



State and Private Forestry Fact Sheet

Hawaii 2024



Investment in State's Cooperative Programs

Program	FY 2023 Estimate
Community Forestry and Open Space	\$0
Cooperative Lands - Forest Health Management	\$395,848
Forest Legacy	\$6,820,886
Forest Stewardship	\$107,892
Landscape Scale Restoration	\$611,326
State Fire Assistance	\$911,326
Urban and Community Forestry	\$681,627
Volunteer Fire Assistance	\$278,590
Total	\$9,807,495

NOTE: This funding is for all entities within the state, not just the State Forester's office.

The mission of the Division of Forestry and Wildlife (DOFAW) of the Hawaii Department of Land and Natural Resources (DLNR) is to protect, manage, and restore natural and cultural resources in collaboration with the people of Hawai'i. Cooperative forestry programs, administered and implemented through a partnership between the State of Hawaii, the U.S. Forest Service, and many other private and government entities help to fulfill DOFAW's mission. DOFAW and its partners work to protect and restore forests to enhance watershed functions, provide habitat for threatened and endangered species, mitigate wildfire threats, and support many other benefits for current and future generations. Additionally, Hawaii's Forest Action Plan (FAP) provides nine priority issues, including: 1) Water Quality and Quantity; 2) Forest Health: Invasive Species, Insects, and Disease; 3) Wildfire; 4) Urban and Community Forestry; 5) Climate Change and Sea Level Rise; 6) Conservation of Native Biodiversity; 7) Hunting, Nature Based Recreation and Tourism; 8) Forest Products and Carbon Sequestration; and 9) U.S. Tropical Island State and Territorial Issues. Consistent with Hawaii's FAP, reversing the trend of natural resource loss by increasing watershed protection, invasive species prevention and control, and restoration of native species has been identified as a target to be achieved by 2030 in the Aloha+ Challenge, a statewide commitment crossing jurisdictions, agencies, sectors, and communities to sustain resources. DOFAW, which manages a quarter of the land in Hawaii, continues to work with partners to enhance the resilience of the State's wildland and urban forests so they are capable of providing the public benefits and ecosystem services upon which our islands depend. Ultimately, forests play a large role in the health of Hawaii's economy, residents, and visitors.

Program Goals

- Protect and maintain healthy forested uplands and functioning watersheds for the array of ecosystem services that are imperative for an island geography, particularly water recharge.
- Preserve, enhance, and restore habitat necessary to sustain native species and ecosystems.
- Reduce the negative impacts of wildfires on native ecosystems, forests, and watersheds as well as communities and the threatened rare habitats near them.
- Enhance awareness of threats posed by invasive species and continue to collaborate with partners throughout the State and the Pacific islands region to prevent the spread of invasive species.
- Improve the health and viability of urban forests through educational programs, technical and financial assistance, and public/private partnerships.
- Promote sustainable forest management to generate a variety of locally sourced forest products and jobs.
- Support teachers in environmental education, offer youth internships, provide volunteer opportunities, and support green jobs.
- Provide technical and financial assistance to landowners and long-term leaseholders of privately

managed forests.

- Purchase land and develop conservation easements to preserve and restore forested areas that are threatened by development or fragmentation.
- Maintain public trails and access roads used for recreation as well as cultural values.

Key Issues

- Hawaii suffered the worst fire in US history in 2023 and is committed to ensuring nothing of this sort occurs again. Fire-tolerant invasive grasses, drought, land use, and population trends continue to be a concern for the Fire Management Program. Enhancing DOFAW's capacity to maintain and expand fire-resilient landscapes, support fire-adapted communities, and respond to wildfires will depend largely on its ability to secure funds and strengthen collaborative partnerships.
- Climate change poses current and long-term threats to Hawaii's forests, as well as new opportunities to support reforestation for carbon sequestration. The Regional Climate Assessments predict warmer and drier conditions will contribute to declining freshwater supplies and increase the risk of extinction. Nearly a third of the nation's listed species are found in Hawaii with habitat limited by temperature gradients; as areas warm species habitats may be lost and new threats emerge.
- The sustainable yield of freshwater depends on the protection of forested watersheds throughout the State and continues to be a priority for programs within the Division of Forestry and Wildlife. The State of Hawaii has committed to protection of 30% of highest priority watersheds by 2030.
- Preventing and responding to new invasive species that threaten forests in Hawaii, while effectively managing widely established pest species through Integrated Pest Management.
- Respond to the detection of new fungus killing on of Hawaii's most important forest tree species, ohia, which makes up 50% of all of the forests in Hawaii. The disease, locally referred to Rapid Ohia Death, has affected an estimated 135,000 acres and threatens forest statewide. DOFAW is coordinating with other state, federal, and county agencies to effectively respond to this new disease threat

Forest Facts and Accomplishments

Selected Facts	Value	FY 2023 Accomplishments	Value
Population	1,455,271	Landowners Receiving Educational or Technical Assistance	40
Acres of Forest Land	1,808,280	Acres Covered by New or Revised Forest Stewardship Plans	3,905
Acres of Nonindustrial Private Forest Land	366,000	Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans	942
Number of NIPF Landowners	1,782	Volunteer Fire Departments Assisted	115
Acres of Federal Land Under State Fire Protection	0	State Fire Communities Assisted	187
Acres of Private Land Under State Fire Protection	2,300,000	Coop Forest Health Acres Protected	0
Number of Rural Fire Departments	4	Forest Legacy Project Acquisitions	0
Cities and Towns	5	Communities Provided Urban Forestry Program Assistance	135
Forest Based Employment	926	Population Living in Communities Provided Urban Forestry Program Assistance	1,411,952
Economic Impact of Forestry (by rank)	19	Urban Forestry Volunteer Assistance	12,612
State Forestry Budget (All Sources)	53,865,282		

Program Highlights

Conservation Education

In 2023 the Information & Education Section continued to implement the Communications Strategy released in 2022. This included the implementation of a statewide campaign called "Year of the K'huli", which highlighted the role of native tree snails in Hawaiian forests. Endorsed by the Governor, the

campaign engaged thousands of residents over 2023 to promote awareness of k'huli and forest health through in-person events, classroom and library presentations, and a festival dedicated to k'huli. Virtual field trips showcased the specialized snail lab and other forests in Hawai'i for students near and far. The O'ahu team built a volunteer program at the Kamananui educational forest, providing schools and community members with an opportunity to remove invasive plants and plant native species. The team also released a new video series that allows forest users to share their cultural experiences with forest gathering and use. The education team continued to be involved in a state youth challenge to produce videos about forests and forest health and participated in statewide events to celebrate O'hi'a, one of Hawai'i's most important trees. A short Public Service Announcement on responsible forest use will debut in 2024.

Cooperative Fire Protection

The 2023 fire season in Hawaii saw a higher than normal wildland fire incidence, starting with a fire in February on Hawaii island burning 1,500 acres in mostly non native grasslands. Prolonged drought through the summer resulted in extremely dry conditions. With a tropical system traveling south of the islands and a high pressure system to the NE generating sustained winds of 45 mph with gusts in the 70-80 mph range, five FMAG fires occurred on August 8th. The Mauna Kea Beach fire on Hawaii Island burned 290 acres, destroyed one structure and damaged 7 others. Hawaii DOFAW responded to a request by Hawaii Fire Department to suppress a 1800 acre fire off of Akoni Pule Hwy, though an entire subdivision was threatened, no structures were lost. Maui DOFAW responded to a 1,082 acre fire that burned a substantial piece of non-native forest that was difficult to extinguish due to steep terrain. The Kula fire resulted in 202 acres burned and 16 structures destroyed. The Lahaina fire burned 2,170 acres, destroyed 2,207 structures, and resulted in 101 fatalities.

On the island of Oahu, the Mililani fire burned 1,696 acres of native dominant forested watershed, mostly on USFWS land, with DOFAW responding with Honolulu FD and DOI fire resources. 28 miles of fuel breaks were maintained.

On Kauai, 19.5 miles of fuel break were maintained in high-risk areas on the west side the island.

DOFAW Kauai responded to four small fires totaling 30.25 acres.

On Hawaii Island, 189.15 miles of fuel break were maintained in high-risk areas of the island.

On Maui, 22 acres of fuel reduction actions were performed.

Statewide there was a large uptick in the number of communities seeking FireWise status with Hawaii Wildfire Management Organization (HWMO), as well as many communities seeking out Community Wildfire Protection Plans. DOFAW, HWMO, and other non profits applied for \$62 million in Community Wildfire Defense Grants for CWPPs, fuel reduction projects, and Water Cistern projects.

Forest Health Protection

Rapid Ohia Death (ROD) continues to be a high priority for natural resource managers in Hawaii. The disease is caused by two recently described fungi in the Ceratocystis genus and threatens Hawaii's most important native tree species, *Metrosideros polymorpha*. Project priorities in 2023 were survey and response, diagnostics, research, and public outreach. Research efforts include determining how the pathogen spreads, the role of ambrosia beetles and feral ungulates, genetic fingerprinting to track disease spread, remote sensing for disease detection, efficacy of treatments (e.g., felling and tarping), and developing disease resistant ohia for restoration. The aggressive form of the disease, *C. lukuohia*, has only been found on Hawaii and Kauai islands to date.

The Division continued working with biological control practitioners in the state to promote the release of safe biological control for Hawaii's most damaging invasive species such as miconia, cane tibouchina, *Chromolaena odorata*, and the erythrina gall wasp. These projects are currently undergoing environmental review and permitting, and releases are expected for some projects in 2024. Biological control is the most cost-effective management solution to many of Hawaii's worst forest threats. The Division and its partners are also spreading *Tectococcus ovatus* to control strawberry guava and monitoring its effectiveness in close collaboration with the Forest Service's Institute of Pacific Islands Forestry.

The Division of Forestry and Wildlife worked with the Hawaii Agriculture Research Center to establish a network of disease-resistant koa (*Acacia koa*) seed orchards across the state. A 5-acre seed orchard was recently planted on state land on Oahu. Seed from the orchard to support scaling up reforestation efforts on the island. Similar projects are underway on other islands.

Forest Legacy

The purpose of the Hawaii Forest Legacy Program is to identify environmentally important forestlands and to protect them from conversion to non-forest uses. In doing so, the program facilitates the conservation and preservation of forest product resources, watersheds, wildlife, scenic enjoyment, recreation, cultural and native species resources, and other ecologically important values. DOFAW supports acquisition through the program for conservation purposes and/or sustainable management of forests with the support of land trust/non-profit partners. Specific Forest Legacy projects in Hawaii include assisting the Office of Hawaiian Affairs with the Wao Kele O Puna Forest Reserve (Hawaii Island); holding conservation easements at Kealakekua Heritage Ranch and Kaawaloa Forest (Hawaii Island); addition of Helemano Wilderness Area (Oahu – 2,882 acres fee title) and Kamehamenui Forest (Maui – 3,434 acres fee title) to the state Forest Reserve System; providing monitoring support for U.S. Forest Service conservation easement projects in South Kona (Hawaii Island); and developing community-based, multi-resource management plans for recently acquired parcels such as Kamehamenui Forest. Due diligence for other pending program acquisitions is underway including; Haloa Aina (Hawaii Island -2800 acres conservation easement), Hana Highway Coastal Rainforest (Maui - 395 acres fee title) and two projects on Oahu (Kaneohe Pali - 948 acres fee title and Maunawili Forest - 672 acres fee title).

Forest Stewardship

The Forest Stewardship Program (FSP) enables private landowners or long-term leaseholders to restore, conserve, and responsibly manage important forest resources that provide vital public and private socioeconomic and environmental benefits. The majority of Hawaii's forests, 66% or 1,155,000 acres of Hawaii's 1,748,000 acres of forestland, is privately owned or managed. Through the FSP, the State recognizes that public-private partnerships are essential to the health of Hawaii's forests and to the public benefits that they provide. Since the program began in 1990, approximately 77 private landowners have enrolled in the FSP and are conducting forest management activities on over 44,000 acres under agreements spanning 10 or more years. The program provides cost-share assistance for the development of FSP management plans and FSP management plan implementation over the 10-year period. In Hawaii, the FSP has leveraged over \$16 million in state and private funding to support provided by U.S. Forest Service through the Cooperative Forestry Act over the last thirty years. The Division, with the assistance of the State's Forest Stewardship Advisory Committee, updated the FSP handbook for landowners to assist them with forest management planning. The Division assisted over 40 landowners and community groups in the past year, providing them with technical guidance on responsible stewardship of their forest resources. Participants in the FSP would not have been able to pursue their sustainable and often innovative land-use objectives without the technical and financial assistance made available through this program. With recent cross-sector initiatives, such as the commitment to freshwater security, watershed protection, carbon neutrality, biosecurity, invasive species control, and native species restoration, the program continues to remain relevant through sustainable forest management actions and partnerships.

Landscape Scale Restoration

Recent Landscape Scale Restoration Grants have gone toward the establishment of seed orchards for both Koa and Hawaiian sandalwood to produce high-quality, eco-region-specific seed, and improved seeds that will promote sustainable reforestation and restoration of native forests on a variety of sites. The new seed orchards will also serve as in-situ genetic conservation sites maximizing project value. Partners are producing ecological seed zones, developing protocols for selecting mother trees for the orchards and tracking natural resistance to diseases. Seed orchard sites have been installed and are being monitored and maintained for future seed collection efforts.

Urban and Community Forestry

A total of \$3.5M in funding was awarded to Kaulunani in FY2023 through the Inflation Reduction Act (IRA), marking a banner year for federal investment in Hawaii's Urban and Community Forestry Programs. The state IRA allocation of \$1.5M funded the recruitment and onboarding of a new full-time staff member, development of a competitive funding distribution process, and solicitation and review of 52 pre-proposals. \$2M in direct federal awards allocated in 2023 will support a Community Coconut Project and Shade Trees in Schools Project.

The Community Grants program continued with sustained applicant interest and partner engagement. Over \$400,000 was awarded to 22 partner organizations, which included 9 new partnerships. A highlight

is the successful production of the Symphony of Hawaii Forests, a free symphonic concert for schools that included original stories, animations, and music. It included an art contest for students and professional development training for teachers. The performances welcomed and inspired more than 1500 students to grow their appreciation for their connections with trees and forests. The Artist In Residence program supported Nalu Andrade, a traditional wood carver, to host a series of four (4) m'lama a'ina (forest stewardship) and ka'lai (carving) workshops that reached 141 participants who learned about invasive species, forest management, and reciprocity. In total, community partners expect to report \$320,000 in cash and in-kind match, 7,362 volunteer hours, and 6,800 non-invasive trees planted or distributed. Kaulunani is proud to support multifaceted urban and community forestry projects that uplift our community partners. In the next phase of programmatic growth, we look forward to meaningful engagement with new, current, and past partners to collectively advance community forestry in Hawaii.

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