Appendix A

Community-Based Master Land Use Plan for Molokai Ranch

COMMUNITY-BASED MASTER LAND USE PLAN FOR MOLOKA'I RANCH

FINAL

By:
LAND USE COMMITTEE
MOLOKA'I ENTERPRISE COMMUNITY

Compiled By:
TOWNSCAPE, INC.

NOVEMBER 14, 2005

COMMUNITY-BASED MASTER LAND USE PLAN FOR MOLOKA'I RANCH

FINAL

By:
LAND USE COMMITTEE
MOLOKA'I ENTERPRISE COMMUNITY

Compiled By:
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NOVEMBER 10, 2005

Acknowledgements

In a rare display of community initiative, this Community Plan is the result of countless community meetings, long hours of impassioned debate, critical thinking and soul searching. Numerous individuals who, in loving dedication to Molokaʻi-nui-a-Hina, have contributed their time and energy over the course of two years to complete the Community-Based Master Land Use Plan for Molokaʻi Ranch.

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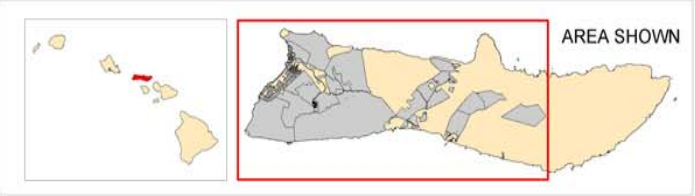
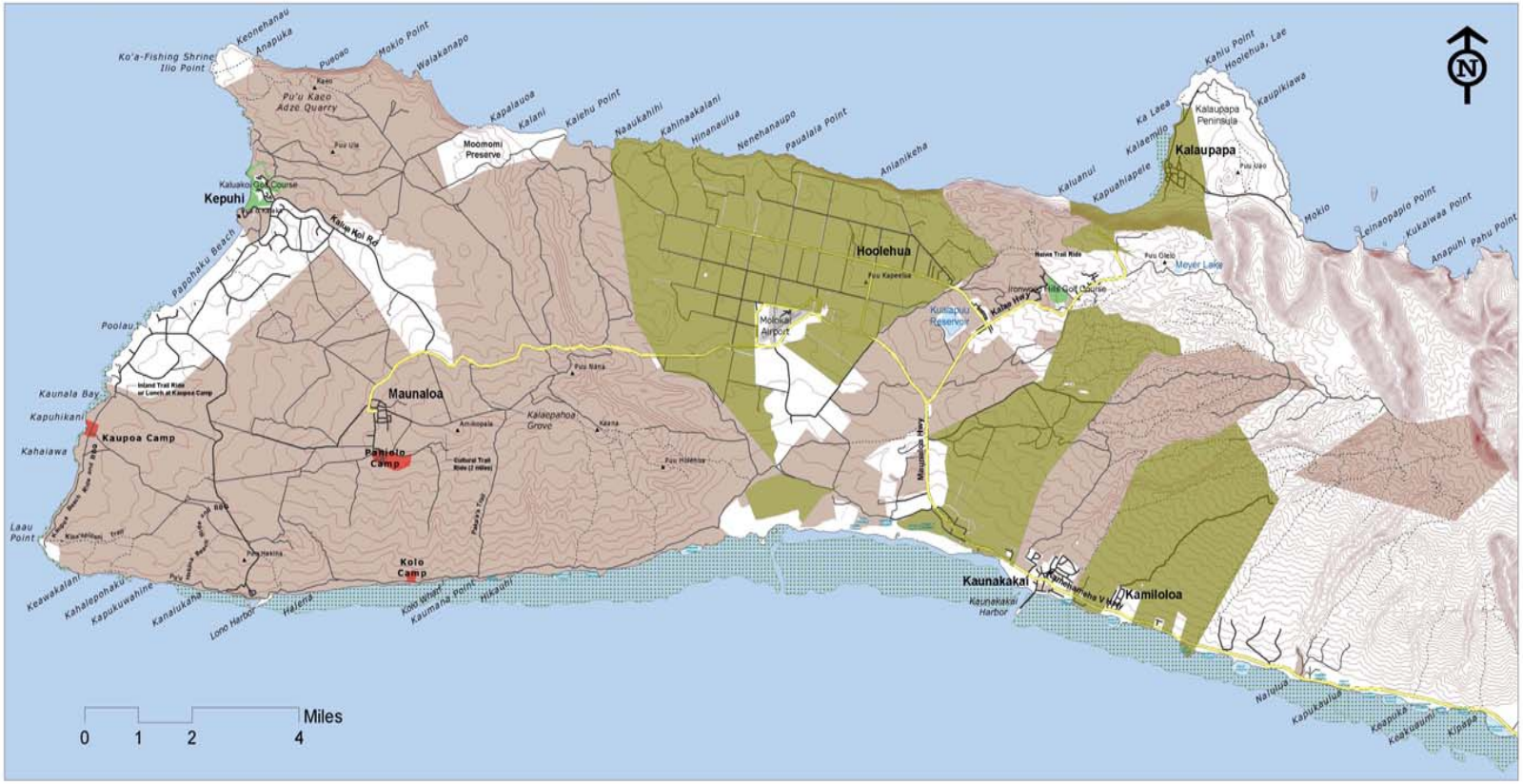
MOLOKA'I RANCH LANDS: BASE MAP





Molokai Ranch Property
DHHL Land
Coral Reef
Camp
Golf Course
Major Road
Secondary Road
Minor Road
4WD Road
Trail

Prepared by: The Conservation Fund
October 21, 2005

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1 EXECUTIVE SUMMARY

1.1 ORIGIN

A vision for the future protection of the land's precious resources, a desire to create a sustainable economy for the community and a strong sense of cultural heritage, were the principal focus of community representatives and Molokaʻi Properties Limited (MPL) when they began discussing a Community-Based Master Land Use Plan for Molokaʻi Ranch in January 2004.

What began almost a year earlier as discussions on the re-opening of the Kaluakoʻi Hotel led to a desire by MPL and The Moloka'i Enterprise Community, Ke Aupuni Lōkahi (KAL) to create a Plan for MPL's 65,000 acres that would truly be visionary and reflect the wishes of the community.

KAL was formed in 1998, developing a 10-year strategic plan to stimulate the island's economy. Today the KAL has more than 50 projects.

MPL, the largest landowner on the island, had through its decade of ownership by BIL International Limited, isolated itself from the community through a lack of consultation about its future plans.

It was the willingness of these two organizations to come together as equal partners in a planning process which involved representatives of the community that led to the Plan contained within this document.

But the results of the Plan mean more than what is contained on these pages.

The results mean a coming together of the community and a reconciliation of families that had been separated by controversy for more than a decade; a partnership between a company and its island neighbors, and personal growth for all involved.

The planning process was formally launched in August 2003 as a KAL project under Project #47: Community-Based Compatible Development.

In February 2004, the MPL Community-based Master Land Use Plan for Molokaʻi Ranch was included as part of the project.

1.2 GOALS

The goal of the project and the plan was to create new employment and training opportunities for Moloka'i residents and to provide the Moloka'i community with

certainty about their future. Its objectives are:

- Develop sustainable economic activities that are compatible with Molokaʻi and the vision of the Molokaʻi Enterprise Community.
- Secure the role of the community in the management of MPL's 65,000 acres.
- Re-open the Kaluakoʻi Hotel and create 100 plus jobs.
- Protect cultural complexes and sites of historic significance on MPL lands.
- Protect environmentally valuable natural resources and agricultural land, pasture and open space.
- Create a land trust with donated lands from MPL.

The Master Land Use Plan provides a framework by which the agreed upon principles serve to guide future land use and management activities for the MPL and Molokaʻi Land Trust lands.

1.3 PROCESS

From March 2004 through May 2004, five committees: Environment, Cultural, Economics, Tourism, and Recreation met for 100 days with a total of 1,000 participants to develop the plan.

The meetings were announced, open to the public, and most of the meetings were aired on the Akaku Channel 53. The Conservation Fund was hired by MPL to plan the process, produce maps, and to guide the formation of a land trust to manage lands that MPL would gift to the Molokaʻi community.

KAL and MPL presented the draft plan to various community organizations and the general public to receive their input. During this time, a Land Use Committee finalized the guidelines for policies and principles for land management, except for the segments on the development at Lāʻau Point and Water Use.

In October 2004, the Alternative to Lāʻau Development Committee (ALDC) was formed to look at alternatives to the proposed development at Lāʻau Point.

On August 1, 2005, the Lāʻau Point and Water Use segments of this plan were adopted by the Land Use Committee.

Final approval of the draft CB Master Land Use plan by the KAL is scheduled for early November. The ALDC report will be considered at the same time.

1.4 VISION STATEMENT

Molokaʻi is the last Hawaiian Island. We who live here choose not to be strangers in our land. The values of ***aloha ʻāina*** *and* ***mālama ʻāina*** *(love and care for the land) guide our stewardship of Molokaʻi's natural resources, which*

nourish our families both physically and spiritually.

*We live by our **kupuna's** (elders') historic legacy of **pule oʻo** (powerful prayer). We honor our island's Hawaiian cultural heritage, no matter what our ethnicity, and that culture is practiced in our everyday lives. Our true wealth is measured by the extent of our generosity.*

*We envision strong **ʻohana** (families) who steadfastly preserve, protect and perpetuate these core Hawaiian values.*

We envision a wise and caring community that takes pride in its resourcefulness, self-sufficiency and resiliency, and is firmly in charge of Molokaʻi's resources and destiny.

*We envision a Molokaʻi that leaves for its children a visible legacy: an island **momona** (abundant) with natural and cultural resources, people who **kōkua** (help) and look after one another, and a community that strives to build an even better future on the **paʻa** (firm) foundation left to us by those whose **iwi** (bones) guard our land.*

1.5 RESOURCE ASSESSMENT

MPL owns approximately 65,000 acres on the island of Molokaʻi. The bulk of these land holdings are located on the west end of the island. There are also three tracts of land located in the central portion of Molokaʻi.

The MPL properties contain a vast array of cultural and archaeological, subsistence, environmental (both terrestrial and aquatic), agricultural, recreational, and economic-based resources.

In order to develop the plan, committees were established to collect and interpret the information necessary to formulate the plan.

Sub-Committee members identified and assessed various resources including terrestrial and aquatic environments, agricultural use areas, physical infrastructure, residential and commercial areas, cultural and archaeological sites and subsistence areas. Various documents and maps were gathered and rendered as follows:

Agriculture: Soil suitability; agricultural lands of importance; current agricultural uses.

Archaeological: Site inventories (west end Molokaʻi) and Lāʻau.

Residential and Commercial: Maunaloa, Kualapuʻu and Kaunakakai towns.

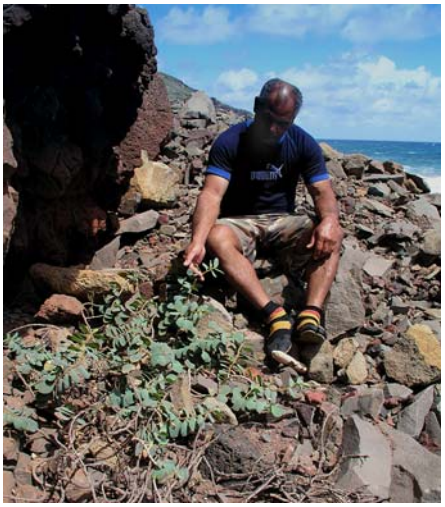
Hunting: Identification of bow and rifle and no hunting safety areas.

Natural Resources:

- Terrestrial: Native dominated landscapes including coastal, lowland and montane, and wet cliff areas;

vertebrate and invertebrate rare species; and non-native plant landscapes.

- Aquatic: Ancient fishponds, wetlands including tidal (marine/coral reef and estaurine areas) and non-tidal, erosion areas, and critical watersheds for reef



protection.

Industrial: Existing Moloka'i Industrial Park.

Recreation: Hiking and bike trails, horse trails, State trails, surfing areas, visible viewsheds, golf courses, and historic Monsarrat trail.

Subsistence Fishing: Ancient fishponds, camp sites, and fishing zones.

1.6 PRECEDENTS

This Plan creates a number of unique precedents:

1.6.1 Community Planning

A Land Use Plan that was initiated, designed and will be implemented by the community of Moloka'i. It is the result of a two-year planning process involving every member of the community who wished to participate.

1.6.2 Land Trust

A total of 26,200 acres or 40% of Moloka'i Ranch lands is donated to a Moloka'i Land Trust that has the unique mission of:

- Protecting historic cultural archeological sites.
- Preserving the precious natural and environmental resources.
- Enhancing indigenous rights through the protection of subsistence gathering.

1.6.3 Easements

A further 24,950 acres (38% of the property) are placed under new Land Trust protective easements, of which:

- 14,390 acres will be protected forever for agriculture use.
- 10,560 acres will remain open space.

1.6.4 Protection from Development

The combination of the donated land, existing and new easements protect more than 85% or 55,000 acres of the property from development.

1.6.5 Subsistence

The recognition of Native Hawaiian subsistence rights, and protecting for the

community, the hunting and fishing resources of the island, by:

- Seeking to establish a subsistence fishing zone from the coast to the outer edge of the reef or where there is no reef, out a quarter mile from the shoreline along the 40 mile perimeter of the property.
- Ending commercial hunting, and allowing only the community to hunt on the property.
- Ensuring access to the shoreline will be available only by foot.

1.6.6 Community Expansion

Only Moloka'i residents will decide future expansion of existing communities in the areas with a total of 200 acres around Kualapu'u and Maunaloa to be made available for community housing, and in the 1,100 acres above Kaunakakai to be donated to the Moloka'i Land Trust for community expansion.

1.6.7 Jobs for the Community

The Kaluako'i Hotel will be re-opened for visitor accommodation creating more than 100 permanent jobs for the local community. By outsourcing various hotel functions such as laundry, gift shop, beach shack and spa, and by committing to use local produce, small business opportunities will be created for the community.

1.6.8 Development

Integral to the development of a 200-lot subdivision at Lā'au Point, the community has ensured it will:

- Be restricted to 500 acres
- Through protective easements to the Land Trust, protect more than 1,000 acres of beachfront, archeological sites and environmental areas, giving the community an important voice in the future of this area.
- Protect the shoreline for subsistence gathering by only allowing foot access for the community.
- Ensure covenants will limit water use, minimize disturbance to the landscape, prevent pollution of the ocean through pesticides and minimize the visual impact of buildings.
- Be the subject of a land use boundary change from agriculture to rural through the Land Use Commission.
- Allow community input.

1.6.9 Land Trust Funding

The community will share in the development returns of the Lā'au Point subdivision by a fee paid to a community entity with every sale transaction, including subsequent re-sales.

Existing communications rents on Land Trust lands of approximately $250,000 will be assigned to the Land Trust for operating funds.

1.6.10 Water

This Plan guarantees the community that there will be no increase in drinking water currently supplied to the west end of the island, and that excess drinking water capacity from Moloka'i Properties Limited's Well 17 will be made available for the use of the community.

1.7 LAND USE PLAN SUMMARY

The Community-Based Master Land Use Plan establishes five **Land Use Districts:** Cultural, Natural Resources, Rural Landscape Reserve, Agricultural, and Development. These Districts define the primary functions for the 65,000 acres of land under consideration in this Plan. See Proposed Land Trust and Land Use Districts Map on page 9.

In an effort to include all uses and activities for these lands, **Overlay Zones** indicate distinct yet complementary uses within the overall district.

The Districts and Overlays serve a key function of this Master Land Use Plan, namely, **land use activities or management strategies must conform to the requirements of the District or the overlay zone.**

The Plan also proposes new **Ownership and Management** for the 65,000 acres. Significantly, eighty-five percent (85%) of the lands will either be protected by the Moloka'i Land Trust or will constitute part of a new conservation or agricultural easement in perpetuity. The easement lands will remain in MPL ownership. See Ownership Map on page 11.

Ownership

Moloka'i Land Trust:	26,200 acres
Conservation/Easements:	24,950 acres
Existing Easements:	4,040 acres
Other MPL Lands:	9,810 acres
Total	**65,000 acres**

1.7.1 Land Use Districts

Cultural: The Cultural District is to protect the historic and cultural sites and resources for current and future spiritual, cultural, and subsistence uses.

Natural Resource: The purpose of this district is to support the protection and restoration of significant natural ecological/biological resources, i.e., sensitive ecosystems, indigenous and endemic species, watersheds, and wildlife habitat, particularly where they have been degraded, but still remain relatively intact.

Rural Landscape Reserve: The principle purpose of this district is the maintenance of the rural landscape – to preserve the traditional Moloka'i character and to provide scenic viewsheds and open space buffers.

Agricultural: The purpose of this district is to perpetuate the traditional base of Moloka'i's economy in agriculture. This district includes lands where commercial agriculture and aquaculture

operations are encouraged. These areas are suitable for agriculture and aquaculture cultivation that will not result in degradation of the natural landscapes.

Development: This category applies to areas targeted by MPL for the purpose of revenue-generating development. MPL should work with the community to ensure that development projects are suitable and sensitive to their surroundings, preserve significant ecological and cultural resources, and provide economic benefit to the Molokaʻi community.

1.7.2 Overlay Zones

Hunting: Hunting areas, almost 40,000 acres, will be used for allowable types of community hunting including bird, bow, and rifle. Hunting areas near towns will maintain buffer zones as an added measure of safety.

Subsistence Fishing: This zone encompasses areas from the coast to the outer edge of the reef or where there is no reef, out a quarter mile from the shoreline or to the outer edge of the reef along a 40 mile perimeter of the property including the partnership lands. Areas not under MPL ownership will require collaborative management by other landowners at: Lāʻau Point, Pāpōhaku Beach, ʻĪlio Point, the area between Kapālauoʻa and Kaiehu Point, and the area between Moʻomomi and Nāʻiwa.

Trails (Historic and Recreation): This overlay documents the access routes and existing trails, leaving the decisions regarding use to the land-owner(s). Use of trails should be consistent with the land district or applicable overlays in which they are located and Native Hawaiian rights.

Natural Resource: This overlay supports the sensitive ecological resources that are in need of management, i.e., areas prone to erosion and in need of watershed management. It also protects important ecological areas that support rare species, native ecosystems, and/or coastal habitats.

Cultural: The purpose of this overlay is to identify areas with significant cultural resources regardless of the land use district in which they are found.

1.7.3 Ownership and Management

MPL Lands: Approximately 9,810 acres is retained by MPL for community

expansion, resort, golf course, and residential shoreline development.

- Community Expansion: Future growth of townships in Maunaloa, Kaunakakai, and Kualapuʻu.

- Resort and Golf Course: Retain existing establishments, including refurbishment of the Kaluakoʻi Hotel and existing Golf Course and future development of a 250-acre golf course in place of the current Maunaloa Golf Course shown in the Molokaʻi Community Plan.

- Lāʻau Point Development: Development of a 200-lot subdivision at Lāʻau Point.

Molokaʻi Trust Lands: The Land Trust, approximately 26,200 acres, contains the following features.

- Cultural sites at Kawela Plantation (34.895 acres) and Kaiaka Rock.

- Lands mauka of Kaunakakai for community expansion (1,160 acres).

- The Makahiki Grounds mauka of Kualapuʻu, through to Nāʻiwa.

- A large strip of land from Kawakanui beach, north to ʻĪlio Point, extending to Hoʻolehua and down to Pālāʻau until Hale O Lono Harbor, including the Kāʻana area.

- The fishing village site, 15 acres, adjacent to the north boundary of Kaupoa Camp.

Lands Owned by MPL with Easements to the Molokaʻi Land Trust: The MLT would enforce the use of the specified 24,950 acres for Agricultural and Rural Reserves.

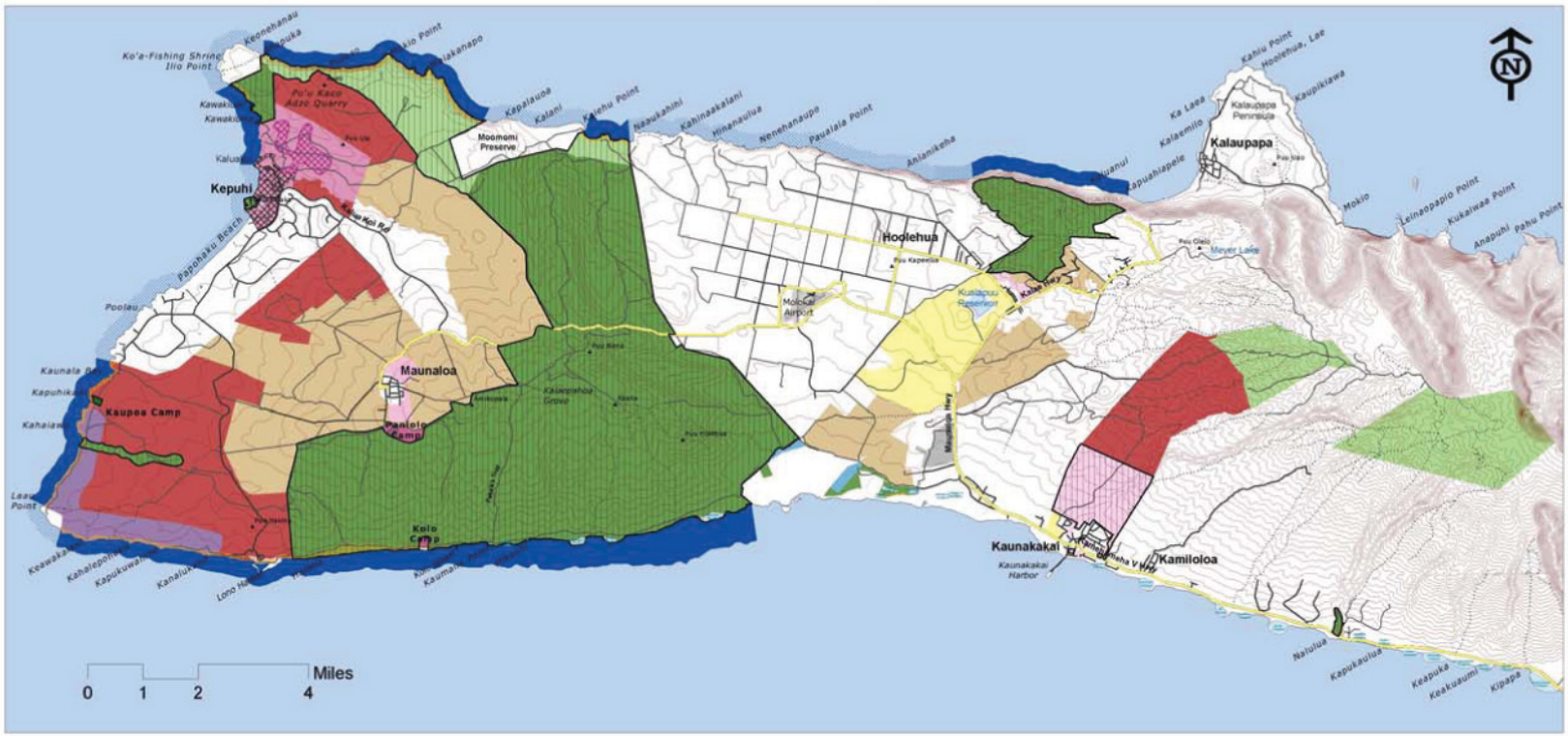
- The Molokaʻi Land Trust would hold easements over the Agricultural Reserve and Rural Reserve Lands, while MPL would retain the title.

- The easement provides permanent dedication of lands for specific uses that are registered on the land title deed.

Lands Owned by MPL with Easements to Other Entities: Contains approximately 4,040 acres, which consists of lands owned by MPL, but protected by existing conservation easements.

- These areas are known as the Preserves, i.e. the Molokaʻi Forest Reserve and the Kamakou Preserve.

MOLOKA'I RANCH MASTER USE PLAN
PROPOSED LAND TRUST & LAND USE DISTRICTS



Potential Land Trust Property (26,400 acres)
Subsistence Fishing Zone
Partnership Subsistence Fishing Zone
Coastal Conservation District (State)
Alternate Golf Course at Kaluakoi
Current Development at Kaluakoi

Major Road
Secondary Road
Minor Road
4WD Road
Trail

LAND USE DISTRICTS
CULTURAL RESOURCE
NATURAL RESOURCE
RURAL LANDSCAPE RESERVE

AGRICULTURE
Hi-Value or Intensive
Aquaculture
Other/Extensive

DEVELOPMENT
Resort
Residential Shoreline
Community Expansion
Industrial

Prepared by:
The Conservation Fund
October 7, 2005

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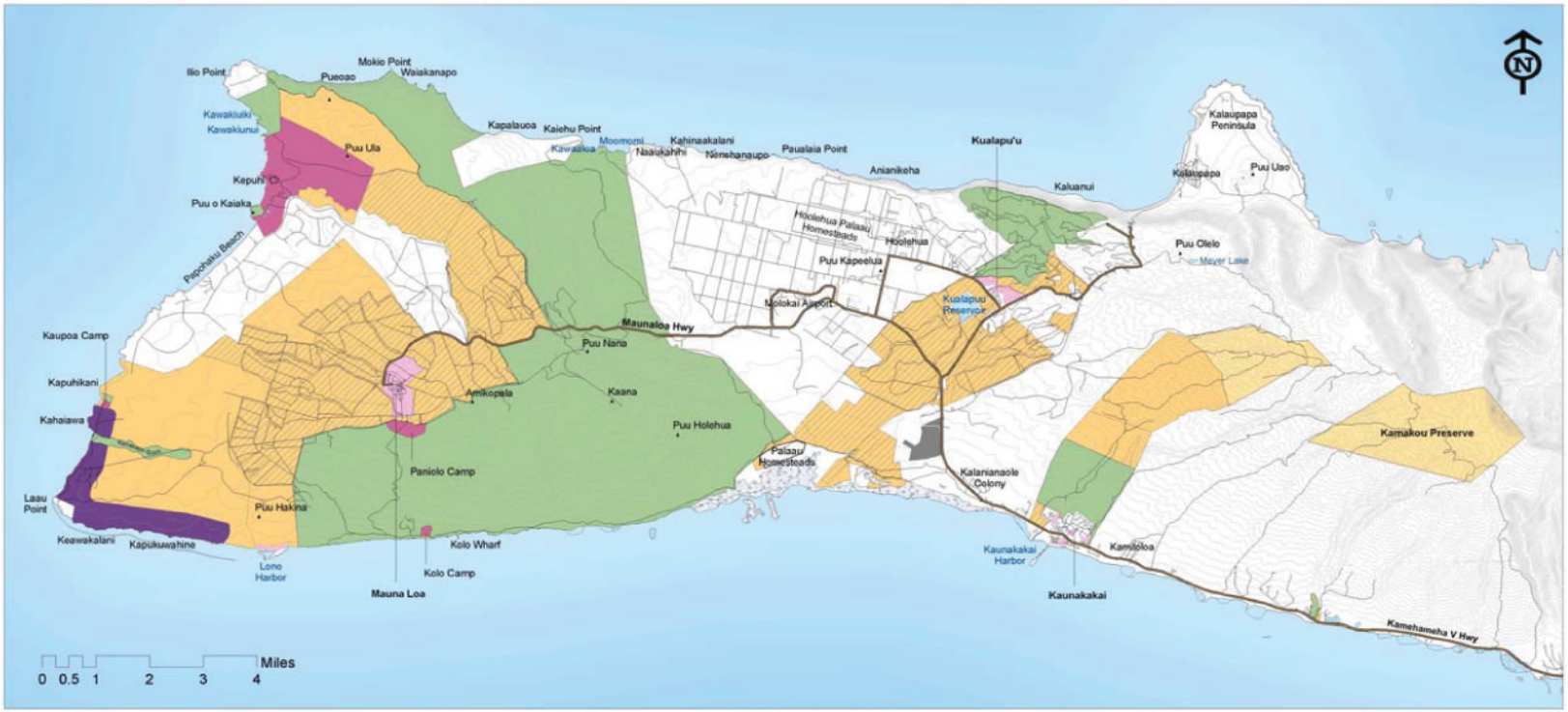
MOLOKA'I RANCH MASTER USE PLAN
PROPOPOSED OWNERSHIP AND MANAGEMENT



POTENTIAL FUTURE OWNERSHIP AND MANAGEMENT FOR MOLOKAI RANCH PROPERTY

Proposed Development Districts
(Ownership and Management Retained by MPL)
- Resort
- Residential Shoreline
- Community Expansion
- Industrial

- Proposed Transfer of Ownership to Community Land Trust (26,400 acres)
- MPL-Owned Lands to be Protected by Future Easement (24,950 acres)
- Agricultural Lands (14,400 acres)
- Protected by Existing Conservation Easement (4,040 acres)

Map Prepared By:
The Conservation Fund
October 5, 2005

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1.8 IMPLEMENTATION

In order for the Master Land Use Plan to be implemented, other actions will be required. This section outlines what additional requirements are needed to implement the Plan. A schematic of what is needed and the input from the various parties is presented at the end of this section.

1.8.1 Stakeholder Agreement

This agreement will be between the Ke Aupuni Lōkahi Molokaʻi representing the community, and Molokaʻi Properties Limited. It will cover all aspects of the Plan and provide for a transition to a Molokaʻi Land Trust:

- Donation of lands and easements
- The reopening of the Kaluakoʻi Hotel
- The binding of Native Hawaiian rights on the land titles
- Agreements by the EC to support the regulatory process for entitlements such as the Lāʻau Point development
- The extension of the industrial area
- The community housing expansion areas
- Lāʻau Point development CC&Rs and protection zones

Other issues such as the implementation of the Water Plan will also be covered by agreements in this document.

The timing of implementation of this agreement will be detailed as well.

1.8.2 Molokaʻi Land Trust and A Proposed Community Development Corporation

A community land trust will be formed to own and manage the 26,200 acres that MPL will donate to the Moloka'i community under this plan. The Land Trust will also administer land use policies that permanently protect another 24,950 acres under agricultural and rural landscape reserve easements.

The mission statement, goals, and objectives of the Molokaʻi Land Trust will be detailed in the Trust's formation document.

A Community Development Corporation has been proposed and is being discussed.

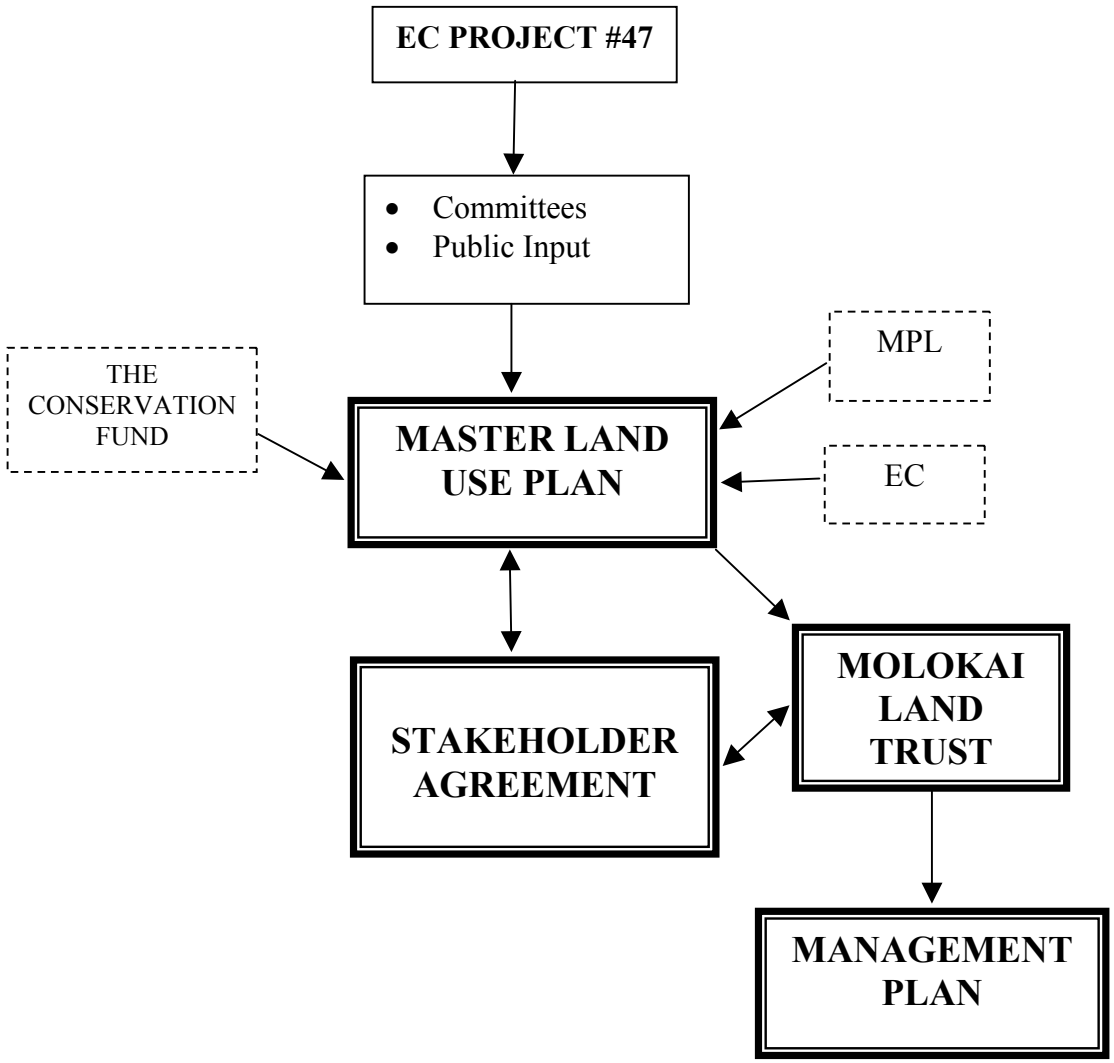
Any relationship issues between MPL and the Land Trust or a proposed Community Development Corporation will be spelled

out and agreed to in the aforementioned document.

1.8.3 Management Plan

This document, which outlines how the Land Trust will manage its assets for the benefit of the community, an essential element in retention of its 501c3 status, will be prepared by the Moloka'i Land Trust immediately after its formation. It will undertake a community input process and rely heavily on the work of the various committees and the Land Use Committee established under Project #47: Community-Based Master Planning Process for Moloka'i Ranch.

SCHEMATIC OF PROCESS



2 INTRODUCTION

MPL currently owns approximately 65,000 acres, which encompasses over one-third of the total 166,000 acres of the island of Molokaʻi. Most of the property is located on the west end, but there are also three substantial areas of MPL land in the central part of the island (See Appendix 1, Molokaʻi Ranch Lands).

This section provides a brief historical overview of these lands, the Plan vision, overall goals, and the planning process.

2.1 HISTORY

The island of Molokaʻi has long been characterized by its rural-agricultural base that was first established by the early *kānaka maoli* (original people or Native Hawaiians). One of the earliest settlement dates for Hawaiʻi, 500-600 A.D., established by carbon-14 testing, was found on the Hālawa Valley shoreline along the windward coast of Molokaʻi.

Early inhabitants subsisted on fish, as evidenced by the archaeological sites of stoned fishponds and abundant *koʻa* (fishing shrines). Many ancient *heiau* (temples) sites demonstrate a strong sense of tradition, culture, and spirituality (Molokaʻi Community Plan, 2001).

Like all the Hawaiian Islands, Molokaʻi has a windward side that receives a significant amount of rainfall, and a leeward side that is typically hot and dry. Subsequently, the island has generally had a higher concentration of settlement and agriculture on the more lush east side.

Despite its dry climate, the western end

of Molokaʻi is rich in natural and cultural resources, which attracted people there. The areas on the leeward side with the most resources and use by the kānaka maoli were the coasts and the summit area surrounding Maunaloa.

2.1.1 Western Molokaʻi Coastal Areas

The North, West, and South coasts of western Molokaʻi vary dramatically in their topography, and therefore in their settlement patterns. The North Coast tended to be devoid of permanent settlement due to the sea cliffs and its exposure to strong winds and big north swells.

Moʻomomi is the only exception. Composed mostly of sand dunes and low

coastal vegetation, Moʻomomi was used as a fishing station. Located near this area is the *Kalaina Wāwae* (carved footprints), which are a series of oblong depressions that are said to represent human footprints. These footprints were made as a prophecy of the arrival of the boot-wearing Caucasian. In addition, the sand dunes of Moʻomomi were used for burials (Pāpōhaku Dunes Draft Preservation Plan, 2005).

One *moʻolelo* (legend/history), associated with ʻĪlio Point, the northwest corner of the island, is told about a Red Dog. In brief, the shark god of Kainalu had an ancestor whose bones washed ashore on this end of Molokaʻi. The people there gathered the bones and made a shrine. To visit his ancestor on land, the shark god took the form of a red dog. Every fifth year, he trotted to his ancestor's shrine, paid homage, and then slipped into the water. This moʻolelo represents the important Hawaiian values of respect and homage to ancestors.

The West Coast was also exposed to strong winds and big North swells, but protected embayments along it served as safe places for landing canoes and shelter. Residential clusters were concentrated near these bays, generally below the 50-foot elevation in order to access marine resources.

There are also mouths of gulches strewn up and down the West and South Coasts, unlike the North Coast. They served as shelter and had sources of fresh water. There is evidence of habitation near these gulches, and fishing villages in the areas of Pāpōhaku, Kepuhi, and Kawākui Iki.

The West Coast has a very high concentration of cultural sites and its historical uses are well known. Koʻa, were found in abundance along the entire coastline, indicating the rich ocean resources found here. It was possible for the kānaka maoli of Kaluakoʻi to access the coastline due to the *Ke alapupu i Molokaʻi* (the shell road at Molokaʻi), which was constructed by the Maui *aliʻi* (royalty) Kiha-a-Piʻilani. This coastal trail connected the important fishing places. (See Appendix 8, Recreation/Trails Map.)

Pāpōhaku Beach and the area surrounding it are historically significant. North of the beach is Kaiaka Rock. This major outcropping is home to a heiau facing Pāpōhaku Beach, which was used as an observation tower for fishing and scouting purposes.

Just below Kaiaka Rock is a canoe heiau, which is a rare type of shrine. Its existence indicates the importance of this area for canoe launching and landing.

Pāpōhaku Beach still serves as a major canoe access point for the West Coast. In addition to fishing and canoe access, the beach maintains a spiritual use. The dunes along Pāpōhaku Beach served as burial grounds, as did the sandy areas and dunes of Moʻomomi and *Keonelele* (Flying Sands). Keonelele is the sandy, inland area that connects the two coastal

dune systems. Lastly, to the south of Pāpōhaku is Puʻu Koʻai, the area where bodies were prepared for burial.

The name Pāpōhaku, meaning stone wall, comes from the story of a chief from east Molokaʻi who boarded canoes with some of his people and set off around the island. When they reached the southwest coast of Molokaʻi, they met some fishermen who had a large catch of ʻōpelu. They started to eat the ʻōpelu until another group of fishermen came by and told them to stop because it was the season of ʻōpelu kapu. However, since the visiting chief only had a kapu for eating turtle, they continued to eat. The fishermen became angry and attacked the visiting chief and his men.

Overpowered, they were brought before the kahuna. The visiting chief became very ill, and it was decided that a human sacrifice was needed to save the chief from death. One of his men offered himself as a sacrifice and the chief recovered. The kahuna ordered a tree to be planted on the grave of the willing victim. The chief was afraid the waves would wash the sand from the grave, and so ordered his men to build a stone wall in respect and remembrance. Over two hundred feet long when it was created, the wall represented the Hawaiian values of preserving that which is sacred or scarce (kapu of the ʻōpelu) and respect for deeds of unselfishness.

The South Coast generally had calmer waters and shallow reef systems that were not found on the West and North Coasts. The shallow reef area off of Lāʻau Point, called "Penguin Banks," was well known to be a rich fishing area. Along the boulder coastline were habitats for edible mollusks such as ʻopihi, pūpūʻawa, pipipi, and aʻama crab, while the nearshore area had an abundance of algae and edible seaweed such as limu kohu.

Several fishponds were constructed on the eastern portion of the South Coast, along with two important fishing villages, located at Kapukawahine and Kanalukaha. Situated in the upland area of Lāʻau Point are bell stones, which the kānaka maoli would ring to announce to the village of Kanalukaha the arrival of aliʻi by canoe. Also, the area around Hale o Lono has been noted as the fourth extensive burial locality on the west end of the island.

The name Lāʻau Point comes from another moʻolelo involving the shark god of Kainalu. This time, the shark god left his home off of Molokaʻi and traveled to Kauaʻi. Romping in the ocean with the shark god of Kauaʻi, a large floating branch from a hau tree got stuck on the Molokaʻi shark's back. As he swam back towards Molokaʻi, the branch came loose and washed ashore off of the southwest point. The people on the beach saw it float ashore and took the branch to a fertile bit of land and planted it. Their chief, Kuama, said they should call the place *Ka Lae O Ka Lāʻau* (the Point of the Branch). The tree is short and sprawls

close to the ground. The beautiful blossoms were offered by the people of Molokaʻi to their gods (Pāpōhaku Dunes Draft Preservation Plan, 2005).

2.1.2 Maunaloa Summit Region

This summit region extends from Maunaloa town on the west, along the ridge, to Puʻu Nānā on the east; all above 900 feet in elevation. Traditional dryland agriculture thrived in this area with the cooler temperatures that resulted from the elevation and strong winds.

There was also believed to be a native forest of kukui, hala, ʻieʻie, ʻiwa ferns, ginger, and hau, which served to break the winds that today blow unabated across Kaluakoʻi. Crops grown there included sweet potato, dryland taro, sugarcane, and banana.

This area was home to numerous adze quarries and adze manufacturing sites. The adzes were used by the kānaka maoli of Kaluakoʻi and east Molokaʻi. Site surveys have found shop refuse, such as adze chips, and adzes in all stages of finish. Both the adze manufacturing and agricultural areas were intermingled with house sites and rows of stone walls. These archaeological sites indicate significant levels of settlement in the Maunaloa region.

The summit zone, generally thought of as being the most sacred, is also where the head of major gulches are located. This

area is known for its association with gods and *ʻanāʻanā* (sorcery).

Approximately one mile northeast of ʻAmikopala is a hill with an outcropping of rock. The largest of these rocks is the piko stone, where newborns' umbilical cords would be placed. The Maunaloa summit plateau was also the location for games and aliʻi recreation.

One important *wahi pana* (sacred place) on the summit region is Kāʻana. It was revered by many hula practitioners as the birthplace of the hula, or *ka hula piko* (the navel or center of hula). Kapoʻulakīnaʻu lived at Maʻohelaia on Maunaloa, and originated the hula, enlisting the aid of her younger sister Laka to help teach others. She decided to never to leave the mountain, so she remained there in the form of a rock.

West of Kāʻana is Pakaʻa's Trail. It begins near the beach on the west side of Kolo Gulch and runs inland (mauka) for approximately 2 miles to the slopes below ʻAmikopala. The trail is paved

with large stones and has a width of 6 feet. There are chunks of sandstone or coral placed alongside of the trail, at intervals of roughly 20 feet, presumably as guides for using the trail at night. Pakaʻa was the servant of Keawenuiaʻumi, the king of Hawaiʻi (1525). After his enemies conspired against him, Pakaʻa left the island of Hawaiʻi and sailed to the southwest side of Molokaʻi, where he lived in disguise. There he married the daughter of the high chiefs of that section, built several houses and planted fields of crops. Pakaʻa used this trail to go from his home near Kolo Wharf to his sweet potato fields (Summers, 1971).

2.1.3 Formation of Molokaʻi Ranch

Molokaʻi Ranch's beginnings were as a cattle ranch belonging to the High Chief Kapuāiwa who later became Kamehameha V. Bernice Pauahi Bishop, daughter of Paki and Konia, the last descendant of the Kamehameha dynasty, inherited title to these lands from those to whom these lands were given in 1848 at the time of the great Mahele, among them Princess Ruth or Keʻelikolanu. Mrs. Bishop did not inherit the land of Kaluakoʻi on the west end of Molokaʻi, for this had been granted to her husband Charles R. Bishop, in 1875. When American Sugar Company was formed, most of these lands were acquired from her estate and Kaluakoʻi was acquired from Mr. Bishop. Subsequently, small holdings were purchased and sold.

In 1897, Molokaʻi Ranch was formed by a hui (group) of men including Judge Alfred S. Hartwell, Alfred W. Carter, and A.D. McClellan. They had purchased seventy thousand acres of land in fee simple from the Bishop interests. With an additional thirty thousand acres leased from the Government, stock-raising became their principal enterprise.

Early in 1898 the American Sugar Company Limited took over the land (that now belongs to the Molokaʻi Ranch) and leaseholds of large tracts of government land lying between the ranch lands.

American Sugar Company was unsuccessful in its cane sugar cultivation due to saline water in its well, and the company was purchased in 1908 by Charles M. Cooke, son of the early missionary teacher, Amos Starr Cooke. He established the Molokaʻi Ranch, which his son George P. Cooke subsequently managed.

By 1923, the Libby, McNeill and Libby Company had begun raising pineapple in the Maunaloa area on lands leased from Molokaʻi Ranch. They continued operations until selling to the Dole Corporation in 1972. Del Monte, then known as California Packing Corporation, arrived in 1927 and made their headquarters at Kualapuʻu. They soon commenced their large-scale pineapple cultivation, mostly on land leased from Molokaʻi Ranch. Dole ceased its Molokaʻi operations on January 1, 1976. Del Monte phased out its operations in the mid-1980s.

In the early 1970s Molokaʻi Ranch entered into a partnership with Louisiana

Land and Exploration Company for the development of the Kaluakoʻi Resort. It subsequently sold its interest in the undertaking when it was unable to fund the required cash calls. The Ranch later tried diversification into mainland commercial property. After initial success, the cash requirements of these investments led to the eventual sale of Molokaʻi Ranch stock to Brierly Investments, Limited who became its sole stockholder in 1987. At that time, Molokaʻi Ranch consisted of approximately 52,000 acres.

In October 2001, Molokaʻi Ranch re-acquired 6,300 acres on the southwest corner of Molokaʻi then known as the Alpha parcel; in December 2001 Molokaʻi Ranch acquired the land holdings of Kukui (Molokaʻi), Inc. that had acquired the Kaluakoʻi Hotel and the undeveloped lands of the resort area from Kaluakoʻi Corporation.

2.1.4 MPL Lands in Central Molokaʻi

From west to east, the first tract of MPL land begins mauka of the Pālāʻau Homesteads and runs north around Kualapuʻu and the Reservoir, up to and including Nāʻiwa.

Nāʻiwa has numerous cultural sites such as petroglyphs, heiau, caves, and makahiki sites. One site contains large, upright, weathered stones. Several of these stones have figures carved or scratched in them, appearing to represent humans (Summers, 1971).

Another significant site is called *Na Imu Kalua Ua* (the ovens to bake rain) Heiau. It consists of a series of open compartments formed by flat stones placed on edge at right angles to one another. Local tradition says that these stones would catch and retain the large "lumps" of rain that fell in the area. The rain would then be cooked to dissipate it (Summers, 1971).

South of Nāʻiwa, on the south and west slopes of Kualapuʻu hill, there used to be many sweet potato patches, which were defined by rows of stones. One moʻolelo claims that the name of Kualapuʻu used to be *Ka ʻUala Puʻu* (The Sweet Potato Hill) (Summers, 1971).

Further east, the next tract of MPL land begins in the south, around Kaunakakai. From town it continues north up to and including the Molokaʻi Forest Reserve. The old name for Kaunakakai was *Kaunakahakai* (Resting-on-the-beach).

It was a place for canoe landings and for fishing. West of the Kaunakakai wharf is a platform that was part of Kamehameha V's home, Malama. The beach in front of this site was used exclusively by the aliʻi for sun bathing.

To the west of Kaunakakai was once a site used to make salt. Sea water was run into salt pans at high tide, and retained there when the tide ebbed. Lastly, Kaunakakai and the area mauka of it had numerous heiau and petroglyphs (Summers, 1971).

The third area of MPL land in central Molokaʻi is actually composed of two tracts of land from the same ahupuaʻa: Kawela, a 34-acre parcel with cultural significance, and Kamakou Preserve, an ecologically important 2,774-acre parcel. Kawela was the site of famous ancient battles and contains the remains of many fallen warriors. One of the most destructive battles of Kamehameha I was fought here.

Another, earlier battle was fought between Kapiʻiohokalani of Oʻahu and the Molokaʻi chiefs, who were allied with Alapaʻinui of Hawaiʻi. The main archaeological sites at Kawela are petroglyphs and burial mounds. Kamakou Preserve is located mauka of Kawela. Though it has less cultural sites, it continues to be a healthy, native-dominated, montane wet forest ecosystem today.

The island as a whole has gone through numerous population shifts and economic changes. The population began to increase dramatically in the early 1920s, from approximately 1,000 to 4,427 people by 1930. The first change occurred when the Government passed the Hawaiian Homes Commission Act in 1921, resulting in the settlement of Kalamaʻula, Hoʻolehua, Pālāʻau, and Kapaʻakea.

The establishment of two pineapple plantations, Libby, McNeil and Libby (later Dole Pineapple) at Maunaloa in 1923, and California Packing Corporation (Del Monte) in 1927 at Kualapuʻu, further encouraged the gradual population shift west from the more populated eastern areas of the island.

These plantations both closed down during the 1970s and 1980s, leaving the island again dependent on diversified agriculture, primarily vegetable farming, and cattle ranching. In the late 1970s, resort development at the west end of the island at Kaluakoʻi became an influence on the island's economy. The population increased during this period to 6,049. With a very gradual increase since then, the current population remains relatively stable at approximately 7,000 (Molokaʻi Community Plan, 2001).

2.2 VISION STATEMENT

This vision statement projects the long-term future for Molokaʻi, its environment, spirit, culture, and people.

> *Molokaʻi is the last Hawaiian Island. We who live here choose not to be strangers in our land. The values of* ***aloha ʻāina*** *and* ***mālama ʻāina*** *(love and care for the land) guide our stewardship of Molokaʻi's natural*

resources, which nourish our families both physically and spiritually.

*We live by our **kupuna's** (elders') historic legacy of **pule oʻo** (powerful prayer). We honor our island's Hawaiian cultural heritage, no matter what our ethnicity, and that culture is practiced in our everyday lives. Our true wealth is measured by the extent of our generosity.*

*We envision strong **ʻohana** (families) who steadfastly preserve, protect and perpetuate these core Hawaiian values.*

We envision a wise and caring community that takes pride in its resourcefulness, self-sufficiency and resiliency, and is firmly in charge of Molokaʻi's resources and destiny.

*We envision a Molokaʻi that leaves for its children a visible legacy: an island **momona** (abundant) with natural and cultural resources, people who **kōkua** (help) and look after one another, and a community that strives to build an even better future on the **paʻa** (firm) foundation left to us by those whose **iwi** (bones) guard our land.*

2.3 GOALS AND OBJECTIVES

The management of Molokaʻi Ranch and the members of the EC have worked hard through this process in order to define and achieve their primary goals of conserving the cultural and natural resources of Molokaʻi and stimulating the local economy. The following are the objectives of the Plan:

- Develop sustainable economic activities that are compatible with Molokaʻi and the vision of the Molokaʻi Enterprise Community.
- Secure the role of the community in the management of MPL's 65,000 acres.
- Re-open the Kaluakoʻi Hotel and create 100 plus jobs.
- Protect cultural complexes and sites of historic significance on MPL lands.
- Protect environmentally valuable natural resources and agricultural land, pasture and open space.
- Create a land trust with donated lands from MPL.

2.4 PLANNING PROCESS

The process followed this general outline and timeframe:

August 2003: Molokaʻi EC creates EC Project #47 for Compatible Community-Based Development.

January 2004: Community-Based Master Use Planning begins with a two-day planning seminar with The Conservation Fund ("TCF"), a renowned Washington-based land planning organization.

February 2004: EC approves the Community-Based Master Use Plan for Molokaʻi Ranch as part of EC Project #47.

March 2004: Committees meet and develop Principles and Policies, and map Land Use Districts (Cultural, Recreation, Environment, Economics, and Tourism Committees).

May 2004: Committees complete work. Land Use Committee forms and begins to compile and approve "Guidelines for Principles and Policies of Land Use," except for Lāʻau Point and Water.

August 2004 – March 2005: Community presentations outline the Community-Based Master Use Plan for Molokaʻi Ranch.

October 2004: Alternative to Lāʻau Development Committee forms.

January 2005: Panel of Water Experts holds Community Forum; the MPL Water Plan is presented.

April 2005: Seminar on Molokaʻi Land Trust, and formation of a Land Trust Steering Committee.

May/June/July 2005: Land Use Committee meetings focus on Lāʻau Development proposal.

August 1, 2005: Decision on Motions for Lāʻau Development and Land Use Planning.

September – December 2005: Compilation of Community-Based Master Land use Plan for Molokaʻi Ranch.

2.4.1 Committee Process: Cultural, Environmental, Recreation, Tourism, and Economics

The idea to create five committees came at the conclusion of the 2-day planning seminar with TCF in January of 2004. The group proposed a committee-based process to efficiently and thoroughly collect, synthesize, and interpret the information necessary to formulate the Plan.

The committees were comprised of individuals with knowledge and expertise in the specific areas of culture, environment, recreation, tourism, and economics. The Committees were charged with the following:

- **Goals & Objectives**: Formulate goals and objectives for the Plan by devising clear statements that can guide its development. What specifically should the Plan seek to achieve?

- **Data/Information Collection**: Assemble information relevant to each topic's specific issues through document research, site analysis, and/or expert consultations. The information was then reported on maps and/or provided in written form, as appropriate.

- **Analysis & Interpretation**: Each committee then began to evaluate, synthesize the data, and identify the most important resources and develop guidelines for prioritization. Committees were asked to concentrate on capturing the spectrum of opinions, perspectives and ideas, rather than deriving a consensus.

The committees' work had the following functions and methods for data collection and analysis:

- **Environment Committee:** Research opportunities to conserve natural resources where they still exist and restore native communities and/or landscapes where they have been eliminated. Collect and map the information pertaining to biological significance, environmental quality, and community interests.

- **Economics Committee:** Provide input and research facts on issues dealing with the creation of incoming-generating activities that will provide job opportunities for Moloka'i residents. Research issues connected to agriculture, aquaculture, commercial development, and residential development. Review and assess the accuracy of maps of productive agricultural and aquaculture lands, along with economic statistics, market studies, and physical and regulatory infrastructure.

- **Recreation Committee:** Collect information on existing recreation sites and activities, and map them. Provide data on use and potential conflicts created by use between residents and visitors.

- **Tourism Committee:** Develop guidelines and criteria to direct future recommendations on tourism that does not compromise the lifestyles and traditional activities of islanders.

- **Cultural Committee:** Collect and map locations and significance of archaeological sites. Identify areas of traditional use, such as

hunting, fishing, gathering, and ongoing cultural activity.

2.4.2 Formation of the Land Use Committee

In May 2004, representatives of the five committees formed the Land Use Committee. This committee received the recommendations of the committees, recommended Land Use Districts reflecting primary uses and worked to produce a Land Use Plan and Policies and Principles for land use on the property.

2.4.3 Public Input and Review

Throughout the process, Project #47 solicited public input and review. Between August 2004 and March 2005, there were12 community meetings and 24 community and focus group presentations regarding the Community-Based Master Land Use Plan for Molokaʻi Ranch.

The meetings were held island wide, in Kaunakakai, Kualapuʻu, Manaʻe, Maunaloa, and Hoʻolehua, with over 1,000 participants. Community feedback was taken into account during the development of the Plan.

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3 RESOURCES

3.1 BACKGROUND OF PROJECT AREA

The island of Molokaʻi is comprised of approximately 260 square miles. Formed by a series of three volcanoes, it has an elongated shape with diverse topography and rainfall patterns. According to its physical characteristics, the island is divided into three main sections – West Molokaʻi, East Molokaʻi, and Central Molokaʻi.

The west end makes up about 30 percent of the total area, and is relatively dry with gentle slopes. The eastern half of the island is mostly comprised of mountains and gulches that are covered in rainforests and mixed mesic forests, which are vegetation zones found in wet climates.

The only perennial streams that reach the sea are on East Molokaʻi. The remaining 20 percent of the land mass makes up Central Molokaʻi, which is relatively level and has soil suitable for cultivation. The southern coast is lined almost entirely with coral reef, except where it has been removed for the Kaunakakai Harbor. In contrast, the northern coastline is mostly sheer sea cliffs, making it largely inaccessible, except for the peninsula of Kalaupapa.

The current (2005) population of Molokaʻi is approximately 7,000. Kaunakakai, located about midway along the south coast, is the island's primary population and commercial center. There are also the small plantation communities of Maunaloa and Kualapuʻu, as well as the less compact, rural Hawaiian homestead settlements, Hoʻolehua and Kalamaʻula. The southeast coast contains a settlement pattern along Kamehameha V Highway, which becomes more rural and scattered as it extends from Kaunakakai to Hālawa Valley. The peninsula of Kalaupapa and some of the surrounding area on the northern coast constitute the County of Kalawao.

Molokaʻi Ranch Land

The property of Molokaʻi Ranch is located primarily on the west end of the island, though there are also three tracts of land in Central Molokaʻi. The boundary of the western property extends eastward from the west coast; from ʻIlio Point to Moʻomomi in the north, and from Lāʻau Point to the Pālāʻau Homesteads in the south.

The land on the west end of Molokaʻi is relatively dry, supporting mostly dryland forest and shrub vegetative zones that are now overrun with non-native species. There is also a substantial amount of erosion caused by years of agricultural and ranch use. (See Appendix 1. Molokaʻi Ranch Lands.)

Generally, the most important resources in the west end are subsistence food sources and cultural sites. Many residents hunt and fish in various places

within this region. They also come to important cultural sites for traditional and spiritual practices. The Moʻomomi Preserve along the north coast is managed by a partnership of organizations and supports a native dominated lowland dry forest and shrub landscape and a carefully managed subsistence fishing zone. On the west coast lies Pāpōhaku beach and dunes, one of the longest, mostly intact coastal dune systems in the state. To the south, Lāʻau Point is a pristine coastal environment, mostly used for subsistence fishing and hunting.

The main population center in West Molokaʻi is the small town of Maunaloa, where MPL is headquartered. Along the shores south of Maunaloa is Hale o Lono and Kolo Wharf. Maunaloa Highway connects the west end to the Molokaʻi Airport, Kaunakakai, and the rest of the island.

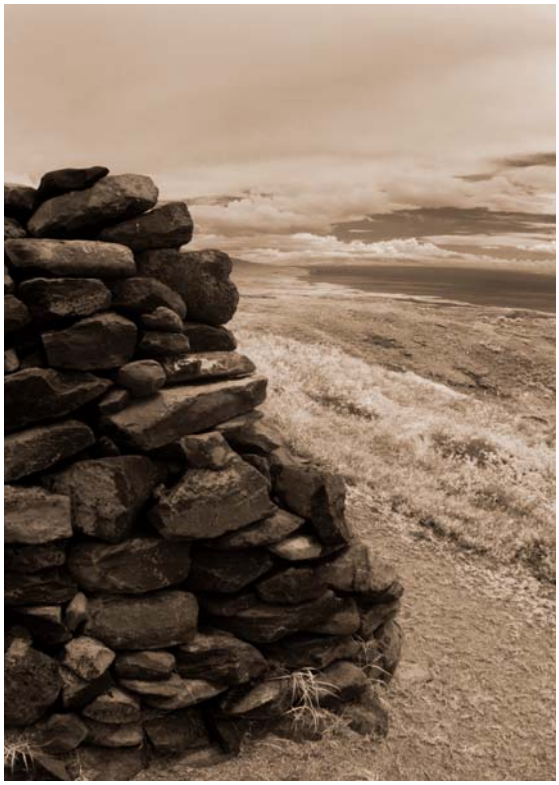
MPL also owns three large tracts of land in Central Molokaʻi. From west to east, the first tract encompasses Nāʻiwa, Pālāʻau State Park, the area surrounding Kualapuʻu town and Reservoir, and continues south to the Pālāʻau Homesteads.

The second tract includes land immediately surrounding Kaunakakai and a large area mauka of town, including the Molokaʻi Forest Reserve.

The third tract is the Kamakou Preserve, which consists of 2,774 acres of an important native rainforest ecosystem with a conservation easement to and managed by The Nature Conservancy. In addition to these large tracts of land, MPL also owns a 34-acre parcel located south (and makai) of the Kamakou Preserve, at Kawela. This parcel is significant for its cultural history and archaeological sites.

3.2 CULTURAL AND ARCHAEOLOGICAL RESOURCES

The cultural maps, "Cultural Sites of Kaluakoʻi, Molokaʻi" and "Lāʻau Cultural Sites" located in Appendix 2, identify the archaeological sites within the MPL property located on the west end. (The central properties also contain important cultural sites but they are not graphically represented in these maps.)



There are various cultural sites, including burials throughout the property, though some areas have higher concentrations. Archaeological maps, coupled with oral history interviews provide insight as to the types of sites, hence cultural land uses that may be found on the Ranch lands.

Evidence suggests that Moʻomomi, to the north, was an ancient fishing station and burial ground. The area is also noted for the presence of the Kalaina Wāwae, which prophesized the arrival of the boot-wearing Caucasian.

The area along the west coastline, between ʻĪlio Point and Pāpōhaku Beach, has a high concentration of remnant shelters, caves, and mounds. This area includes the Kawākiu Iki Complex and the Kawākiu Nui North that are believed to have been utilized for habitation.

Oral history accounts confirm that this area was used for temporary fishing villages, which explains the remnants of ancient homes and fishing shrines along the coast. A historical trail, Ke alapūpūkea Molokaʻi (the shell road at Molokaʻi), runs from Moʻomomi, around ʻĪlio Point, and to the south, through Pāpōhaku Beach, to Lāʻau Point, east to Iloli in the south.

This coastal trail was constructed with white shells (pūpūkea) to ensure safe nighttime travel under the direction of Maui Island Chief Kiha-a-Piʻilani. Poʻolau, the area immediately south of Pāpōhaku, is an area rich with habitation, agricultural and natural communities, and bunker sites. This was also the location of a Naval Reservation and a gunnery range for the U.S. military.

Another area with a high concentration of cultural sites is located to the east of Maunaloa. Along the southeast edge of the abandoned pineapple fields are numerous koʻa, heiau, and petroglyphs, as well as remnants of enclosures and platforms that were once used for agriculture and habitation.

This area also has evidence of adze quarries and adze manufacturing. This summit zone is the location of the head of major gulches, which explains its association with the gods and sorcery. It is also where Kāʻana is situated, which is believed to be the birthplace of hula.

The entire property is dotted with burials, especially those areas composed of sand, since this was a common material in which burials were placed. The main burial sites include the dunes of Moʻomomi and Pāpōhaku, and Keonelele, the area where sand is believed to blow southwest from Moʻomomi towards Pāpōhaku.

The "Lāʻau Cultural Sites" map illustrates the numerous archaeological sites located in the Lāʻau Point area. The majority of sites in this region are of fishing villages and koʻa.

Lastly, the central properties contain important archaeological sites and complexes as well, though they are not included on these maps. The area furthest north in the first tract of central MPL land is Nāʻiwa. It is rich with petroglyphs, heiau, caves, and other sites, such as the area that contains large, upright, weathered stones with figures carved into them.

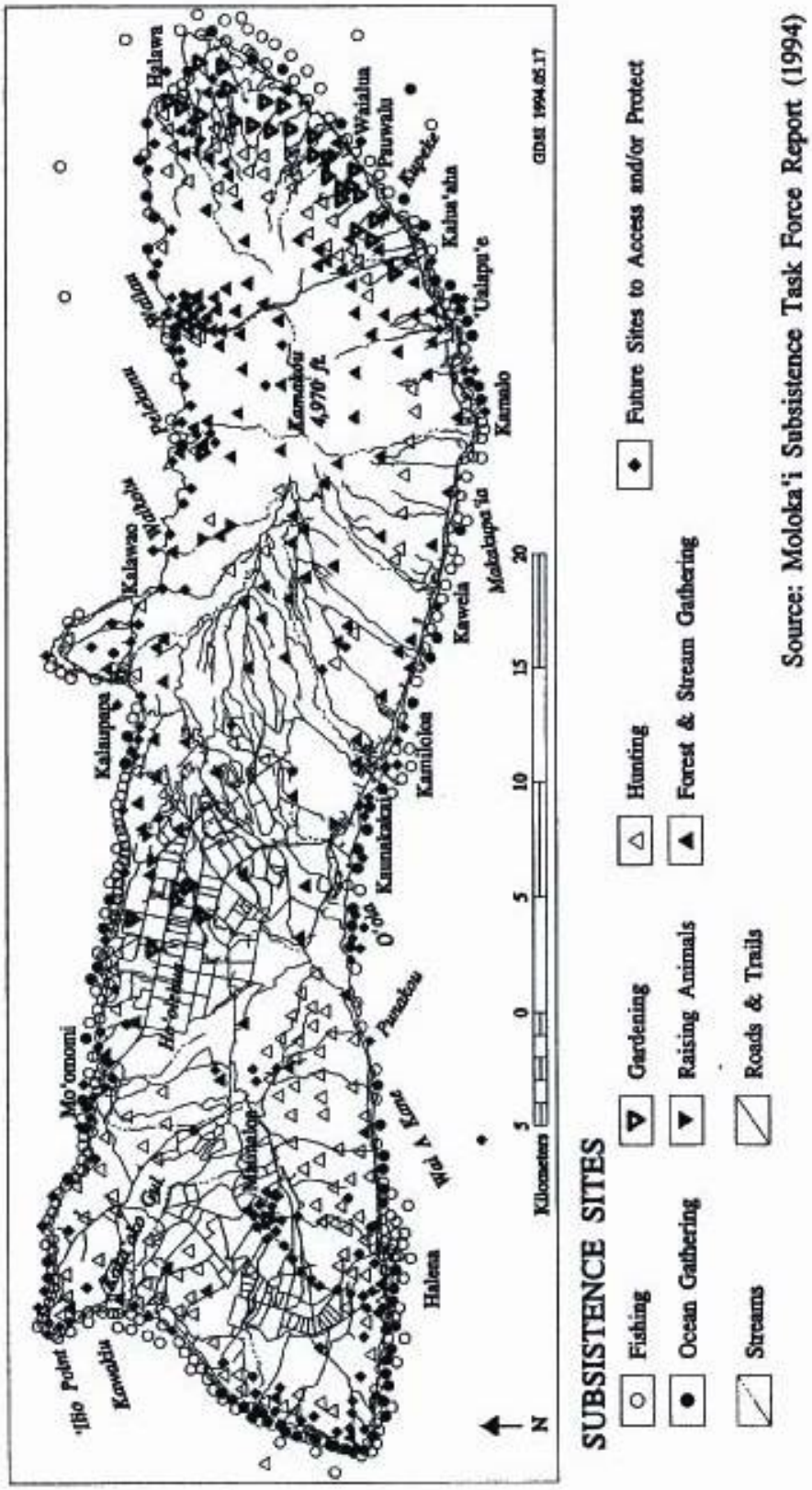
The other main areas with archaeological sites include the region mauka of Kaunakakai and Kawela. Numerous petroglyphs and heiau have been identified in the gulches mauka of Kaunakakai, while the Kawela Cultural Complex is well known to contain burial mounds and the remains of fallen warriors from ancient battles.

3.3 SUBSISTENCE RESOURCES

In summer 1993, the Governor's Moloka'i Subsistence Task Force met with subsistence practitioners in focus groups to map sites important for fishing, ocean gathering, hunting, forest and stream gathering, gardening, raising animals, and trails to access the resources.

This map was published in the final report of the Task Force. Practitioners identified sites that had been used in the past, were currently used, and sites where they would want to go if access were opened.

The map shows that the entire coastline of the MPL lands is important for subsistence fishing and ocean gathering. It also indicates that the MPL lands are very important for subsistence hunting. Forested areas on MPL lands are also accessed for subsistence gathering.



Source: Moloka'i Subsistence Task Force Report (1994)

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3.4 ENVIRONMENTAL RESOURCES: TERRESTRIAL AND AQUATIC

The terrestrial and aquatic natural resources are illustrated on the following three maps, which are located in Appendix 3:

- "Molokaʻi Resource Assessment: Natural Resources – Terrestrial"
- "Molokaʻi Resource Assessment: Natural Resources – Aquatic"
- "Molokaʻi Ranch Resource Summary: Natural Resources"

The "Natural Resources – Terrestrial" map shows that the Ranch property is dominated by non-native species (shown in gray). The topography and rainfall patterns of West Molokaʻi indicate that the area, at one time, was lowland dry forest and shrub. The vegetation of this landscape includes mostly grasses and shrubs, with few species of trees. Such coastal and lowland dry forest and shrublands occur on the lower leeward slopes of the higher Hawaiian Islands.

However, over 90 percent of the Hawaiian low shrublands have been lost to development or displacement by alien vegetation. On the Ranch land, these native ecosystems were permanently altered by cattle grazing, followed by the cultivation of sugarcane and pineapple. These activities caused severe degradation and erosion of the west end. The area is now dominated by invasive species such as the kiawe tree and Christmas berry, which have spread throughout the property.

The northwestern edge of the island has a few remaining pockets of native dominated landscape communities. The Moʻomomi Preserve (on the "Natural Resources – Terrestrial" map), which is managed by The Nature Conservancy, is one of these native lowland dry forest and shrubland communities that still exists in the state.

The preserve is 921 acres and harbors more than 22 native Hawaiian plant species, four of which are globally rare or endangered. These rare plants, like ʻakoko and ʻenaʻena, thrive in the dry, windy, salt-sprayed environment. The preserve is also an important nesting site for the endangered green sea turtle.

There are a few small areas of the native dominated coastal dry shrubland and grassland communities along the northwestern corner (shown in purple on the "Natural Resources – Terrestrial" map). This landscape community is similar to the Moʻomomi Preserve community, but has less species diversity.

The west end also has some occurrences of Natural Heritage rare vertebrates and plant species, such as the ʻakoko. The endangered Hawaiian monk seal frequents the beaches of the west end.

The Ranch property in the Forest Reserves of the island contains some occurrences of rare plant species as well as an important native dominated montane mesic forest and wet forest.

Erosion

Eroding lands are one of the most significant problems that need immediate attention. A substantial portion of MPL's Maunaloa lands have bare soils that erode during seasonal storms. The worst problems occur along the south shore from Punakou to Halena as the inner reef waters are red from land-based sedimentation. (See Soil Erosion Aerial Photo on page 37.)

Similar problems occur elsewhere along the coast, but the western and northern coastal waters have huge winter surf that help flush away the seasonal sedimentation.

Therefore, where possible, hunting could keep deer herds from denuding the landscape. It is also important to preserve Puu Nānā (top of Maunaloa mountain) forested areas and increase forestry plantings to retain and improve moisture cycle. Access, use and construction plans should also prevent erosion of dirt road ways and trails.

The Moʻomomi to ʻĪlio Point coastal section is is the most important biological resource on Molokaʻi Ranch's lands. This area is not only important biologically, but is a very rugged and beautiful coastline. The terrestrial native coastal beach strand is some of the best strand left in the main Hawaiian Islands. Many rare plants like ʻakoko and ʻenaʻena still exist in healthy numbers as do common species like hina hina, nehe, ʻakiʻaki, pau o hiʻiaka, and nama. The coastal dunes and rocky cliffs also provide nesting sites for several sea bird species including; wedge-tailed shearwater (ʻuaʻu kani), Great frigatebird (iwa), and tropic birds (white- tailed – koaʻe kea and red-tailed – koaʻe ʻula).

Erosion is the main environmental concern in the ʻĪlio Point to Kawakiu and Kepuhi area where human impact will cause problems.

There is severe sedimentation of the inshore reef between Punakou and Halena. With the exception of Pālāʻau, it would not be possible to do sedimentation ponds as there is not much flat land along that coastline and therefore, re-vegetation of the adjacent slopes would be the primary solution for that area.

The Pālāʻau inshore waters have significantly less sedimentation due to the thick mangrove growth along the shoreline. Although the mangroves are acting as a filter to flood waters and provide nursery sites for inshore marine species, there are concerns that

eventually the mangroves will infringe on the fringing coral reef systems.

The "Natural Resources – Aquatic" map illustrates the substantial coral reef protection area that runs along the south shore of the Ranch property. It begins at Hale o Lono and extends east along much of the southern shore of the island. The protected area includes numerous fishponds.

The fringing reef along this coastline is a treasured resource of Molokaʻi. The inshore areas along this area are also important hatcheries/breeding grounds for many key subsistence marine fish species. This is confirmed by the many koʻa locations.

Inshore marine species still are abundant along the rugged coastline and tidal pool systems. The limited access is the main reason why this northwest coastline has remained unchanged the past few decades.

At the very tip of the northwest corner is ʻĪlio point, an abandoned US Coast Guard station site, which is owned by the State of Hawaiʻi. Although not part of the Ranch lands, this area needed to be clean of old metal debris, and possible live ordinance. This Plan seeks that the State portion of ʻĪlio Point should also be put in conservation protection as it contains very high quality native coastal beach strand, inshore tidal pools and fisheries.

In the Kepuhi to Lāʻau Point area where MPL is planning development, there are several pockets of beach strand or terrestrial systems of note. It is important that any development plans require an erosion plan, recognizes and enhances pockets of native beach strand/vegetation, and includes no incompatible beach activities (i.e. motorized vehicles on the beach, harvesting of sand, and military exercises).

Beginning at Hale o Lono and extending east is an area of land mauka of the coral reef protection area, which is marked for reclamation and erosion control. Protection of this land is critical for continued health of the coral reef and marine ecosystem, which are sensitive to excessive run-off.

It is important to note the absence of perennial streams on the Ranch property. There are numerous intermittent streams, which generally only have flows during or immediately following heavy rainfalls. The entire west end is relatively dry, and in need of erosion control measures.

The "Molokaʻi Ranch Resource Summary: Natural Resources" map shows those regions prone to erosion, which have been identified as "Priority Areas" for Watershed/Aquatic Resource Protection. That map also illustrates the Priority Areas for Rare Species/Native Ecosystem Preservation and Coastal Habitat Management Protection.

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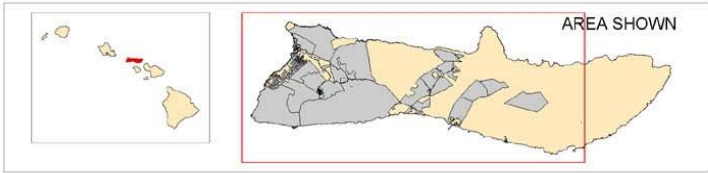
ISLAND OF MOLOKA'I
AERIAL PHOTOGRAPH - 1998



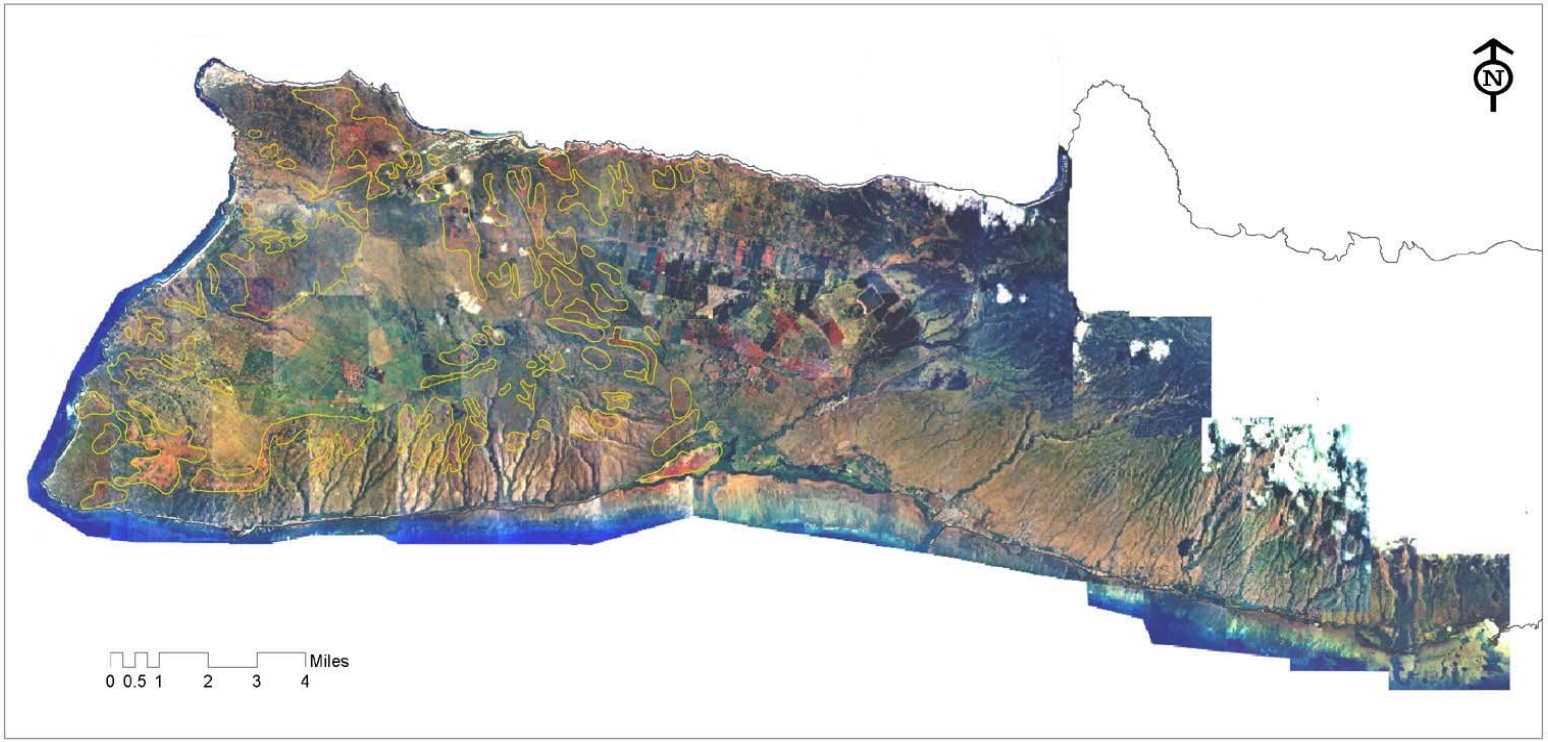


Photo Courtesy of: Air Survey Hawaii, Inc.

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3.5 AGRICULTURAL RESOURCES

The "Agricultural Suitability Classification & Proposed Agricultural Easement Lands" map is in Appendix 4. It illustrates the agricultural resources of the project area and the proposed agricultural lands. The dotted black lines encircle the areas proposed for the agricultural easements, a total of 14,390 acres. The ag lands in Central Molokaʻi are located near numerous water sources for irrigation. The ag lands in Western Molokaʻi are serviced by water lines that vary from ¾ inches to 8 inches in diameter.

The Agricultural Lands of Importance generally overlap with the areas defined for ag easements. They consist of substantial areas of dark green on the suitability map, which indicates Class I: 0 – 2.99% slope, signifying that the land is suitable for cultivation.

The ag lands in West Molokaʻi are composed of the Molokaʻi-Lahaina soil association, i.e. deep, nearly level to moderately steep, well-drained soils that have a moderately fine textured or fine textured subsoil. Molokaʻi soils are suitable for pineapple, pasture, truck crops, and wildlife habitat.

To the north, near Puʻu Ula, and to the west, ag lands are classified as very stony land-rock land association, indicating gently sloping to very steep, rocky and stony land types on uplands and in gulches and valleys.

The ag lands located in Central Molokaʻi are also largely composed of the Molokaʻi-Lahaina association. Within these soil associations there are two main soil types found within the ag easements:

Molokaʻi silty clay loam (MuB): Slopes range from 3 to 7 percent. Runoff is slow to medium, and the erosion hazard is slight to moderate. Included in mapping were a few small areas that are eroded to soft, weathered rock.

Hoolehua silty clay (HzC): Slopes range from 7 to 15 percent. Runoff is slow to medium, and the erosion hazard is moderate.

Referring again to the "Agricultural Suitability Classification & Proposed Agricultural Easement Lands", the ag parcel furthest east also contains significant amounts steeper slopes. It is composed of similar soil associations, but also contains areas of Rough broken land-Oli association, which indicates

shallow to deep, very steep to precipitous soils in gulches and moderately deep to deep, gently sloping to steep, well-drained soils that have a medium textured and moderately fine textured subsoil. That land is suitable for pasture, woodland, orchard, recreation, and wildlife.

3.6 RECREATIONAL RESOURCES

The Molokaʻi Ranch lands contain various recreational activities for both residential and visitor recreational activities. The west and south coasts of the ranchlands contain stunning and relatively undeveloped beaches.

However, the rip currents and shorebreaks on the west end make entering the water extremely dangerous in the winter months and during certain weather patterns. Nonetheless, the beach and nearshore areas are used at various times for sunbathing, picnicking, swimming, fishing, snorkeling, scuba diving, whale watching, surfing, and paddling by residents and visitors.

There are a significant number of trails throughout the property for hiking, biking, and horse-riding, that are popular with residents and tourists alike. There are cultural trails and the Historic Trail mapped by Monsarrat, which runs along the west coast. There is a proposed Na Ala Hele State Trail to be located on the central property.

The Ranch provides access to numerous activities, such as kayaking, mountain biking, horse riding, as well as a paniolo cultural museum and workshop in Maunaloa town. It also maintains camping facilities at Kaupoa Camp. Maui County maintains camping sites at Pāpōhaku Beach Park, located on the north end of Pāpōhaku Beach.

Currently, there is an 18-hole golf course at Kaluakoʻi and 9-holes at the Ironwoods Golf Course. In the future, MPL may open another golf course north of the Kaluakoʻi resort area. Lastly, there are areas set aside for public bow and rifle hunting, which are differentiated from the subsistence hunting areas.

3.7 MPL URBAN AND COMMERCIAL RESOURCES AND EXISTING ZONING

Although the majority of MPL land is undeveloped, it is zoned for agricultural, urban, and commercial uses.

3.7.1 Maunaloa

Designated "Country Town Business District", Maunaloa's main thoroughfares have 13 MPL commercial sites located along them. This County designation allows for quaint country-town commercial properties, which would suit a wide range of activities including retail businesses, arts or culture outlets or professional offices. These sites range in size from 8,700 sq ft to 31,500 sq ft and are competitively priced at approximately $14-16 per sq ft.

3.7.2 Kaunakakai

Kaunakakai serves as the main population center on the island. It is home to the majority of grocery stores, restaurants, and general services for island residents. The Kaunakakai Wharf is still used for transporting goods between Molokaʻi and the rest of the Hawaiian Islands.

This Plan maintains that the old ball park retain its existing use. The Community Plan's recommendation for this area is to redesignate it from "Public/Quasi Public" to "Park," so that the current uses as rodeo, fairgrounds, and park are maintained. MPL owns parcels within the town center and a large area mauka of town, including areas to be considered for Community Expansion.

3.7.3 Kualapuʻu

Kualapuʻu is a small plantation community located between Kaunakakai and Maunaloa, just north of the Maunaloa Highway and east of the Molokaʻi Airport.

3.7.4 Kaluakoʻi

This resort zoned area just north of Pāpōhaku Beach contains three condominium projects, the golf course and the Kaluakoʻi Hotel, which is currently shut down. One of the goals of this Plan is to generate the investment revenue to re-open the Hotel. All three condo projects are privately owned; some of the 300 plus units are included in a rental pool and are rented out. The Ted Robinson designed golf course has been restored and improved but needs further renovation.

3.7.5 Pāpōhaku

Located along white, sandy Pāpōhaku Beach, is the Pāpōhaku Ranchlands Subdivision. It contains 273 lots, a few of which are currently for sale. Less than 100 of the lots have been built upon, and of those, less than half of the owners live there full-time. This means that the Pāpōhaku area remains relatively quiet for most of the year (Pāpōhaku Dunes Draft Preservation Plan, 2005).

3.7.6 The Lodge at Maunaloa

A member of the *Small Luxury Hotels of the World,* The Lodge contains 22 guest rooms. The Lodge's main building features a living room with a two-story stone fireplace, an upstairs library & TV room, the Maunaloa Room for dining, the Paniolo Lounge for lite dining, a TV sitting area and billiards room, the Lodge den with computer and wireless internet access, the Lōkahi meeting room, a heated outdoor infinity pool, and a fitness center offering spa treatments with separate saunas, workout room, shower and lockers.

3.7.7 Beach Village

A 40-tent platform visitor accommodation operation located at Kaupoa Beach on a 31-acre parcel.

3.7.8 Industrial Park

Centrally located to Molokaʻi's main town of Kaunakakai, commercial harbor and the Hoʻolehua airport, the Molokaʻi Industrial Park consists of 22 improved lots.

All lots have prepared building pads and are accessed from paved roads with curbs, gutters, and sidewalks. These lots range in size from 22,000 sq ft to 55,000 sq ft and are fully serviced with water, underground electricity, and phone connections. Lot prices begin at $200,000.

MPL owns this only industrial park on the island. The first increment was developed in the late 1990's to meet the island's long term needs for both heavy and light industrial users.

4 COMMUNITY GUIDELINES FOR LAND USE PRINCIPLES AND POLICIES

These guidelines are intended to guide Molokaʻi Properties Ltd. and the Molokaʻi Land Trust in setting policies for the implementation of the Molokaʻi Ranch Community-Based Master Land Use Plan and the establishment of the Molokaʻi Land Trust.

4.1 MANAGEMENT POLICIES

The wisdom of our kupuna and their relationship to the land and sea has proven well with centuries of managing and living in a manner that caused the land and sea to flourish abundantly. It provided future generations with more than enough for their continued survival without destroying their fragile, island environment and precious resources for over two thousand years.

A single, most important and vital principle of our kupuna and their relationship to their land comes from the word "Mālama ʻĀina" or "Care for the land". To "mālama" not only means to care for the land physically, it also means to care for the land spiritually. It also means to regulate the use of land and ocean resources to ensure the continuance of those resources for future generations. *(Written by John Kaimikaua, March 30, 2004)*

What distinguishes Hawaiian custom and practice is the honor and respect for traditional ʻohana cultural values and customs to guide subsistence harvesting of natural resources. Such ʻohana values and customs include but are not limited to the following:

- Only take what is needed.
- Don't waste natural resources.
- Gather according to the life cycle of the resources. Allow the resources to reproduce. Don't fish during their spawning seasons.
- Alternate areas to gather, fish, and hunt. Don't keep going back to the same place. Allow the resource to replenish itself.
- If an area has declining resources, observe a kapu on harvesting until it comes back. Replant if appropriate.
- Share what is gathered with family and neighbors.
- Take care of the kupuna who passed on the knowledge and experience of what to do and are now too old to go out on their own.

- Don't talk openly about plans for going out to subsistence hunt, gather or fish.
- Respect the resources. Respect the spirits of the land, forest and ocean. Don't get loud and boisterous.

(Native Hawaiian Access Rights/McGregor/2/12/04)

Hawaiian Subsistence, Cultural and Religious Beliefs, Customs and Practices

Hawaiian custom and practice encompasses the full range of traditional, subsistence, cultural, and religious activities Hawaiian 'ohana or extended families have engaged in for many centuries to live as a people and survive in a unique island environment. There are customs and practices related to each major aspect of Hawaiian lifestyle and livelihood including:

- Community life
- Family
- Human well-being and spirituality
- Stewardship and use of natural and cultural resources
- Rights
- Economics

The Governor's Task Force on Moloka'i Fishpond Restoration and the Governor's Moloka'i Subsistence Task Force developed a useful definition of subsistence. According to these task forces:

Subsistence is the customary and traditional uses of wild and cultivated renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, transportation, culture, religion, and medicine; for barter, or sharing, for personal or family consumption and for customary trade.

Land and Natural Elements – The Foundation of Hawaiian Subsistence, Culture and Religion

TO HAWAIIANS, THE LAND AND NATURAL ELEMENTS ARE THE FOUNDATION OF SUBSISTENCE, CULTURAL, AND RELIGIOUS BELIEFS, CUSTOMS, AND PRACTICES.
The land and the natural environment are alive, respected, treasured, praised, and even worshipped. The land has provided for generations of Hawaiians, and will provide for those yet to come.

Hawaiian subsistence practitioners speak of their cultural and spiritual relation to the lands of their region and their commitment to take care of it and protect it for future generations. The land is not viewed as a commodity; it is the foundation of their cultural and spiritual identity as Hawaiians. The land is a part of their 'ohana and they care for it as they do the other living members of their families.

Hawaiian Stewardship and Use of Natural and Cultural Resources

The ahupuaʻa is the basic unit of Hawaiian natural and cultural resource management. An ahupuaʻa runs from the sea to the mountains and contains a sea fishery and beach, a stretch of kula or open cultivable land and higher up, the forest.

A land should run from the sea to the mountains, thus affording to the chief and his people a fishery residence at the warm seaside, together with products of the high lands, such as fuel, canoe timber, mountain birds, and the right of way to the same, and all the varied products of the intermediate land as might be suitable to the soil and climate of the different altitudes from sea soil to mountainside or top.

Hawaiians consider the land and ocean to be integrally united and that these land sections also include the shoreline as well as inshore and offshore ocean areas such as fishponds, reefs, channels, and deep sea fishing grounds. Coastal shrines called fishing koʻa were constructed and maintained as markers for the offshore fishing grounds that were part of that ahupuaʻa.

Fresh water is the most important thing for life and needs to be considered in every aspect of land use and planning. The Hawaiian word for water is wai and the Hawaiian word for wealth is waiwai, indicating that water is the source of well-being and wealth.

Insights about the natural and cultural resources inform those who use the land about how to locate and construct structure and infrastructure so as to have the least negative impact upon the land.

The practitioners are sensitive to the condition of the landscape and resources and their changes due to seasonal and life cycle transformations. This orientation is critical to the preservation of the natural and cultural landscape.

An inherent aspect of Hawaiian stewardship and use of cultural and natural resources is the practice of Mālama ʻāina or conservation to ensure the sustainability of natural resources for present and future generations.

These rules of behavior are tied to cultural beliefs and values regarding respect of the ʻāina, the virtue of sharing and not taking too much, and a holistic perspective of organisms and ecosystems that emphasizes balance and coexistence. Maintaining spiritual, cultural, and natural balance with the elemental life forces of nature.

Hawaiian families who rely upon subsistence as a primary part of their diet respect and care for their surrounding natural resources. They only use and take what is needed in order to allow the natural resources to reproduce. They share what is gathered with family and

neighbors. Through understanding the life cycle of the various natural resources, how changes in the moon phase and the wet and dry seasons affect the abundance and distribution of the resources, the subsistence practitioners are able to plan and adjust their activities and keep the resources healthy.

Hawaiian Fishing Responsibilities and Rights

If subsistence fishing is disrupted, the lifestyle of the families who rely upon the fishing for their diet will be negatively impacted. This will precipitate a chain of negative impacts for those families. Systemic change is likely to occur such as disruption of the ʻohana system of exchange and sharing of foods caught and gathered.

The diet of the families would worsen. The standard of living would be negatively impacted by the increased cost of purchasing food, due to the lack of fish, seaweed, and other marine foods which are part of their regular diet. The inability to fish and gather marine foods regularly relied upon might impair the ability of the ʻohana (extended family) to celebrate life cycle events – baby lūʻau, weddings, or birthdays.

In ancient Hawaiʻi the right to fish in any given area of the sea depended upon rank. The "aliʻi nui" or high chief of the island owned all the land and its adjacent fishing areas in his personal and sovereign capacity. He gave the chiefs under him, or "konohiki", the ahupuaʻa and their adjacent fisheries to manage. In return, the konohiki paid tribute to the aliʻi nui by giving him their oaths of allegiance and portions of bounties that the ahupuaʻa tenants under them harvested from the land and sea.

The konohiki fishing area extended from the shoreline to the edge of the reef. Where there was no reef, the konohiki had a private fishing right that extended one mile seaward of the shore. Traditionally, the tenants of an ahupuaʻa shared the use of fisheries that were adjacent to the ahupuaʻa with the konohiki. Duty required them to reserve portions of their catch and certain species of marine life for the konohiki and aliʻi nui *(Externalities Workbook/Native Hawaiian Impacts/ 12/17/96).*

According to <u>*Native Hawaiian Rights Handbook*</u> *by Melody K. Mackenzie, "within the boundaries of the ahupuaʻa, the makaʻainana also had liberal rights to use the ahupuaʻa resources. These*

included the right to hunt, gather wild plants and herbs, fish offshore, and use parcels of land for taro cultivation together with sufficient water for irrigation. All these activities were regulated by an intricate system of rules designed to conserve natural resources and provide for all ahupuaʻa residents."

"Implicit in ancient Hawaiian regulations regarding water and land is the concept of mutual benefit and sharing," D. Malo Hawaiian Antiquities (1951 ed).

Access along the shore, between ahupuaʻa or districts, to the mountains and sea, and to small areas of land cultivated by native tenants, was a necessary part of early Hawaiian life. Use of Hawaiʻi's trails was open to all classes of people and was governed by *Mamalahoe Kanawai, the Law of the Splintered Paddle.* This first law of Kamehameha, punishable by death, "guaranteed the safety of those using the highway trail of old."

In early Native Hawaiian life, gathering activities served to supplement the everyday food, religion, clothing, housing, and medicinal supplies of the people. They gathered both cultivated and non-cultivated items from the mountains and into the sea, including hunting and fishing.

Tenants of the ahupuaʻa also had a right to take fish, subject to the right of the Konohiki to manage and conserve the fisheries.

The legal basis for Traditional Hawaiian Access is founded on *Native Hawaiian Ahupuaʻa Tenant Rights*, and are derived from three sources: *(1) The Common Law of England: Section 1-1 Common Law and Hawaiian Usage; (2) The State of Hawaiʻi Revised Statutes: HRS 7-1; (3) The Hawaiʻi State Constitution: Article XII Sec. 7.*

This plan recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778. These rights will be the foundation upon which we build our Management Plan for West Molokaʻi.

Relative Importance of Management Area

Subsistence fishing reduces dependence on purchased seafood. The availability of an alternative food source gives residents a sense of self-sufficiency and freedom.

Subsistence fishing provides other, less definable benefits. Time spent in subsistence fishing cultivates intimacy and harmony with the ocean, reinforcing a strong sense of kinship with nature that is the foundation of Hawaiian spirituality and religion. While engaged in fishing and gathering activities, practitioners share experiences and gain knowledge that provides continuity between the past

and the present and that builds trust and cooperation.

These shared experiences reinforce beliefs and values that are critical for perpetuation of Hawaiian cultural identity. Subsistence fishing emphasizes group identity and relationships rather than individual economic accomplishment. Food obtained through subsistence fishing is distributed within the community and is consumed at family and community gatherings.

The prevalence and economic and social importance of subsistence activities on Molokaʻi is well documented (Governor's Molokaʻi Subsistence Task Force, 1994). A survey commissioned by the Task Force concluded that, without subsistence as a major means of providing food and supplementing income, Molokaʻi families would have a greatly reduced standard of living.

Subsistence is an essential and viable sector of the overall island economy. Subsistence fishing not only provides food, but contributes to a healthy diet. Obtaining equivalent food items, such as fish, from stores can be costly and families on fixed incomes are known to purchase cheaper, less healthy foods. Subsistence activities require physical exertion and provide opportunities for relatively inexpensive recreation that contributes to better health.

Beyond the immediate economic and health advantages of subsistence fishing are other benefits that serve to enhance family identity and community cohesion and to perpetuate traditional values. Subsistence resources have allowed Molokaʻi to endure economic hardship without major social disruption (Governor's Molokaʻi Subsistence Task Force, 1994).

Molokaʻi is unlikely to experience economic growth or social dislocation on a scale that would change the underlying lifestyle. Subsistence fishing on Molokaʻi will continue to be an integral part of the island's economy. In fact, the subsistence lifestyle so prevalent on Molokaʻi is viewed by many on the more urbanized islands as a preferred lifestyle, which protects against downturns in the cash economy (Proposal to Designate Moʻomomi Community-Based Subsistence Fishing Area/Northwest Coast of Molokaʻi/Hui Mālama O Moʻomomi/April 1995).

Many families on Molokaʻi, particularly Hawaiian families, continue to rely upon subsistence fishing, hunting, gathering, or cultivation for a significant portion of their food. Availability of the natural resources needed for subsistence is essential to Molokaʻi households where the unemployment rate is consistently higher than on other islands and a significant portion of the population depend upon public assistance.

Without subsistence as a major means for providing food, Molokaʻi families would be in a dire situation. Subsistence

provides families with the essential resources that compensate for low incomes and a means for obtaining food items that may be prohibitively costly under a strict cash economy.

Food items like fish, limu, and deer meat, which are normally obtained through subsistence are generally unavailable or are very costly in stores. If families on fixed incomes were required to purchase these items, they would probably opt for cheaper, less healthy foods that would predispose them to disease and other health problems. In this respect, subsistence not only provides food, it also ensures a healthy diet that is critical to the prevention of disease.

Subsistence on Molokaʻi will continue to be essential to the lifestyle of the people. Community-based management of the resources, rooted in traditional values of aloha ʻāina and mālama ʻāina and empowered with the responsibility for monitoring of the resources will be critical in assuring a subsistence lifestyle for future generations on Molokaʻi. The other major facet to the perpetuation of subsistence activities and the protection of the necessary natural resources will be the recognition of subsistence as an essential and viable sector of the overall economy and balancing future economic development and growth on the island to assure its continuation.

Molokaʻi provides a rare example of how residents adapted to changing economic circumstances without massive external intervention. Historical accounts have indicated that when agribusiness closed on Molokaʻi, subsistence became a more vital aspect of the economy. Through community-based efforts, residents organized to successfully stave-off tourism development while promoting values related to community and family integrity. Subsistence and other community-based endeavors are considered the forces that bind together the social elements necessary for cultural perpetuation. Subsistence should not be viewed as a replacement economy per se, but as a tradition that has survived after macroeconomic strategies (i.e., plantations, ranches) failed.

Any economic recovery strategy that is selected should allow for subsistence to continue to play a significant role. This is especially critical on Molokaʻi where natural resources are available and subsistence is an integral part of lifestyle. Community planning is a proactive strategy that should encourage a functional coexistence and balance between subsistence, the market economy, and government.

As the natural and cultural resources of Molokaʻi are no longer as abundant as the current generation of adults remembers them to be in their childhood, management of the resources traditionally used by the people of Molokaʻi for subsistence has become more urgent.

Beyond the immediate economic and health advantages that come with subsistence are other qualities that serve to enhance family and community cohesion and perpetuate culture and spirituality. Subsistence is an activity that provides prescribed roles for its members. Family members of all ages feel that they contribute to family welfare through their involvement in subsistence. Subsistence activities are a central part of camping trips or family outings and parents and children alike are involved in catching fish and gathering marine resources. Older children are oriented towards subsistence by their elders who teach them about techniques and the behaviors of various species.

On another level, subsistence provides a basis for sharing and gift giving within the community. Residents generally ascribe to a process of reciprocity and sharing with those who are unable to obtain resources on their own. Families and neighbors exchange resources when they are abundant and available, and the elderly are often the beneficiaries of resources shared by younger, more able-bodied practitioners. Some practitioners believe that they must share their catch with others even when it is meager, because generosity is rewarded by better luck in the future.

Resources obtained through subsistence are used for a variety of special occasions that bond families and communities. Resources such as fish, limu, ʻopihi, deer meat, etc. are foods served at birthdays, lūʻau, graduations, and holiday celebrations. ʻOhana and community residents participate in these affairs that cultivate a sense of communal identity and enhance social networks.

Time spent in nature cultivates a strong sense of environmental kinship that is a foundation to Hawaiian spirituality. Subsistence practitioners commune with nature, honor the deities that represent natural elements and life forces, learn how to mālama or take care of the land, and develop an understanding about patterns and habits of flora and fauna.

An inherent aspect of traditional subsistence is the practice of conservation. Traditional subsistence

practitioners are governed by particular codes of conduct that are intended to ensure for the future availability of natural resources. Rules that guide behavior are often tied to spiritual beliefs concerning respect for ʻāina, the virtues of sharing and not taking too much, and a holistic perspective of organisms and ecosystems that emphasizes balance and coexistence.

Hawaiians engage in subsistence and related practices more than other ethnic groups. This finding reflects the importance of subsistence to this group and the perpetuation of culture through subsistence activities. As mentioned previously, subsistence also plays in important economic role, and this may be especially true for Hawaiians who generally have lower incomes.

The fact that Hawaiians engage more in subsistence than others also points to how these activities are embedded in the culture and can be explained through a history of adaptation, the development of an indigenous economy, and the maintenance of cultural traditions despite the influx of foreign lifeways. It is important to note that the other groups (e.g. Filipinos, Japanese) engaged in subsistence, although not at the same level as Hawaiians (Governor's Molokaʻi Subsistence Task Force, 1994).

Problems Addressed by Plan

In recent decades, there has been a notable decline in nearshore fishery resources in the main Hawaiian Islands (Shomura, 1987). Resource condition varies considerably from area to area (Smith, 1993), depending on several factors: population size, degree of economic development, extent of nearshore habitat alteration and intensity of fishing. The persistence of subsistence fishing on Molokaʻi is an indication that customary fishing practices have not depleted inshore fisheries resources.

Sustainability of subsistence fisheries resources was assured in ancient Hawaiʻi. The fishing methods and practices of that time generally promoted the sustainable use of fisheries resources within the limited nearshore areas that were exploited. The commercialization of fishing has changed the way resources are perceived and are utilized. Fishing decisions are made with considerable uncertainty about how fishermen will behave collectively. Such uncertainty tends to shorten planning horizons and places a premium on short-term catches over future catches.

Customary fishing practices are increasingly beset by pressures from outside the community. Commercial harvesting by off-island fishermen and new residents is causing some Molokaʻi fishermen to question traditional values (sharing of seafood resources and conservation for future generations) and rules of conduct, which are the foundation of the subsistence culture. An alarming number of fishermen are using improper harvesting methods, taking undersized animals or ignoring seasonal prohibitions. The sustainability of the subsistence fishery and its benefits to the community is threatened by encroachment of commercial fishing values and methods.
The ancient Hawaiians depended on the ocean for survival and existence and they accumulated a sophisticated knowledge of marine fisheries. This knowledge involved not only how and where to fish but also a code of conduct about how fishing should be practiced so that it would be sustainable. Cautions against wanton harvest are part of Hawaiian mythology and kinship with marine creatures is part of Hawaiian spirituality.

While the force of these beliefs has been muted in modern times, perpetuation and application of this body of knowledge is relevant to some of Hawaiʻi's present day fishery problems, particularly the sustainable use of nearshore fisheries (*Proposal to Designate Moʻomomi Community-Based Subsistence Fishing Area/Northwest Coast of Moloka'i/Hui Malama O Moʻomomi/April 1995*).

Over the years, a number of activities contributed to the degradation of the natural environment of Molokaʻi. Offshore reefs and oceans were impacted by pollution, erosion and soil run-off from tourist, residential development, and ranching. Sand from the West End of Molokaʻi was mined and shipped to Oʻahu to make cement to build the freeways and hotels and to replace lost sand at Waikīkī Beach.

Gravel and rocks from East Molokaʻi were used in freeway construction on Oʻahu. Ranching on the East End contributed to deforestation, erosion and run-off. Once productive fishponds were allowed to fill with silt and the walls fell to disrepair following tsunamis and storms. Over-harvesting of marine resources relied upon for subsistence is a growing problem. Traditional resources such as the turtle cannot be used for subsistence under new federal regulations. Wildlife such as deer, goats, pigs, and birds are abundant on privately owned lands but are too scarce to be hunted on public lands.

Within the lifetime of those who are now adults on Molokaʻi, ocean resources have significantly declined. Commercial gathering of crab and ʻopihi have seriously diminished these particular resources. There are more and more boats from Oʻahu and Maui, especially backside. In 1993, all the ʻopihi from Kalaupapa to Hālawa was wiped out in 7 days of the zero tides in March and April. There was no ʻopihi to be gathered

during the summer. ʻOpihi on the West End is gone. Off island boats take massive quantities of ʻopihi from Dixie to the Northwest side.

Moemoe gill nets left in too long without being checked are negatively impacting fishing resources. Gill nets, lobster nets and bullpen traps seriously diminish the resources. Gill nets are the main problem for the fishing resources. Limu is not being gathered properly. Undersized marine resources are being harvested. Kaunakakai to Makakupaʻia is over fished. With 50% of high school graduates having lūʻau which commonly provide raw fish, raw crab, tako, limu, etc., the negative impact on these marine resources are tremendous. Restrictions should apply equally to commercial and subsistence users (Governor's Molokaʻi Subsistence Task Force, 1994).

4.1.1 Cultural Principles and Policies

Cultural Conservation and Management Zone

Establish a Cultural Conservation and Management Zone to include the Historic Cultural Sites and the Complexes of Nāʻiwa (Manawainui-Kahanui), Kaluakoʻi-Kāʻana-Puʻu Nānā (Kalaipahoa-ʻAmikopala), Kaunakakai, and Kawela Cultural Complexes; Cultural and Subsistence use and resource areas; a subsistence fishing zone of one-quarter (1/4) mile offshore on the North and West Shore and to the outside of the reef surrounding the remainder of the property (South shore). (See Cultural Resource Protection Map, page 59.)

Subsistence Fishing

Subsistence is defined as the customary and traditional uses of wild and cultivated renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, transportation, culture, religion, and medicine; for barter, or sharing, for personal or family consumption and for customary trade.

Permitted activities (activities to be allowed)

Persons who receive permission to access Molokaʻi Ranch lands or Trust lands can engage in the following subsistence fishing activities:

- Hook and line fishing for pelagic species.
- Hook and line fishing for deep sea bottom fish species.

- Hook and line net fishing for akule.
- Fishing with SCUBA gear permitted only for akule and ta'ape or for research.
- Trap fishing for deep sea shrimp.
- Trap and net fishing for kona crab and kuhonu crab.
- Throw netting permitted only for subsistence.
- Hook and line fishing from shore permitted only for subsistence (no competitions are permitted).
- Diving with spears permitted only in the daytime and only for subsistence (no spearing competitions are permitted).
- Diving for hand harvesting permitted only in the daytime and only for subsistence.
- Hand harvesting of a'ama crab is permitted at night and only for subsistence.
- Hand harvesting of ala'eke and kuhonu for subsistence only.
- 'Opihi collecting permitted from shore only (no diving) and only for subsistence.
- Harvesting of spiny lobster and slipper lobster permitted only by hand (no netting, no spearing) and only for subsistence.
- Harvesting of mana-moi (7-12 inch) throughout the year for subsistence only.
- For rescue, monitoring, religious, management, and research purposes only, use of equipment otherwise prohibited in this section is allowed.

Hunting

- Hunting will be for subsistence use only. The golden rule is "take only what you need for your family".
- MPL has a contractual obligation for commercial hunting and wildlife management on parts of MPL property until December 2007. The contractor has agreed that at the conclusion of that contract he will no longer seek to conduct commercial hunting on the property and will be agreeable to work for the Land Trust and/or MPL as a Wildlife or Subsistence Hunting Manager.
- As a goal of this management plan, the Land Trust and MPL will seek to reach a mutually acceptable agreement with the contractor to cease commercial hunting prior to December 2007. MPL acknowledges that it, alone, has a moral obligation to this contractor that may extend beyond 2007.

- MPL employees and Native Hawaiian residents of the Kaluakoʻi ahupuaʻa have seniority for hunting in accordance with traditional subsistence management custom and practice. MPL employees assume responsibilities to sustain the natural and cultural resources of the ahupuaʻa.
- Management Options include the following: The decision about when and how to implement a selected option would be made by Molokaʻi Ranch and Trust resource managers. The Hunting Resource Manager would need to work hand in hand with MPL's Livestock Manager so that the pasture lands remain healthy enough to support the livestock. This is especially critical in times of drought when the deer can intrude into the pasture lands, compete with the livestock, and create erosion problems.
- Kapu on Activities such as "No Hunting for Periods of Time"
- Kapu on Animals "No Hunting of Does"
- Kapu on Areas "No Hunting in Certain Districts"
- Kapu on Seasons "No Hunting During Certain Months"
- Kapu on Times "No Night Hunting"
- Kapu on Equipment "No Dogs for Deer Hunting", "Only Bow Zones"
- Education on Conservation and Preservation
- Education on Cultural History and Practices
- Education on Management Areas
- Education on Safety and Responsibilities

Access for Subsistence Fishing and Hunting

- In order to protect the cultural and natural resources, access on both MPL and Molokaʻi Land Trust lands will be managed.
- Hawaiian Access Rights be enshrined on the property titles for both MPL lands and Land Trust lands.
- Non-Hawaiian access will be determined by the landowner.
- Hunting methods (rifle or bow) and game seasons are as confirmed on the Hunting Map.
- Subsistence Fishing: Each year, an experienced Resource Group will recommend open areas for subsistence fishing based on protecting and not depleting the resources.

Stewardship of Cultural Sites

- Designate Kahu for complexes and sites including: Nāʻiwa(Manawainui-Kahanui); Kāʻana; Puʻu Nānā (Kalaipahoa-ʻAmikopala); Kawakiu, Kamakaipo-Lāʻau; Hale O Lono; Punakou. Designated Kahu for complexes and sites shall be

consulted prior to decisions being made affecting those areas.
- Involve cultural resource persons, as needed, in a cultural sites stewardship role for all other protected sites and areas.

Responsibility of Kahu and stewardship resource persons

- Ongoing Monitoring of Sites - annual assessment during the dry season
- Identify and prioritize sites for stabilization
- Develop resources for site stabilization and restoration
- Develop any interpretive signage, markers and trails of access
- Identify and prioritize sites for rededication
- Train stewards in mo'olelo, protocols and responsibilities of stewardship for each site
- Implement Management Plan
- Manage research requests

Access and Use of Cultural Sites

- Sites can be accessed to fulfill traditional and customary Native Hawaiian responsibilities for cultural, religious, and subsistence purposes.
- Education and training activities can be organized through the kahu or the resource manager.
- In some cases access may be seasonal, such as during the non-hunting season, rainy/muddy season.
- Use of sites and related protocols will vary according to use of the particular site, including but not limited to:
  - Monitoring its condition - integrity, boundary and buffer, setting access routes, relation

to overall complex or nearby sites and resources. Sites should be assessed once a year during the dry season.
  - Work to stabilize and restore sites. A plan for the stabilization and restoration of selected sites should be developed and approved by the State Historic Preservation Office.
  - Rededicated for specific spiritual and cultural purposes. Identify sites which have been in continuous use, those which have been rededicated and those which shall be rededicated.
  - Access and use of sites should follow protocols established by the Kahu and resource manager.

  - Protocols should address manner of approach, entry, use, and exit of site; chants seeking entry and granting entry to sites; appropriate hoʻokupu; chants and procedures to stabilize sites.
  - Kahu and stewardship resource persons should train stewards in moʻolelo, protocols and responsibilities of stewardship for each site.
  - There will be no commercial tours within the boundaries of Nāʻiwa (Manawainui-Kahanui) and Kāʻana-Puʻu Nānā (Kalaipahoa-ʻAmikopala) wahi pana.

Nāʻiwa

- An area to be defined by the attached maps inclusive of selected areas within Nāʻiwa and Kahanui ahupuaʻa be protected in perpetuity.
- Known sites be GPS'd (Global Positioning System) and marked on maps.
- Certain sites be limited (kapu) to use only by practitioners of traditional Native Hawaiian religion and culture (Puʻu Ano Ano, Nenewa, Kawahuna, mau Ana, mau Puʻu).
- Residents of Hina (Molokaʻi) be given preferred status for access and practice.
- Youth groups be encouraged to prepare, visit, and be groomed to assume kuleana to mālama these sites and related activities.
- Everyone, regardless of rank or status, be part of the (volunteer) task force.
- Any huakaʻi be accompanied by someone who has been trained and certified in the halau naʻauao for Nāʻiwa.
- Cultural and religious sites be identified, blessed, constructed, and staffed accordingly.
- Fences be reinforced, keys limited, and a schedule of access be developed.

This list does not limit or restrict future recommendations, as may be necessary.

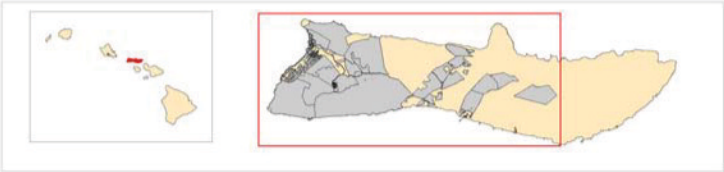
Kaluakoʻi Cultural District

The Kaluakoʻi Cultural District is to protect the historic and cultural sites and resources for current and future spiritual, cultural practices and subsistence uses. It includes the following sites and complexes:

- Punakou which is inclusive of Kāʻana, Puʻu Nānā, and Hoʻolehua
- Pakaʻa trail which is located in the entire Kolo Gulch
- Pakaʻa cultivation fields in the uplands of Kopala
- Kalaipahoa-ʻAmikopala and Kukui adze quarry sites
- Kamākaʻipō complex of sites in the entire gulch
- Kahualewa Heiau, mauka of Waikāne Gulch

- Heiau, mauka of Halena Road and between Kāhinawai and Oneohilo gulches
- Kawākiu Iki and Kawākiu Nui village sites and burials
- Dunes of Keonelele
- Various fishing koʻa along the shoreline
- Burial Site located west of Kaluakoʻi water tank in Kakaʻako Gulch
- All sites identified on the Maurice Majors maps

MOLOKA'I RANCH MASTER USE PLAN
CULTURAL RESOURCE PROTECTION



Data Sources:

USGS Hawaii Data Clearinghouse
Roads, Homesteads

Hawaii Office of Planning
Contours, Molokai Ranch Property, Place Names, Fish Ponds

Maurice Major, Archaeologist
West End Archaeological Survey Data

Cultural and Land Use Committees
Other Archaeological Sites, Makahiki Grounds, Land Use Districts and Overlay Zones

Prepared By: The Conservation Fund
October 7, 2005

- Molokai Ranch Property
- Homestead
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail

Proposed Land Use Districts
- Cultural Resource District
- Cultural Resource Protection Overlay Zone
- Subsistence Fishing Zone
- Partnership Subsistence Fishing Zone

- West End Arch. Sites (M. Major)
- Additional Archaeological Sites
- Kualapu'u Makahiki Grounds
- Ancient Fishponds
- Camp

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4.1.2 Environmental Principles and Policies

Erosion Control Measures

- Support the efforts of the Northwest Erosion Project that is currently working with various partners and landowners to remedy the erosion rate of the Kakaʻaʻaukuʻu Gulch, Kawaʻaloa and Moʻomomi Areas. Take the lessons learned from this project and apply to other areas of West Molokaʻi and develop erosion plans for specific priority areas.
- Keep domestic livestock from denuding the landscape through best management practices.
- Establish fire prevention and suppression plans for the West End properties.
- Augment vegetation recovering through reforestation/reseeding of denuded areas and develop revegetation plan/strategies.
- Preserve all puʻu and forested areas and increase forestry plantings to retain and improve moisture cycle.

"Limited Access"

Develop access use and construction plan that prevents erosion of dirt road ways and trails. The plan should limit any off road/trail (or on beach) activities with wheeled vehicles. "Limited Access" is defined as "providing access with a system of accountability (pass-key), no further development of road systems, and providing walking trail systems. Allow foot access for subsistence purposes, provided a waiver is signed.

Subsistence Fishing Zone

- To preserve inshore fishing/subsistence resources, create a subsistence fishing zone in the coastal waters along all of the Ranch's coastline property modeled after the Hui Mālama O Moʻomomi Subsistence Fishing Zone.
- Establish no commercial take zone 1/4 mile from the shoreline (north and west shore) and from the beach to the reef edge/breaker line (south shore).
- Establish demonstration fishing nurseries/kapu sites to insure reproduction of key subsistence food species (e.g. ʻopihi, moi, mullet, limu, lobster, ulua, uhu heʻe).
- Support protection for Penguin Banks from overfishing.

Moʻomomi to ʻĪlio Point

- Allow subsistence gathering on a limited access system.

- Develop a system of accountability and enforcement to limit the overtaking of resources.
- Manage the terrestrial coastal beach strand (use TNC Moʻomomi Preserve Management as a model).
- Explore management options - Land Trust and/or TNC extension of the Moʻomomi Preserve.

ʻĪlio to Kawākiu to Kepuhi

- Develop erosion plan for Kawākiu.
- Develop plan to preserve areas with pockets of native coastal vegetation.
- Develop a Kahu watch program.
- Install railing system to prevent motorized ingress into sensitive areas or on the beach.
- Restrict private permanent camp sites.
- Develop a camping management plan.
- No night diving or night gill netting.

All (current and future) MPL and/or Land Trust Development Areas

- MPL and/or the Land Trust will implement erosion plans for any future development.
- MPL and/or the Land Trust will recognize, preserve and enhance pockets of native vegetation (i.e. establish parks at these sites).
- No incompatible nearshore or beach activities (i.e. motorized vehicles on the beach, harvesting of sand, military exercises, jet skis).
- MPL and/or the Land Trust will recommend that the water company apply for conservation rate structures for individual owners.
- Any future harvesting or pumping of the water source, should not have adverse affects on the natural resources or deplete the source.

Kepuhi to Pālāʻau

- Conduct an erosion study comparing the stream/sediment output between a managed and an unmanaged gulch system.
- Control present extent of mangrove forest with strategies that integrate mangrove control and reduction of sedimentation.
- Maintain limited access to these areas.
- Develop wetland/fishpond restoration strategies.

Nāʻiwa/Manawainui/Kahanui

- MPL and/or the Land Trust will implement sustainable agricultural practices to minimize non-point source pollution.
- Keep watershed vegetated - both canopy and understory (except for cultural and agricultural sites).
- Use water conserving irrigation methods (e.g. drip irrigation)
- All dirt road construction and maintenance be done in a way to limit erosion.

Kaunakakai

- MPL and/or the Land Trust will work with the County Fire Department to implement fire suppression management.

Kamakou Preserve

- Recognize the Conservation Easement and maintain the management plans that The Nature Conservancy is mandated to implement.

4.1.3 Recreation Principles and Policies

The general structure or creation of recreational policies and procedures for specific areas on MPL land would be in accordance with the policies designed to protect the cultural and natural resources on the MPL lands. Any and all activities and recreational opportunities offered to visitors or tourists should also be available to residents of the island.

Community Advisors

To maintain the longevity and integrity of the recreational plan, cultural and natural resource persons who would be willing to advise the land owners on recreational activities should be identified and asked to provide advice, as needed. Areas of expertise for these advisors should include: natural resource preservation; Hawaiian culture and traditional Hawaiian practices; native indigenous plants and animals; subsistence and gathering; ocean safety and resource management; tourism; business management; agriculture; water management; and lāʻau lapaʻau.

Quality Activities

Recreational activities on MPL lands should emphasize quality not quantity and should be offered to visitors and residents alike. Culturally based activities that have an educational component, practice preservation of the island's natural resources, and are respectful of culturally and environmentally sensitive areas and sites should be promoted. These should include ocean activities that are sensitive to reef systems and committed to the preservation of all native ocean life. Cultural activities should be as authentic as possible, unpretentious and not created merely as a visitor attraction.

Activities such as community team sports and those which promote strong family and community relations should be encouraged. New attractions and recreational activities can include: Hula lessons; Makahiki games; lei making classes; cultural or educational hikes to replant indigenous Hawaiian plants;

cultural water activities that teach ocean resource preservation; ukulele lessons; regular story telling sessions about Hawaiian or Molokaʻi Moʻolelo (legends/history); Paniolo Cultural Center and Museum.

Horseback Riding
While horseback riding outside of pastures should be on designated trails, recreational riding on the beaches and in conservation resource areas will be restricted and regulated. In order to maintain safety on horse rides, trail systems need to be established and maintained. The constant treading of these animals has a devastating effect on plant life along designated trail systems. Trail rides alone are not economical. Trail rides should be offered as part of a larger experience that includes story telling and visits to culturally significant sites, lunch or dinner on the beach, and educational/cultural information or music.

Hiking
Cultural or educational hikes that limit the amount of people on each tour can be positive if strict guidelines are established and followed. The number of people on a hike should be no more than 10 at a time. Hikes have a low environmental impact. Hikes should contain a strong cultural and educational component and offer a "Molokaʻi style" - warm personal – experience. No commercial hikes should be conducted within the boundaries of the wahi pana of Nāʻiwa/Mimimo and Kāʻana/Puʻu Nānā.

Fishing
Reef fishing should be primarily for subsistence. No recreational provider on island is currently, nor should in the future, offer reef fishing as a visitor or tourist activity. Off shore or deep sea sport fishing in which charter boat providers practice "tag and release" does not deplete ocean resources and can in fact educate and give positive benefit to ocean research and study.

Hunting
Hunting on island should be managed carefully. Hunting should be permitted for the community in coordination with the MPL game manager for the deer and wild game population to be sustainable. A map of the water system used for cattle and wild game should be made available to guide the hunting and recreational management plan.

Camping
Encourage weekend camping no earlier than Friday or later than Sunday, unless Monday is a holiday. Longer than weekend camping can be considered but there should be some guidelines for such exceptions. The criteria for camping and for any exceptions should be created later in accordance with a management plan providing accountability, a permitting process, and a protocol for users with established consequences for non-compliance.

It should be based upon an assessment for each area of carrying capacity; how well the site is equipped for sanitation purposes; sustainability of the available resources, seasonal changes. Areas for Primitive and Modern camping should be designated (like the old Halena Boy Scout camp).

Campers should be conscious of the special Molokaʻi camping culture. Quiet hours for campers are between 10:00pm and 7:00am. "Primitive" camping (camping without pre-constructed facilities or structures/electricity) should primarily be a residential recreation as opposed to a visitor activity.

Pōhaku māuliuli (Make Horse) should be limited to day use only. Overnight camping should be prohibited (liability issue from the golf course). The landowner needs to provide signage so that the community knows of this policy.

Items or structures that are not permitted include: any and all permanent foundations dug or set in the ground and RV's or non-working vehicles. No firearms or fireworks are allowed when camping. As a general rule, "whatever is brought into a camping area should be taken out when you leave." Only temporary structures and items may be used such as: EZ Ups, tents, temporary structures with canvas tops, portable toilets or showers and gas generators.

Fire rings should be installed in designated camping areas. Campfires should only be constructed in designated fire rings set up by MPL and/or the Land Trust. Campers must always practice fire safety and adhere to all fire codes, standards and regulations.

A booking system should be designed for weekend camping on MPL and/or the Land Trust property. A fee for campers should be assessed when utilizing MPL and/or the Land Trust camping areas. The fee would include a security deposit which campers would get back upon inspection of the facility after use and a minimal fee that is put towards maintenance of camping sites (example: portable bathrooms, labor for cleaning and security, environmental safety, preservation and education, emergency response plan).

An emergency response/evacuation plan should be designed. Policies taking liability into account will be developed regarding: alcohol consumption, illegal drug usage on property, a fee structure (from other properties with camping areas), sanitation, and health problems. Also there should be signage for water, road and general safety when camping.

4-Wheel /ATV

The landowner should decide about 4-wheel drive vehicles. ATV vehicles should not be allowed on beaches and dunes. Recreational use of ATV should be discouraged on all lands.

Kayaking
Kayaking near or on the reef system is an islandwide issue that is not particular to the West End. It needs to be discussed in the context of the whole island.

Biking (Bicycle)
It is important to include biking as a recreational activity on MPL and Trust lands. Biking events have the potential of bringing worldwide exposure and financial benefit to Molokaʻi and MPL. A map of approved bicycle trails should developed.

Recreation Infrastructure
The paniolo heritage is important and should be exhibited with pride on MPL property through rodeo, workshops, riding lessons and a Paniolo Cultural Center.

A community recreational center and gymnasium should be rebuilt in Maunaloa for West End residents. Youth sports should receive strong support from the community and MPL, including inter-community team sports and events. The Maunaloa Little League baseball field and weight center should be renovated and improved. MPL and the Land Trust should partner with the County of Maui and organize youth playoffs or community league playoffs in Maunaloa.

The county should build a gymnasium next to the College as designated on the Molokaʻi Community Plan.

Recreational Providers and Fees
The landowner should decide if there should be just one provider of activities on Molokaʻi Ranch property for tourists and for the same activities desired by the local community. The landowner should also decide if community members should pay for designated activities on MPL property recognizing the need for insurance coverage, supervision of some activities, the cost of equipment and clean-up. Non-complying service providers and large groups of tours can deplete natural/cultural resources and should be discouraged.

4.1.4 Economic Development Principles and Policies

Goals
Molokaʻi has a diversified economy and efforts should continue to balance that diversity. Tourism should not be the main economic driver, but is recognized as an important component of a balanced diversified island economy. The expansion of the economy should be encouraged in places where existing infrastructure is under-utilized, e.g. Kaluakoʻi Hotel. Molokaʻi's natural resources needs recovery and enhancement.

Lands suitable for agriculture production and animal grazing should be protected now even if those lands are not currently in production, and the water resources needed to service these lands in the future should also be protected and reserved.

It is recognized that Molokaʻi will be in a very powerful economic position if it preserves its agricultural lands and the water resources needed to make those lands productive in the future. Further study needs to be undertaken to determine how much more suitable agriculture land can be put into production.

Molokaʻi needs further housing for the elderly as the population is aging. Land and housing (both rental and for purchase) should also be made available for current and future generations of Molokaʻi families in need of housing that is affordable, based on Molokaʻi incomes.

Molokaʻi needs a better-trained workforce. Communication needs to improve between the community and the County of Maui on long-term infrastructure needs for Molokaʻi.

Objectives and Strategies

- There is consensus agreement that The Kaluakoʻi Hotel should be re-opened.
- Focus on finding products and/or services that people want from Molokaʻi.
- Understand and overcome the identified problem that exists whereby many good ideas for economic stimuli are unable to be turned into actual jobs (e.g. slaughterhouse, ice house and coolstore projects).
- There is consensus that an economist, who understands the community's aspirations and the inherent opportunities and limitations of an island economy, be engaged to report further on what are likely economic drivers to stimulate the Molokaʻi economy and how to build capacity from within the community.
- The growth of Kaunakakai, Kualapuʻu and Maunaloa should be community-planned and should be allowed to happen naturally as community-driven demands require.

Rural Community Economic Development

- Achieve environmentally and culturally compatible economic development through rural community economic development strategies, i.e. sensitivity to scale, low population

density, and historic reliance on natural resources as the basis for economic activity.
- Develop and maintain a diverse and stable economic base and employment opportunities while preserving rural character and open space.

Agriculture
- The land suitability classifications should be the basis for agriculture land preservation.
- Farming of organic crops and crops to support traditional Hawaiian diets have proven to be economically viable on Molokaʻi and these activities should be expanded. The development of value-added products made from Molokaʻi-grown crops/livestock should be encouraged.
- Develop and implement a plan for the Molokaʻi Irrigation System.
- Agricultural methods should protect indigenous species and the public's health.

Tourism
- An economic objective is to fill the existing hotel rooms on the island.
- The local kamaʻāina market is important.

Jobs
- Immediate expansion of the island's employment base and the creation of family-support jobs, which Molokaʻi residents are qualified for (e.g. construction where up to 100 jobs have been identified for construction associated with the re-opening of the Kaluakoʻi hotel, to construct the Maunaloa Community Center, and to build new housing units).
- Other skills needed on Molokaʻi include marketing, health care, farming/ranching, accounting, teaching and middle management supervisory.

Community Development Objectives
- Preserve and improve the quality of life.
- Provide adequate educational opportunities.
- Maintain and improve community infrastructure.
- Provide affordable housing and daycare services.
- Maintain age and income diversity.
- Insure adequate job opportunities and commercial services within the community.
- Build the institutional educational and physical infrastructure needed to sustain long-term economic growth, i.e. Maui Community College, high school voc ed, NARA, learning centers.
- Expand entrepreneurial opportunities and create "value-added" development opportunities tied to natural resource base.
- Make each town friendly for walking and biking between destinations, especially for older

residents and physically challenged.

Housing

- There will be a continuing need in the future for more housing for Molokaʻi families at prices they can afford based on their respective incomes. Molokaʻi Ranch, the EC and others in the community, such as Habitat for Humanity, can coordinate the planning and implementation of future affordable housing projects. Molokaʻi Ranch can reserve lands at realistic prices around Kaunakakai, Kualapuʻu and Maunaloa to ensure the development of these for future affordable housing projects.
- Identify up to 100 acres around each of the towns of Kaunakakai, Kualapuʻu and Maunaloa for the future development of ʻOhana Neighborhood Communities to be developed by partnering various community resources such as Habitat for Humanities, Self-Help Housing and others, such as Department of Hawaiian Homelands (reference policy handout). Housing projects may be developed and managed by the Molokaʻi Land Trust and/or MPL or other appropriate housing entities. Lands above Kaunakakai for housing will be deleted to avoid impact on archaeological sites and natural barriers.
- Affordable housing and other community-facilities should be linked to each of the three communities to insure that they develop as balanced communities. The community does not support a large affordable housing project in one area only.

Kaunakakai

Makai Proposal

- Subject to environmental assessment and clean up, historic Kaunakakai Town should be linked to the sea on the makai side of Kamehameha highway with a series of parks, recreational activities, canoe club hale and cultural/educational facilities such as Mālama Park.
- Pedestrian friendly pathways and bikeways should be continuously linked throughout the Kaunakakai Town planned development area.
- Should be aware of the toxic waste. There is a lot of oil on the property. Testing of

contamination and ongoing monitoring is being conducted to hold Chevron accountable. A cleanup might be conducted as a Brownfields EC project.

Expansion Proposal

- Future development in Kaunakakai should protect the integrity of the town core. Expand Kaunakakai town to avoid archaeological sites and other natural barriers such as ocean, hills, and streams.
- Develop the gymnasium and swimming pool complex as part of the Community College complex. It would be part of the Community College.
- The area between the current landfill and the Industrial Park be designated as light industrial, including the area currently designated as agriculture, subject to an environmental and archaeological assessment (approximately 60 acres). There is concern that there is major drainage in that area. Light industrial can include recycling as well as retail.
- Have commercial development in and around Kaunakakai Town, while maintaining rural/agricultural character of the surrounding areas and respecting the unique effort to establish Kaunakakai as a special destination area for residents and visitors alike. There is also a need to establish and perpetuate affordable commercial space in Kaunakakai for local small business operators.

Fire Department

Ask the EC, on behalf of the Land Use Committee, to send a letter to MPL to continue its negotiations with the Fire Department for the sale of a 5-acre site with the sale subject to the following 6 conditions:

- It will be located on 5 acres mauka of the Community College (the old slaughterhouse site).
- Escrow will be set up to pay either the Moloka‘i Land Trust or MPL depending on the future ownership and completion of the Moloka‘i Ranch Community-Based Master Land Use Plan.
- County will mitigate drainage impacts and consult with Moloka‘i Enterprise Community, DHHL, Moloka‘i Education Center, and the Moloka‘i Planning Commission on the Environmental Assessment.
- The County agrees that the site will not be used as a County base-yard.
- The County will hold a community informational meeting on the proposed design and related improvements, including landscaping scheme, prior to finalizing the design work.
- The County agrees to do an archaeological assessment of the

site which should include the entire pu'u.

Kualapu'u
Organic papaya, asparagus and other high value crops have been identified as suitable for the land above Kualapu'u.

Maunaloa
Build a community center for Maunaloa.

Second Golf Course
Transfer the current designation for the Maunaloa 18-hole golf course over to the state-designated rural land at Kaluako'i.

Kaluako'i Development
Re-open Kaluako'i Hotel. MPL will provide an opportunity for the Moloka'i Land Trust to exercise a "put option" for a yet to be negotiated proportion of the shares in the Kaluako'i Hotel.

North of Kaluako'i Hotel, there are a number of zoned hotel lots, multi-family lots, and commercial lots. There is also a zoned hotel lot on Kaiaka Rock. Moloka'i Ranch has said it wishes to retain this zoning, but does not intend to develop these properties in the foreseeable future. These lands will be owned as follows:

- The Kaiaka Rock zoned site will be placed in the Moloka'i Land trust
- The Kawākiu multi-family site (TMK 5-1-03: Por. 1) and a portion of the hotel zoned site (TMK 5-1-03: Por. 14) which includes the archaeological sites at Kawākiu Nui will be placed in the Moloka'i Land Trust.
- Future development of other entitled lots in the north Kaluako'i area will occur to complement and support the present Kaluako'i Resort.

Hale O Lono
We recommend and support the provision of a comfort station and small boat marine support and small boat storage and trailer parking. We recommend and support partnership opportunities between the Moloka'i Land Trust and MPL to facilitate management of the Cultural Conservation Management Zone, including the provision of a resources management center. A full archaeological survey to identify and preserve the cultural and archaeological sites, including burial sites and adequate buffers, should be conducted to determine the appropriate location of these facilities.

Kaupoa, Kolo, Paniolo

Encourage the quarterly opening of Kaupoa to the community. Given the proximity of the Molokaʻi Land Trust to Kolo and Paniolo camps, we recommend and support the exploration of collaborative opportunities by MPL with the Molokaʻi Land Trust regarding future plans for their use.

4.1.5 Tourism Principles and Policies

Recommended Principles to Guide Tourism

- Hawaiian culture, both traditional and how it is lived on Molokaʻi today, is the foundation for activities including tourism.
- Education is fundamental for all aspects of tourism for the community, service providers, property owners, and visitors.
- Development for tourism must be kept to a more intimate scale for quality experiences for both community and visitors.
- Molokaʻi events and activities should have a strong community component.
- Advertising and marketing should reflect the authentic Hawaiian culture as well as Molokaʻi's rural life style and its people.
- The visitor industry and the community share a commitment to respect, protect, promote and perpetuate authentic Hawaiian culture in visitor sites and visitor activities on Molokaʻi.
- On Molokaʻi we want to share our authentic Hawaiian culture not sell it. We do not want to commercialize Hawaiian culture.
- Exposure to the Molokaʻi rural lifestyle and "rubbing shoulders" with the local community can enrich the visitors' experience.
- Conservation and protection of cultural sites on Molokaʻi is essential. Any use of these significant sites needs to be dealt with under the community process which is being developed and not determined by what visitors and vendors want to do.
- Community input and participation is important on major Molokaʻi Ranch visitor attractions and facilities changes.
- Kaluakoʻi resort redevelopment is essential to the island's tourism economy, including small meetings, conferences kamaʻāina travel, sporting events etc.
- Tourism on Molokaʻi Ranch should complement other Molokaʻi businesses.
- Tourism on Molokaʻi should target niche and special markets, including kamaʻāina.
- The Molokaʻi kupuna play an essential role in keeping the integrity of the Hawaiian culture.
- Molokaʻi Ranch should support Molokaʻi businesses and products as feasible and affordable.
- Islandwide, employees involved in tourism need cultural education specific to this island to assist in maintaining the authenticity of the Molokaʻi experience.

- Encourage personal and interactive modes of communication and education with visitors.
- When landscaping and designing tourist facilities, think in terms of the local environment, ecology and culture.
- Molokaʻi can offer Hawaiian culture in a modern day setting based on the past.
- Tourist activities should have authentic Hawaiian essence and an educational component for resource protection.
- Study to determine the tourism carrying capacity of Molokaʻi should continue at an island wide level.
- Future development of tourist facilities on Molokaʻi should make use of the work done by this Community-Based Land Use Planning Process.
- It is the hope of this committee that appropriate agencies and organizations (MVA, Chamber of Commerce, etc.) will take note of the recommendations of this committee when planning future strategy for this island.

4.1.6 Lāʻau Point Development Principles and Policies

The Lāʻau Point development will be the subject of a change of zoning application from the current Agricultural zoning to a Rural zoning designation, made to the Land Use Commission. The Land Use committee and the Enterprise Community will support that application.

- The development will be no more than 200 2-acre lots. When roads are added, the development will cover no more than approximately 500 acres of the Lāʻau Point TMK parcel.

- The attached archaeological and environmental protection map indicates the areas that are protected from subdivision. Other areas may be protected, depending on a further archaeological survey.

- To this end, MPL will guarantee:
    - The application to the LUC will show the subdivision lots lines at least 50 feet behind the State Conservation Zone.
    - Lot titles that are a minimum of 50 feet from the Conservation zone will have covenants preventing the building of houses less than 50 feet from the closest ocean frontage of the lot.

Other restrictions will be contained in the CC&Rs that are an addendum to this document.

- MPL will get legal advice to ensure potential or future landowners within the subdivision cannot change these CC&Rs.

- MPL's application to the Land Use Commission will promote the importance of subsistence activities in the Conservation Zone areas and other protected areas.

To this end, the following will be incorporated in the subdivision planning:

- Access to the protected areas will be by walking access only, with vehicular parking provided at both ends of the subdivision.
- The perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved.

Other protections to subsistence gathering are contained in the attached CC&Rs, including the joint control of the protected areas by both the Land Trust and the future lot owners.

- MPL will encumber the lot titles on the 200 Lāʻau Point lots so that a percentage of the lot sale revenue is paid to either the Molokaʻi Land Trust or a Community Development Corporation. The percentage of lot sale revenue the first time the lots are offered for sale will be 5% of the net income after the deduction of real estate commissions and other charges such as Legacy Land taxes.

The percentage of re-sale revenue, following the initial sale, to be encumbered to either the Land Trust or the CDC, will be decided between the Land Trust/CDC and MPL.

- Sales Strategy: MPL will attempt to attract buyers to the Lāʻau point subdivision who reflect the hopes and aspirations of the community. Brochures, sales material and other promotional documents will be vetted by the Land Trust or the EC for accuracy and adherence to their principles.

4.1.7 Water Plan Principles and Policies

- MPL will adhere to the principles and statements outlined in the attached Molokaʻi Properties Limited, EC Project #47 Water Plan, published in December 2004 and amended in July 2005.

- The critical principle agreed to by MPL in this document is that it will not, at any time in the future, seek permits for additional drinking water permits, other than the allocation under its permits existing at July 2005, from the Water Commission.

- MPL proposes to develop 1,000,000 GPD from the abandoned Kākalahale Well in the Kamiloloa aquifer for future non-potable needs to meet the demands for non-potable water this Plan proposes.

- The maximum water allocation available for the Lāʻau Point subdivision is set out in the Water Plan, as is future allocations for the growth of the Kualapuʻu and Maunaloa townships.

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5 LAND USE PLAN

The **Community-Based Master Use Plan for Molokaʻi Ranch** establishes five Land Use Districts: Cultural, Natural Resources, Rural Landscape Reserve, Agricultural, and Development. These districts define primary functions for the 65,000 acres of land under consideration in this Plan. (See Proposed Land Trust and Land Use Districts Map on page 9.)

In an effort to include all uses and activities for these lands, Overlay Zones indicate distinct yet complementary uses within the overall district. The Districts and Overlays serve a key function of this Master Land Use Plan, namely, **land use activities or management strategies must conform to the requirements of the District or the Overlay Zone.**

The Plan also proposes **new Ownership and Management for the 65,000 acres.** Significantly, eighty-five percent (85%) of the lands will either be protected by the Molokaʻi Land Trust, or will constitute part of a new conservation or agricultural easement in perpetuity. The easement lands will remain in MPL ownership. (See Land Ownership map on page 11.)

Ownership

Molokaʻi Land Trust:	26,200 acres
Conservation/Easements:	24,950 acres
Existing Easements:	4,040 acres
Other MPL Lands:	9,810 acres
Total	**65,000 acres**

5.1 OVERVIEW OF LAND USE DISTRICTS

The Land Use Districts describe the location, type and intensities of land uses that would be most appropriate on MPL land. Based on input gathered during the community-based planning process, the following Land Use Districts were decided upon:

- Cultural
- Natural Resource
- Rural Landscape Reserve
- Agricultural
- Development

The purpose and use of these districts is described below.

5.1.1 Cultural District

Purpose: The Cultural District is to protect the historic and cultural sites and resources for current and future spiritual, cultural, and subsistence uses. This district includes:

- Historic cultural sites and complexes.
- Nāʻiwa (Manawainui-Kahanui) and Kāʻana-Puʻu Nānā (Kalaipahoa-ʻAmikopala) and Kawela Cultural Complexes, and Kamākaʻipō Gulch.
- Cultural and subsistence use and resource areas.
- A subsistence fishing zone of a ¼ mile on the North and West Shore and to the outside of the reef surrounding the remainder of the property.

Use: Appropriate activities in the Cultural District include:

- The preservation and management of cultural and/or natural resources,
- Traditional non-commercial subsistence practices (i.e., hunting, fishing, gathering), and
- Cultural uses (e.g., religious ceremonies) regulated by traditions, customs, and community-based protocols and other appropriate rules and regulations.
- Tourism activities are deemed appropriate provided they are controlled by local Moloka'i residents in accordance with the approved management plan for the area.

MOLOKA'I RANCH MASTER USE PLAN
CULTURAL RESOURCE DISTRICT

Data Sources:

USGS Hawaii Data Clearinghouse
Roads, Homesteads

Hawaii Office of Planning
Contours, Molokai Ranch Property, Place Names, Fish Ponds

Maurice Major, Archaeologist
West End Archaeological Survey Data

Cultural and Land Use Committees
Other Archaeological Sites, Makahiki Grounds, Land Use Districts and Overlay Zones

Prepared By: The Conservation Fund
October 7, 2005

- Molokai Ranch Property
- Homestead
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail

Proposed Land Use Districts
- Cultural Resource District
- Subsistence Fishing Zone
- Partnership Subsistence Fishing Zone

- West End Arch. Sites (M. Major)
- Additional Archaeological Sites
- Kualapu'u Makahiki Grounds
- Ancient Fishponds
- Camp

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5.1.2 Natural Resource District

Purpose: This category applies to lands prioritized as having the greatest ecological value (for example, rarity and/or quality) for the island of Molokaʻi while facing the most imminent threats to their ecological integrity. This is illustrated on the "Molokaʻi Ranch Resource Summary: Natural Resources" map in Appendix 3.

The purpose of this district is to support the protection and restoration of significant natural ecological/biological resources, i.e., sensitive ecosystems, indigenous and endemic species, watersheds, and wildlife habitat, particularly where they have been degraded, but still remain relatively intact.

Use: Activities are consistent with the preservation of sensitive and threatened natural systems, habitats, and species. Management regimes in the Natural Resource District focus on:

- Restoration and erosion-control
- Native plant re-introduction
- Critical habitat protection
- Fire suppression
- Non-native invasive species control or eradication
- Revegetation or related efforts to bolster watershed health and groundwater and stream recharge

Management plans consistent with the overall guidance of the Master Plan for these districts will be developed to guide resource users of these areas and to ensure that the resources are not threatened. Natural resources will be monitored on a regular basis to assess its status and ensure its sustainability. See Natural Resource Protection Map on following page.

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MOLOKA'I RANCH MASTER USE PLAN
NATURAL RESOURCE PROTECTION

Data Sources:

<bol>USGS Hawaii Data Clearinghouse</bol>
Roads, Homestead

<bol>Hawaii Office of Planning</bol>
Coral Reefs, Contours, Molokai Ranch Property, Place Names, Fish Ponds, Protected Reserves

<bol>Hawaii Natural Heritage Program</bol>
NHP Rare Species, Native Dominated Landscape

<bol>Natural Resource and Land Use Committee</bol>
Land Use Districts & Overlay Zones

- Molokai Ranch Property
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail
- Na Ale Hele State Trail
- Protected Reserves
- USFWS Critical Habitat
- Coral Reefs
- Perennial Streams

Proposed Land Use Districts
- Natural Resource District
- Natural Resource Overlay Zone

Native Dominated Landscape
Plant Community Type
- Coastal Dry Shrubland & Grassland
- Coastal Mesic Forest & Shrubland
- Dry Cliff
- Lowland Dry Forest & Shrubland
- Lowland Mesic Forest & Shrubland
- Lowland Wet Forest & Shrubland
- Montane Mesic Forest & Shrubland
- Montane Wet Forest & Shrubland
- Wet Cliff
- Nonnative
- Eucalyptus / Pine Non-native Forest

Natural Heritage Program Rare Species
Element Occurrences* (1980 - 2004)
- Vertebrate
- Invertebrate
- Plant
- Natural Community
- Plant (recorded habitat range)
- Natural Community

Prepared by: The Conservation Fund
August 25, 2005

*An Element Occurrence represents an observed location that sustains one to several rare individuals. EOs shown here constitute all documented sightings within the past 25 years; present existence is not verified. More detailed information on taxon status and accuracy of sightings is available. NHP data are for planning purposes only; they are not confirmed and should not be regarded as final statements or substituted for surveys required for environmental assessments

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5.1.3 Rural Landscape Reserve

Purpose: Maintenance of the rural landscape – to preserve the traditional Moloka'i character and to provide scenic viewsheds and open space buffers – is a principle objective. This designation applies to areas where multiple uses (e.g., traditional, recreational, scenic) are appropriate. Areas identified for this district should include those lands where various types of land use may be suitable, but that contain neither high-value development potential nor critical or highly sensitive resources. (See "Land Use Districts" on page 9.)

Use: Appropriate activities using best management practices include:

- Sustainable ranching, landscape enhancement, traditional/cultural practices, recreational use, resource protection, public parks and open space preservation.
- Development should be limited to discrete areas to support the management and operations of parks and recreation areas.
- Residential use will be limited to those areas or activities necessary to support ongoing agricultural activity or other specific uses of this land.
- Infrastructure (e.g., roads) provided to support this development should be minimal.
- Construction/development standards could be used to restrict the building envelope, location of allowable structures, and lot size.

5.1.4 Agricultural District

Purpose: Perpetuating the traditional agricultural base of Moloka'i's economy is the purpose of this district. Areas in this category include resource lands where commercial agriculture and aquaculture operations should be encouraged. Areas most appropriate for this category are prime, productive, and potentially productive lands with topography, soil type, and other special characteristics, which create suitable conditions for agriculture and aquaculture cultivation that will not result in degradation of the natural landscapes. (See map "Agricultural Easement Land" in Appendix 4.)

Use: Agricultural activities focus on benefits to the Moloka'i economy as well as generating revenues for the landowner or lessee. In addition, the management plan should be developed with established best management practices (e.g., protection of groundwater, streams, and reef systems; control of erosion and sedimentation; encouragement of water conservation practices; minimized pesticide use and fertilizer; and encouragement of sustainable agriculture practices) and provide financial support to minimize these impacts. Appropriate uses are distinguished among three types of agricultural lands and lands for aquaculture:

- <u>Hi-value agriculture</u> – This category consists of the most productive lands, in particular those that receive natural water inputs/irrigation, have appropriate

soil types, and are at appropriate elevations, the State classes 1-4. Appropriate activities include the cultivation of diversified, specialty, high-value agriculture (e.g., seed corn). Niche markets, specialty crops (e.g., herbs, asparagus, persimmons, organics).

- Intensive agriculture – This category consists of productive lands that are high density but not necessarily high value. Agriculture in this area is labor, capital, or resource intensive, requires access to water (through rainfall or irrigation), and uses a lot of resources (e.g., water, pesticides, cultivation). Examples include higher density, row crops (e.g., corn, dry land taro). Usually State of Hawai'i classes 1-4.
- Extensive agriculture – Appropriate activities include crop cultivation (e.g., hay) and ranching/grazing and raising livestock. Residential use will be limited to low-density farm dwellings, and limited to those areas and activities necessary to support ongoing agricultural activity. Provisions in favor of agricultural activity should be applied to this zone to adequately accommodate and safeguard the agricultural environment (e.g., nuisance and right-to-farm laws). Usually State of Hawai'i classes 5-7.
- Aquaculture – This category of land supports the production and harvesting of aquatic plant and animal life in ponds and other bodies of water.

5.1.5 Development District

Purpose: The purpose of this district is to generate revenues necessary to stimulate employment and economic benefits for the community and to sustain MPL operations. This category applies to areas targeted by MPL for the purpose of revenue-generating development. MPL should work with the community to ensure that development projects are suitable and sensitive to their surroundings, preserve significant ecological and cultural resources, and provide economic benefit to the Moloka'i community.

Use: This broad designation is classified into 6 categories of use and activity based on the nature/character of the development types (See "Proposed Development Areas" Map, page 13):

- Visitor accommodation development—Areas zoned for the development or refurbishment of multi-family units and hotel-type accommodations for island visitors and associated structures/facilities/amenities (e.g., golf courses, restaurants) to support tourism. This includes the Paniolo Camp near Maunaloa and the resort and golf course expansion area north of the Kaluakoʻi Hotel.

- Residential shoreline development—Land that may be subdivided and sold for construction of homes. Development standards will likely include ocean setbacks consistent with the conservation zone.

- Community/Village expansion—Consists of land surrounding existing towns/population centers (Maunaloa, Kaunakakai, Kualapuʻu) set aside for the purpose of accommodating future urban (residential, commercial and/or industrial) growth and setting boundaries. (Refer to Community Expansion maps in Appendix 5.)

- Industrial/Office—This category includes lands currently zoned or appropriate for industrial use. Namely, this is the Industrial Zone shown in gray, located west of Kaunakakai, along Maunaloa Highway.

- Housing—Land in and around existing towns/population centers that will be provided to qualifying Molokaʻi residents at affordable prices for "traditional" and/or conventional housing. Exact locations to be decided.

- Public/Quasi-Public—Areas that include parks, schools, public safety facilities, health facilities, and landfills; for example the Kaunakakai Fire Station relocation and the Maui Community College expansion.

The potential for ancillary uses, including commercial retail, public cultural or educational facilities, exists in each of the above development categories. Small business activity should be focused within the Community/Village expansion zone.

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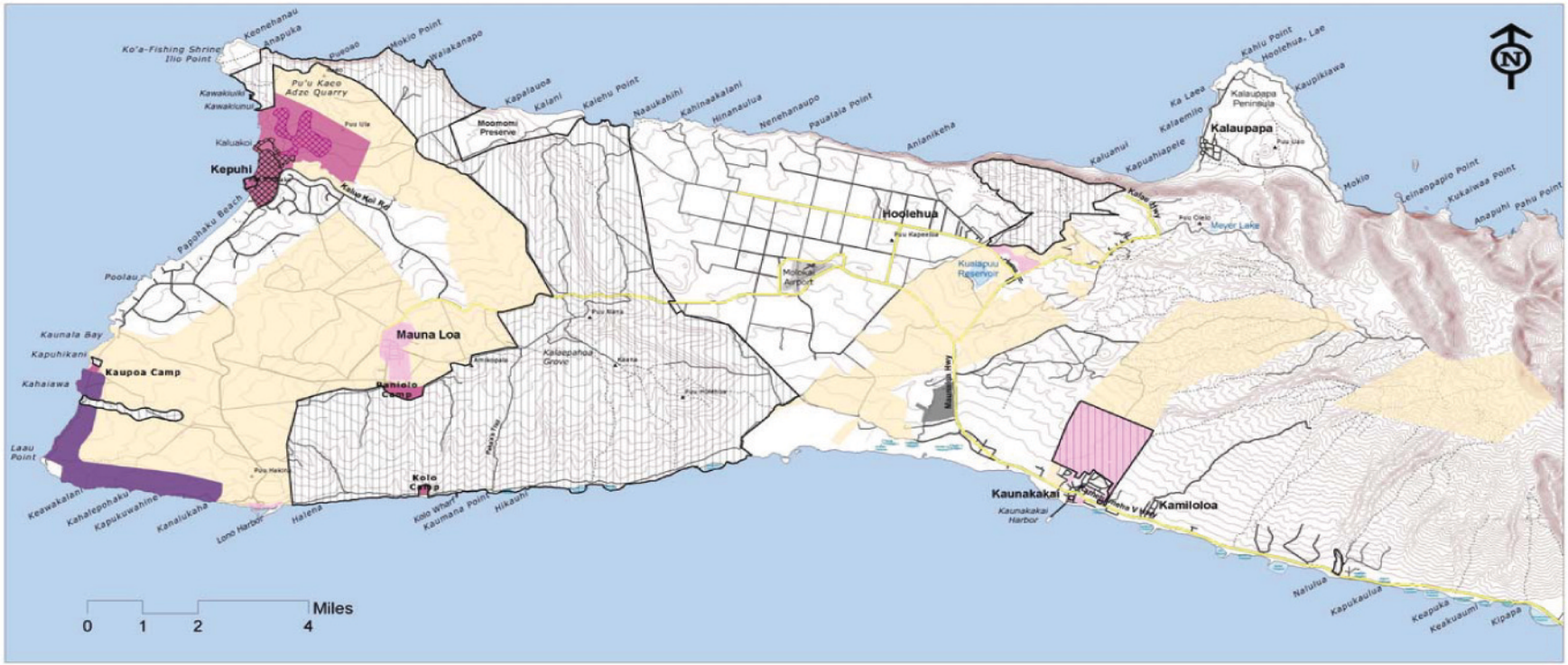
MOLOKA'I RANCH MASTER USE PLAN
PROPOSED DEVELOPMENT AREAS



PROPOSED DEVELOPMENT DISTRICTS

- Resort
- Residential Shoreline
- Community Expansion
- Industrial
- Other MPL-Retained Lands
- Potential Land Trust Property (26,400 acres)
- Alternate Golf Course at Kaluakoi
- Current Development at Kaluakoi
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail

Prepared by:
The Conservation Fund
October 5, 2005

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5.1.5.1 Projected MPL Developments

MPL's proposed developments are categorized as short-term and long-term.

Short-term Developments

- The re-opening of the Kaluakoʻi Hotel and associated facilities.
- The upgrading of the Kaluakoʻi Golf Course and the building of a new Maintenance Workshop on adjacent land.
- A 200-lot subdivision on 2-acre parcels at Lāʻau Point with its associated roads and sewage treatment facility.

Long-term Developments

- The designation of additional land adjacent to the existing Industrial Park for industrial use.
- A Community Plan designation and later zoning of 100 acres around each of the towns of Maunaloa and Kualapuʻu for community housing.
- The removal of the Community Plan designation for the 18-hole golf course on 500 acres of land below the Molokaʻi Ranch Lodge in Maunaloa, and replacement of it with a designation for a smaller 250-acre golf course on State zoned rural land north of the Kaluakoʻi Resort.

Other proposals to be noted

- The need to keep land set aside for the potential expansion of the Kaluakoʻi Hotel from the planned 152-room facility. No land is available on the existing site.
- The need to set land set aside for facilities that complement and support the existing hotel, such as staff housing and a cultural center.

5.1.5.1.1 Hotel

A major focus of this Land Use Plan is to re-open the Kaluakoʻi Hotel, built in the 1970s and abandoned by the previous owners in January 2001.

The current hotel has 144 rooms and a block of former staff accommodation that will be transformed into a 152-room hotel, eight more than when the hotel was operating.

The market focus will be a mid-range kamaʻāina hotel with a range of price points which will appeal to the local community desiring to experience the property, and to visitors who are prepared to pay rates equivalent to a 3-Star experience.

The hotel is to become a focal point for the local community for its functions and gathering, as well as the major focus for visitors, particularly the kamaʻāina market.

Elsewhere in this report it is concluded that the Kaluakoʻi Resort redevelopment (which includes the upgrading of the Kaluakoʻi Golf Course) is essential to the island's tourism economy, including small meetings, conferences, kamaʻāina travel, sporting events and the like.

The hotel renovation will reflect Hawaiian culture in a modern day setting but based on the past history of the area and the island. A visioning group will recommend interior design fittings of cultural significance and outdoor plants representing the island.

The Kaluakoʻi area has a rich cultural history and the aim is to ensure the hotel reflects this.

Activities for hotel guests will have an authentic Hawaiian essence and an educational component for resource protection. It will also give exposure to Molokaʻi's rural lifestyle.

A major factor in the community's desire to re-open the hotel is the job creation and the downstream impact on the Molokaʻi economy.

Design Considerations

Preliminary design, the process by which it is decided how the interior and exterior spaces are used, was completed during the Land Use Committee phase of Project #47.

Key changes from the current hotel layout are:

- Restaurant: Open lānais are created on three sides of the restaurant, overcoming the "cavern-like" feeling of the former restaurant.
- Banquet/Meeting Room: The former Paniolo Grill is converted to a meeting/ banquet room that will seat more than 200 people.
- New Coffee Shop/ Internet Café and redesigned Snack Bar are created on the north side of the grass courtyard.
- Pool: The pool and courtyard area have been redesigned for more functionality and better views of the ocean.
- Lobby/Administration Building: This has been redesigned so guests can enter from the roadway roundabout.
- Spa: The small meeting room to the north of the administration building to be converted to a Spa/ Lomi Lomi Massage building.
- Golf Pro Shop: The former large meeting room to the south of the Administration Building will become the Golf Pro-Shop. Golf cart storage to be available adjacent to this building.
- Current Golf Starter Shack: This building will be converted to a "19th–hole bar that will be open

during daylight hours. A Lūʻau area will be sited where the current practice tee is located.

- Golfers' Car Park: This area will be extended to accommodate double the amount of vehicles it can currently fit.
- Beach Cabana: This building, which will principally be used by the local community, will be moved and has been redesigned. It is now shown to the north of the hotel adjacent to a new picnic area.
- Hotel Units: These are redesigned to improve internal space by enclosing the lānai and adding a new outdoor deck to all units. The units will range in size from small studio to double units with linking doors.

An artist's impression of the design development is on the next page.

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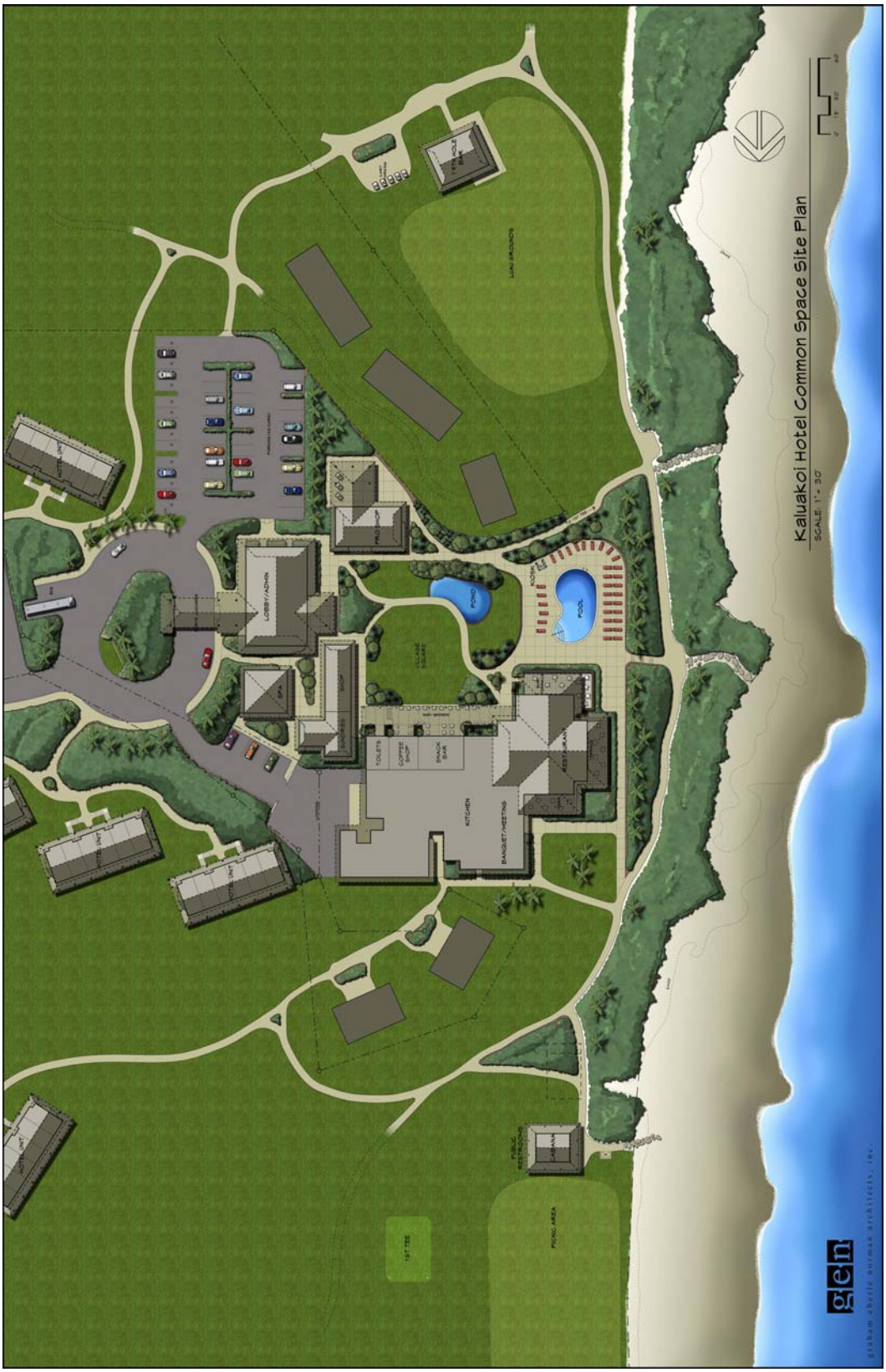
Kaluakoi Hotel Common Space Site Plan
SCALE 1" = 30'
gen
graham chorlie norman architects, inc.
LOBBY/ADMIN
SPA
SHOP
PRO SHOP
LUAU SQUARE
POND
POOL
TOILETS
COFFEE SHOP
SNACK BAR
KITCHEN
BANQUET/MEETING
RESTAURANT
LUAU GROUNDS
PITCH HOLE BAR
PUBLIC RESTROOM
CABANA
PUTTING AREA
1ST TEE
HOTEL UNIT

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Further steps in the process leading towards the re-opening of the hotel are:

- Obsolete Exterior Fixtures

Demolish obsolete exterior fixtures and clearing the site of overgrown trees and bushes. The old gazebo in the courtyard, the pergola around the building and other surplus fittings have been removed and dumped. Site clearing around the hotel units has been completed.

- Shoreline and Building Survey

Surveyors have completed a shoreline and hotel buildings survey to determine whether the plans match the exact location of the hotel buildings. This determines the accuracy of the plans.

- Mature Trees

Mature trees and shrubs that may be damaged during construction must be moved to new locations or bagged and stored in MPL's native plant nursery adjacent to the Kaluakoʻi Golf Course.

- Costings

Preliminary design drawings have been submitted to contractors throughout the State and the mainland for construction estimates.

These estimates will give MPL further insight into the likely cost of demolition and construction and a timetable for this part of the process.

- Molokaʻi Planning Commission

The Kaluakoʻi Hotel is sited within the Special Management Area (SMA) zone and any construction plans need the approval of the Commission.

Important aspects such as the relocation of the Beach Shack, the provision of additional parking adjacent to the new golf pro shop and the addition of lānais to the accommodation units will need the approval of the Commission.

- Construction Drawings and Interior Design

In late 2005, architect Rod Graham will begin to work on detailed construction drawings for the Hotel. This involves engineering work, mechanical, lighting consultants and a kitchen specialist who has already given his input into the preliminary design of the hotel kitchen.

An interior designer will also work with the architect to reflect the work of the visioning group in the hotel's interior design.

- Permitting and Regulatory

Once completed, construction drawings need to be submitted to the Planning Commission and the County for permits.

Business Creation And Community Support:

The Tourism committee of Project #47 determined that Molokaʻi Properties Limited, where feasible and affordable, should support Molokaʻi businesses and products.

The EC and Molokaʻi Properties Limited want to create a positive downstream impact from the re-opening of the Kaluakoʻi Hotel.

The EC's Project #47 is aimed at compatible development on Molokaʻi and much of the focus for this benchmark project is to create sustainable economic benefit from the project.

The current focus in relation to the hotel re-opening is the establishment of entrepreneurial small businesses associated with the Hotel.

The outsourcing of hotel operations includes:

- A laundry business that would contract hotel laundry and offer a cleaning service to other residents and accommodation establishments on the island.
- A specialist hotel cleaning business that would contract cleaning services to the hotel.
- A hairdressing and spa/massage business that will contract these services to guests on site at the hotel.
- A gift shop and sundry store that will be open to hotel guests, adjacent condominium owners and the community.
- A retail outlet offering ancillary golf equipment and Kaluakoʻi logo wear to golfers and hotel guests.
- The operation of the Beach Shack that will offer water equipment and sundry items to hotel guests and to the community who use the hotel beaches.
- Contracting services such as cultural tours, lūʻau events and the opportunity for visitors to learn about authentic Native Hawaiian practices such as net and pole fishing.

A key component to the hotel's success will be to ensure local labor is trained to assist in the construction of the hotel and once built to ensure that it is possible for the Kaluakoʻi Hotel to use locally-grown produce and protein products.

The key to this opportunity is to ensure that farmers are geared to maintain the quantity of quality of products needed. This will be a key focus of Project #47 in 2006.

5.1.5.1.2 Shoreline Residential

The Lāʻau Point subdivision proposal has been the most controversial of this Land Use Plan, with residents from all aspects of community life concerned about the threats posed from newcomers, the potential for desecration of cultural sites and the pristine nature of the area, and

the potential threat to subsistence gathering that takes place in the waters off Lāʻau Point.

MPL has continued to say that it needs an economic engine to this Plan; the ability to make a profit from a venture, which will give it the funds to open the Kaluakoʻi Hotel and to attract an investor to share in the capital, needed for many ventures under this Plan.

For many members of the Land Use Committee, the decision to support the Lāʻau development was an extremely difficult one.

The fact that large areas of the foreshore are to be put aside for resource protection, the lot Covenants, Conditions and Restrictions (CC&Rs) have been strengthened to protect the resources, and MPL will seek a Land Use reclassification from Agricultural to Rural has lessened the pain for many concerning this development.

The Land Use Committee went to extraordinary lengths to ensure that a subdivision development at Lāʻau Point will be set apart from typical subdivisions completed in Hawaiʻi.

The committee has structured subdivision covenants and reviewed protection zones for archaeological and environmental areas, studying how the 1,200 acres of protected shoreline can be maintained for all-time for subsistence gathering.

The aim is that people who buy lots in the subdivision will have to support conservation, cultural site protection and subsistence.

Many Land Use Committee members made at least two site visits to Lāʻau Point reviewing MPL's plans and giving their input.

PBR Hawaii Inc., planners for the Lāʻau Point development, were at the table with Land Use Committee members planning protection zones and designing setbacks to reflect the importance of the area for subsistence gathering.

The Subdivision

The Lāʻau Point development will be the subject of a change of zoning application from the current Agricultural zoning to a Rural zoning designation, made to the Land Use Commission. The community will have an opportunity to appear before the Commission, which will come to Molokaʻi to hear the application.

The development will be no more than 200, 2-acre lots. When roads are added, the development will cover no more than approximately 500 acres of the Lāʻau Point TMK parcel.

The "Lāʻau Cultural Sites" map (see Appendix 2) indicates the areas that are protected from subdivision. Other areas may be protected, depending on a further archaeological survey.

To this end, agreement documents between MPL and the EC will guarantee:

- The application to the LUC will show the subdivision lots lines at least 50 ft behind the State Conservation Zone.
- Lot titles that are a minimum of 50 ft from the Conservation zone will have covenants preventing the building of houses less than 50 ft from the closest ocean frontage of the lot.

MPL's application to the Land Use Commission will promote the importance of subsistence activities in the Conservation Zone areas and other protected areas.

To this end, the following will be incorporated in the subdivision planning:

- Access to the protected areas will be by walking access only, with vehicular parking provided at both ends of the subdivision.
- The perpetual right to Subsistence gathering will be noted on the titles of the areas to be preserved.

Other protections to subsistence gathering are contained in the attached covenants, including the joint control of the protected areas by both the Land Trust and the future lot owners.

Protected Areas

"Lāʻau Point must be the most environmentally planned, designed and implemented large lot community in the State. The residents would be educated and informed about the environment and culture, and taught to "Mālama ʻāina," take care of the land and sea."

This statement precedes the covenant document determined by the Land Use Committee that will place many restrictions on lot owners at Lāʻau Point, in order to attract only those who are concerned about conservation.

As an example, the Conservation Zone and other areas to be protected (approximately 1,200 acres) within the subdivision will be the subject of an easement held by the Land Trust, with guidelines for these uses to be determined prior to the construction of the subdivision and reflecting the importance of the area archaeologically and to subsistence gathering.

These protected lands will be part of an entity that is controlled equally by the

homeowners and the Land Trust. All decisions relating to this area: maintenance, subsistence protection, archaeological site protection, personnel, etc., will be the shared responsibility between the Trust and the homeowners, who will share equally in the costs.

MPL will attempt to attract buyers to the Lāʻau point subdivision who reflect the hopes and aspirations of the community. Brochures, sales material and other promotional documents will be vetted by the Land Trust or the EC for accuracy and adherence to their principles.

Covenants

The following are some of the key design restrictions and other covenants that will be implemented at Lāʻau Point.

Enforcement and substantial penalties will be put in place to ensure that the covenants are respected and upheld.

Restrictions to Prevent a Gated Community

- Ensure CC&R's reflect prohibition of gates across roads and access roads.
- Ensure no traffic lights be permitted on the roads.
- Ensure maximum two lanes, with one lane in each direction only.
- No street-facing walls or other barriers to be higher than four feet.

Further Subdivision

- Restrictions forever preventing the further subdivision of lots.

Restrict area of lot that can be disturbed for use

- Define a buildable area for each lot based on the site features that should be protected (i.e. unique rock features, arch. sites, etc.). Allow disturbance of no more than 30% of the lot. (For 2 acre Lot = +/-26,000 s.f. or about 1/2 acre).
- Require some level of maintenance of lot area to reduce fire hazard (remove dead wood).
- Building must be at least 50 ft in from the oceanfront property line.

Building restrictions to prevent erosion

- No building allowed on slopes of more than 50%.

Building Code

- Restrict building heights to 25′ (same as for Conservation District) and designs to a "kamaʻāina style" so that the homes will blend with the landscape.
- Restrict building height to one-story buildings. This is important in order to make the buildings discrete, or blended into the environment.
- Restrict building materials, colors and roof materials (non-reflective).

Solar Power

- Require that all buildings make use of solar panels for electric power.
- All houses shall be equipped with a primary hot water system comprised of a conventional solar panel hot water system, sized to meet at least 80% of the hot water demand of the respective houses.

General Energy

- All energy systems for residences shall be designed and constructed to meet conservation standards established by the Climate Protection Division of the United States Environmental Protection Agency.

Pesticide Restrictions

- Because of the proximity to the ocean, pesticide use will be prohibited.

Water Quality Monitoring

- Water quality parameters in storm water drains and in the ocean shall be monitored for the following:

  Temperature, salinity, total suspended solids, total nitrogen, ammonia nitrogen, nitrate and nitrite, total phosphorus, chlorophyll A and silicate.

Lighting – General

- All exterior lighting shall be shielded from adjacent properties and from the ocean.

Restrict water use for irrigation (*landscaping)*

- Require re-use and collection/storage systems for catchments.
- Only drip systems permitted for irrigation.

Storage Tank

- Require all houses to have at least a 5,000-gallon storage tank for water captured from roofs. Could be used for drinking water or for irrigation.

Covenants on drinking water use

- Designed to ensure an overall maximum drinking water daily use of 500-600 gals per day.

Type of drinking water covenants

- Double flush toilets.
- Specially designed showerheads assisted with water conservation.
- Must use dual water system split into potable and non-potable.

Landscaping

- Restrict landscaping to appropriate native and Polynesian introduced species that are drought tolerant and suitable for coastal locations
- Prohibit use of noxious or invasive species.

- Look to Arizona ordinances where plant type and xeriscaping is aimed at dramatically reducing water use.

Green architecture

- Require "green" architecture that incorporates recycled materials, energy efficient equipment, natural ventilation, solar and photovoltaic systems, etc.
- Study for appropriateness, energy efficient codes such as the LEED building design system.

Drainage systems

- Require drainage systems that retain any run-off within the disturbed area of the lot.
- Maximize recharge into the ground.
- Restore land areas that have eroded by re-establishing vegetative cover.
- Minimize impervious (paved) surfaces on the Lot.

Soil erosion

- Manage open space common areas to reduce/eliminate soil erosion by controlling deer and goats and restoring the vegetative cover.
- Put deer fence at the rear of the subdivision.

Restrict building coverage and size

- Establish a maximum allowable size of a dwelling. The most restrictive example is DLNR's restriction for homes constructed in the Conservation District; the maximum developable area of 5,000 s.f. defined as follows: The total floor area in square feet allowed under the approved land use. The floor area computation shall include: all enclosed (on three sides minimum, with floor or roof structure above) living areas; above grade decks in excess on 4′-0″ in width; garage or carport; swimming pools (*if allowed),* saunas or other developed water features (excluding naturally existing ponds, tidepools, etc---*if allowed.);* or any other standing structures, which are accessory to the approved land use. Site characteristics and the degree of pre-existing site disturbance may be further limiting factor in the calculation of maximum developable area.

Design Committee

- Require Strict Design Review and Approval Process.

Building Lines

- Will set restrictions on building lines in relation to the front of lots, or to minimize distance between houses and visual impact.

Fences/Barriers

- Will prevent any barriers at front of lots in order to minimize visual disturbance to the land.

Inability to Change CC&Rs

- Ensure that the final CC&Rs are unable to be changed.

Land Trust Representation

- As the Conservation Zone, flood areas, archaeological sites etc are subject to easements from the Land Trust; ensure that representatives of the Land Trust have adequate representation on the homeowners' association.

Property Renting

- Renting properties to third parties will be prohibited in the property covenants.

Lāʻau Community Education

- Every person whose name is on the property title of a Lāʻau point lot must commit to undergo a certain amount of education about the Molokaʻi community and its desires and aspirations. Suggested courses by Kupuna and others from the Maunaloa community.

Land management – Run-off

- Need to ensure that all current run-off from the land is stopped forever so the ocean is not polluted from tailings.

Conservation zone and "protected land"

- Unlike most other subdivisions, control of the conservation zones, archaeological sites, trails and native plant ecosystems would be an easement, but control would rest jointly with the Land Trust and the lot owners. Both will share the responsibility and cost to mālama (care for) the area. Kamākaʻipō Gulch and other areas identified as exceptional will be transferred to ownership of the Land Trust.

Archaeological sites and historic trails

- Protection and restrictions are to be written into CC&Rs as a result of a Cultural Plan, which shall have two major components- archaeological and cultural. The Plan will follow the community guidelines for Policies and Principles adopted for this Master Land Use Plan.

Native Species Plan

- Develop a preservation plan of identified endemic and indigenous species in co-ordination with qualified government agencies in consultation with qualified Molokaʻi experts.

Subsistence Plan

- Seek an ordinance for a non-commercial zone in order to support a designated subsistence management area.
- The Land Trust in consultation with the Maunaloa community will develop a subsistence plan. This plan will follow the community guidelines for Policies and Principles adopted for this Master Land Use Plan.

Access Plan

- Design a measure to restrict access to foot only between Dixie Maru and Hale O Lono in order to conserve resources, with an acknowledgement of Native Hawaiian gathering rights as defined by law for subsistence purposes, in a designated subsistence management area.
- CC&Rs to reflect community-driven access plan. Walking access only from each end of the subdivision to restrict area for subsistence. No access from road above subdivision in order to restrict for subsistence gathering to ensure that resources are not depleted.
- No parking all through the roads, to prevent parking and access other than at each end which will enhance the subsistence nature of access.

'Ohana Housing

- Must fit within the 5,000 square foot limit. Cannot subdivide this away from the primary lot. Cannot be a short term rental. Water restrictions will apply.

5.1.5.1.3 Industrial Expansion Area

The Industrial Expansion Area is to accommodate the island's long-term needs for industrial zoned lands. This area is located off of Maunaloa Highway and consists of approximately 180 acres surrounding the Moloka'i Industrial Park and the Landfill.

It is anticipated that area would be developed by the expansion of the existing Industrial Park in a mauka or northward direction as demand warranted.

The cul-de-sacs in the existing Industrial Park were designed to allow those roads to be extended which would eliminate the need to add additional connections to the Maunaloa Highway, connections that would be undesirable from a traffic flow perspective. (See map "Proposed Industrial Zoning Change" on following page.)

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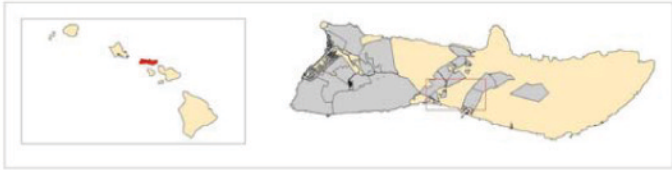
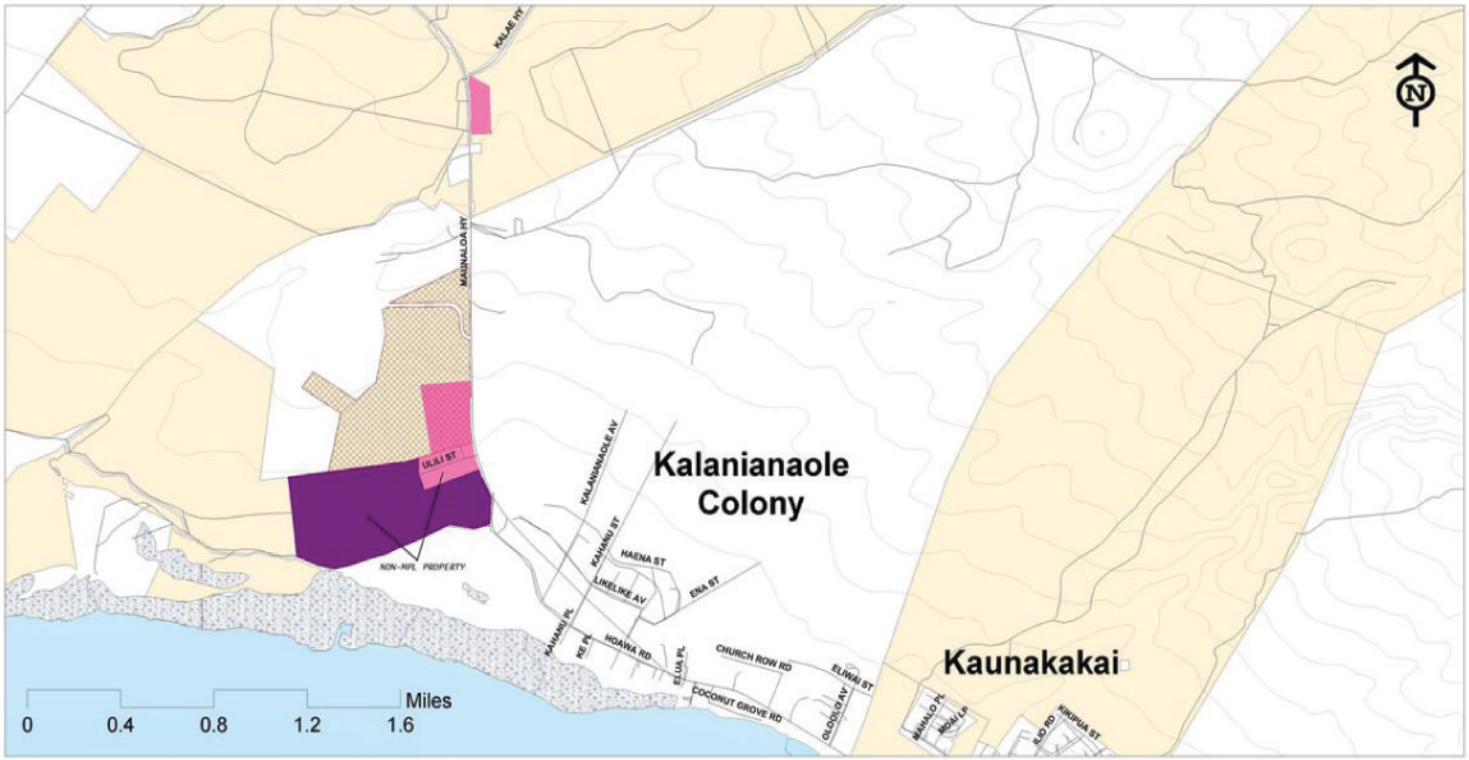
MOLOKA'I RANCH MASTER USE PLAN
PROPOSED INDUSTRIAL ZONING CHANGE





Molokai Ranch Property
100' Contours
Roads

Current Community Plan Designations
Light Industrial
Heavy Industrial
Proposed New Industrial District

Map Prepared By:
The Conservation Fund
August 10, 2005

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5.1.5.2 Community Housing

- The Moloka'i community will know the development plans for and growth of all MPL properties and continue to have input on future plans and development.
- MPL sets aside 200 acres for the following "Future Community Expansion" that will be decided upon by Moloka'i residents.
  - A total of 100 acres each around Kualapu'u and Maunaloa will be made available for community housing.
  - More than 1,000 acres above Kaunakakai will be donated to the Land Trust for future community expansion.

5.1.5.3 Projected Land Trust Urban Sites

The following sections describe the urban sites that are located within the Land Trust. (See Kaunakakai Map in Appendix 5.)

5.1.5.3.1 Junior Roping Club Site

This 5-acre parcel (approximate) is located in Kaunakakai on the west side of Mohala Street between Kamehameha V Highway and the Ocean. The land is currently zoned light industrial; a Maui County designation that allows for a wide range of uses including commercial operations.

A mapped, but unimproved road running east-west abuts the mauka boundary of the site. Future development of this site will likely trigger roadway improvement requirements. Currently, the Moloka'i Junior Roping club has a lease on the site for a nominal consideration that runs to December 4, 2006.

They also have a 5-year option that would extend the lease date to December 4, 2011. The site is an assemblage of several smaller parcels. The conveyance of the parcel to the Land Trust will be subject to the Roping Club lease.

5.1.5.3.2 Community College

This 3.213 acre parcel fronting Kamehameha V Highway lies immediately west of the existing 2-acre campus. The parcel was included in the original master planning for the campus and was slated for additional classrooms, parking and a theater. The University was given a 10-year option to acquire the parcel at fair market value running from the date of the original parcel donation together with an additional 10-year right of first refusal thereafter.

5.1.5.3.3 Kaunakakai Fire Station

The existing Kaunakakai Fire Station is subject to flooding and is no longer large enough to accommodate the needs of the community. Accordingly, the County approached Moloka'i Properties in 2003 about acquiring a suitable replacement site. Subsequently, in the course of the master planning effort, Moloka'i Properties committed to the community that it would not sell lands in the Kaunakakai area without community

input while the planning process continued.

As the County was desirous of moving forward with the planning and acquisition of a replacement site, they brought their plans to the Land Use Committee. Over the course of a few months and several meetings, an acceptable 5-acre site was agreed upon which could satisfy the Fire Department's needs for a central location, good access and drainage, as well as address the community concerns that were raised.

The site is located on lands scheduled to go to the Land Trust on the east side of Ala Nui Kaʻimiʻiki Street near Kākalahale Street. The purchase price has been established at $100,000. If the transaction closes before the Land Trust is established the proceeds will be held in escrow for the Trust's benefit. The County, which is responsible for the needed zoning change and subdivision, is currently undertaking soils testing and other preliminary planning activities.

5.2 OVERLAY ZONES

The Overlay Zones provide additional policies and controls to areas that have unique characteristics. The Overlay Zones consist of the following:

- Hunting
- Subsistence Fishing
- Trails – Historic and Recreation
- Natural Resource
- Recreation
- Cultural

Also, note that traditional rights of access and use – for subsistence-based hunting, gathering, fishing and performance of important cultural and spiritual activities – were considered with other District uses. Respecting these rights, managing access, enforcing rules, and monitoring adherence to established policies and protocols are an important part of the Community-Based Master Plan.

5.2.1 Hunting

The "Molokaʻi Ranch Resource Summary: Hunting Map" in Appendix 6 shows the areas that are to be used for each type of hunting. These zones have a combined area of almost 40,000 acres. A safety buffer surrounds Maunaloa town and other populated areas. The rules guiding subsistence hunting are in the Management Policies.

Bow hunting is designated in two regions in the southwest corner of MPL property, near Lāʻau Point. The Kaupoa Hunting Area 11 has an area of about 6,000 acres and the Ka Ihu Loa Hunting Area 5 consists of 4,000 acres, for a total of approximately 10,000 acres.

The areas established for rifle hunting are located in the northwest corner of the MPL property, near ʻĪlio Point and in the south, near the Pālāʻau Homesteads. The combined area is approximately 17,000 acres.

Lastly, there are hunting areas in the central properties that have other

management: the Kākalahale and Kamakou Hunting Areas.

5.2.2 Subsistence Fishing

The Subsistence Fishing Zone surrounds most of the western Ranch lands. This fishing zone includes areas from the coast to the outer edge of the reef or where there's no reef, out a quarter mile from the shoreline along the 40 mile perimeter of the property, including the partnership lands.

The rules guiding subsistence fishing are also in the Management Policies in Section 4.1.1. Although the areas indicated on the map by hatch marks are not owned by MPL, they are still included in the subsistence fishing zone. They are Lāʻau Point, Pāpōhaku Beach, ʻĪlio Point, the area between Ka pālauoʻa and Kaiehu Point, and the area between Moʻomomi and Nāʻiwa.

Proper management will depend on cooperation by these other landowners: The Nature Conservancy, DHHL, Pāpōhaku lot-owners, and the Park Service, State of Hawaiʻi DLNR and the U.S. Coast Guard. (See Subsistence Fishing Management Zone Map in Appendix 7.)

5.2.3 Recreation and Trails

The Molokaʻi Ranch lands have a significant number of trails, both for recreational activities, such as biking, hiking and horse riding, as well as for cultural practices, such as walking the Historic Trail mapped by Monsarrat for subsistence fishing and gathering. Recreational uses should be in accordance with policies designed to protect cultural and natural resources. This section documents the access routes and existing trails. The decisions regarding use are hereby deferred to the land-owner(s). Use for the trails is to be consistent with the land district or applicable overlays in which they are located. (See Recreation/Trails Map in Appendix 8.)

- **Hiking and Biking Trails**

The trails map shows that many of the recreational trails for hiking and biking begin near Maunaloa town and lead hikers and riders towards the coast. However, most of them are currently inactive and in need of maintenance. There are also two Na Ale Hele State Trails that lead hikers through central Molokaʻi Properties Limited land.

- **Horse Trails**

The horse trails shown are distinguished as Active, Active/Seasonal, and Less Active trails by their respectively colored dotted lines. The primary active trail is a loop near the Paniolo Camp in Maunaloa.

- **Historic Trails**

The Historic Trail, as documented on the Monsarrat map shows that it is a cultural trail. It runs along the west coastline around ʻĪlio Point and then along the north coast to the Moʻomomi Preserve. There is also a 2-mile cultural trail that runs from just east of Maunaloa down to Kolo Wharf, called Pakaʻa's Trail. The Government Road from Kaunakakai to Kolo, mapped by Summers in "Sites of Molokaʻi" is also shown.

5.2.4 Natural Resource

The purpose of this Overlay Zone is to indicate the sensitive ecological resources that are in need of management. Large areas are especially prone to erosion, and in need of watershed management. The protection of these areas is critical to the preservation of the coral reef to the south of the area, as well as to the continued health of the Moʻomomi Preserve to the north. Both shades of green on the map illustrate important ecological areas that support rare species, native ecosystems, and/or coastal habitats. (See Natural Resource Protection map on page 83.)

5.2.5 Cultural

The purpose of the Cultural Resource Overlay Zone is to identify areas with significant cultural resources regardless of the land use district in which they are found. This overlay zone will be subject to management policies that ensure the protection and appropriate interpretation of the cultural resources found there. (See Cultural Resource Overlay in Appendix 9.)

The Cultural Overlay Zone includes the Kaunakakai Cultural District, which is bounded by the Kaunakakai Gulch on the east and the Kaunakakai-Kalamaʻula ahupuaʻa boundary on the west. This area is important to the preservation of the unique Molokaʻi petroglyphs, extensive agricultural sites, house sites, and heiau found in this district.

This zone includes the 2,774-acre Kamakou Preserve, which is managed by The Nature Conservancy under a conservation easement from MPL. Lastly, it includes the area designated for the future Lāʻau Subdivision. This area is rich in sites, but is included in the Cultural Resource Overlay instead of the Cultural District because the sites are spread out and less dense in concentration than most areas within the district.

5.3 OWNERSHIP/MANAGEMENT

This section outlines the division of MPL land according to ownership and management. The Land Use Plan concentrates MPL's economic development in a limited area, and conserves as much land as possible for the citizens of Molokaʻi. Thus, with approval of this plan, 85% of the land will be protected by the Land Trust, or as part of a conservation/agricultural easement, in perpetuity. The remaining 15% will continue to be owned and managed by MPL. The following maps and narrative demonstrate the land

distribution and use under this ownership and management arrangement. (See map "Proposed Land Ownership and Management" on page 11.)

5.3.1 MPL Lands

The 10,000 acres (approximate) retained by MPL/Molokaʻi Ranch are depicted in gray and include: community expansion zones, visitor accommodations, golf courses, and residential shoreline development. The community expansion zones are demonstrated in the smaller town maps by diagonal black lines. These are the areas set aside for the future growth of these townships. In the case of Maunaloa, it includes the land to the north and to the south. Kaunakakai and Kualapuʻu are focusing their growth mauka of town, instead of allowing sprawl from east to west.

The land designated with visitor accommodations includes the existing establishments:

- The Lodge at Maunaloa
- The Beach Village at Kaupoa
- The Kaulakoʻi Hotel
- Paniolo Camp
- Kolo Camp

The Kaluakoʻi Golf Course is located near the Hotel. It will continue to be owned and managed by MPL. A future golf course is proposed for the land north of Kaluakoʻi as a substitute for the golf course at Maunaloa designated in the community plan.

The residential shoreline development component of MPL lands consists of a maximum 200-lot subdivision at Lāʻau Point. While this development has been the controversial aspect to the Plan, MPL will target development to finance the restoration of the Kaluakoʻi Hotel and the renovation of the Kaluakoʻi Golf course. The planning process has guaranteed that the Lāʻau project will mean no increase in the Ranch's potable water use; it will follow strict cultural and environmental guidelines, and will protect traditional subsistence gathering in the area.

5.3.2 Community Trust Lands

The community will control the Molokaʻi Land Trust, which consists of 26,200 acres. Going from east to west, the Trust lands include:

- Cultural sites at the base of the Kawela Plantation (34.895 acres)
- Lands mauka of Kaunakakai for community expansion (1,160 acres)
- The Makahiki Grounds mauka of Kualapuʻu and up through and including the cliffs of Nāʻiwa
- A large strip of land from Kawakanui beach, north to ʻĪlio Point, stretching around to the Molokaʻi Ranch boundary with Department of Hawaiian Homes Lands in Hoʻolehua and down to Pālāʻau and over to Hale O Lono Harbor and including the Kāʻana area

- The fishing village 15-acre site adjacent to the north boundary of Kaupoa Camp
- Kaiaka Rock
- Plus other sites as shown on the Land Trust map

5.3.3 Lands Owned by MPL with Easements to Land Trust

A third ownership category of lands illustrated on this map are those that belong to a partnership of MPL and Molokaʻi Land Trust. The Molokaʻi Land Trust would hold easements over these Agricultural Reserve and Rural Landscape Reserve Lands, while MPL would retain the title.

An easement provides permanent dedication of lands for specific uses that are registered on the land title deed. In this case, the Molokaʻi Land Trust would enforce the dedicated use of the specified 24,950 acres for Agricultural and Rural Landscape Reserves.

The Agricultural Easement Lands are located around Kualapuʻu and south of the town to the southern shore, as well as lands at the western end of the property that were formally used for pineapple cultivation. These lands will be dedicated for agriculture and only single farm dwellings can be built there. These 14,118 acres are depicted with diagonally striped lines on the "Proposed Land Ownership/Management" map.

The Rural Landscape Reserve was created to protect views and the rural character of the island, and to forever prevent development from happening on these lands. Five large parcels are dedicated for a Rural Landscape Reserve Easement, totaling 10,832 acres. These areas are located:

- North of the currently zoned land at Kaluakoʻi,
- Surrounding the Pāpōhaku Subdivision,
- North of the community expansion zone at Kaunakakai, and
- One large parcel adjacent to the proposed development at Lāʻau Point.

5.3.4 Lands Owned by MPL with Easements to Other Entities

The final ownership category consists of those lands owned by MPL, but protected by existing conservation easements. There are two parcels of land with this status. These areas are known as the Preserves, i.e. the Molokaʻi Forest Reserve and the Kamakou Preserve. Molokaʻi Ranch, Ltd. granted a perpetual conservation easement to The Nature Conservancy to protect the Kamakou Preserve and the Molokaʻi Forest Reserve is leased by DLNR on a monthly basis. Both contain important water resources. These two properties have a combined area of 4,040 acres.

6 WATER PLAN

6.1 MOLOKAʻI PROPERTIES, LIMITED EXISTING WATER SYSTEMS

Molokaʻi Properties, Limited (MPL) operates 3 water systems, two of which are subject to State Public Utilities Commission (PUC) regulation. All three systems are subject to regulation by the State's Commission on Water Resource Management (CWRM).

6.2 KALUAKOʻI SYSTEM (MOLOKAʻI PUBLIC UTILITIES, INC. (MPU)

MPU services the existing Kaluakoʻi Development. Its source is Well 17 in Kualapuʻu which has a water use allocation of 1,018,000 gallons per day (GPD). The following is the permitted allocation established by the Water Commission based on the then existing uses:

Kaluakoʻi Hotel	67,000
Condos	186,000
Residential	51,000
Golf Course	400,000
Beach Park	26,000
Nursery	18,000
Filter Backwash	100,000
Moloka'i Ranch	0
System loss	0
Kaluakoʻi Total	**848,000**
MIS System Use Charge	94,000
Kualapuʻu Town	76,000
Total	**1,018,000**

In this paper "current use" is defined as the average daily use over a one-year period. Current use of the MPU system, with the Kaluakoʻi Hotel closed is approximately 800,000 GPD.

At the time the Kaluakoʻi System was acquired by MPL in December 2001 it had been out of full compliance with Department of Health Drinking Water Standards since 1993. Those standards, which went into effect nation-wide, required drinking water systems using surface water or systems using groundwater under the influence of surface water to meet higher water quality standards to provide a greater margin of safety to their customers.

That non-compliance led to a Consent Order that MPL inherited from the previous owners of Kaluakoʻi. At the time of acquisition, the compliance deadline was extended to September 15, 2004. A one-year extension was subsequently requested and approved. MPL could have satisfied the Consent Order by either using a dedicated pipeline from Well 17 (an alternative that was abandoned) or by installing new treatment facilities that could meet the current standards. New filtration equipment was installed and became operational on September 14, 2005.

Essentially, MPU starts with clean, compliant water as it leaves Well 17. However, use of the Molokaʻi Irrigation System (MIS) to convey this water to the west end mixes in surface water creating

the need for treatment to again make it safe for drinking water purposes.

6.3 EXISTING SYSTEM LOSSES

Much has been said about MPU's system losses and MPL acknowledges that the system it inherited had losses of approximately 200,000 gallons per day.

Prior to the upgrade, the largest water loss was the approximate 100,000 gallons per day consumed in backwashing the sand filters at Puu Okoli that were part of the system MPL inherited. The old Ag lines and the open reservoir between Mahana and the entrance to Kaluakoi were also historically large water wasters. Completion of the system upgrade allowed 17,500 lineal feet of this old pipeline to be removed from service.

All systems have some level of loss. Most systems aim for losses of about 10% -- a reasonable target for the Kaluakoi System at build-out.

6.4 WAIOLA O MOLOKA'I, INC. SYSTEMS

Waiola Waiola is the Public Utilities Commission regulated entity that supplies drinking water to the remaining communities on Moloka'i Ranch land.

The Ranch has been in the water business for more than 100 years. Its role in this area expanded significantly when it inherited the drinking water systems for Maunaloa and Kualapuu when their lessees abandoned those plantation towns.

Waiola also supplies water to Kalae/Kipu and the Moloka'i Industrial Park/Manawainui areas. Prior to 1993, all of this water was supplied from the Ranch's surface water system. With the imposition of more stringent standards, these systems shifted from surface water to purchased well water.

The Kipu/Kalae system (approximately 20,000 gallons per day) is supplied with well water purchased from the Department of Hawaiian Homelands (DHHL).

The Kualapuu system (76,000 gallons per day as noted above) is supplied from Well 17 via a bulk water purchase agreement with MPU.

Initially, Maunaloa and the Industrial Park were supplied with water purchased from the County Board of Water Supply, from its well in Kualapuu. When that agreement came to an end in May 1998, MRL built a new treatment facility that meets the new standards.

6.5 MOLOKA'I RANCH MOUNTAIN (AG) SYSTEM

The initial water system of the Ranch is more 100 years old and moves surface water approximately 20 miles from the central mountains of Moloka'i to the far corners of MPL's holdings through a combination of six and eight inch pipelines. Currently, the surface water system has 3 primary uses:

1. Feed water for the Puʻu Nānā water treatment plant that provides potable water for Maunaloa and the Industrial Park.
2. Irrigation water for landscaping of Maunaloa Village, the Lodge and Kaupoa camp.
3. Water for the Ranch's livestock operations.

The system has an average yield of approximately 500,000 gallons per day, but as with all surface water systems, its yield is highly weather dependent. Seasonal flows of 1,300,000 gallons per day can be achieved during winter storms, while summer drought lows of 65,000 gallons per day have occurred.

In many ways the Ranch's surface water system is like its much larger counterpart on Molokaʻi, the MIS, which is also a surface water system.

While numbers vary, one estimate of the average yield of the MIS is 3,500,000 GPD making it about seven times larger than the ranch system in terms of yield. In terms of storage, the Ranch's 44,000,000 gallons of storage pales in comparison to the MIS's 1.4 billion gallons, which is more than 30 times greater.

Both are highly dependent on the weather and rely heavily on winter rains to sustain demand during the drier summer months. One area of difference between the two systems is the MIS's ability to pump high-level ground water to supplement gravity surface water flows while the Ranch system relies totally on surface water delivered by gravity. Surface water is the basis for our agricultural industry on Molokaʻi as it is much cheaper to deliver to customers.

The typical energy costs for MPU to raise water 1,000 feet to the surface (the elevation of the Kualapuʻu Wells) is $1.00 per 1,000 gallons. Without high energy costs, water from Molokaʻi's existing surface water systems can be kept affordable which is a critical factor to the future of farming on Molokaʻi. Inexpensive water is the key to expanding agriculture on Molokaʻi and Molokaʻi Ranch supports this wholeheartedly.

6.6 MPL AND THE MIS

Since the first days of the Kaluakoʻi development, transmission of Well 17 water to the Resort utilized the MIS distribution system and the old Libby, McNeill & Libby irrigation pumps, pipelines, and reservoirs. From the MIS reservoir to beyond the Kaluakoʻi reservoir at Puʻu Nānā.

Currently MPU leases MIS transmission capacity for $135,000 per year. Based on current usage, that is equivalent to about 51 cents per 1,000 gallons for the right to use a portion of the excess capacity of the existing infrastructure. Other users pay 31.5 cents per 1,000 gallons, plus an acreage assessment. To MPL's knowledge, the Ranch is the largest financial contributor to the system.

In addition MPU "pays" the MIS "a systems loss" equal to 10% of the water it transmits.

MPU does not use MIS water. It puts in 1,111,111 gallons of water for every 1,000,000 gallons it takes out at its Mahana pump station. Over the course of a year, this additional input amounts to about 30,000,000 gallons.

When MPL acquired the assets of Kukui (Molokaʻi), Inc. and MPU in December 2001, Kukui had a pumping deficit of 30,000,000 gallons. MPL made up this deficit by mid-February 2002.

Since then MPL has been in arrears only once between April 5th to August 19, 2004. It was the result of the change-out of the old Detroit diesel engine with a new Caterpillar four-stroke diesel that is expected to be a more reliable power unit to drive the Well 17 pump. In hindsight, MPL should have built up greater reserves prior to taking the Well 17 motor out of commission.

This breakdown has, quite rightly, raised concern from homesteaders that a future breakdown could lead to a similar occurrence. MPL proposes that it advances the MIS system 100 million gallons and retains that surplus in the system at all times. That amount of water would equate to about 4 feet of depth out of the 52 feet of usable storage capacity. In the event of any future breakdown at Well 17, this surplus would more than cover any conceivable repair time. MPL also proposes that Preference farmers are able to use this surplus in the event of a drought emergency.

6.7 WATER NEEDS GOING FORWARD

MPL has stated that it **DOES NOT** need any more drinking water than currently allocated for the proposed Master Use Plan. Under this Plan, MPL will abandon the Waiola Well application. If this Plan is approved, MPL will sign covenants preventing it from ever seeking further water permits from the Water Commission. This Master Use Plan is proposing:

Potable Water:
MPL retains its 1.5 million gallons per day of water currently allocated:

- 1,018,000 GPD from Well 17
- 500,000 GPD from the Mountain System.

Non-Potable Water:
It is proposing to develop 1,000,000 GPD from the abandoned Kākalahale brackish water well in the Kamiloloa aquifer sector for future non-potable needs.

By gradually moving current non-potable uses such as the golf course, irrigation of the hotel, condos and large lots to non-potable water, MPL believes its existing 1.5 MGD potable allocation from a combination of Well 17 and the mountain system will meet all of MPL's long-term potable demand.

Non-potable needs can be supplied by a combination of use of MPL's existing mountain system and the unused Kākalahale Well.

MPL has proposed that the remaining 1,000,000 MGD be drawn from the Kākalahale brackish water well. This well which was built by Kaluakoʻi Corporation in 1969, has been pump tested and demonstrated capable of providing 1,000,000 GPD of good quality brackish water (chlorides at 500 ppm, or twice the drinking water standards).

MPL's advice is that drawing water from the Kākalahale well will have no impact on the yield of the Kualapuʻu aquifer. While concerns have been raised about its use by the MIS or on DHHL lands, MPL believes it is a good source for west end irrigation needs.

MPL WILL NOT propose transmission of the Kākalahale brackish water to the West End by the MIS system.

MPL is currently investigating transmission alternatives.

This Plan is different from previous West End water proposals because, previously, three separate large land owners, Molokaʻi Ranch, Alpha USA and Kukui (Molokaʻi), Inc. all had or were developing massive comprehensive development plans that would have required as much as a total of 20,000,000 gallons of water per day to support.

Because the proposed Master Plan limits development, proposed water use is subsequently dramatically reduced as the table below shows.

6.8 LĀʻAU POINT WATER USE

The proposed Lāʻau Point project, like the Pāpōhaku Ranchlands subdivision, is expected to comprise second and third homes for owners who spend a limited amount of time on island. At Pāpōhaku, 60% of those who have built houses are not permanent residents.

Also like Pāpōhaku, MPL would expect actual dwelling construction to lag lot sales by several years. To date, about 20% of lots in Kaluakoʻi have been built on. After more than twenty years, the build-out rate is less than one percent per year as an average. MPL believes a combination of low occupancy, water conservation education, xeriscaping and tiered water rates will moderate water consumption by these homeowners.

While MPL expects home construction to be slow, water demands during the construction period are expected to be in the order of 50,000-150,000 gallons per day. Initial erosion protection and control measures would likely require an additional 50,000-100,000 gallons per day as well. The construction phase is projected to be 2 years. The initial erosion control phase would be expected to continue well after construction ranging from 5 to 10 years.

The public park(s) would require potable water and non-potable water for irrigation concurrent with the completion of site construction.

MPL anticipates it would be several years into the sales of the project before wastewater recycling would be a significant contribution to the supply of irrigation water for landscaping features, erosion etc. In the interim, non-potable water not required for unbuilt house lots would support these uses.

In summary, MPL expects that water use for the project would start out as a significant percentage of total demand then drop after completion of construction and then slowly rise again as home construction proceeded.

6.9 WATER USAGE UNDER PROPOSED MASTER PLAN

(In Gallons Per Day)

CURRENT WATER USE

DESCRIPTION	Potable	Potable Irrigation	Non-Potable
Kaluakoi Hotel & Golf Course	2,000	405,120	
Kaluakoi Condos	116,250	70,880	
Kaluakoi Residential	70,500	143,825	
Maunaloa/Industrial Park	136,370		25,480
Ranch Operations/ Misc.	41,500		150,000
Kualapuu	76,000		
Subtotal	**442,620**	**619,825**	**175,480**
TOTAL POTABLE		**1,062,445**	
Total Potable & Non-Potable Categories			**1,237,925**

FULLY DEVELOPED WATER USE

DESCRIPTION	Potable		Non-Potable
Current and Future Changes (within 50 years)			
Kaluakoi Hotel & Golf Course	33,400		273,240
Golf Course Wastewater Reuse			-100,000
Kaluakoi Condos	116,250		70,880
Kaluakoi Residential	228,500		633,825
Maunaloa/Industrial Park	296,870		25,480
Ranch Operations/Misc.	41,500		150,000
Laau Point Lots	96,000		300,000
Laau Point Parks	1,000		40,000
TOTALS	**889,250**		**1,393,425**
Long term growth > than 50 yrs			
Community directed growth in Kualapuu and Maunaloa	200,000		
TOTALS	**1,089,520**		**1,393,425**
TOTAL ALL USES			**2,482,945**

MPL has stated that the projected West End water use will not exceed the existing permits plus 1.0 MGD of brackish water from the Kākalahale Well. Current use is grouped into 3 types of water; potable, potable irrigation, and non-potable. Currently 619,825 GPD of irrigation demand is met with potable water. This use will be shifted to non-potable sources over time, freeing up this water for new potable uses. Renovation of the golf course (130 acres of turf down to 80 acres of turf) will reduce water consumption and reopening of the Hotel and higher condo occupancies will provide more wastewater. This is reflected in the much-reduced demand for golf course and hotel irrigation. The Lāʻau potable allocation is based on 600 GPD for 200 lots at 80% occupancy. The non-potable water is based on 1,500 GDP for 200 lots.

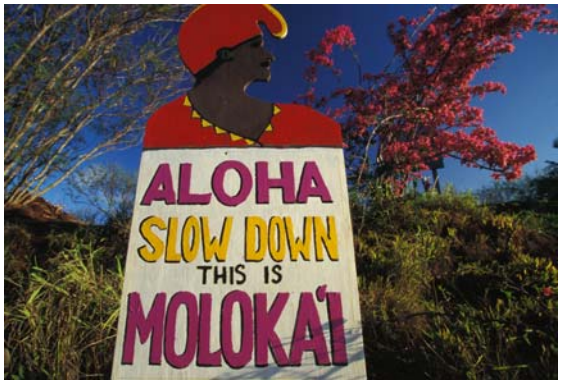
6.10 THE ROLE OF WATER CONSERVATION

At the time of the Kaluakoʻi acquisition, MPL understood that water conservation would play an important role in managing the West End's water usage.

The Water Commission reinforced that understanding in its water use permit for Well 17 that was issued after MPL took title to the Kaluakoʻi assets.

The Commission required MPU to report on its progress in controlling water waste, to conduct an educational campaign on water conservation with its customers, and to investigate a non-potable source for the golf course to allow potable water being used for non-potable uses to be available for other potable purposes.

MPL immediately identified and corrected several long-term water waste issues. MPL conducted a water conservation campaign over 12 months. However the most important action undertaken to date has been to restructure MPU's water rates to properly reflect the true cost of providing this service and to implement tiered water conservation rates that provide a financial incentive to customers to conserve water.



MPL approached its rate structure by using the Water Commission allocation amounts by user type as the base rate. All water use above that amount would be billed at a much higher "conservation rate". MPL proposed that the base rate be $3.18 per 1000 gallons and the conservation rate be twice as much or $6.36 per thousand gallons.

As an example, the Water Commission used 560 gallons per unit for the Condos plus 2,000 gallons per day per acre for irrigation. A 50-unit condo on a 4-acre site would have 36,000 gallons per day in its base rate (560 gallons X 50 units plus 2,000 gallons X 4 acres for irrigation). Any water used above this amount would be sold at the higher conservation rate.

As the permit allocation amount was 1,000 gallons per day for all residential uses (even though the existing usage in the Pāpōhaku Ranchlands was noted in the permit to be 5,308 gallons per day per residence), MPL proposed that the conservation rate begin at 1,000 gallons per day for residential customers.

Because of a concern the Consumer Advocate termed "rate shock," MPL agreed to reduce the conservation rate to $4.70 per 1,000 gallons and phase-in the conservation rate for residential

customers. For residential customers the conservation rate applies to all water used in excess of 5,000 gallons per day.

However the Consumer Advocate and the Public Utilities Commission agreed that MPL could telegraph that its next rate increase – then anticipated to be two to three years away-- would likely see the conservation rate take effect for all residential water use in excess of 1,000 gallons per day.

For the most part, Kaluakoʻi residents have adjusted their water use. Consumption has dropped by 45% in the Ranchlands and the condos have shown reduced water consumption as well since the rate hike in September 2003. The most notable change is that customers now respond to rainfall and shut off their irrigation systems. Previously MPL saw very little reduction in water use after a good rain. Now a passing shower will cause water consumption to drop dramatically.

6.11 CONTINGENCY PLANNING

MPL has stated that the 2.5 million gallons of water per day is the maximum this community-based Master Plan will require; 1.0 million gallons of existing drinking water from Well 17, and 0.5 MGD from the Mountain System, and one million gallons of brackish water from the Kākalahale Well.

The question has been posed: what if the Plan needs more water? What if there is increased demand for agriculture, particularly on MPL lands designated for agriculture, or on lands to be donated to the land trust?

MPL will never go back to the community and seek more drinking water.

If more non-potable water is needed for agriculture in particular, MPL still has two options:

- The brackish water available to MPL from the Prawn Farm at Palaʼau, which is currently permitted for 864,000 gallons per day of which 500,000 gallons per day could be available for reuse.
- Desalination.

The Prawn Farm water is very brackish; 1300 parts per million as chlorides (drinking water must have no more than 250 parts per million), and it would three times as expensive to remove the salts to bring it to an acceptable level for use as agricultural water as compared to obtaining water from the Kākalahale Well.

But it is an option for the future and particularly for non-potable uses. Currently, desalting is still about 4 times more expensive on Molokaʻi than developing an operating deep groundwater well. While it is not a viable economic alternative today, this technology continues to improve and its costs are declining as a result.

As this technology continues to improve, the cost of producing water will come down. As the conservation rates go up, at some point the two lines will cross, and MPL will find the balance between demand and supply. MPL has talked about the ability to have multiple rate blocks for both potable and non-potable water.

Structured properly, these rates would, in effect, subsidize prudent or thrifty water users and penalize excessive water use. At the higher rate blocks, the cost of desalination can be recovered. Because of this, there would be no pressure to pursue additional groundwater or surface water sources from the central or east end of the island.

6.12 WATER AND HAWAIIAN RIGHTS

Every water use permit issued by the Water Commission contains a provision that the allocation will be reduced if it interferes with the rights of the Department of Hawaiian Homelands.

The water code states that each County's Water Use and Development Plan, and the State's Water Project Plan, "shall incorporate the current and foreseeable needs of DHHL".

Hawai'i revised statutes provides that the Hawaiian Homes Commission and its lessees have a prior right to 2/3 of the water in the MIS. Supreme Court rulings have affirmed that the priority uses of water include Native Hawaiian and traditional and customary rights.

For Moloka'i Properties Limited, the issue of Hawaiian Water Rights is very clear: the existing allocations are subject to reduction if they interfere with DHHL's rights to water in the future and due consideration must be given to DHHL's projected needs with any proposed new allocations.

Essentially MPL has proposed in its Master Plan to forever limit the withdrawals of potable groundwater to that which has already been permitted and seek only one million gallons per day of non-potable water from the existing proven brackish Kākalahale well in the Kamiloloa aquifer sector.

In essence, MPL is requesting 2 million gallons of groundwater out of the estimated developable 33.5 million gallon estimated sustainable yield of the island (about 6%), in the knowledge that it could be reduced in the future if necessary for DHHL's needs to be met. As MPL sees it, it's a matter of law.

So MPL believes that if DHHL used every reasonable effort to develop its 2.905 MGD allocation in Kualapu'u and wasn't successful, the Water Commission would then be obligated to reduce the allocation as necessary so that DHHL would get the full benefit of their allocation at the time it was needed.

MPL does not believe that scenario will eventuate because:

- MPL believes the work done by the USGS supports that the estimates of water availability will be realized.

- There is a strong consensus on island to limit development that will limit total water demand.

- Large quantities of groundwater for agriculture will be cost prohibitive.

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7 IMPLEMENTATION

7.1 LAND TRUST

The Moloka‘i Land Trust will be formed to own and manage the 26,200 acres that MPL will donate to the Moloka'i community under this plan. The Land Trust will also administer land use policies that permanently protect another 24,950 acres under agricultural and rural landscape reserve easements.

The initial land to be donated to the land trust is an approximate 1,000 acre piece lying between the State’s parcel at ‘Ilio Point and the Nature Conservancy’s parcel at Mo‘omomi. It is a portion of Tax Map Key parcel 5-1-02: 01. Approximately half of ARINC’s facilities are located on the parcel and the transfer will include a partial assignment of rents that will provide about $50,000 of annual income to the Land Trust.

As noted above, the eastern boundary of the parcel is The Nature Conservancy’s parcel and the existing jeep road that intersects the western corner of The Nature Conservancy’s parcel. The northern boundary is the shoreline. The western boundary is the north/south leg of the State’s eastern boundary at ‘Ilio Point. The southern boundary runs from the southern point of the parcel’s western boundary to the jeep road paralleling the northern shoreline running east to the junction of the eastern boundary at the “corral”.

A Land Trust steering committee has been meeting since July 2005 planning the implementation of the proposed Land Trust, reviewing its mission statement, goals and objectives and vision in order that documentation can be prepared to establish the Trust.

The committee is:

- Researching organizational documents.
- In the process of engaging an attorney.
- Preparing the Articles of Incorporation, its By-laws.
- Preparing for application for Federal Tax Exempt status.

It is planned that the Land trust will be incorporated by December 2005. The proposed mission of the Land Trust is:

> **To protect and restore the land and natural resources of Moloka'i, and to perpetuate the unique Native Hawaiian traditions and character of the island, for the benefit of the future generations of all Moloka'i.**

Among the proposed activities of the Land Trust to implement the Master Land Use Plan are:

Moloka'i Nui A Hina (Moloka'i, Great Child of Hina) – Resource Protection

- Conduct a base line survey, assessment and mapping of the natural and cultural resources of the trust lands.

- Identify, record and map cultural, archaeological and other important sites on the trust lands.
- Conduct oral history interviews to document the cultural, archaeological and other important sites on the trust lands.
- Develop a cultural resources restoration and management plan for the trust lands.
- Develop and conduct public education about the cultural, archaeological and related sites on the trust lands, including cultural protocols for their proper use.
- Develop a natural resources restoration and management plan to control erosion, protect native beach strand and marine resources, protect the dune systems and overall improve the watershed and ground water resources.
- Develop a community-based subsistence fishing plan in partnership with adjacent landowners and government agencies for approval by the Department of Land and Natural Resources.
- Develop a sustained/yield hunting plan that doesn't erode the land and is based on a determination of the carrying capacity for the feral deer and other game.
- Develop an access management plan to protect natural and cultural resources and respect Native Hawaiian rights.
- Develop policies to guide recreation and tourism activities on trust lands in accordance with the policies designed to protect the trust's cultural and natural resources.

Moloka'i 'Aina Momona (Moloka'i, Land of Plenty) – Use and Productivity

- Implement the guidelines for land use principles and policies developed for the Moloka'i Ranch Community-Based Master Plan.
- Provide stewardship of the Trust's lands and resources, mauka to makai, guided by best management practices and lessons from our kupuna.
- Develop partnership agreements to protect and enhance precious natural resources of the ahupua'a where the trust lands are located, mauka to makai.

Moloka'i Pule O'o (Moloka'i, Land of Powerful Prayer) – Perpetuation of Culture and Education

- Develop curriculum for environmental and cultural

education in partnership with educational and cultural groups and institutions.
- Communicate effectively with the community about the Trust's work.
- Design enforcement of rural landscape and agriculture easements under the control of the land trust.
- Halau (facilities and sites) are established for the training, practice, and research in la'au lapa'au (medical healing), ho'oponopono (conflict resolution), lomilomi (massage), hula, hoe wa'a, etc.

Moloka'i No Ka Heke (Moloka'i is the Greatest) – Sustainability and Organization

- Develop an organizational and financial plan for long-term sustainability of the land trust.
- Develop a training program for staff and interns in cooperation with community agencies and institutions.
- Organize a mechanism to receive public participation and input on the trust's management plans and policies.
- Provide ongoing training for members of the land trust board.

7.2 ZONING AND OTHER REGULATORY APPROVALS

The purpose of this section is to outline the potential State and County permit processes that may be needed to accomplish the overall goals of the Community Based Land Use Plan for Molokaʻi Ranch. It is important to note that any development or plan proposal may require a variety of Federal, State and County permits. Identifying and obtaining the necessary permits can be fairly complicated depending on the complexity, impacts, location and sensitivities associated with projects. Requirements change as laws and regulations are amended. Only by contacting the appropriate regulatory agency, can a project have accurate information on permits required for specific projects.

7.2.1 Land Use Designations and County Zoning

State Land Use Designations

All lands in the State of Hawaiʻi are classified into one of four Districts: Urban, Rural, Agricultural and Conservation. Most of Molokaʻi Ranch's Lands are designated as Agricultural according to the Land Use Commission Districts.

The towns of Kaunakakai, Kualapuʻu and Maunaloa are designated as Urban. The Kaluakoʻi area has all four designations. The Urban District extends from Kawakiuiki south to Puʻu O Kaiaka, from the shore to about 2000 feet inland; behind the northern portion of that area is Rural; the balance is in the Agricultural District with the exception of the a strip of land running along the shoreline starting at Puʻu O Kaiaka running south which is Conservation District land.

Maui County Community Plans

Maui County has 9 Community Plan areas. The current Moloka'i Community Plan was adopted in December of 2001. Community Plans provide Policy Guidance on Land Use within their respective areas. They also include maps which classify land into one of 17 use categories; requests to change zoning cannot be processed unless there is consistency with the Community Plan. Additionally, Special Management Area permits cannot be approved unless the application is consistent with the Community Plan.

Maui County Zoning Districts

Title 19, Maui County Code, is the County's zoning ordinance. Zoning classifies the way land maybe used and regulates the types of activities that may occur. Maui County has 25 different Zoning Districts ranging from open space to high density development districts for varying uses including Residential, Hotels and Commercial uses.

State and County Regulatory Approvals

The information below briefly describes the most appropriate County and State permits that may be required to implement portions of the Community Based Master Plan for Moloka'i Ranch. It is important to note that in certain instances Federal permits may be applicable as well. This section only indicates whether or not a Federal approval may be necessary.

- Change in Zoning: A zoning change is required when a land use is desired that is not allowed under the current zoning of that parcel of land. Zoning changes must be in conformance with the State Land Use District and the Moloka'i Community Plan. Zoning changes are processed through the Planning Department and Moloka'i Planning Commission and adopted via ordinance by the County Council and Mayor.

- Community Plan Amendments: A Community Plan Amendment is required if a use is in a Special Management Area and is not consistent with the Community Plan, or if a proposed zoning change is not consistent with the Community Plan Designation. Amendments require the submittal of a Draft Environmental Assessment, in accordance with Chapter 343, Hawai'i Revised Statutes. Community Plan Amendments are processed through the Moloka'i Planning Commission which provides their recommendation which is acted on by ordinance by the County Council and Mayor.

- State Land Use Commission District Boundary Amendment (SLUCDBA): A District Boundary Amendment is required when a proposed use is not allowed under

the State land use district as outlined in Chapter 205, Hawai'i Revised Statutes (HRS). For properties greater than 15 acres or involving conservation lands, District Boundary Amendments applications are processed by the State Land Use Commission. Applications for less than 15 acres are processed by the Maui County Planning Department and the Moloka'i Planning Commission.

- State Land Use Commission Special Permit: Special permits are required for uses not explicitly permitted under State land use, but may be permitted as an "unusual and reasonable" use within the State Agricultural and Rural Districts. Projects involving 15 acres or more are processed by the County through the Moloka'i Planning Commission and referred to the State Land Use Commission for final action.

- Special Management Area (SMA) Permit: SMA boundaries are designed to protect the County's coastal environment and resources. Proposals involving developments within the SMA boundary requires an application reporting assessment and determination. The assessment must include the anticipated impacts of the proposed action in the SMA. The Director of Planning will determine if the project is exempt or requires a permit. The Moloka'i Planning Commission is currently reviewing rule changes in this area. A SMA Minor Use Permit is required for projects involving less than $125,000. A SMA Major Use Permit requires a more comprehensive environmental review and applies to projects valued above $125,000. Both are granted by the Moloka'i Planning Commission.

7.2.2 Applicable Permits

This section discusses the various Land Use Plan activities that may require County and State permits. It does not contemplate the various land ownership transfers.

<u>Development Districts</u>

1) Visitor Accommodation:
The hotel will require a special management area permit as well as building permits. The refurbishment of the golf course may or may not require a special management permit; however, the new maintenance building for the golf course will require a SMA permit. Building and grading permits will also be required.

The proposed relocation of the second west end golf course currently in the Community Plan from just below Maunaloa to the resort area in the Rural

district would require a Community Plan amendment and a zoning change to Park PK-4 zoning.

2) Residential Shoreline Development at Lāʻau Point:
The 200-lot subdivision of 2-acre parcels at Lāʻau Point will need infrastructure such as associated roads and sewage treatment facility. This development will require a State LUC District Boundary Amendment, Community Plan Amendment, Zoning Change, SMA application and EIS.

3) Community Village Expansion**:**
Consists of land surrounding existing towns and population centers of Kaunakakai, Maunaloa and Kualapuʻu. Lands are set aside for future residential expansion for Maunaloa and Kualapuʻu while some commercial expansion may be appropriate as well for Kaunakakai. Future implementation will require a State Land Use District Boundary amendment, Community Plan Change and a Zoning Change(s). Kaunakakai expansion, depending on location may also require a SMA permit.
Land in and around existing towns/population centers that will be available to qualifying Molokaʻi residents at affordable prices for "traditional" and/or conventional housing.

4) Industrial: Expansion of the Molokaʻi industrial Park will require a State Land Use District Boundary Amendment, Community Plan Amendment and Zoning changes.

5) Public/Quasi Public: Includes park, schools, public safety type facilities and uses such as Kaunakakai Fire Station relocation, Junior Roping Club and Maui Community College expansion.

- **Kaunakakai Fire Station Relocation:** Includes a 5-acre site located on lands to the east of Alanui Ka'imi'ike Street near Kakalahale Street. The site is zoned Agriculture. The County will be responsible for redistricting the land to Urban, and changing the Community Plan designation and zoning to Public/Quasi-Public. Other County approvals will be required for construction and grading. The property is located within the SMA boundary.

- **Junior Roping Club Site:** This 5-acre parcel is located in Kaunakakai on the west side of Mohala Street. It is zoned Light Industrial. The area is located within the SMA boundary. Possible Community Plan Amendment may apply depending on the intended-long term use of the property.

- **Community College Expansion:** This parcel fronts Kamehameha V Highway and is located west of

the existing 2-acre campus. The property is currently zoned Public/Quasi public. The area is located within the SMA boundary and Other County permits may be required.

Remaining Districts and Overlays

The remaining Districts and Overlay Zones as well as the Subsistence Fishing Zone will require consultation with the County and State in order to verify which jurisdiction is appropriate to adopt or enact the Districts and associated Overlays.

Certain Districts and Overlays, for example may be adopted as policy by the "Moloka'i Community Plan" produced by the County of Maui and adopted by the County Council and Mayor. In other instances, State Legislative acts may be needed to adopt the Subsistence Fishing zone for example, as policy or to enable enforcement powers.

Applicable Permits						
Proposal (Future Ownership)	**State LUC District Boundary Amendment**	**Comunity Plan Amendment**	**Change in Zoning**	**Special Management Area Permit**	**Other County Permits, e.g. building, grading**	**State Land Use Commission Special Permit**
Development District						
1) Resort						
Reopen Kaluakoi Hotel (MPL)				X	X	
Upgrade Kaluakoi Golf Course and Workshop (MPL)				X	X	
18 Hole Golf Course transfer to Kaluakoi from Maunaloa Site (MPL)		X	X	X	X	
2) Residential Shoreline Development						
La'au Development (MPL)	X	X	X	X	X	
3) Community Village Expansion						
Kua'alapu'u (MPL)	X	X	X		X	
Maunaloa (MPL)	X	X	X		X	
Kaunakakai (MLT)	X	X	X	X	X	
4) Industrial Expansion (MPL)	X	X	X		X	
6) Public/Quasi Public						
Kaunakakai Fire Station (MLT)				X	X	X
Junior Roping Club (MLT)		X		X	X	
Community College Expansion				X	X	X
Other Districts and Overlays		X				

7.2.3 Lāʻau Point Implementation Schedule

The following is the estimated schedule to obtain the various land use approvals from the State and County for the Lāʻau Point development. This schedule assumes plan approval by the EC Board by January 2006.

Environmental Impact Statement (EIS)
It is assumed that a complete EIS will be required for the project. The technical environmental, engineering, and socioeconomic studies required to complete the EIS are currently being undertaken and the EIS Preparation Notice will be submitted and published for public comment after the EC Board approval of as noted above. The schedule to complete the EIS is as follows:

EIS Preparation Notice (EISPN)	January 2006
Complete Draft EIS/Publish	April 2006*
Public Comment Period (45 Days)	May 2006
Prepare Final EIS/Acceptance	July 2006

*Subject to technical studies being completed by end of February

State Land Use District Boundary Amendment (SLUDBA)
The areas of Lāʻau Point to be included in the subdivision lots are proposed to be re-classified by the State Land Use Commission (LUC) from Agricultural to Rural. Utilizing the EIS as the informational document to the LUC petition, the schedule is anticipated to be as follows:

LUC Petition Submitted (w/EISPN)	January 2006
Petition Hearings (after EIS Accepted)	August/September 2006
Decision and Order	October/November 2006

County Land Use Approvals
The project area requires a Community Plan Amendment, Change in Zoning, and Special Management Area permit prior to obtaining final subdivision approval. It is assumed that these approvals will be sought concurrent with the SLUDBA, utilizing the Draft EIS as the technical supporting document to the submittals. The schedule is anticipated as follows:

Applications Submitted (w/DEIS)	April 2006
Planning Commission Hearings/Recommendations	August/ September 2006
Council Hearings/Approval	November December 2006*
Mayor Approval	January 2007*
Planning Commission Approval (SMA)	March 2007

*Could be delayed due to elections

County Subdivision Approval
The preliminary and final subdivision plans would be reviewed concurrent with the above County Land Use Approvals with final subdivision approval being granted following obtaining all of the above approvals.

Preliminary Plat Submitted	April 2006
Preliminary Plat Approved/Comments	October/ November 2006
Final Plat Map Reviewed/Approved	April 2007
Bond Improvements/Construct Improvements	May 2007 – May 2009 ±

7.2.4 Land Trust Zoning Issues

Currently under the Maui County Plan and the Molokaʻi Community Plan, there is no zoning applicable to the proposed special activities of the Land Trust, namely cultural protection, subsistence protection and land restoration.

The current agricultural zoning of the vast majority of the land is not adequate to reflect the nature of activities on the Land Trust property.

The Land Trust may seek to have the majority of its land designated a "Special Project District" or seek to create a Cultural Area Resource designation.

Special Project Districts are normally reserved for development areas, but there is no reason why this designation cannot apply to the special needs of the Land Trust.

Further work with the County of Maui needs to be undertaken so that the Land Trust land designation is correctly reflected in zoning for all time.

In terms of the proposed easements, the current agricultural zoning, along with strict easement documentation, will be adequate to protect the "open space" designated areas.

7.3 PHASING

The phasing of the implementation of this Land Use Plan will take place over many years, with some aspects of its implementation not taking place in the lifetime of those responsible for its preparation.

Key components of the Plan are the phasing relating to the agreement between Molokaʻi Properties Limited and the EC on the Plan's agreements, the donation of land to the Molokaʻi Land Trust and the establishment of the protective easements, the re-opening of the Kaluakoʻi Hotel, the established of a Community Development Corporation and the regulatory aspects of the Lāʻau Point approval and implementation.

Other aspects such as land put aside for future housing for the community, the extension of the industrial park and the application relating to the transfer of second golf course from Maunaloa to north of the Kaluakoʻi Hotel will be phased over many decades, but covered in the initial agreement between the EC and MPL.

A brief timetable for the Plan's implementation is as follows:

Community Based Master Land Use Plan for Molokaʻi Ranch Implementation Timetable

TIME	TASK
December 2005	(1) Master Land Use Plan finalized. (2) Molokaʻi Land Trust established and operating. (3) Kaluakoʻi Hotel redevelopment costs finalized. (4) Land boundaries for initial donation of North Shore land to Land Trust finalized.
January 2006	(1) EIS Prep Notice for Lāʻau Point filed. (2) LUC petition for State Land Use District Boundary/ Amendment submitted. (3) Draft agreement between EC and Molokaʻi Ranch re Land Use Plan submitted to EC and its legal advisors for consideration.
March 2006	(1) Agreement between EC and Molokaʻi Properties Limited re Land Use Plan agreed and signed by the EC on behalf of the community and MPL. (2) Initial land donation (as specified at the beginning of Section 7.1) transferred to Molokaʻi Land Trust. (3) Molokaʻi Land Trust hires executive director.
May 2006	(1) Working drawings for Kaluakoʻi Hotel finalized.
August/September 2006	(1) Molokaʻi Planning Commission hearings on SMA permit for Renovation of Kaluakoʻi Hotel. (2) Planning Commission Hearings on Lāʻau Point Subdivision.
October 2006	(1) Decision by LUC on State Land Use District Boundary Amendment. (2) Proposed Community Development Corporation established. (3) Molokaʻi Land Trust applies to Maui County for Land Trust lands to become "Special Project District."

Implementation Table cont.	
January 2007	(1) Council hearings on Lāʻau Point zoning change. (2) Surveys of land to be transferred to Molokaʻi Land Trust and survey and photographs of land under easement, completed and agreed between the parties. (3) Construction company for Kaluakoʻi Hotel chosen and contract signed.
April 2007	(1) County approval of subdivision. (2) Construction on Kaluakoʻi Hotel begins.
May 2007	(1) Remaining 20,000 plus acres transferred to Molokaʻi Land Trust and easement agreements signed between the parties. (2) Land assigned to Community Development Corporation transferred and agreements signed between CDC and MPL on Lāʻau Point revenue percentage. (3) MPL implements covenants on its property relating to perpetual rights for access for subsistence gathering. (4) Rental agreements relating to Land Trust lands assigned to Land Trust.
August 2007	(1) Molokaʻi Land Trust publishes Management Plan for the property. (2) Lāʻau Point lot construction commences.
September 2007	(1) Kaluakoʻi Hotel re-opens.

7.4 WATER IMPLEMENTATION

The agreement relating to Molokaʻi Properties Limited's Water Plan will form part of the agreement between the EC and MPL on the Master Land Use Plan.

The main implementation of the Water Plan relates to the permitting of the Kākalahale brackish well and the transmission of the water to the west end.

Early in 2006, testing of the well will commence with an expected application to the Water Commission for well permitting in mid to late 2006. In the intervening period, MPL will submit to the EC its proposal for transmitting the brackish water to the west end for future irrigation needs.

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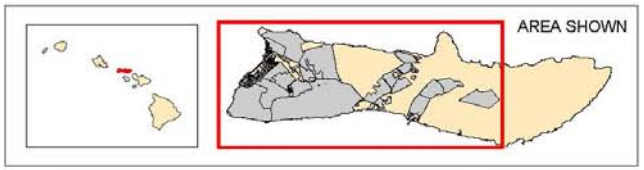
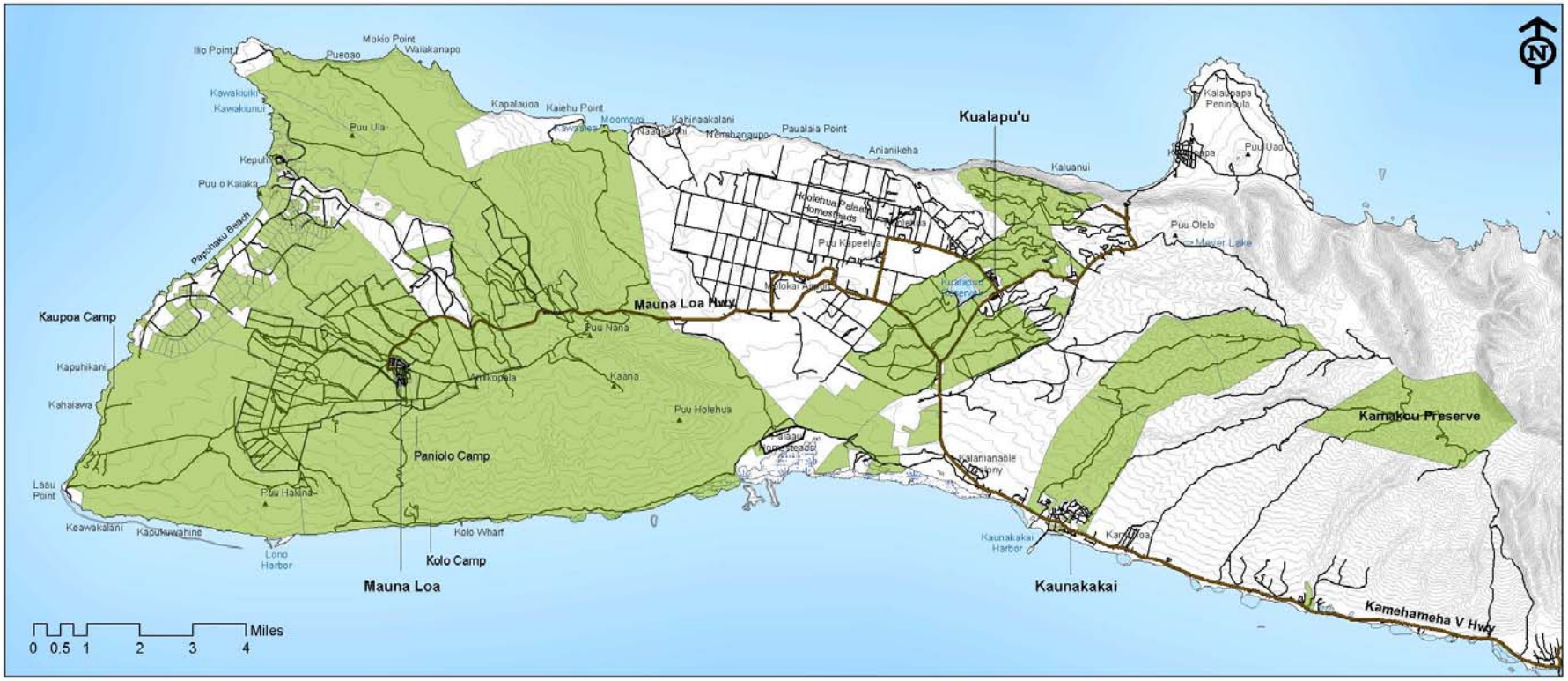
APPENDIX 1: MOLOKA'I RANCH LANDS MAP

MOLOKA'I RANCH LANDS

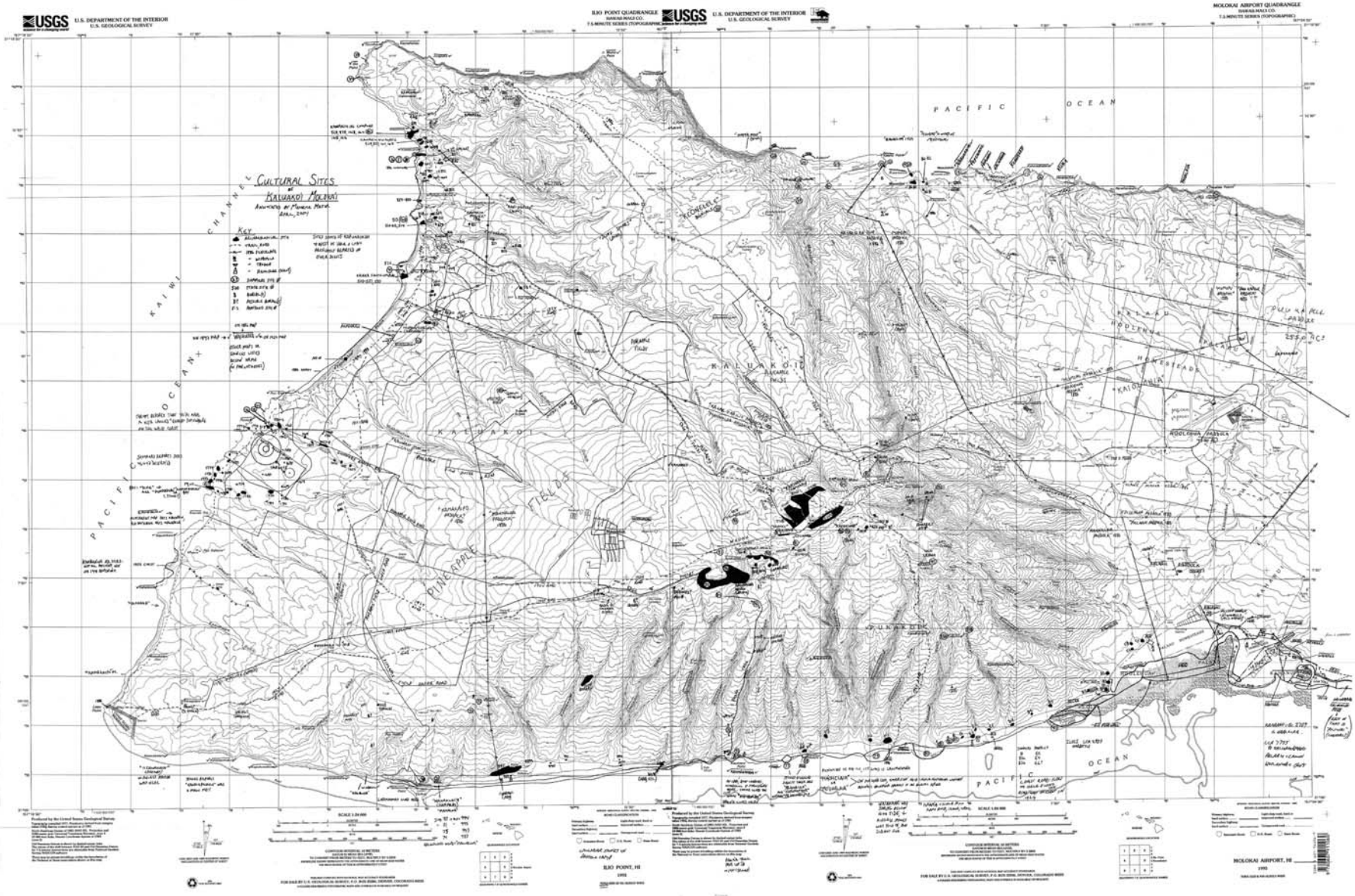


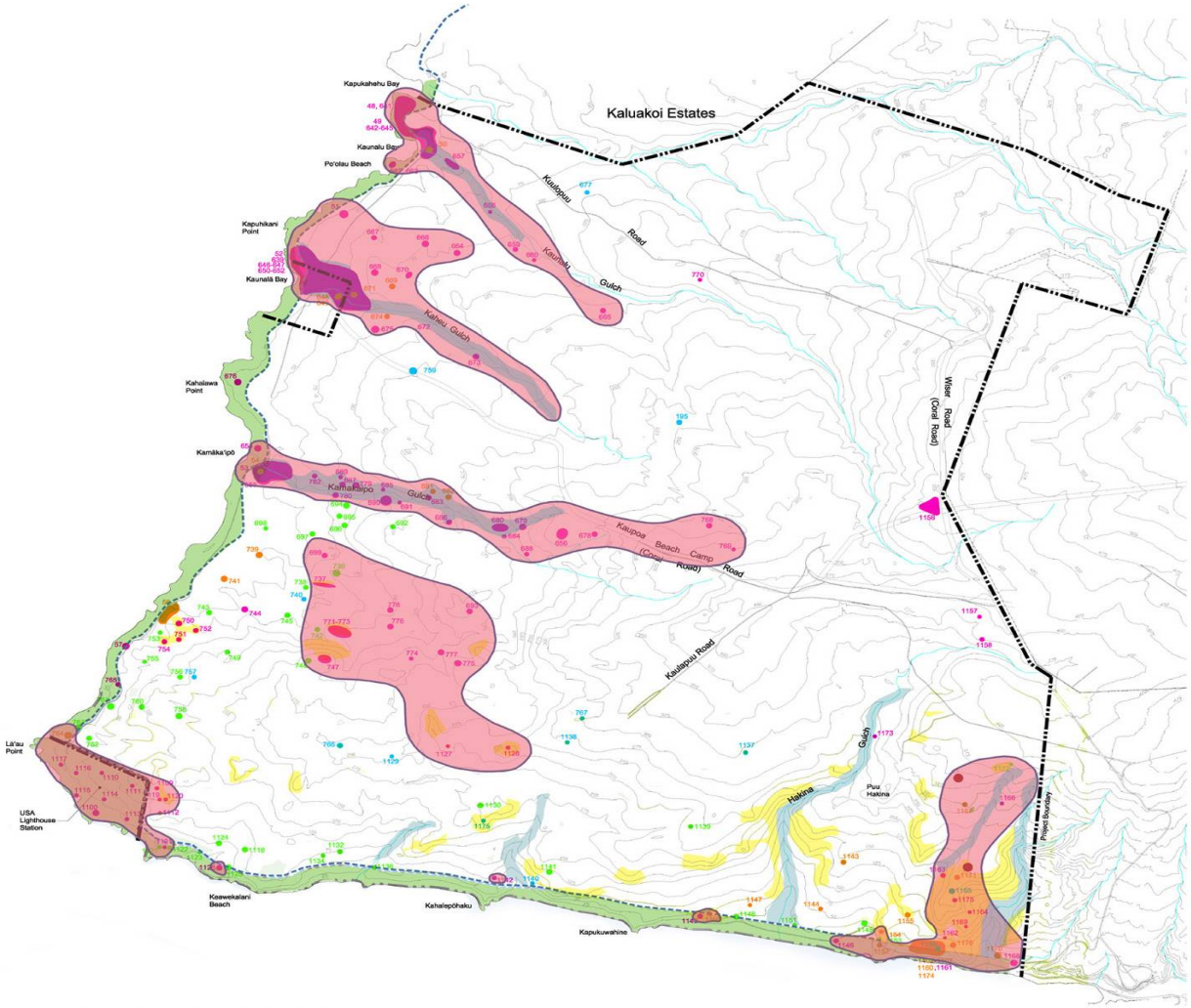


Molokai Ranch Property
Major Roads
Other Roads
100' Contours

Map Prepared By:
The Conservation Fund
October 21, 2004

APPENDIX 2: CULTURAL SITES OF KALUAKOʻI MAP AND LĀʻAU POINT CULTURAL & RESOURCE PROTECTION ZONE MAP


USGS U.S. DEPARTMENT OF THE INTERIOR U.S. GEOLOGICAL SURVEY
ILIO POINT QUADRANGLE
HAWAII-MAUI CO.
7.5-MINUTE SERIES (TOPOGRAPHIC)
MOLOKAI AIRPORT QUADRANGLE
HAWAII-MAUI CO.
7.5-MINUTE SERIES (TOPOGRAPHIC)
PACIFIC OCEAN
KAIWI CHANNEL
CULTURAL SITES
KALUAKOI
PINEAPPLE FIELDS
KALAUPAPA
HOOLOMA HOMESTEAD
KAUNAKAKAI
ILIO POINT, HI
1995
MOLOKAI AIRPORT, HI
1995



CULTURAL & RESOURCE PROTECTION ZONE

LA`AU POINT

Island of Molokai

AREA SCALE: 20 Acres; 10 ac. 10 ac.

NORTH

LINEAR SCALE (FEET): 0 800 1600 2800

PBR HAWAII

Legend

- Cultural Protection Zone (with Archaeological site to be preserved)
- Shoreline Conservation Zone

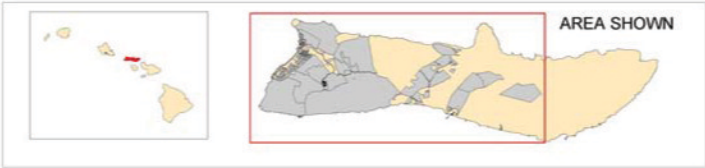
Archaeological Sites

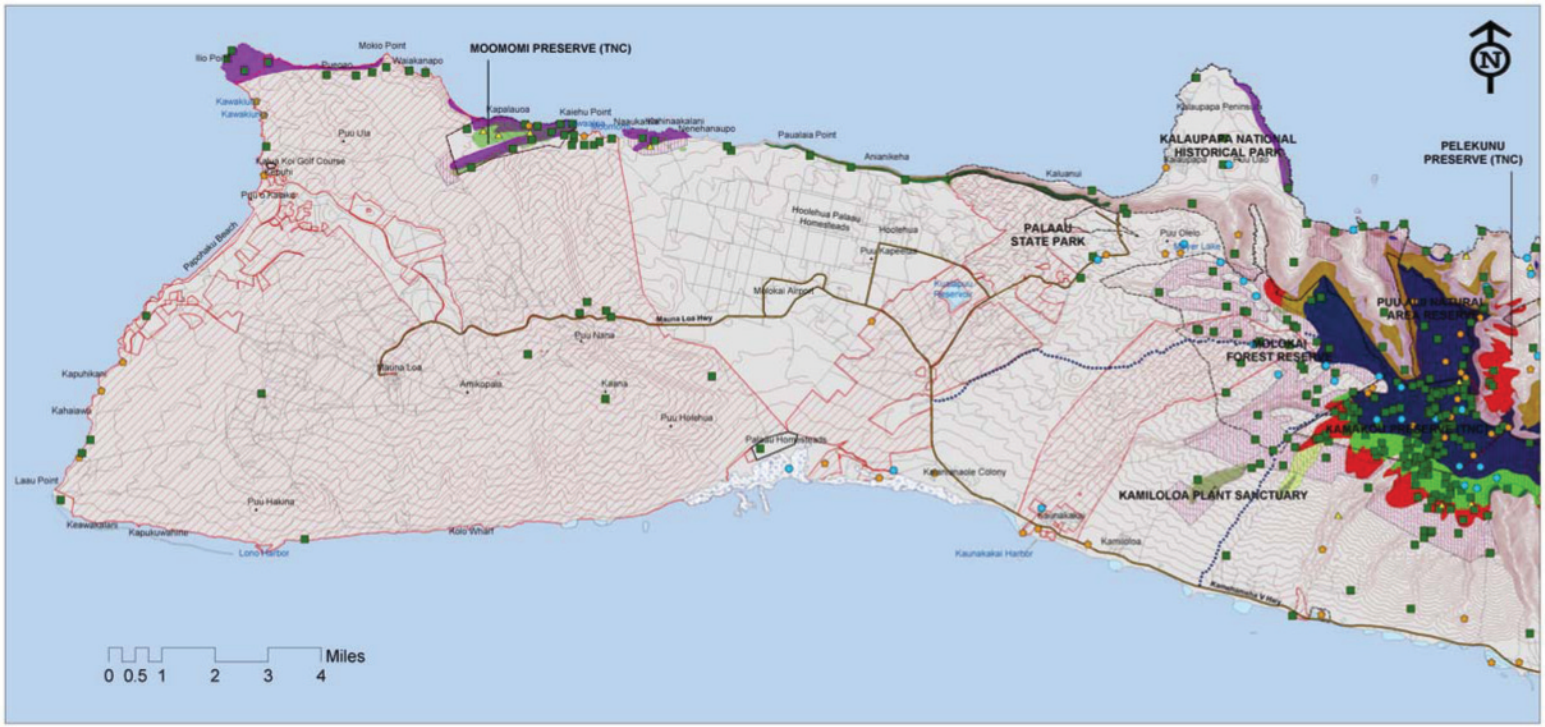
- Preserve
- Burial / Possible Burial
- Additionally Recorded Burial (May 2004)
- Data Recovery
- No Action

NOTE: Site areas are conceptual only and not illustrated to scale. Refer to Kahalawa to Hakina, A'upua'a of Kaluakoi, Island of Moloka'i, Archaeological Mitigation Plans (Cultural Landscapes Hawaii, June, 2001).

APPENDIX 3: NATURAL RESOURCES: TERRESTRIAL MAP, AQUATIC MAP, AND SUMMARY MAP

MOLOKA'I RESOURCE ASSESSMENT: NATURAL RESOURCES - TERRESTRIAL





Data Sources:

Natural Heritage Rare Species Occurrences - Hawaii Natural Heritage Program (TNC of Hawaii)
USFWS Critical Habitat - USFWS
Native Dominated Landscape Vegetation - HI NHP
Protected Reserves - Hawaii Office of State Planning (OSP)
Na Ale Hele State Trails & Access - Hawaii Department of Land and Natural Resources

Prepared By: The Conservation Fund
May 19, 2004

- Molokai Ranch Property
- Major Roads
- 100' Contours
- Protected Reserves
- Na Ale Hele State Trails
- USFWS Critical Habitat

Native Dominated Landscape

Community Type

- Coastal Dry Shrubland & Grassland
- Coastal Mesic Forest & Shrubland
- Dry Cliff
- Lowland Dry Forest & Shrubland
- Lowland Mesic Forest & Shrubland
- Lowland Wet Forest & Shrubland
- Montane Mesic Forest & Shrubland
- Montane Wet Forest & Shrubland
- Wet Cliff
- Nonnative

Natural Heritage Rare Species

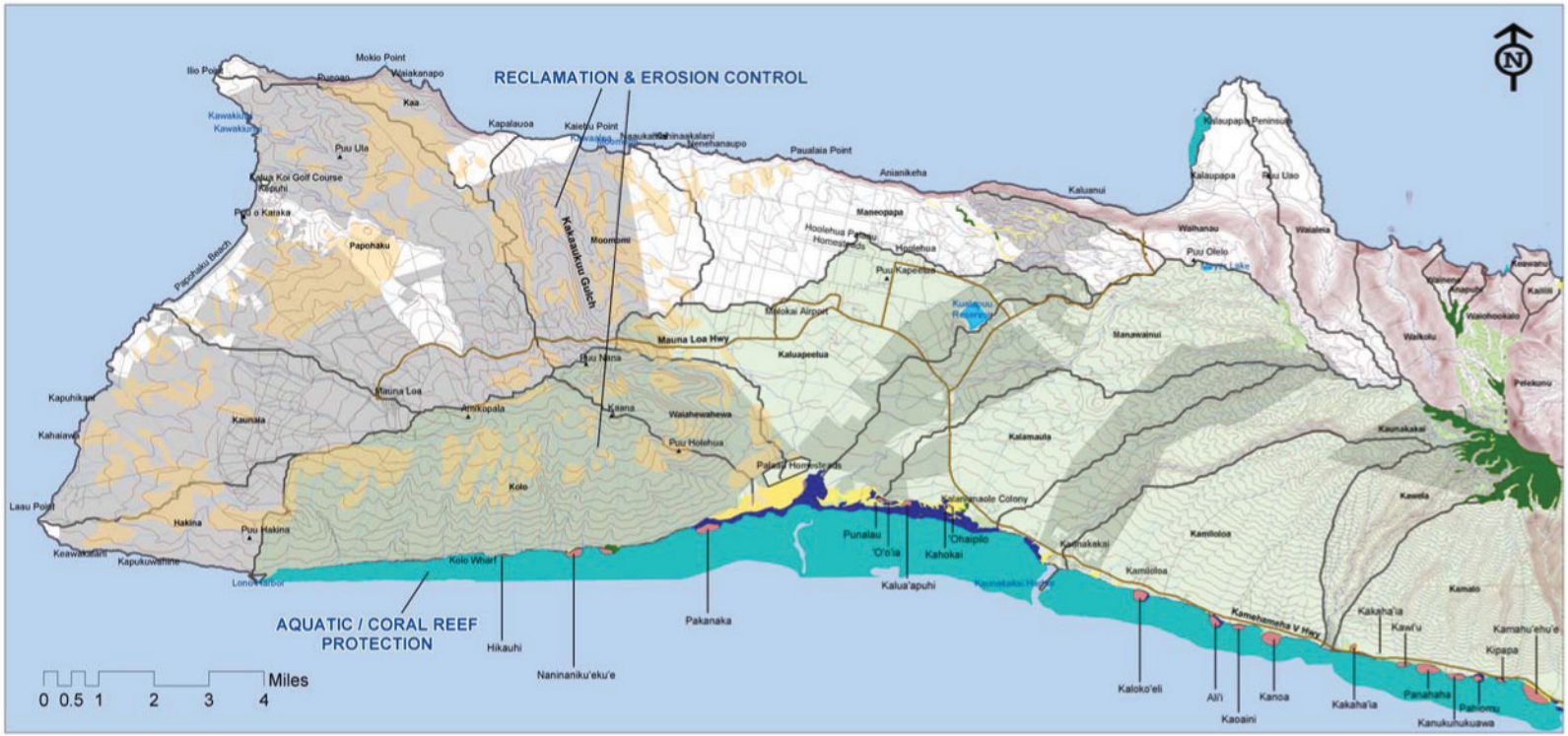
Element Occurrence

- Vertebrate
- Invertebrate
- Plant
- Natural Community

Polygons

- Natural Community
- Plant

MOLOKA'I RESOURCE ASSESSMENT: NATURAL RESOURCES - AQUATIC



Data Sources:

Hydrography - Perennial and intermittent streams and water bodies (USGS, 1983)
Wetlands and Coral Reefs - USFWS / National Wetlands Inventory (WSI)
Watersheds - Hawaii Department of Land and Natural Resources
Erosion - Identified from Air Survey Hawaii, Inc. aerial photo (1998)
Fishponds - HOSP

Prepared By: The Conservation Fund
May 20, 2004

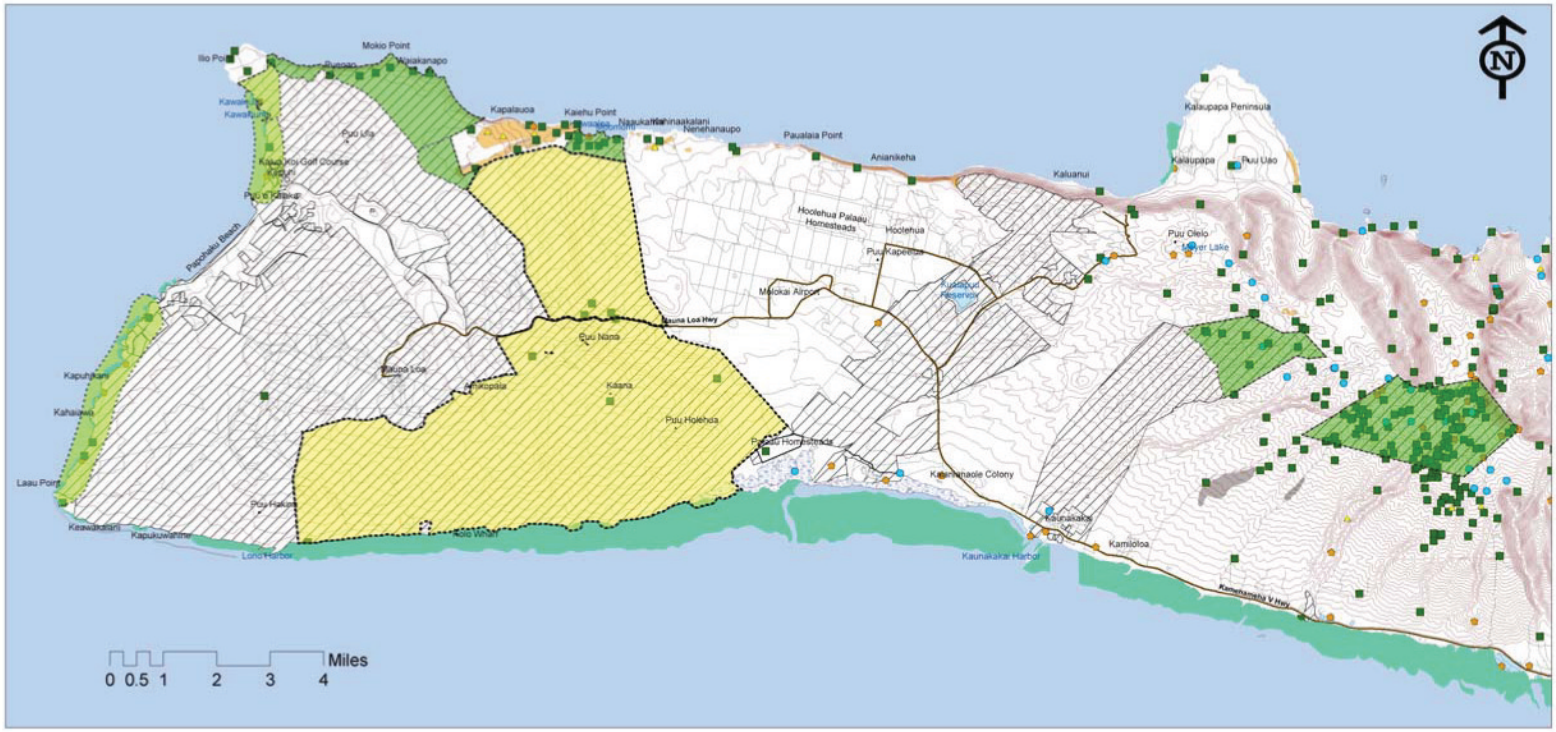
- Molokai Ranch Property
- Major Roads
- 100' Contours
- Perennial Streams
- Intermittent Streams
- Watersheds
- Critical Watersheds for Coral Reef Protection
- Erosion
- Fishponds

Wetland Type

Tidal
- Marine / Coral Reef
- Estuarine

Non-tidal
- Riverine
- Lacustrine
- Palustrine - Emergent
- Palustrine - Scrub/Shrub
- Palustrine - Forested

MOLOKA'I RANCH RESOURCE SUMMARY: NATURAL RESOURCES



Molokai Ranch Property
Major Roads
100' Contours
Coral Reefs

Natural Heritage Rare Species

Element Occurrence
- Vertebrate
- Invertebrate
- Plant
- Natural Community

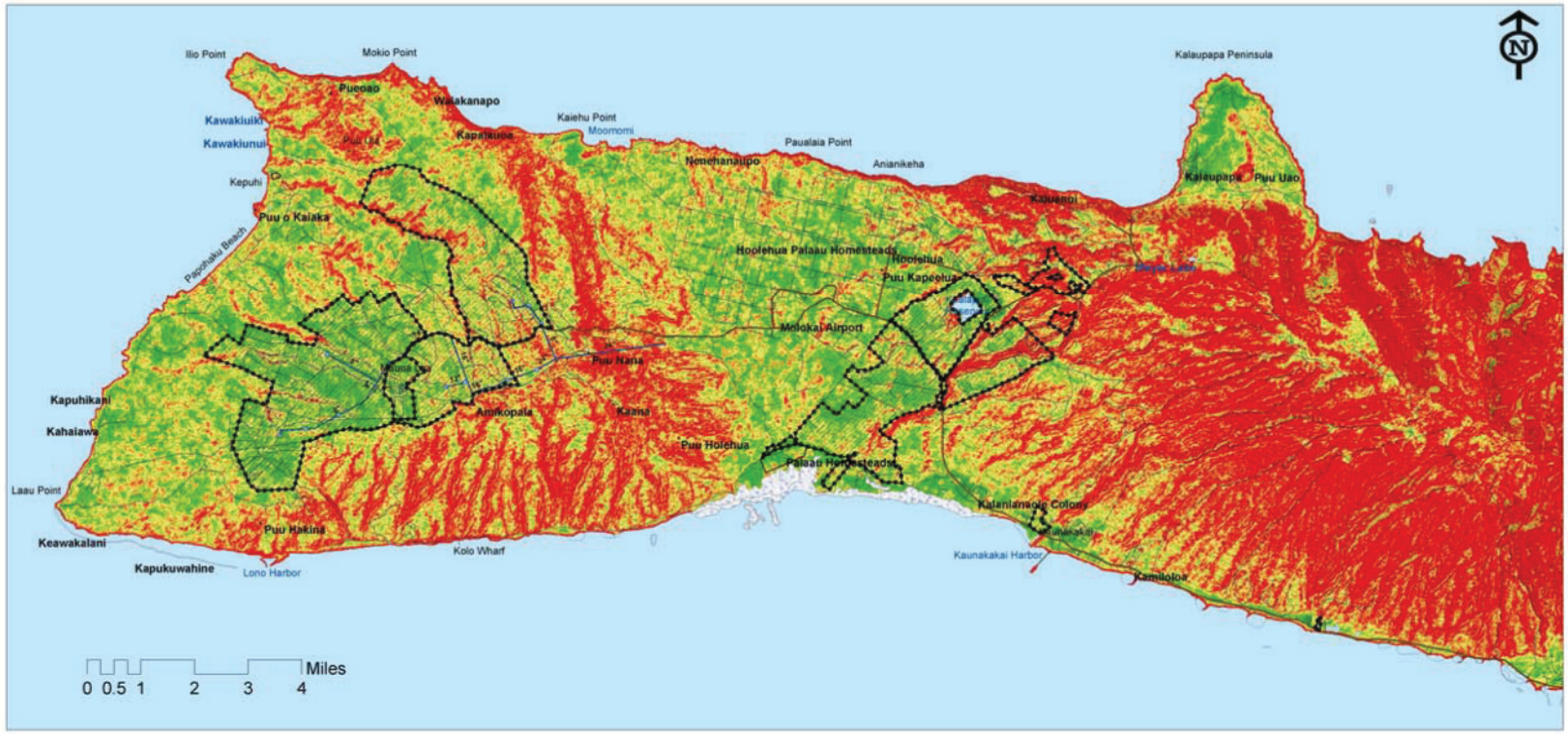
Polygons
- Natural Community
- Plant

PriorityAreas (from Environment Committee)
- Rare Species / Nativel Ecosystem Preservation
- Coastal Habitat Management Protection
- Watershed / Aquatic Resource Protection

Prepared By: The Conservation Fund
August 6, 2004

APPENDIX 4: AGRICULTURAL SUITABILITY CLASSIFICATION & PROPOSED AGRICULTURAL EASEMENT LANDS MAP AND AGRICULTURAL EASEMENT LAND MAP

MOLOKA`I RANCH MASTER USE PLAN
AGRICULTURAL SUITABILITY CLASSIFICATION & PROPOSED AGRICULTURAL EASEMENT LANDS



Data Sources:

Slopes derived from 10-meter USGS DEM
Water Infrastructure - Moloka`i Ranch
Land Capability Classification - Alton Arakaki, University of Hawaii
Proposed Agricultural Easements - Land Use Committee

Prepared By: The Conservation Fund
August 10, 2005

Agricultural Easements (14,390 acres)
Irrigation Pipeline
Valve

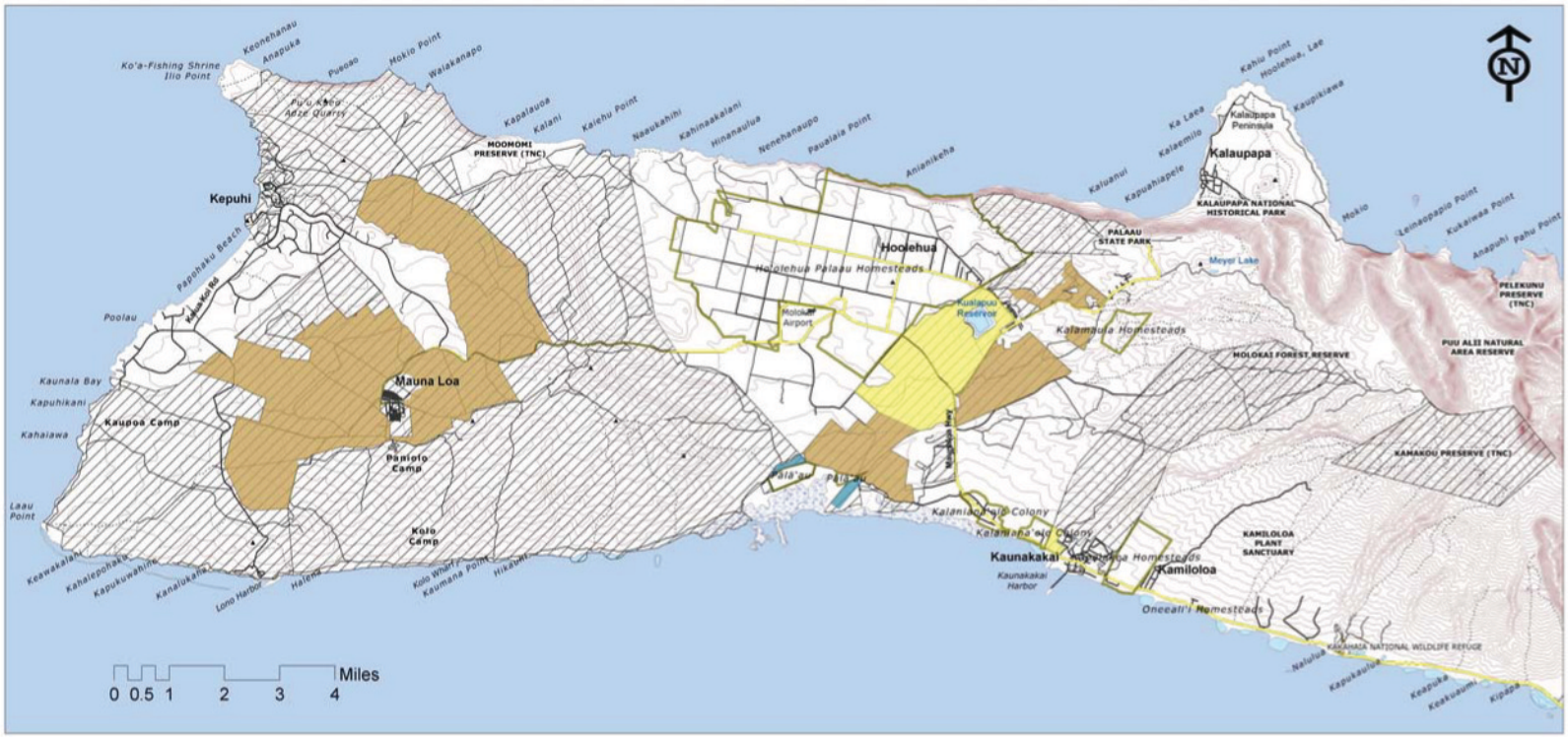
Suitability Class (% Slope)

- Class I: 0 - 2.99%
- Class II: 3 - 7.99%
- Class III: 8 - 14.99%
- Class IV: 15 - 24.99%
- Class VI: 25- 39.99%
- Class VII: 40 - 69.99%
- Class VIII: 70 - 100%

Land Capability Classification

Class	Slope	Use
Class I	0 to 2 percent	
Class II	3 to 7 percent	Suitable for cultivation
Class III	8 to 14 percent	
Class IV	15 to 24 percent	
Class V	0 to 2 percent, water table	Grass production, grazing, forestry, wildlife
Class VI	25 to 39 percent	Pasture, orchard, woodland, wildlife, recreation
Class VII	40 to 69 percent	Pasture, woodland, wildlife
Class VIII	70 or more percent	Recreation, wildlife

MOLOKA'I RANCH MASTER USE PLAN: AGRICULTURAL EASEMENT LAND



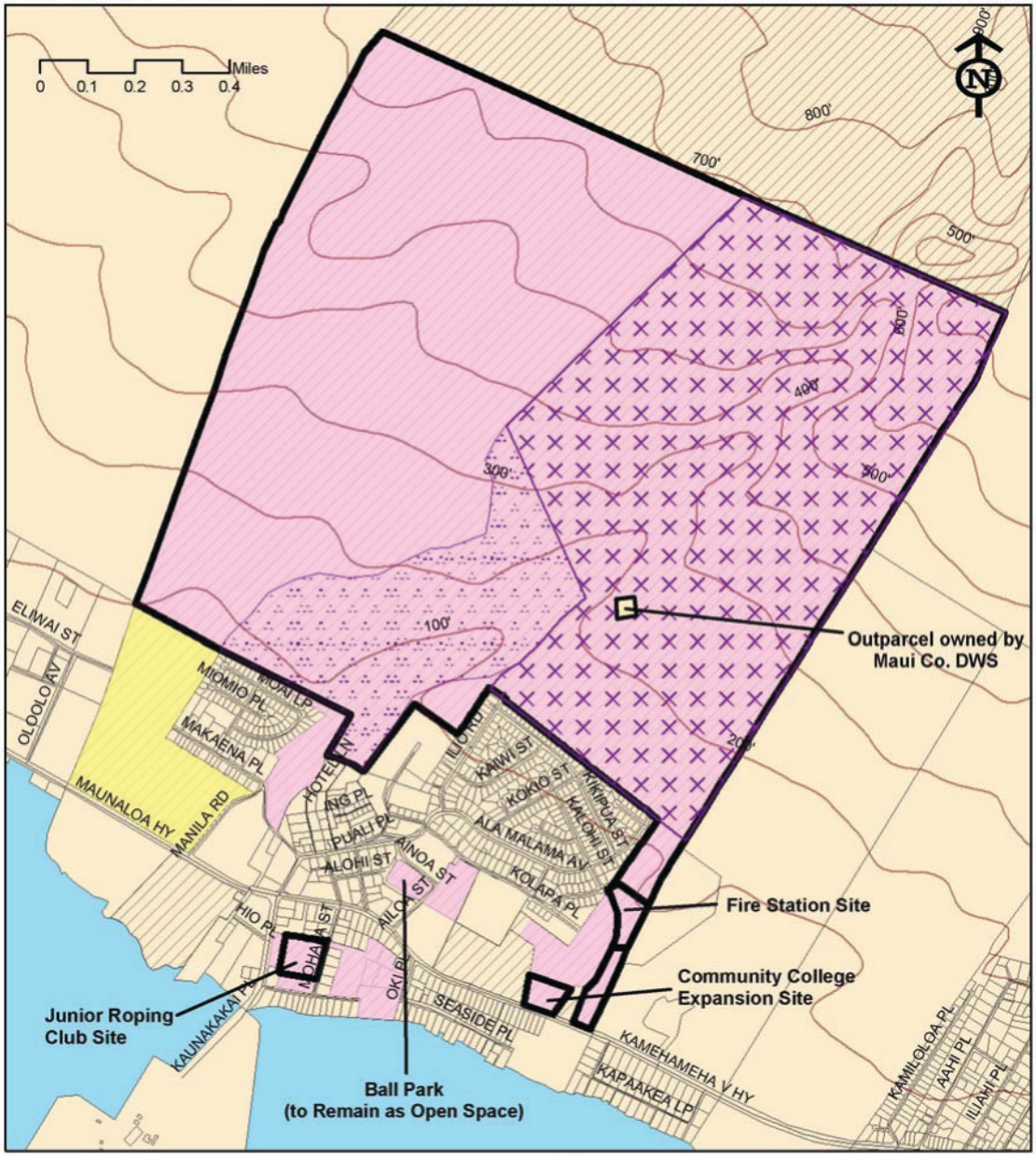
Molokai Ranch Property
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail
- 100' Contours

Proposed Agricultural Districts
- Hi-Value or Intensive Agriculture
- Aquaculture
- Other/Extensive Agriculture

Prepared By: The Conservation Fund
October 10, 2005

APPENDIX 5: COMMUNITY EXPANSION: KAUNAKAKAI MAP, MAUNALOA AND KUALAPU'U MAPS

MOLOKA`I RANCH MASTER USE PLAN - KAUNAKAKAI



Proposed Land Trust
Molokai Ranch Property
Maui Co. Tax Parcels
Roads
100' Contours

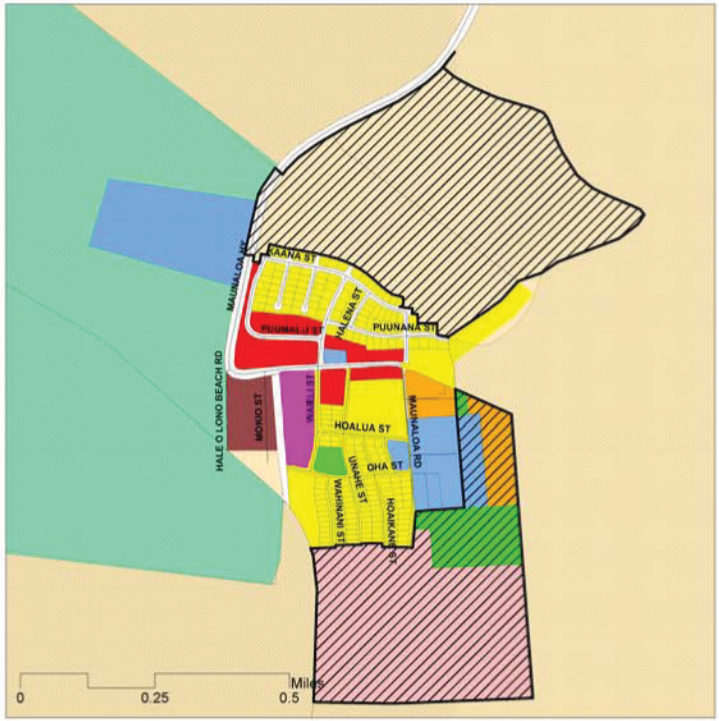
Land Use Districts
Agriculture
Community Expansion

Cultural Overlay Zone
Area verified and documented
Area needing further study

Prepared By: The Conservation Fund
October 5, 2005

MOLOKA`I RANCH MASTER USE PLAN
COMMUNITY EXPANSION

Maunaloa



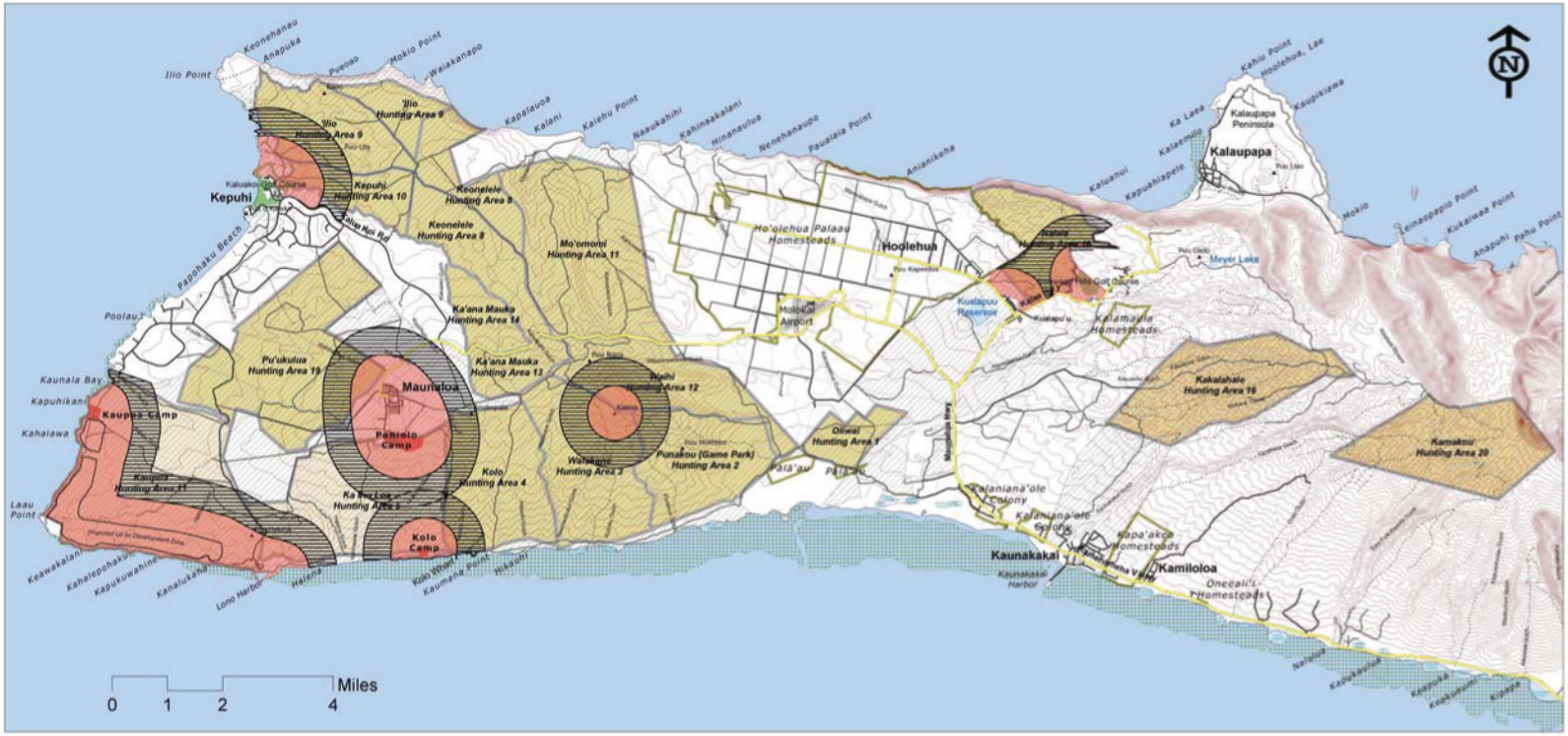
Kualapu`u

Prepared By: The Conservation Fund
October 10, 2005

Maui Co. Tax Parcels	**Community Plan Designations**	Airport	Park
Roads	Single Family	Agriculture	Park/Golf Course
Proposed Land Use Districts	Multi-family	Rural	Roads
Community Expansion	Hotel	Project District	
Cultural Resource	Commercial	Open Space	
Agriculture	Light Industrial	Conservation	
	Heavy Industrial	Public/Quasi-public	

APPENDIX 6: HUNTING MAP

MOLOKA'I RANCH RESOURCE SUMMARY: HUNTING MAP



Data Sources:

USGS Hawaii Data Clearinghouse
Roads, Homestead

Hawaii Office of Planning
Coral Reefs, Contours, Molokai Ranch Property, Place Names

Moloka'i Ranch Community-based Master Plan - Land Use Committee
Hunting Areas, Safety Buffer

Prepared by: The Conservation Fund
October 10, 2005

- Molokai Ranch Property
- Homestead
- Coral Reefs
- 100' Contours
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail

Hunting Areas

- Bow
- Rifle
- Other Management
- 1/2-mile safety zones (around populated areas)
- 1-mile transition zones (Bow Hunting ONLY)

APPENDIX 7: SUBSISTENCE FISHING MANAGEMENT ZONE MAP

MOLOKA'I RANCH MASTER USE PLAN
SUBSISTENCE FISHING MANAGEMENT ZONE

Community-Based Subsistence Fishing Zone

- Adjacent to MPL and Trust-Owned Lands
- Contingent on Partnership Agreements

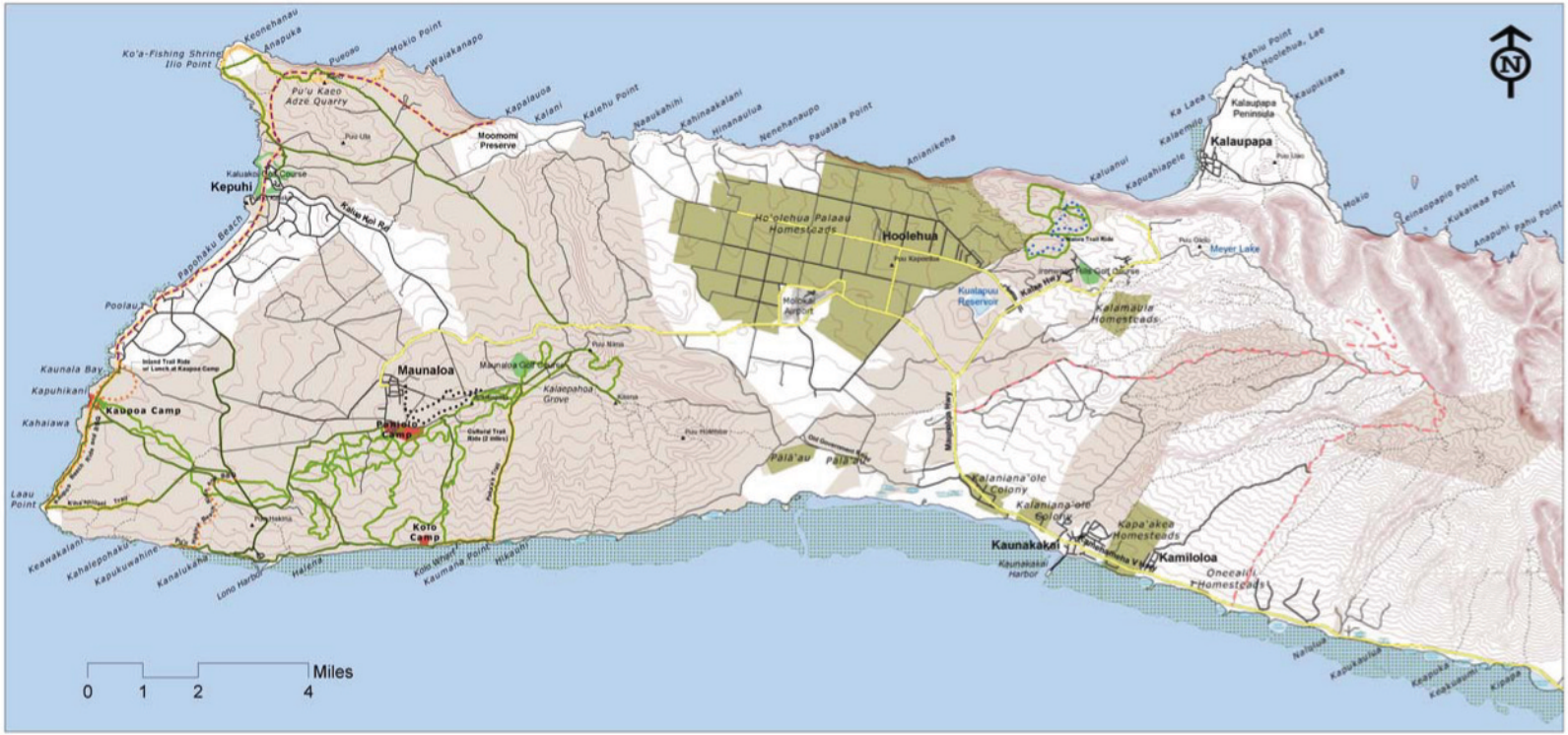
- Molokai Ranch Property
- Homestead
- Camp
- Ancient Fishpond

- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail
- 100' Contours

Map Prepared By:
The Conservation Fund
October 7, 2005

APPENDIX 8: RECREATION/TRAILS MAP

MOLOKA'I RANCH RESOURCE SUMMARY: RECREATION / TRAILS



Molokai Ranch Property
Homestead
Coral Reef
Camp
Golf Course

Major Road
Secondary Road
Minor Road
4WD Road
Trail

Cultural Trail
Historic Monsarrat Trail
Na Ale Hele State Trail
Bike / Hike Trail - Inactive

Horse Trails
Active
Active / Seasonal
Less Active

Prepared by: The Conservation Fund
October 10, 2005

APPENDIX 9: CULTURAL RESOURCE OVERLAY ZONE MAP

MOLOKA'I RANCH MASTER USE PLAN
CULTURAL RESOURCE OVERLAY ZONE

Data Sources:

USGS Hawaii Data Clearinghouse
Roads, Homesteads

Hawaii Office of Planning
Contours, Molokai Ranch Property, Place Names, Fish Ponds

Maurice Major, Archaeologist
West End Archaeological Survey Data

Cultural and Land Use Committees
Other Archaeological Sites, Makahiki Grounds, Land Use Districts and Overlay Zones

- Molokai Ranch Property
- Homestead
- Major Road
- Secondary Road
- Minor Road
- 4WD Road
- Trail
- Cultural Resource Protection Overlay
- Subsistence Fishing Zone
- Partnership Subsistence Fishing Zone
- West End Arch. Sites (M. Major)
- Additional Archaeological Sites
- Kualapu'u Makahiki Grounds
- Ancient Fishponds
- Camp

Prepared By: The Conservation Fund
October 7, 2005

APPENDIX 10: REFERENCES

REFERENCES

Maui County. Department of Planning. "Molokaʻi Community Plan" (2001). <http://www.co.maui.hi.us/departments/Planning/pdf/molokai.pdf>

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Summers, Catherine C. (1971). "Molokai: A Site Survey". Department of Anthropology, Bernice P. Bishop Museum. Honolulu, Hawaii.

University of Hawaii, Department of Urban & Regional Planning (2005). "Pāpōhaku Dunes Draft Preservation Plan." Planning Practicum Spring 2005.