

**Request for Statements of Interest
Funding Opportunity Announcement**

Federal Awarding Agency:

U.S. Army Corps of Engineers,
Engineer Research and Development Center
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

Funding Opportunity No: W81EWF-21-SOI-0021

CFDA No: 12.630

Statutory Authority: 10 USC 2358

Program Title: Proposed Cooperative Agreement for Evaluating Mineral Associated Blue Carbon Accumulation in Coastal Wetlands

Announcement Type: Initial announcement

Issue Date: 22 June 2021

Statement of Interest/Qualifications Due Date: July 21, 2021. 17:00 CST.

Full Application Package Due Date, if Invited: August 18, 2021. 17:00 CST.

Estimated Award Ceiling: \$140K will be available for the two-year cooperative agreement. A third optional year may be available at \$70K. The total amount of the award will be \$210,000 if all three years are funded.

Estimated Total Program Funding (optional): \$210K (\$140K for 2-years; optional year \$70K)

Expected Number of Awards: 1.

Section I: Funding Opportunity Description

Background:

Coastal wetlands provide a number of ecological functions that benefit society, including the sequestration of carbon which plays a key role in regulating climate at global scales. Recent interest has focused on the need to understand carbon dynamics in coastal wetlands, resulting in the evolution and expansion of the field of research investigating blue carbon.

Importantly, the carbon stored in wetlands can undergo a number of biotic and abiotic transformations that have implications for decomposition rates, turnover, and fate of organic materials in the wetland soil system. Few studies have investigated the partitioning of blue carbon between organic and mineralized pools, representing a knowledge gap that must be addressed to improve the management of coastal wetlands within a carbon sequestration context. Additionally, a paucity of information is available regarding the carbon transformation pathways occurring in constructed or restored coastal wetlands compared with unaltered systems.

Brief Description of Anticipated Work:

This research project focuses on quantifying the accumulation of mineral associated blue carbon in both natural systems and areas that have been created or enhanced using dredged materials or other sources of sediment that contain a larger fraction of mineral contents than most coastal wetland soils. The project will focus on systems within the southeast United States and the Gulf Coast (e.g., FL, AL), but will also include sample collections in the Chesapeake Bay and Great Lakes regions. Common approaches to collect and analyze soil carbon within coastal wetlands will be applied to characterize the soil materials and novel metrics capable of determining the abundance and lability of mineral associated blue carbon will need to be employed to accomplish the project objectives.

The purpose of the work is to 1) demonstrate that mineral associated carbon can be effectively quantified in wetland systems, 2) compare and contrast these carbon pools across broad geographic regions, and 3) elucidate similarities and differences between the carbon forms and recalcitrance under natural and created/restored management scenarios. The Government will be involved with the research by providing technical guidance on the research; assisting with the experimental design and method development; and collaborating site selection, sample collection and analysis, and the on the preparation of journal articles and conference presentations. The Government is not expecting the periods of performances to overlap.

Objectives:

The objectives of the project for years 1 and 2 are as follows:

1. Develop technical team and identify study sites.
2. Develop a proof of concept outlining novel methods to characterize mineral associated carbon on coastal wetland systems.
3. For each study site, collect and analyze samples from paired natural and created/restored locations (minimum triplicate samples).
4. Generate peer-reviewed journal article with ERDC researchers to describe the application of novel methodologies to characterize wetland mineral protected carbon.
5. Generate peer-reviewed journal article with ERDC researchers reporting the results of the field investigations within the southeastern United States, Chesapeake Bay, and Great Lakes regions.
6. Develop and present public seminars based on study findings.

The objectives for Optional Year 3 are as follows:

1. Refine the established methodology to increase operational efficiencies.
2. Expand the study to other regions or develop chronosequences of across restored/created wetland systems.
3. Generate a peer-reviewed journal article or public report in conjunction with ERDC researchers integrating all study conclusions.
4. Develop and present public seminars based on study findings.

Successful applicants should have expert knowledge of: 1) carbon dynamics within coastal systems; 2) field data collection capabilities; 3) carbon pools and the role of mineral associated carbon within soil

systems; 4) experience developing novel approaches to wetland soil characterization, especially with regards to soil carbon.

Areas of expertise that may be required in combination to perform this study include:

- 1) Capacity to collect and process soil cores within a variety of coastal setting including both organic and mineral dominated substrates.
- 2) Advanced laboratory capabilities to fractionate and characterize various carbon pools using techniques to determine carbon abundance and recalcitrance.
- 3) Development of novel approaches to wetland soils research specifically evaluating carbon fractions in coastal settings.
- 4) Experience working with soils and sediments in a wide array of natural and constructed/restored wetland settings.

Applicants will be required to submit quarterly status reports and a final report within 4 months of completion of the study. ERDC and the candidates will develop a draft of the journal article or articles for internal peer review during cooperative agreement's period of performance.

Public Benefit:

Coastal wetlands are important to the public because they provide flood protection, habitat for wildlife and plants, nutrient cycling, and carbon sequestration. Coastal wetlands comprise less than 10 percent of the continental United States land area. However, 39 percent of the United States population lives in these areas, and those numbers are expected to continue to increase. Coastal wetlands, such as marshes, represent the first line of defense to protect lives and property. These ecosystems buffer inland areas from storm surges by absorbing the storm energy and preventing the intrusion of salt water into upland ecosystems. Coastal wetlands also play a key role in regulating climate through the sequestration of large stores of carbon, which if released would contribute to global warming. Understanding how to evaluate carbon dynamics and adaptively manage both natural wetlands and created/restoration sites within a blue carbon context is critical to public welfare and property in coastal communities. This applied research will enhance our knowledge of carbon dynamics, with particular emphasis on mineral associated carbon. The findings of this cooperative agreement will be made publicly available through the release of public reports or peer-reviewed journal articles as well as public seminars describing results.

Section II: Award Information

Responses to this Request for Statements of Interest will be used to identify potential investigators for studies to be sponsored by the Engineer Research and Development Center to provide field data collection and synthesis for sites in the southeastern U.S. and elsewhere. The estimated level of funding for the first two years of the cooperative agreement is approximately \$140K. Additional funds may be available to the successful Recipient/Awardee to execute a third optional year in the amount of \$70K. The total value of the cooperative agreement will not exceed \$210K over the life of this cooperative agreement.

Government Involvement:

The ERDC will work cooperatively with the investigator to identify issues related to experimental design and project execution, including identification of potential sites, field data collection and analysis, and the development of novel methodologies. ERDC scientists will participate in the preparation of peer-reviewed journal papers and conference presentations to insure wide dissemination of these findings.

Section III: Eligibility Information

1. Eligible Applicants – This opportunity is restricted to non-federal partners of the Gulf Coast Cooperative Ecosystems Studies Unit (CESU).
2. Cost Sharing – This action will be 100% funded by USACE.

Section IV: Application and Submission Information – Two Phase Process

Phase I: Submission of a Statement of Interest/Qualifications.

1. Materials Requested for Statement of Interest/Qualifications:

Please provide the following via e-mail attachment to: Kisha.M.Craig@usace.army.mil

(Maximum length: 2 pages, single-spaced 12 pt. font).

1. Name, Organization and Contact Information
2. Brief Statement of Qualifications (including):
 - Biographical Sketch,
 - Relevant past projects and clients with brief descriptions of these projects,
 - Staff, faculty or students available to work on this project and their areas of expertise,
 - 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.

The administrative point of contact is Kisha M. Craig, 601-634-5397,
Kisha.M.Craig@usace.army.mil

2. Statement of Interest/Qualifications shall be submitted 21 July 2021 17:00 CST.

Based on a review of the Statements of Interest received, an investigator or investigators will be invited to move to Phase II which is to prepare a full study proposal. Statements will be evaluated based on the investigator's specific experience and capabilities in areas related to the study requirements.

Phase II: Submission of a complete application package to include a full technical proposal including budget, if invited.

1. Address to Request Application Package

The complete funding opportunity announcement, application forms, and instructions are available for download at Grants.gov.

The administrative point of contact is Kisha M. Craig, 601-634-5397,
Kisha.M.Craig@usace.army.mil

2. Content and Form of Application Submission

All mandatory forms and any applicable optional forms must be completed in accordance with the instructions on the forms and the additional instructions below.

- a. SF 424 R&R - Application for Federal Assistance
- b. Full Technical Proposal – Discussion of the nature and scope of the research and technical approach. Additional information on prior work in this area, descriptions of available equipment, data and facilities, and resumes of personnel who will be participating in this effort should also be included.
- c. Cost Proposal/Budget – Clear, concise, and accurate cost proposals reflect the offeror's financial plan for accomplishing the effort contained in the technical proposal. As part of its cost proposal, the offeror shall submit cost element breakdowns in sufficient detail so that a reasonableness determination can be made. The SF 424 Research & Related Budget Form can be used as a guide but is required if you choose to utilize the subaward budget form. The cost breakdown should include the following, if applicable:

1. Direct Labor: Direct labor should be detailed by level of effort (i.e. numbers of

hours, etc.) of each labor category and the applicable labor rate. The source of labor rates shall be identified and verified. If rates are estimated, please provide the historical based used and clearly identify all escalation applied to derive the proposed rates.

2. Fringe Benefit Rates: The source of fringe benefit rate shall be identified and verified.
3. Travel: Travel costs must include a purpose and breakdown per trip to include destination, number of travelers, and duration.
4. Materials/Equipment: List all material/equipment items by type and kind with associated costs and advise if the costs are based on vendor quotes and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.
5. Subrecipient costs: Submit all subrecipient proposals and analyses. Provide the method of selection used to determine the subrecipient.
6. Tuition: Provide details and verification for any tuition amounts proposed.
7. Indirect Costs: Currently the negotiated indirect rate for awards through the CESU is 17.5%.
8. Any other proposed costs: The source should be identified and verified.

3. Application package shall be submitted 18 August 2021, 17:00 CST.

4. Submission Instructions

Applications may be submitted by e-mail or Grants.gov. Choose ONE of the following submission methods:

a. E-mail:

Format all documents to print on Letter (8 ½ x 11") paper. E-mail proposal to Kisha.M.Craig@usace.army.mil

b. Grants.gov: <https://www.grants.gov/>:

Applicants are not required to submit proposals through Grants.gov. However, if applications are submitted via the internet, applicants are responsible for ensuring that their Grants.gov proposal submission is received in its entirety.

All applicants choosing to use Grants.gov to submit proposals must be registered and have an account with Grants.gov. It may take up to three weeks to complete Grants.gov registration. For more information on registration, go to <https://www.grants.gov/web/grants/applicants.html>.

Section V: Application Review Information

1. **Peer or Scientific Review Criteria:** In accordance with DoDGARs 22.315(c), an impartial peer review will be conducted. Subject to funding availability, all proposals will be reviewed using the criteria listed below (technical and cost/price). All proposals will be evaluated under the following two criteria which are of descending importance.

a. **Technical (items i. and ii. are of equal importance):**

- i. Technical merits of proposed R&D.
- ii. Potential relationship of proposed R&D to DoD missions.

b. **Cost/Price:** Overall realism of the proposed costs will be evaluated.

2. Review and Selection Process

a. **Categories:** Based on the Peer or Scientific Review, proposals will be categorized as Selectable or Not Selectable (see definitions below). The selection of the source for award will be based on the Peer or Scientific Review, as well as importance to agency programs and funding availability.

- i. **Selectable:** Proposals are recommended for acceptance if sufficient funding is available.
- ii. **Not Selectable:** Even if sufficient funding existed, the proposal should not be funded.

Note: The Government reserves the right to award some, all, or none of proposals. When the Government elects to award only a part of a proposal, the selected part may be categorized as Selectable, though the proposal as a whole may not merit such a categorization.

b. No other criteria will be used.

c. Prior to award of a potentially successful offer, the Grants Officer will make a determination regarding price reasonableness.

Section VI: Award Administration Information

1. Award Notices

Written notice of award will be given in conjunction with issuance of a cooperative agreement signed by a Grants Officer. The cooperative agreement will contain the effective date of the agreement, the period of performance, funding information, and all terms and conditions. The recipient is required to sign and return the document before work under the agreement commences. **Work described in this announcement SHALL NOT begin without prior authorization from a Grants Officer.**

2. Administrative Requirements

The cooperative agreement issued as a result of this announcement is subject to the administrative requirements in 2 CFR Subtitle A; 2 CFR Subtitle B, Ch. XI, Part 1103; and 32 CFR Subchapter C, except Parts 32 and 33.

3. Reporting

See 2 CFR Sections 200.327 for financial reporting requirements, 200.328 for performance reporting requirements, and 200.329 for real property reporting requirements.

Section VII: Agency Contact

Kisha M. Craig, Grants Specialist
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