



Progress Report

Project Title: Disaster Relief Supplemental Act (DRSA) - Repair and Replacement of Observing Assets, Real Property, and Equipment in the Gulf of Mexico, Southeast, and Caribbean Regions Non-competitive Request for Applications (RFA) - NOAA-NOS-IOOS-2024-2008259 Disaster Relief Supplemental Appropriations Act, 2023

Award number: #NA24NOSX012C0037

Period of Activity: 10/01/2024 – 03/31/2025

Submission Date: 04/22/2024

Principal Investigator: Debra Hernandez, SECOORA Executive Director

Co-investigators: Jennifer Dorton (SECOORA)

I. PROJECT GOAL:

SECOORA supported assets, specifically HFR, water level stations, surface buoys and subsurface moorings in Florida, South Carolina, and North Carolina were damaged during the passage of Hurricane Ian in September 2023. Hurricane Ian crossed the path of two surface buoys and two subsurface moorings in the Gulf of Mexico on September 28 as a Category 5 Hurricane. It made landfall on the southwest coast of Florida where it then damaged the HFRs located in Venice, FL and destroyed the HFR in Naples, FL. Additionally, water level sensors in Captiva, FL and Sanibel, FL were also destroyed. The storm crossed Florida, and entered the Atlantic Ocean, finally making a second US landfall on September 30 as a category 1 storm near Georgetown, SC. The HFR located in Georgetown, SC was damaged and two buoys off the coast of South Carolina and one buoy off the coast of North Carolina sustained damages. Repairs are needed to bring these stations back into full operation. Without data, the ability to forecast and respond to future disasters in our region will be significantly impacted. The goal of this award is to repair assets damaged during the passage of Hurricane Ian so they are fully operational.

Objectives from the proposal are identified in Section II Progress and Accomplishments. High-level accomplishments and any issues identified by each project team member are included for each objective. Status of each deliverable is reported as complete, on-track, or delayed. If the milestone is delayed, a justification for the delay and description of activities employed or to be employed to mitigate the delay are provided.

II. Progress and Accomplishments

Objectives	Status
Objective 1: Hurricane Ian Repairs – High Frequency Radar	
The following accomplishments detail the status of Hurricane Ian repairs to High Frequency Radar (HFR) in South Carolina by the University of South Carolina (USC) and Florida by the University of South Florida (USF): USF - Objectives are on track with two purchase orders issued to HFR manufactures 1) CODAR Ocean Sensors and 2) Helzel Messtechnik GMBH (for WERA HFR). Damages occurred at two USF CODAR sites Naples and Venice and at the Venice WERA HFR site. - The CODAR order supports equipment and supplies for the Venice and Naples HFR. Items ordered for the Venice HFR include a Seasonde Long range transmit antenna and receive antenna. Items ordered for Naples HFR include: a combined transmit-receive (TX-RX) antenna and cable, Seasonde transmitter chassis, Seasonde receiver chassis, and preconfigured remote site mini-computer. - Items ordered for the Venice WERA include TX (Qty 4) and RX (Qty 12) antenna, tuning, and overall system check-out at 13.5 MHz by authorized factory personnel. - Deliveries from CODAR and WERA are expected by July 2025. On-site repairs can be completed once the orders are received. USC - Equipment and supply orders are 90% complete for the Georgetown HFR. Specific items purchased from Helzel include a Power Amplifier, Frequency Control Rack, new CPCI computer, 8 Active WERA Tx Antennas, WERA Tx antennas kit (4 Tx antennas built for 5 MHz), 2 Tx (1:4) signal splitter boxes, 2 Tx cables sets, 8 WERA Tx Antenna tuning coils, and 16 WERA Rx Antenna tuning coils. Anticipated delivery from Helzel is late August to September 2025. - All other required supply items can be purchased from big box stores at the time of the HFR re-installation. - On-site repairs can be completed once the orders are received. Overarchingly, there is concern of escalating costs on HFR parts and supplies from Helzel Messtechnik GMBH due to recently applied import tariffs. Helzel is a German company.	On-track
Objective 2: Hurricane Ian Repairs - Coastal Real-time Buoys and Subsurface Non Real-time moorings	
The following accomplishments detail the status of Hurricane Ian repairs to Buoys and Subsurface moorings in North Carolina, South Carolina, and Florida by the University of North Carolina Wilmington (UNCW) and USF. Note that many of the supplies for the USF	On-track

buoy repairs were purchased by SECOORA and shipped to USF. UNCW - Damages occurred UNCW buoys SUN2, SUN2Wave, CHR60 and CHR60Wave. Equipment and supply orders have been placed as follows: - Two replacement Sofar spotter buoys (one each for SUN2Wave and CHR60Wave) - One Seabird SBE-37 SIP CTD (for SUN2) - Replacement solar panels, cables, and other mooring components for SUN2 and CHR60. - UNCW is evaluating the number of cable connectors needed and will place an order during the next reporting period for connectors and remaining supplies. USF - Equipment and supplies have been ordered for real-time buoys C13 and C22 and non real-time bottom moorings C11 and C15. Items ordered include: 12 Conductivity, Temperature, and Depth (CTD) sensors, 4 Acoustic Doppler Current Profilers (ADCPs), buoy beacons, and a deck box. The CTD's will be received from SeaBird in late summer or early fall 2025. All other items have been received. - Supplies from the following vendors were purchased by SECOORA and delivered directly to USF: Vaisala, Doppler, SeaBird, Mooring Systems, Campbell Scientific, Anchor Marine, PP Systems, and Flynn Tech. These supplies have been received by USF. - Three ADCPs damaged during the passage of Hurricane Ian will be shipped back to Teledyne for repairs and calibrations during the next reporting period. - Testing of new data telemetry systems has begun.	
Objective 3: Hurricane Ian Repairs - Water Level Sensors	
The following accomplishments detail the status of Hurricane Ian repairs to water level sensors in SC and FL by Hohonu: - Sensors damaged by Hurricane Ian in Captiva and Sanibel, FL, and in Oyster Landing and Georgetown, SC were replaced during this reporting period. - New hardware to upgrade telemetry and maintain high-quality data standards was installed in the four new sensors.	On-track

III. PROJECT CHALLENGES/MODIFICATIONS:

Tariffs could impact any remaining supply and equipment items that need to be purchased. Tariffs on HFR supplies coming out of Germany will cost USF and USC an additional 10% (at minimum). Additionally, the cost of lumber required for antenna stakes has increased since due to tariffs on Canadian lumber.

IV. BUDGET SUMMARY:

- Give details on any delays with initiating a contract/subaward. Note any issues with the previous year funds or other issues that occurred during the reporting period. Will this result with a work stoppage or cause significant problems with the partnership?

- All subawards have been issued and executed.
 - No work stoppage or significant problems noted.
 - Give a brief update on project invoicing for the reporting period. Were there any delays with invoicing or payment?
 - SECOORA is receiving invoices. There is always a delay between when a subawardee conducts work and when SECOORA is given an invoice for that work. SECOORA regularly monitors invoicing frequencies with subawardees/subcontractors. Most subawardees invoice quarterly.
 - No known delays with invoicing or payment.
 - Provide details on any property or equipment charged directly to the award having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit during the period.
 - No equipment was purchased during this reporting period.
 - Include changes in key scientific, technical or management personnel, not included in certification.
 - No changes
 - Include changes to the organizational structure such as: changes in status or partners organizations and points of contact. As a reminder, a change to the award's Principal Investigator and a change in an award's Key Person Specified in the Application requires NOAA approval through Grants Online.
 - No changes to organizational structure
 - Provide an update about travel completed during the reporting period.
 - No travel was conducted by SECOORA under this award.
 - Are there any plans to initiate a new partnership (contract or subaward) during the next reporting period?
 - No
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