Lā'au Point

DRAFT ENVIRONMENTAL IMPACT STATEMENT

West Moloka'i, Moloka'i, Hawai'i

Volume 1 of 2

Accepting Authority
State of Hawai'i Land Use Commission

Applicant
Molokai Properties Limited

January 2008

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West Molokaʻi, Molokaʻi, Hawaiʻi

Accepting Authority:
State of Hawaiʻi Land Use Commission
&
Applicant:
Molokai Properties Limited

This draft environmental impact statement and all ancillary documents were prepared under my direction or supervision and the information submitted, to the best of my knowledge, fully addresses document content requirements as set forth in Section 11-200-17, Hawaiʻi Administrative Rules.

Peter Nicholas, President & CEO
Molokai Properties Limited

January 2008

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LIST OF ACRONYMS

ALDC	Alternative to Lā‘au Development Committee
ALISH	Agricultural Lands of Importance to the State of Hawai‘i
ARINC	Aeronautical Radio, Inc.
BIL	Brierley Investments Limited
BLNR	Board of Land and Natural Resources
CC&Rs	Covenants, Conditions, and Restrictions
CDC	Moloka‘i Community Development Corporation
CWRM	State Commission on Water Resource Management
CZM	Hawai‘i Coastal Zone Management Program
DHHL	Department of Hawaiian Homelands
DLNR	Department of Land and Natural Resources
DOA	State Department of Agriculture
DOE	State Department of Education
DOH	State Department of Health
DWS	County of Maui Department of Water Supply
EC	Moloka‘i Enterprise Community
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
EZ	Empowerment Zone
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GPS	Global Positioning System
HAR	Hawai‘i Administrative Rules
HOA	Lā‘au Point Homeowners’ Association
HRS	Hawai‘i Revised Statutes
IRS	Internal Revenue Service
KAL	Ke ‘Aupuni Lōkāhi
KMI	Kukui (Moloka‘i), Inc.
KWLLC	Kaluako‘i Water, LLC
LOS	Level of Service
LUC	State Land Use Commission
MCC	Maui County Code

MCSC	Molokaʻi Community Services Council
MECO	Maui Electric Company
MIP	DHHL's *Molokaʻi Island Plan*
MIS	Molokaʻi Irrigation System
MPL	Molokai Properties Limited, also known as Molokai Ranch
MPUI	Molokaʻi Public Utilities, Inc.
NOAA	National Oceanic & Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
PUC	Molokaʻi Public Utilities Commission
SAMP	Shoreline Access Management Plan
SHPD	State Historic Preservation Division
SLUDBA	State Land Use District Boundary Amendment
SMA	Special Management Area
TIAR	Traffic Impact Assessment Report
TMK	Tax Map Key
USGS	United States Geological Survey

BACKGROUND

Since pineapple plantations began phasing out operations on Moloka‘i, beginning in the 1970s, and finally ceasing all cultivation by the mid-1980s, the Moloka‘i community has grappled with the issue of revitalizing the island’s economy and providing jobs for residents while maintaining its unique social and cultural fabric. During this time and throughout the 1990s until 2003, Molokai Ranch (also known as Molokai Properties Limited), the largest private landowner on Moloka‘i, isolated itself from the Moloka‘i community through a lack of consultation on its development plans. As a result, Molokai Ranch’s plans generally met with strong community opposition.

In 2003, Molokai Properties Limited (MPL), which had acquired the abandoned Kaluako‘i Hotel, and the Moloka‘i Enterprise Community (EC), a 501(c)(3) non-profit organization, whose mission is to help Moloka‘i residents empower themselves to implement their community strategic plan and, thereby, control their own destiny, began meeting together to discuss a mutual interest in re-opening the Kaluako‘i Hotel. Out of those discussions grew a partnership of the Enterprise Community and MPL to create a cohesive proposal for Molokai Ranch’s 60,000+ acres that would ensure that MPL’s goals could be met in a manner that assured the community that Moloka‘i would remain the kind of community its residents desired.

These discussions created a partnership between a company and its island neighbors that had been acrimonious and adversarial; and it contributed to personal growth for those involved in the process. Importantly, the community-based planning process set the stage for Moloka‘i’s future—a future in which self-determination by the island’s residents is assured.

The resultant *Community-Based Master Land Use Plan for Molokai Ranch* (the *Master Plan*) (initially launched as EC Project #47: Community-Based Compatible Development) is the product of more than 150 community and special interest group meetings, the majority of which members of the community were invited to take part in. More than 1,000 Moloka‘i residents participated in the planning process, which involved long hours of impassioned debate, critical thinking, and soul-searching. This comprehensive land-planning process, certainly the most unique ever to have taken place in Hawai‘i, will hopefully lead to a reconciliation of families that have been separated by controversy for more than a decade.

The prospect of Molokai Ranch lands being split up and sold, or parent company GuocoLeisure Limited selling MPL because it would never be economically viable, and the community facing the resultant prospect of never again being able to have the opportunity of planning its future, made the urgency of reaching consensus on the *Master Plan* of critical importance to both the Moloka‘i EC and MPL.

This Environmental Impact Statement (EIS) examines the impacts of the Lā‘au Point project. The *Master Plan* has been included as Appendix A. The communities’ acceptance of the Lā‘au Point project as an enterprise that can be undertaken without compromising the Moloka‘i cultural and social fabric is dependent on the assurances derived from the *Master Plan*.

Issues Addressed by the *Master Plan* and this EIS

Summarized below are the issues that have been raised during the *Master Plan* process and subsequently with references within this document where MPL has answered community and regulators’ concerns.

Issue or Concern	EIS Section Number that Addresses Issue
Master Plan Was the Master Plan the result of an extensive community-based process?	Section 2.1.7
Moloka‘i Land Trust Will the mission, goals and strategic plan developed by the Land Trust protect the donated lands? Who are these people on the Land Trust?	Section 2.1.12; Appendix D
Moloka‘i Land Trust and Lā‘au Point How will the Land Trust ensure compliance of the Lā‘au CC&R’s and protect the shoreline in front of the lots for subsistence for all time? How will a community member complain and who will listen?	Section 2.3.6
Water: Why can’t homesteaders get water when newcomers at Lā‘au are able to get water? How will MPL’s Water Plan protect DHHL’s water reservations to ensure homesteaders always have enough water? Will the development of the Kakalahale Well impact existing Wells and Native Hawaiian gathering rights? How will MPL get Well 17 water to the West End if it is forced to get off the MIS system? How will MPL transmit Kākalahale Water to the West End? How will MPL restrict water use at Lā‘au Point and will it really work?	Section 4.9
Lā‘au CC&R’s and other documents relating to the development of 200 lots Can the draft CC&R’s for Lā‘au Point, the Shoreline Access Management Plan and the Easement over the expanded Conservation District Lands be included in your documents?	Appendix B; Appendix C; Appendix E
Agricultural and Rural Reserve Easements under Master Plan What are the key development provisions allowable under these easements?	Section 2.1.11

Issue or Concern	EIS Section Number that Addresses Issue
Assessement of Facilitated Actions: Discuss facilitated actions from the projects such as: • The re-opening of the Kaluako‘i Hotel • Any changes to Hale O Lono harbor • Other actions resulting from the implementation of the Master Plan that are reasonably foreseeable.	Section 5.0
Kaluako‘i Area MPL has existing entitlements at Kaluako‘i. What are its plans for the area?	Section 5.2
Maui County Rules How many houses can be built at Lā‘au Point under existing Maui County ordinances for such a development? How does the Lā‘au Point development fit into the revision of the County’s General Plan?	Section 6.2.3
Monk Seals How will MPL’s plans for Lā‘au Point impact the monk seal population?	Section 3.7
Archeological and Cultural Sites at Lā‘au Point How can we ensure that all important archeological sites on planned roadways and lots will be protected during construction?	Section 4.1
Alternatives What alternatives to the proposed Lā‘au Point subdivision did MPL study and did it review the alternative of Wind-farms?	Section 7.0
Community Development Corporation What is the role of the Community Development Corporation and can anyone get involved?	Section 2.1.13

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1.0 INTRODUCTION AND SUMMARY

This Environmental Impact Statement (EIS) is prepared in accordance with Chapter 343, Hawaiʻi Revised Statutes (HRS), and Title 11, Chapter 200, Administrative Rules, Department of Health, State of Hawaiʻi. Proposed is an applicant action by Molokai Properties Limited (also known as Molokai Ranch) for the Lāʻau Point project in the West Molokaʻi region of the island of Molokaʻi (portions of TMK (2) 5-1-02:30).

1.1 PROJECT PROFILE

Project Name:	Lāʻau Point
Location:	West Molokaʻi
Judicial District:	Molokaʻi
Landowner:	Molokai Properties Limited
Applicant:	Molokai Properties Limited
Tax Map Key:	(2) 5-1-02:30; 5-1-06:157; 5-1-08:04, 03, 06, 07, 13, 14, 15, 21, and 25
Project Area:	1,432 acres
SLUDBA Petition Area:	1,113 acres
Existing Use:	Vacant
Proposed Use:	Single-family rural-residential lots, required infrastructure, access road, cultural preserves, parks, and shoreline access.
Current Land Use Designations:	State Land Use: Agricultural and Conservation Conservation District Subzones: General and Limited Community Plan: Agricultural and Conservation County Zoning: Agricultural Special Management Area (SMA): portion of the parcel within the SMA
Proposed Land Use Designations:	State Land Use: Agricultural to Rural; Agricultural to Conservation; Conservation to Agricultural Community Plan: Agricultural to Rural and Park County Zoning: Agricultural to Rural and Open Space

Permits/Approvals Required:

Compliance with Chapter 343, HRS
State Land Use District Boundary Amendment
Compliance with Chapter 6E, HRS (SHPD)
Community Plan Amendment
Change in Zoning
Special Management Area Use Permit
County Special Use Permit
Subdivision Approval
Conservation District Administrative Rule Amendment
Grading/Building Permit
NPDES permit
Water Use Permit
Approval for Distribution System for a Public Water System
Recycled Water System Approval

Accepting Authority: State Land Use Commission

1.2 APPLICANT

The applicant is Molokai Properties Limited.

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Dan Orodenker, General Manager for Land & Entitlements/General Counsel
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Honolulu, Hawaiʻi 96813
Telephone: (808) 531-0158
Fax: (808) 521-2279

1.3 ACCEPTING AUTHORITY

In accordance with Chapter 343, HRS, privately initiated EIS documents must be accepted by the government agency empowered to approve permits for a project: "The authority to accept a final statement shall rest with the agency initially receiving and agreeing to process the request for approval." A State Land Use District Boundary Amendment is required for this project. As such, the State Land Use Commission is the accepting authority.

Contact: State Land Use Commission
P.O. Box 2359
Honolulu, Hawaiʻi 96804
Telephone: (808) 587-3822
Fax: (808) 587-3827

1.4 COMPLIANCE WITH STATE OF HAWAIʻI AND MAUI COUNTY ENVIRONMENTAL LAWS

This document has been prepared in accordance with the provisions of Hawaiʻi Revised Statutes (HRS) Chapter 343 (Environmental Impact Statement Law) and Hawaiʻi Administrative Rules Title 11, Department of Health, Chapter 200, Environmental Impact Rules. Section 343-5, HRS, establishes nine "triggers" that require compliance with these regulations. Three triggers are applicable to the Lāʻau Point project; these include:

- Community Plan Amendment.
- Use of Conservation District land.
- Proposed wastewater treatment facility.

Molokai Properties Limited (MPL) has initiated the preparation of this Environmental Impact Statement (EIS) to address potential impacts related to Lāʻau Point.

In addition, construction of Lāʻau Point may involve or impact State and/or County lands relating to infrastructure improvements for roadways, water, sewer, utility, drainage, or other facilities. While the specific nature of each improvement is not known at this time, the EIS is intended to address all current and future instances involving the use of State and/or County lands relating to Lāʻau Point.

This EIS was preceded by the *Lāʻau Point Environmental Impact Statement Preparation Notice* (EISPN). The EISPN was submitted to the Office of Environmental Quality Control (OEQC) on May 25, 2006. Notice of the availability of the EISPN was published in the June 8, 2006 edition of OEQC's *The Environmental Notice*. Copies of the EISPN were provided to appropriate government agencies and other organizations. The public comment period for the EISPN ended July 10, 2006. Comments on the EISPN have been incorporated in this EIS. Comment letters received regarding the EISPN are included in Section 9.0.

A previous *Lāʻau Point Draft Environmental Impact Statement* (Draft EIS) was submitted to OEQC on December 13, 2006. Notice of the availability of this previous Draft EIS was published in the December 23, 2006 edition of OEQC's *The Environmental Notice*. Copies of the previous Draft EIS were provided to appropriate government agencies and other organizations (See Chapter 12). The 45-day public comment period on the previous Draft EIS was from December 23, 2006 to February 6, 2007. Based on community requests, MPL extended the comment deadline period on the previous Draft EIS to end on February 23, 2007, allowing a 63-day comment period.

Pursuant to Hawaii Adminstrative Rules Section 11-200-23(f) MLP withdrew the previous Draft EIS on November 19, 2007. Comments on the previous Draft EIS have been incorporated into this EIS. Comment letters received regarding the previous Draft EIS are included in Section 9.0.

1.5 STUDIES CONTRIBUTING TO THIS ENVIRONMENTAL IMPACT STATEMENT

This EIS provides a description of the environment, alternatives considered, preliminary impacts, and proposed mitigation measures. The information contained in this report has been developed from site visits, general available information regarding the characteristics of the site and surrounding areas, and technical consultant reports. Technical studies to assess the existing

natural and physical conditions of the site and potential impacts to the property and the surrounding area were prepared and are included as appendices in this EIS. These studies include:

- Air Quality Study
- Archaeological Inventory Survey
- Cultural Impact Assessment
- Economic & Fiscal Impacts Report
- Fauna Survey
- Flora Survey
- Geotechnical Engineering Reconnaissance
- Noise Assessment Study
- Marine Environment Assessment
- Market Support for Real Estate Development Report
- Preliminary Drainage Report
- Preliminary Engineering Report
- Social Impact Assessment
- Traffic Impact Analysis Report
- Wastewater Study
- Water Plan Analysis

1.6 EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared for the proposed Lā‘au Point project located along the shoreline bluffs on the southwest coastline of Moloka‘i. In the course of developing the project MPL engaged in a dialogue with the community that ultimately led to the comprehensive *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*) for all of Molokai Properties Limited (MPL)’s 60,000+ acres on West Moloka‘i.

Through the *Master Plan*, MPL has endeavored, prior to seeking land use entitlements, to facilitate the re-opening of the Kaluako‘i Hotel, to settle long-standing disputes with regard to the use of all of its holdings on West Moloka‘i, to develop only enough of its lands to fund the re-opening of the Kaluako‘i Hotel, to allow MPL to remain economically viable and to fund other projects to benefit the island of Moloka‘i as a whole and, finally, to provide long-term assurances that the great majority of these holdings will never be developed or will only be developed at much less than their current development potential.

The key components of the *Master Plan* are as follows:

The Lā‘au Point Project (1,432 acres)

- Create the Lā‘au Point community. The project area consists of 1,432 acres or approximately two percent of MPL’s total land holdings on Moloka‘i. This project will consist of no more than 200 rural-residential lots, each approximately 1.5 to 2+ acres in size. Sales of the lots are crucial to funding the Kaluako‘i Hotel renovations and golf course upgrades (see below). In addition, a portion of the sales revenues will fund an endowment for both the Moloka‘i Land Trust and a yet-to-be formed Community Development Corporation.

The Re-opening of the Kaluako‘i Hotel

- Meet the community’s desire to renovate and re-open the 152-room Kaluako‘i Hotel (which was closed in 2001) and upgrade the Kaluako‘i Golf Course, which is estimated to cost in excess of $30 million. The Kaluako‘i facilities are crucial for revitalizing the Moloka‘i economy and will provide more than 100 jobs for Moloka‘i residents. The re-opening of the hotel was a primary focus of the *Master Plan*. Funding for the Kaluako‘i Hotel and Golf Course renovations will come from sales of the Lā‘au Point rural-residential lots.

Large Acreages Protected From Future Development (55,000+ acres)

Provide long-term assurances that the great majority of MPL’s land holdings will never be developed or will only be developed at much less than their current development potential through the following:

- Regardless of the outcome of the Lā‘au Point development, the Moloka‘i Land Trust is to receive an initial donation of 1,600 acres of MPL land on Moloka‘i’s north shore between ‘Īlio Point and Mo‘omomi, regarded by environmentalists as the most pristine of MPL’s property. This donation is to take place early in 2008.

- Prevent development on more than 55,000 acres (85 percent) of MPL’s property in perpetuity, thereby protecting the rural agricultural and open space nature of the island through: Land Trust donations (26,200 acres); protective Agricultural/Rural Landscape Reserve easements (24,950 acres); existing easements to other entities, i.e. Moloka‘i Forest Reserve and Kamakou Reserve (4,040 acres); and Lā‘au Point Cultural Protection Zones and Conservation lands (434 acres). The Moloka‘i Land Trust (see Section 2.1.12) will assume ownership and management of the donated land that is to be preserved and result in “lost revenue opportunity cost” of more than $25 million to MPL.

Protection of Subsistence Resources

- Actively promote the protection and enhancement of subsistence, an important element of life on Moloka‘i, which includes ensuring access to the shoreline across the property for subsistence gathering. Access to areas that have been closed to the community for generations will be opened for walking access, and the perpetual right to subsistence gathering will be noted on the titles of all access areas. Further, in support of wishes by participants of the process, commercial hunting would cease and subsistence hunting would be allowed on the lands that are currently used for commercial hunting; lands that will be donated to the Land Trust as part of the 26,200-acre donation.

- Protecting subsistence through a future application to the State to establish a subsistence fishing zone from the coast to the outer edge of the reef or where there is no reef, out to a quarter-mile from the shoreline along the 40-mile perimeter of the property. MPL will end commercial hunting, thereby allowing only the community to hunt on the property. MPL will ensure access to the shoreline will only be available by foot as desired by the community (see Sections 2.3.7, 4.2, and 4.3 for further discussion).

Resolution of Longstanding Land Use Disputes

- The lands to be donated include many premier Hawaiian legacy lands that were the subjects of past land use disputes between the community and Molokai Ranch, and also contain many subsistence resources, including the following:
  - Pu‘u o Kaiaka within the Kaluako‘i Resort which was previously approved for development over the objections of the community.
  - Village sites at Kawakiu, which was previously approved for development over the objections of the community.
  - The ancient burial ground in the sand dunes of Kawa‘aloa Bay.
  - Ka‘ana, the birthplace of the hula.
  - Nā‘iwa, the only intact traditional makahiki grounds in the islands.
  - The Burial mounds at Kawela.

The Lā‘au Point Project Provides Revenues for CDC

- Provide an endowment that serves as a continuous revenue stream for a Community Development Corporation (CDC). Section 2.1.13 provides further discussion.

The Lā‘au Point Project Allows MPL to Be Economically Viable

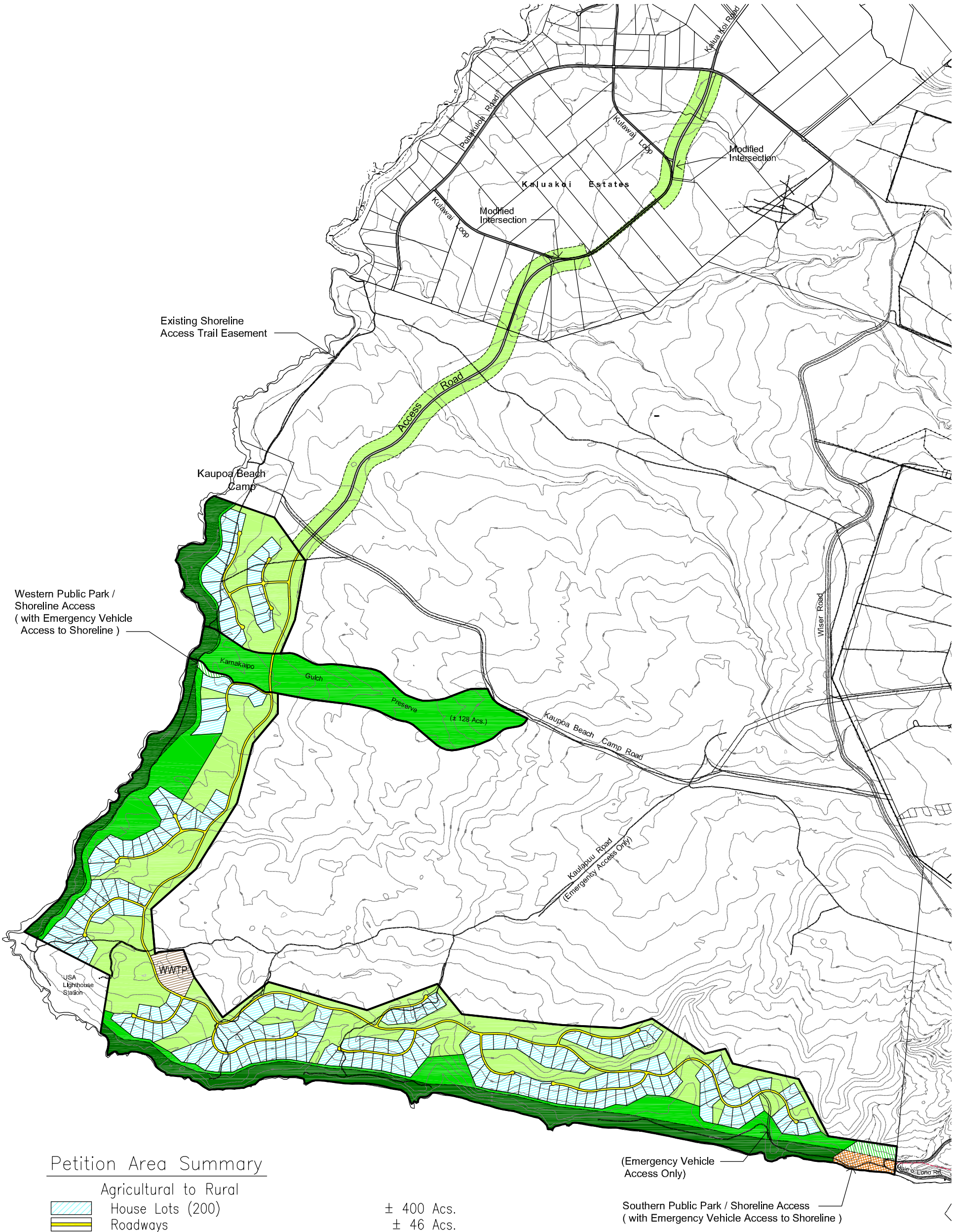
The Lā‘au Point project will assure the availability of funds for MPL’s current tourism and agricultural operations, ensuring the continued employment of its current staff. MPL is currently cash negative from its operations by approximately $3.8 million annually and is supported by its parent company GuocoLeisure Limited.

1.6.1 Lā‘au Point Project Description Summary

The Lā‘au Point project proposes 200 two-acre rural-residential lots surrounded by an open-space buffer, roads and infrastructure, an expansion of the State Conservation District, cultural protection zones for archaeological sites, easements to protect subsistence gathering, and two public shoreline parks in the area of Lā‘au Point on Moloka‘i’s southwest coastline (see Figure 1). The total Lā‘au Point project area covered in the EIS is 1,432 acres comprising three main types of areas: rural-designated residential lots, open space buffer, and coastal conservation land.

The coastal conservation land encompasses 451 acres of the existing and proposed expanded Conservation District boundary, which includes the coastline, gulches, parks, and several cultural protection zones. Cultural protection zones include approximately 1,000 acres of land that were identified within the project and larger area of the Lā‘au Point parcel to denote areas where groupings of archaeological and historic sites exist. Access roads and the rural-residential lots have been planned to respect these cultural protection zones and archaeological sites. In addition, an archaeological preserve (approximately 128 acres) will be created at Kamāka‘ipō Gulch. Natural resource areas, such as streams, gulches, and floodways will be maintained as open space. The project will also include two public shoreline parks, one by Kamāka‘ipō Gulch on the west end of the Lā‘au Point site, and the other by Pu‘u Hakina at the southeast end.

Approximately 400 acres of rural-designated area within Lā‘au Point will consist of 200 rural-residential lots, each approximately 1.5 to 2+ acres in size. An access road corridor will run



Petition Area Summary

	Agricultural to Rural	
	House Lots (200)	± 400 Acs.
	Roadways	± 46 Acs.
	Infrastructure (Wastewater Treatment Plant)	± 14 Acs.
	Parks	± 8 Acs.
	Open Space	± 382 Acs.
	Total Agricultural to Rural	± 850 Acs.
	Conservation to Rural (for Park Use)	± 9 Acs.
	Agricultural to Conservation	± 254 Acs.
	Total Petition Area	± 1,113 Acs.

Project Area Summary

	Petition Area	± 1,113 Acs.
	Existing Conservation District (along Shoreline)	± 180 Acs.
	Offsite Road Corridor	± 139 Acs.
	Total Project Area	± 1,432 Acs.

Figure 1
Project Area & LUC Petition Area

Lā'au Point

Island of Molokai

NORTH

LINEAR SCALE (FEET)
0 1000 2000 4000

PBR HAWAII

north-south from Pōhakuloa Road to Kaupoa Beach Camp Road, connecting with Kaluakoʻi Road and Kulawai Loop. An open space buffer area totaling approximately 382 acres will surround the residential lots. This open space buffer will be maintained by the Lāʻau Point Homeowners' Association (HOA). The mauka boundary of the open space buffer will be defined by a deer and livestock fence to minimize conflicts with adjacent subsistence hunting and pasture usage of the remainder of the Lāʻau parcel. The fence will protect the open space and coastal conservation areas from degradation by livestock and deer.

Lāʻau Point aims to attract people who respect the unique character of the site and Molokaʻi, and who support conservation, cultural site protection, and coastal resource management. Residents of Lāʻau Point will be educated and informed about the environment and culture, and taught to "mālama ʻāina," take care of the land and sea, through strict Conditions, Covenants, & Restrictions (CC&Rs) attached to the subdivision. Perpetual right to subsistence gathering will be noted on the land titles of the areas to be preserved. The CC&Rs will establish policies that permit subsistence gathering and cultural practices, as well as provide for the hiring of resource managers to protect the subsistence lifestyle.

1.6.2 Summary of Potential Project Impacts and Proposed Mitigation Measures

The Lāʻau Point project will transform the vacant land of the site into a rural-residential community. For areas of environmental concern, the following summarizes the associated mitigation measures that are either recommended or planned to ensure that potential adverse impacts are minimized or mitigated in addition to the larger off-site mitigation measures set forth in Section 1.1.1.

Soils – Impacts to the soils of the site include the potential for soil erosion and the generation of dust during construction. Clearing and grubbing activities will temporarily disturb the soil retention values of the existing vegetation and expose soils to erosion. All construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. All construction activities will also comply with the provisions of Chapter 11-60.1, Hawaiʻi Administrative Rules, and Section 11-60.1-33 on fugitive dust. After construction, the establishment of permanent landscaping will provide long-term erosion control. See Section 3.3 for a full discussion of the potential impacts and the mitigation measures.

Agricultural Impact – Lāʻau Point soils are poorly suited for soil-based agriculture. Other agricultural activities in the project area, such as cattle grazing, ceased in 2000. The Lāʻau Point project will not displace any active agricultural land out of production and will not impact Molokai Ranch's agricultural operations. See Section 3.4 for a full discussion of the potential impacts and the mitigation measures.

Flora – Although dominated by non-natives, healthy native plant communities can still be found in sandy beach, rocky shoreline shrub land/grassland, and seasonal wetland habitats. Three species considered rare in Hawaiʻi include: Alkali Weed (*Cressa truxillensis),* Hawaiian cotton or maʻo *(Gossypium tomentosum)*, and ʻihiʻihilauakea *(Marsilea villosa)*. ʻIhiʻihilauakea, a native fern, is the only federally listed endangered plant occurring in the Lāʻau Point area. The ʻihiʻihilauakea population is located within Kamākaʻipō Gulch. Kamākaʻipō Gulch will be part of the expanded Conservation District area, designated a Cultural Protection Zone, and managed by the Land Trust. No development will occur in the expanded Conservation District area, including Kamākaʻipō Gulch. The ʻihiʻihilauakea population is not within the proposed

residential houselot area. The Lāʻau Point project site will retain existing landscaping appropriate to the coastal preserve setting. New landscaping will include drought-tolerant native plants to minimize the use of water for irrigation. See Section 3.6 for a full discussion of the potential impacts and the mitigation measures.

Fauna – The Lāʻau Point project will be sensitive to natural systems and define areas for environmental protection. A State Land Use District Boundary Amendment is proposed to protect and expand the existing Conservation District (shoreline area) by 254 acres, thereby increasing the amount of shoreline and habitats, such as for Hawaiian monk seals, put into permanent protection. This request is reflective of the community's desire to preserve shoreline resources. In addition, a Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) provides guidelines, rules, monitoring programs, and general principals for the protection and utilization of the cultural, biological, and social resources of the area, including Hawaiian monk seals. The expanded shoreline protection area will also reduce impacts to water and shorebirds. Land birds and mammals may be displaced by the residential development. It is noted, however, that the vast majority of the parcel will be left in its natural condition. See Section 3.7 for a full discussion of the potential impacts and the mitigation measures.

Marine Environment – A marine assessment report concludes that it is likely that sediment discharge from runoff to the ocean will be significantly less with the Lāʻau Point project compared with existing conditions. This conclusion is based on the several measures planned for Lāʻau Point that will protect nearshore waters from increased degradation of water quality, such as drainage control systems, CC&Rs to regulate the use of fertilizers and pesticides, re-vegetation as a means of permanent erosion control measures throughout the developed areas, and livestock fencing to keep deer and livestock from disturbing the soil near the project area. Therefore, it is likely that the long-term water quality in adjacent coastal waters may be improved by these measures. See Section 3.8 for a full discussion of the potential impacts and the mitigation measures.

Archaeological and Historic Resources – MPL is committed to preserving known archaeological sites in the project area. As a result of the archaeological surveys, approximately 1,000 acres of cultural protection zones were identified to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch. Access roads and the rural-residential lots will not affect cultural resources since subdivision plans will be designed to avoid cultural protection zones and archaeological sites. Depending on the nature of the archaeological sites, mitigation measures such as buffers, permanent and easement boundaries, and interpretive signs will be established to protect and preserve the sites as is in accordance with mitigation plans approved by the State Historic Preservation Division. MPL and its contractors will comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. See Section 4.1 for a full discussion of the potential impacts and the mitigation measures.

Cultural Resources – To mitigate the overall cultural impacts of the Lāʻau Point project, the *Master Plan* provides measures that set unique precedents. These precedents are related to community planning, the creation of a land trust for the community, the donation of legacy lands to the land trust, the granting of easements to the land trust, and the protection of subsistence fishing, gathering, and hunting. The *Master Plan* also provides for covenants, conditions and restrictions that Lāʻau Point homeowners will need to accept and agree to uphold in order to

purchase a lot. The Cultural Impact Assessment recommends several measures to offset concerns over locating development near culturally sensitive areas and managing public access to cultural resources. See Section 4.2 for a full discussion of the potential impacts and the mitigation measures.

Trails and Access – Increased public access to the shoreline and other coastal resources has the potential to damage the natural environment and diminish the uniqueness of the coast. Therefore, to protect the natural resources of the shoreline, manage subsistence activities, and protect cultural resources a Shoreline Access Management Plan (SAMP) has been developed with, and adopted by, the Molokaʻi Land Trust to regulate the use of the land and cultural and ocean resources to ensure the continuance of the resources for future generations. This measure is further enhanced by a planned Conservation Easement (draft attached as Appendix C) over the expanded Conservation District, which will ensure protection of the area for all time. The SAMP includes protocols, rules, and permitted activities for persons engaging in cultural activities and subsistence shoreline fishing and gathering in the shoreline area. It also contains provisions to protect endangered species in the area. The SAMP consolidates public shoreline access to two locations at the proposed shoreline parks at each end of the project area. In addition, a Resource Manager or Land Trust steward will supervise access to ensure that damage to the environment does not take place, and that those who access the area have taken the appropriate education classes in traditional subsistence gathering and access responsibilities, safety and protocol. See Section 4.3 for a full discussion of the potential impacts and the mitigation measures.

Roadways and Traffic – Primary access to the Lāʻau Point site will be from a new access road connecting from Kaluakoʻi Road. Based on the trip generation data for single-family dwelling units, the project will generate 40 inbound trips and 95 outbound trips during the morning peak hour and 95 inbound trips and 60 outbound trips during the afternoon peak hour. Based on findings of the Level-of-Service (LOS) analysis, the main intersection of Maunaloa Highway at Kaluakoʻi Road will operate at an acceptable LOS. However, as recommended by the State Department of Transporation (DOT), MPL will plan, design, and construct, at no cost to the State: 1) a left-turn deceleration lane and right-turn deceleration lane at the intersection of the proposed project access road (Kaluakoʻi Road) with Maunaloa Highway; and 2) highway improvements recommended as mitigation measures as required by the Highways Division. See Section 4.4 for a full discussion of the potential impacts and the mitigation measures.

Noise – Potential impacts to the acoustic environment of the site will primarily relate to short-term construction activity noise. Although there are no residential properties adjacent to the Lāʻau Point project site, all construction activities will comply with Chapter 11-46, HAR (Community Noise Control). See Section 4.5 for a full discussion of the potential impacts and the mitigation measures.

Air Quality – Construction of Lāʻau Point may result in short-term impacts on air quality either directly or indirectly as a consequence of construction (i.e., clearing and grading). Therefore, an effective dust control plan will be prepared for the project construction phase. All activities will comply with the provisions of Hawaiʻi Administrative Rules, §11-60.1-33 on Fugitive Dust. Long-term air quality impacts generally come from motor vehicle exhausts. Because traffic associated with the project is estimated to be less than 200 vehicles per hour at full build-out and all intersections in the vicinity will have very good level-of-service conditions, traffic-related long-term air quality impacts are not expected to be significant. See Section 4.6 for a full discussion of the potential impacts and the mitigation measures.

Scenic Resources – The existing landscape and views around Lāʻau Point will change with the creation of the rural residential community. Because the Lāʻau Point project will be on only eight percent of the entire parcel, potential impacts to scenic open space resources are not expected to be significant. To further mitigate visual impacts, lot lines and buildings will be set back at least 250 feet from the shoreline, creating a coastal conservation zone to act as a visual buffer. To minimize visual impacts caused by the Lāʻau Point project, all homes will be subject to stringent CC&Rs (see Section 2.3.6), which will place restrictions on building setbacks, building height, materials, colors, and style to blend homes into the environment. See Section 4.7 for a full discussion of the potential impacts and the mitigation measures.

Housing – The Lāʻau Point project will address affordable housing in the implementation of *Master Plan* (see Section 2.1.6). Throughout the community-planning process, the vesting of land back into community hands and ensuring the development returns (Lāʻau Point income) be shared by the community was part of a larger vision by the Molokaʻi community to plan and finance housing for themselves. MPL will put title restrictions on 100 acres around each of the towns of Kualapuʻu and Maunaloa to limit the use of these lands for affordable housing. Approximately 1,100 acres will also be gifted to the Community Development Corporation (CDC), a large portion of which can be used for affordable housing. See Section 4.8.2 for a full discussion of the potential impacts and the mitigation measures.

Community Character – An important objective of the Lāʻau Point project is to retain Molokaʻi's rural island lifestyle. A key design element of Lāʻau Point was to keep the project area on only eight percent of the Lāʻau parcel. This keeps the remainder of Lāʻau's 6,348-acre TMK parcel in open space. Also, in designing Lāʻau Point, there were many conscious decisions regarding the strict CC&Rs to be attached to the project that would help to perpetuate Molokaʻi's rural lifestyle. These measures, in conjunction with those derived from the *Master Plan*, provide significant measures to protect the community character. See Section 4.8.3 for a full discussion of the potential impacts and the mitigation measures.

Economy – Proceeds from the sale of the Lāʻau Point lots will fund the renovations and upgrading of the Kaluakoʻi Hotel and Golf Course. These facilities are crucial to revitalizing the Molokaʻi tourism economy and are projected to provide over 100 jobs for Molokaʻi residents. The Lāʻau Point project is the catalyst for the *Master Plan* to enhance the economic environment and stimulate economic diversification relative to the present unprofitable ranch operations. Tax revenues from construction costs, property sales, and increased spending by new residents will outweigh costs to the County and State governments and result in net economic benefit. See Section 4.8.4 for a full discussion of the potential impacts and the mitigation measures.

Water – Potable water for Lāʻau Point will be supplied from Well 17 in Kualapuʻu within currently permitted allocations. MPL does not require any more drinking water than what is currently proposed for allocation in the *Master Plan*. To supplement existing non-potable water sources currently used by MPL, MPL proposes to activate the existing but unused Kākalahale brackish water well to supply Lāʻau Point and other *Master Plan* areas with irrigation water. MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water. According to the Water Plan Analysis MPL's plans are reasonable and realistic from a regulatory standpoint, and are not believed to impact DHHL's reservation nor Native Hawaiian cultural water rights. Further, there are several short-term and long-term options for transmission of brackish water and potable water from existing and the proposed new source. Section 4.9 contains the full discussion.

Drainage – Lā‘au Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the downstream marine environment and nearshore and offshore water quality. The current runoff from the area of the proposed lots of the project area is 512 cubic feet per second (cfs) for a 50-year 1-hour storm. This is expected to increase by 111 cfs to 623 cfs with development. The present flow patterns in the existing drainageways will be maintained. Culverts will be sized to convey flows across roadways that generally run perpendicular to these natural drainageways. Surface and/or subsurface retention facilities will be sized to retain the difference in peak runoff in each lot and for roadways. See Section 4.10.1 for a full discussion of the potential impacts and the mitigation measures.

Wastewater – Lā‘au Point will include its own private wastewater treatment system to be maintained through the HOA. MPL will build the onsite sewer collection system within Lā‘au Point at a 14-acre centrally located site. A central package treatment plant will connect to individual homes via a low-pressure sewer force main system such as e-one or equivalent. The package plant will treat to tertiary quality levels allowing this water to be reused for common area landscape irrigation. See Section 4.10.2 for a full discussion of the potential impacts and the mitigation measures.

Solid Waste – Solid waste will be generated during construction and after development of Lā‘au Point. A solid waste management plan will be prepared to address waste generated by construction. During construction, material derived from clearing and grubbing will be chipped and spread over adjoining Ranch lands to decompose as organic matter. Lā‘au Point will incorporate recycling during construction and in the new community to help reduce the amounts of solid waste going to the landfill. See Section 4.10.3 for a full discussion of the potential impacts and the mitigation measures.

Electrical and Communication Systems – The current electrical capacity at the Moloka‘i generating plant is adequate to provide power to the Lā‘au Point subdivision as proposed, although improvements will be needed to the Kaluako‘i transmission system. Electrical, telephone, and cable distribution systems will be extended underground from Kaluako‘i. Underground utilities will be as close to the road center as possible to avoid multiple impact corridors. At its eastern terminus, this underground distribution system will be connected to the existing overhead system servicing Hale O Lono Harbor to provide an alternative means of serving the project. CC&Rs and design standards for Lā‘au Point will encourage energy-efficient building design and site development practices to reduce electrical demand. See Section 4.10.4 for a full discussion of the potential impacts and the mitigation measures.

Public Services – As Moloka‘i’s population grows, there will be need for the County to allocate resources necessary to adequately fund public services. Since Lā‘au Point will increase the tax base for the County, Lā‘au Point will provide additional funds for expanding public services on Moloka‘i. Emergency vehicles will be able to access the community from the new paved access road from Kaluako‘i and the existing emergency access dirt road from Hale O Lono Harbor. See Section 4.11 for a full discussion of the potential impacts and the mitigation measures.

1.6.3 Relationship to Land Use Policies

State Land Use Law Chapter 205, Hawaiʻi Revised Statutes – The Lāʻau Point site is currently in the State Agricultural and Conservation Districts. Molokai Properties Limited has filed a petition with the State Land Use Commission to reclassify areas of the property from Agricultural to Rural, Agricultural to Conservation, and Conservation to Rural. The project's conformance with the State Land Use Law is discussed in Section 6.1.2 of this EIS.

Conservation District Law, Chapter 183C, Hawaiʻi Revised Statutes – Within the Conservation District, the project site falls within the General and Limited Subzones. The project's conformance with the Conservation District Law is discussed in Section 6.1.3 of this EIS.

Hawaiʻi Coastal Zone Management Program, Chapter 205A, Hawaiʻi Revised Statutes – The Coastal Zone Management Area as defined in Chapter 205A, HRS, includes all the lands of the State. As such, Lāʻau Point is within the Coastal Zone Management Area. The project's conformance with the Coastal Zone Management Program is discussed in Section 6.1.4 of this EIS.

Hawaiʻi State Plan, Chapter 226, Hawaiʻi Revised Statutes – The Hawaiʻi State Plan (Chapter 226, HRS), establishes a set of goals, objectives, and policies that serve as long-range guidelines for the growth and development of the State. The Lāʻau Point project is relevant to many of the goals, objectives, and policies set forth by the Hawaiʻi State Plan. The project's conformance with specific elements of the Hawaiʻi State Plan is discussed in Section 6.1.5 of this EIS.

State of Hawaiʻi Functional Plans – The Hawaiʻi State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawaiʻi State Plan. The functional plans applicable to the Lāʻau Point project are discussed in Section 6.1.6 of this EIS.

Maui County General Plan – The Maui County General Plan sets forth the desired sequence, patterns, and characteristics of future development. This is accomplished through long-range objectives focusing on the social, economic, and environmental effects of development coupled with specific policies designed to implement the objectives. The project's conformance with specific elements of the General Plan is discussed in Section 6.2.1 of this EIS.

Molokaʻi Community Plan – The Molokaʻi Community Plan Land Use Map designates specific areas of the Lāʻau Point site as AG (Agricultural) and C (Conservation). MPL is seeking a Community Plan Amendment to change appropriate portions of the project area the area from Agricultural (AG) to Rural (R) and Park (P). MPL submitted a Community Plan Amendment application to the Maui Planning Department on December 15, 2006. The relevant objectives and policies of the Molokaʻi Community Plan pertaining to Lāʻau Point, along with a discussion of how the community conforms to these objectives and policies, are discussed in Section 6.2.2 of this EIS.

County of Maui Zoning – The Lā‘au Point site is in the County of Maui Agricultural zone. MPL is seeking a Change in Zoning to change the County zoning of appropriate portions of the project area the area from County Agricultural zoning to the County Rural and Open Space zoning. MPL submitted a Change in Zoning application to the Maui Planning Department on December 15, 2006. Section 6.2.3 contains further discussion.

Special Management Area – Portions of the Lā‘au Point site are within the County’s Special Management Area (SMA), pursuant to Chapter 205A, HRS and Chapter 202, Special Management Area Rules for the Moloka‘i Planning Commission. MPL is seeking an approval of a Special Management Area Use Permit concurrently with the processing of the other required County permits and approvals. Section 6.2.4 contains further discussion.

County Special Use Permit – Lā‘au Point’s private wastewater treatment facility will require a County Special Use Permit on lands proposed for Rural zoning. The proposed sewage system will be designed to County of Maui standards. In addition, all wastewater plans will conform to applicable provisions of HAR, Chapter 11-62, “Wastewater Systems.” Section 6.2.5 contains further discussion.

1.6.4 Required Permits and Approvals

A preliminary list of permits and approvals required for Lā‘au Point is presented below.

Permit/Approval	Responsible Agency
Chapter 343, HRS Compliance	State Land Use Commission Office of Environmental Quality Control
State Land Use District Boundary Amendment	State Land Use Commission
Community Plan Amendment	County of Maui Planning Department Moloka‘i Planning Commission Maui County Council
Change in Zoning	County of Maui Planning Department Moloka‘i Planning Commission Maui County Council
Special Management Area	County of Maui Planning Department Moloka‘i Planning Commission
County Special Use Permit	County of Maui Planning Department Moloka‘i Planning Commission
Chapter 6E, HRS Compliance	State Historic Preservation Division
Conservation District Use Permit	State Department/Board of Land & Natural Resources
Conservation District Administrative Rule Amendment	State Department/Board of Land & Natural Resources
Subdivision Approval	County of Maui Department of Public Works & Environmental Management
Grading/Building Permits	County of Maui Department of Public Works & Environmental Management
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health

Permit/Approval	Responsible Agency
Water Use Permit	State Commission on Water Resource Management
Approval for Distribution System for a Public Water System	State Department of Health
Recycled Water System Approval	State Department of Health

1.6.5 Alternatives

Alternatives are discussed in detail in Section 7.0 of this EIS. The alternatives that have been considered are:

- No Action
- Bulk or "Piece-Meal" Sale of Other Land Inventory
- Agricultural Subdivision
- Other MPL Land Development Alternatives Considered
- ALDC Proposed Alternatives
- Other Proposed Uses for MPL Lands (Non-residential and Non-agricultural)
- Relocating the Development Mauka of the Current Location at Lāʻau
- Kaluakoʻi Resort Condo Alternative
- Alternative Access to the Lāʻau Area
- The Wind Farm Alternative
- The "Buy the Ranch" Alternative
- Postponing Action Pending Further Study

1.6.6 Cumulative and Secondary Impacts

Impacts are restricted to those future actions that are reasonably foreseeable. To assess the cumulative and secondary impacts of the Lāʻau Point project in context with other projects, MPL has openly discussed its plans for Lāʻau Point with Molokaʻi community members and organizations through the *Master Plan* process and this EIS.

Impacts from the re-opening of the Kaluakoʻi Hotel, and the potential future development of existing DHHL lands and vacant residential and other lots in Kaluakoʻi, Maunaloa, and Pāpōhaku, are likely to include greater demand on public infrastructure systems and services, such as water, energy, and solid waste. These are discussed in Sections 5.0 and 8.2. Over the long term, the project's infrastructure improvements and the *Master Plan's* community benefits should help to balance the impacts related to increased users and activities.

It is also expected that community character of the region may change as this is an inevitable consequence of growth. The project's population at full build-out will account for only two percent of the forecasted population for Molokaʻi in 2025. The expected low occupancy rates of vacation/second homes should also serve to minimize the need for services to residents and lessen any impacts of residential build-out on the rural character of the island. Sections 5.0 and 8.2 discusse these impacts in further detail.

1.6.7 Irreversible and Irretrievable Commitments of Resources

The Lā‘au Point project would result in the irreversible and irretrievable commitment of certain natural and fiscal resources. Major resource commitments include the project site and the money, construction materials, non-renewable resources, labor, and energy required for the project’s completion.

To help minimize community concerns and impacts of the Lā‘au Point project, the *Master Plan* provides measures which set unique precedents. These precedents are related to community planning, the creation of a land trust for the community, the donation of legacy lands to the land trust, the donation of easements to the land trust and the protection of subsistence fishing, gathering, and hunting.

The *Master Plan* will provide the community with tools to protect more than 50,000 acres of land from development. These lands, which are being managed by the Moloka‘i Land Trust, can never be sold and through careful planning and proper land management practices, these valuable lands will be able to sustain the spiritual and physical health of the community for many years. The *Master Plan* also provides for strict CC&Rs that Lā‘au Point homeowners will need to accept and agree to uphold to purchase a lot. Section 8.3 discusses irreversible and irretrievable commitments of resources in detail.

1.6.8 Probable Adverse Environmental Effects that Cannot Be Avoided

Probable adverse environmental effects that cannot be avoided include changes to the land use character and visual appearance of the site, unquantifiable impacts to the overall spiritual quality of the area, changes to the experience of fishing in an isolated area, differences in values and lifestyle of new residents, increased wastewater and solid waste generated, increased water and electrical power consumed, increased demand for police and fire protection services, and short-term impacts to air quality and noise levels during construction. These probable adverse effects are more fully discussed in Section 8.4 and in individual sections throughout this EIS.

An important objective of the Lā‘au Point project is to retain Moloka‘i’s rural island character. MPL has limited development to only eight percent of the 6,348-acre Lā‘au parcel and 200 house lots proposed for a low density, rural residential development. While this would ensure that the project is in character with Moloka‘i’s rural landscape and lifestyle, the implementation of the *Master Plan* will result in the transfer and control of over 55,000 acres of MPL’s current land holdings to the Land Trust which will protect the West End of the island from further development.

1.6.9 Rationale for Proceeding with Lā‘au Point Notwithstanding Unavoidable Effects

In light of the above-mentioned unavoidable effects, the Lā‘au Point project should proceed because the negative impacts of the project will be offset by substantial positive impacts, including:

- Land Donation of 26,200 acres to the Moloka‘i Land Trust.
- 24,950 acres put into permanent Agricultural and Open Space Easements.
- 434 acres of Conservation District around Lā‘au Point.
- Two new public shoreline access parks.

- 1,100 acres of land and other assets donated to the Molokaʻi Community Development Corporation.
- Renovation and re-opening of the Kaluakoʻi Resort.
- Increased access for subsistence hunting and gathering in West Molokaʻi.
- Wages, taxes, and overall positive economic impacts of the community.

The findings of the cultural and social impact assessments provide further rationale for proceeding with the project based on community input. People who were active in the formation of the *Master Plan* as well as non-participants felt that the *Master Plan* is a rare and unique opportunity which offers many benefits to the Molokaʻi community. Given over three decades of conflicts between the community and Molokai Ranch, the *Master Plan* provides mutually beneficial results. Section 8.4.1 provides full discussion.

1.6.10 Unresolved Issues

Unresolved issues are invariably associated with projects in the planning and preliminary design stages, or due to negotiation of complicated agreements for such a unique project, primarily because there is much reliance on the Molokaʻi Land Trust.

Notwithstanding MPL's efforts, some aspects of the water issue remain unresolved between stakeholders at this stage of the planning process, as well as the final completion of an easement agreement between the Land Trust and MPL concerning the expanded Conservation District lands in front of the Lāʻau Point project. MPL is actively working to complete this agreement which will be available at the time of filing the proposed final EIS.

There is also an unresolved issue relating to the continued use of the Molokaʻi Irrigation System (MIS) by Kaluakoʻi Water, LLC (KWLLC) and whether MPL has to find alternative means of transmitting Well 17 water.

Regarding water, MPL is actively working with the DHHL, the County of Maui Department of Water Supply, and the U.S. Geological Survey to comprehensively evaluate and seek solutions to Molokaʻi's water demands and resources. The goal is to appropriately locate wells and manage pumping such that all of the parties will be able, to the greatest extent possible, withdraw sufficient water to meet their needs. Section 8.5 provides full discussion.

2.0 PROJECT DESCRIPTION

2.1 BACKGROUND INFORMATION

2.1.1 Location

The Lā‘au Point project is located at Lā‘au Point, along the shoreline bluffs on the southwest coastline of Moloka‘i, within the County of Maui (see Figure 2). The project area encompasses a band of land ranging from 1,500 to 2,000 feet inland of the existing Conservation District boundary. The land along the western shoreline extends approximately 10,400 feet north of Lā‘au Point to Kamāka‘ipō. The land along the southern coastline extends approximately 15,400 feet east of Lā‘au Point to Pu‘u Hakina.

2.1.2 Land Ownership

Molokai Properties Limited (MPL) owns the lands identified as TMK (2) 5-1-02:30; (2) 5-1-06: 157; (2) 5-1-08: 04, 03, 06, 07, 13, 14, 15, 21, and 25 (see Figure 3).

2.1.3 Surrounding Uses

Molokai Ranch, owned by MPL, encompasses 60,000+ acres, comprising about 35 percent of the island of Moloka‘i. The majority of Molokai Ranch is located on Moloka‘i’s west end, extending eastward from the west coast, from ‘Ilio Point to the Mo‘omomi Preserve in the north, and from Lā‘au Point to the Pālā‘au Homesteads in the south.

Important resources in the west end of Moloka‘i include 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 Mo‘omomi Preserve, along the north coast, is owned and managed by The Nature Conservancy 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, Lā‘au Point’s coastal environment is used for subsistence fishing and hunting.

Maunaloa Town is the main population center in West Moloka‘i, and headquarters for Molokai Ranch. Maunaloa’s population at the 2000 census was 230 people. Since that time, seven new houses have been built in Maunaloa. In Maunaloa, MPL operates the Lodge, which offers activities that introduce visitors to ranch life. Activities include mountain biking, horseback riding, hiking, and rodeo skills. MPL employs approximately 140 people and for many years has been the largest private employer on the island.

A portion of the Pāpōhaku Ranchland subdivision, located north of the project area, has been identified as a Formerly Used Defense Site (FUDS). The FUDS was a rocket and bombing target range used by the U.S. Navy and Marine Corps from 1944 to 1965. The 1,500 acres of FUDS is in the vicinity of Kaluako‘i Road that provides access to the project.

Along the shores south of Maunaloa are Hale O Lono Harbor and the abandoned Kolo Wharf. Hale O Lono Harbor is a State DLNR harbor with no facilities. Hale O Lono Harbor is the starting site for the famous Moloka‘i to O‘ahu outrigger canoe races. Access to Hale O Lono Harbor is by narrow, dirt road.

An un-manned USA Lighthouse Station, Lā‘au Light, is located at the tip of Lā‘au Point, on property owned by the US government encompassing a total of 51 acres. The US Coast Guard regulates this federal aid to navigation. The light structure is twenty feet high on a white mono pole with three white/black non-lateral daymarks. The light can be seen 360 degrees with a seven nautical mile nominal range. The US Coast Guard noted that they will soon be changing the Lā‘au Light’s 250mm lantern to a 300mm lantern[1].

Maunaloa Highway connects the west end to the Moloka‘i Airport, Kaunakakai, and the rest of the island.

2.1.4 Description of the Property

The Lā‘au Point site is located mainly within a 6,348-acre vacant parcel identified as TMK (2)5-1-02:30; the residential lots and related infrastructure will encompass only eight percent of this parcel and will be subdivided out from the larger parcel. The land is relatively dry, supporting mostly dryland kiawe forest and shrub vegetative zones with many non-native species.

In the past, the land has been used for agricultural and ranch operations. Some of the estimated 15,000 deer contained on Molokai Ranch’s property roam throughout the Lā‘au Point parcel.

Although still the largest single cattle raising operation on the island, MPL is barely breaking even on its cattle operations forcing MPL to reduce its cattle operations, which now total 500-head. The cost of getting meat to market is still a major disincentive to furthering meat operations on the island.

MPL built its herd size from 3,000 to 5,000 during 1996 through 2000 in hopes of making a profit or breaking even in the cattle business. Unfortunately, operating losses averaged about $300,000 per year during those years. In more recent years, annual losses with the smaller herd averaged $10,000. Major factors which affect the cattle operation are lack of a: 1) proper local feedlot to produce weight gains needed before slaughter; and 2) large enough local slaughterhouse to handle the number of head.

The above deficiencies lead to having cattle shipped to the mainland. However, shipping cattle to the mainland resulted in the following issues: 1) high freight cost of up to $0.32 per pound; and 2) cost of pasture and feedlot costs prior to having finished cattle.

Although MPL’s cattle is considered to be of good to excellent grade, the addition of shipping, pasturing, and feedlot costs did not make up the premium prices. This, along with having to deal with feed cost during cycling drought conditions on the island, made having other than a small cattle operation not viable.

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[1] US Coast Guard letter dated March 19, 2007; letter included in Section 9.0 of this EIS.

Source: U.S. Geological Survey

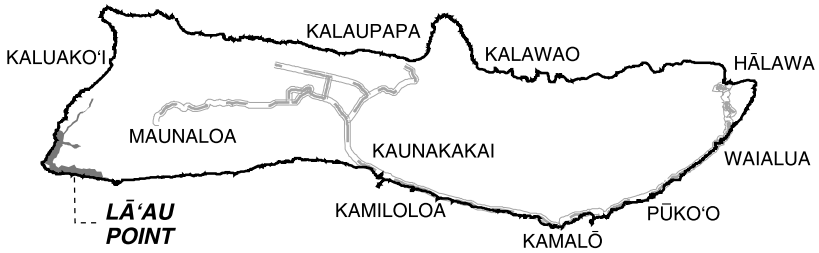


Figure 2

Regional Location Map

Lāʻau Point

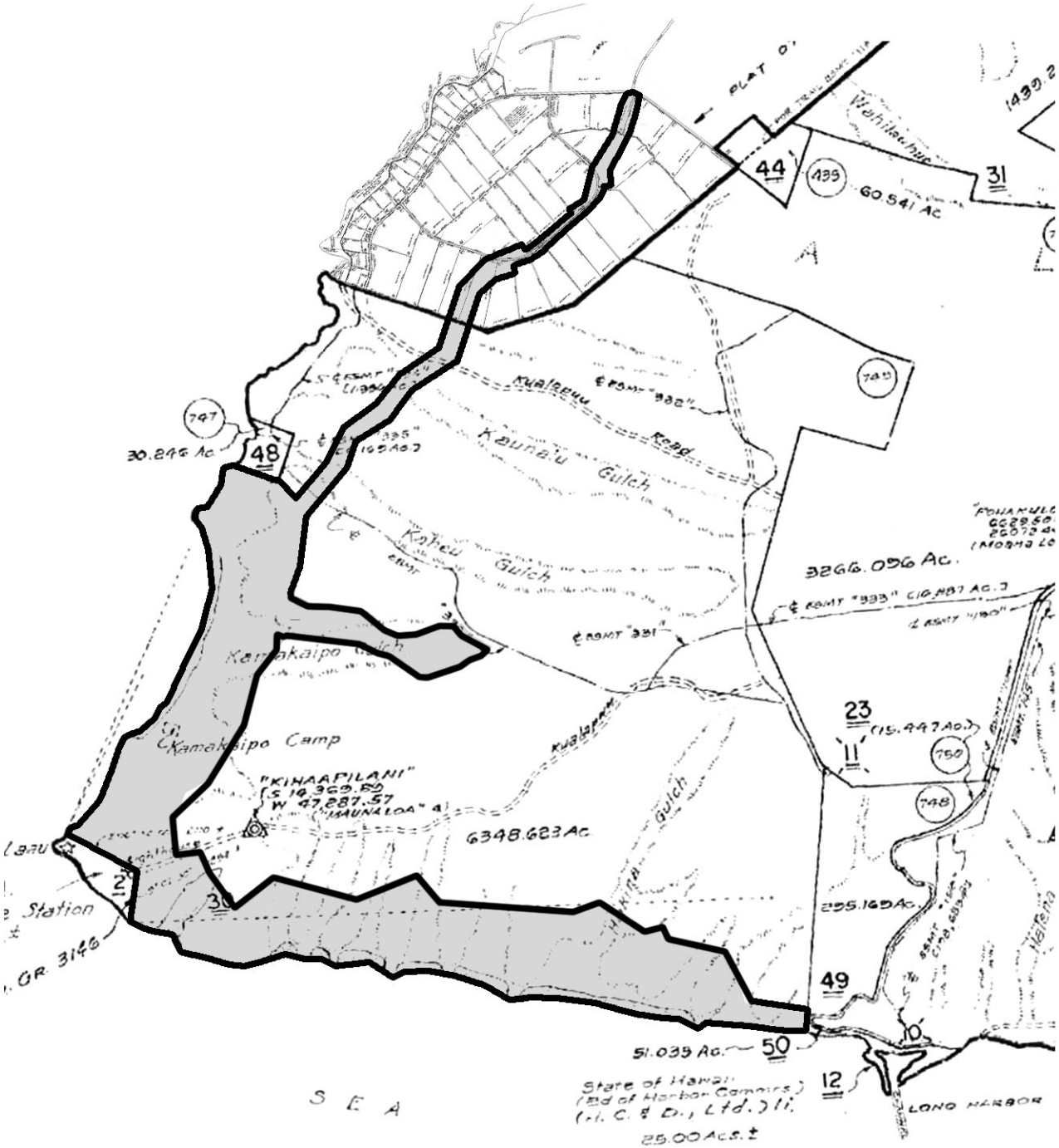
ISLAND OF MOLOKAʻI

NORTH

LINEAR SCALE (FEET)

0 4000 8000 16000

PBR HAWAII



LEGEND

Project Area

Source:
County of Maui Tax Map Key

Disclaimer:
This map has been prepared for general planning purposes only.

Figure 3
Tax Map Key

Lā‘au Point

ISLAND OF MOLOKA‘I

NORTH

LINEAL SCALE (FEET)

0 2000 4000 8000

PBR HAWAII

The cattle operation also forms part of MPL’s visitor attractions where visitors and residents alike are able to take part in Paniolo-type ranching activities that are fast becoming a lost tradition in Hawai‘i.

The current land use designations of the Lā‘au Point site, TMK (2)5-1-02:30, are as follows:

- State Land Use: Agricultural and Conservation (Figure 4)
- Conservation District Subzones: General and Limited (Figure 5)
- Moloka‘i Community Plan: Agricultural and Conservation (Figure 6)
- Maui County Zoning: Agricultural (Figure 7)
- Special Management Area (SMA): portion within the SMA (Figure 8)

The Southwest Moloka‘i coast is very diverse and offers approximately 5.2 miles of shoreline from Hale O Lono Harbor to Kaupoa Beach. Stretches of white sand beach are broken by large, rocky outcroppings. The lava rock bluffs are generally steep and difficult to negotiate, but just inside the breaking waves are ‘opihi, limu, and reef fishes. Figure 9 contains photographs of the site.

2.1.5 Detailed Land Use History

George Paul Cooke became the manager of Molokai Ranch in 1908 after his father, Charles M. Cooke bought Moloka'i Ranch. In his book, *Mo‘olelo O Moloka‘i*, George P. Cooke described how Molokai Ranch was formed. According to Cooke, Molokai Ranch was formed in 1897 by a hui of men including Judge Alfred S. Hartwell, Alfred W. Carter, and A.D. McClellan. In 1898, the American Sugar Company Limited was incorporated by Judge Alfred S. Hartwell and Alfred Carter (who were partners in the Molokai Ranch), and Charles M. Cooke, George H. Robertson and George R. Carter. At this point, the Molokai Ranch stockholders exchanged their stock for shares in the new American Sugar Company. According to George P. Cooke, the sugar cane company failed when the pumps installed in surface wells to irrigate the cane fields depleted the fresh water and started to pump salt water. In December 1908, Charles M. Cooke bought out the interests in the Molokai Ranch. (*Mo‘olelo O Moloka‘i*, 1949, pp. 1 - 8)

In 1991, Marshall Weisler reviewed the history of the ownership of Molokai Ranch in his 1991 study of the Mo‘omomi dune system. According to Weisler:

> *"In 1875, some 30 years after the Great Mahele, Charles R. Bishop purchased, by royal patent, the lands of Kaluako'i. Responding to a query by E.O. Hall, the Minister of the Interior, R.W. Meyer, who made a rough survey of the lands of Kaluako'i in the 1850s, valued the lands -- both 'good and bad . . . at 12 1/2 cents per acre or about 5000 dollars.'* (Meyer 1873:2).
>
> *Bishop transferred the property to the Bishop Estate in 1893. Five years later, three men formed Moloka'i Ranch and bought 46,500 acres of Kaluako'i from the Bishop Estate. Shortly thereafter, the American Sugar Company was formed by a group including Charles M. Cooke, George Robertson, George Carter, and two judges named Hartwell and Carter (Cooke, 1949). C. M. Cooke bought out his partners in 1908, 10 years after the establishment of American Sugar Company."* (Weisler, *The Archaeology of a Hawaiian Dune System: The Nature Conservancy's Mo'omomi Preserve, Moloka'i*. Honolulu: The Nature Conservancy, 1991p. 10)

The Cooke family owned Molokai Ranch for almost 80 years until the late 1980s. It was operated as a family corporation separate, from Castle and Cooke. George Cooke served as manager of the Ranch for 35 years, from 1908 through 1943. Under his tenure, it became the second largest cattle ranch in Hawaiʻi and a major producer of beef.

In the early 1920's, pineapple came to the island and Maunaloa was developed as a plantation village to house the immigrant pineapple workers. By 1923, the Libby, McNeill & Libby Company had begun raising pineapple in the Maunaloa area on lands leased from Molokai 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 large-scale pineapple cultivation, mostly on land leased from Molokai Ranch. Dole ceased its Molokaʻi operations on January 1, 1976. Del Monte phased out its operations in the mid-1980s.

In 1968, Molokai Ranch, then owned by the Cooke family, entered into a partnership with Louisiana Land and Exploration Company for the development of the Kaluakoʻi Hotel and Resort. Louisiana Land and Exploration Company was provided a contingency for the Ranch's West End lands. The Kaluakoʻi Resort opened in 1977 and included a hotel, a golf course, and condominiums. In 1978, the Molokaʻi Ranch Wildlife Park opened for safari-like tours on the ranch lands.

In 1980, Louisiana Land and Exploration Company separated its interests from Molokai Ranch and exercised its option over the West End lands from Kaluakoʻi to Kawakiu. These lands were sold to Tokyo Kosan in 1987. Operating as Kukui (Molokaʻi), Inc., the company subdivided its property and developed the Pāpōhaku Ranchland Subdivision.

Molokai Ranch subsequently sold its interest in the undertaking and later tried to diversify into mainland commercial property. It also sold the lands from Hale O Lono to Kaupoa to an individual investor. This investor sold the lands to Alpha U.S.A. Alpha U.S.A. hired Henry Ayau as its representative, Walter Ritte as a consultant, and Group 70 as its planner. They developed a plan to develop the Lāʻau parcel that involved Hawaiian villages.

After initial success, the cash requirements of these investments led to the eventual sale of Molokai Ranch stock to Brierly Investments Limited (later to become BIL International Limited and subsequently GuocoLeisure Limited), who became its sole stockholder in 1987. At that time, Molokai Ranch consisted of approximately 52,000 acres.

In 1991, Tokyo Kosan went bankrupt, it sold Kukui (Molokaʻi), Inc., which owned the Kaluakoʻi Resort and Golf Course and the adjacent lands over to Kawakiu, back to the Ranch, or its parent company, Brierly Investments, Limited. The Kaluakoʻi Hotel closed in January 2001.

In October 2001, BIL International, on behalf of Molokai Ranch, re-acquired 6,300 acres on the southwest corner of Molokaʻi previously known as the Alpha parcel. In December 2001, Molokai Ranch acquired the land holdings of Kukui (Molokaʻi), Inc., that included the abandoned Kaluakoʻi Hotel, the Kaluakoʻi Golf Course, and the undeveloped lands of the resort area. In December 2002, seeing that Molokai Ranch had operations that went beyond ranching, the corporation's name was changed to Molokai Properties Limited (MPL). The golf course was renovated and re-opened in 2004. The hotel and most of the common facilities have yet to be re-opened. In October 2007, BIL changed their name to GuocoLeisure Limited.

LEGEND

Land Use Districts
AG: Agricultural
C: Conservation
Project Area

Source:
Warren S. Unemori Engineering

Figure 4
State Land Use District Boundary Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)
0 2000 4000 8000

PBR HAWAII

Disclaimer:
This map has been prepared for general planning purposes only.

LEGEND

Conservation Subzones
General
Limited

Project Area

Source:
State Department of Land and Natural Resources (1995)
Warren S Unemori Engineering

Figure 5
Conservation District Subzones Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAR SCALE (FEET)
0 2000 4000 8000

PBR HAWAII

Disclaimer:
This map has been prepared for general planning purposes only.

LEGEND

Land Uses

AG: Agricultural

C: Conservation

Project Area

Source:
County of Maui (2006)

Figure 6
Molokaʻi Community Land Use Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)

0 2000 4000 8000

PBR HAWAII

Disclaimer:
This map has been prepared for general planning purposes only.

LEGEND

Zoning Districts
Agricultural

Project Area

Source:
County of Maui (2006)

Disclaimer:
This map has been prepared for general planning purposes only.

Figure 7
County Zoning Map

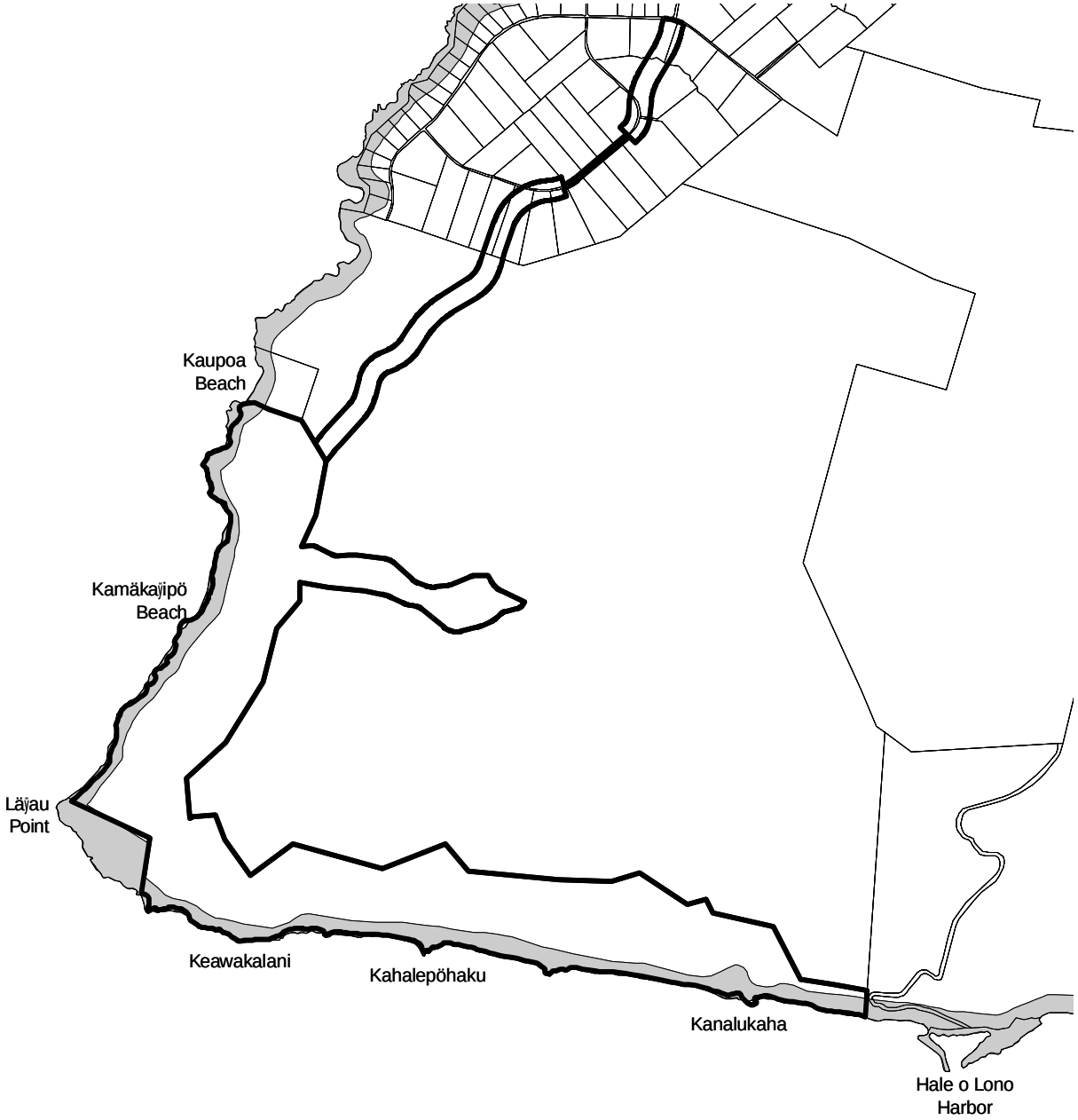
Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)
0 2000 4000 8000

PBR HAWAII



LEGEND

Special Management Area

Project Area

Source: County of Maui (1998)

Figure 8
Special Management Area Map

Läÿau Point

ISLAND OF MOLOKAÿI

NORTH

LINEAR SCALE (FEET)

0 2000 4000 8000

Disclaimer:
This map has been prepared for general planning purposes only.

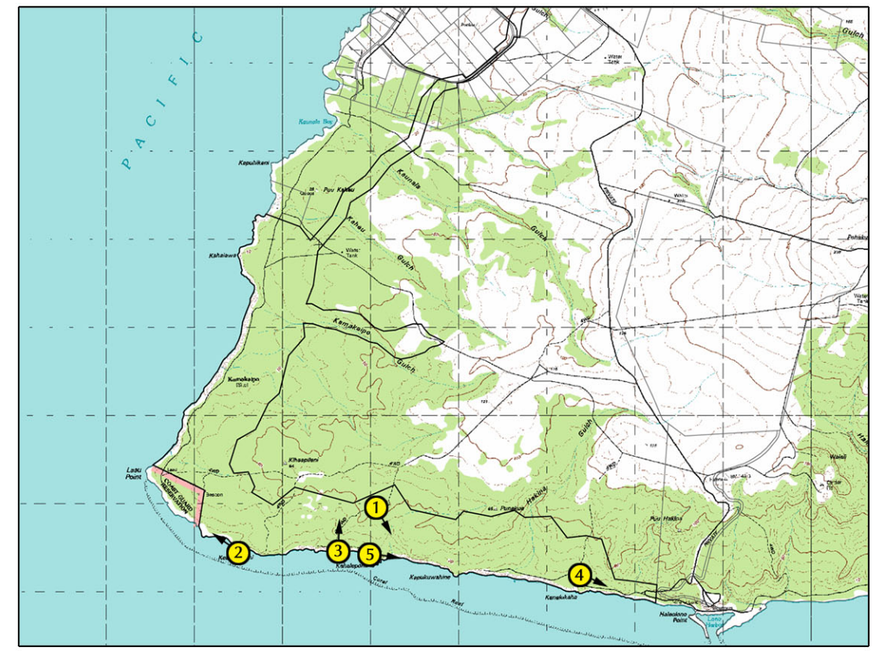
1. View from ridge above Kahalepohaku looking toward Lanai.

2. Looking west toward Keawakalani Point.

3. View mauka from Kahalepohaku.

4. Conservation District Land at Kanalukaha looking toward Hala O Lono Harbor.

5. View east from Kahalepohaku Point.



Source: U.S. Geological Survey

Figure 9a
Site Photographs

Lā‘au Point

Island of Molokai

PBR HAWAII

1. View from Kahaiawa Point towards Laʻau Point.

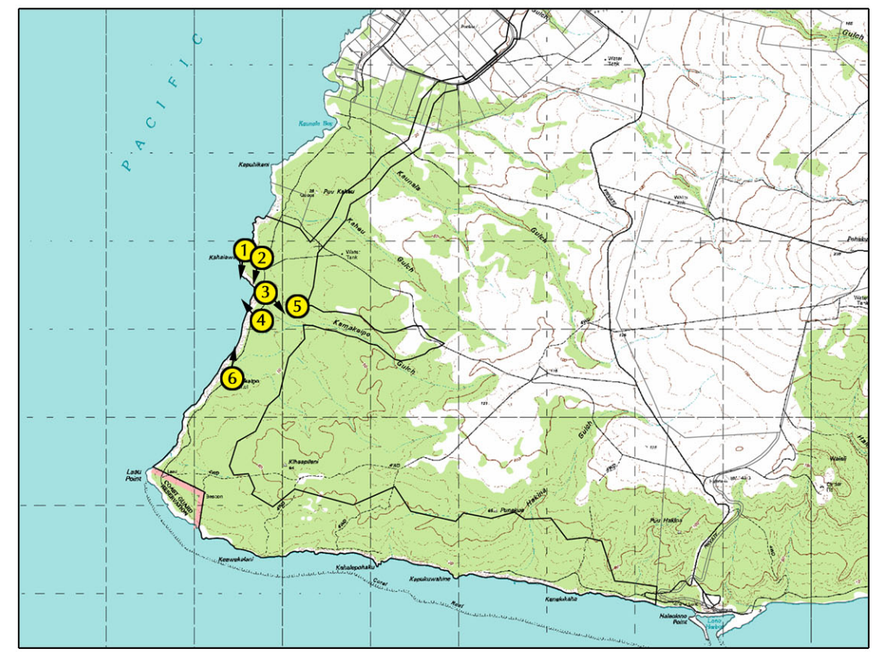
2. View from approx. mauka edge of Conservation District.

3. Stream outlet at beach of Kamakaʻipo.

4. Limestone outcrop along beach.

5. Heiau site near Kamakaipo Gulch.

6. View of "Shipwreck Beach"- looking north.



Source: U.S. Geological Survey

Figure 9b
Site Photographs

Lāʻau Point

Island of Molokai

PBR HAWAII

Regarding the activities of prior owners of the Lāʻau parcel, MPL has no knowledge of the prior financial or other activities of the previous owners, with the exception of some development plans proposed in the early 1990s; these previous development plans were on a far larger scale than this proposed Lāʻau Point project.

2.1.6 Introduction to the *Community-Based Master Land Use Plan for Molokai Ranch*, Summary of the Planning Process, Objectives, Key Components and Issues

Through the *Community-Based Master Land Use Plan For Molokai Ranch* (*Master Plan*), MPL endeavored, prior to seeking land use entitlements, to settle long-standing disputes with regard to the use of all of its holdings on West Molokaʻi, to provide long-term assurances that the great majority of these holdings would never be developed or would be minimally developed and to develop only enough of these lands to allow MPL to be viable, to re-open the Kaluakoʻi Hotel, and to fund other projects to benefit the island of Molokaʻi as a whole.

One main reason for formulating the *Master Plan* prior to seeking land use entitlements was to attempt to achieve a working or practical consensus in the community before embarking in the permit process to avoid the delays and acrimony that otherwise occur. MPL made many significant compromises and commitments of financial and land resources to benefit the Molokaʻi community to achieve this consensus. MPL believed in good faith that this working or practical consensus had been achieved that would allow this *Master Plan* to be implemented.

Some members of the community have focused primarily upon the lands selected for development at Lāʻau and actively seek the denial of permits for the Lāʻau Point project. The denial of Lāʻau Point would economically undermine MPL's ability to implement most of the remaining portions of the *Master Plan*.

Without the revenues from Lāʻau Point, for example, Kauakoʻi Hotel could not be re-opened. Under these circumstances, MPL offers the remaining aspects of the *Master Plan* as mitigation measures to be imposed by the approving entities of the Lāʻau Point project.

These mitigation measures taking place outside the project area are designed to ensure that there is no change to the current general uses, and, along with the remainder of the *Master Plan*, MPL does not propose any actions. MPL only proposes to convey lands to the Molokaʻi Land Trust (see Section 2.1.12) and to the Molokaʻi Community Development Corporation (see Section 2.1.13), and to burden others with covenants requiring restrictive uses. The Molokaʻi Land Trust and to the Molokaʻi Community Development Corporation, not MPL, will decide how to use the lands deeded to these entities. To the best knowledge of MPL, there are no plans to actively use these lands in the reasonably foreseeable future. When and if proposals are developed in the future to use these lands actively, environmental review will be initiated as may be appropriate.

2.1.7 Background to the Process

Since pineapple plantations began phasing out operations on Molokaʻi, beginning in the 1970s, and finally ceasing all cultivation by the mid-1980s, the Molokaʻi community has grappled with the issue of revitalizing the island's economy and providing jobs for residents while maintaining its unique social and cultural fabric. During this time and throughout the 1990s until 2003, Molokai Ranch (also known as Molokai Properties Limited), the largest private landowner on Molokaʻi, isolated itself from the Molokaʻi community through a lack of consultation on its

development plans. As a result, Molokai Ranch’s plans generally met with strong community opposition.

In 2003, Molokai Properties Limited (MPL), which had acquired the abandoned Kaluako‘i Hotel, and the Moloka‘i Enterprise Community (EC), a 501(c)(3) non-profit organization, whose mission is to help Moloka‘i residents empower themselves to implement their community strategic plan and, thereby, control their own destiny, began meeting together to discuss a mutual interest in re-opening the Kaluako‘i Hotel. Out of those discussions grew a partnership of the Enterprise Community and MPL to create a cohesive proposal for Molokai Ranch’s 60,000+ acres that would ensure that MPL’s goals could be met in a manner that assured the community that Molokai would remain the kind of community its residents desired.

These discussions created a partnership between a company and its island neighbors that had been acrimonious and adversarial; and it contributed to personal growth for those involved in the process. Importantly, the community-based planning process set the stage for Moloka‘i’s future—a future in which self-determination by the island’s residents is assured.

Throughout this community planning process, there have been numerous opportunities for public involvement, input, and review. Table 1 below provides a timeline summary list of meetings and public involvement.

Table 1. Community Meetings & Involvement

Date	Community Activity
December 10, 2003 to October 20, 2005	28 total Land Use Committee meetings
March 1 to May 4, 2004	8 total Environment Committee meetings
March 2 to May 10, 2004	11 total Tourism Committee meetings
March 4 to July 19, 2004	25 total Cultural Committee meetings
March 8, 2004 to January 12, 2005	10 total Economics Committee meetings
March 10 to May 10, 2004	9 total Recreation Committee meetings
June 2, 2004	Expert Panel on Hawaiian Rights Issues
June 17, 2004	Land Use Committee site visit to Lā‘au Point
June 17, 2004	Facilitated Land Use Committee meeting
July 18, 2004	Presentation to Native Hawaiian Legal Corporation—Board of Directors on Moloka‘i
August 18, 2004	Presentation to Ahupua‘a O Moloka‘i
August 26, 2004	Presentation of draft Master Land Use Plan community meeting at Kulana ‘Ōiwi, Kaunakakai
September 1, 2004	Maunaloa Community meeting at Maunaloa Park
September 1, 2004	Presentation at Moloka‘i High and Intermediate School—Immersion Program
September 2, 2004	Presentation on access issues at Kulana ‘Ōiwi
October 6, 2004	Presentation to Office of Hawaiian Affairs—Board of Trustees on

Date	Community Activity
	Moloka‘i
October 12, 2004	Presentation to HSTA and Moloka‘i Chamber of Commerce
October 15, 2004	Presentation to Moloka‘i Veterans Association
October 16, 2004	Presentation to Moloka‘i Lions Club
October 27, 2004	Kualapu‘u Community meeting at Kualapu‘u Recreation Center
November 3, 2004	Kaunakakai Community meeting at Mitchell Pauole Center
November 13, 2004	Presentation to West Moloka‘i Community Association
November 16, 2004	Presentation to Moloka‘i General Hospital, Alu Like Inc.—Ke Ola Pono O Na Kupuna, and Executive Board of Moloka‘i Chamber of Commerce
November 18, 2004	Presentation at Aka‘ula School
November 28, 2004	Presentation to Filipino Community Association
November 30, 2004	Mana‘e Community meeting at Kilohana Recreation Center
November 30, 2004	Presentation at Aka‘ula School
December 22, 2004	Presentation to Kamalama at Keawanui, Moloka‘i
January 5, 2005	Presentation to AARP
January 8, 2005	Water Forum meeting at Lanikeha Community Center
January 12, 2005	Presentation to Spiritual Leaders in Maunaloa
January 15, 2005	Presentation to Kaluako‘i golfers
January 27, 2005	Maunaloa Community meeting at Maunaloa Park
January 28, 2005	Presentation to Ahupua‘a O Moloka‘i
January 29, 2005	Public meeting—Mana‘o Sharing on Water at Kulana ‘Ōiwi
February 3, 2005	Ho‘olehua Community meeting at Lanikeha Community Center
February 12, 2005	Public Meeting on Lā‘au Point development at Kulana ‘Ōiwi
March 5, 2005	Public Meeting on Master Land Use Plan at Kulana ‘Ōiwi
June 15, 2005	Land Trust seminar conducted by the Conservation Fund
July 2005	Land Use Committee site visit to Lā‘au Point
August 1, 2005	Land Use Committee vote to approve Master Land Use Plan
November 1, 2005	Enterprise Community Governance Board vote to approve Master Land Use Plan
May 26, 2006	EISPN distributed to agencies/organizations/individuals for public comment and made available at Moloka‘i library
May 31, 2006	Cultural impacts assessment community meeting at Maunaloa Elementary School
June 1, 2006	Cultural impacts assessment community meeting at Kulana ‘Ōiwi
June 5, 2006	Cultural impacts assessment community meeting focusing on fishing at OHA/DHHL Conference Room
June 6, 2006	Cultural impacts and subsistence community meeting at Kualapu‘u Elementary School
June 7, 2006	Cultural impacts assessment community meeting at Kilohana Recreational Center
June 8, 2006	Focus on hunting & gathering cultural impacts assessment community meeting at Mitchell Pauole Conference Room
July 10, 2006	Water Plan public input meeting at Maunaloa
July 11, 2006	Water Plan public input meeting at Ho‘olehua
July 12, 2006	Water Plan public input meeting at Kilohana

Date	Community Activity
July 25, 2006	Social Impact Assessment Focus group meeting with Maunaloa residents
July 26, 2006	Social Impact Assessment meeting at Kaunakakai Elementary School
July 27, 2006	Social Impact Assessment Focus group meeting with Filipino residents
July 28, 2006	Social Impact Assessment Focus group meeting with ALDC
July 31, 2006	Social Impact Assessment Focus group meeting with Kaluakoʻi and Pāpōhaku Ranch residents
August 25, 2006	Meeting with EIS consulted parties

From March 2004 through May 2004, five committees (Environment, Cultural, Economics, Tourism, and Recreation) met with a total of 1,000 participants. The meetings were open to the public and most of the meetings were aired on the Akaku Channel 53. Representatives of the five committees formed the Land Use Committee, which worked to produce the policies and principles for the land use plan.

Between July 2004 and March 2005, there were 12 community meetings and 24 community and focus group presentations regarding the *Master Plan*. The meetings were held island-wide, in Kaunakakai, Kualapuʻu, Manaʻe, Maunaloa, and Hoʻolehua, with over 1,000 participants.

Four Land Use Committee meetings, specifically focusing on all aspects of the Lāʻau Point project, were held between May 2005 and July 2005, and included presentations from MPL's planners and a visit to Lāʻau Point by those who had concerns about subsistence issues.

Sign-in sheets were taken at all the Lāʻau Point meetings. In the process, sign-in sheets were provided at every meeting, but there were individuals who chose not to sign in as they did not want their names to be published. Therefore, a complete list of names for every participant is not included. Appendix A and Section 9.0, however, contains lists of the most active participants during the processes.

The resultant *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*) (initially launched as EC Project #47: Community-Based Compatible Development) is the product of more than 150 community and special interest group meetings, the majority of which members of the community were invited to take part in. More than 1,000 Molokaʻi residents participated in the planning process, which involved long hours of impassioned debate, critical thinking, and soul-searching. This comprehensive land-planning process, certainly the most unique ever to have taken place in Hawaiʻi, will hopefully lead to a reconciliation of families that have been separated by controversy for more than a decade.

The prospect of Molokai Ranch lands being split up and sold, or parent company GuocoLeisure Limited selling MPL because it would never be economically viable, and the community facing the resultant prospect of never again being able to have the opportunity of planning its future, made the urgency of reaching consensus on the *Master Plan* of critical importance to both the Molokaʻi EC and MPL.

On August 1, 2006, the 27-member EC Land Use Committee voted to approve the *Master Plan*. The final vote was 19 in favor, 6 opposed, 2 abstentions.

This EIS examines the impacts of the Lāʻau Point project. The *Master Plan* has been included as Appendix A. The communities' acceptance of the Lāʻau Point project as an enterprise that can be undertaken without compromising the Molokaʻi cultural and social fabric is dependent on the assurances derived from the *Master Plan*.

2.1.8 General Goals of the *Master Plan* - Community and Lifestyle Protection

Underlying the community's anxiety over any development project on Molokaʻi is a concern that there will be a "domino effect" radically changing Molokaʻi and the way of life they hold dear. There is a fear that once a project like Lāʻau is completed, the demand for more of the same will open the door to more and more growth, effectively ending the cultural and social lifestyle developed on Molokaʻi.

MPL recognized when it began planning for the eventual development of the Lāʻau Point project, that these concerns, as well as the desire for economic stability, would have to be dealt with if the project was to be successful. Having the unique capability, as a result of its holdings on Molokaʻi, to have a long-term impact on preventing change to large areas, MPL was able to mitigate the impacts of the Lāʻau Point project on the community and develop measures both inside and outside of the project boundaries to ensure that the end result of the Lāʻau Point project would meet the community's needs and desires.

The *Master Plan* therefore contains significant concessions to the community that ensure that Lāʻau Point will not be the "foot in the door" for radical change from the outside, but rather the genesis for protection of the existing fabric. Outside of Lāʻau and Kaluakoʻi, the remainder of Molokai Ranch's holdings will, through easement transfer or co-management, remain as they are physically, and be more accessible to the community.

In addition, the practical goal of the Lāʻau Point project and the *Master Plan* is to ensure that the community's social and cultural concerns can be maintained while creating new employment and training opportunities for Molokaʻi residents, protecting large areas of land from development, protecting key cultural and environmentally-sensitive areas, and providing the Molokaʻi community with certainty about its future.

The *Master Plan* is therefore generally designed to do two things:

- Protect the current functional uses currently taking place on MPL property (open space and agriculture).
- Ensuring that the environment and activities undertaken by the community that are important socially, culturally, and economically remain unhindered and unspoiled.

Its direct objectives are to:

- 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 60,000+ acres.
- Re-open the Kaluakoʻi Hotel and create 100+ 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 Plan* will provide a framework by which these agreed upon principles will guide future land use and management activities for MPL.

2.1.9 Specific Key Components and Issues of the *Master Plan*

- The *Master Plan* creates a number of key planning components or precedents which are unique in community planning in Hawai‘i. The unique components and precedents created by the Master Plan are summarized and detailed below.

2.1.9.1 Community Planning

The *Master Plan* was initiated, designed by the Moloka‘i community, and will be implemented by a Moloka‘i Land Trust on behalf of the community of Moloka‘i. The *Master Plan* was the result of a two-year process involving every member of the community who wished to participate.

2.1.9.2 Land Trust

To ensure that a large portion of Moloka‘i will remain undeveloped and accessible to cultural and subsistence practitioners a total of 26,200 acres or 40 percent of Molokai Ranch lands will be donated to a Moloka‘i Land Trust. (See Section 2.1.12 for a full discussion of the Land Trust)

In addition the Land Trust will receive an initial donation of 1,600 acres of MPL land on Moloka‘i’s north shore between ‘Īlio Point and Mo‘omomi (regarded by environmentalists as the most pristine of MPL’s property) and a revenue stream form an existing lease on the property. This donation will occur regardless of whether or not the Lā‘au project is approved.

2.1.9.3 Community Development Corporation

The *Master Plan* called for the establishment of a Community Development Corporation (CDC) that will receive land and funding from lot sales in the proposed Lā‘au Point development in order that affordable homes could be developed by the community itself.

A steering committee has been formed, the CDC mission established and funds already earmarked for the organization from the sale of land to the County of Maui for the new Kaunakakai Fire Station (see Section 2.1.13 for a complete discussion of the CDC).

2.1.9.4 Protection from Development

The combination of the donated land, existing and new easements ensure that the Moloka‘i Land Trust will have the ability to protect more than 85 percent or 55,000 acres of its property from development (see Section 2.1.11 for a complete discussion of the Easements).

By protecting such vast portions of Moloka‘i from future development, a significant portion of the Island will not only remain open space, but it will be retained for subsistence and traditional cultural use as well. This is key to MPL’s assurance to the community that the Lā‘au Point project will not lead to intense growth in development and that Moloka‘i’s social fabric will be

maintained. The Lāʻau Point project seeks to put to rest controversy and fears that have permeated Molokaʻi for years.

The combination of the Land Trust donated land, the loss of potential development rights from the easement lands, and the loss of revenue from the Lāʻau Point project from revenue donations to the CDC, have a loss of value for MPL in excess of $70 million.

MPL has already put in place easements on the some long-term leased agricultural land designated as easement land.

2.1.9.5 Subsistence

The project will provide 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.

This protection of subsistence rights is in place already and is enshrined in documents relating to the donation of the 1,600 acres of north-shore land to the Molokaʻi Land Trust early in 2008.

2.1.9.6 Community Expansion

Only Molokaʻi residents will decide future expansion of existing communities in the areas with a total of 200 acres around Kualapuʻu and Maunaloa protected for community housing and 1,100 acres above Kaunakakai to be donated to the Molokaʻi CDC for community expansion.

2.1.9.7 Jobs for the Community

The Kaluakoʻi 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.

2.1.9.8 Water

The *Master 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 MPL's Well 17 will be made available for the use of the community.

The *Master Plan* proposes the use of the abandoned Kākalahale Well for the supply of 1,000,000 gallons per day of brackish water. This brackish water will not only serve the needs of the proposed Lāʻau Point project, but facilitate the implementation of other aspects of the *Master Plan* such as the future affordable homes projects in Maunaloa, Kualapuʻu, and Kaunakakai, the re-opening of the Kaluakoʻi Hotel and the future build-out of the current Industrial Park at

Kaunakakai and for future homes to be built in the Kaluako‘i subdivision. (See Section --- for a complete discussion of the Water Plan and issues)

2.1.10 Key Lā‘au Point Project Development Components and Unique Precedents

Although the *Master Plan* contains elements that ensure the community fabric and cultural setting will not be significantly impacted, it was recognized that the Lā‘au Point project itself needed to be closely examined to ensure that the project area remained as much a part of the community assets as possible. As a result a number of unique features were designed into the development.

This EIS contains a number of unique subdivision elements, derived from community input and the concerns raised in the *Master Plan* process.

The Development

- The development will be a maximum of 200-lots, which will be unable to be subdivided further.
- The total development will be restricted to 400 acres containing house lots, 46 acres of roadways, a waste treatment plant of 14 acres, and 17 acres of parks with facilities.
- The lots will be sited a minimum of 250 feet, and in some places up to 1,000 feet, from the shoreline.
- Restrictive CC&Rs will ensure only those who care for the environment will wish to purchase lots in the subdivision (See Section 2.3.6 for a complete discussion of the CC&Rs)
- Lot disturbance will be limited to 1/3 only of the lot; the remaining 2/3 acres must remain in its natural state.
- Houses will be limited to a maximum of 5,000 square feet (including any lanai), must be single-storied and a maximum of 25 feet in height.
- Solar power and green building standards must be incorporated in building designs.
- Each lot will be restricted to daily use of 600 gallons of potable water and 1,500 gallons of brackish water for irrigation.
- No vacation rentals will be permitted and pesticide use is prohibited so that the ocean is not polluted.

Land Trust Role

The Moloka‘i Land Trust will be a party to the CC&Rs and has the ability to enforce any breach of their provisions. The Land Trust will also attend HOA meetings and act on any public complaint about breaches of CC&R provisions.

The Land Trust has approved the draft CC&Rs as complying with the *Master Plan* provisions.

CDC Revenue Stream

The community will share in the development returns of the Lā‘au Point subdivision through a net five percent fee paid to the CDC with every initial sale transaction of the 200 lots. A further 0.5 percent fee will be paid to the CDC by the lot owner for subsequent re-sales of lots or lots and houses.

Protection of Shoreline Resources for Subsistence Gathering

Subsistence gathering is a way of life on Molokaʻi. To ensure that Lāʻau will remain a part of the community's "icebox" and that cultural and social practitioners are not hampered, impeded or made to feel uncomfortable, a number of unprecedented features were developed as a part of the project's mitigation measures.

- The Conservation District lands (180 acres) along the shoreline in front of the subdivision will be increased by 254 acres to make a total of 434 acres of Conservation District Lands.
- This area, which contains important archaeological sites and environmentally sensitive areas, will be protected by the attachment to the land's title of an easement on the lands to the Molokaʻi Land Trust, giving the community an important voice in the future of this area. This Easement is contained in Appendix C.
- The Molokaʻi community will always have access to the shoreline for subsistence gathering. To ensure this, Lāʻau Point homeowners and Land Trust members will form a council to administer a Shoreline Access Management Plan (SAMP), which is contained in Appendix B.
- The marine resources will be protected for subsistence gathering by only allowing foot access for the community from each end of the subdivision.
- Subsistence gatherers will only be able to remove what they can carry out by foot. Full-time guardians will protect archeological and cultural sites and enforce the provisions of the SAMP.

2.1.11 Areas Protected by Easements Outside the Project Area

Provisions of the Master Plan covenant that 24,590 aces, or 38 percent of MPL's property, will be placed under new protective easements. These easements will be in favor of the Molokaʻi Land Trust. The easement lands are as follows:

- **Agricultural Easements.** A total of 14,390 acres are protected forever for agricultural use. These agricultural lands effectively mirror the former pineapple plantation land surrounding Maunaloa and on MPL's property in the central plateau.
- **Rural Landscape Reserve Easements.** A total of 10,560 acres will be protected forever under a Rural Reserve designation easement. These lands are in four parcels and shown on the Map on page 9 of the *Master Plan* (Appendix A), and titled, "Proposed Land Trust and Land Use Districts."

2.1.11.1 Definition of an Easement

An easement is an interest in land owned by another that entitles its holder to a limited use. In this case it serves as a restriction placed on the property that limits the use of the property to those uses defined within the easement document.

Easements are attached to a property title, recorded at the Bureau of Conveyances or the Land Court, and are enforceable in law. Easements are used widely throughout the United States to protect property from potential development. Millions of acres of land are subject to restrictive easements. As an example, The Maui Coastal Land Trust holds easements over a number of properties on Maui.

In order that the restrictions can be enforced, the easement is made in favor of, or held by, an entity that has an interest in ensuring the easement is adhered to.

In the case of these easements, the easements will be made in favor or be held by the Molokai Land Trust, who will enforce the restrictions.

2.1.11.2 General and Specific Definition of Agriculture and Rural Reserve Easements

While the terms "Agricultural Easement" and "Rural Reserve Easement" have generally been used to describe certain categories of easement documents, the true nature of the easement is developed on a case by case basis. In this situation the limitations on use and intent of the easements were developed with community input during the *Master Plan* process and are intended to meet the long term concerns of the community to protect the areas subject to the easements from development or changes that would be contrary to their current use.

The *Master Plan* defines the uses under the easements as follows:

> *Agricultural Areas:*
>
> *Purpose: Perpetuating the traditional agricultural base of Molokaʻi's economy is the purpose…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 of the Master Plan).*
>
> *Use: Agricultural activities focus on benefits to the Molokaʻi 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:*
>
> - ***Hi-value agriculture.*** *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 Hawaiʻi 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 Hawaiʻi 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.*

Rural Landscape Reserve Areas:

Purpose: Maintenance of the rural landscape – to preserve the traditional Molokaʻi character and to provide scenic view sheds 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.

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.*

2.1.11.3 Some Easements Already Put in Place

All property transactions relating to the sale or lease or MPL lands in the central plateau have title restrictions retaining the use of the lands for agriculture as per the *Master Plan* areas noted for future agriculture use.

This is the case in the 2006 long-term lease of lands to Monsanto, where the covenants retain the use of the land for agriculture.

There has also been a lease of further agriculture-designated land to a private lessee that restricted the use of that land for agriculture.

2.1.11.4 Current Status and Proposed Provisions of The Easement Documents

The following are the intended provisions of the easements that are under discussion and that further clarify their uses. In all cases MPL will not be bound to provide potable or non-potable water for any potential farm dwellings in these areas.

Agricultural Uses

- In all cases, the lands must be used for a genuine agricultural purpose. Land will not be leased or sold to those that have no intention of using of the land for agriculture.
- Minimum sub-dividible areas are 500 acres for the raising of animals for food.

- Smaller lot sizes (to a minimum of 100 acres) may be considered by the Land Trust for "intensive agriculture," which is defined as the growing of crops or other foodstuffs or flowers for the purposes of sale, or for aquaculture.
- The keeping of animals for leisure purposes must be on areas of land sufficient so as not to cause damage or erosion. The Land Trust must pre-approve such uses.
- Land for forestry is encouraged, but forestry uses are to be prohibited within 100 yards of the west side of the Maunaloa Highway in so that view planes are protected.
- One residential home is permitted per lot. The homes are restricted to 2,500 square feet, must be single storied, and use solar power for energy.
- One ancillary farm building per lot will be permitted, but the farm owner must obtain pre-approval from the Land Trust prior to applying for a building permit.
- Condominiums are prohibited, as are solid wall fences, structures in excess of 25 feet in height, and swimming pools.

Further restrictive provisions that ensure the lands are forever used only for agricultural purposes and the rural nature of Molokaʻi is protected, are under discussion.

It is intended that these documents will be available at Land Use Commission petition hearings.

Rural Landscape Reserve Uses

While the intention of the Landscape Reserve easements are to create open space buffers, the Land Trust believes that these lands should be able to be sold, or leased, to potential owners committed to care for the land under strict guidelines.

Under the guidelines currently being considered by the Land Trust, some farming uses would be approved on these lands.

On November 6, 2007, MPL and the Land Trust signed an addendum to the *Master Plan* in relation to the Rural Landscape Reserve Lands to add clarity to the *Master Plan* section 5.1.3 (see Appendix A) as it related to Rural Reserve Lands.

The addendum clarifies the uses in relation to any buildings on Rural Reserve property:

- Residential uses shall be restricted to one home per 1,500 acres.
- "Clustering" of residences is not allowed, and no residence will be allowed with 1/2-mile of another.
- Any development or construction of a residence and/or ancillary farm structure must be approved by the Land Trust.
- Any residential structure must be ancillary to allowed agricultural activity and a maximum of 25 feet in height and no more than 2,500 square feet of living space.

2.1.12 Molokaʻi Land Trust

A land trust is a private, non-profit conservation organization set up for the purpose of acquiring lands or easements on land. Land trusts can manage the lands they acquire. A local land trust would be a community-based organization—in this instance, one dedicated to maintaining and protecting cultural and natural resources of Molokaʻi.

2.1.12.1 Lands Designated to the Molokaʻi Land Trust

The Molokaʻi Land Trust, a community-based land steward organization, will be entrusted with ownership and management of the 26,200 acres (40 percent of Ranch lands) that MPL will donate to the Molokaʻi community and will administer 24,950 acres of easement lands and 434 acres of Lāʻau Point's cultural preservation zones and Conservation District lands. Figure 10 shows potential future ownership and management for Molokai Ranch property, including the lands the Molokaʻi Land Trust will own, manage, and administer.

The Molokaʻi Land Trust's fee simple lands, going from east to west, 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 MPL 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.
- Pu'u O Kaiaka.
- Other sites as shown on Figure 10.

MPL will donate a 1,600-acre parcel of land (referred to as the "Mokio parcel") on the coastline between Moʻomomi and ʻĪlio Point to the Molokaʻi Land Trust regardless of the outcome of the Lāʻau Point petition and County applications. Figure 11 shows the location of the Mokio parcel. The transfer of this land parcel also includes a partial assignment of rents that will provide $50,000 of annual income to the Land Trust. This land donation is regardless of the outcome of the Lāʻau Point LUC petition and County applications.

As of December, 2007, an agreement to transfer the 1,600-acre Mokio parcel to the Land Trust was in the final stages of attorney review, and it is anticipated the donation in fee will take place early in 2008 following an extensive due diligence process conducted by the Land Trust and its advisors.

The Land Trust will permanently hold protective easements over a total of 24,950 acres of MPL-owned land: 14,390 acres will be dedicated as agricultural easement land and 10,560 acres will be dedicated as rural landscape reserve easement (see page 9 of Appendix A). The agricultural easement lands (depicted with diagonally-striped lines on page 11 of Appendix A) will be dedicated for agriculture and only a few farm-related structures (i.e., barns, sheds, or farm dwellings) can be built there.

The *Master Plan* process designated proposed easement land areas based on the agricultural suitability of the area, without regard to specific TMK parcels; however, the area includes 20 TMK parcels. Under State law (Section 205-4.5) one farm dwelling could be built on each of the TMK parcels for a total of 20 potential farm dwellings.

The rural landscape reserve easement will protect open space and views on five large parcels on which no buildings or development will be permitted. The Land Trust will administer agreed upon land use policies for these areas, and enforce the dedicated use of the easement lands. The

easements would run with the land and future landowners would be bound to the easements. Therefore, although these easement lands could be re-sold, they would always be subject to the easement restrictions.

2.1.12.2 Land Trust Role

The Land Trust will provide for the community’s self-determination and protection of the island’s resources. Its mission is to “protect and restore the land, natural and cultural 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, particularly Native Hawaiians” (EC 2006).

In an effort to accomplish their objective, the volunteer members of the Land Trust have been working diligently for the past two years to accomplish its goals, mission and vision for Moloka‘i (Appendix D).

Ms. Berna Cabacungan of Earthplan, in her social impact analysis (see Section 4.8) accurately describes the efforts that are led by the all-volunteer land trust board in the following statements:

> *“For proponents of the Plan, their approach to protecting Moloka‘i is to be proactive in determining the island’s destiny. The lack of control due to landownership and land use issues implies an unknown future and possible proposals that could threaten the island its people and its resources. They have chosen to solve this problem by coming up with a Plan that brings more community control over land resources through land ownership, resource management and land use controls.*
>
> *While Lā‘au Point opponents are putting up signs and organizing protests, Plan proponents are exploring mechanisms for coming up with a resource management program and establishing a Land Trust and a Community Development Corporation. Hence, while both sides are seeking to protect Moloka‘i, their strategies have no commonality. There is little that can be done to bridge the gap.”*

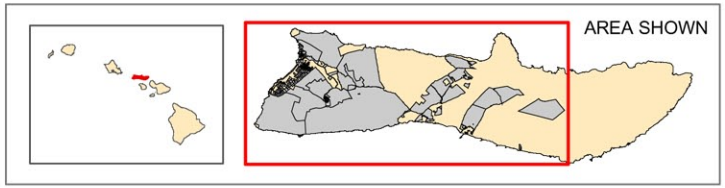
The Land Trust’s unique goals are:

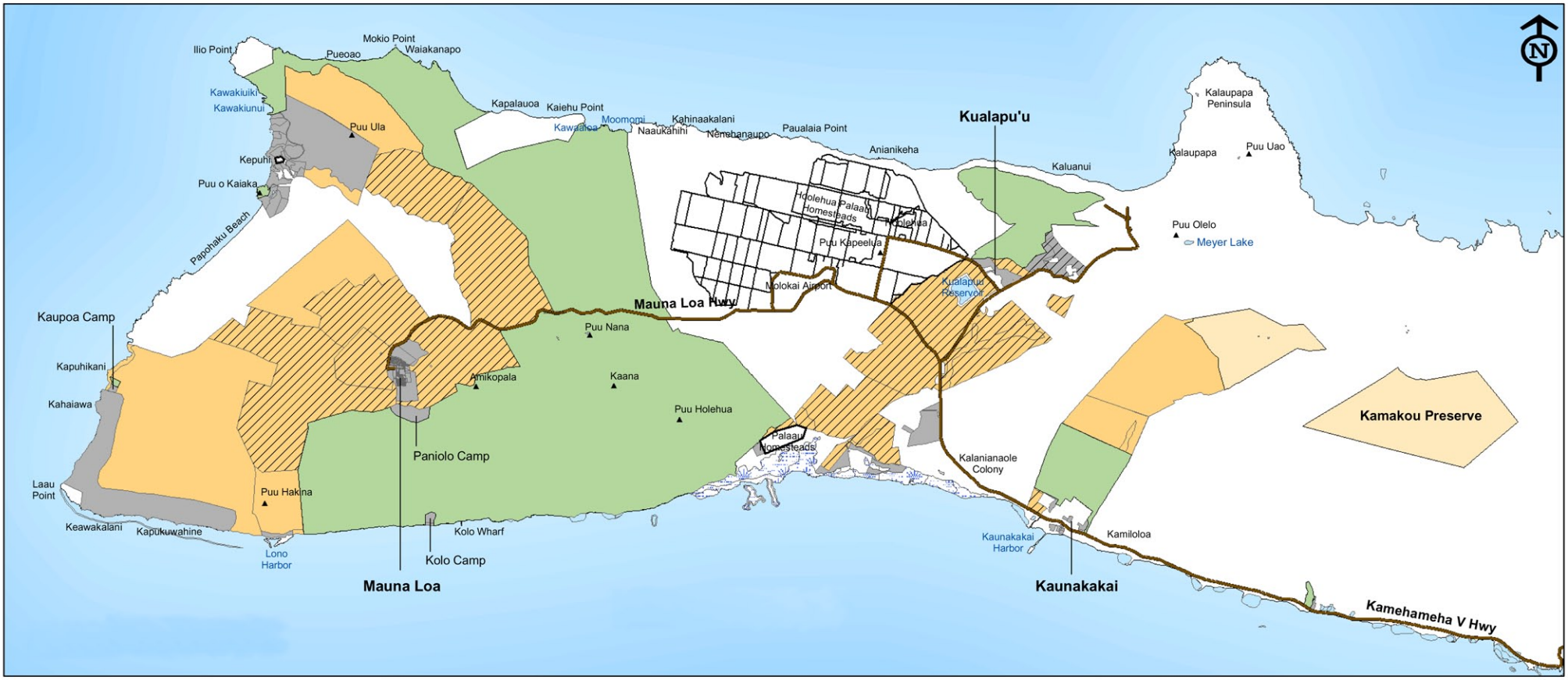
- Protecting historic cultural archeological sites.
- Preserving the precious natural and environmental resources.
- Enhancing indigenous rights through the protection of subsistence gathering.

The Land Trust will play a major role in the Lā‘au Point project. The Land Trust will:

- Hold and control the easement over the expanded Conservation District lands in front of the subdivision that is important for subsistence practices. This easement document is in the final stages of preparation.
- Share the management responsibility of the expanded Conservation District lands equally with the Lā‘au Point HOA by having equal representation on a Council of land trustees and homeowners.
- Implement the Shoreline Access Management Plan (SAMP), which is the council’s guide to management of the expanded Conservation District lands. The SAMP was approved by the Land Trust on August 10, 2007. A copy of the SAMP is provided as Appendix B of this EIS.

MOLOKA'I RANCH MASTER USE PLAN
PROPOSED LAND OWNERSHIP / MANAGEMENT





POTENTIAL FUTURE OWNERSHIP AND MANAGEMENT FOR MOLOKAI RANCH PROPERTY

- Proposed Transfer of Ownership to Community Land Trust (26,200 acres)
- Proposed Conservation / Open Space / Agricultural Easement Area (Ownership Retained by Molokai Ranch, 24,950 acres)
- Ownership and Management Retained by Molokai Ranch
- Agricultural Lands (14,390 acres)
- Protected by Existing Conservation Easement (4,040 acres)

Map Prepared By: The Conservation Fund
August 11, 2004

Figure 10
Proposed Land Trust Donations and Easements

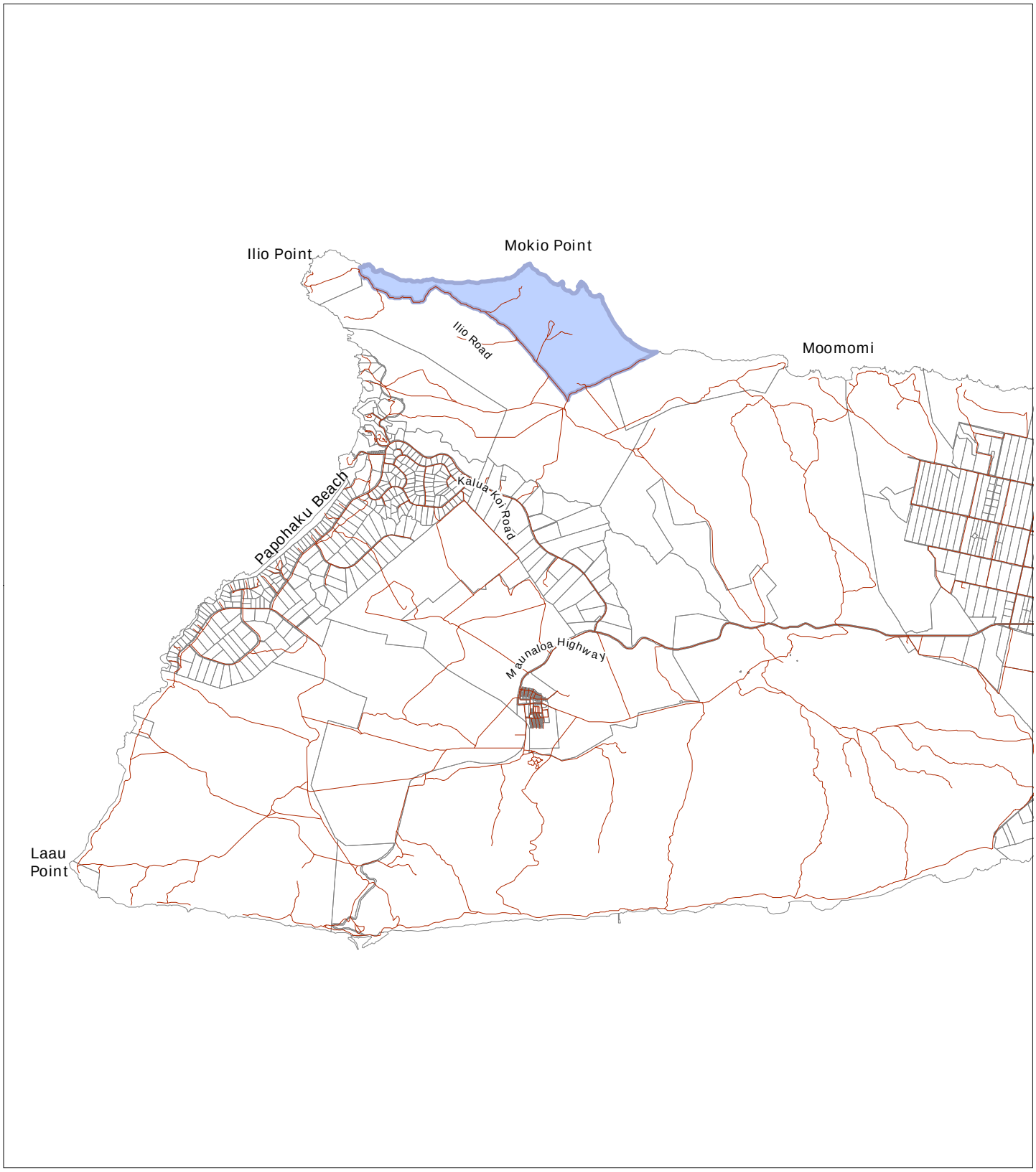
Lā'au Point

ISLAND OF MOLOKA'I

NORTH

NOT TO SCALE

PBR HAWAII



Legend

Roads

First Land Trust Donation Land

Figure 11
First Land Trust Donation - Mokio Parcel

Läʻau Point

Molokai Properties Limited

ISLAND OF MOLOKAI

NORTH

LINEAR SCALE (FEET)

0 5,000 10,000 20,000

PBR HAWAII & ASSOCIATES, INC.

Disclaimer: This graphic has been prepared for general planning purposes only.

- Be a party and signatory to the Lāʻau Point CC&Rs covering restrictions on aspects of the development.

2.1.12.3 Land Trust Membership

As of December 2007, there are ten directors on the Land Trust board. Six of the board members are born and raised on Molokaʻi, five are Native Hawaiian. The following is a brief summary of the members:

- **Colette Machado, President.** Born and raised on Molokaʻi. Since 1996, Colette has served as an elected trustee of the Office of Hawaiian Affairs for the islands of Molokaʻi and Lānaʻi. She is a former State Land Use Commissioner, Hawaiian Homes Commissioner, and Kahoʻolawe Island Reserve Commissioner.
- **Richard Cooke III, Vice President.** Raised on Molokaʻi as part of the Cooke family that previously owned Molokai Ranch. He serves as the Operating Manager of Hui Hoʻolana Retreat Center on Molokaʻi and is an alternate on the Cooke Foundation Board of Trustees. He is a professional photographer and worked for 15 years with the National Geographic Society.
- **Cheryl Corbiell**, Secretary. Self-employed as a communications consultant. Operates a bed and breakfast operation and teaches part-time business and communications classes at Maui Community College – Molokaʻi.
- **William Akutagawa, Treasurer.** Born and raised on Molokaʻi. Founder of the Molokaʻi Health center. The Executive Director of Na Puʻuwai Native Hawaiian Healthcare System and a founder of the Molokaʻi Community Health Center. He is the Molokaʻi field representative for Senator Daniel K. Inouye.
- **Clarence Halona Kaopuiki, Director.** Molokaʻi born and raised. Lifelong advocate of Native Hawaiian cultural preservation and archaeology. He has served for the past six years on the Native Hawaiian Historic Preservation Council and is employed with the Office of Hawaiian Affairs on Molokaʻi.
- **Stephanie Stacy Helm Crivello, Director.** Molokaʻi born and raised. Retired Island Manager of Verizon's Molokaʻi and Lānaʻi operations. She serves as the president of Ke ʻAupuna Lokahi - Molokaʻi Enterprise Community.
- **David Lunney, Director.** Molokaʻi resident. Prior to living on Molokaʻi, David was the General Manager of the American Film Institute, Center for Advanced Film Studies, and had an independent film and television production company in Los Angeles. David is also active in the Molokai community performing Hawaiian dance and music and was runner-up for Male Kupuna Dancer of the Year.
- **Davianna McGregor, PHD, Director.** Part-time resident of Molokaʻi. Professor of Ethnic Studies at the University of Hawaiʻi, Mānoa. She is a spokesperson for the Protect Kahoʻolawe ʻOhana and secretary-treasurer of the Protect Kahoʻolawe Fund. Dr. McGregor has worked on the Molokaʻi Subsistence Study; the Molokaʻi Empowerment Zone grant application; the Molokaʻi Responsible Tourism Initiative; and the Cultural Assessment of the Kamakou and Moʻomomi Preserves of The Nature Conservancy.
- **Edwin Misaki, Director**. Born and raised on Molokaʻi. He is the Executive Director of The Nature Conservancy on Molokaʻi and recently served ast he Interim Director for The Nature Conservancy Palau Program.
- **Pedro Venenciano, Director.** Born and raised on Molokaʻi. Benny was one of the original board members of the Molokaʻi Enterprise Community. He serves as president of Friends of Molokaʻi High and Middle Schools Foundation and volunteers as a coach with

the Molokaʻi Baseball Little League and Wrestling programs. He is employed with the Department of Health Division caring for Molokaʻi's disabled population.

MPL is an ex-officio member of the Land Trust and acts in an advisory capacity only. MPL does not have voting rights.

2.1.12.4 Articles of Incorporation

The purposes of the Land Trust as specifically set forth in Article IV of its Articles of Incorporation are:

- To protect and restore the land, natural and cultural resources of Molokaʻi, and to perpetuate the unique Native Hawaiian traditions and character of the island, for the benefit of the future generations of all Molokaʻi, particularly Native Hawaiians; and
- To achieve the above charitable purposes and for no other purposes, to hold and acquire title and easements to lands and to gather and disseminate funds; and
- To operate exclusively for charitable, scientific, or educational purposes as a section 509(a)(3) supporting organization within the meaning of section 501(c)(3) of the Internal Revenue Code of 1986, as now enacted or hereinafter amended, and the regulations there under ("the Code") and
- To support the mission of Ke ʻAupuni Lōkāhi, a federally funded, Hawaiʻi nonprofit corporation, which: (a) has been granted status as a charitable organization under section 501(c)(3) of the Code that is described in sections 509(a)(1)and 170(b)(1)(A)(vi) of the Code; (b) has as part of its mission to steward the natural and cultural resources of Molokaʻi; and (c) includes in its strategic plan the creation of a land trust for Molokaʻi; or, to support other or additional public charities as provided in Article VII of these Articles.

The corporation shall have and possess all the powers permitted to nonprofit corporations under the laws of the State of Hawai'i, including but not limited to: (a) the ability to acquire land or interests in land, including conservation easements, by gift or purchase; and, (b) the power to conduct fundraising activities, so long as such activities are consistent with the corporations purposes, as set forth in Article IV of the Articles of Incorporation.

The management of the affairs of the corporation shall be vested in a board of directors, consisting of not less than nine, or more than 21 persons.

If the corporation shall cease to exist or shall be dissolved, all property and assets of the corporation of every kind, after payment of its just debts, shall be distributed only to one or more entities that has qualified as a tax-exempt organization under section 501(c)(3) of the Code and has purposes similar or related to those of this corporation. In addition to the foregoing limitation, to the extent conservation easements are included within the distributed assets, such easements shall be distributed only to one or more entities that are qualified to hold easements under the relevant state and federal laws, including section 170(h)(3) of the Code. In the event a conservation easement held by the corporation identifies a specific entity to whom the easement shall be distributed in the event of dissolution, such entity shall hold the easement as long as it meets all other qualifications set forth in the Articles of Incorporation regarding dissolution.

2.1.12.5 Vision, Mission, Values

The Land Trust shares a long-term vision of the future for Molokaʻi, its environment, spirit, culture, and people.

Although there are many important principles that guide its work, the Land Trust emphasizes the following values as core to its efforts:

- Molokaʻi Nui A Hina: reverence and love for Molokaʻi's people and the land.
- Molokaʻi Pule Oʻo: strength in mission through prayer, training and education.
- Molokaʻi Aina Momona: promotion and practicing of sustainable land use practices.
- Molokaʻi No Ka Heke: remaining true to core Hawaiian values while embracing new technologies and ideas.

2.1.12.6 Draft Strategic Plan

For the past year and a half, the Land Trust has devoted its time, energies and resources to organizing itself as a bona fide corporation.

The Land Trust has also implemented a fundraising campaign to meet its initial operating costs with a plan to hire an administrator and support staff being a priority in 2008.

A system of sound financial management, with appropriate internal controls, is in place with plans to provide ongoing improvements to the financial system as a priority.

Ongoing training of existing and new board members continues to be a priority.

A key component of its draft strategic plan is to increase the community's participation and involvement with the land trust. The Board membership will be increased and the addition of Molokaʻi and non-Molokaʻi residents to various standing and ad hoc committees is a priority action item identified in the board's draft strategic plan. Increased collaboration with private and public partners that help to achieve the mission of the Land Trust is also an action item for the board.

The gifting of the first lands at Mokio is an opportunity for the Land Trust and community to celebrate a major accomplishment. Discussions and planning for this event with the community is currently underway.

The acquisition of Phase II of MPL lands, which includes the additional 26,000 acres, will be implemented in the near term and will also require additional volunteers with the energy and expertise to help the land trust implement its strategic plan.

2.1.12.7 Land Trust Registered with State and IRS

The Land Trust was registered with the State of Hawaiʻi as a non-profit corporation on June 14, 2006 and received its Internal Revenue Service tax-exempt 509 (a)(3) status six months later in December, 2006. A copy of its Articles of Incorporation is included in Appendix D.

The Land Trust meets monthly and has set up a number of committees (finance, lands and stewardship, strategic Planning and governance) to review:

- The detailed work necessary to be completed before accepting the first gift of 1,600 acres of land.
- Planning the future fund-raising necessary to enable the Land Trust to manage the lands to be donated.
- Future staffing, governance, and operational issues.

Trustees have undergone extensive training in the duties and obligations of a Land Trust with consultants approved by the Land Trust Alliance, the organization that sets standards and practices for the hundreds of land trusts throughout the United States.

2.1.12.8 Revenues to Moloka‘i Land Trust

To ensure the Land Trust is adequately funded for its administration costs, revenue for the Land Trust will come from a share of the Lā‘au Point lot sales and existing communications rentals on the MPL land to be donated. Communications tower rents currently total $250,000 a year with a capitalized value of more than $2.5 million.

Table 2 below lists the assets and sources of income for the Land Trust as set forth in the *Master Plan*.

Table 2. Moloka‘i Land Trust Revenue Stream

Proposed Donation	Revenue Stream
An initial parcel of 1,600 acres of land on the western shoreline of Moloka‘i, known as the Mokio parcel. This donation is unrelated to the outcome of the Lā‘au Point entitlement process.	Land donation only. Included is rental income from the property for Aeronautical Radio, Inc. (ARINC) of $50,000 per annum.
Approximately 23,400 remaining acres of land (total donation with Mokio parcel 26,200 acres or 40 percent of the current MPL property).	Land donation. Also income from telecommunications and remaining ARINC rentals of aprox $200,000 per annum.
Will hold the easement over a further 24,000 acres of land that will be protected for agriculture (15,000 acres) and open space (14,000 acres).	No income from conservation easements.

Section 7.1 of Appendix D contains further documentation on the Land Trust including copies of its Articles of Incorporation, Vision, Mission, Values and Goals Statements, Draft Strategic Planning document, and biographies of Board members.

2.1.13 Moloka‘i Community Development Corporation (CDC)

The *Master Plan* proposes the creation of the Moloka‘i Community Development Corporation (CDC), an entity which will continue the efforts of the Enterprise Community (EC) after the EC’s official US Department of Agriculture designation expires (The Moloka‘i EC is part of the federal USDA EC/EZ Program which in 1999 designated the entire island of Moloka‘i as an Enterprise Community and has provided $2 million in grant funds plus access to other funds set-

aside for EZ/EC toward implementing a 10-year strategic plan for Molokaʻi). The CDC will have the following tasks:

- Develop affordable homes for the Molokaʻi community.
- Promote economic development.
- Expand educational opportunities that will build capacity among the island's youth.
- Assist the Land Trust with project funding.

To assist the CDC with providing affordable housing, MPL will convey ownership of 1,100 acres of land mauka of Kaunakakai to the CDC for future housing development. MPL will also put development restrictions on 100 acres around each of the towns of Kualapuʻu and Maunaloa to limit the use of these lands for affordable housing. Although MPL will retain ownership of the reserved lands, development decisions and timing will be made by the community via the CDC and not by MPL.

The CDC will work with partners such as Lokahi Pacific, the 501(c)(3) organization that is currently completing 10 affordable homes in Maunaloa on land provided at a reduced price by MPL. Funds from the Lāʻau development (the initial five percent of lot sales and the subsequent half a percent of subsequent lot or house and lot sales) will be used to fund CDC activities. The CDC will own the 1,100 acres of Kaunakakai land that is being donated by MPL.

Self-determination is a critical component behind the creation of the CDC and this plan for development of affordable housing. Moreover, placing housing development in the hands of a community organization, rather than a developer, provides the opportunity for appropriate development timing, which is important in a slow-growing community like Molokaʻi.

Affordable housing is intended for resident members of the Molokaʻi community, within the income bracket and definitions as defined by the County of Maui. Affordable housing will be developed by the CDC. The CDC is tasked with providing affordable homes for Molokaʻi residents. Residency requirements for affordable homes will be as specified under Section 2.96.020, Maui County Code (MCC).

In addition to land for housing, MPL will gift the CDC with the following assets that can be used for community development:

- A 5-acre parcel in central Kaunakakai zoned light industrial, which will be available for development in 2011 when the lease to the current lessee, the Junior Roping Club, expires.
- A 3.2-acre parcel adjacent to the Community College, which will be sold to the Maui Community College at market value. The proceeds from this sale would go to the CDC, which would add to the organization's funding for community projects such as construction of affordable housing.
- $100,000 from the sale by MPL of a 5-acre site to the County for a new Kaunakakai Fire Station (contained within the 1,100 site above Kaunakakai).
- Endowment from the Lāʻau Point project as a sustainable form of CDC funding, which will be structured as follows:
    - An initial funding of the CDC arises from a net 5 percent of the sale revenue of all 200 lots in Lāʻau Point. The value of this revenue is estimated to be $10 million over five years.

- Future and perpetual income for the CDC comes from second and subsequent sale of lots or lots and houses, as a percentage (half a percent) of all future net sale proceeds from sellers of Lā‘au Point properties will be diverted for CDC use. This will provide the CDC with a perpetual income. This provision to allocate income from subsequent lot sales will be provided for in the CC&Rs in the form of a perpetual and unchangeable covenant (Master Plan Covenant). The CC&Rs will require the percentage fee to be paid to the CDC at closing directly out of escrow.

Table 3 below lists the assets and sources of income for the CDC as set forth in the *Master Plan*.

Table 3. Moloka‘i CDC Revenue Stream

Proposed Donations	Revenue Stream
1,100 acres above Kaunakakai town	Land for affordable housing
Land currently occupied on a short-term lease by the Junior Roping Club (4.18 acres) that is County-zoned industrial.	Land to either develop or realize in cash on sale.
The funds ($100,000) to be received from the County from the purchase of land for the new Kaunakakai Fire Station.	$100,000 in late 2007 or 2008.
The funds received from the University of Hawai‘i from the future purchase of 3,213 acres designated for community college expansion.	Funds will be at market valuation of the property at the time of sale.
Five percent of the net proceeds from the initial sales of lots in the proposed 200-lot Lā‘au Point subdivision (likely to be in excess of $10 million).	A total of $10 million over the period of the sale of the lots, anticipated to be a 5-year period.
A 0.5 percent (a half a percent) of all future lot and house sales in the Lā‘au Point development, (giving the CDC a perpetual income forever).	A continuous income stream as lots, or lots and houses are resold.

A CDC steering committee, a project of the Moloka‘i EC, has been already established and is investigating legal and tax structures to ensure the optimum ability to fulfill its mission. CDC steering committee members are: Kevin Comcowich, Cheryl Corbiell, Stacy Crivello, Keoni Lindo, Ed Medeiros, and Claud Sutcliffe.

Other community members, who support the *Master Plan*, and who can bring specific skills that will assist the CDC in achieving its objectives, will be sought early in 2008.

The CDC mission statement has now been defined by the steering committee as follows: “A community-based non-profit organization working to enhance the quality of life for residents primarily in the area of affordable homes for the community, as well as economic development, education, health care, leadership, culture and the environment, while preserving Moloka‘i’s rural character.”

The CDC steering committee has also been investigating partnerships with other non-profit organizations for the building of affordable homes, and a structure will be in place to accept the land and funding donations prior to the transfer of land and the first sale of Lā‘au Point lots.

There is no relationship between the Moloka‘i Land Trust and the CDC steering committee. Both operate as separate entities with differing but compatible interests.

2.2 STATEMENT OF PURPOSE AND NEED FOR LĀ‘AU POINT

The Lā‘au Point project and the re-opening of the Kaluako‘i Hotel will give MPL, its shareholders, and employees, future certainty about the viability of the property, its current operations and assets. The Lā‘au Point project is the active measure that gives rise to the concessions in the *Master Plan* and the financial driver for the economic development that the community desires.

Proceeds from the sale of the Lā‘au Point lots will fund the renovations and upgrading of the Kaluako‘i Hotel and Golf Course. 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, additional small business opportunities will be created for the community.

The funds derived from the sale of lots will fund the re-opening of the Kaluako‘i Hotel, estimated to cost in cash between at least $30 million to $35 million before it becomes cash-positive. As this is the only significant change outside of the Lā‘au project that arises from the *Master Plan*, the Kaluako‘i Hotel project’s impacts are discussed in Section 5.1.

Proceeds from the sale of Lā‘au Point lots will also, as outlined in Section 2.1.13, fund an endowment to assist the CDC in carrying out its mission of developing affordable homes for Moloka‘i residents, expanding educational opportunities for Moloka‘i’s youth, and assisting the Moloka‘i Land Trust with project funding.

The Lā‘au Point project has been the controversial aspect of the adopted *Master 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 currently takes place in the waters off Lā‘au Point. Therefore, for many members of the *Master Plan’s* Land Use Committee, the decision to support the Lā‘au development was an extremely difficult one.

Many Land Use Committee members made at least two site visits to Lā‘au Point reviewing MPL’s plans and giving their input. The Land Use Committee structured subdivision covenants and reviewed protection zones for archaeological, cultural, and environmental areas, studying how the shoreline can be protected and maintained perpetually for subsistence gathering. The aim was for Lā‘au Point homeowners to be educated and required to support conservation, cultural site protection, and subsistence.

For many involved, the difficulty concerning the Lā‘au Point project has been lessened by: 1) the fact that 55,000 acres will be placed into some form of open space conservation or agricultural resource protection; 2) the Lā‘au Point Covenants, Conditions and Restrictions (CC&Rs) have been strengthened to protect the resources; and 3) MPL’s decision to seek a Land Use

reclassification from Agricultural to Rural. The Land Use Committee went to extraordinary lengths to ensure that the subdivision at Lāʻau Point would be set apart from typical subdivisions in Hawaiʻi.

2.2.1 Statement of Objectives

The objectives of the Lāʻau Point project are rooted in MPL's desire to create a sustainable future for Molokaʻi through implementation of the *Master Plan*.

The goal of the *Master Plan* was to create new employment and training opportunities for Molokaʻi residents and to provide the community with certainty about its future. The objectives of the *Master Plan* and the Lāʻau Point project are to:

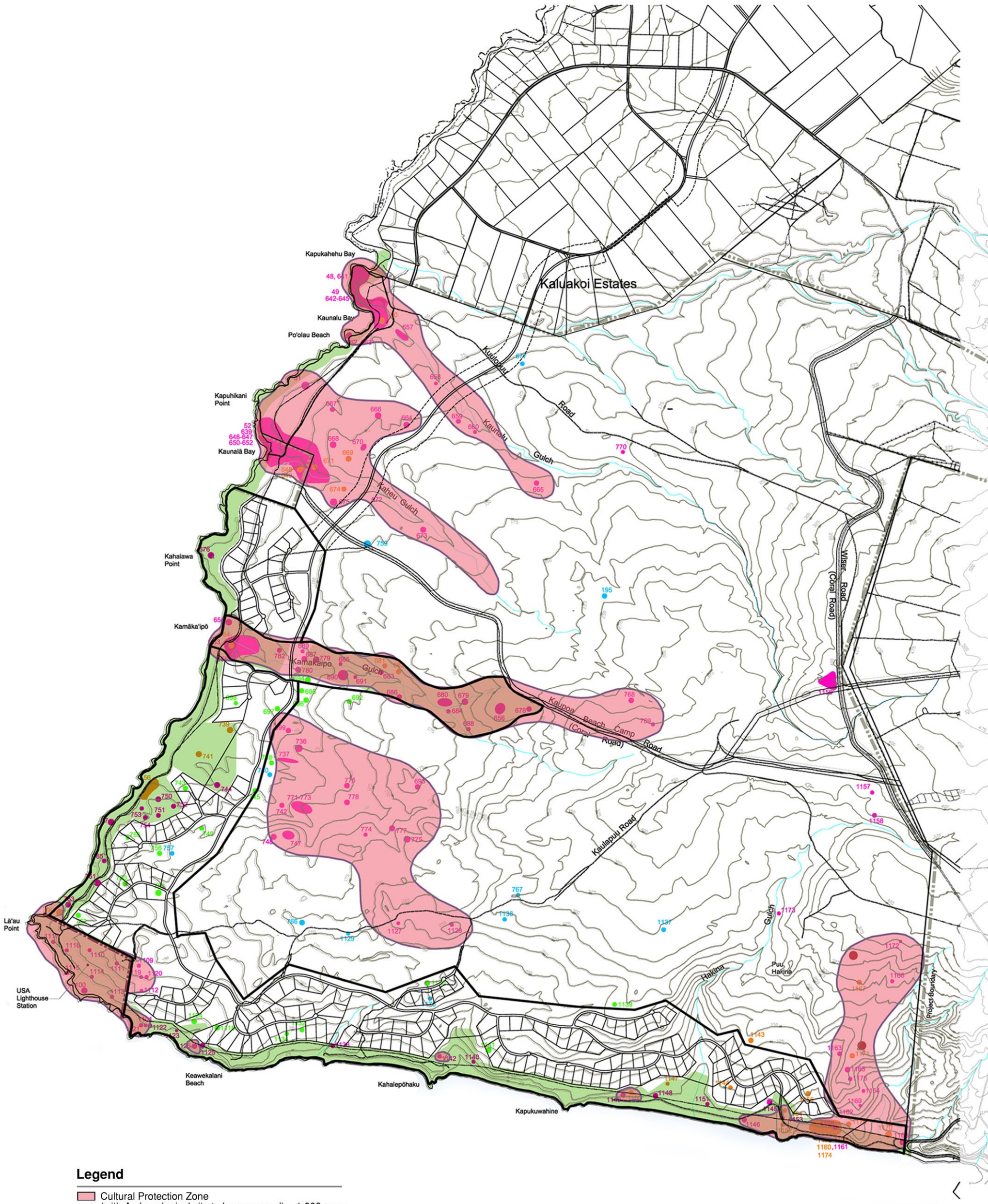
- Develop sustainable economic activities that are compatible with Molokaʻi and the vision of the Molokaʻi Enterprise Community (EC).
- Secure the role of the community in the management of MPL's 60,000+ acres.
- Re-open the Kaluakoʻi Hotel and create in excess of 100 jobs.
- Protect cultural complexes 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 (see Section 2.1.12).
- Provide an endowment that serves as a continuous revenue stream for the CDC (see Section 2.1.13).

With respect to development at Lāʻau Point, the project "must be the most environmentally planned, designed, and implemented large lot community in the State." This statement precedes the covenant document determined by the Land Use Committee that will place many restrictions on lot owners, thereby attracting only those buyers who are concerned about conservation. Lāʻau Point will be a community of people that demonstrates the value of mālamaʻaina (caring for, protecting, and preserving the land and sea).

To ensure the Lāʻau Point project does not undermine the island's health, environmental sensitivity will be incorporated into all design aspects of Lāʻau Point. Strict CC&Rs, Design Guidelines, and Construction Rules for Lāʻau Point will: 1) establish appropriate semi-arid landscapes that envelop buildings and blend them into the surrounding site; 2) utilize plants, landscapes, structures, and details that draw upon indigenous landscape and building traditions; 3) utilize plant palettes that are sensitive to water conservation; 4) include a resource protection management plan for Lāʻau Point as part of the covenants for each property owner.

2.3 GENERAL PROJECT DESCRIPTION OF LĀʻAU POINT

This EIS has been prepared for the proposed Lāʻau Point project located along the shoreline bluffs on the southwest coastline of Molokaʻi. The lands that are subject to the provisions of Chapter 343, Hawaiʻi Revised Statutes (HRS) (Environmental Impact Statements) and Title 11, Chapter 200, Hawaiʻi Administrative Rules (Environmental Impact Statement Rules), are the 1,432 acres at Lāʻau Point.



Legend

- Cultural Protection Zone (with Archaeological site to be preserved) ± 1,000 acres
- Shoreline Conservation Zone ± 451 acres
- Project Area

Archaeological Sites

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

Figure 12
Cultural & Historic Resources Map

Lā'au Point

Island of Molokai

NORTH

LINEAR SCALE (FEET)
0 1000 2000 4000

PBR HAWAII

The natural topography and slope of the site provide exceptional coastal and ocean views from many vantage points. The natural drainage ways and gulches will be preserved as open space and the numerous significant archaeological, cultural, and historic sites are placed within cultural preservation zones. Environmentally-sensitive areas will be preserved within conservation zones.

Lāʻau Point will be unlike any other community in Hawaiʻi. What is unique about the Lāʻau Point project is the community planning that went into ensuring that exceptional views are preserved and that development would be environmentally and culturally sensitive. Brochures, sales material, and other promotional documents will be reviewed by the Land Trust or the EC for accuracy and adherence to their principles. Residents of Lāʻau Point will be educated and informed about the environment and culture, and taught to "mālamaʻāina," take care of the land and sea, through strict Covenants, Conditions, and Restrictions (CC&Rs) attached to the subdivision (see Section 2.3.6).

2.3.1 Protected Areas

Prior to site planning and design of the Lāʻau Point project, an archaeological inventory was conducted for the property. Areas where groupings of archaeological and historic sites exist were denoted (totaling approximately 1,000 acres) and designated for the project as "Cultural Protection Zones" (see Figure 12). Access roads and the rural-residential lots have been planned to respect these Cultural Protection Zones and archaeological sites. An archaeological preserve (approximately 128 acres) will be created at Kamākaʻipō Gulch, with the area being donated to the Land Trust.

Natural resource areas at Lāʻau Point, such as streams, gulches, and floodways will be protected and maintained as open space. MPL will seek to expand the existing State Conservation District in the project area by approximately 254 acres from 180 acres to 434 acres (See Figure 1). The Molokaʻi Land Trust will have an ownership and management role in all Conservation District lands at Lāʻau Point. The Land Trust would solely own and manage the Kamākaʻipō Gulch (128 acres). The remaining Conservation District lands along the shoreline will be controlled jointly by Lāʻau Point homeowners and the Land Trust as shown in Figure 13. All decisions relating to this area: maintenance, subsistence protection, archaeological site protection, and resource management will be the shared responsibility between the Land Trust and the homeowners, as will be in the costs to achieve these goals.

The expanded Conservation District lands (total 434 acres) within the Lāʻau Point project area will be subject to an easement over 306 acres held by the Land Trust. Another 128 acres will be given in fee to the Land Trust, with guidelines for uses reflecting the importance of the area culturally, archaeologically, and for subsistence gathering. Additionally, the Land Trust will hold an open space easement on approximately 4,800 acres of the Lāʻau parcel.

Through the planning process for Lāʻau Point, it was determined that lot lines should be set back at least 250 feet from the designated shoreline or high water mark to create a coastal conservation zone. Using the current Conservation District boundary, which is approximately 150 to 200 feet inland from the shoreline, as a base, residential lot boundary lines for Lāʻau Point were determined to be at least 50 feet beyond the current Conservation District. In addition, boundaries for the makai lots fronting the proposed expanded Conservation District will have covenants requiring an additional 50-foot building setback. These specified setbacks result in

providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet.

The proposed expansion of the State Conservation District will further preserve the shoreline and other natural resource areas. This expansion of the Conservation District will re-designate the Conservation District boundary; however, lot lines and setbacks are based on the current (April 2006) Conservation District boundaries (Figure 4). The open corridors between the clusters of lots and mauka of the main subdivision access road will be designated as Open Space under County zoning regulations. This will serve to provide additional restrictions on development for those areas with State Rural District designation that are not intended for residential lots.

The mauka boundary of the Lāʻau Point community will be defined by a deer and livestock fence to minimize conflicts with adjacent subsistence hunting and pasture usage of the remainder of the parcel. The fence will also protect the open space and coastal conservation areas from degradation by livestock and deer. The HOA will maintain the fence.

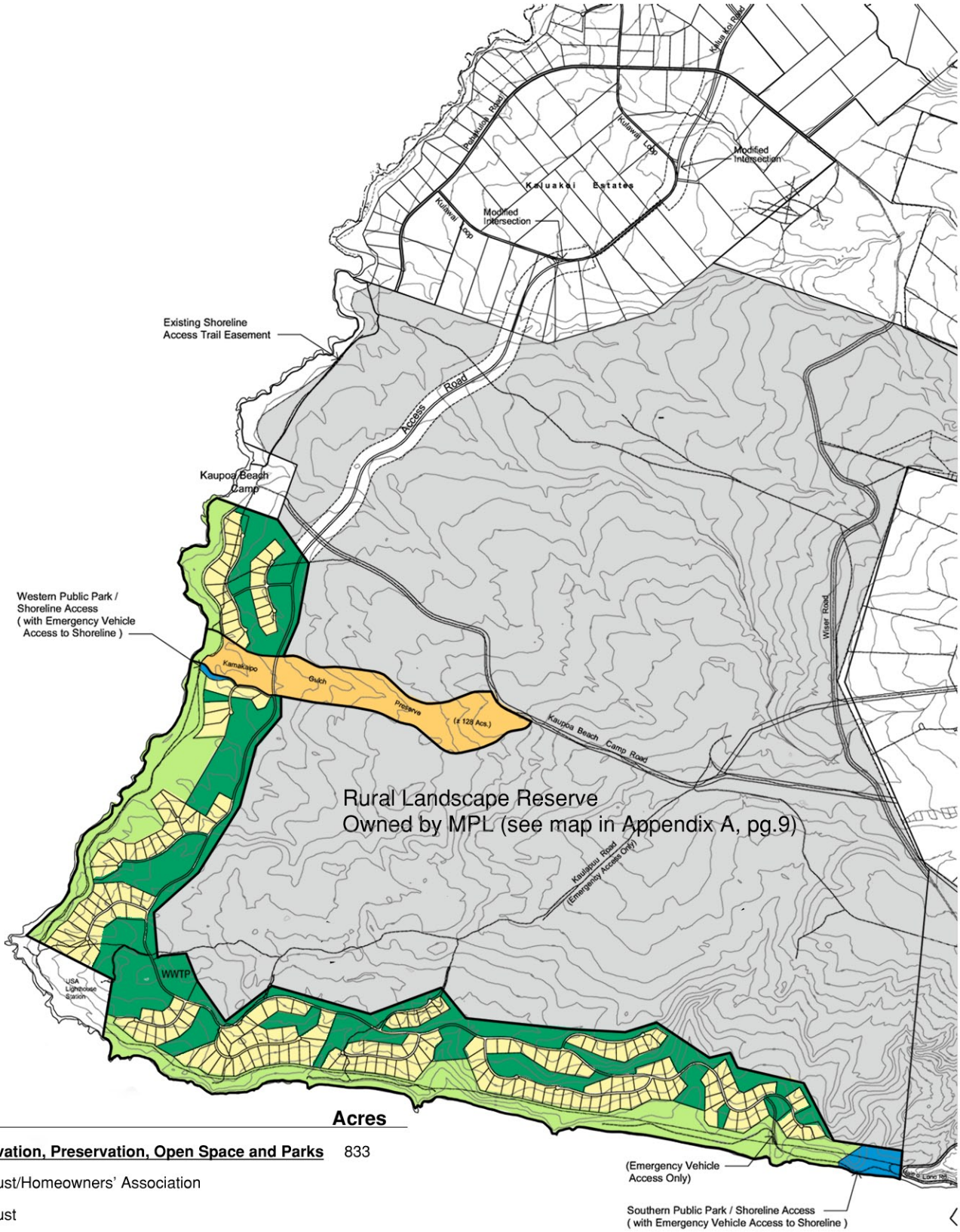
2.3.2 Petition Area

The majority of the Lāʻau Point site is within the Agricultural State Land Use District, but the coastline area is within the Conservation District (see Figure 4). MPL is seeking a SLUDBA to change approximately 850 acres from the Agricultural District to the Rural District, and allow the Lāʻau Point rural-residential subdivision. The following uses are proposed for the 850 acres of Agricultural District land to be re-districted to Rural District:

- 200 house lots (on 400 acres)
- Roadways (on approximately 46 acres)
- Infrastructure (on approximately 14 acres)
- Parks (on approximately 8 acres)
- Open space (on approximately 382 acres)

It should be emphasized that 382 acres or 45 percent of the total 850 acres of land being reclassified from Agricultural to Rural District is intended for open space use. The two public shoreline parks, a two-acre West park and 15-acre South park, will total 17 acres. When combined, the areas designated for conservation, open space, and park usage will total 653 acres or 59 percent of the total Petition Area.

The approximately nine acres proposed to be re-districted from the Conservation District to the Rural District will allow for the proposed park improvements for the proposed public shoreline park (on 15 acres) by Puʻu Hakina at the southeast end; another proposed public park (on two acres) will be located by Kamākaʻipō Gulch on the west end of the community, but that is included in the Agricultural to Rural re-districting previously mentioned. Public purpose uses, such as recreational facilities, are permitted in the Conservation District; however, MPL would first have to obtain a permit from the State Board of Land and Natural Resources in addition to the County permits for any park improvements. Re-districting the park areas to Rural would streamline the permit process requiring just the County to handle the permit processing for subsequent park improvements. After all park improvements are completed and land ownership transferred to either the County or Land Trust, consideration should be given to reverting the Rural designation back to the Conservation District if added management control is deemed necessary.



Legend	Acres
Conservation, Preservation, Open Space and Parks	833
Land Trust/Homeowners' Association	
Land Trust	
Homeowners' Association	
Public Park (County or Land Trust)	
House Lots and Infrastructure	
Private Homeowners (200 Lots)	400
Homeowner's Association Roads and WWTP	60
Offsite Road Corridor	139
Total Project Area	1,432
Project Area (Mauka Fence Line)	
Rural Landscape Reserve (MPL)	

Figure 13
Proposed Ownership and Management

Lā'au Point

ISLAND OF MOLOKA'I

Note: For planning purposes only.

To summarize, the MPL is requesting 850 acres be changed from Agricultural to Rural, 254 acres from Agricultural to Conservation, and 9 acres from Conservation to Rural. Therefore, the total petition area for the Lā‘au Point project is 1,113 acres.

2.3.3 Community Plan Amendment

The Moloka‘i Community Plan Land Use Map designates specific areas of the Lā‘au Point site as AG (Agricultural) and C (Conservation) (Figure 6). MPL is seeking a Community Plan Amendment to change the area of the proposed houselots from Agricultural (AG) to Rural (R) and the area of the proposed parks from Agricultural (AG) to Park (P). MPL submitted a Community Plan Amendment application to the Maui Planning Department on December 15, 2006.

2.3.4 County Change in Zoning

The Lā‘au Point site is designated Agricultural by the County of Maui (Figure 7). MPL will seek a Change in Zoning to change the County zoning of the project site from the County Agricultural zoning to the County Rural and Open Space zoning. MPL submitted a Change in Zoning application to the Maui Planning Department on December 15, 2006. The County of Maui does not zone land within the Conservation District.

2.3.5 Project Description

Lā‘au Point will comprise three main types of areas: rural-designated residential lots, open space buffer, and coastal conservation land. The rural-designated residential area within Lā‘au Point will consist of 200 lots, each approximately 1.5 to 2+ acres in size (see Figure 1). It is anticipated, and as outlined in Section 4.8.1 (Population) of this EIS, that only about 30 percent of the Lā‘au Point homeowners will be permanent residents, and the population of Lā‘au Point is expected to be somewhat older than the general population.

The open space buffer area, also designated as rural, will surround the residential lots. The coastal conservation land encompasses the existing and proposed expanded Conservation District boundary, which includes the coastline, gulches, and Cultural Protection Zones. The Lā‘au Point project will include rural-residential lots, an off-site access road corridor, on-site roadways, infrastructure such as a wastewater treatment facility, open space, cultural and environmental preservation zones, and beach park areas, which will total approximately 1,432 acres (Table 4).

Table 4. Lā‘au Point Community Land Use Summary

Land Use	Acreage
Rural-Residential House Lots	400
On-site Roadways	46
Infrastructure	14
Off-site Road Corridor	139
Coastal Conservation and Preservation (State Land Use Conservation District)	434
Open Space (State Land Use Rural District)	382
Public Parks	17
TOTAL	**1,432 acres**

Conceptual Landscape Plan – Landscaping will be restricted to appropriate native species that are drought-tolerant and suitable for coastal locations. The use of xeriscaping will reduce water use. The following is a list of possible native plants that would be appropriate for Lāʻau Point landscaping:

Trees

- Naio, false sandalwood *(Myoporum sandwicense)*
- Alaheʻe, ʻoheʻe, walaheʻe *(Canthium odoratum)*
- Kou *(Cordia subcordata)*
- Milo *(Thespesia populnea)*

Shrubs

- Maʻo, Hawaiian cotton *(Gossypium tomentosum)*
- Naupaka *(Scaevola sericea)*
- ʻAkia, beach solanum *(Solanum nelsonii)*
- Pohinahina *(Vitex rotundifolia)*
- ʻAʻaliʻi *(Dodonaea viscosa)*
- Maʻo hau hele, Rock's hibiscus *(Hibiscus calyphyllus)*
- Nehe *(Lipochaeta lavarum)*
- Kolomana *(Senna gaudichaudii)*

Groundcovers

- Paʻu o hiʻiaka *(Jacquemontia ovalifolia ssp. Sandwicensis)*
- Nehe *(Lipochaeta integrifolia)*
- ʻIlima *(Sifa fallax)*

Operations & Management – As discussed in Section 2.3.1, the Molokaʻi Land Trust will have a management role in all Conservation District land, with the possible exception of the two public parks (total of 17 acres), which could either be conveyed to Maui County Department of Parks and Recreation or held by the Land Trust. The Land Trust would solely own and manage the Kamākaʻipō Gulch (128 acres), and jointly own and manage the remaining 306 acres of Conservation District land with the Lāʻau Point HOA on a council. The HOA will own and manage the 382 acres of Agricultural District lands that will be reclassified to Rural and contain the common areas between lot clusters and the mauka buffer zone of the project area (see Figure 13).

There are no commercial businesses proposed for Lāʻau Point. Operations and management are primarily related to tasks associated with the community common areas' maintenance and upkeep, which would be administered through the Lāʻau Point HOA. The responsibility of the shoreline park maintenance and upkeep will be provided by the County Department of Parks & Recreation or the Land Trust, depending on ownership of the parks, and may include a live-in Resource Manager for the South Park. The Resource Manager will be responsible for community access and protection of the subsistence resources within the Lāʻau shoreline. MPL and the Land Trust believe that providing on-site accommodation and having a Resource Manager on-site full-time will add additional protection to the marine resources at Lāʻau Point. The management (land stewardship) of the coastal Conservation District areas would be administered jointly by

the Land Trust and HOA. Beyond this, Lāʻau Point does not propose any other uses that require employees.

Fees Charged to Residents and Visitors – The Lāʻau Point HOA fees have not been established yet. It is expected that Lāʻau Point's fees will be similar to the fees found in similar HOAs (plus future escalation). There are no uses envisioned within Lāʻau Point that would involve fees charged to visitors. The Land Trust and homeowners will jointly control and manage the expanded coastal Conservation District areas.

Access and Roadways – A new access road corridor will run north-south from Pōhakuloa Road to Kaupoa Beach Camp Road, connecting with Kaluakoʻi Road and Kulawai Loop. The Lāʻau Point community will be accessed via this access road corridor extension from Kaluakoʻi Road at the western boundary. The community will feature curvilinear roadways designed to fit into the terrain. All roadways within the community will be privately-owned and built to County of Maui standards as specified in Chapter 18.16 of the Maui County Code. Adherence to the standards includes providing the required street width to allow for adequate Fire Department and emergency vehicle access.

The two previously mentioned public parks, one by Kamākaʻipō Gulch on the west end of the community, and the other by Puʻu Hakina at the southeast end will provide management centers and public access to the shoreline (see Sections 4.3 and 4.11.5).

Parking – Chapter 19.36 (Off Street Parking and Loading) of the Maui County Code states that single-family dwellings require two parking spaces for each dwelling unit. All homes at Lāʻau Point will conform to the County Code. It is expected that the residential lots (1.5 to 2 acres) are sufficient in size to accommodate guest parking on-site within private property.

The shoreline parks will include free public parking. The number of parking stalls will be in compliance with County requirements and based on community input.

2.3.6 Covenants

The Conditions, Covenants and Restrictions (CC&Rs) placed on the property provide that every person whose name is on the title must commit to undergo a certain amount of education about the Molokaʻi community and its desires and aspirations with kupuna and the Maunaloa community. This will be conducted under the guidance of the Molokaʻi Land Trust. The CC&Rs have been strengthened to protect the environment and resources at Lāʻau Point. Enforcement and substantial penalties will be put in place to ensure that the covenants are respected and upheld. A draft of the proposed CC&Rs is provided as Appendix E.

The Land Trust is a signatory to the CC&Rs and is given specific enforcement rights under the terms of the document. Certain covenants and restrictions in the CC&Rs are derived from the provisions of the *Community-Based Master Land Use Plan for Molokai Ranch (Master Plan)* that represent the Land Trust and community concerns on protection of subsistence and cultural practices and the protection of cultural/archaeological and environmental resources. These are designated "Master Plan Covenants" or "Master Plan Perpetual Covenants" under the terms of the CC&Rs. The CC&Rs provide that the Land Trust may prosecute breaches of the Master Plan Covenants and take legal action to ensure their enforcement.

The Moloka‘i Land Trust is satisfied that the CC&Rs are enforceable and adequate since the CC&Rs are: 1) binding on the lot owners; and 2) the Land Trust, as a party to the CC&Rs, has specific and secure enforcement rights.

The CC&Rs will be monitored and enforced by the Board of Directors (the Board) of the Lā‘au Point Homeowners’ Association (HOA), affected lot owners, and, where the community has an interest as set forth in the *Master Plan* (designated as Master Plan Covenants and Master Plan Perpetual Covenants), the Moloka‘i Land Trust as a signatory and Molokai Properties Limited as the Declarant under the CC&Rs. Failure to comply with the terms of the CC&Rs would expose the non complying owner to sanctions which include monetary fines, suspending an owner’s right to vote, suspending services provided by the HOA, the HOA or the Land Trust exercising self-help or taking action to abate any violation, removal of the non compliant structure or improvement, precluding contractors, agents, or employees of any owner who fails to comply with the terms of the CC&Rs from undertaking the activity.

The CC&Rs for any development contain the conditions and restrictions that are placed on the property by the developer which must be adhered to by subsequent owners of the property. In the case of the Lā‘au Point development, these conditions and restrictions were developed by the Land Use Committee of EC Project #47. To implement the Committee’s vision, the CC&Rs are designed to meet the overall goals of:

- Protection of subsistence gathering in the expanded Conservation District.
- Reduction of potential social conflicts between new homeowners and existing community members.
- Protection of cultural/archeological and environmental resources.

The Land Trust has taken over the role from the Moloka‘i Enterprise Community (EC) of ensuring the implementation of the provisions set forth in the *Master Plan*. As such, the Land Trust is a party and additional signatory to the “Lā‘au Point Declaration of Covenants” to ensure that the covenant provisions are adhered to. As a party to the CC&Rs, the Land Trust will be able, in the unlikely event that breaches occur, to enforce the covenants (See Section 7.8 (c) of CC&Rs).

There has been criticism on Moloka‘i that CC&Rs have provisions that either allow for changes to key provisions after a certain period of time has elapsed or that such key provisions expire at a certain future date. As has been the case in another West Moloka‘i subdivision’s covenants. Pāpōhaku’s covenants now allow further subdivision of properties (subject to regulatory approvals) because original prohibitions on further subdivision contained in the CC&Rs have expired.

MPL is adamant this will not be the case with the Lā‘au Point development. To ensure that at anytime in the future a majority of homeowners cannot attempt to rescind key provisions, covenants relating to the *Master Plan* will be designated as such (referred to in the CC&Rs as “Master Plan Covenants” and “Master Plan Perpetual Covenants”) and, unlike other provisions, are specifically prohibited from being changed, deleted, or modified by the HOA or the Board (See Article 19 of CC&Rs). Future homeowners will sign documents agreeing to adhere to the CC&Rs when they purchase lots at Lā‘au Point. Adherence to the CC&Rs is a condition of ownership of the property.

The CC&Rs provide that there are three classes of covenants. Some provisions of CC&Rs will be changeable by a 75 percent majority vote of homeowners. These are operational in nature or concern and involve the management of the HOA common areas. They bear no relationship to the covenants that are designed to implement the vision of the *Master Plan*.

Covenants that relate to the *Master Plan* which concern restrictions that concern the community interests but may be subject to technological improvements or modification to ensure better adherence to the *Master Plan* principles, are deemed "Master Plan Covenants" and are changeable only with the consent of the Land Trust (See Sections 2.31 and 1.4(c) of CC&Rs). These include things that may become obsolete as technology changes such as the requirement for Solar Power (see Exhibit G-1 of CC&Rs) or where circumstances may change (such as the General Energy Standards).

Covenants that are directly related to the Cultural and Social efforts in the *Master Plan* and may not be changed in order to protect the interest of the community are deemed "Master Plan Perpetual Covenants" (see Article 19 and Section 2.32 of CC&Rs). These include such things as key building restrictions and limitations on lot size and building heights, setback requirements, the prohibition on subdivision, and the right of the Land Trust to enforce the CC&Rs.

There have been additions to the Master Plan Perpetual Covenants and Master Plan Covenants based on input from the community at Cultural Impact Assessment review meetings, the receipt of the Social Impact Assessment report, and subsequent comment letters from community members and groups, and County, State, and Federal government agencies.

Key Master Plan Perpetual Covenants include:

- **Archeological site protection.** Protective measures and the rules on handling of archaeological and cultural sites requiring non-disturbance and reporting to authorities (See Section 5.10 of CC&Rs).
- **Setback restrictions.** Setback requirements to ensure that no home will be at least 50 feet mauka of the Conservation Zone (See Section 5.12 of CC&Rs).
- **No subdivision.** Further subdivision of lots, even if allowable in the future by County ordinance or the Molokaʻi Planning Commission is prohibited and the use is limited tio residential (See Section 6.1 of CC&Rs).
- **Deer fence.** The HOA will be responsible for maintaining the deer and livestock fence along the mauka boundary of the project area (See Section 7.6 (a)(v) of CC&Rs).
- **Open space retention.** Maintenance of the Common Areas as open space (See Section 7.6(c) of CC&Rs).
- **Enforcement.** The Land Trusts right to enforce Master Plan Covenants and Master Plan Perpetual Covenants (See Section 7.8(c) of CC&Rs).
- **CDC payments.** Payment of contributions to the CDC on Transfer (See Section 7.24 (c) of CC&Rs).
- **Limit on number of lots.** Prohibitions on increasing the number of residential lots in the subdivision (See Section 8.5 of CC&Rs).
- **Rules for amendments of covenants.** Rules regarding the changing of Master Plan Covenants by the Land Trust where allowed (See Section 19.3 of CC&Rs).
- **Building code.** Restriction on building height; maximum height of 25 feet and one-story (See Exhibit G-1 to CC&Rs).

- **Restricted building coverage.** The maximum developable area of a home, or a home and ‘ohana housing unit if allowed by the County, will be 5,000 sq ft. Further details are set out on Page 27 of the *Master Plan* (Appendix A) and Exhibit G-1 of the CC&Rs.
- **Soil erosion.** No building allowed on slopes greater than 50 percent. Manage open space common areas to reduce/eliminate soil erosion by restoring the vegetative cover. Deer and livestock fence will be placed at the rear of the subdivision (See Exhibit G-1 to CC&RS).
- **Land Trust easements.** The expanded State Conservation District of 434 acres, flood areas, archaeological sites, etc., will be subject to an easement from the Land Trust. The Land Trust will have ex-officio representation on the HOA and both the Land Trust and HOA will share the responsibility and cost to care for the easement area by equal representation on a “Council” that will provide day-to-day management of the easement lands. The Council will have representation from qualified subsistence gatherers, those with knowledge of cultural site protection and from Maunaloa. The Council will be guided by a Shoreline Access and Management Plan (Appendix B) (Also see Section 10.13 of CC&Rs).
- **Rentals.** Renting properties to third parties will be prohibited (See Section 6.1 of CC&Rs).
- **View plane.** The final subdivision map will designate proposed building sites to ensure the view planes of each lot and that the house to be built will not be unreasonably obtrusive when viewed from the ocean (see Section 11(d) of Exhibit G-1 to the CC&Rs).
- **Restriction to prevent a gated community.** Gates will be prohibited across roads and access roads. No street-facing walls or barriers may be higher than four feet (See Section 7.14(b) of CC&Rs).
- **Fencing.** All lots with frontage to the ocean will be required to have one of four or five types of fences (set out in the Design Guidelines) that create a physical separation between the lots and the Open Space and Expanded Conservation District areas that are being protected for subsistence gathering. Homeowners will be allowed gates that access these areas (See Exhibit G-1 of CC&Rs).
- **Subsistence access.** Perpetual right to subsistence gathering activities at Lā‘au Point (see Section 2.3.7 below) will be set forth within the Easement document covering the expanded Conservation District (See Appendix C and Section 10.13 of CC&Rs).
- **Subsistence hunting.** Buyers must accept that hunting occurs in the broader surrounding area, mauka of the subdivision behind a deer and livestock fence (See Section 10.13 of CC&Rs).
- **Master Plan Perpetual Covenants.** Master Plan Perpetual Covenants cannot ever be changed (See Article 19 of CC&Rs).

Key Master Plan Covenants include:

- **Pesticide/Fertilizer restriction.** Pesticide use will be prohibited. Only organic fertilizers will be allowed, although this has not been finalized as some concern was raised concerning potential damage to fisheries from organic fertilizers as well (See Section 6.4 of CC&Rs).
- **Lā‘au Point community education.** Every owner must commit to undergo a certain amount of education about the Moloka‘i community and its desires and aspirations (See Section 6.5 of CC&Rs).

- **Design guidelines.** Covenants that specify color, size, height restrictions, landscaping, energy efficiency, and lighting of houses and lots (See Exhibit G-1 to CC&Rs).
- **Water Usage.** Restrictions on potable and non-potable water use by lot owners (See Exhibit G-1 to CC&Rs).
- **Buildable area.** Allow disturbance of no more than 30 percent of the lot. (2-acre Lot = +/-26,000 s.f. or about 1/2 acre). Require a level of maintenance of lot area to reduce fire hazard (remove dead wood). Building must be set back at least 50 feet inland from oceanfront property lines (See Exhibit G-1 of CC&Rs).
- **Green architecture.** Require “green” architecture that incorporates recycled materials, energy efficient equipment, natural ventilation, solar and photovoltaic systems, etc. Green architecture may be defined in the Lā‘au Point Design Guidelines as design standards, which preserve as far as practicable, the characteristics of each lot and the project as a whole, and strive to minimize non-renewable energy requirements, water use, and the impact of the project on the natural environment (See Exhibit G-1 of CC&Rs).
- **General energy.** All energy systems shall be designed and constructed to meet United States Environmental Protection Agency (EPA) conservation standards. An example of an EPA conservation standard is the ENERGY STAR program, which was established in 1992 for energy-efficient computers. Now a joint program under the EPA and the U.S. Department of Energy, the ENERGY STAR program has grown to encompass more than 35 energy-efficient product categories for homes and workplace. Homes that earn the ENERGY STAR designation must meet guidelines for energy efficiency set by the EPA. ENERGY STAR qualified homes can include a variety of energy-efficient features, such as effective insulation, high performance windows, tight construction and ducts, efficient heating and cooling equipment, and ENERGY STAR qualified lighting and appliances. These EPA standards for the ENERGY STAR program can be found at the following website: http://www.energystar.gov. For example, all dwellings will be required to have solar panels (or comparable technology) sized to meet at least 80 percent of the hot water demand of each home. Other energy-efficient measures will be required in the Lā‘au Point Design Guidelines (See Exhibit G-1 of CC&Rs).
- **Solar power.** Solar panels (or comparable technology) sized to meet at least 80 percent of the hot water demand of each home and to supplement electric power for appliances will be required (See Exhibit G-1 of CC&Rs).
- **Lighting.** Exterior lighting must be shielded from adjacent properties and the ocean (See Exhibit G-1 of CC&Rs).
- **Landscaping and irrigation.** Common area irrigation systems will utilize re-use water (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Drinking water will not be used for irrigation of any landscaped areas. Only drip systems will be permitted for both common area and residential landscaping. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use (See Exhibit G-1 of CC&Rs).
- **Storage tank.** All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs (See Exhibit G-1 of CC&Rs).
- **Water covenants.** Requirement of a dual-water system split into safe drinking and non-drinking water; safe drinking water will be limited to 500-600 gpd, or 96,000 gallons per day for potable water in the entire subdivision. Homes will be required to use double flush toilets and specially-designed showerheads for water conservation (See Exhibit G-1 of CC&Rs).

- **Fire Protection.** Each dwelling will be required to install a fire protection or sprinkler system when a house is constructed, until such time that a fire station is built on the West End of the island (See Exhibit G-1 of CC&Rs).
- **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 (See Exhibit G-1 of CC&Rs).
- **Master Plan Covenants.** The Master Plan Covenants in the CC&Rs cannot be changed without Land Trust permission (See Section 19.3 of CC&Rs).

Section 7.8(c) of the CC&Rs provide that if the HOA chooses not to prosecute a breach of a Master Plan Covenant, the Land Trust may, after proper notice and after giving the HOA the opportunity to act, take legal and direct action against the homeowner and/or the HOA to ensure that the Master Plan Covenants are not violated.

The by-laws of the HOA specify a nine-member board of directors, including two Land Trust members. The CC&Rs specify that the Land Trust will have two special voting seats on the board of directors of the HOA. On non-*Master Plan* issues the Land Trust representatives will not have a vote. On *Master Plan* issues they will be voting Directors (See Exhibit C to CC&Rs).

Where the Land Trust members will assist the directors is in the interface of homeowners with subsistence gatherers, cultural practitioners, and community members who frequent the expanded 434-acre Conservation District adjacent to Puʻu Hakina and Kamākaʻipō (Lāʻau) shoreline.

As well as HOA Board meetings, the homeowners' representatives and Land Trustee share membership of a "Council" that manages and implements the provisions of the Shoreline Access Management Plan (see Section 4.3 and Appendix B for further discussion).

The Land Trust and the homeowners therefore have at least two opportunities to work together; on the HOA Board and in the management of the expanded Conservation District lands under the SAMP.

The State Office of Environmental Quality Control (OEQC) recommended that the US Green Building Council's Leadership in Energy and Environmental Design (LEED) silver standard be applied to the project. The LEED Green Building Rating System is a nationally accepted benchmark for the design, construction, and operation of sustainable buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

While creating the CC&Rs, the LEED certification process was reviewed. Currently, the LEED certification process mainly deals with certifying buildings, not lot subdivisions. The Lāʻau Point project will create 200 residential lots for sale; buyers will build their own homes. Therefore, Lāʻau Point will not go through a formal LEED certification process. However, the CC&Rs and subsequent design guidelines will strive for the same goals as LEED.

2.3.7 Access for Subsistence Gathering

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.

An agreement between MPL and the Moloka‘i EC will ensure that the Lā‘au Point project promotes the importance of maintaining subsistence activities in the Conservation District areas and other protected resource areas. The work begun by the Moloka‘i EC has now been taken over by the Moloka‘i Land Trust, the organization that will enforce aspects of the *Master Plan*. The Land Trust will enforce agreements made between MPL and the EC. Because of the Land Trust role in the *Master Plan* implementation, public funding or disbandment of the EC will not impact any agreements; the agreements will be completed with the Land Trust. Page 59 and Appendix 7 of the *Master Plan* (included as Appendix A of this EIS) shows designated subsistence fishing zones.

Protection of the shoreline for subsistence gathering is of great importance to the people of Moloka‘i. Therefore, perpetual right to subsistence gathering will be noted on the land titles of the areas to be preserved and recorded with the Bureau of Conveyances. Protections to subsistence gathering will be specified in the Lā‘au Point CC&Rs. The CC&Rs will also require adherence to the Shoreline Access Management Plan (SAMP) which provides that a Council will govern the expanded conservation zone and establish policies that permit subsistence gathering and cultural practices, as well as allow the hiring of resource managers to protect the subsistence lifestyle (see Appendix B).

As recommended in the *Master Plan*, to preserve inshore fishing/subsistence resources, a subsistence fishing zone in the coastal waters along all of the Ranch’s coastline property will be sought. This means that from one quarter-mile out from the shoreline (north and west shore) and from the beach to the reef edge/breaker line (south shore), only Moloka‘i residents will be able to fish for subsistence, effectively banning off-island boats from fishing in these in-shore areas.

Special Legislation is not required to establish the subsistence fishing zone. The 1994 Hawai‘i State Legislature created a process for designating community-based subsistence fishing areas (Act 271/94). The guidelines for a community-based subsistence fishing management area in the Master Plan would need to be developed into a management plan and draft administrative rules for adoption by the Department of Land and Natural Resources (DLNR) Division of Aquatic Resources (DAR) working in coordination with the landowners, the community and the subsistence fishers and gatherers. The administrative rules would need to undergo a public hearing process on Moloka‘i, O‘ahu and other neighbor islands. Overall, the process would take from 18 months to 2 years. The development of guidelines and policies for such a management area within the *Master Plan* is the first step toward its establishment.

Once the community-based subsistence fishing management area is established through the DAR rule-making process the rules will be enforced by DLNR in conjunction with the shoreline resource managers who will be hired jointly by the homeowners and the Moloka‘i Land Trust.

To protect the cultural and natural resources at Lā‘au Point, access to the area will be carefully managed. Vehicular parking will be provided at both ends of the residential community in the

planned public parks. Access to the Lā‘au Point shoreline, however, will be restricted to foot only between the two planned shoreline public parks to conserve resources, with an acknowledgement of Native Hawaiian gathering rights as defined by law for subsistence purposes, in a designated subsistence management area. Strict access measures, such as a shoreline access education process, could be put in place to ensure that resources for subsistence gathering are not depleted.

The proposed access measures detailed above, and the rationale behind seeking a variance to the County ordinance requiring public shoreline access every 1,500 feet within a subdivision, is further discussed in Section 4.3 (Trails and Access) and Section 7.8.1 (Alternative Access to the Lā‘au Area) of this EIS.

In addition, approximately 40,000 acres of Ranch land, previously reserved for commercial operations, will be opened up for subsistence hunters. These include all of the lands to be donated to the Moloka‘i Land Trust, the current 4,000 acres of preserves, and the land designated under the *Master Plan* for Open Space/Protective Easements.

2.4 CONTINUING COMMUNITY ACTIVITY AND INVOLVEMENT

On November 1, 2005, the EC Governance Board of Directors voted to approve the *Master Plan* based on the recommendation from the EC Land Use Committee. The 13-member board voted 10 in favor, 2 opposed (1 Director did not vote).

Since the EC Land Use Committee and Governance Board of Director’s approval of the *Master Plan*, MPL has moved forward with implementing the actions proposed in the *Master Plan.* Since the Lā‘au Point EIS process began with the distribution of the EIS Preparation Notice, public community meetings have been held to help obtain feedback for the cultural assessment, social impact study, and water plans. In addition, MPL met with individuals that requested to be a consulted party to the EIS on August 25, 2006.

In addition to community meetings, the following activities have occurred to inform the Moloka‘i community and others about the *Master Plan*:

- A 24-minute DVD was produced featuring a cross-section of Moloka‘i residents and other supporters of the *Master Plan*. The video began airing on both O‘ahu and Maui County public television stations in November 2006 and is will continue to be shown in 2007.
- The DVD will also be shown at selected public forums throughout the community and plans are underway to have each residential household on Moloka‘i receive a copy of DVD.
- A brochure explaining the *Master Plan* was finalized and distributed to more than 3,200 Moloka‘i households in December 2006.
- Radio spots about the *Master Plan* will begin airing on selected radio stations in December 2006.
- Supporters of the *Master Plan* are enrolled in classes provide by AKAKU Public Access Television to learn skills and techniques for producing videos that can be used to further educate television audiences about the *Master Plan*.
- A website was developed by volunteers that support the *Master Plan* and is being updated with information on a regular basis.

- Copies of the *Master Plan* have been printed and distributed to MPL employees with follow-up informational sessions and site tours being led by the employees. MPL employees, their families, and other interested community residents have participated in these tours and sessions.
- Copies of the *Master Plan* have been distributed to individuals in the community and will continue to be shared with interested persons upon requests.
- A series of articles about land trusts was prepared and submitted to Moloka‘i newspapers by trustees of the Moloka‘i Land Trust to inform the community about land trusts.
- Paid advertisements about the *Master Plan* were developed by volunteer MPL employees and the OHA trustee for Moloka‘i. The ads were printed in the local Moloka‘i newspapers and the OHA trustee’s ad was printed in the Moloka‘i papers in addition to being distributed statewide through OHA’s newspaper.
- Copies of the DVD, interviews of *Master Plan* supporters, press releases, and letters to editors were submitted to newspapers on Moloka‘i, Maui, and O‘ahu, in addition to television news outlets on O‘ahu.
- Informational sessions have been held with business organizations such as the Moloka‘i Chamber of Commerce, and plans are underway to educate other community groups and organizations as well as students and faculty at the community college, and public and private schools on island.
- Educational rallies that are organized by MPL employees and *Master Plan* supporters are being implemented during the months of December 2006 through June 2007.
- Volunteer MPL employees have constructed and distributed educational signs that are seen in various locations on Moloka‘i indicating support for the *Master Plan*.

During the previous Draft EIS comment period, numerous community members sought information concerning the *Community-Based Master Land Use Plan for Molokai Ranch* (Master Plan) process, its validity, and the status of other aspects of the Master Plan implementation. Questions also related to whether MPL had been honest in its intentions at the commencement of the Master Plan process.

In addition, the Social Impact Assessment Report recommended that MPL conduct further community outreach regarding the *Master Plan*, since it appeared that many island residents were unaware of the *Master Plan*’s provisions; many were aware of the Lā‘au development more than any other aspect of the entire *Master Plan*’s benefits for the community. These important issues are discussed below:

2.4.1 MPL’s Intentions at the Commencement of the Planning Process

At the commencement of EC Project #47 “Moloka‘i Sustainable development,” the Conservation Fund conducted a two-day seminar on likely outcomes of the planning process and made recommendations as to the process to be followed.

This seminar, attended by community leaders, and many of the current opponents to the *Master Plan* including DeGray Vanderbilt, Walter Ritte, Glenn Teves, and others, took place on January 28 and January 29, 2003 at the OHA/DHHL conference room at the Kulana ‘Ōiwi center in Kaunakakai.

The EC had been adamant that MPL outline its intentions at that meeting. MPL’s CEO, Peter Nicholas, prepared a written speech detailing what MPL needed from the process and what it hoped the community could gain. That speech, which is attached as Appendix F sets out its vision for land protection, and its needs for a future development to sustain its on-going activities and curb its losses.

It has been asserted that Lā‘au Point was brought up only at the end of the community planning process. Page 2 of the speech clearly indicates the contrary, as it states: “Economically, we need some development at Lā‘au Point, because the Kaluako‘i Hotel and Golf Course will almost certainly lose money for many years until a marketing campaign kicks in. We need a larger financial engine than just the hotel and the golf course.”

Subsequent to that speech, there was only one question concerning its Highland Golf Course option; an option that was subsequently discarded at the wishes of the Cultural Committee.

MPL believes it was always honest in its intentions and outlined all its proposals at the commencement of the process.

2.4.2 Validity of the *Master Plan* process

MPL believes in the validity of the community-based process, which resulted in the creation of the *Master Plan*.

As previously discussed in Section 2.1.6, between September 2003 and September 2005, MPL joined with community participants to discuss a community-based master land use plan for Molokai Ranch’s lands in an EC-sponsored process (EC Project #47). The EC was the appropriate organization with which to partner in this planning exercise; it was an elected 501(a)(3) non-profit organization charged with the island’s sustainable development future options. The EC ensured all meetings were open to the public, many being advertised extensively. Most committee meetings were shown on Akaku community television, which is broadcast on Moloka‘i.

Despite comments to the contrary, MPL did not control the planning process; MPL was a participant. MPL participated in all committees, and later in the Land Use Committee. MPL answered all questions put to it during the process regarding the Lā‘au Point development, including the presentation of shoreline setback studies, information concerning its operational financial losses, the funding it needed to re-open the Kaluako‘i Hotel, and the many alternatives to Lā‘au Point, which are further analyzed in Section 7.0 of this EIS.

Questions have been raised concerning the members of the Land Use Committee and those elected members of the EC who were MPL employees and who voted for the acceptance of the *Master Plan*. MPL acknowledges that 3 of the 29 members of the Land Use Committee were MPL employees. However, if MPL employees had abstained from voting, a majority of the remaining members would still have passed the *Master Plan*.

2.4.3 Further *Master Plan* Outreach

To ensure adequate information was supplied and feedback from the community received on the *Master Plan* and this LUC application, MPL currently employs two staff full-time who are responsible for community relations, outreach, and education concerning the *Master Plan*.

MPL has also distributed an information sheet and DVD on the *Master Plan* to all households on Molokaʻi. MPL staff responds to letters to the local and national media, provides accurate information on a regular basis, and continues to attend outreach meetings with community groups, island, County, State, and Federal leaders.

A major rally outlining the plans for the future of the Kaluakoʻi Hotel and Golf Course was held in late 2006 and more large group gatherings are planned.

2.4.4 Other *Master Plan* Implementation

While there has been a necessary concentration by MPL on preparing information for the Land Use Commission petition, other aspects of the *Master Plan* implementation have been underway.

Since December 2006, the following initiatives of the *Master Plan* have been implemented:

- **First Lands Donation.** The 1,600-acre Mokio parcel is on track for gifting to the Molokaʻi Land Trust in early 2008, following an extensive due diligence process by the Land Trust and the preparation of a cultural and environmental inventory and an important access and management plan for the area.
- **Land Trust/MPL agreement on *Master Plan* implementation.** This agreement, an extensive and complicated document, is being drafted and should be finalized by November 2007.
- **Kaluakoʻi Hotel refurbishment.** MPL in the process of devceloping an SMA application for submittal with the Maui County Planning Department and awaits a hearing date.
- **Puʻu Hakina & Kamākaʻipō Shoreline Access Management Plan (SAMP).** This document which spells out the management criteria for the expanded Conservation District has been approved by the Land Trust and is attached as Appendix B.
- **Affordable Housing.** As a forerunner to future affordable housing partnerships with the CDC, a trial 10-lot affordable housing project is underway on MPL subdivided lots in Maunaloa. MPL and a developer will build these houses for a total sales price not exceeding $170,000 for the land and buildings. Completion is expected in early 2008.
- **Rural Landscape Reserve and Agricultural Easements.** Documents relating to the easement provisions on the Rural Landscape Reserve lands (10,560 acres) and land protected for agriculture (14,390 acres) are in preparation and will be completed early in 2008 for ratification by the Molokaʻi Land Trust.
- **Protection of Subsistence Resources and Access Issues.** A major initiative under the *Master Plan* calls for improved access for the community to all of MPL's property for subsistence fishing and hunting. MPL employees and Maunaloa residents have been working closely with the Land Trust on preparatory plans, in particular on access to the Mokio donated parcel and with the protected areas within the Lāʻau development.

2.5 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS

Development and sales of Lā‘au Point are projected to be completed within 15 years from construction commencement. Within this total time and before construction, permitting and entitlement processing is expected to take approximately two years. Construction of the infrastructure and finished lots is estimated to take two more years, with sales of all lots completed by 2012, or if there are permitting delays, by 2014. Residential homes are anticipated to begin construction in 2012 with full project absorption through to 2023.

The estimated order of magnitude costs for the development of onsite and offsite infrastructure, final subdivision layout, lot grading and finishing, and general administrative costs during construction is expected to be approximately $88 million (see Table 5 below). These costs to develop Lā‘au Point are preliminary and do not include taxes. Development costs will be better defined in the future following detailed site engineering prior to construction.

Table 5. Development Timetable and Preliminary Costs

Development	Completion Range	Costs
Infrastructure and Development	2009 – 20011	$17,730,000
Amenities	2010 - 2011	$2,350,000
Onsite (roadways, housepads, water systems, etc.)	2009 - 2014	$39,234,000
Design & Contingencies, Other Costs	2009 - 2014	$12,683,000
Maintenance, Operations, and Management	20010 - 2017	$16,153,000
Total Project Development Costs	**-**	**$88,150,000**

3.0 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

3.1 CLIMATE

Like all of Hawaiʻi's islands, Molokaʻi has an array of micro-climates: tropical rainforest, dry desert, steep green valleys, and rolling plains. Windward areas, on the east and north sides of the island, receive the most rain. On the south and west sides, drier conditions prevail. Lāʻau Point, located in Southwest Molokaʻi, is characterized by dry conditions.

The climate of the Lāʻau Point area is affected by its near coastal situation and by nearby mountains. Winds are variable but are often trade winds from the north or northeast. Wind speeds vary between 5 and 15 miles per hour.

Temperatures on Molokaʻi average about 75° F. In the winter (December through March), nighttime temperatures may drop to the lower 60s and rainfall is more likely. Temperatures in the spring, summer, and fall are very similar, with warm days (up to 85º F) cooled by trade winds and evenings in the mid to lower 70s.

As one of the driest areas on the island, the Lāʻau Point area has very little rainfall. Average annual rainfall is less than 15 inches.

3.2 GEOLOGY AND TOPOGRAPHY

Molokaʻi was formed by three separate volcanoes, as evidenced by the island's environmental diversity compressed within its small land area. Molokaʻi can be divided into three major sections: East Molokaʻi, the Central Hoʻolehua plain, and West Molokaʻi.

The mountains of East Molokaʻi are over 1.8 million years old and are dominated by extremely steep sea cliffs that rise over 3,000 feet on the north coast. The Kalaupapa Peninsula, located on the north-central coast, remains isolated from the rest of Molokaʻi because of steep cliffs that rise to 1,600 feet that are negotiable only on foot or by mule (Juvik and Juvik 1998).

West Molokaʻi, where Lāʻau Point is located, was formed by a volcanic dome that is 1.9 million years old and 1,381 feet high. Molokaʻi's south shore features Hawaiʻi's most extensive coastal reef system, with offshore reefs stretching over 14,000 acres.

The topography of the Lāʻau Point project site ranges from 0 feet mean sea level (msl) at the shoreline to approximately 200 feet above msl in the mauka areas. The project site generally slopes in a mauka to makai direction. The cross slopes along the westerly strip of land between Kaluakoʻi and Lāʻau Point varies between 3 to 7 percent, whereas the lands along the southerly boundary toward Puʻu Hakina is a bit steeper with cross slopes ranging between 7 and 15 percent. Steeper slopes can be found in isolated areas in between.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Impacts to the topography of the site will be caused by alterations, such as grading, to accommodate roads at Lā‘au Point. To the extent possible, improvements will conform to the contours of the land, limiting the need for extensive grading of the site.

No structures will be built in the gulches, except for necessary drainage retention and erosion abatement structures in roadways that cross gulches. Further information on drainage plans for Lā‘au Point is provided in Section 4.10.1.

Opening up the Lā‘au parcel to hunting and constructing a deer and livestock fence will also help control erosion by keeping wild animals from denuding the landscape. Fencing out animals helps prevent erosion, water quality degradation from run-off, protect threatened and endangered plants, which in turn reduces soil compaction and maintains soil productivity. Fencing is an applicable biocontrol measure where existing vegetation, aesthetic values, desired forest reproduction, and recreation are damaged by these animals.

Appropriate engineering, design, and construction measures will be undertaken to minimize potential erosion due to grading of soils during construction. As such, significant geological impacts are not expected. Further information on soils and grading is provided in the Section 3.3 below.

3.3 SOILS

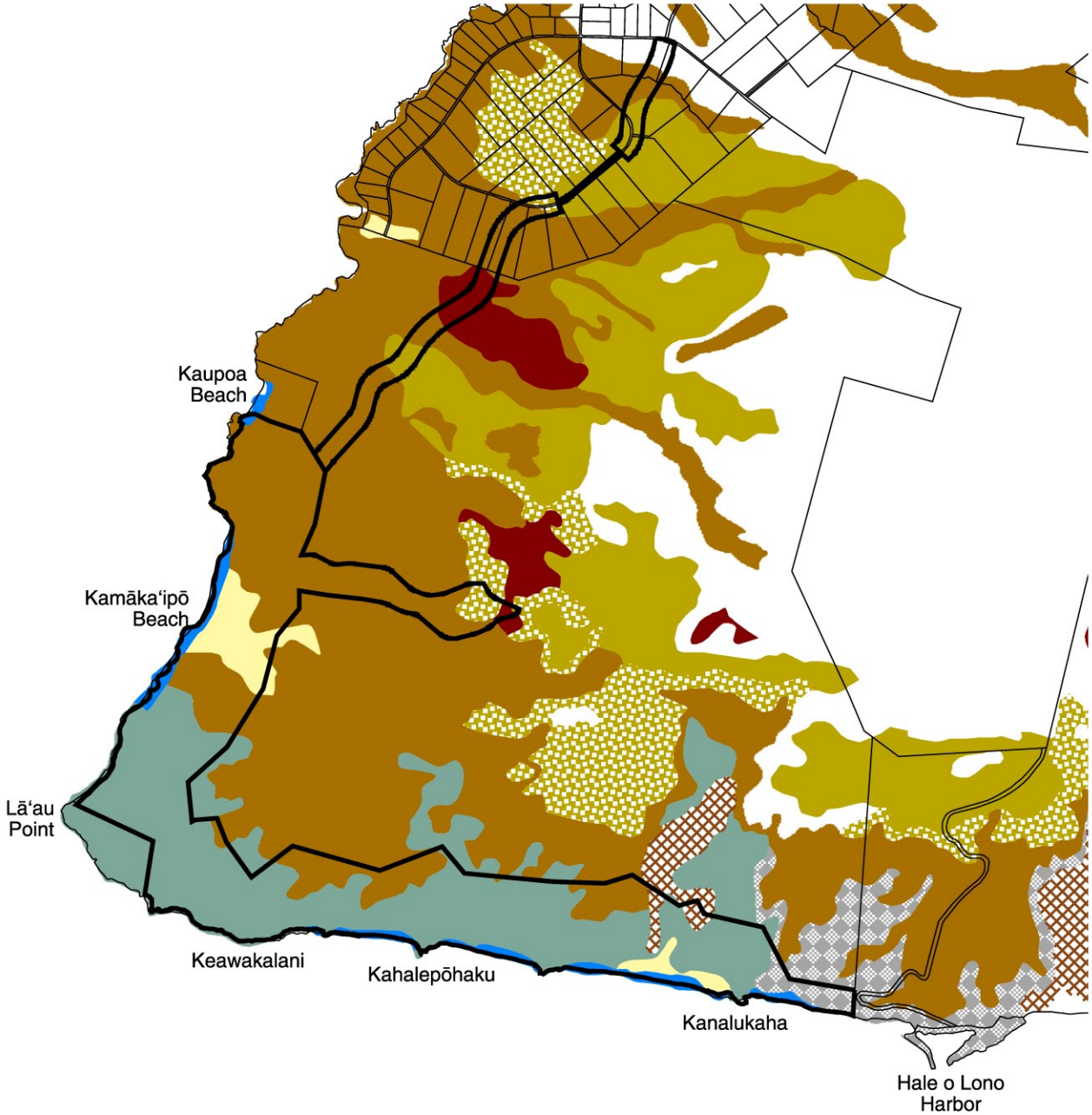
There are three soil suitability studies prepared for lands in Hawai‘i whose principal focus has been to describe the physical attributes of land and the relative productivity of different land types for agricultural production. These are: 1) the U.S. Department of Agriculture Natural Resource Conservation Services (NRCS) Soil Survey; 2) the University of Hawai‘i Land Study Bureau Detailed Land Classification; and 3) the State Department of Agriculture’s Agricultural Lands of Importance to the State of Hawai‘i (ALISH) system.

3.3.1 NRCS Soil Survey

The *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai* (NRCS 1972) classifies the soils of the Lā‘au Point site as Kapuhikani Extremely Stony Clay, Very Stony Land, Rock Land, Beaches, and Mala Silty Clay (see Figure 14).

Under the NRCS’s Land Capability Grouping, soil types are rated according to eight levels, with I being the highest classification level and VIII, being the lowest. Lower case letters following the classification level indicate specific subclasses. Brief descriptions of soils of the Lā‘au Point site, along with their Land Capability Grouping rating, are provided below.

Kapuhikani Extremely Stony Clay (KKTC) – These soils are well drained and extremely stony with slope ranges from 3 to 15 percent, and elevation ranges from nearly sea level to 500 feet. These soils are used for wildlife habitat and pasture. Runoff is slow to medium, and the erosion hazard is slight to moderate. The project area contains a significant amount of this type of soil. KKTC soils are rated Class VII, non-irrigated. Class VII soils have very severe limitations that make them unsuited to cultivation (i.e., abundant stones and shallow soil).



LEGEND

Soil Types

- BS: Beaches
- HvA, HvB: HOLOMUA Silt Loam
- HvB3, HvC3: HOLOMUA Silt Loam, Severely Eroded
- KKTC: KAPUHIKANI Extremely Stony Clay
- MmA: MĀLA Silty Clay
- PJD2: PAMOA Stony Silty Clay, Eroded
- rRK: Rock Land
- rVS: Very Stony Land
- rVT2: Very Stony Land, Eroded
- Project Area

Source:
Natural Resources Conservation Service GIS (1995)

Figure 14

Natural Resources Conservation Service
Soil Survey Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)

0 2000 4000 8000

PBR HAWAII

Disclaimer:
This map has been prepared for general planning purposes only.

Irrigated, Kapuhikani soils are placed in Classification ranging from II for lands with 3 to 7 percent slope, to IV for lands with 15 percent slope. Only 10 percent of the acreage of Kapuhikani Soil Series is made up with very stony condition. In order for stony conditions to be a limiting factor that would place a soil series in VII, greater than 60 percent of the acreage need to be covered with stony conditions.

Very Stony Land (rVS, rVT2) – Very Stony Land (rVS) occurs where 50 to 90 percent of the surface is covered with stones and boulders. The slope ranges from 7 to 30 percent. Elevations range from sea level to 1,500 feet. This land type is used for pasture and wildlife habitat. Pasture improvement is very difficult because of the many stones. Very Stony Land, eroded (rVT2) supports a thicker stand of vegetation than Very Stony Land because it has more soil material.

A majority of the Lā‘au Point site contains rVT2 soil. This soil is classified as VIIs, non-irrigated. Type VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife. Subclass VIIs soils are limited mainly because they are shallow, droughty, or stony.

Rock Land (rRK) - Rock land is made up of areas where exposed rock covers 25 to 90 percent of the surface. The rock outcrops and very shallow soils are the main characteristics. This land type is nearly level to very steep and is used for pasture, wildlife habitat, water supply, and urban development.

Beaches (BS) - Beaches occur as sandy, gravelly, or cobbly areas that are washed and rewashed by ocean waves. The beaches consist mainly of light-colored sands derived from coral and seashells. Beaches have no value for farming. Where accessible and free of stones, beaches are highly suitable for recreational uses and resort development.

Mala Silty Clay (MmA) – This series consists of well-drained soils on bottoms of drainage ways and on alluvial fans on coastal plains. Elevations range from nearly sea level to 100 feet. These soils are used for pasture, alfalfa, truck crops, orchards, and wildlife habitat. The soil is slightly acidic to neutral in the surface layer and upper part of the subsoil and moderately alkaline in the lower part of the subsoil. Permeability is moderate, runoff is slow, and the erosion hazard is no more than slight.

In low areas, this soil is subject to flooding for short periods during heavy rains. Shallow wells can be dug in this soil. The water in the wells is likely to be brackish, and care is required if it is used for irrigation purposes. The soil is easily compacted, and sub soiling may be necessary. MmA is classified as VIc, non-irrigated.

Holomua silt loam, 0 to 3 percent slopes (HvA), 3 to 7 percent slopes (HvB), 3 to 7 percent slopes, severely eroded (HvB3) – Holomua soils consist of well-drained soils, developed in volcanic ash and material weathered from andesite rock. They are nearly level to strongly sloping. This soil occurs as large, smooth areas. These soils are used for pineapple and truck crops where irrigation water is available and for pasture and wildlife habitat where water is not available.

For HvA soils, permeability is moderate. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.7 inches per foot of soil. In places roots penetrate to a depth of 5 feet or more. Insufficient water is the principal limiting factor. For HvB soils, runoff is slow

and the erosion hazard is slight to moderate. HvA and HvB soils are rated VIc, nonirrigated. HvA and HvB soils occur north of the project area, within the adjacent residential subdivision, and where the project's access road is proposed. For HvB3 soils, runoff is slow to medium and the erosion hazard is moderate. Most of the surface layer and, in places, part of the subsoil have been removed by wind and water erosion. Vegetation is sparse, especially in summer. HvB3 soils are rated Vie, nonirrigated. Only a small portion of the proposed access road, as well as a portion of the Cultural Protection Zone at Kamākaʻipō Gulch, will be on this soil.

Pamoa stony silty clay, 5 to 20 percent slopes, eroded (PJD2) – This soil is well-drained and gently sloping to moderately steep. Runoff is medium, and the erosion hazard is severe. Both sheet erosion and gully erosion are active. Most of the surface layer has been removed, and gullies are common. The gullies are steep sided, and many extend to the bedrock. The gullies and stones make workability difficult. This soil is used for pasture and wildlife habitat. This soil is rated VIe, nonirrigated. A small portion of the proposed access road contains this soil.

3.3.2 Land Study Bureau Detailed Land Classification

The University of Hawaiʻi's Land Study Bureau Detailed Land Classification classifies soils based on a five-class productivity rating using the letters A, B, C, D, and E, with A representing the highest class of productivity and E the lowest.

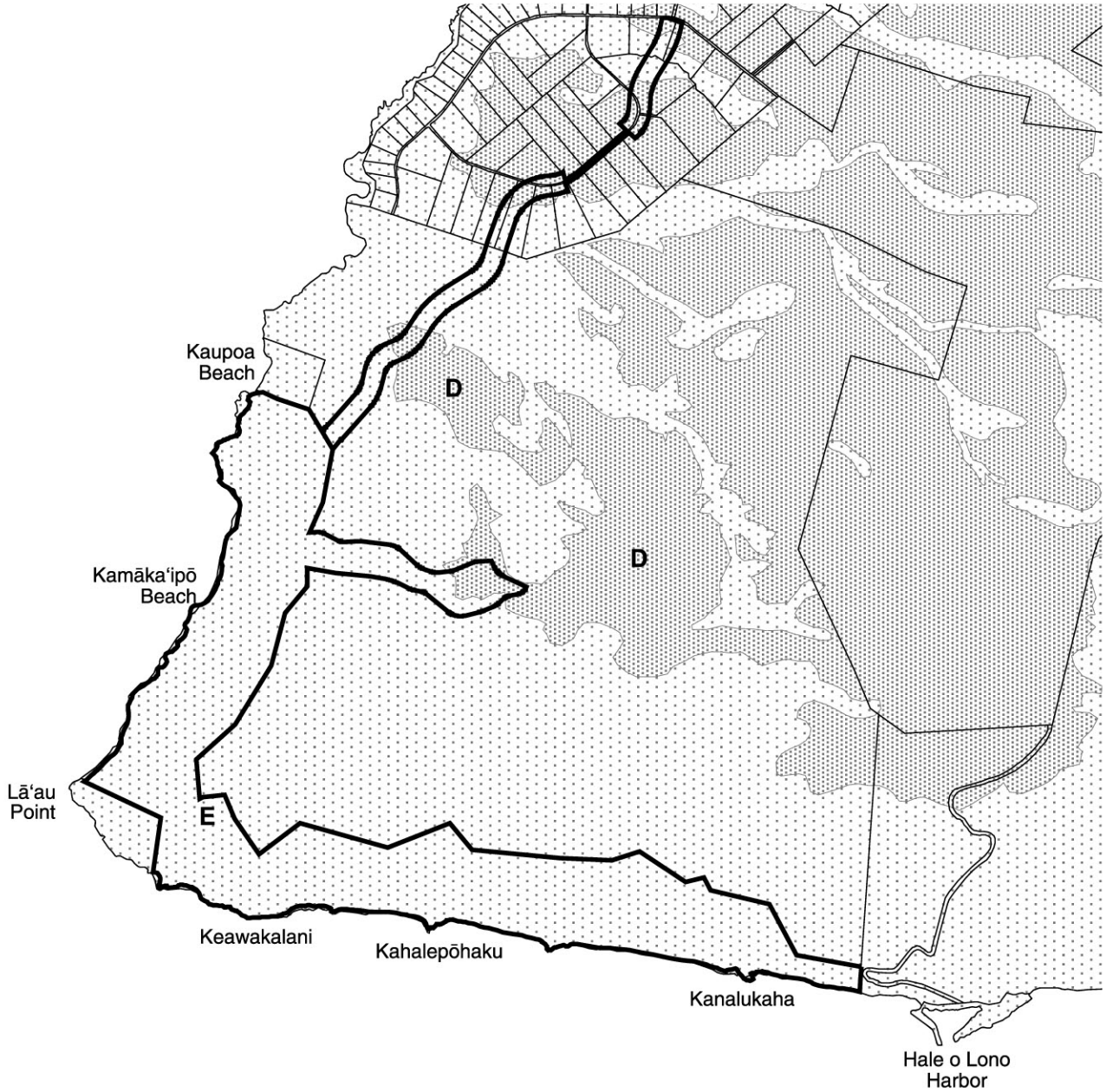
The soil classification ratings for the Lāʻau Point site range from "D" (poor) to "E" (very poor) (see Figure 15). The site consists primarily of very poor (rated "E") soils, except for 24 acres of poor (rated "D") soils within the Kamākaʻipō Gulch. Soils classified as "D" and "E" are marginal agricultural soils. Soils rated "E" are considered as having little or no suitability for soil-based agricultural production.

3.3.3 Agricultural Lands of Importance to the State of Hawaiʻi (ALISH)

The Agricultural Lands of Importance to the State of Hawaiʻi (ALISH) system classifies some of the lands within the Lāʻau Point site as "Other Agricultural Land," and the majority of the lands as "Unclassified" (see Figure 16).

Other Agricultural Land is land other than Prime or Unique Agricultural Land that is of statewide or local importance for the production of food, feed, fiber, and forage crops. The lands in this classification are important to agriculture in Hawaiʻi, yet they exhibit properties such as seasonal wetness, erosion, limited rooting zone, slope, flooding, or drought, which exclude them from the Prime or Unique Agricultural Land classifications. These lands can be farmed satisfactorily (i.e., by applying greater inputs of fertilizer and other soil amendments, constructing drainage improvements, and implementing erosion control practices and flood protection measures), and can produce fair to good crop yields when managed properly.

The lands designated as "Unclassified" provide no value for soil-based agriculture.



LEGEND

Agricultural Land Productivity Rating
- A (Excellent)
- B (Good)
- C (Fair)
- D (Poor)
- E (Very Poor)

Project Area

Source:
Land Study Bureau (1967)

Figure 15
Detailed Land Classification Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAR SCALE (FEET)
0 2000 4000 8000

PBR HAWAII

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LEGEND

ALISH Types
- Prime ALISH Lands
- Unique ALISH Lands
- Other ALISH Lands
- Not Classified

Project Area

Source:
State Department of Agriculture (1977)

Figure 16

Agricultural Lands of Importance to the State of Hawaii (ALISH)

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)

0 2000 4000 8000

PBR HAWAII

Disclaimer:
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3.3.4 Geotechnical Engineering Reconnaissance

A Geotechnical Engineering Reconnaissance (Survey) was performed by Geolabs, Inc., in July and August of 2007 within the project area. The Survey, which is provided as Appendix G, provides a general study of the predominant soil characteristics of the project area.

A review of aerial photographs combined with site reconnaissance and laboratory testing of selected soil samples, indicates that the predominant soil at the project site is represented by a reddish brown to brown colored silty clay with a typical shrink-swell potential of less than about two to four percent, which is considered to be of generally low expansion potential. Based on an evaluation of the existing site conditions, these soils reside over approximately 70 to 80 percent of the land area within the project limits. The remaining 20 to 30 percent of the land area within the project limits may contain generally isolated and discontinuous deposits of expansive, dark grayish brown colored clay, which may be classified as a true vertisol containing a higher percentage of montmorillite clay mineralogy.

In summary, the predominant surface soils encountered during reconnaissance consists of reddish brown to brown silty clays (CH) representing residual soil material derived from the weathering of basaltic rock. In general, these soils appear to have a low expansion potential. Reddish brown to brown clayey soils (CH) with sand are encountered mainly in alluvial depositional environments, which appear generally confined to topographic low elevations such as depressions and drainage ravines. These soils appear to have a low to moderate expansion potential.

Finally, the dark brown to grayish brown clay (CH) soil is encountered as isolated inland deposits and discontinuous deposits along the lower elevation coastal regions at the southern portion of the project site. These soils may have a relatively high expansion potential. With the exception of the northernmost portions of the project site (northerly of Kamākaʻipō Gulch), basalt rock formation is encountered at the ground surface and partly exposed at the ground surface mixed with the soils mentioned previously.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Lāʻau Point project will be built parallel to the coastline north and east of the actual Lāʻau Point on the southwestern tip of Molokaʻi. Part of the development process will include grading inland portions of the area for the infrastructure. As previously stated in Section 3.2, the roads are planned to conform to existing contours, which will limit extensive grading.

The NRCS Soil Survey, Land Study Bureau Detailed Land Classification, and ALISH soil rating systems classify the Lāʻau Point soils as poorly suited for soil-based agriculture.

Impacts to the soils of the site include the potential for soil erosion and the generation of dust during construction. Clearing and grubbing activities will temporarily disturb the soil retention values of the existing vegetation and expose soils to erosion. Some wind erosion of soils could occur without a proper watering and re-vegetation program. Heavy rainfall could also cause erosion of soils within disturbed areas of land. Southwest Molokaʻi, however, is one of the driest areas on the island, with average annual rainfall of less than 15 inches.

All construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. Before issuance of a grading permit by the County of Maui, an erosion control plan and best management practices (BMP) will be prepared describing the implementation of appropriate erosion control measures. All construction activities will also comply with the provisions of Chapter 11-60.1, Hawaii Administrative Rules, and Section 11-60.1-33 on fugitive dust.

Before a grading and grubbing permit can be secured from the County, a grading and grubbing permit must be secured from the County in accordance with Chapter 20.08 Maui County Code, "Soil Erosion and Sedimentation Control." This Chapter helps the County comply with Federal and State requirements to protect coastal waters from non-point source pollution and minimize construction impacts to downstream properties coastal ecosystems.

Erosion control plans are reviewed by the County Department of Public Works, the State of Hawaiʻi Department of Health Clean Water Branch, and the Federal Natural Resources Conservation Services (NRCS).

The BMP plan which is part of the application will show silt fencing around construction areas. According to County policy, no more than 15 acres can be exposed at any given time. Each exposed area will be provided with a temporary sedimentation basin. Each exposed area must also be regressed or re-vegetated before the next 15 acre section can be graded. Contractors will also be asked to "leapfrog" between areas to be graded to minimize the cumulative exposed area.

After construction, the establishment of permanent landscaping will provide long-term erosion control. Since annual rainfall in West Molokaʻi is less than 15 inches per year, a permanent irrigation system will be installed to irrigate and establish ground cover on all disturbed areas such as, roadway shoulders and cut and fill slopes, which are estimated to total 85 acres. Water for this purpose will be from the Kākalahale Well as discussed in Section 4.9 (Water). A nonpotable water irrigation reservoir or tank will be constructed above the project site at the outset to ensure continuous non-potable supply and source for this purpose. To the extent possible, Conservation District areas will not be landscaped or irrigated. Exceptions to this may include areas subject to erosion, where new landscaping can serve to stabilize the soil.

3.4 AGRICULTURAL IMPACT

The Lāʻau Point site is currently vacant. No ranching activities have occurred at the site since 2000. In addition, no chemicals or fertilizers have been used on the site since 1970 when pesticides were used to kill overgrown kiawe trees. Historically, pineapple cultivation took place on gently sloping land near the top of the Lāʻau Point parcel, but never in the area proposed for the development.

POTENTIAL IMPACTS AND MITIGATION MEASURES

As previously discussed in Section 3.3 (Soils), the NRCS Soil Survey, Land Study Bureau Detailed Land Classification, and ALISH soil rating systems classify the Lāʻau Point soils as poorly suited for soil-based agriculture.

Other agricultural activities in the project area, such as cattle grazing, ceased in 2000, therefore, the Lā‘au Point project will not take any active agricultural land out of production and will not impact Molokai Ranch’s agricultural operations.

As far as future potential for agricultural development, the Lā‘au Point site lies outside of the 14,390 acres being designated for protection through restrictive agricultural easements in favor of the Moloka‘i Land Trust (See Section 2.1.12). These agricultural easement lands are located mostly in Central Moloka‘i near numerous irrigation water sources suitable for high-value or intensive agriculture.

The agricultural easement lands proposed for West Moloka‘i are also serviced by water lines and are designated for extensive agriculture (see Chapter 3.5 in Appendix A). These lands will be dedicated for agricultural use.

A large parcel of land which buffers Lā‘au Point from the West Moloka‘i agricultural easement lands is designated as part of the Rural Landscape Reserve, which was created to protect views and the rural character of the island.

3.5 NATURAL HAZARDS

Natural hazards impacting the Hawaiian Islands include hurricanes, tsunami, volcanic eruptions, earthquakes, and flooding.

Devastating hurricanes have impacted Hawai‘i twice since 1980: Hurricane ‘Iwa in 1982 and Hurricane ‘Iniki in 1992. While it is difficult to predict these natural occurrences, it is reasonable to assume that future events could be likely given the recent record.

Tsunamis are large, rapidly moving ocean waves triggered by a major disturbance of the ocean floor, which is usually caused by an earthquake but sometimes can be produced by a submarine landslide or a volcanic eruption. About 50 tsunamis have been reported in the Hawaiian Islands since the early 1800s. Seven caused major damage, and two of these were locally generated. Only a small portion in the southeast of the Lā‘au Point site is designated as a Tsunami Inundation Zone (see Figure 17).

Volcanic hazards in the Lā‘au Point area are considered minimal due to the extinct status of the volcanoes comprising Moloka‘i.

In Hawai‘i most earthquakes are linked to volcanic activity, unlike other areas where a shift in tectonic plates is the cause of an earthquake. Each year thousands of earthquakes occur in Hawai‘i, the vast majority of them so small they are detectable only with highly sensitive instruments. However, moderate and disastrous earthquakes have occurred; most recently a 6.7-magnitude earthquake centered on the Kona side of the Big Island occurred in 2006.

Flood hazards are primarily identified by the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program. According to the FIRM (Panel ID: 1500030025B), the project site is predominantly Zone C, outside of the floodplain and in areas subject to minimal flooding. The lower lying coastline and shoreline areas of Lā‘au Point are in Zones V25, V15, and A4, which are areas inundated by

100-year flooding with velocity hazard (wave action); base flood elevations have been determined (see Figure 18).

POTENTIAL IMPACTS AND MITIGATION MEASURES

Lā‘au Point will not exacerbate any hazard conditions. No structures will be built within FIRM Zones V and A to mitigate against coastal and flooding hazards.

The potential impact of earthquakes, and destructive winds and torrential rainfall caused by hurricanes, will be mitigated through compliance with the Maui County Building Code.

Although a small portion of the site is located within the Tsunami Inundation Zone (Figure 17), no structures will be allowed to be built in these areas.

At the appropriate time during the project design phase, MPL will consult with the State Department of Civil Defense regarding appropriate placement of the Civil Defense sirens. State Department of Civil Defense has recommended that two outdoor warning sirens should be included in the design.

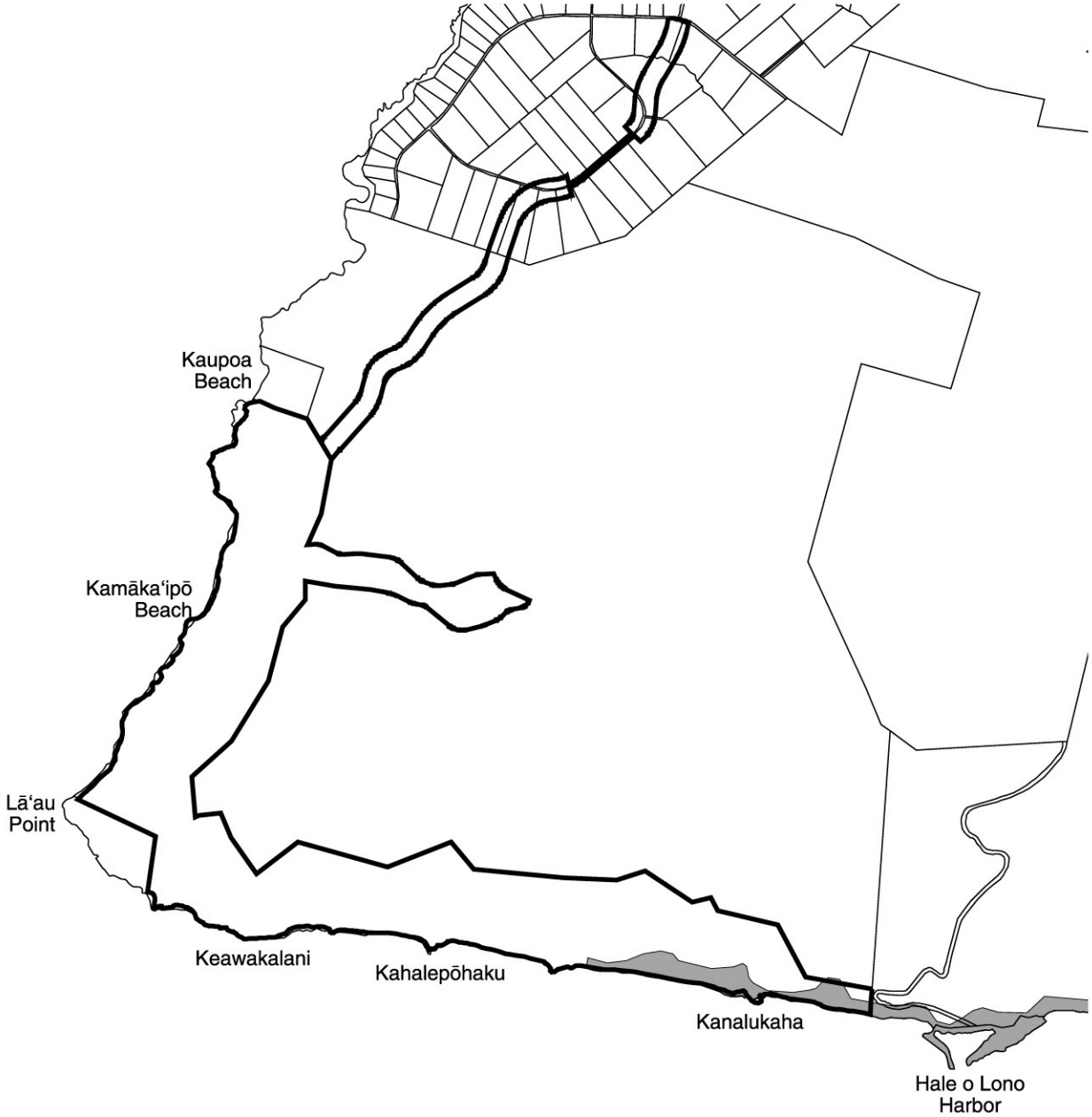
3.6 FLORA

The vast majority of Lā‘au Point is vegetated by non-native plants. Although dominated by non-natives, healthy native plant communities can still be found in sandy beach, rocky shoreline shrub land/grassland, and seasonal wetland habitats. Three species considered rare in Hawai‘i include: *Cressa truxillensis,* Hawaiian cotton or ma‘o *(Gossypium tomentosum)*, and ‘ihi‘ihilauakea *(Marsilea villosa).*

The sandy beach habitat of Lā‘au Point contains the most extensive example in Hawai‘i of a seasonal herb land dominated by Alkali Weed (*Cressa truxillensis)*. Other native plants include: ‘aki ‘aki *(Sporobolus virginicus)*, ‘akulikuli *(Sesuvium portulacastrum)*, pohuehue or beach morning glory *(Ipomoea pes-caprae)*, the sedge *(Fimbristylis cymosa)*, and pohinahina *(Vitex rotundifolia)*. The non-native kiawe *(Prosopis pallida)* and animal grazing have been main pressures on these plant communities.

Only ten percent of the rocky shoreline shrub land/grassland habitat has native plant cover, but it contains the highest number of native plants, which include: naupaka *(Scaevola sericea)*, uhaloa *(Waltheria indica)*, Hawaiian cotton or ma‘o *(Gossypium tomentosum)*, ‘ilima *(Sida fallax)*, alena *(Boerhavia diffusa)*, pau o Hi‘iaka *(Jacquemontia ovalifolia ssp. Sandwicensis)*, ‘ihi *(Portulaca lutea)*, akulikuli *(Sesuvium portulacastrum)*, the grass *Panicum fauriei var. latius*, aki‘aki *(Fimbristylis cymosa ssp. Umbellate-capitata)*, and Kakonakona *(Panicum torridum)*. Non-native plants that dominate this habitat include: golden crown beard *(Verbesina enceliodes)*, Australian salt bush *(airiplex semibaccata)*, dog fennel *(Dessodia tenuiloba)*, and kiawe.

The federally endangered ‘ihi‘ihilauakea *(Marsilea villosa)* was found near a seasonal wetland along where the Kamāka‘ipō Gulch drainage meets the coast. This native fern is the only federally listed endangered plant occurring in the Lā‘au Point area. ‘Ihi‘ihilauakea was federally listed as endangered in 1992. A total of 11 populations have been reported: five on O‘ahu, four on Moloka‘i, and one on Ni‘ihau. Although critical habitats for ‘ihi‘ihilauakea have been



LEGEND

Tsunami Inundation Zone

Project Area

Source:
Pacific Disaster Center (1998)

Figure 17
Tsunami Inundation Zone

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAR SCALE (FEET)

0 2000 4000 8000

PBR HAWAII

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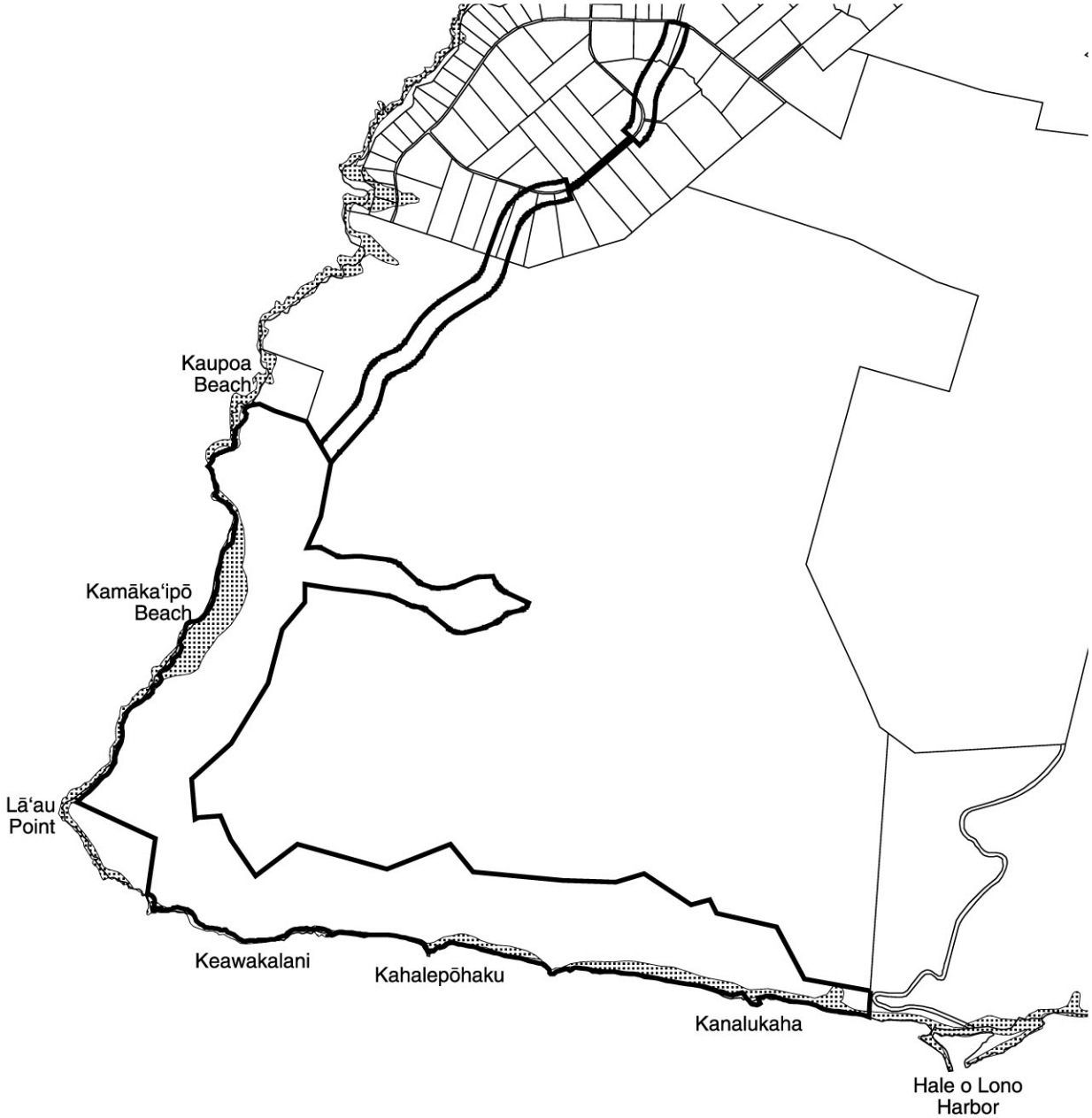

LEGEND

Flood Zones
Zone A: 100-Year Floodplain
Outside Floodplain/Minimal Flooding Area

Project Area

Source:
Federal Emergency Management Agency
(Panel ID: 1500030025B, 1981)

Disclaimer:
This map has been prepared for general planning purposes only.

Figure 18
Flood Insurance Rate Map

Lāʻau Point

ISLAND OF MOLOKAʻI

NORTH

LINEAL SCALE (FEET)
0 2000 4000 8000

PBR HAWAII

established on O‘ahu, no critical habitats for ‘ihi‘ihilauakea have yet been designated for Moloka‘i.

The Kamāka’ipō Gulch population of ‘ihi‘ihilauakea is not a new discovery. This population is known from historic accounts and recent surveys. Collections were reported to state and federal agencies as part of required collection permit reporting. In the past, collections from this ‘ihi‘ihilauakea population have also been distributed to botanical gardens in Hawai‘i with programs dedicated to endangered plant conservation.

Due to ‘ihi‘ihilauakea’s unique requirement for flooded areas, this fern can be very difficult to find. Hence, the survey for the ‘ihi‘ihilauakea was specifically conducted over a six month period (November 28, 2005 to June 6, 2006), including surveys after the heavy rains of 2006, so that the populations could be found and mapped under the best possible conditions. All potential habitat in the area was checked multiple times in the survey period and no additional ‘ihi‘ihilauakea populations were observed.

The ‘ihi‘ihilauakea population at Kamāka‘ipō is currently expanding, despite occasional foot traffic. Samples are being preserved in three endangered plant collections around the state. The surrounding habitat is no longer the intact native shrubland that would have existed there hundreds of years ago.

Under drought situations, the seasonal wetland community is dominated by several dryland weed species, including cocklebur *(Xanthium saccharatum)*, bristly foxtail *(Setaria verticilata)*, finger grass *(Chloris barbata)*, and the vine *Merremia aegyptica*. The perimeter of the seasonal wetlands is dominated by kiawe and guinea grass *(Panicum maximum).*

The most widespread plant community in the Lā‘au Point parcel is kiawe lowland dry forest. In many areas, these forests stretch up to the high tide line due to the trees’ ability to utilize brackish groundwater. The kiawe forests are most developed in areas where groundwater is available, just inland of the coastal strand, and in the drainages. Native plants in this habitat include: ‘ilima, *Abutilon incanum*, and pili grass *(Heteropogon contortus)*.

Non-native lantana is the dominant species in lowland shrub land areas where rocky terrain, erosion, and lack of water have created gaps in the lowland kiawe forest.

Appendix H of this EIS contains the botanical survey by William Garnett. The botanical survey was carried out over a period of six months (late November 2005 to early June 2006) to assure detecting ‘ihi‘ihilauakea (*Marsilea villosa*) and other seasonally ephemeral species. To assure complete coverage, detailed GPS track logs were kept to record both ground and air survey routes. To be aware of any possibilities, a list of historical plant collections made from within the survey area was provided by the Bishop Museum herbarium. However, it is always possible that additional populations could appear in other seasonal wetlands under different conditions in future years.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The majority of the native plant communities are located in the expanded Conservation District area in the sandy beach and rocky shoreline areas, where no development will occur. Of the native plant species, only the ‘ihi‘ihilauakea *(Marsilea villosa)* population is located within the

project area, at Kamākaʻipō Gulch. Kamākaʻipō Gulch will be part of the expanded Conservation District area, designated a Cultural Protection Zone, and managed by the Land Trust. No development will occur in expanded Conservation District area, including Kamākaʻipō Gulch. The ʻihiʻihilauakea population is not within the proposed residential houselot area.

A Shoreline Access Management Plan (SAMP) (Appendix B) has been adopted by the Land Trust as the easement holder of the expanded Conservation District area and county-zoned open space areas. Kamākaʻipō Gulch, which will be deeded to the Land Trust, is also covered by the SAMP. The provisions of the SAMP include managing the significant ʻihiʻihilauakea population, including-possible opportunities for private landowner "safe harbor" conservation programs. The ʻihiʻihilauakea might also benefit from habitat created by any settling ponds planned for the site. The key to protecting the ʻihiʻihilauakea is the creation and implementation of provisions to protect the fern from grazing, trampling, erosion, fire, or other habitat changes.

To protect environmentally sensitive features, including native, rare, threatened, and endangered plants, the Terrestrial Biological Resources Preservation of Resources section of the SAMP provides for:

1. Promulgation of rules and regulations to protect native, rare, threatened or endangered species.
2. Development of a natural resource management plan to identify management of terrestrial resources.
3. Provision of informational/educational signs where rare, threatened, or endangered plants or animals are found and to manage or control access.
4. Provision of buffer zones to ensure protection of sensitive species or habitats
5. Development of a monitoring program incorporating both scientific and anecdotal evidence to monitor the environment and ensure the viability of native species and habitats.
6. Enforcement of rules and prohibitions by an on-site Resource Manager.
7. Education of all individuals (staff, contract or volunteers) implementing the natural resource management plan.

The Lāʻau Point project will include landscaping appropriate to the coastal setting. Where feasible, new landscaping will include drought-tolerant native plants and grasses.

Evidence at public meetings has been given that the kiawe and other non-native plant species drain the limited water resources that would otherwise be available for feeding native plants. The Land Trust and the homeowners together will plan for the best use of native plants, ensuring they have the necessary growth opportunities.

3.7 FAUNA

No native land birds, native water birds, or seabirds were observed at the project site during an avifaunal and feral mammal survey (Appendix I) conducted in August 2006. The only native land bird species likely to forage in this area is the Hawaiian Owl or Pueo (*Asio flammeus sandwichensis*). This species is listed by the State of Hawaiʻi as endangered on Oʻahu but not elsewhere in the State. They hunt in grasslands, agricultural fields and forests and nest on the ground in habitats with tall grass.

Four species of common migratory shorebirds were observed: Pacific Golden-Plover or Kolea (*Pluvialis fulva*); Ruddy Turnstone or ‘Akekeke (*Arenaria interpres*); Wandering Tattler or ‘Ulili (*Heteroscelus incanus*); and Sanderling or Hunakai (*Calidris alba*). None of these migratory shorebirds are listed as threatened or endangered. Thirteen species of introduced alien birds were also tallied during the survey, none of which are listed as threatened or endangered.

Most mammals typically found in the area are introduced, and include rats, mice, axis deer, and mongoose. During the survey, two Hawaiian monk seals (*Monachus schawinslandi*) were observed resting on Sam Wights Beach north of Lā‘au Point.

3.7.1 Hawaiian monk seal

The Hawaiian monk seal is protected under the Endangered Species Act and the Marine Mammal Protection Act. According to the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), since 1984, a total of 169 Hawaiian monk seal sightings have been documented on the shoreline of the project area. Most of these sightings were documented in 2005 and 2006 when increased observations occurred. To date, a total of 18 uniquely identifiable seals have been documented among these sightings. Because not all Hawaiian monk seal are tagged or well-identified by natural marks, these 18 represent a minimum number of individual seals that have used the area. Of the 18 identified seals, nine were known to have been born on Moloka‘i: eight at Kalaupapa Peninsula, and one at a small pocket beach between Lā‘au Point and Hale O Lono[2].

NOAA is the foremost authority on the Hawaiian monk seals and has assembled all available data and continues to perform research. NOAA has been consulted on the status of Hawaiian monk seal research and whether there are any studies that correlate to the Lā‘au Point project’s situation. In their letter of December 17, 2007, (see Appendix J), NOAA reports that there have been no studies done on the impact of near shore development on Hawaiian monk seals. They do not believe that development is the area of concern, but rather that it is the frequenting of the beach by humans and their pets that has a potential impact on Hawaiian monk seals. Similarly, there is no quantitative data that could be used as a benchmark to determine what level of human activity causes an impact.

What data is available has been compiled in August 2007 NOAA publication *Recovery Plan for the Hawaiian Monk Seal*. The Hawaiian monk seal current population is approximately 1,200 individuals. The species has been identified by NOAA as having a recovery priority number of one, based on the high magnitude of threats, the high recovery potential, and the potential for economic conflicts while implementing recovery actions.

The Hawaiian monk seal has the distinction of being the only endangered mammal whose entire species range is within the United States. The majority of the Hawaiian monk seals live in the Northwest Hawaiian Islands with six main breeding populations. They are found in lower numbers in the Main Hawaiian Islands (MHI) where the population size and range seems to be expanding.

[2] NOAA letter dated February 5, 2007; letter included in Appendix J of this EIS.

The study notes that with regard to the present, threatened destruction, modification, or curtailment of Hawaiian monk seal habitat or range, measures are in place to minimize human disturbance of Hawaiian monk seals that haul-out on the Main Hawaiian Islands and to protect major Hawaiian monk seal haul-out habitat.

It is recognized that coastal development creates the potential for problems and concerns on Hawaiian monk seal health and population stability. As re-colonization of the Main Hawaiian Islands by the Hawaiian monk seals is underway, groups such as the Marine Mammal Commission have sponsored workshops to discuss the ramifications of this occurrence. Improved efforts to strengthen cooperative work with loc al organizations to minimize the threat of coastal development to ensure the seals will not be disturbed have been recommended.

The principal or direct fishery interaction threat currently facing Hawaiian monk seals in Main Hawaiian Islands fisheries are gillnets and shore-cast gear which are managed by the State of Hawai‘i and are known to cause monk seal mortality.

Significant threats to the Hawaiian monk seal are identified as:

- Low survival rates of juveniles and sub-adults (probably due to starvation).
- Entanglement of Seals in marine debris.
- Predation of juvenile seals by Galapagos sharks.
- Hawaiian monk seal haul-out beach loss due to erosion in the Northwest Hawaiian Islands.
- Potential disease impacts could be devastating given the small population (This is of concern in the Main Hawaiian Islands as the seals are exposed to disease from feral and domestic animal contact).
- Human interaction in the MHI including recreational fishery interactions, mother-pup disturbance on popular beaches and exposure to disease.

3.7.1.1 Habitat Issues in the Main Hawaiian Islands

Most beaches in the Main Hawaiian Islands that are likely used by Hawaiian monk seals are now used by people for recreational purposes. Some of the Hawaiian monk seal habitat in the Main Hawaiian Islands is being considered for development or is being considered for development for residential and other human use. This creates the potential to displace the Hawaiian monk seal to less optimal pupping and foraging areas.

Re-occupation of the Main Hawaiian Islands by Hawaiian monk seals will depend on the effectiveness of efforts to protect Hawaiian monk seals from people and animals using popular beaches and the extent to which seals are able to use beaches that where human access is more limited.

3.7.1.2 Conservation Efforts in the Main Hawaiian Islands

An increased number of seals are frequenting the Main Hawaiian Islands. This is a positive development but also has the potential to cause serious management problems. Management measures have been made to ensure that haul-out beaches on the Main Hawaiian Islands are available for use by the Hawaiian monk seals. These include:

- Workshops on managing Hawaiian monk seals.
- Hiring Hawaiian monk seal coordinators on different islands to monitor haul-out seals and prevent sources of human disturbance.
- Volunteer Hawaiian monk seal monitoring groups.
- The establishment of protection zones around Hawaiian monk seals on recreational beaches.

3.7.1.3 NOAA Comments and Recommendations Relating to Lā‘au Point

According to the NOAA NMFS, Lā‘au Point is an especially good Hawaiian monk seal habitat because of its remoteness and limited access, sandy beach substrate, and proximity to foraging areas.

Hawaiian monk seals have been documented on the sandy beaches around Lā‘au Point and are known to visit deserted beaches, or beaches not heavily used by people. The project increases the potential for interactions between humans and the endangered Hawaiian monk seal. In a February 5, 2007 letter, NOAA NMFS notes that potential threats to Hawaiian monk seals as a result of the project include: 1) human-caused disturbance; 2) disturbance, physical harm, and potential disease transfer from dogs; and 3) hooking and entanglement associated with shore-based fishing. In a subsequent letter dated June 21, 2007, NOAA states that they believe there should be a monitoring program with regular surveys conducted before, during, and after development to determine whether or not Hawaiian monk seal use of the habitat changes as land and ocean uses change (Appendix J).

In their June 21, 2007, letter NOAA NMFS also stated: “NMFS believes it would not be necessary to conduct a survey at the site to ascertain that Lā‘au Point is important monk seal habitat, as that is already known.”

3.7.1.4 Population Trends in the Main Hawaiian Islands

No surveys on the Hawaiian monk seal population in the Main Hawaiian Islands were performed prior to 2000. At that time the population was estimated at 45. In 2005, the total was estimated at 77.

While Hawaiian monk seals are found on all the Main Hawaiian Islands, the largest population is likely in Ni‘ihau. The number of sightings tends to decrease moving southward along the chain. Births in the Main Hawaiian Islands have become more frequent since the mid-1990s but occur almost exclusively in remote areas with a few at popular public beaches.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Lā‘au Point project will be sensitive to natural systems and define areas for environmental protection. Based on NOAA’s initial recommendations, the Lā‘au Point project has been designed and a Shoreline Access Management Plan (SAMP) has been developed to ensure that the impact on Hawaiian monk seals will be mitigated to an unprecedented extent. An example of this is the proposed increase in shoreline setbacks to ensure minimal encroachment and impact on eth shoreline and limits on access to two points and by foot to minimize human recreational

activity. Many of the recommendations contained in the 2007 NOAA study have been adopted. These are set forth in more detail below, but generally include:

- Setting up the recommended education and training network under the SAMP (further discussed in Section 4.3 and provided as Appendix B).
- Closely working with NOAA to minimize potential impacts.
- Specific restrictions in the SAMP are derived from NOAA’s 2007 report, including the restrictions on fishing, limiting access along the shoreline to minimize visitation and developing a local monitoring program.

Significantly, as per Appendix J, it is intended that the Lā‘au project be used for the development of a study and data gathering on the impacts of near shore development and the effectiveness of mitigation measures. As previously discussed, to date, there have been no studies undertaken in this area. By working with NOAA to monitor the population and health of the seals before, during and after the project development, and as various mitigation measures are out in place, a definitive source of valuable information can be developed to guide the SAMP resource managers on how to handle and enhance the Monk Seal Population.

Specific Mitigation Measures

A State Land Use District Boundary Amendment is proposed to expand the existing Conservation District, thereby increasing the amount of shoreline and Hawaiian monk seal habitat put into permanent protection. This request is reflective of the community’s desire to preserve shoreline resources. The coastal area also falls within the County’s Special Management Area (SMA), which provides additional rules and regulations designed to protect shoreline resources.

In addition, the project proposes that lot lines should be set back at least 250 feet from the designated shoreline or high water mark. Residential lot boundary lines for Lā‘au Point will be at least 50 feet behind the current Conservation District boundary. In addition, the makai lots along the shoreline will have an additional 50-foot building setback. These specified setbacks result in providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet. These setbacks will prevent encroachment and provide a natural buffer zone within the Conservation District between the homes and shoreline.

The Cultural Impact Assessment (see Section 4.2) calls for the need to provide education and enforce laws protecting Hawaiian monk seals. In addition, the Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) is a community-based and developed set of guidelines, rules, monitoring programs, and general principals for the protection and utilization of the cultural, biological, and social resources of the area, including Hawaiian monk seals.

The SAMP contains a plan and recommendations for the protection of Hawaiian monk seals developed in consultation with NOAA. Elements of the plan and recommendations were taken from NOAA’s draft *Recovery Plan for the Hawaiian Monk Seal* (November 2006). In addition, the SAMP provides for the establishment of management plans which include monitoring of potential impacts to resources, including Hawaiian monk seals.

The SAMP also provides rules to ensure non-disturbance of Hawaiian monk seal habitat and the promotion of Lā‘au Point as an area for Hawaiian monk seals to frequent and “haul out.” Rules

have been developed on removal of gear, the use of certain types of gear, and responses to Hawaiian monk seal sightings. No domestic pets and animals (including hunting dogs) will be allowed in the managed area. The use of toxins and pesticides is specifically prohibited and equipment will be purchased for cordoning off areas where Hawaiian monk seals have come ashore.

To ensure that the project does not alter behavior of Hawaiian monk seals that visit the area, residents and visitors will be educated about possible interaction with these animals and the appropriate human behavior for that interaction. Appropriate protocol if one encounters a Hawaiian monk seal on the beach is to notify National Marine Fisheries Service (NMFS), who will check if the animal is injured or entangled, then put tape around the site to keep people from approaching too closely. Due to the lack of available NMFS staff on Moloka‘i, a Resource Manager will monitor the Lā‘au shoreline area daily. The Resource Manager will:

- Post signs in regular intervals along the shoreline explaining the rules regarding Hawaiian monk seals.
- Cordon off areas, place signs around resting Hawaiian monk seals, and designate areas closed to fishing as a result of a Hawaiian monk seal sightings.
- Report Hawaiian monk seal sightings to NOAA and take whatever actions are required by NOAA to ensure the safety of the Hawaiian monk seal.
- Enforce all Hawaiian monk seal protection rules, regulations, and protocols.
- Report violations of federal or state laws to appropriate authorities and act as a witness in the prosecution of any person violating federal or state laws.
- Receive training as a Hawaiian monk seal protection specialist.
- Notify NOAA of entangled Hawaiian monk seals.
- Remove debris that may be harmful to Hawaiian monk seals from the shoreline area.
- Monitor the shoreline area for contaminants that may be harmful to Hawaiian monk seals.
- Work with NMFS to develop a volunteer seal monitoring program.

Adherence to the SAMP is required by the CC&Rs. In addition, everyone accessing the area must be educated on the law, rules, and protocols associated with Hawaiian monk seal protection. Additional information on the educational requirements of the SAMP is included in Section 4.3 (Trails and Access).

The SAMP also addresses other biological and endangered species protection. A long term monitoring program will be developed to adapt to changing circumstances and to measure the effectiveness of the mitigation measures.

The impact of the Lā‘au Point project on birds is not expected to be significantly adverse. The expanded Conservation District will reduce impacts to protect water and shorebirds. Land birds and mammals may be displaced by the residential development. It is noted, however, that the vast majority of the parcel will be left in its natural condition. These species could readily move and re-populate adjacent open spaces.

As the shoreline and in-shore areas are available only for subsistence gathering, the Land Trust and the homeowners have a responsibility to protect land birds and mammals by firstly, educating visitors, and secondly, enforcing policies and procedures to be developed for

subsistence gathering. The Lā‘au Point landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations.

Regarding lighting impacts on animals, as addressed Section 2.3.6 (Covenants), the CC&Rs require that all exterior lighting be shielded. Although the subdivision roadways will be privately-owned, the street lighting standards will conform to County of Maui standards. Lā‘au Point outdoor lights will include low-wattage, low-pressure sodium lamps that direct light downward, as recommended by the County’s proposed Outdoor Lighting Standards, to curtail light pollution that interferes with astronomical observations and prevent turtles and seabirds from being disoriented during their migration. This recommendation is also promulgated by the US Fish & Wildlife Service.

3.8 MARINE ENVIRONMENT

Marine habitat characteristics at Lā‘au Point are described as typical wave-exposed, low relief reef type with generally low coral cover. This area is exposed to high wave energy, moderate sand movement, and fairly low fishing pressure relative to other near shore areas in the main Hawaiian Islands.

Large-scale marine habitat features include shelf zone (84 percent), followed by reef flat (8 percent), fore reef (6 percent), and shoreline intertidal (2 percent). The sea bottom cover is dominated by turf algae (57 percent), followed by sand (22 percent), macroalgae (10 percent), and hard coral cover (6 percent).

Numbers of individual fish are higher north of Lā‘au Point. Diversity, evenness, and species richness are higher north of the point as well. Fish biomass, however, are higher east of Lā‘au Point.

Small schools of surgeonfishes (manini – *Acanthurus triostegus,* kala lolo – *Naso brevirostris,* na‘ena‘e – *A. olivaceus*), planktivores, triggerfishes, herbivores, and apex predators, primarily a single island jack (ulua – *Carangoides orthgrammus*) and two individuals of the introduced peacock grouper (roi – *Cephalopholis argus*) were observed around Lā‘au Point.

Marine biological and water quality baseline surveys of the area found that fish characteristics at Lā‘au Point are generally lower than average values reported from large-scale studies statewide. The amount of fish was more than four times lower at Lā‘au Point compared to no-take Marine Life Conservation Districts (MLCDs) and 42 percent lower than open access areas across multiple habitat types statewide.

According to the State Department of Health Environmental Planning Office Total Maximum Daily Load (TMDL) Program, “Receiving waters for the proposed project are ‘Class AA West Moloka‘i open coastal waters,’ and water quality in a portion of these receiving waters is impaired by excessive nutrients, turbidity, and suspended solids (Final 2004 List of Impaired Waters in Hawaii Prepared under Clean Water Act Section 303(d)).”

The marine waters surrounding Lā‘au Point experience episodic “red water” events following periods of heavy rainfall. Turbidity, suspended solids and nutrient concentrations may be significantly elevated during these events. Sediment delivery to coastal waters is exacerbated by soil loosened by natural causes, including the effects of deer and livestock transiting and

foraging in upland areas. The return to baseline conditions after a storm event is aided by turbulent mixing from waves and advection by currents along this exposed coast. The coastal marine communities are adapted to this periodic influx of runoff as well as to occasional high surf and the resulting scour from moving sand and rocks. Coral cover in particular is low and the low relief of the substratum provides limited fish habitat.

Appendix K of this EIS contains the marine biological and water quality baseline surveys prepared by The Environmental Company, Inc. (TEC). Section 4.2 (Cultural Resources) of this EIS provides discussion of subsistence gathering along the shoreline and nearshore waters. According to their letter dated February 15, 2007, the State Department of Land and Natural Resources, Division of Aquatic Resources stated: "the methodology employed by their subcontractor TEC is consistent with acceptable practices, and very likely akin to what we would have done ourselves if given the task."

POTENTIAL IMPACTS AND MITIGATION MEASURES

The marine water quality report concludes that it is likely that sediment discharge from runoff to the ocean will be significantly less with the Lāʻau Point development compared with existing conditions. This conclusion is based on several measures planned for Lāʻau Point that will protect nearshore waters from increased degradation of water quality, such as drainage control systems, CC&Rs to regulate the use of fertilizers and pesticides, re-vegetation as a means of permanent erosion control measures throughout the developed areas, and fencing to keep deer and other animals from disturbing the soil near the community (see Section 2.3.6). Therefore, it is also likely that the long-term water quality in adjacent coastal waters may be improved by these measures.

Lāʻau Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the downstream marine environment and near shore and offshore water quality. The drainage plan (see Section 4.10.1) states that any increase in runoff from each developed lot will be retained onsite in surface or subsurface facilities. The anticipated increase in surface runoff from the paved roadway areas will be directed into surface or subsurface detention and/or desilting facilities before being released into the nearby drainage ways.

Potential short-term impacts of construction on marine waters will be mitigated by implementation of State and County approved Best Management Practices (BMP) to control drainage and mitigate erosion from grading for the duration of the construction period. Subsequent water monitoring activities will be conducted by a Council representing Homeowners and the Molokaʻi Land Trust. These organizations will have management responsibility and enforcement authority over the Puʻu Hakina and Kamākaʻipō (Lāʻau area) shoreline area and fishing zone. The Land Trust will conduct the monitoring on a regular basis. Should it be determined that there is some problem with water quality, testing will be undertaken and investigation made as to the cause. The action taken will depend on the results of the investigation and the attributed cause. Through the CC&Rs or through the courts, the problem will be rectified of the cause is a violation of the law of the CC&Rs.

The Cultural Impact Assessment (see Section 4.2) indicated that Molokaʻi subsistence fishermen felt the new Lāʻau Point residents would probably not directly damage the fishing grounds because they would not know how to fish. The fishermen feel the real impact on the fishing

resources comes from Honolulu boaters fishing all along the west end and south shore (for commercial purposes), and fishing out the grounds of lobster and fish. Therefore, to preserve inshore fishing/subsistence resources, a subsistence fishing management zone in the coastal waters along all of the Ranch’s coastline property will be created, as previously discussed in Section 2.3.7 and as recommended in the *Master Plan.* In addition, a no commercial-take zone a quarter-mile from the shoreline (north and west shore) and from the beach to the reef edge/breaker line (south shore) will be established. Page 59 of the *Master Plan* (Appendix A) shows the proposed designated subsistence fishing zones. The Cultural Impact Assessment suggests using the pilot project at Mo‘omomi and the rights of the Kalapana people to fish in the Volcanoes National Park as community-based models. Efforts should also be coordinated with the communities of Miloli‘i on Hawai‘i, and Hā‘ena on Kaua‘i who are also establishing community-based fishing zones.

Preservation of offshore and shoreline resources for subsistence gathering is of great importance to the people of Moloka‘i. Therefore, perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved. Protections to subsistence gathering will be specified in the CC&Rs for Lā‘au Point. The CC&Rs will establish policies that permit subsistence gathering and cultural practices, as well as permit the hiring of resource managers to maintain the subsistence lifestyle. Further discussion on subsistence fishing and gathering is presented in Section 4.2 on cultural impacts and mitigation.

Based on the community-proposed access plan (Appendix A, p. 105), protection of the offshore coastal resources at Lā‘au Point would best be achieved by controlling access to the area so that the community can retain the area for subsistence gathering. Therefore, a Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) has been developed and adopted to regulate (through legal and enforceable means) the use of the land and ocean resources to ensure the continuance of the resources for future generations.

The SAMP consolidates public shoreline access to two locations at the proposed beach parks. The SAMP adopts protocol, rules, and permitted activities for persons engaging in subsistence shoreline fishing and gathering in the expanded Conservation District shoreline area. Under the SAMP, mandatory educational classes in traditional subsistence gathering and access responsibilities, safety and protocol are required. Due to hazardous shoreline conditions toward Lā‘au Point (USA Lighthouse parcel), public access to these areas would be discouraged. Access would be restricted to experienced subsistence fishermen only. Further discussion of the impacts upon marine and coastal resources as affected by shoreline access issues is presented in Section 4.3.

4.0 ASSESSMENT OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes the existing conditions of the human environment, potential impacts of Lā’au Point, and mitigation measures to minimize any impacts.

4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

Cultural Landscapes Hawai‘i conducted a series of archaeological studies and prepared mitigation plans for Lā‘au Point during the period 2001-2006. Their work consisted of historical background and archival research; inspection and survey of the parcel; mapping and description of site features; consultation with community groups and individuals; and analysis, interpretation, and reporting of all relevant data. The objectives of the archaeological mitigation plans are to:

- Reduce potential impacts of the Lā‘au Point project.
- Increase preservation as a cultural resource management goal by establishing a community Land Trust tasked with preserving natural and cultural resources within lands deeded to it.
- Create conservation easements and cultural overlay districts on privately held land.
- Develop codes, covenants, and restrictions for Lā‘au Point that would help preserve sites therein and establish procedures for a management partnership between the Lā‘au Point HOA and the Land Trust.

4.1.1 Historical Background and Settlement Pattern

The Kaluako‘i ahupua‘a, on Moloka‘i’s West End, is named for the pits and quarries (“lua”) from which adzes (“ko‘i”) were made. When Maui chief Kiha-a-Pi‘ilani ruled over Moloka‘i, he stationed his men in all of the coastal villages of Kaluako‘i to protect his rights to the ko‘i, and had a trail (KealapūpūoKihaaPi‘ilani) built for access and security over the quarries (Kaimikaua 1997). The historical trail runs from Mo‘omomi, around ‘Īlio Point, and to the south, through Pāpōhaku Beach, to Lā‘au Point, east to ‘Īloli in the south. This coastal trail was constructed with white shells (pūpūkea) to ensure safe nighttime travel.

One of the Moloka‘i chiefs who provided labor for the trail, Kamāka‘ipō, was immortalized in the name of the gulch and bay north of Lā‘au Point. Kamāka‘ipō Gulch exemplifies a mauka-makai settlement pattern system prevalent in the Kaluako‘i ahupua‘a. The gulches of Kaluako‘i are the foci of mauka-makai oriented landscape use. From north to south, the gulches and bays are where historic sites are clustered, and Kamāka‘ipō Gulch has an array of sites that remain relatively undisturbed. Between the gulches, the ridges and flatlands have relatively few traces of human presence.

The general gulch settlement pattern begins at the coasts. There are often multiple permanent habitations, fishing shrines, and abundant cultural deposits clustered around the bays. Inland of these, the lower gulches have a mixture of agricultural fields, temporary habitations, and work areas. Further inland, sites become more sporadic, and multi-function are less common. The complete mauka-makai system ends up in the summit region where there are numerous religious,

habitation, agricultural, lithic, and other types of sites, but where the peaks and plateaus provide the foci for settlement. The mauka end of the gulch settlement system is often a source of stone quarried to make adzes and other tools.

When Europeans found the Hawaiian Islands, Western Molokaʻi was not heavily populated. One explanation for the area's small population was that Molokaʻi was a battleground in the struggles between Maui, Hawaiʻi, and Oʻahu, and during the latter 18th century, lost much of its population to warfare (Menzies 1920). Another source indicates that Oʻahu chief Peleioholani raided and burned Molokaʻi in revenge for his daughter being killed on the island (Fornander, cited in Summers 1971). Regardless of the reasons, archaeological literature has accepted that Kaluakoʻi was a dry and thinly populated area.

Stokes (1909) stated that "inhabitants of the western end of Molokaʻi deserted or were removed from their homes nearly half a century ago" (Stokes 1909:30), a period when Kamehameha V had begun ranching operations on the island. Stokes, after his 1909 survey also stated, "This part of the island [Kaluakoʻi] does not give any evidence of a dense population . . . It is probable that formerly, as now, coasts were periodically visited by the inhabitants of the rest of the island for the purpose of fishing, the waters there yielding very abundantly."(cited in Summers, p.40)

According to John Wesley Coulter in *Population and Utilization of Land and Sea in Hawaii, 1853* (1931), "Nearly all the western half of the island was uninhabited. There the semi-arid climate precluded successful agriculture."

Traditional wisdom among archaeologists has also concluded that this region would have been settled only after sweet potato was available, and after population densities had risen in the wetter areas, probably no earlier than about AD 1500 (Kirch 1985). Radiocarbon dates suggest somewhat earlier occupation may be possible, although the limited data make it hard to discern sporadic early use from a stable early habitation. An inland quarry yielded a radiocarbon date of AD 1260-1440, and the south Kamākaʻipō coastal site was dated between AD1410-1955. A subsequent, unpublished date from the 1991 excavations at Site 654, in a coastal imu that Weisler originally recommended dating, provided an even earlier date of AD 1019-1211, confirming the suspicion that coastal areas were used much earlier than they were permanently settled.

4.1.2 Archaeology

The Kaluakoʻi area, including Lāʻau Point, had been surveyed and studied as early as 1909 when Stokes recorded koʻa (fishing shrines) on the coast at Kamākaʻipō (Sites 53 and 55), Lāʻau (Site 58, destroyed by lighthouse construction), Keawakalani (Site 59), Kahalepōhaku (Site 61), Puʻu Hakina (Site 62), and Kalalua Heiau (Site 67).

Bonk (1954) excavated a fisherman's house site at Kamākaʻipō (Site 54). Strong (1971) documented four more house sites at Kamākaʻipō and a variety of associated features, including ahu (stone mounds), shrines, koʻa, a stone pile, and scatters of midden and artifacts strewn on the surface.

In the early 1980s, Weisler (1984) surveyed coastal southwest Molokaʻi, locating and discovering 11 sites (Sites 53 through 56, 655, 118, and 1134). Weisler's study in the 1980s focused on some sites he documented, and although he was aware that more existed, it was the

size and quality of the 11 mentioned that caused him to nominate them for inclusion in the National Register of Historic Places (NRHP) as the District (which then got one all-inclusive number, 803). A notable outcome of Weisler's work was the creation of the Southwest Molokaʻi Archaeological District (Site 803), which included Sites 53, 54, and 56. This district is now on the State of Hawaiʻi and National Registers of Historic Places, meaning that the sites within it are afforded additional protection.

A Bishop Museum survey of 6,350 acres of southwest Molokaʻi encountered numerous features (Dixon and Major 1993). The Bishop Museum survey covered a larger area, and included not just major sites such as those documented by Weisler, but also things as small as a concentration of a few basalt flakes. For these reasons, the Bishop Survey documented 596 features in 190 sites, of which 170 were evaluated. This survey provided the most complete coverage of the area to date, and reinforced the settlement pattern system of sites clustering around bays and gulches, as described in the previous section. The extensive survey area, however, also revealed a surprising number of large multi-roomed enclosures near the 100-foot elevation, such as the Sites 771-773 complex, which went against the previous model that inland features were marginal. These sites are noted as unique and are being preserved.

The proposed Lāʻau Point access road corridor in the Pāpōhaku Ranchlands, which is outside of the Lāʻau Point project area itself, runs past a former military target range, leased by the US Government from Molokai Ranch between 1944 and 1965 (Burtchard 2000). The largest feature of the range was a large circular target (about 600 meters in diameter) comprised of three concentric earth and rock rings. Facilities included targets, cement observation bunkers, a range control tower, a munitions dump, and another possible communications tower. Construction, and the use of the area as a target range, destroyed most of the cultural sites in the Pāpōhaku Ranchlands some time ago. Archaeological reconnaissance of the area by Burtchard and Athens (2000) revealed 27 sites, five of which are near the proposed Lāʻau Point access road corridor (Sites 520, 1784, 1758, 1760, and 1761).

The Lāʻau Point parcel contains numerous known archaeological or historic features, including burials, heiaus, habitation sites, and complexes, with some areas having higher concentrations of features than others. Figure 12 shows the location of sites within the project area and the complete Archaeological Mitigation Plans in Appendix L include inventory lists of recorded State archaeological sites in the project area and vicinity. Based on known excavations, subsurface deposits in southwest Kaluakoʻi can be expected to yield small to moderate amounts of cultural materials, although a few spots in intensive lithic workshops or long-term habitations may have abundant deposits. Coastal dunes and alluvial flats, where they have not yet been disturbed by erosion, may have extensive subsurface deposits. It is expected that additional data collection proposed for preservation management purposes may refine site boundaries as expressed through buried deposits. Buried cultural deposits are likely to be abundant in alluvial and sand dune deposits near the coast, and within the less abundant inland habitation features. Agricultural sediments in the region rarely yield intact stratified deposits or artifacts, and most of the quarry-related sites have been heavily eroded, and artifacts are typically exposed on the surface.

Subsurface deposits are most likely to be found in and around sites on the coast, from the high water mark to the base and top of the first ridge or cliff. Certain landforms also have a higher probability of having buried cultural deposits, based on their geomorphology, soil depths, proximity to surface archaeological sites, proximity to resources (water, agricultural soil, sources

of various types of stone used for various purposes), proximity to old trails, and lack of erosion. Un-eroded deposits atop level finger ridges and the terraces found in a few of the gulches are therefore the most likely landforms and settings to have buried deposits. Also, as set forth above, deposits are likely to be found within and around habitation features such as 771-773 as well as enclosures and C-shape foundations found in the quarries.

Archaeological projections are shown in the map and text sent to the Cultural Committee during the planning process for the Master Plan. Essentially, these are predicted deposits only at the most general level. For example, all of the coastal flat, up to any flat land immediately atop ridges or cliffs mauka of the coastal flat, are "high probability," whereas former pineapple fields and areas eroded down to hardpan are "low probability." These projections also suggest relatively high probability in gulches and along their rims, as well as the summit region from Maunaloa town east to Puʻu Nānā and Kāʻana. These projections played a part in the establishment of the Cultural Protection Zones, expansion of the Conservation District, and the Cultural Resource District overlay.

POTENTIAL IMPACTS AND MITIGATION MEASURES

MPL is committed to preserving the overwhelming majority of known archaeological sites and complexes in the project area. As a result of the archaeological work and the two year involvement of the Cultural Committee and the larger community within the *Master Plan* process, approximately 1,000 acres of "Cultural Protection Zones" were identified to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (see Figure 12). As noted throughout the Preservation Plan contained in Appendix L, the plan was developed with significant community input during the course of the community based planning process for the Master Plan and through the work of our archaeologist. The creation of Cultural Protection Zones, to be managed by the Land Trust, increases both continued community involvement and preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions. In their July 5, 2006 letter[3], OHA stated: "Because many known archaeological sites exist within this property, it is likely that more will be found, …the area is more of a cultural property than a property containing cultural sites." The creation of Cultural Protection Zones acknowledges this concept and implements protection of cultural landscapes rather than only individual sites.

Special and unique resources, in particular those contained in sites 771-773, the Kalalua Heiau and associated structures at the Puʻu Hakina coastline, are within the "cultural zones". This provides more protection than simple isolation of the individual sites. Preservation zones also provide protection of sites in context, which is far superior to the minimal approach of buffering individual sites or features.

In their July 5, 2006 letter, OHA also stated: "Further consultation also may show that view planes must be preserved between existing heiau and other cultural sites." Creation of large cultural protection zones as opposed to single site protection provides the view plane protection requested. In the case of koʻa shrines, an additional aspect of the buffer will be a requirement to keep an open view plane toward the ocean. In the case of the Mauka-Makai preserve at

[3] OHA letter dated July 5, 2006; letter provided in Section 9.0 of the EIS.

Kamākaʻipō, the entire area will be a buffer, so that the overall character of the cultural landscape will be preserved.

Access roads and the rural-residential lots will only minimally affect cultural resources since plans are to avoid Cultural Protection Zones and archaeological sites. Sites that cannot be avoided are recommended for data recovery under the Data Recovery Plan approved by SHPD in February of 2007.

The vast majority of sites, including those interpreted as heiau, koʻa, burials or permanent habitation, as well as most of the remainder, are being preserved. The only sites that will undergo data recovery mitigation are some of the possible temporary habitations, marginal agricultural features, lithic scatters and items that are significant only for their informational content (Significance Criterion D).

Depending on the nature of the archaeological sites, mitigation measures such as buffers, permanent boundaries and easements, and interpretive signs will be established to protect and preserve sites. It is expected that the project will not have adverse effects to archaeological sites. The residential community will not encroach on Cultural Protection Zones and strict cultural resource management measures (discussed below) will be implemented.

To ensure proper resource protection and management in the project area, mitigation efforts will include: 1) the establishment of the Molokaʻi Land Trust, an organization tasked with preserving natural and cultural resources within lands deeded to it; 2) conservation easements and cultural overlay districts on MPL lands; and 3) CC&Rs for the Lāʻau Point project that would help preserve sites therein and establish procedures for a management partnership between the Lāʻau Point HOA and the Land Trust.

MPL has committed to maintain or expand upon previous preservation measures as the landowner's plans have changed in response to the community becoming more involved in the process. The Preservation Plan expands current preservation efforts by an order of 300 percent over the 1994 recommendations.

It is recognized by MPL that TMK 5-1-008 (Pāpōhaku Ranchlands) does not yet have an approved inventory survey. Reconnaissance survey work has been performed (Burtchard 2000) indicating where the main body of archaeological sites are located. MPL will undertake the archaeological excavation and mapping within affected Pāpōhaku Ranchland parcels to bring records up to SHPD Archaeological Inventory Survey Report standards, and will use the refined data to determine a final access road route that avoids unmitigated adverse effects to archaeological sites.

This commitment does not extend into TMK 5-1-02-030, which already has and adequate archaeological inventory. Prior to construction, the archaeologist will re-examine the road corridor and verify descriptions of known sites, gather additional data if possible, and search for unrecorded archaeological deposits or features observable due to changes in surface visibility. After the road corridor re-examination and supplemental data collection, the proposed subdivision lots and coastal zone will be also be re-examined, following the same methods for investigating and recording sites as described for the road corridor. Additional land survey work will be done prior to designation of the road corridor in order to design the corridor to avoid significant sites.

Archaeological sites will be treated in one of three ways: preservation, data recovery, or no action. Preservation means avoiding damage to the site whether treatment is passive (avoidance) or active (stabilization, interpretation, and other measures). Data recovery pertains to sites that are significant for their information only, and covers actions such as mapping, excavation, and surface collection that adequately gather that information. No action is planned for those sites that were deemed not significant in the 1993 Bishop Museum inventory report, such as sites that had been so badly damaged as to eliminate the possibility of determining their original form or salvaging meaningful data.

After the additional work on the road corridor outside of the project area and project site, short-term site preservation measures will be implemented, such as establishing protective buffers and emergency stabilization. Then, data recovery and long-term preservation measures will be implemented. During construction, monitoring by an approved archeologist will occur. In their July 5, 2006 letter, OHA requested that "an archaeological monitor be on-site during all excavation and ground disturbances for this project." The archaeological mitigation plan has been submitted to the State Historic Preservation Division (SHPD) for review. The monitoring plan submitted to SHPD includes a provision for an archaeological monitor to be on-site during all construction activities, including excavation and/or ground disturbances.

The Preservation Plan, Burial Treatment Plan, Monitoring Plan, and Data Recovery Plan are contained in Appendix L. By letter February 13, 2007, SHPD has approved the Data Recovery Plan contained in Appendix L. Revised Monitoring and Preservation Plans were submitted for SHPD review on September 10, 2007 and comments are pending. A revised Burial Treatment Plan will be submitted in the near future.

Traditional gathering rights and access will not be restricted during construction, except as necessary to ensure safety. In the event access is prevented for safety reasons alternate access routes will be provided.

Finally, MPL and its contractors will comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during the construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary. Should a possible burial be encountered that cannot be planned around, SHPD and OHA will be consulted prior to any testing of the burial.

4.2 CULTURAL RESOURCES

Davianna McGregor, PhD, professor of Ethnic Studies at UH Mānoa, conducted a cultural impact assessment of the Lāʻau Point site. The cultural impact assessment is summarized below. Appendix M contains the full study.

4.2.1 Cultural Historical Overview

Cultural resources and subsistence practices are usually examined in relation to a particular island, district, and ahupuaʻa. An ahupuaʻa runs from the sea to the mountains and contains a sea

fishery and sea beach, a stretch of kula or open cultivable land and higher up its forest. For this project area, the island is Molokaʻi, the district is Kona and the ahupuaʻa is Kaluokoʻi in West Molokaʻi, and includes the nearshore resources out to one-quarter mile from the shoreline or to the outer edge of the reef.

During the time of early Western contact in the Hawaiian archipelago, Westerners viewed Kaluakoʻi as an arid and sparsely inhabited land (previously discussed Section 4.1). There were few Native Hawaiians spotted living in this ahupuaʻa. Therefore, Westerners often regarded the valleys and streams of Manaʻe as the more important part of the island. Beyond their grasp was that "Molokaʻi pule oʻo (Molokaʻi of the potent prayers)," a "figurative reference to Molokaʻi's fame in sorcery" (Pukui and Elbert 1957: 266; cited in Summers: 15), was a spiritual island, an island of mana. Halona Kaopuiki shares with us the mana of Molokaʻi.

> *"… when you look at Molokaʻi, when you look at the island, it's a moʻo, it's a mama lizard, and all the valleys is the babies, that she is carrying on her back, of Molokaʻi. My father use to tell us, where the mana stay, where's the defense of the lizard, the moʻo? The tail, the West End!" (Enos et.al., 2005:24)*

Without the moʻolelo (traditional story), the place names, and an understanding of the cultural uses and practices of Kaluakoʻi, the mana of Kaluakoʻi would have remained displaced by these Westerner's first impressions.

The ahupuaʻa of Kaluakoʻi has, and still is well known today, for its vast marine resources, especially Penguin Banks located on the eastern portion of the south coast, off of Kapukuwahine. Along the boulder coastline were habitats for edible mollusks such as ʻopihi, pupuʻawa, pipipi, and aʻama crab, while in the nearshore area algae were abundant with a variety of species, including the edible seaweed, limu kohu (Army Corps of Engineers 1984; cited in Weisler 1984b: 9). There is also moi and aholehole, ʻopihi and ʻaʻama crab on the south shore. The ʻopihi starts at Kapukuwahine on the south shore and out on the cliffs along what they refer to as ʻOpihi Road. The western shore is known for moi, aholehole, and lobster. The south shore from Hale O Lono to Pālāʻau also factors into the life cycle of the mullet, serving as a hatchery area from which they move east to Manaʻe or East Molokaʻi (McGregor 2006).

Due to the importance of fishing and the marine resources found on and off the shores of Kaluakoʻi, koʻa, or fishing shrines, were abundantly found up and down the entire coastline along with a myriad of heiau and burials. Maui aliʻi Kihaʻa Piʻilani constructed a coastal trail, "Kealapupu i Molokaʻi" (The shell road at Molokaʻi), making it possible for the kanaka maoli of Kaluakoʻi to access the coastline. This trail was lined with shells to ensure safe travels at nighttime, thus further alluding to the vital significance of the marine resources.

Moʻolelo of Lāʻau Point – There are three versions of how "Lāʻau Point" was named. The first comes from Harriet Ne, a kupuna of Molokaʻi who was the source for Tales of Molokaʻi. The subsequent versions can be found in Summers (1971: 54) who compiled and provided a complete listing of known sites for *A Site Survey of Molokaʻi*.

The first story comes from a legend involving the shark god of Kainalu (Ne 1992). 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 toward 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 that grew from the branch was short and sprawled close to the ground. The beautiful blossoms were offered by the people of Molokaʻi to their gods.

The other two stories involve Palila, the Kauaʻi hero who, with a spear (lāʻau palau) given to him by the gods, leapt to Kiha a Piʻilani, a Molokaʻi hill, and there attracted all the women; the angry and jealous Molokaʻi men fought him. His club lost its mana to the gods of Molokaʻi, and so he threw it away; it landed on this cape (Lāʻau Point).

It is also noted that the area from Lāʻau to Pālāʻau attracts fish. It has a lot of moi holes, kole, aholehole. That place was called Poʻo Loʻuloʻu, a name special to Molokaʻi which means turbulent - a metaphor for the wealth of Molokaʻi—a place for the gathering of fishes. It was a special place for Ku and Hina—Kane and Wahine. There were heiau. The fish spawning begins at Pālāʻau. The ʻiole, the hatchlings would stock the fishponds.

Cultural Significance of Lāʻau Point – In Hawaiian tradition, lae, or points of land into the ocean, are culturally significant. As a feature, the lae includes not only the point itself, which can be visualized as a nose on a face, but also the forehead, the land formation from which the point juts out into the ocean. The community refers to the lae, or points along the south shore, using numbers - first point (Kanalukaha), second point (Kapukuwahine), third point (Kahalepōhaku) and fourth point (ʻOpihi Road).

A large part of the significance of the Lāʻau Point area is that it is raw and untouched. It is so isolated that most of the residents of Molokaʻi may have never been there and may have no direct experience with the place. This factor gives Lāʻau an almost mythical quality. Lāʻau Point has become an icon of what Molokaʻi represents – a rural stronghold and reserve of Native Hawaiian culture, a cultural kipuka. If Molokaʻi is "The Last Hawaiian Island" then Lāʻau is one of the last untouched Hawaiian places on "The Last Hawaiian Island."

It should be noted that while the development is called Lāʻau Point rural-residential subdivision, that Lāʻau Point itself, is not part of the development. It is not owned by MPL, but by the U.S. federal government, which owns and manages a lighthouse for navigational safety within a 51-acre parcel.

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.

4.2.2 Focus on Subsistence

Throughout the islands of Hawaiʻi, subsistence practices thrive in particular rural Hawaiian communities. Surrounding these communities, are pristine and abundant natural resources in the ocean, the streams, and the forest. This is largely due to the continued practices of aloha ʻaina/kai (cherish the land and ocean) and malama ʻāina/kai (care for the land and ocean).

> *On Molokaʻi, 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.* (Governor's Task Force on Molokaʻi Fishpond Restoration)

Many families on Molokaʻi, particularly Hawaiian families, continue to rely upon subsistence fishing, hunting, gathering, or cultivation for a significant portion of their food, or to supplement their daily needs. The practice of subsistence is also a valuable economic tool that allows individuals and families to survive, particularly in communities like Molokaʻi, where employment opportunities are limited and often times seasonal. Subsistence has contributed to the persistence of traditional Hawaiian cultural values, customs, and practices. Subsistence practitioners respect and care for the surrounding natural resources. They only use and take what is needed. They allow the natural resources to reproduce. Cultural knowledge, such as about place names, fishing koʻa, methods of fishing and gathering, or the reproductive cycles of marine and land resources, were passed down from one generation to the next through training in subsistence skills. The sharing of foods gathered through subsistence activities continued to reinforce good relations among members of extended families and with neighbors.

An inherent aspect of traditional subsistence is the practice of conservation to ensure availability of natural resources for present and future generations. 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. The Hawaiian outlook which shapes these customs and practices is lōkahi, or maintaining spiritual, cultural, and natural balance with the elemental life forces.

In the summer of 1993, the Governor's Molokaʻi 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 (see Page 59 of Appendix A). 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.

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. It is important to note that other groups (e.g. Filipinos, Japanese) engage in subsistence, although not at the same level as Hawaiians (Governor's Molokaʻi Subsistence Task Force 1994).

4.2.3 Oral History and Interviews

The purpose of conducting oral history is to help gather knowledge about historic and traditional land use practices, including subsistence activities, that existing data do not contain. Understanding what areas were accessed, and for what reasons, can provide an overview of traditional uses and practices there, that can lead to a prediction of the cultural impact of a proposed project.

For the cultural impact assessment, community meetings were held island-wide to discuss cultural resource issues. The agenda for these meetings included: 1) Reviewing plans and maps of Conservation District shoreline setback, cultural sites protected areas, subsistence fishing, gathering, and hunting zones in relation to the proposed project; 2) Identifying additional resources and protection measures; and 3) Discussing the Water Plan. In addition, individuals were interviewed about their experience and knowledge of Lāʻau Point. Individuals were asked about their knowledge of natural and cultural resources in the area, their subsistence and cultural activities there, the impact of the proposed development on the identified natural resources and their activities, their concerns about the water plan, and their overall assessment of the project.

A general synopsis of these interviews is provided below. The full Cultural Impact Assessment Report, including anecdotal information obtained during the study, is provided as Appendix M of this EIS.

In Hawaiian tradition, Lāʻau Point represents a point of no return. For those traveling by canoe from Oʻahu to Molokaʻi across the Kaiwi Channel, once Lāʻau Point is sighted, there is no turning back to Oʻahu. This concept has been generally applied to the issue of the Lāʻau Point project. Many Molokaʻi residents feel that if the west and south shores adjacent to Lāʻau Point are developed as proposed, that this will open up Molokaʻi to new residents unfamiliar with the culture and way of life on Molokaʻi and lead to irreversible cultural change. Most informants' concerns focused on the project's potential impacts to valued natural, cultural, subsistence, and spiritual resources.

Subsistence Fishing and Gathering – Participants in community meetings and interviews spoke of the south and west coasts adjoining Lāʻau Point and the nearshore water as their "icebox." It is a place where fishermen usually go to get fish, ʻopihi, and crab for parties and gatherings of their large extended families.

Due to the seasonal ocean swells, the south shore is usually harvested in the winter time when there are north swells and the west shore is usually harvested in the summer time where there are south swells. Interviewed participants (informants) also spoke of the ocean as being very treacherous and not safe for swimming; there is a very strong current off of Lāʻau Point, which has swept even the best divers out to the open ocean.

Traditionally, Lāʻau Point was not a place that was fished on a regular basis because it is isolated and difficult to reach. However, the increased use of boats on Molokaʻi and Oʻahu has changed this. Informants noted that the resources have declined in the area with heavy seasonal harvesting by boaters from Oʻahu and the opening of Hale O Lono Harbor and Kaluakoʻi as closer launching points to Lāʻau Point for Molokaʻi boaters.

Persons interviewed stated that they feel the project will spoil the experience of fishing in what is now an isolated, pristine, and spiritual area (Lāʻau Point). Many informants felt that the proposed Lāʻau Point project will greatly hinder, if not abolish altogether, ongoing traditional gathering activities currently enjoyed at Lāʻau Point. A concern was the lack of privacy the subsistence fishermen would get if homes are built along the shoreline. In order to succeed, throw net subsistence fishermen require an undisturbed beach that allows fish to forage closer inshore. Gatherers of ʻaʻama crabs require dark silent nights to ensnare their nocturnal prey. Gatherers of limu and pupu may be met with kayakers in the water, people sunbathing on the beach, and pet animals running up and down the shoreline. The sentiment from subsistence practitioners is that

newcomers will be insensitive and intolerable of subsistence activities in what is perceived to be their front yards.

Most informants feel that the new residents will probably not directly damage the fishing grounds because they will not know how to fish. Rather, they believe the real impact on the fishing resources is from boaters. When the outboard motor and twin outboards came out at affordable prices, the Honolulu boats came fishing all along the west end and south shore. Honolulu commercial fishermen over fish the lobster and fish grounds, even the eggs, according to informants. Equally devastating to the resources has been over fishing by Molokaʻi boaters as well.

Subsistence Hunting – The major hunting areas on Ranch lands, including the Lāʻau Point parcel, are currently reserved for commercial hunting, and closed to subsistence hunting. Informants acknowledge that there is poaching of deer, but not as far out as the project area, except by illegal trophy hunters for prize money. The project area is thick with kiawe and lantana and inaccessible by land. While deer find refuge there, it is not a regularly hunted area.

Hunters are concerned that the new landowners will not want to hear shooting and may be protective of the deer and oppose even bow hunting. Deer hunting could become an animal rights issue. Bullets can travel four miles, so there will need to be a sufficient buffer zone. The overall hunting area will be reduced by the no hunting zone in the project area, in addition to the necessary buffer and safety zones.

Cultural Resources and Practices – Informants are concerned that cultural sites will be destroyed during grading and clearing of the land for development. At Pāpōhaku, some homeowners have graded and damaged dune systems and destroyed cultural sites and burials located in the dunes. Some have extended their household area into the conservation zone, treated it like their own private property and tried to exclude Molokaʻi residents from the public beach area fronting their homes. Informants feel the same process can occur at Lāʻau Point.

In addition to natural resources utilized for subsistence, informants spoke of other natural resources which have cultural significance such as native plants, native species of turtles and monk seals, and the simple unspoiled natural beauty of the undeveloped seascape. Informants expressed concerns about the disturbance to the monk seals from construction or from new landowners who have dogs.

Spiritual Resources – The Lāʻau area is generally regarded as a special place of spiritual mana and power. Community participants and key informants spoke of specific burials, fishing koʻa, and heiau. Such specific sites are documented and described in Section 4.1 (Archaeological Resources) of this EIS.

The overall general concern is that the development of the area will destroy the special quality of Lāʻau as a special place of spiritual mana and power. The overall spiritual quality of the Lāʻau area as a wahi pana and wahi kapu cannot be quantified and deserves recognition and respect.

Water – For many participants in the community meetings, water is the primary cultural resource. They feel that drawing brackish water out of the Kākalahale Well, as proposed by the project, will have a huge impact on the culture and way of life on Molokaʻi. They expressed concern that the additional water proposed to be drawn out of the Kākalahale Well, even if it is

brackish, will strain and diminish the water table on Molokaʻi, increasing salinity levels of ocean discharge and in neighboring wells. They refer to findings in the Waiola Well Water Use Permit contested case before the Hawaiʻi State Commission on Water Resource Management which examined the potential impacts of withdrawing groundwater and affecting shoreline seepage on nearshore marine resources makai of Kākalahale.

Hawaiian homesteaders, especially those with lots in Hoʻolehua, feel that the greatest cultural impact of the Lāʻau Point project is the MPL Water Plan (discussed in Section 6 of Appendix A and Section 4.9 of this EIS). They feel that the withdrawal of an additional 1,000,000 gallons per day of brackish water from the Kākalahale Well will take away water that the Department of Hawaiian Homelands (DHHL) will need to support future expansion of agriculture and residential lots on their Molokaʻi lands. Hawaiian homesteaders have the first preference for water from the Molokaʻi aquifer.

4.2.4 Cultural Assessment

The cultural impact assessment has been designed to fulfill the mandate to the Land Use Commission from the Hawaiʻi State Supreme Court in its ruling, *Ka Pa'akai O Ka 'Aina v. Land use Commission, State of Hawaiʻi.* 94 Haw. 31 (2000). The specific section of the ruling that served to guide the development of the report is as follows:

> *In order for the rights of native Hawaiians to be enforceable, an appropriate analytical framework for enforcement is needed. Such an analytical framework must endeavor to accommodate the competing interests of protecting native Hawaiian culture and rights on the one hand, and economic development and security, on the other.*

Those responsible for the future of the land and natural resources of Molokaʻi must weigh the cultural impacts and the benefits of the proposed development in consultation with the people of Molokaʻi who depend upon these resources for subsistence, cultural, and spiritual purposes. In particular, the kamaʻāina families who have lived in Maunaloa and the Kaluakoʻi ahupuaʻa for generations and the long time employees of Molokai Ranch and their relatives have been the primary users of these resources and will be the most directly affected by the proposed development.

In general, of those people that were interviewed for the cultural impact assessment and those who came to cultural assessment community meetings, many expressed reservations about the proposed development. There were no enthusiastic advocates and the most vocal were opposed to the development.

Interestingly, the Maunaloa community and longtime employees of Molokai Ranch, people who have the most direct and longtime experience with the project area, are concerned and reluctant about the development, but are more willing to acknowledge and support the right and the need of the Ranch to seek the development. They felt that the negative impacts could be managed if the development would conform to the strict covenants, conditions and restrictions outlined in the *Master Plan*. They are confident that their community can work together with the project's resource managers to provide stewardship over the marine resources that they rely upon for subsistence. They also felt that the negative impacts would be offset with the gifting of important legacy lands to the community. The Maunaloa kupuna felt that the overall *Master Plan*, of which

Lā‘au Point is a part, provides for the community to manage and monitor the proposed development.

In addition, many longtime adversaries of Molokai Ranch, who were involved in developing the *Master Plan*, were willing to allow the project to proceed under guidelines and conditions agreed to over the course of a two-year planning process. For them, it was a process of negotiating a lasting settlement of a thirty-year struggle with Molokai Ranch over extravagant development schemes and the extractive use of millions of gallons of water. The proposed Lā‘au development was difficult for some of them to accept and at that point some withdrew their support. However, the majority of the planning group persisted in their support for the overall *Master Plan* as a reasonable and balanced approach that empowers the community to manage premier Native Hawaiian legacy lands, control population growth and land speculation, and monitor the one last major development on Molokai Ranch lands. Moreover, the *Master Plan* revolves around the management of natural resources for subsistence, cultural, and spiritual purposes.

POTENTIAL IMPACTS AND MITIGATION MEASURES

There will be impacts from the Lā‘au Point project. The vacant Ranch land at Lā‘au Point will be developed into rural-residential lots. New residents at Lā‘au Point may not be originally from Moloka‘i and may not understand the Moloka‘i lifestyle and subsistence practices. New homes at Lā‘au Point will require water. Commercial hunting will close by the end of 2007, which will open areas on Molokai Ranch lands for subsistence hunting. Limiting access along the shoreline to foot access will open up access sufficiently that it might impact the resources, as the entry points through the proposed park sites located at each end of the project will be closer for those who now walk from Hale O Lono or Dixie Maru. If the access is easier, there will be more fishing and gathering.

To mitigate the overall impacts of the Lā‘au Point project, the *Master Plan* provides measures that set unique precedents. These precedents are related to community planning, the creation of a Land Trust for the community, the donation of legacy lands to the Land Trust, the donation of easements to the Land Trust, and the protection of subsistence fishing, gathering, and hunting. The *Master Plan* also provides for CC&Rs that Lā‘au Point homeowners will need to accept and agree to uphold in order to purchase a lot.

A total of 26,200 acres or 40 percent of Molokai Ranch lands will be donated to the Moloka‘i Land Trust, who 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.

The donated lands include premier Native Hawaiian legacy lands and contain many subsistence resources. The lands include:

- The ancient burial ground in the sand dunes at Kawa‘aloa Bay. This is one of the most famous and largest burial grounds in all of the islands. At one time, the Ranch allowed the mining of sand here and disturbed the burials. The Ranch also planned to develop a resort here. Now, these sacred grounds will be permanently protected under the Land Trust.

- Kaʻana, the birthplace of the hula, which originated on Molokaʻi and spread to other islands. This sacred site will never be destroyed or commercialized.
- Nāʻiwa, the only intact traditional makahiki grounds in the islands. This extensive area was once threatened by the development of a golf course. It will now be protected forever.
- Village sites at Kawakiu, which could be under threat from the current designation in the Molokaʻi Community Plan, will now be permanently protected.
- Burial mounds at Kawela, which at one time were threatened by development, will be protected under the Land Trust.
- Key subsistence fishing grounds from Keonelele to ʻĪlio Point and from Pālāʻau over to Hale O Lono, including Hālena and Kolo.
- The historic Pākaʻa house sites, upland sweet potato gardens, and connecting trails.
- Puʻu of Kaiaka, which was saved from development.
- Kamākaʻipō Gulch will be preserved.
- Cultural sites used for spiritual customs and practices such as fishing koʻa and heiau, as well as iwi kupuna or burials will be protected as discussed in the previous section on archaeological resources (Section 4.1).

Mitigation measures for impacts to subsistence activities include the recognition of Native Hawaiian subsistence rights, and protecting for the community, the hunting and fishing resources of the island. Under the *Master Plan*, MPL, Molokaʻi Land Trust, the homeowners, and the broader community will work together as follows:

- Seek to establish a subsistence fishing zone (see Appendix A, p. 59), which will not require special legislation to be enacted by the State legislature (as previously discussed in Section 2.3.7). The zone would encompass the areas stretching from the shoreline to the outer edge of the reef on the Southern coast, and where there is no reef on the western shoreline, out a quarter-mile from the shoreline along the 40-mile perimeter of MPL's coastline property. The subsistence fishing zone for Lāʻau would be modeled after the Hui Malama O Moʻomomi Subsistence Fishing Zone which has proven to be most successful in protecting the coastal resources at Moʻomomi. As with the Moʻomomi Community-Based Subsistence Fishing Management Area, the objectives are: 1) Regulate fishing activities that are incompatible with sustainable use of marine resources in the marine waters and submerged lands traditionally utilized for subsistence; 2) Prevent depletion of subsistence fishery resources by managing on the side of caution; 3) Maintain and restore customary fishery practices that are consistent with subsistence uses and values; 4) Establish a cooperative management system in which authority and responsibility are shared by the fishing community and the State of Hawaiʻi and there is a fusion of customary management practices with contemporary government regulations; 5) Train volunteer resource managers, recruited from the community, to monitor harvesting activities and resource conditions and assist the State of Hawaiʻi in enforcing regulations in the management area; 6) Design and implement an educational program to perpetuate subsistence fishing methods and values through initiation of novice fishermen of the young generations; 7) Integrate local knowledge of natural history and fishermen's experience with conventional scientific data collection to monitor and manage the fishery ("Proposal to Designate Moʻomomi Community-Based Subsistence Fishing Area," Northwest Coast of Molokaʻi, Hui Mālama O Moʻomomi, April 1995, p. 5).
- End commercial hunting (commercial leases expire 2007), and allowing only subsistence hunting on the property.

- Ensure access to the shoreline will be available only by foot.
- Establish demonstration fishing nurseries/kapu sites to insure reproduction of key subsistence food species (e.g. ‘opihi, moi, mullet, limu, lobster, ulua, uhu he‘e).
- Support protection for Penguin Banks from overfishing.
- Each year, an experienced Resource Group, comprising Maunaloa subsistence practitioners and the Land Trust will recommend open areas for subsistence fishing based on protecting and not depleting the resources.
- Those provided access to fish and gather once the community-based subsistence fishing management zone is established will be asked to take an educational course on traditional fishing methods, practices and conservation measures that will be offered by the resource managers, with guidance by the Maunaloa residents.
- Erect a fence to demarcate private property from public access area. All of the informants felt that it is important to have a clear physical demarcation, such as a log fence, running along the individual property lines to distinguish between private property and the public access area. By putting in a fence of some kind the public will know the boundary.
- Establish an access trail that would follow the contour of the old traditional trail as much as possible. Existing kiawe would serve as a buffer between the trail and the sand and ocean. This can help reduce impact of the trail on the beach and ocean. The trail will be unpaved and only for walking (no cars, ATVs, or bicycles). Because of community concerns about how kiawe drain water from this dry part of the island, selected pruning may be necessary to enable the re-establishment of native plants in the Conservation areas.

Regarding concerns to water, MPL is currently working with the Department of Hawaiian Homelands (DHHL), the County of Maui Department of Water Supply (DWS), and the US Geological Survey (USGS) to comprehensively evaluate Moloka‘i’s long-term water demands and resources. It is expected that many of Moloka‘i’s water issues will be addressed by a comprehensive modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL’s priority first rights to water. Further mitigation measures for potential water impacts are discussed in Section 4.9 of this EIS.

An overall concern is that the development of the area will destroy the special quality of Lā‘au as a special place of spiritual mana and power. The overall spiritual quality of the Lā‘au area as a wahi pana and wahi kapu cannot be quantified and deserves recognition and respect. The Lā‘au Point project will have an impact upon the solitude and spiritual resources now existing. That impact can be minimized, however, reinforcing the importance of having the homeowners learn from the Moloka‘i community about the area’s uniqueness. The *Master Plan* calls upon the leadership of the Moloka‘i Land Trust to bring various sectors of the community together in a working relationship to ensure the spiritual, physical, and natural resources of the area are properly cared for.

The intended locations of the house lots and protection of cultural sites will also serve to create a sense of respect for the area. For example, it is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low-density rural community. Homes will be sited appropriately to avoid a dense urban-like development. Further, with a projected average occupancy of approximately 30 percent (as discussed in Section 4.8.1 Population), there will be relatively few residents in the area.

The establishment of Cultural Protection Zones (as discussed in Sections 2.3.1 and 4.1) will protect the spiritual quality of important cultural complexes, such as at Kamāka‘ipō Gulch. Limiting access to a walking trail and providing a clear demarcation between the private lots and the general public access areas can help protect the integrity of the shoreline and mitigate the impact of the house lots.

4.3 TRAILS AND ACCESS

An essential aspect of Native Hawaiian cultural and subsistence practices are access routes to reach subsistence and cultural resources. Maps produced by M.D. Monsarrat for the Hawaiian Government Survey in 1886 and 1897 clearly show a trail going from Kapālauo‘a near Mo‘omomi to ‘Īlio Point and from ‘Īlio Point along the west coast to Lā‘au Point.

When the Cooke family owned Molokai Ranch until 1988, access to the west and south coastlines adjacent to Lā‘au Point was limited to the Cooke family and the Ranch stockholders. Ranch employees could go hunting and fishing on the whole West End under a pass system.

Currently, a subsistence committee comprising of senior Molokai Ranch employees, most of who are from the Maunaloa community, manages permitted access by Ranch employees. Guided access is also provided to hotel guests and guests of out-sourced commercial operators who offer a range of approved recreational activities on the Ranch. Employees and their families usually camp out on weekends. However, employees who are off on weekdays can go during the week, provided access at that time is approved by the employees’ committee. They are limited to two or three vehicles and ten adults. ATV’s and motorcycles are not allowed. Families can go only once a month to give everyone a chance. Gathering is allowed for parties, and there is a three-gallon limit on ‘opihi.

The Southwest Moloka‘i coastline offers a total of approximately 5.2 miles of shoreline from Hale O Lono Harbor to Kaupoa Beach. Stretches of white sand beach are broken by large, rocky outcroppings. The lava rock bluffs are generally steep and difficult to negotiate. The opening of public access to Hale O Lono Harbor increased access to the south shore out to Lā‘au Point – both by foot and by boat. While it is still a long walk from Hale O Lono along the south coastline to Lā‘au Point, it is closer than what it had been. Hale O Lono also provides a closer point for boats from Moloka‘i to launch and get to the fishing grounds and ‘opihi covered rocks of the south coastline.

The opening of Kaluako‘i and Pāpōhaku also afforded closer access points to the western coast south to Lā‘au Point – both by foot and by boat. Fishermen could begin at Kaunalu Bay or “Dixie” to walk south to Lā‘au. Boaters can launch from Kainalu Bay and an area off Kaluako‘i Resort.

Although the sandy beaches along Lā‘au Point are excellent for picnicking and beachcombing, the waters off the south and west shores are often unsuitable for recreational swimming due to the exposure to swift ocean currents. There are a few surf spots on both the south and west shores, identified in Appendix 8 of the *Master Plan* (provided in Appendix A of this EIS).

POTENTIAL IMPACTS AND MITIGATION MEASURES

MPL recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians. Project plans propose that Native Hawaiians and the general public will have Lā‘au Point shoreline access from two points – one on the south shore at the southeast entry and one on the west shore at the northwest entry. Vehicular access to the shoreline is restricted to the two public parks. Access beyond the two parks shall be by foot only. Vehicular access beyond the two parks is prohibited, except for emergency access. Off-road vehicles, ATVs, motorcycles and any other motorized vehicle are also specifically prohibited, except as needed by the Resource Managers.

In the process of developing the *Master Plan*, subsistence fishermen and gatherers were very concerned of marine resource depletion that could be caused by opening up the south and west shores to increase public access to every 1,500 feet, as the Maui County Code (MCC) Section 18.16.210 provides. The County of Maui requires rights-of-way to be created where land fronting the shoreline is subdivided. The County of Maui recommends the placement of 15-foot wide shoreline access rights-of-way every 1,500 feet, where possible. This standard would require 16 public access rights-of-way for the project. Using the standard application of the County requirements as described above would result in many access rights-of-way in locations where access to the shoreline would be difficult and dangerous, thereby making the beach access locations undesirable for most users. This access method would also not be conducive to protecting the coastal resources of the Lā‘au Point area.

Subsistence fishermen regretted that the opening of nearby Hale O Lono Harbor to general public access had severely decreased the marine resources there and they did not want to see the same happen to Lā‘au Point. Opening up access points every 1,500 feet would have severe impact on the subsistence resources along the west and south coasts adjacent to Lā‘au Point. The subsistence fishermen and gatherers felt that the provision of two access points and parking at either end of the project site would afford sufficient access, and that the need to walk in would protect the area.

As provided for in County regulations, the Director of Public Works, “may require that rights-of-way be consolidated to provide sufficient area for vehicular access, parking, development of shoreline or other recreational facilities, or other public purposes; or may modify the standard rights-of-way to take into consideration terrain features, length of frontage, uses of parcel to be subdivided and other pertinent features; provided, however, that the total area to be dedicated shall not differ substantially from that which would be required by the provision of standard rights-of-way, unless additional areas of improvement are mutually agreed to by the subdivider and Director” (MCC Sec. 18.16.210).

Increased public access to the shoreline and other cultural and coastal resources has the potential to damage the natural environment and diminish the uniqueness and cultural resources of the coast. As a result of the Master Plan process, the community decided that protection of the off-shore coastal resources at Lā‘au Point and the onshore cultural resources and subsistence practices would best be achieved by controlling access to the area so that the community can retain the area for subsistence gathering (see Appendix A, p. 105). Therefore, to protect the natural resources of the shoreline, manage subsistence activities, and protect cultural resources a Shoreline Access Management Plan (SAMP) has been developed with, and adopted by, the Moloka‘i Land Trust to regulate the use of the land and cultural and ocean resources to ensure

the continuance of the resources for future generations. The SAMP includes protocols, rules, and permitted activities for persons engaging in cultural activities and subsistence shoreline fishing and gathering in the shoreline area. It also contains provisions to protect the federally-listed endangered species in the area.

Appendix B contains the SAMP. In summary, the SAMP is a community-based and developed set of guidelines, rules, monitoring programs and general principals for the protection and utilization of the cultural, biological and social resources of Lā‘au Point. It will ensure protection of the area’s marine resources. The SAMP has been accepted by the Land Trust as an initial governing document based on current knowledge of the cultural, subsistence and biological resources of the site. From a social standpoint it is intended to foster a harmonious and respectful relationship between current users and subsistence practitioners of the area, Lā‘au Point homeowners, and new local users of the area. As previously mentioned, adherence to the SAMP is required by the CC&Rs.

Specific issues addressed by the SAMP include:

- **Hawaiian Monk Seal Protection** – The SAMP contains a plan and recommendations developed in consulation with NOAA. Elements of the plan and recommendations were taken directly from NOAA’s draft *Recovery Plan for the Hawaiian Monk Seal* (November 2006). The SAMP reiterates the rules required to ensure non-disturbance of Hawaiian monk seal habitat and the promotion of Lā‘au Point as an area for Hawaiian monk seals to frequent and “haul out.” A Resource Manager for the area will undertake the removal of debris and materials that may be harmful to Hawaiian monk seals. Strict rules have been developed on removal of gear, the use of certain types of gear, and responses to Hawaiian monk seal sightings. No domestic pets and animals (including hunting dogs) will be allowed in the managed area. The use of toxins and pesticides is specifically prohibited and equipment will be purchased for cordoning off areas where Hawaiian monk seals have come ashore. These measures are designed to ensure the health and safety of the Hawaiian monk seals. Additional provisions governing monitoring programs and education and outreach are also included.
- **Biological/Endangered Species Protection** – Similar to the Hawaiian monk seal requirements, rules for access and designation of closed areas are set forth in the SAMP. The Resource Manager will be responsible for monitoring the health of any significant organisms, designating closed areas, and enforcing regulations designed to protect the resource including fires and limitations on access to the area. A long term monitoring program will also be developed to adapt to changing circumstances and to measure the effectiveness of the program.
- **Subsistence Gathering** – A large part of the SAMP activity and requirements is dedicated to education to ensure that the area remains open for subsistence use and that new residents will honor the rights of local practitioners. Limitations on over-night camping and the prohibition of vehicles onto the area will limit the taking of resources to what can be carried out. Protocols for monitoring resources are included as well as the ability to designate seasonal and long term restrictions.
- **Cultural Resource Management** – The Preservation Plan attached to the EIS designates areas for protection and preservation of cultural resources. These measures are to be made a part of the SAMP and implemented by the Resource Manager. A large part of the SAMP’s protocols in this area also concern educational requirements. Concerns over continued access and desecration are mitigated by rules concerning who may access sites and when (by permission on notice), oversight (by a Resource Manager), the

development of a "Kahu council" and the designation of access areas and non-access areas. Movement or harm to cultural resources will be strictly prohibited with enforcement by the council. Commercial activities (tours) are specifically prohibited. The educational program includes awareness of the rights and sacred nature of the assets and the area.

- **Marine Resource Management** – Limitations on access (non-vehicular) and regular monitoring of the health of the resource are indicated in the SAMP. Water quality monitoring, as well as the health of the fishery and stock will be assessed regularly. A plan and program will be developed from this program by the Resource Manager to ensure the resource is protected.
- **Access and Over-utilization** – Community concerns over excessive utilization of an area that has been closed to the public are addressed by limiting access to the to the area to footpaths from the two parks at the ends of the project area, prohibiting access from the subdivision roadways and specifying closure periods for the Parks themselves. In this manner increased traffic into the area will be minimized. Enforcement is through the Resource Manager.
- **Monitoring and Resource Management** – The resources are to be monitored, as set out above, to ensure that the SAMP is effective and actually protecting and preserving the various resources. On site Resource Managers will monitor the situation daily and adjustments made to the rules and plan to ensure the goals of the SAMP are met. Enforcement of the rules by the Resource Managers will further serve to ensure the mitigation of any impacts on the area resources.
- **Education (Cultural and Environmental of Homeowners)** – All homeowners must undertake an education program. This program will be designed to create awareness and will mitigate cultural and social impacts as well as instruct and inform homeowners and users of the rules and requirements of the SAMP and the cultural and biological resources being protected. The educational program sets forth topic areas on Hawaiian culture and Molokaʻi social and cultural traditions to mitigate concerns that homeowners will not be sensitive to, or understand, the cultural environment they are entering. The program will explain rules on the handling of cultural and archaeological sites, their significance and use in the Hawaiian culture to prevent destruction and desecration and to provide recognition of the rights of families and practitioners to access the sites. Education on the social fabric of Molokaʻi is designed to inform homeowners of the subsistence lifestyle and traditional use of the area for hunting, fishing, and gathering and its importance to Molokaʻi's way of life. Training on the rules regarding Hawaiian monk seals and notice of the opportunity to volunteer in monitoring programs will be given to ensure adherence to the Hawaiian monk seal requirements. Similar instruction is required for biological assets to ensure their preservation. Additional training is to be provided to educate the homeowners on the rules and management policies regarding enforcement to ensure adherence to the SAMP guidelines and rules.

SAMP education will be conducted in a variety of forms - written, audio-visual and personal hands-on on-site orientations - and not be limited to any one form. The educational requirement will be mandatory. From a practical standpoint, it is recognized that short-term guests may not have the time to undertake the program. However, it can be assumed that the homeowners who have undertaken the program will inform and educate their guests.

Admittedly, educational classes for landowners, vacationing or permanent, are a new approach to a decades old problem of disconnect between new landowners from outside Hawai‘i and the local and Native Hawaiian communities.

We can only assume that educating new residents would have a better effect than if new residents were not educated at all. It is very likely that new buyers will be willing to attend classes to learn how to protect the environmental resources and Moloka‘i lifestyle and culture. This is already occurring, whereby relatively newer residents are participating in environmental advocacy and protection efforts.

Currently, MPL allows limited beach access for MPL employees and Maunaloa residents to the area projected for residential development. It is mandatory that employees and their guests view a conservation video in order to qualify for a beach pass. This system has worked well and received the cooperation of those who have used beach passes.

A timeline for completion of the required plans and management components of the SAMP can only be estimated. The SAMP requires the development of various mitigation and protection programs as well as the development of an educational program. Over the course of several months beginning in the fall of 2007 work will begin on creating the working programs required by the SAMP.

As discussed in Section 2.3.5 (Project Description), the Conservation District shoreline areas will be jointly controlled and managed by the Land Trust and HOA through a council made up of an even number of directors appointed by the HOA and a corresponding number appointed by the Land Trust (see Figure 13). All decisions regarding the management of the SAMP area, including fees charged to users (if any), restrictions on catch and general management, and protection of the areas biological and cultural resources, will be made by the Council. The SAMP will be incorporated by reference into the CC&Rs (adherence to which is made a Master Plan Covenant and unable to be changed), and homeowner orientation and education materials. Resource Managers hired by the Land Trust or security hired jointly with the HOA will enforce the agreed-upon SAMP.

Some community members have expressed concerns that subdivision lot owners and their friends will have preferential access to the coast. Their concern is that there will be nothing to stop the owners who live along the shoreline and their guests from walking down to the beach and even using a vehicle. To some community members, affording only two access points for the general public while owners in the subdivision will have access from their homes, seems unequal. Informants also expressed concern that landowners might call police if they see the general public walking on the beach, as this has happened at Pāpōhaku. To mitigate these concerns, all Lā‘au Point homeowners will be required to undergo an education program about the restrictions on access, its importance, and the requirements of the SAMP. Adherence to the SAMP is mandatory. In addition, the educational process, the lack of infrastructure and paths through to the shoreline, and the density of the foliage and rough terrain, acting as a practical and natural barrier, will support adherence to the SAMP and serve to limit widespread access to the shoreline.

Vehicular access in the Conservation District area will be prohibited. The SAMP, contains several clarifications of this policy: 1) vehicular access will be provided for emergency services; and 2) kupuna who are unable to access the area on their own, as well as the infirmed wishing to

access the site for cultural purposes, will be allowed assisted access in a form, including vehicular, at the discretion of the SAMP governing Council or its designee. Land alteration such as clearing and grading for vehicle trails will be prohibited and strictly enforced.

Participants in community meetings felt it was important to provide emergency access through the subdivision to the shoreline for emergencies. They were also concerned that access should be afforded for kupuna and persons with special needs. Some pointed out that the areas closest to the access points will be heavily impacted, while spreading out the access points might spread out the impact. It was also noted that the road down to Hale O Lono Harbor would need to be maintained in order to keep access to the area open.

Due to hazardous shoreline conditions toward Lā‘au Point (USA Lighthouse parcel), public access to these areas would be discouraged. Access would be restricted to experienced subsistence fishermen only. The lighthouse property is owned by the US Government and is under the jurisdiction of the US Coast Guard. The shoreline and ocean area around this parcel can be treacherous and is not advisable for inexperienced users. MPL recognizes that it cannot exercise control over or prevent access along the shoreline below the high water mark. The area controlled by the Land Trust and the HOA can be subject to conditions and rules of access. As the area near the lighthouse is hazardous, the conditions themselves will discourage inexperienced users. This could be supplemented by warning signs and educational materials.

Emergency access through the subdivision would be allowed. Emergency access for the project is further discussed in Section 4.11.3 of this EIS.

Land Trust Easement Over the Lā‘au Point Conservation District Lands

To ensure that the lands designated conservation within the project area (the expanded Conservation District lands of 434 acres) are kept in their current state and that the Land Trust will have the unquestionable right to co-manage this land for subsistence purposes, a “Conservation Easement” will be granted to the Land Trust.

MPL has been working with the Land Trust to develop the Conservation Easement documents. A draft of the Conservation Easement, currently under consideration by the Land Trust is contained in Appendix C).

The Conservation Easement will not only ensure the community’s continued use and access to the area in perpetuity, but will ensure that the Land Trust will, forever, have the right to co-manage the area’s resources. Subsistence gathering and cultural practices is a right granted to the community and guarded by the Land Trust as holder of the Conservation Easement. The Conservation Easement will provide the Land Trust, and hence the community, with the ability to protect the areas resources and maintain its character aesthetically and culturally.

The property to be protected and made subject to the Conservation Easement includes areas designated as Cultural Preservation Zones and Conservation District Lands. The Cultural Preservation Zone and Conservation District lands total approximately 434 acres in an expanded Conservation District area including *makai* portions of the proposed Lā‘au Point subdivision and various cultural sites and buffer zones.

The Conservation Easement, in essence, mirrors the provisions of the Shoreline Access Management Plan covering the expanded Conservation District that has been developed by the Land Trust and is included in as Appendix B.

Values Set Forth the Conservation Easement

The Conservation Easement is specific as to its purpose and intent. The elements and principles it seeks to “conserve” for the community include:

- Preserving Moloka‘i’s rural and agricultural character, including subsistence fishing and hunting;
- Recognizing the Lā‘au area is generally regarded by some as a special place of spiritual mana and power; the overall spiritual quality of the Lā‘au area as a *wahi pana* and *wahi kapu* cannot be quantified and deserves continued recognition and respect;
- Maintaining the wilderness feeling of the expanded Conservation District and mitigating the impacts to the scenic vistas from the shoreline of any proposed housing. The Lā‘au Point portions of the expanded Conservation District offers a total of approximately 5.2 miles of shoreline from Hale O Lono Harbor to Kaupoa Beach with stretches of white sand beach broken by large, rocky outcroppings. The south shore portions have three long, white sand beaches: Kanaluhaka Beach, Kapukuwahine Beach, and Kahalepohaku Beach. Kapukuwahine Beach is backed by a low sea cliff for the entire length of the beach; Kanaluhaka Beach and Kahalepohaku Beach are backed by small sand dunes and kiawe trees. The West shore has a rocky shoreline with scattered areas of sandy beach. A dense kiawe forest borders the sand dunes backing the shoreline:
- Retaining the expanded Conservation District substantially in its current open-space condition for subsistence, recreational, cultural and traditional purposes,
- Protecting and preserving culturally significant elements present on the property, including, but not limited to, heiau, stone walls, platforms and other archaeologically relevant structures by providing, in part, sizeable conservation zones and buffer areas to protect the cultural sites and shoreline areas;
- Providing for access cultural and subsistence purposes, including cultural practices hunting, fishing and subsistence gathering in the expanded Conservation District. Subsistence is defined and understood 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;
- Limiting access to the shoreline by foot trail only. Gates will be prohibited across roads and access roads. No street-facing walls or barriers may be higher than four feet;
- Barring further subdivision of lots;
- Developing subsistence fishing zones modeled after the Hui Malama O Mo’omomi Subsistence Fishing Zone and establishing demonstration fishing nurseries/ kapu sistes in insure reproduction of key subsistence food species (e.g., opihi, moi, mullet, limu, lobster, ulua, huh, he’e);
- Managing open space common areas to reduce and/or eliminate soil erosion by restoring vegetative cover; and
- Adhering and to and managing the lands in conjunction with the Lā‘au Point HOA pursuant to the terms and conditions contained in the Shoreline Access Management (SAMP) (See Appendix B for the text of the SAMP).

Key Protective Provisions of the Easement

Under the terms of the Conservation Easement the land will be protected from further development and subdivision. While the Homeowners will have continued access to the area, the community will also be guaranteed the same privilege.

While Homeowners have the right to use the area as any other member of the general public, no owner, at the time of subdivision or in the future, will be able to deny the community access to the area or undertake any activity that would be inconsistent with the conservation purposes set out above.

The Conservation Easement also states that the Land Trust will have the power to enforce the easement conditions outside of its rights under the CC&Rs and requires that the CC&Rs include provisions mandating adherence to the SAMP and recognition of the Land Trust's rights under the Conservation Easement.

4.4 ROADWAYS AND TRAFFIC

In the project vicinity of West Molokaʻi, the main roads are Maunaloa Highway and Kaluakoʻi Road; both two-lane, two-way roadways. Maunaloa Highway has an east-west orientation and Kaluakoʻi Road has a north-south orientation. The intersection of these two roads is an unsignalized, T-intersection. All approaches are one-lane. There are no separate turn lanes at any approach.

Traffic on these roads and intersections operate at a Level-of-service (LOS) "A," which represents free-flow conditions with no congestion. Traffic turning from Maunaloa Highway onto Kaluakoʻi Road and traffic turning onto Maunaloa Highway has a negligible impact on traffic operations along Maunaloa Highway.

There are currently no formal roads within the Lāʻau Point site. There are, however, various unpaved jeep trails that traverse the Lāʻau Point parcel. There is also a coral-based, unpaved State-owned road that abuts the southeast corner of the project site; this road connects Hale O Lono Harbor with Maunaloa Highway, but will not provide access to the Lāʻau Point project.

Appendix N of this EIS contains the Traffic Impact Assessment Report (TIAR) prepared by Phillip Rowell & Associates.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Primary access to the Lāʻau Point site will be from a new access road connecting from Kaluakoʻi Road. Future traffic growth for the region from Lāʻau Point and other projects within the vicinity were analyzed in the TIAR. The only other development project proposed between Lāʻau Point and Maunaloa Highway is the remaining build-out of the Kaluakoʻi Resort.

Although only 30 percent of the homes at Lāʻau Point are expected to be permanently occupied, the trip generation rates used in the TIAR are based on single-family housing units typical for a suburban subdivision with daily commuting. Therefore, the number of trips for Lāʻau Point may be overestimated.

Based on the trip generation data for single-family dwelling units, at full build-out the project would generate 40 inbound trips and 95 outbound trips during the morning peak hour and 95 inbound trips and 60 outbound trips during the afternoon peak hour. Based on findings of the Level of Service (LOS) analysis, traffic levels at the main intersection of Maunaloa Highway at Kaluakoʻi Road will operate at an acceptable LOS.

Relative to pedestrian and recreational activities along Kaluakoʻi Road, consideration will be given to providing sufficient shoulders along both sides that can be used by pedestrians and bicyclists.

The main access road and spur roads within Lāʻau Point will be designed and constructed in accordance with Maui County Subdivision Design Standards (MCC Section 18.16). All roads will be built to County minor road standards, which require 40-foot wide right-of-ways and 22-foot pavement widths. At full build-out, it is anticipated that all intersections within Lāʻau Point would operate at LOS "A;" therefore, signalization or separate turn lanes for project-generated traffic would not be required.

MPL will fund the construction costs of all Lāʻau Point roads which will be built using County standards. In a letter dated June 21, 2006, the Maui County Department of Public Works and Environmental Management stated: "We note that roads for the development will be built to County standards. We also note that access for these roads are from a private road. As such, the roads for the development shall remain under private ownership and maintenance."[4] After build-out, the roads will remain private, and the Lāʻau Point HOA will be responsible for maintenance. In addition, MPL will plan, design, and construct, at no cost to the State: 1) a left-turn deceleration lane and right-turn deceleration lane at the intersection of the proposed project access road (Kaluakoʻi Road) with Maunaloa Highway; and 2) highway improvements recommended as mitigation measures as required by the Highways Division.

Regarding an option of having the access road go directly from Maunaloa Town to Lāʻau Point, this alternative was rejected because the remaining parcel area mauka of the Lāʻau Point residential community will be open to subsistence hunting and the area is also designated for "Rural Landscape Reserve." An access road cutting through hunting lands would disrupt hunting there and spoil the landscape views from the Maunaloa Highway.

The old coastal jeep road will be abandoned due to its alignment through several archaeological sites and erosion-prone environments. Portions of the jeep road may be used to provide emergency access and subsistence foot trail access to the shoreline.

4.5 NOISE

The Lāʻau Point site is currently exposed to daytime ambient noise from wind, birds, the ocean, and occasional distant aircraft. Aircraft are routed over the northern portion of the project area to the Molokaʻi Airport. Aircraft are audible when they fly over. Flyovers, however, occur infrequently, only during daytime hours, and are not greater than 55 decibels (dBA).

Appendix O of this EIS contains the Noise Assessment Report prepared by D.L. Adams.

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[4] Letter included in Section 9.0 of this EIS.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential impacts to the acoustic environment of the site will primarily relate to short-term construction activity noise. The expected noise levels due to construction will largely be a function of the methods employed during the construction. Earthmoving equipment, for example, is expected to be the loudest equipment used during construction. However, given that the nearest residential property is more than a mile from the project site, there will be no noise impact due to construction-generated noise in the vicinity. Although there may be a noise impact for residences in the vicinity of access roads to the project site, a significant noise impact due to vehicular traffic in the surrounding area is not expected.

Construction activities will comply with Chapter 11-46, HAR (Community Noise Control). Proper mitigation measures will be employed to minimize construction-related noise and comply with all Federal and State noise control regulations. Increased noise activity due to construction will be limited to daytime hours and occur only during the construction period. Construction vehicles will also be equipped with mufflers.

Noise impacts in the long-term may include noise from stationary mechanical equipment (air conditioners, condensing units, compressors, etc.) that are typical for residential housing. Noise from this type of mechanical equipment must comply with Chapter 11-46, HAR, which stipulates maximum permissible noise for single-family homes at the property line to be 55 dBA during daytime hours and 45 dBA during nighttime hours. The CC&Rs will require noisy equipment to be located away from neighbors and other residences, as much as practical.

Vehicular traffic at Lāʻau Point is expected to be low in volume, and traveling at low speeds typical of a residential environment. Noise levels from Lāʻau Point vehicular traffic are predicted to be below the US Federal Highway Administration and Hawaiʻi Department of Transportation maximum noise limit of 67 dBA. Therefore, a significant noise impact is not expected.

Lāʻau Point is located well outside the airport's 55 dBA noise contour; therefore, significant noise impacts from aircrafts are not expected.

4.6 AIR QUALITY

The air quality in the Lāʻau Point region is believed to be relatively good. Periodically, air quality is affected by distant volcanic emissions (VOG).

Regional and local climate along with the amount and type of human activity generally dictate the air quality of a given location. The climate of the Lāʻau Point region is affected by its coastal location and nearby mountains. Winds are variable but are often trade winds from the north or northeast. Temperatures in the area are generally very consistent and moderate, with an average daily temperature of 75 ° F.

Both Federal and State standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated, which include: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone, and lead. State of Hawaiʻi air quality standards are more stringent than the comparable national standards, except for those pertaining to sulfur dioxide and particulate matter, which are equivalent.

Appendix P of this EIS contains the air quality study prepared by B.D. Neal & Associates.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Short-term Impacts – Construction of the Lāʻau Point community may result in short-term impacts on air quality either directly or indirectly as a consequence of construction (i.e., clearing and grading). The direct impacts may include fugitive dust from soil excavation, vehicle movement, and exhaust emissions from on-site construction equipment. Indirect short-term air quality impacts may result from disruption of traffic on nearby roadways from slow-moving construction equipment traveling to and from the project site, and from commuting construction workers. These potential air quality impacts, however, will be short-term, and it is anticipated that no State or Federal air quality standards will be violated during or after the construction of Lāʻau Point.

The State of Hawaiʻi Air Pollution Control Regulations prohibit visible emissions of fugitive dust from construction activities at the property line. All activities will comply with the provisions of Hawaiʻi Administrative Rules, §11-60.1-33 on Fugitive Dust. To control fugitive dust, a program will be implemented to keep bare-dirt surfaces in active construction areas from becoming significant sources of dust. An effective dust control plan will be prepared for the project construction phase, which may include the following:

- Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact.
- Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase.
- Minimizing dust form shoulders and access roads.
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.
- Controlling dust from debris being hauled away from the project site by having open-bodied trucks be covered at all times when in motion and transporting materials that create airborne dust.

Long-term Impacts – After the construction period, long-term air quality impacts generally come from motor vehicle exhausts. Traffic for Lāʻau Point will use Kaluakoʻi Road and several intersecting project access roads. Because traffic associated with the project is estimated to be less than 200 vehicles per hour at full build-out and all intersections in the vicinity will have very good level-of-service conditions, traffic-related long-term air quality impacts are not expected to be significant.

Long-term impacts from indirect emissions associated with electrical power and solid waste disposal is expected to be negligible as well.

4.7 SCENIC RESOURCES

The Lāʻau Point coastline offers a total of approximately 5.2 miles of shoreline from Hale O Lono Harbor to Kaupoa Beach. Stretches of white sand beach are broken by large, rocky outcroppings. Current access to Lāʻau Point and its scenic resources is via hiking along the shoreline, on very rough dirt roads over private Ranch lands, or by boat.

The South shore has three long, white-sand beaches: Kanaluhaka Beach, Kapukuwahine Beach, and Kahalepōhaku Beach. Kapukuwahine Beach is backed by a low sea cliff for the entire length of the beach. Kanaluhaka Beach and Kahalepōhaku Beach are backed by small sand dunes and kiawe trees.

The West shore has a rocky shoreline with scattered areas of sandy beach. A dense kiawe forest borders the sand dunes backing the shoreline.

Looking mauka from both shorelines, the dominant view of the project site is upward sloping land covered in dryland kiawe forest and brush.

Within the project site looking makai, the west shore lots have views of the ocean, shoreline, sunset, and distant O‘ahu vistas. South shore lots have views of the ocean, shoreline, and distant Lāna‘i vistas.

Figure 9 contains site photographs.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The existing landscape and views around Lā‘au Point will change with the creation of the rural-residential community. To mitigate visual impacts, the houselots, roadways, and infrastructure of the Lā‘au Point project will occupy only eight percent of the entire 6,348-acre Lā‘au parcel, protecting the majority of the land’s open space landscapes. It is also important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low-density rural character. Homes will be sited appropriately to blend into the landscape and avoid a dense urban-like setting.

To mitigate visual impacts for shoreline users and provide privacy for the homeowners, lot lines will be set back at least 250 feet from the designated shoreline or high water mark, creating a coastal conservation zone buffer. Using the current Conservation District boundary, which is approximately 150 to 200 feet inland from the shoreline, as a base, residential lot property lines for Lā‘au Point were determined to be at least 50 feet beyond the current Conservation District. In addition, makai residential lots along the Conservation District will have covenants requiring an additional 50-foot building setback from their lot line. These specified setbacks result in providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet.

To further mitigate minimize visual impacts, residential construction will be subject to stringent CC&Rs (as previously discussed in Section 2.3.6). The maximum buildable area will be 30 percent of the lot (e.g. two-acre Lot = +/-26,000 s.f. or about 1/2-acre). Buildings must maintain a low-profile rural character and respect the natural environment. Restrictions on building height (one-story, maximum 25 feet high), materials, colors, and style are important factors to blend homes into the environment. Figure 19 contains a setback and buffer zone analysis of a typical lot section.

In their July 5, 2006 letter, OHA stated: “Further consultation also may show that view planes must be preserved between existing heiau and other cultural sites.” The archaeological preservation plan provides for a buffer with a radius of nine meters to extend from burials and

heiau. In the case of koʻa shrines, an additional aspect of the buffer will be a requirement to keep an open view plane toward the ocean. In the case of the Mauka-Makai preserve at Kamākaʻipō, the entire area will be a buffer, so that the overall character of the cultural landscape will be preserved.

4.8 SOCIAL AND ECONOMIC CHARACTERISTICS

Appendix Q of this EIS contains the economic, fiscal impact, and marketing study prepared by Knowledge Based Consulting Group (KBCG). Appendix S of this EIS contains the social impact study prepared by Earthplan.

4.8.1 Population

Molokaʻi's population increased from 5,089 persons in 1970 to 7,257 persons in 2000, which represents an overall 43 percent increase. The rate of growth during this 30-year period was highest in the 1970s, when the population increased an average of 1.5 percent a year. Most of Molokaʻi's population growth occurred in East Molokaʻi in this 30-year period.

In contrast, West Molokaʻi's population decreased from 1970 to 1990 due to plantation closures, which resulted in former plantation employees leaving the area. Then, the area experienced a 1.7 annual growth rate in the 1990s due to growth in resort-related activities. In 2000, the West Molokaʻi population of 2,569 persons accounted for 35 percent of Molokaʻi's total resident population, mainly situated in Kaluakoʻi Resort and Maunaloa Village.

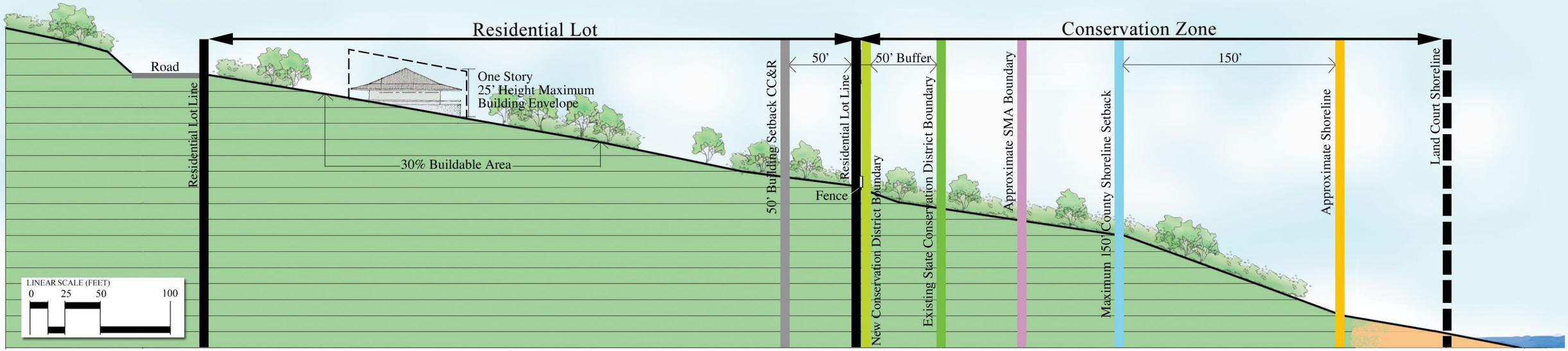
In addition to the resident population, 805 non-residents populate Molokaʻi on any given day (SMS 2002).

Currently, there are no residents living in the Lāʻau Point project site.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Maui County Planning Department developed a socio-economic forecast in preparation for the 2006 General Plan Update. The forecast serves as a planning tool to predict future growth scenarios, and is based on projections developed by the State Department of Business, Economic Development and Tourism. Population projections indicate that Molokaʻi's population will reach 7,276 in 2010 and 7,772 by 2020 (Maui County Data Book 2006).

Based on the demographic patterns at other seasonal communities in Hawaiʻi and what has been observed at Kaluakoʻi, it is expected that most Lāʻau Point residents will be empty nesters, and in pre-retirement or retirement. The average number of persons per household at Lāʻau Point is expected to be 2.9. At the end of the lot sales period in 2012, it is expected there will be 12 permanent residents at Lāʻau Point. At final build-out in 2023, preliminary estimates project that the population of Lāʻau Point will be approximately 174 permanent residents (persons staying at Lāʻau Point 180 or more days per year) and a maximum of 325 seasonal residents (KBCG 2006a). The term "seasonal resident" refers to persons living at Lāʻau Point less than 180 days per year. On average, seasonal residents are expected to occupy their homes from 60 to 90 days per year. This is expected to occur over 4 to 6 visits, generally around holidays and summer vacation times. Because Lāʻau Point homes will be individually owned (time-share or vacation



Legend

- Land Court Shoreline
- Approximate Shoreline
- Maxiumum 150 ft. County Shoreline Setback
- Approximate SMA Boundary
- State Conservation District Boundary (Existing)
- 50 ft. Minimum Lot Line Setback from Conservation District Boundary
- Residential Lot Line/New Conservation District Boundary
- 50 ft Building Setback from Oceanfront Lot Line

Figure 19
Conservation Zone Setbacks &
Buffer Zone Analysis - South Section

Lā'au Point

Island of Molokai

NORTH

PBR HAWAII

rental will be prohibited), the seasonal fluctuations that are common with tourist high/low seasons would not necessarily apply to Lāʻau Point.

At build-out, it is anticipated that permanent residents will occupy up to 60 of the homes (30 percent) and seasonal residents would occasionally occupy the remainder. Low occupancy rates would minimize the need for County services to residents and lessen any impacts of residential build-out on the character of the Molokaʻi coast.

4.8.2 Housing

Between 1970 and 2000, Molokaʻi's supply of housing units more than doubled, from 1,449 units in 1970 to 3,013 units in 2000. Most of this increase occurred in the 1970s, when housing units increased an average of 4.5 percent a year. Most of the increase in housing unit supply occurred in East Molokaʻi (Earthplan 2006).

West Molokaʻi's housing supply increased 75 percent from 669 units in 1970 to 1,170 units 2000. In 2000, the West Molokaʻi's housing supply accounted for 39 percent of the island's housing units (Earthplan 2006).

Although Molokaʻi does not have high-density resorts, it has seen strong growth in its real estate markets, particularly since the re-opening of the Kaluakoʻi Golf Course. Total real estate sales in Molokaʻi were about $83 million in 2005, up slightly from a record $79.8 million in 2004. In terms of units, the market is fairly evenly split between condominium resales (69), lot sales (106), and single-family residences (77). In terms of value, single-family residences represent $37.8 million, lots represent $27.4 million, and condominiums account for $18.0 million.

Lots are a major part of the Molokaʻi real estate market (40 percent of units and 35 percent of sales). The distribution of real estate sales on Molokaʻi is similar to that on the Big Island resorts, where lots are 45 percent of sales. The majority of Molokaʻi real estate buyers are from owners within the State of Hawaiʻi (KBCG 2006b).

Specifically, Kaluakoʻi had 65 sales or resales for $34.1 million in 2005. These included 32 condominiums ($9.3 million), 25 lots ($12.6 million), and 8 single-family residences ($12.2 million). Kaluakoʻi sales prices are substantially higher than elsewhere on Molokaʻi. The average price for a lot at Kaluakoʻi in 2005 was $503,000, compared to $182,000 elsewhere on the island. Single-family residence prices reflect this land value with the average price for a Kaluakoʻi single-family residence surpassing $1.5 million in 2005. The owners of Kaluakoʻi real estate reside in a wide geographic region, including other Hawaiian islands. The largest source market is California (37 percent), followed by Hawaiʻi (22 percent), and the Pacific Northwest and Alaska (15 percent). About 10 percent are Molokaʻi residents (KBCG 2006b).

There are currently no homes at Lāʻau Point.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Lāʻau Point project will add 200 single-family rural-residential lots to the island's housing inventory. Lāʻau Point will include low-density oceanfront and near ocean lots in a setting of seclusion and natural beauty. It will be a unique product in the state and should attract buyers who appreciate privacy, the natural values of the land, and the Molokaʻi community who are

primarily Native Hawaiian; rather than the resort environment prevalent on the more developed islands. Based on market data from comparable non resort settings, the limited availability of low-density oceanfront and near ocean property anywhere in the state, and the special conditions and requirements associated with ownership at Lāʻau Point, it is anticipated that annual demand for residential lots at Lāʻau Point will range from 35 to 45 lots a year (KBCG 2006a).

Following initial lot sales, the first houses are expected to be built around 2010 and residential construction should continue through 2023. Residential market values for the project will be $34.4 million in the first year of lot sales (2008) and increase to $211.9 million when lot sales are completed and the first 22 homes have been built (2012). From that point on, the residential values increase by about $16 million per year as additional residences are constructed for both seasonal and permanent residents. Upon the eventual build out of all residences by the end of 2023, the residential market value will increase to $352 million (KBCG 2006a).

The principal markets for Lāʻau Point include the opportunity to relocate existing Kaluakoʻi and Molokaʻi property owners (Local Transfer Market) as well as attract buyers who currently own property elsewhere in Hawaiʻi (Interisland Transfer Market) and bring in new buyers from qualified markets (Ongoing Market) outside of Hawaiʻi. Being able to successfully penetrate the transfer market will be a key factor in Lāʻau Point's initial success. The transfer demand, on its own, seems sufficient to support about three-quarters of the units that are planned be developed at Lāʻau Point (KBCG 2006b).

Property Taxes – There have been concerns raised regarding the potential impact of Lāʻau Point on increased property taxes for other Molokaʻi homeowners. The Hallstrom Group, Inc., examined potential increases to real property tax on existing properties in the areas of Maunaloa, Kualapuʻu, Kaunakakai, and beyond as a result of the Lāʻau Point project. Appendix R contains the Hallstrom Group's comments.

According to the Hallstrom Group (2006), assessments of existing property that is not adjacent (and thus not competing in the same market or market area), and/or that has different highest and best use potentials, will not be directly affected. This finding is based on analysis of paired assessment trends over time between expanding development and non-adjacent land holdings, an understanding of value trends and influences, and discussion with Maui County and Oʻahu tax offices concerning this specific matter. Of particular note has been the historic lack of "cause and effect" between changes in market prices in Kaluakoʻi and assessed values elsewhere on the island.

The Lāʻau Point project is physically separated from the rest of Molokaʻi by hundreds of acres of Ranch land, and will be a unique market unto itself. Secondary impacts, if any, might only be potentially possible among the makai portions of the Kaluakoʻi lots; however, even this inventory already has an established data set of its own comparable market activity. In addition, the 55,000+ acres of protective lands of the Land Trust and easements will isolate and distinguish Lāʻau Point from the rest of Molokaʻi. Changes in assessments are the result of comparable market transactions, fueled by new economic activity or a scarce amenity; Lāʻau Point is not a comparable to the existing real estate.

Only to the extent there is new worker in-migration to the island to support or sustain the development and its residents, could there be some modest indirect impact on selected real estate activity and prices. Offsetting this is the moratorium on further MPL land development as a

result of the Land Trust and easements, which will reinforce the status quo and limit further development.

Additionally, the land going into Land Trust donations and easements will remove those lands' potential for development, thereby lowering its market value. If a property's development rights are forfeited through a conservation easement, then the land's development potential no longer exists and the land's value may be lowered. This in turn lowers the property's taxes (source: Nature Conservancy and Land Trust Alliance).

Affordable Housing – The Lāʻau Point project will address affordable housing in the implementation of *Master Plan* (see Section 2.1.6). During the community planning process, the EC and other Molokaʻi community members involved in creating the *Master Plan* clearly indicated that "only Molokaʻi residents will decide future expansion of existing communities" (Appendix A, p. 5). Throughout the community planning process, the vesting of land back into community hands and ensuring the development returns (Lāʻau Point income) be shared by the community was part of a larger vision by the Molokaʻi community to plan and finance housing for themselves without the involvement of MPL.

The community process identified up to 100 acres around each of the towns of, Kualapuʻu and Maunaloa for the future development of "Ohana Neighborhood Communities" (i.e., affordable housing) to be developed by partnering various community resources such as Habitat for Humanities, Self-Help Housing, and others. As previously noted, approximately 1,100 acres will also be gifted to the Molokaʻi Community Development Corporation (CDC); a large portion of which can be used for affordable homes. As discussed in the *Master Plan*, the community desires a link between affordable housing and other community-facilities present at each of the three communities to insure that they be developed as balanced communities. The community also does not support a large affordable housing project in one area only (Appendix A, p. 69).

There will be a continuing need in the future for more housing for Molokaʻi families at affordable prices based on incomes. MPL, EC, and others in the community, such as Habitat for Humanity to name just one organization, can coordinate the planning and implementation of future affordable housing projects. MPL will put title restrictions on 100 acres around Kualapuʻu and Maunaloa to limit the development of these lands for future affordable housing projects. Although MPL will retain land ownership, affordable housing development decisions will be made by the community-represented CDC and not by MPL.

The economic value of the land donations, and the income from Lāʻau Point (estimated at more than $10 million from initial lots sales and an endowment from the income from subsequent lot and house sales), will enable the Molokaʻi CDC to plan, site, and construct affordable homes itself. Self-determination is a critical component behind the creation of the CDC and this *Master Plan* for development of affordable housing. Moreover, placing housing development in the hands of a community organization provides the opportunity for appropriate development timing, which is important in a slow-growing community like Molokaʻi. As stated in the *Master Plan*: "The growth of Kaunakakai, Kualapuʻu, and Maunaloa should be community-planned and should be allowed to happen naturally as community-driven demands require" (Appendix A, p. 67).

For the purposes of affordable housing, residency will be as specified under the County of Maui Residential Workforce Housing Policy, Chapter 2.96, MCC. Specifically, under Section 2.96.020, MCC, "Resident" means a person who meets one of the following criteria:

1. Currently employed in the County;
2. Retired from employment in the County, having worked in the County immediately prior to retirement;
3. A full-time student residing in the County;
4. A disabled person residing in the County who was employed in the County prior to becoming disabled;
5. The parent or guardian of a disabled person residing in the County;
6. A spouse or dependent of any such employee, retired person, student, or disabled person residing in the County; or
7. In the event of the death of the employee, retired person, student, or disabled person, the spouse or dependent of any such person residing in the County.

To satisfy the affordable housing requirements of Chapter 2.96, MCC, MPL will seek an adjustment as specified under Section 2.96.030(C)(1), MCC. The terms of the adjustment will specify the provisions discussed above.

4.8.3 Community Character

Molokaʻi is known as a place where the pace is slow, the land and style are rural, and Hawaiian culture and values form the foundation of all facets of island life. With not a single traffic signal, Molokaʻi has avoided the urbanization and mass development that has become evident on other islands.

Molokaʻi is still governed by the old ways of life. Many residents continue to nourish their family in the same vein as the early kānaka maoli; subsistence activities (hunting, gathering, fishing, and agriculture) play an important role to Molokaʻi's culture and lifestyle.

West Molokaʻi's plantation-agricultural history is still evident in the old plantation village of Maunaloa, which sits at 1,200-foot elevation overlooking countryside and the Pacific Ocean. Although many of the former plantation buildings have been converted to shops and modern-day uses, the old-style architecture has been retained.

Molokai Ranch is still a working cattle ranch with its paniolo heritage spanning generations. Visitors to Maunaloa can experience the paniolo and ranching lifestyle through various activities offered at the Lodge and Kaupoa Beach Village at Molokai Ranch.

During the Earthplan's research and meetings for the Social Impact Assessment (Appendix S), there was an underlying theme of a Molokaʻi identity. People often assessed activities behavior and attitudes based on whether or not it was reflective of a Molokaʻi value or behavior. There seemed to be a common understanding shared by residents of what constitutes a positive Molokaʻi identity, hereby referred to as "Molokaʻi style" and is summarized below:

- **Foundation of Hawaiian values.** ʻOhana, mālamaʻāina and alohaʻāina form the bases for the various facets of Molokaʻi Style.
- **Laid back.** A common attribute which reflects both attitude and behavior. Being laid back was described as being patient and accepting.

- **Social interaction.** Also common was a clear pattern of social interaction. People noted that, not only did "everyone know each other," they also took care of each other. It was noted that even though there may be controversy and conflict, "when push comes to shove," people will help each other. Homelessness is virtually non-existent because people look out for those in need. Molokaʻi Style also means respecting and accepting each other. It was noted that newcomers are welcomed and families stick together even though they may be on different sides of an issue.
- **Survival.** People were comfortable, if not dependent, on outdoor living, and the island's natural resources provide for subsistence living. It is expected that people take only what they need to maintain sustainability. Survival also depends on maintaining good relationships with each other. People trust and depend on each other and bartering and trading are still practiced.
- **Self-identity.** Knowing who you are and your inherent value, and not depending on class or status for identification. Molokaʻi Style is being comfortable with yourself regardless of your economic situation, and respecting others unconditionally. Hence, while those with low incomes should not be ashamed of being poor, the affluent should be satisfied with a modest house.

While Molokaʻi Style meant mostly positive attributes, there were also some characteristics that were considered negative, and it was feared that these are becoming increasingly evident. A common problem was the increasing antagonism associated with controversial matters. It was felt that Molokaʻi is becoming known for its controversy and confrontation and that this is not reflective of the "Friendly Isle."

Kūpuna noted they that did not teach people rudeness and name-calling and that this type of behavior is becoming more common at public meetings. It hurt them to see such behavior from their own Molokaʻi people. They and others felt that this confrontational attitude is intimidating and causes a loss of aloha, respect, and friendliness.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The social impact assessment (Earthplan 2006) found that a significant impact on the social environment is the embodiment of negative expectations related to Lāʻau Point residents and the public controversy. The heated nature of this controversy has a detrimental effect on the social environment. It causes social disharmony and stress. Kūpuna were concerned that this type of behavior was becoming more common. The mitigation to offset this already existing impact has been to give people the opportunity to learn about the Lāʻau Point project and the *Master Plan* in a non-confrontational setting so that they can make an informed decision on their own (see Section 2.4).

Social impacts of Lāʻau Point have been related to expectations and preconceptions of other social groups. There is a tendency to expect certain behavior and values of people who are different. Race and gender have culturally and historically been the bases for expectations. Economic class differences also elicit preconceptions, as do age, religion, politics, occupation and lifestyle. The bases for these expectations vary, including cultural mores, the media, experience, parents, authority, etc.

Part of the Lāʻau Point project's impact on Molokaʻi's social environment is therefore the expectation of conflicting behavior and values between the new Lāʻau Point residents and current Molokaʻi residents. These expectations create an atmosphere that awaits conflicts, an atmosphere of tension and apprehension.

This social impact is already occurring. In meetings and interviews for the social impact assessment, it was found that people have many expectations of the new residents, and these expectations are especially negative for those who oppose the project. People expect the new residents to have materialistic values and to look down on those who are poor. People expect the new residents to have little or no appreciation for Molokaʻi Style, including social behavior, subsistence gathering, and ocean recreation. The Lāʻau Point project has elicited passionate community discourse and created some community conflict between project opponents and proponents.

Interestingly, the Lāʻau Point project is not adding a new element (affluent people) to Molokaʻi's social environment. East Molokaʻi, in particular, has been experiencing affluent people buying homes. Interaction between existing residents and affluent newcomers is therefore already occurring. From accounts in interviews and meetings, Molokaʻi Style is still persistent and resilient in spite of these new residents (Earthplan 2006).

Regarding the issue of future growth and development, there was strong consensus that growth needs to be planned, slow, and controlled. Further, there was a sense of the "right type of growth." People wanted to make sure that new development would fit in. They were concerned that luxury housing would bring in millionaires, and generally assumed that these new residents would have values that conflict with Molokaʻi Style. It was felt that community character would be affected by having luxury homes and affluent residents, particularly if the homes and property fences are very visible or prominent, at Lāʻau Point. The juxtaposition of natural beauty and expensive homes would be offensive for those who resent the presence of outsiders or structural development. On the other hand, existing residents may appreciate the ability to visit Lāʻau Point, a previously inaccessible area, regardless of nearby uses.

The proposed Lāʻau rural residential development would potentially increase the Maunaloa population back to the level that it was before the pineapple plantation phased out. According to the 1970 census, Maunaloa was a bustling town of 872. At that time there was a full-service gas station, a large grocery store, a couple of restaurants, and a fully enrolled elementary school. The 2000 census reported the population of Maunaloa as 230. The gas station is only open for a few hours a day, the grocery store has a limited number of items and the only restaurant is part of the Molokai Ranch Lodge Hotel and the elementary is sparsely enrolled. Even with the development of the Kaluakoʻi Resort and subdivision in the 1970s and 80s, the overall population of West Molokaʻi only increased by 53 from 2,515 in 1970 to 2,568 in 2000. Rather than increasing traffic and the demand for limited parking spaces in Kaunakakai or lengthening lines in the Kaunakakai grocery stores, the proposed development could breathe new economic life to revive Maunaloa town and relieve the pressure on Kaunakakai.

In contrast to Maunaloa, the population of East Molokaʻi nearly doubled from 2,574 in 1970 to 4,688 in 2000. Molokaʻi families have been selling lands to persons from off-island, one-by-one, lot-by-lot. The cumulative impact of this unmanaged growth is that the prices of land, houses and the property taxes have risen beyond the reach of many of the upcoming generation raised on the island. Some of the newcomers are only seasonal residents, and rent out their homes as vacation

rentals when they are away, which has changed the close-knit quality of neighborhoods. The demographic changes already witnessed in East Molokaʻi have made the longtime residents of Molokaʻi fearful of the proposed development of 200 new lots potentially priced at $1 million or higher. These fears provide fertile ground for opponents of the *Master Plan* and their campaign against development on the south and west shores of the island. It is especially appealing to the younger generation who are too young to remember the level of the population, and related social and economic activity in Maunaloa town before the pineapple plantation closed.

To mitigate potential social conflicts due to economic disparities between the existing and new residents, there needs to be social integration on a regional level. Newcomers will be informed of and sensitized to local values and lifestyle through a CC&R requirement that they attend education classes that will be with kūpuna who would be working with the Land Trust. The Land Trust will further enlist the support of existing residents to help the new homeowners assimilate into the community through Hawaiian spiritual, cultural, and Molokaʻi lifestyle education. Sharing, not selling or commercializing, authentic Hawaiian culture will help integrate new residents to Molokaʻi Style. As previously stated in the *Master Plan*: "…subdivision development at Lāʻau Point will be set apart from typical subdivisions completed in Hawaiʻi…The aim is that people who buy lots in the subdivision will have to support conservation, cultural site protection, and subsistence" (Appendix A, pg. 99). The strict CC&Rs attached to Lāʻau Point ensure that new residents will have to adhere to values consistent with the Molokaʻi community. This scenario of mutual adjustment and acceptance is very likely, especially given the spiritual values and aloha that is characteristic of Molokaʻi Style.

Interactions between new Lāʻau Point residents and existing residents can be positive if both parties are respectful and appreciate each other's right to enjoy Lāʻau Point. It is crucial that existing residents feel welcome to use the public accesses and visit the shoreline. Expectation management will be incorporated in the resource management program orientation so that shoreline visitors are comfortable with the new development. Also, to the extent possible, structures will be setback 100 feet from the current Conservation District boundary line to limit visibility from the shoreline (see Section 4.7). This will mitigate the visual impacts for shoreline visitors and provide privacy for the homeowners.

The *Master Plan* embodies Molokaʻi style in several ways. Implementation of the *Master Plan* and the Lāʻau Point project will protect 55,000 acres from development, and allow for local control over land and other resources. It helps people survive by providing economic opportunities and provisions for affordable housing. The *Master Plan* promotes subsistence gathering and ensures the protection and preservation of large tracts of land. This will protect these lands from further development in perpetuity, thereby maintaining the rural open space character of the West End.

An important objective of the Lāʻau Point project is to retain Molokaʻi's rural island lifestyle. A key design element of Lāʻau Point was to keep the community on only eight percent of the Lāʻau parcel. This keeps the remainder of the Lāʻau's 6,348-acre TMK parcel in open space. Also, in designing Lāʻau Point, there were many conscious decisions regarding the strict CC&Rs to be attached to the community that would ensure Molokaʻi's rural lifestyle would be perpetuated.

4.8.4 Economy

According to the Molokaʻi Community Plan, limited economic opportunity is the most significant problem facing Molokaʻi, due to the limited availability of jobs. In the 1970s and 80s, the economy of Molokaʻi was devastated when two pineapple plantations closed down. Then, Kaluakoʻi Resort, Molokaʻi's only major resort, closed in 2000. Further negative economic impacts were caused by the bankruptcy of Coffees of Hawaiʻi and downsizing of the Molokaʻi's only hospital (EC 2006).

In 2005, Molokaʻi's labor force was 2,550 people, with non-agricultural jobs making up 1,900 jobs. Although the unemployment rate dropped from 13.3 percent in 2000 to 7.8 percent in 2005, Molokaʻi continues to have the highest jobless rate within the state historically (DLIR 2006).

Historically Molokaʻi has had decades of double digit unemployment up until the past few years. Although the unemployment rate was reported as 3.2 percent in December 2006[5], this figure may be deceptively low. A consultant for First Hawaiian Bank thinks it is just a matter of time before that number starts to creep up and a manager of the Workforce Development office of DLIR in Wailuku believes many Molokaʻi people have moved to Maui for work. Creating more jobs on Molokaʻi will prevent a large out-migration of Molokaʻi residents to other islands.

The primary industry on Molokaʻi today is government, yet the island's economy still depends on tourism and agriculture as economic sources. West Molokaʻi is a significant center for tourism and related recreational amenities. Molokai Ranch (MPL) operates the Lodge and Kaupoa Beach Village, which offers activities that introduce visitors to ranch life. Activities include mountain biking, horseback riding, hiking, and rodeo skills. MPL employs approximately 140 people and is the largest private employer on the island.

According to the Economic and Fiscal Impacts Report (Appendix Q), the net loss from MPL operations in 2001 to 2006 has been approximately $31.6 million. Whereas often painful cost cutting has reduced operating losses from $8.6 million in 2001 to a range of $3.6 to $3.8 million in the last three years, the increasing costs of water, energy, and insurance make it difficult to expect profitable operations in the future. In addition to operating losses, annual capital expenditures are another drain on cash flow, averaging over $800,000 per year over the past five years. Taken in total, MPL has subsidized the continuing operations and upkeep of Molokai Ranch to $4.7 million to $10.2 million per year. The cumulative subsidy over the past six years has been $36.9 million. The only way the company has survived fiscally in recent years has been to sell land.

Molokaʻi's visitor occupancies have been low for many years. In 2004, Molokaʻi had 72,099 visitors; lower than Lānaʻi's 73,388 visitors and Maui's 2,155,561 visitors. In 2004, 299 rental accommodations were available, with an average occupancy rate of 60.38 percent, and an average room rate of $107.28 per night. These figures are substantially lower than Maui's, which had an average occupancy rate of 78.69 percent, and an average room rate of $226.78 per night (Maui Couny Data Book 2005). Forecasts, however, show Molokaʻi visitor unit occupancy rising over time, in proportion to overall growth of Maui County's average visitor count (SMS 2002).

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[5] Source: Molokai Island Times, "Molokai jobless rate hits new low," January 31, 2007.

The *Molokaʻi Responsible Tourism Initiative Report* (2006) indicates: "Kaluakoʻi resort development is essential to the island's tourism economy" (p. 21). The study determined that for the re-opened Kaluakoʻi Resort to break even (60 percent occupancy), Molokaʻi would need an additional 56,000 visitor nights annually.

While the current amount of flights to Molokaʻi from Oʻahu and Maui do not provide the capacity to bring the number visitors needed to re-open the hotel and make it break even economically at 60 percent occupancy, discussions have been held with Island Air concerning future flights to Molokaʻi. Island Air has stated that the economics of the airline business prevent it from increasing capacity with no demand. However, capacity would definitely follow demand (the re-opening of the hotel) and the airline has stated it would be in its interests to meet this demand with additional airline capacity.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The *Master Plan* addresses MPL's operational cash deficit and assures an economic future for its employees. The Lāʻau Point project is crucial to the economic viability of the *Master Plan*. Lot sales will also fund an endowment to assist the CDC in carrying out its mission as discussed in Section 2.1.13.

Proceeds from the sale of the Lāʻau Point lots will fund the renovations and upgrading of the Kaluakoʻi Hotel and Golf Course. These facilities are crucial to revitalizing the Molokaʻi tourism economy and are projected to provide over 100 jobs for Molokaʻi residents. 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 also be created for the community. However, the direct impact of Lāʻau Point on tourism will be limited since no vacation rentals are allowed under the Lāʻau Point CC&Rs.

MPL is now totally managed on the island by members of the community, with many Native Hawaiians in key roles. Over the past five years there has been a conscious effort to promote local people into management positions within the Molokai Ranch Lodge and Beach Village. Local people, including a majority of Native Hawaiians, now hold all key management positions at the hotels and within the MPL management structure for maintenance and other on-island activities. Those individuals will form the core nucleus of the future management team in other MPL enterprises such as the Kaluakoʻi Hotel.

Regarding specific new jobs created by the Lāʻau Point project, these jobs will be a mix of construction, maintenance, and service jobs at prevailing wages. Some will be short-term, depending on the length of time for full build-out, and some will permanent and long-term. Many jobs will be contracted, therefore, for the contracted jobs during construction or after build-out, MLP will not be providing direct training and employment opportunities. Several positions also will be available for the operation and maintenance of the wastewater treatment plant. As mentioned above there will also be jobs re-created upon the re-opening of the Kaluakoʻi Hotel.

In addition, sales of the Lāʻau Point rural-residential lots will offset the value of donated land and potential "lost-opportunity cost" of developing land of more than $25 million.

The Lāʻau Point project will enhance the economic environment and stimulate economic diversification relative to the present unprofitable ranch operations. The Lāʻau Point project not only provides a financial return for MPL, but its implementation creates an economy on the West End that will give stimulus to MPL investments (the second largest employer on Molokaʻi) and to the town of Maunaloa. There will also be "spill over" effects on other businesses as well.

The Economic and Fiscal Impacts report (Appendix Q), summarizes the following economic benefits:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- $17.7 million in construction-related taxes.
- $1.3 million in annual real estate tax revenues at the end of the lot sales period in 2012; tax revenues will increase at a rate of $90,000 each year until it reaches $2.1 million at full build-out.
- Other County tax revenue (fuel tax, utility tax, license fee, permits, state/federal grants) will be $1.6 million at full build-out with an additional $30 million over the development period.
- Annual state revenues from taxes on residents and their expenditures of $276,000 at the end of lot sales in 2012; climbing to $1.3 million by 2023. A line-item breakdown of these state tax revenues is as follows:

	For 2012	For 2023
Excise Tax	$28,668	$240,000
Income Tax	$64,000	$960,000
Conveyance Taxes	$183,324	$106,205

  These revenues would continue on in subsequent years.
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Five percent of land sales going to support the Land Trust; this commitment will provide over $10.2 million (prior to the payment of any real estate commissions or other regulatory costs) for the preservation and enhancement of the dedicated lands.

A vibrant and busy West End greatly assists the West End economy by bringing more people to the area. The Lāʻau Point project will also generally stimulate the West End economy as follows:

- The additional West End visitor traffic will generate more revenues for the golf course as well as providing an economic stimulus to Maunaloa town through increased population.
- The new residents in Maunaloa and at Lāʻau Point will shop in Maunaloa and use the town's facilities as Maunaloa is the closest retail area to Kaluakoʻi and Lāʻau Point.
- The increased visitor count and new residents will add impetus to ancillary businesses such as its Village Grill, which was closed when the Kaluakoʻi Hotel shut down.

MPL's Financial Status – The Economics and Fiscal Impacts report indicates that between 2001 and 2006, MPL's net operating cash flow deficit was in excess of $36 million.

In the 2006/2007 year, MPL’s operating cash deficit without land sales, including capital expenditure and entitlement costs, was $4.6 million, making a total combined cash deficit for the seven years between 2001 and 2007 in excess of $41 million.

Details of the operational “cash-burn” by department are outlined in the Economic & Fiscal Impacts report (Appendix Q).

Until early 2003, MPL’s parent company, GuocoLeisure Limited was funding MPL’s operating losses through cash investments.

Between 2003 and 2007, MPL was able to sell enough land in order that it could fund its own operating cash requirements, capital needs, master planning, and entitlement costs.

GuocoLeisure Limited (MPL’s parent company) – GuocoLeisure Limited now has a policy of not funding its subsidiaries for operational needs. However, it has been made clear to MPL that, should it be necessary, GuocoLeisure Limited, has in the past and will continue to fund its subsidiaries for essential capital needs where projects meet return on investment criteria.

The Lā‘au Point project meets those criteria. Further information sought about MPL and GuocoLeisure’s return criteria cannot be supplied as it is commercially sensitive.

GuocoLeisure has the ability to fund the Lā‘au Point project development costs as set out in Section 2.5.

The audited financial statements for GuocoLeisure Limited, which indicates the company at June 30, 2007, had equity of $1,067 million are a clear indication of the parent company’s financial strength and ability to fund the Lā‘au project costs of $88 million, should that be required.

GuocoLeisure Limited is not willing to invest in the Kaluako‘i Hotel project without certainty that any funds invested will be covered by excess returns from the Lā‘au Point project.

While MPL is certain the Kaluako‘i Hotel will ultimately be profitable, and has produced internally-generated models to satisfy itself of this fact, the costs associated with its renovation, which are in excess of $30 million, do not meet its parent company returns criteria as a stand-alone investment.

Further information concerning the future profitability of the Kaluako‘i Hotel is commercially sensitive as the hotel business in Hawai‘i is fiercely competitive.

Investor Being Sought for Lā‘au Project and Kaluako‘i Hotel – It is still MPL’s intention to seek an investment partner for the Lā‘au Point project and other aspects of implementation of the *Master Plan*.

MPL has been in continual discussions with a number of potential investors concerning a partnership venture in: 1) the Lā‘au Point project; 2) the Lā‘au Point project and the renovation of the Kaluako‘i Hotel; and 3) an investment in the entire MPL property holdings. Those discussions are continuing.

In a similar manner to GuocoLeisure Limited, no investor has indicated a willingness to fund the renovation of the Kaluako‘i Hotel separate from the Lā‘au Point project.

The commercial nature of negotiations between MPL and the potential investors prevents disclosure of the entities interested in the investment options. All are US-based companies or individuals.

Returns for the Lā‘au Point Project – MPL supplies the following information concerning anticipated returns from the Lā‘au Point project:

- Anticipated revenue at an average sale price of $1 million per lot for 200 lots: $200 million.
- Discounts for early purchase or prompt payment (8 percent):$16 million.
- Selling commissions and other marketing costs: $20 million.
- Costs of implementing the 5 percent net revenue transfer to the Moloka‘i CDC: $8.2 million.
- Net Revenue: $155.8 million.
- Development costs (as per Section 2.5): $88 million.
- Contribution, pre-funding and pre-interest costs: $67.8 million.

4.9 WATER

4.9.1 Moloka‘i Hydrology

4.9.1.1 Moloka‘i’s Water Resources

Moloka‘i’s groundwater resources are of three types: Basal, perched, and dike-confined. Basal groundwater underlies most of the island, but its quality varies significantly from East to West Moloka‘i. Generally speaking, good quality potable water is found on the East end, somewhat brackish water is found in Central Moloka‘i, and completely brackish water is found on the West end. Perched water comes from percolating water that runs underground along ash beds and issues as springs. The perennial streams in East Moloka‘i are largely due to springs issuing from dike structures. Dike-confined water is also developed with tunnels or wells.

Virtually all of the stream flow on Moloka‘i originates in the East Moloka‘i Mountains, flows north and east to the ocean, and is characteristically flashy. In general, streams in the windward northeastern valleys of Moloka‘i are perennial throughout most of their lengths. Most of the streams that drain to the southern coast of East Moloka‘i are perennial only in the upper reaches where rainfall is persistent or where water is drained from marsh areas or springs. No measurable stream flow occurs in the arid and semi-arid Central and West Moloka‘i.

4.9.1.2 Explanation of Moloka‘i Aquifer Systems Geology

The State Commission on Water Resource Management (CWRM) has divided the island of Moloka‘i into 16 management areas or aquifer systems, primarily defined on the basis of geologic conditions and topographic divides. Each Aquifer has its own sustainable yield in millions of gallons per day. The aquifer systems, however, are not necessarily isolated from one another. Significantly, not enough information is presently available to accurately determine the extent to which the basal aquifers that are most important for the island’s domestic water supply

– Kualapuʻu, Kamiloloa, and Kewela – are hydrologically connected (See Aquifer Map in USGS 2007 study, Appendix T).

The Island of Molokaʻi is formed primarily by the extrusive shield- and postshield-stage lavas of the older West Molokaʻi Volcano and the younger East Molokaʻi Volcano, and secondarily by rejuvenated-stage volcanic rocks at Kalaupapa Peninsula. The central saddle area between the two volcanoes was formed by lava flows from East Molokaʻi Volcano banking up against and being deflected by the West Molokaʻi Volcano. The zone of weathered West Molokaʻi Volcanics and soil located beneath the contact of the West and East Molokaʻi Volcanics impedes ground-water flow between East and West Molokaʻi. This means that groundwater in the West Molokaʻi Volcanics is limited to the recharge of minimal local rainfall. As a result, groundwater throughout all of West Molokaʻi is too saline for irrigation or potable use without desalinization.

Although there are data gaps on hydrologic connectivity between aquifers on Molokaʻi, there is empirical evidence to conclude that the Kākalahale well site is hydro geologically isolated from existing and proposed well sites in the Kualapuʻu aquifer. When the Kākalahale Well was drilled and pump tested in 1969, the brackish quality of its water was not expected. The Kākalahale well site is situated downgradient of the Kākalahale Puʻu, which was formed by intrusive dikes which are barriers to groundwater flow. The poor quality of water from the Kākalahale Well is attributed to its location downgradient of these barriers.

Intrusive volcanic rocks include those rocks, such as dikes, that formed when magma cooled below the ground surface. Dikes associated with the rift zones of the West and East Molokaʻi volcanoes are the dominant intrusive rocks on Molokaʻi, and are most abundant within the central area of the rift zones. The rift zones are hydrologically important because dikes have low permeability and tend to impound ground water to high altitudes within inter-dike compartments.

The dike compartments in Waikolu Valley, from which the MIS system obtains its water, are isolated from the basal ground water bodies from which most of the domestic water on Molokaʻi is withdrawn.

The Punakou Aquifer – The Lāʻau project area overlies the Punakou aquifer. The aquifer has a developable sustainable yield of 2.0 mgd. There is however, little or no fresh water associated with the Punakou aquifer. Although MPL has not conducted any test drillings itself, public records indicate that Louisiana Land, its predecessor in ownership, conducted tests between the early 1970s and early 1990s.

Several wells and a number of test borings have been done in the Punakou and Kaluakoʻi aquifer immediately adjacent. The water in the aquifer has consistently shown up as being very brackish to near seawater salinity. In virtually all of the borings the water was also geothermally heated. Tests indicted that the water in the aquifer has salinity levels at 1/3 to 1/2 of seawater. Alpha USA reported similar results more recently. The water in the aquifer is not usable even for irrigation without desalinization.

The Kualapuʻu Aquifer – The Kualapuʻu Aquifer system, within the Central Aquifer Sector, is the furthest extension westward of potable groundwater. Much of the island's population is dependent upon this aquifer for drinking water. DHHL's water system relies on two wells (0801-01 and 0801-02) from which it is authorized to pump 0.367 mgd. In close proximity to DHHL's wells is the Maui DWS Well No. 0801-03, which has a water use permit for 0.516 mgd.

MPUI has a water use permit to pump 1.018 mgd from Well 17, which provides water to Kaluakoʻi.

The concentrated pumpage of the two DHHL wells and the County DWS well appear to be the cause of chloride rise in these wells. The DHHL and DWS wells are closely grouped and poorly located relative to each other. All three wells have upgradient/downgradient effects when the DWS well is running while one or the other of the DHHL wells is also operating. A 20 mg/L chloride rise—to levels of about 100 mg/L—in the DHHL wells was an almost immediate response to the start of pumping of the DWS Kualapuʻu well in 1991. Chloride levels appear to have been stabilized in all three wells at the higher level.

Well 17 has been in use from 1952 to the present. There has never been a chloride response in the DHHL wells since they began operating in 1961 and 1981 or in DWS well since it began operating in 1991 as a result of pumping the Well 17, even during periods of extended (continuous) pumpage of Well 17 at a 1750 gpm pumping rate (2.5 mgd). The fact that chloride levels for Well 17 have remained stable at about half (or less) the levels in the DHHL and DWS wells is further evidence that pumpage of Well 17 is not producing a chloride response in the DHHL/DWS wells, and vice versa.

The sustainable yield of the Kualapuʻu aquifer is 5 mgd. Existing allocations amount to 1.937 mgd. Most of the remainder of the available sustainable yield is reserved for future use by DHHL.

The Kamililoa Aquifer – The Kamiloloa Aquifer system, within the Southeast Aquifer sector, falls between Kaunakakai and Onini Gulches. More than two miles in from the coast a basal lens exists with water quality that ranges from brackish to fresh.

Current sustainable yield for the Kamiloloa Aquifer is 3 mgd. Water use permits totaling 0.211 mgd have been issued for this aquifer.

In 1998, the State Commission on Water Resource Management authorized Molokai Ranch to drill the Waiola well within the Kamiloloa aquifer and issued a water use permit for 0.656 mgd. The Hawaiʻi Supreme Court vacated the permit and remanded the case for further proceedings in 2004. To date, Molokai Ranch has not sought to re-open the case.

Downgradient from the proposed Waiola well site and from the Kualapuʻu well field where DHHL and the County have their wells, lies the Kākalahale Well. It was developed in 1969 as a drinking water well for the Kaluakoʻi Resort. However, due to the brackish quality of the water, the well was never put into production. Relative to its distance inland, chlorides of the Kākalahale Well are anomalously high. This anomaly is explained, however, by the presence of upgradient subsurface intrusives, i.e., the subsurface "plumbing" of Puʻu Kākalahale, which function as barriers to normal mauka-to-makai flow of groundwater. The upgradient intrusives, which create the brackish result in the Kākalahale Well, also function to limit the effect of pumping the Kākalahale Well on other wells upgradient of the intrusives, such as the DHHL and DWS wells in Kualapuʻu. MPL's Water Plan proposes utilizing 1 mgd of non-potable water from the Kākalahale Well to meet some of the non-potable water needs for La`au Point, Kaluakoʻi and other MPL developments.

4.9.2 Water Regulation

4.9.2.1 Molokaʻi's "Sole Source Aquifer" Designation

Molokaʻi has been designated a "Sole Source Aquifer" by the Federal Government pursuant to §1424(e) of the Safe Drinking Water Act of 1974. Under this federal program, designation as a "sole source aquifer" does not necessarily denote a hydrological determination. For purposes of the Sole Source Aquifer program, an "aquifer" may be a part of an aquifer, an entire aquifer, or an aquifer system. An aquifer system may be designated a "sole source aquifer" if all aquifers in the system are hydrogeologically connected. In Molokaʻi's case, the petition to designate the entire Island of Molokaʻi as a sole source aquifer was filed by Sarah Sykes in 1993. The petition acknowledged that aquifer boundaries are not known and proposed a "broad-brush agreement that there is basically only one hydrogeologically-linked aquifer underlying Molokaʻi." From a hydrologic perspective, however, it is clear that ground water in West Molokaʻi is relatively isolated from the basal aquifers in central and eastern Molokaʻi, and that the dike-impounded waters are isolated from the basal aquifers. Moreover, the State Commission on Water Resource Management, for its regulatory purposes, divides the Island of Molokaʻi into 16 aquifer systems.

The purpose of the Federal Sole Source Aquifer program is to protect ground water sources for drinking water purposes. The program is aimed at protecting water sources needed to supply 50 percent or more of the drinking water for an aquifer service area, where the volume of water which could be supplied by alternative sources is insufficient to replace the sole source aquifer should it become contaminated.

This program prohibits Federal financial assistance for projects that might contaminate an aquifer that has been designated by EPA as a sole or principal source of drinking water for an area. No Federal financial assistance is contemplated for any part of the Lāʻau Point project and therefore the Sole Source Aquifer program is not applicable to Lāʻau Point. However, in response to comments made, a discussion of the Sole Source Aquifer designation for the island of Molokaʻi is included here.

Proposed projects with Federal financial assistance that have the potential to contaminate sole source aquifers are subject to EPA review by a ground water specialist. Examples of projects that might be subject to review include highways, wastewater treatment facilities, construction projects that involve storm water disposal, public water supply wells and transmission line, agricultural projects that involve the management of animal waste, and projects funded through Community Block Grants. Project reviews can result in:

- EPA requirements for design improvements, ground water monitoring programs, maintenance and educational activities that would not otherwise occur; or
- District technical assistance, by identifying specific activities that may lead to ground water contamination. In addition, technical assistance usually involves site-specific coordination of ground water protection activities among State and local environmental and public health protection agencies.

To reiterate, no Federal financial assistance is contemplated for any part of the Lāʻau Point project and therefore the Sole Source Aquifer program is not applicable to Lāʻau Point.

4.9.2.2 Molokaʻi Designated a Ground Water Management Area

Criteria for designating a groundwater management area are set forth in HRS §174C-44. CWRM will designate a groundwater management area if:

1. Actual water use or "authorized planned use" will cause the maximum rate of withdrawal from that groundwater source to reach 90 percent of the sustainable yield;
2. The Department of Health determines that there is actual or threatened water quality degradation;
3. CWRM believes, based on evidence of excessively declining groundwater levels, that regulation is necessary to preserve the groundwater supply for the future;
4. Existing withdrawals of groundwater are endangering the stability or optimum development of the ground water body due to upconing or encroachment of salt water. Although the amount of water withdrawn may be well within the sustainable yields, the rates, times, spatial patterns, or depths of the withdrawals may nevertheless degrade the water source;
5. Chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses;
6. There is excessive and preventable waste occurring;
7. There are serious disputes about the use of groundwater resources; or
8. Water development projects that have received other governmental approvals would result in any of the above conditions.

The entire Island of Molokaʻi was designated as a groundwater management area for the reasons set out below:

Reasons for Designation as Ground Water Management Area – In 1992, the CWRM found that the authorized planned use (demand) for domestic/municipal water for the island of Molokaʻi was 4.35 mgd, which could be fully supplied by the Kualapuʻu aquifer or any other combination of sources. However, the demand for irrigation water in West and Central Molokaʻi exceeded 21.6 mgd. Although the sources of irrigation water were undetermined, the CWRM recognized that there would be strong pressures to develop the Kualapuʻu Aquifer to the maximum extent possible before pursuing alternative sources of water. This concern, and the existence of disputes regarding the use of ground water resources, especially from the Kualapuu aquifer, persuaded the CWRM to designate the entire island of Molokaʻi as a ground water management area.

There is no indication that current withdrawals are threatening the health of any of the aquifers. Rising salinity levels in some of the wells appear to be localized phenomena associated with particular wells and not an indication of general aquifer degradation.

The total sustainable yield for groundwater resources on Molokaʻi, which is established by CWRM, is 81 mgd. For planning purposes, the 1996 Molokaʻi Water Working Group used 33.5 mgd as the developable yield of potable water on the island. Of the 81 mgd, less than 10 mgd is currently used. Additionally, there are 36 perennial streams on Molokaʻi, but surface water usage on Molokaʻi amounts to an average of about 3 mgd.

4.9.3 Molokaʻi Water Working Group 1992 and 1996 report

The Molokaʻi Water Working Group was originally appointed in 1992 to: 1) recommend to the CWRM a plan for water development on Molokaʻi that assists the County and community in developing its Water Use and Development Plan; and 2) test a community "working group" model that could be used in other communities faced with tough water issues. The Working Group was asked to enter into good faith deliberations aimed at producing the highest consensus possible on demand forecasts, bulk water allocations, recommendations to manage both supply and demand, and the best plans on balancing future water uses.

In 1993, the Working Group presented a written report. A second Working Group revisited and updated the 1993 report and issued its final report in 1996. Findings of these reports include the following estimates of existing uses, future demands, and supply:

- 1996 groundwater permitted usage is 8,590,000 gpd.
- 1996 surface water reported usage is 2,960,000 gpd.
- DHHL has a groundwater reservation of 2,905,000 gpd from the Kualapuʻu aquifer system.
- 1993 projected potable water use for 2010 is estimated at 11,550,000 gpd.
- 1993 projected non-potable water use for 2010 to "build out" is estimated at 42,900,000 gpd.
- Current use (in 1996) plus 1993 projections of water use exceed supply.

From these findings, the Molokaʻi Water Working Group's 1996 report set forth a number of general and specific recommendations to water resources and each of the four aquifer sectors on the island. The Water Plan Analysis (Appendix U) includes an analysis of relevant Molokaʻi Working Group recommendations in relation to MPL's Water Plan.

In July 2007, at the request of Molokaʻi residents, the Water Commission reconvened the Molokaʻi Water Working Group because of the community focus arising from initiatives from MPL, DHHL, and the Maui County DWS. See Section 4.9.4 below for futher information.

4.9.3.1 The 1996 Water Working Group Projections of Water Use is Out-of-Date Under Master Plan

In considering available water supplies on Molokaʻi, the 1996 Water Working Group limited its analysis to groundwater. Although the island's ground water sustainable yield is 81 mgd (it was 83 mgd at the time the Water Working Group's report was written), the Water Working Group decided to work with a conservative 41.5 mgd of developable yield. Of that amount, 33.5 mgd was considered "sweet" or potable water.

On the demand side, the Water Working Group projected a 2010 potable water demand of 11.55 mgd. That included 2.14 mgd for the Kaluakoʻi Resort and 2.0 mgd for the Alpha USA property. Since the Water Working Group report, MPL acquired Kaluakoʻi Resort and the Alpha USA property. MPL's current projected potable water demand for all of its existing and future developments is less than 1.5 mgd, significantly less than the 4.14 mgd projected need for just the Kaluakoʻi Resort and Alpha property that was utilized in the Water Working Group's analysis.

The big gap between water supply and demand, however, is reflected in the Water Working Group's non-potable water use projections. Total projected long-term non-potable water demand amounted to 42.9 mgd. Included within this amount was 10.6 mgd for Molokai Ranch's agricultural activities. Existing agricultural activities on Ranch lands are supplied with irrigation water from the Ranch's mountain system, not from groundwater. There are no plans to convert these uses to groundwater sources. Additionally, the Water Working Group projected that 5.8 mgd of non-potable water would be required for Kaluakoʻi Resort and the Alpha USA property. Under MPL's current ownership, and as identified in the Water Plan for the EC/Community-Based Master Land Use Plan for Molokai Ranch, the total long-term demand for non-potable ground water will be less than 1.5 mgd.

In other words, the gap between water availability and water need as identified in the Water Working Group's Report is, under present conditions, overstated, and the conclusion that "projections of water use exceed supply" is probably inaccurate.

4.9.4 Water Working Group Task Force 2007

In July 2007, CWRM reconvened the Water Working Group on Molokaʻi. This followed three major planning efforts "which had brought the community to a renewed focus on water issues," according to the deputy-director Ken Kawahara. These planning efforts had been completed by MPL (The Community-Based Master Land Use Plan for Molokai Ranch), DHHL (The Molokaʻi Island Plan), and the County of Maui (initiating a Water Use and Development Plan).

As of December 2007, it was unclear as to the likely outcome of the Water Working Group's deliberations because of the political agenda of many of the members and polarization of the participants on many issues.

4.9.5 Existing Water Systems and Uses

The major water systems on Molokaʻi include: Department of Hawaiian Homelands (DHHL), Maui County Department of Water Supply (DWS), Molokaʻi Irrigation System (MIS), and private systems.

DHHL operates two wells (0801-01 and 0801-02) in Kualapuʻu with permitted withdrawals of 367,000 gallons per day (gpd). In addition, it and has a groundwater reservation of 2,905,000 gpd from the Kualapuʻu Aquifer System.

Maui County DWS has one well (0801-03) in close proximity to the DHHL wells, and has a permit to withdraw 516,000 gpd. Other County wells are in Kaunakakai and ʻUalapuʻe.

The MIS was planned, designed, and constructed under a special Act of Congress (Reclamation Act of 1954) to develop surface water and high-level groundwater (Wells 0855-01, -02, and -03) in Waikolu Valley in northeastern Molokaʻi to irrigate farmlands in central and western parts of the island. The MIS originally served large-scale pineapple operations, but was converted to serve diversified agriculture after the pineapple operations closed in the late 1970s. The system also serves the native Hawaiian homesteads in Hoʻolehua, and pursuant to HRS Section 168-4, Hawaiian homesteads have a prior right to two-thirds of the water currently developed by the MIS. The MIS transports 1,500,000 gpd via a 10-mile transmission link to an open reservoir at

Kualapuʻu, where it is stored prior to entering a distribution network extending from Hoʻolehua to Mahana.

When originally constructed, the MIS was administered by the State Board of Land and Natural Resources (BLNR). In 1975, the BLNR entered into an agreement (the Agreement) with Kaluakoʻi Corporation (Kaluakoʻi), renting "space" in the MIS for Kaluakoʻi to transport water from Well 17 to Mahana. The water is then treated to potable standards and used to supply potable water to Maunaloa town, the Pāpōhaku and Kaluakoʻi subdivisions, the Kaluakoʻi condominiums, and for other residential purposes as well as to meet the potable water needs of the resort areas on the West End. The MIS has subsequently been transferred to the department of Agriculture and MPL has become the successor in interest to the MIS Agreement with Kaluakoʻi (See Section 4.9.18).

4.9.6 MPL Systems and Uses

A map of MPL's Water sources and transmission is attached as Appendix V.

MPL operates three water systems that serve West Molokaʻi, two of which are subject to regulation by the Public Utilities Commission – Molokaʻi Public Utilities, Inc., and Waiola O Molokaʻi, Inc. All three systems, the third being Molokai Ranch Mountain System, are all subject to regulation by the State's Water Commission.

4.9.6.1 Kaluakoʻi or MPU System

The Kaluakoʻi System's source is Well 17 in Kualapuʻu, which has a water use allocation of 1,018,000 gpd. Water from Well 17 is transported via rental space in the Molokaʻi Irrigation System (MIS) to the Mahana pump station. The Kaluakoʻi System 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. The amount of water pumped into the MIS from Well 17 and the amount that is withdrawn at Mahana are metered; the meters at both ends are monitored by the DOA. Over the course of a year, this additional input amounts to about 30,000,000 gallons.

From Mahana, water is then pumped to a 7,000,000-gallon reservoir at Puʻu Nana for treatment. The treated water is then piped to a 3,000,000-gallon reservoir in Maunaloa and gravity-fed to Kaluakoʻi. The distribution system terminates approximately 9,000 feet north of the Lāʻau Point project site. With the Kaluakoʻi Hotel closed, current use of the Kaluakoʻi system is approximately 800,000 gpd.

Kaluakoʻi's use of the MIS to transport water from Well 17 to Mahana dates back to 1975. In September 2007, the DOA decided that continued use of the MIS to transport Well 17 water would be subject to the preparation of an environmental disclosure document pursuant to HRS Chapter 343 (See Section 4.9.18 for discussion of the MIS and Transmission).

4.9.6.2 Mountain Water System

The Molokai Ranch Mountain Water System is the initial ranch water system. It is over 100 years old and relies totally on surface water delivered by gravity, which makes it cheaper to deliver to customers. The Ranch system moves surface water approximately 20 miles from the central mountains of Molokaʻi to Puʻu Nana. The system relies on surface water diverted from

the upper Kawela and Kamakou watersheds, both of which are separate from and distantly removed from streams serving the Hālawa and Waialua taro activities. From Puʻu Nana, the water is either treated to potable quality for use in Maunaloa and the Industrial Park or untreated water is used in the Molokai Ranch irrigation system. In addition, the system provides water for landscaping at Maunaloa Village, the Molokai Lodge, Kaupoa Camp, and Molokai Ranch's livestock.

As with all surface systems, the mountain system's yield is highly weather-dependent. In winter storm months, flows of 1,200,000 gpd can be achieved, while in summer drought months, low yields of 65,000 gpd have occurred. The average yield of this system is 500,000 gpd. The system has a storage capacity of 39,000,000 gallons, which helps to compensate for the seasonal fluctuation in source.

4.9.7 MPL Water Permits

Below is a table of the various existing water use permits held by MPL or its subsidiaries:

Table 6. Water Use Permits

WUP NO.	APPROVED	PERMITTEE	WELL NO.	WELL NAME	WUP (mgd)	USE
617	12/19/2001	Kaluakoʻi Land, LLC	0901-01	Well #17	1.018	Molokaʻi Public Utilities, Inc., Well Municipal Use
604	03/14/1995	Molokai Ranch Ltd.	0706-03	Pālāʻau Salt	0.001	Aquaculture, Salt Water
607	11/17/1993	Molokai Ranch, Ltd.	0706-02	South Hoʻolehua	0.864	Aquaculture, Brackish Water

The Lāʻau Point site is currently undeveloped and is not yet serviced by any of the previously-mentioned water systems.

4.9.7.1 Tenure of MPL's Water Resource Permits

The water use permit for 1.018 mgd from Well 17 is on appeal to the Supreme Court. However, a permit issued by the CWRM is valid, even though appealed, unless and until it is vacated or revoked by the Court or CWRM.

The Hawaiʻi Supreme Court's decision in the Waiahole Ditch case cast a cloud over all of the interim in-stream flow standards adopted statewide. However, no petition has been filed to amend any of the interim in-stream flow standards adopted for any of the streams on Molokaʻi. It is unlikely therefore, that Molokai Ranch's ability to continue to divert water in its Mountain Water System is in any jeopardy.

MPL does not currently have a permit for the Kākalahale brackish well.

4.9.8 Current Issues and Future Needs

4.9.8.1 DHHL Molokaʻi Island Plan

In 2005, Group 70 completed the Molokaʻi Island Plan (MIP) for DHHL. The MIP planned future growth of DHHL residential, commercial, and agricultural uses over the next 20 years on DHHL properties throughout Molokaʻi.

Based on the MIP, DHHL asked its water consultants to study existing demand and the likely future demand at build-out, and whether there was adequate water reserved within its 2.905 mgd reservation within the Kualapuʻu Aquifer.

This build-out anticipated an additional 466 residential units at Hoʻolehua and 243 additional residential units at Kalamaʻula, in addition to 113 acres at Hoʻolehua and 89 acres at Kalamaʻula for future commercial and community use.

At a presentation to stakeholders and to its constituents in June 2007, DHHL stated that at build out under their MIP, it anticipated an additional 2,037,521 gpd of additional source would be required. This left a 698,900 gpd balance of DHHL's reserve remaining within its reservation within the Kualapuʻu Aquifer.

4.9.8.2 DHHL's Water Reservation and Future Water Needs

MPL Reiterates Support for DHHL's 2.905 mgd Kualapuʻu Aquifer Reservation; MPL Opposition to DHHL Well Permits in the 90s

MPL has stated and re-iterates that it supports DHHL's priority rights to water, including its 2.905 mgd reservation in the Kualapuʻu Aquifer.

Hawaiian Homesteaders have a priority right to two-thirds of the water developed in Phase I of the Molokaʻi Irrigation System (MIS), which is owned and operated by the State Department of Agriculture. Water for the MIS is developed from dike compartments in Waikolu Valley, which are isolated from the basal ground water bodies from which Well 17 and Kākalahale well water is or will be withdrawn.

DHHL has a reserved 2.905 mgd from the Kualapuʻu aquifer, the bulk of which is targeted for agricultural use. MPL's Water Plan (Chapter 6 of Appendix A) recognizes DHHL's future needs and MPL's water development plans will not interfere with DHHL's ability to develop its water reservation. MPL is currently working with DHHL, the County of Maui DWS, and USGS to comprehensively evaluate Molokaʻi's long-term water demands and resources. The goal is to appropriately locate wells and manage pumping such that all of the parties will be able, to the greatest extent possible, withdraw sufficient water to meet their needs.

When DHHL applied for a water use permit to increase pumpage from its Kualapuʻu wells in 1996, DHHL was a party in a contested case proceeding on Waiola o Molokaʻi's application for a new well and water use permit in the Kamiloloa aquifer. In the Waiola contested case, DHHL took the position that pumping 1.25 mgd from the proposed Waiola well, which was more than three miles away from the Kualapuʻu well field, would adversely affect existing pumping from the DHHL wells. According to DHHL, the transition zone was close to the bottom of its wells, thus the additional pumping by Waiola would result in an unacceptable increase in chloride

levels in the DHHL Kualapuʻu wells. At the same time, DHHL contradicted itself by filing an application to pump more out of its existing wells. Waiola/Molokai Ranch did not oppose DHHL's application, but sought to explore this contradiction through a contested case proceeding on DHHL's application.

DHHL did not receive a permit for additional pumping because the CWRM staff recommended that the application be denied because DHHL was proposing to increase pumpage from wells that were already showing indications of localized upconing due to the close proximity of the two DHHL wells and the County well. CWRM staff recommended that any increased withdrawals should be from new wells strategically located elsewhere in the Kualapuʻu aquifer so as not to interfere with water quality in the existing wells. DHHL proposed reducing the amount of increased pumpage, but was not willing to consider a new well site.

4.9.8.3 DHHL's Current Water Shortages

The shortage of water available to Hawaiian Homesteaders is not due to a scarcity of water resources on Molokaʻi. The total sustainable yield for groundwater resources on Molokaʻi is 81 mgd, according to the 1996 Water Working Group. For planning purposes, the Molokaʻi Water Working Group used 33.5 mgd as the developable yield of potable water on the island. Of the 81 mgd, less than 10 mgd is currently used. Additionally, there are 36 perennial streams on Molokaʻi, but surface water usage on Molokaʻi amounts to an average of about 3.0 mgd.

Since 1995, DHHL has had a reservation right to develop another 2.905 mgd of groundwater in the Kualapuʻu aquifer, which it has not yet tapped into. When DHHL requested its reservation of water in the Kualapu`u aquifer, it was anticipated that it would meet the domestic and agricultural water needs for DHHL lands in Hoʻolehua and Kalamaʻula. More recently, DHHL's Molokaʻi Island Plan indicated a foreseeable need for 2,037,521 gpd – 698,000 gpd less than its reservation amount. Additionally, Hawaiian Homesteaders have a priority right to two-thirds of the water developed by the Molokaʻi Irrigation System but present usage by Homesteaders is considerably lower.

The lack of infrastructure has hampered DHHL's ability to meet the demands of its homesteaders. In 1996, DHHL proposed to pump some of that reservation amount out of its existing wells in Kualapuʻu. Because there already were indications of localized upconing due to the close proximity of the two DHHL wells and the County well, CWRM staff recommended that any increased withdrawals should be from new wells strategically located elsewhere in the Kualapuʻu aquifer so as not to interfere with water quality in the existing wells. At the time, DHHL was not willing to consider a new well site.

To date, DHHL has not identified alternate well sites and thus, has not developed any of its 2.905 mgd water reservation.

4.9.8.4 DHHL's System Improvements

A major focus of DHHL's future plans will be to improve its storage capacity and infrastructure within its Molokaʻi water system and attempt to convert agricultural users from its system to intended MIS System use.

A DHHL water study completed in 2007 by its consultants showed that the homesteaders' use of DHHL potable water for agriculture also results in higher potable water demand and increases over-pumping of DHHL wells beyond the permitted allocation.

DHHL is also is committed to substantially improve its water losses, which were stated at the June 2007 presentation as being about 50 percent of the 357,000 gpd that it supplies to its users. DHHL has admitted that its current unaccounted water losses include theft of water from its system.

4.9.8.5 DHHL's Source Development Options

DHHL has a number of options to meet source requirements for full build-out under the Island Plan. At the June 2007 presentation, DHHL recommended reviewing the construction or operation of four new well sources itself, and at the same time exploring all other source opportunities on Molokaʻi, as follows:

- Develop New Sources. The required four new wells; source, transmission and infrastructure have a probable cost of $23 million, requiring $4 million to $6 million for well construction.
- Explore partnerships with Maui DWS to construct a new well on DHHL land, in place of current DWS plans for a well in the Manawainui Aquifer.
- Receive the excess capacity from MPL's Well 17. Well 17 is a proven water source that may yield up to an additional 500,000 gpd. If DHHL could utilize this source, it would mean no water development cost for DHHL. Countering this was the downside that there was no existing stand-by well for Well 17, and such as arrangement would require easements in DHHL land to the West End of the island.

4.9.8.6 DHHL Recommendations

DHHL recommended that validation tests of all wells in the Kualapuʻu Aquifer be undertaken to determine the safe pumping capacities of existing wells in order that the aquifer's integrity be protected.

POTENTIAL IMPACTS AND MITIGATION MEASURES

4.9.9 Prior Studies by USGS on the Capacity of the DHHL Wells and Results

There has been some mention of increased salinity levels in the DHHL Wells. Rising salinity was referred to in a previously released USGS study. The referenced changes in salinity appear to be related to local phenomena associated with particular wells and do not appear to be an indication of dangerously depleted resources.

The concentrated pumpage of the two DHHL wells (Well Nos. 0801-01 and 02) and the County DWS well (Well No. 0801-03) appear to be the cause of chloride rise in these wells. The DHHL and DWS wells are closely grouped and poorly located relative to each other. All three wells have upgradient/downgradient effects when the DWS well is running while one or the other of the DHHL wells is also operating. A 20 mg/L chloride rise—to levels of about 100 mg/L—in the DHHL wells was an almost immediate response to the start of pumping of the DWS

Kualapuʻu well in 1991. Chloride levels appear to have been stabilized in all three wells at the higher level.

Well 17 has been in use from 1952 to the present. There has never been a chloride response in the DHHL wells since they began operating in 1961 and 1981 or in DWS well since it began operating in 1991as a result of pumping the Well 17, even during periods of extended (continuous) pumpage of Well 17 at a 1750 gpm pumping rate (2.5 mgd). The fact that chloride levels for Well 17 have remained stable at about half (or less) the levels in the DHHL and DWS wells is further evidence that pumpage of Well 17 is not producing a chloride response in the DHHL/DWS wells, and vice versa.

Before the early 1980s, chloride concentrations of water pumped from the County's Kawela Shaft (Well No. 0457-01) ranged from 100 to 200 mg/L, and since 2002 chloride concentrations generally have been greater than 200 mg/L.

Before 2002, chloride concentrations of water pumped from the County's ʻUalapuʻe Shaft (Well No. 0449-01) generally were less than 70 mg/L. From 2003-2005, however, chloride levels exceeded 70 mg/L, reaching a high of 100 mg/L during 2004.

The rising chloride levels in Kawela Shaft and ʻUalapuʻe Shaft appear to be the result of localized phenomena, and the USGS and Maui County are exploring redistributing and increasing withdrawals to other locations, including locations within the Kawela and ʻUalapuʻe aquifers.

MPL is not aware that the MIS is experiencing chloride problems. The sources of water for the MIS are stream diversions and three production wells located in Waikolu Valley, which withdraw water from the dike complex in northeastern Molokaʻi. Unlike basal aquifers, fresh water in dike complexes do not overlie salt water.

4.9.10 MPL's Water Plan

More so than most other places in the state, Molokaʻi residents are keenly attuned to water issues. Significant segments of the population have long taken very active roles in issues relating to water planning, allocation, development and use. Molokaʻi is where the State Commission on Water Resource Management, in 1992, elected to inaugurate and test the concept of a community-based water working group for addressing local water issues. Abundant water resources are located on the north and east sides of the island of Molokaʻi, but very limited quantities of fresh water are available on the west, central, and south sides of the island where most of the current population resides, nearly all of the planned developments are to occur, and most of the agricultural lands are located. The relatively sparse population of the island and low level of economic activity add to the infrastructure challenges associated with the accessibility of water resources. Water, therefore, is, and will continue to be, of significant concern on Molokaʻi.

In conjunction with the participants who were involved in preparing the *Master Plan*, MPL developed a proposed Water Plan. A copy of the proposed Water Plan is provided as Chapter 6 in Appendix A.

A key feature of the Water Plan is that only existing sources, at currently permitted amounts, will be utilized to meet all of the potable water needs for the current customers of the three water

systems operated by MPL and MPL's future developments proposed under the Plan. These sources include the permitted 1,018,000 gpd from Well 17 in the Kualapuʻu Aquifer and surface water from the Molokai Ranch Mountain Water system which is treated to potable quality at the Puʻu Nana water treatment plant. The constructed, but currently unused, Kākalahale well in the Kamiloloa Aquifer is being proposed as a new non-potable water source. The Kākalahale Well was drilled in 1969 to provide drinking water to Kaluakoʻi. However, due to the brackish water quality, the well was never used as a production well.

The Water Plan also includes aggressive water conservation strategies for reducing demand and utilizing alternative sources of water. For example, when MPL acquired the Molokaʻi Public Utilities water system, inadequate maintenance had resulted in significant system losses amounting to approximately 200,000 gpd. MPL has already begun to implement system improvements and anticipates that system losses have been cut in half. An analysis of the Water Plan was prepared by Morihara Lau & Fong LLP and is provided as Appendix U of this EIS.

In the Water Plan, MPL proposes that water from Well 17 be used solely for potable water needs. Irrigation uses, currently permitted under the Well 17 permit, will be supplied from other sources. Under this plan, MPL will not need to seek any more potable water than what is currently developed. MPL will sign covenants preventing it from ever seeking further potable water permits from the CWRM, and will abandon the Waiola Well application.

The CWRM has permitted the use of 1.018 mgd from Well 17 for uses at Kaluakoʻi. More than half of that amount is for irrigation purposes. Under the Water Plan, the water pumped from Well 17, which is of drinking water quality, will not be used for irrigation purposes. Other sources of non-potable water, namely the Kākalahale Well, are intended to replace Well 17 water for irrigation.

The Kākalahale Well is an ideal source of non-potable water. The well is owned by MPL and already constructed (though not in production). More importantly, because the well site is hydro-geologically isolated by subsurface intrusive structures, withdrawing water from the Kākalahale Well is unlikely to have any adverse impact on existing wells in the Kualapuʻu aquifer, on DHHL's ability to withdraw its 2.905 mgd reservation amount from the Kualapuʻu aquifer, or the development of potable water in the Kamiloloa aquifer.

Until the alternate non-potable source is permitted, developed, and the infrastructure is in place to transport the water to Kaluakoʻi, Well 17 water will continue to be used for irrigation purposes. As the alternate non-potable source becomes available, the water from Well 17 that was used, or slated for use, for irrigation purposes will be available for drinking water needs.

MPL is currently working with the DHHL, the County of Maui DWS, the Army Corp. of Engineers and USGS to comprehensively evaluate Molokaʻi's long-term water demands and resources. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis (see Section 4.9.13). Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water.

According to the Water Plan Analysis, MPL's plans are reasonable and realistic, from a regulatory standpoint, because the Water Plan calls for: 1) significantly decreasing the current

use of safe drinking (potable) water for irrigation; 2) increasing efficiencies within existing systems; and 3) aggressive water conservation strategies.

Safe Drinking (Potable) Water – MPL plans to retain its current 1,500,000 gpd of safe drinking water: 1,018,000 gpd from Well 17 and 500,000 gpd of treated water from the Molokai Ranch Mountain System. Under the Water Plan, approximately 600,000 gpd of safe drinking water from Well 17 will be freed up from existing irrigation uses, leaving that amount available for safe drinking water needs associated with MPL's future developments of Lāʻau Point and Kaluakoʻi. Safe drinking (potable) water will not be used for irrigation.

For Lāʻau Point, safe drinking water demand is projected at 96,000 gpd at full build-out based on 600 gpd for 200 lots at 80 percent occupancy. An additional demand of 1,000 gpd of safe drinking is projected for the two parks within the project area. Modification of the uses of Well 17 (0901-01) to serve Lāʻau Point will require a modification of the water use permit.

The following Section 4.9.11 below indicates that even if the 200 lots each use 600 gpd, and not the 80 percent as projected, MPL's Water Plan still remains a valid document of future water demand.

Since 1975, the MIS has been utilized, pursuant to agreement with the State, to transport water from Well 17 to Mahana, where it is treated and then distributed to end users at Kaluakoʻi. MPL's plan was to extend this existing distribution infrastructure from Public Water System No. 231, Maunaloa-Kaluakoʻi, to service Lāʻau Point. This extension shall be approved by the Director of Health (HAR, Chapter 11-20, Rules Relating to Potable Water Systems, Section 11-20-30). When customer demand in Kaluakoʻi warrants, a looped connection from Maunaloa to Lāʻau Point is proposed to be added which will then supply Lāʻau Point and augment deliveries to Kaluakoʻi whose original infrastructure was not sufficiently sized to support full build-out of the area. MPL has also offered to make the excess safe drinking water capacity available from Well 17 for the use of communities outside its property.

4.9.10.1 Clarification that Water Plan Allows for Full Kaluakoʻi Build-Out

MPL's Water Plan projects long-term potable water needs of no more than 1.5 mgd. This includes, among other things, water for full build-out of the Kaluakoʻi residential properties. At full build-out, potable water requirements for Kaluakoʻi residential properties are expected to increase to 228,500 gpd from its current use of 77,500 gpd. Non-potable water needs for Kaluakoʻi residential properties are expected to increase from the current 143,825 gpd to 633,825 gpd at full build-out.

4.9.10.2 Further Subdivision of Lots

Issues have been raised as to whether MPL's water projections are adequate if lot owners further subdivide their lots at Kaluakoʻi.

To date only one lot owner has subdivided his property.

At a recent poll of West Molokaʻi Association members, more than 70 percent of those opposed further subdivision of lots, while a further 8 percent of lots owners were unable to be contacted to establish their view on the issue. This indicates there is major opposition to further

subdivision of lots and it is highly unlikely many lot owners will subdivide in the future, preferring the current situation where minimum lot sizes range between 5 acres and 40 acres.

MPL’s estimates also presume that every current lot will use their entire projected water allocation, which is unlikely to be the case as many lots will remain undeveloped as they were purchased as long-term investments for their owners and their descendents.

4.9.11 MPL’s Water Plan and the Lā‘au Point Project

MPL plans to have a dual water system at Lā‘au Point supplying separate potable and non-potable water.

4.9.11.1 Potable Water

MPL’s Water Plan indicates that 600 gallons per day be available for potable use for each lot.

Because we estimate, and it is confirmed by the Economics and Fiscal Report (Appendix Q) that only 35 percent of the houses, when built, will be occupied at any one time, MPL has estimated that the maximum number of houses using potable water at any one time will be 160 of the potential 200 houses, or 80 percent.

4.9.11.2 The Impact of 100 Percent of Lā‘au Point Homes Using 600 gpd

Under the Water Plan, MPL will have approximately 1.5 mgd of potable water: 1.018 mgd from Well 17 plus 500,000 gpd from the Mountain water system.

Total anticipated long-term potable water needs amounts to 1,089,520 gpd. This includes 96,000 gpd for the Lā‘au Point lots, which is based on 600 gpd for 200 lots at 80 percent occupancy.

If for some reason, all 200 lots require 600 gals per day for drinking water, then the additional potable water use per day is an additional 24,000 gallons, which can still be accommodated under MPL’s Water Plan.

If MPL were to increase the Lā‘au Point potable allocation to 100 percent (i.e. all 200 homes used 600 gpd), the amount would be 120,000 gpd, an increase of 24,000 gpd. That would raise the total long-term potable water needs to 1,113,520 gpd, which can still be accommodated with the 1.5 mgd available.

The estimated use of 600 gpd for each Lā‘au Point residence relates to potable water use only. This is the Maui County Department of Water Supply Water Demand Standard per residential unit.

There is no reason to assume that the homeowners at Lā‘au Point should be different from other domestic users throughout the county.

4.9.11.3 Non-Potable Water

MPL’s Water Plan projects non-potable water use at 1,500 gallons per day for each lot or a total of 300,000 gallons per day for the 200 lots.

In addition, the Water Plan allows for 40,000 gallons per day of non-potable water for the Lā‘au Point parks and 1,000 gallons per day or drinking water from water fountains in those parks.

MPL believes that the 1,500 gallons per day is more than adequate for irrigation uses, especially as agricultural activities will be prohibited on lots, and no more than 30 percent of each lot can be used for both a house and for gardens. Also the fact that residents will be required to store water from their roofs in a 5,000 gallon water tank, and use conservation measures as outlined below, will ensure the adequacy of the projections.

Initially, water for irrigation and fire protection will be provided from available mountain system water. Water for construction will be from available non-drinking (non-potable) water sources that will later be used for irrigation after build-out.

In the long-term, MPL’s water plan, calls for the project demands for water to be met from drawing 1,000,000 gpd of brackish water from the Kākalahale Well for future non-drinking water needs.

Of that amount, as has been indicated, 340,000 gpd is for the proposed Lā‘au development, 200,000 gpd is proposed for future expansion of Maunaloa and Kualapu‘u, and the balance is needed to address future demands from existing developed lots, the renovation of the Kaluako‘i Hotel, and existing Ranch uses.

4.9.11.4 Restricting the Water Use at Lā‘au Point

Conservation rates are but one means of moderating water consumption. Covenants attached to the Lā‘au lots will ensure conservation of water.

Residences at Lā‘au Point, unlike the existing Kaluako‘i residences, will be required to use a dual water system (potable and non-potable). Moreover, a number of covenants will be attached to the Lā‘au lots that will ensure further conservation of potable water. These covenants include:

- Restrictions on further subdivision of lots.
- Disturbance of lot limited to no more than 30 percent (approx. 1/2-acre)
- Restrict water use for irrigation (landscaping).
  - Require re-use and collection/storage systems for catchments.
  - Only drip systems permitted for irrigation.
- Require all houses to have at least a 5,000-gallon storage tank for water captured from roofs (could be used for irrigation).
- Covenants on drinking water use – designed to ensure an overall maximum drinking water daily use of 500-600 gpd.
  - Double flush toilets.
  - Specially designed shower heads for conservation.
  - Must use dual water system (potable and non-potable).

While the above conservation measures have not been precisely quantified, the restriction on drinking water use to a maximum of 500-600 gpd will ensure implementation of the above conservation measures and perhaps other measures to stay within the maximum daily drinking water limit.

4.9.11.5 Lāʻau Water Conservation

MPL will implement conservation measures recommended by the Maui County DWS such as: eliminating single-pass cooling, utilizing low-flow fixtures and devices, maintaining fixtures to prevent leaks, using climate-adapted plants, and preventing over-watering by automated systems.

MPL will also continue its own water conservation campaign to Kaluakoʻi residents and future Lāʻau Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates. MPL believes a combination of low occupancy, water conservation education, xeriscaping, and tiered water rates will moderate water consumption by Lāʻau Point homeowners. As previously discussed in Section 2.3.6, CC&Rs will require the following water-related protocol:

- **Landscaping and Irrigation.** Common area landscape irrigation systems will utilize re-use water (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip irrigation systems will be permitted for both common area and residential landscaping. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use.
- **Storage Tank.** All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.
- **Water covenants.** Requirement of a dual-water system split into safe drinking and non-drinking water; safe drinking water will be limited to 500-600 gpd. Homes will be required to use double flush toilets and specially-designed showerheads for water conservation.
- **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.

Although the Punakou aquifer is a non-potable aquifer, MPL will use Best Management Practices (BMPs) designed to minimize infiltration of the aquifer by contaminants and to minimize runoff so that water can be retained in the system for recharging the aquifer. In developing BMPs MPL will utilize "Source Water Protection Practices – Managing Storm Water Runoff of Prevent Contamination of Drinking Water."

4.9.12 The Kākalahale Well

The Kākalahale Well is an ideal source of non-potable water. The well is owned by MPL and already constructed (though not in production). More importantly, because the well site is hydro-geologically isolated by subsurface intrusive structures, withdrawing water from the Kākalahale Well is unlikely to have any adverse impact on existing wells in the Kualapuʻu aquifer, on DHHL's ability to withdraw its 2.905 mgd reservation amount from the Kualapuʻu aquifer, or the development of potable water in the Kamiloloa aquifer.

The Kākalahale Well sits at elevation 980 feet, and was drilled in 1969 to provide drinking water to Kaluakoʻi. However, due to the brackish water quality, the well was never used as a production well.

Under the *Master Plan*, MPL needs a total of 1,000,000 gals per day to meet the needs of community expansion (such as future affordable housing projects in Maunaloa and Kualapuʻu, build out of the Industrial Park, etc.), and the needs of the Lāʻau Point development.

A total of only 40 percent of the 1,000,000 gals from Kākalahale that MPL is requesting will be effectively allocated for Lāʻau Point residential uses. This is, as outlined in the Water Plan contained within the *Master Plan*, after MPL reallocates some current potable water (being used for non-potable uses) to future potable uses and uses non-potable Kākalahale water for non-potable uses throughout the property.

In July 2006, MPL presented the following table (Table 7) at community meetings throughout Molokaʻi on its Water Plan under the heading: "Where will the 1,000,000 gallons of water go that MPL is requesting?" The table below reflects potable and non-potable uses of water that are either taken directly from the Kākalahale source or are taken from potable sources as a result of non-potable water being utilized for things that are currently potable (or would otherwise be potable without the addition of the Kākalahale well) in other areas. In effect this shows the application of the Kākalahale water although some of the uses in the table are labeled as potable.

Table 7. Proposed Use of Kākalahale Well

For Non-Lāʻau Point Residential uses (60 percent):	
Build-out of Maunaloa Village and the Industrial Park:	160,500 gpd
Build-out of Kaluakoʻi residential	158,000 gpd
Community Directed growth at Maunaloa/ Kualapuʻu	200,000 gpd
Ranch Operations	41,500 gpd
Total	**560,000 gpd**
Lāʻau Point Public Parks Irrigation	40,000 gpd
Lāʻau Point Public Parks potable water	1,000 gpd
Total Lāʻau potable water	**41,000 gpd**
For Lāʻau Point Residential uses (40 percent):	
Lāʻau Point Rural Lots potable water	96,000 gpd
Lāʻau Point Rural Lot Irrigation	300,000 gpd
Total	**396,000 gpd**
Total New Uses Shown	**997,000 gpd**

MPL has asserted that the Lāʻau Point development is not contingent on the Kākalahale Well. However, it is the most efficient and cost-effective source of non-potable water and MPL does not believe its use to the levels proposed will significantly impact other wells or DHHL's 2.905 million gallon reservation in the Kualapuʻu Aquifer.

In the event Kākalahale Well water is not available, there are alternative sources of non-potable water (see Section 4.9.21). Reclaimed water from the Pālāʻau Shrimp Farm could be treated to make it suitable for irrigation purposes. Additionally, desalinization of either brackish water from West Molokaʻi aquifers or sea water, are alternative sources of irrigation water.

4.9.12.1 Salinity and Impacts on Use

Water from Kākalahale Well is considered "slightly brackish" with chloride levels of approximately 400 mg/L. In contrast, seawater is about 19,500 mg/L, and the County's Kawela Shaft (a drinking water source) has chlorides of about 200 mg/L.

Types of crops that could be irrigated with water of these chloride levels include: asparagus, date palm, sugar beet, alfalfa, broad bean, onion, turnip, cabbage, lettuce, carrot (source: CTAHR <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/pnm17.pdf>).

4.9.12.2 Impact on the Aquifers of Pumping Water from Kākalahale

It is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will have any measurable impact on the existing DHHL and DWS wells in Kualapuʻu for several reasons. First, the Kākalahale Well is down- and across-gradient from the DHHL and DWS wells. Second, the Kākalahale Well is approximately 12,200 feet (2.31 miles) away from the DHHL and DWS wells; at that distance, it is unlikely that pumping 1.0 mgd will create a measurable effect. Third, there are known subsurface intrusives between the Kākalahale and DHHL/DWS well sites, namely Puʻu Kākalahale and Puʻu Luahine, which are barriers to ground water flow.

The Kākalahale Well was developed in 1969 as a drinking water well for the Kaluakoʻi Resort. However, due to the brackish quality of the water, the well was never put into production. Relative to its distance inland, chlorides of the Kākalahale Well are anomalously high. This anomaly is explained, however, by the presence of upgradient subsurface intrusives, i.e., the subsurface "plumbing" of Puʻu Kākalahale, which function as barriers to normal mauka-to-makai flow of groundwater. The upgradient intrusives, which create the brackish result in the Kākalahale Well, also function to limit the effect of pumping the Kākalahale Well on other wells upgradient of the intrusives, such as the DHHL and DWS wells in Kualapuʻu.

Recent USGS studies have modeled the impacts of various proposed wells, including the Kākalahale Well on the Aquifer and the ability of DHHL to access its reservation. These studies are summarized in section below. The studies generally indicate that there will be no adverse impact on existing wells in the Kualapu'u aquifer by pumping 1.0 mgd out of the Kākalahale Well.

It is also highly unlikely that withdrawing 1.0 mgd from Kākalahale Well will adversely impact DHHL's ability to develop its water reservation in Kualapuʻu Aquifer.

For DHHL to develop its 2.905 mgd reservation in the Kualapuʻu aquifer, new and appropriately spaced wells east of the existing DHHL/DWS well field will be required. All of these new wells will be upgradient of the known subsurface intrusives, Puʻu Kākalahale and Puʻu Luahine. These subsurface intrusives create a barrier to groundwater flow, benefiting wells that are upgradient of the intrusives and adversely impacting the wells downgradient of the intrusives. They also limit the impact that wells on one side of the intrusives have on wells on the other side of the intrusives.

The Kākalahale Well will be down- and across-gradient, and on the downstream side of known intervening intrusive structures, from any wells that DHHL is likely to develop to access any part

of its 2.905 mgd reservation. Therefore, an adverse impact on future DHHL wells is highly unlikely.

MPL is keenly aware that water is Molokaʻi's most precious resource, and therefore, has incorporated into its plans, water system improvements to increase efficiencies and decrease system losses and aggressive water conservation strategies to minimize water demands.

4.9.12.3 Impact of Kākalahale Well on the Aquifer

For many participants in the community meetings, water is the primary cultural resource. They feel that drawing brackish water out of the Kākalahale Well will have a huge impact on the culture and way of life on Molokaʻi. They expressed concern that the additional water proposed to be drawn out of the Kākalahale Well, even if it is brackish, will strain and diminish the water table on Molokaʻi, increasing salinity levels of ocean discharge and in neighboring wells. They refer to findings in the Waiola Well Water Use Permit contested case before the Hawaiʻi State Commission on Water Resource Management which examined the potential impacts of withdrawing groundwater and affecting shoreline seepage on near shore marine resources makai of Kākalahale.

Hawaiian homesteaders, especially those with lots in Hoʻolehua, feel that the greatest cultural impact of the Lāʻau Point project is the MPL Water Plan (discussed in Section 6 of Appendix A and Section 4.9 of this EIS). They feel that the withdrawal of an additional 1,000,000 gallons per day of brackish water from the Kākalahale Well will take away water that DHHL will need to support future expansion of agriculture and residential lots on their Molokaʻi lands.

MPL unquestionably supports the reservation of 2.9 million gallons reserved in the Kualapuʻu aquifer for Hawaiian homestead users. A recent study by DHHL's consultants indicates that even after building out both Hoʻolehua and Kalamaʻula under DHHL's Molokaʻi Island Plan, there will still be 698,900 gpd in the Kualapuʻu Aquifer reserved for DHHL. This gives confidence that DHHL's future water needs are well protected. The recent two-dimensional modeling completed by USGS as part of the Kaunakakai Stream Ecosystem Restoration Project, gives additional confidence that the Kākalahale Well will have minimal impact on DHHL's existing wells. Further, the hydrogeological isolation of the Kākalahale well site protects DHHL's ability to access its reservation amount from the Kualapu`u aquifer.

MPL has long acknowledged publicly that its water use would yield to DHHL's priority reservation rights to water. Further mitigation measures for potential water impacts are discussed in Section 4.9 of this EIS.

4.9.12.4 Analysis of Impacts and Alternatives to the Kākalahale Well

MPL is actively working with DHHL, the County of Maui DWS, the Army Corp. of Engineers and the US Geological Survey to comprehensively evaluate and seek a solution to Molokaʻi's cumulative water demands and resources. The goal is to appropriately locate wells and manage pumping such that all of the parties will be able, to the greatest extent possible, withdraw sufficient water to meet their needs. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. The specifics of the water resource issues and modeling analysis are currently being identified by DHHL, Maui DWS, MPL, the CWRM, and other homeowner associations and the study is likely to commence later in 2007.

MPL is participating in these studies and cooperative efforts notwithstanding the fact that it is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will diminish the other parties' ability to develop the water they need, or, conversely, that water withdrawals by others will impact MPL's ability to withdraw 1.0 mgd from the Kākalahale Well.

In the event Kākalahale Well water is not available, however, there are alternative sources of non-potable water. Reclaimed water from the Pālāʻau Shrimp Farm could be treated to make it suitable for irrigation purposes. Additionally, desalinization of either brackish water from West Molokaʻi aquifers or sea water are alternative sources of irrigation water.

Therefore, the currently unresolved issue of water should not forestall proceeding with required approvals for the Lāʻau Point project because:

1. It is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will diminish other parties' ability to develop the water they need, or, conversely, that water withdrawals by others will impact MPL's ability to withdraw 1.0 mgd from the Kākalahale Well.; and
2. In the event Kākalahale Well water is not available, there are alternative sources of non-potable water available to MPL: a) reclaimed water from the Pālāʻau Shrimp Farm could be treated to make it suitable for irrigation purposes; and b) desalinization of either brackish water from West Molokaʻi aquifers or sea water are alternative sources of irrigation water.

4.9.12.5 The Waiola Case and the Kākalahale Well

In order to withdraw 1.0 mgd from the Kākalahale Well, MPL will have to obtain a water use permit from the Water Commission. The issues addressed in the Waiola case will also have to be addressed for Kākalahale.

MPL will be able to show that withdrawing 1.0 mgd from the Kākalahale Well will not impact DHHL's ability to withdraw its 2.905 reservation amount from the Kualapuʻu aquifer. Kākalahale Well is 1.5 miles downslope of the proposed Waiola well site and down gradient from the Kualapuʻu well field. More importantly, unlike the Waiola well site, the Kākalahale Well site is hydrogeologically isolated and it is also highly unlikely that withdrawing 1 mgd from Kākalahale Well will adversely impact DHHL's ability to develop its water reservation in Kualapuʻu Aquifer.

For DHHL to develop its 2.905 mgd reservation in the Kualapuʻu aquifer, new and appropriately spaced wells east of the existing DHHL/DWS well field will be required. All of these new wells will be upgradient of the known subsurface intrusives, Puʻu Kākalahale and Puʻu Luahine. These subsurface intrusives create a barrier to groundwater flow, benefiting wells that are upgradient of the intrusives and adversely impacting the wells downgradient of the intrusives. They also limit the impact that wells on one side of the intrusives have on wells on the other side of the intrusives.

The Kākalahale Well will be down- and across-gradient, and on the downstream side of known intervening intrusive structures, from any wells that DHHL is likely to develop to access any part of its 2.905 mgd reservation. Therefore, an adverse impact on future DHHL wells is highly unlikely.

Additionally, by conducting a cultural impact study, MPL is addressing the issue of impacts on traditional and customary native Hawaiian rights.

4.9.13 USGS Modeling of Kualapu'u Aquifer and Impact of MPL Water Plan

4.9.13.1 2006 USGS Simulations

Any ground water withdrawals on Molokaʻi must consider the impact it would have on DHHL's ability to develop its reservation of 2.905 mgd from the Kualapuʻu aquifer.

Theoretically (based on sustainable yields), if DHHL, MPL, and the County DWS space out their wells, each of the parties should be able to develop the water they need, including the full amount of DHHL's reservation. On the other hand, a lack of coordination and cooperation could mean that none of the parties will be able to develop the water necessary to satisfy each of their needs. Indeed, depending on where DHHL locates its wells, it may not be able to withdraw its full 2.905 mgd reservation amount without adversely impacting its own existing wells, even without any withdrawals from the Kākalahale Well or additional DWS withdrawals. In a 2006 ground water modeling study, the USGS arbitrarily located four additional well sites within the Kualapuʻu aquifer to withdraw an additional 2.905 mgd. These arbitrarily chosen sites were spaced relatively close together and not far distant from the existing Kualapuʻu well site. Under that scenario, USGS concluded that DHHL could not develop the full amount of its reservation from the Kualapuʻu aquifer.

The result of a 2006 USGS model simulation should not, and cannot, be taken to mean that there is not enough water within the Kualapuʻu aquifer for DHHL to develop its full reservation amount within that aquifer. USGS is not proposing, as a result of its study, that the sustainable yield of the Kualapuʻu aquifer be reduced. The lesson gleaned from the USGS modeling study is that the future development of ground water resources on Molokaʻi demands coordination among the larger water developers—DHHL, DWS, and MPL—to accommodate, to the greatest extent possible, the water needs of all of the stakeholders.

4.9.13.2 Recent Studies by USGS Indicate Pumping Kākalahale Will not have an Adverse Impact on the DHHL, County, or MPL Wells

Background – In August 2007, the USGS released preliminary results of a two-dimensional modeling study it did for the Army Corps of Engineers as a part of its Kaunakakai Stream Ecosystem Restoration Project entitled "Effects of Ground-Water Withdrawal on Kaunakakai Stream Environmental Restoration Plan, Molokaʻi, Hawaiʻi," Scientific Investigations Report 2007-5128 by Delwyn S. Oki (See Appendix T). The Kaunakakai project proposes the construction of 2.75 acres of shallow ponds and mudflats near the mouth of Kaunakakai Stream to restore habitat for the endangered Hawaiian Stilt. A study on the effects of well pumping mauka of the site was important as, where the wetland bottoms are below the water table, the ponds and wetlands are sustained by ground water discharge during the dry season. Because ground water is the main source of water for the proposed wetlands, a reduction of ground water discharge near the mouth of the stream will have an effect on the availability of habitat.

At the Army Corps' request the USGS undertook an investigation to estimate water levels using an existing numerical ground flow model and the changes that would occur if there were additional ground water withdrawals. Water levels in existing wells in the upstream aquifers and the coastal discharge changes (if any) were estimated for six different scenarios. The six

scenarios were developed by assuming changes in pumping at existing wells and pumping at proposed new wells, at selected sites in the area between Kualapu‘u and ‘Ualapu‘e.

The model used was the existing numerical ground water flow model done by Delwyn Oki in 1997. The 1997 study was used as the background for the various scenarios. The new 2007 study describes the results of model simulations that assess the effects of redistributed or additional ground water withdrawal using the 2006 average or May 2007 permitted withdrawal rates as a baseline. The study did not use any new (subsequent to 1997) data.

Available data was sufficient in 1997 to develop a detailed contour map of water levels for the entire island. Electrical–resensitivity measurements were used to determine the depth of saltwater below ground and then applied using a principal (Ghyben-Herzberg) or relation, to estimate the altitude of the water table for the western part of the island. This relationship (for hydrostatic conditions and assuming a sharp interface between salt and fresh water without the known transition zone) predicts that every foot of freshwater above sea level must be balanced by 40 feet of freshwater below sea level. This generally underestimates the freshwater lens thickness near the discharge zones. The method ignores the transition zone and does not account for dynamic conditions of the aquifer where water flows vertically.

The study notes that groundwater on Moloka‘i occurs in two forms: 1) as a lens shaped body of fresh water floating on saltwater within permeable dike free rocks; and 2) as dike impounded water ten to hundreds of feet above seal level (meaning it is not directly a part of the lens).

Numerical Simulation of Additional Withdrawal – The regional (1997) model is two-dimensional. It is designed to simulate the flow of fresh ground water in systems that have a fresh water lens. The simulation assumes a sharp interface between fresh and salt water (meaning there is no transition zone allowed for in the model). It also assumes that water flow is entirely horizontal (there is no modeling of potential up and down movement) and all wells fully penetrate the freshwater lens. As such, if a well is actually using dike impounded water or is otherwise isolated from the lens, the model cannot take these factors into account.

The original 1997 study was used to estimate the effects of new well withdrawals in the model on ground water and coastal discharge. Although the original model covered the entire island, for this study only certain “nodes” were used from the 1997 report so that it could be focused on the desired area. To determine a base case, or current conditions without any changes, reported withdrawals from existing wells were used. The withdrawals, from a geographic perspective, were assumed to take place in an entire “node” of 3280 square feet.

The Waiola well was not considered as part of the scenario as the application has not been acted upon and the DHHL reservation was not considered as the location of the wells by DHHL has not been determined.

The total amount of water withdrawal is five percent of the total recharge of the aquifer.

Withdrawal rates for the various proposed wells in the different scenarios were developed from conversations with the various water purveyors. The various scenarios and withdrawal rates are set forth in each of the six scenarios.

The model has several limitations. The number of wells is insufficient to define the distribution of water levels in the southeastern part of Molokaʻi in the west and in the dike complexes in the northeast part of the island. The simulated withdrawals are therefore unverified in some part of the island. Also, the thickness of the fresh water lens is not known on most parts of the island, including the areas of proposed increase in groundwater withdrawals. Because of this and because of the other limitations mentioned above, the model should not be viewed as precise. The model is, nevertheless, a tool for analyzing possibilities.

Model Results – For each of the scenarios the water levels and coastal discharges were determined relative to what is currently occurring. Simulated changes were greatest at withdrawal sites and decrease outward from the site. Within the zone where water levels decline because of increased withdrawal, the salinity of water pumped from existing wells may increase, although the extent of the increase could not be predicted accurately because of the limitations in the model, mainly because it assumes a sharp interface between fresh and salt water (it assumes that there is no transition zone). However, greater water level changes are expected to cause greater salinity changes (all other factors being equal). Wells near the coast are likely to be closer to a transition zone and as such, water level changes affect the wells to a greater extent.

Simulated changes in coastal discharge are greatest immediately down gradient (below) from changes in withdrawal. The numerical models used in this study are estimates of changes in coastal discharge because the actual changes are difficult to measure.

- **Scenario 1.** In this scenario pumping of 1.0 gallons per day at Kākalahale was added to the base model. This causes water levels and coastal discharge decrease from what is currently estimated. The water level decline at the well itself is estimated at 0.61 feet and decrease moving away from the sell site. Near the Kaunakakai stream habitat the simulated water level decline is 0.08 feet. The percentage decrease is estimated at seven percent. However, this is likely overestimated as the stream only covers a small fraction of the area measured in the model.

  When Kākalahale is pumped at 1.0 mgd there is a 0.09-foot decrease in the level at Well 17. Kualapuʻu Mauka decreases by 0.09 feet and Kawela Shaft by 0.01 feet. ʻUalapuʻe shaft shows no decrease at all.

- **Scenario 2.** Withdrawals at Kākalahale are at 1.0 mgd and withdrawals at Well 17 are increased to 1.7 mgd in this scenario. Increased withdrawals from Well 17 cause greater simulated decline in coastal discharge than Scenario 1. The simulated level decline at Well 17 in this scenario is 3.4 feet and 0.71 feet at Kākalahale. Reductions of coastal discharge in the Kaunakakai Stream area increase to 11 percent. In the Kaunakakai Stream area, the simulated water decline is 0.04 feet greater than Scenario 1. As in Scenario 1, the decrease in coastal discharge is likely overestimated.

  In Scenario 2 the simulated water level at Kualapuʻu Mauka decreases by an estimated 1.45 feet and the Kawela shaft by 0.02 feet. There is no impact on the ʻUalapuʻe shaft.

- **Scenario 3**. The withdrawals are the same as Scenario 1 but Scenario 3 includes redistribution of withdrawals from existing wells to wells proposed by the Maui DWS. Withdrawal from the DWS Kualapuʻu Mauka well is reduced to 0.232 mgd and withdrawal from a proposed Manawainui well was increased from zero to 0.232 mgd and

the Kawela Shaft reduced to zero. A well proposed by DWS at Kawela was increased from zero to 0.237, ʻUalapuʻe Shaft was decreased to zero and withdrawal and a new ʻUalapuʻe well was increased from zero to 0.272.

Reduced withdrawals from the Kualapuʻu mauka well results in a simulated increase in the immediate area by 0.57 feet. Because of the simulated increase at the two proposed wells the simulated water level decline at Kākalahale increases from scenario one by 0.04 feet. However, Kākalahale's impact on surrounding water levels decreases because of the decreased withdrawal from Kualapuʻu Mauka. The simulated water level decline at the Kaunakakai stream is 0.01 greater than Scenario 1.

- **Scenario 4.** Scenario 4 is the same as Scenario 2 with the redistributed withdrawals from Scenario 3. Reduced withdrawals from the Kualapuʻu Mauka, Kawela Shaft, and ʻUalapuʻe Shaft wells decreases the water level decline at Well 17 from the Scenario 2 decline of 3.40 feet to 2.81 feet. However, the increased withdrawals from the proposed wells cause the Kākalahale well decrease in water level to increase from 0.71 to 0.74 feet. Near the Kaunakakai stream the decline is 0.01 greater than in Scenario 2.

- **Scenario 5.** Simulated withdrawal is the same as Scenario 3 except that withdrawal from Kualapu'u Mauka is further reduced by .2 mgd and withdrawal from the proposed Manawainui well increased by an equal amount. In this scenario the water level at Kualapu'u Mauka increases by 1.11 feet compared to .57 in Scenario 3. The simulated water level at the proposed Manwainui well increases from Scenario 3 by an additional .23. The simulated decline in Kaunakakai stream is the same as Scenario 3.

- **Scenario 6.** Simulated withdrawals in Scenario 6 are the same as Scenario 4 except that withdrawal at Kualapuʻu Mauka is further reduced by 0.2 mgd and the Manawainui well is increased by the same amount. In this scenario, the water level at Kualapuʻu Mauka decrease by 0.03 feet from the base case compared to 0.65 in Scenario 4. The decrease at the Manawainui well increases due to the increased withdrawal at the well. Water level decline at the Kaunakakai stream habitat is the same as Scenario 4.

  In the scenario that mirrors the proposed water withdrawals for the Lāʻau Point project (Scenario 1), the results indicated that pumping Kākalahale would have a negligible impact on the DHHL wells (a 0.03-foot lowering). This would indicate that even if it is assumed that there are no geological intrusions, and that the down-gradient location of the Well is discounted such that there is an assumed direct connection between the aquifers and the wells, pumping Kākalahale at 1.0 mgd will not impact on DHHL's ability to continue to operate its well. In addition, the impact on the discharge of fresh water at the ocean is limited such that the water level decline is 0.08 feet.

4.9.14 Impact of Pumping Kākalahale on the Fresh Water Transition Zone

Within the dike-free lava flows, a freshwater lens floats on denser, underlying saltwater. Saltwater flows landward in the deeper parts of the aquifer, rises, and then mixes with seaward-flowing freshwater, creating a freshwater-saltwater transition zone. Under hydrostatic conditions, the thickness of the freshwater lens can be estimated by using the Ghyben-Herzberg relation, which predicts that every foot of freshwater above sea level must be balanced by 40 feet of

freshwater below sea level. The Ghyben-Herzberg relation is sometimes used to estimate the depth at which brackish water in the transition zone has a salinity of about 50 percent of seawater.

USGS drilled a deep monitor well in the Kualapuʻu area and collected salinity profiles from this well from 2001 to 2004. Measured salinity profiles indicate a freshwater lens of about 260 to 290 feet thick. The upper part of the freshwater-saltwater transition zone generally is about 150 feet thick.

The Kākalahale Well site, however, is hydrogeologically isolated by subsurface intrusive structures. The Kākalahale Well was developed in 1969 as a drinking water well for the Kaluakoʻi Resort. However, due to the brackish quality of the water, the well was never put into production. Relative to its distance inland, chlorides of the Kākalahale Well are anomalously high. This anomaly is explained, however, by the presence of upgradient subsurface intrusives, i.e., the subsurface "plumbing" of Puʻu Kākalahale, which function as barriers to normal mauka-to-makai flow of groundwater. The upgradient intrusives, which create the brackish result in the Kākalahale Well, also function to limit the effect of pumping the Kākalahale Well on other wells upgradient of the intrusives, such as the DHHL and DWS wells in Kualapuʻu. Pumping water from the Kākalahale Well will not draw down on the fresh water lens underlying the Kualapuʻu wells or cause a rise in the transition zone.

4.9.15 Impact of Pumping Kākalahale on the Coastal Environment, Limu, and Fishponds

Marine resources need infusion of fresh water to spawn. The findings in the Waiola Case provide relevant information on the potential impact of the pumping of 1,000,000 gallons of brackish water a day can have on the marine resources makai of Kākalahale. The findings were based on the pumping of 1.25 mgd of ground water and thus the impact would be less than that projected in the Waiola Case. The findings in the Waiola Case that are relevant to assessing the impact on the marine resources are as follows:

Ground-water models showed that pumping 1.25 mgd of ground water would reduce ground-water flux to the nearshore area by about 3 percent to 15 percnet. At that magnitude, the resultant change in salinity in the fishponds would be virtually indistinguishable from the initial values.

Native Hawaiians gather limu and other marine resources all along the southern and eastern coastline of Molokaʻi, including the shoreline area of the Kamiloloa Aquifer. They do not confine their gathering activities to areas within their ahupua'a of residence.

Set forth below are findings of fact made by the CWRM in the Waiola case[6] that are relevant to the impacts of pumping groundwater on the coastal environment and resources:

[6] In the Matter of the Contested Case Hearing on Water Use, Well Construction, and Pump Installation Permit Applications Filed by Waiola O Molokai and Molokai Ranch, Limited (CCH-MO96-1), Findings of Fact, Conclustions of Law, and Decision and Order, filed on December 28, 1998.

Nearshore Environment

122. The coastal boundary of the Kamiloloa aquifer comprises approximately 6 kilometers of shoreline, extending just west of Kaunakakai Gulch to just east of Ali'i Fishpond, and includes Kaunakakai Harbor channel and two large fishponds (Ali'i and Kaloko'eli fishponds).

123. No perennial stream exist within the Kamiloloa aquifer and surface runoff reaches the ocean only after significant rainfall events.

124. The coastal area off the Kamiloloa aquifer is fairly homogenous. The shoreline consists of very shallow sand and mud flats that extend offshore several hundred meters.

125. Groundwater enters the nearshore zone from seepage at the shoreline and from offshore springs. In some areas, seeps are actually visible at low tide and offshore springs are also visibly evident.

126. Freshwater springs enter the reef at numerous points along Moloka‘i's south sore creating brackish conditions that favor seaweed growth nearshore, especially in many of the fishponds, which tend to trap fresh water.

127. Groundwater discharge into the ocean is reduced by the amount that is pumped from the ground whether it is pumped from the Kualapu'u or Kamiloloa aquifer.

128. The McNulty model predicts that if 1.25 mgd of groundwater is pumped from the proposed well, the flux of groundwater at the Kamiloloa shoreline will be reduce by about 15 percent. The USGS Study indicates that the coastal discharge is reduced by 3 percent over a 13-mile stretch of coastline.

129. The USGS Study predicts that pumping 0.3 mgd from the proposed well [Wai Ola] will result in a reduction in groundwater discharge of 0.8 percent over a 13-mile stretch of coastline (which extends further than the boundaries of the Kamiloloa aquifer). The largest effects occur in areas nearest the well and effects diminish with distance from the well.

Fish

133. Several important species of fish, including mullet, aholehole, and milkfish, depend upon brackish environment along Moloka‘i’s south shore.

134. The brackish water environment is necessary for the primary productivity that is the basis of the food chain for milkfish, mullet, aholehole, and other animals found along Moloka‘i’s south shore.

135. Mullet need brackish water with salinity ranging from 13 to 20 ppt. for proper maturation of their eggs.

136. After mullet, ama'ama, awa or milkfish spawn in the open ocean, the fry, up to one month old, are predators, eating zooplankton in the open ocean. Then they move to nearshore areas where they switch to an omnivore diet, and feed on diatoms, a benthic plant usually found on the bottom of estuaries where brackish water and sunlight mix to allow for their growth. They stay on this diet for the rest of their lives, reaching sexual maturity, and feeding in estuaries and stream mouth areas which are conducive to this plant. Fishermen often know these locations in their areas.

137. Brackish water environments, which Dr. Tamaru defined as having salinities of less than 30 ppt, are essential for the maturation of striped mullet from the juvenile stage to maturation. For oocyte maturation, salinities in the range of 13 to 20 ppt is important. However, salinities along the nearshore area fronting the Kamiloloa aquifer consistently exceed 30 ppt.

Limu

145. Native Hawaiians gather limu and other marine resources all along the southern and eastern coastline of Moloka‘i, including the shoreline area of the Kamiloloa aquifer. They do not confine their gathering activities to area within their ahupua'a of residence.

149. Limu is more productive in brackish water than in pure seawater.

4.9.16 Commitment to Continued Analysis

MPL is currently working with DHHL, DWS, the Army Corp. of Engineers and USGS to comprehensively evaluate Moloka‘i’s long-term water demands and resources. The goal is to appropriately locate wells and manage pumping such that all of the parties will be able, to the greatest extent possible, to withdraw sufficient water to meet their needs.

Since September of 2006, MPL has attempted to join with DHHL and DWS in having USGS perform a comprehensive three-dimensional model for the Moloka‘i aquifers. MPL is pleased that USGS will move forward with a joint study, the terms of which are currently under discussion with all parties. The timeline for completion of this modeling analysis is uncertain; however, based on total sustainable yield on Moloka‘i, and the evidence of previous water studies, the modeling analysis is not a critically important element for acceptance of the Lā‘au Point Final EIS.

MPL is participating in these studies and cooperative efforts notwithstanding the fact that it is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will diminish the other parties’ ability to develop the water they need, or, conversely, that water withdrawals by others will impact MPL’s ability to withdraw 1.0 mgd from the Kākalahale Well.

4.9.17 Lā‘au Point Non-Potable Water Infrastructure

A water use permit would be required before the Kākalahale Well (0700-01) can be put into production; this was confirmed by the DLNR Commission on Water Resource Management in their letter dated January 10, 2007. When Kākalahale Well use is permitted, MPL will not transmit brackish water from the well to the West End by the MIS system. Instead, MPL has indicated that it will seek to use existing pipeline easements across DHHL’s Ho‘olehua lands for the transmission of Kākalahale water.

A storage tank or reservoir will be constructed above the project site to provide adequate pressure and to meet the storage requirements for fire protection. All lots will be metered. Fire flows are proposed to be provided from the non-drinking water system due the larger pipe and reservoir sizes that will be associated with this system. Fire hydrants will be installed along the road spaced at intervals between 450 to 500 feet. At full build-out, some 20 years hence, non-drinking (non-potable) water use is projected to be 300,000 gpd for the 200 Lā‘au Point rural

residential lots and associated common areas, plus 40,000 gpd for the two parks within the project area. Various alignments are under consideration with respect to bringing non-drinking (non-potable) water to the project site.

The safe drinking (potable) and non-drinking (non-potable) water systems will be carefully designed and operated to prevent cross-connections and backflow conditions. The two systems will be clearly labeled and physically separated by air gaps or reduced pressure principle backflow preventers to avoid contaminating the safe drinking (potable) water supply. In addition, all non-potable spigots and irrigated areas will be clearly labeled with warning signs to prevent the inadvertent consumption of non-potable water.

A dual water system management plan will be developed at a later date and submitted by the water system owner and operator.

4.9.18 Water Transmission

4.9.18.1 Current Methods of Transmission: Well 17 and the MIS

The MIS only transmits Well 17 Water; MPL does not use MIS water.

Well 17, located in Kualapuʻu, currently provides water to Kaluakoʻi on the West End of Molokaʻi. Water is transported from Well 17 to Kaluakoʻi first through the MIS system to the Mahana pump station. From Mahana, water is pumped to Puʻu Nānā for treatment. The treated water is piped to a reservoir in Maunaloa, and from there gravity fed to Kaluakoʻi.

Kaluakoʻi does not use any MIS water, i.e., water developed by the MIS system for agricultural irrigation. Instead, Molokaʻi Public Utilities, Inc. (MPUI), which services Kaluakoʻi, "rents space" in the MIS system to transport Well 17 water to Mahana.

The water pumped from Well 17 is of potable quality. However, in the MIS, it is mixed with non-potable water that does not meet Safe Drinking Water standards. Thus, the water has to be treated at Pu'u Nana before it can be distributed to end users in Kaluakoʻi.

4.9.18.2 Transmission Agreement

The MIS was planned, designed, and constructed under a special Act of Congress (Reclamation Act of 1954) to develop surface water and high-level groundwater (Wells 0855-01, -02, and -03) in Waikolu Valley in northeastern Molokaʻi to irrigate farmlands in central and western parts of the island. The MIS originally served large-scale pineapple operations, but was converted to serve diversified agriculture after the pineapple operations closed in the late 1970s. The system also serves the native Hawaiian homesteads in Ho'olehua, and pursuant to HRS section 168-4, Hawaiian homesteads have a prior right to two-thirds of the water currently developed by the MIS. The MIS transports 1,500,000 gpd via a 10-mile transmission link to an open reservoir at Kualapuu, where it is stored prior to entering a distribution network extending from Ho'olehua to Mahana.

When originally constructed, the MIS was administered by the State Board of Land and Natural Resources (BLNR). In 1975, the BLNR entered into an agreement (the Agreement) with Kaluakoʻi Corporation (Kaluakoʻi), renting "space" in the MIS for Kaluakoʻi to transport water from Well 17 to Mahana. The water is then treated to potable standards and used to supply

potable water to Maunaloa town, the Pāpōhaku and Kaluakoʻi subdivisions, the Kaluakoʻi condominiums, and for other residential purposes as well as to meet the potable water needs of the resort areas on the West End. Under the terms of the Agreement, Kaluakoʻi would pump water from Well 17 into the MIS system and withdraw the water at Mahana. To account for potential system losses along the way, Kaluakoʻi was allowed to withdraw a lesser amount than was put in from Well 17. Additionally, Kaluakoʻi paid lease rent to the MIS. The Agreement was for the use of "excess capacity" in the system and provided that if there was no longer sufficient capacity in the system then the use would have to be relinquished on reasonable notice.

The 1975 Agreement was extended by the BLNR in 1985. In 1988, Kaluakoʻi assigned its interest in the Agreement to Kukui (Molokaʻi), Inc. (KMI), which assignment was consented to by the BLNR. As a result of the Agreement, no other infrastructure to transport Well 17 water to the West end of Molokaʻi was put into place.

Effective July 1, 1989, administration and management of the MIS was transferred from the BLNR to the State Department of Agriculture (DOA). In December 1989, the Agreement was amended to reflect the statutory transfer to the DOA.

Subsequently, the Agreement was extended twice through December 31, 2005. In late 2001, KMI assigned the Agreement to Kaluakoʻi Water, LLC (KWLLC), a Hawaiʻi limited liability company wholly owned by Molokai Properties Limited. The DOA acknowledged the assignment in early 2002.

Prior to and following the Agreement termination date of December 31, 2005, KWLLC and the DOA have been engaged in negotiations for the continued use of the MIS to transport Well 17 water to Mahana, and the DOA has conducted community meetings on the matter. By September 2007, a further extension to the Agreement was in the final stages of being completed following community input on aspects of the Agreement. The Agreement had been open for public input on Molokaʻi before the MIS Advisory Board prior to its execution by the parties.

The proposed extension Agreement would have permitted MPL to transmit water through the MIS system until June 30, 2011 at an equivalent price of 70 cents per 1000 gallons transmitted. This compares to the 30 cents per 1,000 gallons paid for by homesteaders and commercial agricultural users of the system. Provisions of the Agreement include emergency use of surplus Well 17 pumping capacity in drought emergencies, the ability for MPL to store up to 20 million gallons in the MIS reservoir in case of breakdowns at its Well 17 pump, continued compensation for system losses and an option for extension of the Agreement, or early termination provisions should MPL seek to transmit water from Well 17 outside the MIS.

The extension Agreement had not been executed when, on September 12, 2007, the DOA, through its Deputy Attorney General, officially determined that any agreement for the continued use of the MIS by KWLLC would be subject to the preparation of an environmental disclosure document pursuant to HRS Chapter 343. The DOA's Deputy Attorney General also indicated in writing that KWLLC's use of the MIS should cease pending preparation of the environmental disclosure document. Notwithstanding the Deputy Attorney General's statement, based on legal precedent and requirements imposed by the Public Utilities Commission, it is anticipated that KWLLC will be allowed to continue to utilize the MIS to transport water until the agreement is renewed or an alternate transmission method is in place.

Currently, there is no alternative means of transporting water from the source (Well 17) to end users in Kaluakoʻi. Upon completion of the environmental disclosure process, either there will be an agreement for the continued use of the MIS to transport Well 17 water or an alternative method of water transport will have to be established. Several alternatives are possible, (See Section 4.9.21 below) each of which requires acquisition of new easements or modification of existing easements as well as engineering and cost studies. These items have to be addressed before MPL can rationally identify the practicable alternatives. As of this writing, this issue remains unresolved.

Under MPL's Water Plan, Lāʻau Point's potable water needs will be met from Well 17. MPL's infrastructure plan for transporting and distributing water to Lāʻau Point, therefore, remains unresolved as of December 2007. This issue, however, will have to be resolved regardless of, and without reference to, the Lāʻau Point project.

4.9.18.3 Impacts of the Attorney General's Opinion on Transmission of Well 17 Water

The MIS currently transports up to 1.018 mgd of water (12-month moving average) pumped from Well 17 to Mahana for distribution to existing, current users in Kaluakoʻi. Well 17 water will continue to be used by Kaluakoʻi customers whether or not the Lāʻau Point project is approved. Thus, the issue of how to transport water from Well 17 to either Mahana or to Kaluakoʻi will have to be resolved regardless of the Lāʻau Point project. Inasmuch as the MIS issue affects existing, current uses, there is an element of urgency, and it is likely that the MIS issue will be resolved prior to any discretionary land use decisions being made on the Lāʻau Point project. Therefore, the decisions made with respect to continued use of the MIS may have to be made without consideration of the Lāʻau Point project.

Because there are existing customers in Kaluakoʻi dependent upon Well 17 water, water will have to somehow be transported from Well 17 to the facilities owned by MPL for further distribution to end users at Kaluakoʻi. Either the MIS will continue to be used or alternate infrastructure will be developed for this purpose. Either way, the infrastructure used to transport water from Well 17 to MPL distribution facilities will also be used to transport potable water to Lāʻau Point. Therefore, even if use of the MIS to transport Well 17 water is discontinued, there will be a means of getting potable water to Lāʻau Point. The decisions made with respect to this MIS issue, however, will affect infrastructure planning for the transport and distribution of potable water to Lāʻau Point.

These water system improvements will need to be developed with the cooperation and consent of the County of Maui (DWS) and the CWRM. This issue, however, will have to be resolved regardless of, and without reference to, the Lāʻau Point project.

4.9.18.4 Explanation of the "System Losses" Concept in MIS Agreement

As part of the rental agreement, MPUI, in addition to monetary payments to the MIS, puts in more water than it takes out of the MIS.

The "excess" water is meant to cover system losses. Thus, for every 1,111,111 gallons that is pumped from Well 17 into the MIS, 1 million gallons is taken out at Mahana for eventual use in Kaluakoʻi. The amount of water pumped into the MIS from Well 17 and the amount that is withdrawn at Mahana are metered; the meters at both ends are monitored by the DOA. In

recognition of this agreement, CWRM included a "MIS System Use Charge" of 94,000 gallons per day as part of the 1.018 mgd allocation for Kaluakoʻi.

4.9.18.5 MPL Kept Its Word, Did Not Use MIS Water During Well 17 Breakdown

During June and early July of 2007, MPL's Well 17 pump malfunctioned and the Well was inoperable for 36 days while the shaft was removed and the pump replaced. During this period, MPL instituted strict conservation measures and was able to use water from its mountain system that was stored in reservoirs to meet potable needs throughout its systems. Stream diversions in the mountain system were not increased during this time.

MPL received approval from CWRM to extend the service area of its mountain system to Kaluakoʻi during the breakdown period.

MPL did not use MIS water and did not seek permission to use MIS water.

MPL was able to maintain its buffer in the MIS system, ensuring the homesteaders and other agricultural users were not affected by the Well 17 breakdown.

4.9.18.6 MPL and the DOA

As discussed, MPL has been working with the DWS and Department of Hawaiian Homes Lands (DHHL) to meet their future water needs, and all requirements of the CWRM. MPL must seek a water use permit from the State CWRM for its Kākalahale Well, and to vary the supply areas of its current permits. In September 2007, however, the DOA decided that continued use of the MIS to transport Well 17 water would be subject to the preparation of an environmental disclosure document pursuant to HRS Chapter 343 (See discussion earlier in this section). There are alternative means of transporting water from the source (Well 17) to end users in Kaluakoʻi. Upon completion of the environmental disclosure process, either there will be an agreement for the continued use of the MIS to transport Well 17 water or an alternative method of water transport will be decided on. Several alternatives are possible, each of which requires acquisition of new easements or modification of existing easements as well as engineering and cost studies. These items are addressed, but more study will be undertaken before MPL can decide and implement the most practicable alternative..

Molokaʻi Public Utilities is a registered public utility with the Public Utilities Commission and supplies water from Well 17 to principally households and condominiums in the Kaluakoʻi area.

Without the current access to the MIS system for the transmission of this potable water, households in Kaluakoʻi would have no access to drinking water. This would be a breach of MPU's Certificate of Public Convenience and Necessity issued by the PUC and would create health hazards that would be unacceptable to State agencies and residents.

Therefore any move to get MPL off the MIS system without an alternative means of transporting water in place and ready to operate, is not going to be acceptable to the PUC and State agencies and is highly unlikely to be implemented. Moreover, legal precedent indicates that an ongoing use will not be terminated pending the preparation of an environmental disclosure document. (See, for example, the East Maui Irrigation case where the continued diversion and use of millions of gallons of water is allowed pending the preparation of an EIS.)

However, MPL accepts that it needs to remove its transmission of Well 17 water from the MIS system in the medium term, despite the fact that it is by far the major contributor to the economic running of the MIS system and its payments of $136,500 per annum or 57c per 1,000 gallons of transmitted water. In comparison, users pay only 30c per 1,000 gallons. It has been stated that having MPL on the system keeps the rates for homestead users at a minimum, and in fact has prevented a rate increase for all other users.

Because the alternatives for transmitting Well 17 potable water to the West End of Molokaʻi are linked with alternatives for transmitting water from the Kākalahale Well and the Mountain Water System, transmission alternatives are discussed together below in Section 4.9.21.

4.9.19 Transmission of the Kākalahale Water to the West End

4.9.19.1 MPL Will Not Seek to Use the MIS System

MPL will be seeking to transmit the Kākalahale brackish water to the West End in a pipe carrying non-potable water only, and not mix it, prior to transmission, with its existing potable water from Well 17.

MPL will not seek approval to use the MIS system for this water transmission, as stated in the Master Plan (Appendix A of this EIS) and its Water Plan contained as Chapter 6 within the Master Plan document.

4.9.19.2 Options for Transmission

There are at least three viable options for transmitting the Kākalahale Well water from the Kamiloloa Aquifer to the West End of Molokaʻi.

All options require some degree of regulatory approvals, and some options require consent under existing easements agreements with the Department of Hawaiian Homelands.

MPL has completed basic costings on each option, but as yet does not have a preferred and set option as the final decision on the transmission methods relies heavily on the easement agreement between MPL and DHHL.

Transmission of Kākalahale Water is linked to the way in which Well 17 and Mountain water are transmitted. As such, the options for transmission are discussed as total transmission options. It should be kept in mind however, that the transmission of Potable water to MPL's current users on the West end is an issue which must be resolved regardless and outside of the Lāʻau project.

4.9.19.3 Options Assuming Continued Use of the MIS for Transmitting Well 17 Water

There are a series of options available for transmitting Kākalahale water and Mountain Water to the West end if the MIS remains in continued use by MPL. This assumes that MPL will resolve the outstanding issues on use of the MIS with the DOA and continue to transmit the Well 17 water to Puʻunana for treatment.

4.9.19.4 The Option of Maintaining the Existing System for All Current Uses and Adding a New System for Kākalahale

One potential option is for MPL to reach agreement with DOA for continued use of the MIS and maintain its current methods for transmitting water. This would require a new pipeline for transmission of Kākalahale water to users on the West End. MPL could then complete and utilize its existing dry 12 inch pipe that currently ends and begins on either side of the DHHL easements for transmitting Kākalahale water. This would require obtaining a third easement across DHHL land for a new pipeline.

4.9.19.5 The Option of Continued Use of the MIS and Using a Current Pipeline within the DHHL easement area for Kākalahale water

One transmission option is for MPL to resolve the issue of using the MIS with the DOA and continue to use the MIS to transmit potable water to the West End. This would allow MPL to use one of its two approved existing pipeline easements across DHHL lands under its easement agreement, to transmit Kākalahale water, thereby not seeking a third easement under the DHHL easement agreement.

Under this scenario, MPL would replace the treated water currently being taken from the Pu'u Nana treatment station back to the Industrial Park at Kaunakakai. This water currently originates from the Mountain System and is transmitted to the treatment station via an 8-inch pipeline, treated, and then transmitted back to users in the Industrial Park via a 5-inch pipeline (which has a 3-inch diameter inner).

MPL would initially treat the water at source in the mountain and transmit it directly to the Industrial Park., freeing up the existing pipeline easement across DHHL lands for the new Kākalahale-sourced water.

The current pipe (5-inch outer and 3-inch inner) would be replaced with an 8-inch pipe in order to carry the 1,000,000 gallons per day that would ultimately be drawn from the Kākalahale Well. MPL would need to seek approval from DHHL under its easement agreement to increase the size of this pipeline.

Another option under this scenario would be to complete the 12-inch pipe for transmitting Kākalahale water as previously mentioned and abandon the 5-inch pipe instead of constructing a new 8-inch pipe from the Kākalahale Well. This would be within MPL's current agreement with DHHL for the utilization of only two easements.

The cost of this option is estimated to be approximately $5 million.

4.9.19.6 Options Assuming MPL will no Longer Use the MIS System to Transmit Well 17 Water

If MPL is unable to use the MIS to transmit well 17 water a new method of transmission would have to be developed. There are several options under this scenario.

4.9.19.7 Transmission of Water through a Third Pipeline

Under this scenario MPL would continue to move mountain system water through the existing pipeline and change the 5-inch pipe to a diameter sufficient to bring Kākalahale Well water to the West end. MPL would then acquire a third easement from DHHL to bring Well 17 water across to the West end either by completing the 12-inch dry pipe or by constructing a totally new pipeline of adequate size.

Variations on this alternative include running one of the pipelines across MPL land along a more coastal route to avoid having to obtain the third easement as discussed below.

4.9.19.8 Transmission of Well 17 water in A Bigger Diameter Pipeline Using Current DHHL Easements

Under this scenario Well 17 water would be transmitted using one of the pipeline easements across DHHL land. The 5-inch line would have to be replaced in favor of a larger diameter line. Completion of the 12-inch line across the DHHL land would provide the necessary capacity.

Water from the Mountain System required to be used for potable purposes could be treated somewhere in proximity to the Well 17 pipeline and added to the Well 17 transmission system. Water from the Mountain system being used as non-potable could then be added to the Kākalahale transmission system.

Kākalahale water could then be transmitted to the West end using the existing 8 inch to 6 inch pipe. This alternative would not require the granting of any new easements.

4.9.19.9 Transmission of Water by Maintaining the Two Existing Pipelines At Their Current Sizes

By leaving the two pipelines across the DHHL easements the way they are, MPL forecloses several options mentioned above. The end result would be that MPL would have to construct two new pipelines, one to transmit Kākalahale water and the other to transmit Well 17 water. This could be accomplished by connecting the 12-inch dry pipe across DHHL lands and constructing a new pipeline running across DHHL land.

This option would require two more easements from DHHL.

4.9.19.10 DHHL Easement Issues for the various Options

Under the options that would require MPL to change the size of the existing pipelines running across the DHHL easments, MPL would need to seek permission from DHHL, under its current easement agreement, to increase the size of one or both of its existing two pipes in the easement area to facilitate the Well 17 and/or Kākalahale transmission.

Under the joint easement agreement with DHHL, both parties need to seek approval from the other for amendments to their existing agreed pipe sizes, but the agreement notes that this approval "cannot be unreasonably withheld."

4.9.19.11 The Option of transmitting Kākalahale Water in an existing but larger, pipeline that transmits the Mountain Water to the West End.

As mentioned above, MPL transmits its non-potable water from its mountain system to the treatment plant at Pu`u Nana via an eight (8) inch pipeline that runs to the boundary of each end of DHHL’s property.

Inside DHHL’s easement area, this pipeline drops to a six (6) inch pipeline which results in inefficiencies in the transmission of the mountain water through the DHHL easement area.

Under this option, MPL would construct a new 12-inch pipeline (replacing the 6in pipeline) to carry both the mountain water and the water from Kākalahale direct to the West End.

MPL’s Water Plan indicates that it has enough potable water from its existing Well 17 to meet all future potable water needs once current potable users such as the Kaluako‘i Golf Course and the irrigation needs of the Kaluako‘i development are transferred to non-potable water. Note the Kaluako‘i infrastructure already provides separate pipes for potable and non-potable water.

The cost of constructing a new pipeline to carry the Mountain System water and the Water from Kākalahale is estimated to be approximately $8.million. MPL already owns a dry 12 inch pipeline that extends to both ends of DHHL’s property. This existing pipe could be utilized for the non-potable transmission outlined in this option should there not be the need, in the short term, for MPL to exit the MIS system and transmit the water from Well 17 in a new and separate pipeline.

Again this option needs the approval of DHHL for a variance in the pipeline size of the 8 inch pipeline through its lands.

4.9.19.12 The Option of Transmitting Kākalahale Water Across MPL Lands and State lands near Pālā‘au.

The final, but most expensive, option is to transmit the Kākalahale Water across MPL’s property near the south shore of the island, across portion of State-owned land, and then back onto MPL’s property and then across the hills that divide West End from the central plateau of Moloka‘i.

This adds miles of pipeline to previous options, at a total cost of approximately $10 .million. Cost and probable environmental impacts make this the least desirable of all options considered.

Under this option, approval would be needed from the State and an Environmental Impact Study conducted on the pipeline easement that would be sought. An SMA permit may also be required. The pipeline also crosses intensely culturally sensitive lands and would be likely to require a detailed archeological survey and cultural assessment.

MPL has the time to work with DHHL and State agencies on the Preferred Option.

MPL has discussed water transmission options with DHHL, along with a range of other water-related issues that are considered to add benefits to both parties from future water plans for the island.

From MPL's side, it has offered DHHL the excess 500,000 gals capacity from the potable Well 17 for current and future short-term needs of homesteaders. A study of the future capacity of the Kualapu'u Aquifer in which Well 17 is sited, will determine whether this option can be considered in more detail.

Over time, and with the implementation of DHHL's Molokaʻi Island Plan, increases in pipeline sizes will be also needed by this agency, potentially leading to a co-operative effort between all water users on the island.

As MPL's needs for transmission of large volumes of water from Kākalahale is at least a decade away, no immediate or untimely decisions need to be made concerning transmission options.

4.9.19.13 Transmission of Potable Water Beyond Mahana to the Project

The "loop" will not be built during the initial phase of construction. It will be added as demand warrants. Once the capacity of the existing line based on calculated demand, using accepted County standards, is reached, the loop will be constructed. Since potential build-out is gradual, it is estimated that construction will not be required for 5-10 years.

4.9.20 Alternative Supplies of Water Other than Kākalahale

The community has requested information on alternative supplies of water other than the Kākalahale Well and whether there were other sources of water that MPL could use. Further information was also requested on MPL's analysis of the desalination option, use brackish water on its own lands at the west end, and use of the brackish well water from the Pālāʻau Prawn Farm. The analysis of alternatives to the Kākalahale Well includes consideration of the following issues raised by various community members:

- The impact of the well on neighboring wells and analysis concerning the Kākalahale Well as contained in Section 4.9 (Water).
- How much of the 1,000,000 gpd groundwater MPL is requesting is allocated for future community use as opposed to the Lāʻau development?

4.9.20.1 Additional Analysis has been Conducted on the Options to Kākalahale

MPL had presented and discussed a wide range of water alternatives at community meetings in Maunaloa, Kualapuʻu, Kaunakakai, and Manaʻe in mid-2006 so it could obtain more information from the community on the water issue prior to filing its Draft EIS. Based on these discussions, the principle developed by MPL was to minimize water use and, if possible, keep potable water consumption to existing limits with a minimal impact on other wells. This principal was applied in analyzing the implications of the various alternatives.

Desalinization is not the preferred alternative because of the cost. As mentioned in MPL's Water Plan, desalting is still about four times more expensive on Molokaʻi (not helped by the island's high energy costs) than developing an operating deep groundwater well.

4.9.21 Alternative Water Sources

4.9.21.1 The Waiola Well

MPL could go back to the Water Commission and ask to have the remand of the Waiola water use permit taken up again. However, MPL has said since the beginning of this planning process, that it does not need more potable water and that 1,000,000 gallons of brackish water would allow it to implement the Master Plan.

The Waiola Case

In 1998, the Commission on Water Resource Management issued a permit to Waiola O Molokaʻi/Molokai Ranch authorizing the withdrawal of 655,928 gallons per day from the proposed Waiola well site in the Kamiloloa aquifer. The Water Commission's decision was appealed to the Hawaiʻi Supreme Court, which remanded the Waiola water use permit case to the Water Commission for further proceedings on two issues.

1. The court held that although it had be shown that pumping from the proposed Waiola well would not adversely impact the existing DHHL wells in Kualapuʻu, MPL had not provided evidence to show that pumping from the Waiola well would not impact DHHL's ability to withdraw its 2.905 reservation amount from the Kualapuʻu aquifer.
2. Second, the court held that MPL did not meet its burden in showing that water withdrawals from the Waiola well would not abridge native Hawaiian traditional and customary gathering rights. In the Waiola contested case, MPL took a defensive posture with respect to the issue of traditional and customary native gathering rights. In other words, MPL focused on discounting or impeaching the testimony of those who claimed that native Hawaiian gathering rights would be abridged. The court held that that was not sufficient for MPL to meet its burden as the applicant. Instead, MPL had to make an affirmative showing that withdrawal of water from the Waiola well would not abridge native Hawaiian traditional and customary gathering rights. Additionally, the court held that there was a procedural error in not allowing one of MPL's witnesses to be fully cross-examined, which may have affected the Water Commission's findings of fact with respect to the impact on native gathering rights.

The Supreme Court ruled that in all other respects MPL had met the requirements for a water use permit for the Waiola well.

MPL could ask that the proceedings be re-opened to give MPL the opportunity to address the two issues the Supreme Court identified as requiring further evidence. On MPL's request, the Water Commission has not yet re-opened those proceedings.

MPL has said if the Lāʻau project, and subsequently the *Master Plan*, is approved, it would abandon its application for this well. Accordingly, it would be inconsistent to use this source to complete our water infrastructure requirements. That having been said, MPL is aware of concerns in using the Kākalahale Well, and could reconsider this alternative.

4.9.21.2 Pālāʻau Prawn Farm Brackish Water

Several years ago, this source was proposed to irrigate a proposed Molokai Ranch second golf course on the West End.

With chlorides in the 1,400 parts per million ranges, it is too salty for general irrigation usage and can be used with only a limited number of salt tolerant grasses or by blending with low chloride water. Additionally, the exiting water use permit is for 864,000 gpd of which about 700,000 could be available for reuse, is an insufficient amount to meet the irrigation needs of the Water Plan, in particular the planned expansion of the community areas of Kualapuʻu and Maunaloa, areas that are within MPL's water service catchment. Lāʻau Point and the future build-out of Kaluakoʻi could be served by this source. The cost to consumers of this water would be three times that of water from the Kākalahale Well because of the high cost of removing the salts.

4.9.21.3 Desalinization

In the event Kākalahale Well water is not available, however, there are alternative sources of non-potable water. Reclaimed water from the Pālāʻau Shrimp Farm could be treated to make it suitable for irrigation purposes. Additionally, desalinization of either brackish water from West Molokaʻi aquifers or sea water are alternative sources of irrigation water.

Desalinization is not the preferred alternative because of the large amount of energy required in the desalinization process. On Molokaʻi, which relies largely on imported fossil fuels for energy generation and which has some of the highest electricity rates in the state, the cost of desalinated water amounts is still about four times more expensive on Molokaʻi than developing an operating deep groundwater well.

A pilot plan on Oʻahu developed in the early 2000s still remains idle today because of escalating energy costs needed, in simple terms, to push the brackish water through a membrane to remove the salts.

MPL has previously been approached by two parties proposing desalination on Molokaʻi as an economic business; neither party, following their detailed investigation, wished to continue with their plans for a desalination plant.

Desalinization is therefore too expensive to be considered MPL's first choice of non-potable water. However, it is an alternative if water from the Kākalahale Well is not available.

The incentive for desalinization is associated with costs. If the operational cost to desalinate water and the amortized capital costs become lower than the costs to pump and transmit water, we would choose to desalinate. Issues associated with the DHHL reservation and pipeline easements as well as the reliability of the MIS are added incentives.

After preliminary investigation, it was determined that desalinization was not a current reasonable economic alternative and it was therefore not included among those alternatives that were more rigorously explored.

Components of the Cost of Desalting at Molokaʻi's West End (50 percent recovery rate)

	Dollars/kgal
Pumping the Feedwater Supply	$1.36
Pumping cost through the RO Filters	$4.39
Other RO Operating Costs	$1.00
Total	**$6.75**

In comparison, pumping water from the Kākalahale Well through a 69,000-foot long pipeline, also at $0.30/kwh, would cost approximately $2.60 per kgal. If the average use rate is 1.0 MGD, the operating cost difference of $4.15 per kgal would amount to $4,140 per day or more than $1.5 million per year.

Therefore, the significantly higher costs associated with desalination technology limit its use as an alternative solution today. However, as technology continues to improve, desalination may be an option for the future and particularly for non-drinking water uses when the cost of producing water comes down.

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 price 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 block, the cost of desalinization can be recovered. Therefore, if multiple rate blocks were implemented, there would be no pressure to pursue additional groundwater or surface water sources from the central or east end of the island.

The incentive for desalination is associated with costs. If the operational cost to desalinate water and the amortized capital costs become lower than the costs to pump and transmit water, we would choose to desalinate. Issues associated with the DHHL reservation and pipeline easements as well as the reliability of the MIS are added incentives.

After further investigation it has been determined that, at this point in time, but not necessarily in the future, desalination is not a current reasonable economic alternative.

MPL has studied potential sites for a desalination operation and determined that a potential desalination plant would be located on West End land currently designated under the Master Plan for one of three Rural Reserve easements. It would be proposed that brackish water would be drawn from inland near the north-western corner of its property.

Prior to submitting an application to the Water Commission for the Kākalahale Well permit, MPL will continue to analyze the desalination option because:

- It has a responsibility to compare updated costs and new technology innovations for desalination with the total costs involved in obtaining permits and transmitting the Kākalahale Water to the West End.
- More information will be available on windmill technology and studies being conducted on Molokaʻi as to the appropriateness of this technology to replace fossil fuel generated power for the desalination process.
- More information will be available concerning the environmental and cultural issues associated with this option.
- The Molokaʻi Land Trust input will be needed as it is intended that the Molokaʻi Land Trust will hold the easement over the land that is thought suitable for the desalination option.

4.9.21.4 Collecting Catchment Water: Kahoʻolawe –Style from the West End

While Kahoʻolawe and West Molokaʻi have similar rainfall amounts and patterns, surface water catchment on the West End is not a viable alternative to meet its non-potable water requirements.

The Kahoʻolawe rainwater catchment system was designed to collect 640,000 gallons per year and was constructed in 2002 at a cost of $3,000,000. A comparable system to meet the West end's long-term need of 1,000,000 gallons per day would have to be about 570 times larger. Assuming for comparison purposes, it could be built at half of the unit cost on Molokaʻi that would still be over $850 million dollars.

The reliability of any surface water system is subject to weather cycles. Extended dry periods lasting 5-10 years are not uncommon. For a surface catchment system to reliably meet customer needs, it would have to be sized to deliver the required quantities of water with due consideration to these extended dry periods. In other words, it would need to be "oversized" for normal weather to be able to supply the requirements during drought conditions. Groundwater systems are able to tap aquifers that have sufficient storage to deal with long-term weather cycles.

The Kahoʻolawe system was chosen because other alternatives there do not exist.

Why Not Develop a Brackish Well on the West End?

Eleven exploratory wells and boreholes have been drilled on the West End between 1945 and 1991. None of these wells produced water of usable quality, even for irrigation of salt-tolerant landscaping. All wells tapped into a thin, brackish to saline basal lens supported by only a modest amount of rainfall recharge. Several of the wells also exhibited geothermal heating. At Molokaʻi's West End, the groundwater's potential use is limited to a source of feedstock for desalting.

4.9.22 West End Water Sources and East End Alternatives

Several wells and a number of test borings have been completed in both the Kaluakoʻi and Punakou aquifer systems. The water there is very brackish to near-seawater salinity. In virtually all of the borings, the water was also geothermally heated. These sources are not satisfactory for irrigation use.

There are also a number of small wells in the Kawela and ʻUalapuʻe aquifers, including the County's Kawela Shaft and ʻUalapuʻe Shaft, which have water use permits to pump 0.348 mgd and 0.234 mgd respectively. The USGS's 2006 modeling effort was given the task of, among other things, studying the effects of replacing these wells with new wells (some in other locations within the Kawela and ʻUalapuʻe aquifers), and also of increasing pumpage from these wells. The USGS study modeled 14 different scenarios, each of which included, among other things, some withdrawals by the County from wells in both the Kawela and ʻUalapuʻe aquifers.

The water level in the Puʻu O Hoku No. 1 well in the Waialua aquifer, which was drilled in 1998, is nine feet mean sea level, indicating that the well site is not in the dike complex as anticipated.

4.9.22.1 Contingency Planning Alternatives

Concerns have been raised in the event MPL's water plan needs more water for increased demand for agriculture on its own lands or on land to be donated to the Land Trust. If more non-potable water is needed for agriculture in particular, MPL still has two options:

1. The brackish water available to MPL from the Prawn Farm, at Pālāʻau, which currently is permitted for 864,000 gallons per day of which 500,000 gallons per day could be available for reuse. The following "Additional Analysis and Information" section below has also shown that even without the Kākalahale Well, MPL could satisfy the needs of its Lāʻau Point customers, and provide for the build-out of all of the Kaluakoʻi subdivision from the existing systems and from extracting usable water from the Prawn Farm well.
2. Desalinization.

The Prawn Farm water is very brackish and it would be 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 remains an option for the future and particularly for non-potable uses, such as agriculture.

Although improvements to desalination technology have been made, the technology's high operating cost (primarily energy costs) continues to be an issue for its use as an alternative water supply. If a desalination plant were to be located on the West End of Molokaʻi using the underlying groundwater as the feedwater supply, the feedwater salinity would limit recovery of the product water to 50 percent or less of the water running through the plant.

Assuming the treatment plant utilizes reverse osmosis (RO) technology, the plant would use a pressure of approximately 700 psi to move the feedwater through the RO membranes. At an average electrical cost of $0.30/kwh and assuming the treatment plant were located at 500 feet elevation above Kaluakoʻi Resort, the cost of desalted product water (excluding capital recovery) would be at least $6.75 per thousand gallons (kgal).

4.9.23 Other Water Issues in Relation to the *Master Plan*

4.9.23.1 Water for Agricultural Easement Land

The majority of MPL's west end holdings are currently in agricultural use. Agricultural easements will ensure that agricultural use of these lands will continue into the future. Much of these lands are utilized for ranching, which has low water requirements. Water for irrigation of MPL's agricultural lands is supplied by Molokai Ranch's Mountain Water System.

4.9.23.2 Drought Mitigation

In addition to the development of new sources for agricultural water, drought mitigation strategies are important in securing the viability of agriculture and agricultural activities on Molokaʻi. Recommended drought mitigation strategies for Molokaʻi, identified by the Maui Drought Committee, include a number of measures to repair and improve the efficiencies of the Molokaʻi Irrigation System. Another drought mitigation recommendation is to install a pump in MPL's Kākalahale well, which could supply brackish water for mixing with existing sources to meet non-potable demands. This drought mitigation measure can readily be incorporated into

MPL’s plans to utilize the Kākalahale Well for non-potable irrigation needs identified in the *Master Plan* (provided as Appendix A).

4.10 OTHER INFRASTRUCTURE AND UTILITIES

The Lā‘au Point project will provide significant infrastructure improvements that will serve the project and many of the on-site improvements will not require County maintenance.

Appendix W contain the preliminary engineering and drainage reports prepared by Warren S. Unemori Engineering, Inc.

4.10.1 Drainage

There are several natural drainageways that transect the Lā‘au Point project site in the mauka to makai directions, such as Kamāka‘ipō Gulch and Hakina Gulch. There are numerous intermittent streams, which generally only have flows during or immediately following heavy rainfalls. There are no perennial streams on the project site.

Current runoff in these drainageways for a 100-year 24-hour storm range between 79 and 2,194 cubic feet per second (cfs). The current peak runoff from the project site for a 50-year 1-hour duration storm is 512 cfs.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Lā‘au Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the downstream Conservation District land’s marine environment and nearshore and offshore water quality.

The present flow patterns in the existing drainageways will be maintained. Culverts will be sized to convey these flows across the roadways that generally run perpendicular to these natural drainageways. To minimize disturbance of existing conditions, existing drainageways that transect the lots in a mauka-makai direction, may be undergrounded and subsurface or surface detention facilities installed at the downstream end of such drainageways. In addition, the CC&Rs will state that the existing flow patterns through/across lots shall be retained and maintained by the lot owner.

Clearing, grubbing, and grading will be confined to road right-of-ways and other areas needed for infrastructure installation. All disturbed areas will be planted with groundcover upon completion of grading.

Roadways constructed across existing drainageways will be provided with culverts to convey 100-year, 24-hour offsite runoff safely across them. Storm drainage systems will also be installed along the roadway shoulders to convey pavement runoff into the closest drainageways. Subsurface storage and filtration systems (de-silting basins) will be installed at the end of each roadway drainage system to intercept waterborne silt and other debris before it is discharged into drainageways and coastal waters.

Perforated risers will be added to the inlets of these culverts as shown in Exhibit 7 of Appendix W. In addition, subject to the availability of boulders from the roadway excavation, boulder berms will be constructed upstream of some of the inlets to reduce the velocity in the drainway and also to induce gravitational settling of water borne silt and debris before it enters the culverts. Energy dissipators will be constructed at the outlets of these drainage culverts to keep the velocities equal to or less than pre-development velocities, in accordance with the provisions of Article 15-04-06 subparagraph (8) of Title NC-15, A Rules for the Design of Storm Drainage Facilities in the County of Maui.

All lots will also be required to retain runoff of their lot in surface or subsurface retention basins onsite. This is to ensure that additional runoff generated by the project is kept within the project limits in accordance with Maui County Storm Drainage Standards. The contractor will also be required to comply with State and County approved Best Management Practices for the duration of the construction period.

The current runoff from the project area is 512 cubic feet per second (cfs) for a 50-year 1-hour storm. This is expected to increase by 111 cfs to 623 cfs with development. The total volume needed to store this increase is 152,390 ft^3. Since the increase in runoff due to the roadway pavement is estimated at (53/111) = 48 percent, approximately 52 percent is attributable to the imperviousness in each lot. The required storage in the roadway and lots are (0.48 x 152,390) = 73,147 ft^3 and 79,243 ft^3 respectively. It is estimated that approximately 20 feet of 5 feet diameter perforated pipe buried in each lot or a retention basin of equal capacity will be required to handle the additional runoff generated during a 50-year 1-hour storm event. See Exhibit 6 in Appendix W for details of subsurface systems on road and in lots.

As previously discussed in Section 3.8 (Marine Environment), marine waters surrounding Lā‘au Point will experience episodic “red water” events following periods of heavy rainfall. Sediment delivery to coastal waters is exacerbated by soil loosened by natural causes, including the effects of deer and livestock transiting and foraging in upland areas. Erosion control practices are planned for Lā‘au Point that will protect existing natural drainageways and nearshore water quality, such as drainage control systems, re-vegetation as a means of permanent erosion control measures throughout the developed areas, and fencing to keep deer and other animals from disturbing the soil near the community.

The Land Trust will conduct the monitoring on a regular basis. Should it be determined that there is some problem with water quality, testing will be undertaken and investigation made as to the cause. The action taken will depend on the results of the investigation and the attributed cause. Through the CC&Rs or through the courts, the problem will be rectified if the cause is a violation of the law of the CC&Rs.

4.10.2 Wastewater

The Lā‘au Point site is currently undeveloped and is not serviced by any wastewater system. In the project’s vicinity, both Maunaloa Village and Kaluako‘i have their own private individual wastewater systems. The site is located in the Critical Wastewater Disposal Area as determined by the Maui County Wastewater Advisory Committee where no new cesspools are allowed.

POTENTIAL IMPACTS AND MITIGATION MEASURES

At build-out, it is anticipated that permanent residents will occupy up to 60 of the homes (30 percent). Daily flows for wastewater are anticipated to be approximately 20,000 gpd. With additional seasonal residents (80 percent occupancy), the project could generate 70,000 gpd of wastewater.

Lāʻau Point will include its own private wastewater treatment system to be maintained through HOA dues. In their July 6, 2006 letter, the State Department of Health stated: "As the project cannot be served by the County sewer service system, we have no objection to the proposed option for a private wastewater treatment system." In their letter dated January 31, 2007, the State Department of Health stated: "we have no objections to the proposed construction of an R-1 wastewater facility."[7] MPL will build the onsite sewer collection system within Lāʻau Point. A centrally-located site of 14 acres has been designated for the wastewater treatment system, which will accommodate the projected full development flow. The proposed sewage system will be designed to County of Maui standards. In addition, all wastewater plans will conform to applicable provisions of HAR, Chapter 11-62, "Wastewater Systems."

The method of effluent disposal proposed for the Lāʻau Wastewater Treatment Plant (WWTP) is beneficial reuse as irrigation water for common areas and for soil erosion control. Residential lots will not be irrigated with effluent disposal because the State Hawaiʻi State Department of Health (DOH) *Guidelines for the Treatment and Use of Recycled Water* require residential recycled water systems to be managed by a "irrigation manager," and this would not be effective for the amount of residential lots at Lāʻau Point. However, the effluent produced by the WWTP shall meet the DOH R-1 recycled water quality criteria. R-1 quality recycled water requires the effluent to be at all times oxidized, then filtered, and then exposed to a disinfection process that kills pathogens.

To meet the stringent effluent requirements for R-1 recycled water, a fully integrated wastewater treatment system that incorporates biological processes, ultrafiltration membranes, and disinfection technology is proposed for the WWTP. This technology combines the activated sludge process with micro-pore filtration in a compact membrane bioreactor (MBR). Final effluent from the MBR, virtually particulate-free, will be disinfected using ultraviolet irradiation to render it bacteriologically safe for recycling and disposal. This grade of treated water is approved by the Hawaii Department of Health for such uses as agriculture, landscaping, and golf course irrigation.

The terminal disinfection process will eliminate the potential of pathogen infection. R-1 water, will however contain inorganic nutrients such as nitrogen and phosphorous. Because the applications will take place below the UIC line, no potable groundwater lens will be affected. Runoff of this water into the ocean will have minimal effect on water quality because of the circulation patterns along this coast which will dilute the runoff.

The DOH Director must approve all recycled water systems. A Conservation District Use Permit also would be required for any recycled water systems within the State Conservation District. As stated in Section 3.3 (Soils), to the extent possible, Conservation District areas will not be

[7] Letter included in Section 9.0 of this EIS.

landscaped or irrigated. Exceptions to this may include areas subject to erosion, where new landscaping can serve to stabilize the soil.

Pollution prevention (P2) plans will be incorporated in plant facilities design and standard operation and maintenance procedures aimed to minimize pollutant releases in stormwater runoff from plant activities.

A schematic of the treatment proposed at the WWTP and a conceptual site layout are provided in Figures 1 and 2 of Appendix X, respectively. Constituent concentration levels anticipated after each treatment process are presented in Table 8 below.

Table 8. Anticipated Wastewater Effluent Constituent Levels

Constituent	Influent	MBR	UV Disinfection
Average BOD_5 (mg/L)	240	< 5	< 5
Average SS (mg/L)	240	< 5	< 5
Fecal Coliform – median (CFU/100 mL)	10^8	< 23	< 1
Turbidity (NTU)	30 - 50	< 0.2	< 0.2

In wastewater engineering, BOD is a term for biochemical oxygen demand, SS is suspended solids, CFU is colony forming units, and NTU is nephelometric turbidity units.

Biochemical Oxygen Demand (BOD) is a measure of the quantity of oxygen used in the biochemical oxidation of organic matter in a biological treatment process, and hence an indicator of the biodegradable organic content of constituents in wastewater. In conventional secondary treatment processes for wastewater, BOD concentrations are reduced from 200 milligrams per liter (mg/L) to 30 mg/L, or 85 percent removal.

Suspended Solids (SS) is the concentration of organic and inorganic particles held in suspension in wastewater. The laboratory procedure is to measure a liter of liquid, pass it through a standard glass fiber filter, weigh the amount of particles after drying on the filter paper, and calculate the concentration in milligrams per liter of liquid. Secondary treatment processes are defined as producing an effluent of 30 mg/L, or 85 percent removal. As Table 8 above indicates, R-1 recycled water quality is far better than secondary treatment.

Colony Forming Units (CFU) is a unit of expression used in enumerating bacteria density by plate-counting methods. A colony of bacteria develops from a single cell or a group of cells, either of which is a colony-forming unit.

Nephelometric Turbidity Units (NTU) is a unit of expressing the cloudiness (turbidity) of a sample as measured using a nephelometric turbidimeter, a laboratory instrument that emits and measures absorbed light through the solution.

Sludge Treatment and Disposal – The MBR is essentially a high mixed liquid suspended solids (MLSS) activated sludge process utilizing a membrane as a means to separate solids from liquid. The MLSS concentration in the MBR typically ranges between 15,000 mg/L to 30,000 mg/L with sludge ages typically in excess of 40 days. Therefore, sludge digestion is typically not required following the MBR. Wasted sludge (or biosolids) from the MBR will be dewatered to humus using sand drying beds, a practice that is particularly conducive in the arid climate of west Molokaʻi. Biosolids residue for disposal at a county landfill will be small, amounting to about 70 cubic yards annually.

Alarms and Telemetering – Alarms indicating high and low liquid level conditions, equipment malfunction, and other emergency conditions will be a feature of the WWTP. Visual and audio alarms will be integrated in the control centers of the WWTP, and any alarm signals will be sent through telephone lines to the homes and mobile telecommunication devices of key maintenance personnel as an additional safety measure during non-work hours.

Odor Control – Since the collection system for the development is not extensive and the sewer flow velocities are high in the small-diameter pressure mains, the detention time in the sewer system should be relatively short, thereby minimizing the formation and emission of odors at the WWTP.

Reliability and Redundancy – Safeguards will be incorporated in the plant design to ensure that treatment operations are uninterrupted in the event of power failure or equipment malfunction. Design features will comply with the reliability and redundancy provisions promulgated in the "Guidelines for the Treatment and Use of Recycled Water," prepared by the Hawaiʻi State Department of Health, and dated May 15, 2002, and amendments thereto. For power supply reliability, an auxiliary generator will automatically operate and transfer power during electrical power outages. For process redundancy, multiple units of tanks, pumps, and other key equipment will afford parallel operation during times when a process unit is taken out of service for maintenance or repair.

As part of the reliability and redundancy operating safeguards, an effluent storage impoundment will be provided at the treatment facility. Should any of the redundant backup treatment units malfunction resulting in the plant effluent not having full treatment, that water will be stored in the impoundment for re-treatment, applied to grounds for soil erosion control, or used in plant watering at nearby areas of the treatment facility that are not in the Conservation District. A contingency provision for impoundment is contained in the State Department of Health Reuse Guidelines of Chapter 62, HAR, Wastewater Systems.

During times when the irrigation system is not in operation or when recycled water quantities exceed the irrigation requirements, a storage tank and backup storage and disposal impoundment will be utilized for any excess, such as in times of inclement weather or system maintenance.

Restricted Public Access – Wastewater conveyance pump stations and treatment facilities will be fenced to restrict public access.

Warning Signs and Special Precautions – Effluent reuse facilities, including piping and appurtenances, and application areas subject to public access will have warning signs stating that irrigation water is not fit for consumption. These signs shall comply with the DOH guidelines.

Construction Phasing – The treatment plant will be constructed with an initial capacity of 60,000 gallons per day (gpd), and consist of dual parallel process trains of 30,000 gpd to afford operating redundancy. At some future time when the wastewater flow is forecast to increase as build-out of the project nears, another increment of up to two 30,000 gpd capacity modules will be added to the existing plant. Concomitant with this expansion will be provisions for additional drying beds and ancillary equipment. The treatment facility can be constructed in a 15 to 18 month timeframe.

4.10.3 Solid Waste

In the Public Facilities Assessment Update County of Maui (2002), R.M. Towill Corporation projected that the Nāʻiwa landfill will have adequate capacity to accommodate residential and commercial waste through the year 2019, and a 10-acre parcel adjacent to the Nāʻiwa site, that has been identified for future landfill expansion, could provide for another 25 to 30 years of waste disposal service.

The Lāʻau Point site is currently undeveloped and does not have solid waste disposal.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Solid waste will be generated during construction and after development of Lāʻau Point.

The County of Maui's Solid Waste Division has previously estimated that households on Maui generate approximately nine pounds of solid waste per day. Applying this estimate to Lāʻau Point after full build-out, total waste from residential uses would be 1,800 pounds per day. This estimate includes full occupancy of all homes. It is projected, however, that only 30 percent of the homes will be occupied on a full-time basis.

To mitigate potential impacts of solid waste generation, Lāʻau Point will incorporate recycling during construction and in the community to help reduce the amounts of solid waste going to the landfill.

As required by the County of Maui, a solid waste management plan will be prepared to address waste generated by construction. During the construction phase, whenever practical, solid wastes will be minimized and recycled. It will be recommended to contractors that a job-site recycling plan be developed and, as much as possible, construction waste should be recycled. Construction waste that cannot be recycled will be sent to the Nāʻiwa landfill. MPL will ensure that all solid waste generated during construction will be directed to a DOH-permitted waste disposal or recycling facility. Nāʻiwa landfill is a DOH-permitted waste disposal facility.

Material derived from clearing and grubbing will be chipped and spread over adjoining MPL lands to decompose as organic matter. Boulders and other excavated material that are not recycled will be stockpiled on MPL lands with proper erosion control measures.

4.10.4 Electrical and Communication Systems

There is no existing electric, telephone, or cable service for the Lāʻau Point site. Nearby, there is an underground system in Kaluakoʻi north of the project site, and an overhead system that runs to Hale O Lono Harbor east of the project site.

Moloka‘i has 12.0 Megawatts (MW) of firm generating capacity. Peak load for 2005 was 6.4 MW (MECO 2005). There is, therefore, more than enough capacity for the Lā‘au project at full buildout.

Moloka‘i recently received a $1.1 million solar power grant from the USDA for solar water heating systems. Water heating is considered the largest use of electricity in a typical home. MECO estimates that 300 systems will be installed through the program.

POTENTIAL IMPACTS AND MITIGATION MEASURES

At full build-out, if all 200 lots contain a residence, estimated electrical demand would range from 110,400 to 183,000 kilowatt-hours (kWh) monthly, depending on the residence’s air conditioning usage (see Table 9 below). This estimate is based on the use of solar water heaters, as required by the CC&Rs.

Table 9. Electrical Demand

	200 Residences	
	Electric Demand per month (kWh)	**Electric demand per year (kWh)**
No a/c	110,400	1,324,200
With room a/c	139,800	1,676,400
With central a/c	183,000	2,194,200

MPL proposes to have electrical, telephone, and cable distribution systems extended underground from Kaluako‘i. Underground utilities will be as close to the road center as possible to avoid multiple impact corridors. At its eastern terminus, this underground distribution system would be connected to the existing overhead system servicing Hale O Lono Harbor to provide an alternative means of serving the project.

Maui Electric Company (MECO) has stated that the project’s anticipated electrical load demand will have a substantial impact to the Kaluako‘i system and an electrical line extension and other substantial upgrades to this system may be necessary to accommodate the project[8].

As project design progresses, as recommended by MECO, MPL’s electrical consultant will submit electrical drawings and a time schedule to MECO so that electrical demand and infrastructure upgrades can be analyzed and electrical service can be provided to new customers on a timely basis. MPL will pay for necessary system upgrades.

CC&Rs and design standards for Lā‘au Point will encourage energy-efficient building design and site development practices to reduce electrical demand. As previously discussed in Section 2.3.6, covenants will include:

- **Green architecture.** Require “green” architecture that incorporates recycled materials, energy efficient equipment, natural ventilation, solar and photovoltaic systems, etc.
- **Solar power.** Solar panel requirement for water heating and to supplement electric power for appliances.

[8] Personal communication with MECO on November 28, 2007 and MECO letter dated June 29, 2006; letter included in Section 9.0 of this EIS.

- **General energy.** All energy systems shall be designed and constructed to meet United States Environmental Protection Agency conservation standards.

4.11 PUBLIC SERVICES

4.11.1 Schools

Molokaʻi has six public schools, including three elementary, one conversion charter school elementary, one intermediate, and one high school. In the last three years, educational resources were expanded to include a private charter high school and a private charter middle school. Maui Community College offers post-secondary opportunities.

The nearest educational facilities to the project site are Maunaloa Elementary School (grades K-6) in Maunaloa Town, and Molokaʻi Intermediate School (grades 6-8) and Molokaʻi High School (grades 9-12), located in Hoʻolehua. Other options include the three charter schools.

Enrollment for Maunaloa Elementary School has been decreasing. Enrollment dropped from 73 students in 2003-2004 to 69 students in 2004-2005, to its current 2005-2006 school year enrollment of 57 students. The school has capacity for 121 students (DOE 2006).

Molokaʻi Intermediate School has experienced decreasing enrollment from 253 students in 2003-2004, to 215 in 2004-2005, to 181 in its current 2005-2006 school year. Molokaʻi High School also experienced decreasing enrollment from 451 in 2003-2004, to 413 students in 2004-2005, to 408 in 2005-2006.

POTENTIAL IMPACTS AND MITIGATION MEASURES

According to Department of Education (DOE) school multipliers[1] for new communities, it is estimated that the Lāʻau Point community will contain 56 elementary, 29 middle, and 31 high school students. However, this DOE formula does not take into consideration the unique character of the Lāʻau Point community and the expectation that seasonal residents and retirees will occupy a substantial share of the community. Therefore, adjustments to the DOE formula may be justified given the following factors (KBCGa 2006):

- Only approximately 30 percent of Lāʻau Point residents are expected to be permanent residents.
- Lāʻau Point residents will be somewhat older than the general population.
- About 25 percent of the Lāʻau Point permanent residents are expected to have children under 18.
- Expected school age population of Lāʻau Point permanent residents will likely be less than 10 children ages 5 through 12, and less than 15 children ages 13 through 17.
- Expected Lāʻau Point population of schoolchildren is less than 25 percent of what is expected on a pro rata basis.

[1] Elementary: 200 SF homes x 0.279 = 55.8 students
Middle: 200 SF homes x 0.143 = 28.6 students
High: 200 SF homes x 0.154 = 30.8 students

- It is likely that some of the Lāʻau Point residents will home school or send their children to private schools off island.

MPL will make a monetary contribution to the development, funding, and/or construction of school facilities on a fair-share basis pursuant to the Education Contribution Agreement for Lāʻau Point between MLP and the DOE dated August 3, 2007.

4.11.2 Police Protection

Police protective services on Molokaʻi are provided by the Maui Police Department. Lāʻau Point falls within the Maui Police Department's (MPD) Molokaʻi Patrol District V. The Police Station is located in Kaunakakai, next to the Kaunakakai Fire Station. In addition to the Commanding Officer position, there are 28 positions including:

- One Lieutenant
- Six sergeants
- Twelve patrolmen
- Five dispatchers
- One school resource officer
- One community officer
- One animal control officer
- One clerk-typist

A minimum of two officers and one sergeant are on duty at any given time. The island is divided into an east and a west beat. Each beat has three eight-hour shifts, and each shift is staffed by one officer.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Lāʻau Point project may impact police protection services due to increase of people and activity on and around the project site. During construction, construction activities will increase activity and access on private property.

In the long-term time frame, there will be an increase in demand from the additional population, more homes and property, and increased activity resulting from public parks and more public accesses. Lāʻau Point is very remote and the response time for all emergency services is about 25 minutes. Further, the population in the Kaluakoʻi region is dispersed.

To mitigate impacts, road access will be improved. The Police Department will be kept informed of each stage of the construction process in anticipation of security or other issues. Further, on-site private security services, hired by the HOA, will help to deter trespassing, loitering, and property crime.

4.11.3 Fire Protection

There are three fire stations on Molokaʻi: Kaunakakai, Pūkoʻo, and Hoʻolehua. In addition to fire emergencies, the department has first responder medical assistance capability when needed. Emergency Medical Service, or EMS, is provided by Medivac, a private ambulance service of

American Medical Response Company. EMS has two ambulances, one with two people on duty and a backup ambulance serviced by call-back personnel.

The main station is the Kaunakakai Fire Station located next to the Police Department. The Kaunakakai Fire Station has an Engine and Tanker, a rescue boat and a utility truck. There are five to six firefighters on duty every twenty-four hours.

A $10.5 million new fire station for Kaunakakai is starting development on a five-acre parcel, approximately one-half mile from the existing fire station, near the intersection of Alanui Ka ʻImi ʻIke and Kākalahale Street. This new station will house full equipment, apparatus, and personnel, and will serve as an Emergency Operations Center in case of disasters.

The Pūkoʻo Fire Substation is 16 miles east of Kaunakakai and houses a two-man engine company. The County of Maui budgeted for a new fire station at Pūkoʻo in its Fiscal Year 2006, Capital Improvement Program.

The Hoʻolehua Station is the closest station to Lāʻau Point, at 20 miles away. The Hoʻolehua Fire Station serves the west end, and houses a full five-man engine company.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The project may impact fire protection services due to the increased demand generated by additional population, the presence of more structures, and potential increased activity at the parks and along the shoreline. The project area is about 25 to 35 minute response time from the Hoʻolehua fire station and about 20 additional minutes from Kaunakakai's station. These response times are estimates and emergency response times may take longer. Currently access to the area is via unimproved and dirt roads. With the project, the access road will be paved, improving the road conditions, which may reduce emergency response times.

Most responses to the project area would probably be medical related given the older population. Further, there is a risk of brush fires in the area due to dryness and high winds, although fire breaks will be cut regularly during summer months.

A water storage tank or reservoir will be constructed above the project site to provide adequate pressure and to meet the storage requirements for fire protection. Fire hydrants will be installed along the road spaced at intervals between 450 to 500 feet.

To provide increased fire protection at Lāʻau Point until there is a fire station within the five road miles required to have a favorable fire insurance rating as determined by the Hawaii Insurance Bureau, the Lāʻau Point Covenants, Conditions, and Restrictions (CC&Rs) will require all residential structures to have sprinkler systems meeting standards specified in the Fire Code. The Fire Department does not require MPL to provide a fire station on the West End for Lāʻau Point.

Fire and rescue emergency services will be able to access Lāʻau Point and the shoreline from the new paved access road from Kaluakoʻi and the existing emergency access dirt road from Hale O Lono Harbor, with access to the shoreline through the subdivision at designated locations. Emergency responders can also use an existing emergency access dirt road from Hale O Lono Harbor and do not have to go all the way to Kaluakoʻi to access Lāʻau Point.

4.11.4 Health Care Services

Moloka‘i is served by the Moloka‘i General Hospital, which is part of the Queens Health System based in Honolulu. Located in Kaunakakai, the Moloka‘i General Hospital houses 15 patient beds, of which 13 are acute care beds and two are long-term care beds. Its service population is the island of Moloka‘i.

Moloka‘i General Hospital has the only emergency room and urgent care clinic on the island. The hospital provides acute, long-term care, and low-risk obstetrical inpatient services. It also offers kidney health, diabetes management, preventive health, high-risk weight management, compassionate care/hospice services, family planning and family support services on an outpatient basis.

In June, 2005, Moloka‘i General Hospital celebrated the opening of a new wing to their facility. The $7.5 million project represents completion of Phase I of the development, conceptualized in 1997. The new wing includes two new trauma rooms, new CAT scan, new radiology room, emergency room, delivery room, and storage rooms among others. Phase II will include the relocation of the Women’s Health Center and expansion of the medical office.

In addition to the hospital, Moloka‘i’s medical services include a rural health clinic that is part of the hospital, two private physician practices, a midwife, three dental practices, a community health center, and one chiropractic clinic. Other medical and health services include three mental health care homes, an area health education center, Care Resources (nursing home without walls), ambulance medical response, Moloka‘i Occupational Center, Na Pu‘uwai, Kalua Ola Hou, Moloka‘i Drugs, and several government programs.

POTENTIAL IMPACTS AND MITIGATION MEASURES

It is anticipated that on-site residents will be older than the general population, and thus may require a higher level of service. The low level of permanent population (30 percent) will help to offset impact on health care services.

Should emergency services be required at Lā‘au Point, emergency vehicles will be able to access the site from the new paved access road from Kaluako‘i and the existing emergency access dirt road from Hale O Lono Harbor. Should medical and rescue services be needed for shoreline emergencies, access will be provided at designated points through the subdivision.

4.11.5 Recreational Facilities

The Molokai Ranch lands contain various recreational activities for both residents and visitors. The west and south coasts of the ranch lands contain stunning and relatively undeveloped beaches. 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. There are also cultural trails, which run along the coast.

Molokai Ranch provides access to numerous activities, such as kayaking, mountain biking, horse riding, as well as a paniolo cultural museum in Maunaloa town. It also maintains camping facilities at Kaupoa Camp, which is now available to the community at affordable prices at selected times of the year. Maui County maintains camping sites at Pāpōhaku Beach Park, located on the north end of Pāpōhaku Beach. There is an 18-hole golf course at Kaluakoʻi and a 9-hole course at the Ironwoods Golf Course.

In addition to Molokai Ranch's recreational facilities, the following are public parks and recreation areas available on Molokaʻi:

- Duke Maliu Regional Park
- Halawa Park
- Cooke Memorial Pool
- Kakahaiʻa Park
- Kaunakakai Ball Park
- Kaunakakai Lighthouse Park
- Kilohana Community Center
- Kualapuʻu Park
- Mitchell Pauole Center
- One Aliʻi Park
- Pāpōhaku Beach Park
- Puʻu Hauole Park
- Maunaloa Park

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Lāʻau Point community is not expected to have a significant impact on public regional recreation facilities. To provide access for the shoreline and help manage the coastal resources, the Lāʻau Point project will include two public parks (totaling approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the community, and the other (15 acres) at Puʻu Hakina at the south end. This 17-acre total exceeds the 2.26 acres of parks required for a 200-lot development under the County's subdivision requirements (MCC Sec. 18.16.320). The following description of the parks is provided to comply with Special Management Area (SMA) Use permit application requirements. Figures 20 shows proposed preliminary design and landscape treatment plans for each park site.

Conceptual South Park Plan – This larger park located at the east end of the proposed Lāʻau Point site's south shoreline will provide primary access for the public to engage in recreational, cultural, and subsistence activities. The park is intended to provide for passive recreational and open space needs as there are more appropriate sites for active recreational sports elsewhere. The main purpose of the South Park at Lāʻau Point is to provide parking and comfort station for users of the shoreline area who must enter by foot.

A new paved road approximately 800 feet long will be constructed through the park site as far inland as possible along the base of the hills away from the shoreline. A total of 30 parking stalls will be provided in three enclaves to minimize the impact of open paved lot areas. The use of permeable materials for the road and parking lots will be considered. At the end of the paved road will be a Resource Manager's residence and/or maintenance shed. An elevated vantage point for the Resource Manager's residence will allow park personnel to overlook the park

Landscape Legend

Trees
-Kou
-Milo
-Existing Kiawe

Shrubs
-Naupaka

Groundcovers
-Bermuda Grass

Figure 20a
Conceptual Plan - South Park

Lā'au Point

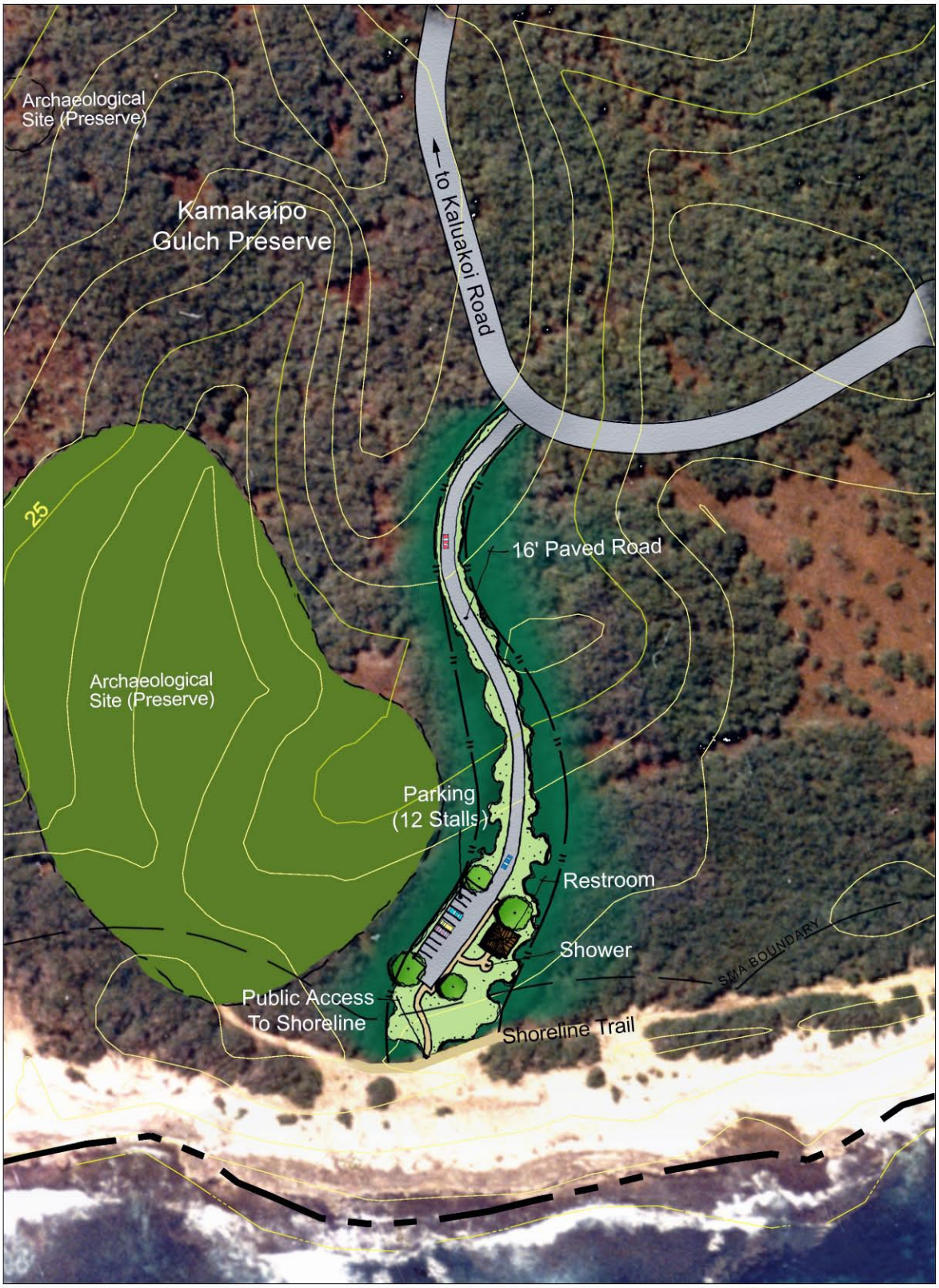
ISLAND OF MOLOKA'I

NORTH

LINEAL SCALE (FEET)

0 50 100 200

PBR HAWAII



Landscape Legend

Trees
-Kou
-Milo
-Existing Kiawe

Shrubs
-Naupaka

Groundcovers
-Bermuda Grass

Figure 20b
Conceptual Plan - West Park

Lā'au Point

ISLAND OF MOLOKA'I

NORTH

LINEAL SCALE (FEET)

0 50 100 200

PBR HAWAII

entrance and manage shoreline access. The Resource Manager would be responsible for community access and protection of the subsistence resources within the Lāʻau shoreline. MPL and the Land Trust believe that providing on-site accommodation and having a Resource Manager on-site full-time will add additional protection to the marine resources at Lāʻau Point. A gate will control use of the existing shoreline access road for emergency purposes.

The proposed road improvements and the Resource Manager's residence will be located outside of the SMA boundary. The public restroom and shower is located within the SMA boundary but outside of the County's 150-foot shoreline setback line. All structures, including buildings and roads, are proposed to be located outside of the County's setback line. No paved areas or walkways fall within the shoreline setback. Improvements within the shoreline setback will be limited to clearing for footpaths and landscaped planting, along with underground sprinklers and minor drainage system improvements. No utility pipes would traverse underground in the setback area. The comfort station and Resource Manager's house will require all utilities and be serviced by individual wastewater systems.

The existing shoreline trail will remain intact along the shoreline. A portion of the shoreline trail will be used for emergency access to the Lāʻau Point residences through the east end of the subdivision. The intersection of the new park road and the existing State access road to Hale O Lono will need to be modified. An SMA Use Permit will be sought for improvements occurring within the SMA boundary line. A State land use district amendment from Conservation to Rural will be needed to implement park improvements. The County designation for Park use will be sought to amend the Community Plan and Rural (RU-1) use proposed for the Change in Zoning. A shoreline survey certification will be submitted if deemed appropriate for the shoreline area fronting the park improvements.

Conceptual West Park Plan – The proposed park on the northwest end of the Lāʻau Point project site will provide public access entering south from Kaluakoʻi Road. A new 700-foot long paved road will lead down to the shoreline along the one side of Kamākaʻipō Gulch. The park will provide a buffer between the houselots along the edge of the new road and the archaeological sites of the Kamākaʻipō Gulch Archaeological Preserve. The purpose of the park is to provide parking and foot access to the shoreline and the Archaeological Preserve for cultural, recreation, and subsistence activities. A total of 12 parking stalls and a comfort station with shower facilities will be provided. Utility connections and an individual wastewater system will be needed for the comfort station. Road construction will avoid archaeological sites and be designed to stabilize any erosion and drainage conditions.

All structures, including buildings, roadways, and walkways will be located outside of the SMA boundary and 150-foot County Shoreline Setback area. There may be only minor clearing and landscape planting in the area fronting the shoreline within the SMA and Shoreline Setback areas, which will be, for the most part, left in its natural state. The existing shoreline trail traverses this area.

As the park site remains outside of the State Conservation District, a reclassification from the existing State Agriculture to Rural District will be sought. The Park use designation will be sought for the County's Community Plan Amendment and Rural (RU-1) use proposed for the Change in Zoning. Although most of the park improvements lie outside of the SMA boundary, an SMA permit application has been submitted in the event minor or exempt improvements may be involved.

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5.0 ASSESSMENT OF FACILITATED ACTIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES

The following discussion on the Kaluakoʻi Hotel renovation is included as an action being undertaken because the Lāʻau project facilitates its funding and re-opening.

5.1 KALUAKOʻI HOTEL

5.1.1 Background

Kaluakoʻi Hotel and Golf Club was built in the late 1970s and consisted of 144 small studio hotel rooms. The hotel was sold in the mid 1980s to Kukui Molokaʻi Inc., a Japanese investment company. After a failed attempt to operate the hotel on its own, the hotel and golf club closed in early 2001 and was purchased in 2001 by Molokai Properties Limited (MPL).

Kaluakoʻi, a resort-zoned area just north of Pāpōhaku Beach in West Molokaʻi, contains three condominium projects, an 18-hole championship golf course, a large acreage residential subdivision, and the Kaluakoʻi Hotel which is currently shut down. All three condo projects are privately owned, some of the 300 plus units are included in rental pools and are rented out as vacation units, some are long term rentals while others are owner occupied, both full-time and seasonal residents.

Kaluakoʻi Poolside, LLC is the fee simple owner of the lands underlying the Kaluakoʻi Hotel, situated at the western end of Molokaʻi, at 240 Kepuhi Place, and is identified as TMK (2)5-1-3: 5. The total land area is 18.12 acres.

Kaluakoʻi Golf Course, LLC is the fee simple owner of TMK s (2) 5-1-3: 21 and 7 (the golf course lots), adjoining properties with a land area of 45.3 acres (TMK: 5-1-3: 21) and 42.4 acres (TMK: 5-1-3: 7), respectively.

Most of the land surrounding Kaluakoi is owned by MPL. Molokai Ranch, also owned by MPL, encompasses 60,000+ acres, about 35 percent of the island of Molokaʻi. The majority of Molokai Ranch is located on Molokaʻi's west end, extending eastward from the west coast, from ʻĪlio Point to the Moʻomomi Preserve in the north, and from Lāʻau Point to the Pālāʻau Homesteads in the south.

Maunaloa Town is the main population center in West Molokaʻi, and headquarters for Molokai Ranch. In Maunaloa, Molokai Ranch operates the Lodge, which offers activities that introduce visitors to ranch life. Activities include mountain biking, horseback ridding, hiking, and rodeo skills. Molokai Ranch employs approximately 140 people and is the largest private employer on the island. Along the shores south of Maunaloa are Hale O Lono Harbor and the abandoned Kolo Wharf. Maunaloa Highway connects the West End to the Molokaʻi Airport, Kaunakakai, and the rest of the island.

5.1.2 Molokaʻi Population and Visitor Arrivals

The 2005 population of Molokaʻi was approximately 7,400. 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 main population center in West Molokaʻi is the small town of Maunaloa, where MPL is headquartered. After the pineapple plantations began phasing out in the 1970s to the present, the population of Maunaloa has sharply declined from 872 according to the 1970 census to 230 in the 2000 census.

In 2005, Molokaʻi had a total of 73,506 arrivals by air and 11,849 arrivals by ferry. With 152 rooms at Kaluakoʻi and the goal of 60 percent occupancy, we expect to increase arrivals by 26 percent resulting in 20,805 more visitors to the island. These numbers of visitors are comparable to the visitor arrival statistics of the early 90s, when Kaluakoʻi was open and fully operating.

5.1.3 Re-opening of the Hotel

MPL is in the process of re-opening the Kaluakoʻi Hotel and plans on filing its environmental assessment and shoreline management application in mid-January 2008. The plan is to re-open the hotel with 152 rooms instead of 144, at a cost of between $30 and $35 million, with the following highlights:

- All (existing) buildings to have new roofing material, new siding, new doors, windows, bathrooms, and generally upgraded interior finishes.
- Installation of a porte-cochere to provide for a covered drop-off and pickup area at the Reception/Admin. Building.
- New exterior stairways and access paths and corridors.
- Enlarge interior guest rooms into existing lanai area and repair and extend existing lanais.
- Renovate existing restaurant area and create exterior covered dining area.
- Convert existing Paniolo Broiler into large meeting/banquet room.
- Convert existing large meeting room (west of admin. building) into facility to service golfers (club storage, restroom, club rentals, etc.). Add covered golf cart storage area to south part of building.
- Upgrade public restrooms and bring into ADA compliance.
- Create covered golf cart storage area.
- Redesign and rebuild pool and pool deck area.
- Convert existing meeting room building into a small spa.

MPL is preparing an environmental assessment in support of applications for Special Management Area Use permits and Shoreline Setback variances necessary for the renovations and reopening of the hotel.

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 three-star experience. The hotel is to become a focal point for the local community for its functions and gatherings, as well as the major focus for visitors, particularly

the kamaʻāina market. The redevelopment and re-opening of the hotel is essential to the island's tourism economy, job creation and the downstream effect on the Molokaʻi economy.

The hotel renovation will reflect Hawaiian culture in a modern day setting but based on the past history of the area and 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.

5.1.4 Kaluakoʻi Hotel Details

Preliminary design have been completed by Architect Roderick J. Graham, AIA, principal of Portland, Oregon based GEN Architects. Mr. Graham is a part time resident of Molokaʻi, and owns a property at Kaluakoʻi. In addition to engineers who will provide design details for the construction drawings, a kitchen design consultant will be retained to provide input into the final design of the hotel kitchen.

The renovation will create a maximum of 152 total rentable units with various combinations of studio, one-bedroom, and two-bedroom options. The restaurant space will be renovated to accommodate about 300 patrons, an increase of about 65 from the old. There will be a banquet /meeting room which will handle groups of up to 160 people. Retail spaces will be increased to accommodate guest needs and improvements will also be made to shop interiors. The Pro Shop will be relocated to where the old meeting room west of the administration building. The improved Pro Shop will include a reception area, logo and merchandise, limited lockers, showers and restrooms. The existing eroded cabana will be removed and a new facility will be built further inland. This building will be used to rent beach equipment and have restrooms and exterior showers for public use. The swimming pool will be repaired and enlarged to accommodate a shallow area for children. The pool deck will be replaced and the pool equipment room will be enlarged as required. The existing starter shack on the golf course will be converted into a small bar.

The landscaping objective for the Kaluakoʻi Hotel is to provide the hotel guests with a tropical Hawaiian experience incorporating both indigenous and exotic tropical plants.

The renovation will also be used to educate the public about various native plants, provide information on their Hawaiian and botanical names, and in some cases how ancient Hawaiians used these plants in their daily life. The lawns will consist of salt tolerant and draught resistant grass which will aid in resolving issues with the ocean spray and Kaluakoʻi's low rainfall. Where possible, drip irrigation will also be installed to minimize water use and provides a better method of watering the plants root system.

A summary of the proposed changes to the existing structures follows:

	EXISTING	PROPOSED
HOTEL ROOMS		
ROOMS	144	152
STAFF APTS.	7	0
	151	152

	EXISTING	PROPOSED
PARKING STALLS		
BUS	2	2
CARS	201	220
	203	222
HARDSCAPE		
PATHWAYS	56,000 SF	56,441 SF
PARKING	149,660 SF	164,345 SF

BUILDING AREA	EXISTING			PROPOSED		
	ENCLOSED	UNENCL.	TOTAL	ENCLOSED	UNENCL.	TOTAL
HOTEL BUILDINGS	44400	20040	64440	66384	28584	94968
STAFF APTS	4241	1196	5437	5433	1196	6629
KITCHEN/DINING	18507	611	19118	17667	2343	20010
19 TH HOLE BAR	984	301	1285	459	826	1285
CABANA	672	350	1022	600	140	740
BACK OF HOUSE	3150	1323	4473	3150	1323	4473
LOBBY/ADMIN.	2060	1731	3791	3791	1774	5565
NEW PRO SHOP	1746	0	1746	1668	829	2497
SPA/MEETING	1156	0	1156	1156	0	1156
SHOPS	2210	0	2210	2210		2210
ENTRY PAVILION	0	288	288	0	0	0
EXT. POOL GAZEBO	0	192	192	0	0	0
TOTAL	79126	26032	105158	102518	37015	139533

SEATING	EXISTING	PROPOSED
INT. RESTAURANT	150	108
EXT. RESTAURANT	0	80
INTERIOR BAR	85	54
EXTERIOR BAR	0	54
PANIOLO BROILER	150	0
NEW BANQ. ROOM	0	160
	385	456

POTENTIAL IMPACTS AND MITIGATION MEASURES

5.1.5 Proposed Action Regarding Sea Wall on Adjoining Property

Along the beach area closest to the hotel property, the golf course lot contains a retaining wall, portions of which have been undermined by winter storm surf. The retaining wall supports a small strip of land between the golf course itself and the beach. It is considered “public space” by local residents and is heavily used for picnics and family outings, especially so during the surfing season. Maui County has been unable to provide evidence of a building permit for the wall’s construction. Without this evidence, shoreline certification is not possible. Without shoreline certification, the applicant will need an exemption to obtain the SMA Permit required to construct the new beach cabana. Another alternative regarding shoreline certification is the removal of the wall.

Because the retaining wall is partially undermined, but still protects a popular and much used grassy community space, a decision is needed regarding its future. One alternative is to leave the

sea wall "as is" because its retention protects a "community space" between the beach and golf course and is popular and heavily used by local residents. The second alternative is to remove the wall entirely and let the shoreline processes run their natural course.

The property owner is neutral as to which outcome is preferable and would be happy to have community input during the SMA process before the Molokaʻi Planning Commission decides the outcome of this matter. However, we believe that the Community favors the new beach cabana being located as close to the beach as possible, which presumes the sea wall remains. The new cabana is essentially a public facility, containing restrooms and exterior showers for local community swimmers and surfers.

5.1.6 Shoreline Setback Area

The project requires a Shoreline Setback Variance (SSV) for demolition and removal of the existing beach cabana and for construction of the new beach cabana. Another SSV will be filed for the pool and pool deck, pool equipment building, and dining pavilion. The land owner intends to seek a Shoreline Setback Variance(s) for the project concurrently with the processing of other required County permits and approvals.

According to Section 12-4-13 of the Rules relating to Shoreline Setbacks for the Molokaʻi Planning Commission, a variance may be granted if the authority finds the structure or activity is necessary or ancillary to:

1. Cultivation of crops.
2. Aquaculture.
3. Landscaping; provided that the authority finds that the proposed structure or activity will not adversely affect beach processes and will not artificially fix the shoreline.
4. Drainage.
5. Boating, maritime, or water sports recreational facilities.
6. Facilities or improvements by public agencies.
7. Private facilities or improvements that are clearly in the public interest.
8. Private facilities or improvements which will neither adversely affect beach processes nor artificially fix the shoreline.
9. Private facilities or improvements that may artificially fix the shoreline; provided that, the authority also finds that shoreline erosion is likely to cause hardship to the applicant if the facilities or improvements are not allowed with the shoreline area; and provided further that, the authority imposes conditions to prohibit any structure seaward of the existing shoreline unless it is clearly in the public interest.
10. Moving of sand from one location seaward of the shoreline to another location seaward of the shoreline; provided that, the authority also finds that the moving of sand will not adversely affect beach processes, will not diminish the size of the public beach, and will be necessary to stabilize an eroding shoreline.

One of the criteria contained within the Molokaʻi Planning Commission rules that justify a variance is "private facilities or improvements that are clearly in the public interest." The beach cabana's purpose is as a public facility for beach users offering among other things, restrooms. Criteria #8 above, "private facilities or improvements which will neither adversely affect beach processes nor artificially fix the shoreline" provides the justification for the variance for the pool and pool deck, pool equipment building, and dining pavilion.

5.1.7 Tourism Impact

The impact of reopening the Kaluakoʻi Hotel on tourism will be the additional 152 rooms it will add to the rooms currently available.

This effect and other factors have been addressed in a study, *Molokaʻi Responsible Tourism Initiative* prepared by Davianna Pomaikaʻi McGregor, PhD in 2006.

Throughout 2005, Dr. McGregor conducted interviews with 72 Molokaʻi kūpuna, providers of visitor services and accommodations, business operators, subsistence farmers and fishermen, members of community organizations and community contacts for sports and high school events, as well as focus group, in the most comprehensive study on tourism ever completed on Molokaʻi.

The report concluded that the re-opening of the Kaluakoʻi Hotel is one of the key elements to a five-year community-based tourism initiative for Molokaʻi. It stated:

> *The single most important opportunity to expand visitor activities on Molokaʻi is the re-opening of the Kaluakoʻi Hotel by Molokai Properties Limited scheduled for December 2007. The willingness of the current Chief Executive Officer and senior management of Molokai Properties Limited to partner with the KAL-MEC to enhance community-based visitor activities is an additional significant opportunity.*

According to the report,

> *The re-opening of the Kaluakoʻi Hotel will be an important stimulus to visitor activities. There is a lot of support within the community for the re-opening of the hotel. Among the informants, 48 out of the 50 who responded supported the reopening of the hotel.*

The goal of this tourism study was to develop a five-year plan for sustainable tourism on Molokaʻi in order to increase jobs and small business opportunities for the residents of Molokaʻi. The level of expansion would need to be acceptable to Molokaʻi residents, respectful of the Native Hawaiian culture, and protective of the island's natural resources.

The Molokaʻi community initially conceived the elements of community-based tourism while developing the Molokaʻi Enterprise Community (EC) Rural Empowerment Zone grant application in 1999. With an average occupancy of tourism establishments at 25 percent, a vision was developed to find a niche in the visitor industry market to continually attract visitors who would appreciate the special, unique qualities of rural island living.

The community recognized that its greatest assets were the hospitality of its people, its natural environment and resources, and its rich cultural heritage and traditions. The proposal was based on the belief that the people in community could be actively involved in developing the visitor market by drawing on their own knowledge and experiences.

A Visitor Coordinator position was conceived as someone who would work closely with a community task force to create, develop, and preserve ongoing local events and activities that could attract and sustain an increased visitor count. A primary responsibility of this position would be the development, implementation, and promotion of organized, community-based activities, such as softball tournaments, high school and community athletic events and

tournaments, class reunions of local high schools, family reunions, cultural exchange/educational tours, and small, local conferences. This position would collaborate with local, statewide, and national businesses, groups, organizations, and individuals. The success of this position would be measured with an increase in the number of jobs in the visitor industry and an increase in contributions to the island's economy from visitor activities and retail purchases.

Concepts of "Community Tourism," described in Molokaʻi community meetings by Peter Apo of the Native Hawaiian Hospitality Association helped the EC to label and articulate the essential features of community-based tourism. Community Tourism is defined as:

> *[A] process by which a community is empowered to share its greatness while preserving its dignity. It is small in scale and driven by a genuine desire of a community to share itself, its history, traditions, and customs with strangers, as a means by which to support economic growth.*

Features of Community Tourism

Features of Community Tourism include:

- Involves travel-related offerings created and operated by local, traditional, or indigenous populations to enhance their quality of life, protect and restore the environmental and cultural assets and engage visitors on terms defined by the area's inhabitants.
- Activities evolve as a solution to economic, environmental, social, educational, and cultural growth challenges.
- Yields a fair exchange of value between the host and the hosted,
- Preserves the community's sense of place, and brings dignity and pride to the host.
- Invites far more intimacy in the relationship between host and guest than is normally afforded by other tourism business models.
- Features far more authentic and genuine activities for the guests, because the activities are for the community and not constructed specifically to entertain a stranger.
- Shares its real culture by the people who practice it.
- Places boundaries and limitations on how many visitors can be accommodated so that the sense of place is not overwhelmed by large scale tourism, and the ratio between the local population and the visitor count remains in balance.

Criteria for a Molokaʻi Community-Based Plan

The Criteria for a community-based plan include:

- Do the proposed activities make Molokaʻi a better place?
- Do the proposed activities create opportunities for increased prosperity for all segments of the Molokaʻi community?
- Do the proposed activities contribute to the celebration of the community's heritage and traditions?
- Do the proposed activities bring dignity to the community and the people who live around it?
- Do the proposed activities help connect Molokaʻi's past to its future
- Does the operating culture of the managers of the activities bring dignity to the workers and the workplace?

One-Product Integrated Marketing

One of the primary recommendations of the report was the hiring of a Visitor Coordinator, who has since been hired by the KAL-Molokaʻi Enterprise Community. Fundamental to the concept of a Visitor Coordinator is the strategy of marketing the island of Molokaʻi as a whole, rather than marketing individual visitor destinations or enterprises on the island. For example, restaurants and hotels can alternate their specialty nights so that a week of events which rotate between the island's restaurants and hotels can be promoted. Integrated activities for two-day, three-day or four-day visits which patronize a wide range of visitor hosts can be suggested and marketed on a community-based Molokaʻi visitor Web Site, in brochures, and in magazines. Existing Kualaupapa tours can be marketed with overnight stays and a package of visitor activities. "Molokaʻi Tourism" can be distinct. It can incorporate a mixture of agriculture, eco-tourism, cultural tourism, and health and wellness and utilizes the whole island as one, each contributing to the industry but not dependent upon it for individual success. Under this concept, the re-opening of the Kaluakoʻi Hotel will not compete with existing hotel operations or tourism activities.

5.1.8 Five-Year Strategic Plan

The Study by Dr. McGregor also outlined a five-year Strategic Plan for the Visitor Coordinator in order to ensure that the re-opening of the Kaluakoʻi Hotel was successful and that kamaʻāina visitors were the first priority.

Below are key elements, relevant to the re-opening of the Kaluakoʻi Hotel and the five-year plan, which is currently being implemented.

- Support the re-opening of the Kaluakoʻi Hotel by helping to identify kamaʻāina groups to target as Molokaʻi visitors with the MPL marketing staff.
- Coordinate activities focused around the re-opening of the Kaluakoʻi Hotel. Link kamaʻāina planning to come to Molokaʻi for ʻohana events to Kaluakoʻi visitor packages. Coordinate the linkage of entrepreneurial cohorts with hotel services activities and programs, such as the ʻāina momona experiences, agricultural product sales to the restaurant, and agro-tourism, etc.
- Meet regularly with the marketing, services and activities staffs of Molokaʻi hotels to link community entrepreneurs, special events, and 'ohana events with these accommodations.
- Network across the entire island with providers of visitor services as well as with ʻohana and community organizations in order to develop a central calendar of events and set up a central clearinghouse of information about activities on the island.

5.1.9 Economic Impact

In general, the economy of Molokaʻi has been "flat" in recent years when compared to the economic condition of Maui and Lānaʻi. Molokaʻi has typically experienced high unemployment. In 2004, the unemployment rate for Maui was 3.1 percent, Lānaʻi was 2.8 percent, while Molokaʻi was at 10.8 percent. In 2005, the unemployment rate for Maui was 2.6 percent, Lānaʻi was 2.5 percent, and Molokaʻi was 8.3 percent. In comparison, the State of Hawaiʻi unemployment rate for 2005 was 2.8 percent (Maui County Data Book 2006).

In 2004, estimated visitor count for Molokaʻi was 72,099 (Maui County Data Book 2005). In 1999, the total was 69,657 (Maui County Data Book 2001), an increase of just 3.5 percent over five years. In 2005, the Molokaʻi visitor count increased to 73,506 (Maui County Data Book 2006).

In 2000, the total number of non-agricultural wage and salary jobs on Molokaʻi was 2,000. In 2004, that number dropped to 1,850 (Maui County Data Book 2005). It increased slightly to 1900 for 2005 (Maui County Data Book 2006).

The primary industry on Molokaʻi today is government, yet the island's economy still depends on tourism and agriculture as economic sources. West Molokaʻi is a significant center for tourism and related recreational amenities. MPL operates the Lodge and Kaupoa Beach Village, which offers activities that introduce visitors to ranch life. Activities include mountain biking, horseback riding, hiking, and rodeo skills. MPL employs around 140 people and is the largest private employer on the island.

The re-opening of the Kaluakoʻi Hotel will create more than 100 permanent jobs for the local community. By outsourcing various hotel functions (see section below), and by committing to use local produce, small business opportunities will be created for the community.

5.1.10 Outsourcing of Hotel Functions

The *Master Plan* included, as one of its key economic elements, the re-opening of the Kaluakoʻi Hotel. In addition, the Tourism committee of the EC's project #47 determined that MPL, where feasible and affordable, should support Molokaʻi business and products.

The EC and MPL want to create a positive downstream impact from 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 business associated with the Hotel. A minimum of seven privately owned and operated businesses have been identified for outsourcing. The proposed outsourcing of hotel operations includes:

1. A laundry business that would contract hotel laundry and offer a cleaning service to other residents and accommodation establishments on the island.
2. A specialist hotel cleaning business that would contract cleaning services to the hotel.
3. A hairdressing and spa/massage business that will provide these services to guests at the hotel as concession operators.
4. A gift shop and sundry store that will be open to hotel guests, adjacent condominium owners and the community. This shop currently operates even while the hotel is closed.
5. A retail outlet offering ancillary golf equipment and Kaluakoʻi logo wear to golfers and hotel guests. This shop currently operates even while the hotel is closed.
6. The operation of the Beach Shack that will offer water equipment and sundry items to hotel guests and to the community who use the public beaches fronting the hotel.
7. Contracting services such as cultural tours, luau events and the opportunity for visitors to learn about authentic Native Hawaiian practices such as net and pole fishing.

5.1.11 Construction Environment and Labor Force

The booming Hawaiʻi construction climate has made it difficult for the property owner to solicit and receive timely and accurate feedback from general contractors regarding preliminary pricing for the hotel renovation. Several Hawaiʻi contractors have been approached, but none have yet committed to working on Molokaʻi.

The hotel property owner and its partner in the hotel renovation project, the Molokaʻi EC, are committed to using local labor on the hotel renovation. The hotel owner will be making every effort to utilize Hawaiʻi based contractors. More effort in this area will be forthcoming after receipt of the SMA permit that will outline the scope of approved plans.

A key component to the hotel's success will be to ensure local labor is trained to assist in the construction of the hotel. The re-opening of the Kaluakoʻi Hotel and the creation of 100 jobs is one of the key elements of the *Master Plan* which was sponsored by the Molokaʻi EC and prepared with input from more than 1,000 Molokaʻi residents over a two year planning process.

5.1.12 Infrastructure

Electrical and Communications

The project was previously serviced with underground electrical, telephone, and cable TV services. No issues have surfaced with regard to restoring these services.

Water

Water service will be provided by Molokaʻi Public Utilities, Inc., a public utilities commission regulated water purveyor that is an affiliate of the property owner. The Kaluakoʻi water system source is Well 17 in Kualapuu, which has a water use allocation of 1,018,000 gpd. Water from Well 17 is transported via rental space in the Molokaʻi Irrigation System (MIS) to Mahana. The Kaluakoʻi system 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.

From Mahana, water is then pumped to a 7,000,000 gallon reservoir at Puu Nana for treatment. The treated water is then piped to a 3,000,000 gallon reservoir in Maunaloa and gravity fed to Kaluakoʻi.

The following is the water budget used by the State Commission on Water Resource Management to calculate the water allocation based on the then existing uses:

	Gallons per Day
Kaluakoʻi Hotel	67,000
Condos	186,000
Residential	51,000
Golf Course	400,000
Beach Park	26,000
Nursery	18,000

	Gallons per Day
Filter Backwash	100,000
Molokai Ranch	0
System Loss	0
Kaluakoʻi Total	848,000
MIS System Use Charge	94,000
Kualapuu Town	76,000
Total	1,018,000

When the hotel re-opens, an additional 53,200 gpd is anticipated. Total water demand will increase to 850,000 gpd, which is less than the 1.1 mgd water system capacity. The hotel's domestic water demand is expected to decrease from the initial 1976 levels with the installation of more efficient plumbing fixtures in the Admin and Hotel buildings.

Section 4.9 addresses total water issues and uses which includes impact on re-opening the Kaluakoʻi Hotel and of the Golf Course.

Kaluakoʻi has its own private waste water system. Waste water sewer service will be provided by MOSCO, Inc., an affiliate of the property owner.

Solid Waste

Single family solid waste collection service is provided by a private disposal company under contract with the County of Maui. Solid waste from businesses and other non-residential uses will be handled by private disposal companies.

In the Public Facilities Assessment Update County of Maui (2002), R.M. Towill Corporation projected that the Naiwa landfill will have adequate capacity to accommodate residential and commercial waste through the year 2019, and a 10 acre parcel adjacent to the Naiwa site, that has been identified for future landfill expansion could provide for another 25 to 30 years of waste disposal service.

When the hotel re-opens, it is estimated that it will generate 3,650 pounds of solid waste per day. The annual waste generated is estimated to be 1,330,000 pounds or 1,330 cubic yards per year. According to Table 13-10 of the Public Facilities Assessment Update of Maui dated March 9, 2007, prepared for the County of Maui, the annual waste volume in the Naiwa landfill was 20,081 cubic yards in 2006, and is estimated to be 20,252 cubic yards in 2007. The table is based on 1,000 pounds of waste to occupy 1 cubic yard of landfill space. The 1,330 cubic yards of waste estimated to be generated per year by the hotel's re-opening will represent a 6.6 percent increase in waste to be land filled. The existing landfill and a proposed 10 acre expansion will have the capacity to handle the waste for Molokaʻi, including the hotel's solid waste beyond the year 2040.

Drainage

The renovation of the Kaluakoʻi Hotel will generally utilize existing site conditions as the structures exist. No excavation or building of retaining walls is planned. Current plans do not anticipate any changes to the present drainage conditions. While the proposed action includes

enclosing existing lanais and incorporating that space into the hotel rooms and the construction of new lanais, such activity should have a minimal effect on drainage.

The property owner has been advised of past drainage issues involving neighboring condo properties, Ke Nani Kai and Kaluako‘i Villas. Remedial action by one of the condo associations, to the best of our knowledge, has addressed the problem.

With respect to the golf course lots, no earthwork is planned. The only proposed actions are the construction of a new beach cabana to serve the public and the renovation of the existing Pro Shop into the proposed 19th Hole Bar.

The existing drainage system diverted about 80 percent of the storm water flows around the buildings and onto the golf course. In the area of the Administration Building, a small underground collection system of drain inlets and culverts carried storm water into the beach area.

As part of the renovation process, flows down the main road and into the Administration Building area will be mitigated by cleaning and repairing the existing underground system and by installing small barrier walls to divert flows around this area. The net paved area at the hotel is not expected to change significantly and therefore, will not affect drainage run-off.

Given the lack of earthwork involved in this project, there are no negative impacts anticipated on existing topography and associated land forms.

Traffic

Analysis of the impact of the re-opening of the Kaluakoi Hotel and other potential projects in the resort area on roads and traffic was done by Phillip Rowell and Associates. That information can be found in Appendix G (of the DEIS). Pertinent info on the hotel re-opening and other projects is contained on page 5, Section H of the report dated November 17, 2006.

On page 9, Section K, the report concluded:

“Based on the findings of the level-of-service analysis, the intersections within the subdivision do not require widening for separate turn lanes or signalization to accommodate project generated traffic for single family housing. It is anticipated that all intersections will operate at Level-of-Service A, which is the highest level-of-service.

Based on the findings of the level-of-service analysis for the intersection of Maunaloa Highway at Kaluakoi Road, which is the access and egress location for project traffic along Maunaloa Highway, the minimum level-of-service is C, which is above the minimum acceptable Level-of-Service D. Therefore, no improvements are recommended.”

5.1.13 Cultural Impacts

Cultural Resources and Wahi Pana

Although sparsely inhabited, the ahupua’a of Kaluakoi has been, and still is well known for its vast marine resources. Along the boulder coastline are habitats for edible shellfish such as ‘opihi, pupu’awa, and pipipi, as well as a’ama crab. The nearshore area has many seaweed species including, the edible limu kohu. The ranges of sea life found off the coasts of Kaluakoi follow different depth zones. Near shore reefs are known for moi, aholehole, lobster, 'o'io, manini and kala.

Due to the importance of fishing and the marine resources found along the shores of Kaluakoi, ko’a or fishing shrines were erected at the points and promontories, some of which are still honored by fishermen today.

It was possible for the kanaka maoli of Kaluakoi to access the coastline due the Ke alapupu i Molokai (the shell road at Molokai), which was constructed by the Maui chief Kiha-a-Piilani. This coastal trail connected the important fishing places along the Kaluako‘i shoreline.

Marine Resources

Prior to the construction of the Kaluako‘i Hotel, access to the shoreline from Kepuhi to Pohakuma‘uliuli (Make Horse) was limited to the owners, stockholders and employees of Molokai Ranch and their families. Occasionally, fishermen from Maunaloa would walk the long distance to fish and gather 'opihi and limu in the area. The harvesting of marine resources was monitored by the Joao family who lived on the site where the hotel was built.

Once the hotel opened, subsistence fishing and diving in front of the Kaluako‘i Hotel increased. In addition, the hotel infrastructure afforded a launching point for boats out of Kepuhi bay. The marine resources at Kepuhi and along the entire western shoreline were severely diminished. Fishing - throw net and diving - is still conducted in front of the Kaluako‘i Hotel and will continue after its reopening, as will the ability to launch boats.

The beaches in front of the Kaluako‘i Hotel are popular for swimming and surfing, although they can be treacherous during the winter swells.

The primary purpose for the Cabana which will be rebuilt and relocated further inland with the reopening of the hotel is to provide a bathroom and showers for the general public. The community identified the provision of public bathrooms and showers as an essential feature of the hotel, if it is to feature community tourism as part of its program. The facility will also house rentals of surf boards, snorkels, etc. by an out-source community enterprise.

Lighting

The re-opened hotel will strictly adhere to the Maui County Lighting Code which prohibits shining light on beaches.This will protect visits by the Hawaiian Monk Seal.

Landscaping

As much as possible, native plants which are drought tolerant, require little water, and are indigenous to the Kaluako‘i ahupua'a will be used in landscaping the hotel. Tropical exotic plants which require little water will also be utilized. Native pilants will be labeled with its Hawaiian name, scientific name and a short description of the various uses Native Hawaiians made of the plant.

The following are some of the mo'olelo related to places where the Kaluako‘i Hotel was constructed.

Kepuhi, Village of the Eel
Geographic Location: Kepuhi, a small village in Kaluako‘i on West Moloka‘i
Characters: Lono Nu‘uhiwa- last chief, Keao- fish spotter, Anuhea- girl from Makapu‘u, O‘ahu.
Deities: Moray Eel, guardian god, ‘aumakua of Kepuhi.

For generations Kepuhi was ruled by the Nu‘uhiwa family, and their last chief was Lono Nu‘uhiwa. On his sixtieth birthday, even though there was a great feast, he was sad for he had not named a successor. He was fond of Keao but knew that Keao was too soft to be a leader.

One day Keao saw a canoe floating in the ocean. As it came closer, he noticed that there was a beautiful girl in the canoe. The girl was unconscious; when she awoke she mentioned that she was from Makapu‘u, O‘ahu and that she was fishing with her brother when they were attacked by a large eel at Makapu‘u. The chief was in wonder as the guardian god of Kepuhi was a giant moray eel.

Auhea and Keao fell in love, and soon Auhea became pregnant. One night, the kahuna dreamed that the chief of the village to succeed Lono would have the mark of the eel on his body. A few nights later, the chief died.

Three months later, Auhea gave birth to a husky boy. As Auhea lifted the baby to the kahuna, he saw three white marks running down the right side of the baby’s face from his ear to his mouth. Instantly, the kahuna broke into a joyful chant: “Behold the mark of the eel. Behold the high chief of Kepuhi.” And so life was lived, in harmony and balance, in the village of Kepuhi.

Pāpōhaku, the Stone Wall
Geographic Location: Pāpōhaku Beach
Characters: Chief and his people from East Moloka‘i, Kahuna of Pāpōhaku Village.
Hawaiian Values: Preserving that which is sacred or scarce (Kapu of the fish ‘opelu); respect and homage for deeds of unselfishness.

A chief from east Moloka‘i and a few of his people boarded canoes and set off around the island. They found themselves on the southwest coast of Moloka‘i. They paddled up to some fishermen who had a large catch of 'opelu. Hungry, they began to eat. As they were all eating with great satisfaction, another group of fishermen came by and cried: “Stop. Do not eat the ‘opelu. This is the season of ‘opelu kapu.” However, the visiting chief only had a kapu for eating turtle, so they continued eating.

Mad with outrage and fear, the fishermen attacked the visiting chief and his men. Overpowered, they were brought before the kahuna. The visiting chief became very ill, and the only way to make things right was a human sacrifice to save the chief from death. One of his men offered himself as a sacrifice and the chief recovered.

The kahuna ordered a tree planted on the grave of the willing victim. The grave was on shore; when the tide was high, the waves would wash sand from the grave. Thus, in a very short time, the body would be exposed. In respect and remembrance, the chief ordered his men to build a stone wall about fifty feet long. All with gratitude of their fellow, the chief ordered the wall to continue for another two hundred feet. The chief himself put the last stone on the wall, saying as he did so, "I call this place Pāpōhaku, 'Stone Wall.'"

Kaiaka Rock

Kaiaka Rock, a major outcropping between Kepuhi and Pāpōhaku is home to a heiau facing Pāpōhaku Beach and was used as an observation tower for fishing and scouting purposes. Just below Kaiaka Rock, facing Pāpōhaku Beach is a canoe heiau (Kaopuiki, 2005).

Libby, McNeill & Libby Company acquired a lease from Molokai Ranch Co., Ltd. to establish a pineapple plantation on any lands of Kaluakoʻi above the five hundred foot level. In February 1923, the first field of 977 acres was planted. Due to the distance to Kaunakakai over undeveloped roads, Libby decided to construct camp buildings and houses on Ranch land in the Maunaloa area. Libby built a cable landing on Puʻu Kaiaka and shipped in materials which were hauled from ship to shore using a winch to construct Maunaloa Town, as well as fertilizer, weed control paper, and pulapula (plantings). (Cooke, 1949, 90-91).

Permanent Protection

The original plan for the Kaluakoʻi Resort included a 375 room hotel and a restaurant on Kaiaka Rock. Hawaiian activists in the Hua Ala Loa organization successfully protested the construction on Kaiaka Rock which would have destroyed this significant cultural feature and the cultural sites located on it. Under the *Master Plan*, the Kaiaka Rock will be gifted to the Molokaʻi Land Trust for permanent protection and conservation of its cultural and natural resources.

Community Principles to Guide the Re-opening of Kaluakoʻi Hotel and Related Tourist Activities

As part of the development of the *Master Plan*, a committee on tourism developed guidelines and principles to guide the development of tourist activities on all lands owned by MPL, especially the Kaluakoʻi Resort. These principles are to assure that the tourist activities promoted by MPL are culturally appropriate to the Molokaʻi lifestyle. These principles are as follows:

Principles to Guide Molokaʻi Tourism

A. General Points

- A study to determine the tourism carrying capacity of Molokaʻi should be conducted 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.

B. Hawaiian Culture

- Hawaiian culture, both traditional and how it is lived on Molokaʻi today, is the foundation for activities including tourism.
- Advertising and marketing should reflect the authentic Hawaiian culture as well as Molokaʻi's rural life style and its people.
- On Molokai we want to share our authentic Hawaiian culture, not sell it. We do not want to commercialize Hawaiian culture.
- 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.
- The Molokaʻi kūpuna play an essential role in keeping the integrity of the Hawaiian culture.
- Molokaʻi can offer Hawaiian culture in a modern day setting based on the past.

C. Community Involvement

- 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.
- The Molokaʻi community should be welcome at all places visitors have access.
- 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 Molokai.
- Exposure to the Molokaʻi rural lifestyle and "rubbing shoulders" with the local community can enrich the visitors' experience.
- Community input and participation is important on major Molokai Ranch visitor attractions and facilities changes.
- Encourage personal and interactive modes of communication and education with visitors.

D. Education

- Education is fundamental for all aspects of tourism for the community, service providers, property owners, and visitor.
- Island wide employees involved in tourism need cultural education specific to this island to assist in maintaining the authenticity of the Molokaʻi experience.
- When landscaping and designing tourist facilities, think in terms of the local environment, ecology and culture.

- Tourist activities should have authentic Hawaiian essence and an educational component for resource protection.

E. Molokai Properties Limited

- Kaluakoʻi resort redevelopment is essential to the island's tourism economy, including small meetings, conferences kama'aina travel, sporting events etc.
- Tourism on Molokai Ranch should complement other Molokaʻi businesses.
- Tourism on Molokai Ranch should target niche and special markets, including kamaʻāina.
- Molokai Ranch should support Molokaʻi businesses and products as feasible and affordable.

Cultural Planning

The *Master Plan* envisioned a group or committee recommending interior design fittings of cultural significance and outdoor plants representing the island. After consultation with community members, the land owner elected to retain a Hawaiian Cultural Consultant, who would meet with the community and gather cultural and historical input. The Consultant would have the technical expertise to translate the community input into tangible design feedback for use by the project design team.

The Kaluakoʻi Hotel has retained Mr. Wesley Kaiwi Nui Yoon as Hawaiian Cultural Consultant. Mr. Yoon is formally trained as an architect, having received his B.A. in Architecture from the University of Hawaii in 1998. A 1993 graduate of Kamehameha Schools, he is a member of the OHA Native Hawaiian Historic Preservation Council, trained in Hawaiian warfare, strategy, and healing. He brings to the project a keen understanding of Hawaiian culture in relation to site planning and interior design.

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.

Cultural Blessing to Re-open Kaluakoʻi Hotel

In July 2006, members of the Halau of the late John Kaimikaua conducted a ceremony of blessing for the reopening of the Kaluakoʻi Hotel. They offered prayers for the hotel, in its re-opening, to help the people of Molokaʻi.

Summary

Overall, the re-opening of the Kaluakoʻi Hotel will have a positive cultural impact, not only on the aging facility and infrastructure, but also on the landscape and cultural resources of Kaluakoʻi. Through various interviews, meetings, community organizations, and plans, the Molokaʻi community has reaffirmed its support for the re-opening of the Kaluakoʻi Hotel and Golf Course. Many feel that the re-opening of the Kaluakoʻi Hotel will bring the hotel room count up to a manageable and desirable level that can benefit the economy of Molokaʻi and the overall community.

Moreover, allowing the hotel facilities to deteriorate would actually have a negative impact on the cultural and natural resources of the hotel property and would be a waste of significant infrastructure.

5.2 KALUAKOʻI RESORT LANDS

MPL has no current plans for any development within the Kaluakoʻi Resort area, other than the renovation of the Kaluakoʻi Hotel into a 152-bedroom hotel and the renovation of the Kaluakoʻi Golf Course, the plans and impacts of which have been discussed in the previous section.However, issues concerning already entitled lots have been raised and are therefore discussed below.

County-zoned parcels within the Kaluakoʻi Resort area are detailed in the map provided in Appendix Y. The entitlement of each parcel and potential future plans for each of these lots is discussed below.

5.2.1 Parcel Donations to the Land Trust

Two parcels and part of a third parcel are to be donated to the Molokaʻi Land Trust because of their archeological and cultural significance.

Lots 13 (the 22-acre Kaiaka Rock and its Puu O Kaiaka site) and Lot 7-A (a 25-acre site to the north of Kawakui Beach) are intended for donation to the Molokaʻi Land Trust as per the *Master Plan.*

The Kaiaka site is currently zoned as a hotel site and the Molokaʻi Land Trust will downzone this site to Open Space; this will be a condition of transfer to the Molokaʻi Land Trust. The Kawakui hotel site is zoned as low density apartments. A similar down-zoning will be part of the transfer of this property to the Molokaʻi Land Trust.

Also donated to the Molokaʻi Land Trust is a 5-acre portion (of the total 15-acre parcel) of 6D-1, a designated hotel site, as important archeological sites are located on the promontory. This site has yet to be surveyed in anticipation of the donation.

5.2.2 Other Entitled Kaluakoʻi Parcels

MPL has no other current plans for any of the other entitled lots.

Any potential development of these sites is subject to a Special Management Area permit from the Molokaʻi Planning Commission as the entire Kaluakoʻi Resort area is within the SMA zone.

Such plans would also be based on the future availability of desalinated water, as MPL has not allowed for the provision of either potable or non-potable water for any further developments at Kaluakoʻi other than the Kaluakoʻi Hotel and golf course.

5.2.3 Potential Kaluakoʻi Hotel expansion

Following the renovation of the Kaluakoʻi Hotel, there may be a need, at some time in the future, for additional hotel rooms to meet future demand. This is a long term projection that may ultimately be inapplicable.

Should this need occur, there is no room to expand on the current site.

MPL believes that sites 6B-1 (a four acre hotel-zoned site), 6B-3 (an 18 acre hotel zoned site) and 6B-4 (a seven acre hotel zoned site) would be the likely siting for additional rooms as these entitled lots are the closest in proximity to the Kaluakoʻi Hotel.

5.2.4 Potential Cultural Center

Also included in the *Master Plan* is discussion of a potential cultural center for the Kaluakoʻi area. This cultural center would be an attraction to visitors to Molokaʻi staying at the Kaluakoʻi Hotel.

Potential siting of this cultural center is on site 6C, a 29-acre site currently entitled as a hotel site.

This site is rich in cultural resources along the shoreline and only the rear half of the site is thought suitable for such a cultural center.

The success of the hotel would be critical to consideration of this option.

5.2.5 Potential Accommodation for Hotel Staff

The *Master Plan* also projected potential for future staff housing for hotel workers.

Site A-2, a 25-acre zoned medium density apartment site bounded by Kaluakoʻi Road and Kaiaka Road is potentially available for use if the need ever arises.

5.2.6 Transfer of Maunaloa Community Plan-approved Golf Course Site

The *Master Plan* proposes that if ever a need is proven for the construction of a second 18-hole golf course on Molokaʻi, that MPL will transfer its current community plan-approved 18-hole golf course adjacent to the Lodge at Maunaloa, to a more suitable site adjacent to the current Kaluakoʻi Golf Course.

In this instance, Kaluakoʻi site 6E (14-acres zoned residential), parcel 6A (5-acres apartment-zoned), parcel 6D-2 (29 acres zoned hotel) as well as other land mauka of the current zoned parcels, would be used for this golf course.

As the existing Kaluakoʻi Golf Course will take many years to become commercially viable, there are no short- or medium-term plans to develop a second 18-hole golf course.

5.2.7 Zoned Commercial Sites

Currently zoned resort commercial (in other words for retail or offices) are two parcels (8-B, 4-acres, and 8A- 12acres) on the Kaluako‘i Road near the entrance to the Kaluako‘i Hotel.

Any potential development of these lots is not foreseeable and is therefore speculative.

5.2.8 Parcel 7B-2

This 8-acre site is culturally sensitive and it is unlikely it will ever be developed.

5.2.9 Agriculture and Open Space Zoned Areas

In the resort area there is other acreages zoned agriculture and Open Space, and an area, not specified in size, as designated for future county facilities.

POTENTIAL IMPACTS AND MITIGATION MEASURES

As MPL has no current plans and any potential developments for these undeveloped entitled areas, potential impacts are purely speculative at this time, and potential impacts cannot be determined.

As the Moloka‘i Land Trust intends to down-zone the parcels MPL intends to donate to the trust, no adverse impacts will result from retaining these parcels in open space.

5.3 HALE O LONO HARBOR

The question as to the future use of Hale O Lono harbor by intended Lā‘au residents has been raised.

MPL believes this issue is highly speculative and not reasonably foreseeable, but gives the following information as background.

5.3.1 MPL-owned Land

The *Master Plan* discusses Hale O Lono Harbor to the extent of any future development that might, in the future, take place on the land owned by MPL adjacent to the harbor.

The *Master Plan* states that the strip of land should be “reserved” for the potential in the future for “ancillary boating facilities” such as small structures needed to repair and outfit small craft that call at the harbor and toilet facilities.

MPL has no plans to develop the strip of land that it will continue to own along the coast at the rear of Hale O Lono Harbor. Its use will be continued for agricultural uses and part of the land adjacent to the foreshore will be reserved for, when it is demanded by the Moloka‘i community, and not those who might purchase property at Lā‘au Point, for those “ancillary boating facilities.”

MPL’s only current connection with Hale O Lono Harbor is the supply of water, at no charge, to those taking part in the canoe races each year. MPL connects a pipe to its current non-potable water supply at the top of the cliffs that surround the harbor and supplies non-potable water for toilets and washing facilities.

5.3.2 Hale O Lono Harbor Land

MPL has no ownership nor does it intend to seek a lease of the Hale O Lono harbor facilities that are owned by the Department of Land and Natural Resources and administered by the Division of Boating and Ocean Resources.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Claims have been made that the wealthy Lā‘au homeowners, with “excess disposable income” may press for access to harbor and mooring facilities along the southwest coast of Moloka‘i to engage in “such high-end recreational facilities like boating and fishing the waters off that part of the island, if not the entire island.” Hale O Lono was huge recreational asset that could fill the void in such facilities as there was a shortage of mooring facilities for private boats and yachts throughout the state, was the claim.

The Division of Boating and Ocean Recreation has indicated that it has no master plan for Hale O Lono Harbor and that pressure for more use, improved facilities, more parking, moorings or boat ramps, would lead to a development of such a master plan, and the result public hearings.

Hale O Lono Harbor is currently used as a “drop-off and on” point for those Moloka‘i residents with boats, and for overnight camping, particularly during the summer months.

MPL believes that with the anticipated slow build-out of the Lā‘au Point development over 20 years, and the fact that most buyers will be more residents, that the pressure for more use of Hale O Lono Harbor will in fact result from the current Moloka‘i community rather than the new homeowners.

It also believes that the impact on Hale O Lono Harbor from the Lā‘au Point project is not reasonably foreseeable and therefore speculative.

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6.0 RELATIONSHIP TO LAND USE PLANS AND POLICIES

State of Hawaiʻi and County of Maui land use plans and polices relevant to the Lāʻau Point project, and required permits and approvals, are described below.

6.1 STATE OF HAWAIʻI

6.1.1 Chapter 343, Hawaiʻi Revised Statutes

Compliance with Chapter 343, HRS is required as previously described in Section 1.4.

6.1.2 State Land Use Law Chapter 205, Hawaiʻi Revised Statutes

The State Land Use Law (Chapter 205, HRS) establishes the State Land Use Commission (LUC) and gives this body the authority to designate all lands in the State into one of four districts: Urban, Rural, Agricultural, or Conservation. The majority of the Lāʻau Point project site is within the Agricultural District, and the coastline area lies within the Conservation District (see Figure 4). Within the Conservation District, the project site is within the General and Limited Subzones (see Figure 5).

MPL is seeking a State Land Use District Boundary Amendment (SLUDBA) to change the proposed residential area from the Agricultural District to the Rural District, to allow rural-residential lots of 1.5 to 2+ acres in size, roadways, infrastructure, parks, and open space. In addition, MPL proposes to expand the Conservation District along the shoreline and related resource areas to ensure protection of these areas (see Table 10 and Figure 1).

Table 10. SLUDBA Petition Area

District	Acreage
Agricultural (AG) to Rural (R)	
• House lots (200)	400
• Roadways	46
• Infrastructure	14
• Parks	8
• Open Space	382
Conservation (C) to Rural (R)	9
Agricultural (AG) to Conservation (C)	254
TOTAL	**1,113 acres**

Decision making criteria to be used in the LUC's review of petitions for reclassification of district boundaries is found in Section 205-17, HRS, and Section 15-15-77, HAR. Standards for determining the Rural District are contained in Section 15-15-21, HAR and standards for determining the Conservation District are contained in Section 15-15-20 HAR. The following is an analysis of how the Lāʻau Point project conforms to these criteria and standards.

Land Use Commission Decision Making Criteria

§205-17 Land use commission decision making criteria*. In its review of any petition for reclassification of district boundaries pursuant to this chapter, the commission shall specifically consider the following:*

(1) The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawaii state plan and relates to the applicable priority guidelines of the Hawaii state plan and the adopted functional plans;

Discussion: Lāʻau Point conforms to the applicable goals, objectives, and policies of the Hawaiʻi State Plan and functional plans, as discussed in Sections 6.1.5 and 6.1.6 of this EIS.

(2) The extent to which the proposed reclassification conforms to the applicable district standards;

Discussion: Lāʻau Point conforms to the Rural and Conservation District standards as discussed below.

(3) The impact of the proposed reclassification on the following areas of state concern:

(A) Preservation or maintenance of important natural systems of habitats;

(B) Maintenance of valued cultural, historical, or natural resources;

Discussion: The Lāʻau Point project will be sensitive to natural systems, such as streams, gulches, and floodways, and will define areas for environmental protection. A State Land Use District Boundary Amendment is proposed to expand the existing Conservation District along the coastline of Lāʻau Point to create a Shoreline Conservation Zone (see Figure 1). The acreage in the Conservation District will expand from 180 acres to 434 acres (an increase of 254 acres), thereby increasing the amount of natural shoreline habitats in protection. An additional 382 acres surrounding the rural-residential lots will be designated for open space under County zoning to ensure that streams, gulches, and floodways will remain undeveloped open space.

Prior to site planning and design of the Lāʻau Point project, an archaeological survey of the entire 6,348-acre parcel identified approximately 1,000 acres for cultural and resource protection where groupings of archaeological and historic sites exist. Access roads and the rural-residential lots have been planned to respect these cultural preservation areas and archaeological sites. An archaeological preserve of approximately 128 acres will be created at Kamākaʻipō Gulch, an area to be donated to the Molokaʻi Land Trust. The creation of Cultural Protection Zones (see Figure 12) increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions (see Section 4.1).

The Conservation District areas to be protected (approximately 434 acres) within the Lāʻau Point project will be the subject of an easement held by the Molokaʻi Land Trust, with guidelines for uses reflecting the importance of these areas culturally, archeologically, and to subsistence gathering. These protected lands will be part of an entity that is controlled jointly by Lāʻau Point homeowners and the Land Trust.

(C) Maintenance of other natural resources relevant to Hawaii's economy, including, but not limited to, agricultural resources;

Discussion: MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Molokaʻi Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Molokaʻi community under the *Master Plan* (see Section 2.1.12). Under the protective easements, 14,390 acres will be protected forever for agricultural use, and 10,560 acres of Agricultural District land will be protected as open space on which no building will be permitted. The Land Trust will administer agreed upon land use policies for these areas that affect agricultural resources.

(D) Commitment of state funds and resources;

Discussion: The fiscal analysis prepared for the Lāʻau Point (Appendix Q) projects that State revenues should exceed State expenditures by $4.7 million over the life of the project. Regarding County revenues and costs, the fiscal analysis projects an annual surplus of $2.1 million at the end of lot sales.

Lāʻau Point's onsite Wastewater Treatment Plant will be privately developed, owned, and maintained. MPL will develop roadways to County standards and may at some future stage seek to dedicate the roads to the county. Initially, the roads will be owned by the residents.

(E) Provision of employment opportunities and economic development; and

Discussion: As discussed in Sections 2.1.7 (Key Points) and 4.8.3 (Economy), the Lāʻau Point project will enhance Molokaʻi's economic environment and stimulate economic diversification relative to the present unprofitable ranch operations. These opportunities include:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Providing funding for the Kaluakoʻi Hotel and Golf Course renovations from sales of the Lāʻau Point rural-residential lots. These resort facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide in excess of 100 jobs for Molokaʻi residents.

(F) Provision for housing opportunities for all income groups, particularly the low, low-moderate, and gap groups; and

Discussion: As discussed in Sections 2.1.13 (CDC) and 4.8.2 (Housing), 200 acres around the towns of Kualapuʻu and Maunaloa have been identified for the future development of ʻOhana Neighborhood Communities (i.e., affordable housing) to be developed by partnering with various community resources such as Habitat for Humanities, Self-Help Housing, and others. Approximately 1,100 acres will also be gifted to the Molokaʻi Community Development Corporation (CDC), a large portion of which can be used for affordable housing.

(4) The representations and commitments made by the petitioner in securing a boundary change.

Discussion: MLP is committed to following through with the representations and commitments it has made to the community and the State Land Use Commission. The financial statements of MPL's parent company, GuocoLeisure Limited (previously known as BIL International Limited), were provided as an exhibit of the SLUDBA petition submitted on April 27, 2006.

§15-15-77 Decision-making criteria for boundary amendments. *(a) The commission shall not approve an amendment of a land use district boundary unless the commission finds upon the clear preponderance of the evidence that the proposed boundary amendment is reasonable, not violative of section 205-2, HRS, and consistent with the policies and criteria established pursuant to sections 205-16, 205-17, and 205A-2, HRS.*

(b) In its review of any petition for reclassification of district boundaries pursuant to this chapter, the commission shall specifically consider the following:

(1) The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawaii state plan and relates to the applicable priority guidelines of the Hawaii state plan and the adopted functional plans;

(2) The extent to which the proposed reclassification conforms to the applicable district standards;

(3) The impact of the proposed reclassification on the following areas of state concern;

(A) Preservation or maintenance of important natural systems or habitats;

(B) Maintenance of valued cultural, historical, or natural resources;

(C) Maintenance or other natural resources relevant to Hawaii's economy including, but not limited to agricultural resources;

(D) Commitment of state funds and resources;

(E) Provision for employment opportunities and economic development; and

(F) Provision for housing opportunities for all income groups, particularly the low, low-moderate, and gap groups;

(4) In establishing the boundaries of the districts in each county, the commission shall give consideration to the general plan of the county in which the land is located;

Discussion: Lāʻau Point's conformance with the applicable goals, objectives, and policies of the Hawaiʻi State Plan and Functional Plans are discussed in Sections 6.1.5 and 6.1.6 of this EIS.

The extent to which the proposed reclassification conforms to the applicable district standards is discussed below.

The impact of the proposed reclassification on areas of state concern is discussed in the preceding section regarding Section 205-17, HRS, *Land Use Commission Decision Making Criteria*.

Lāʻau Point's conformance with the Maui General Plan and the Molokaʻi Community Plan land use policies is discussed in Section 6.2.2. A Community Plan Amendment is being sought so that Lāʻau Point is consistent with the Molokaʻi Community Plan Land Use Map.

(5) The representations and commitments made by the petitioner in securing a boundary change, including a finding that the petitioner has the necessary economic ability to carry out the representations and commitments relating to the proposed use or development; and

Discussion: MLP is committed to following through with the representations and commitments it has made to the community and the State Land Use Commission. The financial statements of MPL’s parent company, GuocoLeisure Limited (previously known as BIL International Limited), were provided as an exhibit of the SLUDBA petition submitted on April 27, 2006.

(6) Lands in intensive agricultural use for two years prior to date of filing of a petition or lands with a high capacity for intensive agricultural use shall not be taken out of the agricultural district unless the commission finds either that the action:

(A) Will not substantially impair actual or potential agricultural production in the vicinity of the subject property or in the county or State; or

Discussion: Lā‘au Point will not impact MPL’s agricultural operations. As discussed in Section 3.4 (Agricultural Impact), no ranching has occurred on the site since 2000. As discussed in Section 3.3 (Soils), the Lā‘au Point site provides no value for soil-based agriculture.

(B) Is reasonably necessary for urban growth.

Discussion: Lā‘au Point will be a rural residential community, as opposed to an urban development. The real estate marketing report prepared for the Lā‘au Point project (Appendix Q) projects a demand of approximately 40 of these rural-residential lots per year, indicating that all lots could be sold in approximately five years.

(c) Amendments of a land use district boundary in conservation districts involving land areas fifteen acres or less shall be determined by the commission pursuant to this subsection and section 205-3.1, HRS.

(d) Amendments of land use district boundary in other than conservation districts involving land areas fifteen acres or less shall be determined by the appropriate county land use decision-making authority for the district.

Discussion: The Lā‘au Point project area is more than 15 acres; therefore, the State Land Use Commission is the appropriate body to consider the reclassification.

(e) Amendments of a land use district boundary involving land areas greater than fifteen acres shall be determined by the commission, pursuant to this subsection and section 205-3.1, HRS.

Discussion: The State Land Use Commission shall be the decision-making authority for the SLUDBA and accepting authority for the EIS.

Standards for Determining Rural District Boundaries

§15-15-21 Standards for determining "R" rural boundaries. *Except as otherwise provided in this chapter, in determining the boundaries for the "R" rural district, the following standards shall apply:*

(1) Areas consisting of small farms; provided that the areas need not be included in this district if their inclusion will alter the general characteristics of the areas;

(2) Activities or uses as characterized by low-density residential lots of not less than one-half acre and a density of not more than one single-family dwelling per one-half acre in areas where "city-like" concentration of people, structures, streets, and urban level of services are absent, and where small farms are intermixed with the low-density residential lots; and

(3) It may also include parcels of land which are surrounded by, or contiguous to this district, and are not suited to low-density residential uses for small farm or agricultural uses.

Discussion: The Lā‘au Point community will be low-density, consisting of 200 rural-residential lots, each approximately 1.5 to 2+ acres in size. The community will not contain “city-like” concentrations of people, structures, streets, or urban levels of services.

Standards for Determining Conservation District Boundaries

§15-15-20 Standards for determining "C" conservation district boundaries. *Except as otherwise provided in this chapter, in determining the boundaries for the "C" conservation district, the following standards shall apply:*

(1) It shall include lands necessary for protecting watersheds, water resources, and water supplies;

(2) It may include lands susceptible to floods and soil erosion, lands undergoing major erosion damage and requiring corrective attention by the state and federal government, and lands necessary for the protection of the health and welfare of the public by reason of the land's susceptibility to inundation by tsunami and flooding, to volcanic activity, and landslides;

(3) It may include lands used for national or state parks;

(4) It shall include lands necessary for the conservation, preservation, and enhancement of scenic, cultural, historic, or archaeologic sites and sites of unique physiographic or ecologic significance;

(5) It shall include lands necessary for providing and preserving parklands, wilderness and beach reserves, for conserving natural ecosystems of indigenous or endemic plants, fish, and wildlife, including those which are threatened or endangered, and for forestry and other related activities to these uses;

(6) It shall include lands having an elevation below the shoreline as stated by section 205A-1, HRS, marine waters, fish ponds, and tidepools of the State, and accreted portions of lands pursuant to section 501-33, HRS, unless otherwise designated on the district maps. All offshore and outlying islands of the State are classified conservation unless otherwise designated on the land use district maps;

(7) It shall include lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use, except when those lands constitute areas not contiguous to the conservation district;

(8) It may include lands with a general slope of twenty per cent or more which provide for open space amenities or scenic values; and

(9) It may include lands suitable for farming, flower gardening, operation of nurseries or orchards, growing of commercial timber, grazing, hunting, and recreational uses including facilities accessory to those uses when the facilities are compatible natural physical environment.

Discussion: A SLUDBA is proposed to expand the existing Conservation District along the coastline of Lā‘au Point to create a Shoreline Conservation Zone (see Figure 1). The areas proposed for Conservation District expansion include concentrations of archaeologically and culturally important sites. Additionally, the Conservation District lands along the shoreline will be expanded inland to allow a greater setback between the shoreline and the homes and in recognition of the cultural importance of the shoreline area in Native Hawaiian subsistence practices. The increased Conservation District will allow for sensitivity to natural systems, such as streams, gulches, and floodways, and areas for environmental protection. Within the project area, the acreage in the Conservation District will expand from 180 acres to 434 acres (an increase of 254 acres), thereby increasing the amount of natural shoreline habitats in protection.

A reclassification of nine acres from Conservation to Rural District is also proposed for the public shoreline park on the south shore. While park-type uses are compatible with the standards set forth in §15-15-20, HAR, the reclassification to the Rural District will facilitate implementation of park improvements (such as a comfort station, a parking lot, a Resource

Manager's residence, an individual wastewater system, a drainage system, and footpaths) without the need for a Conservation District Use Application (CDUA). In their letter dated February 23, 2007, the DLNR Office of Conservation Coastal Lands confirmed that a petition to re-district the nine acres from Conservation to Rural for the park development would not require a Conservation District Use Application (CDUA)[9].

6.1.3 State Conservation District Administrative Rules

The purpose of the State Conservation District Law (183C, HRS) is to conserve, protect, and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and public health, safety, and welfare. The Conservation District lands in the project site fall within the General and Limited Subzones (see Figure 5).

The State Conservation District Administrative Rules (HAR, Title 13, DLNR, Subtitle 1 Administration, Chapter 5, Conservation) provide for identified land uses within Conservation District subzones. Below each criterion is listed, along with a discussion of how the Lāʻau Point project conforms to the specific criterion.

In their letter dated February 23, 2007, the DLNR Office of Conservation Coastal Lands stated that the 254 acres designated into the Conservation District will not have subzone designation. If the land is designated to the Conservation District the landowner will need to petition the Board of Land and Natural Resources for a new subzone. This will require an Administrative Rule Amendment.

(1) The proposed land use is consistent with the purpose of the conservation district;

Discussion: According to HAR §13-5-1, the purpose of the Conservation District is to "regulate land use in the conservation district for the purpose of conserving, protecting, and preserving the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare."

The areas proposed for Conservation District expansion include concentrations of archaeologically and culturally important sites. Additionally, the Conservation District lands along the shoreline will be expanded inland to allow a greater setback between the shoreline and the homes and in recognition of the cultural importance of the shoreline area in Native Hawaiian subsistence practices. Within the project area, the acreage in the Conservation District will expand from 180 acres to 434 acres (an increase of 254 acres), thereby increasing the amount of natural shoreline and other areas in protection.

(2) The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur;

Discussion: The objective of the Limited subzone is "to limit uses where natural conditions suggests constraints on human activities" (HAR §13-5-12). MPL agrees that the natural conditions along the Lāʻau Point shoreline suggest constraints on human activities, and is

[9] Letter included in Section 9.0 of this EIS.

therefore seeking to increase the Conservation District between the house lots and the shoreline. The shoreline area will be accessible in recognition of the cultural importance of the shoreline area in Native Hawaiian subsistence practices.

The objective of the General subzone is "to designate open space where specific conservation uses may not be defined, but where urban use would be premature" (HAR §13-5-14). The expanded Conservation District lands along the shoreline will be accessible for subsistence activities. The archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust) will also be designated to the Conservation District and accessible for cultural practices.

(3) The proposed land use complies with provisions and guidelines contained in chapter 205A, HRS, entitled "Coastal Zone Management," where applicable;

Discussion: Lāʻau Point complies with the provisions and guidelines contained in Chapter 205A, HRS, entitled "Coastal Zone Management" as discussed in Section 6.1.4 of this EIS.

(4) The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community, or region;

Discussion: The proposed land use involves expanding the existing Conservation District area by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected in the Conservation District. Natural systems, such as streams, gulches, and floodways will be maintained and remain as open space. Potential impacts to the natural resources will be mitigated through appropriate management and protocol as discussed in Section 3.0 of this EIS.

(5) The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.

Discussion: No buildings, structures, or facilities will be built in Conservation District lands.

(6) The existing physical and environmental aspects of the land such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable;

Discussion: The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved by the expansion of the Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected as open space in the Conservation District. Natural systems, such as streams, gulches, and floodways will be maintained and remain as open space.

As discussed in Section 4.1, large areas of Cultural Protection Zones, such as the archaeological preserve (approximately 128 acres) at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust), increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions (see Figure 12).

(7) Subdivision of land will not be utilized to increase the intensity of land uses in the conservation district; and

Discussion: There will be no subdivision of land within the Conservation District other than for the parks and the Kamakaipo Gulch which will remain by deed restrction in conservation.

(8) The proposed land use will not be materially detrimental to the public health, safety and welfare.

Discussion: Expanding the Conservation District at Lāʻau Point is not expected to be detrimental to public health, safety, or welfare.

6.1.4 Hawaiʻi Coastal Zone Management Program, Chapter 205A, Hawaiʻi Revised Statutes

The Coastal Zone Management Area as defined in Chapter 205A, HRS, includes all the lands of the State. As such, Lāʻau Point is within the Coastal Zone Management Area.

The relevant objectives and policies of the Hawaiʻi Coastal Zone Management (CZM) Program pertaining to Lāʻau Point, along with a discussion of how the project conforms to these objectives and policies, is discussed below.

Recreational Resources

Objective
(A) Provide coastal recreational opportunities to the public.

Policies
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
- *(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
- *(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
- *(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
- *(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
- *(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.*

Discussion: Project plans propose that Native Hawaiians and the general public will have shoreline access from two public shoreline parks (totaling approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the community, and the other (15 acres) at Puʻu Hakina at the south end (see Section 4.11.5). In the process of developing the *Master Plan*, subsistence fishermen and gatherers were very concerned of marine resource depletion that could be caused by opening up the south and west shores to increase public access. Increased public

access to the shoreline and other coastal resources has the potential to damage the natural environment and diminish the uniqueness of the coast. Therefore, to protect the natural resources of the shoreline, a Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) has been developed and adopted to addresses maintenance and resource management for the area.

Historic Resources

Objective
Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
Policies
A) Identify and analyze significant archaeological resources;
B) Maximize information retention through preservation of remains and artifacts or salvage operations; and
C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion: As discussed in Section 4.1 (Archaeological Resources), extensive archaeological surveys have been conducted for the Lāʻau Point project site. Approximately 1,000 acres were identified as Cultural Protection Zones, which denote areas where groupings of archaeological and historic sites exist, such as at the proposed archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (see Figure 12), an area to be donated to the Molokaʻi Land Trust. The creation of Cultural Protection Zones, to be managed by the Land Trust, increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions.

The residential community at Lāʻau Point will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve sites. It is expected that the project will not have adverse effects to archaeological sites.

Scenic and Open Space Resources

Objective
Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

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

Discussion: As discussed in Sections 2.3.1 and 4.7, to mitigate visual impacts, lot lines will be set back at least 250 feet from the designated shoreline or high water mark, creating a coastal conservation zone. Figure 19 provides a typical section analysis of the setback and buffer zone. To further minimize visual impacts, residential construction will be subject to stringent CC&Rs

(as discussed in Section 2.3.6). Buildings must maintain a low-profile rural character and respect the natural environment. Restrictions on building height (one-story, maximum 25 feet high), materials, colors, and style are important factors to blend homes into the environment.

It is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low-density rural community. Homes will be sited appropriately to avoid a dense urban-like development.

The scenic resources and shoreline open space will be preserved and improved upon by the expansion of the Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected as open space in the Conservation District. Natural systems, such as streams, gulches, and floodways will be maintained and remain as open space. In addition, the creation of Cultural Protection Zones and rural landscape reserves will preserve large open space landscapes throughout Lā‘au Point.

Coastal Ecosystems

Objective
Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:
A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources.
C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs;

Discussion: As discussed in Sections 3.8 (Marine Environment) and 4.10.1 (Drainage), Lā‘au Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the marine environment and nearshore and offshore water quality.

The coastal ecosystem and shoreline will be further preserved by the expansion of the Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected in the Conservation District.

Lā‘au Point will exercise an overall conservation ethic by appealing to people that respect the unique character of the site and Moloka‘i, and that support conservation, cultural site protection, and coastal resource management. Residents of the Lā‘au Point community will be educated and informed about the environment and culture, and taught to “mālama ‘āina,” take care of the land and sea, through strict CC&Rs attached to the subdivision.

Coastal Hazards

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

Policies
B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.
C) Ensure that developments comply with requirements of the Federal Flood Insurance Program.

Discussion: As previously discussed in Section 3.5 (Natural Hazards), Lā‘au Point will not exacerbate any hazard conditions. No structures will be allowed to be built within the 100-year floodplain (Zones V and A) or the Civil Defense Tsunami Evacuation Zone. The potential impacts to homes by earthquake, tsunami, or destructive winds and torrential rainfall caused by hurricanes will be mitigated by compliance with the Maui County Building Code.

In addition, residential lot lines will be set back at least 250 feet from the designated shoreline or high water mark. In addition, boundaries for the makai lots fronting the proposed expanded Conservation District will have covenants requiring an additional 50-foot building setback. These specified setbacks result in providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet.

As discussed in Sections 3.8 (Marine Environment) and 4.9.1 (Drainage), Lā‘au Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the downstream marine environment and nearshore and offshore water quality.

Managing Development

Objective
Improve the development review process, communication and public participation in the management of coastal resources and hazards.

Policies
C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Discussion: This EIS discusses potential impacts and mitigation measures of the Lā‘au Point project.

Public Participation

Objective
Stimulate public awareness, education, and participation in coastal management.

Policies
A) Promote public involvement in coastal zone management processes.

B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: As discussed in Sections 2.1.7 (Background to the Process) and 2.4 (Community Meetings), MPL has worked diligently with community and government agencies to create the *Community-Based Master Land Use Plan for Molokai Ranch* (Appendix A) and the Lāʻau Point project.

Through this EIS, the State Land Use District Boundary Amendment petition hearings, and the County permitting process, the public has additional opportunities to be involved in the public review process for Lāʻau Point.

Beach Protection

Objective
Protect beaches for public use and recreation.

Policies
A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion.

Discussion: Residential lot lines will be set back at least 250 feet from the designated shoreline or high water mark. In addition, boundaries for the makai lots fronting the proposed expanded Conservation District will have covenants requiring an additional 50-foot building setback (see Figure 19). These specified setbacks result in providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet.

Marine Resources

Objective
Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies
A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

Discussion: As discussed in Sections 2.3.7 (Access for Subsistence Gathering), 4.2 (Cultural Resources), and 4.3 (Trails and Access), protection of the shoreline for subsistence gathering is of great importance to the people of Molokaʻi. Access to Lāʻau Point will be managed to protect marine and coastal resources. Perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved.

In the process of developing the *Master Plan*, subsistence fishermen and gatherers were very concerned of marine resource depletion that could be caused by opening up the south and west shores to increase public access. Therefore, to protect the natural resources of the shoreline, a

Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) has been developed and adopted to addresses maintenance and resource management for the area.

Project plans propose that Native Hawaiians and the general public will have shoreline access from two public shoreline parks (totaling approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the community, and the other (15 acres) at Puʻu Hakina at the south end (see 4.11.5).

6.1.5 Hawaiʻi State Plan, Chapter 226, Hawaiʻi Revised Statutes

The Hawaiʻi State Plan (Chapter 226, HRS), establishes a set of goals, objectives and policies that serve as long-range guidelines for the growth and development of the State. The State Plan is divided into three parts: Part I (Overall Theme, Goals, Objectives and Policies); Part II (Planning, Coordination and Implementation); and Part III (Priority Guidelines). Part II elements of the State Plan pertain primarily to the administrative structure and implementation process of the State Plan. As such, comments regarding the applicability of Part II to Lāʻau Point are not appropriate. The sections of the Hawaiʻi State Plan directly applicable to Lāʻau Point, along with a discussion of how the project conforms to the State Plan are included below.

Part I: Overall Theme, Goals, Objectives and Policies

The Hawaii State Plan lists three "Overall Themes" relating to: (1) individual and family self-sufficiency; (2) social and economic mobility; and (3) community or social well-being. These themes are viewed as "basic functions of society" and goals toward which government must strive (§226-3). To guarantee the elements of choice and mobility embodied in the three themes, the State Plan states three goals:

1) *A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawaii's present and future generations.*
2) *A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.*
3) *Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life (§226-4).*

Discussion: The Lāʻau Point project contributes to the attainment of the three goals by 1) providing direct and indirect employment opportunities for present and future residents of Molokaʻi; 2) generating increased State and County tax revenues; 3) contributing to the stability, diversity, and growth of local and regional economies; and 4) protecting the archaeological, historic, and natural features of the site.

The creation of the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*) was based on the partnership between MPL and the Enterprise Community to create a visionary plan for Molokai Ranch's 60,000+ acres that would reflect the kind of community the residents desired (see Section 2.1.6 and Appendix A). The *Master Plan* provides for a viable and sustainable economy that is in balance with resident needs and values, cultural and natural resources, and lifestyle. Section 2.1.9 discusses the key points of the *Master Plan*, which support the above-mentioned Hawaiʻi State Plan goals.

The *Master Plan* provides measures that set unique precedents. These precedents are related to community planning, the creation of a Land Trust for the community, the donation of legacy lands to the Land Trust, the donation of easements to the Land Trust, and the protection of subsistence fishing, gathering, and hunting. The *Master Plan* also provides for covenants, conditions and restrictions that Lāʻau Point homeowners will need to accept and agree to uphold in order to purchase a lot.

Specific objectives, policies, and priority directions of the State Plan most relevant to the Lāʻau Point community are listed and discussed below.

Objectives and Policies for Population (§226-5)

Objective
It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.

Policies
1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each County.
2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.
7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.

Discussion: The creation of the Molokaʻi Community Development Corporation (CDC) provides the Molokaʻi community a means to plan their own future (Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. The Water Plan (see Section 4.9 and Appendix U) addresses the availability and coordination of water resources for future growth.

As discussed in Sections 2.1.9 (Key Components) and 4.8.3 (Economy), the Lāʻau Point project will enhance Molokaʻi's economic and employment environment and stimulate economic diversification relative to the present unprofitable ranch operations. These opportunities include:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Providing funding for the Kaluakoʻi Hotel and Golf Course renovations from sales of the Lāʻau Point rural-residential lots. These resort facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide approximately 130 jobs for Molokaʻi residents. As discussed in Section 4.8.3, the *Molokaʻi Responsible Tourism Initiative Report* (2006) indicates that Kaluakoʻi Resort is essential to the island's tourism economy.

Objectives and Policies for the Economy—in General (§226-6)

Objectives

1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.

Policies

2) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.

6) Strive to achieve a level of construction activity responsive to, and consistent with, State growth objectives.

9) Foster greater cooperation and coordination between the public and private sectors in developing Hawaii's employment and economic growth opportunities.

10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

11) Maintain acceptable working conditions and standards for Hawaii's workers.

14) Promote and protect intangible resources in Hawaii such as scenic beauty and the aloha spirit, which are vital to a healthy economy.

Discussion: Lāʻau Point will promote Hawaiʻi as an attractive market for environmentally and socially sound investment activities by appealing to people that respect the unique character of the site and Molokaʻi, and that support conservation, cultural site protection, and coastal resource management. Residents of the Lāʻau Point community will be educated and informed about the environment and culture, and taught to "mālama ʻāina," take care of the land and sea, through strict CC&Rs attached to the subdivision.

Cooperation and coordination between the public and private sectors in developing employment and economic growth opportunities was demonstrated in the planning and development of the *Master Plan.* Between September 2003 and September 2005, in an Enterprise Community (EC) sponsored process (EC Project #47), MPL joined with over 1,000 community participants to discuss a community-based master land use plan for Molokai Ranch's lands. The goals of the *Master Plan* and the planning process was to create new employment opportunities and affordable housing options for Molokaʻi residents, as well as provide Molokaʻi with more control of their future.

As previously discussed in Sections 2.1.9 (Key Components) and 4.8.3 (Economy), the Lāʻau Point project will enhance Molokaʻi's economic environment and stimulate economic diversification relative to the present unprofitable ranch operations. These opportunities include:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Providing funding for the Kaluakoʻi Hotel and Golf Course renovations from sales of the Lāʻau Point rural-residential lots. These resort facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide over 100 jobs for Molokaʻi residents. As

discussed in Section 4.8.3, the *Molokaʻi Responsible Tourism Initiative Report* (2006) indicates that Kaluakoʻi Resort is essential to the island's tourism economy.

Objectives and Policies for the Economy—Agriculture (§226-7)

Objectives

3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.

Policies

1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.
2) Encourage agriculture by making best use of natural resources.
9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.

Discussion: MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Molokaʻi Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Molokaʻi community under the *Master Plan* (see Section 2.1.12). Under the protective easements, 14,390 acres will be protected forever for agricultural use, and 10,560 acres of Agricultural District land will be protected as open space on which no building will be permitted. The Land Trust will administer agreed upon land use policies for these areas which affect agricultural resources.

Objective and Policies for the Economy – Visitor Industry (§226-8)

Objectives

Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.

Policies

3) Improve the quality of existing visitor destination areas.
5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.
7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.

Discussion: The *Molokaʻi Responsible Tourism Initiative Report* (2006) indicates there is almost unanimous community support for the re-opening of the Kaluakoʻi Hotel as a mid-range hotel. As previously discussed in Sections 2.1.9 (Key Components) and 4.8.3 (Economy), funding for the Kaluakoʻi Hotel and Golf Course renovations will come from sales of the Lāʻau Point rural-residential lots. These facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide over 100 jobs for Molokaʻi residents.

Objectives and Policies for the Physical Environment—Land Based, Shoreline and Marine Resources (§226-11)

Objectives
Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:
1) Prudent use of Hawaii's land-based, shoreline, and marine resources.
2) Effective protection of Hawaii's unique and fragile environmental resources.

Policies
1) Exercise an overall conservation ethic in the use of Hawaii's resources.
2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.
3) Take into account the physical attributes of areas when planning and designing activities and facilities.
4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.
8) Pursue compatible relationships among activities, facilities, and natural resources.
9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.

Discussion: As discussed in Sections 3.8 (Marine Environment) and 4.10.1 (Drainage), Lāʻau Point will be in compliance with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water runoff and siltation will not adversely affect the marine environment and nearshore and offshore water quality.

The coastal ecosystem and shoreline will be further preserved by the expansion of the Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected in the Conservation District. Natural systems, such as streams, gulches, and floodways will also be maintained and remain as open space. The Land Trust will be in charge of managing Lāʻau Point's Conservation lands.

The entire coastline of MPL lands is important for subsistence fishing and ocean gathering. MPL lands are very important for subsistence hunting, and forested areas are accessed for subsistence gathering. MPL recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians; and therefore, will continue to provide access to Molokaʻi community members for subsistence activities (see Sections 2.3.7 and 4.2).

Access to the Lāʻau Point shoreline for subsistence will be provided from two public shoreline parks, one by Kamākaʻipō Gulch (2 acres) on the west end of the project site, and the other (15 acres) at Puʻu Hakina at the south end (see Section 4.3).

Sections 3.6 (Flora) and 3.7 (Fauna) discuss the protection of rare and endangered plant and animal species and habitats through appropriate management and protocol.

Lāʻau Point will exercise an overall conservation ethic by appealing to people that respect the unique character of the site and Molokaʻi, and that support conservation, cultural site protection, and coastal resource management. Residents of Lāʻau Point will be educated and informed about

the environment and culture, and taught to "mālama ʻāina," take care of the land and sea, through strict CC&Rs attached to the subdivision.

Objective and Policies for the Physical Environment--Scenic, Natural Beauty, and Historic Resources (§226-12)

Objective
Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.

Policies
1) Promote the preservation and restoration of significant natural and historic resources.
2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.
3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.
4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.

Discussion: As previously discussed in Section 4.1, large acres of Cultural Protection Zones, such as the archaeological preserve (approximately 128 acres) at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust), increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions (see Figure 12).

The rural residential community will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve the sites. It is expected that the project will not have adverse effects to archaeological sites.

The natural topography and slope of the site provide exceptional coastal and ocean views from many vantage points. Section 4.7 provides discussion on Lāʻau Point's scenic resources. Lāʻau Point has been designed to blend in with the surrounding landscape, therefore, minimizing the alteration of natural landforms and existing views. Strict CC&Rs will regulate the color, size, and height of homes within the community (see Section 2.3.6).

As discussed in Section 4.2 (Cultural Resources), a total of 26,200 acres or 40 percent of Molokai Ranch lands will be donated to the Molokaʻi Land Trust. The donated lands include premier Native Hawaiian legacy lands and contain many subsistence resources. The Land Trust donation, going from east to west, will 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 MPL 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.
- Puʻu O Kaiaka.

- Other sites as shown on the Land Trust map (See Appendix A, p. 9).

Objectives and Policies for Facility Systems—Water (§226-16)

Objective
Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.

Policies
1) Coordinate development of land use activities with existing and potential water supply.
2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.
3) Reclaim and encourage the productive use of runoff water and wastewater discharges.
4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.
5) Support water supply services to areas experiencing critical water problems.
6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

Discussion: As discussed in Section 4.9 (Water), MPL will not require any more drinking water than what is currently proposed for allocation in the *Master Plan* (Appendix A). According to the Water Plan Analysis (Appendix U), MPL's plans are feasible because the Water Plan calls for: 1) significantly decreasing the current use of safe drinking (potable) water for irrigation; 2) increasing efficiencies within existing systems; and 3) aggressive water conservation strategies.

MPL is currently working with the Department of Hawaiian Homelands (DHHL), the County of Maui Department of Water Supply (DWS), and the US Geological Survey (USGS) to comprehensively evaluate Molokaʻi's long-term water demands and resources. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water.

Common area landscape irrigation systems will include water re-use (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip systems will be permitted. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use. All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.

MPL supports research and development of alternative methods to meet future water requirements.

MPL supports water supply service to areas experiencing critical water problems. As outlined in the Water Plan (Appendix U), MPL will make its excess safe drinking water capacity from its Well 17 potable well in the Kualapuʻu aquifer available for the use of DHHL as part of DHHL's 2.905 mgd reservation.

MPL will continue its water conservation campaign to Kaluakoʻi residents and future Lāʻau Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates.

Objectives and Policies for Socio-Cultural Advancement—Housing (§226-19)

Objective

1) *Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low-, and moderate-income segments of Hawaii's population.*
2) *The orderly development of residential areas sensitive to community needs and other land uses.*

Policies

1) *Effectively accommodate the housing needs of Hawaii's people.*
2) *Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.*
3) *Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.*
5) *Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.*
6) *Facilitate the use of available vacant, developable, and underutilized urban lands for housing.*
7) *Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.*

Discussion: The creation of the Molokaʻi Community Development Corporation (CDC) provides the Molokaʻi community a means to plan their own future (discussed in Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. The economic value of the land donations, and the income from Lāʻau Point, will enable the Molokaʻi CDC to plan, site, and construct affordable homes itself.

As discussed in the *Master Plan* (Appendix A), the community desires a link between affordable housing and other community-facilities present at each of the three communities to insure that they be developed as balanced communities. The future development of ʻOhana Neighborhood Communities (i.e., affordable housing) would be developed by partnering various community resources such as Habitat for Humanities, Self-Help Housing, and others. The community also does not support a large affordable housing project in one area only (Appendix A, p. 69).

Part III. Priority Guidelines

The purpose of this part of the State Plan is to establish overall priority guidelines to address areas of Statewide concern. The State Plan notes that the State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in five major areas of Statewide concern which merit priority attention: 1) economic development, 2) population growth and land resource management, 3) affordable housing, 4)

crime and criminal justice; and 5) quality education (§ 226-102). The priority guidelines applicable to the Lā‘au Point community are discussed below:

Economic Priority Guidelines (§ 226-103)

b) Priority guidelines to promote the economic health and quality of the visitor industry:

> *2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.*
>
> *3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.*
>
> *4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.*

Discussion: As discussed in Sections 2.1.9 and 4.8.3, the community supports the re-opening of the Kaluako‘i Hotel as a mid-range hotel. Funding for the Kaluaki‘o Hotel and Golf Course renovations will come from sales of the Lā‘au Point rural-residential lots. These facilities are crucial to revitalizing the Moloka‘i economy and are projected to provide over 100 jobs for Moloka‘i residents.

d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:

> *1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.*

Discussion: As promised in the *Master Plan* with the implementation of the Lā‘au Point project, under protective agricultural easements, 14,390 acres of other Molokai Ranch land will be protected forever for agricultural use, and another 10,560 agricultural-zoned lands will be protected as Open Space on which no buildings will be permitted. The Land Trust will administer agreed-upon land use policies for these areas.

e) Priority guidelines for water use and development:

> *1) Maintain and improve water conservation programs to reduce the overall water consumption rate.*
>
> *2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.*
>
> *3) Increase the support for research and development of economically feasible alternative water sources.*
>
> *4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.*

Discussion: MPL will comply with all the above-mentioned guidelines. As discussed in Section 4.9 (Water), MPL will not require any more drinking water than what is currently proposed for allocation in the *Master Plan* (Appendix A). According to the Water Plan Analysis (Appendix U), MPL’s plans are feasible because the Water Plan calls for: 1) significantly decreasing the current use of safe drinking (potable) water for irrigation; 2) increasing efficiencies within existing systems; and 3) aggressive water conservation strategies.

As set forth in Section 4.9, MPL is currently working with DHHL, the County of Maui DWS, and the USGS to comprehensively evaluate Moloka‘i’s long-term water demands and resources. It is expected that many of Moloka‘i’s water issues will be addressed by a comprehensive

modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL’s priority first rights to water.

Common area landscape irrigation systems will include water re-use (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip systems will be permitted. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use. All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.

MPL supports research and development of alternative methods to meet future water requirements.

MPL supports water supply service to areas experiencing critical water problems. As outlined in the Water Plan (Appendix U), MPL will make its excess safe drinking water capacity from its Well 17 potable well in the Kualapu‘u aquifer available for the use of DHHL as part of DHHL’s 2.905 mgd reservation.

MPL will continue its water conservation campaign to Kaluako‘i residents and future Lā‘au Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates.

Population Growth and Land Resources Priority Guidelines (§226-104)

a) Priority guidelines to effect desired Statewide growth and distribution:

1) Encourage planning and resource management to insure population growth rates throughout the State that are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii’s people.

2) Manage a growth rate for Hawaii’s economy that will parallel future employment needs for Hawaii’s people.

5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.

b) Priority guidelines for regional growth distribution and land resource utilization:

2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.

10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.

12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.

13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.

Discussion: MPL will comply with priority guidelines to achieve desired Statewide and regional growth distribution by implementing the goals and objectives of the *Master Plan* (see Section 2.1.9).

The creation of the Moloka‘i CDC provides the Moloka‘i community a means to plan their own future (Section 2.1.13). With the *Master Plan*’s implementation and the Lā‘au Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL.

While planning Lā‘au Point, many considerations were taken to protect environmentally sensitive areas. First, the MPL proposes to expand the existing Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for 434 acres in the Conservation District. Second, streams, gulches, and floodways will be maintained as open space. Finally, access roads and the rural-residential lots have been sited away from environmental protection zones and the Conservation District.

MPL will also donate 26,200 acres to the Land Trust and set aside another 24,950 acres as agricultural and open space easements.

6.1.6 State of Hawai‘i Functional Plans

The Hawai‘i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai‘i State Plan. The functional plans applicable to the Lā‘au Point project, along with each plan’s applicable objectives, policies, are discussed below.

AGRICULTURE

The Agriculture functional plan seeks to increase the overall level of agricultural development in Hawai‘i, in accordance with the two fundamental Hawai‘i State Plan objectives for agriculture: 1) continued viability of Hawai‘i’s sugar and pineapple industries, and 2) continued growth and development of diversified agriculture throughout the State.

Discussion: As promised in the *Master Plan* with the implementation of the Lā‘au Point project, under protective agricultural easements, 14,390 acres of other Molokai Ranch land will be protected forever for agricultural use, and another 10,560 acres of agricultural-zoned lands will be protected as Open Space on which no buildings will be permitted. The Land Trust will administer agreed-upon land use policies for these areas.

CONSERVATION LANDS

The Conservation Lands Functional Plan addresses the impacts of population growth and economic development on our natural environment and provides a framework for the protection and preservation of our pristine lands and shorelines. Within the overall theme of balanced growth, the functional plan also provides for enhancement and increased access to Hawaii’s scenic natural resources and the effective management of already developed lands. The

functional plan is divided into three issues: 1) inventories of resources and background information and basic research; 2) management; 3) education and public information.

Discussion: MPL proposes to expand the existing Conservation District by 254 acres. Areas proposed for Conservation District expansion include concentrations of archaeologically and culturally important sites and lands along the shoreline to allow a greater setback between the shoreline and the homes and in recognition of the cultural importance of the shoreline area in Native Hawaiian subsistence practices. This proposed expansion of the Conservation District will provide for a total of 434 acres of the project area to be protected as open space. The Land Trust and the HOA will jointly manage the expanded Conservation District. The HOA will own the expanded Conservation District lands and the Land Trust will hold, and be able to enforce, an easement over these lands. Both entities will discuss and jointly decide on the management of the lands within the scope of the easement provisions.

Lāʻau Point will exercise an overall conservation ethic by appealing to people that respect the unique character of the site and Molokaʻi, and that support conservation, cultural site protection, and coastal resource management. Residents of Lāʻau Point will be educated and informed about the environment and culture, and taught to "mālama ʻāina," take care of the land and sea, through strict CC&Rs attached to the subdivision.

EMPLOYMENT

The Employment Functional Plan focuses on the preparation of Hawaiʻi's workforce for the global, information-based twenty-first century economy. It takes a multi-agency approach in providing job training and education services, implementing job placement services, improving the quality of the work environment, and coordinating employment information, analysis, and planning.

Discussion: The *Molokaʻi Responsible Tourism Initiative Report* (2006) indicates there is community support for the re-opening of the Kaluakoʻi Hotel as a mid-range hotel. As previously discussed in Sections 2.1.9 and 4.8.3, funding for the Kaluakiʻo Hotel and Golf Course renovations will come from sales of the Lāʻau Point rural-residential lots. These facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide over 100 jobs for Molokaʻi residents. Also, spending by permanent and seasonal residents of Lāʻau Point, and HOA services are projected to support approximately 60 on-going jobs upon full build-out in 2023.

ENERGY

The Energy Advisory Committee highlights three major concerns for Hawaiʻi in its Functional Plan: 1) the State's over dependency on oil and fossil fuels; 2) the need for an integrated approach to energy development and management; and 3) energy emergency preparedness.

Discussion: Lāʻau Point covenants (Section 2.3.6) will require "green" architecture that incorporates recycled materials, energy efficient equipment, natural ventilation, solar systems, etc. All energy systems shall be designed and constructed to meet United States Environmental Protection Agency conservation standards.

HISTORIC PRESERVATION

The long-term philosophy of the Historic Preservation Functional Plan highlights the importance of maintaining a record of Hawaiʻi's unique history. History enriches our social, intellectual, aesthetic and economic lives with insights from the past. With the rapid change and development of our island state, our historical resources are at risk. The Historic Preservation Functional Plan attempts to preserve these resources by focusing on three main issue areas: 1) preservation of historic properties; 2) collection and preservation of historic records, artifacts and oral histories; and 3) provision of public information and education on the ethnic and cultural heritages and history of Hawaiʻi.

Discussion: As discussed in Section 2.1.12, the Molokaʻi Land Trust will be entrusted with ownership and management of the 26,200 acres (40 percent of Ranch lands) that MPL will donate to the Molokaʻi community under the conditions of the *Master Plan*. The Land Trust donation, going from east to west, will 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 MPL 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.
- Puʻu O Kaiaka.
- Other sites as shown on the Land Trust map (See Appendix A, pg. 9).

As discussed in Section 4.1, approximately 1,000 acres of Cultural Protection Zones were identified to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch, an area to be donated to the Molokaʻi Land Trust. The creation of Cultural Protection Zones, to be managed by the Land Trust, increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions.

The Lāʻau Point project will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve the sites. It is expected that the project will not have adverse effects to archaeological sites.

HOUSING

The State Housing Functional Plan, prepared by the State Housing Finance and Development Corporation (now Housing and Community Development Corporation of Hawaii), addresses six major areas of concern: 1) increasing home ownership; 2) expanding rental housing opportunities; 3) expanding rental housing opportunities for the elderly and other special need groups; 4) preserving housing stock; 5) designating and acquiring land that is suitable for residential development; and 6) establishing and maintaining a housing information system. The

majority of the objectives, policies, and implementing actions of the State Housing Functional Plan apply to the government sector.

Discussion: The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (see Section 2.1.13). With the Master Land Use Plan's implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. The economic value of the land donations, and the income from Lāʻau Point, will enable the CDC to plan, site, and construct affordable homes itself. Section 4.8.2 (Housing) provides a full discussion.

RECREATION

The Recreation Functional Plan outlines the public and private sectors' roles in serving the recreation and open space needs of the public. It organizes objectives, policies, and actions into six major issue areas: 1) Ocean and shoreline recreation; 2) Mauka, urban, and other recreational opportunities; 3) Public access to shoreline and upland recreation areas; 4) Resource conservation and management; 5) Management of recreation programs, facilities, and areas; and 6) Wetlands protection and management.

Discussion: Lāʻau Point will include two public shoreline parks (total approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the community, and the other (15 acres) at Puʻu Hakina at the south end. Section 4.10.5 (Recreational Facilities) provides a full discussion.

WATER RESOURCES DEVELOPMENT

The State Water Resources Development Plan presents guidelines for: 1) the regulation of the development and the use of water to assure adequate supplies for the future; 2) development of water resources to meet municipal, agricultural, and industrial requirements, and the reduction of flood damage; and 3) preservation of water-related ecological, recreational, and aesthetic values and the quality of water resources.

Discussion: MPL is currently working with DHHL, the County of Maui DWS, and the USGS to comprehensively evaluate Molokaʻi's long-term water demands and resources. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water.

Common area landscape irrigation systems will include water re-use (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip systems will be permitted. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use. All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.

MPL will continue its water conservation campaign to Kaluakoʻi residents and future Lāʻau Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates.

6.2 COUNTY OF MAUI

Relevant land use plans and Ordinances of the County of Maui that pertain to Lāʻau Point include the General Plan, the Molokaʻi Community Plan, and the Maui County Code.

6.2.1 Maui County General Plan

The County of Maui Charter requires that the Maui County General Plan set forth the desired sequence, patterns, and characteristics of future development. This is accomplished through long-range objectives focusing on the social, economic, and environmental effects of development coupled with specific policies designed to implement the objectives. The Maui County General Plan is a public document, and therefore, is available directly from the County of Maui Planning Department, and accessible directly from the Maui County website.

The Maui Planning Department is currently in the process of updating the *General Plan of the County of Maui 1990 Update*. Ordinance 3166, commonly referred to as "Bill 84", was adopted in 2002 and established an improved process for the update of the General Plan and Community Plans. The Planning Department is responsible for writing the General Plan with the inclusion of input from State and County agencies and the general public.

A community-based visioning process for Maui County was undertaken in 2003 called Focus Maui Nui. This process identified the following as issues specific for the island of Molokaʻi (Retrieved from: http://www.co.maui.hi.us/departments/Planning/pdf/molokai.pdf):

- Consider each island and its unique needs individually from Maui.
- Expanded opportunities for vocational training and apprenticeships.
- Connect economic development with environmental preservation.
- Increased local control.
- Treatment and prevention of substance abuse.
- Nurture and respect local cultural heritage and values.
- Preserve natural and cultural resources.

To assist the Planning Department in updating the *General Plan of the County of Maui 1990 Update*, General Plan Advisory Committees (GPACs) have been formed on Maui, Molokaʻi, and Lānaʻi. The Focus Maui Nui issues provided a starting point for the GPACs to discuss, comment, advise, and provide recommendations to the Planning Director on the General Plan 2030 (updated General Plan).

In January 2007 a Countywide Policy Plan—the portion of the General Plan which provides broad policies and objectives that portray the desired direction of the County's future—was distributed to the GPACs for review and comment. In August 2007, the Countywide Policy Plan was provided to the Maui, Molokaʻi, and Lānaʻi Planning Commissions for review.

MPL has submitted information regarding the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan)* and Lāʻau Point to the GPAC. In addition, this EIS, including the *Master Plan* (Appendix A), has been submitted to the Maui Planning Department and has been widely available for public review. Further, the Lāʻau Point project and the *Master Plan* have been widely discussed within the Molokaʻi community, and many Molokaʻi GPAC members: 1) participated in the process of creating, or attended meetings regarding, the *Master Plan*; and 2) commented on this EIS. While the Lāʻau Point project and the *Master Plan* are well known on Molokaʻi, MPL intends to continue to be available to respond to questions on these issues.

As of December 2007, the updated General Plan was still a work in progress. Since the content of the updated General Plan is not finalized, and thus is ultimately unknown, it is not possible to discuss the Lāʻau Point project in context of the unfinished updated General Plan.

Ultimately, the Maui County Council will approve the updated General Plan. However, until the Maui County Council approves the updated General Plan, the current *General Plan of the County of Maui 1990 Update* is still in effect. Discussion of how the Lāʻau Point project conforms to the relevant objectives and policies of the *General Plan of the County of Maui 1990 Update* is provided below.

POPULATION

Objective

1. *To plan the growth of resident and visitor population through a directed and managed growth plan so as to avoid social, economic and environmental disruptions.*

Policies

a. *Manage population growth so that the County's economic growth will be stable and the development of public and private infrastructures will not expand beyond growth limits specified in the appropriate community plans or negatively impact our natural resources.*
b. *Balance population growth by achieving concurrency between the resident employee work force, the job inventory created by new industries, affordable resident/employee housing, constraints on the environment and its natural resources, public and private infrastructure, and essential social services such as schools, hospitals, etc.*
d. *Provide for population density and distribution patterns within the appropriate community plans which balance with the County's fiscal ability to provide necessary essential services.*
e. *Participate in and support State and Federal programs which compliment the County's growth strategy.*

Discussion: The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. Section 4.8 (Social and Economic Characteristics) provides full discussions.

LAND USE

Objective

1. *To preserve for present and future generations existing geographic, cultural and traditional community lifestyles by limiting and managing growth through environmentally sensitive and*

effective use of land in accordance with the individual character of the various communities and regions of the County.

Policies

b. Provide and maintain a range of land use districts sufficient to meet the social, physical, environmental and economic needs of the community.

c. Identify and preserve significant historic and cultural sites.

e. The County will explore ways to develop a Maui County Open Space Program which will preserve important scenic, cultural, recreational, environmental and open space resources

Discussion: As part of the *Master Plan* process, there where many considerations to preserve for present and future generations existing geographic, cultural, and traditional community lifestyles. Through the *Master Plan*, MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Molokaʻi Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Molokaʻi community under the *Master Plan* (see Section 2.1.12). Under the protective easements, 14,390 acres will be protected forever for agricultural use, and 10,560 acres of Agricultural District land will be protected as open space on which no building will be permitted. The Land Trust will administer agreed upon land use policies for these areas which affect agricultural resources.

Within the Lāʻau Point project area, MPL proposes to expand the existing Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total 434 acres in the Conservation District. Second, streams, gulches, and floodways will be maintained as open space. Third, access roads and the rural-residential lots have been sited away from environmental protection zones and the Conservation District.

In addition to Conservation lands, the Lāʻau Point project area includes another 382 acres of rural open space and 17 acres of parks (see Table 4 in Section 2.3.5).

As discussed in Section 4.1, 1,000 acres of Cultural Protection Zones, such as the archaeological preserve (approximately 128 acres) at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust), will preserve cultural landscapes.

Objective

2. To use the land within the County for the social and economic benefit of all the County's residents.

Policies

a. Mitigate environmental conflicts and enhance scenic amenities, without having a negative impact on natural resources.

c. Encourage land use methods that will provide a continuous balanced inventory of housing types in all price ranges.

e. Encourage programs to stabilize affordable land and housing prices.

Discussion: The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community

expansion at pace with population growth, and without recourse to MPL. The economic value of the land donations, and the income from Lāʻau Point, will enable the Molokaʻi CDC to plan, site, and construct affordable homes itself.

Lāʻau Point will include two public shoreline parks (totaling approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the community, and the other (15 acres) at Puʻu Hakina at the south end (see Section 4.11.5 for full discussion).

Objective

3. To preserve lands that are well suited for agricultural pursuits.

Policies

a. Protect prime agricultural lands from competing nonagricultural land uses.

d. Discourage the conversion, through zoning or other means, of productive or potentially productive agricultural lands to nonagricultural uses, including but not limited to golf courses and residential subdivisions.

Discussion: As proposed in the *Master Plan,* MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Molokaʻi Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Molokaʻi community under the *Master Plan* (see Section 2.1.12). Under the protective easements, 14,390 acres will be protected forever for agricultural use, and 10,560 acres of Agricultural District land will be protected as open space on which no building will be permitted. The Land Trust will administer agreed upon land use policies for these agricultural resource areas.

ENVIRONMENT

Objective

1. To preserve and protect the county's unique and fragile environmental resources.

Policies

a. Preserve for present and future generations the opportunity to experience the natural beauty of the islands.

b. Preserve scenic vistas and natural features.

Objective

2. To use the County's land-based physical and ocean-related coastal resources in a manner consistent with sound environmental planning practice.

Policies

a. Preserve, enhance and establish traditional and new environmentally sensitive access opportunities for mountain and ocean resources.

b. Evaluate all land based development relative to its impact on the County's land and ocean ecological resources.

e. Establish shoreline rules to maintain traditional beach access, beach use and lateral access along shorelines.

Discussion: MPL proposes to expand the existing Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected as open space in the Conservation District. Natural systems, such as streams, gulches, and floodways will also be maintained and remain as open space. The Land Trust will be in charge of managing Lāʻau Point's Conservation lands.

The entire coastline of MPL lands is important for subsistence fishing and ocean gathering. MPL lands are very important for subsistence hunting, and forested areas are accessed for subsistence gathering. MPL recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians; and therefore, will continue to provide access to Molokaʻi community members for subsistence activities (see Sections 2.3.7, 4.2, and 4.3).

Access to the Lāʻau Point shoreline for subsistence will be provided from two public shoreline parks, one by Kamākaʻipō Gulch (2 acres) on the west end of the project site, and the other (15 acres) by Puʻu Hakina at the south end (see Section 4.3).

Sections 3.6 (Flora) and 3.7 (Fauna) discuss the protection of rare and endangered plant and animal species and habitats through appropriate management and protocol.

CULTURAL RESOURCES

Objectives

1. *To preserve for present and future generations the opportunity to know and experience the arts, culture and history of Maui County.*

Policies

b. *Encourage the recordation and preservation of all cultural and historic resources, to include culturally significant natural resources.*
c. *Establish programs to restore, maintain and interpret significant cultural districts, sites and artifacts in both natural and museum settings.*
e. *Identify and maintain an inventory of significant and unique cultural resources for special protection.*

Discussion: As discussed in Section 2.1.12, the Molokaʻi Land Trust will be entrusted with ownership and management of the 26,200 acres (40 percent of Ranch lands) that MPL will donate to the Molokaʻi community under the conditions of the *Master Plan*. The Land Trust donation, going from east to west, will 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 MPL 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.
- Puʻu O Kaiaka.
- Other sites as shown on the Land Trust map (See Appendix A, pg. 9).

As discussed in Section 4.1 (Archaeological Resources), approximately 1,000 acres of Cultural Protection Zones were identified within the entire Lāʻau parcel to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust). The creation of Cultural Protection Zones, to be managed by the Land Trust, increases

preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions.

The residential community will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve the sites. It is expected that the project will not have adverse effects to archaeological sites.

ECONOMIC ACTIVITY

Objective

1. To provide an economic climate which will encourage controlled expansion and diversification of the County's economic base.

Policies

a. Maintain a diversified economic environment compatible with acceptable and consistent employment.

b. Support programs, services and institutions which provide economic diversification.

Objective

3. Utilize an equitable growth management program which will guide the economic well-being of the community.

Policies

a. Encourage a sustainable rate of economic development which is linked to the carrying capacity of the infrastructure systems and the fiscal ability of the County to maintain those systems.

b. Encourage consensus building wherein growth conflicts are addressed in advance of critical infrastructural shortfalls.

c. Encourage managed growth by concurrency wherein the administration and council regulate, tax and spend revenue in order to guide economic development by concurrently balancing growth demand with infrastructure supply and capability.

d. Encourage the adoption of a resource allocation program which gives a high priority to affordable residential projects.

Discussion: As previously discussed in Sections 2.1.9 and 4.8.3, the Lāʻau Point project will enhance the Molokaʻi's economic environment and stimulate economic diversification relative to the present unprofitable ranch operations. These opportunities include:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Providing funding for the Kaluakoʻi Hotel and Golf Course renovations from sales of the Lāʻau Point rural-residential lots. These resort facilities are crucial to revitalizing the Molokaʻi economy and are projected to provide over 100 jobs for Molokaʻi residents.

The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL.

AGRICULTURE

Objective

2. To maximize the use and yield of productive agricultural land throughout the County.

Policies

a. Ensure the availability of land that is well suited for agricultural production.

Discussion: As proposed in the *Master Plan,* MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Molokaʻi Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Molokaʻi community under the *Master Plan* (see Section 2.1.12). Under the protective easements, 14,390 acres will be protected forever for agricultural use, and 10,560 acres of Agricultural District land will be protected as open space on which no building will be permitted. The Land Trust will administer agreed upon land use policies for these agricultural areas.

HOUSING

Objective

1. To provide a choice of attractive, sanitary and affordable homes for all our residents.

Policies

a. Provide or require adequate physical infrastructure to meet the demands of present and planned future affordable housing needs.
b. Encourage the construction of housing in a variety of price ranges and geographic locations.
f. Encourage large land owners in the context of new projects to provide land and/or housing for their employees.
i. Ensure that each community plan region contains its fair share of affordable housing.

Objective

2. Provide affordable housing to be fulfilled by a broad cross-section of housing types.

Policies

a. Identify Federal, State, County and private lands for affordable housing development, and make a dedicated effort to reserve these lands.
b. Support the establishment of a non-profit County, business and community based housing alliance to provide financial assistance for housing development, purchase and rental.

Discussion: The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (see Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. The economic value of

the land donations, and the income from Lāʻau Point, will enable the Molokaʻi CDC to plan, site, and construct affordable homes itself. Section 4.8.2 (Housing) provides a full discussion.

WATER

Objective

2. To make more efficient use of our ground, surface and recycled water sources.

Policies

a. Reclaim and encourage the productive use of wastewater discharges in areas where such use will not threaten the integrity of ground water resources.
d. Improve catchment systems and transmission systems to reduce runoff.
e. Maximize use of existing water sources by expanding storage capabilities.
g. Promote water conservation practices to make the most efficient use of existing water sources.
h. Support the establishment of potable groundwater use priorities which prohibit the use of potable water for the irrigation of golf courses, golf driving ranges, parks and landscaped open space.
i. Develop a method of allocation of water based on community need.

Discussion: MPL will comply with all above-mentioned Water objectives and policies. As discussed in Section 4.9 (Water), MPL will not require any more drinking water than what is currently proposed for allocation in the *Master Plan* (Appendix A). According to the Water Plan Analysis (Appendix U), MPL's plans are feasible because the Water Plan calls for: 1) significantly decreasing the current use of safe drinking (potable) water for irrigation; 2) increasing efficiencies within existing systems; and 3) aggressive water conservation strategies.

MPL is currently working with the DHHL, the County of Maui DWS, and the USGS to comprehensively evaluate Molokaʻi's long-term water demands and resources. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water.

Common area landscape irrigation systems will include water re-use (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip systems will be permitted. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use. All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.

MPL supports research and development of alternative methods to meet future water requirements.

MPL supports water supply service to areas experiencing critical water problems. As outlined in the Water Plan (Appendix U), MPL will make its excess safe drinking water capacity from its Well 17 potable well in the Kualapuʻu aquifer available for the use of DHHL as part of DHHL's 2.905 mgd reservation.

MPL will continue its water conservation campaign to Kaluakoʻi residents and future Lāʻau Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates.

6.2.2 Molokaʻi Community Plan

The *Molokaʻi Community Plan*, most recently updated in 2001, is one of nine community plans for Maui County. It reflects current and anticipated conditions for the island of Molokaʻi and addresses planning goals, objectives, policies, and implementation considerations as a decision-making guide in the region through the year 2010. The *Molokaʻi Community Plan* provides specific recommendations to address the goals, objectives, and policies contained in the General Plan, while recognizing the values and unique attributes of Molokaʻi, to enhance the region's overall living environment. The *Molokaʻi Community Plan* is a public document, and therefore, is available directly from the County of Maui Planning Department, and accessible directly from the Maui County website.

In conjunction with the *Maui County General Plan Update* process noted in Section 6.2.1, the 2001 *Molokaʻi Community Plan* will also be updated. It is expected that after the *General Plan* update process, the GPAC will transition into the Molokaʻi Citizen Advisory Committee (CAC) to review and update the 2001 *Molokaʻi Community Plan*. Per conversation with the Maui County Long Range Division (phone call February 1, 2007), the updated *Community Plan* may not reach approval stages until 2009.

MPL has submitted information regarding the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*) and Lāʻau Point to the GPAC. In addition, this EIS, including the *Master Plan* (Appendix A), has been submitted to the Maui Planning Department and has been widely available for public review. Further, the Lāʻau Point project and the *Master Plan* have been widely discussed within the Molokaʻi community, and many Molokaʻi GPAC members: 1) participated in the process of creating, or attended meetings regarding, the *Master Plan*; and 2) commented on this EIS. While the Lāʻau Point project and the *Master Plan* are well known on Molokaʻi, MPL intends to continue to be available to respond to questions on these issues.

Ultimately, the Maui County Council will approve the updated *Molokaʻi Community Plan*. However, until the Maui County Council approves the updated *Molokaʻi Community Plan*, the 2001 *Molokaʻi Community Plan* is still in effect. Discussion of how the Lāʻau Point project conforms to the relevant objectives and policies of the 2001 *Molokaʻi Community Plan* is provided below.

The *Molokaʻi Community Plan* Land Use Map designates specific areas of the Lāʻau Point site as AG (Agricultural) and C (Conservation) (Figure 6). The applicant is seeking a Community Plan Amendment to change the area of the proposed house lots from Agricultural (AG) to Rural (R) and Park (P). MPL submitted a Community Plan Amendment application to the Maui Planning Department on December 15, 2006. Community Plan amendments are processed through the Molokaʻi Planning Commission, which provides their recommendation to the County Council and Mayor.

LAND USE

GOAL
Enhance the unique qualities of the island of Molokaʻi to provide future generations the opportunity to experience rural and traditional lifestyles.

OBJECTIVES AND POLICIES

2. *Subdivision approvals should consider environmental, economic and social impacts of the project, including impacts on archaeological, historic and cultural resources, and should undergo public review to allow neighbors the opportunity to comment.*
9. *Limit the visitor accommodation center to West Moloka‘i and require that any expansion approvals reflect the employment needs of the island's resident work force.*
11. *Promote and support the use of land in the State Agricultural District for productive agricultural purposes through implementing beneficial policies and education.*
12. *Protect prime, productive and potentially productive agricultural lands from competing non-agricultural land uses.*
14. *Encourage the expansion of the State Conservation District boundary where warranted for environmental preservation and habitat enhancement.*
15. *Regulate land use in a manner which reaffirms and respects customary and traditional rights of Native Hawaiians as mandated by Article 12, Section 7, Constitution of the State of Hawaii.*
22. *Consider the recommendations of the Moloka`i Subsistence Task Force Final Report (1994), as applicable, in the processing of discretionary land use permits.*
23. *Any new proposed land uses at Kaluako‘i should go through the community plan amendment process to allow for community review.*

Discussion: The Lā‘au Point project complies with the above-mentioned Land Use objectives and policies. In compliance with Chapter 343, HRS (see Section 1.4) and Act 50 of Chapter 343, HRS, MPL has initiated the preparation of this EIS to address potential environmental, cultural, economic, and social impacts related to the Lā‘au Point project. Through the EIS, County permitting, and Community Plan Amendment process, the public has opportunities to be involved with the public review process and comment on Lā‘au Point.

As set forth in above, the *Master Plan* provides measures which set unique precedents. These precedents are related to community planning, the creation of a Land Trust for the community, the donation of legacy lands to the Land Trust, the donation of easements to the Land Trust, and the protection of subsistence fishing, gathering, and hunting. The *Master Plan* also provides for covenants, conditions and restrictions that Lā‘au Point homeowners will need to accept and agree to uphold in order to purchase a lot.

The *Moloka‘i Responsible Tourism Initiative Report* (2006) indicates there is almost unanimous community support for the re-opening of the Kaluako‘i Hotel as a mid-range hotel. As previously discussed in Sections 2.1.9 and 4.8.3, funding for the Kaluaki‘o Hotel and Golf Course renovations will come from sales of the Lā‘au Point rural-residential lots. These facilities are crucial to revitalizing the Moloka‘i economy and are projected to provide over 100 jobs for Moloka‘i residents.

As proposed in the *Master Plan,* MPL is committed to preserving over 55,000 acres of Agricultural District property in perpetuity through donation of land and establishing protective easement restrictions to protect the rural and agricultural nature of the island. The Moloka‘i Land Trust, a community-based land steward organization, will manage the 26,200 acres (40 percent of present MPL lands) that MPL will donate to the Moloka‘i community under the *Master Plan* (see Section 2.1.12).. The Land Trust will administer agreed upon land use policies for these areas.

To preserve the shoreline and other natural resource areas, MPL seeks to expand the State existing Conservation District by 254 acres along the shoreline and related resource areas. This

proposed expansion will provide for 434 acres of the project area to be in the Conservation District.

The entire coastline of MPL lands is important for subsistence fishing and ocean gathering. MPL lands are very important for subsistence hunting, and forested areas are accessed for subsistence gathering. MPL recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians; and therefore, will continue to provide access to Molokaʻi community members for subsistence activities (see Sections 2.3.7, 4.2, and 4.3).

SUBSISTENCE

GOAL:
The continued practice of subsistence as a part of the Molokaʻi lifestyle which incorporates and fosters the traditional and cultural values of conservation, malama ʻaina and ʻauwana.

OBJECTIVES AND POLICIES:

1. *Recognize the historical, traditional and continued role of subsistence activities as an integral part of the island residents' lifestyle.*
2. *Encourage and protect traditional Hawaiian access as mandated by Article 12, Section 7 of the Hawaiian State Constitution and HRS 7-10.*
3. *Encourage education concerning subsistence activities with an emphasis on traditional values and proper use of resources.*
4. *Where appropriate, use subsistence considerations as a factor in the design, evaluation and permit processing of discretionary land use proposals.*
5. *Wherever possible, protect trails for traditional Hawaiian Access.*
6. *Where desirable, establish or re-establish access for hunting, fishing, religious, laʻau and lapaʻau gathering uses.*
7. *Protect resources from overuse and commercial exploitation.*

Discussion: The entire coastline of MPL lands is important for subsistence fishing and ocean gathering. MPL lands are very important for subsistence hunting, and forested areas are accessed for subsistence gathering. MPL recognizes and reaffirms all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes by descendants of Native Hawaiians; and therefore, will continue to provide access to Molokaʻi community members for subsistence activities.

As discussed in Sections 2.3.7 (Access for Subsistence Gathering), 4.2 (Cultural Resources), and 4.3 (Trails and Access), access to Lāʻau Point will be managed to protect the marine and coastal resources. Protection of the shoreline for subsistence gathering is of great importance to the people of Molokaʻi. Perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved. Based on the community-proposed access plan (Appendix A, p. 105), protection of the off-shore coastal resources at Lāʻau Point would best be achieved by controlling access to the area so that the community can retain the area for subsistence gathering. Therefore, a Shoreline Access Management Plan (SAMP) (further discussed in Section 4.3 and provided as Appendix B) has been developed and adopted to regulate (through legal and enforceable means) the use of the land and ocean resources to ensure the continuance of the resources for future generations.

Access to the Lā‘au Point shoreline will be provided at two points at planned shoreline public parks, with an acknowledgement of Native Hawaiian gathering rights as defined by law for subsistence purposes, in a designated subsistence management area. Strict access measures, such as a shoreline access education process, will be put in place to ensure that resources for subsistence gathering are not depleted.

Under the *Master Plan*, MPL, Moloka‘i Land Trust, the homeowners, and the broader community will work together 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 MPL’s coastline property, modeled after the Hui Malama O Mo‘omomi Subsistence Fishing Zone.
- End commercial hunting (commercial leases expire 2007), and allowing only subsistence hunting on the property.
- Ensure access to the shoreline will be available only by foot.
- Establish demonstration fishing nurseries/kapu sites to insure reproduction of key subsistence food species (e.g. ‘opihi, moi, mullet, limu, lobster, ulua, uhu he‘e).
- Support protection for Penguin Banks from overfishing.
- Recommend open areas for subsistence fishing based on protecting and not depleting the resources.
- Require educational courses on traditional fishing methods, practices and conservation measures for those who access the shoreline.
- Erect a fence to demarcate private property from public access area. All of the informants felt that it is important to have a clear physical demarcation, such as a log fence, running along the individual property lines to distinguish between private property and the public access area. By putting in a fence of some kind the public will know the boundary.
- Establish an Access Trail that would follow the contour of the old traditional trail as much as possible. Existing kiawe would serve as a buffer between the trail and the sand and ocean. This can help reduce impact of the trail on the beach and ocean. The trail will be unpaved and only for walking (no cars, ATVs, or bicycles).

In addition, approximately 40,000 acres of Ranch land, previously reserved for commercial operations, will be opened up for subsistence hunters. Protections to subsistence gathering will be specified in the CC&Rs for Lā‘au Point. Section 4.2 (Cultural Resources) provides a full discussion on subsistence activities for Lā‘au Point.

ENVIRONMENT

GOAL

Preserve, protect and manage Moloka‘i's exceptional natural land and water resources to ensure that future generations may continue to enjoy and protect the island environment.

OBJECTIVES AND POLICIES

1. *Protect and encourage the restoration of native habitats through government and private conservation, land management and educational programs.*
3. *Manage, protect and preserve shoreline dune formations throughout the planning region. These topographic features are a significant element of the natural setting, often contain burials, and should be protected from any actions which would detract from their scenic or cultural value.*

4. Manage, protect, and where appropriate, restore reef habitats, fish ponds and other coastal resources unique to the Island of Moloka‘i.
6. Recognize and preserve traditional access and uses of the environment to address subsistence needs of the residents of Moloka‘i.
7. Encourage the development of environmentally sensitive drainage master plans which consider development opportunities and constraints in flood prone areas, stream channels and gulches.
12. Recognize Native Hawaiian rights to environmental resources.
16. Establish shoreline setback plans based upon the unique cultural environmental and ecological shoreline characteristics of Moloka‘i's coastline.

Discussion: Lā‘au Point supports these goals, policies, and objectives intended to preserve, protect and manage Moloka‘i's exceptional natural land and water resources to ensure that future generations may continue to enjoy and protect the island environment.

MPL proposes to expand the existing Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the Project Area to be protected as open space in the Conservation District. Natural resource areas at Lā‘au Point, such as streams, gulches, and floodways will be protected and maintained as open space.

In addition, residential lot lines will be set back at least 250 feet from the designated shoreline or high water mark. Using the current Conservation District boundary, which is approximately 150 to 200 feet inland from the shoreline, as a base, residential lot boundary lines for Lā‘au Point were determined to be at least 50 feet beyond the current Conservation District. In addition, boundaries for the makai lots fronting the proposed expanded Conservation District will have covenants requiring an additional 50-foot building setback. These specified setbacks result in providing substantial building setbacks from the shoreline; in some areas, this is as much as 1,000 feet.

As discussed in Sections 3.8 (Marine Environment) and 4.10.1 (Drainage), Lā‘au Point will protect nearshore waters from increased degradation of water quality, such as drainage control systems, CC&Rs to regulate the use of fertilizers and pesticides, re-vegetation as a means of permanent erosion control measures throughout the developed areas, and livestock fencing to keep deer and livestock from disturbing the soil near the community. Therefore, it is likely that the long-term water quality in adjacent coastal waters may be improved by these measures.

As discussed in Sections 2.3.7, 4.2, and 4.3, protection of the shoreline for subsistence gathering is of great importance to the people of Moloka‘i. Therefore, perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved. Access to the Lā‘au Point shoreline will be provided at two points at planned shoreline public parks, with an acknowledgement of Native Hawaiian gathering rights as defined by law for subsistence purposes, in a designated subsistence management area. Strict access measures, such as a shoreline access education process, will be put in place to ensure that resources for subsistence gathering are not depleted.

Finally, Lā‘au Point will exercise an overall conservation ethic by appealing to people that respect the unique character of the site and Moloka‘i, and that support conservation, cultural site protection, and coastal resource management. Residents of Lā‘au Point will be educated and

informed about the environment and culture, and taught to "mālama ʻāina," take care of the land and sea, through strict CC&Rs attached to the subdivision.

IMPLEMENTING ACTION

14. Review and revise the Special Management Area boundary to include the entire island of Molokai except Department of Hawaiian Homes lands and Kalawo County.

Discussion: This implementing action is listed under the "Environment" section of the *Molokaʻi Community Plan*. Also in the *Molokaʻi Community Plan*, Table 1 lists implementation responsibilities. We note that the Planning Department is responsible to implement this action. As of September 2007, the Planning Department has stated that a SMA Boundary study is currently under way, but there are no reportable results as of this date.

CULTURAL RESOURCES

GOAL

Preservation, enhancement and appropriate use of cultural resources, cultural practices and historic sites that provide a sense of history and define a sense of place for the island of Molokaʻi.

Objectives and Policies

1. Foster an awareness of the diversity and importance of cultural resources and of the history of Molokaʻi.
2. Promote the rehabilitation of significant cultural resources.
3. Encourage and protect the use of ancient Hawaiian trails, cultural practices and rural lifestyles.
4. Encourage community stewardship of historic sites and recognize and respect family ancestral ties to certain sites.
7. Require the identification, protection, and where appropriate, preservation of sites prior to and during development review. The general site types and areas that should be flagged for preservation include the following:
    Ancient Trails/Old Government Roads
    Fishponds
    Landings
    Leeward Slope Areas
    Nearshore marine cultural resources
    Stream Valley and Leeward Slope Areas
    habitation complexes (shoreline & interior)
    loʻi and ʻauwai
    terraces
    Significant native vegetation zones
    Plantation ditch systems
    Religious Structures (shrines, churches & heiau)
    Old bridges
    Plantation camps
    Plantation era structures & homes
    Petroglyphs
    Burials
8. Encourage site preservation for significant archaeological remains, rather than data recovery.
10. Encourage proper management, appropriate interpretation, and adequate access to significant cultural resources and sites.
11. Improve and enhance access to cultural resources and the shoreline for the West End of the island.

Discussion: As discussed in Section 2.1.12, the Molokaʻi Land Trust will be entrusted with ownership and management of the 26,200 acres (40 percent of Ranch lands) that MPL will donate to the Molokaʻi community under the conditions of the *Master Plan*. The Land Trust donation, going from east to west, will 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 MPL 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.
- Puʻu O Kaiaka.
- Other sites as shown on the Land Trust map (See Appendix A, pg. 9).

As discussed in Section 4.1, approximately 1,000 acres of Cultural Protection Zones were identified within the larger Lāʻau parcel to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust). The creation of Cultural Protection Zones, to be managed by the Land Trust, increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions.

The Lāʻau Point project will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve the sites. It is expected that the project will not have adverse effects to archaeological sites.

Regarding the Lāʻau Point shoreline area, under the *Master Plan*, MPL, Molokaʻi Land Trust, the homeowners, and the broader community will work together to:

- Ensure access to the shoreline will be available only by foot.
- Establish demonstration fishing nurseries/kapu sites to insure reproduction of key subsistence food species (e.g. ʻopihi, moi, mullet, limu, lobster, ulua, uhu heʻe).
- Recommend open areas for subsistence fishing based on protecting and not depleting the resources.
- Require educational courses on traditional fishing methods, practices and conservation measures for those who access the shoreline.

ECONOMIC ACTIVITY

GOAL

A balanced local economy which provides preferred employment levels, long-term viability and sustainability while meeting residents' needs, respecting cultural and natural resources, and is in harmony with Molokaʻi's rural quasi-subsistence lifestyle.

Objectives and Policies

3. Maintain agriculture as an important economic activity on the island.

9. *Consider a Community Land Trust and Community Development Corporation as tools for community-based economic development appropriate to Molokaʻi's lifestyle.*
15. *Establish a management plan for Molokaʻi's nearshore and offshore resources to ensure its productivity for future generations.*
17. *Promote, protect and enhance subsistence activities as provided in Article 12, Section 7 of the State Constitution.*
19. *Allow expansion of the visitor industry within the existing tourist destination area at the West End to the extent that it does not infringe upon the traditional, social, economic and environmental qualities of the island.*

Discussion: Sections 2.1.12 and 2.1.13 of this EIS provide discussions of the Molokaʻi Land Trust and Community Development Corporation (CDC). The conditions set forth in the *Master Plan* provides the Land Trust and CDC with the land and funding to guide community-based economic development appropriate to Molokaʻi's lifestyle.

Under the protective easements in favor of the Land Trust (see Section 2.1.12), 14,390 acres will be protected indefinitely for agricultural use, and 10,560 agricultural-zoned lands will be protected as Open Space on which no buildings will be permitted. The Land Trust will administer agreed-upon land use policies for these areas.

As discussed in Sections 2.3.7 (Access for Subsistence Gathering), 4.2 (Cultural Resources), and 4.3 (Trails and Access), access to Lāʻau Point will be carefully managed to protect the marine and coastal resources. Protection of the shoreline for subsistence gathering is of great importance to the people of Molokaʻi. Therefore, perpetual right to subsistence gathering will be noted on the titles of the areas to be preserved.

As discussed in Sections 2.1.9 and 4.8.3, the community supports the re-opening of the Kaluakoʻi Hotel as a mid-range hotel. Funding for the Kaluakiʻo Hotel and Golf Course renovations will come from sales of the Lāʻau Point rural-residential lots. These facilities will not infringe upon the traditional, social, economic, and environmental qualities of the island. On the contrary, the re-opening of this West End visitor destination is crucial to revitalizing the Molokaʻi economy and is projected to provide over 100 jobs for Molokaʻi residents.

HOUSING

GOAL
Housing opportunities which are affordable, safe, and environmentally and culturally compatible for the residents of Molokaʻi.

Objectives and Policies
5. *Allow the development of multi-family housing in Kaunakakai and Maunaloa to provide local residents a choice in housing type and affordability.*
8. *Designate sufficient land area for affordable residential development in appropriate areas near established infrastructure.*

Discussion: The creation of the Molokaʻi CDC provides the Molokaʻi community a means to plan their own future (see Section 2.1.13). With the *Master Plan*'s implementation and the Lāʻau Point project, MPL will gift land and assets to the CDC for future community expansion and affordable housing projects. With these donations, the CDC can plan its own community expansion at pace with population growth, and without recourse to MPL. The economic value of

the land donations, and the income from Lā‘au Point, will enable the Moloka‘i CDC to plan, site, and construct affordable homes itself.

DESIGN

GOAL
Harmony between the natural and man-made environments to ensure that the natural beauty and character of Moloka‘i is preserved.

Objectives and Policies
3. *Encourage building, infrastructure and landscaping designs which respect the scale, beauty and scenic qualities of Moloka‘i.*
7. *Promote the maintenance of historic landscapes and streetscapes in character to the region.*

Discussion: The Lā‘au Point project has been designed to respect the scale, beauty and scenic qualities of the area and to blend in with the surrounding landscape, therefore, minimizing the alteration of natural landforms and existing views.

As discussed in Section 4.7, to mitigate visual impacts lot lines will be set back at least 250 feet from the designated shoreline or high water mark, creating a coastal conservation zone. To further mitigate visual impacts, residential construction will be subject to stringent CC&Rs (as discussed in Section 2.3.6). Buildings must maintain a low-profile rural character and respect the natural environment. Restrictions on building height (one-story, maximum 25 feet high), materials, colors, and style are important factors to blend homes into the environment.

It is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low density rural community. Homes will be sited appropriately to avoid a dense urban-like development.

The scenic resources and shoreline open space will be preserved by the expansion of the Conservation District by 254 acres along the shoreline and related resource areas. This proposed expansion will provide for a total of 434 acres of the project area to be protected as open space in the Conservation District. Natural systems, such as streams, gulches, and floodways will be maintained and remain as open space. In addition, the creation of Cultural Protection Zones and rural landscape reserves will preserve large open space landscapes throughout Lā‘au Point.

INFRASTRUCTURE

GOAL
Culturally and environmentally sensitive infrastructure systems, developed and maintained in a timely fashion, which protect and preserve the safety and health of Moloka‘i's residents and visitors.

Water Objectives and Policies
1. *Future water allocations for agriculture/aquaculture and Hawaiian Home Lands use should be given first priority and then consideration should be given to other viable economic development initiatives.*
5. *Promote programs for water conservation as well as ground water and wellhead protection.*
6. *Recognize Hawaiian water rights.*

Discussion: MPL will comply with the above-mentioned Water objectives and policies. As discussed in Section 4.9.2 (Water), MPL will not require any more drinking water than what is currently proposed for allocation in the *Master Plan* (Appendix A). According to the Water Plan Analysis (Appendix U), MPL's plans are feasible because the Water Plan calls for: 1) significantly decreasing the current use of safe drinking (potable) water for irrigation; 2) increasing efficiencies within existing systems; and 3) aggressive water conservation strategies.

MPL is currently working with the DHHL, the County of Maui DWS, and the USGS to comprehensively evaluate Molokaʻi's long-term water demands and resources. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. Although the specifics of the water resource issues and modeling analysis have yet to be identified, MPL has long acknowledged publicly that its water use would yield to DHHL's priority first rights to water. Upon project approval MPL intends to enter inopt agreements preventing it from ever seeking further water permits from the CWRM. MPL will also abandon the Waiola Well application.

Common area landscape irrigation systems will include water re-use (treated effluent) from the wastewater treatment plant. Residential catchment systems may provide landscape irrigation to individual lots and homes. Only drip systems will be permitted. Landscaping will be restricted to appropriate native and Polynesian species that are drought-tolerant and suitable for coastal locations; xeriscaping aims to reduce water use. All houses will be required to have at least a 5,000-gallon storage tank for water captured from roofs.

MPL supports research and development of alternative methods to meet future water requirements.

MPL supports water supply service to areas experiencing critical water problems. As outlined in the Water Plan (Appendix U), MPL will make its excess safe drinking water capacity from its Well 17 potable well in the Kualapuʻu aquifer available for the use of DHHL as part of DHHL's 2.905 mgd reservation.

MPL will continue its water conservation campaign to Kaluakoʻi residents and future Lāʻau Point residents by reducing consumption, shutting off irrigation systems during rainfall, and restructuring the water rates.

Liquid and Solid Waste Objectives and Policies

1. *Encourage comprehensive waste management for the island which includes recycling and reuse of solid waste and wastewater as major plan components.*
4. *Designate an alternate site for the wastewater treatment plant, if needed.*

Discussion: As discussed in Section 4.10.2 (Wastewater), Lāʻau Point will include its own private wastewater treatment system to be maintained through HOA dues. The treatment facility will provide tertiary quality water suitable for use as landscape irrigation.

As discussed in Section 4.10.3 (Solid Waste), Lāʻau Point will incorporate recycling during construction and in the community to help reduce the amounts of solid waste going to the landfill.

Drainage Objectives and Policies

1. *Require an environmentally sensitive drainage system which provides for a high standard in preventing flooding and property damage while not adversely affecting wetlands, the marine environment and nearshore and offshore water quality. It is necessary to alleviate existing problems, institute maintenance procedures, and ensure that the overall system will meet future growth requirements.*
2. *Prepare, adopt and implement a drainage master plan for settlement areas, which emphasizes land management techniques, such as the use of natural landscape swales, periodic maintenance and annual cleaning of stream channels and avoidance of development in flood-prone areas to minimize the potential of flood damage.*

Discussion: As discussed in Section 4.10.1 (Drainage), Lāʻau Point's drainage plan requires runoff generated by the project to be retained onsite and kept within the project limits in accordance with Maui County Storm Drainage Standards. Subsurface storage and filtration systems (de-silting basins) will be installed at the end of each roadway drainage system to intercept waterborne silt and other debris before it is discharged into drainageways and coastal waters.

Energy and Public Utilities Objectives and Policies

6. *Encourage the undergrounding of existing overhead utility lines as well as the provision of underground utility lines in major new developments.*

Discussion: Utility lines will be placed underground. See Section 4.10.4 for full discussion.

SOCIAL INFRASTRUCTURE

GOAL

An efficient and responsive system of people-oriented public services which enable residents to live a safe, healthy and enjoyable lifestyle.

Recreation Objectives and Policies

1. *Provide and maintain recreational opportunities which address the needs of residents while respecting the rural character of Molokaʻi.*

Discussion: Lāʻau Point will include two public shoreline parks (totaling approximately 17 acres), one by Kamākaʻipō Gulch (2 acres) on the west end of the project site, and the other (15 acres) by Puʻu Hakina at the south end (see Sections 4.3 and 4.11.5).

GOVERNMENT

GOAL

Accessible, cost effective and responsive government services and programs which meet the unique needs of the residents of the island of Molokaʻi.

Objectives and Policies

1. *Investigate and pursue ways to streamline the permit process through means such as consolidating public hearings, concurrent processing of applications and coordination of permits between State, Federal and County governments*

Discussion: The efficient processing of the Lāʻau Point EIS and County applications implements this policy.

PLANNING STANDARDS

LAND USE

3. *Require appropriate mitigative measures as needed to preserve and protect archaeological sites. Such measures could include greater building setbacks (suggested minimum of 50-feet), buffer areas, controlled access, prohibiting fill or pier construction in wetlands, loʻi or fishponds.*

Discussion: As discussed in Section 4.1, approximately 1,000 acres of Cultural Protection Zones were identified to denote areas where groupings of archaeological and historic sites exist, such as the archaeological preserve (approximately 128 acres) to be created at Kamākaʻipō Gulch (an area to be donated to the Molokaʻi Land Trust). The creation of Cultural Protection Zones, to be managed by the Land Trust (see Section 2.1.12), increases preservation of cultural landscapes rather than only individual sites, which represents a great advance not just in acreage, but in diversity and intensity of preservation actions.

The residential community will not encroach on Cultural Preservation Zones since access roads and the rural-residential lots are planned to avoid cultural preservation zones and archaeological sites. Depending on the nature of the archaeological sites, buffers, permanent boundaries, and interpretive signs will be established to protect and preserve the sites. It is expected that the project will not have adverse effects to archaeological sites.

DESIGN

1. *Limit building height throughout the island to two stories or thirty-five feet above grade…*
3. *Traditional Hawaiian design with distinctive pitched roof construction, or low-rise earthtone contextual architecture is encouraged for new construction. Use of traditional materials should be explored.*
4. *Encourage the siting of buildings so that the roofline is in context with surrounding terrain.*
5. *Consider existing topographical features in building design, building bulk, and height.*
6. *Choose materials and colors which blend with the landscape avoiding highly reflective materials.*

Discussion: The Lāʻau Point project has been designed to respect the scale, beauty and scenic qualities of the area and to blend in with the surrounding landscape, therefore, minimizing the alteration of natural landforms and existing views.

As discussed in Section 4.7, to mitigate visual impacts lot lines will be set back at least 250 feet from the designated shoreline or high water mark, creating a coastal conservation zone. To further mitigate minimize visual impacts, residential construction will be subject to stringent CC&Rs (as discussed in Section 2.3.6). Buildings must maintain a low-profile rural character and respect the natural environment. Restrictions on building height (one-story, maximum 25 feet high), materials, colors, and style are important factors to blend homes into the environment.

It is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low density rural community. Homes will be sited appropriately to avoid a dense urban-like development.

LANDSCAPE PLANTING

1. *Native plant species which are found on the island of Molokaʻi should be utilized in landscaping for all new developments.*
2. *Require the use of xeriscaping in future landscape planting.*

Discussion: As discussed in Section 2.3.6 (Covenants), strict CC&Rs for Lā‘au Point will: 1) establish appropriate semi-arid landscapes that envelop buildings and blend them into the surrounding site; 2) utilize plants, landscapes, structures, and details that draw upon native plant landscape and building traditions; 3) utilize plant palettes that are sensitive to water conservation; 4) include a resource protection management plan for Lā‘au Point as part of the covenants for each property owner. Section 2.3.5 of this EIS provides a conceptual landscape plan and plant list.

SUBDIVISIONS

Environmental Design

Lot configurations, roadways and subdivision improvements shall be designed to respect existing landforms, coastal and aquatic resources, biological resources and cultural/historic resources to the greatest extent possible.

Discussion: The Lā‘au Point project has been designed to respect the scale, beauty and scenic qualities of the area and to blend in with the surrounding landscape, therefore, minimizing the alteration of natural landforms and existing views. To respect the presence of cultural preservation zones and archaeological sites, access roads and the rural-residential lots have been sited away from these sensitive areas.

As discussed in Section 4.7, to mitigate visual impacts lot lines will be set back at least 250 feet from the designated shoreline or high water mark, creating a coastal conservation zone. To further mitigate minimize visual impacts, residential construction will be subject to stringent CC&Rs (as discussed in Section 2.3.6). Buildings must maintain a low-profile rural character and respect the natural environment. Restrictions on building height (one-story, maximum 25 feet high), materials, colors, and style are important factors to blend homes into the environment.

It is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low density rural community. Homes will be sited appropriately to avoid a dense urban-like development.

Socio-Economic Considerations

The direct and cumulative impacts on agriculture and the socio-economic impacts on the community shall be assessed and considered.

Discussion: Sections 3.4 (Agricultural Impact Assessment) and 4.8 (Social and Economic Characteristics) of this EIS (was well as conformance to other policies within this chapter) address the project’s impacts on agriculture and the community.

6.2.3 County of Maui Zoning

The Lā‘au Point site is designated Agricultural by the County of Maui (Figure 7). The applicant will seek a Change in Zoning to change the County zoning of the project site from the County Agricultural zoning to the County Rural and Open Space zoning. MPL submitted a Change in Zoning application to the Maui Planning Department on December 15, 2006. The County of Maui does not zone land within the Conservation District. Zoning changes are processed through the County of Maui Planning Department and Moloka‘i Planning Commission, and then adopted via ordinance by the County Council.

Restrictions on Houses

In a letter to the Land Use Commission in November 2007, the Moloka‘i Planning Commission questioned the number of houses that could be built in the Lā‘au Point subdivision..

In relation to State Land Use zoning, HRS §205-5 provides that powers granted to the counties under Section 46-4 shall govern the zoning within the districts, other than the Conservation District. The Maui County Code for zoning in Rural Districts (19.29.020 District Standards) states that minimum lot areas are one half-acre in the RU-0.5 districts and one acre in the RU-1 district.

MPL’s application to the County of Maui for a change in zoning for the Lā‘au Point project submitted in December 2006 is for a change in zoning from Agriculture to RU-1. Under this zoning application it is permitted to have two-acre lots which is MPL’s stated intention under the both the State Land Use District Boundary Amendment petition and the County of Maui Change in Zoning application.

The County code states:

> *“The following uses and structures shall be permitted in the rural districts provided they conform with all other applicable laws…*
> *A1: One single family dwelling per one-half acre in the RU-0.5 district; and one single-family dwelling per one acre in the RU-1 district.”*

It continues in relation to permitted structures:

> *“B3: One accessory dwelling per lot, in accordance with the provisions of Chapter 19.35, Maui County Code.”*

If MPL wished to maximize the lot sizes and buildings under its RU-1 application, it is possible that a total of two dwellings or 400 houses could be built under Clause A1; and a further dwelling or ‘Ohana house built under Clause B3, giving rise to the contention that a total of 600 dwellings could potentially be erected in the proposed subdivision. This, however, is not MPL’s intention nor the agreement reached between the Enterprise Community Governance Board on behalf of the Moloka‘i community under the *Master Plan*.

- The CC&Rs (Appendix E) place restrictions on individual lot owners. They ensure that lots will be restricted to two-acres and to 200 in number and prevent furhtehr subdivisdion, allow only one 5000 square foot dwelling including any potential ohana units.

Under these restrictions, the maximum potential dwellings that could ever be built in the subdivision are a total of 300. However, this ignores the potential that some potential lot owners may wish to purchase two or even three adjacent lots and construct only one dwelling, reducing the total number of potential dwellings well below the maximum potential number.

Under the County code relating to Rural Districts, other permitted uses will also be prevented under the CC&Rs. These include:

- Any agricultural uses and the display and sale of agricultural products (Rural permitted uses: B: 2 and B: 5).
- Day-care, child-care homes and kindergartens (Rural Permitted Uses:A:5)

A full summary of restrictions and covenants under the CC&Rs are contained in Section 2.3.6 of this EIS.

6.2.4 Special Management Area

Portions of the Lāʻau Point project are within the County's Special Management Area (SMA), pursuant to Chapter 205A, HRS and Chapter 202, Special Management Area Rules for the Molokaʻi Planning Commission (see Figure 8). The proposed improvements within the SMA include creation of two shoreline beach parks with related park facilities, for future dedication to the County or the Land Trust. No residential lots will be located within the SMA.

MPL is seeking an approval of a SMA Permit concurrently with the processing of the other required County permits and approvals. The SMA Permit is granted by the Molokaʻi Planning Commission.

According to Section 12-302-10 of the Special Management Area Rules for the Molokaʻi Planning Commission, the objectives and policies of the Special Management Area are the same as the objectives and policies of the Coastal Zone Management Program (Section 205A-2, HRS). Conformance to the objectives and policies of the Coastal Zone Management Program was previously discussed in Section 6.1.4 of this EIS.

6.2.5 County Special Use Permit

Lāʻau Point will include its own private wastewater treatment plant (WWTP) to be maintained through the HOA. MPL will build the onsite sewer collection system within Lāʻau Point. A site of 14 acres has been designated for the WWTP, which will accommodate the projected full development flow (see Figure 1 for WWTP site). The proposed sewage system will be designed to County of Maui standards. In addition, all wastewater plans will conform to applicable provisions of HAR, Chapter 11-62, "Wastewater Systems." The private WWTP will require a County Special Use Permit.

6.3 APPROVALS AND PERMITS

An approximate list of permits and approvals required for the Lāʻau Point project is presented below.

Table 11. Necessary Permits and Approvals

Permit/Approval	Responsible Agency
Chapter 343, HRS Compliance	State Land Use Commission Office of Environmental Quality Control
State Land Use District Boundary Amendment	State Land Use Commission
Community Plan Amendment	County of Maui Planning Department Molokaʻi Planning Commission Maui County Council

Permit/Approval	**Responsible Agency**
Change in Zoning	County of Maui Planning Department Moloka‘i Planning Commission Maui County Council
Special Management Area	County of Maui Planning Department Moloka‘i Planning Commission
County Special Use Permit	County of Maui Planning Department Moloka‘i Planning Commission
Chapter 6E, HRS Compliance	State Historic Preservation Division
Conservation District Use Permit	State Department/Board of Land & Natural Resources
Conservation District Administrative Rule Amendment	State Department/Board of Land & Natural Resources
Subdivision Approval	County of Maui Department of Public Works & Environmental Management
Grading/Building Permits	County of Maui Department of Public Works & Environmental Management
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Water Use Permit	State Commission on Water Resource Management
Approval for Distribution System for a Public Water System	State Department of Health
Recycled Water System Approval	State Department of Health

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7.0 ALTERNATIVES TO THE PROPOSED ACTION

Under HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, Section 11-200-10(6), the alternatives to the proposed action considered are limited to those that would allow the objectives of the project to be met, while minimizing potential adverse environmental impacts. The feasible alternatives must also address the project's economic characteristics while responding to the surrounding land uses that will be impacted by the project.

Project Objectives – As stated in Section 2.2.1, the objectives of the Lā‘au Point project are rooted in MPL’s desire to create a sustainable future for Moloka‘i and the Ranch through the implementation of the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan)*. The goal of the *Master Plan* was to create new employment and training opportunities for Moloka‘i residents and to provide the community with certainty about its future. The objectives of the *Master Plan* are shared by the Lā‘au Point project and include:

- Developing sustainable economic activities that are compatible with Moloka‘i and the vision of the Moloka‘i Enterprise Community (EC).
- Securing the role of the community in the management of MPL’s 60,000+ acres.
- Re-opening the Kaluako‘i Hotel and creating over 100 jobs.
- Protecting cultural complexes and sites of historic significance on MPL lands.
- Protecting environmentally valuable natural resources, agricultural land, pasture, and open space.
- Providing an endowment that serves as a continuous revenue stream for the Moloka‘i Community Development Corporation (CDC).
- Protecting and enhancing subsistence gathering, an important element of life on Moloka‘i that includes ensuring public access to and along the shoreline area adjacent to the project.
- Protecting Moloka‘i’s water resources, by minimizing drinking (potable) water use.

Criteria for Evaluating Alternatives – Alternatives to the Lā‘au Point project were evaluated against the project objectives along with MPL‘s criteria of achieving economic viability while minimizing potential adverse environmental, social, and cultural impacts. These included:

- Reasonable financial returns must be generated from the funds invested.
- No expanded use of drinking (potable) water currently available to the company.
- No significant increase in population and large urban development of land beyond what the company conceived as acceptable to the community.
- Minimal displacement of land currently designated for agriculture or open space.
- Development of unsuitable lands with poor soil ratings rather than development on more potentially productive agricultural lands.
- Minimizing the cultural and social impacts by mitigating the impact of new people to the island and by ensuring that minimum amounts of drinking (potable) water are used.
- Protecting cultural sites and complexes.

While most alternatives analysis is based on financial feasibility and is economic by nature, this section is intended to also weigh the economic impacts with broader environmental concerns, which include social and cultural impacts, as appropriate. In its efforts to address community-wide concerns, MPL expanded their criteria for evaluation to compare how each alternative

addressed key issues related to the increase in population, availability of drinking water supplies, protection of cultural sites, subsistence activities, and agricultural land.

More detailed discussion of the cultural impacts of the proposed alternatives is discussed in Section 9 of the Cultural Impact Assessment Report (included as Appendix M of this EIS). The social impacts of various scenarios are discussed in Section 5 of the Social Impact Assessment Report (included as Appendix S of this EIS).

The Process of Examining Alternatives – During the two-year community planning process that led to the *Master Plan*, MPL in conjunction with the Enterprise Community (EC) under the auspices of EC Project #47 (Moloka‘i Compatible Development Plan), examined a range of alternatives to the proposed Lā‘au Point development.

Community concerns were raised about homes at Lā‘au Point and whether MPL had been diligent in seeking alternatives that would be more acceptable to the community. In evaluating any proposed alternative, there was the need for economically viable projects that could generate revenue and returns on investment which could make the overall conservation initiatives proposed by the *Master Plan* feasible and sustainable for the benefit of the Moloka‘i community. Similarly, the cultural and social impacts were evaluated.

The Alternative to Lā‘au Development Committee (ALDC) and an outside planning consultant were funded and sponsored by the EC to find alternatives to the Lā‘au Point development and review all the alternatives from the community and off-island. Clark Stevens of New West Land Company was hired based on his expertise in conservation planning. For all proposed alternatives, MPL analyzed the proposals using financial models to ensure it was not ignoring any feasible alternative. In April 2005, MPL reported to the Land Use Committee and the ALDC on its review of 10 alternatives that had been proposed over the previous 14 months by a variety of community members and planners. Later, after the ALDC consultant delivered his report to the EC, MPL evaluated each of the consultant’s recommendations. In all cases, the alternative development plans proposed by the ALDC and others did not include any business case, revenue, or cost estimates that demonstrated a feasible alternative (see Table 12 in Section 7.4).

In summary, all alternatives proposed were evaluated against the project objectives and not selected over the proposed Lā‘au Point project (detailed in Section 2.3) for the following primary reasons. The alternative plans:

- Did not produce the revenue and returns necessary to fund the re-opening of the Kaluako‘i Hotel and support the future viability of Molokai Properties Limited.
- Were not viable economically as stand alone projects.
- Would require vastly increased safe drinking (potable) and non-drinking (non-potable) water use that could not be supported by the Land Use Committee or the EC.
- Proposed increases of up to 1,000 units which increased the resident population to levels that were unacceptable to the Land Use Committee and the EC.

In summary, MPL did not want to seek more drinking (potable) water from island resources, nor propose population increases that appeared to be unacceptable to the island’s community. At the Lā‘au Point project’s build-out, it is anticipated that permanent residents will occupy only 60 of the homes (30 percent), thus minimizing the social impact (see Section 4.8). Water use will be contained by strict CC&Rs attached to the project (see Section 4.9).

Another criteria was to ensure that current potentially usable agricultural land remain available for future agricultural use, thus protecting the desire to have Moloka‘i remain an agricultural-based economy. Section 3.3 and 3.4 discuss soils at the Lā‘au Point site as being poorly suited for soil-based agriculture. Other more suitable agricultural land has been identified elsewhere on other MPL lands in the *Master Plan*.

In conformance with applicable regulations (HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, Section 11-200-10(6)), the alternatives to the proposed action that were derived during the community process and evaluated are listed below and discussed individually.

- No Action
- Bulk or “Piece-Meal” Sale of Other Land Inventory
- Agricultural Subdivision
- Other MPL Land Development Alternatives Considered
- ALDC Proposed Alternatives
- Other Proposed Uses for MPL Lands (Non-residential and Non-agricultural)
- Postponing Action Pending Further Study

7.1 “NO ACTION” ALTERNATIVE

The “no action” alternative would not involve any changes to the Lā‘au Point project site, and the property would remain vacant of any additional improved uses. If the Lā‘au Point project were not developed, lands would remain as fallow agricultural land. As agricultural land, the site is underutilized due to the poor soils (see Section 3.3) and lack of irrigation water.

With “no action”, there would be no expansion of the Conservation District or designation of cultural and environmental preserves in the area.

In terms of meeting the goals of the *Master Plan*, maintaining the site in its present condition would forego a revenue source to pay for renovations of Kaluako‘i Hotel. In addition, the “no action” alternative would not meet the *Master Plan*’s objectives as previously detailed above and in Section 2.1.8. The *Master Plan*’s needs (e.g. affordable housing, infrastructure improvements, housing demand) would not be met, and direct and indirect impacts would not occur.

Since the Lā‘au Point project is the primary financial component to achieve the *Master Plan*’s objectives, non-implementation of the project means that most, or all, of the *Master Plan* may not be realized. The only *Master Plan* component that will occur without the Lā‘au Point project is the gifting of 1,600 acres to the Land Trust (as discussed in Section 2.1.12). The Land Trust would not receive the remainder donation of 24,600 acres, which include numerous culturally significant sites such as the makahiki grounds of Nā‘iwa, Kawela Plantation, fishing village at Kaupoa Camp, and other sites.

A key negative impact of the “no action” alternative would be the effect on the financial viability of ongoing operations of Molokai Ranch and its employees. An evaluation of MPL’s current and historical operating records shows that the net loss from 2001 to 2006 operations has been approximately $36.9 million. Painful cost-cutting has reduced operating losses in the last three years, but increasing costs for water, energy, and insurance have made it difficult to expect profitable operations in the future.

The "no action" alternative would also not generate the $30 million+ required to renovate and re-open the Kaluakoʻi Hotel. MPL is currently seeking a Special Management Area permit in anticipation that the Lāʻau Point project will receive approval. Unless MPL begins the preliminary design work on the hotel now, it could be at least two years after regulatory approvals for Lāʻau Point that the hotel is re-opened. Doing the necessary preliminary work on the hotel now means an earlier re-opening.

Without the increase in support for golf and the existing Lodge and Beach Village hotel operations, MPL could be forced to reduce operations and perhaps close those facilities. In addition, MPL could also be forced to reduce or eliminate other subsidized operations such as maintenance, nursery, gas station, and other services. The impacts of these reductions would significantly affect existing employment at Molokai Ranch and in Maunaloa Town.

The "no action" alternative would not sustain the Ranch for the future. A continuation of present operating practices would eventually lead MPL to close down its ranch operations and either land bank the property for the future or put the lands up for sale (see Section 7.2). Employment would have to be reduced, tourist expenditures would be lost, and local businesses at Maunaloa Town and elsewhere would be affected. These losses in local jobs and probable business failures would also increase the need for County and State social services. While the "no action" alternative would allow the environment of Lāʻau Point to remain untouched to the benefit of those opposing development, these negative effects of the impending closure of Ranch operations and unknown risk created by probable land sales would appear to have more far reaching effects upon the economic and social fabric of the larger Molokaʻi community.

Finally, the "no action" alternative would deny the State, County, and general public of the potential public benefits associated with the Lāʻau Point project. Some of these benefits include:

- $246 million in total development and construction investment.
- 1,350 person years of construction-related employment over project build-out (a "person year" is the amount of time a person can work in one year).
- $17.7 million in construction-related taxes.
- $1.3 million in annual real estate tax revenues at the end of the lot sales period in 2012; tax revenues will increase at a rate of $90,000 each year until it reaches $2.1 million at full build-out.
- Other County tax revenue (fuel tax, utility tax, license fee, permits, state/federal grants) which is estimated to reach $1.6 million annually after full build-out.
- Annual state revenues from taxes on residents and their expenditures of $276,000 at the end of lot sales in 2012; climbing to $1.3 million by 2023.
- Annual expenditures on Molokaʻi at build-out of about $4.4 million, which represents about $22,000 in on-island spending per residence.
- Support of 60 on-going jobs upon full build-out in 2023 through resident spending and the Lāʻau Point HOA.
- Five percent of land sales going to support the Land Trust; this commitment is estimated to provide over $10.2 million (prior to the payment of any real estate commissions or other regulatory costs) for the on-going operations related to the preservation and enhancement of the dedicated lands.

The resulting environmental, social, and economic benefits of creating the proposed Lāʻau Point project outweigh the loss of approximately 460 acres of currently vacant agricultural land. The

conversion to rural district for 200 lots and related infrastructure development would not impact Molokai Ranch's agricultural goals and production.

Given the above, and in consideration with the goals and objectives of the Lāʻau Point project and the *Master Plan*, the alternative for "no action" is not a feasible alternative.

7.2 BULK OR "PIECE-MEAL" SALE OF OTHER MPL LAND INVENTORY ALTERNATIVE

MPL land holdings are comprised of 101 lots that could be sold within Pāpōhaku Ranchlands, Maunaloa (both Residential and Commercial), and the Industrial Park. Of these 101 lots, 23 are held by a Kaluakoʻi LLC, 70 by MPL, and 8 by Cooke Land Company. The golf course is actually held in six separate TMK parcels but is only counted as one, as it would be impractical to sell it to more than one buyer, unless it was to be abandoned. Each of the lots in Kaunakakai is counted as a separate lot as it could be sold to different buyers. It would be more likely that there would be a fair amount of consolidation and re-subdivision of those small lots for larger industrial or business uses.

This "land-banking," or individual parcel sales, would essentially close down ranch operations and reduce MPL's employment to only 10 full-time staff as the company sells its properties to potentially 101 new owners/residents. Although the immediate effect of reducing employees is always devastating often with longer-term implications, it is conceivable that subsequent landowners could rehire former employees and/or create new job opportunities. While the amount and type of new jobs is not known, these would likely occur over a longer period of time. A great concern will be how the local economy will be impacted shortly after it loses support of the island's largest private employer and user of goods and services.

In selling off its holdings, an existing allowable lot density analysis conducted by MPL shows that the west end agricultural-zoned parcels comprising approximately 43,000 acres could be subdivided into more than 1,500 lots, based on the Agricultural district subdivision standards for Maui County zoning (lots range from 2, 15, 25, and 40 acres) or the *Molokaʻi Community Plan* (minimum 25-acre lots).

In this alternative, the 24,600 acres (this does not include the 1,600 acres to be gifted regardless of project outcome) that would otherwise have been donated to the Land Trust under the Lāʻau Point proposed action would instead be sold off as separate parcels.

If these lots were sold off without the benefit of a master plan, such as the one prepared for Lāʻau Point, the impact would include a greater number of new land owners/residents, less community control of development (i.e. design controls and CC&Rs), no land trust, and less financial support to the County and State (this later assumes that Lāʻau Point is developed and taxed at its highest and best use and if not developed as such, that subsequent land owners could not develop their individual lots with the same intensity of uses in mind). Similar to the "no action" alternative (see Section 7.1), selling parcels separately would deny the State, County, and general public of the potential public benefits associated with the Lāʻau Point project, of which the benefits have been cited before in the previous section.

Given the summary of impacts disclosed above, and in consideration with the goals and objectives of the Lāʻau Point project and the *Master Plan*, the alternative for "bulk and piece-meal sale of other MPL land inventory" has been rejected as an acceptable alternative.

7.3 AGRICULTURAL SUBDIVISION ALTERNATIVE

The Lāʻau Point project will require a State Land Use District Boundary Amendment (SLUDBA) to re-district 850 acres of land currently within Agricultural District to the Rural District. The Lāʻau Point project site to be re-districted is a small portion of the larger agricultural parcel of 6,348 acres, identified as TMK 5-1-02:30. The "agricultural subdivision alternative" would not require a SLUDBA because the entire parcel is already within the State Agricultural District.

The project will also require both a Community Plan Amendment and Change in Zoning approval to re-district agricultural-designated lands (AG) to rural (R) designation. According to the Molokaʻi Community Plan (Planning Standards, Subdivisions, Minimum Lot Size), the recommended minimum lot size for AG subdivisions shall be 25 acres; therefore, the Lāʻau Point parcel could be subdivided into approximately 215 agricultural lots (with an allocation of 15 percent for roads). Under the Maui County Agricultural District Ordinance (Maui County Code, Chapter 19.30A), the entire parcel zoned AG could be subdivided into 223 lots ranging in size from 2 acres, 15 acres, 25 acres, and 40 acres.

Since the MPL parcels are already zoned for agriculture, agricultural subdivisions would not require MPL to obtain a State Land Use District Boundary Amendment, Community Plan Amendment, or County Change in Zoning approval.

As previously discussed in Section 3.3, the soils of the parcel have severe limitations for cultivation. Except for approximately 24 acres rated as poor ("D") soils, the Land Study Bureau classifies the soils of the parcel as very poor ("E"). Soils rated "E" are considered as having little or no suitability for soil-based agricultural production. Also, a majority of the soils of the parcel are unclassified by under the ALISH system, which means the soils provide no value for soil-based agriculture. Therefore, the only feasible agricultural activity that could prosper on this parcel would be grazing, which has proven to not be economically sustainable for Molokai Ranch.

For these reasons, it is questionable as to whether there would be a market for agricultural lots in West Molokaʻi. Unlike the Lāʻau Point project, which would subdivide and sell 400 acres (200 lots) to private landowners, the agricultural lot subdivision alternative would involve selling 6,348 acres to farmers in direct competition with more suitable agricultural lands elsewhere throughout Molokaʻi and the State.

In addition, an agricultural subdivision of the parcel would not provide the environmental benefits of expanding the Conservation District at Lāʻau Point and creating cultural/environmental preserves, or addressing the objectives of the *Master Plan*.

7.4 OTHER MPL LAND DEVELOPMENT ALTERNATIVES

Molokai Ranch has vast land holdings on Molokaʻi of 60,000+ acres. These lands stretch from West Molokaʻi east to scattered parcels near Kaunakakai and Kualapuʻu. While large tracts of land appears available for development at first, options are narrowed when considering the importance of the development's location in relation to the shoreline and therefore its ability to attract interest and generate the necessary revenue to make the *Master Plan* work economically.

MPL examined various options in detail where it may be possible to develop a community at other Ranch land locations away from the Lāʻau Point project area. Models were developed to compare alternative scenarios ranging among different agricultural and residential projects of between 27 lots/units and 1,000 lots/units.

MPL initially looked at large Agricultural lot developments conforming to existing State land use designations, the Molokaʻi Community Plan, and County Zoning at Maunaloa Town and above Kaunakakai. MPL also looked at an affordable residential expansion at Kualapuʻu as part of the first round of possible alternatives and at various rural and condo alternatives for Kaluakoʻi. MPL also examined DeGray Vanderbilt's Lāʻau Point alternative (the Kaluakoʻi Rural Subdivision and Golf Course) to make sure MPL had looked at every aspect.

In efforts to avoid development specific to the Lāʻau Point project area, MPL examined nine options in detail on other Ranch lands outside of the Lāʻau Point project site. Financial models were created to examine the alternatives' ability to generate the necessary revenue to make the *Master Plan* work economically. It is important to note the following assumptions in relation to these financial models and resulting evaluation:

- Current land sales data of MPL transactions was used for establishing relative selling prices, benchmarked with prices of properties sold by local real estate agents at the West End at various locations.
- Development cost models were constantly reviewed and benchmarked with current projects such as the Maunaloa Community Center, the Kaluakoʻi Water Compliance project, and the Pāpōhaku erosion control project. Development and construction cost estimates were reviewed and updated quarterly with outside contractors, and factored in future inflation costs and labor requirements.

In all of the development alternatives evaluated below, the following has not been factored in, but would undoubtedly substantially reduce returns to the developer:

- The cost of capital or funding costs to develop.
- A percentage of lot sale revenue assigned to the Land Trust.
- The impact of delays in the regulatory permitting process, which can be significant.
- Sales momentum, the time taken to sell once developed, in other words the "time value of money" or net present value of future cash flows.

In this analysis, MPL found that all of the financial models had the common problem of not generating reasonable returns on the funds invested in meeting Lāʻau Point's objective of providing adequate funding for the Kaluakoʻi Hotel and Golf Course renovations, and an endowment for the Land Trust and the CDC. The models that in theory were capable of generating returns in excess of 10 million dollars are massive in scope and in reality are probably less feasible than the smaller projects due to the need to phase them over years and the time

taken to address both the construction requirements and market absorption. The outcomes showed either proposed water use not available to the company or used vast amounts of land or increased the population beyond what was conceived as acceptable to the island, thus having dramatic cultural and social impacts.

In varying degrees, none of the alternatives evaluated meet the criteria established: adequate financial return, no further use of drinking (potable) water, no great population increase, no great displacement of lands designated for agriculture or open space, no use of potentially higher value agricultural lands versus less, suitable agricultural lands with poorer soil productivity ratings.

Table 12 and the following sections provide a summary of the evaluation analysis of the alternative of "Other MPL Land Development".

Table 12. Summary of Other MPL Land Development Alternatives

	Alternative	# of Lots/ Units	Approx. Land area (acres)	Estimated Water use per lot/unit (gals/day)	Estimated Total Water Use (gals/day)	Esti-mated Popu-lation impact per lot	Total Popu-lation	Estimated Financial Return (total dollars)
1	Maunaloa to Lāʻau – 25-acre lots	175	4,650	3,000	525,000	2	350	$4,336,000
2	Maunaloa to Lāʻau – 10-acre lots	420	4,350	3,000	1,260,000	2	840	$15,731,000
3	Maunaloa to Lāʻau – 2-acre lots	600	1,450	3,000	1,800,000	2	1,200	$6,455,000
4	Maunaloa Ag	27	700	3,000	81,000	2	54	$2,613,000
5	Kaunakakai Ag	70	1,800	3,000	210,000	2	140	$1,974,000
6	Kualapuʻu	40	7	500	20,000	4	160	($92,000)
7	Kaluakoʻi Rural #1	500	300 125	1,000/unit potable 2,000/acre nonpot	500,000 potable 250,000 nonpotable	2	1,000	$0
8	Kaluakoʻi Rural #2	800	720 180	1,000/unit potable 2,000/acre nonpotable	800,000 potable 360,000 nonpotable	2	1,600	$36,752,000
9	Kaluakoʻi Resort Condo	1,000	92.75	560/unit potable 2,000/acre nonpotable	560,000 potable 185,500 nonpotable	1.5	1,500	$38,000,000

7.4.1 Maunaloa Toward Lāʻau Point

Professor Luciano Minerbi from the University of Hawaiʻi's Urban and Regional Planning Department recommended that MPL look at a development area below Maunaloa town extending toward Lāʻau Point but staying a minimum of a mile from the shoreline. MPL ran three models for this area, a Molokaʻi Community Plan-conforming Agricultural subdivision

with a 25-acre minimum lot size, a subdivision in the same area using a 10-acre minimum lot size, and a 2-acre minimum lot size version.

25-acre Minimum Lot Size – this model contains 175 lots.

(a)	Revenue per lot:	$450,000
(b)	Total Revenue:	$72,450,000
(c)	Cost to Develop:	$68,114,000
(d)	Financial Return:	$4,336,000
(e)	Water Use:	525,000 gallons/day
(f)	Population increase:	350
(g)	Land Requirement:	4,650 acres

Agricultural lots are often marketed to farmers desiring to cultivate diversified crops. The economic feasibility and market demand of this alternative is questionable due to the lack of infrastructure and high cost of front-end investment needed.

10-Acre Minimum Lot Size – Located in the same geographic area as the project above, this project contemplates a Community Plan Amendment to create higher densities and greater net revenues. This model contains 420 units.

(a)	Revenue per lot:	$275,000
(b)	Total Revenue:	$115,500,000
(c)	Cost to Develop:	$99,769,000
(d)	Financial Return:	$15,731,000
(e)	Water Use:	1,260,000 gallons/day
(f)	Population increase:	840
(g)	Land Requirement:	4,350 acres

Although this alternative creates a high profit return, this alternative’s proposed water use is not available to the company, more land is required, and the increase in population is beyond what was conceived as acceptable to the community. Therefore, this alternative was rejected.

2-Acre Minimum Lot Size – Smaller lots are preferable for small-scale diversified agricultural operations. Like the concept above, a Community Plan amendment to allow minimum 2-acre lot size is also contemplated with this scheme. This project of 600 sites, would have a much smaller footprint than the two alternatives above, but would have considerably greater population and water impacts.

(a)	Revenue per lot:	$200,000
(b)	Total Revenue:	$120,000,000
(c)	Cost to Develop:	$113,545,000
(d)	Financial Return:	$ 6,445,000
(e)	Water Use:	1,800,000 gallons/day
(f)	Population increase:	1,200
(g)	Land Requirement:	1,450 acres

This alternative does not generate reasonable returns on the funds invested, proposed water use is not available to the company, more land is required, and the increase in population is beyond what was conceived as acceptable to the community. Therefore, this alternative was rejected.

7.4.2 Maunaloa Agricultural Subdivision

This alternative would utilize the best 700 acres of pasture land just above Maunaloa to create a 25-acre agricultural lot subdivision. This development would provide 27 lots and infrastructure demands were relatively low.

(a)	Revenue per lot:	$500,000
(b)	Total Revenue:	$13,500,000
(c)	Cost to Develop:	$10,887,500
(d)	Financial Return:	$2,612,500
(e)	Water Use:	81,000 gallons/day
(f)	Population increase:	54 people
(g)	Land Requirement:	700 acres

This alternative does not generate reasonable returns on the funds invested. Therefore, this alternative was rejected.

7.4.3 Kaunakakai Agricultural Subdivision

This alternative would develop the existing cornfields below Manila Camp and all the land directly above Manila Camp up to about the 1500-foot elevation. Consistent with the *Molokaʻi Community Plan*'s 25-acre minimum agricultural lot size, the lots would require 1,800 acres, creating 70 lots – 2 suitable for diversified agriculture and 68 pasture lots. As the cornfields are an existing agricultural water use, that water use is not included in the summary below:

(a)	Revenue per lot:	$475,000 - $625,000
(b)	Total Revenue:	$33,980,000
(c)	Cost to Develop:	$32,006,000
(d)	Financial Return:	$1,974,000
(e)	Water Use:	210,000 gallons/day
(f)	Population increase:	140 people
(g)	Land Requirement:	1,800 acres

This alternative doe not generate reasonable returns on the funds invested, proposed water use is not available to the company, and more land is required. Therefore, this alternative was rejected.

7.4.4 Kualapuʻu Residential Subdivision

Conceived as an affordable housing project adjacent to the existing town and the Kalae Highway, the project would be able to benefit from existing infrastructure to reduce costs to some degree. This initial increment was sized at 40 lots.

(a)	Revenue per lot:	$60,000
(b)	Total Revenue:	$2,400,000
(c)	Cost to Develop:	$2,492,000
(d)	Financial Return:	($92,000) loss
(e)	Water Use:	20,000 gallons/day
(f)	Population increase:	160
(g)	Land Requirement:	7 acres

This alternative results in a financial loss. Therefore, this alternative was rejected.

7.4.5 Kaluakoʻi Rural Subdivision and Golf Course

This concept looked at 500 half-acres designated for rural lot development in conjunction with a new 18-hole golf course. About half of the lots would have golf course frontage, while the remainder would have ocean views.

(a)	Revenue per lot:	$245,000
(b)	Total Revenue:	$122,256,000
(c)	Cost to Develop:	$122,259,000
(d)	Financial Return:	Breakeven
(e)	Water Use:	750,000 gallons/day
(f)	Population increase:	1,000
(g)	Land Requirement:	425 acres

This concept replicated a previous land use plan concept that provided 800 three-quarter acre lots planned around 27 holes of golf. As would be expected, the population and water impacts are considerable. However, the financial contribution from this project is disappointing.

(a)	Revenue per lot:	
	(1) Golf Course frontage:	$300,000
	(2) View Lots:	$200,000
(b)	Total Revenue:	$200,500,000
(c)	Cost to Develop:	$163,748,000
(d)	Financial Return:	$36,752,000
(e)	Water Use:	1,160,000 gallons/day
(f)	Population increase:	1,600
(g)	Land Requirement:	900 acres

This alternative's proposed water use is not available to the company and the increase in population is beyond what was conceived as acceptable to the community. Therefore, this alternative was rejected.

7.4.6 Kaluakoʻi Resort Condo Units

For this analysis MPL assumed that 1,000 units might determine a return that was feasible. Two-bedroom, 1,200 square foot units were assumed. It was also presumed that MPL would need to build the units with an investor/partner due to the enormous financial requirements of this development.

(a)	Revenue per unit:	$500,000
(b)	Total Revenue:	$500,000,000
(c)	Cost to Develop:	$462,000,000
(d)	Financial Return:	$ 38,000,000
(e)	Water Use:	745,000 gallons/day
(f)	Population increase:	1,500
(g)	Land Requirement:	92.75 acres

This alternative increases population beyond what was conceived as acceptable to the community and has water requirements beyond what's available the company. Therefore, this alternative was rejected.

Summary of Findings – To the extent that MPL could develop a community at another location on other MPL lands, the alternative for “Other MPL Land Development” was rejected for the following reasons:

- Other sites do not have the natural beauty and coastal attributes needed to achieve the full economic potential.
- Other sites would not attract the upper spending market that would pay a premium for lots at Lā‘au Point. Sales of the residential lots are crucial for funding the Kaluako‘i renovations and the Moloka‘i CDC.
- Overall project density and population would be higher at the alternative locations.
- More water would be required, which would mean increased water permit applications.
- A consensus was reached with the *Master Plan* for the Lā‘au Point project.

The models that in theory were capable of generating returns in excess of ten million dollars are massive in scope and in reality are probably less feasible than the smaller projects due to the need to phase them over years and the time taken to address both the construction requirements and market absorption. As stated, these factors were not addressed.

By comparison (refer to Table 12), the Lā‘au Point project as currently conceived would:

- Require only 1/8 the land area of models (1) or (2), and much less than models (3), (4), (5), or (8).
- It would impact the population less than models (2), (3), (7), (8), or (9).
- It would also require much less water than models (2), (3), (7), (8), or (9).

More importantly, the Lā‘au Point project can meet the financial requirements of MPL, protect the employment of existing staff and provide over 100 new jobs with the Kaluako‘i Hotel re-opening, with slow, modest growth. Most importantly, it allows the creation of the Land Trust and the resulting transfer of 26,200 acres and the protection of an additional 25,000 acres.

7.5 ALDC ALTERNATIVES

The Alternative to Lā‘au Development Committee (ALDC) efforts to find an alternative to the Lā’au Point project, and the hiring of Clark Stevens (New West Land Company), were funded by the Moloka‘i Enterprise Community (EC). The former leader of the ALDC, Mr. Matt Yamashita, sought EC Board approval to delay a vote on the *Master Plan* and Lā‘au Point “until a process for solidly incorporating potential alternatives into the Land Use Plan was seriously considered by the EC.” Ultimately, the EC Board rejected this motion after review and consideration of ALDC’s proposed alternatives, which are described below.

At the wish of Mr. Yamashita, we have incorporated the following statements by him:

> *“…the ALDC was formed by frustrated members of the community who had to petition the EC for the ALDC to become a part of the “community” process.”*
>
> *“The ALDC was not formed until November of 2004. EC funding to support the work of the ALDC was not secured until June 2006!”*
>
> *“The reason the ALDC formed was because no action was being taken by the EC to allow the community to address potential alternatives to Lā‘au Point. While there was a Tourism Committee, Economics Committee, Environment Committee, & Cultural*

Committee — no Committee was formed to look at the Lāʻau development and other potential economic engines."

7.5.1 New "Town"

This alternative proposed 50 view-shed lots at Lāʻau Point, located between 0.5 mile and 1.5 miles from the Lāʻau shoreline, and another 100 small residential lots, which would represent a new "town" similar to Maunaloa. No financial evaluation was provided with this proposed alternative.

This alternative was examined in some detail as the EC funded the ALDC to hire Clark Stevens to review alternatives. MPL examined every site proposed by Clark Stevens by walking the area proposed for these lots.

MPL's analysis of the alternative indicates that the total cost of infrastructure and lot construction (which would need to be brought in and connected to Maunaloa's systems) would cost $875,000 per lot (or a total cost of $44 million) for the 50 view-shed lots (not including the 100 small residential new "town"). The distance between the lots (lots were proposed to be spread out across the Lāʻau Point parcel) and the fact that it would not be feasible to run infrastructure from Kaluakoʻi, resulted in this abnormally high infrastructure cost.

On this basis, MPL would lose money on this alternative as it is inconceivable that it could achieve a price of $875,000 for lots that only had ocean views and were sited between one mile and one and a half miles from the ocean.

A comparison can be made with the Kaluakoʻi lots, many of which are currently on the market by private sellers and are of similar distance from the ocean. Good ocean-view lots of five-acres in size, and that are close to the Kaluakoʻi Hotel, were selling for approximately $400,000 to $450,000 in October 2006.

The proposal to create a new "town" at Lāʻau Point was soundly rejected by the community of Maunaloa; a community that is currently fighting to survive a declining West End economy. The *Master Plan* allows for the expansion of Maunaloa by up to 100 acres, but only when the community believes it is necessary, as discussed in Section 4.8.2 (Housing).

Some of the proposed sites were also in the middle of cultural site complexes (denoted as Cultural Protection Zones in Figure 12), a factor not reviewed by Stevens in his report.

The Lāʻau Point proposal protects more than 1,000 acres in front of and surrounding the development. This protection includes the gifting of an important cultural and archaeological complex at Kamākaʻipō Gulch to the Land Trust and protective easements covering other cultural sites.

The detail of the cultural impacts (Section 4.2) of proposed Lāʻau Point project, the issues of access for the community for subsistence gathering (Sections 2.3.7, 4.2, and 4.3), and the proposed Water Plan (Section 4.9) are discussed in this EIS.

The budgeted construction for the proposed Lā‘au Point project is $360,000 per lot. Because of the large cost and value difference between this alternative ($875,000 per lot) and the proposed project, the new “town” alternative was rejected.

7.5.2 Purchase of Lā‘au Point Parcel

The other alternative proposed included several purchase options for Lā‘au Point instead of development. ALDC’s consultant, Clark Stevens, proposed that it would not be “unreasonable” to assume that an effort to purchase Lā‘au Point would elicit broad-based financial support, particularly from the 400,000 people of Hawaiian ancestry who appreciated the culture of the Hawaiian Islands.

Stevens also proposed that the Land Trust purchase both the lands proposed for the Land Trust and the Lā‘au Point parcel (a total of 33,000 acres), and then lease the land in 1,320 properties (25-acre lots). This option was rejected as it failed to recognize the desire of the Land Use Committee and the EC to protect vast areas of the property in conservation. It was not reasonable to assume that the Land Trust would purchase land that was already planned for fee donation to them under the proposed *Master Plan*.

Early in 2006, the ALDC, in a memorandum to the EC Board, indicated its support for the purchase of the Lā‘au Point parcel, either in whole or in part, by a third party, individual, or entity. The ALDC stated it would prefer a conservation “philanthropic” buyer to purchase the entire 6,348-acre parcel, or a buyer who could use the tax incentives and develop mauka of the shoreline with less density. The ALDC asserted that in order for them to move forward with finding potential purchasers, MPL must be willing to keep this alternative open and determine a purchase price for the parcel.

In October 2006, Mr. Yamashita, leader of the ALDC, told an EC Board meeting that the ALDC, as a formal organization, no longer existed, and he asserted it was the responsibility of the EC to consider looking for alternatives to the Lā‘au Point development. He stated that the ALDC had not put effort into finding a conservation buyer for the parcel.

MPL has stated to the ALDC, regarding this purchase alternative, the following:

- If a purchaser offers the company a price for the Lā‘au parcel that is equivalent to its development return, protects areas for subsistence as proposed, and provides an endowment income to the Land Trust/CDC as proposed under the Lā‘au Point development plan, it will seriously consider the offer. MPL will seriously consider offers, but after an extensive two-year community process, does not desire to indicate a price for the parcel because of the many variables involved.
- Should a serious buyer emerge, MPL will enter meaningful negotiations with that party or parties.

7.6 OTHER PROPOSED USES FOR MPL LANDS (NON-RESIDENTIAL AND NON-AGRICULTURAL) ALTERNATIVES

Several other options were suggested which included a Marine Biology Center, a new University focusing on environmental sciences, a Health and Wellness Center, and a Cultural College; all proposed to have economic benefit equal to or better than the Lā‘au Point project. MPL does not

believe that these options are viable at this time and over the past decade has had no inquiries from institutions with any interest in establishing such projects or investing capital on Molokaʻi for these types of ventures.

An alternative proposed by the U.S. Military was to use parts of Lāʻau Point for non-live firing amphibious and air exercises. The Land Use Committee rejected this alternative citing it as an inappropriate use and contrary to the *Master Plan* and project objectives.

MPL was also asked to look at the area from Hale O Lono to Pālāʻau There are several issues with this area, not the least of which is the proposed inclusion of this land in the Land Trust and the importance of the Kāʻana ahupuaʻa.

With respect to archeological sites, the area has had only limited analysis done to date, and where surveys have been conducted, sites have always been found. Based on the limited surveys, it is likely that extensive archaeological survey work would identify culturally-sensitive areas. The topography of the site is that of sloping ridges divided by deep, steep gullies. To access development along the more desirable coastal areas, it would be necessary for road construction to start at the top of Maunaloa and traverse down each of these ridges. MPL estimated that 24 miles of roads would be needed to service the area. This would not only be costly, but would severely impact the ability of this region to be used for subsistence hunting as currently proposed by the *Master Plan*. These roads and utilities would require the development of hundreds of lots to offset their construction costs. This analysis explains why Molokai Ranch in the past had shelved plans for initial development of this area as being economically unfeasible.

7.7 FURTHER ALTERNATIVE ANALYSIS

As part of a continuing commitment to analyze alternatives to the proposed development at Lāʻau Point, and following a review of other suggested alternatives, MPL has further analyzed its previous complete list of alternatives (published in the Section 7 above).

- Further research has shown that Alternative 1 (175 twenty-five acre lots between Maunaloa and Lāʻau Point), Alternative 2 (420 ten-acre lots between Maunaloa and Lāʻau Point), Alternative 4 (27 Maunaloa Ag lots), Alternative 5 (70 Kaunakakai Agricultural lots), Alternative 6 (40 Kualapuʻu residential lots), Alternatives 7 and 8 (500 and 800 rural lots in the Kaluakoʻi area) and the alternative proposed by the ALDC consultant, Clark Stevens, for a new "town" located between Maunaloa and Lāʻau Point, are not economically feasible. The reasons given in the previous section for dismissing these particular developments are still valid.

Examined in greater detail were:

- The three alternatives for a variety of different developments on two-acre lots and ten-acre lots mauka of Lāʻau Point and situated between half a mile and two miles between the current proposed Lāʻau Point development and Maunaloa.
- A Kaluakoʻi Resort Condo development of 1,000 with a potential return of $38 million; and options for lesser units.

- The option raised concerning the siting of 100 three-megawatt wind turbines on the West End on undeveloped MPL lands, mainly sited on the northern coastline of MPL’s property.
- An option that MPL support the “Buy The Ranch” campaign, being undertaken by the Moloka‘i Community Services Council (MCSC) and led by its executive director, Ms. Karen Holt.

7.7.1 Relocating the Development Mauka of the Current Location at Lā‘au

One of the primary questions asked was: “Why can’t the proposed development be relocated mauka by one-half mile to one mile?” In context with this question, MPL has been asked about the following issues in regard to currently proposed location of the Lā‘au Point subdivision (that is at least 250 ft from the shoreline):

i. The homes may be visible from the beach and from the ocean, thereby depriving residents of the sense of an undeveloped place, as it now exists.
ii. The homes as currently located, increase adverse social inter-action and the new residents will have an adverse impact on the fishing and coastal resources of the area.
iii. The homes as currently located, increase the risk of adverse impacts from the subdivision such as run-off.
iv. What is the basis of the economic impact of re-locating the subdivision mauka of its current planned location, and can these be outweighed by the other adverse impacts of the current location.

In response to items (i), (ii) and (iii) above, MPL is extremely conscious of these issues. Specific sections of this EIS have provided suggested mitigation measures to minimize potential impacts. In response to item (iv) an economic analysis is provided below. The principle issue of the development of a piece of property close to the ocean, and the almost certainty that some houses will be visible from areas of the beaches, is an issue that cannot be overcome with the current siting, and MPL can only mitigate this issue to lessen the impact.

7.7.1.1 One Mile from the Shoreline

Relocating the subdivision at least one mile from the shoreline would:

- Overcome potential adverse visual impacts from the shoreline and the ocean;
- Lessen perceived adverse social impacts from inter-action from new residents with members of the community wishing to fish the ocean, and
- Reduce the potential for run-off from the subdivision into the ocean.

Locating the subdivision at least one mile from the shoreline would also:

- Place the development on Rural Reserve land, projected for no buildings whatsoever under the *Master Plan*.
- Interrupt rural views toward the ocean from Maunaloa and the Maunaloa Highway by the sight of houses. During the process of creating the *Master Plan*, protection of the rural views from the highway leading into Maunaloa was a primary concern of participants, particularly those from Maunaloa.

- Prohibit subsistence hunting, planned for that Rural Reserve area.

7.7.1.2 One-Half Mile from the Shoreline

In the case of siting the subdivision one-half mile from the shoreline, the potential visual impact would be minimized, but not overcome entirely as the high-point ridges of the hills above Lāʻau Point are in many places more than one-half mile away. Some homes built within a half mile from the shoreline may be visible from the ocean and from some of the beaches.

For this alternative, the same protection measures to prevent runoff would need to be in place as the currently proposed plan and residents would be able to easily walk to the beaches. There would also be the same issues regarding interaction with subsistence fishermen, and there is the same potential for rubbish being littered in the areas between the subdivision and the beaches.

7.7.1.3 Comparative Analysis

The economics of locating the subdivision further from the shoreline is discussed in more detail below.

Input from the community at Social Impact Assessment review meetings and at Cultural Impact Assessment meetings led to incorporating extraordinary measures to overcome potential problems in the Lāʻau project that equalized the impacts, or lack of impacts between the proposed project and alternatives examined wherein the homes were relocated further mauka. These include:

Visual Impact:

- The CC&Rs will prevent houses of more than one-story being built.
- House sites will be pre-determined by MPL on lot plans.
- At least two-thirds of the lot must remain undisturbed.
- Natural materials must be used in house construction.
- Any colors used will be pre-determined and will blend with the landscape.
- The front lots in the subdivision are setback at least 250 feet (and in some cases up to 1,000 feet or 1/4 -mile) from the registered shoreline. This is much further back from the shoreline than is usually the case e.g. the Kaluakoʻi subdivision.

Note: The Land Trust will be a party to the CC&R documents, and therefore, can enforce its provisions if they are not met by the homeowners, or even the HOA representing the homeowners.

Subsistence Protection:

- A total of 254 acres of existing agricultural land behind the Conservation District of 180 acres adjacent to the beach is being designated as additional Conservation District land.
- This expanded Conservation District of 434 acres, where the community has access, will be under easement to the Land Trust.
- The area will be jointly managed by the homeowners and the Land Trust to ensure the easement provisions, which protect the cultural sites and guarantee subsistence practices for the community, are forever in place.

- Access to the area will only be by foot, from access points at each end of the subdivision.
- The lot owners and the Land Trust will employ Resource Managers to ensure those who visit the protected areas only take from the fishing resources what they can carry out.
- Lot owners will not be allowed to use pesticides or non-organic fertilizers to prevent dangerous materials leaching into the ocean.

Note: Contained in this EIS is a Shoreline Access Management Plan (Appendix B), developed by MPL in conjunction with the Molokaʻi Land Trust, which will guide use of the Conservation District lands or shoreline areas in front of the subdivision.

Lot Owner Interaction:

- Each lot owner will be required under the CC&Rs to take a course, conducted by the Kupuna, only "Molokaʻi style" and what is expected of them as new residents living at Lāʻau Point.
- Restrictive CC&R provisions relating to energy and water conservation measures and the prohibition on vacation renting of the houses will mean that the Lāʻau Point subdivision is not for everyone. Only conservation-minded people, who are likely to respect what is dear to the island, are likely to be potential buyers of Lāʻau Point lots.
- As the Land Trust is a party to the CC&Rs, the lot owners and representatives of the Land Trust will meet regularly and inevitably discuss any issues of concern.

Adverse Impacts from Run-off and Rubbish:

- A Soils Survey commissioned as a result of questions concerning soil suitability for lot construction and house-building, projects no adverse impact from the types of soils at Lāʻau Point. The report is summarized in Section 3.3.4 and the full report is provided as Appendix G.
- A preliminary drainage and construction plan has been aimed at preventing the existing runoff from the lands around Lāʻau Point so that during and following construction, there will not longer be muddy brown water in the nearshore areas of Lāʻau Point following heavy rains.
- The lot plans shows that there will be no building or construction on all natural drainage ways and steep slopes above 50 percent.

Note: An exception of preventing existing runoff may be in the area of Kamākaʻipō Gulch, a 128-acre cultural reserve that will be donated to the Land Trust. This area, on the western shoreline is rich in archeological sites that must be protected.

Cultural Impacts:

- The Molokaʻi Land Trust will ensure that all cultural sites and complexes are protected in the Lāʻau Point area under the subdivision plan.
- Archeologists and Land Trust cultural advisers will work closely with the construction team to ensure any potential sites are identified and the governing laws relating to protection of sites during a construction period are strictly adhered to.
- Once construction is complete, Resource Managers will be on-site to ensure the continual protection and enhancement of cultural complexes.

7.7.1.4 The Economics of Lāʻau Mauka Developments

In early 2005, MPL quantified the value loss from additional shoreline setbacks of lots that were more than 250 feet from the Lāʻau shoreline. It also conducted a "Lāʻau Shoreline setback study," which looked at the impact on sale prices of lots at various distances from the shoreline.

The results of these studies, which were discussed and debated at length by the Land Committee of the EC Project #47 (Sustainable Development), were independently verified by the Hallstrom Group, a registered land valuation company which has been operating in Hawaiʻi for many years.

The studies concluded that views of the ocean and shoreline, combined with ease of access to the shoreline, were the prime real estate value determinants in Hawaiʻi. This is evidenced by the many developments throughout Hawaiʻi that, in previous years, have allowed homes to be built right up adjacent to the shoreline; sometimes preventing access to beaches by the local community.

The studies provided that related to both factors of views and access was the factor of topography and how that affected the views and access to the shoreline.

The study projected that the potential revenue from the sale of the currently proposed Lāʻau lots was $193 million. Lots, depending on their proximity to the ocean could range in price from:

- $1.45 million for the ocean-front lots
- $750,000 for those lots that overlooked the ocean, but were second-tier lots overlooking the oceanfront lots
- $500,000 for ocean-view home sites that were further inland, were on the "third-tier," and were a significant distance from the shoreline.

Pushing the subdivision back by another 200 feet was estimated by the studies to drop the overall lot sale prices by $52 million or 27 percent, to $141 million.

Notable in this exercise was that the projected 60 rear lots did not change in sale price and remained at $500,000, but the majority of the front lots dropped in value by 40 percent. Most were now projected to sell at $870,000.

It was these studies, and the MPL's experiences with lot prices in the mauka areas of Kaluakoʻi, that formed the basis of projections for alternatives that were either one-half mile or one mile from the Lāʻau shoreline.

MPL also checked its sale assumptions with local real estate agents and continues to update its database with sale prices of similar property.

In all cases, the model of costs to develop was the same as that used for the currently proposed Lāʻau Point development, with factors such as the provision of services adjusted for location.

Below is a sensitivity analysis of lot sales price, with higher prices for lots shown to reflect a price at which the subdivision may be feasible, ignoring facts such as ability to sell and the issue of the need for additional water for a greater amount of lots.

In each case, the same cost to develop has been used Table 12 above. It is important to note that none of these proposed subdivisions will have close ocean views as a distance of one mile from the shoreline takes the subdivision over the ridge separating the Lāʻau foreshore with the Maunaloa agricultural land.

MPL also reviewed a 300-lot two-acre subdivision one mile from the shoreline (shown in Table 13 below as D), as a comparison to the 600 lot two-acre subdivision (shown below as "A").

Table 13. Additional Alternatives Analysis

Alternative	Price Per Lot Projected in EIS	Adjusted Lot Price	Profit contribution Pre-Funding Costs on Adjusted Lot Price
A. **600**-lot 2-acre subdivision mauka of Lāʻau Point	$200,000	$300,000 (50 percent increase in projected sale price) $240,000 (Projected 20 percent increase)	$61,700,000 $28,600,000
B. **420-**lot 10-acre subdivision mauka of Lāʻau Point	$275,000	$400,000 (45 percent increase in projected sale price) $330,000 (Projected 20 percent increase)	$64,000,000 $37,000,000
C. **50** lots mauka of Lāʻau as proposed by Clark Stevens (ALDC)	$875,000	$1,000,000 (Projected 14 percent increase)	$2,000,000
D. Adjusted 2-acre subdivision: Only 300 lots mauka of Lāʻau Point		$300,000 $240,000	$30,800,000 $14,300,000

MPL then reviewed these "adjusted" sales prices with recent sales of similar type lots at Pāpōhaku and Maunaloa to test the accuracy of the adjusted lot size pricing.

There is little of a comparable size, or without views, that have sold recently in either Maunaloa or Kaluakoʻi.

The sale in 2006 of a similar lot (5-acres) without views achieved $270,000 in Pāpōhaku, but none without views have sold in 2007. In Maunaloa, 1/4-acre residential sites have sold as high as $152,000. Other lots with close proximity views of the ocean have sold for about $500,000, the same selling price as projected for the third-tier lots in the currently proposed Lāʻau Point plan.

Conclusion on sale prices that can be achieved in these options; original sale prices may have been conservative, but in the current market may be between $20,000 and $40,000 per lot lower than the market.

Although higher prices may now be able to be achieved for these revised alternatives, the issue of water source still remains the major stumbling block to any development. In these scenarios,

each of the development option uses more water than the currently proposed Lā‘au Point plan. Developments of 10 acres or more are likely to be intended for some sorts of agricultural use and require additional irrigation water.

7.7.2 Kaluako‘i Resort Condo Alternative

Another question raised with MPL was: “Why can’t MPL just develop its entitled land at Kaluako‘i?” MPL further reviewed the Kaluako‘i Resort Condo alternative using plans drawn up in 1991 by the previous owners of Kaluako‘i on a site adjacent to the Paniolo Hale condominium units.

This proposal for 1,000 units generates $38 million profit contribution, but uses a land area of not more than 100 acres. Each unit had a projected sale price of $500,000 built at a cost of $462,000.

To further examine this option MPL modeled 200 units, which produced a contribution, pre-funding of $7,600,000. These were 1,200 sq ft two-bedroom units.

Only a condominium project in excess of 500 units would give a return equal to that of the currently proposed Lā‘au Point. However, with funding costs in excess of $231 million, compared to the Lā‘au construction cost funding costs of about $80 million, this is not an accepted alternative. Also, the ability to sell such a project is questionable.

The conclusion reached from further analysis of 1) moving lots further mauka and 2) the Kaluako‘i Condominium alternative, is that that the higher the price achieved per unit or lot, the less number of lots that need to be developed.

This, along with the high cost of funding and the of the additional water necessary for a greater number of homes, are the principal reasons MPL still believes the current Lā‘au Point development is the best alternative. Water use still remains a major barrier to larger-scale developments.

7.7.3 The Wind Farm Alternative

In early 2006, a major U.S. company, developing wind turbines for the supply of electric power, approached a shareholding company in GuocoLeisure Limited seeking to purchase MPL with the main reason to use the property to site 300 megawatts of wind turbines in order to supply O‘ahu with electric power via an undersea cable.

Their plans involved the siting of 100 three-megawatt wind turbines on the West End of the island, in particular on land that was identified under the *Master Plan* as the most environmentally sensitive of all MPL lands.

For many reasons, nonetheless that the proposal ran counter to conservation uses under the *Master Plan*, the offer was rejected. Another consideration, even if alternative siting for the wind-turbines could be found, was that the price offered would have meant a major financial loss for GuocoLeisure Limited on its MPL investment, seriously impacting the company’s share price.

Residents have since raised the issue as to why MPL has not further considered this alternative to the Lāʻau Point development.

MPL's and its parent company's decision and consequence response is as follows:

- Both GuocoLeisure and MPL have a fiduciary responsibility to shareholders to maximize the return from its investments to its shareholders. Its directors and officers could face major litigation if it sold its assets at substantially below market value. The offer was substantially below a February 2006 market valuation of MPL conducted by the Hallstrom Group, registered valuers of Honolulu, of $203 million. No alternative should be considered that proposes that the company's shareholders suffer a major economic loss, particularly when the proposed action under consideration in this EIS does not contemplate such economic loss.
- The alternative proposed by contrary to the provisions of the *Master Plan*, which states that the land under consideration for use as wind-turbines be protected for all time under Land Trust easements as Rural Reserve. Wind-turbines are not a use proposed under the Rural Reserve criteria (see Section 2.1.11).
- The environmental and cultural considerations of the proposal would mean that detailed and time-consuming environmental impact reports would need to be conducted, prior to any confirmation of this alternative, with no guarantee of success.

MPL has never been directly approached by this company; however, its literature indicates that the company is not interested in siting wind-farms on Molokaʻi solely for the use of supplying the Molokaʻi community with electric power. This would mean a vastly reduced number of turbines. MPL's believes that the company's aspirations are to build wind-turbines for the supply of power into the Hawaiʻi state grid.

MPL would consider an economic option that solely provided benefits of the people of Molokaʻi in a similar way to the *Master Plan*. Regrettably, we understand that with the cost of such turbines and the environmental issues that need to be overcome, this is not an economic or viable option for such companies. This is unfortunate as MPL supports the State mandate to move away from fossil fuels as a source of energy.

7.7.4 "Buy the Ranch" Alternative

In mid-2006 the Molokaʻi Community Services Council (MCSC), a 501(c)(3) non-profit organization, under the guidance of its executive director, Ms. Karen Holt, began a campaign to raise funds to purchase MPL as a means of stopping the Lāʻau Point project and the implementation of the overall *Master Plan*.

In late 2007, a company with stated intentions to build a large number of wind turbines on the company's property pledged $50 million to the campaign.

Despite statements by MPL and letters to MCSC that MPL is committed to the *Master Plan* and its various facets, including the Lāʻau Point project, the MCSC has continued to raise funds for their "Buy the Ranch" campaign.

MPL has stated on a number of occasions that should the Master Plan fail at the regulatory level, by far the greatest return for its shareholders would come from a piece-meal break up and sale of the property. This was confirmed in the 2006 valuation of the company completed by Hallstrom Associates for the Hong Kong Stock Exchange. That valuation is available for viewing on the GuocoLeisure website: www.guocoleisure.com.

7.8 APPLICATION OF KEY CRITERIA IN ALTERNATIVE ANALYSIS

7.8.1 Alternative Access to the Lāʻau Area

7.8.1.1 Benefits and Detriments of Limited Access

One of the cornerstones of the Master Plan and the reluctant agreement by the Land Use Committee and the Molokaʻi Enterprise Community was that the development of the lands adjacent to Lāʻau Point would not lead to a further depletion of the subsistence resources so important to the Molokaʻi community. This was the strong advice of subsistence practitioners, and those with a long association with the Ahupuaʻa of Kaluakoʻi.

Experiences on Molokaʻi of access to the beaches at Kaluakoʻi, and when Hale O Lono Harbor was open to the public, led by the Land Use Committee (on the recommendation of the Cultural Committee) to firmly resolve that multi-access points without restrictions over the entire property, not only at Lāʻau Point, would lead to abuse and over-harvesting of the scarce fishing resources.

This principle was also adopted by the Molokaʻi Land Trust, who on implementation of the Master Plan will control a significant portion of Molokai Ranch's current shoreline.

The Molokaʻi Land Trust will only be allowing access by foot to its coastal lands within the 26,200 acres of donated MPL land. Visitors will need to take courses in conservation methods of fishing and hunting, and access for fishing, will be restricted at fish breeding times to particular areas. Community subsistence practitioners will only be able to take what they can carry themselves from the area. Conservation of the deer herd will be a primary focus for the Land Trust in granting hunting access.

To further support this belief that resource protection was paramount over free and open access, the *Master Plan* participants supported, and the Land Trust will seek to implement, a Subsistence Fishing Zone right around the property. In this zone, which would extend to the outer edge of the reef on the south shore and to 1/4-mile on the west and north shores, only community members could fish for subsistence purposes.

Master Plan participants saw no reason why this principle should not be adopted in relation to shoreline access within the Lāʻau Point development. It would protect the in-shore fisheries and grant access for genuine subsistence fisherman and practitioners. It would also assist in the MPL objective of "enhancing and improve the cultural and subsistence resources at Lāʻau Point"

Community members involved in the planning process realized this was at variance with the current Maui County subdivision ordinance which states that access points in a development must be available every 1,500 feet, but were determined to protect the cultural heritage of the area and the subsistence resources.

But it determined that access only from each end of the subdivision, with full-time "guardians" ensuring there was no over-fishing and that visitors had taken part in conservation instruction from the Land Trust, was the only method to ensure long-term protection of the resources, both cultural and subsistence.

7.8.1.2 Benefits and Detriments of Increased Access

Comments have been received from community members and others questioning why the access ordinance is not being followed. Letters in opposition to the Master Plan's proposed access to Lāʻau Point are summarized as follows:

- Anyone can walk along the beach, which is public space, and avoid the access points and control proposals.
- The subdivision should follow the County subdivision ordinance.
- Lot owners will have more access to the beaches than the community.
- Many community members would find it insulting to have to undergo education on conservation of the marine resources and care of cultural sites and complexes.

7.8.1.3 Access Comparative Analysis

A primary goal and principal of the project adopted by the Land Trust and MPL is that protection of the resources should take priority over multi-access points throughout MPL lands, not only within the Lāʻau development.

The principles utilized in the analysis of this access issue as it is applied in the alternatives is set out as follows:

- ***Protection of Cultural Resources and the Spiritual Qualities Associated with the Solitude of the Area***

The west and south shorelines adjacent to Lāʻau Point is where the proposed development is projected. According to the archaeological surveys and ethnographic documents there were settlement clusters around protected bays, such as at Kapukuwahine and Kanalukaha on the south shore. In addition, the Master Plan identified Kamākaʻipō as an important cultural and spiritual place.

Molokai Ranch proposes to change the State Land Use District boundaries of these areas from Agricultural to Conservation to protect the significant settlement areas and clusters along the west and south shores adjacent to Lāʻau Point, notably at Kamākaʻipō, Kapukuwahine and Kanalukaha. These proposed archeologically significant areas are proposed for gifting to the Molokaʻi Land Trust.

Lāʻau Point, itself, can be considered a significant historic and cultural property. There are 51 acres at the Point, its coastline, and inland, which are owned by the federal government and managed by the U.S. Coast Guard. These 51 acres will remain undeveloped (Appendix M, page 79) and it is important to conserve the resources and spiritual qualities of Lāʻau Point and of the west and south coastlines adjacent to Lāʻau Point.

Many community members have ascribed a spiritual quality of the Lāʻau Point area because of its isolation and solitude. Perhaps there is no way to fully mitigate the impact upon the solitude that can now be enjoyed at Lāʻau if the rural residential subdivision is approved, but it is very important to minimize such impact and protect the special quality of the area. Limiting access to a walking trail that is set back behind a row of kiawe and providing a clear demarcation between the private lots and the general public access areas can help protect the integrity of the shoreline and mitigate the impact of the house lots upon the shoreline. Conservation zones provided for in the CC&Rs will protect the spiritual quality of important complexes such as Kamākaʻipō.

- ***Providing More Access than In The Past***

The area proposed for development of the rural residential lots is on private property. This area has been privately owned since Charles Reed Bishop purchased the Kaluakoʻi ahupuaʻa in 1875, 132 years ago. Since 1875, the coastal areas where the rural residential lots are projected have only been accessible by foot. Limited vehicular access has only been available for shareholders, cowboys and employees of Molokai Ranch.

On the west, the closest access point for the general public to enter on foot was the main highway, until the development of the Pāpōhaku Subdivision opened an access point at what is called Dixie Maru Bay in the 1980s. The development of the "tentalows" at Kaupoa opened vehicular access to guests of the Molokai Ranch Lodge and Beach Village as far as Kaupoa. An occasional special weekend rate for Molokaʻi residents at the Beach Village has opened up the opportunity for vehicular to those Molokaʻi residents while they are guests at the Beach Village.

On the south, the closest access point for the general public to enter on foot was at Pālāʻau until access was opened to Hale O Lono Harbor in 1998.

The proposed access point on the west shore at the proposed West shoreline park and parking area (located at Kamākaʻipō Gulch) will be much closer than the current access point at Dixie Maru or even at the Kaupoa Beach Village.

The proposed access point on the south shore at the proposed South shoreline park and parking area (located at Puʻu Hakina) will be closer than the current access point at Hale O Lono.

In summary, given the history of the area, the proposed development will, in fact, increase access along the west and south coastal areas. As a means of limiting the impact upon subsistence resources with the increased access, vehicular access is proposed to be up as far as the two public access points, while walking access is unlimited. Access will also be increased for the general public on other lands granted to the Molokaʻi Land Trust under the *Master Plan*.

- ***Important to Protect Subsistence Resources***

Traditionally, the west and south shoreline beach and nearshore ocean was accessed for subsistence by the Ranch shareholders, cowboys, employees and their ʻohana, and longtime residents of Maunaloa. It is not a recreational area because of the rough ocean conditions and strong currents. Seasonally, there is good surf at Puʻu Hakina and Kaupoa, which, under this proposal, will be open to vehicles.

In order to protect the marine resources, the subsistence practitioners in the Moloka‘i community had strongly urged that access be limited to foot access - so that the amount of resources harvested is limited to what can be carried out by each person. Access with vehicles and coolers will lead to over-harvesting of the resources. This advice is based upon the negative experience resulted with the opening of Kaluako‘i in the 1970s, Pāpōhaku in the 1980s, and Hale O Lono in 1998. The abundant resources in each of these areas have been over-harvested.

In addition to limiting the area to foot access, rules and regulations on methods, bag limits, and seasonal harvesting under a community-based subsistence management fishing zone, as outlined in the *Master Plan*, will be implemented. Limited access in combination with rules and regulations which provide for accountability, a penalty process and a protocol for uses with established consequences for non-compliance are essential for the protection of the marine resources along the west and south coasts where the rural residential subdivision is being proposed.

7.9 POSTPONING ACTION PENDING FURTHER STUDY OR DELAYS

Postponing or delaying the Lā‘au Point project for reasons, such as allowing the ALDC to find the necessary funding to purchase Lā‘au Point, puts MPL in the position of being unable to continue its ongoing operations on Moloka‘i.

MPL’s cash flow is negative from its operations by approximately $3.8 million per year, plus the cost of capital replacement items and repair and maintenance costs. The Lā‘au Point project will provide the funds to re-open the Kaluako‘i Hotel and revitalize the town of Maunaloa, enabling the company to realize economic returns on many of its land holdings that previously had no return.

MPL is the largest single private contributor to the island of Moloka‘i. Without MPL, the island would lose $9 million that it brings to the economy. This means that the $9 million the company contributes directly and indirectly to the Moloka‘i economy would be terminated: $3.8 million in on-island wages and benefits, $2.6 million annually in on-island supplier payments, $850,000 in taxes; and $1.9 million spent by tourists who stay at its tourism establishments.

Since MPL is cash negative, the shareholders will not permit this to continue without a solution. This solution was formulated over a two-year community process and the resultant *Master Plan*. If that process and its outcomes are not accepted, its only alternative is to find ways to reduce its overhead by shutting losing operations and selling off the property over time.

The most realistic method of achieving the maximum return for its properties is to sell the 101 parcels and other subdivided lots to individual buyers who will pay the best price.

The alternative of postponing action pending further study may allow some of the objectives of Lā‘au Point to be met eventually. This alternative, however, is not considered acceptable for the following reasons:

- This EIS and its related technical studies provide a thorough evaluation of the Lā‘au Point project’s impacts and would provide for mitigation where warranted.

- Entitlement processing for Lā‘au Point will include obtaining a State Land Use District Boundary Amendment, a Community Plan Amendment, a Change in Zoning, a Special Management Area Use Permit, and a County Special Use Permit. All of these steps provide for public input and comments, as well as opportunities for the public and decision makers to ask for more information or further study. Not withstanding the entitlement process, community members engaged in a planning process to achieve the *Master Plan* in 2003. The Moloka‘i community has been kept informed of the planning process and status of the project.

- There is need for the implementation of the *Master Plan*:
    - MPL is currently operating on a negative cash-flow basis, and needs funding for its current tourism and agricultural operations to ensure the continued employment of its current staff.
    - The community desires to renovate and re-open the 152-room Kaluako‘i Hotel and upgrade the Kaluako‘i Golf Course, which is considered crucial for revitalizing the Moloka‘i economy and providing more than 100 jobs for Moloka‘i residents.
    - The slow economy on Moloka‘i is creating an out-migration of its young people. Moloka‘i has not yet recovered from the plantation closures. The island still needs economic opportunities that will provide a diversity of jobs, including management positions and alternatives to the visitor industry. A viable MPL and the benefits of implementing the *Master Plan* will contribute to a more stable economy.

Statement Regarding Detailed Analysis of Reasonable Alternatives – MPL has addressed all of the rational alternatives that have been suggested. MPL has analyzed all of these alternatives to the degree necessary to determine which among them are reasonable and feasible alternatives. MPL then selected these reasonable and feasible alternatives for detailed analysis and study.

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8.0 CONTEXTUAL ISSUES

The community’s acceptance of the Lā‘au Point project, as an enterprise that can be undertaken without compromising the Moloka‘i cultural and social fabric, is dependent on the assurances derived from the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*), which has been described in this EIS. The relationship between the project and the *Master Plan* is symbiotic in that the thrust of the *Master Plan* is, for all intents and purposes, measures that will ensure the community’s concern that the Island’s social and cultural fabric will not be compromised.

This EIS therefore incorporates the results of discussion and analysis of the *Master Plan* by consultants who analyzed the environmental, socio-economic, and cultural impacts of the Lā‘au Point project. A summary of key issues of the Lā‘au Point project within the context of the overall *Master Plan* is presented in this section.

8.1 RELATIONSHIP BETWEEN THE SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Lā‘au Point project site currently contains previously vacant pastureland. As described in Section 3.4 (Agricultural Impact), MPL maintains a long-term commitment to preserve agriculture through the use of proposed protective easements on more suitable lands it owns elsewhere as identified in the *Master Plan*. The project site is relatively dry, supporting mostly kiawe forest and shrub vegetative zones. Soil surveys indicate that the Lā‘au Point site contains very unproductive agricultural soils (see Section 3.3). In practice, much of the adjacent land on the Lā‘au Point parcel has been left fallow, used only for grazing or commercial tourism activities. The project site itself currently is not in use. Thus, the use of the Lā‘au Point site for a rural-residential community will not impact MPL’s long-term goals for protecting prime agricultural lands on Moloka‘i.

The site possesses physical attributes desirable as amenities in a low-density, rural-residential coastal community. These attributes include a superior location with regard to views, slope, climate, and proximity to an established resort (Kaluako‘i). Studies performed in preparation of this EIS indicate that the Lā‘au Point project will be compatible with the existing environment. Specific measures will mitigate any potential adverse environmental impacts in the design and long-term operation of the community.

Short-term uses and long-term productivity consist of the project’s short-term construction phases and the long-term benefits of the Lā‘au Point community after construction. Short-term construction impacts can be mitigated while they occur. The project will maintain high standards in design and construction, as established in its strict CC&Rs. A key element of these will be the inability of Lā‘au residents to change these covenants. The long-term environmental and social benefits of the Lā‘au Point project will be the establishment of permanent protection for archaeological and cultural sites placed in cultural protection zones and preserves, increased Conservation District areas along the shoreline, increased access for subsistence gatherers, the donation of 26,200 acres to the Land Trust (see Section 2.1.12), the donation of various

community parcels and assets to the Molokaʻi CDC (see Section 2.1.13), and the perpetual funding source for the Molokaʻi Land Trust and CDC to carry out their missions.

In the long-term, the development of the Lāʻau Point project and the implementation of the *Master Plan* will contribute to substantial positive economic and social benefits as discussed throughout this EIS. The project will contribute to the maintenance and enhancement of long-term productivity for the people of Molokaʻi in general.

8.2 CUMULATIVE AND SECONDARY IMPACTS

Cumulative and secondary impacts are impacts that may result from other reasonably foreseeable actions within the area, regardless of who initiates the action. To assess the cumulative and secondary impacts of the project in context with other projects, MPL has openly discussed its plans for Lāʻau Point with Molokaʻi community members and organizations through the *Master Plan* process and this EIS.

The Department of Hawaiian Homelands (DHHL) has been, and is, a major force for change in Molokaʻi as its holdings comprise 25,889 acres, or 16 percent of the island's total acreage. Their 2005 *Molokaʻi Island Plan* (MIP) is a regional 20-year visioning document that identifies future uses of its land holdings and homestead developments. Residential areas on DHHL lands on Molokaʻi consist of 742 acres. The MIP proposes 417 new residential lots. The priority for residential uses will be focused on DHHL's lands in ʻUalapuʻe, Kapaʻakea, Makakupaʻia, and Kamiloloa.

The MIP also calls for agricultural lots in Hoʻolehua. The MIP cites the limiting factor for agricultural lots in Hoʻolehua is securing an adequate provision of potable water to support the projected demand. Development of homes on these agricultural lots would be possible, but with strict farm-related conditions. DHHL's priority is to develop the residential lots mentioned above.

Some Hawaiian homesteaders, especially those with lots in Hoʻolehua, feel that the greatest cultural impact of the Lāʻau Point project is the MPL Water Plan (discussed Section 4.9 of this EIS and Section 6 of Appendix A). They feel that the proposed withdrawal of an additional 1.0 mgd of brackish water for future non-drinking water needs of the project and other MPL properties from the Kākalahale Well (as proposed in the Water Plan of Section 6 of Appendix A) will take away water that DHHL will need to support future expansion of agriculture and residential lots. Hawaiian homesteaders have particular interest as major users of Molokaʻi's aquifers with first preference for groundwater reservations.

As discussed more extensively in Section 4.9 (Water), it is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will have any measurable impact on the existing DHHL and DWS wells in Kualapuʻu for several reasons. First, the Kākalahale Well is down- and across-gradient from the DHHL and DWS wells. Second, the Kākalahale Well is approximately 12,200 feet (2.31 miles) away from the DHHL and DWS wells; at that distance, it is unlikely that pumping 1.0 mgd will create a measurable effect. Third, there are known subsurface intrusives between the Kākalahale and DHHL/DWS well sites, namely Puʻu Kākalahale and Puʻu Luahine, which are barriers to ground water flow.

MPL and other agencies with interests in the future water needs of the island are actively working to find long-term solutions to the island's water allocation issues; the process is solution-oriented and not adversary as it may have previously been.

The re-opening of the Kaluakoʻi Hotel will add 152 hotel rooms to the West End. To the extent that the development of Lāʻau Point facilitates the reopening of the Kaluakoʻi Hotel, the reopening is roughly of the same extent that the hotel was operating at a few years ago such that the impacts of the hotel at that time are already known. There are also vacant residential and agricultural lots in Kaluakoʻi, Maunaloa, and Pāpōhaku that could be developed in the future. Cumulative and secondary impacts resulting from these projects and further development in the region are likely to include increased population and traffic, and greater demand on public infrastructure systems and services. Residents of Pāpōhaku Ranchlands and Kaluakoʻi would have a direct relationship with the Lāʻau Point project. These areas are currently fairly isolated, and the project would bring increased activity due to the shared access road with Lāʻau Point residents and those using the public shoreline access. Upgraded roadways in the Kaluakoʻi and Pāpōhaku areas as a result of Lāʻau Point should help to balance the impacts related to increased users and activities in the areas and could be considered to be a positive impact.

Regarding other MPL lands, currently, MLP does not have plans for developing any of the other MPL lands, including land adjacent to Hale O Lono Harbor and Kaluakoʻi. The *Master Plan* states that if demand for accommodation at the Kaluakoʻi Hotel warranted it, MPL at some time in the future, may seek to use some zoned land for an extension of the hotel, for a cultural center, and for hotel staff housing. However, as the currently proposed renovations of the hotel are not complete it will be many years before further expansion is contemplated. Therefore, plans for developing any other MPL lands cannot be said to be reasonably foreseeable for the purposes of this EIS.

Because of the vacation/second-home nature and anticipated low population at Lāʻau Point (see Section 4.8.2), the project will place less strain on infrastructure and public services than other developments with full-time, year-round populations. In addition, tax revenues from the project are expected to contribute to State and County revenues in excess of the State and County costs incurred for public services, and thus contribute to the net benefit of the overall State and County tax base (see Section 4.8.4).

In terms of the real estate market and its effect on home prices and property taxes, the Lāʻau Point project is physically separated from the rest of Molokaʻi by hundreds of acres of Ranch land, and will be a unique market unto itself. Secondary impacts on nearby communities, if any, might only be potentially possible among the makai portions of the Kaluakoʻi lots, which have their own comparable market activity. In addition, the 24,950 acres designated for protective easements on lands held by the Molokaʻi Land Trust will isolate and distinguish Lāʻau Point from the rest of Molokaʻi. The Hallstrom Group analysis (See Appendix R) concludes that property taxes of properties located in other parts of the island (and thus not competing in the same market or market area), and/or that have different highest and best use potentials, will not be directly affected.

Only to the extent there is new worker in-migration to the island to support or sustain the Lāʻau Point project and its residents could there be some modest indirect impact on selected real estate activity elsewhere and prices. Offsetting this is the moratorium on further MPL land

development as a result of the Land Trust and its easements, which will reinforce the status quo and limit further development.

The Lā‘au Point project itself is not anticipated to have any significant cumulative and secondary impacts upon public infrastructure and services. However, the implementation of specific Plan components calling for the provision of affordable housing and other CDC community development projects may result in increases in demand for police, fire, medical, education, and other public services.

Based on traffic study findings, traffic levels at the intersection of Maunaloa Highway at Kaluako‘i Road will operate at an acceptable Level-of-Service (LOS); and therefore, no improvements are recommended to accommodate any cumulative impacts for the region (see Section 4.4). As the Lā‘au Point project will mainly be vacation/second homes, there will be fewer commute trips and traffic will mostly be localized around Lā‘au Point and the West End.

The project will develop its own wastewater treatment facility, and thus will not place additional burdens on the County for these resources or compete with other projects. Solid waste is likely to increase, but the County’s Nā‘iwa Sanitary Landfill is projected to have adequate capacity to accommodate residential and commercial waste through the year 2019 and the additional area that has been identified for future expansion, could provide for another 25 to 30 years of waste disposal service.

With the cumulative effects of increased housing and population from not only the Lā‘au Point project but also other future developments, the community character of Moloka‘i will experience change. This is an inevitable consequence of growth and has been occurring gradually as evident in Kaunakakai and Kualapu‘u. The challenge facing political decision makers, business leaders, and the public in general is how to manage this opportunity to create a Moloka‘i that everyone desires. In efforts to mitigate concerns over growth and help the community adapt to changing conditions, the Lā‘au Point project provides MPL with the means to donate 26,200 acres to the Moloka‘i community, to be managed by a Land Trust. This land will no longer be under private landownership as it will belong to the community to preserve without any development at all forever.

Growth in Moloka‘i is a natural progression. The implementation of the *Master Plan* and the Lā‘au Point project will provide the community with the tools to protect more than 50,000 acres of land from development. These lands, which are being managed by the Moloka‘i Land Trust, can never be sold and through careful planning and proper land management practices, these valuable lands will be able to sustain the spiritual and physical health of the community for many years.

8.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The Lā‘au Point project would result in the irreversible and irretrievable commitment of certain natural and fiscal resources. Major resource commitments include the project site and the money, construction materials, non-renewable resources, labor, and energy required for the project’s completion. The impacts represented by the commitment of these resources, however, should be weighed against the positive socio-economic benefits that could be derived from the project versus the consequences of either taking no action or pursuing another less beneficial use of the property.

In addition to irreversible and irretrievable commitments for land, money, construction materials, non-renewable resources, labor, and energy required, many community members’ concerns center on the project’s potential impacts to the Moloka‘i way of life and valued natural, cultural, subsistence, and spiritual resources.

In Hawaiian tradition, Lā‘au Point represents a point of no return. For those traveling by canoe from O‘ahu to Moloka‘i across the Kaiwi Channel, once Lā‘au Point is sighted, there is no turning back to O‘ahu. This concept has been generally applied to the issue of the Lā‘au Point project.

Many Moloka‘i residents feel that if the west and south shores adjacent to Lā‘au Point are developed as proposed, that this will open up Moloka‘i to new residents unfamiliar with the culture and way of life on Moloka‘i and lead to irreversible cultural change. Concerns include:

- New residents at Lā‘au Point may not be from Moloka‘i and may not understand the Moloka‘i lifestyle and subsistence practices.
- New homes at Lā‘au Point will compete for water, which is a major islandwide issue.
- Limiting the shoreline to foot access helps to control access but will open up access sufficiently that it might impact resources, as the entry points through the proposed park sites located at each end of the project will be closer for those who now walk from Hale O Lono or Dixie Maru. If access is made easier, there will be more fishing and people.
- More people and the homes may affect the spiritual nature of the area.

To help minimize community concerns and impacts of the Lā‘au Point project, the *Master Plan* provides measures which set unique precedents. These precedents are related to community planning, the creation of a Land Trust for the community, the donation of legacy lands to the land trust, the donation of easements to the land trust, and the protection of subsistence fishing, gathering, and hunting. The *Master Plan* also provides for CC&Rs that Lā‘au Point homeowners will need to accept and agree to uphold to purchase a lot.

Regarding the irreversible and irretrievable effects of growth and development, there was strong community consensus that growth needs to be planned, slow, and controlled. Further, there was a sense of the “right type of growth.” People wanted to be sure that new development would fit in. They were concerned that higher end housing would bring in new residents with values that conflict with Moloka‘i Style. It was felt that community character would be affected by having luxury homes and affluent residents, particularly if the homes and property fences are very visible or prominent at Lā‘au Point. The juxtaposition of natural beauty and expensive homes would be offensive for those who resent the presence of outsiders or structural development. On the other hand, existing residents may appreciate the ability to visit Lā‘au Point, a previously inaccessible area, regardless of nearby uses.

The *Master Plan* embodies the Moloka‘i style in several ways. Implementation of the *Master Plan* and the Lā‘au Point project will protect over 55,000 acres from development, and allow for local control over land and other resources. It provides economic opportunities for people to care for their families through employment and affordable housing. The *Master Plan* promotes the protection of subsistence gathering activities and seeks to implement the permanent protection and preservation of large tracts of land that include large acreages of cultural sites and lands that can be used for agricultural purposes. The protection of these lands from further development in

perpetuity is designed to thereby maintain the rural open space character of the West End and offset any irreversible and irretrievable effects to the natural and human environments.

8.4 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Land Use Character - An important objective of the Lāʻau Point project is to retain Molokaʻi's rural island character. MPL has limited development to only eight percent of the Lāʻau parcel. This keeps the remainder of the Lāʻau's 6,348-acre parcel in open space. Also, in designing the Lāʻau Point project, there were many conscious decisions regarding the strict CC&Rs to be attached to the homeowners that would ensure that the project is in character with Molokaʻi's rural landscape and lifestyle. If the project is implemented, over 55,000 acres of MPL's current land holdings (control to be transferred to the Land Trust control land donations and easements) will be protected from further development. This will prevent significant changes in future settlement patterns throughout the West End.

Visual Resources – With the Lāʻau Point project, existing views mauka from the shore will change from vacant land to low density, rural-residential homes. The natural area along the shoreline will be preserved within the expanded the State Conservation District. This expanded Conservation District will buffer views from the shoreline toward the homes. A key design element of Lāʻau Point is the 250-foot setback from the shoreline for lots and the additional 50-foot setback from the makai lot lines to any buildings. These setback distances are greater than what is normally approved throughout the State of Hawaiʻi. With strict CC&Rs, the homes at Lāʻau Point will be subject to height and building design restrictions that require the home to blend in with surrounding landscape.

Population – The project's population at build-out will account for a very small portion of the population forecasted for Molokaʻi in 2025. The permanent Lāʻau Point population will account for two percent of the forecasted Molokaʻi population of 8,068 persons in 2025. During peak seasons, the on-site population will account for six percent of the island population, and, on the average, Lāʻau Point residents will make up three percent of the island's population. Lāʻau Point's population will be well within the population forecast for Molokaʻi and will therefore have an insignificant impact on population counts.

The low occupancy rates of vacation/second homes should serve to minimize the need for county services to Lāʻau Point residents and lessen any impacts of the added residents on the rural and uncrowded character of Molokaʻi. At full build-out, projected to occur after 20 years (but based on experience at Pāpōhaku, this could more likely be at one percent per year as has been the trend there), it is anticipated that permanent residents (persons staying at Lāʻau Point 180 or more days per year) will occupy up to 60 of the homes (30 percent) and seasonal residents would occasionally occupy the remainder.

Social Impact – While there may be differences in values and lifestyle of new residents, community cohesion is anticipated to grow over time if residents can come to appreciate the contributions of more recent residents, and the latter have learned to work within the framework of the local community.

The Lāʻau Point project will provide 200 homes on approximately 400 acres of presently vacant land. Based on the demographic patterns at other seasonal communities in Hawaiʻi and what has been observed at Kaluakoʻi, it is expected that most Lāʻau Point residents will be empty nesters, and in pre-retirement or retirement. The average number of persons per household at Lāʻau Point is expected to be 2.9. At the end of the projected lot sales period in 2012, it is projected that there will be 12 permanent residents at Lāʻau Point. Project build-out is estimated to take 16 years at a rate of only 11 permanent residents per year. At final build-out in 2023, the population of Lāʻau Point will be approximately 174 permanent residents (persons staying at Lāʻau Point 180 or more days per year) and a maximum of 325 seasonal residents (KBCG 2006a). This will account for only two percent of the population forecasted for 2025. The likelihood of these new residents having significant influence in changing Molokaʻi's social and political structure is low.

Spiritual Resources – The Lāʻau area is generally regarded by some as a special place of spiritual mana and power. The overall spiritual quality of the Lāʻau area as a wahi pana and wahi kapu cannot be quantified and deserves recognition and respect. The Lāʻau Point project will have an impact upon the solitude and spiritual resources now existing. This impact can be minimized, however, by reinforcing the importance the homeowners and Molokaʻi community working together to educate each other about the area's uniqueness. The *Master Plan* calls upon the leadership of the Molokaʻi Land Trust to bring various sectors of the community together in a working relationship to ensure that the spiritual, physical, and natural resources of the area are properly cared for.

The locations of the house lots and protection of cultural sites should serve to create a sense of respect for the area. For example, it is important to note that the 200 homes will be on relatively large lots (approximately two acres each) which provides for a very low-density rural setting. Under the CC&Rs, only 30 percent of the lot can be disturbed for home building, landscaping, etc. Homes will be sited appropriately to avoid a dense urban-like character. Further, with a projected average occupancy of approximately 30 percent, there will be relatively few residents in the area.

The establishment of Cultural Protection Zones (as discussed in Sections 2.3.1 and 4.1) will help protect the spiritual quality of important cultural complexes, such as at Kamākaʻipō Gulch. Limiting access to a walking trail and providing a clear demarcation between the private lots and the general public access areas can help protect the integrity of the shoreline and mitigate the impact of the house lots.

Subsistence Fishing and Gathering – The experience of fishing in an isolated, pristine, and spiritual area (Lāʻau Point) will be affected by the Lāʻau Point project. To mitigate impacts, the *Master Plan* seeks to establish a subsistence fishing zone, which will require special legislation to be enacted by the State legislature. A shoreline management plan will be developed and adopted to control access and (through legal and enforceable means) the use of the land and ocean resources to ensure the continuance of the resources for future generations.

During the research for the cultural impact assessment, participants at community meetings and interviews spoke of the south and west coasts adjoining Lāʻau Point and the nearshore water as their "icebox." It is a place where fishermen usually go to get fish, ʻopihi and crab, for parties and gatherings of their large extended families. A major concern is that the proposed Lāʻau Point project will greatly hinder ongoing traditional gathering activities currently enjoyed at Lāʻau Point. The sentiment from subsistence practitioners is that newcomers will be insensitive and

intolerable of subsistence activities in what new homeowners and visitors perceive to be their front yards.

Traditionally, Lāʻau Point was not a place that was fished on a regular basis because it is isolated and difficult to reach. Resources have declined in the area with an increase in heavy seasonal harvesting by boaters from Oʻahu. Subsistence fishermen also expressed concerns that the opening of nearby Hale O Lono Harbor to general public access had severely decreased the marine resources there.

Solid Waste – As detailed in Section 4.10.3, there will be solid waste generated during construction and after development of the Lāʻau Point project. Lāʻau Point will encourage recycling; solid waste that cannot be recycled will be disposed in the County's Nāʻiwa Sanitary Landfill. It is projected that Nāʻiwa Landfill will have adequate capacity to accommodate residential and commercial waste through the year 2019, and a 10-acre parcel adjacent to the current site that has been identified for future expansion, could provide for another 25 to 30 years of waste disposal service.

Police Services - The Lāʻau Point project will impact police protection services due to increase of people and activity on and around the project site. There will be homes on the property, and increased activity resulting from public parks and more public shoreline accesses. Lāʻau Point is very remote and the population in the Kaluakoʻi region is dispersed. More conservation land will be accessible for cultural and subsistence uses. To mitigate impacts, road access to the project area and shoreline will be improved. Further, in creating measures to protect coastal resources and the community, the management of conservation lands by the homeowners and Land Trust will effectively help to deter trespassing, loitering, and property crime.

Fire Protection and Emergency Services - The Lāʻau Point project will impact fire protection services due to the increased demand generated by additional population, the presence of more structures, and increased activity at the parks and along the shoreline. To mitigate impacts, on-site roads will be improved and emergency access to the shoreline provided.

Medical Facilities - The Lāʻau Point project may impact hospital services by increasing the service area and population. It is anticipated that on-site residents will be older than the general population, and thus may require a higher level of service. The low level of permanent population will help to offset impacts on health care services.

Air Quality – In the short-term, construction for Lāʻau Point will unavoidably contribute to air pollutant concentrations due to fugitive dust releases at construction areas; however, appropriate mitigation measures will help to establish controls, and it is anticipated that no State or Federal air quality standards will be violated during or after the construction of Lāʻau Point. Over the long-term, an air quality modeling analysis of estimated community-related traffic indicates that even during worst-case conditions predicted concentrations of pollutants will remain well below State and Federal standards.

Noise – Construction of Lāʻau Point will generate short-term noise impacts during daytime time hours. Noise from construction activity will comply with State Department of Health noise regulations. Traffic-generated noise is predicted to be imperceptible to people with normal hearing. After the establishment of Lāʻau Point, the ambient quality of the site will be changed

from vacant to residential sound patterns which include cars entering and exiting the community, and other sounds from human habitation.

8.4.1 Rationale for Proceeding with Lā‘au Point Notwithstanding Unavoidable Effects

In light of the above-mentioned unavoidable effects, the Lā‘au Point project should proceed because any negative impacts will be minimized or offset by substantial positive benefits for the community of Moloka‘i from the implementation of the *Master Plan.* All of the elements of the *Master Plan* which directly benefit the community are developed as mitigation measures for and predicated on the transfer of land assets and funding that the Lā‘au Point project will provide.

Ever since the pineapple plantations ceased all cultivation in the mid-1980s, the Moloka‘i community has grappled with the issue of revitalizing the island’s economy and providing jobs for its residents. At the same time, Molokai Ranch was doing the same in an effort to preserve and protect its assets and investments.

The *Master Plan* will hopefully lead to long term positive solutions for Moloka‘i’s past problems.

The prospect of MPL lands being split up and sold off to offset continuing deficits in Ranch operations, or GuocoLeisure Limited selling MPL because it would never be economically viable made the urgency of reaching consensus on the *Master Plan* of critical importance to both the EC and local MPL staff. The community itself faced the potential loss of employee jobs which would surely have far reaching effects on the island economy.

As the largest private employer on the island, MPL currently employs 140 people. In the 12 months ended June 2006, the company directly contributed the following $9 million to the Moloka‘i economy:

- A total of $3.8 million in wages and benefits to its on-island employees.
- More than $2.5 million in payments to on-island suppliers of services to its Lodge, Beach Village, golf course and maintenance operation.
- A total of $853,000 in local government and State government taxes.
- Its tourism operations brought more than $1.8 million to the island in spending on rental cars, local airline tickets and spending on activities on-island.

On one hand, the Moloka‘i community desired to protect this economic base and create new job opportunities by re-opening the Kaluako‘i Hotel, while at the same time preserving its rural way of life. More importantly, they saw it as a unique opportunity to empower themselves and control their own destiny by planning their future. These combined complementary interests made the Lā‘au Point project of critical importance to both MPL and the EC.

As recognized by both supporters and opponents of the Lā‘au Point project, the *Master Plan* is not perfect but it represents a historic good faith effort on the part of MPL and the EC to a create sustainable economic solution that will protect cultural integrity of a unique Hawaiian island community. The *Master Plan* created a partnership between a company and its island neighbors and contributed to personal growth for those involved in the process. More importantly, the *Master Plan* process set the stage for Moloka‘i’s future – a future in which self-determination by the island’s residents is assured.

- In the rationale to proceed, the overall *Master Plan* was considered in the assessment of the benefits, impacts and mitigation measures of the proposed development project at Lā‘au Point. While this EIS identifies those unavoidable effects of developing the property itself, clearly there are profound and unprecedented features in the *Master Plan* that will benefit future generations of the island as a whole for years to come. The *Master Plan* benefits are well documented in this EIS.

Moreover, it is not only the quantity, but also the quality of the culturally and archaeologically rich lands that are being gifted in fee title ownership that is significant. The ancient burial grounds of Kawa‘aloa, the birthplace of the hula at Ka‘ana and the Hula Piko at Maunaloa, the Makahiki grounds of Nā‘iwa, the fishing village of Kawakiu, the fishing grounds of Halena and Mokio are premier Native Hawaiian legacy lands of great significance to Native Hawaiians throughout the islands.

- While the economic related benefits of Lā‘au Point are many, there are the uavoidable impacts upon the social, cultural, and natural environments of the larger community that must be mitigated though the *Master Plan*. While the *Master Plan* protects significant subsistence resources on the northeast shoreline of Moloka‘i from Kalaupapa to ‘Īlio Point to Kepuhi from development, the southwest shore from Kamāka‘ipō to Pu‘u Hakina will contain rural residential homes. Extraordinary measures, also set out in detail in this EIS are incorporated into the *Master Plan* to buffer and protect the subsistence and cultural rural resources from negative impacts.

The findings of the cultural and social impact assessments provide further rationale for proceeding with the project based on community input. People who were active in the formation of the *Master Plan* as well as non-participants felt that the *Master Plan* is a rare and unique opportunity which offers many benefits to the Moloka‘i community. Given over three decades of conflicts between the community and Molokai Ranch, the *Master Plan* provides mutually beneficial results.

Support for the *Master Plan* - Interestingly, the Maunaloa community and longtime employees of Molokai Ranch, people who have the most direct and longtime experience with the project area, are concerned and reluctant about the development, but are more willing to acknowledge and support the right and the need of the Ranch to seek the development. They felt that the negative impacts could be managed if the development would conform to the strict CC&Rs outlined in the *Master Plan*. They are confident that their community can work together with the project’s resource managers to provide stewardship over the marine resources that they rely upon for subsistence. They also felt that the negative impacts would be offset with the gifting of important legacy lands to the community. The Maunaloa kūpuna felt that the *Master Plan*, of which Lā‘au Point is a part, provides for the community to manage and monitor the proposed development.

Those of the community who wholeheartedly approved of the *Master Plan* tended to accept the Lā‘au Point project as a satisfactory trade-off. They believed that the *Master Plan*’s long-term and far-reaching benefits outweigh potential negative impacts of the project. Supporters of the *Master Plan* felt it embodies Moloka‘i style in several ways. It allows for local control over land and other resources. It helps people survive by providing economic opportunities and provisions for affordable housing. The *Master Plan* promotes subsistence gathering and ensures the

protection and preservation of large tracts of land. This will protect these lands from further development in perpetuity, thereby maintaining the rural open space character of the West End.

For *Master Plan* proponents, their approach to protecting Molokaʻi is to be proactive in determining the island's destiny. The lack of control due to landownership and land use issues implies an unknown future and possible proposals that could threaten the island, its people and its resources. They have chosen to solve this problem by coming up with a *Master Plan* that brings more community control over land resources through land ownership, resource management, and land use controls.

In addition, many longtime adversaries of Molokai Ranch, who were involved in developing the *Master Plan*, were willing to allow the project to proceed under guidelines and conditions agreed to over the course of a two-year planning process. For them, it was a process of negotiating a lasting settlement of a 30-year struggle with Molokai Ranch over extravagant development schemes and the extractive use of millions gallons of water. The proposed Lāʻau Point project was difficult for some to accept and at that point some withdrew their support. However, the majority of the planning group persisted in their support for the *Master Plan* as a reasonable and balanced approach that empowers the community to manage premier Native Hawaiian legacy lands, control population growth and land speculation, and monitor the one last major development on Molokai Ranch lands.

This local control over portions of the Lāʻau Point project is reassuring for those who have mixed feelings. The Land Trust will manage the shoreline conservation area in partnership with the new HOA. The Land Trust will also manage Kamākaʻipō Gulch and oversee other significant resources in the project site.

Further, it is felt that the low-density nature of the project, buffer zones, and shoreline access are positive features compared to higher density housing developments. The project is also preferable to what has occurred on the East End, where change has been scattered, uncontrolled, and subtle. With Lāʻau Point, the community knows what will happen.

For those that initially opposed the project, ideally for them, no change should come to Lāʻau Point. Nevertheless, some are willing to accept the project because they understand the economic reality and that the implementation of the *Master Plan* in its entirety is dependent on the implementation of the project. The project will provide the springboard for the *Master Plan*. These people envision a significant legacy through *Master Plan* implementation, one that will persevere through future generations. For them, because the *Master Plan* is Molokaʻi Style, the project is also Molokaʻi Style because of its relationship to the *Master Plan*.

Opposition to *Master Plan* - For *Master Plan* opponents, however, the Lāʻau Point project is the heart of the problem and not a solution. They focus on Lāʻau Point because for them, it signifies a threat to the people, the environment, the Hawaiian culture, and Molokaʻi Style. Their approach to solving the problem is to fight its approval and implementation. Indeed, there have been strong public statements by project opponents that they will do whatever it takes to stop the project.

The uniqueness of this situation is the relationship between a specific development proposal and a plan that extends far beyond project boundaries. While *Master Plan* opponents put up signs and organize protests, *Master Plan* proponents are attempting to find solutions to age-old issues by

exploring mechanisms for coming up with a resource management program and establishing a Land Trust and a Community Development Corporation. Hence, while both sides are seeking to protect Molokaʻi, their strategies are divergent.

Making an Informed Decision - For those who are not strongly aligned with either side, the prominent issue is the Lāʻau Point project. Activist efforts have drawn attention away from the *Master Plan* by narrowing their opposition to the project itself. People seem very aware of the Lāʻau Point project and less knowledgeable about the overall *Master Plan*. It was easier for them to address the project than to discuss the *Master Plan*.

Based on the issues presented, many residents of Molokaʻi share the same values of Molokaʻi Style and have the same passion and commitment to protect the island. It is to their advantage to know about the *Master Plan* and the project so that they understand the full implication of both. However, many have indicated that they would not attend public meetings because they dislike the antagonism and conflict. To help them make an informed decision, every effort is being made and will continue to be made to share information with them in a non-confrontational environment that encourages constructive dialogue (see Section 2.4).

In its final analysis, the government agencies who are responsible for decisions about the future of the land and natural resources of Molokaʻi must weigh the cultural impacts and benefits of the proposal to develop the west and south shoreline of the island of Molokaʻi in consultation with the people of Molokaʻi who depend upon these resources for subsistence, cultural, and spiritual purposes.

8.5 UNRESOLVED ISSUES

Unresolved issues are invariably associated with projects in the planning and preliminary design stages, or due to negotiation of complicated agreements for such a unique project, primarily because there is so much reliance on the Molokaʻi Land Trust for the approval of various enforcement documents.

Notwithstanding MPL's efforts, some aspects of the water issue remain unresolved between stakeholders at this stage of the planning process, as well as the final completion of one agreement between the Land Trust and MPL, the Conservation Easement document over the Proposed Expanded Conservation District.

8.5.1 Water

In conjunction with the participants who were involved in preparing the *Master Plan*, MPL developed a proposed Water Plan. A key feature of the Water Plan is that only existing sources, at currently permitted amounts, will be utilized to meet all of the potable water needs for the current customers of the three private water systems operated by MPL and MPL's future developments proposed under the *Master Plan*. These sources include the permitted 1,018,000 gpd from Well 17 in the Kualapuʻu Aquifer and surface water from the Molokai Ranch Mountain Water system. The constructed, but currently unused, Kākalahale well in the Kamiloloa Aquifer is being proposed as a new non-potable water source. The Kākalahale Well was drilled in 1969 to provide drinking water to Kaluakoʻi. However, due to the brackish water quality, the well was never used as a production well.

The Kākalahale Well is an ideal source of non-potable water. The well is owned by MPL and already constructed (though not in production). More importantly, because the well site is hydro geologically isolated by subsurface intrusive structures, withdrawing water from the Kākalahale Well is unlikely to have any adverse impact on existing wells in the Kualapuʻu aquifer, on DHHL's ability to withdraw its 2.905 mgd reservation amount from the Kualapuʻu aquifer, or the development of potable water in the Kamiloloa aquifer.

In the Water Plan, MPL proposes that water from Well 17 be used solely for potable water needs. Irrigation uses, currently permitted under the Well 17 permit, will be supplied from other sources. Under this plan, MPL will not need to seek any more potable water than what is currently developed. MPL will sign covenants preventing it from ever seeking further potable water permits from the State Commission on Water Resource Management (CWRM), and will abandon the Waiola Well application. It will concurrently seek an application to draw 1,000,000 gallons per day from the Kākalahale Well.

Unresolved issues associated with water are as follows:

- The ability of MPL to obtain a water use permit to pump brackish water from the Kākalahale Well and not impact DHHL's reservation in the nearby Kualapu'u Aquifer, nor the cultural resources in the Manawainui foreshore. MPL will have to persuade the Commission on Water Resource Management (CWRM) that the Kākalahale Well will do neither of these things as outlined in Section 4.9.12. By necessity, this remains an Unresolved Issue until a CWRM decision is made.
- The future transmission of water from Well 17 via the MIS System. This is discussed in Section 4.9.18.

  Because there are existing customers in Kaluakoʻi dependent upon Well 17 water, water will have to somehow be transported from Well 17 to the facilities owned by MPL for further distribution to end users at Kaluakoʻi. Either the MIS will continue to be used or alternate infrastructure will be developed for this purpose. Options for transmission of MIS water are discussed under Section 4.9.18. However, at the time of writing it remained an Unresolved Issue.

  Either way, the infrastructure used to transport water from Well 17 to MPL distribution facilities will also be used to transport potable water to Lāʻau Point. Therefore, even if use of the MIS to transport Well 17 water is discontinued, there will be a means of getting potable water to Lāʻau Point. The decisions made with respect to this MIS issue, however, will affect infrastructure planning for the transport and distribution of potable water to Lāʻau Point.

- The transmission of brackish water from the Kākalahale Well to the West End of Molokaʻi. Options for transmission of this water are linked to the decision on transmission of Well 17 water. At least three options are outlined in Section 4.9.21. A decision on transmission does not need to be made for at least a decade when the build out of Lāʻau Point accelerates. However it remains an unresolved issue.

In any event, MPL is not totally reliant on the Kākalahale Well for its brackish water needs. In the event the Kākalahale Well cannot be used, it has the option of using a permitted brackish

source it owns at the Pālāʻau Prawn Farm, although some other Master Plan initiatives such as full expansion of the communities of Maunaloa and Kualapu'u may need to rely in the future on desalinated water development.

All water system improvements will need to be developed with the cooperation and consent of the County of Maui (DWS) and the CWRM. MPL has been working with the DWS and Department of Hawaiian Homes Lands (DHHL) to meet their future water needs, and all requirements of the CWRM. MPL must seek a water use permit from the State CWRM for its Kākalahale Well, and to vary the supply areas of its current permits.

For many participants in the community meetings, water is the primary cultural resource. They feel that drawing brackish water out of the Kākalahale Well will have a huge impact on the culture and way of life on Molokaʻi. They expressed concern that the additional water proposed to be drawn out of the Kākalahale Well, even if it is brackish, will strain and diminish the water table on Molokaʻi, increasing salinity levels of ocean discharge and in neighboring wells. They refer to findings in the Waiola Well Water Use Permit contested case before the Hawaiʻi State Commission on Water Resource Management which examined the potential impacts of withdrawing groundwater and affecting shoreline seepage on near shore marine resources makai of Kākalahale.

Hawaiian homesteaders, especially those with lots in Hoʻolehua, feel that the greatest cultural impact of the Lāʻau Point project is the MPL Water Plan (discussed in Section 6 of Appendix A and Section 4.9 of this EIS). They feel that the withdrawal of an additional 1,000,000 gallons per day of brackish water from the Kākalahale Well will take away water that DHHL will need to support future expansion of agriculture and residential lots on their Molokaʻi lands.

MPL unquestionably supports the reservation of 2.9 million gallons reserved in the Kualapuʻu aquifer for Hawaiian homestead users. A recent study by DHHL's consultants indicates that even after building out both Hoʻolehua and Kalamaʻula under DHHL's *Molokaʻi Island Plan*, there will still be 698,900 gpd in the Kualapuʻu Aquifer reserved for DHHL. This gives confidence that DHHL's future water needs are well protected. The recent two-dimensional modeling completed by USGS as part of the Kaunakakai Stream Ecosystem Restoration Project, gives additional confidence that the Kākalahale Well will have minimal impact on DHHL.

MPL has long acknowledged publicly that its water use would yield to DHHL's priority reservation rights to water. Further mitigation measures for potential water impacts are discussed in Section 4.9 of this EIS.

MPL is actively working with DHHL, the County of Maui DWS, and the US Geological Survey to comprehensively evaluate and seek a solution to Molokaʻi's cumulative water demands and resources. The goal is to appropriately locate wells and manage pumping such that all of the parties will be able, to the greatest extent possible, withdraw sufficient water to meet their needs. It is expected that many of Molokaʻi's water issues will be addressed by a comprehensive modeling analysis. The specifics of the water resource issues and modeling analysis are currently being identified by DHHL, Maui DWS, MPL, the CWRM, and other homeowner associations and the study is likely to commence later in early 2008.

MPL is participating in these studies and cooperative efforts. All parties are eager to find solutions to the age-old water issues on Molokaʻi.

Therefore, the currently unresolved issue of water should not forestall proceeding with required approvals for the Lāʻau Point project because:

1. It is highly unlikely that pumping 1.0 mgd from the Kākalahale Well will diminish other parties' ability to develop the water they need, or, conversely, that water withdrawals by others will impact MPL's ability to withdraw 1.0 mgd from the Kākalahale Well.; and
2. In the event Kākalahale Well water is not available, there are alternative sources of non-potable water available to MPL: a) reclaimed water from the Pālāʻau Shrimp Farm could be treated to make it suitable for irrigation purposes; and b) desalinization of either brackish water from West Molokaʻi aquifers or sea water are alternative sources of irrigation water.
3. MPL has options for transmission of both Well 17 Water and Kākalahale brackish water.

8.5.2 Easement Over Expanded Conservation District Lands

The *Master Plan* calls for the Molokaʻi Land Trust to hold an easement over 306 acres of the expanded Conservation District area of 434 acres (the remaining 128 acres of the 434-acre expanded Conservation District will be held by the Land Trust in fee, as will the 17 acres of parks). The Land Trust and the Lāʻau Point homeowners will jointly manage the 434-acre expanded Conservation District and the 17 acres of parks (total 451 acres) through participation on a "council" of homeowners and Land Trust representatives and nominees.

The easement, to be held by the Molokaʻi Land Trust over the 306 acres, will incorporate the provisions of the Shoreline Access and Management Plan (SAMP) which is included in Appendix B. The SAMP was approved by the Molokaʻi Land Trust in August 2007.

8.5.3 Molokaʻi Community Development Corporation

The Molokaʻi Community Development Corporation (CDC), responsible for the implementation of the affordable housing provisions anticipated under the *Master Plan*, will be incorporated by October 2007 and registered as a State entity.

Currently in preparation is the CDC's strategic plan to implement the affordable housing provisions in line with the CDC's funding sources of: 1) five percent of net lot sales; and 2) the use of land donated to the CDC as part of the implementation of the *Master Plan*. References to the CDC's mission statement and activities are further outlined in Section 2.1.13 (Molokaʻi CDC).

8.5.4 Other Master Plan Agreements

The conservation easements relating to the Agriculture Easement lands and the Rural Landscape Reserve lands are currently being drafted and will be reviewed and ratified by the Land Trust prior to the submission of the Final EIS. Key provisions are outlined in Section 2.1.11.

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9.0 CONSULTATION

Community organizations and members, as well as various Federal, State, and County agencies, were consulted in the preparation of the *Community-Based Master Land Use Plan for Molokai Ranch* (*Master Plan*) and this EIS (see Section 2.4 and Table 4).

EISPN

The environmental impact statement preparation notice (EISPN) was sent to the following agencies, organizations, and individuals. The public comment period on the EISPN was from June 8, 2006 to July 10, 2006. Where indicated, the agency, organization, or individual submitted comments.

State of Hawaiʻi

- DBEDT – Office of Planning
- Department of Defense – Civil Defense
- Department of Health (DOH) – Environmental Planning Office
- DOH – Office of Solid Waste Management
- DOH – Office of Environmental Quality Control
- DLNR – State Historic Preservation Division (SHPD)
- Department of Transportation (DOT)
- Office of Hawaiian Affairs (OHA)

County of Maui

- Department of Housing & Human Concerns
- Department of Parks & Recreation
- Department of Planning
- Department of Public Works & Environmental Management
- Department of Water Supply
- Police Department

Private Organizations

- Maui Electric Company, Ltd.
- Molokaʻi Homestead Farmers Alliance
- Native Hawaiian Legal Corporation (on behalf of the Molokaʻi Homestead Farmers Alliance)

Individuals

- DeGray Vanderbilt
- Glenn Teves
- Stanley Casacio
- Steve Morgan
- Tom Holloman

EIS Consulted Parties

Title 11, Chapter 200, HAR, §11-200-15, Consultation Prior to Filing a Draft Environmental Impact Statement, states: "Upon publication of a preparation notice in the periodic bulletin, agencies, groups, or individuals shall have a period of thirty days from the initial issue date in which to request to become a consulted party and to make written comments regarding the environmental effects of the proposed action."

The following individuals requested to become a consulted party during the EISPN comment period (June 8, 2006 to July 10, 2006). They will also be distributed the Draft EIS:

- Kimo Frankel, Native Hawaiian Legal Corporation
- Lynn Decoite, Molokaʻi Homestead Farmers Alliance
- Stephen Morgan
- Glenn Teves
- DeGray Vanderbilt
- Tom Holloman

A meeting with Consulted Parties was held on Molokaʻi on August 25, 2006.

Comments and Response from Previous Draft EIS (December 2006)

The comments and responses from the previous Draft EIS (December 2006) are provided on the CD located in the following folder sleeve. Below lists the agencies, organizations, and individuals that provided comments.

State of Hawaiʻi

- State Land Use Commission
- Department of Accounting & General Services (DAGS)
- DBEDT – Strategic Industries Division
- DBEDT – Office of Planning
- Department of Education (DOE)
- Department of Hawaiian Homelands (DHHL)
- Department of Health (DOH) – Environmental Planning Office
- DOH – Maui District Health Office
- DOH – Office of Environmental Quality Control
- DLNR – Commission on Water Resource Management
- DLNR – Division of Forestry and Wildlife, Division of State Parks, Engineering Division
- DLNR – Office of Conservation & Coastal Lands (OCCL)
- DLNR – Division of Aquatic Resources (DAR)
- DLNR – State Historic Preservation Division (SHPD)
- Department of Transportation (DOT)
- Office of Hawaiian Affairs (OHA)
- University of Hawaiʻi (UH) Environmental Center
- UH College of Tropical Agriculture and Human Resources (CTAHR) Cooperative Extension Service
- UH Maui Community College-Molokaʻi Education Center

Federal

- NOAA National Marine Fisheries Service
- US Army Corps of Engineers
- US Coast Guard

County of Maui

- Cultural Resources Commission (CRC)
- Department of Fire Control & Public Safety
- Department of Planning
- Department of Public Works & Environmental Management
- Department of Water Supply
- Molokaʻi Planning Commission

Elected Office

- State Senator Clayton Hee
- Councilmember Danny Mateo
- Councilmember Michelle Anderson

Private Organizations

- Maui Electric Company, Ltd.
- Kakoʻo Oiwi
- Life of the Land
- Native Hawaiian Legal Corporation (on behalf of the Molokaʻi Homestead Farmers Alliance and Wayde Lee)
- Save Lāʻau ʻOhana
- Sierra Club Maui Group
- The Molokai Dispatch

Individuals

- Adam Mick
- Ana Sibayan
- Andra Morrow
- Anuhea Naeole
- Aolani Ahina
- Asuka Hirabe
- Barbara and Keith Rasmussen
- Blossom Brown
- Bridget Mowat
- Bryson Santiago
- Carol Hinton
- Carrie-Ann Kaauwai
- Catherine Wharton
- Chantey Uahinui
- Chase Will
- Cheryl Pritchard
- Chris Cramer
- Chris Grean
- Chuck Everhart
- Clifford Bermudes
- Corey-lynn Remegio
- Dale Gammie
- Darlene Toth
- DeGray Vanderbilt
- Drake Wells
- Elizabeth Johnson
- Ella Alcon
- Emrick Bailey
- Farhod Family
- Fay Huff
- Francis Alcain
- Gandharva Mahina Hou Ross

- Glenda Mawae
- Glenn Teves
- Hana K. Yasso
- Harry K. Purdy III
- Jaissuinin Cariceo
- James Puaa Spencer
- Jasper Kahoiwai
- Jeannine Johnson
- Jennie Manlutac
- Jill Mulholland
- John Lyle
- Jon Givens
- Joseph Farber
- Joseph K
- Joseph LaRosa
- Joseph O’Leary
- Josh Pastrana
- Judith Mick
- Kainalu Purdy
- Kalimakuhilani Suganuma
- Kammy Purdy
- Karen Ashley
- Karen Holt
- Kauwila Hanchett
- Kawaiola Agader
- Kegal-Joe Tancayo
- Ken Bare
- Keoki Mollena-Akina
- Kevin Brown
- Kevin Kahana-Kalua
- Kian Phillips
- Kim Kido
- Kirk Kiaha
- Kodah Kalawe-English
- Kyle Kaiama
- Lea Malia Kanehe
- Lehua Shelley
- Leila Stone
- Lopaka Ocampo
- Loretta Ritte
- Lorina Young
- Louise Bush
- Makaila Purdy
- Malia Akutagawa
- Malia Waits
- Mark Ignash
- Marty Johnston
- Matt Yamashita
- Melody Vila
- Mike & Michele Pate
- Paulette Rodriguez Lopez
- Peniela Penniman
- Rachelle Kupau
- Raina A Puaoi
- Randy Bautista
- Ricky Greenleaf
- Rydge-Alan Villa
- Scot Schafer
- Shardae MM Calairo
- Shona Barnes
- Sis Naehu
- Steve Morgan
- Susannah Iott & Jeffrey Friedman
- Tearo Keanini
- Tiare Ritte-Manangan
- Timothy Matross
- Trevor Gilligan
- Trisha Kehaulani Watson
- Tyson Santiago
- Valerie Monson
- Victoria Kapuni
- Walter Ritte, Jr.
- Yvonne Everhart

10.0 LIST OF PREPARERS

Name	Area of Expertise
PBR HAWAII	Planning Consultant
B. D. Neal & Associates	Air Quality Impact Assessment
Cultural Landscapes Hawai‘i	Archeological Inventory Survey
Davianna McGregor	Cultural Impact Assessment
Morihara, Lau & Fong LLP	Water Plan Analysis
Engineering Concepts, Inc.	Wastewater Design
Earthplan	Social Impact Assessment
Warren S. Unemori Engineering, Inc.	Drainage and Engineering
Knowledge Based Consulting Group	Economic and Fiscal Impacts; Market Support for Real Estate Development
The Hallstrom Group	Analysis of Impact on Real Property Taxes
Bill Garnett	Botanical Survey
Phillip L. Bruner	Avifaunal and Feral Mammal Survey
The Environmental Company, Inc.	Marine Biological and Water Quality Baseline Surveys
D.L. Adams Associates, Ltd.	Noise Assessment
Phillip Rowell & Associates	Traffic Impact Assessment
Geolabs, Inc.	Geotechnical Engineering Reconnaissance

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