



January 12, 2015

SECOORA Solicitation for Regional Coastal Ocean Observing System: Rip Currents Forecast Model Validation Project

As part of the SECOORA FY14 (Year 4, June 1, 2014 - May 31, 2015) Scope of Work for the grant titled *Southeast Coastal Ocean Observing Regional Association (SECOORA): Coordinated Monitoring, Prediction and Assessment to Support Decision-Makers Needs for Coastal and Ocean Data and Tools*, SECOORA is investing in coastal ocean observing system project(s) in the Southeast that promote integration of the ongoing Regional Coastal Ocean Observing System (RCOOS) as well as addressing the needs of stakeholders. These projects will leverage existing capabilities, foster development and deliver data and new products that address stakeholder needs in the identified [SECOORA thematic areas](#).

Background/Need

SECOORA is currently sustaining observing, modeling, data management subsystems for US Southeast coastal waters that provide the basis for the RCOOS by supporting and integrating existing assets and observations. NOAA's National Ocean Service (NOS), in collaboration with National Weather Service (NWS) and other stakeholders is implementing a new Rip Current Forecast Model (RCFM) in Morehead City, North Carolina and Miami, Florida Weather Forecast Offices (WFOs), with a planned expansion of model spatial coverage and transfer to additional WFO locations over the coming years. NOS and NWS are also engaged in developing a rip current program to provide a unified and seamless suite of products and services for the public, thereby reducing their susceptibility to loss of life or injury from rip currents.

NOAA NOS currently validates the RCFM and Nearshore Wave Prediction System (NWPS) with visual observations of rip currents intensity via lifeguards and available instrument-collected nearshore wave observations. In 2015, NOAA is planning to expand the spatial coverage of the Morehead City Weather Forecast Office (WFO) study area to include Emerald Isle, NC. Nearshore wave observations and visual rip current observations are lacking in the Emerald Isle location. The purpose of this solicitation is fund a project to address these gaps in wave observations for RCFM and NWPS models validation. In addition to rip currents, the NWPS model and data collected for rip validation will be beneficial for high sea level and wave run-up forecasts efforts. SECOORA has a maximum of \$80,000 for addressing the observational gaps in NOAA's RCFM and NWPS modeling efforts in the Emerald Isle, NC area. The study area and the RCFM output extent, which may be expanded to the east and west to provide greater spatial coverage, are shown in Figure 1.

This effort will not only address stakeholder needs, but also will facilitate integration of ongoing SECOORA projects in observing, modeling and data management. As SECOORA's membership and stakeholders grow, it is critical to have a process by which funds are distributed throughout our network in a fair and transparent manner. An equitable mechanism to make these decisions is through a proposal process. The following describes the objectives and process we will use to distribute the available funding.

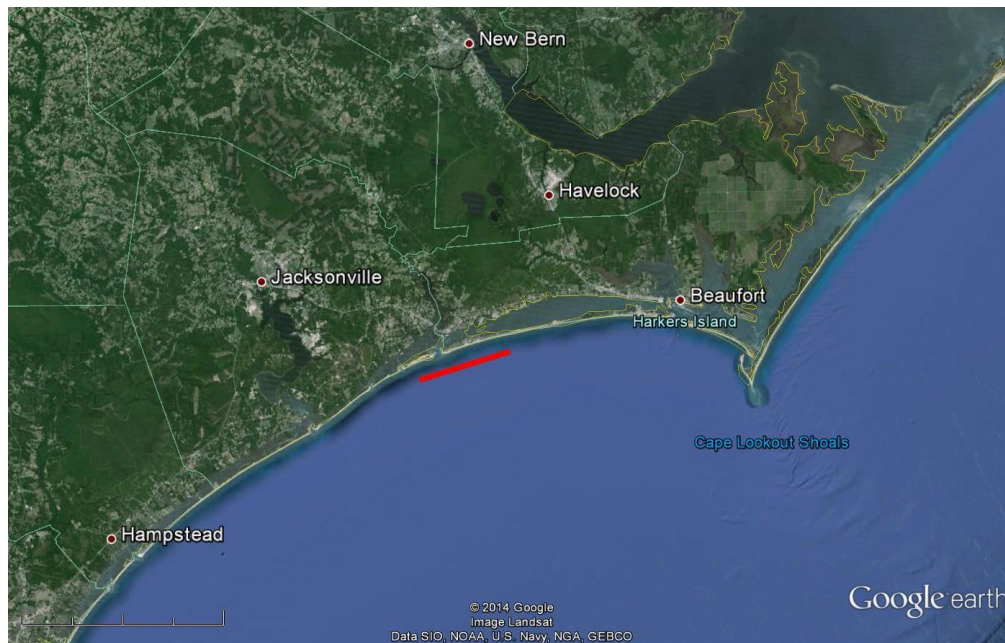


Figure 1. The red line indicates the present output extent of the rip current forecast model at Emerald Isle, NC.

Objectives:

The primary goals of this solicitation are to collect nearshore wave observations in the Emerald Isle study area in support of NOAA's RCFM and NWPS modeling efforts, and to collect rip current observations. This secondary goal is to utilize a camera (or another similar system) and/or visual observations by trained observers to collect rip current observations. The tasks to address these goals will include:

1. The responder will be required to deploy directional wave measurement devices in shallow water (5 - 20m depth) for a minimum of two months within the Emerald Isle output domain (Figure 1) over the summer of 2015 (from May – September 2015) in support of the validation of RCFM and NWPS models. Preference would be to have at least two instruments deployed at multiple depths (e.g. 5 m and 10 m depth). Instruments should collect wave information and sample at least every 3-hours (corresponding to the NWPS run times) and can be self-contained (non real-time).
2. Collection of a rip current dataset indicating when and where (at a minimum) rip currents have occurred overlapping the domain of the wave measurement dataset. Utilization of a remote digital video camera (or another similar) system in a location in the study area for observing rip current occurrence and evaluating the surf zone bathymetry and/or visual observations of rip currents intensity by trained observers are likely methods for collecting this dataset. NOAA NOS/NWS will provide training, if needed, to identify rip currents and estimate rip current intensity.
3. The observational data, upon retrieval of the instruments and/or conclusion of rip current observations, needs to be delivered to SECOORA/NOAA NOS/NWS in formats specified in the final award contract.

Solicitation Requirements

Responders are expected to demonstrate the following skills and experience:

- knowledge of oceanography of SE and in the proposed study area,

- knowledge of wave measurement methods,
- experience with wave measurement device deployment and operations,
- experience with digital video camera (or similar system) installation and operations,
- experience in wave data and image processing methods and
- understanding of the ongoing SECOORA projects and capabilities.

The performance period for this solicitation is twelve months with field work spanning the summer of 2015.

PROPOSAL PROCESS and TERMS

1. SECOORA will convene a review panel of 3-5 participants. The panel will include SECOORA staff, a SECOORA member with relevant expertise, other subject matter experts, and/or a IOOS Program Office representative.
2. Solicitation for proposals (via email) will be sent out via SECOORA's email list and made available on the SECOORA web site. Proposal must be submitted by 5:00 PM ET, Monday, February 9, 2015
3. The review panel will review the submitted proposals and recommend recipient(s) and funding amount(s).
4. Funding will be allocated to awardees via contracts between SECOORA and the awardee.

This is an open and competitive process. SECOORA reserves the right to reject any and all proposals received as a result of this process. SECOORA reserves the right to request proposals make modifications at any time before a contract is awarded. SECOORA reserves the right to reject any and all bids, to waive or not waive informalities or irregularities in bids or bidding procedures and to accept or further negotiate cost, terms, or conditions of any bid determined in the best interests of SECOORA even though not the lowest bid.

SUBMISSION OF PROPOSALS

Proposals should be sent to Vembu Subramanian (vembu@secoora.org) by 5 PM ET, Monday, February 9, 2015.

The project proposal should be a maximum of 7 pages of 12-point text in PDF format, and must include the following elements.

1. Key organizations/personnel involved
2. Project Description
3. Methodology/Technical details
4. Deliverables and Timeline
5. Brief budget summary and justification

CVs of key personnel should be attached as an appendix.

Questions regarding solicitation

For any questions related to this solicitation, please contact Vembu Subramanian, RCOOS Manager, SECOORA via either email (vembu@secoora.org) or telephone (727.641.5258).