KAULUNANI HAWAII URBAN & COMMUNITY FORESTRY FELLOWSHIP APPLICATION ANNOUNCEMENT

About Kaulunani

Kaulunani is the state of Hawaii's Urban and Community Forestry Program housed within the Department of Land and Resources, Division of Forestry and Wildlife. The purpose of Kaulunani is to strengthen the capacity of communities to plan for, establish, manage and protect trees, forests, and green spaces across Hawai'i. Through these actions and through supporting relationships among people and trees, this program provides social, economic, ecological, and health benefits to Hawaii's communities. It supports collaboration across governmental, private, non-profit, and community-based organizations to improve the biocultural well-being of communities and the ecosystems they inhabit. This program is supported in part by Region 5 of the USDA Forest Service, State and Private Forestry.

Kaulunani Mission is to:

Support all of Hawaii's communities with a focus on equity to cultivate wellbeing and resilience through restorative and environmental justice, planting, caring for and growing relationships with the trees and forests that we live with and that are crucial to the ecosystems on which we rely.

About the Fellowship

Trees are vital infrastructure that make communities more livable, healthy, and resilient. Specifically, tree canopy cover (i.e., the leaves, branches, and stems that cover the ground) drives ecological, economic and human health benefits including: improving air and water quality, increasing property values, reducing ambient air temperatures, and reducing stress, among others. Understanding the extent of existing tree canopy can help communities design and implement management practices to maximize those benefits. With this in mind, The Division of Forestry and Wildlife and the U.S. Forest Service partnered to create Hawai'i's first statewide Tree Canopy Viewer. The viewer offers a downloadable statewide canopy raster layer (created using 1-meter resolution LiDAR and MAXAR Vivid imagery), providing a snapshot of canopy up to 2020. In developed areas, it also includes layers with sociodemographic, economic, health, and environmental data to show their relationships with canopy.

Hawaii's Tree Canopy Viewer helps address questions such as: What does our tree canopy look like? Where is our tree canopy located? Is the distribution of tree canopy in Hawai'i equitable? What are the factors that seem to drive urban canopy distribution? How can we prioritize tree planting and maintenance where it can have the most impact for communities disproportionately burdened by risks that urban tree cover may help improve?

Applicants must be students or have graduated with a degree within the last two years from an accredited institution of higher learning (i.e, community college or university). Four Fellows will be selected to carry out projects that use the Hawaii Tree Canopy Viewer and data to contribute to the mission and purpose of Kaulunani, as well as contribute to the goals of Hawaii's **Forest Action Plan**, specifically, the **Urban and Community Forestry** section found **here**.

What can Fellows expect from the fellowship?

- **Funding** – Each fellow will receive a $5,000 stipend. Payments will be made in two installments – half within the first quarter of the project, half upon completion.
- **Research Mentoring** – Mentorship will be provided from the Fellow's research mentor(s). Fellows can identify their own mentor, such as: their graduate student advisors, professors at their universities, a research expert at a nonprofit or organization that has appropriate expertise for the proposed work, and/or an elder or specialist recognized by their community as an expert. Alternatively, Kaulunani can match Fellows with research mentors**.**
- **Linking & Networking Mentoring** – Staff from the Institute of Pacific Islands Forestry (Pacific Southwest Research Station of the US Forest Service) will be matched with Fellows to assist with networking and support from industry partners, enhancing project visibility and career development. Kaulunani staff will also provide support through introductions to local organizations, community groups, researchers, and industry practitioners, as appropriate for each fellow.

Expectations of Fellows

- **Explore** – conduct and provide a literature review *or* accompanying annotated bibliography related to their project.
- **Research** – develop research questions and project(s) aligned with the general topic parameters provided in the Research Areas section below. Fellows are invited to submit concepts that augment or support an already existing research question or project and/or concepts that tackle new research areas supplementary to their existing work. This may vary for each project, but Fellows should expect to commit a minimum of 125 hours over the course of the fellowship.
- **Collaborate** with:

1) Research Mentor(s) – meet at initiation of project and throughout the project as is best determined by Fellow and mentor. An estimated four meeting times is recommended to guide and advise Fellows in the research design, methodology, analyses, and creation of products to share information learned.

2) Linking & Networking Mentor(s) - meet three or more times with an assigned linking and networking mentor from the USFS, Institute of Pacific Islands Forestry. The first meeting will be at the start of project, with one or two interim meetings. The final meeting would be in preparation for the seminar to share research results. Additional meetings with Kaulunani staff will be held as is appropriate to each context.

3) Anticipated users of the proposed research for guidance on refining research design, data collection, product development (e.g., report, presentation, other non-technical creation) and professional development. These may be community members, non-profit staff, teachers, or others.

These interactions will serve as an opportunity for Fellows to develop relationships with researchers and practitioners in their area of interest. More than one mentor may be of help depending on the complexity of the work proposed, or the breadth across topics.

- **Sharing** – Each Fellow will:

  1) Present their research findings in the Spring of 2023.

  2) Write a brief (5-page maximum) technical report capturing the main research questions, methods and findings of the work.

  3) Create a means to share findings with a non-technical audience (e.g. a StoryMap, infographic, story, video, or flyer).

All three deliverables (oral presentation, technical report and product for non-technical audience) must be submitted to Kaulunani, no later than July 1, 2023.

Application Requirements

1. Apply online, via this link;
2. Application includes: (1) your proposed research topic, including approach (methods) (2) timeline of activities and deliverables, (3) why you are interested in your proposed research topic, (4) what you hope to learn from this fellowship
3. CV or resume – 2 pages
4. Letter of recommendation (at least one, more than one will be accepted)
5. Current unofficial transcript to document degree completion or progress toward degree completion in focal areas
6. *Optional*: If you have an active study that you believe fits this fellowship, please provide an abstract (one paragraph maximum) of that ongoing work and how you would augment that work through the fellowship if selected.

Research Areas

Kaulunani invites proposals that align with one or more of the research priorities outlined below. Please ensure that your proposal clearly indicates how the focal topic(s) will be addressed in sufficient detail for the Evaluation Committee to evaluate the merit of your proposal as a stand-alone document. Preference will be given to proposed projects that incorporate an analysis of our tree canopy raster layer. Applicants are invited to submit concepts that augment or support their already existing research questions and/or concepts that tackle new research areas supplementary to their existing work.

Urban Tree Canopy Prioritization & Potential – Ex: Analysis of currently available plant-able space and the potential for urban canopy expansion and prioritization along:

- Streets (Public Right of Way)

- Parks
- Private property
- Elementary School Campuses (ex: creation of campus shapefile using GPS devices to run analysis of canopy cover on elementary school campuses)
- Other land use categories (ex: single-family residential, multi-family residential, commercial/mixed-use, industrial, streets, recreational, protected areas, etc.)

Urban Tree Canopy and Public Health – Ex: Relationships between various public health indicators (obesity, asthma, mental health, life expectancy) and urban tree canopy cover in targeted regions throughout Hawaii;

Urban Tree Canopy and Urban Heat Island – Ex: the broader role of urban forests in urban heat island mitigation and where additional efforts might be focused, for example, near schools, hospitals, elderly care facilities, or public transportation access points;

Urban Tree Canopy and Environmental Justice – Ex: Identification of current and/or potential stakeholder networks within selected low-canopy regions, accessibility to environmental and social benefits of trees in selected low canopy regions; relationships between urban tree canopy cover and socioeconomic factors, for example race, homeownership, or immigration status; infrastructure barriers or challenges to urban canopy expansion in historically marginalized communities (ex: overhead powerlines, average parkway size, percent impervious land vs. currently plantable space, etc.); attitudes toward urban canopy expansion in low-canopy regions; or urban canopy expansion and gentrification.

Urban Tree Canopy and Urban Waters – Ex: How various planned Watershed revitalization efforts may be informed by or incorporate available Urban Tree Canopy Assessment data; the relationship between tree canopy and water pollution diversion; how urban forest cover could meet some of the goals outlined by the Green House Gas Sequestration Task Force.

Urban Tree Canopy and Coastal Waters – Ex: How our current urban tree canopy impacts stormwater runoff into our oceans; relationships between stormwater related brown water events, reef health, and urban tree canopy.

Urban Tree Canopy and Green infrastructure – Ex: Relative habitat value of native and non-native species of trees and or plants; Designs for stormwater use to maintain trees-scalable to cities; sustainable planning indicators; percent impervious surface; lower energy burden; mitigating noise and light pollution.

Urban Tree Palate for Future Climate – Ex: identify 'climate ready' tree species for one or more of Hawaii's communities in the future given climate change scenarios.

Tree Canopy and Wildfire - What is the relationship between fire history, fire threat, and tree canopy across diverse communities?

Urban Tree Canopy and Wildlife Habitat – Ex: corridors, refugia, kīpuka

Urban Tree Canopy and Indigenous Resource Stewardship - Ex: What is relationship between canopy cover and the intensity and occurrence of biocultural practices such as agroforestry, loʻi kalo, and concepts such as the wao system?

In addition to using the *Hawaii Tree Canopy* data, Fellows are also encouraged to incorporate other available and relevant datasets pertaining to their chosen research area (ex: biocultural data, public health data, climate data).

Resources:

Hawaii Tree Canopy Viewer
Kaulunani Urban & Community Forestry Program
Hawaii Climate Data Portal
Stewardship Mapping & Assessment Project
Current Initiatives | LAUC (laurbanresearchcenter.org)
FELLOWSHIPS | LAUC (laurbanresearchcenter.org)
Climate & Economic Justice Screening Tool

How to Apply

Submit your application online by September 15, 2022, 5:00pm HST.

Important Dates

Application Due: September 15, 2022 at 5:00 PM HST (early submissions encouraged)

Telephone Interviews for select applicants: October 3 – 5, 2022

Applicants Notified: October 7, 2022

Fellowship Onboarding: October 10, 2022

Fellowship Duration: October 10, 2022 – August 1, 2023

Presentation of Findings: TBD

Please note that in this round of Fellows we have no possibility for extensions of projects, thus, your application indicates you are able to complete the proposed work in full during the stated time period. Withdrawing post-selection will likely impact any future applications for funding you may wish to submit to Kaulunani and USFS.

Questions? Please email Heather McMillen at heather.l.mcmillen@hawaii.gov