general public."

2. THE INVENTORY

A comprehensive inventory which records the existence of all trails and accesses is fundamental to the planning of a statewide trail and access program. The inventory provides Na Ala Hele with an overall perspective of the types of trails/accesses which exist and their many characteristics.

Additionally, when land use applications and other development proposals are reviewed by government agencies, the presence of trails/accesses on or adjacent to the subject properties can be more easily determined using the inventory. Another potential use of the inventory is in search and rescue of missing persons.

The inventory is in a computerized database which enables information to be easily updated and corrected. It also enables quick retrieval of information.

Each trail and access inventory record contains the following information:

- Location according to USGS quadrangle map, island district, and Tax Map Key identifications
- Traditional and popular name of the trail/access
- Whether it is known to be ancient (created in or prior to 1892)
- Land ownership of property over which trail/access passes
- Primary manager of trail/access
- Whether it is part of a larger network
- Length, elevation range, climate in which it is located
- Physical condition - frequency of maintenance, hazards, degree of difficulty for foot travel, recommended method(s) of transportation along trail/access
- Special activities that can be enjoyed along the trail/access and any amenities/facilities present
- Any restrictions on use of the trail/access and whether or not it is available for general public use
- Other brief comments considered necessary for the record

Kauai, Maui, and Hawaii Counties and the City and County of Honolulu are assisting with the shoreline trail and access portion of the inventory.

3. UPDATING AND CORRECTING THE INVENTORY

A thorough inventory of existing trails and accesses on all islands will include thousands of records. The condition and status of trails and accesses may change over time, requiring updating and correcting of the recorded information by Na Ala Hele and all cooperators in the inventory. Thus the inventory will never be "complete." To be useful, the inventory must be accurate, and this will depend upon the program's ability to keep the records current.

Updates of the inventory records will be made at regular intervals (i.e., biannually) by DOFAW and the Counties. The process of updating will be done by (1) reconciling changes in the database at the district level based on input from each county and DOFAW office; (2) submittal of each island's updated inventory for reconciliation by the main Honolulu DOFAW office, which will manage the statewide inventory; and (3) distribution of the statewide updated information by the Honolulu office to each of the DOFAW district offices, the counties, and other cooperators in the inventory system.

4. PUBLICATION OF THE INVENTORY

Publication of all inventoried trails and accesses available for general public use will allow residents and visitors to locate trails/accesses of interest to them. The publication will contain both maps and descriptive details, and will be in the form of a binder with removable pages that will be available at key locations statewide, public libraries, and certain State and county offices. Maps will be at a scale which allows easy location of the trail or access. The public will be able to select those trails/accesses which are of greatest interest and photocopy the records at a nominal cost. This system has the advantages of:

a. being easily updated (Incorrect pages can be replaced, offering more current information to the public than would be available through infrequent reprints.);

b. generating minimal waste of paper (By enabling selective copying of information, the amount of partially used guides discarded after the users' trip is over will be significantly reduced. Also litter generated by those who improperly dispose of guides will be minimized.); and

c. being cost-effective (Program funds can be concentrated on trail/access acquisition, development, and maintenance, and large expenditures for printing and updating guides can be avoided.).

B. CLASSIFICATION OF TRAILS AND ACCESSES

1. WHAT THE LAW REQUIRES

Section 198D-4, HRS, requires the department to classify each trail and access in the inventory according to "function, type, theme, actual and desired use intensity, and any other classification deemed necessary or desirable by the department."

2. RATIONALE AND PURPOSE OF NA ALA HELE'S TRAIL AND ACCESS CLASSIFICATION

One of the applications of Na Ala Hele's inventory is to facilitate classification of trails and accesses.

Na Ala Hele's classification system is designed to provide efficient retrieval of information that would be of interest to the trail/access user, planner, and manager. Classification can tell users what to expect in a particular trail/access. Planners look to classification systems for help in planning a system that includes sufficient variety of trail/access types and satisfies community needs. Managers look to a classification system for guidance in determining desired trail/access standards of development, monitoring requirements, level of use, and maintenance requirements.

The inventory's database format allows for classification according to a wide variety of attributes. The format enables selective and quick retrieval of information, depending on the requestor's needs. Through classification, information can be selected, evaluated, compared, and contrasted. This ability can be a powerful planning and management tool.

3. TRAIL TYPES

Na Ala Hele has developed **Trail Type** designations which are the core of the trail/access classification system.

"Trail Type" designations (**urban, rural, wildland, and sensitive**) are organized around the physical setting but also reflect the fact that trails and accesses provide people with various experiences. It is important to note that Na Ala Hele is not simply making trails and accesses physically available to the public. Through planning, design, and management, Na Ala Hele is working to satisfy the public's demand for a diversity of trail and access-related experiences in a variety of physical settings. The aim is to develop a system that allows people to safely pursue their desired experiences, be these recreational, educational, cultural, inspirational, or practical (i.e., subsistence hunting and fishing). Certain trails will exhibit a combination of trail type characteristics, e.g., trail complexes or a lengthy trail beginning in a rural environment and extending into a wildland setting.

The challenge, for both planning and management, is to maintain a balance between the protection of the **physical setting** (biophysical and cultural-historical resources), the **social characteristics** of public use (the mixture of users, their equipment, and behavior), and the **managerial requirements and options** (facilities, personnel, rules and regulations). The trail type guidelines can help in this regard by clarifying the needs, constraints, and possibilities presented by different uses and environments (Refer to the Trail Type Guidelines and Figure IV-2.). Decisions about trail and access design and management will be made on an individual basis, but will be influenced by the Trail Type Guidelines.

4. TRAIL TYPE GUIDELINES

URBAN

Description: Trails which may follow natural features (such as streams and coastlines) but which are primarily within an urban/suburban environment.

Intent: To provide an alternative route to existing streets, sidewalks, etc., and to provide access to natural features found within primarily urban and suburban areas. The main intended use is for recreation, but many urban trails could also receive significant commuter traffic (i.e., alternative access to neighborhood parks, schools, work, bus stops, and community centers).

Accessibility: Should be easily accessible to a wide variety of users, including the casual user and, whenever possible, persons with disabilities.

Mode of Transport: Primarily intended for pedestrian and bicycle use. Equestrian use may also be possible, providing the trail is of sufficient width, is appropriately surfaced, and provision is made for clean-up.

Facilities: Should be provided whenever necessary to make urban trails readily accessible to the general population. Examples include directional, informational, and safety-related signs, fencing, bridges, benches and/or picnic shelters, parking areas, emergency telephones, and sanitation facilities.

Examples: Oahu: existing shoreline accesses in Waikiki and Kailua, as well as trails such as those proposed for stream corridors within Honolulu; Hawaii: shoreline accesses at resorts in North Kona and South Kohala.

RURAL

Description: Trails and accesses in areas where the presence of people is visible on the landscape. Rural trails are located in areas which are predominantly natural, but those areas may be managed for a variety of uses, including other types of recreation (golf courses, inland or coastal parks), watershed, forest products, farming, and hunting. A wide range of trails will fall under this heading, including many jeep and hunting trails.

Intent: Should place an emphasis on providing a diverse recreational experience in a natural environment for a variety of people. Rural trails or accesses may adjoin or traverse residential or resort developments, but the location and potential expansion of such developments may result in a rural trail becoming an urban trail.

Accessibility: Should begin and end near public transport routes or settlements whenever possible.

Mode of Transport: Should be available to a variety of users, and can potentially include all transport types.

Facilities: Should complement the particular trail's level and type of use. Levels of facility development may range from basic safety and directional signage to facilities such as camping sites, shelters, equestrian and hunting related improvements, bridges, and roads. Parking and sanitation facilities should be provided where necessary.

Examples: Oahu: portions of trails comprising the Manoa Falls and Makiki Tantalus Complex, and the Koolaupoko Demonstration Trail Complex; Kauai: trails in Moalepe and Kuilau, up the "Sleeping Giant," and portions of Kokee State Park's Trail System.

WILDLAND

Description: Trails or accesses in "primitive areas" which are without permanent improvements or human habitation and are protected and managed so as to preserve their natural condition. These areas should be scenic and wild, not highly sensitive to human presence, and will generally be managed for multiple uses. These may include watershed protection, conservation of native flora and fauna, hunting, and back country hiking and nature study.

Intent: Should provide an opportunity for solitude and recreation in a largely natural environment.

Accessibility: Many people seek a wildland experience, and thus a variety of trails and accesses should be provided in this category, from those accessible to young or relatively inexperienced hikers to "routes" which demand significant outdoor skills and stamina. In many cases degree of difficulty will be a function of the terrain and setting of the trail.

Mode of Transport: Primarily for pedestrian use, with equestrian and bicycle use allowed as appropriate.

Facilities: To protect both the trail environment and experience, the building of roads, cabins, and extensive recreational facilities should be minimized, and any facilities which are provided should be designed to be as unobtrusive as possible. Sanitation facilities should be built where necessary.

Examples: Many National Park trails; Kauai: Na Pali Coast Trail; Hawaii: portions of the Ala Kahakai Coastal Trail and the Humuula Trail; Maui: Waihee Ridge Trail and trails in Polipoli; Oahu: portions of the Koolaupoko Demonstration Trail Complex and the Aiea Loop Trail.

SENSITIVE

Description: Trails or accesses in areas which are sensitive to human disturbance due to natural or archeological features.

Intent: To provide public access to important cultural and educational resources. While incorporation into Na Ala Hele means a commitment to some form of public access, the primary concern in management of these areas and of the trails/accesses in them should be protection of sensitive resources, including native flora and fauna, historic trails, and other archeological features.

Accessibility: Due to their educational potential, attempts should be made to provide access for all ages and abilities to at least some trails and accesses classified as sensitive. Access may need to be controlled via permits, number limitations, or restrictions limiting use to daylight hours only, and special provisions may need to be made for activities such as sport and subsistence hunting.

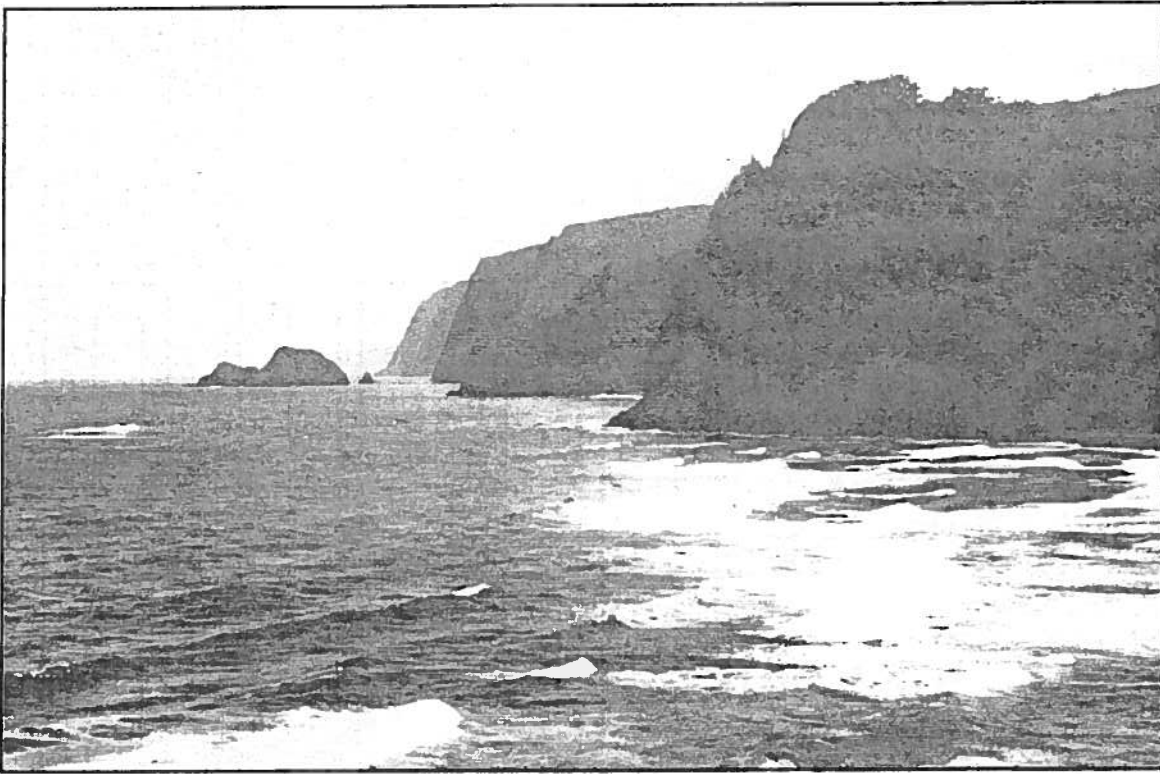
Mode of Transport: Restricted to pedestrian traffic to limit impacts on fragile resources. Horses may be allowed on historic trails which were constructed for their use.

Facilities: These trails will not feature extensive recreational amenities and will generally incorporate only those facilities which are necessary to protect the resource (i.e., restrooms, boardwalks, signs, etc.).

Examples: Kauai: Alakai Swamp Trail; Molokai: Pepeopae Bog and Hanalilolilo in the Nature Conservancy's Preserve; Maui: Ahihi-Cape Kinau Natural Area Reserve; Hawaii: Puu O Umi Natural Area Reserve.

Figure IV-2. Trail Type Guidelines

| | URBAN | RURAL | WILDLAND | SENSITIVE |
|---|---|--|--------------------------------------|--------------------------------------|
| FACILITIES | <-----Extensive-----> | <-----Moderate-----> <--As Required for Safety and Resource Protection--> | | |
| SIGNS | <-----Sufficient to Allow General, Casual Use-----> | <-----Minimal-----> (Sufficient for Resource Protection) | | |
| HOW APPARENT ARE MANAGEMENT ACTIVITIES? | <-----Obvious-----> <-Apparent, but Natural in Appearance-> | <-----Minimal Intrusion-----> | | |
| PERMITS | <-None-----> | <-----As Required for Management-----> | | |
| USE OF REGULATION | <-Extensive-----> <-----Moderate-----> | <-----Minimal-----> | | |
| DESIGN AND CONSTRUCTION PARAMETERS | <-----Vary in all Cases-----> | | | |
| DESIGN NOTES | •Trails are for Widespread Use •Access for the Disabled a Priority | •Design to Allow Maximum Flexibility for Different Uses | •Design to be Minimally Intrusive | •Resource Protection is Top Priority |
| TRANSPORT TYPE | <-----> <-----Pedestrian-----> <-----Bike-----> <-----Horse-----> <-----4WD-----> | | | |
| DEGREE OF DIFFICULTY | <-----> <-----Easy-----> <-----Moderate-----> <-----Difficult-----> | | | |
| SOCIAL INTERACTION | <-----Frequent Contact-----> | <-----Occasional Contact-----> | <-----Infrequent or No Contact-----> | |
| ACCEPTABLE LEVEL OF USER IMPACTS | <-----High-----> | <-----Moderate-----> | <-----Low-----> | <-----Very Low-----> |



View from Pololu Valley Overlook in North Kohala, Hawaii

C. EVALUATION OF TRAILS AND ACCESSES

Evaluating trails and accesses for inclusion in the program is difficult, as it demands that we weigh the merits of trails and accesses on all islands, which may incorporate very different features and appeal to completely different segments of the public. Evaluating a trail/access requires more than merely asking "Is this one of my favorite trails?"

1. GENERAL CONSIDERATIONS IN TRAIL AND ACCESS EVALUATION

The following considerations are important in developing the broad perspective necessary in carrying out sound and informed planning decisions.

a. Assessing Available Trail Resources

The relative numbers and geographic distribution of different trail/access types and their availability to the general public can be analyzed using the inventory's database. The program's intent is to satisfy a broad range of user groups by providing a variety of trail types that are distributed geographically within the individual islands and across the state. Careful review of presently available trail and access resources will help indicate where additional trails or accesses are needed.

Resource assessment must also consider Na Ala Hele's funding and staff capabilities, as well as the willingness and abilities of other key agencies to cooperate in trail/access projects.

b. Gathering Public Input

The advisory councils, through their members, ex officios, and public/user group contacts, are in a position to be informed of general public concerns. Advisory councils will need to gather input through public meetings in order to assess public and community trail/access needs and preferences. In addition, more formal surveys can be carried out in conjunction with DOFAW and other DLNR divisions.

c. Identifying Issues and Concerns

Issues and concerns relating to features and characteristics unique to each island, region, or type of trail/resource (i.e., historic Hawaiian trail, subsistence-use trail, trails in Natural Area Reserves) need to be identified. If appropriate, policy statements can be developed which express Na Ala Hele's concerns and position with respect to the natural, historic, and/or recreational resources involved.

d. Assessing Urgency

Ongoing land sales and developments sometimes threaten the continued existence of trails/accesses or present opportunities for improved public trails and accesses. In such instances Na Ala Hele must assess the urgency for action in various regions.

e. Providing for Persons with Disabilities

Na Ala Hele recognizes the need to provide more trail/access opportunities for persons with disabilities.

Pursuant to Chapter 504 of the Rehabilitation Act of 1973, Na Ala Hele must prepare a "Self-Evaluation Plan." This plan is an evaluation of programs, activities, policies and practices to determine what actions need to be taken in order to comply with Chapter 504. The plan, which must be available for public inspection, should identify problem areas and note planned corrective actions. A "Transition Plan" is also required which identifies structural changes needing to be made to existing facilities in order to achieve accessibility. Both plans should identify corrective measures planned for a five year period and must be developed with the input of persons with disabilities. Sample Self-Evaluation and Transition Plans and more guidelines to designing accessible outdoor recreation facilities are available in the Na Ala Hele library.

2. EVALUATION OF SPECIFIC TRAILS AND ACCESSES

Na Ala Hele has developed eight basic criteria which are intended to be used as guidelines by advisory councils, ex officios, and staff when specific trails and accesses are considered for program inclusion. The criteria have been incorporated into the "Trail and Access Evaluation Form" (see Appendix), to be used in the **TRAIL AND ACCESS SELECTION PROCESS** (see Chapter IV.D.). Admittedly this process is a subjective one. None of the basic criteria are intended to have more weight or significance than another. The trail/access must be evaluated in the context of the larger trail and access system, in light of public needs and demands, and the resources of the responsible agency(ies).

CRITERIA

Recreational

- Does the trail/access contribute to Na Ala Hele's intent of enabling a range of outdoor recreational opportunities? (Consider subsistence and sport activities such as hunting and fishing, camping, strenuous hiking, nature study, picnicking, meditation, and solitude.)
- Does the trail/access contribute to Na Ala Hele's intent of providing for the needs of a variety of user groups? (Consider the elderly, the young, the disabled, families, strong and experienced hikers, first-time hikers, and visitors.)

Intrinsic

- Are there special features that attract trail users (e.g., waterfalls, scenic vistas, beaches, unique historical or biological sights)?
- Does the trail follow a route with outstanding scenic, cultural, or historic value?

Accessibility

- Is the trail accessible to a wide variety of users, i.e., the young, the elderly, the disabled, families, first-time hikers, and visitors?
- Does the trail provide a challenge to strong, experienced hikers?
- How would the user get to the trail/access? Is a 2-wheel or 4-wheel drive vehicle required?
- What modes of transport could be used on the trail/access? (Consider foot, equestrian, 4WD, mountain bike.)

Cultural

- Does the trail have historic, religious, or cultural significance to any segment of Hawaii's population?
- Have people traditionally used the trail/access for a minimum of 20 years' uninterrupted use?
- Do people rely upon the trail/access for food gathering and subsistence?

Educational

- Are there unique biological and/or historical features found along the trail/access that would interest researchers and students?
- Is this trail/access especially suited to interpretive programs for the public? Could programs be designed to promote protection of fragile resources along this trail/access?

Geographic

- Is the trail/access at risk of being lost to development activities, or neglect?
- Would the trail/access attract visitors from other islands, states, or countries?
- Is the trail/access part of a more extensive network? Would it contribute to the larger network of trails/accesses proposed for the island?
- Are there alternative trails/accesses leading to the same destination?
- Are there trails/accesses of similar type nearby? How does the proposed trail/access differ from the alternatives?
- Is the trail/access located where there is a need or demand for more trails or accesses? How is the need or demand expressed?
- Does the trail provide access to parks, recreation sites, or public lands?
- Has the trail/access been previously identified (or nominated) to be a Na Ala Hele priority?

Management

- What special management considerations apply to the trail/access?
- What multi-agency coordination and cooperation would be necessary to manage the trail/access?
- Does the trail have multiple uses? Are there potentially conflicting uses that need to be managed?
- Is it necessary to control public access due to the environmental or historic sensitivity of the area being accessed? Is the area too sensitive to expose to public use?
- Would management of the area be improved as a result of increased accessibility?
- Is this a trail/access that is already public but needs better management?
- Should the trail/access remain "rough" with minimal improvements, or upgraded and provided with facilities and amenities?

Success Potential

- What is the trail/access' current physical condition?
- What is the likelihood that the trail/access can be acquired?
- What is the likelihood that the trail can be developed and managed effectively?
- What landowner(s) and agency(ies) would be involved? Are they receptive to the trail/access?

- Is litigation or condemnation likely to be necessary in order to acquire the trail/access?
- Are the resources available to acquire, develop, and manage the trail/access (e.g., funding and staff)?
- Does it appear likely that needed resources for future acquisition and management could be obtained?
- Are there exceptional hazards that trail users would be exposed to? Can the liability exposure be minimized?

3. EVALUATION OF HISTORIC TRAILS AND ROADS

Historic trails and highways are a unique category of Hawaii's inventory and require special analysis. The following guidelines for evaluating historic trails and roads are the result of many hours of discussions and meetings. Eventually policies should be adopted to guide decision-making affecting historic trails and roads.

Historic trails are included in the definitions of "historic property" and "historic preservation" in Chapter 6E, HRS, the State's Historic Preservation Law. In this law, "historic property" is defined as "any building, structure, object, district, area or site, including heiau and underwater site which is over fifty years old." "Historic preservation means the research, protection, restoration, rehabilitation, and interpretation of buildings, structures, objects, districts, areas, and sites, including underwater sites and burial sites, significant to the history, architecture, archaeology, or culture of this State, its communities, or the nation."

In assessing the values of a historic road or trail, there are three basic questions to answer:

- Who has ownership and jurisdiction over the trail/access?
- What was, is, and could be the functional value of the trail/access?
- What are the trail/access' cultural and historical values?

a. Ownership/Jurisdiction

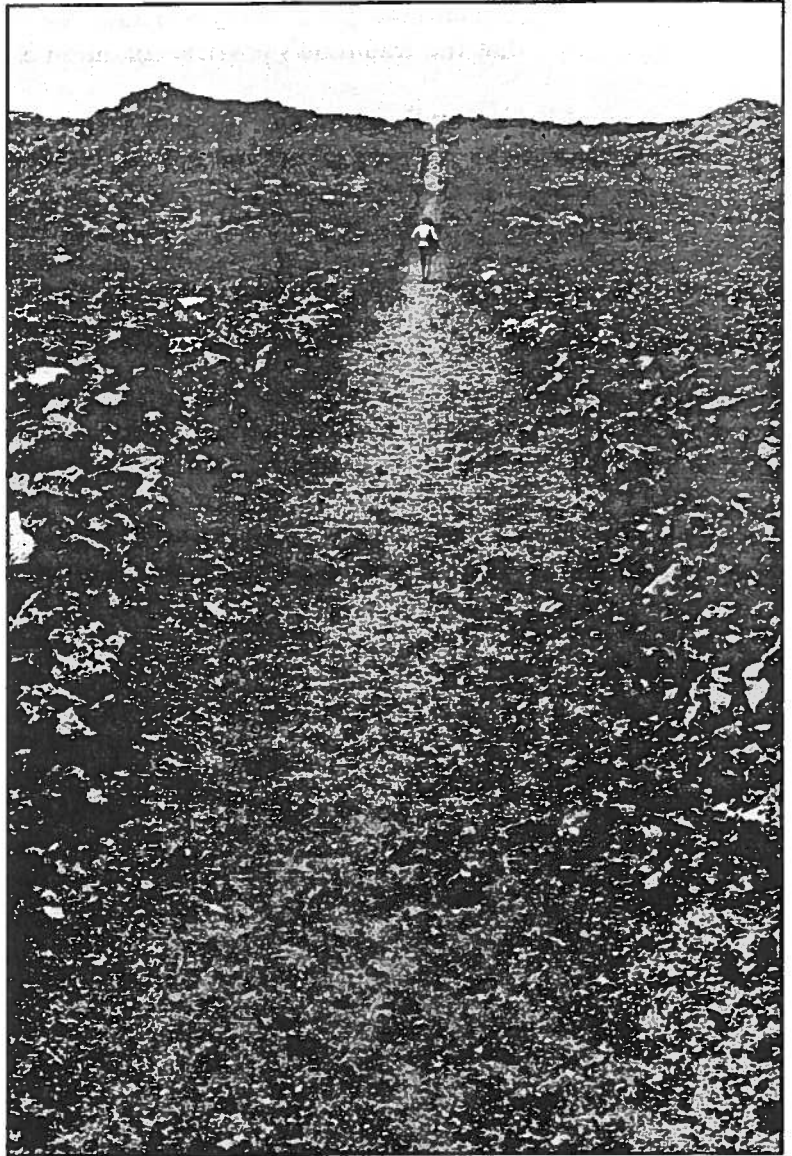
Hawaii's escalating land values seriously hamper government's ability to acquire lands for public recreation. Certain historic trails and roads are already owned by the government in fee simple. Others are public easements by virtue of traditional use. If government proves its claims over such historic pathways, the costs of acquiring public access to certain areas can be significantly reduced. For more information on legal doctrines used in determining public claims to trails and accesses, see Chapter VI., EXPANSION.

In evaluating a historic trail or road, the ownership/jurisdictional status must be researched. The research effort will frequently involve land title search by abstractors and sometimes require oral history documentation, and historic and legal analyses. The outcome of that determination will undoubtedly influence how the trail/road is treated.

b. Functional Value

A historic path must have functional value to be a candidate for the Na Ala Hele system. Evaluation of functional value should consider the trail/road's past, present, and potential future uses. A trail/road cannot be dismissed as useless because it is currently so overgrown, physically deteriorated, and forgotten that no one uses it anymore. In wet climates it doesn't take long for an infrequently used historic trail to disappear under vegetation. Perhaps illegal blocking of the trail or accesses leading to the trail has resulted in its disuse. It is important to determine whether the trail/road is part of an extensive, historic network. Is the route in an area where little or no public access is available? The trail may be in a remote area now, but is it located where future development and population growth is expected?

It should not be assumed that unrestricted public use of a historic trail/road is desirable in every case. Controls (and regulations) on public access may be necessary for environmental and/or historical protection. Management and safety concerns may also require regulation of public use. **If evaluation of the historic route and its immediate surroundings indicates an area is too sensitive for public use and requires more enforcement than can reasonably be provided by the State, its inclusion in the Na Ala Hele system will not be recommended.**



Built in the latter 1800s, this alaloe is on Hawaii's Register of Historic Places.

c. Cultural and Historical Values

The five basic criteria of the Hawaii and National Registers of Historic Places for evaluating the significance of historic properties can be applied to historic trails/roads:

- (1) **Contains information on prehistory or history.** Historic trails/roads always have significance for their information content.
- (2) **A good example of its type within the traditional region (district).** This usually means that the trail/road's physical condition is good.
- (3) **Culturally significant.** Most historic trails/roads are considered culturally significant.
- (4) **Reflects broad patterns of history.** Alaloa trails fall into this criterion.
- (5) **Associated with a famous person, event, or deity.**

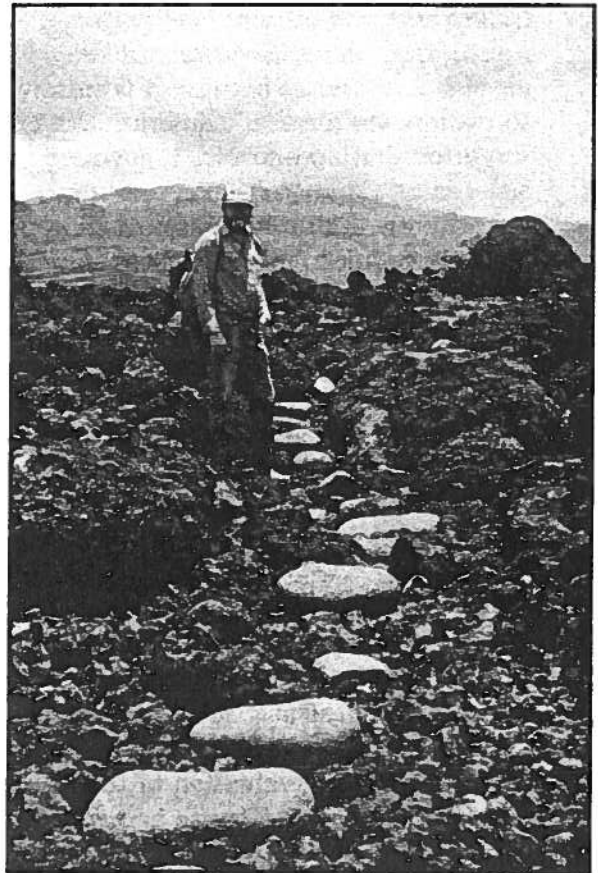
It is essential that Na Ala Hele coordinate with the Historic Preservation Division (HPD) in historic significance evaluations. HPD (part of the DLNR) is responsible for overseeing the treatment of historic sites statewide and ensuring that historic properties are not adversely affected by private and public projects. HPD's roles are to monitor, review, and supervise the plans for and treatment of historic properties by others (see Chapter V.D.5., Historic Trail Restoration and Public Use).

Cultural significance evaluation should consider the trail/road's past and present use. The route may have been or may still be important to native Hawaiians who reside in the area and are legally entitled to use the road/trail to exercise religious, harvesting and gathering rights (see Chapter VI., EXPANSION). It is important to determine whether the trail/road is part of an "alaloa," "alanui," or "alanui aupuni" (see Figure IV-3.). These trail/road types were open to all people in old Hawaii and were major thoroughfares historically. Wherever possible, Na Ala Hele seeks to restore the traditional Hawaiian trail and access system which generally provided access to most shorelines and frequently provided the means to get to mid-elevation population centers and mountain summits. A good source of information on historic Hawaiian trails is Trails: From Steppingstones to Kerbtones. Apple, 1965.

d. Disposition

Depending on the evaluation, a historic trail or road can be:

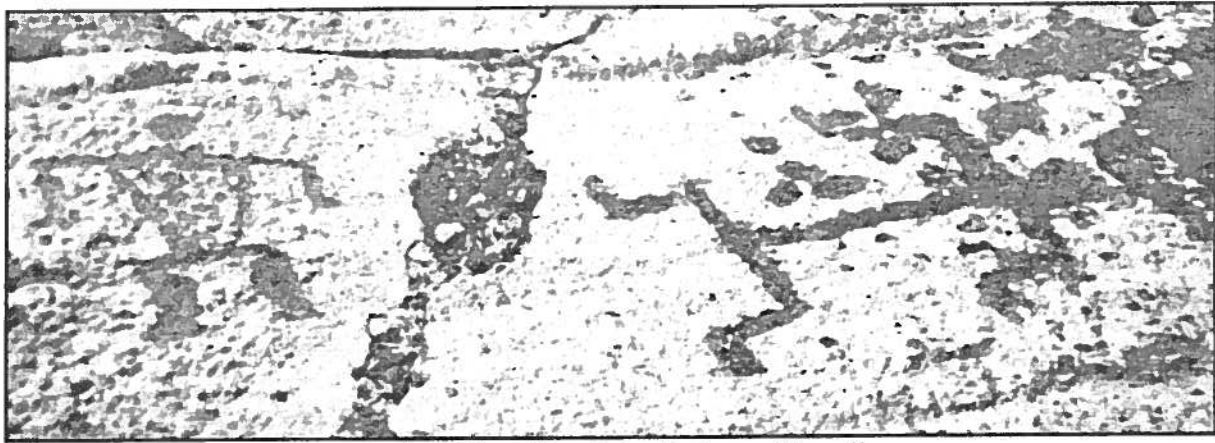
- (1) preserved and restored in its traditional location;



Ancient Hawaiian Foot Trail on Maui

- (2) preserved without restoration in its traditional location;
- (3) destroyed after its information content is recorded;
- (4) relocated with government retaining fee simple ownership or perpetual easement rights; or
- (5) sold, exchanged, or quitclaimed in return for other benefits to the public.

The decision to exchange or quitclaim a public trail needs to be justified as being in the public's best interests (see Chapter VI., EXPANSION, for further information).



Ancient Hawaiian Petroglyphs on Hawaii

Figure IV-3. Hawaiian Historic Trail Terms

- Alaloa or "Long Trail" is a term used by the earliest Hawaiian historians to refer to major prehistoric and early historic routes that were used by the general population. These trails were important in transportation, religious rites, and political control in old Hawaii (for more information see Appendix, "The Runner Tradition of Ancient Hawai'i"). Na alaloa are often located along shorelines and at times are mid-elevation or cross-island trails. Such trails are frequently associated with nearby historic sites such as habitation complexes, shrines, and petroglyph fields.
- Alanui or "Large Trail" is a major thoroughfare or street. The term is used in certain pre-1892 maps and legal documents relating to land title. An alaloa can also be referred to as an alanui.
- Alanui Aupuni or "Government Road" is used in certain pre-1892 maps and legal documents relating to land title. Certain na alaloa are also alanui aupuni.

D. TRAIL AND ACCESS SELECTION PROCESS

The Na Ala Hele trail and access selection process is illustrated in Figure IV-4. This process will be used to evaluate and select trails and accesses which are nominated to the Na Ala Hele system. Selected trails and accesses qualify for acquisition and development funds, as these funds become available. Trails and accesses which are already a part of the Na Ala Hele System qualify for ongoing maintenance and development efforts, as funding permits.

As shown in Figure IV-4., the Selection Committee plays a key role in the process. The tasks of the island advisory councils (soliciting public input, debating trail/access merits with the participation of governmental representatives, etc.) are ongoing, whereas the Selection Committee will meet at set periods during the year (perhaps in March and September) to coordinate with the budgeting process. Information on all trails/accesses nominated for inclusion into the system will be kept on file, and trails and accesses can be reconsidered if they are not selected initially.



Kerbstones border both sides of this raised section of Maui's Hoapili Trail (circa 1824-1840).

1. Priority selections should be made with input that is representative of the island communities where trails/accesses are located. The island advisory councils provide a forum for public participation in the decision-making process. Individuals and groups can provide input by attending advisory council meetings or by speaking with individual council members and ex officios. The island advisory councils should hold public meetings to solicit recommendations and comments from local communities island-wide. Public agencies can also propose trails/accesses and provide input through the advisory councils. Each island advisory council will then evaluate all the proposals for its island and submit nominations, using the "Trail and Access Evaluation Form" (see Appendix). These nominations will be ranked by the council in order of priority.
2. The council nominations will be given to the island's Trail and Access Specialist who compiles any additional information necessary for evaluation of the trail/access. This may require field checks and discussions with representatives from other state or county agencies, landowners, etc.
3. The island advisory council nominations,

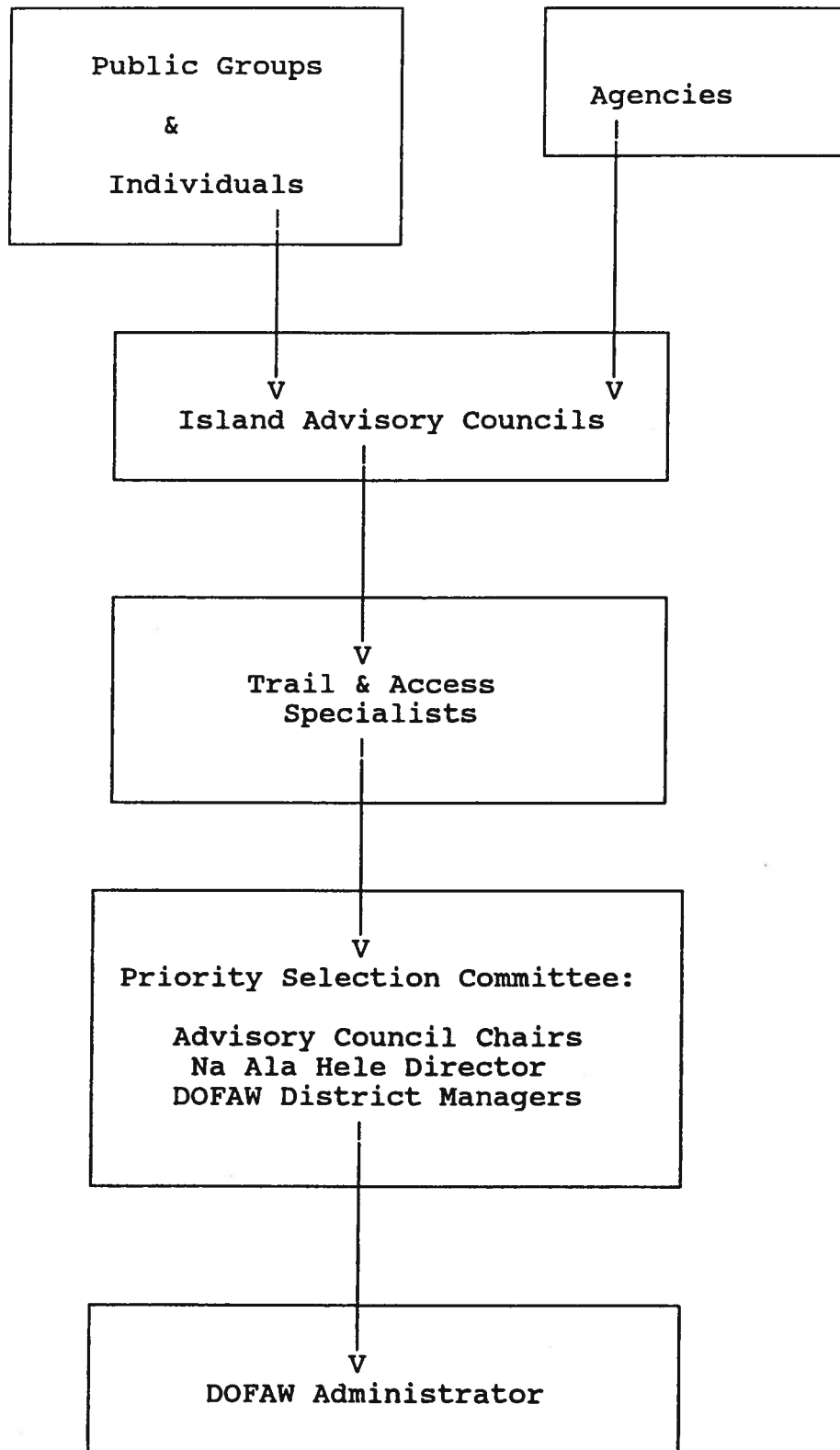


It is difficult to select one trail over another.

with attachments from the Trail and Access Specialist, will then be forwarded to the Selection Committee. The Selection Committee will be composed of the chairpersons of the island advisory councils, the Division of Forestry and Wildlife's District Managers, and the Na Ala Hele Director. Nominations will be returned to the Trail and Access Specialists if additional "fact-finding" is required. If some nominations are judged unsuitable they will be dropped from consideration. Trails and accesses considered suitable and desirable will be ranked in terms of priority, utilizing evaluation and selection criteria.

4. The Selection Committee's priorities will then be submitted to the Forestry and Wildlife Administrator, who will make the final selection. Rationale for the final action will be given to the Selection Committee members for dissemination to all those who were involved in the process.

Figure IV-4. Trail and Access Selection Process



E. NA ALA HELE'S CURRENT PRIORITY TRAILS AND ACCESSES

Na Ala Hele has attempted to identify trail and access priorities for the next 10 years. The priorities that are described and mapped in this section are the result of island advisory council recommendations and review by Division of Forestry and Wildlife staff during 1989 and 1990 (refer to maps on pages IV-27 to IV-32). **It must be emphasized that these priorities are regarded as preliminary. The described trails/accesses are not ready for public access and subject to change as more information becomes available, and as the evaluation and selection process is further developed.**

As Na Ala Hele is asked to review and comment on applications to develop lands which are found to contain trails and accesses, new trail/access priorities may result. Trails and accesses brought to the program's attention through this process tend to be vulnerable to being destroyed. An assessment of each trail and access' values must occur as part of the review process and recommendations made as to its disposition. The island advisory councils are usually asked to advise DOFAW as these specific trail/access issues arise.

1. KAUAI'S PRIORITY TRAILS

Waioli Valley Access and Falls Trail is Kauai's demonstration trail. See description in Chapter II.C.

Waiakalua Beach Access is an old Hawaiian trail approximately a half mile in length that provides beach access along a bluff which overlooks the ocean, fringing reefs, and picturesque coastline. The trail provides the only mauka-makai public beach access between Waiakalua Beach and Kilauea Bay to the north. Fishing, swimming, snorkeling, and observing seabirds and green sea turtles are among the activities that can be enjoyed here. Concerns are being expressed that many traditional accesses to the relatively undeveloped coastline between Moloaa Bay and Kilauea Bay are being closed.

Pilaa Beach Access involves a mile long dirt road, which changes to a short trail through a hau (Hibiscus tiliaceus) forest. The fringing reef is ideal for fishing, swimming, snorkeling, and educational field trips. The area has been well-known to native Hawaiians for more than a hundred years as a place for limu (seaweed) gathering. Establishing this as an access would assure public entry to this special area and the coastline south to Moloaa Bay.

Papaa Access consists of an approximately 1-mile long dirt road which has recently been blocked off by boulders. It has been a popular spot for local fishermen. The status of this beach access needs to be researched to determine if the public has a right to use it.

Hoopii Falls Access is an approximately 1-mile long trail leading from a residential area to Kapaa Stream and two waterfalls. The upper falls is 18 feet high and a popular swimming hole. The trail continues a quarter-mile through a forested area adjacent to Kapaa Stream, to another picturesque falls and swimming hole. The recent sale of private land next to the stream may threaten access to the lower falls. However, access could be assured through State-owned lands on the other side of the stream which are being leased to private parties. The State could ensure the right of public access to both waterfalls in its lease agreements. As the area continues to develop as a residential neighborhood, the trail's recreational value to nearby residents increases.

Lihue - Anahola Coastal Trail is approximately 13 miles long. This scenic coastal path is proposed to accommodate pedestrians, bicycles, and horseback riders. The proposed path passes numerous beaches where ocean-related activities could be enjoyed. A variety of owners and jurisdictions would need to cooperate in the development of this trail.

Wailua Cart Road is Kauai's demonstration trail. See description in Chapter II.C.

Kalepa Ridge Access is a proposed route that would enable public access to the presently land-locked Kalepa Forest Reserve, where a trail network could be developed. The 0.1-mile long access (and future trails in the Reserve) would afford another outdoor recreation opportunity near the communities of Lihue, Hanamaulu, and Wailua. The State would need to utilize an existing, non-maintained public road and negotiate arrangements for public parking and foot access across State-owned lands presently leased to private parties.

Poipu-Mahaulepu-Kipu Kai Coastal Trail is proposed to begin at the Sheraton Hotel along Poipu Road (where public parking exists), traverse sand dunes and several scenic bays, and ultimately end in Kipu Kai, a total distance of nearly 6 miles. Abounding in fantastic geologic formations and native flora and avifauna, trail users could enjoy a wide range of recreational and educational activities. Petroglyphs, caves, monk seal and turtle watching, make the management and protection of marine and terrestrial features especially important with increased public use of the area. It is recommended that the trail be restricted to pedestrian use.

2. OAHU'S PRIORITY TRAILS

Nike Road is the vehicular access to the **Mokuleia Trail** which extends 9 miles, passing through the Mokuleia Forest Reserve and the Pahole Natural Area Reserve. Other trails connect to the Nike road in the upland plateau area. Four-wheel drive roads used by hunters, hikers, and campers also occur in portions of this upland area. The Mokuleia Trail crosses a mesic (between wet and dry) forest which contains some of the best examples of native plants in the State. It offers excellent panoramas of both the windward and leeward sides of the Waianae Mountain Range. A small stream crosses the trail at one point, providing the only source of water in the area.

Kahuku Shoreline Trail is approximately 7 miles long and passes through windward, coastal wilderness with extensive sand dunes, native and introduced strand vegetation, offshore fringing reefs, and many types of seabirds. Hiking, fishing, surfing, educational field trips and kayaking are among the activities enjoyed here. The Kahuku shoreline is one of the last undeveloped coastal wilderness areas remaining on Oahu. Once established, this trail would help to ensure public access to Kahuku Point.

Koolau Ridge Trail Complex was largely developed by the Civilian Conservation Corps (CCC) workers during the 1930's. The 20-mile long summit trail is intersected by a number of important trails (i.e., the Laie Trail, Kawailoa Trail, Castle Trail, Poamoho Trail, Kaukonahua [Wintera] Trail, Waikane Trail, and the Kipapa Trail) to form an extensive trail complex as it travels along the summit of the Koolau Mountain Range. The trail complex would offer outstanding views, excellent examples of native plants, two to three night camping trips, cross country hiking, and views of Kaluanui Stream, the highest perennial stream on Oahu. The trail system would be especially valuable in its accessibility from both leeward and windward main roads and towns.

Koolaupoko Trail Complex is Oahu's demonstration trail. See description in Chapter II.C.

3. MOLOKAI'S PRIORITY TRAILS

Ke Ala Pupu i Molokai Trail System would be a continuous, lateral coastal access trail about 32 miles in length along Molokai's west end. The name proposed for this trail system, meaning "the path of shells of Molokai," refers to an ancient chief of Maui, Kihaapiilani, who is credited with constructing a road lined with shells at Kaluakoi (see Appendix, The Runner Tradition of Ancient Hawaii). Numerous beaches,

historic sites, rugged terrain, and beautiful scenic views are among this trail's features. However, private lands are involved. Certain coastal sections contain four-wheel drive roads while other locations lack a discernible trail. Ocean-related activities, fishing, hunting, and camping would be possible in certain areas along the proposed trail.

Maunahui-Makakupaia Loop is Molokai's demonstration trail. See description in Chapter II.C.

Meyer's Lake Trail is a 3-mile long trail which would begin at a public highway and connect to the demonstration trail. It would offer scenic views of Kalaupapa peninsula, Meyer's Lake, Waihanau gulch, and native rainforest. The trail is in an important pig and goat hunting area, and Hawaiians utilize the area for plant gathering to make leis. This trail would be a significantly shorter access to the Molokai Forest Reserve than is the demonstration trail.

Hanalilolilo-Pepeopae Loop is connected to the demonstration trail near the Waikolu Picnic Grove. This 3-mile long loop trail traverses intact native rainforest and a mountain bog. The Pepeopae bog is said to be the oldest bog in Hawaii, and a boardwalk has been installed to protect this sensitive environment. The Pepeopae trail ends at a dramatic overlook of Pelekunu valley. That portion of the trail can be enjoyed by children and families, while the Hanalilolilo portion is more difficult and frequently used by pig hunters, scientists, and resource managers.

Puu Kolekole-Kamalo Trail branches off the demonstration trail where it travels about two miles through an intact native rainforest. It continues for about 5 miles along the west rim of Kamalo valley where the trail user would experience spectacular views and rugged terrain. This trail would be for serious hikers, naturalists, and hunters (pig and goat), and would provide access for scientific study and resource management.

Mapulehu-Wailau Trail is considered one of the premier trails in the state. This historic trail which appears on maps of the 1800's was used as a major transportation route by residents of Wailau valley and Mapulehu. The trail has fallen into disrepair and is presently extremely hazardous in certain locations. Estimated length is 7 miles.

Pohakupili Trail would begin just off the main highway and extend approximately 3.5 miles. Permission to hike the trail must be obtained through Puu Hoku Ranch. The trail slopes toward the sea through land characterized by dryland shrubs, trees, and grasses. It follows the coastline up to one of Molokai's most sacred historic sites, the Kukui (Aleurites moluccana) Grove of Lanikaula. The coastline consists primarily of rocky beaches and is a prime fishing area. Fishing shrines are located at various points.

Halawa Falls Trail is located in the only one of four large valleys on the north shore that is accessible by car. Although there is presently a well-marked trail, it is an informal access lacking public parking at the trail head. The trail passes through privately owned lands and crosses a stream which at times is subject to flash flooding. A round-trip of 4 miles, this hike features spectacular waterfalls with a large pool for swimming.

4. LANAI'S PRIORITY TRAILS

Kaiolohia-Kahue Coastal Trail is Lanai's demonstration trail. See description in Chapter II.C.

Keomoku Trail is a mauka-makai trail constructed in the 1800's. Portions of the trail are raised and made of flat rocks to prevent washouts during wet seasons. It was a horse, foot, and wagon trail extending from the shoreline at Maunalei to Koele Village at the foot of Lanaihale mountain. The trail

is approximately 6 miles long, with about a 2-mile paved section. It is only accessible by foot and currently overgrown and unmarked. The trail has historic value, scenic views, and if cleared, could be used for hiking and hunting.

Munro Trail is a four-wheel drive trail which was developed in the mid-1950's to provide access to the rain gauge at the highest point on Lanaihale. The road is about 7.8 miles long, passing through the island's watershed area. The trail, which could be used for hiking, bicycle and horseback riding, and hunting, provides scenic views of the neighbor islands and traverses the island's most dense vegetation. There are no amenities along the trail. The road is steep and gets slippery and muddy when it rains. Hiking, biking, horseback riding, and hunting are among the activities possible along this trail. Historic sites and native Hawaiian plants are also found here.

Awehi Trail is a jeep trail developed in the 1950's to provide an alternative road to Lanai City from Keomoku Road. It starts at sea level and ends at Lanaihale mountain. Hunting, hiking, nature study, and scenic views of Maui, Hawaii, and Kahoolawe can be enjoyed here. There are no amenities and access is currently private. The road is steep with washouts and overgrown sections scattered throughout the approximately 3.5-mile trail.

Hulopoe-Kaunolu Coastal Trail is an ancient trail which extends from Kaunolu Village (summer stop for King Kamehameha) along the coastline to the fishing village at Hulopoe. Approximately 12 miles in length, hiking, viewing of ancient historical sites, hunting, and fishing are among the activities that could be conducted along the trail. Located in rugged, hot terrain, the trail crosses several gulches and travels along steep cliffs. Access would be through private lands. There are restrooms, picnic tables and showers at Hulopoe Beach but no facilities at the Kaunolu end.

5. MAUI'S PRIORITY TRAILS

Poelua Trail is a 4-mile long route following an existing tree planting access road. It climbs a ridge through dry scrub vegetation and gradually ascends into wet forest at the 2,000-foot elevation. Throughout its length, one can enjoy scenic vistas of the ocean, adjacent gulches and ridges, and the spectacular West Maui summit peaks. Hunting, hiking, nature study, and photography are among the activities that could be enjoyed. Feral pigs inhabit the middle and upper slopes. This trail would improve hunting opportunities and a means of managing forest habitats and game populations.

Waikalai Trail is to be a 4.25-mile route which would climb from the Kahekili Belt Road to a 2,000-foot elevation. 2 miles of the proposed trail is an existing tree planting access road. Extension of that road is planned, and the resulting access would facilitate good hunting opportunities of feral pigs. The area is also well-suited for hiking, nature study and photography.

Lahaina Pali Trail is Maui's demonstration trail. See description in Chapter II.C.

Hoapili Coastal Trail is approximately 13.5 miles in length. It is about 9-feet wide and primarily paved with small chunks of basalt and bordered by mortarless kerbstones. Most of the trail was built straight and level, and at some points becomes a raised causeway up to nine feet high as it crosses natural depressions. It is part of the ancient Piilani Trail System that once circled the island. It was built in its present form by convicts during Governor Hoapili's period (1824-1840). Motorized vehicles are prohibited from this historic trail which offers opportunities for hiking, environmental study, and ocean-related activities along a remote, scenic coastline.

Nakula Trail is proposed to be constructed by DOFAW. Planned to extend approximately 8 miles, it would provide access for hunters and hikers into the remote, central Kahikinui region of southeastern Maui and improve management of game herds in the area. Feral goats are found throughout this rugged area and a few feral pigs occur at the lower elevations. The proposed trail would extend from the coast into the forest reserve and climb to an elevation of 8,000 feet, where it would connect to a proposed loop trail, leading to the summit of Haleakala. An overnight cabin is planned at the 6,600-foot elevation that would service hunters and hikers.

Piilani Coastal Trail is believed to have been established during the reign of the Maui ruling chief, Piilani. It is thought that this trail once encircled the island. This section is approximately 6 miles long and follows the coastline. Historic sites are located along the trail route which is presently overgrown and impassable in places. Physical remains of the historic trail can still be seen. Residents actively use the coastal area for fishing, and school children access a portion of this trail for educational field trips.

Kuhiwa Trail is in great disrepair today. This rugged trail once extended more than 6 miles through the very wet lower elevations of Kuhiwa Valley up into what is now the Haleakala National Park. There was once a cabin at the Kuhiwa Valley "end" of the trail. Kuhiwa Valley is unique on Maui in that it lacks a connection to the ocean due to a lava flow which cut it off from the ocean at its lower end.

6. HAWAII'S PRIORITY TRAILS

Kohala Ditch Trail was constructed in the early 1900's in conjunction with the building of the Kohala Ditch which brings water from the Kohala Mountains to the agricultural and residential areas of North Kohala. Presently privately owned, the ditch trail and potential connecting trails would provide a wilderness experience, ranging from one-day hikes to extensive backpacking trips. Portions of the trail which are not maintained can be extremely hazardous, particularly in wet weather.

Awini Trail is approximately 6 miles in length. It originates at the Pololu Valley Overlook, crosses the valleys of Pololu, Honokane Nui and Honokane Iki, and follows a ridgeline up to the abandoned Awini cabin. It is located in a beautiful wilderness area, but during heavy rains can become extremely hazardous. The trail probably follows an ancient Hawaiian trail system and eventually connects with the Kohala Ditch Trail.

Kapia Access is located on State-owned land leased to Parker Ranch. Development of this access would facilitate public hunting in the Puu O Umi Natural Area Reserve where feral pig control is needed. A survey and four-wheel drive road of approximately 1.6 miles would need to be constructed.

Piihonua/Kaiwiki Homestead Access is approximately 1.1 miles long. This homestead road has been a long-standing source of conflict between residents, property owners, and right-of-way users who are primarily hunters. By surveying and improving the road and trail, the State will clearly establish the public's right to use the road to access the Hilo Forest Reserve.

Piihonua Access consists of a paved public road connecting on to a series of unpaved roads leading to the Hilo Forest Reserve boundary. Research is needed to determine the extent of public right-of-way along a portion of the access, and the remaining access over sugar cane haul road would need to be settled through state lease negotiation.

Puu Oo Horse Trail would follow an old cattle run of approximately 45 miles that started at Puu Oo Ranch on Mauna Kea, crossed the Saddle Road, and continued to Keauhou Ranch and down to Keauhou Landing where the cattle were loaded onto inter-island ships. The hike along this trail is mostly

downslope through several cool, forested areas and also crosses sections of the 1984 Mauna Loa lava flow. It would offer a remote, wildland experience and could connect to a larger network of trails in Hamakua District and Volcanoes National Park.

Ainapo Trail would be approximately 9 miles long and connect to an extensive trail system under the Hawaii Volcanoes National Park's jurisdiction. Portions of the ancient Ainapo-Mauna Loa trail and an old camp site at Halewai that was used by those climbing Mauna Loa from the southeast side are part of this trail which also traverses the Kapapala Forest Reserve.

Milolii Trail is a lateral coastal access similar to the Ala Kahakai demonstration trail in that it would utilize the existing ancient Hawaiian foot trail network as much as possible. The approximately 30 miles of coastal trail goes through remote areas of pristine beauty, concentrations of Hawaiian historic sites, and sensitive natural features unique to Hawaii. Some of the most impressively constructed ancient Hawaiian trails are located here.

Opihihali Access would be approximately 0.9-mile long, extending from an old homestead roadway leading mauka from the Mamalahoa Highway to a boundary of the South Kona Forest Reserve. Land title search, survey, and road construction would be necessary for this project. Ultimately a trail could be developed to the top of the forest reserve. Terminating at the 2,100-foot elevation, the trail would pass through a most scenic ohia-lehua (Metrosideros collina subsp. polymorpha) dominated forest, cut in places by more recent lava flows of Mauna Loa.

Kukuiope Access is shown on the tax map to be a trail and homestead road extending mauka of the Mamalahoa Highway. The presently overgrown trail and roadway would need to be title searched, surveyed, and constructed. The access would be about 0.9-mile long. Similar to the Opihihali Access, this access would provide an important means for the public to get to the South Kona Forest Reserve.

Judd Trail was built from 1849 - 1859. Nearly 16 miles of this historic road in the North Kona District was constructed by prisoners from Hawaii and Oahu before work stopped due to the nearby 1859 Mauna Loa lava flow. Not surprisingly this event was interpreted to mean that Pele, the Volcano Goddess, was against the project. The Judd Trail was a public highway project of Hawaii's monarchical government, and the State claims fee-simple ownership of this old government road. It is hoped that the entire trail length will eventually be reopened to public pedestrian and equestrian use. The original trail is still physically evident in the higher elevations but is overgrown and impassable in other areas.

Ala Kahakai Trail is Hawaii's demonstration trail. See description in Chapter II.C.

F. PLANNING RECOMMENDATIONS AND OBJECTIVES

Coordination

- Continue to review and comment on the plans of other divisions and agencies as they pertain to trails and accesses.
- Because trail/access projects most often require the assistance and cooperation of others, Na Ala Hele must continue to involve the affected divisions, agencies, organizations, and individuals in the planning process.
- Continue to inform other divisions and agencies of Na Ala Hele's plans and priorities.

- Integrate priority trails/accesses into other governmental planning documents.

Inventory

- Continue to maintain and improve the statewide inventory in cooperation with the counties and other agencies.
- Develop and improve the use and applications of the inventory as a planning and management tool.
- Include Kahoolawe's trails and accesses in the inventory in 1991.
- Publish the inventory of publicly available trails and accesses with maps by 1992.
- Prevent use of the unpublished inventory for commercial purposes through adoption of rules and regulations and/or statutory amendments in 1992.
- Consider ways in which Hawaiian diacritics can be incorporated into program signage, maps, and other materials.

Evaluation and Selection

- Improve the trail and access evaluation and selection process by (1) increasing public input at the advisory council level, (2) developing surveys and other methods of measuring public needs for trails and accesses, (3) involving other agencies in the priority recommendation process, (4) adjusting the methodology as needed, and (5) continuing to study methods used by other trail/access programs nationwide.
- Begin use of the "Trail and Access Evaluation Form" in 1991.
- In 1991, establish guidelines and policies for the evaluation and preservation of historic Hawaiian trails with the assistance of Historic Preservation Division and the Office of the Attorney General. Share those guidelines with other agencies.

Consistent Reviews of Applications Involving Trails and Accesses

- As Na Ala Hele staff positions are filled, notify all county and state agencies of the need to refer "all permits, licenses, certificates, land use changes, subdivisions, or other entitlements for use" that affect trails and accesses to Na Ala Hele for review and comment.
- Utilize rule making, if necessary, to require referrals by other divisions and agencies.

Accessibility for the Disabled

- Prepare a Self-Evaluation Plan and Transition Plan in 1992.

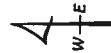
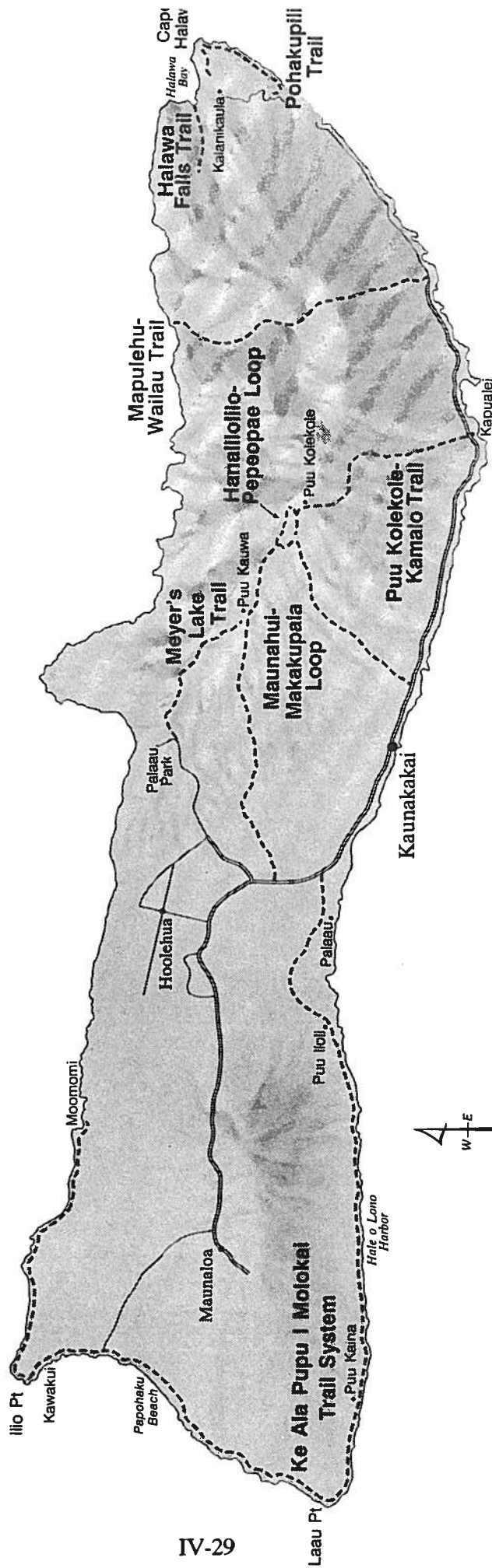
Na Ala Hele Program Plan

- Review and update the program's plan at least every 5 years.

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Cartography by Manoa Mapworks, Inc., 1990

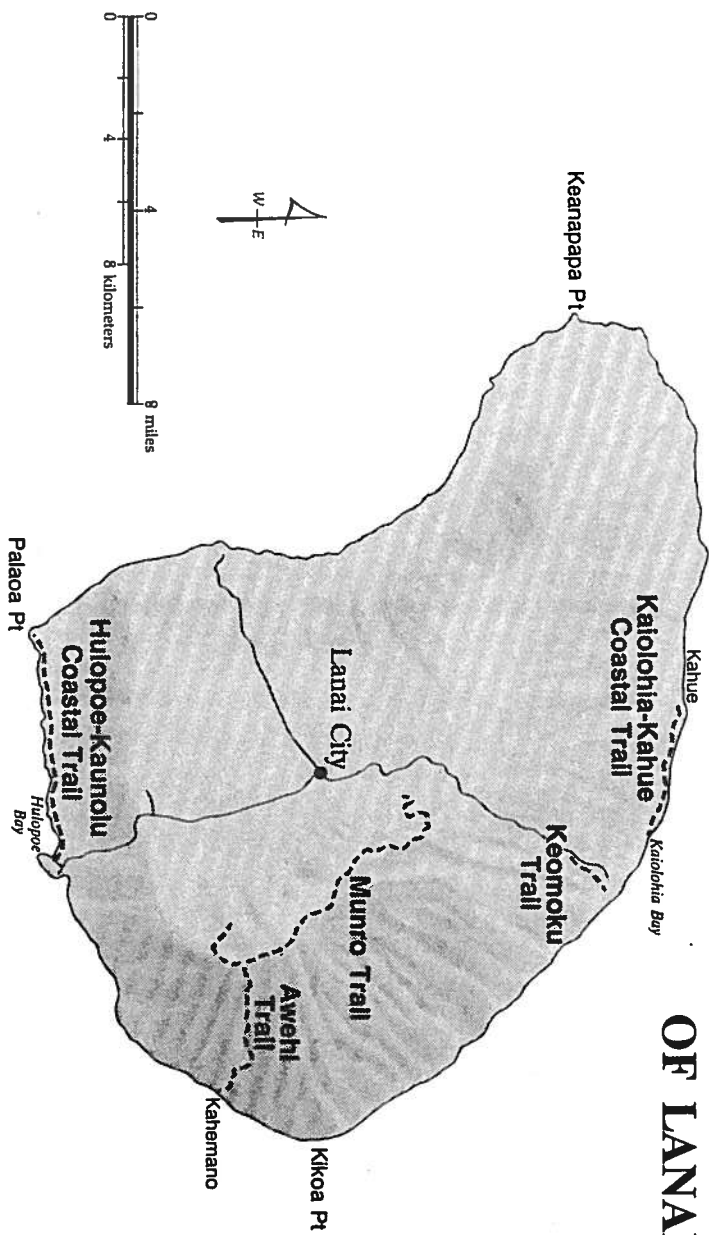
PRIORITY TRAILS OF MOLOKAI



Cartography by Manoa Mapworks, Inc., 1990

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

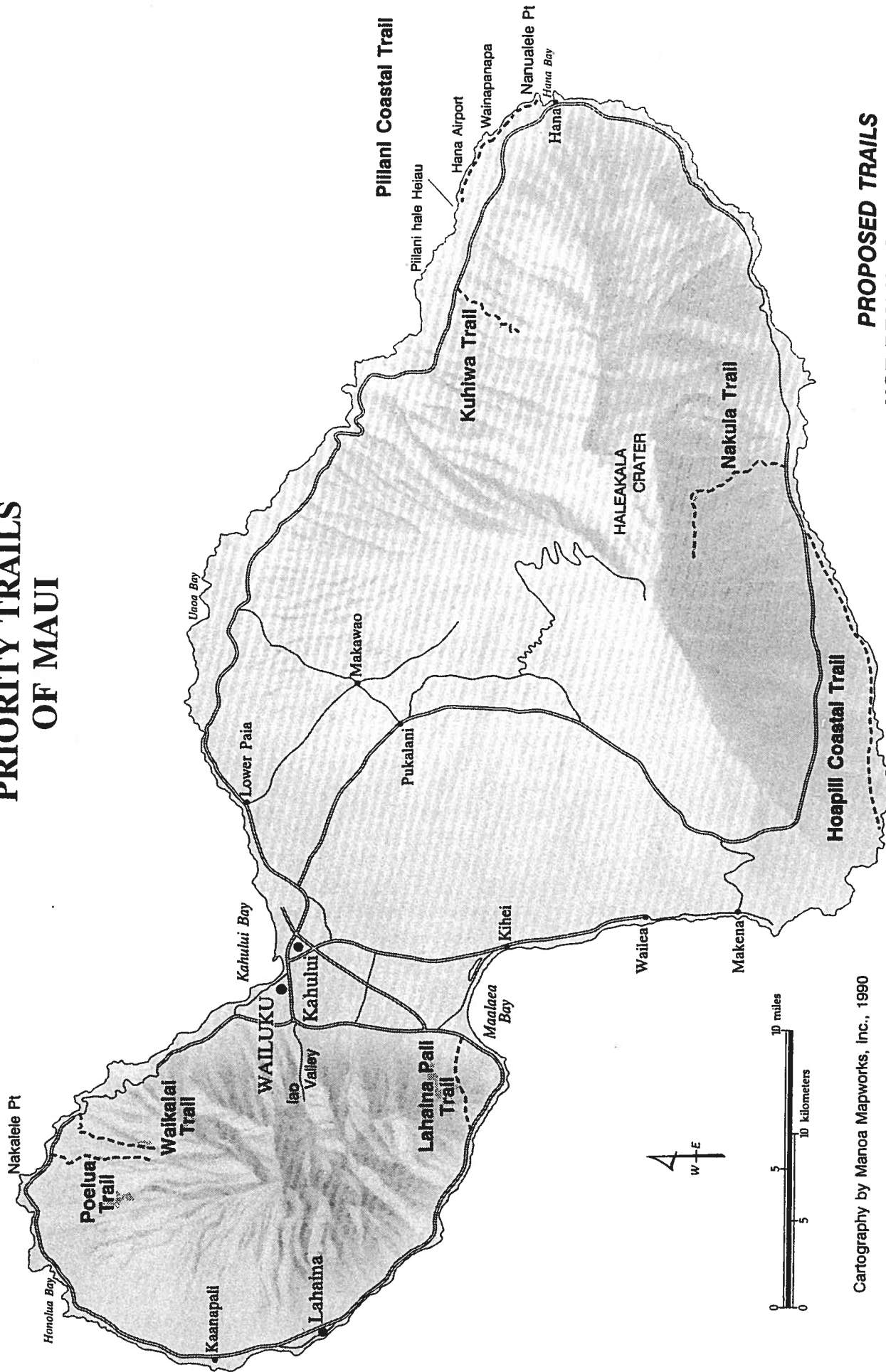
PRIORITY TRAILS OF LANAI



**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

Cartography by Manoa Mapworks, Inc., 1990

PRIORITY TRAILS OF MAUI

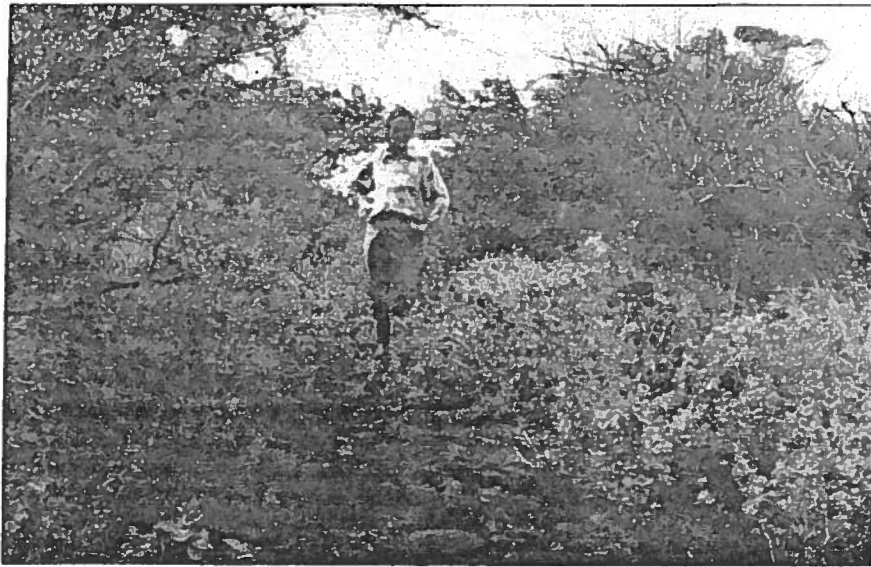


Cartography by Manoa Mapworks, Inc., 1990

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**

**PROPOSED TRAILS
NOT READY FOR PUBLIC ACCESS**





Ancient Hawaiian Trail on Lana'i

A Pacific Island Parable for Trail Users

Another day during Maui's period of eating, Sticky Eyes said, "There is a story of a chief who made a great path of stones in Tahiti. Do you know it?"

"Loke has told me every story there is," Maui said, still eating. "I must know this one. It is about a chief who makes a stone path in Tahiti."

Sticky Eyes waited, then began again. "The stone path ran the length of the island, from the beach across the mountains to the other side. The stones were smooth and even, and the path wide enough for three men to walk abreast. When the last stones were stamped flat by his workers, the chief said he would give his daughter to be married to the man who traveled the path best. Men came from every island to try for the prize. Some walked on their hands, the entire path, some rode wild pigs with flowers tied to the tusks. Some men walked on bamboo stilts. Most wore fine feathered cloaks and helmets, but one man tied live birds to himself with strings and walked in a cloud of fluttering plumes. Some carried fire in bowls, or spun it on the ends of long spears, or strewed the path with red coals and walked upon them. Some sang songs, long beautiful chants that began with the first step and closed with the last one, at the chief's home. Some danced the whole way, but all of the men, when they reached the end, complained about a large pile of wood lying across the middle of the path.

"The chief said he was saddened that anything on his new trail hindered the travelers. After most of the men had arrived they sat at a feast and watched the stragglers come in. One of the last to arrive, a man who wore only a loincloth and a small feathered shoulder cape, and who did not sing or walk on his hands, came in with a woman. No women were allowed on the path, and the feasters exclaimed in anger.

" 'I found a pile of wood on the path,' said the man. 'When I began to clear it away, I found this woman underneath.' "

" 'She is yours,' said the chief. 'She is the daughter I promised, and you have won her. For whoever makes the path easier for those who follow him has traveled it best.' "

CHAPTER V. MANAGEMENT - HOW TRAILS AND ACCESSSES ARE DEVELOPED, CONSTRUCTED, AND MAINTAINED

A. INTRODUCTION

Management is comprised of activities which take place after trails and accesses have been planned and acquired. A comprehensive management program will include:

- Use of **MANAGEMENT OBJECTIVES** which help to ensure that Na Ala Hele's specific goals for various trails and accesses are realized
- Evaluation of potential **MANAGEMENT ACTIONS** and selection of those which are most effective
- Ongoing **TRAIL/ACCESS DEVELOPMENT, DESIGN, AND MAINTENANCE** activities
- **PUBLIC INVOLVEMENT and EDUCATION PROGRAMS** through which the public can actively participate in trail and access management
- Promotion of **TRAIL AND ACCESS SAFETY** throughout all aspects of the Na Ala Hele Program
- Development and implementation of **TRAIL AND ACCESS USE REGULATIONS**

When other agencies have (or should have) primary management responsibility over specific trails and accesses, Na Ala Hele will concentrate on ways to achieve management objectives by coordinating with and supporting others, and by serving as a centralized information agency for trail and access concerns.

1. WHAT THE LAW REQUIRES

Section 198D-2, HRS, directs the Department of Land and Natural Resources to "plan, develop, acquire land or rights for public use of land, construct, and engage in coordination activities" to implement the Na Ala Hele System. The Department is also authorized to regulate trail and access use, to establish standards relating to signs and trail and access design, and to advise and assist other public agencies in matters relating to trails and accesses.

In addition, through the various provisions of Chapter 198D, HRS, Na Ala Hele is charged with the general management of the trail and access system. Many specific goals are indicated, including preserving the integrity, condition, naturalness, and beauty of trails and accesses, limiting impacts on endangered or protected species, and protecting public safety.

2. MANAGEMENT PHILOSOPHY

In Chapter IV it was demonstrated that careful planning can help build a system which offers a range of recreational opportunities and experiences while protecting the trail/access environment. This dual goal underlies Na Ala Hele's approach to management. Management activities will focus on making a range of recreational opportunities available to the public, in a manner which minimizes the social and environmental impacts which accompany trail and access use.

B. MANAGEMENT OBJECTIVES

Management objectives are simple statements outlining how a trail or access is to be developed and maintained.

1. RATIONALE

The acceptability of impacts and the need for facilities, regulations, and other management activities will vary for each trail or access in the system. **Management objectives** should be tailored to fit the unique requirements of each trail or access.

Management should be:

- **proactive**, working to avoid and minimize impacts and problems before they occur;
- **responsive**, reacting quickly when action is needed; and
- **flexible**, because although all levels and types of use have ecological and social impacts, these impacts need not operate at unacceptable levels.

In formulating management objectives for Na Ala Hele's trails and accesses, consideration will be given to:

- a. providing public access to safe, usable trails/accesses;
- b. managing the environmental and social impacts of public use so that they do not exceed acceptable levels;
- c. designing, constructing, and maintaining trails/accesses in keeping with their intended trail type; and
- d. properly designing and constructing trails/accesses so that subsequent management efforts will not have to overcome design or construction deficiencies.

2. SETTING MANAGEMENT OBJECTIVES

Setting of management objectives for an individual trail or access will be undertaken only when that trail/access is incorporated into the Na Ala Hele System.

Management objectives will be established in one of two ways:

a. Trails and accesses that are new to the program will have background and baseline information documented through the trail and access evaluation and selection process (Chapter IV.C. and D.). This information will be used to set management objectives.

b. Trails and accesses that are currently under DOFAW's jurisdiction have existing management objectives. Na Ala Hele will offer technical assistance and work to integrate Na Ala Hele's mandates and responsibilities into DOFAW's programs.

Management objectives should be stated simply in the form of outlines (see examples in Figure V-1.).

Figure V-1. Example of Outlines of Management Objectives

Trail Type: Wildland Coastal Trail

Intent: To provide access to a wildland coastal environment. Such areas are few on this island, and management should be designed to maintain the area's wildland attributes. This trail should provide a direct contrast to popular, heavily used beach areas elsewhere on the island.

Accessibility: Trail route should be accessible to average users, including families, although trail may include rough, uneven, or unstable footing.

Mode of Transport: Foot

Degree of Difficulty: Easy to Moderate

Social Interaction: Low to medium

Activities: Nature dependent activities should be stressed (i.e., hiking, bird-watching, whale watching, fishing, etc.)

Acceptable Level of User Impacts: Low

Management Actions - How Apparent: Management should be inconspicuous, with a minimum of facilities and regulation.

Facilities - General Description: Parking areas should be provided at trail heads. Trail head areas may also have restroom and picnic facilities. Trail side facilities limited to safety related items such as signs.

Trail Type: Urban Trail

Intent: To provide a recreational trail within an urbanized environment. The trail is designed to provide an alternative to often crowded and noisy roads and sidewalks, and is intended primarily for recreational (non-commuter) use.

Accessibility: Trail route is intended for use by all people, including the elderly and physically disabled. The access to it should be negotiable with a wheelchair.

Mode of Transport: Foot and bicycle. Separate paths or marked lanes may be necessary to avoid user conflicts.

Degree of Difficulty: Easy

Social Interaction: High

Activities: Walking, jogging, bicycling, general relaxation and exercise.

Acceptable Level of User Impacts: High

Management Actions - How Apparent: Management will be apparent, including a high level of maintenance to insure trail remains accessible to all users. Trail use should be monitored to insure mixed use does not become a problem, and to discourage trail use by mopeds and other motorized vehicles.

Facilities - General Description: Parking areas to be provided at trail heads or major road junctions. Public phones may be needed at trail heads. Sufficient signage should be provided without the need for additional maps or guides. Benches and picnic tables/shelters to be provided where appropriate.

3. SETTING MANAGEMENT CONDITIONS

Management conditions are easily measured and monitored indicators of the impacts of public use on the trail/access and its environment.

Some conditions can be set when management objectives are established, while others may be formulated when particular management concerns develop. Conditions should be chosen to be easily measured or monitored and should directly address the management concern.

Setting conditions for trails or accesses is especially important to minimize use-related impacts. When management is limited to activities such as basic trail clearing and repair, gradual changes in the trail environment and the type of experience it provides may not be apparent to trail managers. As a result, a trail which was chosen and developed for its wildland attributes may be degraded to a rural trail which provides none of the solitude and "escape" that was originally intended.

Na Ala Hele may wish to define the conditions under which sanitation facilities should be provided on trails and accesses. This could be according to expected or measured use levels and can be helpful when planning and allocating funds for new projects. Having an appropriate standard in place would also eliminate the tendency to allow problems to build up until an unsafe or unsanitary situation occurs.

C. MANAGEMENT ACTIONS

Management actions include all activities of managers which promote the objectives for each trail/access.

1. BACKGROUND

Management actions can be grouped according to three strategies: 1) **site management**, 2) **indirect regulation of use**, and 3) **direct regulation of use** (see summary in Figure V-1a.). These strategies and their related actions represent significantly different approaches to achieving management objectives, but should not be seen as mutually exclusive and may even be in combination. For example, use restrictions may be appropriate for wildland or sensitive trails/accesses and areas which are receiving unacceptable impacts. Such use restrictions may not be suitable for urban or rural trails and accesses, which are expected to receive high levels of use. In the latter case the desired solution may involve providing additional facilities or maintenance, widening the trail, or separating different uses, in place of actual limits on use.

Minimizing impacts by limiting the amount of use is a common but generally ineffective approach, because impacts are often only indirectly tied to the amount of use. Other aspects of trail and access use and impact must also be considered, including:

- type and purpose of use
- distribution of use
- type of environment
- the expectations and tolerance of the trail and access users
- seasonal and site characteristics

FIGURE V-1a.

MANAGEMENT ACTIONS

| STRATEGY | GOAL | MANAGEMENT ACTION |
|--|---|--|
| Site Management (Emphasis on site design and facilities) | Harden site | <ul style="list-style-type: none"> ● Install durable surfaces ● Replant |
| | Channel use | <ul style="list-style-type: none"> ● Erect barriers (rocks, logs, posts, fences, guardrails) ● Construct paths, parking lots, walkways, bridges ● Landscape |
| | Develop facilities | <ul style="list-style-type: none"> ● Provide access to under-or unused areas ● Provide sanitation and/or camping facilities ● Develop interpretive programs |
| Direct Regulation of Use (Emphasis on regulation of behavior; individual choice is restricted) | Increase enforcement | <ul style="list-style-type: none"> ● Impose fines ● Increase patrols |
| | Zone use | <ul style="list-style-type: none"> ● Separate uses, either spatially or over time |
| | Restrict use intensity | <ul style="list-style-type: none"> ● Limit access, group size, length of stay ● Require reservations - rotate use |
| | Discourage use | <ul style="list-style-type: none"> ● Charge fees, standard or variable |
| | Restrict activities | <ul style="list-style-type: none"> ● Restrict fires, camping, swimming |
| Indirect Regulation of Use (Emphasis on influencing or modifying behavior) | Alter physical facilities and characteristics | <ul style="list-style-type: none"> ● Improve (or not): roads, trails, facilities, vegetation |
| | Inform users | <ul style="list-style-type: none"> ● Publish information and educate users on low impact use, ecological and cultural features. |

2. SELECTING MANAGEMENT ACTIONS

Clearly stated management objectives and associated, acceptable conditions can help to guide management actions. Careful review of the situation and the merits of potential management responses is needed before any strategy is implemented (See examples in Figure V-2.).

One management action may not solve all concerns and may provoke the development of other problems. **Site management** is often costly and may not be appropriate for wildland or sensitive trails. **Indirect regulation** relies on users cooperating or behaving as managers predict. **Direct regulation** places limits on users' freedom of choice and requires enforcement to be effective. The ability to enforce regulations largely determines the success or failure of the manager's attempts to control or restrict trail usage. In addition, all three strategies may result in considerable resentment toward the managing agency. This is particularly the case when people are prevented (via barriers), discouraged (via signs or other information), or prohibited (via regulation) from engaging in practices or activities they formerly enjoyed. Some individuals express this resentment by ignoring or actively vandalizing barriers, signs, and facilities.

Management strategies should be developed so that public informational programs, modifications to trails and facilities, and regulation of use are all coordinated (see "Recreation Regulations - When Are They Needed?" Lucas, 1982.).

Figure V-2. Examples of Potential Responses to Management Situations

| | | | |
|---|--|--|--|
| Management Problem: | Several drownings due to flash flooding where a trail crosses a stream. | | |
| Management Strategies & Actions: | | | |
| Site Management | Indirect Reg. | Direct Reg. | |
| <ul style="list-style-type: none">● Build bridge● Re-route trail | <ul style="list-style-type: none">● Develop education programs & signs to inform and warn users | <ul style="list-style-type: none">● Close trail seasonally or permanently | |
| <hr/> | | | |
| Management Problem: | Trail is being widened and muddied by horse and mountain bike use. | | |
| Management Strategies & Actions: | | | |
| Site Management | Indirect Reg. | Direct Reg. | |
| <ul style="list-style-type: none">● Improve drainage● Resurface trail● Build alternate trails | <ul style="list-style-type: none">● Develop education program on when & how to use trail● Discourage horse & bike use (don't publicize) | <ul style="list-style-type: none">● Prohibit horse & bike use in wet weather (not feasible on trails used for ditch maintenance) | |

Management actions are also more likely to be accepted if the public is consulted and informed when various actions are being considered. Trail and access users have a stake in many management decisions. Involving the public (via the Na Ala Hele advisory councils) is recommended whenever feasible. The councils can help managers by outlining their preferences with respect to management actions and by facilitating communication between user groups and managers. The advisory councils and user groups can also be instrumental in public information or education programs which constitute an indispensable aspect of ongoing management.

D. TRAIL AND ACCESS DEVELOPMENT, DESIGN, AND MAINTENANCE

1. GENERAL TRAIL AND ACCESS DEVELOPMENT GUIDELINES

Na Ala Hele's trail and access development guidelines apply differently depending on the trail type. Existing or historic trails, roads, and other access ways will often not conform to recommended guidelines. Na Ala Hele does not intend to redesign or reconstruct these trails unless absolutely necessary. Na Ala Hele consults with the Historic Preservation Division in historic trail restoration and maintenance concerns which are discussed later in this section.



"High quality trail design is primarily a balance between beauty and function. Natural features and scenery exist ideally in creative juxtaposition with the continuity, efficiency, and durability of a proposed route." (From Trail Building and Maintenance, 2nd ed. Proudman and Rajala, 1981)

The following information is applicable to the construction of new Na Ala Hele trails and accesses or to existing, non-historic trails/accesses in need of reconstruction. Specific design guidelines for various trail types and modes of transport are presented in Figures V-4. through V-6.

- Initial Construction and Ongoing Maintenance - Routes should be designed to require minimal future maintenance. The need for vegetation removal, grading, and other modifications should be minimized. Trails should be located where the soil is stable and well-drained.
- Erosion - Routes should conform to the natural terrain. Long, straight sections, sudden, abrupt changes in direction, and steep grades should be avoided. Switchbacks, waterbars, and steps should be used to promote erosion control.
- Safety - Stream and road crossings should be planned to minimize the potential for accidents. Bridges may be necessary. Warning signs may be needed.
- Trail Experience - The trail experience can be more interesting with the incorporation of a diversity of biological, climatic, scenic, and topographic features along the route. Trails should include areas where the public can safely access scenic views.

Additional general information on trail development, including design, layout, and construction, is contained in the many source materials in the Na Ala Hele library. Especially valuable materials are listed in Figure V-3.

Figure V-3. Recommended Sources on Trail Building and Maintenance

Proudman, Robert, and Rajala, Reuben, Trail Building and Maintenance, 2nd Edition. Appalachian Mountain Club in association with the National Park Service, National Trails Program, Boston: 1981. This is easily the best single volume source on trail construction and repair and is strongly recommended as a handbook for groups actively involved in trail work. Each DOFAW District Office has a copy. Handbooks can be purchased by writing to:

Appalachian Mountain Club Books
5 Joy Street
Boston, MA 02108

Hooper, Lennon. NPS Trails Management Handbook. United States Department of the Interior, National Park Service. 1983.

State of Indiana, Department of Natural Resources. Indiana Trails Construction and Maintenance Manual.

State of New Mexico, Natural Resources Department. Adopt-a-Trail Handbook. Volunteers for the Outdoors. 1984.

Ashbaugh, Byron. Trail Planning and Layout. National Audubon Society. New York: 1965.

2. SPECIFIC TRAIL AND ACCESS DEVELOPMENT GUIDELINES

Refer to Figures V-4. through V-6. for details on trail and access design, layout, and construction.

3. ACCESSIBILITY FOR PERSONS WITH DISABILITIES

a. What the Law Requires

Chapters 502 and 504 of the Rehabilitation Act of 1973 require that programs, services, buildings, and facilities that are supported by Federal monies be accessible to persons with disabilities. Section 103-50, HRS, requires that all public buildings and facilities constructed by the State and Counties conform to the "American Standards Specifications for Making Buildings and Facilities Accessible to and Usable by the Physically Handicapped."

The "Uniform Federal Accessibility Standards" are used by the Federal Departments of Interior, General Services Administration, Defense, Housing, and Urban Development, and the U.S. Postal Service.

Even though the Na Ala Hele program has not applied for or received Federal funding, the program must comply with Federal accessibility requirements because Na Ala Hele is part of DOFAW and DLNR, both of which receive Federal monies for a variety of programs.

b. Accessibility

The previously mentioned "American and Uniform Standards" work to prevent architectural barriers so that disabled persons can enjoy access to governmental services that should be equally accessible to all people. Accessibility is not limited to structures and facilities. Federal law also requires programs to be equally accessible. This includes making information available to visually and hearing impaired persons on the availability and location of services, programs, and facilities.

There are no established standards for trails, camping grounds, and picnic shelters. The State of Hawaii's Commission on Persons with Disabilities (Department of Health) is available to review program and structural plans and advise on ways to provide equal access to the maximum extent feasible. In the absence of established standards, it is important to voluntarily determine what can be done to facilitate access to outdoor areas. A balance needs to be maintained between accessibility needs, safety, and environmental and historic preservation concerns.

A wheelchair accessible path requires sufficient width, gentle slopes, and a firm, slip-resistant surface. To construct and maintain to safety standards, such a trail in historic, wildland, or sensitive trail environments may result in unacceptable levels of impacts on the trails and their surroundings. Wherever accessible trails/accesses are located, parking, restrooms, water, and other facilities must be built to standards that enable use by disabled persons, particularly if such facilities are present for the non-disabled.

Kanaha Pond, a major wetland habitat for waterbirds on Maui, has wheelchair accessible trails and viewpoints. Keanae Arboretum, a DOFAW project on Maui, is in the process of developing trails that will be wheelchair accessible. However, at this time neither area has any restroom facilities.

The "Lion's Tale" trail on Massanutten Mountain in Virginia is designed for the visually impaired. It was a joint project of local Lions Clubs and the U.S. Forest Service. The trail's main purpose is to help visually impaired people to experience nature.

Hikers use a guide rope along a .25 mile loop trail which takes them through a forest and mountain stream crossing. Interpretive signs are posted along the way in Braille and extra large print. The route takes advantage of olfactory and tactile features of the forest. Sighted people can be supplied with dark goggles to help them experience the trail as a blind person would.

Figure V - 4. Trail Guidelines






| | Clearing Width | | | Vertical Clearing | Maintenance Comments |
|--|---|---|--|--|---|
| | Trees/Logs | Brush/Logs | | | |
|  | Urban Rural Wildland Sensitive | 6 Ft. Min. 4 - 6 Ft. 3 - 4 Ft. 3 - 4 Ft. | Concrete or Asphalt Asphalt or Packed Dirt Packed Dirt or Woodchips Boardwalk | 1 Ft. to each side of tread 2 Ft. to each side of tread 7 - 8 Ft. | Trail(s)/access(es) should be cleared four times a year in wet climates where vegetation grows rapidly. Once a year clearing is sufficient for certain trail(s)/accesses. |
|  | Urban Rural Wildland Sensitive | 3 - 6 Ft. 2 - 4 Ft. 2 - 3 Ft. 2 - 3 Ft. | Asphalt/Packed Dirt Natural/Woodchips Natural Natural/Woodchips/ Boardwalk as nec. | Tread only 2 Ft. to each side of tread 7 - 8 Ft. | Trail(s)/accesses should be cleared at a frequency that maintains safe conditions. Maintenance frequency is affected by climate, intensity and types of public use, as well as the availability of a labor force to do the work. |
|  | Urban Rural Wildland Sensitive | 3 - 6 Ft. 2 - 4 Ft. 2 - 3 Ft. --- | Dirt/Asphalt for short dirt. Natural Natural ---- | 1 Ft. to each side of tread 3 Ft. to each side of tread 9 - 10 Ft. | TRAIL TREAD WIDTH is generally determined by the trail type and intended use (foot, bike, etc.), but adjustments for the side slope and gradient may be necessary. On steeper slopes, using the minimum tread width will reduce the environmental impact and lower construction costs associated with trail cuts and fills. However, in areas with dangerously steep slopes or cliffs, the trail should include sections which are wide enough to allow two parties (which may include horses or mountain bikes) to pass safely. Interpretive trails should also be wider than normal to accommodate large groups and facilitate interaction between trail users. |
|  | Urban Rural Wildland Sensitive | 3 - 6 Ft. 3 - 4 Ft. 3 - 4 Ft. --- | Concrete/Asphalt Packed Dirt Packed Dirt ---- | 2 Ft. to each side of tread 2 Ft. to each side of tread 9 - 10 Ft. | |
|  | Urban Rural Wildland Sensitive | 10 Ft. Min. 10 Ft. Min. --- --- | Asphalt Natural ---- ---- | 2 Ft. to each side of tread 2 Ft. to each side of tread 9 - 10 Ft. | |

Figure V - 5. Trail Gradients

Maximum Gradients: For Various Uses

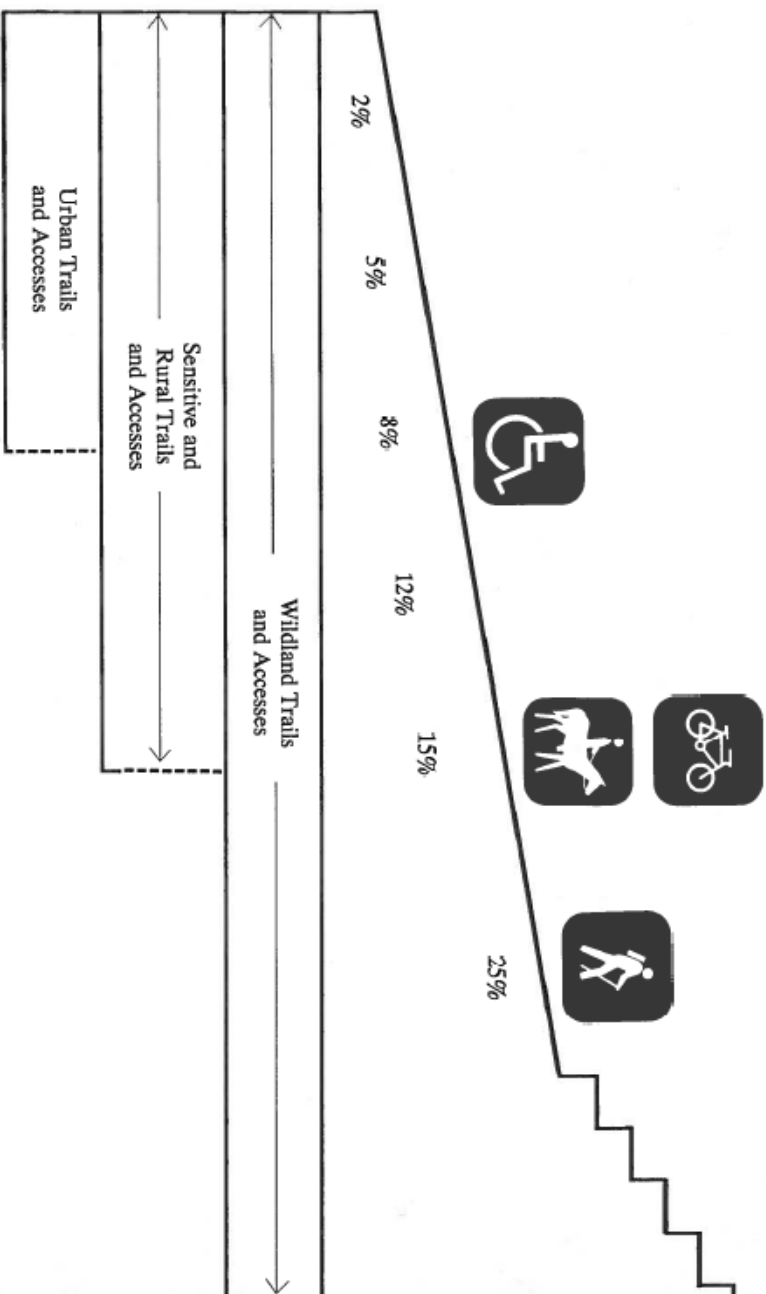






Figure V-6. Tread Materials

| MATERIALS |  |  |  |  | MAINTENANCE | COMMENTS |
|------------|---|---|--|---|-------------|--|
| CONCRETE | A | C | A | D | Medium/Low | <ul style="list-style-type: none"> ● Needs to be Swept ● Costly |
| ASPHALT | A | C | A | C | Low | <ul style="list-style-type: none"> ● Labor Intensive to Install ● Costly |
| BOARDWALK | B | B | B | C | Medium | <ul style="list-style-type: none"> ● Expensive |
| GRAVEL | C | C | C-D | B | Medium | <ul style="list-style-type: none"> ● Must be Well Graded ● Needs Frequent Raking |
| WOOD CHIPS | C | B | D | A | High | <ul style="list-style-type: none"> ● Needs Frequent Replacement |
| SOIL | C | A | B | A | Medium/High | <ul style="list-style-type: none"> ● Maintenance Needs Very Variable |

A: GOOD

B: OK

C: MARGINAL

D: UNACCEPTABLE

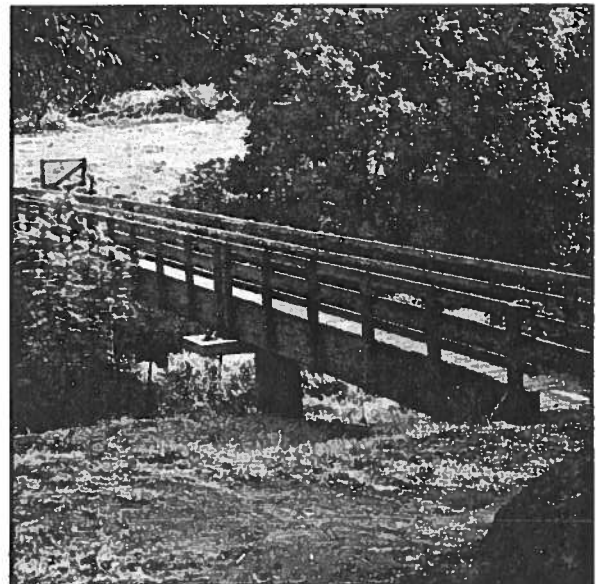
4. TRAIL AND ACCESS STRUCTURES AND FACILITIES

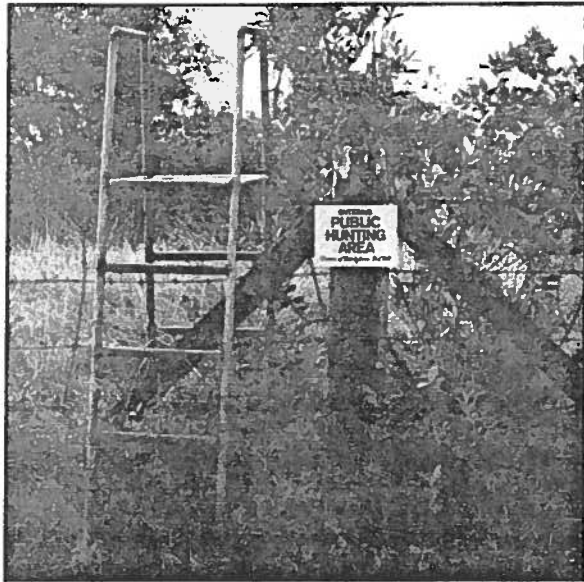
Trail structures and facilities are an integral part of trail and access development and should be designed to be compatible with the **management objectives** for a trail or access. Further details on the design and construction of trail structures and facilities are contained in the Na Ala Hele Trail and Access Structures and Facilities Handbook, available in the Na Ala Hele library (hereinafter referred to as the Na Ala Hele Handbook). See also Appendix, "U.S. Forest Service Cost Estimates."



Boardwalks are used in marshy, boggy areas for both ease of access and for resource protection, and can also be used to help disabled users cross sand dunes or beaches. Design particulars and construction methods vary widely, depending on the type of environment, expected level of use, and funding. This boardwalk protects Pepeopae Bog on Molokai.

Bridges should generally be as wide as the widest trail leading to them. They can range from structures built to accommodate horses to logs across streams. This bridge is located along the Kuamoo-Nounou Trail on Kauai.





Posts, gates, and stiles limit vehicular or animal access while allowing easy pedestrian access for trail/access users. This stile is for climbing a fence without damaging it.

Ramps are generally for persons with disabilities and should be designed in accordance with the "Uniform Federal Accessibility Standards" (in Na Ala Hele's library).

Stairways are expensive, often difficult to construct, and should be used only when there is a high demand for access and no other viable alternative. Less elaborate stairways for use in sand dunes include **sand ladders**, which are inexpensive and easy to fabricate, but require a high level of maintenance.

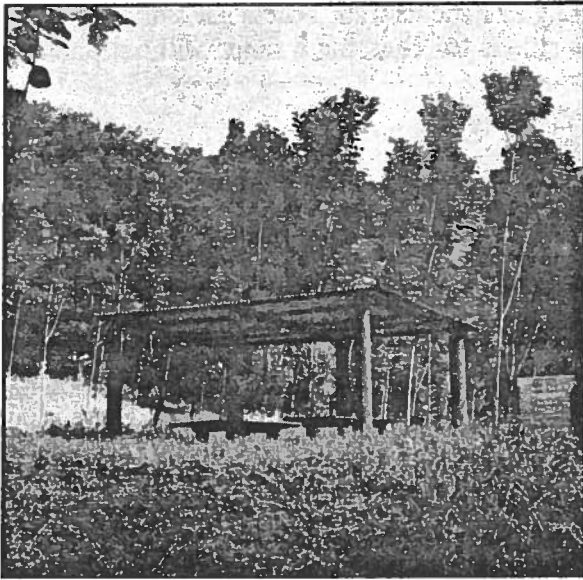
Waterbars are erosion control features used to divert water from trails and accesses. Waterbars present obstacles to disabled users and should not be used on trails which are fully accessible to the disabled.

Benches are placed at scenic viewpoints along rural and wildland trails, and should be provided on all trails accessible to the disabled.



Camping sites are usually in rural or wildland settings and may consist of facilities such as a shelter, picnic table, trash receptacle, and toilet.

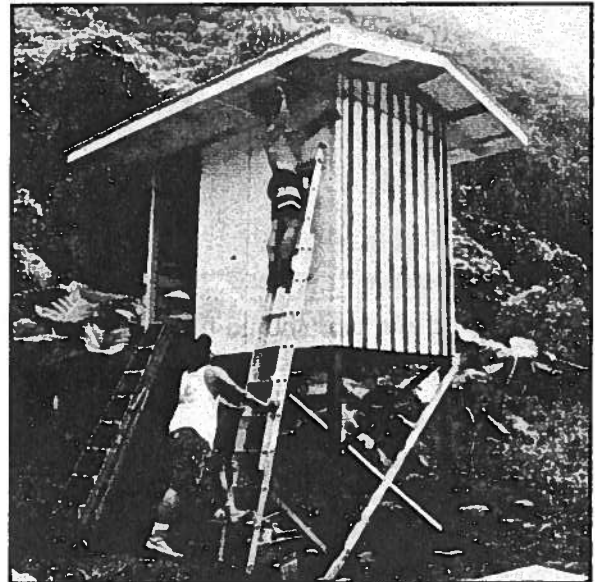
Parking "Uniform Federal Accessibility Standards" should be followed for parking where trails/accesses are accessible to persons with disabilities. Drainage from parking areas should be routed away from bluffs or other erodible features, and away from streams or other water sources. It is necessary to include adequate parking when designing a trail/access.



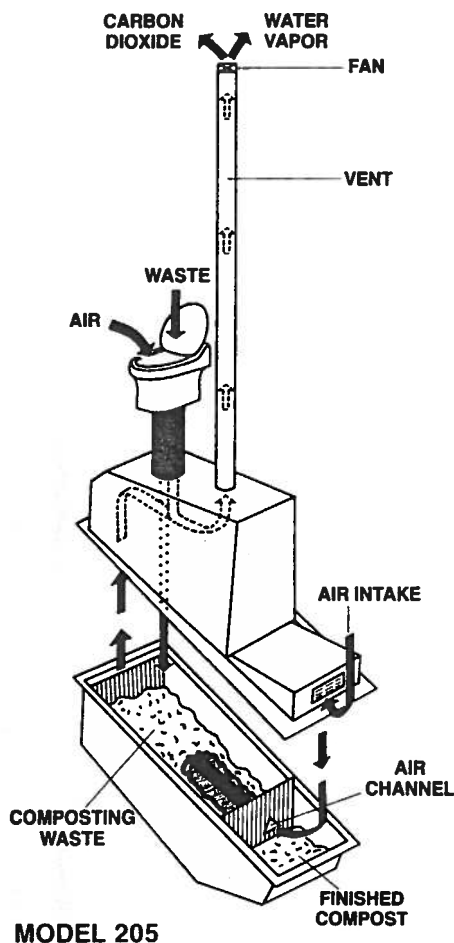
Picnic tables and shelters are suitable for use along trails and accesses of all types. Refer to Kauai Forest Management Note No. 6 for design details in the Na Ala Hele Handbook.

Trash Receptacles should be provided near all parking, camping, and picnic areas, and at the trail heads of urban and rural trails and accesses.

Toilet Facilities. The need for toilet facilities at or along trails and accesses varies and should be determined on a case-by-case basis. California guidelines suggest that restrooms are not required if there are fewer than fifty people per mile of shoreline. More popular beaches should be provided with toilet facilities. California's standards call for a separate unit for men and women for every 30 parking spaces, 50 people, or any fraction thereof (Public Beaches - An Owner's Manual, Mikkelsen and Neuwirth, 1987). If trails are fairly short and receive intensive use, this same standard can be applied. Whenever possible, trail heads should be located near existing parks where toilet facilities are available. In areas lacking water, waterless toilets can be installed.



Division of Forestry and Wildlife workers install a composting toilet system in Waimanu Valley on Hawaii.



It should be noted that these units are expensive and need to be used properly if composting action is to occur. See Appendix, Waterless Toilets, and the Na Ala Hele Handbook for details on waste treatment systems and Department of Health requirements.

5. HISTORIC TRAIL RESTORATION AND PUBLIC USE

The preceding discussion of trail and access development, design, and maintenance does not apply to existing historic trails which are within the State's Historic Preservation Division's (HPD) jurisdiction. If a historic trail is included in the Na Ala Hele System, HPD does a historic preservation review of the trail project to ensure that the trail and other historic properties adjacent to the trail have been fully identified and will be adequately protected when public use occurs. HPD also specifies conditions that must be met in properly restoring or reconstructing the historic trail and advises DOFAW on signage and facilities that should be present. The amount and type of facilities will depend on the anticipated intensity of public use. Signage would consist of warnings where hazards exist, interpretive, directional and regulatory information, and notification of prosecution under Chapter 6E, HRS, of vandalism of historic properties. See Chapter IV.C.3., Evaluation of Historic Trails and Roads, for discussion on historic trail and access assessment.

E. PUBLIC INVOLVEMENT AND EDUCATION

1. WHAT THE LAW REQUIRES

Sections 198D-9(2) and (3), HRS, require that Na Ala Hele serve as the centralized information agency for matters relating to trails and accesses statewide. Advisory councils must be established on regional, islandwide, countywide, or statewide bases. Recognizing Na Ala Hele's responsibilities to develop a program that will benefit the public and Hawaii's heritage and environment, Na Ala Hele must work with members of the public to understand, resolve, and prevent management problems.

2. PUBLIC INVOLVEMENT

The Na Ala Hele program grew out of grassroots citizens' efforts, and public input through the advisory councils has become an integral part of the program. If Na Ala Hele is to succeed over time, public involvement must be developed on a larger scale. Such involvement has many advantages:

- Personal experience with one or more aspects of Na Ala Hele can help build an understanding of the goals and needs of the entire program. In so doing, people can become advocates for the program with other members of the public and lawmakers.
- Participation in trail maintenance and cleanup programs will help build awareness that public access is both a right and a privilege that is perpetuated through responsible behavior by the public.
- Through close association with Na Ala Hele, the public can communicate their needs and interests to those managing the program.

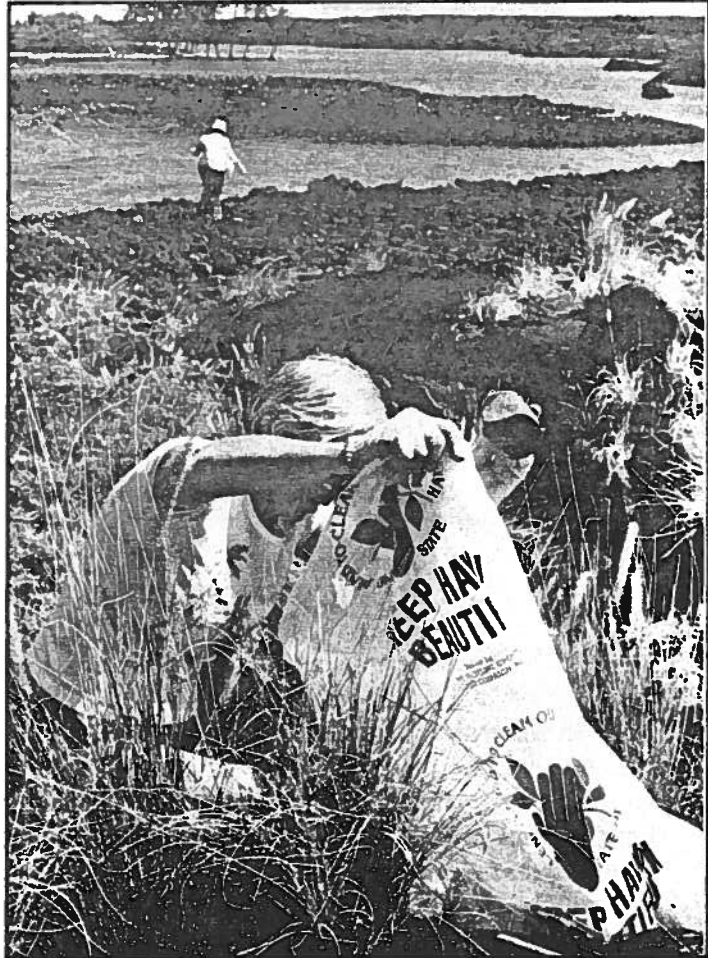
Public involvement can be the use of volunteer crews, active public educational programs focusing on safety and proper conduct in the outdoors, stewardship programs to protect cultural and natural resources, or the holding of public meetings to obtain input prior to planning and carrying out management decisions. Strong public involvement in the program demands more of both staff and the public. The possibilities are limited only by the time available, interests, and imagination of the public and staff.

a. Approaches to Volunteer Involvement

There are three basic approaches to coordinating and organizing volunteers: **Individual, Group, and Partnership Programs**. Na Ala Hele may want to incorporate all three in its management efforts.

(1) Individual Programs

The most common approach is an individual volunteer program in which a government agency directly utilizes volunteers in its programs. The volunteers function as unpaid staff, and agency staff time is required to recruit, train, supervise, evaluate, and reward the individual volunteers. This approach is used by both the U.S. Department of Agriculture, Forest Service (Volunteers in the Forests)



*Lending a Hand to Clean Our Land
Kiholo Bay, Hawaii*

and the U.S. Department of Interior, National Park Service (Volunteers in the Parks). This may be the best approach when volunteer assistance is needed for tasks which must be performed within the agency or tasks which require close cooperation between staff and volunteer. Individual programs are relatively simple to set up and allow the agency to maintain a high degree of control. Disadvantages of this approach include the time required of staff, less freedom of the volunteers, and potentially less accomplishment compared to other approaches.



*Pololu Valley Beach Clean-Up in 1990 by Volunteers of the
Na Ala Hele Nonprofit Organization*

(2) Group Programs

In this approach volunteers become involved as groups, rather than on an individual basis. The services of the group can be contracted by the agency, with funds going toward tools, food, lodging, organizational expenses, etc. DOFAW has used this approach in trail construction and maintenance efforts. The Natural Area Reserves System has successfully employed groups of volunteers who work under the direction of trained volunteer leaders. Another variation involves massive group efforts, such as annual events to clean beaches, parks, or trails. The group program still allows the agency to retain direct control over the work being done, while greatly reducing the need for recruitment and supervision of individual volunteers. It does not eliminate agency staff time in organizing, training, supervising, and rewarding group volunteer efforts.

(3) Volunteer Partnerships

Volunteer partnerships is a term used by the National Volunteer Project of the Appalachian Mountain Club to describe groups of organized volunteers (usually nonprofit organizations) working in cooperation with government agencies to achieve management goals. The volunteer or nonprofit group assumes significant long-term responsibilities as opposed to short-term jobs or contracts. Many examples of such partnerships exist, ranging from the Appalachian Trail Conference, in which nonprofit member groups cooperate with local, state, and Federal land management agencies (see

Appendix, State and Regional Trail Programs), to the Friends of Iolani Palace, which operates facilities and interpretive programs at Iolani Palace in conjunction with the Hawaii State Parks Division.

Successful, long-term partnerships depend on the formal delegation of meaningful responsibilities to organized groups. These can take the form of memoranda of understanding, cooperative agreements, licenses, and contracts, with various legal ramifications. It is important to clearly delineate the responsibilities of all parties.

Volunteer partnerships can offer significant accomplishments while placing management responsibilities primarily on the volunteer group. They may enable programs and activities that would be impossible for the agency to pursue independently, even with individual volunteer assistance. Such partnerships demand more effort to create and perpetuate and require sufficient interest and enthusiasm within both the volunteer group and sponsoring agency to sustain a long-term commitment.

b. State Policy Concerning the Utilization of Volunteers

All State agency programs involving volunteers should be developed in accordance with the guidelines in Chapter 90, HRS ("State Policy Concerning the Utilization of Volunteer Services"), enacted in 1978. A guide to Chapter 90 has been published by Statewide Volunteer Services (SVS) and is currently being revised. Located within the Office of the Governor, SVS serves as a volunteer advocacy and coordination agency within the State. It provides information, technical assistance, and volunteer recognition to State agencies.

Statewide Volunteer Services
Office of the Governor
State Capitol, Room 442
Honolulu, Hawaii 96813
(808) 548-8539

c. Risk Management

Guidelines for State coverage of volunteers via Workers' Compensation are given in Chapter 90, HRS, and the procedures therein should be closely followed if volunteers are to be eligible for State coverage.

Nonprofit groups should be encouraged to adopt a risk management strategy such as that outlined in Risk Management - Strategies for Managing Volunteer Programs. Henson and Larson, 1988. Liability coverage for nonprofit groups which use volunteers is available (see Appendix, Volunteer Sources).

d. Summary

. . . most of the recreational trails in Connecticut, on both State and non-State land have been developed, blazed, and maintained by trail volunteers . . . the volunteer effort, coordinated by private trail organizations (and not the Bureau of Parks and Forests) has been the dominant factor in Connecticut.

(Joseph Hickey, State Park Planner, letter to Na Ala Hele, November 14, 1989)

Many existing trail programs give much of the credit for their successes to public involvement in trail construction and maintenance. Connecticut's experience and that of other states point to the strength of partnerships between public agencies and volunteer and nonprofit organizations. Volunteer organizations, working in partnership with public agencies, have been instrumental in constructing and maintaining the Appalachian Trail. Their Cooperative Management System is discussed in the Appendix, State and Regional Trail Programs.

Whether Na Ala Hele chooses to form partnerships with volunteer groups or develops and manages its own volunteer projects, **there must be commitment on the part of both the public and the responsible agency to cooperate in trail management.**



Volunteers built barriers to prevent motorized vehicles from using (and damaging) the historic Hoapili Trail on Maui.

Important points to remember when involving volunteers in hands-on trail and access work:

- Recruit volunteers and volunteer organizations only when projects are ready for them.
- Pay special attention to initial projects, because if successful, they can generate positive media exposure and help cultivate further volunteer interest and commitment.
- Give volunteers a sense of ownership for their projects by involving them in a meaningful way in decision-making. Since they will be doing the work, they should be part of the process which decides how it will be done.
- Develop a core group of volunteers who can function as crew leaders. Adequately train them in leadership skills, technical problem solving, work crew organization, and safety procedures.
- Choose projects which fit the capabilities of the volunteers.
- Offer volunteers in-kind assistance which complements their efforts. This might include training, liability coverage, technical information, tools, lodging, food, back-up assistance with heavy equipment, and vehicles.
- Establish and follow safety procedures.
- Emphasize the quality, and not the quantity, of the work being performed. Develop enthusiasm for and give recognition to volunteer efforts. Design volunteer programs with built-in incentives.
- Concentrate on meeting volunteers' goals, not Na Ala Hele's, for miles of trails constructed. Volunteers are interested in friendship, camaraderie, making a contribution to society, learning about Hawaii's environment, and growing as individuals. Meet those goals and the trail accomplishments will take care of themselves.

See Appendix, Volunteer Sources, and the Na Ala Hele library for additional information.

3. PUBLIC EDUCATION

Education programs which focus on responsible use of trails, facilities, and trail environments are necessary to promote Na Ala Hele's management objectives. Educational programs should do more than simply teach trail/access users what to do. The object should be to raise people's awareness of how their behaviors impact the environment and other trail/access users. Users should be taught how to evaluate a situation, and then select a course of action most likely to minimize their impacts. The emphasis should be on building sound judgement, as well as on following specific techniques.

a. Methods

Public education programs should be a cooperative effort between managing agencies and the public. Although products for public education (maps, trail guides, etc.) can be used in nonprofit fundraising and produced commercially, inaccuracy of the published information can be a serious problem. Managing agencies should review public education materials prior to their production as much as possible.

Several methods of educating the public include:

- Developing instructional curriculums for children and adults in cooperation with existing environmental education efforts;
- Establishing community outreach programs consisting of public presentations, media campaigns on specific topics, and utilizing written and visual materials;
- Establishing an internship program for high school and college students; and
- Developing interpretive programs and publishing brochures, trail guides, and maps.

b. Topics

Numerous possible topics for public education have been identified. The public needs to be informed of Na Ala Hele's purposes, goals, objectives and activities. Information should be provided on the many ways one can become involved in the program.

People need to be instructed on:



- Trail etiquette, i.e., who has the right-of-way when hikers, horses, and mountain bikes are permitted on the same trail;
- Safety precautions and techniques to avoid and treat injuries;
- The boundaries between the publicly owned shoreline and private property;
- How and where to get permits, what the rules and regulations are, and how to report violators of conservation laws;

- How to minimally impact the environment when hiking and camping by practicing "low-impact" or "no-trace" methods (references include Soft Paths: How to Enjoy the Wilderness Without Harming It. Hampton and Cole, 1988; and "Low Impact Recreational Practices for Wilderness and Backcountry." U.S. Forest Service, 1989);
- How to hike and ride without aggravating erosion problems on trails;
- How to use waterless toilets so that proper composting action can occur;
- How to take care of historic sites and sensitive biological resources; and
- How to properly dispose of trash.

Educating people and attempting to change their behavior in the outdoors could make a difference between keeping an access open or closing it due to inability to manage negative impacts.

F. TRAIL AND ACCESS SAFETY

1. WHAT THE LAW REQUIRES

Section 198D-6, HRS, requires that Na Ala Hele regulate the use of trails and accesses in order to protect the public safety.

2. BACKGROUND

Na Ala Hele's primary safety-related goal is to prevent and minimize injuries sustained by users of Na Ala Hele trails and accesses. Recent research (see Injury Prevention and Control System for the State of Hawaii. Young, 1988) indicates that injury prevention is most effective when pursued in a variety of contexts. Na Ala Hele should address public safety throughout the program. Evaluation of trails and accesses for inclusion in the Na Ala Hele system will need to consider public safety. Safety issues are directly related to landowner liability concerns which affect the trail and access system's ability to expand. Na Ala Hele's trails and accesses need to be designed, constructed, and maintained with public safety in mind. Regulations governing trail and access use are an important means to control public exposure to hazards and are especially effective when combined with public education and involvement programs.

Safety-related issues are discussed throughout this plan. Approaches to injury prevention, the program's duty to warn, and Na Ala Hele's sign program are specifically described here.

3. APPROACHES TO INJURY PREVENTION

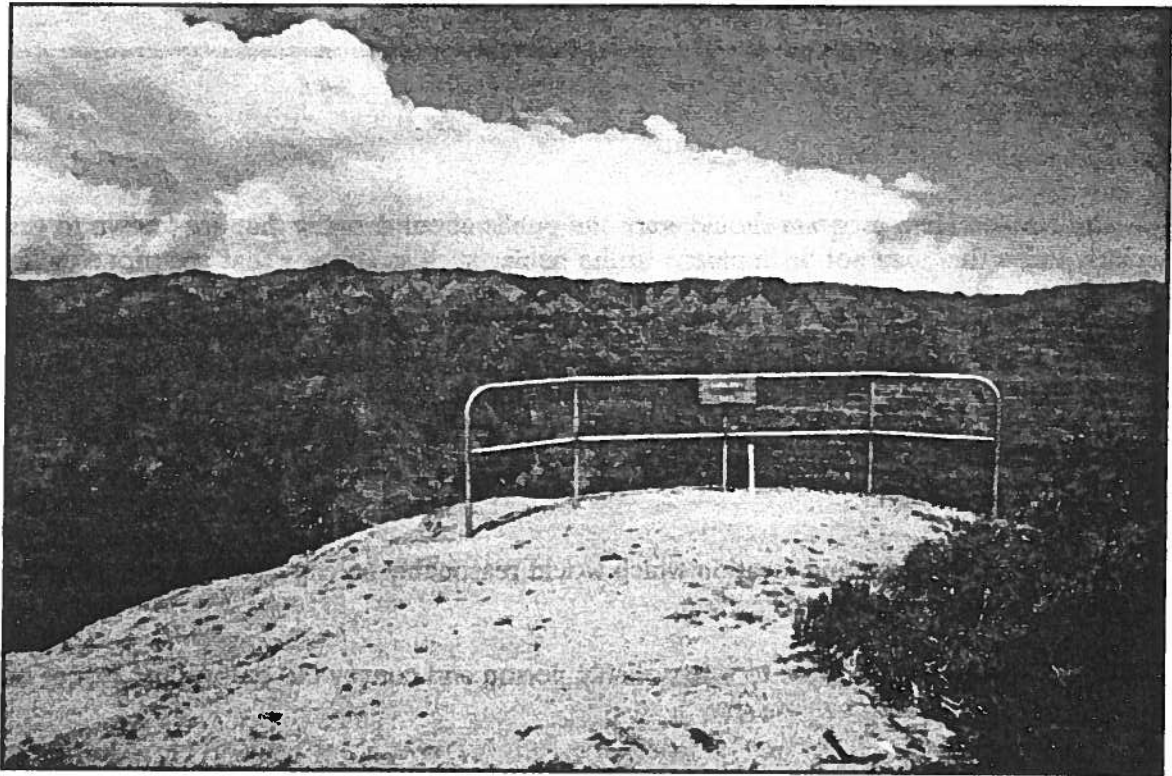
Specialists in injury prevention have found it useful to distinguish between three different approaches:

a. Eliminating or controlling exposure to hazards is the safest of the possible approaches but is often not practical due to cost or degree of intrusiveness. The intrusiveness factor is especially important in wildland and sensitive environments where minimal evidence of human presence is sought. Eliminating natural hazards is often not feasible, but exposure to the hazard can be reduced or eliminated in a variety of ways. For example, signs can be posted to warn users of dangerous surf conditions; a

bridge can be built over a stream which floods during heavy rains; railings and signs can be posted at cliff lookouts. Barring public access provides the ultimate in safety but is clearly an option to be used only when danger to the public is extreme. What is appropriate and effective will vary widely and must be determined on a case by case basis.

b. Changing the nature of the exposure to a hazard so that it does not result in injury requires public education and notification. It is important that the public be informed that the hazard exists. This can be communicated via warning signs. Signs can inform that hunting is in progress, but people should also be advised via trail guides and other informational materials to wear bright clothing and stay on trails in areas where hunting is occurring.

c. Activities that seek to minimize or prevent injuries should be incorporated in the program. First-aid training for users, volunteer leaders, and staff should be conducted, and effective search and rescue capabilities should be developed in cooperation with other responsible agencies. Trail/access users should be instructed to include first-aid supplies in their standard gear. Trail head stations with sign in/out sheets can be very helpful should search and rescue become necessary. Users should be made aware of the purposes and benefits of using the sign in/out system.



Guard rails are installed near the edges of cliffs to allow dramatic but safe viewing.

A combination of injury prevention approaches should be used by Na Ala Hele. Points to consider include:

- Priority should be given to warnings of hazards which may cause serious, life-threatening injuries.
- Areas or hazards which have been the cause of previous injuries or deaths should receive priority and steps taken to limit public exposure to the hazard.
- Na Ala Hele should keep informed of the latest safety-related ideas and techniques that are being successfully used by other states' programs.
- Consistency in the treatment of similar hazards is important, both to enhance public understanding and to effectively protect the public. Safety efforts should be coordinated throughout the Na Ala Hele program.

4. DUTY TO WARN

The Na Ala Hele program should warn the public about dangers that are known to exist, particularly those that may not be apparent to the public, such as streams that are prone to flooding or known ocean rip currents. If a personal injury litigation case comes to trial, the plaintiff must prove (1) that a duty to warn existed, (2) that no warning was given or that the warning was inadequate, and (3) that the injury sustained was caused by the lack of or inadequacy of the warning.

Warnings (in the form of signs or other public information) should be composed and delivered so as to be noticed and heeded. (See The Failure to Warn Handbook. Hall, 1986). To be considered adequate, warnings should:

- be in a form and location which would reasonably be expected to catch the attention of a reasonably prudent person,
- be comprehensible to a reasonable person and convey the nature and extent of the danger, and
- warn with a degree of intensity that matches the potential danger.

Hawaii case law does not presently contain clear guidelines for determining what constitutes an adequate warning. The best presently available alternative is to follow warning guidelines developed for product labeling and industrial signage. These guidelines indicate that warnings should be available when and where they are needed and should be designed to attract immediate attention. The warning should also explain how to avoid the danger. To help catch users' attention, the use of key words and colors are recommended on signs, brochures, and other materials.

Key words:

DANGER: Immediate hazard which can cause severe personal injury or death

WARNING: Potential hazard which may cause severe personal injury or death

CAUTION: Potential hazard which may cause personal injury

Exciter Colors:

Red, yellow, orange, and black - consideration should be given to compatibility and readability.

5. NA ALA HELE'S SIGN PROGRAM

Signs are essential to a trail/access system and serve to:

- provide the public with information which helps them to use and enjoy trails and accesses,
- inform the public about regulations or guidelines which govern the use of trails and accesses, and
- present warnings of significant, existing, and possibly unseen hazards.

The following section describes information which generally needs to be communicated using signage. Important elements of Na Ala Hele's sign program and its prototype signs are reviewed.

a. Types of Sign Messages

Identification: Trail and access names should be consistent. Where trails/accesses have more than one frequently used name (for example, Hawaiian and English), it may be desirable to list both names at the trail head. When trails branch or intersect, the path of each trail should be clearly marked.

Directions: How much directional and distance information should be provided depends in part on the trail type and the extent of the trail network involved. There should be sufficient signage to prevent people from getting lost. The signage should not be too disruptive of the natural surroundings. Maps and guides should be available for more detailed information.

Interpretation and Information: Information is usually provided through a combination of maps, graphics, illustrations, or text. Interpretation can focus on many subjects, including past or present events, the trail/access environment, and visible landmarks. Interpretation can benefit the public, the trail, and its surrounding environment. For example, a brief explanation of the history of an ancient Hawaiian trail and Na Ala Hele's goals with respect to sensitive trails and environments can serve to explain the need for regulations restricting motor vehicles from the trail.

Regulation of Trail Uses and Activities: In general this information should be presented in a positive way to minimize negative messages. Symbols should be used whenever possible to eliminate confusion for non-English speakers. When it becomes necessary to show that an activity is prohibited (particularly important when the activity was previously allowed or is prohibited seasonally), symbols can be used in conjunction with a red slash. Whenever possible, the rationale for prohibiting a use or activity should be given.

Warning: Warning signs are most effective when accompanied by educational efforts informing the public of how to avoid injury. A sign primarily indicates that a hazard exists in a specific place. Information regarding how to avoid injury should be provided prior to the actual trip or at the trail head. Signs along trails and accesses should be simple and direct, consisting essentially of graphics which alert the public to the presence of a particular hazard.

b. Signage Considerations

The following considerations influence how the previously discussed information should appear on actual signs. Not all of these features can be maximized, so the best compromise should be sought.

Effective communication. The message being communicated should be clear and concise, with a minimal potential for confusion. Consistency in design, construction, and placement of various signs helps the public to know what to look for when seeking information on trails and accesses. It also reinforces the fact that Na Ala Hele's trails and accesses are part of a comprehensive, statewide system. Ways to achieve this include careful use of the logo and consistent use of shapes and colors of signs, according to sign type.



Vandalism of trail facilities and amenities can be quite costly and discouraging.

Cost. It is important to minimize the costs of signage. Na Ala Hele's statewide signage program consists of hundreds of signs. Direct costs of this program include the costs of design, manufacture, maintenance, and replacement. The durability and life span of the sign is influenced by its location in the field (i.e., susceptibility to vandalism and climatic conditions). Indirect costs include staff time for sign placement, maintenance, and replacement.

Attractiveness. Signs are highly visible aspects of the Na Ala Hele program, and it is important that signs be well-designed, attractive, and blend into the natural environment as much as possible. While custom designs and materials are available, the costs may be prohibitive. It seems the more attractive the sign, the more susceptible it is to becoming someone's souvenir.



Elements of standardization can be seen in these signs used by Maui and Hawaii Counties.

Standardization. Some sign elements that should be standardized include the following:

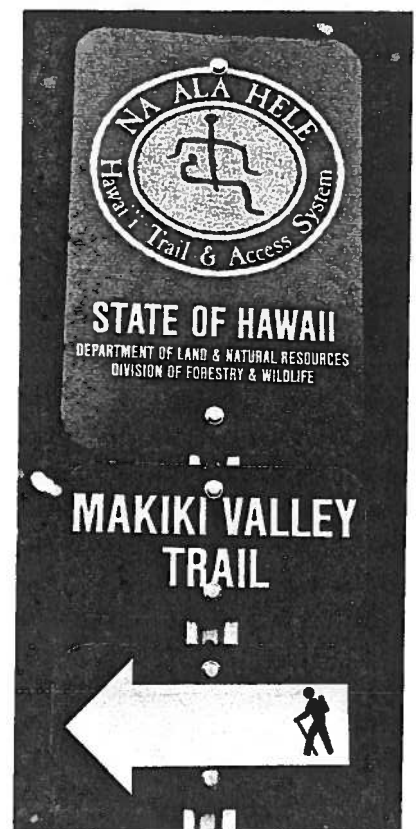
- Symbols used to indicate permitted or prohibited activities, hazards, and facilities.
- The Na Ala Hele logo and how it is used on a particular sign. Either the rectangular or oval logo can be used, depending on which style better suits the particular sign's design.
- Colors for symbols, lettering, warning signs, and logo.

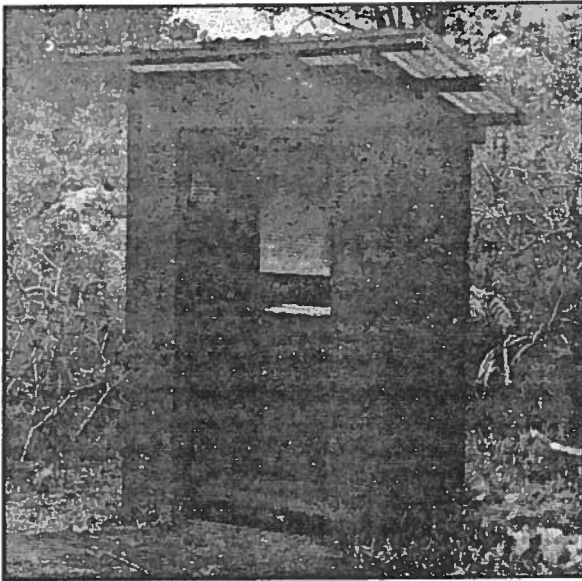
Sign Inventory. A map of sign locations should be kept on file. This should include photos of the sign (in place) and sign specifications when replacement becomes necessary.

Sign Coordinator. A Na Ala Hele staff person should be assigned to coordinate signage issues between districts and other agencies, aid in sign design, and assist DOFAW in revising its signage guidelines and standards as new information, improved designs, and better materials become available.

c. Na Ala Hele Signs Currently in Use

Roadside/Trail Head Identification signs include the Na Ala Hele logo, a trail name or other identifier, and a directional arrow. These signs are to be used beside State and county highways and Forest Reserve roads and must satisfy county and State sign requirements for highways.





A Division of Forestry and Wildlife Trail Head Station

Trail Head Station can be designed to convey most types of information.

- Trail conditions, locations of special sites along the trail, regulations and restrictions, hazards, and other items of interest can be posted.
- A trail check-in and out register provides information regarding trail use. Statistics on trail and access use are important for planning and management. They can be helpful in justifying requests for more facilities, trail/access improvements, or new trails. A remarks section on trail logs allows users to make notes indicating trail sections or areas in need of maintenance. The sign in/out and destination information is useful in case of rescue operations, as it allows those involved to determine if rescue is needed, and where to concentrate search activities.



Trail Side Identification consists of posts with information such as the trail name, length, directional arrows, the Na Ala Hele logo, and prohibited uses or activities.

Warning Signs which are diamond shaped with black symbols on a yellow background, have been developed for the following hazards:



*Wasps
(vespula)*



*Lava
Tubes*



*Falling
Branches*



*Loose
Rocks*



Cliffs



*Stream
Flooding*



*Sharp
Lava*



Hunting

The Na Ala Hele sign program is being field tested and is expected to undergo improvements and revisions.

G. REGULATION OF TRAIL AND ACCESS USE

1. WHAT THE LAW REQUIRES

Section 198D-6, HRS, states that "The department, by rule adopted in accordance with chapter 91, may regulate the use of trails and accesses under the department's jurisdiction. Regulation of the use of trails and accesses shall be established for the following purposes:

- (1) To preserve the integrity, condition, naturalness, or beauty of the trails or accesses;
- (2) To protect the public safety; or
- (3) To restrict or regulate public access to protected or endangered wildlife habitats, except for scientific or educational purposes."

2. IMPLEMENTING TRAIL AND ACCESS REGULATION

Regulation of trail and access use by DLNR or other state agencies requires the adoption of rules which involves official adoption of an appropriate section of the Hawaii Administrative Rules (HAR). Such rules must be in compliance with Chapter 91, HRS.

How regulations are implemented varies according to which agency has jurisdiction over the trail or access. Enforcement of regulations will in many instances require the cooperation of agencies, organizations, or individuals outside of DOFAW. Where Na Ala Hele does not have direct jurisdiction, trail and access regulation must be pursued on a cooperative basis. This will apply to lands which are privately owned or leased, or owned or leased by agencies other than DLNR.

When direct regulation of use is chosen as the preferred management strategy (see discussion on management actions in Section C. of this chapter), managers should not focus solely on the regulations. Consideration should also be given to how the regulations will be put into effect, how they must be explained to the public, and how they will need to be enforced.

3. NEED FOR REGULATIONS

Rules, regulations, and procedures need to be developed and established to govern the following activities:

a. Commercial uses of Na Ala Hele's trails and accesses. There is great interest in the commercial potentials of public recreation along trails/accesses, but several issues have been raised:

- Should the commercial operator help to provide facilities for and maintain public trails/accesses being used for commercial benefit?
- Can adjacent landowners be held liable if a customer strays from the trail/access and is injured?
- Who is liable when a commercially produced map or other trail/access guides are inaccurate and lead to injury?

b. Mixing of modes of transportation that can be used on trails and accesses. As Na Ala Hele's trails/accesses become more available and visible and as Hawaii's resident and visitor population increases, so will the use of each trail/access. The popularity of mountain bikes is increasingly evident. Mules, horses, and even llamas are being used. The mixing of these transportation modes with hikers and four-wheel drive vehicles could lead to unsafe conditions, liability problems, and severe damage to the trail/access and its surroundings. Clearly, managing agencies will need to be able to regulate the mixing of trail/access uses in the interest of public safety and environmental protection.

c. Public access to ecologically and historically sensitive areas. The negative impacts of public access should be acknowledged. There are needs to control or limit public access to certain areas in the interest of protecting the resources that the public seeks to enjoy. Managing agencies will need to justify public access restrictions and may need to implement procedures whereby members of the public will be able to apply for entry through permit systems.

4. EXISTING RULES AND REGULATIONS

a. Division of Forestry and Wildlife

Section 13-104, Hawaii Administrative Rules (HAR), regulates activities within Forest Reserves and applies to all trails/accesses located within Forest Reserves. See copy of Section 13-104, HAR, in Appendix.

b. Division of State Parks

Section 13-146, HAR, governs the use and protection of all lands and historical and natural resources within the State Park System.

c. Division of Historic Preservation

Sections 13-146 through 154, HAR, govern how preservation of historic properties in the State is to be accomplished. These rules are currently being revised.

In order to draft rules regulating the use of Na Ala Hele's trails and accesses, a thorough review of existing rules of DOFAW and other agencies will be necessary. It is important that Na Ala Hele's rules are not in conflict with or duplicate existing rules.

H. MANAGEMENT RECOMMENDATIONS AND OBJECTIVES

Coordination

- Continue to improve coordination with other agencies and organizations in order to fulfill management objectives of each Na Ala Hele trail and access.
- Advise and assist other public agencies in matters relating to trails and accesses.

Rules and Regulations

- Draft rules and regulations to govern public use of Na Ala Hele's trails and accesses by December 1991.
- Hold public hearings on the draft rules and adopt final rules and regulations in 1992.
- Establish procedures for permits, for regulating commercial activities, and for limiting and controlling certain activities, as necessary.
- Coordinate with DOCARE and support efforts to increase the State's capability to enforce rules and regulations that govern Na Ala Hele's trails and accesses.

Signage and Trail/Access Standards

- Continue to field test, evaluate, standardize, and improve Na Ala Hele's signage system in coordination with other agencies such as the counties and the Division of State Parks, with particular attention to developing standards for adequate warning signs. Designate a Sign Coordinator in DOFAW in 1991.
- Work with the counties to encourage establishment of statewide standardization of coastal access and warning signs.
- Maintain an inventory of Na Ala Hele sign types and their locations.
- Continue to field test, evaluate, standardize, and improve the guidelines for trail/access development and design.
- Institute methods by which members of the public and governmental agencies can provide feedback on hazards, problems, and maintenance needs of Na Ala Hele trails/accesses.

- Encourage establishment of standards with regards to personnel required for enforcement of laws and regulations to protect (1) historically and culturally significant trails and nearby sites, and (2) natural resources.

Public Education and Volunteers

- Form partnerships between nonprofit organizations and Na Ala Hele in order to promote trail development and maintenance activities.
- Establish and expand individual, group, and partnership volunteer programs on an ongoing basis, with a training component for volunteers and volunteer leaders.
- Establish and follow safety procedures and provide safety instruction to staff and volunteers.
- Encourage other agencies, organizations, and individuals to supplement Na Ala Hele's public education and interpretive efforts. In doing so, the program should assist in ensuring the accuracy of published information.
- Continue to produce and regularly update island trail maps for the public.
- Continue to work with the DLNR public information officer to build public awareness of the Na Ala Hele program and trail/access issues in general.
- Integrate public educational and informational materials and programs into as many program components as possible.

CHAPTER VI. EXPANSION - HOW TRAILS AND ACCESSES CAN BE ACQUIRED FOR THE NA ALA HELE SYSTEM

A. INTRODUCTION

Acquisition of trails/accesses that are "new" to the Na Ala Hele system can occur through various means:

- **REAL PROPERTY TRANSACTIONS** which can include sales, purchases, land exchanges, lease and easement agreements, and land trust agreements;
- **GOVERNMENT REGULATORY PROCESSES** which can involve provisions for public trails and accesses as conditions to granting State or county land use permits; and
- **ESTABLISHMENT OF PUBLIC RIGHTS TO USE TRAILS/ACCESSES** through the application of certain legal theories and doctrines.

Among the impediments to trail/access expansion are **liability concerns** of both public and private landowners and **resource limitations** of the responsible agencies (i.e., funding and staffing limits).

Information presented in this chapter is not meant to be a legal treatise, but rather an overview for lay people of the major expansion opportunities and constraints. References are cited for those who wish to do more research. In researching legal matters, it must be remembered that laws are subject to varying court interpretations and are sometimes amended by the Legislature. Thus older references may contain outdated information.

B. WHAT THE LAW REQUIRES

Section 198D-2, HRS, requires the DLNR to "acquire land or rights for public use of land," and Section 198D-7, HRS, requires the DLNR, in consultation with the Attorney General, to examine legal issues relating to trails and accesses, such as:

- "(1) Theories, options, and doctrines by which trails and accesses may be placed into or retained in public use;
- (2) The validity and feasibility of dedication requirements to obtain public use of trails and accesses;
- (3) The extent of liability exposure of the State, counties, and private landowners when allowing trails and accesses under their respective jurisdictions to be used by the general public; and
- (4) Strategies to reduce or limit the liability exposure of the State, counties and private landowners in order to promote public use of trails and accesses under their respective jurisdictions which are closed to the general public."

Section 198D-8, HRS, allows the DLNR to request legislative appropriations to acquire rights to trails/accesses that are closed to the public. Also Section 198D-10(b), HRS, points out that nothing in this chapter should be interpreted to be conferring or imposing upon the DLNR any rights, powers, and duties over trails and access to which the public has no rights to use.

C. REAL PROPERTY TRANSACTIONS

Acquiring trails and accesses for the Na Ala Hele system through real property transactions does not necessarily involve large public expenditures. Many options and approaches are available, and these should be attempted prior to considering condemnation proceedings, a last resort should other methods fail. Acquisition by eminent domain through condemnation usually involves large expenditures to justly compensate landowners and can be time consuming, antagonistic, and opposed by landowners as well as taxpayers.

1. METHODS AVAILABLE TO THE STATE

Board of Land and Natural Resources approval and cooperation between Na Ala Hele, Land Management Division, and the AG's Office are required in processing real property transactions that enable the State to acquire or dispose of trails and accesses.

- **Lease Agreements** involve the exclusive use of land for a specified time under terms and conditions agreed to by the parties. The State could lease private property containing an existing or potential trail or access. Section 171-26, HRS, requires the BLNR, prior to leasing any State-owned lands, to determine the feasibility of reserving portions of those lands for public hunting. See section D.1. of this chapter for more on Section 171-26, HRS.
- **Through Cooperative Agreements** made by the State with a private landowner or with other governmental agencies, a trail or access could be opened to the public, subject to whatever conditions are negotiated. Each party's responsibilities would be specified in the agreement.
- **Easements** grant non-exclusive use of private land. The landowner reserves the right to use the underlying fee title to the land so long as there is no substantial interference with the public's use and enjoyment of the easement. Easements should be in perpetuity. For more information on easements, see the following section on "Conservation Easements and Land Trusts."
- **Sale or Purchase** of fee title to the trail or access can be accomplished through:
 - a. **Deed**: Sale of fee simple title to private land by conveyance document. Generally implies grantor has good title to the land being conveyed.
 - b. **Exchange Deed**: Exchange of public land for private land. Land exchanges require legislative review and must serve public purposes under Section 171-50, HRS.
 - c. **Quitclaim**: Sale of any and all interest, whatever that interest may be, in land possessed by grantor. Quitclaim deeds do not warrant that grantor has good or complete title to the land being conveyed. If the State quitclaims its interests in land, legislative review may be required under Section 171-51, HRS. Private landowners and developers have occasionally requested that the State quitclaim its interests in specific segments of ancient Hawaiian trails.

2. A METHOD AVAILABLE TO THE PUBLIC - LAND TRUSTS

In addition to lobbying the Na Ala Hele advisory councils and legislators regarding specific trails and accesses, the public can work on trail/access acquisition through nonprofit, tax-exempt corporations, such as land trusts.

More than 700 land trusts exist nationwide. To date, the work of land trusts has resulted in the protection of about two million acres of land through the efforts of their 500,000 members. Land trusts are working to conserve forests in New Hampshire, grasslands in Nebraska, islands in Georgia, Maine and Washington, river corridors in California and Montana, parklands in New York, hiking trails in California and Washington, and significant historic and natural sites in Hawaii. Particularly relevant to Na Ala Hele is the Trust for Appalachian Trail Lands (See Appendix, State and Regional Trail Programs) whose primary goal is to protect lands adjacent to the Appalachian Trail from incompatible development, in order to preserve wildlife habitat, scenic views, access to connecting trail routes, and the quality of the trail experience. Land trusts generally depend heavily on local volunteer leadership and support.

a. Advantages of Land Trusts

Although some of the techniques used by land trusts are also available to public agencies, their status as private, nonprofit entities enables them to accomplish things which may be difficult or impossible for government. They are less constrained by politics, procedures, and public opinion, and can act with flexibility, creativity, and speed. The State Recreational Functional Plan (1985) recommends the establishment of a private, nonprofit corporation to expand public agency capabilities to provide for public recreational needs.

Land trusts have acted as intermediaries, buying land or easements from private donors who could not wait for public agencies to allocate funds for purchase, and later selling the land to the public agency once public funds are made available. Land trusts can work with private landowners who may be reluctant to negotiate with government agencies. They can accept and hold conservation easements in perpetuity, thereby becoming responsible for the long-term management of the easement. Land trusts can protect trails and other resources which are located within more than one jurisdiction. As community organizations, land trusts can work to increase public awareness, generate political and financial support for conservation and access related issues, and mobilize volunteers in support of their goals.

Considerable literature is available on forming land trusts, and information can be obtained through The Trust for Public Land's Western Regional Office, 116 New Montgomery St., San Francisco, CA 94105.

The success of a land trust depends on the long-term interest and dedication of its public supporters. This is particularly crucial if the land trust accepts and holds a conservation easement in perpetuity. Land trusts should not be viewed as a substitute for public agency efforts, but rather as partners in trail/access acquisition efforts.

b. Conservation Easements and Land Trusts

As costs of direct land acquisition increase, the use of easements has also increased. Easements can be established for purposes of conservation, historic preservation, protection of farmlands and open space, public access, etc. Private landowners can donate easements for public recreation, education, and enjoyment while retaining fee simple title to and residuary uses of their land.

Landowners can also realize significant income, property, or estate tax benefits if their donation satisfies Internal Revenue Service (IRS) criteria. IRS criteria requires that the easement be donated in perpetuity to a qualified organization such as a land trust or public agency, and given "exclusively for conservation purposes." Internal Revenue Code Section 170(h)(4)(A) defines conservation purposes as:

- "i) the preservation of land areas for outdoor recreation by, or for the education of, the general public,
- ii) the protection of a relatively natural habitat of fish, wildlife, or plants, or similar ecosystem,
- iii) the preservation of open space (including farmland and forest land) where such preservation is:
 - (I) for the scenic enjoyment of the general public, or
 - (II) pursuant to a clearly delineated Federal, State or local governmental conservation policy, and will yield a significant public benefit, or
- iv) the preservation of an historically important land area or a certified historic structure."

The IRS also requires that some form of public access be granted in all easements which are to qualify under i, iii(I), and iv. For a thorough discussion of easements, see The Conservation Easement Handbook. Diehl and Barrett, 1988.

D. GOVERNMENT REGULATORY PROCESSES

Several of Hawaii's laws have been enacted to promote establishment of public access to recreational areas. Most of these laws apply only when lands are proposed for development. Often taking the form of conditions of approval, private developers are required to provide public accesses and trails which are frequently built and maintained at the developer's expense. Such requirements have become part of the cost of doing business in Hawaii. It should be noted that when conditions of approval are set, there must be a logical or reasonable connection or "nexus" between the requirement and a valid governmental purpose. For a thorough discussion of a coastal state's application of the nexus concept, see "Designing a Public Coastal Access Program for the Ocean State: A Post-Nollan Assessment." Rhode Island Department of Administration, 1988.

Economic benefits to the landowner/developer can be derived from trail systems, as in the case of an extensive shoreline trail, extending beyond a resort's boundaries, that can be enjoyed by the resort's guests. Increased values and salability of properties adjacent to greenways and open space have been documented in several states. Of course these values are affected by other variables, such as the quality of maintenance and the use intensity of the open space. A recent reference on this subject is Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors. National Park Service. 1990 Edition.

A discussion of Hawaii's laws regarding public access requirements follows.

1. SECTION 171-26, HRS - RIGHTS-OF-WAY TO THE SEA AND GAME PRESERVES

Before the State disposes of public lands through leases, sales, licenses, or permits, this law requires the BLNR to "lay out and establish over and across such lands a reasonable number of rights-of-way from established highways to the public beaches, game management areas, public hunting areas, and public forests and forest reserves" in order to protect the public's rights to utilize such areas. This statute applies only to public lands and not to lands under federal control, Hawaiian Home Lands, or lands held by the Hawaii Housing Authority.

2. CHAPTER 205A, HRS - HAWAII STATE COASTAL ZONE MANAGEMENT ACT

Congress' adoption of the Coastal Zone Management (CZM) Act (PL 92-583) in 1972 encouraged coastal states to develop comprehensive CZM programs and offered federal funding assistance to those who did so. Enacted in 1973, Hawaii's State CZM Act set forth the policies of providing adequate, accessible, and diverse recreational opportunities in the CZM area. It also established the Special Management Area (SMA) concept and made developments in this area subject to terms and conditions that would be set by each of the counties. The SMA concept recognizes the need for special controls in Hawaii's coastal area to prevent permanent loss of valuable resources and to "ensure adequate access, by dedication or other means to publicly owned or used beaches, recreation areas, and natural reserves.....consistent with sound conservation principles."

3. SECTIONS 205A-41 THROUGH 205A-49, HRS - SHORELINE SETBACK LAW

This law empowers the counties to establish shoreline setbacks of not less than 20 feet and not more than 40 feet inland from the certified public shoreline. This setback is intended to provide an open space buffer between private development and the public shoreline. The CZM program in OSP has recommended that the shoreline setback be increased to not less than 40 feet inland from the shoreline in urban districts and not less than 150 feet in all other districts. Legislation to that effect is pending. Hawaii's public shoreline is defined in Section 205A-1, HRS, as "the upper reaches of the wash of the waves, other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth, or the upper limit of debris left by the wash of the waves."

4. SECTION 46-6.5, HRS - DEDICATION OF RIGHTS-OF-WAY AND EASEMENTS TO COUNTIES BY SUBDIVIDERS

In 1973 the Legislature mandated each county to adopt ordinances that would require developers and subdividers to dedicate rights-of-way or easements for pedestrian public access from public roads to beach and mountain recreation areas. County approval of development projects is contingent upon fulfillment of this requirement. Upon dedication and acceptance of the public access by the counties, the funding of improvements and maintenance of the rights-of-way is a county responsibility. This statute applies to land that is to be divided into six or more units or interests, including non-contiguous land, if six or more lots are offered as part of a common, promotional advertising or sale. Legislation seeking to strengthen the public access requirements of this law is pending.

To date, not all of the counties have adopted ordinances in accordance with this statute, and practices with regards to public access requirements of developers vary from county to county. There are limitations and drawbacks to this law, such as its definition of subdivision which does not apply to resort developments which are not being divided into six or more units. Also the counties are concerned about the maintenance costs and liability exposure that accompany dedication of public accesses to the counties.

In varying degrees, the counties have been requiring the provision of public access to and along the shoreline by resort developers, using policies and county ordinances based on Hawaii's State CZM Act and its SMA concept, the Shoreline Setback Law, and various planning documents, e.g., county general plans and the Hawaii State Plan. Agreements have also been made between developers and counties whereby public accesses are maintained by the private developer, closed during certain hours or when the public parking stalls are completely filled.

5. CHAPTER 115, HRS - ACQUISITION OF RIGHTS-OF-WAY BY COUNTIES

Chapter 115, HRS, provides a mechanism for government to acquire public rights-of-way to the shorelines. This Chapter is distinguished from Section 46-6.5, HRS, in that it applies to public access over privately owned lands that are as yet undeveloped or were developed before the enactment of Section 46-6.5, HRS. It has served to clarify the public's right of transit along the shoreline below the private property line, as long as public safety is maintained. It also provides for State and county cost sharing of right-of-way acquisition, but requires the counties to be responsible for development and maintenance of these rights-of-way.

Thus far, this statute has failed to encourage State and county co-sponsorship of public right-of-way acquisition on lands that are not covered by Section 46-6.5, HRS. The main reasons for this failure appear to be that the costs to the State and counties of acquiring public rights-of-way through eminent domain are prohibitive, as well as the costs and liabilities of developing and maintaining acquired public rights-of-way.

The inconsistent application of public access requirements across counties, dissatisfaction with the adequacy of public access requirements, and the lack of public access requirements to mountain recreation areas are among the unresolved issues that need to be addressed. Resolution is complicated by the many governmental agencies involved and the liability and financial concerns shared by these agencies.

E. ESTABLISHMENT OF PUBLIC RIGHTS TO USE TRAILS/ACCESSES

Na Ala Hele often receives inquiries regarding the public's rights to use specific trails/accesses, based on historic, customary, or prescriptive usage.

Legal theories and doctrines that have been used to assert public rights of access include:

- Express Reservation, Exclusion, or Reference to a Trail;
- Ancient Hawaiian Tradition, Custom, Practice, and Usage;
- Public Trails under Chapter 264, HRS;
- Public Easement by Prescription; and
- Public Trust.

In using these theories and doctrines, it is necessary to establish facts that will define **who** has been using the trail/access, and **how long and what kind** of usage has been occurring.

1. EXPRESS RESERVATION, EXCLUSION OR REFERENCE TO A TRAIL

Certain trails and roads have been expressly reserved to the "government" or State, or have been clearly excluded from private ownership. A tax map, Land Court map, or maps registered with the State Surveyor may have a trail expressly shown. Examination of the map and accompanying documents of conveyance, Royal Patents, Grants, or Land Commission Awards may reveal a trail or roadway that has been reserved as a public easement and excluded from the described private property. Land title search to determine a trail or road's ownership status often requires the skills of a professional abstractor.

2. ANCIENT HAWAIIAN TRADITION, CUSTOM, PRACTICE, AND USAGE

This doctrine permits the public's right of access over private property, based on ancient Hawaiian custom and practice. To claim public rights of access based on ancient Hawaiian custom and practice, it must be shown that customary usage was established prior to November 25, 1892. The kind of customary usage needs to be defined: i.e., was usage in ancient times restricted to just "native tenants" who worked and resided in the land division where the trail is located, or was use of the trail open to all people? **Customary use of the trail by "native tenants" is not interpreted to have been use by the "public."** Under Hawaii's law (Section 7-1, HRS) native tenants have the right of access to their kuleana along with certain gathering and other miscellaneous rights, including the right-of-way, over the ahupuaa (an ancient Hawaiian land division) in which their kuleana is situated. "Kuleana land" means land which was granted in fee simple to native tenants during Hawaii's Great Mahele, pursuant to the provisions contained in the Act of August 6, 1850. For more information on the Great Mahele, see The Great Mahele: Hawaii's Land Division of 1848. Chinen, 1978.

Significantly, public rights of access to and along Hawaii's shorelines have been established through ancient Hawaiian custom.

3. PUBLIC TRAILS UNDER CHAPTER 264, HRS

Hawaii's government established a system of "public trails" owned in fee by the government. This system was originally established in 1892 under what is commonly referred to as the Highways Act of 1892 and which is presently enacted in Chapter 264, HRS.

Establishment and identification of public trails is set out in Section 264-1, HRS, which provides that a trail or right-of-way is a public trail owned in fee by the government if it was:

- a. opened, laid out, or built by the government;
- b. opened, laid out, or built by private parties and dedicated or surrendered to public use prior to 1892; or
- c. opened, laid out, or built by private parties and dedicated or surrendered to public use after 1892, **and in addition** formally accepted by the government.

Many historic (and ancient) trails or roads fall within category (b). These trails or roads did not require formal acceptance by the government if already in existence and abandoned or surrendered to public use in 1892. "Abandonment" or "surrender" was established when it was shown that no act of ownership by the owner was exercised over the trail within the previous five years. For further information on dedication of public trails by statute and the Highways Act, see In Re Kelley, 50 Haw. 568 (1968); In Re Hawaiian Trust Co., Ltd., 17 Haw. 523 (1906); Humphries v. Mello, 19 Haw. 468 (1909);

Robello v. County of Maui, 19 Haw. 168 (1908); Santos v. Perreira, 2 Haw. App. 387 (1981); Maui Ranch Estate v. County of Maui, 6 Haw. App. 415 (1986).

Thus, a determination of the status of historic trails/roads as public routes in 1892 often requires land title research, historical and legal analyses, and sometimes a gathering of oral history and testimonies of "kamaaina witnesses." Kamaaina has been defined as "a person familiar from childhood with any locality." Kamaaina testimony has been admitted in courts to help in establishing land boundaries, or customs affecting lands in the community, and to establish events of general history.

Certain public trails are owned in fee by county government and others by the State. Governmental responsibility for the maintenance of and liability for public trails which were never formally accepted by the county or State is the subject of much controversy.

4. PUBLIC EASEMENT BY PRESCRIPTION

To prove the existence of a public easement by prescription, the claimant(s) must show that usage has been "...continuous and uninterrupted, open, notorious and exclusive, with the knowledge and the acquiescence of the owner..." for **at least a 20 year period**. To be considered "open and notorious," the landowner must have had knowledge of or reasonable opportunity to become aware of the public usage. "Continuous and uninterrupted" use means that the usage was not physically interrupted by acts of the owner or by voluntary disuse by those claiming the easement. Additionally the use must not have been with the owner's express or implied permission. The burden of proof to satisfy all requirements of a prescriptive easement is on the claimant(s).

5. PUBLIC TRUST DOCTRINE

Under the public trust doctrine the State of Hawaii has a duty to protect and maintain the natural resources on all lands which are held in trust by the State for all people. The public trust doctrine has been used specifically to uphold the rights of the public to fish and navigate in submerged lands. Disposition of lands held in trust by the State should not result in harm to the public.

Prior to the creation of private property rights in Hawaii, all lands of the Hawaiian kingdom were held by the King **in trust** for the people in common. When the private property system was adopted in 1848, the King was not given the right to dispose of certain lands which were held in trust "for the common good." Included in this category of lands were "public thoroughfares and easements, by means of roads, bridges, streets, etc."

Public trails, accesses, and roads are held in trust by government. If a government-owned route is of cultural or recreational importance to the public, government has a duty to protect and maintain it for that purpose and regulate its use. Conversely, if a government-owned route no longer has public value, government could sell it and use the revenue for public benefit.

6. UNRESOLVED ISSUES AND QUESTIONS

- The Highways Act of 1892 (now Chapter 264, HRS) does not specify the width of fee simple ownership nor the mode of transportation to be used on the pathway. For example, if a historic trail began as an ancient footpath but evolved into a four-wheel drive road in the 1900's, what is the extent of the government's fee simple title?

- There are numerous old government roads, statewide. The question of who is responsible to maintain these old government roads continues to be unresolved between the State and counties. Certain old government roads have public recreational value. Resolution of this issue could provide a significant boost to the public's supply of recreational trails and accesses.

References for Further Study on Legal Theories and Doctrines Re: Public Rights to Use Trails and Accesses:

Public Access to the Shoreline: Legal Aspects. County of Hawaii. 1982.

Roads in Limbo: An Analysis of the State-County Jurisdictional Dispute. Legislative Reference Bureau, 1989.

Native Hawaiian Land Rights. Levy, 1975.

Native Hawaiian Rights Handbook. Native Hawaiian Legal Corporation, 1991.

"Public Access to Beaches in Hawaii: A Social Necessity." Town and Yuen, 1973.

Access Rights in Hawaii. Watson, 1978.

See Bibliography for more details.

F. OBSTACLES TO EXPANSION

1. RESOURCE LIMITATIONS

Clearly, funding and staffing limitations will affect Na Ala Hele's ability to acquire, develop, and properly manage "new" trails and accesses. Cooperative efforts between Na Ala Hele, other government agencies, and private, nonprofit groups can also be hindered by insufficient resources. An example of this is the turning away of volunteers by the U.S. Forest Service in recent years due to lack of staff to supervise field work. According to the American Hiking Society ("American Hiker," Autumn 1990.), a \$200 million backlog in trail construction and maintenance exists in the U.S. national forests.

2. LIABILITY

a. Summary of the Problems with Chapter 520, HRS

Perhaps the most serious obstacle to expanding a trail and access program is the problem of private and public landowner liability. See the Appendix for a copy of Hawaii's recreational statute, Chapter 520, HRS. Hawaii adopted this law in 1969. It was patterned after model legislation developed by the Council of State Governments. At least 49 states currently have a similar law.

Intended to encourage public and private landowners to open their lands to public recreation without charge by limiting their liability toward recreational users, the law has failed to provide such encouragement (See "Recreational Use Statutes - Time for Reform" in Probate and Property).

Goldstein, Telfer and Kennedy, July/August 1989). Additionally the law does not prevent landowners from being sued, a costly process whether or not they "win" a case.

Hawaii's law, unlike other states', applies only to private landowners and does not extend liability protection to government landowners. Nationwide, there are problems with ambiguities of language used in these laws, and the courts have been inconsistent in their interpretations. Here are a few examples:

- The word, "wilful" (more commonly spelled "willful"), has no precise legal meaning. Since the word is not well-defined, it is easy for an injured party to argue that the owner's conduct constituted a "wilful" failure to guard or warn against a dangerous condition. This ambiguity has been described as the most serious weakness in this law.
- There have been different interpretations of what constitutes a "charge," e.g., is a fee for public parking a charge for use of the beach?
- The law makes no distinction between urban and rural, improved and unimproved, or natural and artificial conditions on lands. Should the same standard of safety apply to a remote wildland area as to a frequently maintained urban trail?
- Problems have arisen over the definition of what activities are "recreational." There have been cases in which activities ruled to be outside of that definition have been conducted by trespassers who subsequently filed claims against landowners.
- Landowners have been sued for injuries which have not occurred on their lands, but on lands which were reached by passing through their property. Ocean and beach injuries are the most common cases of this type.

While it may seem that this attention to reducing liability exposure is primarily for the private landowners' benefit, it should be stressed that State and county governments are also greatly concerned about their liability to recreational trail and access users. Currently Chapter 520, HRS, does not include governmental landowners in its limited protection. Liability issues will continue to limit trail and access expansion, nationwide, under the present situation.

b. The Search for Solutions

Na Ala Hele began researching and proposing solutions to the complex liability situation in 1989. The effort must continue and requires:

- Ongoing research into Hawaii's case law in order to thoroughly understand the magnitude and type of problems being encountered in our state, specifically with regard to trail and access liability;
- Keeping abreast of national efforts to develop a model recreational statute;
- Discussing possible solutions with persons who have experience in the subject, such as State and county agencies and their legal counsels, private landowners, lessees, and their attorneys, trail and access user groups, and attorneys who represent insurance companies and injured claimants;

- Identifying short and long-term measures that can reduce or limit the liability exposure of private and public landowners when trails/accesses are opened to public use; and
- Submitting legislative proposals for amending Chapter 520, HRS, and proposing administrative solutions that are possible without changes in the law.

The best liability defense is a properly constructed, well-maintained and monitored, sufficiently marked trail with adequate warnings of potential dangers. However, there are no guarantees that injuries will not occur and that no one will be sued. Trail/access enthusiasts often recommend that laws be enacted to clearly place all responsibility on the trail user, an "enter at your own risk" law. Such a proposal would be vigorously opposed by attorneys for those who have been severely disabled or have died while using trails/accesses which were dangerous due to the landowner's negligence.

Liability problems have even affected manufacturers of outdoor equipment to the point where those that are managing to stay in business (despite lawsuits and increased insurance costs) have organized to develop safety standards and warning labels for their products. Their extra costs undoubtedly will be passed on to the consumer ("Liable to Make You Mad." Backpacker Magazine, June 1990).

Another suggestion is that the State agree to defend and indemnify private landowners who are sued when they permit public access across their lands for recreational purposes. This proposed solution could cost the taxpayers, if the circumstances under which a private landowner could receive that benefit are not carefully defined.

The Na Ala Hele library contains recent studies done by and for Na Ala Hele on liability:

"Report to the Legislature Regarding Senate Concurrent Resolution No. 239 Requesting the Attorney General and the Department of Land and Natural Resources to Examine the Legal Issues Relating to Trails and Accesses in Hawaii." Department of the Attorney General, December 1989.

"Government Landowner Liability for Recreational Use Injuries." Stone, September 1990.

"Landowner Liability to Recreational Users." Stone, September 1990.

G. EXPANSION RECOMMENDATIONS AND OBJECTIVES

Real Property Transactions

- Train Na Ala Hele staff in trail/access acquisition methods and procedures in 1991, and as new staff are hired.
- Train Na Ala Hele staff in the legal aspects of claiming government jurisdiction over historic roads and trails in 1991, and as new staff are hired.
- Identify public lands which have public recreational value but presently lack public access. Work with other land management and planning agencies to recommend lands which

should be opened, and identify appropriate levels of public use, and methods for acquisition.

- Utilize the inventory, in consultation with other State and county agencies, to identify trails and accesses which are desirable for future acquisition. Coordinate with other agencies in requesting funding to acquire mutually desirable trails/accesses.
- Explore the feasibility of Cooperative Agreements with private landowners as a means of opening trails/accesses to public use.
- Gather statistics on the revenues brought to the State from sales of road and trail remnants.

Land Trusts

- Encourage the formation of land trusts by providing information and technical assistance to interested individuals and groups.
- Provide technical assistance to land trusts, as appropriate.

Government Regulatory Processes

- Train Na Ala Hele staff in the public access requirements of each of the counties and the State system in 1991, and as new staff are hired.
- Train Na Ala Hele staff in the use of Cooperative Agreements to encourage joint trail/access projects with other government agencies.
- Encourage the establishment of consistent public access requirements among the counties by suggesting policies that would ensure adequate public access to coastal and mountain recreation areas in keeping with sound conservation principles.
- Study ways of applying public access requirements to developments which are not presently affected by Hawaii's public access laws.
- Study ways of providing incentives for private landowners to permit public use of trails/accesses on private lands.

Establishment of Public Rights

- Continue to work with the AG's Office in defining State and county jurisdictions over historic trails and old government roads.
- Continue to identify historic trails and old government roads of cultural and recreational value to the public.
- Work with Historic Preservation Division and the AG's Office to develop policy statements guiding the treatment of historic trails and roads.
- Continue land title searches on historic trails and roads, statewide.

- Work with Land Management Division, the AG's Office, and the BLNR to develop policy statements guiding the establishment of a reasonable number of rights-of-way on public lands prior to their disposal by lease, sale, license, or permit. This includes assessing the adequacy of public rights-of-way on State land leases as they are due for renegotiation.
- On an ongoing basis, identify and research public access claims to trails and accesses which are at risk of being "lost."
- Work with Land Management Division and the AG's Office in acquiring trails/accesses which are given priority status.

Liability

- Continue research into liability concerns, involving the various parties with interest and experience in the subject.
- Continue to identify and pursue legislative and administrative solutions to the problems.

CHAPTER VII. PROGRAM EVALUATION

A. INTRODUCTION

Though not expressly required in Chapter 198D, HRS, program evaluation provides essential information and feedback that help guide program assessment. The purposes of program evaluation include:

- a. The measurement of achievements in relation to goals and objectives which have been set for the program;
- b. The assessment of program efficiency, staff and volunteer performance, benefits to trail/access users as a result of program accomplishments; and
- c. The provision of data that will indicate where and how program improvements can be made.

Statistics from evaluation studies will also be helpful in defending requests for program support.

As a new program, Na Ala Hele needs to further develop before valid evaluation can be done. For example, volunteer involvement and other program components have not yet begun due to insufficient staff in Na Ala Hele's first years of operation. The public's awareness of Na Ala Hele's existence and role varies considerably on all islands, as does governmental staff awareness that a statewide trail and access system is becoming institutionalized.

B. METHODOLOGY

Program evaluation methods should be economical, timely, simple, and practical. The information being obtained must be meaningful and appropriate to the purpose of program oversight and improvement.

Recording and measuring of **outputs** of the program will be done by appropriate staff on a regular basis. This will include:

- Miles of trails/accesses built and maintained, and the entities performing the work.
- Numbers and types of trail/access facilities and amenities built and maintained, and the entities performing the work.
- Miles of newly acquired trails/accesses for future development, and the entities performing the work.
- Estimated numbers of trail/access users, user activities, and time spent on trails and accesses.
- Revenues to the State's general fund generated from the sale of trail, access, and road remnants.
- Number of volunteers and volunteer hours required to accomplish specified projects.

Also to be recorded and measured are the **inputs** required to accomplish the **outputs**. Inputs include the funds and staff time necessary to run the program and generate the accomplishments. Time measurements should include the less tangible times spent in "overhead," i.e., administration, planning, reviewing proposals, and attending meetings.

Surveys will be developed to obtain public perceptions and evaluations of the program. The primary public evaluators will be members and ex officio representatives on the Na Ala Hele advisory councils and active volunteers. Questionnaires will also be devised which ask randomly selected users to evaluate the availability of needed information and their experiences on Hawaii's trails and accesses.

C. PROGRAM EVALUATION RECOMMENDATIONS AND OBJECTIVES

- In 1991 identify the categories of information that need to be recorded and measured for evaluation purposes.
- In 1991 identify the methods to be used in order to obtain needed information.
- In 1991 fully integrate the recording of Na Ala Hele's "overhead" time, activities, expenditures, and accomplishments into reporting formats used by DOFAW.
- In 1991 devise a survey to be completed by advisory council members and ex officio representatives.
- Develop questionnaires and methods of obtaining public input that will be meaningful to program assessment.
- Produce annual reports on program accomplishments and their cost-effectiveness.
- Produce annual reports on the results of surveys and questionnaires.

GLOSSARY

Acronyms

| | |
|----------|--|
| AG - | Attorney General |
| AHS - | American Hiking Society |
| BLNR - | Board of Land and Natural Resources |
| CCC - | Civilian Conservation Corps |
| CZM - | Coastal Zone Management |
| DAGS - | Department of Accounting and General Services |
| DAR - | Division of Aquatic Resources |
| DHHL - | Department of Hawaiian Home Lands |
| DLNR - | Department of Land and Natural Resources |
| DOCARE - | Division of Conservation and Resources Enforcement |
| DOFAW - | Division of Forestry and Wildlife |
| DOH - | Department of Health |
| DOT - | Department of Transportation |
| F & W - | Forestry and Wildlife |
| HAR - | Hawaii Administrative Rules |
| HPD - | Historic Preservation Division |
| HRS - | Hawaii Revised Statutes |
| IRS - | Internal Revenue Service |
| NARS - | Natural Area Reserve System |
| OCEA - | Office of Conservation and Environmental Affairs |
| OEQC - | Office of Environmental Quality Control |
| OHA - | Office of Hawaiian Affairs |
| OSP - | Office of State Planning |
| PL - | Public Law (Federal) |

| | |
|--------|--|
| SMA - | Special Management Area |
| SVS - | Statewide Volunteer Services in Office of the Governor |
| USGS - | United States Geological Survey |

Hawaiian Words

| | |
|-----------------|---|
| ahupuaa - | An ancient Hawaiian land division usually extending from the mountains to the sea |
| ala - | Trail, road, path |
| alaloa - | Long trail |
| alanui - | Large trail |
| alanui aupuni - | Government road |
| heiau - | Pre-Christian temple |
| hele - | To go |
| kamaaina - | Legal definition is "a person familiar from childhood with any locality" |
| kihei - | Cape |
| kuleana - | Means land which was granted in fee simple to native tenants during Hawaii's Great Mahele, pursuant to the provisions contained in the Act of August 6, 1850. |
| limu - | General name for seaweed and other aquatic plants |
| loi - | Irrigated terrace, especially for taro |
| makai - | Seaward |
| mauka - | Inland |
| na - | Particle indicating a plural |
| pali - | Cliff |

Selected Trail/Access Terms

| | |
|--------------------|--|
| diacritical mark - | A mark added to a letter to indicate a special phonetic value |
| 4WD - | Four-Wheel Drive |
| greenways - | Linear open spaces connecting recreational, educational, cultural, and natural areas |

Hawaii's
Shoreline
Definition

"Upper reaches of the wash of the waves, other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth, or the upper limit of debris left by the wash of the waves." (Section 205A-1, HRS)

indemnify -

To reimburse or compensate landowner for losses incurred by a judgment against him in a court of law

low impact
recreational
practices -

Methods of minimizing and avoiding recreation-related impacts on natural conditions and cultural features

"Na Ala Hele
Handbook" -

Na Ala Hele Trail and Access Structures and Facilities Handbook, available in the Na Ala Hele library

nexus -

Logical or reasonable connection

no trace
backpacking -

Methods of backpacking in backcountry areas without leaving a trace of human disturbance

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THE RUNNER TRADITION OF ANCIENT HAWAII

INTRODUCTION:

The logo of Na Ala Hele represents a runner, as he appears carved in the lava of Pōhue Bay, Hawai'i Island. This paper offers a brief overview of running and the use of trails, as depicted in Hawaiian tradition.

In times of old, while information and materials could be transported between the islands and from point to point along the coasts by canoe, overland communication was affected over an extensive network of trails.

Important chiefs had retainers who specialized in quickly carrying messages and materials back and forth over their dominions. The carrying of larger loads was facilitated by the use of carrying poles. . .

Trails, where not obliterated by modern tracts or roads, form an important component of settlement landscapes, and their study provides important data on the linkages between individual communities. In certain areas, particularly along the leeward coasts of Hawai'i Island and the Kahikinui District of Maui, prehistoric trails are readily discernable and some are still in use today. (Kirch 1985: 266)

TRAIL BUILDERS

Linkages, between points across space and between people through time, are human concerns and components of culture history. And so, we have accounts of renowned trail builders from the generations which have come before us. Accounts of three trail builders are presented here in chronological order.

Māui, a son of Kalana, is remembered for building "zigzag" trails "twenty centuries ago."
(Kamakau 1961: 429) He was probably the road builder who is further remembered by the following saying:

Ke ala kike'eke'e a Māui.

The winding trails of Māui.

Trails made by Māui when he was pursued by those who wished to destroy him. One trail was at Waiahole, O'ahu, one at Keka'a between Lahaina and Ka'anapali, and the third at Kealahakaha, Kahakuloa, Maui. (Pukui 1983: 180)

Ehu, a son of Kuaiwa, was another famous road builder. (Kamakau 1961: 429) Kuaiwa is recounted by Kalākau as being a ruling chief of Hawai'i circa 1300 to 1340. (Kalākau 1979: 31) Kealaehu, the road attributed to Ehu, from the uplands of Kona to Ka'ū, is no doubt part of the system described by Kirch, and no doubt a trail used by the spies of Kamalalawalu (a ruling chief of Maui during the sixteenth century) in their circuit of Hawai'i Island. (Kamakau 1961: 56)

Kiha, a son of Pi'ilani, who lived at the turn of the fifteenth to sixteenth century, is remembered as a chief who "kept peace and order in the county, encouraged agriculture, and improved and caused to be paved the difficult and often dangerous roads over the palis of Kaupo, Hana, and Koolau - a stupendous work for those times, the remains of which may still be seen in many places, and are pointed out as the 'kipapa' of Kihapiilani." (Fornander 1969: Vol. II, 206)

Kihaapi'ilani is also remembered for an exceptional trail located at Kaluako'i, Moloka'i.

Ke ala pūpū i Moloka'i.

The path of seashells of Moloka'i.

Among the noted things made by Kihaapi'ilani, ruler of Maui, was a paved road lined with seashells at Kaluako'i, Moloka'i. (Pukui 1983: 181)

RUNNERS

Runners are recalled as athletes and warriors and were often of chiefly descent. The five accounts of runners which follow, are also presented in chronological order.

In the preceding section reference is made to the spies of the Maui chief, Kamalalawalu. One of these spies was Kauhiokalani, a half brother of Kamalalawalu. Upon landing at Kawaihae, it is told that Kauhiokalani was able to travel from Kawaihae, Kohala to Kealakekua, Kona and back "before the canoes were dismantled." (Kamakau 1961: 56)

Accounts of eighteenth century runners include those associated with Ka'ohele and Uluanui. Ka'ohele was a son of Kumukoa, chief of Moloka'i. "It is related of him that he could run from Kalua'aha as far as Hālawā (a distance of about sixteen miles) and return before a fish put on the fire at

the time of his starting had time to be roasted." (Malo 1976: 219-20) A saying regarding Ka'ohele in 'Ōlelo No'eau follows.

E ku'i ka māmā a loa'a 'o Ka'ohele.

Let your fastest runners run in relay to catch Ka'ohele.

Let us make every effort to attain our goal. Ka'ohele was a chief and warrior and in his day there was none swifter than he. It was only after running after him in relay that he was caught and killed. (Pukui 1983: 40)

Of Uluanui of O'ahu, "it was told that he could carry a fish from Kaele pulu (Enchanted Lakes) pond in Kailua round by way of Waialua and bring it to Waikiki while it was still wriggling." (Malo 1976: 220) These accounts by no means trivialize the talents of these men, who were certainly more than carriers of fish. The accounts graphically, perhaps hyperbolically, relate the speed at which they ran.

From the Kamehameha period comes the following saying regarding a certain renowned athlete by the name of Makoa.

He poki'i no Makoa.

Makoa's younger brother.

Said in admiration of a speedy athlete. Makoa was a speedy athlete. Makoa was a speedy runner of Kamehameha's day whose swiftness gained him fame. (Pukui 1983: 98)

Makoa was of chiefly descent, directly descended from Kakuhihewa, chief of O'ahu. Makoa is also said to have escorted William Ellis on his tour of Hawai'i in 1822. (McKinzie 1986: 79)

Anecdotes concerning Makoa are told and retold today. One popularized by the Volcano Art Center, is that he could carry a fish from the pond at Waiākea, Hilo and reach Kamakahonu, Kona before it was dead. Makoa, depicted by artist, Dietric Varez, as running while holding a mullet, has become the emblem for the Art Center's yearly marathon and rim runs.

Also from the Kamehameha period comes the following reference to a certain group of warrior athletes, who apparently trained as an elite unit.

Ka ua Kipu'upu'u o Waimea.

The Kipu'upu'u rain of Waimea.

An expression often used in songs of Waimea, Hawai'i. When Kamehameha organized an army of spear fighters and runners from Waimea, they called themselves Kipu'upu'u after the cold rain of their homeland. (Pukui 1983: 169)

POETIC SAYINGS CONCERNING THE TRAILS OF SPECIFIC PLACES

Insights may be gained to the geography of the various regions of the islands through the poetic sayings referring to the trails of those regions. We have already seen this in the reference to the "ala pūpū i Moloka'i" noted earlier. The three sayings which follow refer to characteristics of various places on Kaua'i, O'ahu, and Hawai'i respectively.

From Kaua'i comes the following description of a treacherous course:

O Kilohana ia, he 'awe'awe moku.

That is the Kilohana of the broken bundle cords.

Said of Lihu'e on Kaua'i. An old trail went by there, leading from Kona to Ko'olau. Robbers hid there and waylaid lone travelers or those in small companies and robbed them of their bundles. (Pukui 1983: 269)

The saying which follows, from O'ahu, reveals as much about human nature as it does about the earthy medium of Kapu'ukolu.

Kanukanu, hunā i ke meheu, i ka mā'awe alanui o Kapu'ukolu.

Covering with earth, hiding the footprints on the narrow trail of Kapuukolu.

Said of a cautious person who guards his ways from those who pry. In ancient times a person who did not want to be traced by his footsteps carefully eradicated them as he went. (Pukui 1983: 163)

And finally, Hawai'i Island has much geographic diversity, from the vast, open lava lands of Kona and Ka'ū to the waterworn peaks and valleys of the windward side. The following is a windward side saying:

Hāmākua i ke ala 'ulili.

Hāmākua of the steep trails.

Praise of Hāmākua, a land of precipices and gulches where the old trails were often steep and difficult to travel on. (Pukui 1983: 153)

MISCELLANEOUS SAYINGS REGARDING RUNNERS

Runners carried not only specific information or materials, but also impressions of and information regarding the course traveled, as in the saying from Hawai'i Island which follows.

"Māmā Hilo?" "Ae, māmā Hilo i ka wai 'ole."

"Is Hilo light?" "Yes, Hilo is light for lack of water."

A question asked of a runner and his reply. It means that the way is clear, with no robbers or unpleasant experiences, and no rains to swell the streams and make travelling difficult. (Pukui 1983: 232)

Runners who covered great distances no doubt might have worn some protection against the elements as is indicated in the saying which follows.

Welo kihei a ke A'eloa.

The shoulder covering fluttered in the A'eloa wind.

Traveled with speed. The runner went so fast that his kihei stood straight out behind as he ran against the A'eloa wind. (Pukui 1983: 321)

Previous references were made to runners with talents so great that their names are remembered with admiration and respect. As is typical of Hawaiian tradition, not all remembrances are expressions of respect.

Hōkai a Waiwaia ke kukini holo lalau.

The runner, Waiwaia, who ran out of his course, caused hinderance and delay.

Said of one who does not concentrate and wastes considerable time. Waiwaia was a runner who, instead of running on the errand assigned him by his chief, went on a visit before completing the errand, thus causing delay and rousing the ire of his chief. (Pukui 1983: 112)

RUNNING AS SPORT

Foot racing was also a sporting activity, and as such is recounted by both Malo and 'Ī'i.

"The kukini, or swift runners, were a class of men who were trained with great severity and made to practice running very frequently, until they had attained great speed. When the people wished to indulge in betting, a number of the fastest of this class were selected and two of this number were chosen to run a race." (Malo 1976: 219)

"There were two kinds of foot racing, one on a short course 30 or 40 fathoms long, and the other on a long course, perhaps 3 miles or more in length." ('Ī'i 1959: 67)

CONCLUSION

During his reign, Kamehameha recognized the perils of travel along the trails when he proclaimed "Ke Kānāwai Māmalahoe" ("The Law Of The Splintered Paddle"), which follows.

*E hele ka 'elemakule, ka luahine, a me na kamali'i a moe i ke ala
'a'ohe mea nana e ho'opilikia.*

*Let the old men, the old women, and the children go and sleep on
the wayside; let them not be molested. (Pukui 1983: 35)*

Today, recognizing the perils facing the trails themselves and conditions of access, the State of Hawai'i has instituted the Na Ala Hele Program to address access and preservation of historic trails as well as other trail and access types. It is appropriate that the logo for the Program draw from the ancient past and incorporate the long standing tradition of cross-country running.

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- Ua Pau -

Written for Na Ala Hele by Hannah Kihalani Springer. June 1990.

CHAPTER 198D

HAWAII STATEWIDE TRAIL AND ACCESS SYSTEM

SECTION

- 198D-1 DEFINITIONS
- 198D-2 ESTABLISHMENT OF HAWAII STATEWIDE TRAIL AND ACCESS PROGRAM
- 198D-3 INVENTORY
- 198D-4 CLASSIFICATION
- 198D-5 IDENTIFICATION OF PROPOSED, POTENTIAL, AND NEEDED TRAILS AND ACCESSES
- 198D-6 REGULATION OF USE OF TRAILS AND ACCESSES
- 198D-7 EXAMINATION OF LEGAL ISSUES
- 198D-7.5 AGREEMENTS TO DEFEND AND INDEMNIFY
- 198D-8 REQUEST TO ACQUIRE RIGHTS FOR PUBLIC USE OF ADDITIONAL TRAILS AND ACCESSES
- 198D-9 OTHER POWERS AND DUTIES OF DEPARTMENT
- 198D-10 LIMITATION ON CHAPTER'S PROVISIONS
- 198D-11 RULES

Cross References

Unencumbered public lands; penalty for violation. see §171-6.5.

Law Journals and Reviews

Beach Access: A Public Right? 23 HBJ 65.

[§198D-1] Definitions. For the purpose of this chapter:

“Access” means an easement or way:

- (1) Over which the general public has the right to travel; and

- (2) Which is used by the general public or intended for use by the general public primarily to reach or depart a public beach, shore, park, trail, or other public recreational area.

It includes a lateral easement along the shoreline, coastline, or beach.

"Department" means the department of land and natural resources.

"Trail" means an identifiable linear course used primarily for or used to get a recreational, educational, or inspirational experience. It includes, but is not limited to:

- (1) A corridor trail, which is a designated route, segregated from a highway, providing a continuous linkage between or among major urban areas, fragmented accesses, and major trail areas;
- (2) A segment or connector trail, which is a designated route from one locale to another; and
- (3) A special use trail, which is a designated course for a special activity or function. [L 1988, c 236, pt of §2]

§198D-2 Establishment of Hawaii statewide trail and access program.

(a) There is established the Hawaii statewide trail and access program, to be known as Na Ala Hele. The department of land and natural resources shall plan, develop, acquire land or rights for public use of land, construct, restore, and engage in coordination activities to implement the program in accordance with this chapter.

(b) The trail and access program shall prepare an annual report for the legislature concerning the amount of moneys accruing to the credit of the general fund from the following sources:

- (1) All taxes collected under chapter 243 on non-highway recreational fuel, or in the alternative, 0.3 per cent of the proceeds under chapter 243 deposited into the state highway fund established under section 248-8;
- (2) Federal government grants for the management, maintenance, and development of trails and accesses;
- (3) Private contributions for the management, maintenance, and development of trails and accesses; and
- (4) Earnings on the investment of the moneys specified in paragraphs (1) to (3), which became a part of the general fund.

The trail and access program shall submit the report to the legislature not fewer than twenty days prior to the convening of each regular session of the legislature.

(c) The moneys specified in subsection (b) shall be deposited in the state treasury; provided that moneys received as deposits or contributions from the federal government or private sources shall be accounted for in accordance with the conditions established by the agencies or persons making the contribution. Earnings on the investment of these moneys shall become a part of the general fund.

(d) All moneys to meet the general operating needs and expenses of the trail and access program shall be allocated by the legislature through appropriations out of the state general fund. The department shall include in its budgetary request for each upcoming fiscal period, the amounts necessary to effectuate this chapter. [L 1988, c 236, pt of §2; am L 1993, c 273, §1]

§198D-3 Inventory. (a) The department shall establish, maintain, and amend, as required, an inventory of all trails and accesses in the State, whether wholly or partly on public or private lands and whether or not under the jurisdiction of the department, and a separate inventory of all trails and accesses to public hunting areas in the State. The inventories shall include:

- (1) Maps and lists of all trails and accesses;

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- (2) Name and length of each trail or access;
- (3) The person or agency having management responsibility for each trail or access;
- (4) The predominant transportation mode for each trail or access;
- (5) The development standard, condition, and grade of each trail and access;
- (6) The description of amenities or other features on or in close proximity to each trail or access;
- (7) The status of availability to the general public of each trail or access; and
- (8) Other information for each trail or access deemed necessary or desirable by the department.

(b) The department shall publish and periodically update documents, which shall be available to the general public. The documents shall contain that portion of the inventories which include trails and accesses available for the use of the general public. The department may charge an appropriate fee for the documents and any updates. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(1)]

§198D-4 Classification. The department shall classify each trail and access in the inventories according to the following:

- (1) Function;
- (2) Type;
- (3) Theme;
- (4) Actual and desired use intensity; and
- (5) Any other classification deemed necessary or desirable by the department. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(2)]

§198D-5 Identification of proposed, potential, and needed trails and accesses. (a) In addition to the inventories under section 198D-3, the department shall identify and maintain a listing of:

- (1) Proposed trails and accesses which may be opened to the public;
- (2) Potential expansions of trails and accesses;
- (3) Potential or desirable connectors between existing trail systems;
- (4) Public beach, shore, park, trail, and other recreational areas to which access is unavailable or inadequate; and
- (5) Trails and accesses to public hunting areas.

(b) The listing may be published in the inventories required under section 198D-3. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(3)]

§198D-6 Regulation of use of trails and accesses. The department, by rule adopted in accordance with chapter 91, may regulate the use of trails and accesses under the department's jurisdiction. Regulation of the use of trails and accesses shall be established for the following purposes:

- (1) To preserve the integrity, condition, naturalness, or beauty of the trails or accesses;
- (2) To protect the public safety; or
- (3) To restrict or regulate public access to protected or endangered wildlife habitats, except for scientific or educational purposes. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(4)]

[§198D-7] Examination of legal issues. The department, in consultation with the attorney general, shall examine legal issues relating to trails and accesses. The legal issues examined shall include:

- (1) Theories, options, and doctrines by which trails and accesses may be placed into or retained in public use;
- (2) The validity and feasibility of dedication requirements to obtain public use of trails and accesses;
- (3) The extent of liability exposure of the State, counties, and private landowners when allowing trails and accesses under their respective jurisdictions to be used by the general public; and
- (4) Strategies to reduce or limit the liability exposure of the State, counties, and private landowners in order to promote public use of trails and accesses under their respective jurisdictions which are closed to the general public. [L 1988, c 236, pt of §2]

[§198D-7.5] Agreements to defend and indemnify. (a) The department may enter into agreements with owners of public or private land to further the purposes of this chapter. Agreements between the State and an owner may provide that the State will defend the owner from claims made against the owner by public users of the owner's land. These agreements may also provide that the State will indemnify the owner for losses incurred due to public use.

(b) The existence of an agreement does not allow an action to be brought against the State. The State shall not be made a party in any action solely because of the existence of an agreement to defend or indemnify. Any action defended by the State pursuant to an agreement shall be deemed an action against the owner, and the State may assert all defenses available to the owner.

(c) If the agreement provides for indemnification by the State, no judgment shall be executed against an owner until the legislature has reviewed and approved the judgment. [L 1992, c 216, §1]

§198D-8 Request to acquire rights for public use of additional trails and accesses. The department may request the legislature for appropriations to acquire rights to trails and accesses which are closed to public use or which are necessary to effectuate the trail and access program. [L 1988, c 236, pt of §2; am L 1993, c 273, §2]

§198D-9 Other powers and duties of department. The department:

- (1) May establish signing and design standards for classifications of trails and accesses;
- (2) Shall establish advisory councils to solicit advice and assistance in the implementation of the trail and access program. The appointment of members to advisory councils shall be made by the department. If advisory councils are established, the members of the advisory councils shall serve part-time and shall not be compensated for official duties performed. Advisory councils may be established on regional, islandwide, countywide, or statewide bases. The statewide council shall include representatives of motorized as well as nonmotorized trail users;
- (3) Shall serve as the centralized information agency for matters relating to the trail and access program;
- (4) Shall coordinate its activities under this chapter, including its compilation of the inventories and classifications of trails and accesses, with other public agencies;
- (5) Shall advise and, when able, assist other public agencies in the development, construction, operation, maintenance, and regulation of trails and accesses under the other agencies' jurisdiction;

ENFORCEMENT PROGRAM

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- (6) Shall advocate before the legislature, governor, and public agencies, for the implementation of the trail and access program; and
- (7) Shall submit an annual report to the governor and legislature on activities engaged in under this chapter; provided that the annual report shall include a comprehensive description of the status of the trail and access program and the financial information specified in section 198D-2(b). [L 1988, c 236, pt of §2; am L 1990, c 53, §1(5); am L 1993, c 273, §3]

[§198D-10] Limitation on chapter's provisions. (a) Nothing in this chapter shall be construed as conferring or imposing upon the department any rights, powers, and duties over:

- (1) Lands not under its jurisdiction; or
 - (2) The activities of other public agencies; except if provided by other law or agreement.
- (b) The designation as part of the statewide trail and access system of trails and accesses, the use to which the public has no rights, shall not be construed as establishing public rights to use those trails and accesses. [L 1988, c 236, pt of §2]

[198D-11] Rules. The department may adopt rules in accordance with chapter 91 for the purposes of this chapter. [L 1988, c 236, pt of §2]

TRAIL AND ACCESS EVALUATION FORM - DRAFT

(Instructions: Furnish as much information as possible on lines provided.)

Recreational

- Can a variety of recreational opportunities be enjoyed through this trail/access? (Consider subsistence and sport activities such as hunting and fishing, camping, strenuous hiking, nature study, pick-nicking, meditation and solitude.)

(Y/N)

- Will this trail/access help to satisfy the needs of a variety of user groups? (Consider the young, the elderly, the disabled, families, strong and experienced hikers, first-time hikers and visitors.)

(Y/N)

Intrinsic

- Are there special features that attract trail users? (Waterfalls, scenic vistas, beaches, unique historical or biological sights.)

(Y/N)

- Does the trail follow a route with outstanding scenic, cultural, or historic value?

(Y/N)

Historic/Cultural

- Does the trail/access have historic, religious, or cultural significance to any segment of Hawaii's population?

(Y/N)

- Have people traditionally used the trail/access? (For approximately how many years? Is it still used today?) (Y/N)

- Do people rely on the trail/access for food gathering and/or harvesting? (Y/N)

- What is the history of this trail/access (e.g. when and why was it built and by whom)?

- Is the trail/access part of a historic Hawaiian trail network? (Y/N)

Accessibility

- Is the trail/access accessible to a wide variety of users? (Consider the young, the elderly, the disabled, families, first-time hikers and visitors.) (Y/N)

- Does the trail/access provide a challenge to strong, experienced hikers? (Y/N)

- How would the user get to the trail/access? (Foot, public transport, 2-wheel or 4-wheel drive vehicle required?)

- What modes of transport could be used on the trail/access? (Consider foot, equestrian, 4-wheel drive, mountain bike.)

Educational

- Are there unique biological and/or historical features found along the trail/access that would interest researchers and students?

(Y/N)

- Is this trail/access especially suited to interpretive programs for the public?

(Y/N)

Geographic

- Is the trail/access at risk of being lost to development activities or neglect? Specify.

(Y/N)

- Is the trail/access part of a more extensive network, or could it contribute to the larger network of trails/accesses proposed for the island?

(Y/N)

- Are there alternative trails/accesses leading to the same destination? (How does the proposed trail/access differ from the alternatives?)

(Y/N)

- Are there trails/accesses of similar type nearby?

(Y/N)

- Is the trail/access located where there is a need/demand for more trails/accesses? How is the need/demand expressed?

(Y/N)

- Does the trail provide access to parks, recreation sites or public lands?

(Y/N)

- Has the trail/access been previously identified (or nominated) to be a Na Ala Hele priority? When?

(Y/N)

Management

- What special management considerations apply to the trail/access?

- Should the trail/access remain "rough" with minimal improvements? (Specify facilities/amenities which should be provided.)

(Y/N)

- Is this a multi-use trail/access? List the potentially conflicting uses that need to be managed.

(Y/N)

- Is it necessary to control public access due to the environmental and/or historic sensitivity of the area being accessed?

(Y/N)

- Is this a trail/access that is already public but needs better management?

(Y/N)

- What other agencies should be involved in the management of the trail/access?

Success Potential

- Are the landowner(s) and agency(ies) which would be affected receptive to the trail/access? What landowner(s) and agency(ies) are involved?

(Y/N)

- Describe trail/access' current physical condition.

- Are there exceptional hazards that trail/access users would be exposed to?

(Y/N)

- Can the liability exposure be minimized? How?

(Y/N)

- What might be required in order to acquire the trail/access?

- What might be required in order to develop and manage the trail/access?

U. S. Forest Service Cost Estimates

| | |
|--|-------------------------------|
| ●Blasting | \$30,000 per mile |
| ●Bridge design | \$1,000 to \$1,500 |
| ●Cable suspension bridge | \$1,000 per foot |
| ●Forest Service trail worker | \$60 to \$80 per day |
| ●Hiking trail reconstruction | \$12,000 to \$15,000 per mile |
| ●New handicapped-accessible trail | \$20,000 per mile |
| ●New hiking trail | \$15,000 to \$20,000 per mile |
| ●New interpretive trail | \$16,000 per mile |
| ●Right-of-way | \$3,000 per mile |
| ●Right-of-way negotiation | \$2,000 |
| ●Trail planning and environmental assessment | \$500 to \$800 per mile |
| ●Trail preconstruction survey | \$1,500 per mile |
| ●Vault (pit) toilet | \$15,000 each |
| ●Volunteer trail worker | \$25 to \$30 per day |
| ●Wooden footbridge | \$125 to \$150 per foot |

WATERLESS TOILETS

The Hawaii State Department of Health (DOH) requires that any new sanitary facilities within reach of sewer lines be connected to them. When this is not possible, an on-site wastewater treatment system must be installed. Cesspools do not effectively treat wastewater and may lead to pollution of groundwater resources. As of 1988 cesspools are no longer accepted for waste disposal in new public buildings, and with promulgation of revisions to Section 11-62, Hawaii Administrative Rules, will not be accepted for any new construction deemed to be in "Critical Wastewater Disposal" areas.

In areas where remoteness, lack of water, or other conditions prevent the use of septic systems or other standard wastewater treatments, alternative systems must meet the standards set forth in Section 11-62, H.A.R. Systems in agricultural or conservation use districts are exempt, provided they:

- not contaminate or pollute any ground or surface water
- not encourage the harborage of insects, rodents or other possible vectors
- not be a hazard or potential hazard to public health, safety or welfare

Section 11-62 also states that a holding tank or privy does not constitute an acceptable wastewater system. All alternative systems must be submitted to the DOH for approval. DOH has approved composting toilets and other waterless toilet designs.

Systems suitable for remote areas lacking water should be designed to require as little maintenance as possible. Chemical toilets require periodic emptying and off-site disposal of chemical residues. Composting toilets may be the best alternative, as wastes are rendered safe for on-site disposal.

Most composting toilets provide proper conditions for biological decomposition of human wastes in an oxygen-rich (aerobic) environment. To aid in decomposition, other organic wastes such as leaves, ashes, or grass clippings can be added. The wastes are aerated via air channels or mixing devices. Decomposed wastes are reduced 90 - 95% in volume and are useable as a fertilizer or soil conditioner. Electric ventilating fans are required in some systems and power can be supplied with photovoltaic cells.

Composting toilets are used in many areas worldwide, are commercially available and can be fabricated from readily available materials and designs. According to one manufacturer, Clivus Multrum, over 500 of their systems are in use in public facilities throughout the U.S., including state and national parks, highway rest stops, and isolated campgrounds. As an alternative to costly pre-manufactured units, the California Department of Parks and Recreation has prefabricated its own composting toilets and installed them in remote coastal and mountain areas.

Recent cost estimates for a single composting toilet are:

| | |
|--|-----------|
| Composting Tank, Toilet, Ventilation System, | |
| Fire Protection System, Assembly Hardware | - \$9,400 |
| Out House Building Materials | - \$1,800 |
| Fan | - \$1,050 |

Add to these costs the labor required to prepare the site, ready the materials for assembly, and construct. Also helicopter transportation costs can be involved if the unit is installed in a remote area.

Public education with regards to proper use of waterless toilet systems is essential. Waterless toilet systems have been attempted by the State in the past, but numerous problems have led to removal of structures. These costly facilities have been severely vandalized. Rocks, bottles, disposable diapers and other incompatible materials have been thrown into the toilets, causing severe structural damage or interference with conditions required for proper composting. (More information on waterless toilet design and maintenance is contained in the Na Ala Hele Handbook and library.)

STATE AND REGIONAL TRAIL PROGRAMS

Background:

A survey of other states' trail and access programs reveals many ways to organize and manage them. The United States Department of the Interior's National Park Service is finalizing a "Trail Planning Assessment" which surveys all states and reports on the status of trail planning (in Na Ala Hele's Library). The presence of a trails coordinator or plan does not, however, indicate a successful program. This requires a commitment of time and money on the part of the state, and a well organized program, tapping state and volunteer resources. One study emphasizes that the primary concern nationwide is adequate funding for trail planning, acquisition, development and maintenance. In addition, "a sound volunteer trail organization is normally a prerequisite for a successful local trails project." (National Trails Assessment. National Park Service, 1986)

OVERVIEWS of Selected State Programs

The overall organization of most state programs is fairly similar to that proposed for Na Ala Hele, with one or more advisory councils, a trail coordinator working within an existing state agency, and an overall plan to guide program development. (See Na Ala Hele Program Plan's Bibliography for the sources of information used in this appendix.)

COLORADO

The State Recreational Trails Program was established in 1971, and is administered by the Division of Parks and Outdoor Recreation. The program is responsible for major trails within state parks, and for providing assistance to local communities. This has amounted to \$1.7 million in aid for 51 local trails since 1973. Since 1982, funding for trails has been generated by the Colorado Lottery; 10% of the lottery proceeds are allocated to the Division of Parks and Outdoor Recreation for state parks, recreation areas, and recreational trails. In 1984, trails received approximately \$500,000.

The program includes a State Trails Committee, a volunteer group which serves as an advisor to the Parks and Outdoor Recreation Division. The Trails Committee also acts as a liaison between the Division, users, and other public bodies. Tasks include developing funding sources, research, reviewing proposed trails, and developing volunteer programs. Primary program goals include:

1. **Planning**
 - a. Maintain an inventory of trails.
 - b. Develop criteria and rationale by which to allocate funds to local communities.
2. **Providing assistance to local communities**
 - a. Provide technical aid.
 - b. Provide planning assistance.
 - c. Enhance coordination.
3. **General support**
 - a. Provide publicity.
 - b. Assist in the production of maps and guides.

- c. Assist volunteer groups and foundations.
- d. Support trail legislation.
- e. Provide a trails resource center.

Program policies:

- Multiple use trails are encouraged where suitable.
- Commuter use is encouraged where it does not impair recreational or scenic qualities.
- Barriers to use should be removed whenever possible, and interpretive trails are encouraged.
- Funding priority is given to trails whose design incorporates low-cost methods or innovative ideas, while following program guidelines and standards.
- Public education and involvement is a priority.

ARKANSAS

Trail planning efforts include the Arkansas Trails System (established in 1979), the Statewide Trails Plan (1986), the Trails Council (established in 1973), and a full-time Trails Coordinator within the Department of Parks and Tourism.

The Trails Council consists of directors of resource agencies within the State government. Its purpose is to coordinate trail-related activities, encourage volunteer assistance, provide technical help, and encourage and support research and legislation. The Council actively solicits participation from trail users, trail groups, and all levels of government.

The Coordinator is responsible for most day to day activity, and assists government agencies and others to plan, develop, promote, research, and maintain trails.

While the Council and Coordinator work to support all trail activities in the State, not all trails are part of the Trails System. The System is fashioned after the National Trails System, with only trails meeting specific criteria being included. State trails must:

- Have a guaranteed right-of-way for a minimum of five years.
- Have a sponsoring organization which has committed to undertaking trail operation and maintenance, also for a minimum five year period.
- Meet State standards and guidelines.
- Be ready for public use.
- Be properly marked and signed.

The State trail program has these goals:

1. Planning

- a. Maintain a trail inventory to be carried out by the Coordinator.
- b. Compile information on historic trails.
- c. Survey and protect archaeological resources prior to new trail construction.
- d. Maintain a record of trail use statistics.

2. Coordination

- a. Maintain a constant exchange of information between trail users, providers, and other interested parties.
- b. Analyze the trail interests and needs of both residents and visitors.

3. Development

- a. Develop trails for a variety of trail activities.
- b. Establish interpretive trails in natural areas.
- c. Establish mountain bike trails.
- d. Establish equestrian trails.

4. Management

- a. Develop a maintenance and management plan for each designated recreational trail, including:
 - Annual budget.
 - Visible system for trail marking.
 - Regular repair of all structures and facilities, and the trail itself.
 - Estimate number of users and the trail's carrying capacity. Develop use limits if necessary.
 - Outline preventative maintenance techniques.
- b. Publish an Arkansas Trail Guide, funded through contributions from involved agencies and groups. Individual agencies should also develop maps and brochures describing their individual trail facilities.

OREGON

Oregon's trail program was authorized in 1971, but has received no dedicated funding since then. It is organized as a unit within the State Parks Program, and includes a Trail and Beach Coordinator as well as a Recreation Trails Advisory Council with statewide representation. As of 1988 the budget was \$80,000 per biennium, which is allocated primarily to a half-time trail coordinator. Plans called for an expansion of the program, but this depends on legislative action.

The coordinator's role involves:

- Planning and developing a system of connecting trails between metropolitan areas and coastal and mountain regions.
- Assisting local governments and volunteers in locating and building trails, including finding funds.
- Coordinating Federal, State and local agencies on multi-jurisdictional trail projects.
- Writing a recreational trails plan.

According to the present coordinator, volunteers play an "extremely important" role in Oregon trail projects. "If there weren't volunteers, it is likely few projects would be done."

PENNSYLVANIA

Planning for the Pennsylvania program began in 1975, and included considerable involvement on the part of a twenty-seven member Trails Advisory Group composed of representatives from governmental agencies and user groups. In addition, to encourage public involvement, twenty four public meetings were held throughout the state. This input was combined with that provided by advisory groups and user questionnaires.

Lessons from this part of the program include:

Variety is important:

- Many types of trail experience are not available to a high percentage of the population of the state.
- There is a need for trails which provide exposure to new and unique experiences.
- Many trail users who indicate a need for additional trails are not requesting highly developed facilities but rather prefer low-key development.
- Few trail facilities provide access or information for disabled users.

Effective communication is important:

- Lack of effective communication and understanding between users and providers hinders development, use, and enjoyment of trails.
- Some lack of trail-related information exists, most problems stemming from poor distribution and/or publicity.
- Many trail users are not organized into effective statewide user groups. Organized groups may not represent a high percentage of all users.

Money is not everything:

- Lack of funds hinders trail development, but there is much which has and can be done without great amounts of public money.

Current goals of the trail program include relocation of a portion of the Appalachian Trail, provision of trails for all-terrain vehicles, and increased support and public information regarding all of Pennsylvania's trails.

In a summary of Pennsylvania's accomplishments with respect to trails, **the Assistant State Forester observed that the present extensive trail system has been made possible in large part due to volunteer efforts and public works programs.** The State's role has generally been to provide assistance in locating trails and providing tools and materials, while volunteer groups and various conservation corps supplied labor.

CALIFORNIA - Coastal

The California State Coastal Conservancy was created by the Legislature in 1976 to preserve, enhance and restore coastal resources, and in particular to pursue non-regulatory approaches. The Conservancy was developed as an adjunct to the California Coastal Commission, which was formed in 1972 to oversee all development in the coastal zone (within 3000 ft. of the shoreline). Although the Commission was successful in regulating proposed development, it was unable to open or maintain

accessways, establish coastal parks, or protect wetlands. It was also unable to assign this responsibility to state or local agencies. The Conservancy was developed specifically to work for coastal protection and access using a variety of creative approaches.

The Conservancy is authorized to:

- Acquire land.
- Design and implement programs for public access, restoration of coastal land and urban waterfronts, and wetlands and wetland enhancement.
- Provide funds and technical assistance to local governments, other public agencies, and nonprofit organizations.

Securing public access is one of the Conservancy's highest priorities. To do this the Conservancy sponsors (through grants to local jurisdictions or through its own efforts) the development of stairways, trails, and other facilities. The Conservancy also works with nonprofit groups to secure the continued operation and maintenance of accessways and easements. Recognizing that access may be limited by cost, the Conservancy awards grants for the creation of low cost coastal accommodations, including hostels. It also provides interpretive and locational signs and encourages the development of barrier-free accessways.

Important capabilities which account for the success of the Conservancy include:

- **Rapid action.** Prompt response to opportunities and proposals is critical.
- **Risk-taking.** The Conservancy has the mandate to take an active role in resolving coastal conflicts and to pursue new and untried solutions.
- **Leverage.** The Conservancy uses alternative sources of funds whenever possible.
- **Public participation.** Direct public involvement through community design workshops and other participatory approaches is employed.
- **Innovation.** The Conservancy is receptive to original ideas and a willingness and ability to implement them.

The success of the Coastal Conservancy has led to the formation of similar organizations, including the Santa Monica Mountains Conservancy and the California Tahoe Conservancy.

REGIONAL PROGRAMS

In addition to trail programs at the state level there are many successful programs which operate regionally. The most famous of these is the Appalachian Trail. Another is the East Bay Regional Park District.

APPALACHIAN TRAIL COOPERATIVE MANAGEMENT SYSTEM

The Appalachian Trail utilizes a Cooperative Management System in which authority is largely decentralized. The System relies primarily on local partnerships between trail clubs and public agencies. Final responsibility for the entire trail falls on the National Park Service, which consults with the National Forest Service and the public (represented by a coalition of trail groups known as the Appalachian Trail Conference) in determining major policies. Most trail related issues are determined at the local level by individual trail clubs and public agencies in partnership.

The cooperative, decentralized decision-making process allows for responsiveness to local issues and needs, and allows both volunteer groups and public agencies to tailor their involvement to match

their abilities. Some clubs do only blazing and light clearing, with government agencies doing the balance of management. Others are responsible for major trail relocation and rehabilitation, construction and maintenance of facilities, information and education activities, and even management related research. Clubs are encouraged to take on as much responsibility as they can.

Clubs, generally in concert with their agency partners, draw up management plans, which describe management tasks, assess each partner's contribution, assign specific responsibilities, and provide standard procedures. The relationships described in these plans are formalized through a series of cooperative agreements which are established on two levels. One is at the state level and defines principal relationships between trail clubs, cooperating agencies, the Appalachian Trail Conference and the National Park Service. A second level involves broader agreements for mutual cooperation and consultation on the entire trail. While not specifying maintenance responsibilities, these second-level agreements place individual agreements within a context of partnership and provide guidelines for how they will be drafted. The emphasis is on establishing a process of cooperation and coordination, so that issues can be resolved without the need for detailed prescriptions covering all eventualities.

Funding for club activities is usually generated from private sources, with assistance in fund raising provided by the Trail Conference. Public funds are generally used only to support public agency work and for certain major capitol improvements.

TRUST FOR APPALACHIAN TRAIL LANDS

The National Park Service and U.S. Forest Service will soon have completed acquisition of a right-of-way for the Appalachian Trail throughout its 710 miles which lie within New England. Fears about incompatible development of adjacent lands, and concerns about the protection of sites which are critical to enjoyment of the trail but lie outside the narrow (1000 ft.) right-of-way have led to the formation of the **Appalachian Trail Supplemental Lands Protection Program**. This program is being carried out primarily through the efforts of the **Trust for Appalachian Trail Lands**.

The Trust's program has the following objectives:

- Inventory private lands which are critical components of the Appalachian Trail environment.
- Identify existing Federal, State, and private conservation programs that could be used to protect these lands, and form a regional network of groups and programs working for supplemental lands protection.
- Collect and evaluate land and information about landowners.
- Begin an active acquisition program.

The criteria used to evaluate protection projects include:

- Can the property be developed in a way that will degrade the enjoyment of hiking the trail?
- Does the property contain key resources or wildlife habitats?
- By protecting the property are significant side trails or viewsheds protected?
- Would protection supplement other public or private land protection efforts?

Cooperation between those traditionally involved in the Appalachian Trail and New England's "open space activists" is crucial to the Trust's success. Although these interest groups have not traditionally worked together, by joining forces it will be possible to significantly advance each group's

goals. Thousands of acres are involved and if the program is successful, it will mean long-term regional protection of land with public access.

EAST BAY REGIONAL PARK DISTRICT

The East Bay Regional Park District (EBRPD) in California has developed a very different yet effective system for establishing regional trails. This District was formed in the 1930's for the purpose of establishing regional parks in two counties in the East San Francisco Bay Area. It includes 65,000 acres of land in parks, preserves, recreation and wilderness areas, with over 1,000 miles of trails. The District is authorized by the State Legislature, but must coordinate its efforts with those of the Federal government, State, counties, municipalities, etc.

One of EBRPD's priorities is the development of regional trails which provide a linear corridor, in a natural setting where possible, for pedestrian, equestrian and bicycling uses. In the case of such trails the District serves as a coordinating body, working between various jurisdictions and landowners, and providing a comprehensive planning process which assures that environmental and social concerns associated with trail development are met. The District also plans trail routes to connect with their own and other agencies' parklands or open spaces, and seeks to protect lands adjacent to trails via purchase or easement. EBRPD is presently playing an important role in coordinating the many public and private bodies which are cooperating in the acquisition and construction of the Bay and Ridge trails. These trails will enable hikers to circle the entire San Francisco Bay along the shore and via surrounding ridges.

While the basic organizational approach of the District does not provide a model for Na Ala Hele, EBRPD's experience with multi-jurisdictional trail planning is considerable, and much can be learned from their approach. The following is an outline of their process of trail development.

1. **Planning.** The first step involves drawing up and approving an overall trail plan. Individual trail projects are identified and prioritized, and funding is allocated. For individual trails, both a trail corridor study and a draft environmental impact report must be filed. These include a detailed examination of several potential routes. Impacts to the natural environment are often minimal, but there may be significant social impacts. Coordination with other jurisdictions is important at the planning stage, and generally consumes about half of the Trail Administrator's time. Draft plans are widely distributed for comment and then revised.
2. **Acquisition.** Most of the work in trail development is in acquisition of the route. Acquisition of land for trails often occurs without a specific corridor study for a project, and such advance work is critical to the success of the trail system. It is vital to have the authority to act when rights-of-way become available, or many potential trail connections will be lost. Trail planners must be alert and ready to act when considering acquisition possibilities. For the EBRPD this includes maintaining contacts with about 20 cities, each with its own staff, councils, etc.

To acquire land for a recommended trail route a focused land ownership study is first carried out. Where possible, trails are routed on public land. When private landowners are involved, they are contacted as early in the process as possible. When acquisition becomes necessary the major methods are fee title, easement, license, lease, land dedication or gift, and encroachment permits. Condemnation is almost never used. Most trail projects include a combination of all the above methods, and success demands flexibility, persistence, and a readiness to act.

3. **Development.** Trail development occurs only when funds become available, and in many cases involves joint funding from the State, cities, recreation districts, and other organizations. The District's Trail Manual specifies design and construction features. Construction may involve a formal process including public bids and contracts, or be very informal, involving in-house, volunteer, or other low-cost labor.

4. **Operation and Maintenance.** Ongoing trail operation and maintenance are vital to the success of the overall trail program and serve to give the program credibility in the eyes of the public. Volunteers can be used effectively, but generally professional maintenance and supervision is needed as well.

Summary

Na Ala Hele can greatly benefit from studying the experiences and techniques used in other states' trail programs. Enough similarities exist to make certain lessons transferable to Hawaii's situation, Na Ala Hele as a young program can be expected to evolve and change.

VOLUNTEER SOURCES

Volunteer recruitment for in-house programs can be divided into two categories: **general** (often referred to as the "warm body method") and **targeted** recruitment. General recruitment is used for jobs that do not require special skills, or when large numbers of volunteers are sought, such as for a massive work party. Targeted recruitment focuses on volunteers with special skills to fill certain jobs (office skills, legal knowledge, the ability to write effectively, trained in volunteer leadership, knowledge of Hawaiian flora and fauna, etc.).

As Na Ala Hele develops its volunteer programs, the following list of volunteer sources and programs should contain helpful information to a beginning program. It is certainly not an exhaustive list and addresses/phone #'s typically change.

Statewide:

- Existing user groups (e.g. Sierra Club, equestrian clubs, scouting organizations)

Sierra Club-Hawaii Chapter
212 Merchant St., Rm. 202
Honolulu, HI 96813

- General environmental organizations (such as The Nature Conservancy and Hawaii's Thousand Friends)
- Other organized groups, including civic groups and clubs
- The general public via Na Ala Hele advisory councils, radio, television, newspaper releases and/or advertisements, brochures, posters, speakers' bureaus, periodicals, and word of mouth
- Statewide Volunteer Services (SVS) for information, technical assistance and volunteer recognition to State agencies - SVS has a directory of major State government volunteer programs, and Na Ala Hele should make sure to get on their directory once volunteer programs are set up.

Statewide Volunteer Services
Office of the Governor
State Capitol, Room 442
Honolulu, HI 96813
(808) 548-8539

- Military - certain branches of the military will perform community service projects.
- Historic Preservation Division (HPD) of the DLNR has a Curator Program for historic sites. It enables public groups to enter into a formal agreement with the State to be responsible for specific tasks that can include protection, care and interpretation of significant historic sites on State lands. The groups are supervised by HPD, and public access to the sites cannot be restricted by the curator.

Historic Preservation Division
33 South King St., 6th Floor
Honolulu, HI 96813
(808) 587-0047

Kauai:

- Sierra Club Kauai Group
P.O. Box 3412
Lihue, HI 96766

Oahu:

- The "Voluntary Action Center", a program of the "Volunteer Information and Referral Service", recruits and refers individuals and groups to public agencies, and assists in the development and management of private volunteer programs.

Volunteer Information and Referral Service
Voluntary Action Center
200 N. Vineyard Blvd. Room 603
Honolulu, HI 96817
(808) 536-7234

- "Hawaiian Trail and Mountain Club", founded in 1910, has provided formal and informal trail building and maintenance assistance on Oahu's trails for many years.

Hawaiian Trail and Mountain Club
P.O. Box 2238
Honolulu, HI 96804

- Office for Youth Services
Hawaii Youth Service Corps
Contact: Wayne Matsuo
(808) 586-5130

This Federally funded program for youth 17-24 years of age has concentrated on placing youth in health services settings primarily in Waianae. They have contacted Na Ala Hele regarding their interest in doing conservation work. The program is not a vocational training program. Its emphasis is on community service and education. Supervision of the youth would be Na Ala Hele's responsibility.

Maui:

- Sierra Club Maui Group
P.O. Box 2000
Kahului, HI 96732
- In a cooperative effort between the State and County of Maui, the County's Department of Human Concerns, through its Volunteer Action Division's Community Workday Program coordinates volunteer efforts to adopt parks, accesses, reefs, cemeteries, historical sites and roadways.

Community Workday Program
275 Uhu Street
Kahului, HI 96732
(808) 243-7325

"Adopt-a-" programs are functioning in the other counties, but Maui County's program seems to be the most comprehensive and active at this time. Other counties' Parks and Recreation Departments can be contacted for more information on the current status of their "Adopt-a-" programs.

Hawaii:

- Sierra Club Moku Loa Group
P.O. Box 1137
Hilo, HI 96720
- The Na Ala Hele nonprofit has been organizing and conducting volunteer activities in trail clearing and clean-up since its inception in 1979:

Na Ala Hele, Nonprofit
c/o P.O. Box 2193
Kamuela, HI 96743
- The Kohala Foundation is a nonprofit land trust active in conservation volunteer work in Kohala District. The trust cooperates on trail preservation, construction and maintenance projects.

The Kohala Foundation, Inc.
P.O. Box 1015
Kapaau, HI 96755

Nationwide:

- The "American Hiking Society" (AHS) has several volunteer programs:
 1. AHS' "Volunteer Vacations Program" sponsors work trips throughout the country, during all seasons. These trips generally involve trail maintenance and construction, performed by groups of 10-15 individuals under the supervision of a staff person and volunteer supervisor. Work trips are usually 10-14 days in length and in remote areas. More information is available from:

AHS Volunteer Vacations
P.O. Box 86
North Scituate, MA 02060
 2. Helping Out in the Outdoors is a directory of volunteer opportunities nationwide, on all types of public lands. It includes listings from agencies which sponsor volunteer work projects or internships connected with the outdoors. Write:

American Hiking Society
1015 31ST. N.W.
Washington, D.C. 20007

INSURANCE COVERAGE FOR NONPROFIT ORGANIZATIONS

Further information is available in the Na Ala Hele library.

- The "National Recreation and Park Association" (NRPA) offers a blanket recreational activities accident insurance program only to its members. Members can be public recreation agencies and commissions, professionals in the recreation and parks fields, nonprofit organizations, commercial firms and others. Insurance programs are just one of the benefits offered to NRPA members. Write:

National Recreation and Park Association
3101 Park Center Drive
Alexandria, VA 22302
(703) 820-4940

- The "Volunteer Insurance Program" is for members of the "Volunteers Insurance Service Association, Inc." (VIS) which is an organization "formed for the purpose of researching available and feasible insurance relating to volunteers, compiling underwriting information, maintaining a central insurance library, furnishing information to its members, and designing and administering insurance for volunteers." Insurance coverage is provided to any volunteer registered with the volunteer organization that has been accepted for VIS membership. The one-time, lifetime membership fee is \$5.00. A variety of insurance programs are offered: Accident, Personal Liability, Excess Automobile Liability, Directors and Officers Liability, etc. Sports clubs, volunteer police and firefighters are not eligible for VIS. The rates are quite affordable and Personal Liability and Excess Automobile Liability rates have "never" increased. Only the Accident rate has increased due to increases in medical care costs. Write:

Association Insurance Management
216 South Peyton Street
Alexandria, VA 22314-2813
Toll Free: 1-800-468-4200

- Member organizations of the "Land Trust Alliance" have a "Green Umbrella" insurance program which is primarily for land trusts but organizations with related purposes and similar activities could also become eligible for coverage. Eligibility requirements are (1) must be a private, nonprofit, 501(c)(3) organization that qualifies as a public charity (not a private foundation), (2) must operate at a local, state or regional level (national organizations do not qualify) and (3) must either acquire land or easements for conservation purposes, hold or manage conservation lands, or help negotiate such transactions. Write:

Land Trust Alliance
900 Seventeenth St. NW, Suite 410
Washington, DC 20006
(202) 785-1410

DEPARTMENT OF LAND AND NATURAL RESOURCES

Amendment of Chapter 104
Hawaii Administrative Rules

July 23, 1993

SUMMARY

1. §13-104-2 Definitions of "motorized vehicle", non-motorized vehicle", and "spark arrester" were added.
2. §13-104-11 is amended.
3. §13-104-4(9) and 10 are added.
4. §13-104-3 is amended.

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 5 FORESTRY AND WILDLIFE

PART 1 FORESTRY

CHAPTER 104

RULES REGULATING ACTIVITIES WITHIN FOREST RESERVES

Subchapter 1 General Provisions

- S13-104-1 Purpose and applicability
- S13-104-2 Definitions
- S13-104-3 Penalty

Subchapter 2 Public Use

- S13-104-4 Preservation of public property and resources
- S13-104-5 Litter and sanitation
- S13-104-6 Report of injury or damage
- S13-104-7 Fire use restrictions
- S13-104-8 Hunting and fishing
- S13-104-9 Firearms or other weapons
- S13-104-10 Swimming and bathing
- S13-104-11 Vehicles and transportation
- S13-104-12 Animals
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- S13-104-15 Disorderly conduct
- S13-104-16 Residence and forest reserve land
- S13-104-17 Compliance with laws

Subchapter 3 Permits

- S13-104-18 General provisions for permits
- S13-104-19 Camping permits
- S13-104-20 Special use permits
- S13-104-21 Collecting permits
- S13-104-22 Commercial harvest permits
- S13-104-23 Access permits

Historical Note: Chapter 104 of Title 13, Administrative Rules, is based substantially upon Regulation 1 [Eff. 12/9/43; am 8/12/76] and Regulation 10 [Eff. 12/12/59] of the Division of Forestry, Department of Land and Natural Resources

[R OCT 15 1993]

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- S13-104-8 Hunting and fishing
- S13-104-9 Firearms or other weapons
- S13-104-10 Swimming and bathing
- S13-104-11 Vehicles and transportation
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[R OCT 15 1993]

Subchapter 1 General Provisions

S13-104-1 Purpose and applicability. (a) The purpose of these rules is to regulate activity within forest reserves established pursuant to sections 183-11 and 183-15, Hawaii Revised Statutes.

(b) These rules shall apply to all persons entering the boundaries of a forest reserve. Everyone using the forest reserves should conduct themselves in a safe and courteous manner. Users of the forest reserves should be aware that there are certain inherent risks involved due to other users and the environment and should use caution at all times.

[Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-2 Definitions. As used in these rules, unless context requires otherwise:

"Administrator" means the administrator of the division of forestry and wildlife.

"Authorized representative" means the administrator, foresters, conservation enforcement officers, and other persons authorized by the board of land and natural resources to act for the board.

"Board" means the board of land and natural resources.

"Camping" means being in possession of a backpack, tents, blankets, tarpaulins, or other obvious camping paraphernalia, which use necessarily involves overnight sleeping, one hour after sundown in a forest reserve.

"Division" means the division of forestry and wildlife.

"Department" means the department of land and natural resources.

"Forest reserve" means those lands designated as forest reserves by the department pursuant to sections 183-11 and 183-15, Hawaii Revised Statutes, and other lands for plant sanctuaries, facilities, nurseries and baseyards under the custody and control of the division.

"Motorized vehicle" means a vehicle of any shape or form that depends on a motor (gas, electric, or other fuels) for propulsion.

"Non-motorized vehicle" means a vehicle of any shape or form that depends on human, animal, wind, spring and other non-motorized means for propulsion.

"Residing" means being in the same forest reserve for more than seven (7) continuous days.

"Spark arrester" means a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that is operated by hydrocarbon fuels.

OCT 15 1993

S13-104-3 Penalty. Any person violating any of the provisions of these rules shall be guilty of a misdemeanor and shall be penalized as provided by law. [Eff. OCT 15 1993]

Subchapter 2 Public Use

S13-104-4 Preservation of public property and resources. The following activities are prohibited within a forest reserve:

- (1) To remove, injure, or kill any form of plant or animal life, either in whole or in part, except as authorized by the Board or authorized representative or as provided by rules of the Board;
- (2) To remove, damage, or disturb any natural feature or resource (e.g. natural stream beds) except as authorized by the board or its authorized representative;
- (3) To remove, damage, or disturb any historic or prehistoric remains;
- (4) To remove, damage, or disturb any notice, marker, or structure;
- (5) To enter, occupy, or use any building, structure, facility, motorized vehicle, machine, equipment, or tool within or on forest reserve except as authorized by the board or its representative;
- (6) To engage in any construction or improvement except as authorized by the board.
- (7) To sell, peddle, solicit, or offer for sale any merchandise or service except with written authorization from the board.
- (8) To distribute or post handbills, circulars, or other notices.
- (9) To introduce any plant or animal except as approved by the Board.
- (10) To enter or remain within forest reserves when under the influence of alcohol, narcotics, or drugs, to a degree that may endanger oneself or endanger or cause annoyance to other persons or property. The use or possession of narcotics, drugs or alcohol within forest reserves is prohibited. [Eff. **OCT 15 1993**]

(Auth: HRS S183-2) (Imp: HRS SS183-2, 183-17)

S13-104-5 Litter and sanitation. The following acts are prohibited within a forest reserve:

- (1) To drain, dump, or leave any litter, animal waste or remains, or any other material which pollutes or is likely to cause pollution in the forest reserve including streams and other water sources;
- (2) To deposit any body waste in areas without comfort stations without digging a hole and covering all signs of the waste;
- (3) To deposit any body waste within 150 feet of a spring, stream, lake, or reservoir; and
- (4) To leave or abandon a vehicle or any other large refuse

such as refrigerators or stoves, household garbage or trash or other forms of waste or debris.

[Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-6 Report of injury or damage. All incidents resulting in injury or death to persons or damage to property shall be reported by the person or persons involved as soon as possible to the board or its authorized representative. This report does not relieve persons from the responsibility of making any other accident reports which may be required under federal, state, or county statutes, ordinances, and rules.

[Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-7 Fire use restrictions. The following acts are prohibited within a forest reserve:

- (1) To build any fire on the ground or in any structure;
- (2) To build any fire without using a portable stove or other self-contained unit;
- (3) To leave a fire unattended without extinguishing all traces of heat;
- (4) To deposit or discard any potential fire-producing material such as embers, coals, or ashes that are too hot to touch;
- (5) To set on fire or cause to be set on fire any live or dead vegetation except for department fire control measures;
- (6) To start a fire in windy conditions in a place or manner that is likely to cause live or dead vegetation to be set on fire; and
- (7) To use any motor vehicle, motorized equipment, internal combustion engines, or electric motors unless equipped with efficiently operating fire or spark arresting equipment. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS SS183-2, 185-1)

S13-104-8 Hunting and fishing. The hunting, fishing, trapping, or disturbing of any fish, animal, or bird is prohibited except as permitted by department hunting or fishing rules. [Eff. OCT 15 1993] (Auth: HRS S183-2)

S13-104-9 Firearms or other weapons. Firearms including air or gas operated, bow and arrow and other weapons are prohibited except as permitted by department hunting rules and are subject to all applicable federal, state, and county statutes, ordinances, and rules [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-10 Swimming and bathing. Swimming and bathing in all waters within a forest reserve are permitted at an individual's own risk except in waters and at times where the activities are prohibited by the board or its authorized representative in the interest of public health and safety. The excepted waters and times shall be designated by posted signs. [Eff. **OCT 15 1993**] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-11 Vehicles and transportation. (a) The following acts are prohibited within a forest reserve:

- (1) To drive, operate, or use any motorized or non-motorized land vehicle, glider, hang glider, aircraft, balloon, or parachute carelessly and without due caution for the rights or safety of others and in a manner that endangers any person or property;
- (2) To launch or land airplanes, gliders, helicopters, balloons, parachutes, or other similar means of transportation without a special use permit from the board or its authorized representative; provided, however, that landing is authorized without a permit in case of any emergency;
- (3) To drive, operate, or use any motorized vehicle in any area or trails not designated for that purpose;
- (4) To park any motorized or non-motorized vehicle or trailer except in designated areas;
- (5) To drive, lead or ride a horse, mule, other animal, or non-motorized land vehicle in areas and on roads or trails that are posted against such activity; and
- (6) To drive, operate, or use any motorized ground vehicle without a functioning street legal muffler, and without a valid vehicle license plate, registration and safety sticker if required by each respective county.

(b) Any vehicle or property left unattended within a forest reserve for longer than forty-eight hours without prior written permission from the board or its authorized representative shall be considered abandoned. Any abandoned vehicle or property may be impounded or towed away by the board or its authorized representative at the expense of the owner. [Eff. **OCT 15 1993**] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-12 Animals. (a) Dogs, cats, and other animals are prohibited within a forest reserve unless crated, caged, or on a leash, at all times except for hunting dogs when permitted by chapters 122 and 123, Administrative Rules.

(b) All dogs used for hunting shall be crated, caged, or leashed or otherwise under restrictive control during transportation while in transit at all times, to and from hunting areas within the forest reserve.

(c) Dogs, cats, or other domestic animals, observed by an authorized representative of the board to be running at large or in the act of killing, injuring, or molesting humans, wildlife,

or property, may be disposed of in the interest of public safety and the protection of the forest reserve. [Eff. OCT 15 1993]
(Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-13 Audio devices and noise. Creating noise or sound within a forest reserve, either vocally or otherwise (i.e. public address systems, radios, television sets, musical instruments) or use of any noise producing devices (i.e. electric generating plants or other equipment driven by motors or engines) in a manner and at times which creates a nuisance is prohibited. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-14 Explosives. The use or possession of fireworks, firecrackers, or explosive devices within a forest reserve is prohibited. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-15 Disorderly conduct. Disorderly conduct, as defined in section 711-1101, Hawaii Revised Statutes, is prohibited within a forest reserve. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS SS183-2, 711-1101)

S13-104-16 Residence on forest reserve lands. Residing within a forest reserve is prohibited except with written permission from the board. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-17 Compliance with laws. All persons entering the boundaries of a forest reserve shall comply with all federal, state, and county laws, ordinances, and rules. [Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

Subchapter 3 Permits

S13-104-18 General provisions for permits. (a) The board or its authorized representative may issue the following types of permits:

- (1) Camping;
- (2) Special use;
- (3) Collecting;
- (4) Commercial harvest; and
- (5) Access.

(b) All permits are subject to the following provisions:

- (1) Permits are subject to denial, cancellation, or termination at any time by the board or its authorized

representative upon violation of these rules or any conditions of the permit or any federal, state, or county statutes, ordinances, and rules or for danger to the public or because of natural causes.

- (2) Permits shall not be transferable.
- (3) Persons or organizations to whom permits are issued shall be held responsible for all conditions stipulated on the permit.
- (4) All persons eighteen years of age or older shall be eligible to secure a permit and all minors shall be allowed use of the premises provided that they are under the direct supervision of one adult for every ten minors.
- (5) The size of groups as well as the length of time any permit may be in effect may be limited by the board or its authorized representative.
- (6) The board or its authorized representative may require the permittee, at the permittee's own cost, to provide police protection in the interest of the public safety and welfare and for the protection of property when the number of persons using the forest reserve is one hundred or more.
- (7) Fees and charges as set by the board may be assessed when permits are granted for the exclusive use of areas or facilities, or when charges are necessary to defray the cost of special facilities, services, or supplies provided by the State, or as otherwise determined by the board or its authorized representative when necessary to carry out the provisions of chapter 183, Hawaii Revised Statutes. Charges may be waived by the board or its authorized representative if the waiver is in the public interest.
- (8) All permittees shall, upon request, show the permit to any law enforcement officer, the board, or its authorized representative. [Eff. **OCT 15 1993**]
(Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-19 Camping permits. (a) All persons, groups, organizations, or associations wishing to camp within a forest reserve shall obtain a camping permit authorizing the use of the specific area and facilities for camping purposes.

(b) Camping permits shall be obtained from the district offices of the division during regular working hours of the department.

(c) Persons applying for a permit shall provide, if requested, identification for all persons included on a permit, satisfactory to the board or its authorized representative.

(d) Each permit will reserve the use of a designated area for the stated date or dates of use. Camping is permitted only in designated areas or sites.

(e) No person, group, organization, or association shall remain at any one specific camping site for longer than seven days; provided that the board or its authorized representative

may extend the length of stay for good cause; provided further that the length of stay (including the extension as well as the permitted stay) shall not exceed fourteen days.

(f) After the expiration of a permit, a period of thirty days shall pass before another permit may be issued to the same person for the same designated area. This restriction shall apply to all persons named on the expired permit. The board or its authorized representative may waive a portion of the thirty day period for good cause.

(g) Permits may be denied, canceled, or terminated for the following reasons:

- (1) When the size of the group exceeds the capacity of the existing site or facilities;
- (2) When there are inadequate facilities to meet the immediate needs of the camper or campers;
- (3) When repairs or improvements are being made at the campsite; or
- (4) When a state of emergency is declared by the board or its authorized representative [Eff. **OCT 15 1993**]
(Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-20 Special use permits. (a) Special uses are permitted within a forest reserve only by a permit issued by the board or its authorized representative. Special uses are all types of uses other than those provided for herein and which are considered compatible with the functions and purposes of each individual area, facility, or unit within a forest reserve. Special uses include but are not limited to activities such as meetings, weddings, concerts, shows, and other community events or activities and scientific collection of plants and animals.

(b) Applications for special use permits shall be received by the board or its authorized representative at least fifteen working days in advance of the date the permit is to be in effect, unless otherwise received and accepted by the board or its authorized representative.

(c) A request for a special use permit shall be considered on its own merits including its effect on the premises, facilities, and the public's use and enjoyment of the forest reserve. [Eff. **OCT 15 1993**] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-21 Collecting permits. (a) Persons wishing to collect forest items (e.g. ti leaves, bamboo) for personal use and at no charge shall obtain a collecting permit authorizing the collection in a specific area.

(b) Collecting permits shall be obtained from the district offices of the division during regular working hours of the department.

(c) Persons applying for a permit shall provide, their names and addresses and shall produce if requested, identification of all persons named on a permit, satisfactory to the board or its authorized representative.

- (d) Collecting permits shall specify:
 - (1) The date or dates of collection;
 - (2) The quantities and items to be collected;
 - (3) The areas of collection; and
 - (4) Any other terms and conditions deemed necessary by the board or its authorized representative.
- (e) Permits shall not be issued for collecting items for sale.
- (f) No permits shall be issued for the collection of endangered or threatened wildlife or plants except as provided by chapter 124, Administrative Rules. [Eff. OCT 15 1993]
(Auth: HRS S183-2) (Imp: HRS S183-2).

S13-104-22 Commercial harvest permits. (a) The board or its authorized representative may issue permits for the purpose of purchasing, harvesting, and removing forest products (e.g. timber, seedlings, greenery, tree fern, cinder, and lava rock).

- (b) Permits shall be obtained from the district offices of the division during regular working hours of the department.
- (c) Each application for a harvest permit shall be considered on its own merits including its effect on the premises and the public's use and enjoyment of the forest reserve.
- (d) Permits will not be issued for harvesting material for direct resale.
- (e) The value of the raw material to be harvested shall not exceed \$1,000. The quantity to be harvested shall be decided by the board or its authorized representative.
- (f) The time of entry for harvesting shall not exceed 14 days, except that the board or its authorized representative may extend this time for good cause.
- (g) No more than one permit within a thirty day period or three permits within a calendar year may be issued to the same person, group, organization, or association for harvesting the same product.
- (h) Each permit shall specify:
 - (1) The products to be harvested;
 - (2) The amount to be harvested;
 - (3) The dollar value of the products;
 - (4) The designated area to be harvested
 - (5) The date or dates the harvesting may take place; and
 - (6) Any other terms or conditions deemed necessary by the board or its authorized representative.

[Eff. OCT 15 1993] (Auth: HRS S183-2) (Imp: HRS S183-2)

S13-104-23 Access permits. (a) Permits for access to or entry into forest reserves may be required by the board or its authorized representative for the following purpose:

- (1) To comply with the requirements of private landowners or lessees who permit access to forest reserves through their land;
- (2) To control the number of people using a forest reserve

or an area within a forest reserve in order to minimize the impact upon environmentally sensitive area;

- (3) To control the types of uses of a forest reserve or an area within a forest reserve in order to minimize the dangers of incompatible uses in the same area (e.g. horseback riding and motorcycle riding); and
- (4) To control periods of use of a forest reserve, especially during periods when fire danger levels are high.
- (5) To collect plants or animals for scientific purposes.
- (b) Access permits shall be obtained from the district

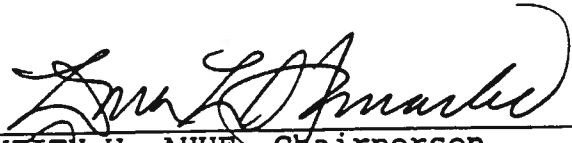
offices of the division during regular working hours of the department.

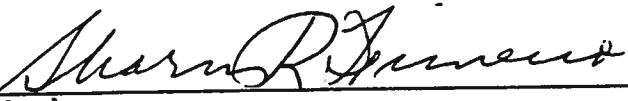
(c) Persons applying for an access permit shall provide their names and addresses and shall produce identification satisfactory to the board or its authorized representative. The board or its authorized representative may require the names, addresses, and telephone numbers of all persons included on a permit. [Eff. **OCT 15 1993**] (Auth: HRS S183-2) (Imp: HRS S183-2)

DEPARTMENT OF LAND AND NATURAL RESOURCES

Revisions to Chapter 104, Hawaii Administrative Rules, was adopted on July 23, 1993, following public hearings held at Honolulu, Oahu on November 13, 1992; Kaunakakai, Molokai on November 16, 1992; Kahului, Maui on November 17, 1992; Hilo, Hawaii on November 18, 1992; Captain Cook, Hawaii on November 19, 1992; and Lihue, Kauai on November 23, 1992 after public notice was given in the Honolulu Advertiser on October 5, 1992 and the Hawaii Tribune Herald, Maui News and the Garden Island Newspaper on October 7, 1992.

The revision of Chapter 104, Rules Regulating Activities Within Forest Reserves shall take effect ten days after filing with the Office of the Lieutenant Governor.


KEITH W. AHUE, Chairperson
Board of Land and Natural Resources


Member
Board of Land and Natural Resources

APPROVED:


JOHN WAIHEE
Governor, State of Hawaii

Dated: OCT 05 1993

APPROVED AS TO FORM:


Deputy Attorney General

OCT 05 1993

Filed

OCT 5 1 00 PM '93
LIEUTENANT GOVERNOR
OFFICE

[CHAPTER 520 LANDOWNERS LIABILITY]

SECTION

- 520-1 PURPOSE
- 520-2 DEFINITIONS
- 520-3 DUTY OF CARE OF OWNER LIMITED
- 520-4 LIABILITY OF OWNER LIMITED
- 520-5 EXCEPTIONS TO LIMITATIONS
- 520-6 PERSONS USING LAND
- 520-7 RIGHTS
- 520-8 RULES AND REGULATIONS

[§520-1] Purpose. The purpose of this chapter is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes. [L 1969, c 186, §1]

Case Notes

Cited. 557 F.2d 1308.

[§520-2] Definitions. As used in this chapter:

- (1) "Land" means land, roads, water, water courses, private ways and buildings, structures, and machinery or equipment when attached to realty, other than lands owned by the government.
- (2) "Owner" means the possessor of a fee interest, a tenant, lessee, occupant, or person in control of the premises.
- (3) "Recreational purpose" includes, but is not limited to, any of the following, or any combination thereof: hunting, fishing, swimming, boating, camping, picnicking, hiking, pleasure driving, nature study, water skiing, winter sports, and viewing or enjoying historical, archaeological, scenic, or scientific sites.
- (4) "Charge" means the admission price or fee asked in return for invitation or permission to enter or go upon the land.
- (5) "House guest" means any person specifically invited by the owner or a member of the owner's household to visit at the owner's home whether for dinner, or to a party, for conversation or any other similar purposes including for recreation, and include playmates of the owner's minor children. [L 1969, c 186, §2; am imp L 1984, c 90, §1]

[§520-3] Duty of care of owner limited. Except as specifically recognized by or provided in section 520-6, an owner of land owes no duty of care to keep the premises safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises to persons entering for such purposes. [L 1969, c 186, §3]

Case Notes

Section renders United States not liable under Federal Tort Claims Act. 723 F.2d 705.

Hawaii Legal Reporter Citations

No duty. 79 HLR 79-0809; 80-1 HLR 800137.

[§520-4] Liability of owner limited. Except as specifically recognized by or provided in section 520-6, an owner of land who either directly or indirectly invites or permits without charge any person to use such property for recreational purposes does not thereby:

- (1) Extend any assurance that the premises are safe for any purpose.
- (2) Confer upon such person the legal status of an invitee or licensee to whom a duty of care is owed.
- (3) Assume responsibility for or incur liability for any injury to person or property caused by an act of omission or commission of such persons. [L 1969, c 186, §4]

[§520-5] Exceptions to limitations. Nothing in this chapter limits in any way any liability which otherwise exists:

- (1) For wilful or malicious failure to guard or warn against a dangerous condition, use, or structure which the owner knowingly creates or perpetuates and for wilful or malicious failure to guard or warn against a dangerous activity which the owner knowingly pursues or perpetuates.
- (2) For injury suffered in any case where the owner of land charges the person or persons who enter or go on the land for the recreational use thereof, except that in the case of land leased to the State or a political subdivision thereof, any consideration received by the owner for such lease shall not be deemed a charge within the meaning of this section.
- (3) For injuries suffered by a house guest while on the owner's premises, even though the injuries were incurred by the house guest while engaged in one or more of the activities designated in section 520-2(3). [L 1969, c 186, §5]

[§520-6] Persons using land. Nothing in this chapter shall be construed to:

- (1) Create a duty of care or ground of liability for injury to persons or property.
- (2) Relieve any person using the land of another for recreational purposes from any obligation which the person may have in the absence of this chapter to exercise care in the person's use of such land and in the person's activities thereon, or from the legal consequences of failure to employ such care. [L 1969, c 186, §6; am imp L 1984, c 90, §1]

[§520-7] Rights. No person shall gain any rights to any land by prescription or otherwise, as a result of any usage thereof for recreational purposes as provided in this chapter. [L 1969, c 186, §7]

Hawaii Legal Reporter Citations

Public prescriptive rights not barred. 80-2 HLR 800829.

[§520-8] Rules and regulations. The department of land and natural resources shall make rules and regulations pursuant to chapter 91, as it deems necessary to carry out the purpose of this chapter. [L 1969, c 186, §8]

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