

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-20-SOI-0032

CFDA No: 12.630

Statutory Authority: 10 USC 2358

Project Title: Wetland accretion and vegetation growth model integration and application to coastal wetland management

Announcement Type: Initial announcement

Issue Date: 4 June 2020

Statement of Interest/Qualifications Due Date: 3 July 2020, 1PM CDT

Full Application Package Due Date, if Invited: 31 July 2020, PM CDT

Estimated Award Ceiling: \$15,000

Estimated Total Program Funding: \$75,000 Total over 5 years

Expected Number of Awards: 1

Section I: Funding Opportunity Description

Background:

Coastal wetlands are critical components of the coastal landscape, providing a number of important ecosystem services such as habitat, carbon sequestration, erosion control, and recreation and tourism. In recent years, the flood risk management services produced by coastal wetlands have been of interest to many coastal communities, and many new and ongoing coastal storm risk management studies are including coastal wetlands as components of the coastal storm risk management system. Additionally, wetland restoration activities are being integrated into navigational dredging operations, which will require understanding of the types and frequency of restoration actions required to maintain wetland function. Understanding wetland elevation dynamics and associated vegetation dynamics is critically important as wetland bathymetry and vegetation type and abundance are the two dominant factors that determine the ability of wetlands to attenuate waves and surge as well as provide other desired ecosystem services. However, questions remain as to the ability of coastal wetlands to sustain elevation and associated functions over USACE project lifecycles and what management actions to plan for to maintain coastal wetlands in the case natural processes are insufficient. USACE requires the ability to predict the response of coastal wetland elevation and vegetation changes in response to sea level rise, storms, restoration activities, and potential changes in system drivers over at least a 50 year project lifetime.

Brief Description of Anticipated Work:

The overall goal of this work is to incorporate coastal wetland accretion dynamics into an USACE process-based vegetation model currently being adapted for coastal wetland systems. Specific objectives of this work include:

1. Determining critical processes included in existing accretion models to integrate with vegetation growth model and identification of coupling requirements for the models such as spatial scales and coupling time steps;
2. Full integration of wetland accretion and vegetation models for one species;
3. Incorporation of vegetation interspecies dynamics and competition to include the role of invasive species colonization and management on accretion processes; and
4. Development of case studies and examples of applications of the integrated models in a project lifecycle context with a focus on sites in the southeastern US.

Applicant must have experience and/or expertise in designing, developing and

implementing coastal wetland accretion models, specifically with respect to the effect of management or restoration actions such as thin layer placement of sediment. Must have experience with modeling accretion in a variety of coastal wetland environments. Cooperators should demonstrate specific research experience with the research in coastal wetland systems in response to a number of climatic, ecological and hydrodynamic drivers.

Public Benefit:

The results of this project will produce a model that will increase the predictive power and confidence in wetland modeling. The integrated wetland model will aid planning and design of resilient coastal wetland projects for flood risk management, restoration and mitigation projects across the nation. Better accounting for the pressures of coastal change and invasive species on wetland design and management enables the development of coastal wetland restoration and creation projects that are more resilient and resistant to chronic hazards such as sea level rise as well as acute hazards such as tropical storms. Improved modeling will also allow enable coastal wetland projects to be developed and maintained in ways that minimize costs while producing additional ecosystem services for the nation. Models and associated data from this project will be made publically available upon project completion. The model development process and case study application will be publically disseminated via peer-reviewed publications, conference presentations, and other technology transition measures such as webinars and workshops. Furthermore, this comprehensive approach in developing the next generation integrated ecological models will inform management strategies that improve flood risk projects through increasing their resiliency and decreasing long-term costs, which will be a significant cost savings to U.S. taxpayers.

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 US Army Engineer Research and Development Center to provide laboratory studies to support the development of next generation riverine vegetation growth model. The estimated level of funding for FY20 is approximately \$15,000. Additional funds of \$15,000 per year for additional up to four (4) years may be available, providing the potential funding of \$75,000 over five (5) years to the successful Recipient/Awardee. Depending on findings in the early years of this effort, funding needs may increase above the anticipated \$15,000 year in subsequent years of this project; however, total funding will not exceed \$200,00 over the life of this cooperative agreement.

Government Involvement:

The US Army Engineer Research and Development Center (ERDC) will serve as a partner organization for this study. The ERDC will serve as the primary developers for the next generation riverine vegetation growth model, while the university partner will provide the underlying datasets and parameter estimates for that model.

Section III: Eligibility Information

1. Eligible Applicants – This opportunity is restricted to non-federal partners of the **Piedmont-South Atlantic 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:
 - a. Please provide the following via e-mail attachment to:
Chelsea.M.Whitten@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 Chelsea Whitten, 601-634-4679;
Chelsea.M.Whitten@usace.army.mil

2. Statement of Interest/Qualifications shall be submitted NO LATER THAN 3 July 2020, 1PM CDT

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 Chelsea Whitten, 601-634-4679; Chelsea.M.Whitten@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. 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 NO LATER THAN 31 July 2020, 1PM CDT

4. Submission Instructions

Applications may be submitted by mail, 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 Chelsea.M.Whitten@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

Chelsea Whitten, Grants Officer
US Army Corps of Engineers, Engineer Research and Development Center
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Vicksburg, MS 39180-6199
Chelsea.M.Whitten@usace.army.mil
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