

REQUEST FOR STATEMENT OF INTEREST FOR PROJECT TO BE INITIATED THROUGH COOPERATIVE ECOSYSTEM STUDIES UNITS (CESU) NETWORK

Eligibility is limited to non-federal members of the Gulf Coast CESU, Piedmont South Atlantic CESU and the South Florida Caribbean CESU.

Project title: Document short and medium term consequences of Hurricane Irma to mature forest systems.

Responses to this Request for Statement of Interest (RSOI) will be used to identify potential collaborators for one or more projects funded by the National Park Service (NPS) to assist with assessing impacts from Hurricane Irma on mature forest communities within Everglades National Park (EVER) that were impacted by Hurricane Irma in 2017. The NPS is requesting information on your interest and qualifications to provide support for this task.

The authority for this Cooperative Agreement is 54 U.S.C. § 101702(b) (Cooperative Research and Training Programs). Substantial involvement is expected between the NPS and nonfederal partner when carrying out the activities specified in the scope of work and may include activities such as the NPS's involvement in the development of study methodology, data gathering and analysis; review of work plans, reports and all deliverables; providing staff time to oversee, sharing previously collected available data, and participate in the collection of field data.

This proposed project contributes to the objectives of the Cooperative Ecosystem Studies Units (CESU) network by providing usable knowledge to support informed decision making; creating and maintaining effective partnerships among the federal agencies and universities to share resources and expertise; encouraging professional development of current and future federal scientists, resource managers, and environmental leaders; and managing federal resources effectively. In addition, this work is consistent with the South Florida Caribbean CESU mission of providing research, technical assistance, and education to federal land management, environmental, and research agencies.

Background and Overview

Projects associated with this RSOI will assess impacts to forest systems affected by Hurricane Irma. Everglades National Park has a variety of recent and past vegetation monitoring and mapping efforts that can be used as baseline information to determine short and long term impacts to forest communities from wind and storm surge flooding associated with the storm. Forest assessments may be made by re-monitoring previously established forest demography plots, re-mapping recently completed vegetation mapping efforts or through the development of novel approaches to forest damage assessments using existing multi-spectrum satellite imagery, aerial photographs and other available data combined with collection or aggregation of post storm information. Forest communities where the most substantial impacts have been observed are primarily coastal (mangrove, coastal hardwood hammock, coastal berm, buttonwood hammock) but impact assessments of any hurricane affected forest community will be considered.

The project or projects resulting from this RSOI will provide an accounting of hurricane impacts, investigate the causes of observed impacts and recovery and/or assess the ongoing or potential for recovery of these communities. The information will be important for documenting large scale storm effects, determining management actions needed to aid recovery and/or potentially mitigate additional impacts from future storms.

Objectives

The objective of this work is to assess the impacts of Hurricane Irma on mature forest communities in EVER. The results of this work will be used provide quantitative information on post storm forest conditions, inform and improve post storm assessment methods and should result in recommendations that will assist EVER in understanding and responding to similar future events.

Potential Research Questions

- In areas affected by Hurricane Irma, what are the trajectories of post-storm vegetation response? Do recovery or successional patterns indicate that damaged forests will recover to pre-storm conditions or are different plant communities replacing them?
- Are impacts to EVER forest communities similar to previous storm events and if not, what contributed to the observed differences?
- Are patterns of impacts and responses of EVER forest communities influenced by proximity to the coast or man-made structures such as roads or infrastructure?
- Are patterns of impacts and responses of EVER forest communities influenced by tidal exchange, pre- and post- storm soil chemistry, storm surge soil deposition and/or other factors?
- Are certain methods of forest impact assessments more appropriate for impacted forest communities than others?
- Are management actions available that can be used to mitigate observed impacts on forest communities that may result from future hurricanes?

Possible Specific Tasks

- Summarize literature on post-Irma studies of mature forest communities.
- Collect data on physical features of affected forest communities in EVER
- Characterize pre- and post-storm forest communities in EVER. Specific geographic areas of interest include Florida Bay Islands, the Ten Thousand Islands region, Cape Sable and surrounding mangrove communities and the northern shore of Florida Bay. However, projects involving any geographic region with storm impacted forest communities will be considered.
- Identify and determine importance of factors contributing to large scale mangrove mortality observed in Coastal Everglades.
- Re-map recently mapped, impacted forests and characterize changes that are detected.
- Determine optimal and maximum time since storm where effective habitat specific damage assessments can be carried out.

Period of Performance

The period of performance for Task Agreements arising from this RSOI is expected to be 24 months from the award date. The NPS plans to have one or more agreement signed and begin project work by March 31, 2020.

Materials Requested for Statement of Interest/Qualifications

Please prepare a brief (3-4 page) summary of how you would envision conducting such a collaborative project. Statement of Interest should include the research topic or topics to be addressed by the proposed project as well as an estimated budget. Research topics are not restricted to those included under possible research questions in this announcement. Include your name, CESU affiliation (university or non-profit organization eligibility affiliated with the Gulf Coast, Piedmont South Atlantic or the South Florida Caribbean CESU) and contact information as well as any relevant experience, past projects, and staff, faculty and students that would be available to work on the project.

Potential Funding

Total funding in the amount of \$500,000 is anticipated to support one or more projects resulting from this RSOI.

Review of Statements Received

All statements of interest received will be evaluated by a committee comprised of two or more National Park Service scientists, who will determine which statement(s) best meet the program objectives. 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 demonstrated skills in conducting mapping, invasive plant surveys, previous experiences studying at the park or region will also be considered, including experience conducting National Park Service natural resource damage assessments, forest community monitoring and plant community mapping.

Please direct all questions to:

Jimi Sadle, Botanist
Everglades and Dry Tortugas National Parks
40001 State Road 9336
Homestead, FL 33034
Office: (305) 242-7806
Jimi_Sadle@nps.gov

Replies requested by: Not later than December 15, 2019, 11:59 PM EST. Please submit electronic statements of interest to:

Carol B. Daniels, NPS Senior Science Advisor
South Florida Caribbean CESU
Office: (402) 661-1846
carol_daniels@nps.gov