**REQUEST FOR STATEMENTS OF INTEREST**

**NUMBER W81EWF-20-SOI-0004**

**PROJECT TO BE INITIATED IN 2020**

**Project Title: Role of Marsh-Mangrove Interface Habitats as Aquatic Refuges for Wetland Fishes and other Aquatic Animals**

Responses to this Request for Statements of Interest will be used to identify potential investigators for a project to be funded by the Engineering Research Development Center (ERDC) which provides information regarding changes in the marsh-mangrove ecotone in the southern Everglades in response to restoration efforts under the Comprehensive Everglades Restoration Plan (CERP) program. Approximately $130,476.00 is expected to be available to support this project for one (1) year. Additional funding *may be* available for follow on work in subsequent fiscal years up to 4 years at $130,476.00 per year for a total of $652,380.00 over 5 years.

**Background:**

The Water Resources Development Act (WRDA) of 2000 authorized the Comprehensive Everglades Restoration Plan (CERP) as a framework for modifications and operational changes to the Central and Southern Florida Project needed to restore the south Florida ecosystem. Provisions within WRDA 2000 provided for specific authorization for an adaptive assessment and monitoring program. The CERP Monitoring and Assessment Plan (MAP) was developed as a framework for measuring and understanding system responses to CERP, determining how well CERP is meeting its goals and objectives, and indentifying opportunities for improving the performance of CERP where needed.

Historically, the marsh-mangrove ecotone in the southern Everglades has provided an area for high wading bird nesting and foraging; however, very little is known about what drives prey abundance, distributions, and concentrations in this part of the ecosystem. As one goal of CERP is to re-establish hydrologic conditions that will increase wet-season prey densities and dry season prey concentrations and in turn support greater wading bird nesting efforts in mainland estuaries, it is important to increase understanding of the role of the marsh-mangrove ecotone as habitat for freshwater fishes. This project will draw upon prior research conducted in the area and continue to study how CERP restoration translates into impacts on fishes in the marsh-mangrove ecotone of the southern Everglades.

**Brief Description of Anticipated Work:**

The purposes of this project are to understand how the fish community inhabiting the marsh-mangrove ecotone will respond to restoration conditions (e.g., increased pooling of freshwater at the ecotone and a wider and seasonally-extended oligohaline zone). Specifically, the objectives include:

Objective 1: Collect fish and macroinvertebrate samples to establish spatiotemporal dynamics of these communities in the marsh-mangrove ecotone.

Objective 2: Gather date to evaluate the linkage of patterns in fish and macroinvertebrate communities to key hydrologic drivers and abiotic and biotic variables.

Objective 3: Summarize data and perform statistical analyses of responses of freshwater and estuarine fishes to hydrologic variation.

**Public Benefit:**

This project will play a critical role in building the knowledge base for the population dynamics of fishes utilizing near shore estuarine and coastal upstream habitats as it relates to ecological conditions including restoration. Data to be collected includes timing of movement through the estuarine systems, hydrological and ecological characteristics associated with fish movement, and population dynamic data including, and species interactions. Movement and interactions of coastal and estuarine fishes are an ecological indicator of ecosystem health which is important to the public. Improvements in ecosystem health as result of ecological restoration and habitat management provide a direct benefit to the public and economy of South Florida by improving commercial and recreational fishing opportunities, as well as, ecotourism opportunities.

**Vendor Requirements:**

The Vendor must be a non-federal partner of the South Florida – Caribbean CESU Unit willing to accept the negotiated CESU indirect cost rate of 17.5%. Successful applicants should have expert knowledge of the southern Everglades ecosystem (in particular the marsh-mangrove ecotone) and a record that demonstrates research experience with collecting and analyzing status and trends in fish abundance and distribution, monitoring key hydrologic, biotic, and abiotic conditions directly impacted by water management, and assessing how upstream restoration activities affect fish dynamics at the ecotone. The candidates should have prior experience with electrofishing and trapping techniques (e.g., minnow traps and drop nets), identification and processing of fish species, collection of hydrological and abiotic parameters, and relating fish responses to hydrological changes. The candidates will be required to prepare a Statement of Work and Work Plan regarding the research to be conducted. The candidates will also be required to submit three (3) quarterly status reports (per year), one (1) annual report each year, and one (1) final report for all years of the contract to provide updates on monitoring, data collection and analyses, and assessments regarding the impacts of CERP implementation on abundance and distribution of fishes at the marsh-mangrove ecotone.

**Government Participation:**

The USACE will participate in study site selections, design, and work plan development. USACE will participate in field data collection efforts as appropriate, will review quarterly status reports, and will provide input to data interpretation for final reports, as well as review annual and final reports. USACE will incorporate the data and analysis into a system-wide database that assesses and evaluates ecosystem restoration efforts in central and southern Florida. Scientific and technical information generated from the project will be utilized to evaluate project/restoration performance and system responses to be used in the development of assessment reports describing and interpreting those responses.

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

Please provide the following via e-mail attachment to: Andrea.D.Knowles@usace.army.mil

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

1. Name, Organization and Contact Information
2. Brief Statement of Qualifications (including):
	1. Biographical Sketch,
	2. Relevant past projects and clients with brief descriptions of these projects,
	3. Staff, faculty or students available to work on this project and their areas of expertise,
	4. 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 received, an investigator or investigators will be invited 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. 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:**

Andrea Knowles

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

ERDC Contracting Office (ECO)

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Vicksburg, MS 39180

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**Availability of Opportunity:**

Statements of Interest must be received by December 17, 2019 to be eligible for consideration.