



# REQUEST FOR PROPOSALS

## University of Hawai'i Water Resources Research Center



### 2020-2022 Grant Program for Hawai'i and American Samoa

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#### OVERVIEW

This request for proposals is to initiate the University of Hawai'i Water Resources Research Center's 2020-2022 participation in the U.S. Geological Survey State Water Resources Research Institutes Program for Hawai'i and American Samoa as authorized by the federal Water Resources Research Act of 1964. We invite proposals for research and information transfer projects in physical, geological, natural, and social sciences related to water resources. We anticipate that a total of approximately \$400,000 will be available to fund 4-6 projects, each 2 years in duration and with half dedicated to projects in Hawai'i and half focused on issues directly impacting American Samoa.

#### Eligible Applicants:

Faculty members or affiliates at institutions of higher education in the State of Hawai'i or the US Pacific Island Territory of American Samoa. **Successful proposals must identify required matching funds of one dollar for each federal dollar (Hawai'i and American Samoa proposals).** Questions about meeting or documenting this match should be directed to John Matassa, WRRC, University of Hawai'i, at [matassa@hawaii.edu](mailto:matassa@hawaii.edu).

#### Duration:

Project duration is for 2 years. Funding for each year is pending project performance and availability of funds. As such, investigators must articulate experimental designs which will produce clearly identified deliverables by the end of each funding year.

#### Guide to Proposers:

Grants for faculty of higher education institutes will be considered, and recently hired or junior faculty will be provided additional consideration. The objective of these grants is to assist principal investigators in collecting preliminary data to use in submission of a large proposal to federal agencies or other funding sources. It is expected that the research resulting from small grants will produce peer-reviewed publications. The maximum award is \$35,000 annually. Requests for a graduate fellow in addition to the research grant request may be made during proposal development.

All projects must demonstrate student training as required by federal program guidelines and must include plans for technology transfer/outreach.

Note that **pre-proposals are due Friday, November 30, 2018**. The pre-proposal should briefly describe the background, rationale, objectives, goals and expected outcomes of the proposed project (no more than 3 pages; see template and instructions in eProjects; [http://www.soest.hawaii.edu/eProjects/logn/logn\\_login.php](http://www.soest.hawaii.edu/eProjects/logn/logn_login.php)).

**Required Deliverables:**

Projects funded under this program must deliver:

- an annual report in the USGS format;
- one or more student theses, presentations, and/or posters; and
- a final project deliverable, which may take the form of a published or submitted paper.

**Program Objectives:**

This program supports:

- research projects that respond to high-priority state/territory research issues in freshwater or coastal environments as outlined below;
- research projects deemed highly likely to generate significant additional funding in the future from other agencies; and
- information transfer projects that enhance communication of research results, or serve a broad environmental education or public service function.

**Research Priorities for 2020-2022:**

Research priorities for WRRRC are set by the advisory councils, who represent broad stakeholder groups in Hawai'i and American Samoa. In addition, the 2006 reauthorization of the Water Resources Research Act shifted priorities in the direction of water supply and reliability questions. Hence, water quality-oriented proposals should refer to improving quality as a means of increasing availability and reliability of water supply. These considerations lead to the following priorities for proposals under this program:

*Hawai'i:*

- Water supply: satisfying growing water demand, including reuse, transfer, conservation, demand management; identifying and assessing new water sources including the use of rainwater catchment.
- Water system infrastructure: modeling of asset replacement; analysis of infrastructure integrity; OSDS systems alternatives and cost-benefit analysis; forensic analysis
- Water quality: methods to restore water quality, especially leading to increasing usable water supply, including models of the fate and transport of contaminants and methods of treating wastewater.
- Water institutions, law, economics: methods of increasing usable water supply through institutional refinement; water allocation laws and institutions in Hawai'i; methods of planning for or pricing water to increase efficiency of use.
- Climate impacts on water quality and/or supply, and adaptation solutions to changes in these parameters.
- Socio-economic and human perception studies that seek to elucidate the value of groundwater and dependent systems.
- Studies that integrate the physical and natural sciences with social sciences related to the topics above.

*American Samoa:*

- Water supply: satisfying growing water demand, including, reuse, transfer, conservation, demand management; identifying and assessing new water sources including the use of rainwater catchment.

### Research Priorities for 2020-2022 (continued):

- Water quality: methods to restore water quality, especially leading to increasing usable water supply, including models of the fate and transport of contaminants and methods of treating wastewater.
- OSDS systems alternatives and cost-benefit analysis.
- Climate impacts on water quality and/or supply, and adaptation solutions to changes in these parameters.
- Socio-economic and human perception studies that seek to elucidate the value of groundwater and dependent systems.
- Studies that integrate the physical and natural sciences with social sciences related to the topics above.

### Statement of Research Kuleana:

As an organization we have a kuleana (responsibility and privilege) to ensure that the programs and projects we support engage in collaborative, mutually-beneficial partnership with communities. With this in mind, we have adopted the [Kūlana Noi'i](#) developed by Hawai'i Sea Grant. The meanings of kūlana include "position, posture, reputation, attitude, stance" and when paired with noi'i, which means "to seek knowledge or investigate, to research," the [Kūlana Noi'i](#) provide a set of standards for engaging in long-term relationships between community and researchers.

The University of Hawai'i Water Resources Research Center is committed as an organization to the standards outlined in the [Kūlana Noi'i](#). The following standards\* are modified from the [Kūlana Noi'i](#):

- **Respect:** The history, people, and place must be respected through understanding, acknowledging, and honoring local culture, traditions, knowledge, and wisdom.
- **Reciprocity:** Relationships between researchers and community should be reciprocal rather than extractive.
- **Self-Awareness and Capacity:** Be aware of and address your place, intentions, power, and value to the place both as an individual and a representative of a group or institution.
- **Communication:** Inclusive, transparent, and open communication throughout the research process.
- **Maintain a Long-Term Focus:** All research projects should contribute positively to the effort to mālama (care for) this wahi (place).
- **Community Engagement and Co-Review:** Promote co-learning and co-development of methods, strategies, goals, and outcomes to be adaptable to local place, people, climate, resources, and needs.
- **\*Knowledge Ownership and Access:** Ownership of information and data about a place ultimately belongs to the community. The community has the right to access and utilize data and have a voice in how information and data are shared.
- **Accountability:** When a project fails to meet these kūlana the community and researchers should work together to identify problems and adjust the project accordingly.

## **Formal Outreach Component:**

Outreach and Community Engagement: Researchers are strongly encouraged to identify and interact with their target audience as they develop their proposals (please see Statement of Research Kuleana, above). Researchers are asked to explain how the research will be extended to, and used by, those audiences who can utilize the information for making informed management and policy decisions.

### Pre-proposal requirement

For pre-proposals, investigators should address a general outline of their outreach plan in their narrative.

### Full proposal requirement

Should a pre-proposal be encouraged for full proposal development, the WRRC, in partnership with Hawai'i Sea Grant extension, will offer a series of office hours to address the question: "How is the proposed research engaging stakeholders and how are your research results useable and accessible by these partner groups?" Prior to full proposal submission, potential principal investigators (PIs) will have the opportunity to meet with members of our integrated outreach program. During these short sessions, the team will consider a researcher's proposed project and offer best practices for designing an effective outreach plan. Anticipated outcomes from these meetings include a framework for developing, implementing, and assessing the outreach plan, along with guidelines for working with potential partners to assist in developing outreach plans as needed. **These meetings are by appointment only and will be held during the spring of 2019.** Meeting with outreach personnel is suggested but not required and does not guarantee project support. The lead PI is responsible for all components of the proposal and funded project. To schedule a session, send an email to: [waltonm@hawaii.edu](mailto:waltonm@hawaii.edu) no later than March 10, 2019 with "Outreach Session Request" in the subject line.

The WRRC is committed to ongoing enhancement of technology and information transfer of WRRC funded research results to stakeholders and relevant users. Toward this goal, **a well-developed plan for outreach activities is to be included in all full proposals.**

## **Selection:**

Pending anticipated federal funding, WRRC expects to issue awards in support of approximately 4-6 proposals in 2020-2022. Successful projects will:

- 1) be hypothesis driven;
- 2) demonstrate strong evidence of scholarly merit that leads to papers in peer-refereed journals;
- 3) focus on the mentoring of graduate and undergraduate students;
- 4) identify and include targeted strategies for transfer of research results to specific user groups; and
- 5) address critical needs and issues as defined in the priorities above.

While all priorities are at the same level, some weight may be given to balance different disciplines in the overall research program. Multiple referees using the following criteria will evaluate each proposal submitted:

- 1) Scientific merit
- 2) Relevance to WRRC's mission
- 3) Qualifications of the PI
- 4) Qualifications of Co-I(s)
- 5) Value to graduate and/or undergraduate education
- 6) Benefit to Hawai'i and/or American Samoa
- 7) Overall value of the proposal

**More information:**

For research program-related questions, contact Dr. Darren T. Lerner (808-956-7031; [lerner@hawaii.edu](mailto:lerner@hawaii.edu)). For fiscally related matters contact John Matassa ((808) 956-7847; [matassa@hawaii.edu](mailto:matassa@hawaii.edu)). For questions related to eProjects please contact Dr. Hal Richman (808-956-8191; [hrichtman@hawaii.edu](mailto:hrichtman@hawaii.edu)).

## APPLICATION PROCEDURE

To receive consideration, preliminary proposals are due electronically via the proposal submission website, eProjects ([http://www.soest.hawaii.edu/eProjects/logn/logn\\_login.php](http://www.soest.hawaii.edu/eProjects/logn/logn_login.php)) no later than **5:00 pm (Hawai'i Standard Time), Friday, November 30, 2018**. This is also where you will find instructions and templates for submittal. Principal Investigators are encouraged to submit electronically via eProjects well prior to the deadline to avoid delays associated with heavy internet traffic during the day on which proposals are due. Hard-copy, faxed, or emailed proposals, ancillary information or appendices will not be accepted nor evaluated. For detailed submission instructions and format guidelines, see the eProjects website listed above. For questions on eProjects submission, please contact Dr. Hal Richman (808-956-8191; [eprojects@soest.hawaii.edu](mailto:eprojects@soest.hawaii.edu)). For questions concerning preliminary proposal content, please contact Dr. Darren Lerner (808-956-7031; [sgd@hawaii.edu](mailto:sgd@hawaii.edu)). For questions on fiscal matters, please contact John Matassa (808-956-7847; [matassa@hawaii.edu](mailto:matassa@hawaii.edu)). Full proposals will be invited from successful peer reviewed and refereed preliminary proposals.

### Required Non-Federal Match

#### *Hawai'i & American Samoa Proposals*

A 1:1 (non-federal match dollars: WRRRC dollars requested) non-federal fund match is required for all funds requested for both WRRRC Hawai'i Proposals and WRRRC American Samoa Proposals. This requirement is mandated by the US Federal Government and as such no waivers for match can be entertained. Principal investigators will be required to provide actual match, legal documentation of promised or pledged match, and/or audit defensible documentation of in-kind match prior to the awarding of first year funds. For questions on acceptable match, please contact John Matassa (808-956-7847; [matassa@hawaii.edu](mailto:matassa@hawaii.edu)). Indirect costs are waived for Hawai'i proposals.

### Other Federal/University of Hawai'i Requirements

Funding cannot be issued to successful applicants until the Principal Investigator has obtained approval(s) from the following as applicable: 1) Use of Human Subjects (outreach projects, surveys, etc.); 2) Use of Vertebrate Animals (Institutional Animal Care and Use Committee [IACUC]); 3) Health and Safety (compressed gas diving, radioactive material, importation of micro-organisms; use of recombinant DNA). Depending on the nature of the activity proposed, other approvals/certifications may also be applicable. Non-UH entities will be responsible for applicable federal assurances.

### Graduate Fellow Requests

Please note: there is an entry opportunity in the on-line application within eProjects to request a graduate student fellow. Please note, that should you be requesting a graduate fellow, you will be required to demonstrate and provide 1:1 non-federal funding match for all graduate fellow funds awarded for both Hawai'i and American Samoa Proposals. The match requirement for a graduate assistant is \$26,213 for WRRRC Proposals. This is based on a total value of \$26,213 composed of \$23,028 (GA Step 9) salary and \$3,185 fringe benefits (13.83% est.).

### How many proposals can I submit?

An individual may participate as a Principal Investigator (PI) or Co-Investigator (Co-I) on **up to two preliminary proposals** submitted to WRRRC. Preliminary proposals in excess of the two preliminary proposal limit for any PI or Co-I will be returned without review.