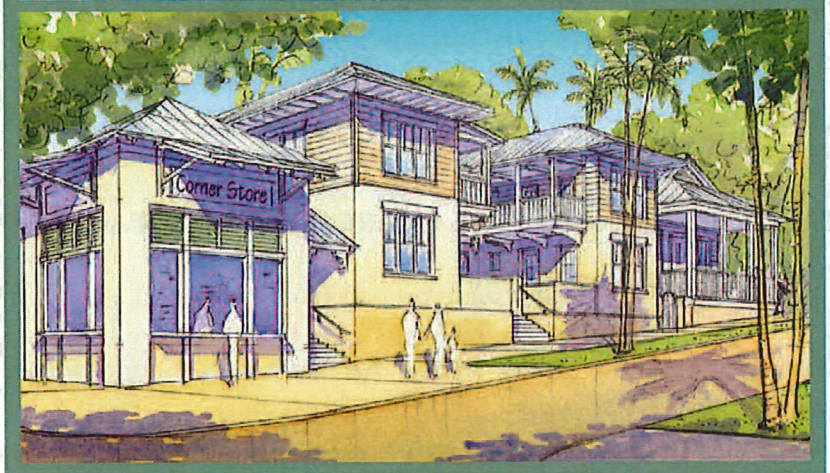
EXHIBIT AA

FINAL ENVIRONMENTAL IMPACT STATEMENT FOR PULELEHUA EXCERPTS

Pulelehua

A New Traditional Community



FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME 1 OF 2

PREPARED BY:

PBR HAWAII

PREPARED FOR:

ACCEPTING AUTHORITY:

STATE OF HAWAII LAND USE COMMISSION

DOCKET NO. A04-751

MAUI LAND & PINEAPPLE COMPANY INC.

TOWN PLAN

PREPARED BY:

DOVER, KOHL & PARTNERS

AUGUST 2005

July ~~8~~ 23, 2004 edition of OEQC's *The Environmental Notice*. Copies of the EISPN were provided to appropriate government agencies and other organizations (See Chapter 11). The public comment period for the EISPN ended August 23, 2004. Comments on the EISPN ~~have been~~ were incorporated in ~~this~~ the draft EIS.

2) The *Pulelehua Draft Environmental Impact Statement* (EIS). The Draft EIS was submitted to OEQC on March 11, 2005. Notice of the availability of the Draft EIS was published in the March 23, 2005 edition of OEQC's *The Environmental Notice*. Copies of the DEIS were provided to appropriate government agencies and other organizations (See Chapter 12). The public comment period for the Draft EIS was from March 23, 2005 to May 6, 2005. Comments on the Draft EIS have been incorporated in this final EIS.

1.8 STUDIES CONTRIBUTING TO THIS ENVIRONMENTAL IMPACT STATEMENT

A number of specific technical studies were prepared for Pulelehua. These include:

- Archaeological Inventory Survey Report (Archaeological Services Hawaii)
- Botanical Resources Assessment Study (Winona Char)
- Avifaunal and Feral Mammal Field Survey (Phil Bruner)
- Cultural Impact Study/Assessment (Maria Ka'imipono Orr)
- Transportation Report (Hall Planning & Engineering)
- Environmental Noise Assessment Report (D. L. Adams Associates)
- Airport Noise Assessment Report (Mestre Graves Associates and Edward K. Noda & Associates)
- Air Quality Study (B. D. Neal & Associates)
- Market Study and Economic Impact Analysis (The Hallstrom Group)
- Public Costs/Benefits Assessment (The Hallstrom Group)
- Preliminary Engineering Report (Otomo Engineering)
- Preliminary Drainage Report (Otomo Engineering)
- Marine Environment Assessment Report (Marine Research Consultants)

The complete studies are included as appendices to this environmental impact statement. Most of these studies were based on the original unit count of 882 single and multi-family units and 318 potential ohana units. All studies assumed 318 ohana units would be constructed; however, Maui Land & Pineapple Company Inc., will not build any ohana units and the construction of ohanas will be at the discretion of individual owners.

The current plan for Pulelehua contains a total of 267 potential ohana units. With the reduction in potential ohana units and the potential that some of the ohana units may not ever be constructed by individual owners, the impact from ohana units will be overstated in the reports. Thus utility demands, traffic, air emissions, and solid waste generation are all conservative figures compared to what might actually exist in the future.

In addition, one of the unresolved issues pertains to a potential medical center within the Pulelehua community. This hospital, and related facilities, could occupy up to 15 acres. In the event the medical center concept is implemented, and based on current conceptual information, the medical facility will generate less demand for water, sewer and electricity than the houses that would be replaced in the plan. Other potential impacts would also be reduced accordingly.

1.9 EXECUTIVE SUMMARY

1.9.1 Pulelehua Summary Description

The holistic concept of Pulelehua provides for a complete community in a compact area. Maui Land & Pineapple Company, Inc., has chosen the use of the "Traditional Neighborhood Design" (TND) model for Pulelehua to build a holistic community that meets the individual and community needs of all residents (Figure 1).

Several aspects of the TND model contribute to creating a rewarding living experience for residents of Pulelehua. The community will include a mix of residential, commercial and public uses. Parks, open space, a neighborhood school, biking and walking paths, a town center, pedestrian friendly streets and inviting and accessible public spaces are just some benefits of the TND design.

These components combine to form a community that encourages residents to build relationships with each other, rely less on cars for transportation, walk and bicycle more often, enjoy the outdoor surroundings and actively engage in civic life.

The residents of Pulelehua will enjoy an increased quality of life through the features of a TND community. People will live close to work, and thereby decrease time lost during a daily commute, decrease traffic congestion, reduce stress, provide for more family and recreation time, and lessen pollution. The narrow streets will encourage slower driving speeds which provides for pedestrian friendly, and thus safer neighborhood.

The TND model differs from conventional neighborhoods in aesthetic and practical ways. Homes are oriented toward the street, which is pedestrian friendly and bordered by wide sidewalks; porches and lanais that invite neighbors to talk; affordable and market rate homes are mixed together and do not differ in quality or appearance; and streets connect the other neighborhoods and the town center rather than end in cul-de-sacs, inviting interaction with the community.

Traditional neighborhood design results in compact communities that preserve rather than consume the surrounding open space. This is particularly significant for Pulelehua and West Maui, where open space will continue to be dedicated to agriculture and

conservation. This is an integral component of Maui Land & Pineapple Company, Inc.'s vision to create holistic communities.

Most importantly, the TND model is in harmony with the hopes and aspirations that community members shared with us throughout the design and planning process. The elements most commonly requested by prospective Pulelehua residents and neighbors are elements of TND, such as walking and biking trails, a neighborhood school, parks, community gathering places, and of course, affordable housing.

Of the total Pulelehua community site of approximately ~~312~~ 310 acres, about 31 percent (97 acres) of the community will be used for homes and other built uses. Community recreation areas, neighborhood parks, and open space will encompass approximately ~~34~~ 32 percent (98 acres) of the community. A public elementary school with playgrounds and fields will be provided on approximately four percent (13 acres) of the site. Other areas will include rights of way (21 percent or 66 acres) and the deep gulches (10 percent or 32 acres).

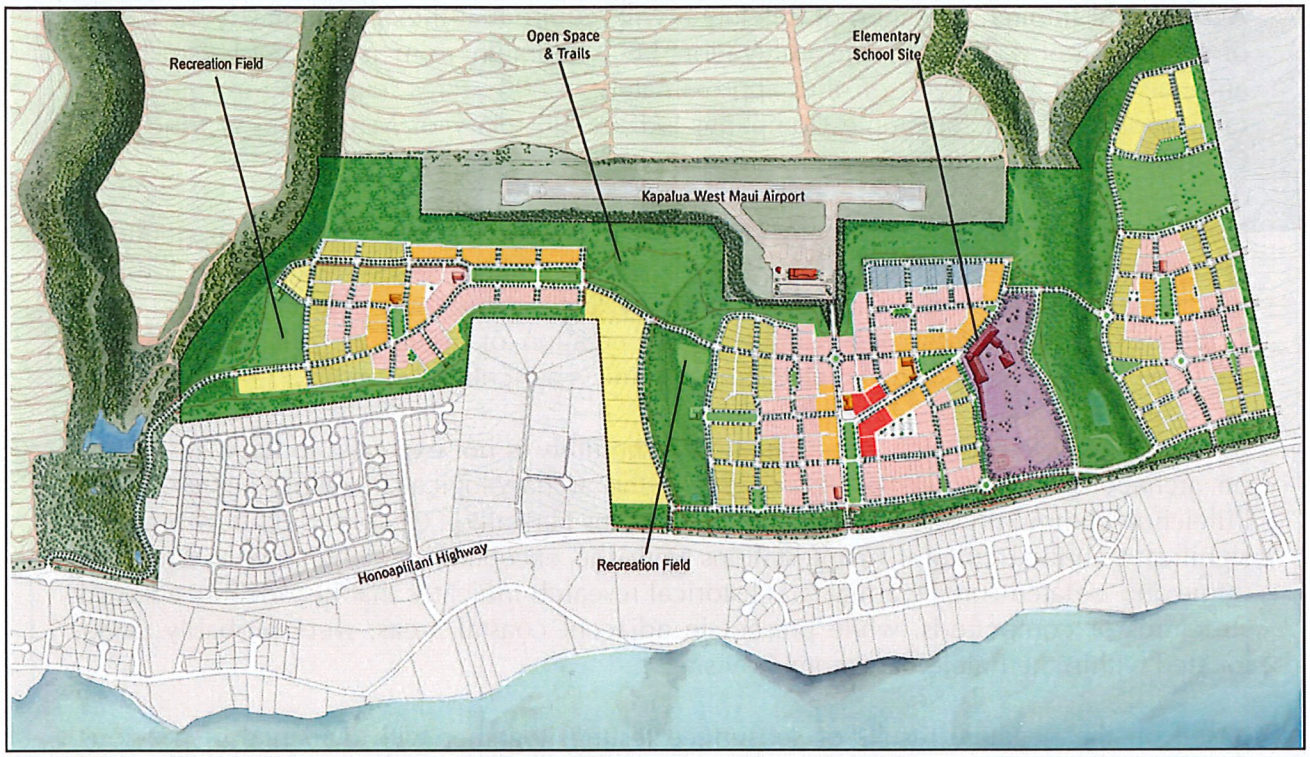
The Pulelehua community will consist of 882 multi-family and single family homes, including 23 lots that will be built by residents. At least 51 percent of the homes will be ~~made available for sale or rent to low, low-moderate and gap-group income Maui residents~~ affordable to families making between 50 to 140 percent of the median income. There will also be approximately 100 moderate-rate (i.e. "gap") homes available for sale. The community will also be designed for as many as 267 ohana dwellings that could be potentially built by residents.

In addition, the Pulelehua community will include 21,475 square feet of retail space, 54,000 square feet of specialty retail/office space and 20,300 square feet of workplace edge commercial space. Maui Land & Pineapple Company, Inc., is making 13 acres of land available to the State of Hawai'i, Department of Education (DOE) for an elementary school. Finally, Pulelehua will include four civic lots, where churches or other civic buildings could be built.

1.9.2 Summary of Potential Impacts and Proposed Mitigation Measures

Creation of the Pulelehua community will transform the pineapple fields of the site into a holistic, mixed-use community. For areas of environmental concern, appropriate mitigation measures have been planned as part of the community. For areas of particular concern, the following summarizes the associated mitigation measures that are either recommended or planned to ensure that potential adverse impacts are minimized or mitigated.

Botanical Resources. Since no threatened or endangered species or species of concern are known to occur on the Pulelehua site, the botanical survey concludes that the proposed use of the site for the Pulelehua community is not expected to have a significant



Legend

- NEIGHBORHOOD CORE (Main Street and Live/Work)
- NEIGHBORHOOD CENTER (Main Street, Live/Work, and Higher Density Residential)
- NEIGHBORHOOD GENERAL (Live/Work, Corner Store, and a Mix of Residential Units)
- NEIGHBORHOOD EDGE (Lower Density Residential)
- ESTATE EDGE (Estate House Lots)
- WORKPLACE EDGE (Workshop / Loft Buildings)

Town Plan by:
DOVER, KOHL & PARTNERS
town planning

Figure 1
Illustrative Master Plan
Pulelehua
MAUI LAND & PINEAPPLE COMPANY, INC. Island of Maui
NORTH
LINEAL SCALE (FEET)
0 670
PBR HAWAII

negative impact on botanical resources. The survey further concludes that "there are no botanical reasons to impose any restrictions, conditions, or impediments to the proposed development of the site."

Wildlife Resources. The Pulelehua community is not expected to impact threatened, endangered, or native species of wildlife, since none were observed on the site. All of the birds and mammals found on the site are alien species. In addition, most of the mammals on site, or believed to be on site, are often regarded as pests (i.e., mongooses, rats, and mice).

Agricultural Impact. Creation of Pulelehua will require that the approximately 150 acres of land currently in pineapple cultivation be withdrawn from agricultural use. This amounts to 2.5 percent of the approximately 5,800 acres currently in pineapple cultivation by Maui Pineapple Company, Ltd. (a subsidiary of Maui Land & Pineapple Company, Inc.).

Maui Land & Pineapple Company, Inc., has a long-term commitment to agriculture. Strengthening agricultural operations is one of the Company's long-term goals. In addition to pineapple, Maui Land & Pineapple Company, Inc., is currently exploring a wide array of diversified agricultural opportunities. The creation of Pulelehua will not lead to a decrease in Maui Land & Pineapple Company, Inc.'s agricultural viability.

Archaeological Resources. The Pulelehua community is not expected to have an impact on archaeological resources. The results of the archaeological inventory survey of the Pulelehua community site (Archaeological Services Hawaii, LLC 2004) did not reveal any significant surface cultural manifestations with the exception a plantation-era irrigation flume and isolated surface artifacts. Historical research indicates that historical residential structures or compounds, while present in adjacent coastal areas, were probably never located within the Pulelehua community site.

Based on the negative results of subsurface testing, together with evidence of previous disturbances in the area from pineapple cultivation, Archaeological Services Hawaii does not recommend further inventory-level archaeological work for the Pulelehua community site.

State Historic Preservation Division reviewed the archaeological inventory survey report, concurred with the recommendations, and found the report to be acceptable.

Maui Land & Pineapple Company, Inc., and its contractors will comply with all laws and rules regarding preservation of archaeological and historic sites should any be found during construction.

Cultural Resources. The cultural impact study/assessment concludes that there are no cultural resources on Pulelehua site and Pulelehua will not have an adverse effect to cultural practices.

The most significant cultural practices in the vicinity of the Pulelehua area that continue today are fishing and sea-gathering (i.e., *limu*/seaweed, *'opihi*, *wana*/sea urchins, and sea cucumber). While these resources are outside of the Pulelehua community site, care will be taken so that any construction activity will not affect or impact these resources.

Traffic. A detailed traffic study was prepared showing traffic patterns over 10 miles of Honoapi'ilani Highway and includes the potential impacts of 24 other planned developments in West Maui, in addition to Pulelehua.

Each potential development was analyzed separately and then integrated into nationally recognized traffic modeling software. The number of trips generated by each development was calculated and distributed on the 10-mile study area. The results were then compiled to look at total traffic impact.

The study quantifies the generally good conditions in the Pulelehua area and shows that widening the highway will not be required, even if all planned projects are constructed by 2011 as projected. Certain components of Pulelehua, like the elementary school and affordable housing nearer the employment centers, are in fact, hoped to improve traffic conditions in Lahaina during peak traffic hours.

Population. The Pulelehua community is targeted toward Maui residents. As such, the community is not expected to significantly increase the population of the island; however, people currently living in other parts of Maui may move to Pulelehua, thereby increasing the population of West Maui.

Public Services. As Maui's population grows, there is a need for the County to allocate resources necessary to adequately fund police services and other public services. Since Pulelehua will increase the tax base for the County, Pulelehua will provide additional funds for expanding police services and other public services. Additionally, Maui Land & Pineapple Company, Inc., is willing to discuss with the Police Department the possibility of providing a police substation within the community.

Providing the opportunity for people to live closer to their jobs and school is expected to decrease commuting to and from West Maui, lessen traffic congestion and accidents, reduce stress, and allow more family and recreation time, thereby improving overall quality of life for not only Pulelehua residents, but for Maui residents in general. The social impacts of these benefits, although not quantifiable, are expected to contribute to a more stable population which should have a positive impact on lessening crime and other issues requiring police attention.

The Nāpili Fire Station is located near the Nāpili Shopping Center and is approximately two miles from the Pulelehua community site. Pulelehua's streets provide multiple routes and increase connectivity to all points thus increasing emergency vehicle access by providing alternative routes to an emergency site.

In their correspondence, the Fire Department stated: "We would like to commend the design committee for the multiple access options that residents and emergency responders will have."

Plans for Pulelehua include a 13-acre site for a public elementary school. It is expected that the Pulelehua school will have a significant positive impact on travel on Honoapi'ilani Highway as elementary school children, residing north of Kā'anapali, will not have to be transported to the Lahaina area for school.

Additionally, a new private school, Maui Preparatory Academy will be located in Nāpili, and is scheduled to open in the Fall of 2005. Maui Preparatory Academy is anticipated to open with an enrollment of 52 students in grades 6, 7, and 8. By the year 2013, Maui Preparatory Academy will reach its anticipated full enrollment of 540 students in grades pre-Kindergarten through 12.

Economic Impacts. In addition to providing housing for Maui workers, the Pulelehua community will enhance the economic environment and stimulate economic diversification relative to the present agricultural use of the property. Some of the economic benefits of the community include:

- $301.5 million in direct real property capital investment;
- 8,399 "worker years" of employment on Maui over the initial 7 to 9-year build-out period (a "worker year" is the amount of time one full-time worker can work in one year);
- $278.8 million in total construction-related wages generated over build-out;
- $47.4 million in profits to local suppliers and contractors;
- 634 permanent full-time equivalent jobs on-site with annual wages of $16 million (businesses within Pulelehua);
- 71 permanent full-time equivalent jobs in the regional economy with annual wages of $1.7 million (maintenance, landscaping, and upgrading of the Pulelehua homes and buildings);
- $30.9 million per year in discretionary expenditures infused into the island economy from community residents; and
- The total base economic impact on Maui from Pulelehua during the first 10 years of development, construction, and use is projected at $996.3 million, with a stabilized base impact of $132.2 million per year thereafter. The total overall economic impact during the first decade will be in excess of $1.9 billion and some $264.4 million annually over the long-term.

Water. Based on Domestic Consumption Guidelines, the average daily water demand for Pulelehua is estimated to be approximately 919,313 gallons per day (including irrigation of parks, open spaces, common areas and the school) based on the current mix of uses (see Section 2.6). This estimate includes the water demand from all potential ohana units; however, it expected that not all ohana units will be built, as ohana units are limited to specific lots and will be built at the discretion of individual owners.

Potable water will be provided by drilled wells in the vicinity of the Pulelehua site to provide a new source of water for Pulelehua. It is envisioned that wells will draw water from the Honokōwai Aquifer. The current pumpage from the Honokōwai Aquifer of 3.171 MGD is well below the aquifer's sustainable yield of 8 MGD. It is estimated that potable water demand will equal 719,589 gallons per day.

Non-potable water for irrigation will be provided ~~by a mixture of~~ from reclaimed water ~~and surface water~~ sources. This water will irrigate community parks, neighborhood parks, open spaces, common area for 151 multifamily units and the school. Non-potable water use is estimated at 199,747 gallons per day. The use of reclaimed ~~and surface~~ water will reduce the total demand of water by 22 percent.

Wastewater. An onsite sewer collection system will be constructed within Pulelehua. The system will be designed to accommodate the anticipated flow, and will consist of a gravity sewer system and sewer pump stations that will connect a new to sewer line located along the east (mauka) side of Honoapi'ilani Highway. The sewer line will continue south, mauka of the highway, approximately 3,500 feet, and will connect directly to the Lahaina Wastewater Reclamation Plant.

Solid Waste. Provisions for recycling, such as collection systems and space for bins for recyclables, will be incorporated into the built Pulelehua community. After the community is occupied by residents, to the extent practical, wastes such as aluminum, paper, newspaper, glass, and plastic containers will be recycled. Green waste from the community may be processed on-site. Waste that cannot be recycled or incorporated into on-site green waste processing areas will be disposed of in the County's central landfill in Pu'unēnē.

Drainage. The net result of the drainage improvements will be no increase in runoff from Pulelehua onto downstream properties or into the existing drainage ways, desilting basins, and the ocean.

Onsite runoff will be collected by catch basins and bioswales located at appropriate intervals along the Pulelehua roadways and diverted by drain lines into on-site detention basins. Detention basins will be sized to accommodate the increased runoff from the community and will be located within the wide greenway mauka of Honoapi'ilani Highway and between the first Pulelehua street parallel to the highway. Drainage

improvements will also be constructed mauka of the Kapalua West Maui Airport to reduce offsite runoff flowing onto the Pulelehua site.

All detention basins will be designed to suppress peak flow and serve as desilting basins to minimize the conveyance of waterborne silt and debris downstream.

1.9.3 Relationship to Land Use Policies

State Land Use Law, Chapter 205, Hawaii Revised Statutes. The Pulelehua community site is currently in the State Agricultural district. Maui Land & Pineapple Company Inc., has filed a petition with the State Land Use Commission to reclassify the property to the Urban district.

Coastal Zone Management Act, Chapter 205A, Hawaii Revised Statutes. The Coastal Zone Management Area as defined in Chapter 205A, HRS, includes all the lands of the state. As such, Pulelehua is within the Coastal Zone Management Area; however, it is not located along a shoreline.

Hawaii State Plan, Chapter 226, Hawaii Revised Statutes. The Hawaii 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. As proposed, Pulelehua is relevant to many of goals, objectives, and policies set forth by the State Plan. Conformance with specific elements of the State Plan is discussed in detail in Section 5.1.4.

State Functional Plans. The Hawaii State Plan directs State agencies to prepare functional plans for their respective program areas. There are 13 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawaii State Plan. The functional plans applicable to Pulelehua are discussed in Section 5.1.5.

Maui County General Plan. The General Plan of the County of Maui 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. Conformance with specific elements of the General Plan is discussed in Section 5.2.1.

West Maui Community Plan. The West Maui Community Plan Land Use Map designates the site as Agricultural, Open Space, and Park. Maui Land & Pineapple Company Inc., is seeking a Community Plan Amendment to designate the property as Project District 5. Conformance with specific elements of the West Maui Community Plan is discussed in Section 5.2.2.

Maui County Zoning. The Pulelehua property is currently within the County Agricultural District (zone). Concurrent with the processing of the community plan amendment, Maui Land & Pineapple Company, Inc., is seeking a Change in Zoning of the property to Project District. Section 5.2.3 includes discussion of zoning requirements.

1.9.4 Required Permits and Approvals

A preliminary list of permits and approvals required for the Pulelehua Community is presented below.

Permit/Approval	Responsible Agency	Status
Chapter 343, HRS Compliance	~~Office of Environmental Quality Control~~ State Land Use Commission (LUC)	Submitted 6-28-04; the LUC accepted the Final EIS onJuly 13, 2005
State Land Use District Boundary Amendment	State Land Use Commission	Submitted 6-28-04; action pending
Community Plan Amendment	County of Maui Planning Department Maui Planning Commission Maui County Council	Submitted 3-18-05; action pending
Project District Phase I/ Change in Zoning	County of Maui Planning Department Maui Planning Commission Maui County Council	Submitted 3-18-05; action pending
Project District Phases II ~~and III~~	County of Maui Planning Department Maui Planning Commission ~~Maui County Council~~	Expected submittal 4-5-06
Project District Phase III	County of Maui Planning Department	Expected submittal 7-5-06
Chapter 6E, HRS Compliance	State Historic Preservation Division	Submitted 06/25/04; accepted 03/03/05
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health	Expected submittal 8-5-06
Subdivision Approval	County of Maui Department of Public Works and Environmental Management	Expected submittal 8-5-06
Grading/Building Permits	County of Maui Department of Public Works and Environmental Management	Expected submittal 8-5-06
Well Construction Permit/ Pump Installation Permit	DLNR Commission on Water Resource Management	Expected submittal 4-5-06

1.9.5 Alternatives

The alternatives that have been considered are:

1) The "No-Action" Alternative;
2) Alternative Locations;
3) Alternatives Related to Different Designs or Details Which Would Present Different Environmental Impacts;

4) Actions of a Significantly Different Nature Which Would Provide Similar Benefits with Different Environmental Impacts; and
5) The Alternative of Postponing Action Pending Further Study.

None of these alternatives meet all of Pulelehua Community's planning objectives to: 1) develop a holistic community; 2) create a compact, sustainable community; 3) provide affordable housing with dignity; 4) provide mixed uses for livability; 5) value the traditions of Hawai'i; 6) incorporate the design element of connectedness; and 7) make the community walkable and bike-able.

1.9.6 Probable Adverse Environmental Effects That Cannot Be Avoided

Potential adverse environmental impacts that cannot be avoided include changes to the land use character of the region, the visual appearance of the site, impacts from increased traffic, increases in solid waste generated, increased in electrical power consumed, and short-term impacts to air quality and noise levels due to construction. These impacts are more fully discussed in Section 7.4 and in individual sections throughout this document.

1.9.7 Cumulative and Secondary Impacts

To assess the cumulative and secondary impacts of the Pulelehua community in context with other projects 24 proposed West Maui projects see (Table 2 in Section 4.4) were used as the basis of reasonably anticipated development in the area. Cumulative and secondary impacts resulting from these projects, along with the Pulelehua community, are likely to include increased population in West Maui and greater demands on public infrastructure systems and services. It also could be expected that the community character of the region may change as more people live in the area. Section 7.2 discusses cumulative and secondary impacts

1.9.8 Rationale for Proceeding with the Pulelehua Community Notwithstanding Unavoidable Effects

In light of the above mentioned unavoidable effects, the creation of the Pulelehua community should proceed because the relatively minor negative impacts of the community will be offset by substantial positive impacts, including:

- Responsible stewardship of the land provided by Maui Land & Pineapple Company, Inc.'s vision for the creation of the Pulelehua community;
- Provision of high quality affordable housing for the workers of West Maui, to allow people to live near where they work;
- Provision of a complete community, with a mix of housing types, recreation areas, an elementary school, and neighborhood commercial uses;
- Incorporation of sustainable design features into the Pulelehua community to minimize impacts and conserve non-renewable resources;

- Promotion of walkability and healthy lifestyles; and
- Wages, taxes, and overall positive economic impacts of the community.

1.9.9 Unresolved Issues

Unresolved issues include:

- Final agreement on source of potable and non potable water;
- Final agreement of waste water treatment;
- Final agreement of internal street sections;
- Final agreement of street connections to Honoapi'ilani Highway;
- Final Affordable Housing Agreement with the County of Maui;
- Final resolution on inclusion of hospital facilities; and
- Potential impact of previous chemicals and fertilizers use on the site.

See Section 7.5 for discussion of these unresolved issues.

dividing the site into three distinct areas. Kahanaiki Gulch forms the northern boundary of the property.

Approximately 150 acres of the site are planted in pineapple. The property also contains fallow fields, and agricultural roadways.

Superior views are available from most areas within the Pulelehua community site: looking makai across Honoapi'ilani Highway and existing shoreline residential areas, there are dramatic panoramic views of the Pailolo Channel, Lāna'i, and Moloka'i; looking mauka beyond the airport there are views of pineapple fields, mauka forested areas, and the peaks of the West Maui Mountains.

Access to the Pulelehua community site is available directly from Honoapi'ilani Highway via Akahele Street. Akahele Street extends from Honoapi'ilani Highway (at a signalized intersection) through the center of the site to the airport terminal.

2.1.5 State Land Use District

The Pulelehua community site is currently in the State Agricultural district (Figure 4). Maui Land & Pineapple Company Inc., has filed a petition with the State Land Use Commission to reclassify the property to the Urban district.

2.1.6 West Maui Community Plan

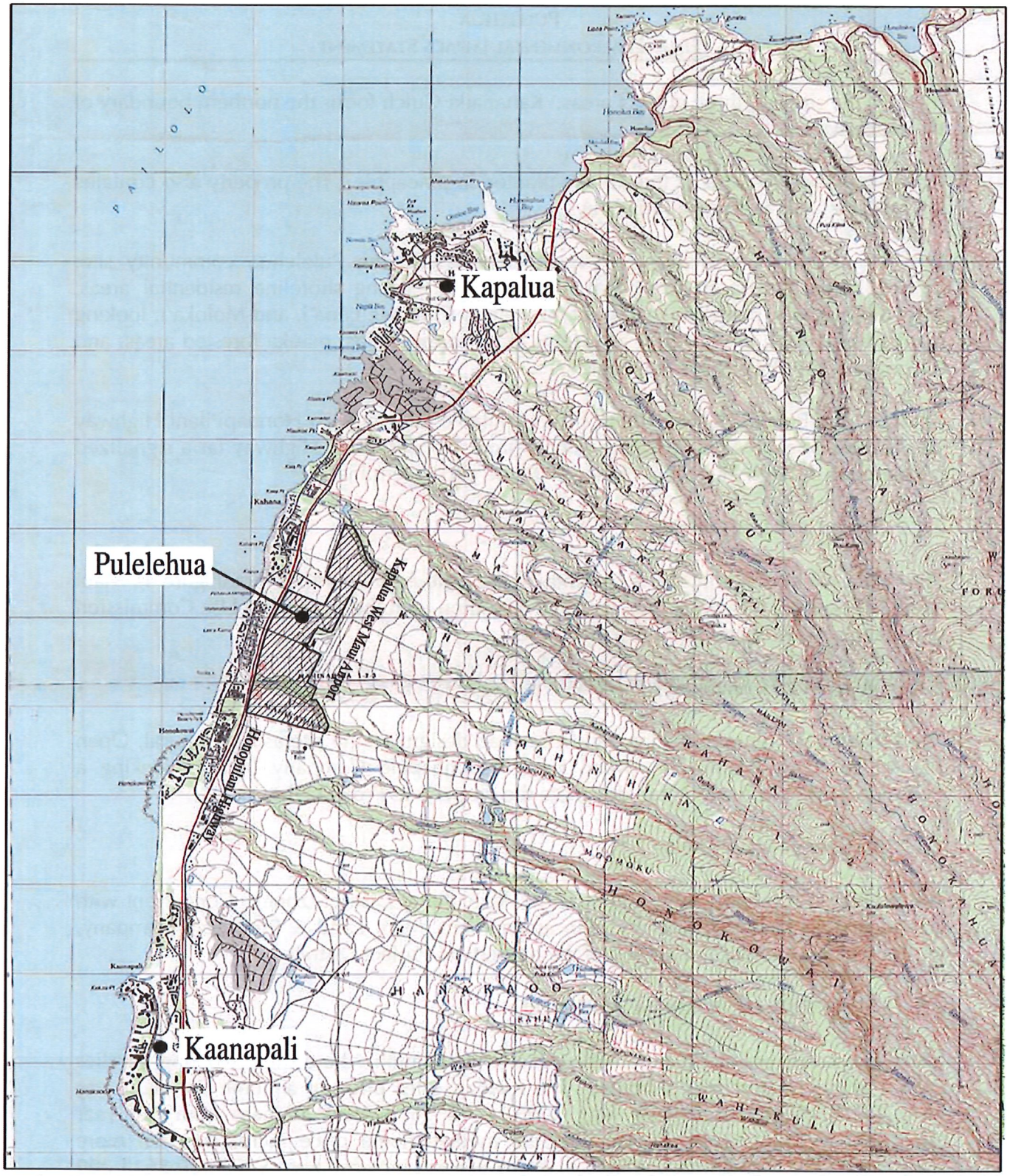
The West Maui Community Plan Land Use Map designates the site as Agricultural, Open Space, and Park (Figure 5). Maui Land & Pineapple Company Inc., is seeking a Community Plan Amendment to designate the property as Project District 5.

2.1.7 County of Maui Zoning

The property is currently within the County Agricultural District (zone). Concurrent with the processing of the community plan amendment, Maui Land & Pineapple Company, Inc., is seeking a Change in Zoning of the property to Project District.

2.2 STATEMENT OF PURPOSE AND NEED

Increasing home prices on Maui have created a situation where most working families cannot afford to purchase a home. The median sales price of a home on Maui was ~~$612,000~~ $780,000 in ~~January~~ May 2005, a ~~18~~ 26 percent increase from last year ($620,000 in May 2004). In Lahaina, the median home price increased even more sharply than the island-wide median: a ~~39~~ 59 percent increase from ~~$509,500~~ $615,000 in ~~January~~ May 2004 to ~~$710,000~~ $975,000 in ~~January~~ May 2005. These recent increases in median home prices are even more significant considering that in 2000 the island-wide



Legend

Pulelehua

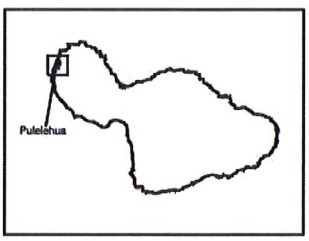


Figure 2
Regional Location

Pulelehua

MAUI LAND & PINEAPPLE COMPANY, INC. ISLAND OF MAUI

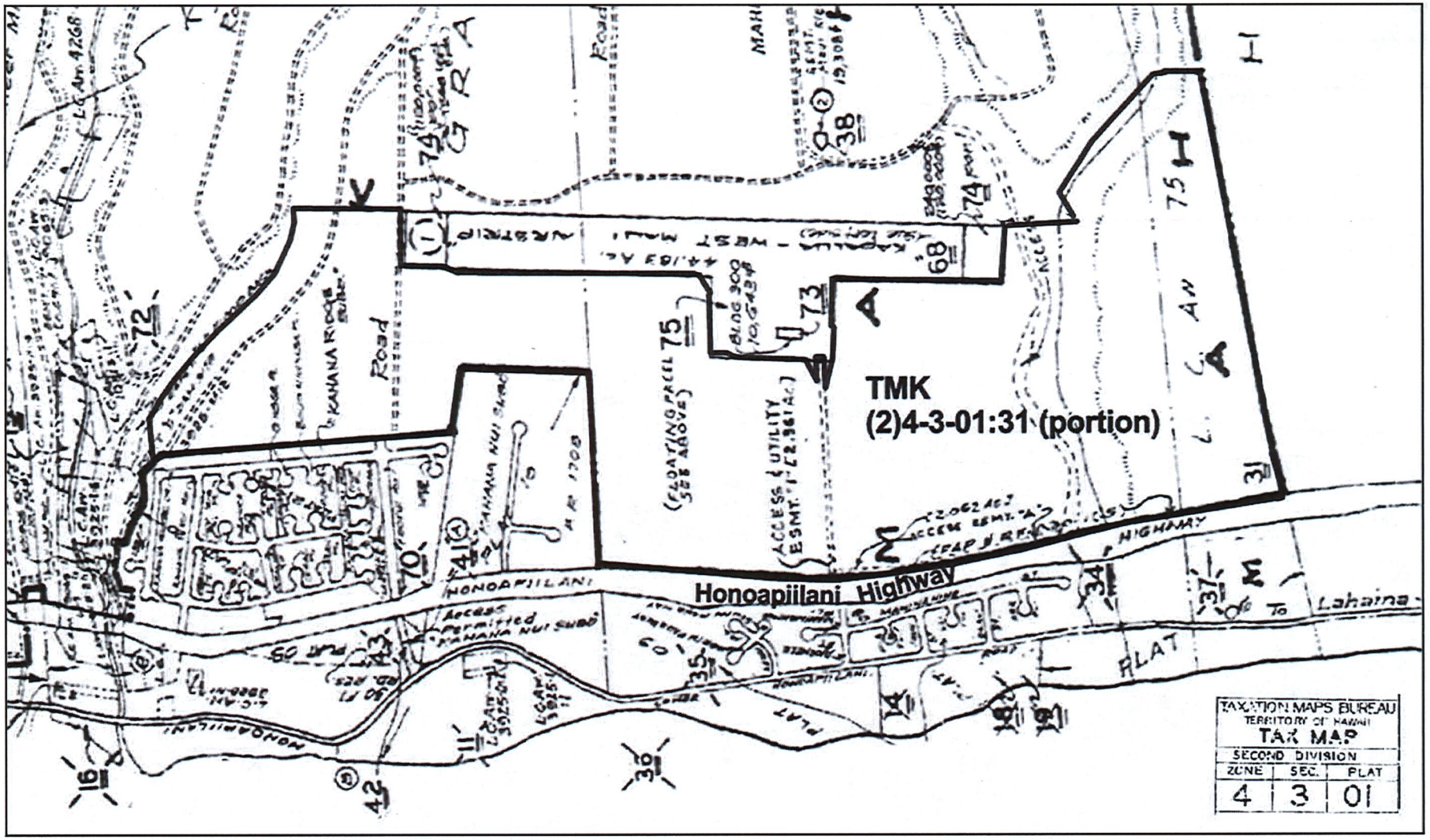
NORTH

LINEAL SCALE (FEET)

0 4,000

PBR HAWAII

Source: United States Geologic Survey



Legend

Pulelehua Boundary

Source: Taxation Maps Bureau

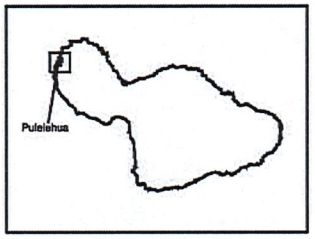


Figure 3
TMK Map

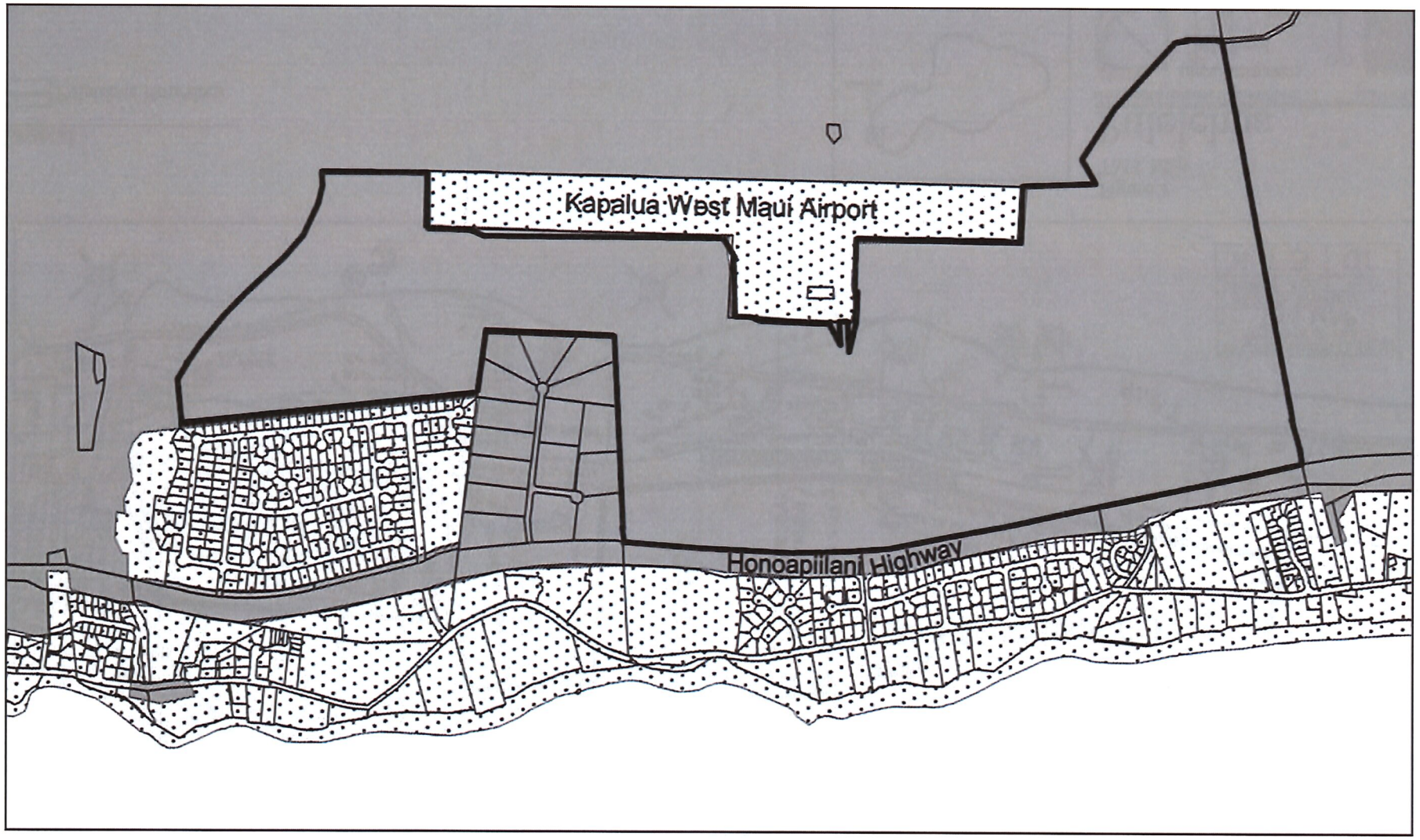
Pulelehua

MAUI LAND & PINEAPPLE COMPANY, INC. ISLAND OF MAUI

NORTH

LINEAL SCALE (FEET)
0 1,000

PBR HAWAII



Legend

- Pulelehua Boundary
- Urban District
- Agricultural District

Source: State Land Use Commission

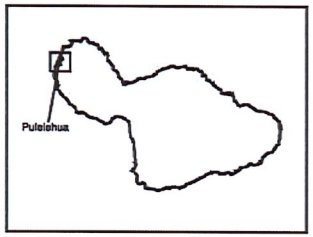


Figure 4
State Land Use Districts

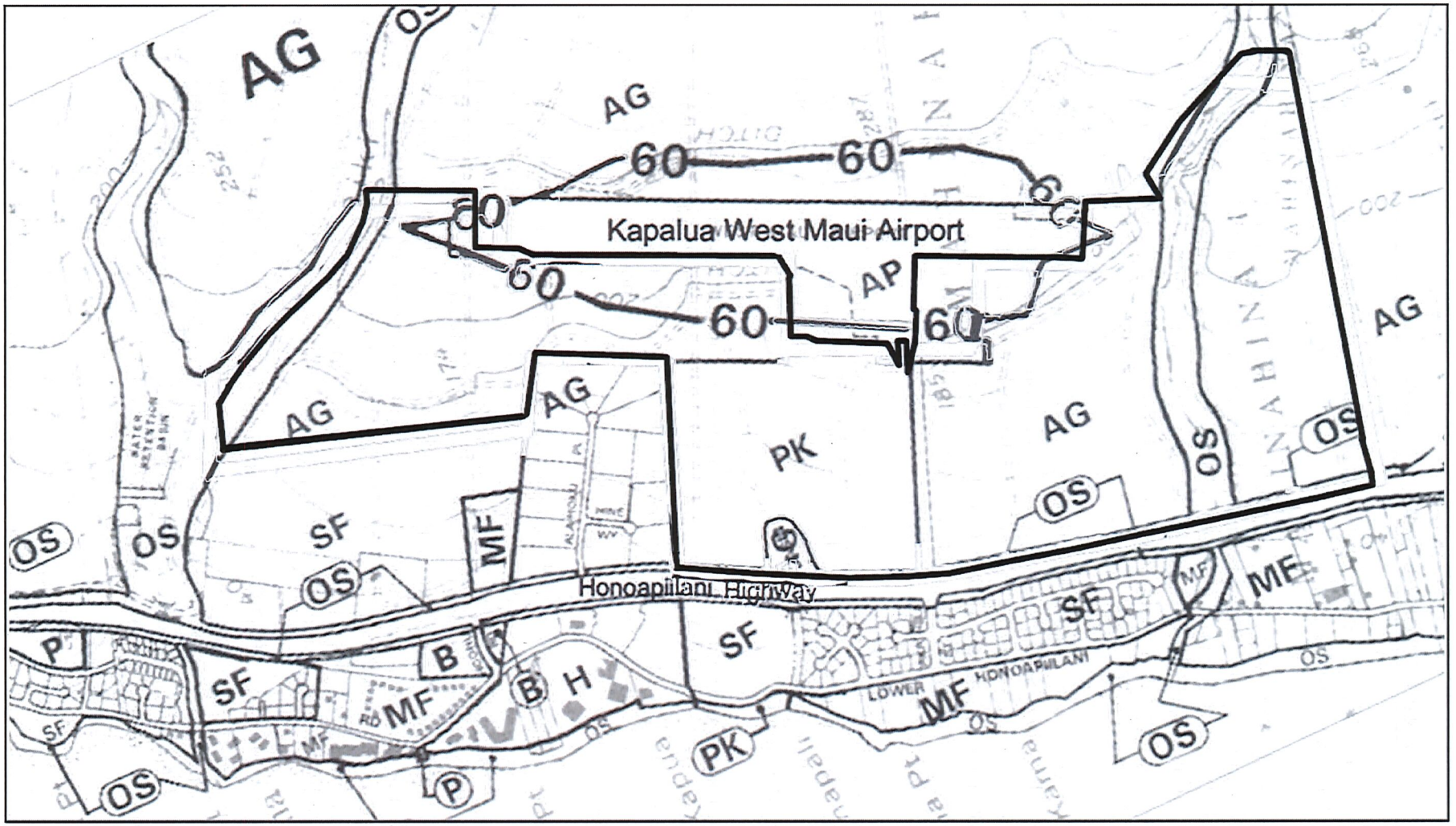
Pulelehua

MAUI LAND & PINEAPPLE COMPANY, INC. ISLAND OF MAUI

NORTH

LINEAL SCALE (FEET)
0 1,000

PBR HAWAII



Legend

—	Pulelehua Boundary	PK	Park
AG	Agricultural	P	Public/Quasi-Public
AP	Airport	B	Business/Commercial
SF	Single Family Residential	H	Hotel
MF	Multi-Family Residential	—60—	Airport Special Control District
OS	Open Space		

Source: Maui County

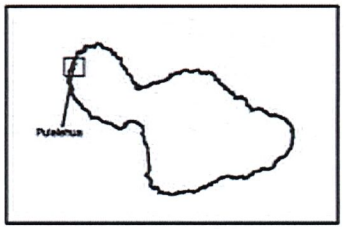


Figure 5
Community Plan

Pulelehua

MAUI LAND & PINEAPPLE COMPANY, INC. ISLAND OF MAUI

NORTH

LINEAL SCALE (FEET)
0 1,000

PBR HAWAII

median price of a home was $275,000, and the Lahaina median price was $260,000 (Realtors Association of Maui, Inc. 2005).

Maui's population is also growing, which naturally creates a demand for housing. Projections commissioned by the Maui Planning Department and calculated by SMS Research (SMS 2002) indicate that the Maui County population will increase from 139,573 people in 2005 to 175,136 people in 2020, a 25.5 percent increase. In West Maui, the population is expected to increase from 19,779 people in 2005 to 25,431 people in 2020, a 28.5 percent increase.

With the increase in West Maui's population, forecasts of housing demand estimate a need for approximately 3,447 (SMS 2002) to 5,440 (Hallstrom 2005) additional homes in West Maui by 2020. The majority of this demand is for homes affordable to families making between 80 to 140 percent of the County of Maui median income, which is currently ~~$60,700~~ $62,350 per year, based on the 2005 Housing and Urban Development (HUD) figures for the County of Maui.

In the past few years, housing development has not kept up to meet West Maui's population growth. Recent developments have included Kahana Ridge of 240 units, Kahana Villas of 117 units, Nāpili Villas of 184 units, Kāpua Village of 45 units, and various small luxury developments.

With the lack of housing development and increase in the population, Maui continues to have a housing shortage. According to John Stephens, president of the Realtors' Association of Maui, "There is a shortage of housing in all sectors, not just affordable housing" (quoted in Eager 2005). One of the factors for increasing housing prices is the lack of either new or older homes for sale (Eager 2005).

In recent years, various landowners and developers have proposed several major new housing projects in West Maui. These include Kā'anapali 2020, Waine'e Village, Pu'unoa, The Villages of Leiali'i, Kapalua Mauka, and homes on the DHHL Honokōwai property. Other smaller projects are also proposed. These projects are in various stages of the planning and permitting process, but it is unlikely all will proceed or be built as currently proposed. For example the Pu'unoa project has been rejected twice by the Maui County Council, approvals for Kā'anapali 2020 are likely to take many more years, and the Villages of Leiali'i has been tied up in a legal dispute for over 10 years, although an agreement was recently reached to allow DHHL to provide 104 homes on the site.

Pulelehua will help to satisfy the demand for housing by providing 882 homes in West Maui. At least 51 percent of the Pulelehua homes will be affordable to families making between 50 to 140 percent of the median income. Other Pulelehua homes will help to satisfy the demand for ~~other moderate~~ "gap" group and market segments, and are expected to be within the range of comparable homes in West Maui.

While Pulelehua will help fill a critical need for affordable housing in West Maui, it will also be a complete community with a school, parks, trails, neighborhood commercial establishments, and civic uses, all in close proximity to each other. These elements are critical to Pulelehua as they will provide necessary services to residents and contribute to the creation of a real, vibrant community with many services and amenities within walking distance.

The marketing study prepared for Pulelehua (Hallstrom 2005) concludes that Pulelehua's neighborhood commercial uses are essential to the community and can be supported by Pulelehua's residents. Section 4.8.3 of this EIS discusses the neighborhood commercial uses in more detail. Appendix A contains the complete marketing study.

2.2.1 Historical Perspective

The idea for Pulelehua began in January of 2004 when Mayor Arakawa approached Maui Land & Pineapple Company, Inc., to help solve the affordable housing crisis in West Maui. Recognizing the critical need for affordable housing, Maui, Maui Land & Pineapple Company, Inc., then began considering sites for a new community on its West Maui property. The area makai of the Kapalua West Maui airport was chosen for its proximity between the major resort employment centers of Kapalua and Kā'anapali, and access to infrastructure.

To ensure the community had input in the planning process, Maui Land & Pineapple Company, Inc., selected nationally recognized town planners Dover, Kohl & Partners to partner with West Maui citizens to design a community that would be both affordable and meet the same high standards for quality as established at their Kapalua Resort. The new community would be called Pulelehua, which means butterfly in Hawaiian, and is a reference to Kapalua's famous logo of a butterfly with a pineapple in the center. This logo is in itself a reference to Maui Land & Pineapple Company, Inc.'s heritage as a pineapple plantation.

2.2.2 ~~2.2.1~~ Statement of Objectives

The objectives of Pulelehua are rooted in Maui Land & Pineapple Company Inc.'s desire to create and manage holistic communities that build a sustainable future for Maui.

Holistic communities first respect and foster an authentic sense of place and inspire community. Second, they generate a strong sense of belonging and inclusiveness. Third, holistic communities preserve surrounding agricultural land and create significant open space and trail systems.

Maui Land & Pineapple Company Inc.'s vision to create holistic communities is based on four cornerstones: authenticity, inclusiveness, sustainability, and eco-sensitivity; which will create a firm foundation for Pulelehua. These cornerstones make Pulelehua a unique

basins. Detention basins will be sized to accommodate the increased runoff from the community and will be located within the wide greenway mauka of Honoapi'ilani Highway and between the first Pulelehua street parallel to the highway. The greenway will vary in width from between 100 to 200 feet and will serve as a landscape buffer and recreation area as well as a detention basin to capture runoff from the Pulelehua community. Additional detention basins may be constructed in park and open space areas. Porous pavement in alleyways and parking lots will be explored for feasibility to decrease storm water runoff. Best management practices (BMPs) will be adopted to minimize infiltration and runoff from construction and vehicle operations.

The detention basins will be designed to provide a recharge rate high enough so that under normal conditions the basins drain quickly, usually within one to two days. Even after heavy rains, the basins should drain before mosquito eggs can hatch and mature into adult mosquitoes. The normal life cycle of a mosquito is eggs to larva to pupa to adult mosquitoes which can fly. It takes one to two days for eggs to hatch into larva and another 5 to 10 days for the lava to change into pupa. The pupa matures into adult mosquitoes over the next two to four days. In total, it takes from between 8 to 16 days on average for eggs to mature to adult mosquitoes that can fly.

Drainage improvements will also be constructed mauka of the Kapalua West Maui Airport to reduce runoff flowing onto the Pulelehua site. All detention basins will be designed to suppress peak flow and serve as desilting basins to minimize the conveyance of waterborne silt and debris downstream.

All drainage improvements will be developed in accordance with applicable DOH and County of Maui drainage requirements and standards. In addition, Maui Land & Pineapple Company, Inc., will comply with all laws and regulations regarding runoff and non-point source pollution, ensuring that storm water run-off and siltation will not adversely affect the downstream marine environment and nearshore and offshore water quality.

The net result of the drainage improvements will be no increase in runoff from Pulelehua onto downstream properties or into the existing drainage ways, desilting basins, and the ocean.

4.9.3 Water System

Existing Conditions

There are two existing water sources which serve the Māhinahina area. The first is surface water from the Honokōhau Ditch which collects water from Honokōhau Stream and Honolua Stream. The surface water from the Honokōhau Ditch is then diverted to the Māhinahina Water Treatment Plant which was designed to process 2.5 million gallons per

day (MGD). Presently, the treatment plant is processing an average of approximately 2.4 MGD.

The second water source is groundwater from the Honokahua wells and Nāpili wells. The capacities of the wells are 700 gallons per minute (gpm) from Honokahua Well A, 1,250 gpm from Honokahua Well B, 700 gpm from Nāpili Well A, 700 gpm from Nāpili Well B, and 1,000 gpm from Nāpili Well C. According to the County of Maui Department of Water Supply (DWS), Honokahua Well A, Nāpili Well A, and Nāpili Well C currently are not in use. Available information indicates that at least one of these wells is non-operational due to mechanical problems. All wells are owned and operated by the DWS.

The wells draw water from the Honolua Aquifer. According to the Commission on Water Resource Management, the Honolua Aquifer has a sustainable yield of eight MGD. In addition to the wells listed above, two other wells draw water from the Honolua Aquifer. All totaled, the wells pumped an average of 2.731 MGD from the aquifer between January 2002 to October 2004. This total is substantially less that the aquifer's eight MGD sustainable yield.

The Honokōwai Aquifer adjoins the Honolua Aquifer to the south. According to the Commission on Water Resource Management, the sustainable yield of the Honokōwai Aquifer is also eight MGD. Nine wells draw water from the Honokōwai Aquifer. All totaled, these wells pumped an average of 3.177 MGD from the aquifer between May 2003 to October 2004. This total is substantially less that the aquifer's eight MGD sustainable yield.

The Commission on Water Resource Management has not designated the Honolua Aquifer or the Honokōwai Aquifer as groundwater management areas.

In comment letters received on the Draft EIS, some writers expressed concerns regarding the possible contamination of the Honokowai and Honolua Aquifers from historical agricultural use in the region. Specifically, concerns were expressed regarding the possible historical use of the agricultural chemicals DBCP and EDB. The use of DBCP was banned by the Environmental Protection agency in 1979 except for use as a soil fumigant against nematodes on pineapples in Hawaii; this use was cancelled in 1985 (EPA website). EDB was banned in 1983 from use as a fumigant (Cornell Cooperative Extension office website).

There are two potable water storage areas for the region: 1) the 2.0 million gallon Honokōwai Reservoir; and 2) the 1.0 million gallon Kahana Ridge reservoir. The Honokōwai reservoir is located at an elevation of 250 feet, approximately 1,000 feet south of the southern boundary of the Pulelehua site. The Kahana Ridge Reservoir is also located at an elevation of 250 feet approximately 3,000 feet to the north of the Pulelehua site. Both reservoirs are owned and operated by the DWS.

The Honokōwai Reservoir is filled from the Māhinahina Water Treatment Plant. The Kahana Ridge Reservoir is filled from the Honokahua and Nāpili wells. A 16-inch waterline along Honoapi'ilani Highway transports water from the Kahana Ridge Reservoir to the Kahana Ridge subdivision. There are no other waterlines along Honoapi'ilani Highway in the vicinity of the Pulelehua site.

Maui Pineapple Company, Ltd., currently uses a mix of reclaimed (R-1) water from the Lahaina Wastewater Treatment Plant and surface water from the Honokōhau Ditch for irrigation of nearby pineapple fields. There is a 2.0 million gallon reservoir for this water at the 300-foot elevation on the south side of the Kapalua West Maui Airport. Maui Pineapple Company, Ltd., currently has agreements in place with the County of Maui to receive R-1 water from the Lahaina Wastewater Reclamation Plant as part of its agricultural operations. As with other R-1 users, Maui Pineapple Company, Ltd., pays a fee to the County of Maui based on use. The fee helps offset the cost, including pumping, of providing R-1 water.

Potential Impacts

In accordance with the DWS's Domestic Consumption Guidelines, the average daily water demand for Pulelehua is estimated to be approximately 919,313 gallons per day (including irrigation of parks, open spaces, common areas and the school) based on the current mix of uses (see Section 2.6). This estimate includes the water demand from all potential ohana units; however, it is expected that not all ohana units will be built, as ohana units are limited to specific lots and will be built at the discretion of individual owners.

Fire flow demand for single-family residential development is 1,000 gallons per minute for 2-hour duration, and 2,000 gallons per minute for 2-hour duration for A-2 apartment, schools, and neighborhood businesses and light industrial. Fire hydrants will be installed with a maximum spacing of 350 feet within the single-family residential area and at 250 feet spacing within all other areas.

~~Water wells will be drilled in the vicinity of the Pulelehua site to provide a new source of water for Pulelehua. It is envisioned that wells will draw water from the Honokōwai Aquifer.~~ While Maui Land & Pineapple Company, Inc., continues to evaluate water supply alternatives, the most likely source for Pulelehua's potable water will be from new wells. These wells will likely be located mauka of the Pulelehua site in the Honokowai or Honolua aquifer. As the current pumpage from the Honokōwai Aquifer of 3.171 MGD is well below the aquifer's sustainable yield of eight MGD, the wells are not expected to impact the sustainable yield of the Honokōwai Aquifer. If the new wells draw water from the Honolua Aquifer, the sustainable yield of the Honolua Aquifer is not expected to be impacted as the current pumpage from the Honolua Aquifer of 2.73 MGD is also well below the Honolua Aquifer's sustainable yield of eight MGD.

Maui Land & Pineapple Company, Inc., has contracted a water resource consultant to conduct a water well source evaluation. This evaluation will include confirming the sustainable capacity of the Honokowai and Honolua aquifer, preparing a well site analysis, and providing recommendations for storage and transmission options. The well site analysis will take into consideration historical agricultural uses and will focus on finding a location that provides the best quality water possible. If a well produces water containing contaminants at levels above State or Federal guidelines, treatment would be required.

Mitigative Measures

Maui Land & Pineapple Company, Inc., will work with the DWS for the development and construction of the new wells, which will be built in accordance with DWS standards and all requirements of the Commission on Water Resource Management. In addition, all new sources of potable water will be developed in compliance with Section 11-20-29, HAR and at the appropriate time Maui Land & Pineapple Company, Inc., will submit a water engineering report for the approval of the Director of the State Department of Health.

A 1.0 million gallon water storage tank will be required at an elevation of approximately 375 feet to accommodate the domestic water for Pulelehua. The tank will also be constructed to DWS standards and dedicated to the DWS.

~~The landscaped areas of the Pulelehua community will be irrigated with mixed R-1 and surface water from the reclaimed water reservoir above the Kapalua West Maui Airport.~~ The community parks, neighborhood parks, open spaces, common area for 151 multifamily units and the school will be irrigated using R-1 water. R-1 water will also be used for fire flow requirements. The total R-1 water ~~use~~ demand is estimated at 199,747 gallons per day. The County has confirmed that there is sufficient R-1 capacity from the Lahaina Wastewater Treatment Plant to supply this demand. Maui Land & Pineapple Company, Inc., intends to continue or increase its current agreements with the County to supply R-1 water to Pulelehua. ~~The mixed water will also be used for fire flow requirements.~~ R-1 water from the Lahaina Wastewater Treatment Plant will be pumped to the reclaimed water reservoir above the Kapalua West Maui Airport for distribution to Pulelehua. The recycled~~/mixed~~ water system within Pulelehua will be built and operated in conformance with all applicable laws and regulations, including HAR, Section 11-62-27, Recycled Water Systems and HAR Title 11, Chapter 11-21, Cross-Connection and Backflow Control.

The use of ~~the mixed~~ R-1 water for irrigation will reduce the average daily water demand by almost 22 percent. Therefore, the Pulelehua community will require approximately 719,589 gallons of potable water per day.

To further conserve water within Pulelehua:

- Single pass cooling will not be allowed pursuant to Maui County Code Section 14.21.20.
- Low-flow fixtures and devices will be used pursuant to Maui County Code Section 16.20A.680.
- Individual homeowners and businesses will be encouraged to maintain fixtures to prevent leaks.
- Climate-adapted native and other appropriate plants will be used in landscaping as practical.
- Best management practices designed to minimize infiltration and runoff from daily operations will be implemented.
- Irrigated turf will be limited where possible.

4.9.4 Wastewater System

Existing Conditions

All existing County wastewater facilities in the vicinity of the Pulelehua site are located makai of Honoapi'ilani Highway, along Lower Honoapi'ilani Road. These facilities include gravity sewer lines, sewer force mains, and sewer pump stations. In addition to the County sewer system, there is a private wastewater collection for Kahana Ridge in the north area of the subdivision. The Kahana Ridge wastewater system connects to the County's sewer system at Ho'ohui Road. All sewerage from the area is transported to the Lahaina Wastewater Reclamation Plant in Honokōwai, approximately 3,500 feet south from the southern boundary of the Pulelehua site.

According to the Wastewater Reclamation Division, County of Maui, the Lahaina Wastewater Reclamation Plant has a design capacity of 9 million gallons per day (MGD). Currently, it is processing approximately an average daily flow of 4 MGD of sewerage. Of the remaining capacity, approximately 1.38 MGD are allocated to AMFAC, 1.80 MGD are allocated to the Housing Finance Development Corporation and 303,350 gallons per day are allocated to Kapalua Land Co., Ltd (a subsidiary of Maui Land & Pineapple Company, Inc.), including purchasable capacity. Kapalua Land Company's allocation is specifically for Kapalua Resort. The County of Maui has retained the services of a consultant to do a dynamic study of the capacity of the existing wastewater facilities. However, ~~it is estimated that~~ the study ~~will take 12 months to~~ is not yet complete.

Potential Impacts

It is projected that Pulelehua will generate approximately 345,688 gallons per day of wastewater based on the current mix of uses (See Section 2.6). This estimate includes wastewater estimates from all potential ohana units; however, it expected that not all

ohana units will be built, as ohana units are limited to specific lots and will be built at the discretion of individual owners.

The existing wastewater facilities along Lower Honoapi'ilani Road were not designed to accommodate sewage flows from development mauka of Honoapi'ilani Highway and therefore, Pulelehua's wastewater system will not connect these facilities. Hence, the capacity of the existing sewer piping system along Lower Honoapi'ilani Road will not be affected by Pulelehua and there would be no requirements to upgrade that section of the existing sewer piping system.

Mitigative Measures

Maui Land & Pineapple Company, Inc., or its subsidiaries will build the onsite sewer collection system within Pulelehua. The system will be designed to accommodate the anticipated flow and will consist of a gravity sewer system and sewer pump stations that will connect to a new sewer line located along the east (mauka) side of Honoapi'ilani Highway. The sewer line will continue south, mauka of the highway, approximately 3,500 feet, and will connect directly to the Lahaina Wastewater Reclamation Plant.

The onsite collection system will incorporate a sewer pump station at the northerly limit of the Pulelehua site. The pump station will not serve all of Pulelehua. It will only handle wastewater from a few dozen homes that cannot gravity flow to the new sewer transmission line. The central and southern neighborhoods, as well as a portion of the northern neighborhood, will be able to gravity feed into the new line, ~~to a gravity flow system~~ which will connect to the County's sewer pump station Nāpili No. 1, ~~which will~~ and transport wastewater into the Lahaina Wastewater Reclamation Plant. ~~Pump~~ The County's pump station No. 1 is located on the northerly side of the Lahaina Wastewater Reclamation Plant and pumps wastewater directly into the headworks at the plant.

The pump station at the northerly end of the Pulelehua site will include instrumentation, alarm systems (e.g. equipment failure, high waste water levels), and redundant equipment such as pumps. These features will provide system monitoring and ensure reliability. During the design and engineering phase, various options will be evaluated to keep any potential overflow of waste water from entering Kahana Gulch. Sound attenuation features will be included in the pump station design, as needed, to ensure that all state and county noise requirements are met. Locating the equipment underground will be evaluated during the design and engineering phase of Pulelehua. Sewer pump stations should not emit noxious odors if running properly. Not withstanding this fact, based on prevailing wind patterns in the area, there is no location within Pulelehua which is predominately upwind of any homes at Kahana Ridge.

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".

Maui Land & Pineapple Company, Inc., is working with the Wastewater Reclamation Division to determine the capacity of the existing facilities to confirm that Lahaina Wastewater Reclamation Plant can accommodate the wastewater generated from Pulelehua. A detailed sewer impact study evaluating the wastewater system requirements for Pulelehua will be prepared and submitted to the County for review as part of Pulelehua's engineering design. The County of Maui Department of Public works requires wastewater contribution calculations before building permits are issued.

Maui Land & Pineapple Company, Inc., will pay its fair share for any improvement fees assessed for Pulelehua. In the event the Lahaina Wastewater Reclamation Plant cannot accommodate Pulelehua, Maui Land & Pineapple Company, Inc., will evaluate the installation of a packaged sewer treatment plant to address Pulelehua's wastewater treatment demands.

4.9.5 Electrical Service

Existing Conditions

Electrical power on Maui is supplied by Maui Electric Company (MECO). The installed generating capacity currently owned and operated by MECO is 212.90 megawatts (MW). This capacity is divided between the Mā'alaea Generating Station with a reserve capacity of 175.30 MW, and the Kahului Generating Station with a reserve capacity of 37.60 MW. Additional power from Hawaiian Commercial and Sugar (HC&S) supplements the total installed generating capacity of MECO. Power from HC&S is generated at the Pu'unēnē Mill located in Pu'unēnē. HC&S has a purchase power contract with MECO to provide 12 MW of firm power.

There are existing overhead electrical lines along the mauka side of Honoapi'ilani Highway, along Lower Honoapi'ilani Highway, and along Akahele Street, which bisects the Pulelehua site. MECO currently serves the Kahana Ridge Subdivision, which is located on the northwesterly side of the proposed Pulelehua community. MECO also has an electrical substation above the Kapalua West Maui Airport.

Potential Impacts

When built out, monthly residential electrical demand for the Pulelehua community is estimated to be 838,800 kilowatt-hours. This estimate is based on the use of solar water heaters on all homes and room air conditioners, although it expected that not all homeowners will install air conditioning. Further, the estimate includes the electrical demand from all potential ohana units; however, it expected that not all ohana units will be built, as ohana units are limited to specific lots and will be built at the discretion of individual owners.

Should an urgent care clinic or other medical facility be developed, certain assumptions and conditions within the Pulelehua community would change. The number of home, for example, would be reduced. Figure 17 shows two medical facility alternatives, a seven-acre site and a 15-acre site. A seven-acre medical facility would reduce the total number of homes in the Māhinahina neighborhood by 50. A 15-acre facility would eliminate 90 homes.

With a medical facility neighborhood traffic patterns within the Māhinahina neighborhood may change slightly, but the intent would be to build the facilities within the fabric of Pulelehua's traditional town plan. Based on conceptual information, the medical facility would generate less demand for water, sewer, and electricity than the houses that would be replaced in the plan. Other potential impacts may also be reduced accordingly. It is anticipated that a medical facility could also provide significant positive economic impacts in the form of related medical businesses and professional job creation.

The close proximity to the airport would provide for air transport between the Pulelehua medical facility and the Maui Memorial Medical Center or medical facilities on Oahu, potentially saving lives. Potential impacts relating to air transport could include increased use of the airport, however since September 2004, the air ambulance has only landed at the airport once.

6.4 ACTIONS OF A SIGNIFICANTLY DIFFERENT NATURE WHICH WOULD PROVIDE SIMILAR BENEFITS WITH DIFFERENT ENVIRONMENTAL IMPACTS

Conventional Subdivision or an all Affordable Subdivision. One alternative that would address the demand for affordable housing would be to develop a conventional small-lot subdivision. Typical subdivisions that include only residential uses require residents to spend more time getting from one activity to the next and discourage neighborhood interaction.

Several aspects of the design of Pulelehua contribute to a high quality of life. The community will include a mix of residential, commercial and public uses, parks, and open space, a neighborhood school, biking and walking paths, a town center, pedestrian friendly streets and public civic spaces. These components combine to form a community that encourages residents to build relationships with each other, rely less on cars for transportation, walk and bicycle more often, enjoy outdoor surroundings, and actively engage in civic life.

Communities that incorporate a mix of residential, commercial, and public spaces offer a broad range of activities within a relatively small area. This allows residents to spend less time getting from one activity to the next and more time doing what they want to do, be it grocery shopping, playing in the park or barbecuing with friends. Pulelehua will be an example of a "live, work, play, learn" community.

A community such as Pulelehua differs from conventional neighborhoods in aesthetic and practical ways. Homes are oriented toward the street, which is narrow and bordered by wide sidewalks; porches and lanai invite neighbors to talk story; affordable and market rate homes are mixed together and do not differ substantially in quality or appearance; and streets connect to other neighborhoods and the town center rather than ending in cul-de-sacs, inviting interaction with the community.

Traditional neighborhood design results in more compact, confined communities that preserve rather than consume surrounding open space. This is particularly significant for Pulelehua and West Maui, where open space will continue to be dedicated to agriculture, an integral component of Maui Land & Pineapple Company's vision to create holistic communities.

Most importantly, the traditional neighborhood model is in harmony with the hopes and aspirations that community members have shared with us throughout the design and planning process.

Another alternative that would address the demand for affordable residential housing would be to develop an "all affordable" subdivision. With the increase in West Maui's population, forecasts of housing demand project a need for approximately 3,447 (SMS 2002) to 5,440 (Hallstrom 2005) additional homes in West Maui by 2020. The majority of this demand is for homes affordable to families making between 80 to 140 percent of the County of Maui median income. However, there is also a demand for homes in West Maui at moderate and market rates.

By design, Pulelehua is planned as a holistic, inclusionary, mixed-income community. Holistic communities embrace a diversity of people and activities and Pulelehua will be a place where Maui's resort employees, police, teachers, fire fighters, doctors, lawyers, and others can live side-by-side. As a mixed income community, Pulelehua will contain a variety of housing options integrated into complete neighborhoods. Affordable homes will be mixed with moderate and market rate homes, on the same block and on the same street. The affordable homes and lots may be smaller than the market homes, or may not have prime views, but they will not be of lesser quality or appearance than other homes. This inclusionary design provides "affordable housing with dignity," rather than an income-segregated, affordable "project" which almost always leads to other social issues.

Pulelehua's inclusionary design also allows for young families to purchase their first home along side more established families or senior citizens, thereby allowing for social diversity of age ranges and life experiences within the community. In the long-term, Pulelehua's mixed housing types, lot, sizes, and flexible design standards will allow for residents' changes over time. For example, a young couple will be able to start out in home they can currently afford, move to a larger home when they have children and their incomes rise, and later more to an apartment or condo close to stores and services when they retire. This range of options will allow residents to remain within the community

they helped to establish and where they have raised their kids and made lifelong friends. It also allows for multiple generations of an extended family to all live in the same community, within walking distance of each other.

The "affordable housing project" alternative would not address the need or the objective to create a holistic community that builds a sustainable future for Maui and other objectives stated in Section 2.2.1.

6.5 THE ALTERNATIVE OF POSTPONING ACTION PENDING FURTHER STUDY

The alternative of postponing action pending further study may allow some of the objectives of Pulelehua to be met eventually; however, this alternative is not necessary for the following reasons:

1. This ~~draft~~ final environmental impact statement and its related technical studies provide a thorough evaluation of the Pulelehua's impacts.
2. Entitlement processing for Pulelehua will include a State Land Use District Boundary Amendment, a Community Plan Amendment, and County Project District Processing. 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, the community kicked off the design process with the community design charrette in early 2004. Since then, the community has been encouraged to call or email comments and/or suggestions. Currently, there is a list of approximately ~~2,000~~ 2,700 interested parties which demonstrates the need for Pulelehua to move forward as soon as possible.
3. Affordable and moderate-priced housing in West Maui is in high demand as stated in County and privately initiated marketing studies (see Section 4.8.2). The cost of housing is increasing at a fast pace. In ~~January~~ May 2005, the median sales price of a home on Maui was ~~$612,000~~ $780,000, an ~~18~~ 26 percent increase from 2004. However, in the Lahaina area, the median home price increased ~~39~~ 59 percent from ~~$509,500~~ $615,000 in ~~January~~ May 2004 to ~~$710,000~~ $975,000 in ~~January~~ May 2005. These recent increases in median home prices are even more significant considering that in 2000 the island-wide median price of a home was $275,000 and the Lahaina median price was $260,000 (Realtors Association of Maui, Inc. 2005). Delays for more studies will only amplify housing demand and increase prices.

Architecture" (State Department of Business, Economic Development and Tourism – Strategic Industries Division) and "Guidelines for Sustainable Building Design in Hawaii (Office of Environmental Quality Control 1999) into the Pulelehua's design guidelines.

All utility lines serving the community will be underground to reduce visual impacts.

Air Quality. In the short-term, construction of the Pulelehua community will unavoidably contribute to air pollutant concentrations due to fugitive dust releases at construction areas, however, appropriate mitigative measures including frequent watering of exposed surfaces will help to establish controls. 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 within national and state standards.

Noise. In the short-term, construction of the Pulelehua community will generate short-term noise impacts. The dominant noise sources during construction will most likely be earth moving equipment such as bulldozers and diesel trucks. Construction activity will occur during daytime hours. Noise from construction activity will be short-term and will comply with DOH noise regulations. Traffic generated noise due to the development of the Pulelehua community is predicted to be imperceptible to people with normal hearing, and no traffic noise mitigation measures are planned. After the establishment of the Pulelehua community, the ambient quality of the site will be changed from the current agricultural uses (including tilling, planting and harvesting) to typical residential and commercial sound patterns. These include, people taking, children playing, cars entering and exiting the community, and other sounds from human habitation.

7.4.1 Rationale for Proceeding with the Pulelehua Community Notwithstanding Unavoidable Effects

In light of the above mentioned unavoidable effects, the creation of the Pulelehua community should proceed because the relatively minor negative impacts of the community will be offset by substantial positive impacts, including:

- Responsible stewardship of the land provided by Maui Land & Pineapple Company, Inc.'s vision for the creation of the Pulelehua community.
- Provision of high quality affordable housing for the workers of West Maui, to allow people to live near where they work.
- Provision of a complete community, with a mix of housing types, recreation areas, an elementary school, and neighborhood commercial uses.
- Incorporation of sustainable design features into the Pulelehua community to minimize impacts and conserve non-renewable resources.
- Promotion of walkability and healthy lifestyles.
- Wages, taxes, and overall positive economic impacts of the community.

7.5 UNRESOLVED ISSUES

Unresolved issues are invariably associated with projects in the planning and preliminary design stages. Not withstanding Maui Land & Pineapple Company, Inc.'s efforts, some issues remain unresolved at this stage of the planning process. The unresolved issues are as follows:

Water. Maui Land & Pineapple Company, Inc., will participate in the funding and construction of an adequate water source, storage, and transmission facilities and other improvements to accommodate total water demand generated by Pulelehua. ~~It is currently envisioned that water wells will be drilled in the vicinity of the Pulelehua site to provide a new source of water for Pulelehua. The current plan is to draw water from the Honokōwai Aquifer.~~ While Maui Land & Pineapple Company, Inc., continues to evaluate water supply alternatives, the most likely source for Pulelehua's potable water will be from new wells. These wells will likely be located mauka of the Pulelehua site in the Honokowai or Honolua aquifer. As the current pumpage from the Honokōwai Aquifer of 3.171 MGD is well below the aquifer's sustainable yield of eight MGD, the wells are not expected to impact the sustainable yield of the Honokōwai Aquifer. If the new wells draw water from the Honolua Aquifer, the sustainable yield of the Honolua Aquifer is not expected to be impacted the as the current pumpage from the Honolua Aquifer of 2.73 MGD is also well below the Honolua Aquifer's sustainable yield of eight MGD.

In comment letters received on the Draft EIS, some writers expressed concerns regarding the possible contamination of the Honokowai and Honolua Aquifers from historical agricultural use in the region. Specifically, concerns were expressed regarding the possible historical use of the agricultural chemicals DBCP and EDB. The use of DBCP was banned by the Environmental Protection agency in 1979 except for use as a soil fumigant against nematodes on pineapples in Hawaii; this use was cancelled in 1985 (EPA website). EDB was banned in 1983 from use as a fumigant (Cornell Cooperative Extension office website).

Maui Land & Pineapple Company, Inc., has contracted a water resource consultant to conduct a water well source evaluation. This evaluation will include confirming the sustainable capacity of the Honokowai and Honolua aquifer, preparing a well site analysis, and providing recommendations for storage and transmission options. The well site analysis will take into consideration historical agricultural uses and will focus on finding a location that provides the best quality water possible. If a well produces water containing contaminants at levels above State or Federal guidelines, treatment would be required.

These water system improvements will need to be developed with the cooperation and consent of the County of Maui and the State Commission on Water Resource Management. Maui Land & Pineapple Company, Inc., will work with the DWS for the development and construction of the new wells, which will be built in accordance with

DWS standards and all requirements of the Commission on Water Resource Management. Agreements concerning these planned improvements are currently not finalized.

Wastewater. The County of Maui's Lahaina Wastewater Reclamation Plant in Honokōwai services the Lahaina District. According to the Wastewater Reclamation Division, County of Maui, the Lahaina Wastewater Reclamation Plant has a design capacity of 9 million gallons per day (MGD). Currently, it is processing approximately an average daily flow of 4 MGD of sewerage. Of the remaining capacity, approximately 1.38 MGD are allocated to AMFAC, 1.80 are allocated to the Housing Finance Development Corporation and 303,350 gallons per day are allocated to Kapalua Land Co., Ltd (a subsidiary of Maui Land & Pineapple Company, Inc.), including purchasable capacity.

It is projected that Pulelehua will generate approximately 345,688 gallons per day of wastewater based on the current mix of uses (see Section 4.9.4).

Maui Land & Pineapple Company, Inc., or its subsidiaries currently envisions building the onsite sewer collection system within Pulelehua. The system will be designed to accommodate the anticipated flow and will consist of a gravity sewer system and sewer pump stations that will connect to a new sewer line located along the east (mauka) side of Honoapi'ilani Highway. The sewer line will continue south, mauka of the highway, approximately 3,500 feet and will connect directly to the Lahaina Wastewater Reclamation Plant.

Maui Land & Pineapple Company, Inc., is working with the Wastewater Reclamation Division to determine the capacity of the existing facilities to confirm that the Lahaina Wastewater Reclamation Plant can accommodate the wastewater generated from Pulelehua. These wastewater system improvements will need to be developed with the cooperation and consent of the County of Maui and conform to the applicable provisions of HAR, Chapter 11-62, "Wastewater Systems." At the time of this writing, agreements concerning these planned improvements are currently not finalized.

Honoapi'ilani Highway Connections and Street Sections. Pulelehua is designed as a walkable community following traditional town planning concepts. Circulation through the community was an important consideration during the design process. Vehicular circulation is to occur along a network of interconnected roads to disperse traffic throughout the neighborhood, but design of Pulelehua's internal roadways assumes that pedestrian movement is the key function of the town's streets.

Streets in Pulelehua are specifically designed to serve pedestrian mobility by achieving lower, safer, motor vehicle speeds within the community. This is often called traffic calming by design, thus preventing the need to install traffic humps and other devices later. Short block faces and parallel parking on most streets allow more efficient use of paved surfaces. Short blocks, buildings closer to the sidewalk, narrower street sections,

internal roundabouts, and on-street parking, all contribute to the traditional traffic calming effect.

Pulelehua's modified street grid system provides multiple routes (for cars, as well as pedestrians and cyclists) to reach a specific destination. Providing multiple routes increases connectivity to all points, decreases congestion by distributing traffic flows, increases emergency vehicle access by providing redundancy, and facilitates pedestrian movement by claming traffic and allowing for a mix of land uses within a walkable distance. In correspondence to Maui Land & Pineapple Company Inc, the County Fire Department stated: "We would like to commend the design committee for the multiple access options that residents & emergency responders will have."

An important element of Pulelehua's street system is the four additional connections to Honoapi'ilani Highway. The existing connection of Akahele Street with Honoapi'ilani Highway will provide a fifth access to Pulelehua. The location of these access points has been carefully considered and selected to provide evenly spaced intersections on Honoapi'ilani Highway which will facilitate Honoapi'ilani Highway traffic flow. As opposed to only providing a single access point to Pulelehua, the additional connections will also ease traffic flow on Honoapi'ilani Highway and within Pulelehua by distributing turning movements to and from Pulelehua at several points, thus eliminating long queuing within turn lanes. Maui Land & Pineapple Company, Inc., will work with the DOT on an agreement for the connections to the Highway.

To achieve walkability and traditional neighborhood design, internal streets within Pulelehua require slightly narrower dimensions than contemporary County practice. Specifically, street widths and parking lanes within Pulelehua will be narrower than the dimensions called for in the roadway design standards in Chapter 18.16 of the Maui County Code.

Maui Land & Pineapple Company, Inc., will build all Pulelehua internal roadways and they are working with the County Planning Department and Department of Public Works to allow the Pulelehua streets to be dedicated to the County upon completion.

~~The Fire Department has approved Pulelehua's street designs and stated they were very pleased with the design details and see no major hurdles with what has been proposed.~~

The Fire Department has attended several meetings over the past year regarding Pulelehua and has participated in discussions pertaining to roadway design and emergency access road widths and routes. Maui Land & Pineapple Company, Inc., and the Fire Department continue to work together to ensure Pulelehua roadways meet Fire Department requirements.

Medical Center. Maui Land & Pineapple is currently in discussions with Hawaii Health Systems Corporation (HHSC) to provide up to 15 acres in Pulelehua's south Māhinahina

neighborhood to support a medical facility as well as other medical related businesses like doctor's offices and clinics. It is uncertain at this time if this plan will move forward. A Needs Analysis and other steps will be taken before a final decision can be made.

HHSC's initial vision for the medical center would include a 30 to 50-bed long-term care facility. This facility may be based on the "Greenhouse Project" concept and be made up of four to five buildings. Each building could house eight to ten residents and would be approximately 6,000 square feet in size. The residents would enjoy separate living areas and bathrooms, situated around a common kitchen and dining area. These buildings could be designed to fit into the neighborhood in such as way as to look like large single-family homes.

In addition, an urgent/emergency care medical clinic could be developed. This facility would address critically injured or sick patients to provide stabilization and diagnostic services. The patients would then be released or transported to more full service facilities, such as Maui Memorial Medical Center.

The long-term care and urgent/emergency care medical facilities, as well as and other medical related businesses could be located relatively close to the Honoapi'ilani Highway to facilitate quick and easy access.

In the event the medical center moves forward certain assumptions and conditions within the Pulelehua community may change. The number of residential units for example will be reduced. Internal neighborhood traffic patterns may change slightly, but the intent will be to build the facilities within the fabric of the traditional town plan.

It is difficult to quantify the impacts of the medical center because it has not been designed. Based on conceptual information the medical facility will generate less demand for water, sewer and electricity than the houses that will be replaced in the plan. Other potential impacts may also be reduced accordingly.

Affordable Housing Provisions. Pulelehua is intended for the working families of West Maui. As noted in other sections, housing prices on Maui are escalating to the point where most residents cannot afford to purchase a home. Pulelehua will provide 51 percent of its homes as affordable homes.

~~To keep Pulelehua affordable for years to come, speculation in the resale of affordable homes will be discouraged with strong buy-back and limited appreciation provisions. In addition, at least 125 homes will be maintained as affordable rentals in perpetuity.~~

Maui Land & Pineapple Company, Inc., will continue to work with the County of Maui Department of Housing and Human Concerns ~~on developing~~ to develop an Affordable Housing Agreement ~~that will contain more specific information of the buy-back and limited appreciation provisions that will be used to prevent speculation in the resale of the~~

~~affordable units~~ and refine the Pulelehua's affordable housing requirements and restrictions (see Section 2.6.4). Maui Land & Pineapple Company, Inc., is also working with the Department of Housing and Human Concerns to receive affordable housing credits for Pulelehua.

Chemicals and Fertilizers. Maui Land & Pineapple Company's application of agricultural chemicals on the Pulelehua site has been in strict compliance with all laws, regulations, and manufacturer's specifications. However, Maui Land & Pineapple Company will conduct appropriate assessment and soils analyses as may be necessary to determine the possible impact to human habitation of the property due to potential low level residues of fertilizers, pesticides, fungicides, or herbicides that may be present in the soils of former pineapple fields of the Pulelehua site. Based on the results of the assessment and/or analyses, appropriate actions will be determined and implemented, including remediation, if necessary.