

**BOUNDARY LEGEND**

- Ahupuaa
- MOKU
- Waiihona

**WORLD LIFE ZONE REGIONS**

Color fill on this map is based on The World Life Zone System created by L. R. Holdridge

Mapping produced by the Tropical Science Center Geographic Information System Unit San Jose, Costa Rica in July 2001

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**Life Zones of Lanai Island**

**Subtropical Basal altitudinal belt**

- Subtropical desert scrub (S-ds)
- Subtropical thorn woodland (S-tw)
- Subtropical dry forest (S-df)
- Subtropical moist forest (S-mf)

**Subtropical Lower Montane altitudinal belt**

- Subtropical Lower Montane thorn steppe (SLM-ls)
- Subtropical Lower Montane dry forest (SLM-df)
- Subtropical Lower Montane moist forest (SLM-mf)

**HAWAIIAN LAND AREAS**

**HAWAII NEI**

All of the inhabited islands of the Hawaiian chain. For this project that will include: Hawaii, Maui, Molokai, Lanai, Kahoolawe, Oahu, Kauai, and Niihau.

**MOKUPUNI**

A single island in Hawaii Nei. For example - Molokai. The mokuuni boundary is the island's shoreline.

**WAIHONA** (Not identified on Lanai)

Yellow outlined area connecting summits and the saddle areas between mountains may follow moku, ahupuaa, shore as well as contour lines and/or streams that were involved with cloud formations, collecting and storing fresh water. Sources are 19th century Territorial Maps.

**MOKU (2 on Lanai)**

Purple outlined polygons. A traditional Hawaiian major division of an island. It is analogous to a bio-region. Moku are made up of adjacent watersheds, bounded by shoreline and mountain ridges. Each moku is distinguished by differences in characteristics like rainfall, winds, topography, orientation, soil, flora & fauna. All the moku cover all of an island (mokuuni). Moku can be viewed as Hawaiian environment types. For example Kona Moku translates to Leeward Division; southwest orientation, dry, gently sloped. Koolau Moku translates to Windward Division; north-east orientation, wet, steeply sloped.

**AHUPUAA (11 on Lanai)**

Red outlined polygons. A traditional Hawaiian division within a moku. Each ahupuaa is thought of as a separate sustainable unit in which people lived. Each ahupuaa is made up of one or more adjacent watersheds bounded by shoreline and mountain ridges. An exception would be when two sustainable valleys that are separated distinctly by a mountain ridge and their streams join close to the sea, those valleys will constitute two ahupuaa and the joined stream becomes part of their boundary. All the ahupuaa in a moku cover all of the moku.

**CRITERIA**

Maps by Samuel P. Kalama (1837 & 1938) were used as a foundation for Moku and Ahupuaa divisions. These divisions are based also on traditional descriptions of location, with boundaries modified to follow watersheds, contours and streams derived from from Hawaii State DBEDT GIS data laid over 3D modelling and aerial photography provided by GoogleEarth. Additional corroboration was acquired through contemporary USGS 7.5" topographical maps and 19th century island surveys by W. D. Alexander.

**CONVENTION**

As was established by Kalama, the Hawaiian names on our maps are without diacritical marks. Also, the MOKU are set uppercase, the Ahupuaa are capitalized. The lack of diacritical marks has allowed cleaner translation of files exchanged between computer applications required to produce this work.

**BACKGROUND**

In 2007 Juan Wilson and Jonathan Jay began a process to identify and map the traditional Hawaiian mokus and ahupuaa on Kauai. We found the way water moves over the land and the effects it has creating those places. We participated with the Aha Kiole Committee, then lead by the late Jean Ileiialoha Beniamina. It issued a report in December 2008 locating and naming the traditional mokus and ahupuaa on each Hawaiian island through interviews with kapuna.

In 2010 Juan Wilson contracted with the Western Pacific Fishery Council (under NOAA) to map the moku and ahupuaa of the Hawaiian Islands for the Aha Moku Council (now part of the Hawaii DLNR). The names and boundaries of those areas on this map are founded on that effort that was completed in June 2011. Since then we have made what we hope are useful adjustments, corrections, additions and refinements to the maps through 2015.

These maps are now being revised by Wilson & Jay to include the World Life Zones as well as modifications based on factors such as rainfall, changing use of land, population shifts, cultural change and ecological modelling.

In our nomenclature the "ahupuaa" refers to the land that makes a food independent area for at least a group, village or community consisting up of one (or a few contiguous) stream watersheds that reach the ocean. An ahupuaa is the specific place a Hawaiian is from or "kamaaina" from an ahupuaa - the fruit of that place.

We use the term "moku" to describe a group of contiguous ahupuaa that make a bio-regional unit on an island. All islands have, for example, a "kona" (leeward) and "koolau" (windward) moku. More than one island has a "puna" district - a place of spring water; and more than one island has a "pali" moku - north or northwestern facing cliffs. These characteristics make the ahupuaa in general hotter, dryer and flatter in the kona moku and cooler, wetter and steeper in the koolau moku.

**RESOURCES**

(www.islandbreath.org/mokupuni/mokupuni.html) (www.ahamokuhawaii.org) (www.ahamoku.org)



Arch D Printed Scale 1 : 50,000 • Contours at 100'



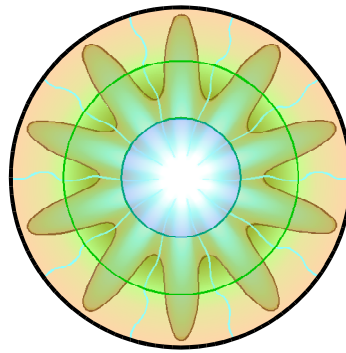
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**Na Mokupuni O Lanai - Hawaii Nei**

Includes streams, water bodies, contours, life zones, roads, town names

**Ahupuaa • Moku • Waiihona • Life Zones**

Borders based on culture, valleys, ridges, elevations, rainfall and shoreline



**M-4**

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