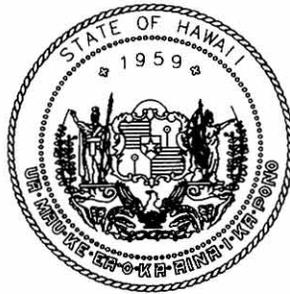


MAUI ISLAND PLAN

State of Hawai'i
Department of Hawaiian Home Lands



Hawaiian Homes Commission

Micah Kane, Chairman
Thomas Contrades, Kaua'i
Colin Kaalele, O'ahu
Quentin Kawananakoa, O'ahu
Trish Morikawa, O'ahu
Milton Pa, Moloka'i
Mahina Martin, Maui
Herring Kalua, East Hawai'i
Henry Cho, West Hawai'i



Prepared by PBR Hawaii
September 2004

MAUI ISLAND PLAN

7.0 SOUTH MAUI

A. REGIONAL OVERVIEW

The South Maui planning region encompasses three DHHL landholdings totaling 23,035.9 acres: Kahikinui, Kalihi/Kanahena, and 'Āhihi (Figure 7-1). The properties fall within three Maui County community plan regions: Kīhei-Mākena, Hāna, and Makawao-Pukalani-Kula (Figure 1-3). Although Kahikinui falls within both the Hāna Community Plan and Makawao-Pukalani-Kula Community Plan regions, for planning purposes, it is considered in relation to the Makawao-Pukalani-Kula Community Plan area because it is closer to the infrastructure of the Makawao-Pukalani-Kula Community Plan region than the Hāna Community Plan region. Kalihi/Kanahena and 'Āhihi are within the Kīhei-Mākena Community Plan region.

The properties in the South planning region are geographically remote with limited infrastructure and public services. The South region is characterized by light rainfall and volcanic soils. Elevations range from sea level to nearly 10,000 feet. In some areas, slopes range from 25 to 50 percent. Annual rainfall varies from 20 inches in *makai* areas of the region to 50 inches in the *mauka* regions. Coastal views include Kaho'olawe and Lāna'i.

Kula is the nearest major population center to Kahikinui. Kīhei is the nearest major population center to Kalihi/Kanahena and 'Āhihi.

1. REGIONAL INFRASTRUCTURE

Roads

The main access routes to the South region are from Kula/Pi'ilani Highway for Kahikinui and from Mākena Road for Kalihi/Kanahena and 'Āhihi.

Analysis

Because of the remoteness of these areas, it is unlikely that the County will improve or expand roads to these properties in the near future.

Water System

There is no existing water service to these properties, with the exception of a substandard County water line extending to the Kalihi/Kanahena tract.

Kula Water Line

The USGS topographic map also shows a Kula water line that is not referenced in the *County of Maui Infrastructure Assessment Update*. The original Kula Water Line began at Waikamoi and extended through Kula San, Paeahu, 'Ulupalakua, Kanaio, Kahikinui, and ended at the Mahamenui Water tank. This is a high level water line that reaches 3,350 feet at its highest point in Kula San. Since construction of the line, service to Kahikinui



Figure 7-1
 South Region
MAUILAND INVENTORY
 DEPARTMENT OF HAWAIIAN HOME LANDS
 NORTH

Legend
 ■ DHHL Properties

Source: Department of the Hawaiian Homelands

MAUI ISLAND PLAN

and the Mahamenui was cut and currently ends at Kanaio. The explanation for the cessation of service beyond Kanaio is not known.

According to minutes from a Department of Water Supply Public Hearing held on May 21, 2002, there had been discussions to renew the connection from Kanaio to Kahikinui to serve the existing DHHL Kahikinui Homesteads. However DWS currently has no plans to construct this extension.

Analysis

It is unlikely that County water systems will be improved or extended to any of the properties in the South region in the near future. However the Kula Water Line presents opportunities to renew water service to Kahikinui. DHHL should assess the Kula Water Line connection between Kanaio and Kahikinui whether this is feasible.

Wastewater Treatment and Disposal

Wastewater treatment and sewer disposal services are not provided to any of the properties in this region.

Analysis

Septic tanks would be used to treat wastewater within these properties.

Solid Waste Disposal

The County does not provide solid waste disposal pick up services to any of DHHL's properties in the South region.

Analysis

It is unlikely that the County will expand its service to the DHHL properties in the near future.

Electrical Service

Although electrical service is provided to most of the community plan areas within the South region, there is no electrical service to the DHHL properties.

Analysis

It is unlikely that electrical service will be extended to any of the DHHL properties in the South region in the near future.

2. SOCIO-ECONOMIC INFRASTRUCTURE

The regional socio-economic infrastructure information presented below reflects service to the current residents of Kahikinui.

MAUI ISLAND PLAN

Police

According to the *Public Facilities Assessment Update*, Kahikinui falls within the Maui Police Department's District 1 – Wailuku (Central). This police district is served by the Wailuku Station, which houses the MPD Headquarters for the entire County. The Wailuku Station is currently staffed with 111 budgeted uniformed patrol officers and an estimated share of 38 investigative officers. Approximately 32 uniformed officers and 10 investigative officers are on call to service the policing needs of the Makawao-Pukalani-Kula Community Plan region.

Analysis

According to the *Public Facilities Assessment Update*, the main problem facing the Kahikinui area is the distance from the Wailuku Station and the limited number of motorized beats serving the area. The Makawao-Pukalani-Kula Community Plan region encompasses a large region with varied topography and a limited road network. This can result in lengthy response times to incidents in outlying areas. For outlying regions this time lag can be considerable, leaving the Kahikinui tract with less than ideal levels of service.

By 2020, police service needs in the Makawao-Pukalani-Kula Community Plan region will increase by approximately 30 percent from the current allocation of 42 officers to 57. The 14 new officers will require a further addition of four new support positions (technical, clerical, and administrative) to be staffed at the existing Wailuku Station. In addition, total need in District 1 is projected to increase. To accommodate this growth, an expansion of the existing Wailuku Station may be required. Other alternatives include:

- Transferring patrol responsibilities for the Makawao-Pukalani-Kula Community Plan region out of the Wailuku Station to new police substations in those areas; and/or
- Expanding the service area of the planned Kihei-Mākena Station to include the Makawao-Pukalani-Kula Community Plan region.

An additional consideration for planning future police services is the number and distribution of patrol beats. The introduction of an additional patrol beat or new substation closer to the Makawao-Pukalani-Kula Community Plan region service population would significantly improve response times and service quality.

Fire

According to the *Public Facilities Assessment Update*, the Kahikinui tract falls within the coverage area of the Kula Fire Station. The Kula Fire Station serves portions of Pukalani, upper Kula, and the area towards Kēōkea.

Analysis

According to the *Public Facilities Assessment Update*, portions of southern Haleakalā, including Kahikinui, are beyond the maximum service radius of five road miles from the Kula Fire Station and therefore are not adequately covered. Narrow winding roads in parts of the area slow emergency vehicle response times and further worsen the situation.

MAUI ISLAND PLAN

Emergency Services

According to the *Public Facilities Assessment Update*, there is one 12-hour ambulance based in Kula that services the Makawao-Pukalani-Kula and Ha'ikū Community Plan regions.

Analysis

According to the *Public Facilities Assessment Update*, converting the 12-hour ambulance to a 24-hour service is a high priority (ranked seventh of the 10 highest priority areas island wide). Judging by population projections through 2020, one ambulance will continue to be sufficient to serve this area.

Health Care Services

Maui Memorial Medical Center, located in Wailuku, is the County of Maui's only critical care facility. The Kula Hospital provides limited acute care (two beds), inpatient skilled nursing and intermediate care, developmentally disabled inpatient services, Alzheimer's and dementia care, family practice clinic services, physical and occupational therapy, outpatient services, and a pharmacy.

Analysis

According to the *Public Facilities Assessment Update*, based on the estimated total demand, nine additional acute care (inpatient services provided to patients whose average length of stay is usually less than 30 days) beds will be needed in 2015 and 20 in 2020.

Schools

The 2002 *Public Facilities Assessment Update* lists the following schools in the Makawao-Pukalani-Kula region¹:

Public

Kula Elementary (18 miles)
Pukalani Elementary (22 miles)
Makawao Elementary (24 miles)
Kalama Intermediate (24 miles)
King Kekaulike High School (24 miles)

Private

Clearview Christian Girl's School (Grades 6-8) (18 miles)
Haleakalā Waldorf (Grades K-8) (18 miles)
Kamehameha Schools- Maui (Grades K-12) (22 miles)
Montessori School of Maui (Grades K-5) (24 miles)
Seabury Hall (Grades 6-12) (24 miles)
Carden Academy- Upcountry (Grades K-5) (24 miles)

¹Distances (approximate) given are from the Kahikinui tract to the listed school.

MAUI ISLAND PLAN

Analysis

The *2002 Public Facilities Assessment Update* projected the enrollment for schools in the Makawao-Pukalani-Kula Community Plan region to 2020 and made the following assessment:

Elementary Schools

Taken as a region, the elementary schools of Makawao-Pukalani-Kula appear to be adequate to meet demand throughout the planning period. This is consistent with current enrollment data for Makawao and Pukalani Elementary Schools, which are between 72 and 89 percent of capacity. It is also consistent with the high proportion of private school students in this region (35 percent of 2001 elementary-aged children).

Intermediate Schools

Using the Maui County forecast, demand for a second school increases in later years. However, Kalama Intermediate, with 2001 enrollment of 1,179 students, is already operating at 118 percent of its rated capacity of 998 students. Thus, the Maui County population forecast appears to underestimate the demand for this age group.

High Schools

Using the Board of Education design guideline of 1,000 students per high school, high school facilities appear adequate to 2020, although overcrowding will intensify at the existing facilities. However, the current high school has a rated capacity of 1,335 and an enrollment of 1,459 or 109 percent of capacity. At a rate of 1,000 students per high school, this region is already over capacity.

Recreation

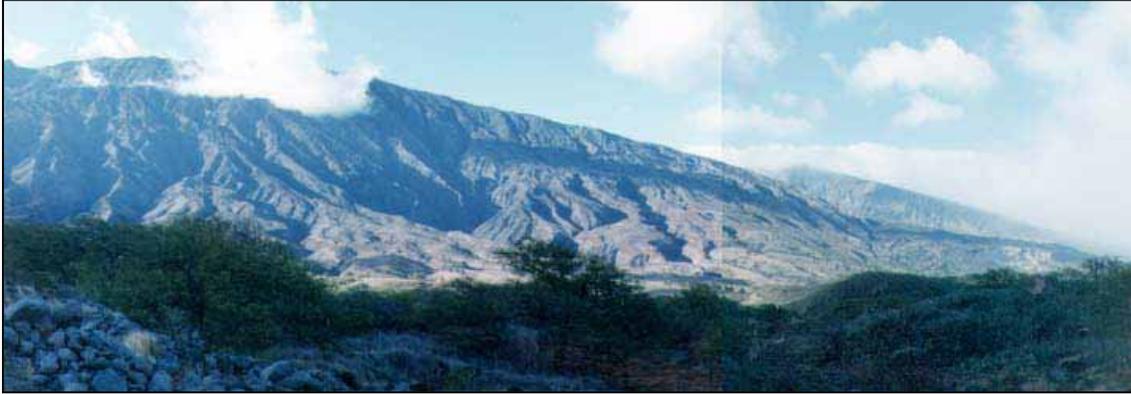
According to the *Public Facilities Assessment Update*, the Makawao-Pukalani-Kula Community Plan region provides its residents with a number of quality park facilities, despite its lack of an extensive park system in terms of acreage. This area has three neighborhood parks, five district parks, six tennis courts, 21 sports fields, two sports courts, five community centers, and three gyms.

Analysis

According to the *Public Facilities Assessment Update*, based on 10 acres of sub-regional park space per 1,000 persons, by 2020 the Makawao-Pukalani-Kula region will need to increase its aggregate park acreage by 180.1 acres to a total of 285.7 acres of sub-regional park space. In addition, the existing community park facilities will need to be supplemented by 13 tennis courts and two sports courts.

MAUI ISLAND PLAN

B. KAHIKINUI TRACT BASELINE INFORMATION



Kahikinui extends from the southern crest of Haleakalā toward the ocean. It represents DHHL’s largest landholding on Maui.

1. INVENTORY

TMK and Acreage

Kahikinui is 22,860 acres and is identified by TMK 1-9-01:03, 07, 08, and 11 (Figure 7-1).

Existing Uses

Although the majority of Kahikinui is undeveloped, DHHL initiated its *kuleana* program at Kahikinui, giving beneficiaries a chance to lease unimproved, off-grid homesteads. Approximately 75 homesteaders have accepted leases on these unimproved lands.

Revocable Permits:

Haleakalā Ranch- pasture use
TMK 1-9-01:11 129 acres

Haleakalā Ranch- pasture use
TMK 1-9-01:08 62 acres

Licenses:

Living Indigenous Forest Ecosystems - Stewardship and conservation of Kahikinui Forest
TMK 1-9-01:03 (portion) 7,050 acres

Ka Ohana O Kahikinui- Transitional beneficiary housing/caretakers’ living quarters
TMK 1-9-01:03 (portion) 1.5 acres

Adjacent Uses

Kahikinui is bound to the north by Haleakalā National Park, to the west by ‘Ulupalakua Ranch, to the south by the Pacific Ocean, and to the east by Haleakalā Ranch. Corresponding adjacent uses include ranchland and conservation land.

MAUI ISLAND PLAN

Proposed Future Surrounding Uses

Because of the area's remote nature and very limited infrastructure, there are no proposed future surrounding uses beyond the existing uses of ranchland and conservation land.

2. REGULATORY

State Land Use District

Kahikinui is in the Conservation District and the Agricultural District (Figure 7-2).

County Community Plan

The *Hāna Community Plan* designates the land of the tract as Conservation and Agricultural.

County Zoning

Maui County zoning for Kahikinui is Conservation and Agricultural.

Special Management Area

Coastal portions of Kahikinui are in the Special Management Area (Figure 7-3).

Underground Injection Control Line

The portion of the Kahikinui tract located *makai* of the four-wheel drive road is below the UIC. The remainder of the tract, located *mauka* of the four-wheel drive road is located above the UIC line (Figure 7-4).

3. PHYSICAL CHARACTERISTICS

Climate

Due to the tract's expansive acreage and wide range in elevation, temperatures vary from approximately 87 degrees Fahrenheit at sea level to approximately 60 degrees Fahrenheit or colder in the upper *mauka* regions.

Soils

The USDA Soil Conservation Service Soil Survey shows the following soils in the Kahikinui tract (Figure 7-5):

- Uma Loamy Course Sand, 40 to 70 percent slopes – This soil is used for pasture and wildlife habitat. The erosion hazard is severe.
- 'lo Silt Loam, 7 to 25 percent slopes – This soil is used for pasture, truck crops, and wildlife habitat. Permeability is moderately rapid. Runoff is slow to medium, and the erosion hazard is slight to moderate.
- Oanapuka Extremely Stony Silt Loam, 7 to 25 percent slopes – This soil is used for pasture and wildlife habitat.



Legend

- Agricultural District
- Conservation District
- Rural District
- Urban District
- DHHL Land Boundary

Source: State Land Use Commission

Figure 7-2
KAHIKINUI
State Land Use

MAUI LAND INVENTORY

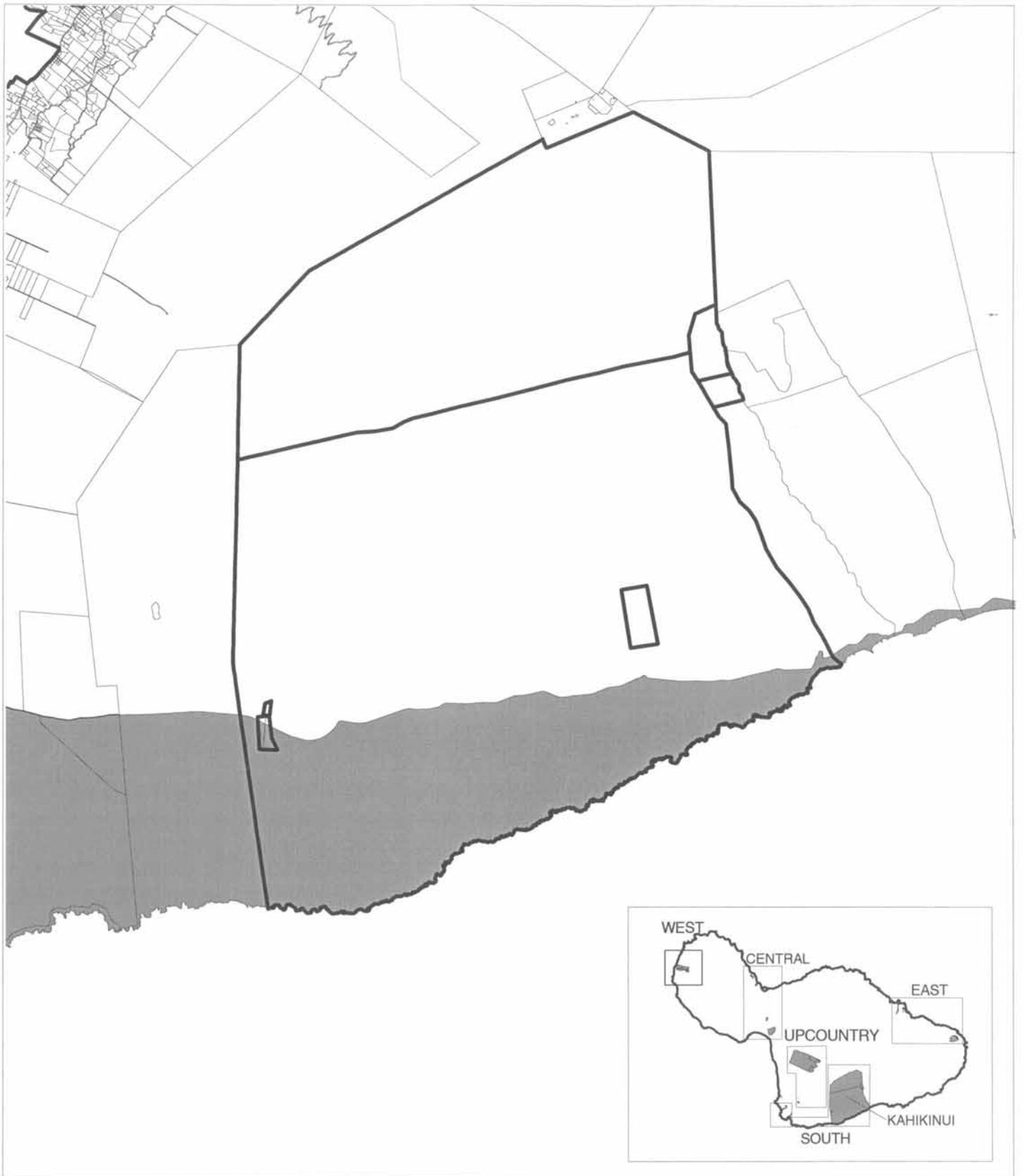
DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH



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Legend

-  Special Management Area
-  DHHL Land Boundary

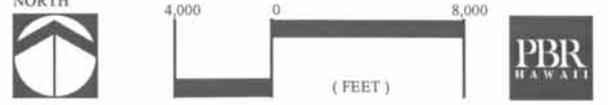
Source: County of Maui

Figure 7-3
 KAHIKINUI
 Special Management Area (SMA)
MAUI LAND INVENTORY

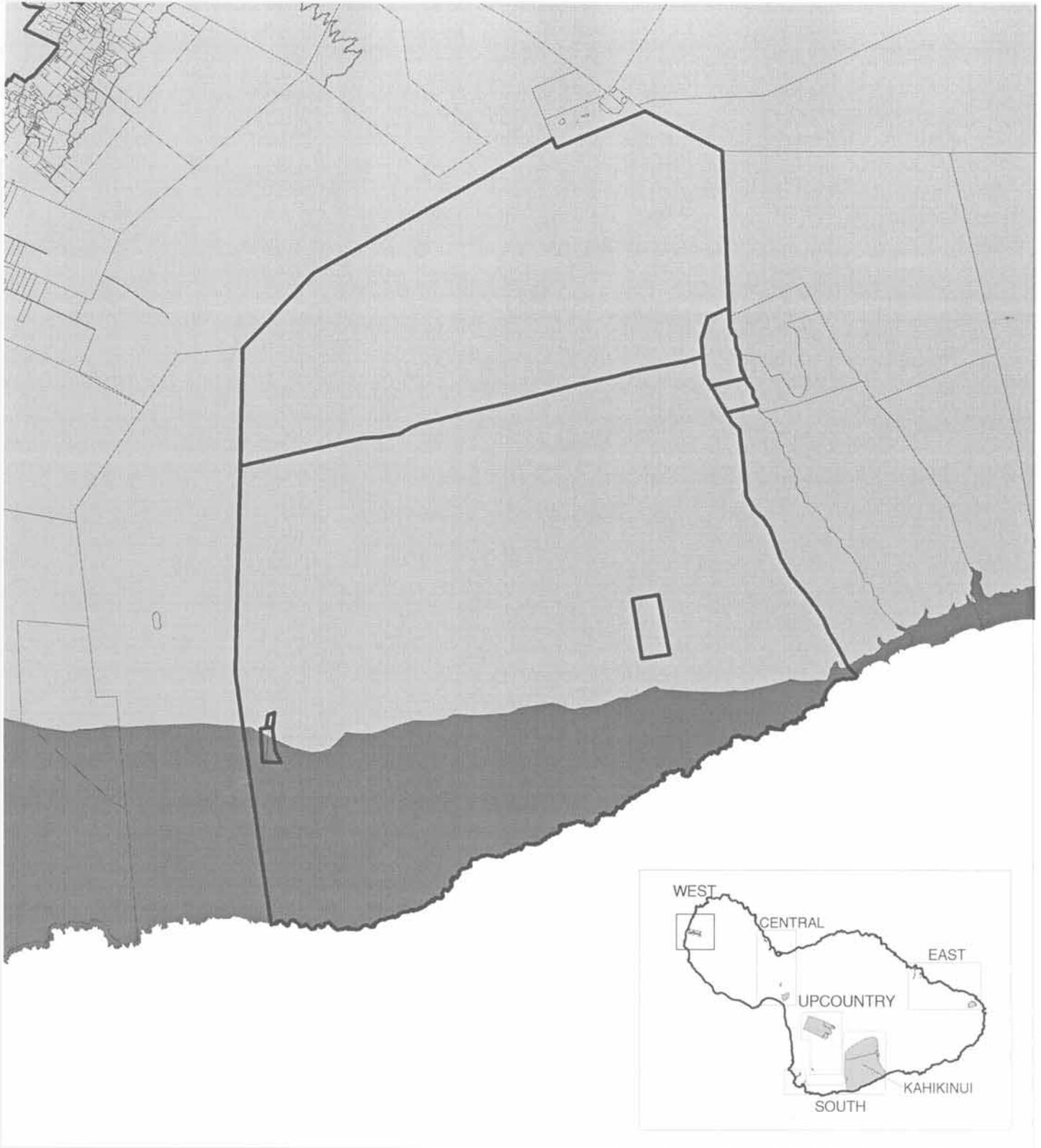
DEPARTMENT OF HAWAIIAN HOME LANDS

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 HAWAII



Legend

- Areas Below (Makai) Underground Injection Control Line
- Areas Above (Mauka) Underground Injection Control Line
- DHHL Land Boundary

Figure 7-4
KAHIKINUI
 Underground Injection Control (UIC) Areas Map
MAUI LAND INVENTORY

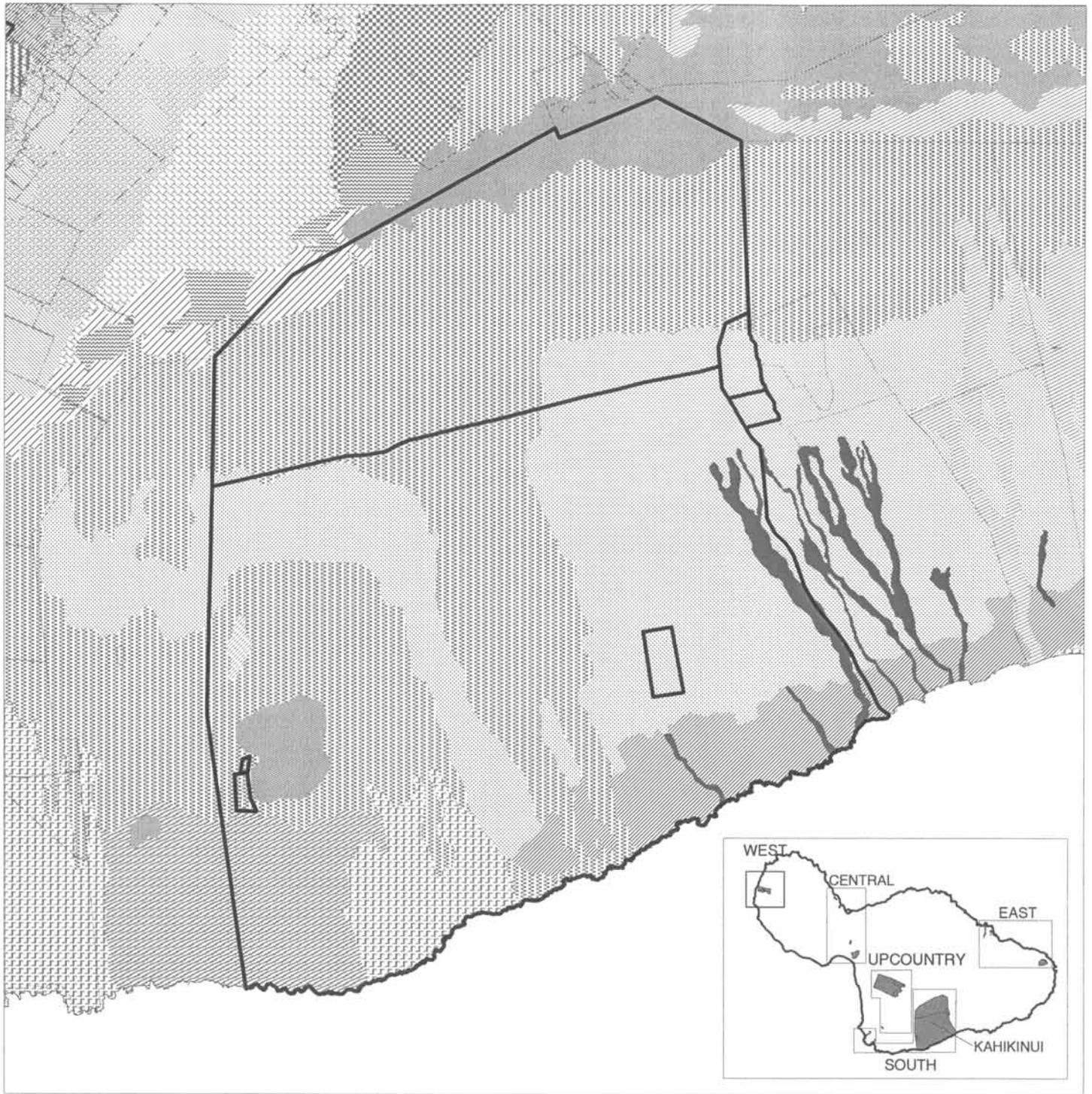
DEPARTMENT OF HAWAIIAN HOME LANDS

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Source: State Department of Health



Legend

-  Uma Loamy Coarse Sand, 40-70% Slopes
-  Puu Pa Very Stony Silt Loam, 7-40% Slopes
-  Io Silt Loam, 7-25% Slopes
-  Oanapuka Extremely Stony Silt Loam, 7-25% Slopes
-  Uma Loamy Coarse Sand, 15-40% Slopes
-  Waiakoa Extremely Stony Silt Clay Loam, 3-25% Slopes, Eroded
-  Very Stony Land
-  Lava Flows, Aa
-  Cinder Land
-  Rock Land
-  DHHL Land Boundary

Figure 7-5

KAHIKINUI

Soil Conservation Service Survey

MAUI LAND INVENTORY

DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH



MAUI ISLAND PLAN

- Uma Loamy Course Sand, 15 to 40 percent slopes – This soil is used for pasture and wildlife habitat. Permeability is very rapid. Runoff is slow, and the erosion hazard is slight to moderate.
- Waiakoa Extremely Stony Silt Clay Loam, 3 to 25 percent slopes, eroded – This soil is used for pasture and wildlife habitat. In most areas about 50 percent of the surface layer has been removed by erosion. Runoff is medium, and the erosion hazard is severe.
- Very Stony Land – This land type is used for pasture and wildlife habitat. Pasture improvement is very difficult because of the many stones.
- Lava Flows, ‘A‘ā – This miscellaneous land type is used for water supply, wildlife habitat, and recreation.
- Cinder Land – Although Cinder land commonly supports some vegetation, it has no value for grazing, because of its loose nature and poor trafficability. It is used for wildlife habitat and recreational areas.
- Rock Land – This land type is used for pasture, wildlife habitat, water supply, and urban development. Land is nearly level to very steep and has a high shrink-swell potential.

Agricultural Lands of Importance to the State of Hawai‘i

The State of Hawai‘i Department of Agriculture *ALISH* system of defining agricultural suitability classifies some of the soils of the Kahikinui tract as “Other Agricultural Land;” the remaining lands are not classified (Figure 7-6).

Ground/Surface Water

The USGS topographic map shows Kamole Stream, Kepuni Stream, Palaha Stream, and Manawainui Stream within the Kahikinui tract. Wai‘ōpai Stream is located along the eastern border of the tract. All of the streams are intermittent.

Rainfall

Depending on elevation, the tract receives approximately 20 (*makai* of Pi‘ilani Highway) to 50 (*mauka* of Pi‘ilani Highway) inches of rainfall per year (Figure 7-7).

Topography/Slope

The USGS topographic map shows that the elevation in Kahikinui ranges from sea level to approximately 9,760 feet. Slope varies from 20 to 50 percent (Figure 7-7).

Drainage

There are no improved drainage systems within the tract. The primary natural drainage ways within Kahikinui include Kamole Gulch, Kepuni Gulch, Palaha Gulch, Manawainui Gulch, and Wai‘ōpai Gulch (along the eastern border).



Legend

- Prime Agricultural Land
- Unique Agricultural Land
- Other Agricultural Land
- Unclassified Land
- DHHL Land Boundary

Figure 7-6

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

MAUI LAND INVENTORY

DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH

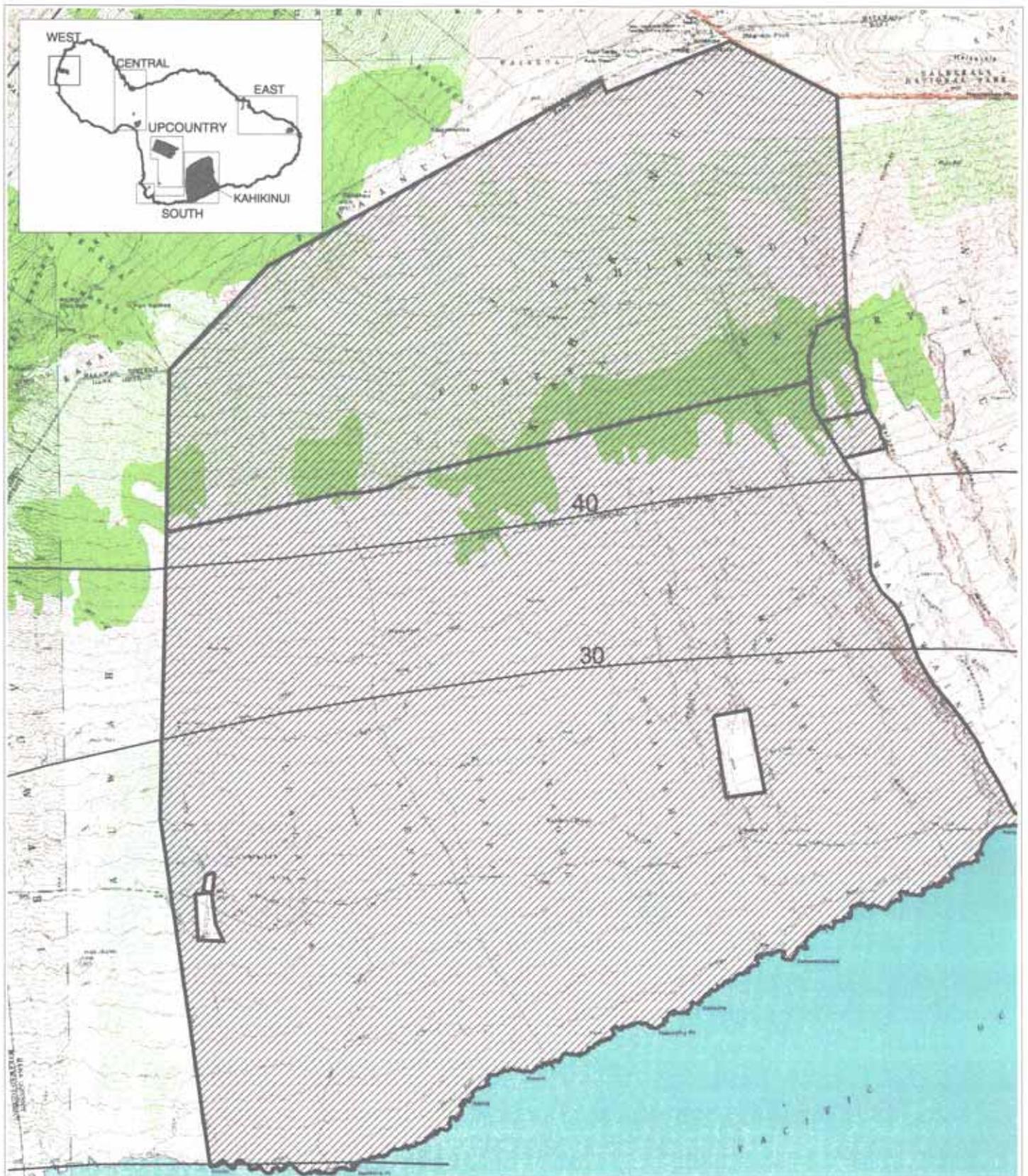


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Legend

-  DHHL Properties
-  Lines of Equal Average Annual Rainfall in Inches

Figure 7-7
 KAHIKINUI
 USGS Map with Rainfall Isohyets
MAUI LAND INVENTORY

DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH




(FEET)



MAUI ISLAND PLAN

Flood Zone

The Flood Insurance Rate Map indicates that Kahikinui is in Zone X, which designates areas determined to be outside of the 500-year floodplain (Figure 7-8). Flooding can occur along the Kahikinui coastline, primarily due to surf surge.

Noise

Due to the rural, undeveloped nature of the area, there are no major sources of noise, with the possible exception of helicopters from sightseeing tours.

4. ENVIRONMENTAL CHARACTERISTICS

Historic Sites/Archaeology/Cultural Resources

Kahikinui is rich in Hawaiian culture and history. Past reports indicate that Kahikinui is virtually unique within the Hawaiian Islands as an entire *moku* with its archaeological and cultural landscape essentially preserved intact (Kirch 1997).

Kahikinui is one of the rare places in modern Hawai'i where massive urbanism, resort development, and/or commercial cultivation have not touched the land. By the mid-1800s the majority of residents had moved elsewhere and Kahikinui was largely abandoned. Relatively low-impact ranching dominated the district since that time. As a result, most of the archaeological landscape is still intact. Shoreline sites still exist, as well as sites located high in the remnant dryland forest. Archaeological surveys have found important religious sites, residential sites, and a previously unknown *hōlua* slide complex.

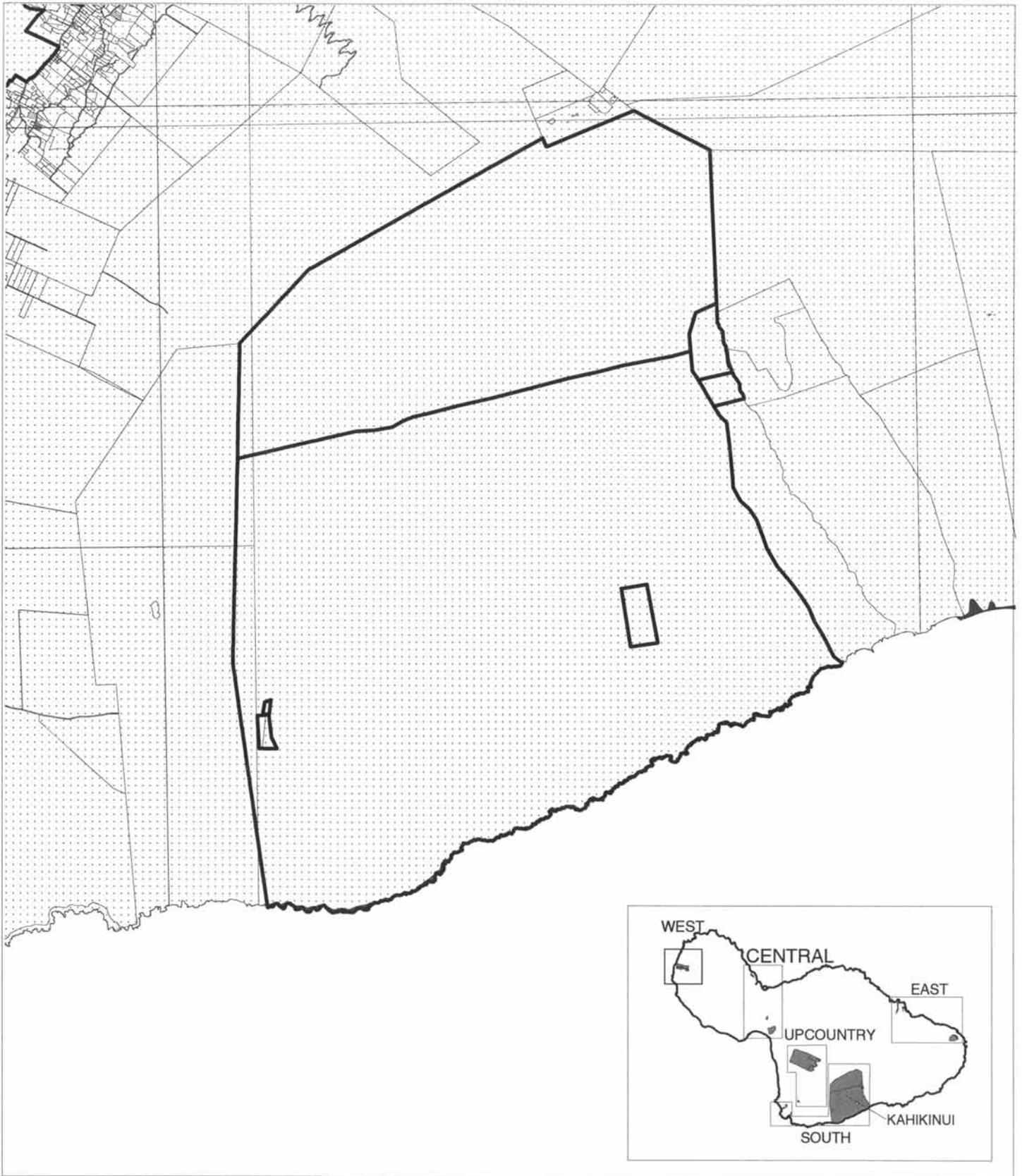
As an example of the number of archaeological sites in the region, an inventory survey conducted by the State Historic Preservation Division recorded 563 features grouped into 309 sites (Dixon et al 2000). This survey covered more than 2,000 acres in the three *ahupua'a* of Kīpapa, Nakaohu, and Nakaaha, which are a part of the DHHL's *kuleana* homestead project.

Endangered Species

The following species found in the Kahikinui tract have been identified as candidates or endangered by the Hawai'i Natural Heritage Program *Biological Conservation Datasystem (BCD)* for Department of Hawaiian Home Lands and the U.S. Fish and Wildlife Service.

Candidates

- *Canavalia pubescens*, 'Āwikiwiki
- *Cyanea obtusa*, *Haha*
- *Cyrtandra oxybapha*, *Ha'iwale*
- *Nothoestrum latifolium*, 'Aiea
- *Ranunculus mauiensis*, *Makou*



Legend

- ZONE A:**
 Special Flood Hazard Areas Inundated by 100-Year Flood
 No Base Flood Elevations Determined

- ZONE X:**
 Areas Determined To Be Outside 500-Year Floodplain

- DHHL Land Boundary**

Source: Federal Emergency Management Agency

Figure 7-8
 KAHIKINUI
 Flood Insurance Rate Map

MAUI LAND INVENTORY

DEPARTMENT OF HAWAIIAN HOME LANDS



MAUI ISLAND PLAN

Endangered

- *Bidens micrantha* spp *kalealaha*
- *Bonamia menziesii*
- *Branta sandvicensis*, *Hawaiian Goose*
- *Clermotia lindseyana*, *‘Ōhāwai*
- *Diellia erecta*, *Asplenium-Leaved Dellia*
- *Diplazium molokaiense*
- *Geranium arboreum*, *Hawaiian Red-Flowered Geranium*
- *Geranium multiflorum*, *Nohoanu*
- *Lipochaeta kamolensis*, *Nehe*
- *Loxops coccineus ochraceus*, *Maui ‘ākepa*, *Honeycreeper*
- *Melicope knudsenii*, *Alani*
- *Neraudia sericea*
- *Nototrichium humile*, *Kulu‘ī*
- *Phyllostegia mollis*
- *Zanthoxylum hawaiiense*, *A‘e*

Critical Habitat

The U.S. Fish and Wildlife Service has designated portions of the tract as critical habitat for the following species (Figure 7-9):

- *Alectryon macrococcus*, *Māhoe*
- *Argyroxiphium sandwicense* ssp. *macroceph*, *‘Āhinahina*
- *Bidens micrantha* ssp. *kalealaha*, *Ko‘oko‘olau*
- *Clermontia lindseyana*, *‘Ōhāwai*
- *Diellia erecta*, *Asplenium-leaved diellia*
- *Diplazium molokaiense*
- *Flueggea neowawraea*, *Mēhamehame*
- *Geranium arboreum*, *Hawaiian Red-Flowered Geranium*
- *Geranium multiflorum*, *Nohoanu*
- *Lipochaeta kamolensis*, *Nehe*
- *Melicope knudsenii*, *Alani*
- *Melicope mucronulata*, *Alani*
- *Nerauddia sericea*
- *Nototrichium humile*, *Kulu‘ī*
- *Phlegmariurus mannii*
- *Phyllostegia mollis*



Legend

 USFWS Critical Habitat Areas

 DHHL Kahikinui Tract

Figure 7-9
 KAHIKINUI
 USFWS Critical Habitat Areas
MAUI LAND INVENTORY

DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH



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MAUI ISLAND PLAN

5. INFRASTRUCTURE

The tract has no water, electricity, or sewer services. Existing homesteaders use independent living techniques, including trucking in water, using gas stoves and refrigerators, and using solar energy for electricity.

Access/Roadways

Kula Highway becomes Pi'ilani Highway in the 'Ulupalakua area. Access to the tract is from Pi'ilani Highway. A partially improved dirt four-wheel drive road provides access within Kahikinui.

Water Service (Lines, Wells)

The County Department of Water Supply (DWS) does not provide water service to Kahikinui. Homesteaders currently truck in their water.

Kula Water Line

The USGS topographic map shows the Kula Water Line, which transverses the Kahikinui tract. This water line is not referenced in the *County of Maui Infrastructure Assessment Update*. The original Kula Water Line began at Waiakamoi and extended through Kula San, Paeahu, 'Ulupalakua, Kanaio, Kahikinui, and ended at the Mahamenui water tank. This is a high level water line that reaches 3,350 feet at its highest point in Kula San. Since construction of the line, service to Kahikinui and the Mahamenui water tank was cut and now ends at Kanaio. An explanation for why the line was cut at Kanaio is not available.

According to the minutes from a Department of Water Supply Public Hearing held on May 21, 2002, there had been discussions to renew the connection from Kanaio to Kahikinui to serve the existing DHHL Kahikinui Homesteads. However, DWS currently has no plans to construct this extension, so it is unlikely that the Kula Water Line will be restored to provide water to Kahikinui.

Wastewater Treatment and Disposal

Septic systems are used within Kahikinui as wastewater treatment and disposal services are not provided.

Solid Waste Disposal

The County does not provide solid waste refuse disposal pick-up services to this area. Homesteaders truck out solid waste and dispose of it at the Central Maui Landfill.

Telephone Service

Sandwich Isles Communications provides telephone service to Kahikinui.

MAUI ISLAND PLAN

Electrical Service

No electrical service is provided to Kahikinui. MECO transmission lines do not extend into the area from Hāna or Kula. Solar, wind, and gas are used to provide energy. It is unlikely that electrical service will be extended to any of the tracts in the South region in the near future.

Cable Television Service

Oceanic Cable does not provide service to this tract.

C. KAHIKINUI TRACT ANALYSIS

Kahikinui is remote and has no infrastructure service. The 75 *kuleana* lots on Kahikinui are off-grid and do not have water, electric, sewer, or cable systems. Of the 75 *kuleana* lots, only a handful of residents permanently live in Kahikinui. These residents have built homes on the rough Kahikinui terrain and live a life that is far removed from the typical Maui resident. The homesteaders use independent living techniques to meet their most basic need. Conventional techniques such as water catchment, windmills, and septic tanks are used, however several progressive independent techniques have also been developed, including “fog-drip” to capture water from passing clouds, composting toilets, and photovoltaic solar shingles.

Water

Rainfall levels across the tract are too low to recommend the use of catchment systems, which are typically used in areas that receive more than 60 inches of annual rainfall. An assessment of the Kula Water Line is needed to determine the condition of the line. Reconnecting Kahikinui to Kanaio would provide water to *kuleana* lots in Kahikinui.

Soils and Topography

A portion of Kahikinui’s soil is suitable for agricultural use according to the Soil Conservation Service Survey and *ALISH* classification. These soils present opportunities for agricultural use on the tract. Any proposed uses on the tract should be located on the slopes ranging from zero to 20 percent. Higher slopes constrain development and increase overall development costs.

Archaeology

Any proposed uses on the tract should be sensitive to existing archaeological sites. According to baseline data, only portions of Kahikinui have been surveyed. Prior to development of any proposed use on the tract, an archaeological survey is recommended to assess the number of sites in that specific location, if the location has not already been surveyed.

MAUI ISLAND PLAN

Ka Ohana O Kahikinui

Ka Ohana O Kahikinui (Ka Ohana) is the homestead association for Kahikinui and is the driving force behind the development of the Kahikinui tract. Ka Ohana was integral in the original conception of the kuleana lease program in Kahikinui.

Ka Ohana's forest protection plan initiated the creation of the Kahikinui Forest Reserve and prompted DHHL to license this reserve to Living Indigenous Forest Ecosystems, Inc. (LIFE), a non-profit organization of citizens and Kahikinui homesteaders independent from other community development entities. LIFE was granted the license for the 7,050-acre Kahikinui Forest Reserve in 1996.

Ka Ohana has also been instrumental in surveying Kahikinui's archeological sites and preserving Kahikinui's rich history. In addition, Ka Ohana has plans for a coastline protection plan that will address the restoration and protection of Kahikinui's coast.

Recommendation

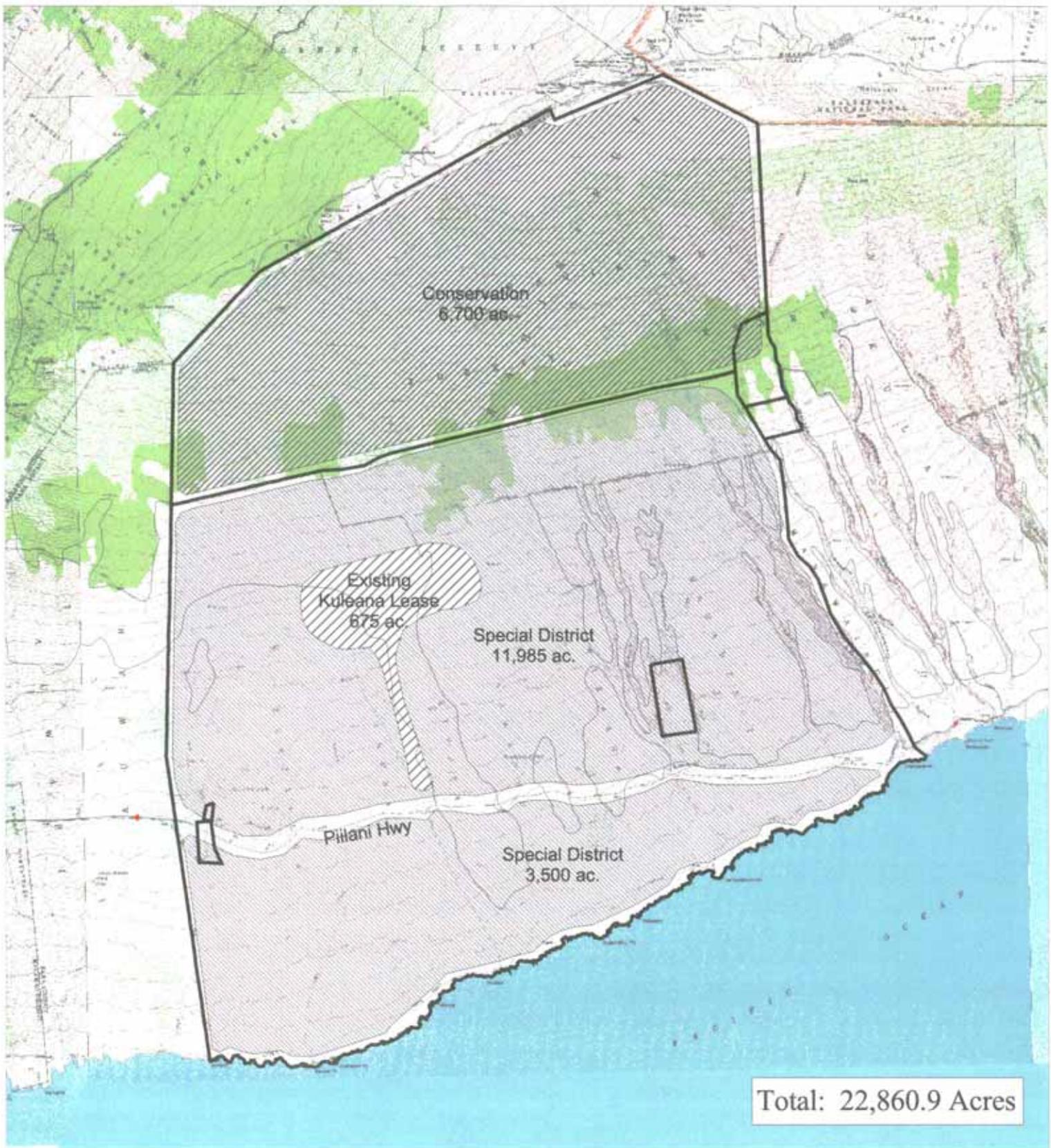
Protection of Kahikinui's natural resources is important to Ka Ohana O Kahikinui. Ka Ohana's past work and future plans reflects the group's commitment to the tract. Ka Ohana has worked with DHHL in planning Kahikinui and should continue to do so. Proposed uses should be sensitive to the past efforts of the Ka Ohana O Kahikinui in preserving and restoring Kahikinui's resources. Based on Ka Ohana's involvement on the Kahikinui tract, as well as factors related to the tract's remoteness and lack of infrastructure, the tract is designated as a Special District.

According to the DHHL *General Plan* (2002), the special district designation is applied to areas requiring special attention because of unusual constraints and/or opportunities, natural hazard areas, open space, raw lands far from infrastructure (and difficult to improve), mixed uses, and greenways. The factors illustrated in the baseline data and analysis sections are considered unique and unusual constraints that require special attention by DHHL.

The special district designation allows opportunities for Ka Ohana O Kahikinui and DHHL to guide the development or preservation of Kahikinui.

D. KAHIKINUI TRACT FINAL PLAN

15,485 acres of the 22,860 acres at Kahikinui are designated Special District (Figure 7-10). DHHL, together with the current residents/stewards of Kahikinui, can plan the tract accordingly. The remaining acres are designated conservation and encompass the existing Kuleana homestead.



Legend
 DHHL Land Boundary

Land Use Summary	Approx Acres
Conservation	6,700
Special District	15,485
Kuleana Lease	675
Total	22,860

Figure 7-10
 KAHIKINUI
 Land Use Plan
MAUI LAND INVENTORY
 DEPARTMENT OF HAWAIIAN HOME LANDS

NORTH

 3000 0 6000
 (FEET)

Source: United States Geologic Survey
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