NYS Center of Excellence in Healthy Water Solutions at Clarkson University and SUNY ESF

2022-2023 Request for Proposals: Healthy Water Solutions Seed Grant

The New York State Center of Excellence in Healthy Water Solutions at Clarkson University and SUNY ESF (CoE) has received additional state funding for the '22-'23 fiscal year. A key requirement for the CoE is to demonstrate an ability to support economic development in New York. The CoE is working to develop a portfolio of projects that will demonstrate the benefits of the CoE to the state in terms of answering critical water science questions while boosting employment, training the workforce, or developing new technologies that can be commercialized.

To meet this goal, the CoE is seeking concise proposals for seed funding. Seed funding can be used to support research, but it can also be used for activities such as workforce training workshops, high school STEM education, or development of plans to support commercialization of a technology. For instance, seed funding could be used to develop an application to an NSF I-Corps regional course (https://www.unyicorps.org/regional-courses/). To provide an example of the types of work that have been supported, funded projects from prior years are listed at the end of this document.

Due Date: Email proposals to coe@clarkson.edu by 5:00 pm (EST) on Friday, Jan. 13, 2023.

Informational Meeting: There will be an on-line informational meeting to answer questions and help coordinate possible collaborations on Tuesday, November 29, 2022 at 8:30 am (EST). (Zoom meeting link: https://syracuseuniversity.zoom.us/j/98607136164?pwd=akpubE5OMERGaE9pU2tGcmN4djVsdz09)

Inquiries: Contact CoE Co-directors Stefan Grimberg,Professor, Civil & Environmental Engineering, Clarkson University (sgrimber@clarkson.edu) or Stephen Shaw, Associate Professor, Environmental Resources Engineering, SUNY ESF (sbshaw@esf.edu).

Anticipated Project Period: We anticipate announcing grant recipients by the first week of February. Funds will be available upon notification of award. Duration of funding will be no more than 12 months.

RFP Budget: A total of $150,000 is available to fund all competitive proposals with a maximum per project of $30,000 (shared between Clarkson and ESF).

Review Criteria:

All projects must include at least one collaborator from both Clarkson and SUNY ESF.

The projects will be scored by an internal review committee comprised of representative faculty experts from each campus who are not competing in this call for proposals.

Proposals will be evaluated on the following criteria:

1. **Economic Development Potential**: Is there evidence of potential for economic impacts? Examples could include matching funds from an industry partner (ideally from NYS), industry collaboration, technology transfer, workforce development, licensing and commercialization. Applicants should provide concrete details and measurable milestones for success in this area. This is a critical part of each proposal and should not be short changed.

2. **Quality of Science/Relevance**: Does the proposal provide sufficient description to contextualize the proposed work within the broader state of knowledge in the field? If focused on workforce development, does it provide evidence of need for the training? Is the work timely and important?

3. **Feasibility**: Does the project team have sufficient expertise and appropriate institutional resources (e.g. lab space, instrumentation, etc.)? Is the scope commensurate with the budget?

Proposal Format:

1 inch margins, 1.08 multi-line spacing, 12 point Times New Roman font. Be sure to number pages.

Cover Page which includes items 1-5 (1 page)

1. *Project Title:*
2. *Clarkson/ESF Team Members (names and contact information):*
3. *External Partners:*
4. *Water research area addressed in proposal:*
5. *Project Impacts (summarize briefly here)*

   Social/Environmental:

   Business/Economic Development:

Project Description (< 2 pages):

Problem Statement

Objectives

Tasks

Expected Scientific Outcomes

Expected Economic Development Outcomes

Budget Justification (<1 page)

Provide a table that identifies primary budget categories (student pay, supplies, travel, etc.). Funds cannot be applied towards faculty salary. Per CoE funding guidelines, 15% indirect cost needs to be applied to all personnel costs. For other costs, indirect costs have been waived. Additionally, travel is only allowed within NYS unless prior permission is given. Also include 1:1 matching funds. These can include faculty salary and fringe benefits or cash and in-kind contributions from partners.

Investigator CV

Provide a 2-page biosketch for each investigator following the NSF or similar format.

2020 – 2021 Projects

Project Title: **Assessing the ecotoxicity of mixtures of per- and polyfluoroalkyl substances**
PIs: Roxanne Razavi and Christopher Whipps (ESF), Sujan Fernando (Clarkson University), and Philip Goodrum (GSI Environmental Inc.)

Project Title: **Development of Energy-efficient Wastewater Treatment for Removal of Pharmaceutical contaminants**
PIs: Gyu Leem and Chang Geun Yoo (ESF); Yang Yang (Clarkson)

Project Title: **High-Capacity Sustainable Sorbents for Treatment of Per-Fluoroalkyl Substances (PFAS) in Contaminated Waters**
PIs: Mario Wriedt (CU), Deepak Kumar (ESF), and Bandaru Ramarao (ESF)

Project Title: **Forecasting Shoreline Erosion Using Deep Learning to Restore Coastal Ecosystem Services**
PIs: Abul Baki (Clarkson), Weiming Wu (Clarkson), and Sharon Moran (ESF)

Project Title: **Wetland and Sediment Plume Monitoring using Advanced Remote Sensing and Machine Learning Techniques**
PIs: Bahram Salehi (ESF) and Sean Banerjee (Clarkson)

2021 – 2022 Projects

Project Title: **High Capacity Sorbents for Rapid and Efficient Removal of Phosphorous from Nonpoint Sources of Runoff**
PIs: Douglas Daley (ESF) and Silvana Andreescu (Clarkson)

Project Title: **Non-targeted screening of drinking water disinfection byproducts and their degradation and detoxification using a continuous flow photoelectrochemical cell**
PIs: Leanne Powers (ESF), Gyu Leem (ESF), and Jingyun Ye (Clarkson)

2021 – 2022 Projects Con't

Project Title: **Development of Sustainable and Renewable Photovoltaic System for Perfluorooctanoic Acids Removal in Aqueous Environment**
PIs: Chang Geun Yoo (ESF), Gyu Leem (ESF), Yang Yang (Clarkson),and Ian T. McCrum (Clarkson)

Project Title: **Advanced Sequencing to Assess Risks Associated with Antibiotic Resistance as An Emerging Contaminant in Great Lakes Sediment and Fish**
PIs: Yaqi You (ESF), Susan Bailey (Clarkson), and Thomas Holsen (Clarkson)