

E Mālama Kākou I Ka 'Āina *Let's All Steward The Land*

Wherever your property is in Puna, untouched land may have native or endemic bird, insect, and plant species found nowhere else on earth. Some may very well be rare and/or endangered.

Responsible stewardship means building and living in a way that minimizes your impact on Hawai'i's unique ecosystems.



Wildlife Corridors

Many parcels of land in Puna either abut or are close to protected areas such as Hawai'i Volcanoes National Park, Kahauale'a Natural Area Reserve, Ola'a Forest Reserve, Wao Kele o Puna, Keau'ohana Forest Reserve, Nānāwale Forest Reserve and several others. These areas are of high ecological sensitivity and development can break the continuity of critical habitat. Bird and plant populations become genetically isolated and are at greater risk. By clearing minimally, removing invasive species and landscaping with native plants or non-invasive non-native plants, you can help to maintain the biological integrity of our at risk native species.

Informational Resources

- County Department of Public Works (DPW) <http://www.hawaiicounty.gov/public-works/>
- State Department of Land and Natural Resources (DLNR) <http://dlnr.hawaii.gov/>
- State Division of Forestry & Wildlife (DOFAW) <http://dlnr.hawaii.gov/dofaw/>
- College of Tropical Agriculture and Human Resources (CTAHR) <https://www.ctahr.hawaii.edu/site/Extprogrms.aspx>
- Hawaiian Alien Plant Studies (University of Hawai'i) http://www.botany.hawaii.edu/faculty/cw_smith/aliens.htm
- Big Island Invasive Species Committee (BIISC) <http://www.biisc.org/>

Mahalo Nui Loa

The agencies and organizations listed below have contributed information used in the development of this brochure.

- County of Hawai'i Planning Department
- Puna Community Development Plan Action Committee
- Volcano Community Association
- Mālama O Puna

The information contained in this brochure is for general information purposes only and is not conclusive. Please confirm all building and permitting requirements with the respective approving agency.

BEFORE YOU BUILD IN PUNA



A Guide to Protecting Puna's Forests

Produced by the
Puna Community Development Plan
Action Committee



County of Hawai'i Planning Department
101 Pauahi Street, Suite 3
(808) 961-8288

Protecting Puna's Forests

Endemic to Hawai'i means that the species cannot be found anywhere else in the world, making it ever more important for us to protect the habitat of our endemic species!



The endemic 'Amakihi sipping from an endangered Hau Kuahiwi flower.

- There are 26,608 species in the state of Hawai'i
- 10,000+ of these species are endemic
- Hawai'i has already lost 26 native bird species with 27 more species currently endangered.
- 90% of terrestrial species in Hawai'i are endemic

Benefits of Saving Your Forest

- Visual and noise buffers are free and provide increased privacy.
- Natural landscaping provided by native forest is both valuable and appealing.
- Essential habitat is saved for native and endemic bird, insect, and plant species.
- Aggressive invasive species can spread quickly on cleared land. Limiting dozing and clearing helps to limit the introduction of invasive species which may save you time, money, and the use of herbicides.
- Serious flooding problems can happen for you and/or your neighbors when improper or excessive grading occurs.
- Vegetation impacts localized climates through natural processes. Forested areas can help reduce localized air temperatures.

Suggestions for Preparing Your Lot

- Get a permit. The County of Hawai'i Department of Public Works regulates grubbing and grading requirements and permits. Those found in violation of Hawai'i County Code (HCC) Chapter 10 are subject to fines. See HCC Chapter 10 Section 10-8. <http://www.hawaiicounty.gov/lb-countycode/#countycode>
- Preserve existing native forest. Avoid clearing your lot "pin-to-pin" preserving areas with the healthiest forest. There are organizations that can help you identify native plants. (See resources on the back)
- Minimize cleared areas. Hand clear or use small machinery and equipment when clearing your lot. Being present to supervise clearing can help minimize misunderstandings.
- Remove existing invasive species during land preparation. Such species include Albizia, Myrica, Ficus, Strawberry Guava, Tibouchina, Himalayan Raspberry, Miconia and Ginger.

Reduce the Spread of R.O.D.

Rapid 'Ōhi'a Death (ROD) is a disease that has killed hundreds of thousands of 'ōhi'a trees. This disease is caused by a fungus called *Ceratocystis fimbriata*. 'Ōhi'a lehua is a keystone species of Hawai'i's native forests and watersheds, and possibly the most important tree in Hawai'i. You can help reduce the spread of rapid 'ōhi'a death by:

- Not moving 'ōhi'a wood, firewood or posts, especially from areas known to have ROD.
- Not moving 'ōhi'a plants, wood, or other plant parts interisland without a permit. [Hawai'i Administrative Rule §4-72-13]
- Cleaning tools used for cutting 'ōhi'a trees (especially infected ones) with 70% rubbing alcohol or 10% bleach.
- Cleaning shoes, gear and clothing. Decontaminate shoes by dipping the soles in 10% bleach or 70% rubbing alcohol. Other gear can be sprayed with the same proven cleaning solutions. Wash clothing in hot water with detergent.
- Washing tires and undercarriage of vehicles with detergent, especially after traveling from an area with ROD and/or if you have traveled off-road.

Building with the Environment

- Much of our native forests are heavily degraded. Help restore our forests by planting native and endemic species appropriate to YOUR local conditions/climate.



- Beware of invasive species and aggressive invasive plants. Potted plants can carry hitchhikers like coqui frogs, fire ants, and stinging-nettle caterpillars. Check all plants before taking them home! Ensure that you are planting non-invasive plant species.
- Prevent standing water. Mosquitoes breed in containers of standing water, and the avian malaria they carry is deadly to native birds. Turn over empty pots, buckets & tires.
- Outdoor lighting and reducing light-pollution. Keep native seabirds safe by limiting exterior lighting. Improperly installed exterior lighting can disorient birds as they overfly forests at night. The law requires that all outdoor lights face the ground, not outward or upward. Rules and regulations for outdoor lighting can be found in Hawaii County Code Chapter 14: General Welfare Article 9. <http://www.hawaiicounty.gov/lb-countycode/#countycode>

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Research permitting requirements before grubbing and grading!



This is the result of clear-cutting