



March 12, 2025

Dr. John Arthington Search Chair, Professor & Chair IFAS - Department of Animal Sciences University of Florida

Dear Dr. Arthington and Search Committee Members,

Having received a formal nomination and invitation to apply, it is a pleasure to write this letter as part of my application for the Department Chair position of the Soil, Water, and Ecosystem Science (SWES) Department at the University of Florida. I hold an M.S. in Biology (wetland ecology), Ph.D. in Botany and Pathology with emphasis in Ecology (forest soil biogeochemistry and ecology). After two postdoctoral positions on two continents, I've spent over 15 years as research and instructional faculty in the interdisciplinary (i.e., natural and social sciences) Department of Natural Resources and Environmental Management within in the land grant-designated College of Tropical Agriculture and Human Resilience (CTAHR) at the University of Hawai'i Mānoa (UH Mānoa). In this role, I broadened my research to include agricultural contexts and social-ecological systems analysis. I bring technical expertise and leadership to diverse tables for land-based conservation and rebuilding landscape resilience and health. My research aims target metrics for soil carbon, organic matter, and holistic aspects of health and the circular economy in Hawai'i and beyond. Our collaborative Hawai'i soil health research group explores what to measure for soil health in tropical and subtropical systems, what those measurements mean to our land managers, producers, and practitioners, and are developing a machine learning model that improves accessibility and cost effectiveness of the assessment. As a member of the Hawai'i delegation to the natural and working lands initiative of the US Climate Alliance and advisor to state agencies responsible for policy and programs relating to agriculture, energy, and natural resources, I also assist with designing science-based incentives programs and informing decision and policy makers on best approaches to achieve meaningful social, economic, and environmental outcomes. At stage of my career, the Chair position of the SWES Department, College of Agriculture and Life Science, Florida Agricultural Experiment Station, and Florida Cooperative Extension Service would be a fitting and exciting transition into administration.

Beginning as a tenure-track faculty member in 2014, my outstanding scholarly achievements and professional activities related to my formal teaching and research responsibilities accelerated my tenure clock by a year and I advanced all the way to the rank of Full Professor in 2023. Highlights of my research impacts to date include securing over \$16.5 million in funding for UH Mānoa from state and federal sources for research in the last 10 years. Many of these projects included additional successful cost share agreements with industry partners, coalition of individual farmers, federal and state agencies, including in-kind and cash. I've mentored 5 postdoctoral research associates and 3 PhD students and advised 16 MS students, 4 Master of Environmental Management students while on a further 8 graduate committees. Mentees have gone on to start businesses, work for state and federal agencies, become faculty researchers, consult, and work for non-profits and other industry employers. I grew an initial allocation of \$79,900 for "Team Science. Land-based solutions: Activating landscapes for climate

change mitigation and soil health" acquired through competitive, internal seed funding from USDA Capacity Funds into \$44,117,376 collaborative research program and multi-user research lab funded by five competitive USDA grants within five years (2020-2024). I continue to support a range of research endeavors since 2021 as a co-PI/applicant in major initiatives that total \$36,600,790 and includes an NSF-funded Mid-scale RI-1 (M1:IP): A Deep Soil Ecotron facility to explore belowground communities and ecosystem processes (\$18,950,955), and Abundant Intelligences, an indigenous-led research program that conceptualizes, designs, develops, and deploys Artificial Intelligence based on Indigenous Knowledge systems funded by New Frontiers in Research Fund (\$15,907,885) and Social Science and Humanities Research Council of Canada (\$1,741,950).

I have over 15 years of experience as a faculty member in a department and college within a land-grant university that is engaged in teaching, research, and extension activities located throughout the state, including three years of service as Graduate Chair of our three programs. However, the best evidence for my potential to direct a large department at a major land-grant university may come from my PI role of a \$40 million USDA funded Partnerships for Climate-Smart Commodities project funded in 2023. Our Hawai'i Partnership employs at least 68 people part- or full-time, spread across over 20+ organizations, most of which are based on four islands across Hawai'i as well as Colorado and Florida. Our climatesmart specialists (akin to extension agents) are embedded with trusted community-based producer organizations in our agricultural regions across the state. A producer advisory council helps us make sound decisions that are best for our portfolio of producers. Our Partnership is currently structured with four "departments", each of whom have decision-making groups and additional teams working for them towards common goals. I oversee the Partnership as a whole, with my team of Program Manager, Department leads, and coordinators. My role also encompasses our long-term strategic vision and sustainability plan. Additionally, I direct a research team in the development of a novel holistic, multivariate climate-ready metric for use in decision support and entrance to the emergent market. All of this is achieved with very intentional, online and hybrid meeting expectations, deliberate in-person, "all-hands" or subgroup events, and careful cultivation of relationships that often requires knowing intuitively when it is best to take a trip and make an in-person visit.

Before 2022, I served as PI on five competitive federal grants for fundamental science and applied research worth \$1.09 million and co-PI on another worth \$1.98 million and was co-PI or senior personnel on three state contracts worth \$524,518. Since joining UH Mānoa in 2009 until 2022, my external grants totaled \$3.52 million (source of funds include USDA NIFA, ARS, and NRCS; Office of Naval Research; American Forests; State Dept. of Land and Natural Resources, Dept. of Health Clean Water Branch, Energy Office, OHA, Office of Planning); internal grants such as the USGS Powell Center Working Group and NSF Industry/University Cooperative Research Center total \$324,338; and College-level awards through competitive, integrated research-extension project through the land grant capacity funds total \$970,630.

My qualifications as they relate directly to the chair's position follow:

Knowing that I was interested in pursuing the transition into leadership and with the news of intended funding for the Hawai'i Partnership, I bolstered my on-the-job experience with formal certification in Leadership and Management through the Harvard Business School Online program. Combined with the intentional selection of shared governance organizational structure and associated training sessions, this program helped me harness my potential to lead our Partnership through an intense startup and into implementation phase within the first year of receiving funding. From a new collaborative group composed of members from agricultural and conservation sectors typically at opposites sides of the table, we built an extraordinary Partnership working together on the foundations of shared governance and distributed power of decision making. I worked together with our Prime recipient, Lynker Corp. to

establish our organizational structure to meet objectives as laid out in the program and our proposal with over 60 staff (ranging from undergraduate student research assistants to executive directors of non-profits) in 20+ organizations. Lynker provided Program Management staff and fiscal/contracting support across the project, while I administrated our UH subaward through our fiscal and administrative staff both provided by UH and of my own development in support of the project's objectives. Our Partnership's organizational structure was designed specifically to decentralize decision-making through a consent-based processes, which in practice means that self-motivation and effective teams are critical, therefore relationships, mentoring, and crystal-clear communication are key to ensuring the work gets done. My experience with, and commitment to, shared governance and fostering strong collaborations in our Partnership will transfer well to meeting the needs of state faculty located on the main campus and at the IFAS Research and Education Centers. Further, my current department is successfully structured similarly - with instruction, research, and extension faculty spread across multiple Hawaiian Islands and research/extension stations.

As an assistant and associate professor in the NREM Department, I served on and chaired the curriculum and Graduate committees, demonstrating my strong commitment to undergraduate and graduate student recruitment and retention that will carry over to all academic programs in Soil, Water, and Ecosystem Sciences. I also understood that developing effective curriculum and programs requires direct contact in the classroom with students in the core courses to ensure continuity across the curriculum and effective pipelines for programs, so instructed courses that allowed me to identify, understand, and address gaps.

While faculty, I sought continued professional development for myself, as well as providing those opportunities for my students and staff to reach their potential and gain training beyond what was available through UH. For myself, I earned the HBSO Certificate of Specialization in Leadership and Management (3 courses: Power and Influence for Positive Impact, Leadership Principles and Management Essentials) in 2024, attended Leadership conferences, and selected meaningful service roles positioned for leadership. I've provided specialized course for my students and postdoctoral researchers e.g., in AI techniques, international earth system model training with an expert in the field, and continent/international conferences for networking off-island. For my staff, I've provided access to courses in management and arranged for training in shared governance and non-violent communication. Mentoring is important but is relationship-based and therefore must happen naturally. Therefore, I focus on creating the work environment where mentoring is expected and available if desirable for the individual's growth.

Even prior to the USDA Partnership grant funding, I had experience leading and managing multistakeholder sustainability initiatives. From 2020-2022 I led a U.S. Climate Alliance award to a collaborative partnership - the Hawai'i Natural Working Lands Team – which is formalized as the state representatives to the Alliance. In our current work, our team's goal is to create a baseline soil carbon database and land management decision support tools to maximize landscape-scale sequestration rates for climate mitigation at the state scale. Our multidisciplinary team over the years included postdoctoral fellows (UH Mānoa and Arizona State University-US Forest Service), state planners (Department of Land and Natural Resources), a UH Economic Research Organization and Water Resources Reasearch Center specialist, The Nature Conservancy, US Forest Service senior scientist, small business owners (Healthy Soils Hawai'i LLC), and graduate and undegraduate student interns. We continue to work closely with policymakers at the Hawai'i Climate Change Commission and the Hawai'i Energy Office to support rigorous legislation, incentive programs, and climate action pathways. I have deep appreciation of and gratitude for those who serve the public through Land Grant Universities. The impact of the land grant mission on curriculum development, training opportunities, and research in support of extension to support the agricultural community was apparent to me first as a graduate student at Oregon State University. As faculty at UH Manoa in CTAHR, the Land Grant College, I was able to more fully understand and embrace the entirety of the service mission with humility through my career. My formal responsibilities are in instruction and teaching, but I've established a research endeavor with strong ties to community and civic engagement on behalf of the breadth of production and ecosystem resilience across Hawaii. Further, our team's research almost always is integrated with extension. Even when not explicitly an integrated extension-research project, our team co-develops research with local experts and farmers and shares back with them to ensure our knowledge gained is also theirs, designed to meet their needs. I currently am director of the S(HEE)R Lab, a multi-user research lab that develops tools to best characterize, understand, and predict the behavior of diverse soils and ecosystems of Hawai'i, the Pacific Region, and beyond. Although formally a research service lab, the S(HEE)R Lab supports the land grant mission by facilitating basic and applied research for faculty, researchers, and students and extending the opportunity to use and learn our collective knowledge beyond the University campus. Our community engagement activities occur at the individual (database to decision-making), State (legislatively mandated programs), regional (LTAR site design, implementation and maintenance), national (soil, water, tissue, organic amendment, soil health, and contaminant testing), and international (one health metrics and analysis) levels.

Although the land grant mission intentionally focuses on meeting local/state needs, the innovation and excellence it supports is also conducive to leadership in international realms through regional extension, e.g. Pacific Islands or the Caribbean, and cutting-edge research and development that may be applied elsewhere or inform international efforts and policy. I've demonstrated this by extending our Hawaii Soil Health research team's index from Hawai'i to Puerto Rico, American Samoa, and Pohnpei with competitive funding from USDA NIFA and NRCS. I am also a member in international networks such as the International Soil Carbon Network, International Soil Radiocarbon Database and Deepsoil 2100, where I can contribute local data to those international databases and participate in continued syntheses. Uplifting local Hawaii-based systems as models for tackling global problems particularly through a policy lens was recently recognized by the international Rockefeller Foundation.

My previous professional responsibilities and achievements as they relate directly to the chair position follow:

- **Principal Investigator**, The Hawai'i Climate-Smart Partnership; Provide overarching leadership for the \$40 million USDA-NRCS funded project "Hawai'i climate-smart commodities: A portfolio approach to equitably scaling the agriculture sector" with Lynker Corp. as Program Manager and lead the \$10,647,990 UH Mānoa subaward.
- **Director**, Soil (Health, Environment, and Ecosystem) Resilience [S(HEE)R] Lab; Lead team of faculty researchers, managers, technicians, and students associated with the multi-user research and training lab, including provision of shared governance structure for collective decision-making.
- Graduate Chair, NREM Masters of Environmental Management (MEM), MS, and PhD.
 Programs (2021-2024); Lead graduate committee through processes for admissions, hiring for teaching assistantships, orientation for entering student cohorts, program assessment, and day to day administration of programs with support from office staff.
- **Chair, Departmental Promotion Committee** (2024-present); Review of departmental tenure/promotion and contract renewal applications, conversion of newly developed workload equivalency policy into a revised tenure and promotion policy for adoption by the department.

- Key **research** areas cover carbon dynamics and sequestration, greenhouse gas flux, soil health in natural and managed (forested or agriculture) ecosystems and how these relate to global change pressures such as land-use, climate change, and invasive species sustainable agriculture, and resilience and policy.
- Responsible for **teaching** courses in soil science, climate action and natural resources and environmental management-related areas as part of undergraduate and graduate core and elective curriculum, currently being covered by Junior and Assistant Researchers on my team with resources available through the formal instructional buyout policy. I continue to offer graduate student advising and directed research and internship opportunities.
- Research and training endeavors support **outreach and extension** through provision of courses for technical assistants, research-level soil, water, and plant analysis, user-inferfaces for datadriven decision support tools, and relationship building via cross-campus, state, national, and international collaborations to identify and meet diverse community member and stakeholder needs. The Hawai'i Climate-Smart Partnership includes a Producer Engagement Team of six community-based producer groups and supports a large team of outreach coordinators and technical assistants across the state.

Administrative and management philosophy as it relates directly to the chair position follows:

Departmental programs grounded in the land grant mission require vision and implementation that encompasses research, education and extension and allow for the creation and sharing of knowledge to improve lives for the citizens of Florida, the country, and the world. To do so requires strategically strengthening research and education partnerships and relationships with community members (stakeholders) by expanding collaborations with local and regional partners to support research, teaching, and outreach programs and engaging with agricultural producers, land managers, industry professionals and other partners to ensure research outcomes are widely applicable. As chair, I will provide growth and professional development through supportive leadership for research excellence, ensuring faculty, researchers, and staff have the resources needed to succeed and aligning departmental goals with advancements in soil, water, and ecosystem science. My leadership focus will be on collaboration and growth, supporting faculty, researchers, and students to take risks and achieve professional excellence while fostering strong teamwork and knowledge exchange. To administrate human and fiscal resources, I am committed to transparent, efficient, and ethical governance that ensures the responsible management of resources, financial planning, and decision-making processes.

General strategy for leadership:

My natural leadership style is somewhere in the middle of structure/direction and support/development, with a range that leans towards support and development given the nature of our role as educators, mentors, leaders in the community. I am vision-driven, adaptive and resilient, collaborative and team oriented, community (stakeholder) engaged, and am committed to long-term mentoring and talent development as a core metric of success. I prefer and practice consent-based decision making, where the process is premised in inquiry (collaborative problem-solving) rather than advocacy (a contest). But recognize that some situations require other approaches. A trusted and safe environment, established intentionally over time through investment in consent-based processes allows for top-down, rapid decision making when required. Above all else, fair processes that give everyone a chance to express views and influence the outcomes, and provide transparency are critical for gaining buy in for decisions.

A specific plan of action to back the philosophy shared earlier would include building partnerships with agricultural producers, conservation groups, and other research institutions to enhance real world

applications of faculty and student work and expands the department's impact in solving critical challenges. Establishing advisory councils and collaborative networks can help align research priorities with long-term environmental and economic sustainability. If necessary, I would strengthen research infrastructure and directly support grant acquisition to secure funding for interdisciplinary research that contributes to long-term sustainability in agriculture and natural resource management. Intentional mentoring structures and collaboration across disciplines can create professional opportunities to enhance research and teaching outcomes. Implementation of shared governance models where faculty and staff contribute to budget planning, hiring decisions, and research strategies help build transparency and trust.

Vision and growth strategy for the department's research, teaching, and extension mission

My research-driven and mission-oriented management approach will facilitate external funding opportunities that advance a research, teaching, and extension agenda that represents departmental, and faculty interests and integrates soil, water, and ecosystem science with resilience, land stewardship, and applied environmental solutions. I hope for the opportunity to meet the faculty, researchers, students, and staff in the Soil, Water, and Ecosystem Science Department, as they are who the Department Chair represents and serves. As a leader coming from outside the UF community, I would seek first to meet, hear, and understand needs, visions, and perspectives of everyone. To do so, I would prioritize visiting each primary work location and get a sense of the landscape. Through these visits, a landscape analysis can help assess existing stakeholder networks and gaps. A series out outreach events will help get input and feedback from our community of stakeholders. Then, a formal strategic visioning process will help us collectively determine a new standard for our work environment, strategy for normalization of behaviors, and any necessary governance agreements for continued accountability. These can be bridged to and facilitate any existing or required processes and frameworks set forth by the Sr. Vice President for departmental reviews and administrative procedures. The next phase will be an adaptive, iterative implementation of focused, clearly defined goals and deliverables and processes to assure completion. Details of this vision and growth strategy will emerge as a collective process through open, transparent shared governance. Direct, clear communication with other unit leaders and IFAS deans within the College of Agriculture and Life Sciences will enable the development of relationships required for successful alliance and incrementality towards shared programmatic goals.

I appreciate the opportunity to share my enthusiasm for the Department Chair position of the SWES Department. Please reach out with any questions, I look forward to hearing from you.

Sincerely,

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