

**REQUEST FOR STATEMENTS OF INTEREST  
NUMBER W912HZ-19-SOI-0014  
PROJECT TO BE INITIATED IN 2019**

**Project Title: USCRP Research Topic 11: Coastal Adaptation Pathways for Barrier Island Communities**

Responses to this Request for Statements of Interest will be used to identify potential investigators for studies to be sponsored by the U.S. Army of Engineer (USACE) Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL). The intent of this request is seek researchers interested in developing recommended approaches (such as numerical modeling, historical data analysis, and/or field data collection) in order to develop community-informed, scientifically-based alternatives for adaptation for barrier island communities at risk from hurricane damage and future sea level change. Estimated award amounts for individual proposals of \$50,000 to \$350,000 may be accepted. Multiple awards may be funded. Possibly no awards will be made if the submitted proposals do not meet the objectives outlined in this RSOI.

**Background:**

The U.S. Coastal Research Program (USCRP) is a partnership of the coastal research community to coordinate Federal activities, strengthen academic programs, and build a strong workforce. Three primary research needs identified by the USCRP's nearshore coastal community are to improve understanding of: 1) long-term coastal evolution due to natural and anthropogenic processes; 2) extreme events, including flooding, erosion, and the subsequent recovery; and 3) the physical, biological and chemical processes impacting human and ecosystem health. As identified by the USCRPs plan, the USCRP addresses societal needs along the coast through a coordinated effort backed by researchers from Federal agencies, academia, industry, and non-governmental organizations. Awards will be made with the intent of assisting academic institutions in funding coastal and nearshore processes graduate students to address critical research needs within the coastal community, advancing the state of knowledge, and building the future U.S. workforce.

**Public Purpose and Benefit:**

These results will benefit the public through documentation of approaches that can be used to evaluate the benefits and timelines associated with adaptation strategies for coastal communities established on barrier islands. Communities will be able to estimate critical timelines to implement adaptation strategies, as well as identify tipping points when strategies are no longer effective based on changing environmental conditions and/or community goals.

**Brief Description of Anticipated Work:**

This research is envisioned as a 2-year study with three main objectives as outlined below.

**Objective 1:** In order to achieve the main objective of this study of developing coastal adaptation pathways for barrier island communities, the researcher should first summarize the present state-of-knowledge concerning adaptation methods of coastal communities. Products from this objective will include: a Shore & Beach article that documents the state-of-knowledge; and a Fact Sheet that succinctly synthesizes these findings (2-4 pages).

**Objective 2:** Based on the present state-of-knowledge, develop conceptual models for determining alternative adaptation pathways for an example barrier island community. Recommend methods that could be applied for these types of studies, including numerical modeling, analytical (e.g., analysis of historical data), and/or field data collection to address gaps in knowledge. Document gaps, recommended actions, and areas that have been improved from this study in a Shore & Beach article.

**Objective 3:** Test, revise, and validate approaches on an example barrier island community using open-source numerical models. Identify tipping points based on community infrastructure, goals, human use, and environmental conditions (e.g., storms, hurricanes, sea level rise, etc.). Document outcomes, methodology, and recommendations for use by other barrier island coastal communities in the final report or journal article.

Annual products from this work will include Community Fact Sheets (2-4 pages each) that summarize advancements each year; and an annual contribution to the USCRP Quarterly Bulletin (1/2- 1 page for each article). Shore & Beach articles that are co-authored with a practitioner are anticipated at the end of Objectives 1 and 2, and at the conclusion of the study. If numerical models are utilized in the study, open-source modeling systems are preferred so that all coastal researchers can benefit from advancements

**Base Period Tasks:**

Objectives 1-3 will be addressed in the base period work effort and summarized in the summary report for this period.

**Government Participation:**

The university researcher(s) will work in close coordination with the USACE and USCRP staff who will provide technical assistance in reviewing progress, draft documentation, and study approaches. As needed, the USACE and USCRP staff will assist researchers to access site-specific data for the barrier island case study to include topographic, bathymetric, wave, water level, and storm history information. The USACE and USCRP team will ultimately incorporate the research and documentation by the researcher(s) into a technical report.

**Materials Requested for Statement of Interest/Qualifications:**

Please provide the following via e-mail attachment to: -----Robyn.D.Wells@usace.army.mil (Maximum length: 2 pages, single-spaced 12 pt. font).

1. Name, Organization and Contact Information
2. Brief Statement of Qualifications (including):
  - a. Biographical Sketch,

- b. Relevant past projects and clients with brief descriptions of these projects,
- c. Staff, faculty or students available to work on this project and their areas of expertise,
- d. Any brief description of capabilities to successfully complete the project you may wish to add (e.g. equipment, laboratory facilities, greenhouse facilities, field facilities, etc.).

Note: A proposed budget is NOT requested at this time.

**Review of Statements Received:** Based on a review of the Statements of Interest (SOI) received, an investigator or investigators will be invited to prepare a full study proposal. Statements will be evaluated based on the specific experience and capabilities of the investigator(s) in areas related to the study requirements. Additionally, the evaluation method and selection criteria for research and development awards must be: (1) the technical merits of the proposed research and development; and (2) potential relationship of the proposed research and development to the Department of Defense missions.

**Please send responses or direct questions to:**

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ERDC Contracting Office (ECO)  
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Vicksburg, MS 39180  
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**Timeline for Review of Statements of Interest:** Review of Statements of Interest will begin after the SOI has been posted to all units on the CESU website for 10 working days.