UH Water Resources Research Center and Sea Grant partner on $20M water sustainability project

Increasing population, changing land use practices, and issues relating to climate change are contributing to growing concerns over water quality and quantity in Hawai‘i. To help the state address this critical issue, the National Science Foundation EPSCoR Program has awarded $20M to the University of Hawai‘i (UH) to engage in a five-year groundbreaking study of water sustainability issues through a collaboration called ‘Ike Wai.

The project name ‘Ike Wai symbolizes knowledge (‘Ike) of water (wai) which informs values, policies, and practices for managing this resource. ‘Ike Wai will assemble UH, state and federal agencies, and community partners to address critical gaps in the understanding of Hawai‘i’s water supply that limits decision-making, planning, and crisis responses. It will also bring together a diverse team of hydrogeophysicists, modelers, volcanologists, engineers, visualization experts, social scientists, and educators, and hire seven new faculty in the UH system to specifically focus on this project.

The five-year project will concentrate on topics ranging from geophysics, microbiology, cyberinfrastructure, data modeling, indigenous knowledge, and economic forecasting, and pair university scientists with the community and state and federal agencies.

The University of Hawai‘i Water Resources Research Center (WRRC), the University of Hawai‘i Sea Grant College Program (Hawai‘i Sea Grant), and the Institute of Hawaiian Language Research and Translation bring critical research expertise and stakeholder input and engagement to bear on solving issues related to water availability and sustainability for the ‘Ike Wai project. In addition to bringing invaluable university knowledge and expertise, these programs provide the capacity for understanding traditional knowledge and history of our water resources and close ties with other parts of the Pacific, which will inform as well as benefit from the results of this groundbreaking collaboration.

Dr. Darren T. Lerner, Hawai‘i Sea Grant director and interim WRRC director, noted “Understanding all dimensions of our water resources in Hawai‘i including quantity, quality, and use, is critical to our path toward increasing our ability to live sustainably. Water is inextricably linked to the production of energy and food and this funding ultimately serves to boost our existing efforts across the UH system to address all of these issues for our state, the region, and the world.”

The Water Resources Research Center at UH serves Hawai‘i and American Samoa, and is Hawai‘i’s link in a National Institutes for Water Resources network consisting of 54 programs nationwide. ‘Ike Wai will provide the opportunity to hire three new tenure-track WRRC faculty shared jointly with UH’s School of Ocean and Earth Science and Technology, College of
Engineering, and College of Social Sciences in the analysis of the data and in addressing fundamental data and knowledge gaps.

The engagement with Hawai‘i Sea Grant will link ‘Ike Wai to Sea Grant’s extensive network of 33 coastal and Great Lakes programs across the U.S., Puerto Rico, and Guam as well as other parts of the Pacific such as American Samoa, the Republic of the Marshall Islands, and Pohnpei, where Hawai‘i Sea Grant faculty are based. In addition, Hawai‘i Sea Grant has been collaborating with the Hawai‘inuiākea School of Hawaiian Knowledge to identify and translate information from the large repository of Hawaiian language material from 1834 through most of the 20th century. One of the largest sources of information is the cache of newspapers published in Hawaiian for over a century. This partnership, now formally realized as the Institute for Hawaiian Language Research and Translation, will allow rendering of this historical Hawaiian knowledge into educational resources that can enrich this project.

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*The University of Hawai‘i Sea Grant College Program is part of the University of Hawai‘i at Mānoa’s prestigious School of Ocean and Earth Science and Technology. It supports an innovative program of research, education and extension services directed to the improved understanding and stewardship of coastal and marine resources of the state, region and nation. Science serving Hawai‘i and the Pacific since 1968.*