

**REQUEST FOR STATEMENTS OF INTEREST
W912HZ-19-SOI-0010**

Project Title: USCRP Research Topic 4: Evaluating the Distribution and Geotechnical Properties of Outer Continental Shelf (OCS) Sand Resources and Coupled Environmental Response to Dredging

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 to seek proposals that will examine the geologic framework of the OCS to establish the distribution and character of beach quality sands; evaluate sediment dynamics on the OCS as a result of normal, storm conditions, or dredging disturbances; evaluate the long-term impact of beach nourishment projects on the ecosystem, including bird and sea turtle populations and nesting behavior; and /or other topics related to OCS sand resource management. Estimated award amounts for individual proposals of \$50,000 to \$200,000 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 Benefit:

These results will benefit the public by providing a better understanding of the offshore geologic framework to focus research into the location and character of sediment resources on the OCS for use in coastal resiliency projects. An analysis of the movement of OCS sediment at depth, as a result of storms or dredging activity, will inform agency policy regarding the frequency of surveying needed to monitor these resources. The examination of long-term impacts of beach nourishment on nesting sea turtles and shorebirds will inform agency policy regarding effective measures for protection of these species in the context of a nourished shoreline.

Brief Description of Anticipated Work:

This research is envisioned as a 2-year study.

Objective 1: In order to achieve the main objective of this study evaluating the distribution and geotechnical properties of OCS sand resources and the coupled environmental response to dredging, the researcher should first summarize the present state-of-knowledge concerning 1) the ability to establish the distribution and character of beach quality sands on the OCS; 2) the evaluation of sediment dynamics on the OCS due to normal, storm conditions, or dredging disturbances and /or; 3) the long-term impact of beach nourishment projects on the ecosystem, including bird and sea turtle populations and nesting behavior. Products from this objective will include: a Shore & Beach article that documents the state-of-knowledge; and a Community Fact Sheet that succinctly synthesizes these findings (2-4 pages).

Objective 2: Recommend analytical (e.g., analysis of historical data), and/or field experiments/surveys to address gaps in knowledge regarding the evaluation of OCS sand sources, sediment dynamics, and/or long-term impacts of beach nourishment projects on the ecosystem. Document gaps and recommended actions in a Shore & Beach article.

Objective 3: Based on knowledge synthesized in this study, develop guidelines for utilizing the geologic framework to locate suitable sand resources in the OCS, predicting the dynamics of OCS sediment as a result of natural and dredging processes, and/or the best practices for sand placement to mitigate impacts to nesting sea turtles and migratory shore birds. The primary product from this objective will be the guidelines.

Annual products from this work will include Fact Sheets (2-4 pages each) that summarize advancements each year; and 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 as needed. The USACE and USCRP will also facilitate and participate in coordination efforts and meetings either in person or by webinar. The USACE and USCRP staff will assist researchers to access topographic and bathymetric data, as well as wave, water level, and current information as needed. 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: Stacy.D.Thurman@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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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.