



Forest Legacy Project

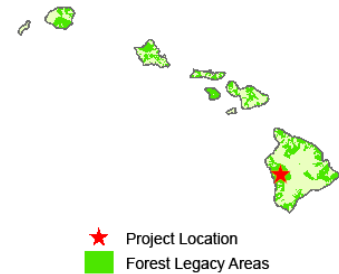
Haloa 'Aina - Royal Hawaiian Sandalwood

South Kona, Hawaii Island, Hawaii

FUNDING HISTORY

FY 2020 Forest Legacy Program Funding \$1,500,000
FY 2020 Non-Federal Cost Share \$625,000
FY 2020 Project Costs \$2,125,000
FY 2020 Project Acres 1,390

Forest Legacy Funding To Date \$1,500,000
Total Project Costs \$4,250,000
Total Project Acres 2,780



| Tract Name | Size (ac) | Tract Cost | FLP Funding | Non-Fed Cost Share | Status |
|-------------------------------------|-----------|-------------|-------------|--------------------|----------------|
| Haloa 'Aina FY18 partial funding | 1,390 | \$2,125,000 | \$1,500,000 | \$625,000 | Funded 2018 |
| Haloa 'Aina FY20 additional funding | 1,390 | \$2,125,000 | \$1,500,000 | \$625,000 | In Review 2020 |

GENERAL DESCRIPTION

Haloa Aina (HA) is a tropical dry forest, the rarest forest type in Hawaii. This unique forest contains economically important sandalwood, world renowned for its scented heartwood, and habitat for endangered wildlife. The robust Hawaiian sandalwood trade initially collapsed in the 1850s due to overharvesting and forest clearing. The once prolific sandalwood is still difficult to find in Hawaii's forests, but HA's populations are growing and flourishing due to sustainable management. Sandalwood is a national and internationally significant forest product and HA uses innovative harvesting techniques that yield the most abundant regeneration in the state - a regional model that supports maintaining forests instead of clearing for other uses. HA's owners are descendants of the native Hawaiian family that stewarded this area before the overthrow of the Hawaiian Kingdom. The owners repurchased the 2,780 acre property to continue family stewardship of this forest. With high land value, active subdivision/sales, and land conversion immediately adjacent to HA, a conservation easement (CE) will ensure this property stays a working forest that connects over 400,000 contiguous acres including other Forest Legacy projects and a National Park.



Rare dry forest ecosystem at HA with Mauna Loa Volcano in the background (Photo by DOFAW)

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PROJECT FEATURES

Important

- **ECONOMIC:** Hawaii is the only U.S. state that grows and exports sandalwood (*Santalum paniculatum*). Sandalwood has local, national, and international export market, particularly to Asia, where it is prized for religious, therapeutic, and medicinal uses, including carving, incense, and essential oils.

- Hawaiian sandalwood oil is recognized as one of the top 3 in the world for quality, and is sold to the US essential oil market where demand is increasing and resources are scarce (average price of \$85/5ml). High quality trees are valued at \$10,000-50,000/tree and used in 34 different products.
- HA's annual revenue in FY17 was \$4.2M, and HA invests in local companies, creating at least 22 jobs annually for this rural community. A CE will provide financial resources for HA that would result in an estimated 12 new jobs via increased and needed forest restoration actions.
- With a goal of creating a sustainable industry, HA's onsite sandalwood oil processing facility (the only one in the US) is USDA Certified Organic and provides an economic benefit for nearby landowners growing sandalwood. HA has a five year contract with a neighboring property to produce sandalwood.
- Native Hawaiians historically used sandalwood oil for wellness and medicinal purposes, and HA promotes these traditional practices. HA sells 90% of their oil or 125kg a month (\$350,000) to Young Living Essential Oils, who is also committed to using sandalwood oil to improve health and wellness.
- ACCESS: In collaboration with groups including Young Living Essential Oils, Hawaii Conservation Alliance (Hawaii inter-agency group for conservation), and hula groups, HA provides educational and ecotourism opportunities (guided tours, volunteer work at approx. 2x/week) for residents and visitors.
- HA provides educational opportunities for undergraduate and graduate students from the University of Hawaii and California State University to research sandalwood and dry forest ecosystems (currently three masters students). Two hula groups have visited HA to reconnect to the dances about this area.
- HA intends to maintain controlled access to the property for recreational, cultural, and educational activities and has had 400 visitors in 2018 through volunteer tours. Future plans include access by the state for seed collection and gathering of culturally significant plants by hula groups.
- UNIQUE: Recognized by international conservation groups and documented in numerous scientific journals and textbooks, tropical dry forests are the most threatened and endangered forest ecosystems in the world. Over 90% of Hawaii's dry forests have already been lost to forest conversion.
- The remaining dry forests of Hawaii Island are scattered in a patchwork across the Kona region. HA's intact dry forest is uniquely linked to a larger dry forest landscape that provides 40,000 acres of contiguous habitat necessary for 25% of Hawaii's native species that are only found in dry forests.
- Sandalwood forests in Hawaii are declining due to grazing cattle that prevent regeneration. However, under a new, innovative management model, HA is yielding the highest regeneration for sandalwood in the state by stimulating root sprouting from dying trees, fencing, and actively removing ungulates.
- After 150 years of cattle ranching, HA has a patchy forest canopy of 25-60% native species. With continued management of sandalwood and other trees such as koa through fencing and planting, the forest is continuing to grow. The owners of HA plan to achieve 80% closed canopy in the next 40 years.
- ENDANGERED: The federally endangered Hawaiian hawk is one of only two raptors in the Hawaiian Islands, with the state endangered Hawaiian owl, pueo, being the other. The hawk and owl are both regularly seen perching on the mamane, koa, and sandalwood trees at HA or soaring above the property.



HA sandalwood oil processing: cleaning log, chips, steam distillation, and oil. (Photo by Haloa Aina and DOFAW)

- The endangered Hawaiian hoary bat can be seen flying over the forest on the HA property. The Hawaii Wildlife Action Plan notes the bat has been severely impacted by a reduction in tree cover in the state. Various age classes of the managed forest at HA provide essential, quality habitat for the bat.
- Hawaiian sandalwood is proposed for listing under the Convention on International Trade of Endangered Species (CITES); African and Indian sandalwood varieties are already listed. The HA CE would provide for protection of the species and ideally help in preventing the species' listing under CITES.
- CULTURE: In early Hawaii, Hawaiians managed land gifted by the King, but did not own land. The HA family lost their ancestral land in the 1850's when private land tenure began. When the two Lee brothers (HA) heard the land was for sale in 2010, they purchased it to once again steward the forest.
- HA's forest is in the backdrop of Kealakekua Bay; site of the Captain Cook monument where the first encounter between Westerners and Hawaiians occurred. Hawaii's primary source of income is tourism, a \$13 billion industry with 150,000 visitors/year visiting Kealakekua Bay State Park for recreation.
- WATER: HA supports Kealakekua Bay's Class AA water quality (highest EPA Clean Water rating) through watershed management. Forest protection and soil erosion mitigation upslope preserves the bay's clear and clean water and coral reef ecosystem enjoyed by thousands of residents and tourists each year.
- HA's dry forests capture moisture daily from passing afternoon clouds, providing valuable water for the region's aquifer. Cloud water capture increases water recharge by 40% more than rainfall alone, and is increasingly needed with an anticipated 30% population growth (2010-2020) in the region.
- The Hawaii Forest Action Plan (FAP) identified the South Kona region as a priority watershed, with forest preservation needed for long-term drinking water security. Water captured by HA's forest contributes to the SW Mauna Loa aquifer, directly servicing 15,000 residents, agriculture, and tourism.

Threatened

- The Assessment of Need (AON) identifies forests in the Agricultural (Ag) District zone, such as HA, as the highest priority for protection due to the extreme threat of forest clearing. HA is one of the few remaining Ag properties in this area that can be converted to agriculture or developed.
- HA is Ag-zoned, and the County of Hawaii allows intensive farming and ranching in this area, including the removal of all trees without a permit or harvest plan. Remnant forest on Ag lands in Kona are continually being lost due to clearing for other agricultural uses such as coffee or cattle.
- There are 650 farms cultivating coffee in Kona valued at \$14 million. The state's 7,300 acres of coffee producing land is expected to result in 24.3 million pounds of coffee during the 2017-18 season. Production increased by 400 acres from 2017, which does not meet increasing demand for Kona coffee.
- DEVELOP: HA is located on the gentle sloping mountains of Kona, a well-known scenic destination and prime coffee production region. Properties in Kona and near HA are marketed as gentleman estates, where you can enjoy ocean views from your home while a cooperative manages your artisanal coffee farm.
- The population of Kona increased nearly 30% from 2000-2010 and is expected to increase at a similar rate for the next 10 years. Spectacular views and Ag zoning, in conjunction with being located 30 miles from Kona airport and 8 miles from schools, makes HA accessible and desirable for development.
- ADJACENT: In 2010, the property west of HA was subdivided from one property to 38. Located along



Recently sold adjacent parcel with forest cleared and planted for coffee (2017). (Photo by DOFAW)

a paved road that leads directly to HA, all but 2 of these lots have sold, all with utility access. The largest of these parcels sold for \$10M and the native forest has already been cleared for coffee.

- The previous owner of the surrounding and now subdivided property, cleared all of the merchantable timber prior to sale. On Ag lands in Kona, this action results in complete forest conversion as new landowners are left with little incentive to replant and manage the forest.
- PROTECTION: HA is at risk of subdivision being one of the few remaining properties in the area that can be further developed. With current zoning of Ag20, the property is dividable to 140 20 acre lots, each with allocated home sites totaling 140 houses. Ag20 also allows for complete land clearing.
- CIRCUMSTANCE: HA is inheritable by 3 children with different land use and business interests. Changes to family circumstances will likely result in the clearing of valuable forest resources, subdivision, and sale; this is the quickest and highest value option for forest land sales in Hawaii.
- The property is mortgaged and will be a financial liability for the next generation, during an economic downturn, or change in market conditions. A CE will reduce this liability, protecting the forest from removal and providing resources to sustain and manage a working forest into the future.

Strategic

- SIGNIFICANCE: HA connects to the forests and volcanic landscape of Hawaii Volcanoes National Park through other protected lands, comprising over 360,000 acres of wilderness with 1.2 million visitors annually. HA combined with the other federal, non-profit, and state reserves in Kona totals over 400,000 acres, which is internationally and nationally significant on an island of 2.6 million acres.
- PROTECTED LANDSCAPE: The adjacent 3 landholdings, Kealahou Reserve (Forest Legacy Program-FLP project), Kaawaloa Forest (FLP project), and Kamehameha Schools (KS-charitable trust) are committed to conservation of their forests. The CE at HA will connect these areas into more than 40,000 contiguous acres of protected and active working forests; one of the largest such areas in the State.
- East of HA are lands owned by KS, a native Hawaiian charitable trust. KS manages their land per their mission to improve the well-being of native Hawaiians. KS stewards their natural resources by balancing education, cultural, economic, environmental, and community benefit for the people of Hawaii in perpetuity. HA has a 5 year contract to manage KS lands for sustainable sandalwood production.
- HA and KS comprise the largest area in the state (30,000 acres) of actively managed Hawaiian sandalwood habitat. Through attentive management (fencing, tree planting, and enhancing natural regeneration) and engagement of neighbors, HA is the center of this region's sandalwood production, achieving conservation goals and economic use of one of the most highly valued forest products in the world.
- INITIATIVE: At the International Union for Conservation of Nature conference held in Hawaii in 2016, the Governor committed to protecting 30% of the State's highest priority watersheds by 2030 in his 30x30 Watershed Forests initiative. HA is a priority watershed and a CE would contribute .5% to meeting these watershed goals as well as protection of 10% of the South Kona Area of Emphasis (AOE).
- The South Kona AOE is a landscape-scale conservation initiative started by a group of non-profit, federal, and state managers over 20 years ago with the goal to protect the diverse native forest on Ag-zoned lands in the region from clearing. This area is a native dominated forest held almost entirely by private owners in a region facing mounting development pressures and agricultural conversion.
- Across Hawaii, watersheds are protected and enhanced through voluntary public-private partnerships. HA has partnered with the Three Mountain Alliance (TMA) Watershed Partnership on projects, including dry forest restoration on 9,000 acres of KS lands adjacent to HA. The TMA is



Endangered Hawaiian hawk, one of the rare species regularly seen at HA (Photo by Cody Yamaguchi)

responsible for management across Mauna Loa, Mauna Kea, and Kilauea mountains, totaling over 1.1 million acres.

- **PLANS:** The Forest Action Plan (FAP) prioritizes the HA region for protection and management. The FAP notes native forest loss due to agricultural development and unsustainable harvesting is particularly apparent in the South Kona area and that the threat of development is "High." The FAP also identifies water quality/quantity, forest health, and forest products as Issue #1; 2; and 8 respectively.
- HA as part of the South Kona AOE is identified in the Hawaii FAP and FLP AON along with 6 FLP CE, 2 federal land acquisitions and 3 proposed projects. The Hawaii FAP identifies HA as a priority due to its native dry forest ecosystem with significant wildlife biodiversity, its high threat of forest conversion, and its potential use for forest products, including koa, sandalwood, carbon, and water.
- **PLAN:** The State of Hawaii's Comprehensive Wildlife Conservation Strategy designates South Kona as priority habitat "where enhanced conservation management would significantly benefit native species or their habitats." Protection of the forest in this region is a high priority for wildlife and plant life per the US Fish and Wildlife Recovery Plan that calls for stabilizing existing populations.

Readiness

| | |
|------------------------------------|----------|
| Pre-Appraisal/Market Analysis | 1 |
| Easement or Fee Conditions | 0 |
| Non-Federal Cost Share Commitment | 0 |
| Signed Purchase Agreement | 0 |
| Title Search | 1 |
| Mineral Determination | 1 |
| Stewardship Plan (or equivalent)* | 0 |
| Readiness Total Tally Score | 3 |

Supporting Parties

State Representative Mark Nakashima, District 1; National Park Service - Hawaii Volcanoes National Park; U.S. Fish and Wildlife Service, Pacific Islands Office; Kamehameha Schools (Native Hawaiian charitable trust); Three Mountain Alliance Watershed Partnership; Hawaiian Island Land Trust; Hawaii Forest Industry Association; California State University; Forest Solutions, Inc. (private forestry company with a sandalwood mgnt focus); Community: Kristen Souza;Georgia Clarke;Hirofumi Itaba;Jay Basn; and Sachiko Mishima.

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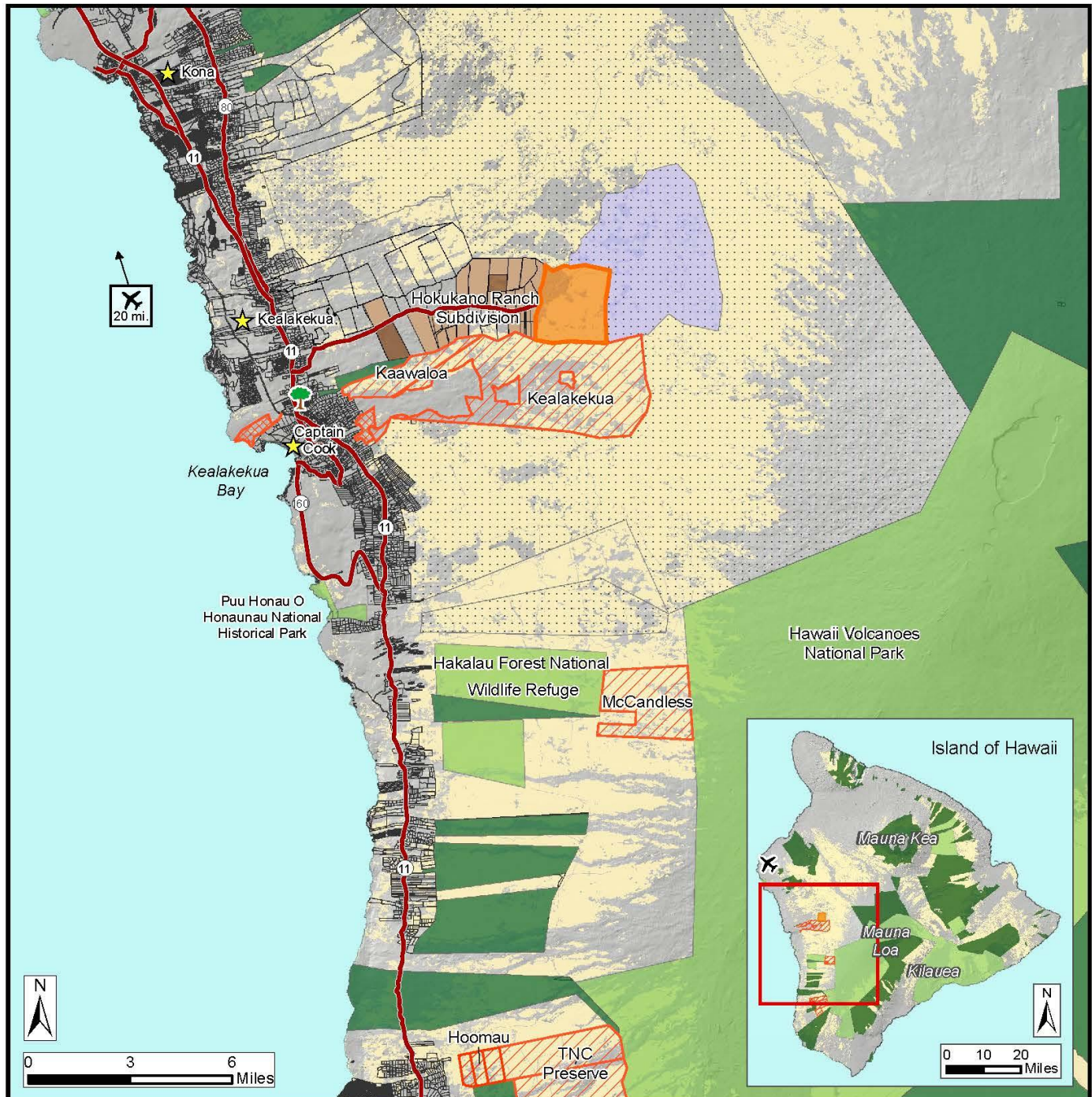
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Haloa Aina Forest Legacy Project

Legend

- | | | |
|--|---|--|
|  Haloa Aina FLP Project (2,780 acres) |  TMA Dry Forest Restoration Project |  Major Roads |
|  Existing FLP CEs |  KS Lands Managed for Forest Conservation |  Development/Housing Lots or Subdivisions |
|  State Reserves |  Hawaii Islands Land Trust CEs | Hokukano Ranch Subdivision |
|  Federally Protected Lands |  FLAON # 1 Priority Landscape (Native Forest in Ag-Zone) |  Remaining Properties for Sale |
|  Community Forest |  Cities and Towns |  Properties Sold in Last 5 Years |



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