

## **STATEMENT OF INTEREST**

### **GULF COAST CESU**

**Number W912HZ-17-SOI-0023**

**Project to be initiated in 2017**

#### **Project Title: Conduct Behavioral Response Update, Vulnerability Analysis of Potential Storm Surge Effects on Evacuation Zones and Transportation Routes**

Responses to this Request for Statements of Interest will be used to identify potential investigators for a project to be funded by the U. S. Army Corps of Engineers (USACE) Galveston District and the Engineer Research and Development Center. Approximately \$325,000 is expected to be available to support this project for one (1) year. The funding will be available in split funding \$150,000 for base period, task 1, 2 and 3 and \$175,000 for option period, task 4, 5 and 6.

#### **Background:**

The Texas Coastal Bend Area (Victoria, Calhoun, Aransas, Refugio, San Patricio, Nueces, Kleberg, and Kenedy Counties) (CBSA) is an area prone to hurricanes and other severe weather events. Based on population demographics, potential storm surge effects, vulnerability analysis, and evacuation transportation routes, these counties must utilize the best available analytical techniques and scientific modeling capabilities to ensure safe evacuation of all residents under any potential severe weather event. This study will utilize existing data from prior storms and evaluate data from potential storms under current and projected conditions as influenced by new factors such as climate change and sea level rise.

#### **Public Benefit:**

The study will benefit the public by providing emergency managers with appropriate planning factors to efficiently and safely evacuate coastal populations due to a hurricane threat.

#### **Study Objectives:**

- 1) Evaluate the Behavioral study from the previous studies and verify it is still valid and update those areas that require changed do to the increase in population.
- 2) Evaluate potential evacuation zones based on data analysis from new storm surge inundation risk area mapping for the CBSA completed and released in late 2017.
- 3) Conduct Vulnerability Analysis of surge risk areas establishing the populations and critical facilities that are potentially vulnerable to hurricane-induced surge flooding under a variety of hurricane scenarios and increased sea level rise from climate change.

4) Conduct Analysis using the Real Time Evacuation Planning Model (RtePM) to predict evacuation clearance times needed to safely evacuate the CBSA population for a range of hurricane threats and scenarios, incorporating existing data from the vulnerability analysis and the public evacuation behavior analysis to be completed by the latter part of 2017.

**Vendor Requirements:**

Vendor must be a non-federal partner of the Gulf Coast CESU Unit willing to accept the negotiated CESU indirect cost rate of 17.5%. Successful applicants should have expert knowledge in Hurricane Evacuation Studies, predictive analytical tools, and roadway network and traffic control measures/highway improvements for improved traffic flow. Candidates need prior experience with ESRI GIS Software and use rigorous QA/QC procedures. Applicants must demonstrate ability to meet the specific detailed objectives for this project.

**Government Participation:**

The Government shall provide Storm surge inundation areas for Texas Coastal Bend Study Area counties (Late 2017) in GIS format and behavioral analysis data from the Coastal Bend Feb. 2008 Study. The Government shall also participate in data gathering exercises as appropriate. The Government shall contribute to the data analysis and final report preparation.

**Period of Performance:**

The base year of the agreement shall extend one year from award.

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

Please provide the following via e-mail to: [Deberay.R.Carmichael@usace.army.mil](mailto:Deberay.R.Carmichael@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 description of project
  - c. Staff, faculty and students available including area of expertise
  - d. Brief description of capabilities to successfully complete this project

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

**Review of Statements Received:** Based on a review of the Statements of Interest received, an investigator or investigators will be invited to prepare a full study proposal.

Statements will be evaluated based on investigators specific experience and capabilities 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:**

Deberay R. Carmichael

U.S. Army Engineer Research and Development Center (ERDC)

ERDC Contracting Office (ECO)

3909 Halls Ferry Rd.

Vicksburg, MS 39180

[Deberay.R.Carmichael@usace.army.mil](mailto:Deberay.R.Carmichael@usace.army.mil)

**Timeline for Review of Statements of Interest:** Review of Statements of Interest will begin after the SOI has been posted on the CESU website for 10 working days.