

# Southeast Coastal Ocean Observing Regional Association (SECOORA): Supporting Resilient Ecosystems, Communities and Economies

## Program Performance Report

Award Number: NA16NOS0120028

Reporting Period: 1 June 2016 – 30 November 2016

Date submitted: 16 December 2016

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## 1) Progress and Accomplishments

**Goal 1: Continue SECOORA’s region-wide governance and communication structure to engage users and stakeholders in coastal observing science**

**Milestone A: Maintain governance and management for the RA and RCOOS**

Activities	Status
Effectively manage grants and contracts	Ongoing.
Ensure SECOORA’s operational & governance structure enables us to achieve our vision.	Ongoing
Maintain effective communication with US IOOS and the IOOS Association	Ongoing
Expand and diversify funding.	Ongoing.
Update and maintain SECOORA’s RCOOS Plan.	Ongoing.

**Milestone B: Engage users and other stakeholders to prioritize investments**

Activities	Status
Improve web-based information system and web presence	Ongoing. Expected soft launch of new content website: Spring 2017. SECOORA continued to engage in marketing and outreach activities via e-newsletter, e-mails, social-media and website. Since June 1, 2016 to November 30, 2016, we observed a less than 1% increase in subscription to our newsletter, from 696 to 697, Facebook “likes” have grown 12% (from 289 to 325) and Twitter “followers” have grown 13% (317 to 358). During the reporting period SECOORA shared approximately 94 Facebook posts and 109 Twitter “tweets”, referring a combined 450 sessions to SECOORA website. Website sessions have decreased 3% during the reporting period (76,961 sessions to 74,750 sessions). We also launched a <a href="#">blog</a> site. SECOORA newsletters, stories and videos can be accessed on our <a href="#">website</a> , <a href="#">Facebook</a> and <a href="#">Twitter</a> .

Activities	Status
Identify and promote opportunities for non-members to engage in SECOORA activities and initiatives.	Ongoing. New fellowship/scholarship and data challenge initiatives are in development.
Implement an effective outreach strategy.	Ongoing.
Support citizen science opportunities.	Evaluation of citizen science activities in the region is in ongoing.
Engage students in problem solving using ocean observing data.	Ongoing. Interviews for Summer 2017 NOAA interns completed. Three students were interviewed and two students accepted the internship.
Coordination of SOCAN activities	Ongoing. The <a href="#">network</a> via SECOORA has hired Leslie Wickes, a contractor who also works part-time for NOAA Ocean Acidification Program, to be the part-time Program Coordinator for SOCAN. An OA Monitoring workshop is scheduled for February 27 and 28, 2017.
Animal Telemetry Workshop (Joint SECOORA, CariCOOS and US IOOS)	Ongoing. Planning committee has been formed. Location: Tampa/St. Petersburg, FL. Tentative workshop dates: Mid-March – Mid April 2017.

### Milestone C: Maintain and Operate DMAC (SECOORA and Axiom Data Science, LLC)

Activities	Status
IOOS DMAC standards compliance and implementation Data Management, Products and Services	Ongoing. We follow the IOOS recommended standards based services and requirements to ingest, manage and provide access to all our funded data streams (in-situ, remotely sensed and numerical models). See <a href="http://portal.secoora.org">portal.secoora.org</a> .
Maintenance of DMAC infrastructure (hardware and software)	Ongoing. Responsible contractor: Axiom Data Science, LLC.
Establishment and release of new SECOORA content website	Ongoing. Expected soft launch: Spring 2017.

### Goal 2: Maintain existing core observation investments in the region

#### Milestone A: Maintain HF Radars distributed throughout the region: Ongoing.

Institution/Contractor	Status
University of South Florida (UFS) (Weisberg, Merz)- Support four CODAR radar arrays on the West Florida Shelf	<b>Operational uptime and average spatial range statistics:</b> Naples (71.5%, 164km); Venice (74.5%, 148km); Reddington Shores (46.9%, 181km). <b>Operational issues:</b> The CODAR central processing site (St. Petersburg) was down from October 10 - 21 due to a hard drive failure with approximately a week of the remote site(s) data missing from the provided CORDC diagnostic totals. Reddington Shores site was down between April 22 – August 19, 2016 due to A/C failure within the instrumented enclosure.
University of Georgia (UGA), Skidaway Institute of Oceanography (SKIO) (Savidge) - Support two WERA radar arrays on St. Catherine's and Jekyll Island, GA	<b>Operational uptime and average spatial range statistics:</b> Jekyll Island (71.9%, 174km) and St. Catherine's Island (48%, 160km). <b>Operational Issues:</b> An upgrade of one component of the Jekyll control hardware required extensive troubleshooting over the summer (2016). The component was repaired by the vendor during the week of Sept 25th. Both sites were affected by hurricane Matthew and had power outages and damages. Repairs in progress.
University of Miami (Shay) - Support three WERA radar arrays at Crandon, Virginia Key and Dania Beach	<b>Operational uptime and average spatial range statistics:</b> Virginia Key (84%, 117km), Crandon Park (70%, 139km); Dania Beach (74%, 98km%). <b>Operational issues:</b> System at Dania Beach had to be shutdown (lasting between 5 to 10 days)

Institution/Contractor	Status
	for US Navy testing.
University of NC - Chapel Hill (UNCCH) (Seim) - Support three CODAR radar arrays on the Outer Banks of NC	<b>Operational uptime and average spatial range statistics:</b> Cape Hatteras (80%, 176km); Duck (82.3%, 190km) and Core Banks (82.3%, 201km). <b>Operational issues:</b> System antenna relocation at Cape Hatteras, transmit cable replacement at Duck, and beam pattern runs at Core Banks were carried out.
University of South Carolina (Voulgaris) -Support two WERA arrays on Fort Caswell, NC and Georgetown, SC	<b>Operational uptime and average spatial range statistics:</b> Georgetown (75%, 231km) and Fort Caswell (77%, 167km). Operations issues: (i) cable relocation due to potential impacts on nesting turtles at Georgetown; (ii) continual and rapid beach erosion where the Fort Caswell transmit array is deployed, the TX array had to be relocated inland by 5m; (iii) replaced the AC unit in the Caswell trailer, rebuilt the support structures for 4 receive antennas, and repaired connectors on cables from July 15th through July 17th, 2016; (iv) failure of the power supply unit at Georgetown, and (vi) power failure and damages at sites due to Hurricane Matthew.

### Milestone B: Maintain in-situ stations along the Carolina and West Florida Shelf (WFS) coasts:

#### Ongoing.

Institution/Contractor	Status
USF (Weisberg) - Coastal Ocean Monitoring and Prediction System (COMPS) moorings	Three real time surface moorings (C10, C12 and C13) were maintained, along with two (non-real-time) subsurface (C11 and C15) moorings. The up-time of all sensors on moorings is over 90%. <b>Operational issues:</b> Data telemetry system outages either power limitations (mostly winter time) or antenna issues.
USF (Luther) - Coastal tidal meteorological stations	<b>Operational issues:</b> Big Carlos Pass site: Rebuilding was completed in August 2016. Shell Point and Aripeka sites: Maintenance visits completed in November 2016. The water level data collection was restored, a worn RM Young wind sensor was replaced, and plugged rain gauge cleaned out at Shell Point. Aripeka site: Damaged by impact of hurricane Hermine. A visit to this site is scheduled December 2016/January 2017.
University of North Carolina - Wilmington (UNCW) (Leonard) - UNCW mooring network	Moorings ILM2, ILM3, LEJ3, SUN2, CAP2, FRP2 were maintained. Except FRP2, meteorological and in-water sensors uptime is over 95%. <b>Operational issues:</b> FRP2 mooring sustained damage during the passage of Hurricane Matthew. Data return from this mooring is 84%.

### Milestone C: Maintain the sensors on NOAA GRNMS buoy: Ongoing.

Institution/Contractor	Status
UGA (Noakes) and University of Delaware (UDEL) (Cai) - Support to NOAA's Ocean Acidification Program NDBC Gray's Reef National Marine Sanctuary (GRNMS) NDBC ID #41008 buoy	<b>UGA:</b> Completed installation of new MAPCO2 system on May 6, 2016. Completed installation of a new iridium antenna and a battery pack on August 4, 2016, to address system performance issues. Next site visit: Spring 2017 to turn around the MAPCO2 system. <b>UDEL:</b> No new field samples were collected, however continue to analyze time series data as it becomes available.

**Goal 3: Begin to address geographic gaps in observations**

**Milestone A: Establish a regional glider observatory in the South Atlantic Bight (SAB): Ongoing.**

Institution/Contractor	Status		
UGA SkIO (Edwards) North Carolina State University (NCSU) (He) UNCCH (Seim) USF (Lembke) Georgia Institute of Technology (Zhang)	Total Glider Days: 58; Deployment Area: South Atlantic Bight (SAB)		
	Glider Name	# Profiles	Sensors
	Modena (UGA)	31,612	CTD, depth, DO, chl-a, CDOM, turbidity, acoustic telemetry (VMT)
	Salacia (NCSU)	12,272	CTD, Loggerhead Remora passive acoustics, acoustic telemetry (VMT)
	Ramses (UNCCH)	5,900	CTD, DO, chl-a, CDOM, turbidity, acoustic telemetry (VMT)
Bass (USF)	2,396	CTD, DO, chl-a, CDOM, turbidity, acoustic telemetry (VMT)	
Data upload to NGDAC: Completed; Anticipated data analysis completion by PIs: Summer 2017.			

**Milestone B: Install a new coastal water quality and meteorological station in Charleston Harbor, SC: Ongoing.**

Institution/Contractor	Status
South Carolina Department of Natural Resources (Sanger)	Held a stakeholder meeting that included local, state and federal interested parties. Identified site location (off of Fort Moultrie in water less than 30 ft. deep).

**Goal 4: Continue delivery of operational model forecasts and products to serve priority users**

**Milestone A: Enhance and operate a Coupled Marine Environmental Assessment and Prediction System for the SE: Ongoing.**

Institution/Contractor	Status
NCSU (He) - Support and enhance SABGOM model	Ongoing. New model developments including data assimilation, improving model skill assessment, model nesting and couplings with biogeochemistry are being pursued.

**Milestone B: Operate the WFS FVCOM ocean model: Ongoing.**

Institution/Contractor	Status
USF (Weisberg)	FVCOM is a prognostic, unstructured-grid, finite-volume, free-surface, 3-D primitive equation coastal ocean circulation model, and is run in a nowcast/forecast mode. Results are available via SECOORA data portal.

**Milestone C: Provide an early warning system for swimming beach and shellfish harvesting waters: Ongoing.**

Institution/Contractor	Status
USC (Porter)	Enhancement of the previous work to include shellfish harvesting waters has begun.

**Milestone D: Optimize and enhance the SECOORA Marine Weather Portal (MWP): Ongoing.**

Institution/Contractor	Status
UNCW (Dorton)	Development site: <a href="http://mwp.cormp.org">http://mwp.cormp.org</a> . Anticipated soft launch date: May 31, 2017.

**Milestone E: Python Data Analysis Tools for Oceanographic Services: Ongoing.**

Institution/Contractor	Status
Independent Contractor (Filipe Pires Alvarenga Fernandes, Oceanographer, Brazil)	Progress report submitted to Jennifer Bosch, IOOS PO.

**2) Scope of Work**

Scope of work remains as described in [Year 1 descope proposal](#).

**3) Personnel and Organizational Structure**

No major changes in SECOORA personnel or organizational structure were made during this reporting period. A current list of SECOORA Members and Board is available on our [website](#). SECOORA's Board elected new officers during this reporting period (Chair- Quinton A. White, Jacksonville University; Vice Chair – Rick DeVoe, South Carolina Sea Grant Consortium; Treasurer – George Maul, Florida Institute of Technology; Secretary – Peter Hamilton, Leidos Corporation; At Large: Jeff Copeland, WeatherFlow).

**4) Budget Analysis**

The FY16 SECOORA audit was conducted by the firm Elliott Davis Decoscimo, LLC and was finalized in October 2016. There were no negative findings. SECOORA's October 31, 2016 financial report shows a budget balance remaining of approximately \$2.4M. We are within budget and on track with spending. SECOORA continues to receive invoices regularly from our sub-awardees and we process them at one of two bi-monthly administration meetings. All invoices are paid within forty-five days. SECOORA continues to draw from ASAP monthly. As a reminder SECOORA pays out its monthly operational costs (i.e. payroll, etc.) and then conducts the ASAP draws in the middle of the following month for both the preceding month's operation expenses and the sub-awardee invoices.

SEC00A - 0001 Asset Inventory v1.0 (template) (Number 6416400013000)																	
Form	Station ID	Station Long Name	Station Description	Station WMO ID	Station Location Lat	Station Location Lon	RA/Preferred Affiliation	Station Type	Instrument Type	Time Period	Performing Institution	Station Operator	Operator Email	Operator Sector	Variable Names	Variable Units	Variable Depth Above Sea
	h01	Oroonoke Bay Outer, NC	Oroonoke Bay Outer	41564	34.2071	-76.049	SEC00A/CDP/Waves	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	Winds: 2.95m (above sea level); Air temperature, pressure and humidity: 2.95m above sea level; Water temperature and salinity: 1m below surface
	h02	Capers Island Booy 2	Capers Island Booy 2	41029	33.8028	-79.8236	SEC00A	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	
	h03	Frisp Island Booy 2	Frisp Island Booy 2	41033	32.217	-80.4077	SEC00A	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	
	h03	Wrightsville Beach Booy 3	Wrightsville Beach Booy 3	41037	33.9866	-77.363	SEC00A	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	
	h02	Wrightsville Beach Booy 2	Wrightsville Beach Booy 2	41038	34.1418	-77.7187	SEC00A/CDP/Waves	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	
	h02	Sunset Beach Booy 2	Sunset Beach Booy 2	41024	33.8427	-78.4932	SEC00A	Booy	Mooring	2016-12-13T11:08:00Z	University of North Carolina, Wilmington	University of North Carolina, Wilmington	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature	(mbar, deg C, %rh, m/s, deg C)	
	C10	WFS Central Booy, 25m isobath	WFS Central Booy, 25m isobath	42013	27.1730000	-82.8240000	SEC00A	Booy	Mooring	2016-12-13T10:35:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature, Longwave Radiation, Shortwave Radiation, Current Speed, Current Direction	(mbar, deg C, %rh, m/s, deg C, cm/s, deg C)	Winds: 3.1m; Air Temperature, radiation and Humidity: 1.98m; Air pressure: 2.95m (all above sea level); Water Temperature and Salinity: 1m, 10m, 20m
	C12	WFS Central Booy, 50m isobath	WFS Central Booy, 50m isobath	42022	27.5040000	-83.7410000	SEC00A	Booy	Mooring	2016-12-13T10:35:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature, Current Speed, Current Direction	(mbar, deg C, %rh, m/s, deg C, cm/s, deg C)	Winds: 3.1m; Air Temperature and Humidity: 1.98m; Air pressure: 1.93m (all above sea level); Water Temperature and Salinity: 1m, 20m, 30m
	C13	WFS South Booy, 50m isobath	WFS South Booy, 50m isobath	42013	26.5500000	-83.0800000	SEC00A	Booy	Mooring	2016-12-13T10:35:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Salinity, Water Temperature, Current Speed, Current Direction	(mbar, deg C, %rh, m/s, deg C, cm/s, deg C)	Winds: 3.1m; Air Temperature and Humidity: 1.98m; Air pressure: 1.93m (all above sea level); Water Temperature and Salinity: 1m, 20m, 30m
	SHF1	Shell Point, FL	Shell Point, FL	SHF1	30.0801567	-84.2905	SEC00A	Show station	Coastal Tower	2016-12-13T07:54:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level	(mbar, deg C, %rh, m/s, deg C, m)	Winds: 12.5m; Air Temperature and Humidity: 5m; Air Pressure: 3.5m (all sensors are above MSL)
	ARP1	Arjika, FL	Arjika, FL	ARP1	28.413	-82.667	SEC00A	Show station	Coastal Tower	2016-12-13T09:54:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level	(mbar, deg C, %rh, m/s, deg C, m)	Winds: 11.3m; Air Temperature, Humidity and Air Pressure: 2.9m (all sensors are above MSL)
	HPW1	Fred Howard Park, FL	Fred Howard Park, FL	HPW1	28.15325	-82.82155	SEC00A	Show station	Coastal Tower	2016-12-13T09:54:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level	(mbar, deg C, %rh, m/s, deg C, m)	Winds: 12m; Air Temperature, Humidity and Air Pressure: 4m (all sensors are above MSL)
	C18	Clam Bayou, FL	Clam Bayou, FL	In Process to get WMO ID assigned	27.7360831	-82.8707333	SEC00A	Show station	Coastal Tower	2016-12-13T10:48:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level, Dissolved Oxygen, pH, Salinity, Chlorophyll Concentration, Water Temperature	(mbar, deg C, %rh, m/s, deg C, m, mg/l, pH, ppt, %chl, deg C)	Winds: 3.1m; Air Temperature, Humidity and Air Pressure: 11m; Water Temperature: 5m (below MSL) and all other sensors above MSL
	BCF1	Big Carlos Pass, FL	Big Carlos Pass, FL	BCF1	26.4048313	-81.881	SEC00A	Show station	Coastal Tower	2016-12-13T10:48:00Z	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level	(mbar, deg C, %rh, m/s, deg C, m)	Winds: 12.5m; Air Temperature, Humidity and Air Pressure: 14.5m (all sensors are above MSL)
	NBF1	Northeast Florida Bay, FL	Northeast Florida Bay, FL	NBF1	25.084	-81.596	SEC00A	Show station	Coastal Tower	Currently Down	University of South Florida, St. Petersburg	University of South Florida, St. Petersburg	<a href="mailto:ash@uncw.edu">ash@uncw.edu</a>	Academic	Far Pressure, Air Temperature, Humidity, Wind Speed, Wind Direction, Water Level	(mbar, deg C, %rh, m/s, deg C, m)	Winds: 5m; Air Temperature, Humidity and Air Pressure: 5m (all sensors are above MSL)



Instructions:

This IOOS Observing Asset Inventory template is to be filled out annually by the IOOS Regional Associations and submitted with their December Progress report.

If an RA has published their list of assets online, they can point to this filled out template.

Including a graphic of pdf inventory with the December Progress report is not an acceptable substitution.

The template can be found at [http://www.ioos.noaa.gov/regions/ra\\_asset\\_inventory\\_v1.0\\_template.xlsx](http://www.ioos.noaa.gov/regions/ra_asset_inventory_v1.0_template.xlsx)

This is version 1.0 and will be updated as needed.



University of South Florida HFR New Yr 1 Obs Sys Expenditures		Period of Performance: 06/01/2016 to 11/30/2016							
Expendables:	Software:	Hardware:	Communications:	Facilities:	Labor:	Testing & Calibration:	Data Mgmt & Data Archive:	Transportation:	Travel to Working Groups & Conferences
Replenishment of supplies (THIS MAY NOT BE NECESSARY-JH)	Costs for applications and mission software, commercial off-the-shelf software, communications software and the cost of software modifications, improvements and maintenance	Investment in durable mission hardware (sensors, platforms, information and communications technology); and modifications and maintenance to systems and mission hardware; includes engineering and off-site repairs, and unit-level replacement of persistent components	Costs associated with leased circuits, internet service, mobile phone service & telemetry required to collect data and deliver data from radar sites to regional or national servers	Costs associated with facilities and facilities infrastructure. Includes, leases and cost of utilities (power and fuel, but excluding communications costs), maintenance and repair for shelters, antenna bases, and HVAC equipment, security fencing or other security-related expenses, lightning protection, and grounds and access maintenance fees including rent.	Sum of salary, fringe benefits & their indirect costs for all field labor.	Labor and transportation costs (surface transport and days-at-sea) to test and calibrate antennas; excludes facilities, software and hardware needed for test and calibration	Cost of managing and processing radial velocity data to the point of delivery to national or regional servers, including data quality analysis and control; meta-data management and maintenance; and allocated cost of long-term data archive	Transportation costs to conduct to maintain and repair/replace radar site equipment; excludes test and calibration transport costs.	Transportation, lodging & associated travel expenses
\$2,231	\$1,441	\$9,143	\$5,220	\$2,720	\$37,695			\$791	\$5,275

University of Miami HFR New Yr 1 Obs Sys Expenditures		Period of Performance:		06/01/2016 to 11/30/2016						
Expendables:	Software:	Hardware:	Communications:	Facilities:	Labor:	Testing & Calibration:	Data Mgmt & Data Archive:	Transportation:	Travel to Working Groups & Conferences	
Replenishment of supplies (THIS MAY NOT BE NECESSARY - JH)	Costs for applications and mission software, commercial off-the-shelf software, communications software and the cost of software modifications, improvements and maintenance	Investment in durable mission hardware (sensors, platforms, information and communications technology); and modifications and maintenance to systems and mission hardware; includes engineering and off-site repairs, and unit-level replacement of persistent components	Costs associated with leased circuits, internet service & telemetry required to collect data and deliver data from radar sites to regional or national servers	Costs associated with facilities and facilities infrastructure. Includes, leases and cost of utilities (power and fuel, but excluding communications costs), maintenance and repair for shelters, antenna bases, and HVAC equipment, security fencing or other security-related expenses, lightning protection, and grounds and access maintenance fees including rent	Sum of salary, fringe benefits & their indirect costs for all field labor.	Labor and transportation costs (surface transport and days-at-sea) to test and calibrate antennas; excludes facilities, software and hardware needed for test and calibration	Cost of managing and processing radial velocity data to the point of delivery to national or regional servers, including data quality analysis and control; meta-data management and maintenance; and allocated cost of long-term data archive	Transportation costs to conduct to maintain and repair/replace radar site equipment; excludes test and calibration transport costs.	Transportation, lodging & associated travel expenses	
\$500.00	\$0.00	\$30,000.00	\$420.00	\$650.00	\$47,500.00	\$1,500.00	\$6,000.00	\$1,500.00	\$0.00	

UM Funds...NOT IOOS

University of North Carolina Chapel Hill HFR New Yr 1 Obs Sys Expenditures		Period of Performance:		06/01/2016 to 11/30/2016								
Expendables:	Software:	Hardware:	Communications:	Facilities:	Labor:	Testing & Calibration:	Data Mgmt & Data Archive:	Transportation:	Travel to Working Groups & Conferences			
Replenishment of supplies (THIS MAY NOT BE NECESSARY-JH)	Costs for applications and mission software, commercial off-the-shelf software, communications software and the cost of software modifications, improvements and maintenance	Investment in durable mission hardware (sensors, platforms, information and communications technology); and modifications and maintenance to systems and mission hardware; includes engineering and off-site repairs, and unit-level replacement of persistent components	Costs associated with leased circuits, internet service, mobile phone service & telemetry required to collect data and deliver data from radar sites to regional or national servers	Costs associated with facilities and facilities infrastructure. Includes, leases and cost of utilities (power and fuel, but excluding communications costs), maintenance and repair for shelters, antenna bases, and HVAC equipment, security fencing or other security-related expenses, lightning protection, and grounds and access maintenance fees including rent.	Sum of salary, fringe benefits & their indirect costs for all field labor.	Labor and transportation costs (surface transport and days-at-sea) to test and calibrate antennas; excludes facilities, software and hardware needed for test and calibration	Cost of managing and processing radial velocity data to the point of delivery to national or regional servers, including data quality analysis and control; meta-data management and maintenance; and allocated cost of long-term data archive	Transportation costs to conduct to maintain and repair/replace radar site equipment; excludes test and calibration transport costs.	Transportation, lodging & associated travel expenses			
		\$171.10			\$8,743.20							as of late October, 2016

University of South Carolina HFR New Yr 1 Obs Sys Expenditures	Period of Performance:	06/01/2016 to 11/30/2016							
Expendables:	Software:	Hardware:	Communications:	Facilities:	Labor:	Testing & Calibration:	Data Mgmt & Data Archive:	Transportation:	Travel to Working Groups & Conferences
Replenishment of supplies (THIS MAY NOT BE NECESSARY-JH)	Costs for applications and mission software, commercial off-the-shelf software, communications software and the cost of software modifications, improvements and maintenance	Investment in durable mission hardware (sensors, platforms, information and communications technology); and modifications and maintenance to systems and mission hardware; includes engineering and off-site repairs, and unit-level replacement of persistent components	Costs associated with leased circuits, internet service, mobile phone service & telemetry required to collect data and deliver data from radar sites to regional or national servers	Costs associated with facilities and facilities infrastructure. Includes, leases and cost of utilities (power and fuel, but excluding communications costs), maintenance and repair for shelters, antenna bases, and HVAC equipment, security fencing or other security-related expenses, lightning protection, and grounds and access maintenance fees including rent.	Sum of salary, fringe benefits & their indirect costs for all field labor.	Labor and transportation costs (surface transport and days-at-sea) to test and calibrate antennas; excludes facilities, software and hardware needed for test and calibration	Cost of managing and processing radial velocity data to the point of delivery to national or regional servers, including data quality analysis and control; meta-data management and maintenance; and allocated cost of long-term data archive	Transportation costs to conduct to maintain and repair/replace radar site equipment; excludes test and calibration transport costs.	Transportation, lodging & associated travel expenses
\$650.00	\$400.00	\$2,050.00	\$1,426.00	\$680.00	\$15,075.00		\$1,200.00	\$1,110.00	

University of Georgia Skidaway Institute of Oceanography HFR New Yr 1 Obs Sys Expenditures	Period of Performance: 06/01/2016 to 11/30/2016								
Expendables:	Software:	Hardware:	Communications:	Facilities:	Labor:	Testing & Calibration:	Data Mgmt & Data Archive:	Transportation:	Travel to Working Groups & Conferences
Replenishment of supplies (THIS MAY NOT BE NECESSARY-JH)	Costs for applications and mission software, commercial off-the-shelf software, communications software and the cost of software modifications, improvements and maintenance	Investment in durable mission hardware (sensors, platforms, information and communications technology); and modifications and maintenance to systems and mission hardware; includes engineering and off site repairs, and unit-level replacement of persistent components	Costs associated with leased circuits, internet service & telemetry required to collect data and deliver data from radar sites to regional or national servers	Costs associated with facilities and facilities infrastructure. Includes, leases and cost of utilities (power and fuel, but excluding communications costs), maintenance and repair for shelters, antenna bases, and HVAC equipment, security fencing or other security-related expenses, lightning protection, and grounds and access maintenance fees including rent.	Sum of salary, fringe benefits & their indirect costs for all field labor.	Labor and transportation costs (surface transport and days-at-sea) to test and calibrate antennas; excludes facilities, software and hardware needed for test and calibration	Cost of managing and processing radial velocity data to the point of delivery to national or regional servers, including data quality analysis and control; meta-data management and maintenance; and allocated cost of long-term data archive	Transportation costs to conduct to maintain and repair/replace radar site equipment; excludes test and calibration transport costs.	Transportation, lodging & associated travel expenses
	\$73.44	\$5,057.41	\$705.64	\$2,026.10	\$28,143.47		\$590.88	\$294.40	\$300.88

**SECOORA HF Radar Staffing Report (June 1 – November 30, 2016) – Year 1 Award**

**University of North Carolina, Chapel Hill**

**Total # of Radars Supported: 3**

**Operating Agency: University of North Carolina, Chapel Hill**

**Collaborators (Operational), if any: None**

<b>Staff Member</b>	<b>(% FTE or #person-months)</b>
Principal Investigator: H. Seim	(0)
Technicians/Engineers: M. Muglia, S. Haines	(1.5,0)
Students: none	

<b>CORDC Station Name/City/State</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Nominal Frequency (MHz)</b>
CORE/NC	34.7601	-76.4114	4.537 MHz
HATY/Buxton/NC	35.2573	-75.5200	4.575 MHz
DUCK/Duck/NC	36.1803	-75.7502	4.537 MHz

**University of South Florida**

**Total # of Radars Supported: 5**

**Operating Agency: University of South Florida**

**Collaborators (Operational), if any: None**

<b>Staff Member</b>	<b>(% FTE or #person-months)</b>
Principal Investigator	0
Technicians/Engineers (Cliff Merz)	2.8
Research Associate	1
Students/OPS	6.5

<b>CORDC Station Name/City/State</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Nominal Frequency (MHz)</b>
Redington, FL (RDSR)	27.8325	-82.8344	4.9
Venice, FL (VENI)	27.0776	-82.4516	4.9
Naples, FL (NAPL)	26.1622	-81.8105	4.9
Ft. De Soto, FL (FDS)	27.6358	-82.7381	12.7
Venice, FL (VEN)	27.0756	-82.4511	12.7

**University of Miami**

**Total # of Radars Supported: 3(4)**

**Operating Agency: University of Miami**

**Collaborators (Operational), if any: None**

<b>Staff Member</b>	<b>(% FTE or #person-months)</b>
Principal Investigator L. K. (Nick) Shay	0.5
Technicians/Engineers Jorge Martinez	6.0
Students None	

<b>CORDC Station Name/City/State</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Nominal Freque</b>
<b>Virginia Key, Miami, FL</b>	25.7413	-80.1465	12.70 MHz
<b>Dania Beach, FL</b>	26.0833	-80.1166	12.70 MHz
<b>Crandon Park, Miami, FL</b>	25.6735	-80.1710	16.04 MHz
<b>Turkey Point, Homestead, FL</b>	25.4366	-80.3269	12.70 MHz

**University of South Carolina**

**Total # of Radars Supported: 2**

**Operating Agency: University of South Carolina**

**Collaborators (Operational), if any: None**

<b>Staff Member</b>	<b>(% FTE or #person-months)</b>
Principal Investigator: <i>George Voulgaris</i>	
Technicians/Engineers: <i>William (Jeff) Jefferson</i>	1.5
Students: <i>Douglas Cahl</i>	4.5

<b>CORDC Station Name/City/State</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Nominal Frequency (MHz)</b>
CSW / Caswell Beach / NC	33.8892	78.0258	8.3
GTN / Georgetown / SC	33.3561	79.1528	8.3

**University of Georgia Skidaway Institute of Oceanography (SKIO)**

**Reporting Period: June 1 2016 – Nov 30, 2016**

**Total # of Radars Supported: 2**

**Operating Agency: SKIO**

**Collaborators (Operational), if any: None**

<b>Staff Member</b>	<b>(% FTE or #person-months)</b>
Principal Investigator (Dana Savidge)	1.33
Technicians/Engineers (Trent Moore/Gabriel Matthias)	2.5
Research Associate	
Students/OPS	



<b>CORDC Station Name/City/State</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Nominal Frequency (MHz)</b>
Jekyll Island, GA	31.06	-81.41	8.3
St. Catherine, GA	31.69	-81.13	8.3

Region	Username	Operator	Glider Name	Deployment Name	Sea Name	Deployment Start	Deployment End	Glider-days in 2016* reported to the glider DAC by glider
<b>SECOORA</b>								
SECOORA	secoora	University of South Florida College of Marine Science Ocean Technology Group	bass	bass-20160909T1733	North Atlantic Ocean	2016-09-09T14:35:24Z	9/10/2016	1
SECOORA	secoora	Skidaway Institute of Oceanography	modena	modena-20160909T17	North Atlantic Ocean	2016-09-09T18:06:05Z	10/3/2016	25
SECOORA	secoora	University of North Carolina Marine Sciences	ramses	ramses-20160909T20	North Atlantic Ocean	2016-09-09T19:07:58Z	9/25/2016	17
SECOORA	secoora	NCSU Ocean Observing and Modeling Group	salacia	salacia-20160919T20	North Atlantic Ocean	2016-09-19T16:43:28Z	10/3/2016	15
							<b>Total</b>	<b>58</b>

Note: This is a new activity started in Year 1 of the new cooperative agreement award (NA16NOS0120028). We experienced Glider DAC issues on uploading data to NGDAC during this reporting period.

Detailed data analysis by PIs are in progress and we will update the exact deployment end time in our next reporting period. Number of profiles acquired by each gliders are mentioned in the progress report.

IOOS RA Glider Use Information for 2008 - 2015

Questions	How many glider-days of data were collected annually in 2008-2015 (Report by year) by glider operator in your RA? (Glider-day = 1 glider in the water collecting data for 1 day)	Of the glider-days reported, how many were completed outside of the EEZ?	Of the glider-days reported, how many were supported by IOOS? Consider only operations and maintenance, not capital costs.	Comments/Notes
AODS	2008	47	0	0
	2009	45	0	0
	2010	132	0	0
	2011	74	0	0
	2012	14	0	0
	2013	44	0	0
CANCOOS	2008	183	0	33
	2009	59	0	59
	2010	6	0	0
	2011	5	0	0
	2012	29	0	0
	2013	0	0	0
GCOOS	2008	57	0	35
	2009	246	0	0
	2010	266	88	253
	2011	492	N/A	298
	2012	0	0	0
	2013	78	0	0
GLOS	2008	118	0	0
	2009	59	0	0
	2010	62	0	29
	2011	68	0	29
	2012	263	0	35
	2013	318	0	2
MARACDOS	2008	0	0	0
	2009	0	0	0
	2010	0	0	0
	2011	41	0	0
	2012	58	0	58
	2013	58	0	58
NANCOOS	2008	149	0	149
	2009	80	0	59
	2010	504	226	40
	2011	700	413	60
	2012	877	594	353
	2013	624	353	59
NEBACDOS	2008	818	477	74
	2009	978	338	102
	2010	404	115	52
	2011	1020	723	131
	2012	432	0	0
	2013	325	0	28
PacCOOS	2008	650	302	85
	2009	1078	78	224
	2010	641	112	76
	2011	2151	1644	335
	2012	645	304	231
	2013	431	90	182.5
SECCOOS	2008	78	0	0
	2009	78	0	0
	2010	78	0	0
	2011	0	0	0
	2012	78	0	0
	2013	0	0	0
SECOORA	2008	52	0	0
	2009	42	0	0
	2010	450	0	56
	2011	510	0	59
	2012	500	0	201
	2013	600	0	89
CarCOOS	2008	600	0	86
	2009	437	0	93
	2010	236	0	0
	2011	186	0	0
	2012	246	664	253
	2013	2943	719	190
IOOS	2008	2589	1033	351
	2009	3084	1232	350
	2010	3765	1204	357
	2011	3665	1556	360
	2012	1584	0	365
	2013	2164	868	N/A
CarCOOS	2008	0	0	0
	2009	0	0	0
	2010	0	0	0
	2011	80	0	0
	2012	199	0	0
	2013	10	0	83
IOOS	2008	22	0	7
	2009	0	0	0
	2010	58	0	58
	2011	0	0	0
	2012	0	0	0
	2013	0	0	0
IOOS	2008	250	0	0
	2009	383	0	383
	2010	4013	890	349
	2011	4744	1132	357
	2012	4973	1379	990
	2013	5740	1663	772
IOOS	2008	6282	1793	745
	2009	7647	3188	990
	2010	4154	307	1224
	2011	5546	1681	1055
	2012	4109	1233	6392
	2013	4109	1233	6392