

WAI'ANAE AND LUALUALEI



REGIONAL COMMUNITY DEVELOPMENT PLAN
JANUARY 2008

DEPARTMENT OF HAWAIIAN HOME LANDS



Contents

Micah A. Kane
Chairman
Hawaiian Homes Commission

COMMISSIONERS
Billie Baclig (East Hawai'i)
Stuart Hanchett (Kaua'i)
Malia Kamaka (West Hawai'i)
Francis K. Lum (O'ahu)
Donald S. M. Chang (O'ahu)
Perry Artates (Maui)
Trish Morikawa (O'ahu)
Milton Pa (Moloka'i and Lāna'i)

Ben Henderson
Deputy to the Chairman

Kaulana Park
Executive Assistant

DEPARTMENT OF HAWAIIAN HOME LANDS
1099 Alakea Street, Suite 2000
Honolulu, Hawai'i 96813

www.hawaii.gov/dhhl

Office of the Chairman
Telephone: (808) 586-3800
Facsimile: (808) 586-3899

Mailing Address:
P.O. Box 1879
Honolulu, Hawai'i 96805

Planning Office
Telephone: (808) 586-3836
Facsimile: (808) 586-3843

Introduction	1
Public Officials and Political Boundaries	2 - 3
Community Leaders and Stakeholders	4
DHHL Partnering Benefits and Examples	5
History and Cultural Aspects of the Area	6
Hawaiian Home Lands in Wai'anae and Lualualei Ahupua'a	7
Regional Map	8
Zoning and Regional Demographics	9
Major Land Owners	10
Development Characteristics and Trends	11
Roads and Transit - Infrastructure and Characteristics	12 - 13
Water - Infrastructure and Characteristics	14 - 15
Wastewater/Sewer - Infrastructure and Characteristics	16 - 17
Drainage - Infrastructure and Characteristics	18 - 19
Regional Services and Public Facilities Map and Characteristics	20 - 21
Development Projects Map and Characteristics	22 - 23
Priority Project: Second Access Road	24
Priority Project: Kaupuni Park	25
Priority Project: Wai'anae Kai Park	26
Contact Information	27



The Department of Hawaiian Home Lands' (DHHL) mission is to manage effectively the Hawaiian Home Lands Trust and to develop and deliver lands to native Hawaiians. DHHL works in partnership with other government agencies, private sector entrepreneurs, and non-profit organizations to carry out this mission. This work includes collaborative visioning, long-range planning, resource allocation, and project-specific joint ventures. DHHL believes that these partnerships benefit not only its native Hawaiian beneficiaries but the larger community as well.

This report has been prepared to facilitate the work of such partnerships as DHHL and others develop lands in Wai'anae and Lualualei. Specifically, this report is intended to:

- Help identify opportunities for partnerships with DHHL in the development of its Wai'anae and Lualualei lands;
- Provide information essential to the planning of projects, services, and entrepreneurial ventures;
- Identify key issues, opportunities, and constraints affecting regional development and area improvements;
- Assist in the efficient allocation of resources by DHHL and its partners; and
- Identify priority projects that are essential to moving development and community improvement projects forward.

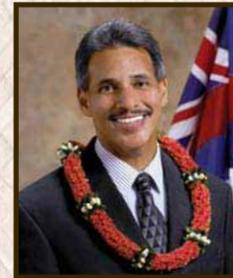
DHHL knows that regional development is a dynamic process with constantly changing opportunities and emerging issues. With that in mind, this document will be regularly updated as development projects progress and priorities change.



Elected Officials



Linda Lingle
Governor



Duke Aiona
Lt. Governor



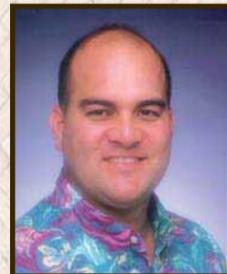
Daniel K. Inouye
U.S. Senator



Daniel K. Akaka
U.S. Senator



Mazie K. Hirono
*U.S. Representative
Congressional District 2*



Micah Kane
*Hawaiian Homes Commission
Chairman*



Trish Morikawa
*Hawaiian Homes Commission
O'ahu Commissioner*



Francis K. Lum
*Hawaiian Homes Commission
O'ahu Commissioner*



Donald S. M. Chang
*Hawaiian Homes Commission
O'ahu Commissioner*



Haunani Apoliona
OHA Chairperson



Mufi Hanneman
Honolulu Mayor



Todd K. Apo
*City Council Member
District 1*



Colleen Hanabusa
*State Senatorial
District 21*



Maile S. L. Shimabukuro
*State House of Representatives
District 45*



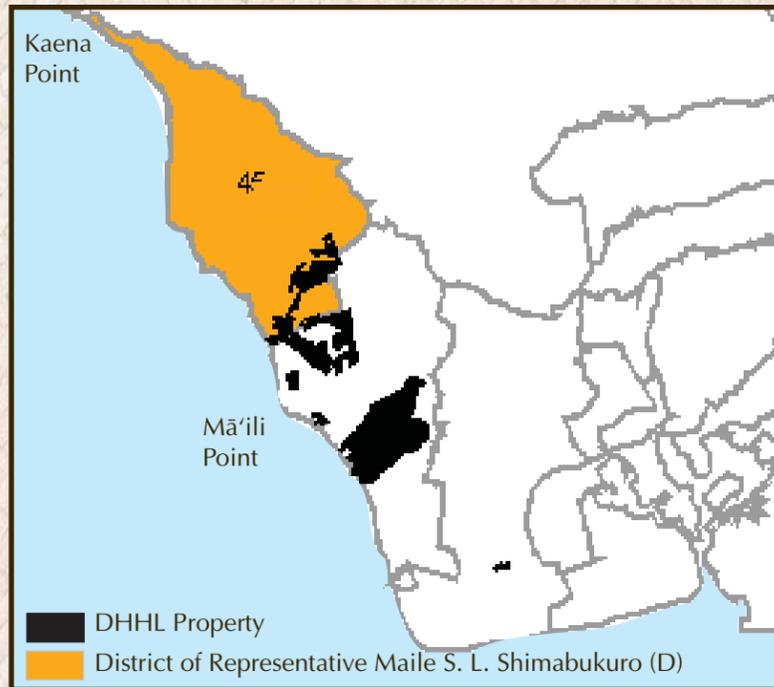
Walter M. Heen
OHA Trustee, O'ahu Chair

Disclaimer: The information and recommendations expressed in this report are not necessarily endorsed by the people depicted on this page. These same people cannot be held liable for the information presented or the results of the report.

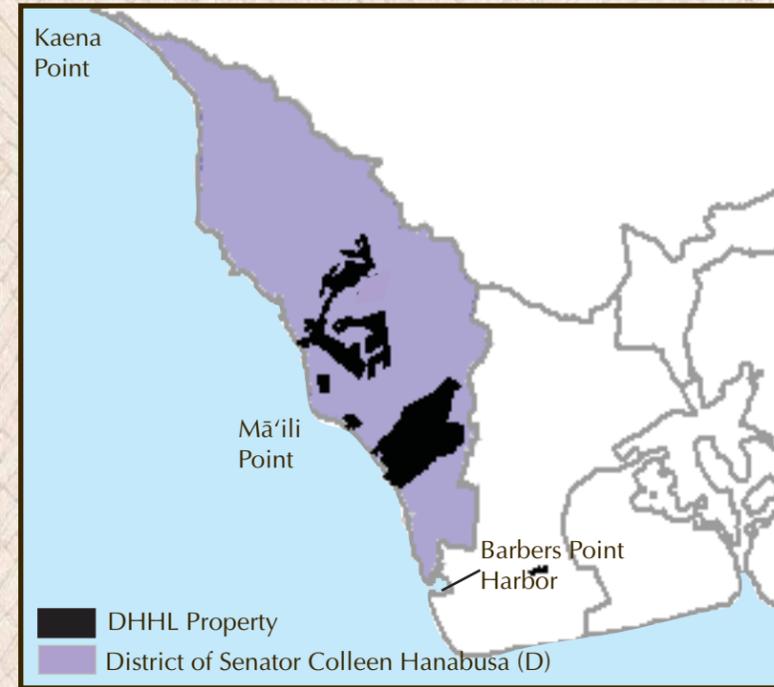


Political Boundaries

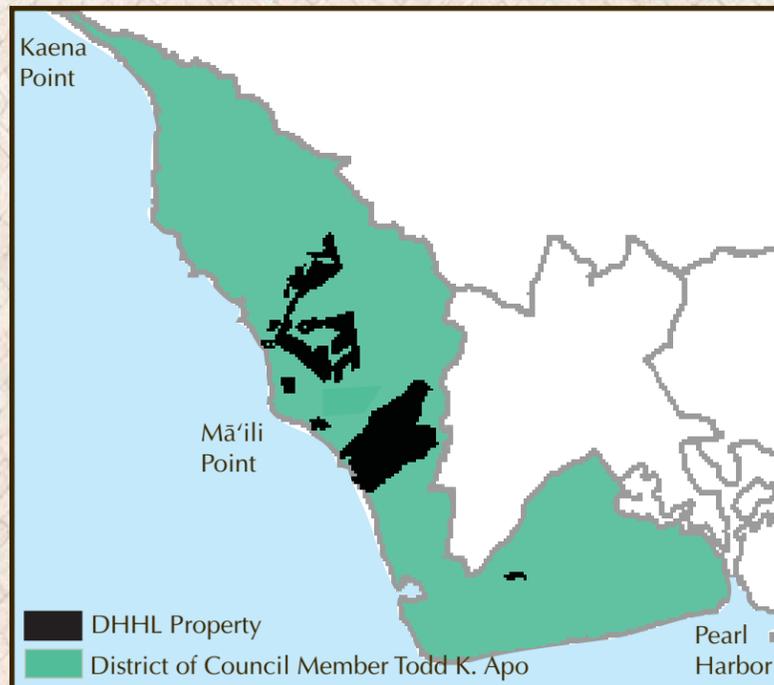
State House of Representatives District 45



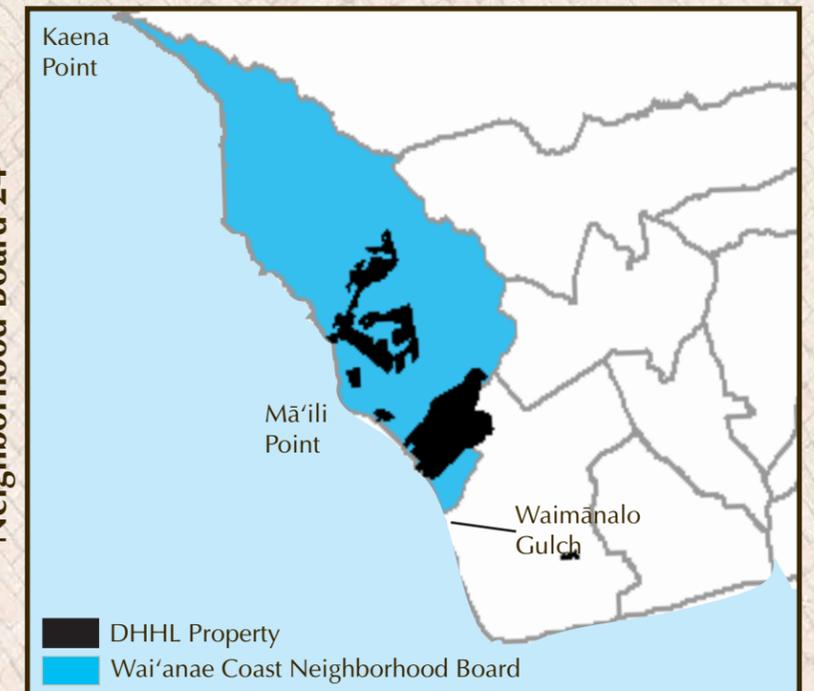
State Senatorial District 21



City Council District 1



Neighborhood Board 24



Community Leaders and Stakeholders

Wai'anae Coast
Neighborhood Board #24
Patty Teruya
Chair



Wai'anae Harbor
William Aila
Harbor Master



Wai'anae Valley Homestead
Community Association
Pikake Pelekai
President



Wai'anae Kai Homestead
Community Association
Herbert Hew Len
President



Ka'ala Farm
Eric Enos
Program Director



Wai'anae Coast Community
Alternative Development
Corporation (WCCADC)
Puanani Burgess
Executive Director



Wai'anae Coast
Comprehensive Health Center
Richard Bettini
CEO



Kamehameha Schools
Dee Jay A. Mailer
CEO



Wai'anae Coast Neighborhood Board Wai'anae Representative Wai'anae Representative Wai'anae Representative Mā'ili Representative Mā'ili Representative Mā'ili Representative	Georgette "Jo" Jordan David Brown Suzanne E. Leonida Cynthia K. L. Rezentes Kehaulani Hew Len Denise Saylor
Koa Mana (citizen group)	Glen Kila
Mālama Mākua	Fred Dodge
Wai'anae Coast Culture and Arts, Director	Agnes Cope
Hawai'i Coalition of Christian Churches	Pastor Wade "Boo" Soares
Leeward Community College at Wai'anae, Coordinator	William Akama, III
Wai'anae Schools Complex, Superintendent	Mamo Carreira
Wai'anae and Nānākuli Boys & Girls Club, Director	Puamamo Wa'a
MA'O Farm (youth training program), Managers	Gary and Kukui Maunakea-Forth
Mikilua Farm Bureau, President	Leonard Oshiro
Kokua 'Ohana, Program Supervisor	Amanda Masuyama

Community Planners

Consuelo Foundation, CEO

The Schuler Division of D.R. Horton, Inc., President

Queen Lili'uokalani Trust, CEO

James Campbell Company LLC, CEO

Naval Magazine Pearl Harbor, Commanding Officer

The organizations listed below have also been recognized by the Wai'anae community as important leaders and stakeholders:

Opelu Fishermen	Kaiser Permanente	HECO
Ke Ola Mamo	Wai'anae Civic Club	PVT
Tamura's Supermarket	Foodland	Okimato

Disclaimer: The information and recommendations expressed in this report are not necessarily endorsed by the people depicted on this page. These same people cannot be held liable for the information presented or the results of the report.



DHHL Partnering Benefits and Examples

DHHL is working in partnership with other government agencies, the private sector, and community organizations to develop its lands and improve community life. DHHL believes that partnerships are an effective way to leverage resources and capital investments, mitigate undesirable impacts of development, coordinate area growth, reduce risks in large scale community projects, and create broad community benefits.

These partnerships allow for better prioritization and coordination of infrastructure improvement and the development of regional public and residential facilities. This coordination helps individual organizations achieve their goals while bringing long-term benefits to the community and region.

DHHL brings to these partnerships:

- Land for development in strategic locations
- Potential use of tax-exempt financing
- Access to legislative appropriations
- Access to federal funding such as HUD, USDA, SBA
- Flexibility in the application of development standards, zoning, and design
- Cultural understanding and resources

DHHL has participated in a number of successful partnerships. A few of these are highlighted here.

1. Residential Partnerships

Through partnerships DHHL has reduced the cost of homes to low-income beneficiaries. DHHL has done this by sharing in the cost of infrastructure, helping to secure tax credits, and using self-help methods of construction. Partnerships in Kapolei resulted in 70 Rent-to-Own units constructed by Mark Development using low-income tax credits and 45 self-help homes constructed with Menehune Development and Honolulu Habitat for Humanity. A partnership with Kaua'i Habitat for Humanity resulted in 20 homes in Hanapēpē and a partnership with Kōkua Housing resulted in 41 self-help homes at La'i'opua in Kona. In these types of partnerships, DHHL provides the land, secures federal grants, and provides access to, or assistance in, acquiring tax credits, subsidies, or other financing.

2. Infrastructure Partnerships

DHHL has partnered with county governments and utility providers on infrastructure improvements that benefit the entire community. DHHL has participated in water-system development with the counties by providing funding, land easements, and access to federal and state programs. Examples include the extension of the Lower Kula Water System on Maui, the Waimea Irrigation System and the Maku'u Water System on Hawai'i, and the Waiawa-Waipahu Water System on O'ahu. DHHL has also provided numerous easements over its lands to electrical, water, telephone, and cable companies to service both homestead areas and the general public.

3. Public Facilities Partnerships

DHHL has participated in a number of partnerships involving public facilities and community resources. The most notable partnerships have brought together Hawaiian agencies and non-profit organizations into a multi-service complex where a broad range of programs are housed to serve the public. Such multi-service complexes have been built on Hawaiian Home Lands in partnership with Kamehameha Schools, Queen Lili'uokalani Children's Center, Alu Like, Papa Ola Lōkahi, the Office of Hawaiian Affairs, Hawaiian community organizations, and the counties. These multi-service complexes are housing preschools, offices, meeting facilities, health clinics, and activity centers. For example, the Paukukalo homestead on Maui is served by a County park on DHHL land next to a community hall, the DHHL district office, the Hawaiian Community Assets' homeownership counseling center, and a Kamehameha preschool.

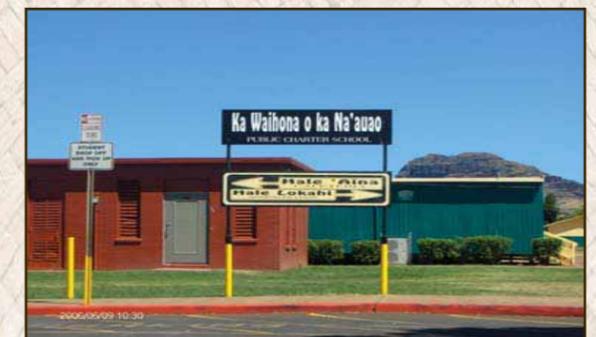
Through a series of management partnerships with DLNR and The Nature Conservancy, unique ecosystems and historic sites are being protected. Examples include the Hakalau Forest Reserve, the 'Āina Hou Management Area, the Pala'au and Mo'omomi preserves, the Kalaupapa peninsula, and the Kamā'oa-Pu'u'eo National Historic District where koa forests, endangered plants and animals, and native species are being protected for future generations. Beachfront recreational values are protected through management agreements with the City and County of Honolulu for Makapu'u, Kaiona, Kaupō, Waimānalo, and Nānākuli beach parks.



Self-Help Housing in Kapolei



Community Center in Waimānalo



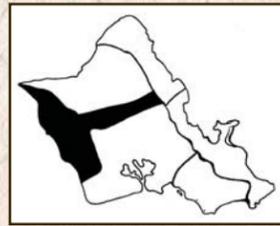
Ka Waihona o ka Na'auao Charter School,
Located on the Former Nānāikapono
Elementary School Site in Nānākuli



History and Cultural Aspects of the Area

Wai'anae

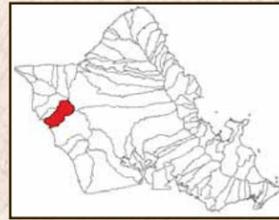
The name Wai'anae means waters (*wai*) of the striped mullet (*'anae*). As a location, Wai'anae refers to both the larger district, which encompasses the western coast of O'ahu, as well as the specific ahupua'a. Traditionally, the area was designated as a moku, which included a narrow piece of land that extended across the middle of the island, known as Wai'anae uka. See maps below:



Wai'anae Moku



Wai'anae District



Wai'anae Ahupua'a

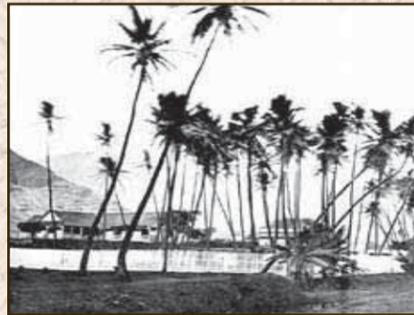
Pre-Contact

The entire Wai'anae District shares a common cultural history based on strong ties to the land, as evidenced by the centuries of wet and dry land agriculture and productive fisheries. Due to its location on the dry, leeward side of the island, the ancient Hawaiians who lived there were forced to adapt to the area's frequent drought conditions.

Sophisticated terrace systems were used to minimize water use while maximizing food production and preserving water quality. Significant evidence of taro lo'i as well as *wahi pana* (sacred places) remain throughout the area. The upper section of Wai'anae Valley has an abundance of these terraced lo'i, some of which are currently being restored for use.

The most sacred place in Wai'anae is generally considered to be Mount Ka'ala, easily recognizable as the tallest point of the Wai'anae ahupua'a. The peak reaches 4,040 feet, which is also the tallest point on O'ahu. "Ka'ala was the guardian of the road to the west, the path of the sun, the resting place on that great road to death where spirits of the dead return to their homeland." (McGrath, et al., 1973)

Prior to the arrival of Captain James Cook in 1778, the native population of the Wai'anae moku consisted of approximately 4,000 to 6,000 people. Wai'anae's people subsisted on the natural resources that the ocean and land provided.



Sugar plantation house at Haua Heiau
Source: CZM Hawai'i

1800s to mid-1900s

The arrival of Captain Cook brought drastic changes to all of Hawai'i, and Wai'anae was no exception. The population declined sharply throughout the 1800s, to a low of approximately 500 people by the 1870s. During the 19th century, Wai'anae's economy was transformed from traditional subsistence agriculture to industrial land based activities. The sandalwood trade lasted from about 1811 to 1829, during which time the trees were harvested almost to extinction. Cattle ranching began in the mid-1800s, and by 1870, had become the area's leading industry. Numerous sugar plantations sprang up between 1878 and 1947, along with a railroad for hauling harvested cane to the mill, and workers to and from the fields.

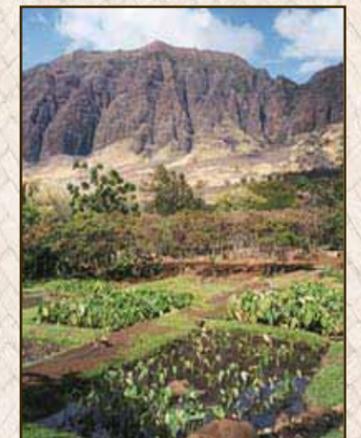
The Hawaiian Homestead Act, passed in 1920, designated lands for native Hawaiians throughout the state. The highest concentration of Hawaiian Homelands on O'ahu were the 4,500+ acres set aside in Wai'anae, Lualualei, and Nānākuli. However, in the early 1930s, the U.S. Government condemned 1,356 acres of DHHL land in Lualualei to build an ammunition depot to supply ships at the Pearl Harbor Naval Base. The depot went into service in 1933, and remains active today, as the Naval Magazine Pearl Harbor. It is located adjacent to the Naval Radio Transmitter Facility Lualualei (NRTF LLL), which transmits radio signals that are used for the navigation of Navy vessels throughout the Pacific. In total, 34% of the land in the Wai'anae District is used by the U.S. Military. Despite this substantial military presence, DHHL maintains a significant presence as well, with approximately 8,000 people living in Hawaiian Homesteads in the Wai'anae District, or about 20 percent of the total district population (U.S. Census, 2000).

Modern Times

The City and County's Wai'anae Sustainable Communities Plan (July 2000) was created through an extensive community participation process. The Plan expresses the community's strong desire to preserve the rural landscape and the country lifestyle of the Wai'anae District. It also provides policies that strengthen the region's ability to sustain its unique character, rural lifestyle, and economic livelihood.

Wai'anae continues to be an important agricultural area for the state, producing livestock, milk, eggs, various fruits, vegetables, and herbs. Many of the area's leaders view sustainable agriculture as critical to preserving the agricultural heritage that is a central part of the area's character. Ka'ala Farm and Mala Ai 'Ōpio Farm are two such agricultural projects that are dedicated to education in Hawaiian culture and to providing young people with opportunities to develop professionally and spiritually.

Sources: McGrath, et al., 1973 and Cordy, 2002

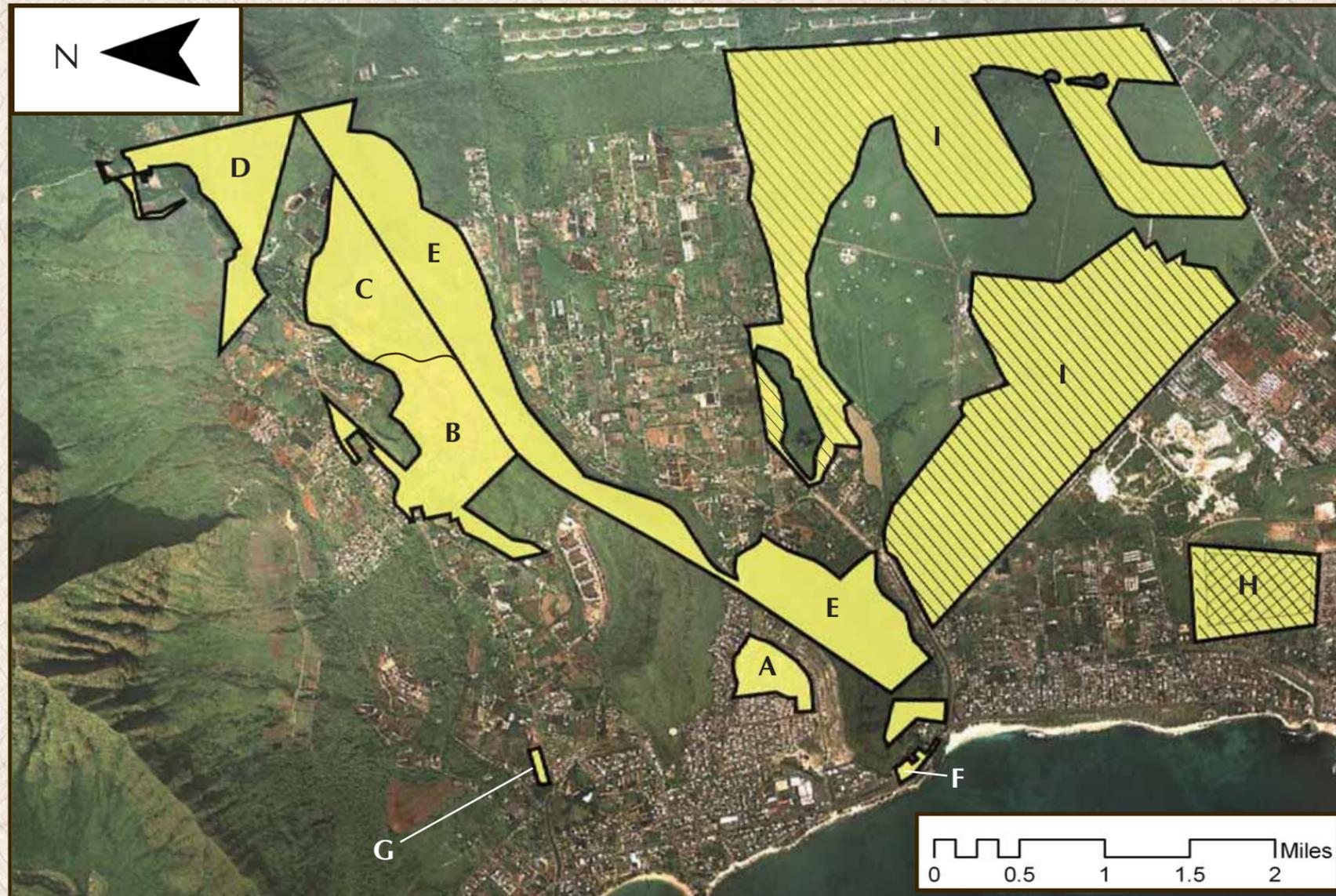


Kalo lo'i at Ka'ala Farm
Source: Environment HI, Inc.



Hawaiian Home Lands in Wai'anae and Lualualei Ahupua'a

DHHL PARCELS



- A. Wai'anae Kai Hawaiian Homesteads**
 - 150 single-family residences on 22 acres; approximate population of 650
- B. Wai'anae Valley Hawaiian Homesteads**
 - 396 single-family residences on 98 acres; approximate population of 1,760
- C. Freitas & Carlos Dairy Projects**
 - 32 single-family residences and 21 agricultural lots on 93 acres
- D. Ka'ala Farm**
 - Native Hawaiian Cultural Center on 97 acres; TMK 8-5-05:36
 - 10-year lease expires in January 2008
- E. Pāhe'ehe'e Ridge**
 - 19 farm lots on 234 acres, site work completed
 - No houses built because area needs drainage plan and rock fall mitigation
- F. Wai'anae Coast Comprehensive Health Center**
 - 16.3 acres on TMKs 8-6-01:03, 40, 41 & 46
 - Currently looking to expand their campus and services offered
- G. Kaupuni Village**
 - 21 proposed lots on 3,353 acres
 - Lot construction underway (2007)
- H. Former Voice of America Site**
 - 89 acres; currently vacant
 - TMK 8-7-10:7
 - Title is held by the Federal GSA, pending transfer to DHHL
- I. Lualualei Lands**
 - 1,356 acres on TMK 8-6-2:1
 - Majority of land currently used by U.S. Navy; title claim is still held by DHHL
 - Title will be transferred to U.S. Navy upon completion of land exchange, as per the Hawaiian Home Lands Recovery Act of 1995.

TOTAL: • 546 single-family residences
 • Approximately 2,000 acres (1,356 acres utilized by U.S. Navy)
 • Approximate population of 2,410

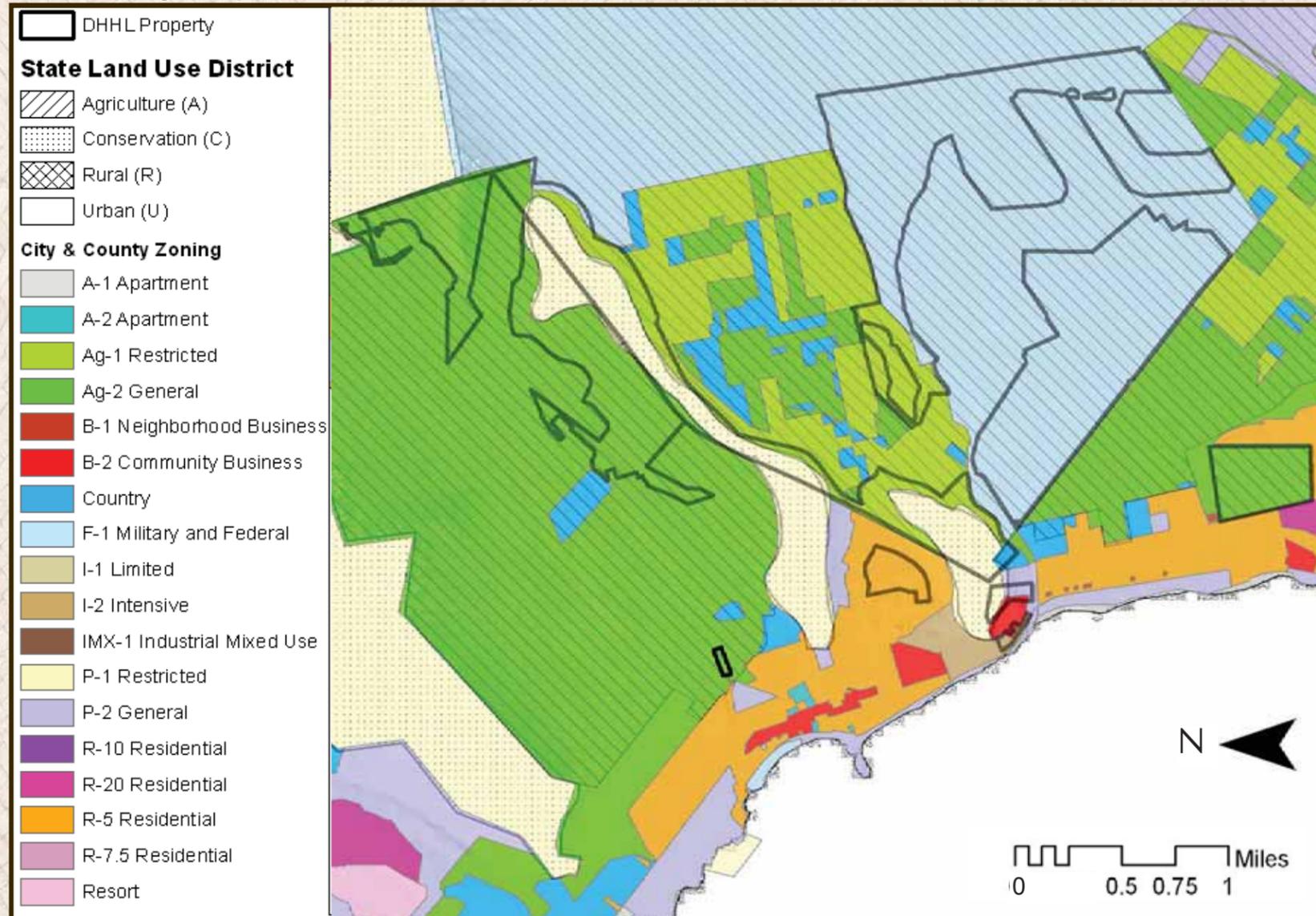


Regional Map



Zoning Map and Regional Demographics

Zoning Map



<u>General Characteristics</u>	<u>Wai'anae DHHL Area*</u>	<u>O'ahu</u>	<u>Hawai'i</u>	<u>U.S.</u>
Total population	16,449	876,156	1,211,537	281,421,906
Median age	28.6	35.7	36.2	35.3
<u>Social Characteristics</u>				
High school graduate or higher	78%	84.8%	84.6%	80.4%
Bachelors degree or higher	7.2%	27.9%	26.2%	24.4%
<u>Economic Characteristics</u>				
Median household income	\$46,252	\$51,914	\$49,820	\$41,994
Per capita income	\$13,267	\$21,998	\$21,525	\$21,587
Families below poverty level	18.3%	7.0%	7.6%	9.2%
<u>Housing Characteristics</u>				
Total housing units	4,427	315,988	460,542	115,904,641
Average household size	4.13	2.95	2.92	2.59
Owner-occupied housing units	60.5%	54.6%	56.5%	66.2%
Renter-occupied housing units	39.5%	45.4%	43.5%	33.8%
Median value of single-family owner-occupied homes	\$166,950	\$309,000	\$272,700	\$119,600
<u>DHHL Housing Characteristics</u>				
DHHL units	546 (12.3%)	2,897 (0.9%)	5,875** (1.3%)	—
Total population in DHHL homes	2,411 (14.7%)	14,556 (1.7%)	—	—

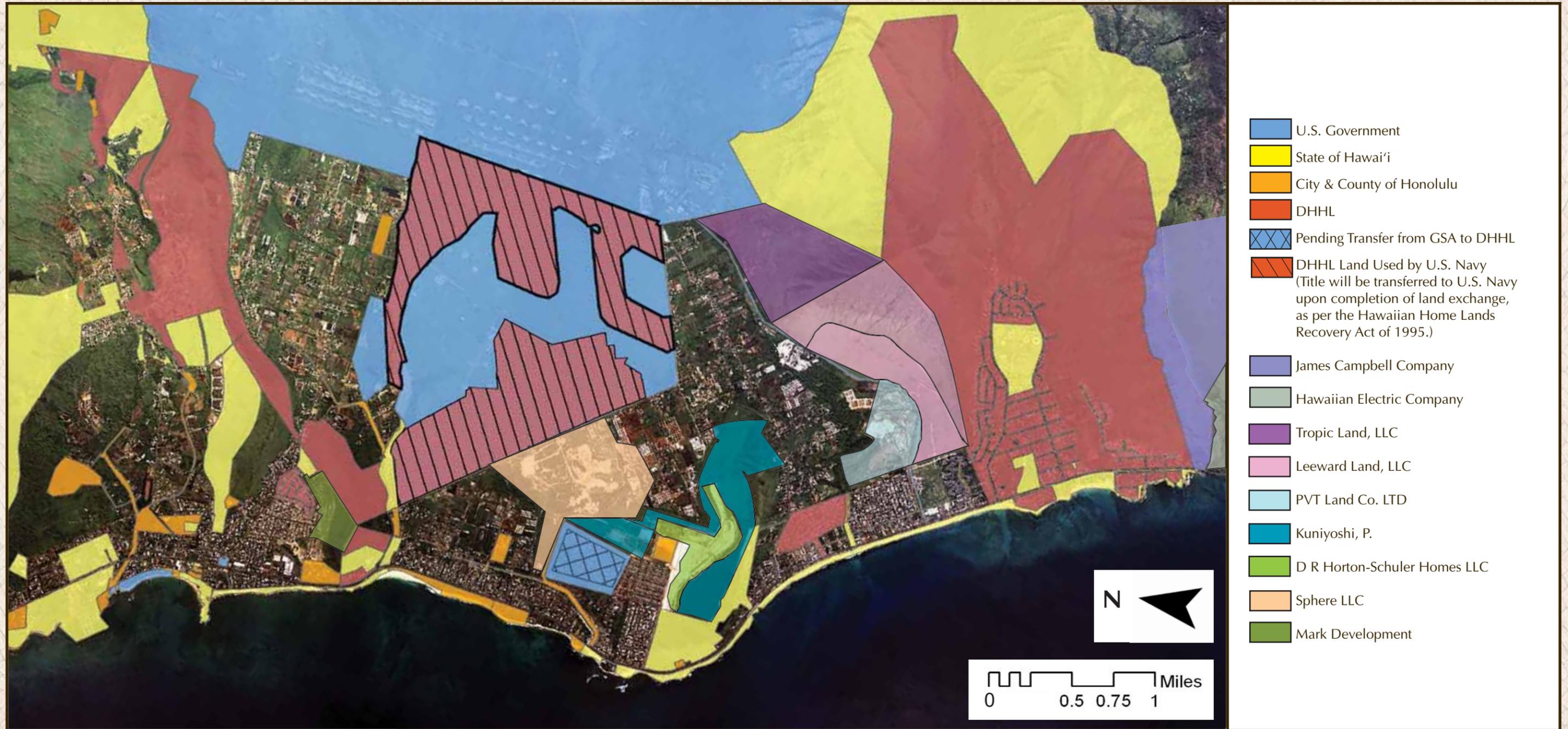
Sources: U.S. Census Bureau, 2000 and Profiles of Homestead Communities within the Hawaiian Home Lands Based on Census 2000 Data.

*The Wai'anae DHHL Area consists of the Wai'anae and Ma'ili Census Designated Places.

**Source: DHHL 2003 Annual Report, based on total number of residential leases.



Major Land Owners

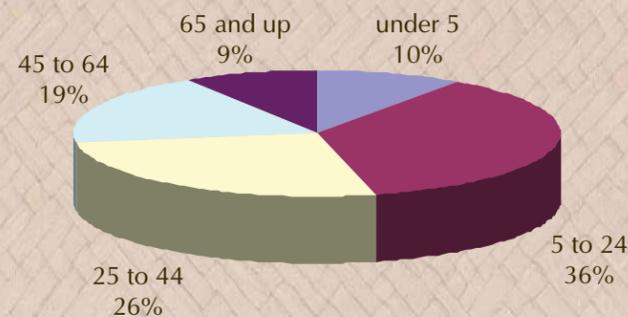


Development Characteristics and Trends

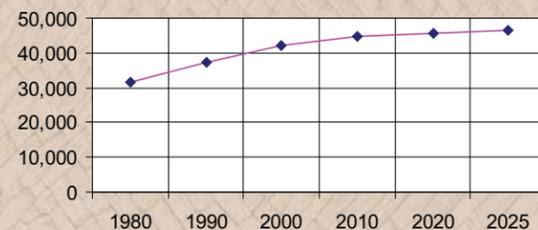
POPULATION BASE AND HOUSING STOCK

The Wai'anae DHHL Area consists of the lands surrounding the Hawaiian Homesteads in Wai'anae Valley and Lualualei. This corresponds to the U.S. Census CDPs (Census Designated Places) of Wai'anae and Mā'ili. The area has a stable population base, and is home to approximately 16,500 people, of whom more than 25% are native Hawaiian. DHHL has a significant presence there, as approximately 2,410 people, or 15% of the population, live in the Wai'anae Valley and Wai'anae Kai Hawaiian Homesteads. Over 20% of the total housing units are DHHL units. Those areas are basically built out, and have some aging housing stock and infrastructure. New lots are being prepared as part of the Freitas & Carlos Dairy Projects and the Consuelo Foundation Project.

Age Distribution, 2000
(Wai'anae CDP + Mā'ili CDP)

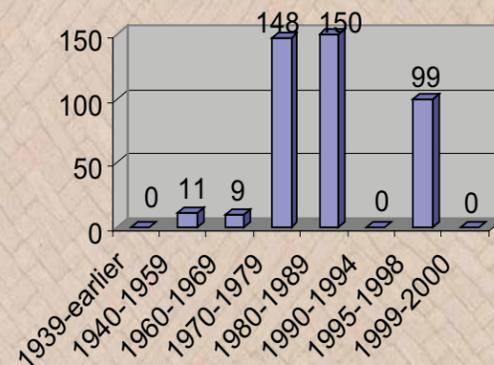


Population Projection
(Wai'anae District)



Sources: U.S. Census & City and County of Honolulu

Numbers of Homes Built by Decade in the Wai'anae Valley Homesteads



COMMUNITY VALUES

The City and County's Wai'anae Sustainable Communities Plan (2000) was created by and for the members of the larger Wai'anae District. The Plan demonstrates the community's desire to preserve the rural landscape and lifestyle. DHHL is currently working with the community on the update of this Plan to ensure that any future DHHL development is supported by the community.

WORKFORCE

The labor force in the Wai'anae DHHL Area consists of 6,914 residents, or 59% of the working age citizens. Most of these residents are employed outside of the community and commute an average of 42 minutes to work.

Although agriculture accounts for only 3% of the employment in the Wai'anae and Mā'ili CDPs, the Wai'anae District as a whole is the largest center for livestock production in the State of Hawai'i. In addition to producing pork, milk, poultry, and eggs, there are also numerous small truck farms that produce fresh fruits, vegetables, and herbs.

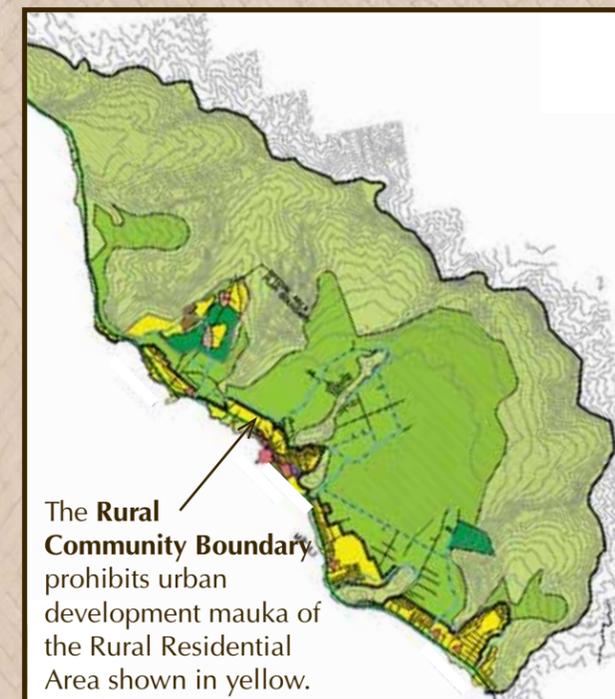
Employed Civilians by Industry in 2000
(Wai'anae CDP + Mā'ili CDP)



EMPLOYMENT OPPORTUNITIES

One of the goals of the Wai'anae Sustainable Communities Plan is to increase employment opportunities within the region. Community members believe that having more job opportunities in Wai'anae would increase their quality of life, since it would reduce commute time and traffic. Similarly, increased jobs opportunities within the Kapolei area could also serve to decrease commute time.

In order to create such jobs, there has been an emphasis on opening new businesses and developing economic strategies by and for the community. The Wai'anae Coast Community Alternative Development Corporation (WCCADC) has helped to stimulate community-based economic development through projects such as its backyard aquaculture project.



The Rural Community Boundary prohibits urban development mauka of the Rural Residential Area shown in yellow.

Source: Wai'anae Sustainable Communities Plan, 2000



Infrastructure: Roads and Transit



Proposed Road and Transit Projects

1 Wai'anae Emergency & Vehicular Access Road

The State DOT has looked at alternate routes for connecting the Wai'anae District to the rest of the island for several decades, both for emergency situations when Farrington Highway is closed (the only access into and out of the District), as well as to enhance traffic movement along the coast. One of the routes that has been considered is from Farrington Highway to Kunia Road, traversing the Wai'anae Mountain Range by way of the Kolekole Pass. The community has suggested using this roadway for emergency access in the short-term, which would require DOT to get access agreements from the U.S. Military, and identify a funding source for \$30 million to upgrade the road to meet the required standards. For the long-term, many residents would like this route or the other major passage in the Wai'anae Mountain Range, the Pōhākea Pass, upgraded for everyday commuting into and out of the District.

Status: DOT has talked to the U.S. Military and confirmed that access agreements could be obtained for emergency use of the Kolekole Pass and the Lualualei Homestead Road. However, a funding source for the \$30 million needed for upgrades has not yet been identified. Additionally, a Wai'anae Second Access project (#509) is currently on the ORTP 2030 Long-Range Plan Project List (2016 to 2030), as a possible future project. Due to the high cost involved, getting this project funded would take coordination between the DOT and the Hawai'i State Legislature, a local match for federal funds would need to be identified, and the project would need to be completed in phases. There would also need to be extensive environmental and cultural impact studies done.

2 TheBus Service Expansion (*not on map because does not correspond to specific location*)

The ORTP Mid-Range Plan Project List (2006 to 2015) includes expanded bus service to Wai'anae, including increased Express service.

Status: The project timeline has not yet been decided upon.

3 Honolulu High-Capacity Transit Corridor Project (*located outside of map boundaries*)

The goal of the Honolulu High-Capacity Transit Corridor Project is to improve the ability of people to move in the highly congested east-west corridor between Kapolei and the University of Hawai'i at Mānoa. Four different transportation options were evaluated. The alternative selected proposes a Fixed Guideway (light-rail) transit system that stretches from Kapolei to the University of Hawai'i at Mānoa. The estimated cost for the project is between \$3.8 and \$4.6 billion. Various alignments are being considered by the City (www.honolulustransit.org, September 2007). If implemented, this project could be utilized by those people who commute from Nānākuli to Honolulu, although they would have to first travel to Kapolei.

Status: The locally preferred alternative was selected by the City Council in December 2006. The City has completed scoping for the environmental process. The team will next prepare a draft EIS and request approval from FTA to begin project design. The earliest that construction could begin would be 2009. Due to the size and cost of the overall project, it is likely to be built in several phases lasting several years.

In Progress/Planned Road and Transit Projects

4 Farrington Highway Improvements

Farrington Highway is the main route for travel within the Wai'anae District, as well as the only commuter highway for trips out of the district. This fact, along with the growing population along the leeward coast and increased automobile use, has led to congestion and a relatively high number of traffic accidents. In response to the situation, the O'ahu Metropolitan Planning Organization (OMPO) has included several projects in the *O'ahu Regional Transportation Plan 2030 (ORTP 2030)* that aim at improving the flow of traffic and the safety of the area.

Status: Those projects that have been included in the *O'ahu Transportation Improvement Program (TIP)*, for FYs 2006 - 2008, consist of replacing out-of-date bridges and intersection improvements, such as the creation of left-turn lanes and roadway widening. These projects are in various stages of design and construction.

5 Wai'anae Coast Emergency Access Road (WCEAR)

As mentioned above, Farrington Highway is currently the only route from the Wai'anae District to 'Ewa and to Honolulu beyond. There have been several situations in recent history that have left the route impassable, such as severe weather, traffic accidents, water main breaks, and other police and fire emergencies. Thus, the City Department of Transportation Services (DTS) conducted a planning study for an emergency access road that would serve to accommodate traffic in such situations. This route would connect existing roads mauka of Farrington Highway from Nānākuli to Mākaha, providing "bypass roads" in times of emergency.

The current status of the project is that the Environmental Assessment was completed in 2002, and 2 of the 6 sections have been completed, including Pakeke Road and the Nānākuli makai roadway connector, phase I and II. The Pa'akea Road segment is currently about 75% completed; construction was stopped due to land issues, which have now been resolved; it should get re-bid this year. The Helelua Place extension was also delayed due to land issues; new construction is planned to begin in January '08. DTS is still negotiating with community members regarding the construction of Kaulawaha Road. The Mahina'au Road Extension has been delayed, and no timeline has yet been defined.

6 Wai'anae Transit Center

A new transit center for TheBus is being constructed next to the Wai'anae Mall on Leihoku Street, mauka of Farrington Highway. The community transit center will accommodate express, trunk, and circulator bus services. There will also be improvements to bus shelters, the information kiosk, the comfort station, and park-and-ride facilities. Overall, the project will enhance the delivery of public transit services to the Wai'anae Coast.

Status: Construction began in August 2006, and the transit center is now operational. The park-and-ride facility is not complete and funding is being sought.



Infrastructure: Water



Proposed Water Projects

1 Increase Potable Water Imports from the Pearl Harbor Aquifer (*outside of map boundaries*)

In order to supply the Wai'anae District with the water it needs to support its projected growth, the most cost-effective short-term solution is to increase the water imports from the Pearl Harbor Aquifer Sector. The Wai'anae District's FY 2005 average potable water use was 9.7 mgd, of which about 6.4 mgd was imported from the Pearl Harbor Aquifer. This water is conveyed to Wai'anae via a transmission main that runs along Farrington Highway, to the BWS Nānākuli, Lualualei, and Wai'anae Reservoirs. Pearl Harbor Aquifer water imports to Wai'anae are expected to increase to approximately 7.2 mgd by 2030.

Status: This appears to be an effective short-term solution that will most likely be implemented. However, as water demand grows in 'Ewa and the Primary Urban Center, an increasing amount of the water from the Pearl Harbor Aquifer will be allocated to those locations, and other water supply options will need to be developed for Wai'anae.

2 BWS Kalaeloa Desal Plant (*outside of map boundaries*)

The BWS has developed preliminary designs for a future seawater desalination plant at Kalaeloa, on lands conveyed for public benefit from the federal government. The initial phase would produce 5 mgd (million gallons per day), expandable to 15 mgd or more. This facility will utilize Reverse Osmosis (RO) membrane filtration to filter high quality basal seawater from deep wells into fresh water. Once constructed, it should serve to meet the future water needs of the Districts of 'Ewa and Wai'anae.

Status: The final design and construction of the Kalaeloa seawater desalination plant has been deferred since BWS conducted a major review of available ground water resources, infrastructure capacity, capital program priorities, and their long-range financial plan. The primary limiting constraint is funding the \$40 million to construct the facility. The federal government has been cooperative in conveying released navy lands for public benefit, and Congress passed Bill S.960 authorizing a 25% federal match for the design and construction costs. The Appropriation is pending and BWS expects to eventually issue municipal bonds for the remaining project costs.

Existing Water System

The Honolulu Board of Water Supply (BWS) provides most of the water consumed in the Wai'anae District (about 87% in 2004), and nearly all of the water consumed on DHHL lands. The remaining water is provided by private (12%) and Federal infrastructure (2%). The source of the total water consumed is roughly one-half from Wai'anae ground water sources, and the remaining half is imported from the Pearl Harbor aquifer. Specifically, the Pearl Harbor Aquifer Sector Area is comprised of three major Aquifer System Areas, of which, the Waipahu-Waiawa Aquifer System Area supplies water to the Wai'anae District, among others.

The BWS operates a low pressure service system from Nānākuli to Wai'anae and high pressure service systems in Nānākuli, Wai'anae, and Mākaha. These systems are supplied by the 12 wells, one shaft, and five tunnels in the district. BWS also maintains 11 reservoirs there.

DHHL presently has less than 100 new homes proposed for the Wai'anae and Lualualei ahupua'a, and none for Nānākuli. The agency has a reservation with the State of Hawai'i Commission on Water Resource Management (CWRM) for future water allocations for their developments. Although no significant developments are planned in the near term for DHHL lands in the Wai'anae District, the population of the district as a whole is projected to grow and an increase in agriculture is being encouraged. To meet that demand, the Wai'anae Watershed Management Plan Public Review Draft (2006) used the Statewide Framework, which requires a range of forecasts in the amount of water required over the planning horizon, in order to create strategies to meet future water demands at reasonable costs. The projects that are most likely to be implemented are listed under "Proposed Water Projects." The following projects are already planned or in progress:

3 Wai'anae District Farrington Highway Water Main Replacement Project (*not on map because the project is taking place in various places along Farrington Highway*)

BWS is currently replacing water mains under Farrington Highway and improving the Wai'anae Valley Road Water System. The project is in the fourth and final phase, with an estimated project cost of \$14 million. (Not demarcated on map because the project does not correspond to a specific location.)

4 The Lualualei Line Booster Improvements

The design for this project is scheduled to begin in FY 2007 and construction in FY 2009, for a budgeted amount of \$1.55 million.



Infrastructure: Wastewater/Sewer



Proposed Wastewater/Sewer Projects

1 Conversion of Wai'anae Wastewater Treatment Plant to R-1 Recycled Water

The WWTP currently produces about 3.1 mgd of R-3 effluent, which could potentially be converted to R-1 (tertiary disinfected) quality water and made available for direct reuse. R-1 is the highest quality recycled water and is approved for a variety of irrigation uses. The potential 3.1 mgd of R-1 water from the Wai'anae WWTP could be made available to farms, parks, and industrial operations in Wai'anae and Lualualei, as allowed within DOH (Department of Health) regulations.

The principal constraint for the development of recycled water facilities at the WWTP is the high chloride content of the wastewater (890 to 970 mg/l), which is due to aging sewer mains that allow infiltration of seawater. This high chloride content is at the upper tolerable limit of most moderately salt-tolerant landscaping and above most agricultural crop limits. It would be very costly to either repair the sewer mains or desalinate the wastewater effluent. Another major constraint is the cost recovery of R-1 treatment plant upgrades and the construction of a pipeline delivery system to a sufficient number of users.

Status: The Wai'anae Watershed Management Plan states that this conversion should be part of the overall long-range water resources management plan for the district, but that the project has a low level of feasibility until chloride levels can be reduced to acceptable levels. In the meantime, the Plan encourages the City & County of Honolulu to conduct a chloride infiltration study to determine which sewer line segments contribute the most seawater to the WWTP and then plan for the timely replacement of these mains.

Existing Wastewater, Collection, Treatment, and Disposal

The existing Wai'anae Water Treatment Plant (WWTP) has design capacity to accept an average of 5.2 mgd (millions of gallons per day), and a peak flow of 13.8 mgd. It is currently producing about 3.1 mgd of R-3 (secondary disinfected) effluent, which is disposed of via ocean outfall approximately 1.1 miles offshore. It is estimated that the facility could service a total population of 65,000 people.

The major sewer lines generally follow Farrington Highway and the main valley roads, with the exception of Lualualei Valley, where the sewer lines do not extend beyond the more densely developed coastal zone. Some of these lines were installed as early as the 1950s, and are in need of upgrades or replacement, which have begun.

In addition, many of the existing residences that were initially developed with cesspools have not yet connected to the wastewater system. In 2000, that number was approximately 1,180 homes in the Wai'anae District, many of which are on property that was developed by DHHL. The sewer lines have been sized to handle these house lots. However, since many people have not connected to the system (due to the high cost), low flows in the lines cause septic conditions that often result in odors.

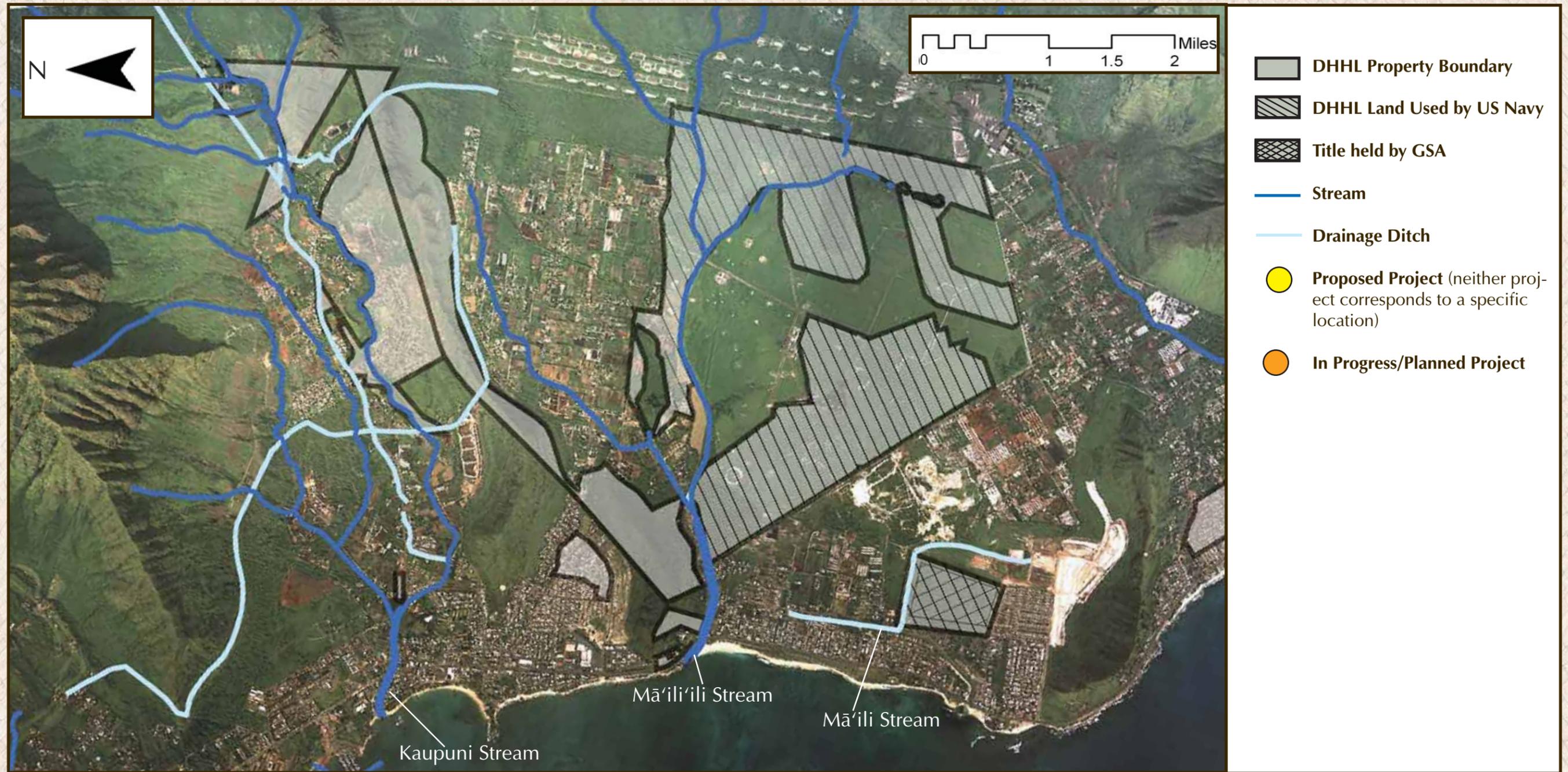
2 Phased Program for Replacement of Old Sewer Lines *(not on map because the project is taking place in various places along Farrington Highway)*

The program for the phased replacement of old sewer lines in Farrington Highway and in the main valley roadways should be continued. The sewer main that services areas between Pōka'i Bay and Mākaha Valley is operating at capacity and will need to be upgraded should development growth continue in Mākaha.

Status: The sewer lines are currently being replaced in various stages.



Infrastructure: Drainage



Proposed Drainage Projects

1 Comprehensive Study of Flooding and Drainage Problems in the Wai'anae District

A comprehensive study of local flooding and drainage problems in the Wai'anae District is recommended by the Wai'anae Sustainable Communities Plan (SCP, 2000). Possible corrective measures may include removal of drainage barriers, cleaning of drainage channels and stream channels, re-grading areas to encourage positive drainage, and construction of new drainage channels, culverts, and other drainage structures. Such a drainage plan should also include programs for the ongoing enforcement of rules and regulations relating to proper grading and drainage for both urban development projects and agricultural use of the land, and public education. In addition, standards for the creation and use of sediment basins at critical locations are encouraged.

Status: The flood study is currently a recommendation, but has not yet been funded.

2 Implementation of Flood Study Recommendations for Lualualei

A Flood Study for Lualualei was performed by the US Army Corps of Engineers and the US Department of Agriculture Natural Resources Conservation Service in 2001. Analysis of flooding in this area found insufficient drainage infrastructure. Sumps without drainage relief were also found to be prevalent in the area. Recommendations to alleviate local flooding include diverting water from ineffective sumps and directing runoff to existing drainage infrastructure.

Status: The Navy has secured some funding for development and design studies to implement a detention basin. Various members of the community, City, State, and Federal government have been meeting with congressional staff in order to secure funding for priority flooding mitigation measures.

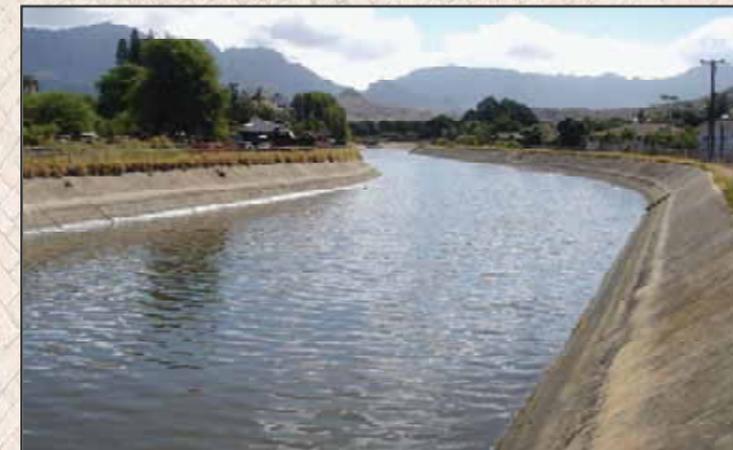
Background of Drainage Conditions

There are no perennial streams in the coastal areas of the Wai'anae District, and the average annual rainfall in the coastal plain is less than 20 inches. Nonetheless, the area has experienced drainage problems and flood damage as a result of severe storms. Studies conducted in the 1950s showed that the major cause of the flooding was the accumulation of sand at the dry stream mouths, which blocked water runoff during heavy rains.

As a result of these studies, the lower reaches of five streams in the District were channelized to improve storm water flow to the ocean. The Wai'anae ahupua'a contains the Kaupuni Stream channel, while Lualualei has three such streams: the Mā'ili'ili'i, the Mā'ili, and the Ulehawa Streams. The fifth channelized stream is the Nānākuli Stream, located in the Nānākuli ahupua'a.

Flooding is still a problem where makai areas are higher in elevation than those mauka because of the deposition of sediment, which has a damming effect. In some areas, Farrington Highway was built up higher than the adjacent mauka areas and restricts seaward runoff, causing localized flooding. Other causes of such flooding include the lack of adequate drainage facilities in subdivisions, unpermitted property walls that divert storm water, the filling of natural drainage swales and ditches, and clogged storm drains.

Flood control and mitigation is currently underway at several levels. The City and County's Capital Improvement Program calls for a variety of drainage improvements in Wai'anae. Farrington Highway Drainage Improvements work began June 21, 2004 to provide better drainage through the implementation of curbs and gutters. Lastly, several groups have requested or begun additional drainage studies.



Kaupuni Stream in its lower reaches

Regional Services: Public Facilities



Regional Services: Public Facilities Characteristics

Parks

The Wai'anae District currently has 20 parks from 7 different categories. However, only one of these is a Neighborhood Park, which according to the City and County's park standards, constitutes a shortage. The standards require one Neighborhood Park (4-6 acres in size) per 5,000 people. Development of adequate public parks is a top priority listed in the Wai'anae Sustainable Communities Plan (2000). The Plan recommends an incremental park development program that would result in two Neighborhood Parks for each of the main settlement areas of the District: Nānākuli, Lualualei, Wai'anae, and Mākaha.

- 1 **Kaupuni Neighborhood Park** - The City and County of Honolulu has included \$900,000 in its Six-Year CIP and Budget FY 2004 - 2009 for Master Planned improvements to Kaupuni Neighborhood Park, located within the Wai'anae Valley Homestead area. Improvements consist of the construction of two lighted basketball courts, two lighted volleyball courts, a lighted parking lot with landscaping, and a post and chain barrier along Kaneaki Street and Punanaula Place to block vehicle access to landscaped improvements.

Status: Once the contract is negotiated, the construction could start in 2008. Expected duration of construction is 7 to 8 months.

Schools

The State Department of Education (DOE) currently operates 10 public schools in the Wai'anae District, 7 of which are part of the Waianae Complex. In addition, there are two private schools and one charter school in the area. Overall, these schools generally have sufficient capacity for the limited growth projected for the District.

School	Grades	Capacity SY 06-07	Actual Enrollment SY 06-07	% of Capacity	Projected Enrollment SY 09-10
Wai'anae Complex					
Kamaile Elem	K - 6	729	646	89%	649
Leihoku Elem	K - 6	855	743	87%	734
Mā'ili Elem	K - 6	868	786	91%	743
Makaha Elem	K - 6	776	568	73%	490
Wai'anae Elementary	K - 6	846	603	71%	545
Wai'anae High	9 - 12	1802	2218	123%	1825
Wai'anae Intermediate	7 - 8	1041	1056	102%	904
Charter School					
Ka Waihona o ka Na'auao	K - 7	N/A	218	N/A	N/A
Private Schools					
Adventist Malama Elem	K - 8	60	49	11	60
Mā'ili Bible School	K - 12	180	142	38	N/A

Red indicates a school over capacity.

Library

The Wai'anae Public Library is the only Hawai'i State Public Library in the District, and it therefore services the entire region. However, in July 2006, Governor Lingle released \$46,000 to finance a project development report and master plan to assist the Hawai'i State Public Library System in planning a new Nānākuli Public Library.

Healthcare Facilities

- **Kaiser Permanente** is located in the **Nanaikeola Clinic** in Nānākuli. The facility offers regular health care services, including family practice, internal medicine, and pediatrics, along with clinical services such as diabetes education, diagnostic imaging, and nutrition counseling.
- **Queen Lili'uokalani Children's Center** offers services for Hawaiian orphans and destitute children.
- **Hale Na'au Pono, the Wai'anae Coast Community Mental Health Center** provides culturally and socially sensitive, community-based, behavioral health services for children and adults.
- **Wai'anae Coast Comprehensive Health Center (WCCHC)** is an outpatient medical clinic that offers a wide variety of services including counseling for family violence, substance abuse, and diabetes, health and wellness programs, traditional Hawaiian healing, adult day care, and health screening. Facility is projected to expand to increase services offered. See Priority Project #4.
- 2 **WCCHC 3-Story Family Medical Building** is an in progress project that will house the expanding services offered by the center, including medical training and education programs. The integrated floorplan is designed to allow for easy movement between the various clinics and classrooms. The groundbreaking ceremony was held on August 1, 2007.

Police Facilities

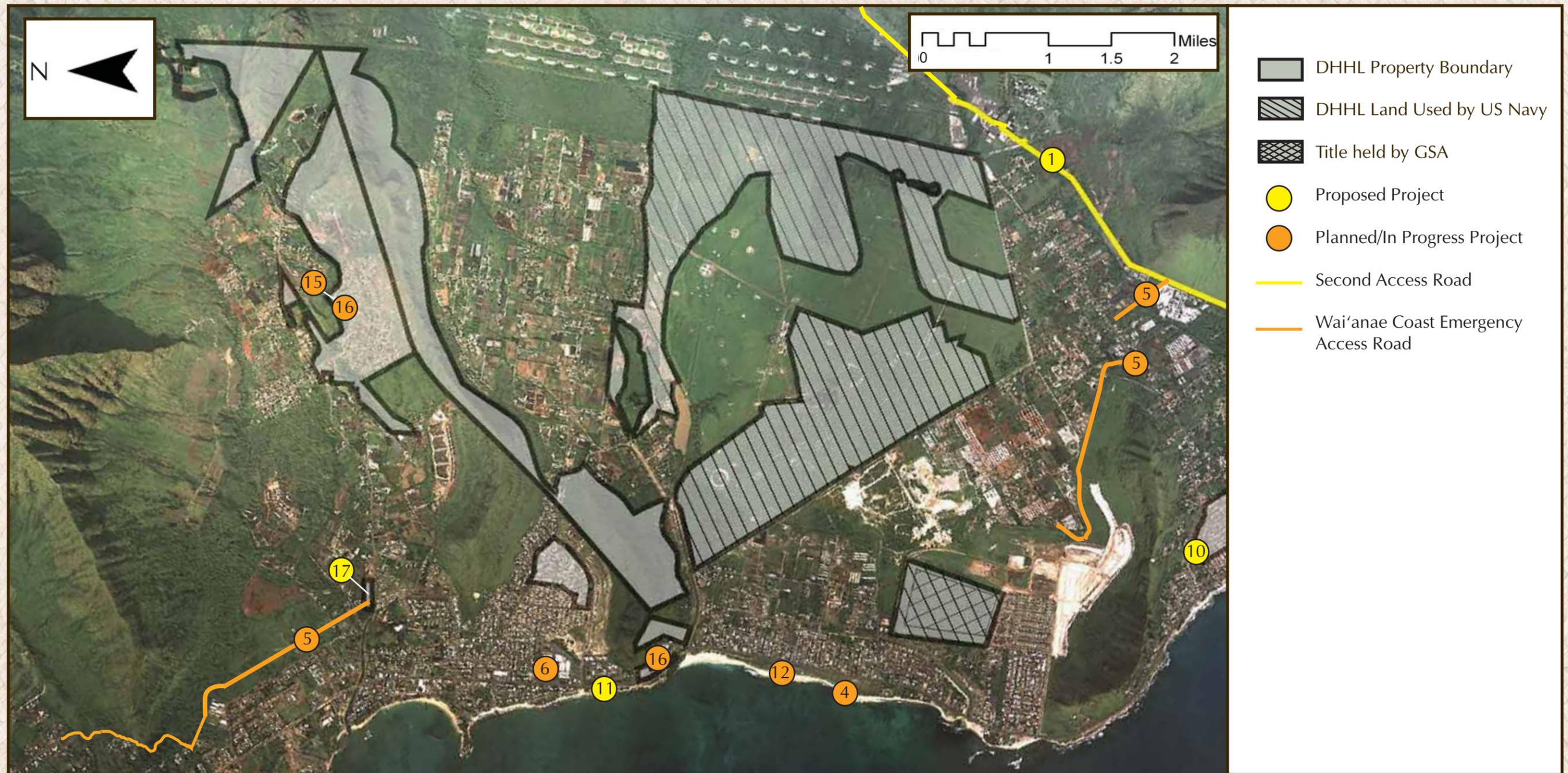
The **Honolulu Police Department** services the Wai'anae District through the Wai'anae Substation, located at 85-939 Farrington Highway. Wai'anae is included in District 8, which has its receiving desk at the Kapolei station. All arrests that occur in District 8 are processed at the Kapolei station, which is also the location of the offices for Juvenile Services, Criminal Investigation, and the Narcotics/Vice Division.

Fire/EMT Services

The **Honolulu Fire Department** has two fire stations in the Wai'anae District – one in Nānākuli (Station 28) and the other in Wai'anae Valley (Station 26). The Nānākuli Fire Station is equipped with an engine, a tanker truck, and an inflatable rescue boat. The Wai'anae Valley Station is equipped with an engine, a quint (combination pumper/ladder truck), and a tanker. Back-up service is provided by fire stations in Kapolei, Makakilo, 'Ewa, and Waipahu.



Development Projects



Roads and Transit

Proposed

- ① Wai'anae Second Access Road
- ② TheBus Service Expansion
- ③ Honolulu High-Capacity Transit Corridor Project

Planned/In Progress

- ④ Farrington Highway Improvements
- ⑤ Wai'anae Coast Emergency Access Road
- ⑥ Wai'anae Transit Center

Water

Proposed

- ⑦ Increase Potable Water Imports from Pearl Harbor Aquifer
- ⑧ BWS Kalaeloa Desal Plant

Planned/In Progress

- ⑨ Wai'anae District Farrington Highway Water Main Replacement Project
- ⑩ The Lualualei Line Booster Improvements

Wastewater

Proposed

- ⑪ Conversion of Wai'anae Wastewater Treatment Plant to R-1 Recycled Water

Planned/In Progress

- ⑫ Phased Program for Replacement of Old Sewer Lines

Drainage

Proposed

- ⑬ Comprehensive Study of Flooding and Drainage Problems in the Wai'anae District
- ⑭ Implementation of Flood Study Recommendations for Lualualei

Community/Public Facilities

Planned/In Progress

- ⑮ Kaupuni Neighborhood Park Improvements
- ⑯ Wai'anae Coast Comprehensive Health Center 3-Story Family Medical Building

DHHL Residential

- ⑰ Kaupuni Village

*Note: Not all projects are demarcated on map because they are either outside of map boundaries or do not correspond to a specific location.



Priority Project: Emergency & Secondary Access Roads



Potential Partners - City and County of Honolulu DTS, State DOT, Federal DOT, US Army, US Navy

Location - From Farrington Highway, up Lualualei Naval Road, over the Wai'anae Mountain Range, connected to Kunia Road

Cost - Emergency Road \$30 Million; Secondary Access Road - \$1 Billion (plus land costs)

Description - Farrington Highway is very congested and dangerous, largely because it is the only way into and out of the District, as well as the main route for travel within the region. For several decades the community has explained the need for a second access road, both in times of emergency, and well as for carrying significant volumes of commuter traffic. Studies on potential alignments and costs have resulted in 2 main options, both going from Farrington Highway, up Lualualei Naval Road, over the Wai'anae Mountain Range, to Kunia Road. One would go through Pōhākea Pass (commuter road, est. \$1 Bil), the other would go through Kolekole Pass, (emergency road, est. \$30 Mil to meet standards).

The community would like to see the alignment through Kolekole Pass fixed first, so it's available for emergencies. Then a plan to open a commuter highway at Pōhākea Pass.

Status - Currently no plans to implement.

Project Sequence

- DOT enter into MOA with the US Navy, US Army, and State Department of Defense for use of Kolekole Pass during emergencies.
- Get funding to bring the road up to minimum safety standards that are required for an emergency route (estimated \$30 Mil).
- Negotiate with landowners to secure land for highway alignment through Pōhākea Pass.
- Secure funding from various sources (\$1 Bil), do environmental and cultural impact statements, finalize planning and design, construct.



Priority Project: Kaupuni Neighborhood Park Improvements



Potential Partners - City and County of Honolulu

Location - Wai'anae Valley Homestead, TMK 8-5-32:039

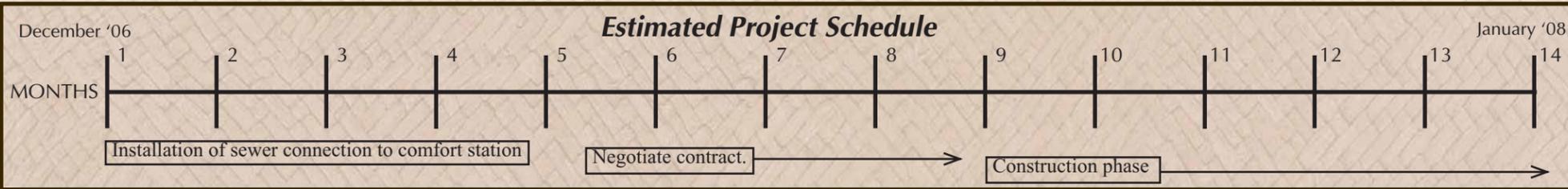
Cost - \$900,000 (\$50,000 for design and \$850,000 for construction)

Description - The park currently occupies a 7.5-acre parcel of land within the Wai'anae Valley Homestead. The land is owned by DHHH and under lease to the City until the year 2020. The existing park facilities and fields are in a state of disrepair.

Master planned improvements to the existing neighborhood park include new lighted basketball and volleyball courts, resurfaced multi-purpose fields, new irrigation system, lighted parking lot with landscaping, and a post and chain barrier along Kaneaki Street and Punanaula Place, to block vehicle access.

Status - The permit for construction was approved in June 2006. Work still has not begun.

Estimated Completion Date - Once the contract is negotiated, construction should take approximately 7-8 months to complete, which would most likely be in 2008.



Priority Project: Agricultural Production and Food Security



Potential Partners - Ka'ala Farm, MA'O Organic Farm, Other Farmers, Local Fishermen, Aquaculture Projects, Community Gardeners, DHHL, DLNR, DOA

Location - Various locations throughout Wai'anae and Lualualei

Description - Many Wai'anae residents are working to increase their community's self-sufficiency and sustainability. They aim to be less reliant on outside sources for food, jobs, energy, and other resources. Food security is one vital component of reaching this goal, since activities such as agricultural production and fishing provide sustenance, economic opportunities, as well as the possibility of working together as a family.

Within this framework, there are several projects currently underway, such as Ka'ala Farm and MA'O Organic Farm. Such organizations could use the support of DHHL, DLNR, DOA, and others, through increased access to lands and water, in order to expand their work. These projects could also serve as models to other community groups interested in joining the Food Security movement.

Status - These projects are at various stages:

- Ka'ala is currently growing kalo for subsistence, and teaching others to do the same. They are looking to increase community food systems to include community gardens. In addition, they are expanding their backyard aquaculture at the 'Opelu Project.

- MA'O has developed over 20 organic products (salad greens, herbs, fruits) that are harvested and sold to a wide range of consumers each week. They are planning to increase their production, and are seeking access to nearby farmlands to do so.

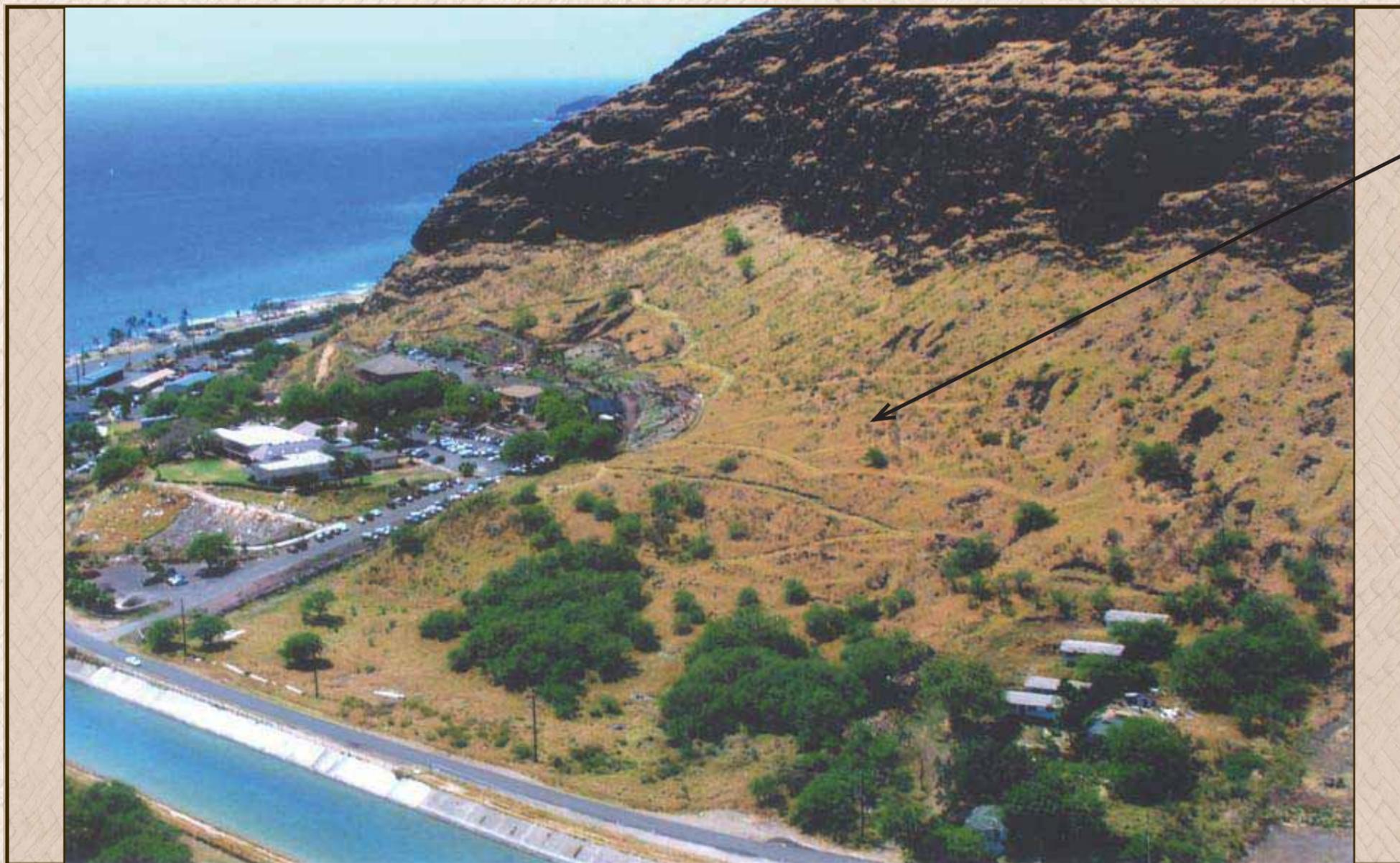
Estimated Completion Date & Cost - Undetermined

Project Sequence

- Work with DHHL, DLNR, DOA, and others to identify potential lands for increasing agricultural production.
- Develop site plans, agricultural production plans, and business/marketing plans to justify long-term leases.
- Negotiate and secure site control.
- Work with DOA and others to develop marketing plans.



Priority Project: Expansion of Wai'anae Coast Comprehensive Health Center



Potential Partners - WCCHC, DHHL

Location - 86-260 Farrington Hwy, Wai'anae
TMKs 8-6-001:024 through 8-6-001:028

Cost - \$250,000 for Phase I and \$1.5 million for Phase II

Description - WCCHC is proposing to build both low-density traditional and modern structures to implement programs that integrate Native Hawaiian traditional practices with Western Medicine, health and wellness, and training.

Phase I would include the development of walking trails for exercise programs, planting of native and drought resistant plants, planting and mixing of plants for traditional medicine, and the building of an additional greenhouse.

Phase II includes the building of classrooms for the Wai'anae Health Academy, medical school project, and possible cottages for housing medical students and/or eco-tourism focused on health and cultural issues.

Status - Proposing interim 2-year phase

Estimated Completion Date - Once the contract is negotiated, construction should take approximately 5 years to complete, which would most likely be in 2012.

Project Sequence

- Develop site plans for Phase I and Phase II
- Negotiate and secure site control
- Contract detailed design, engineering, and construction
- Begin construction



Project Tracking

PROJECT	TYPE	LEAD	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008	2Q2008	3Q 2008	4Q 2008	1Q 2009	2Q 2009	3Q 2009	4Q 2009	1Q 2010
1 Emergency & Second Access Roads	roads	DOT	Proposed												
2 Kaupuni Neighborhood Park Improvements	parks	DPR	Planned												
3 Agricultural Production & Food Security	community development	Various	On-going												
4 Expansion of Wai'anae Comprehensive Health Center	healthcare	WCCHC	Proposed												
5 TheBus Service Expansion	bus	DTS	Proposed												
6 Honolulu High-Capacity Transit Corridor Program	rail	DTS	Alternative Selection	Draft EIS		Final EIS					Construction begins				
7 Farrington Highway Improvements	roads	DOT	In progress												
8 Wai'anae Transit Center	bus	DTS	In progress	Phase I completed			Phase II begins								
9 Increase Potable Water Imports from Pearl Harbor Aquifer	water	BWS	Proposed												
10 BWS Kalaeloa Desal Plant	water	BWS	Proposed												
11 Wai'anae District Farrington Highway Water Main Replacement Project	water	BWS	In progress												
12 Lualualei Line Booster Improvements	water	BWS	Design phase												
13 Nānākuli 242 Reservoir	water	BWS	Design phase						Project completed						
14 Conversion of Wai'anae Wastewater Treatment Plant to R-1 Recycled Water	wastewater	City & County of Honolulu	Proposed												
15 Phase replacement of Old Sewer Lines	sewer	City & County of Honolulu	In progress												
16 Comprehensive Study of Flooding and Drainage Problems in the Wai'anae District	drainage	undetermined	Proposed												
17 Implementation of Flood Study Recommendations for Lualualei	drainage	undetermined	Proposed												
18 WCCHC 3-Story Family Medical Building	healthcare	WCCHC	Proposed		Ground-breaking		Construction begins								
19 Kaupuni Village	residential	DHHL	Planned												



Contact Information:

DEPARTMENT OF HAWAIIAN HOME LANDS



1099 Alakea Street, Suite 2000
Honolulu, Hawaii 96813

Phone (808) 586-3840
Fax (808) 586-3843

www.hawaii.gov/dhhl

Prepared by: Townscape, Inc.