

CARICOOS Field Operations

Performance Period: December 1 2016 – May 30 2017

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LONG-TERM GOALS

Monitor, operate, and troubleshoot CARICOOS assets (Fig. 1) to better serve the needs and desires of CARICOOS stakeholders, beachgoers, emergency management agencies, water and coastal managers, scientists, among others.











Fig. 1 CARICOOS Assets Map

MILESTONES / OBJECTIVES

- Operate the CARICOOS data buoy network
- Yearly maintenance of the CARICOOS - UMaine data buoys
- Yearly maintenance of the CARICOOS Rincón wave buoy
- Yearly maintenance of the UVI-EPSCOR St. Thomas buoy
- Yearly maintenance of the La Parguera MAP CO² buoy
- Maintenance and operation of MESONET
- Maintenance and operation of CARICOOS HF radar network
- Occasional CARICOOS drifter deployments from ships of opportunity or event-driven

WORK COMPLETED

Field Operations Division assisted and performed the following milestones / tasks:

MILESTONE / TASK	Q1	Q2	Q3	Q3	STATUS (%)	COMMENTS / NOTES
Operate the CARICOOS data buoy network					 100	
Yearly maintenance of the CARICOOS-UMaine data buoys					 100	Completed (May 2017)
Yearly maintenance of the CARICOOS Rincón wave buoy					 100	
Yearly maintenance of the UVI-EPSCOR St. Thomas buoy					 0	Pending
Yearly maintenance of the La Parguera MAP CO ² buoy					 100	Completed (January 2017)
Maintenance and operation of MESONET					 100	
Maintenance and operation of CARICOOS HF radar network					 100	
Occasional CARICOOS drifter deployments from ships of opportunity or event-driven					 100	ECO-Drifters deployments (April 2017)

MAJOR OUTCOMES

Inspection and Refurbishment of CARICOOS – UMaine Buoys

CARICOOS Field Operations continued to support University of Maine by assisting in the yearly maintenance of CARICOOS buoys (Fig. 2). All five ocean data buoys were retrieved, refurbished and redeployed successfully in April - May 2017.



Fig. 2 Photographs of CARICOOS buoys during the yearly maintenance.

Maintenance of CARICOOS CO² buoy

In January 2017, personnel from CARICOOS, the Department of Marine Sciences UPRM and the University of New Hampshire refurbished the CO² buoy (Fig. 3) and re-calibrated the instruments in order to provide data related to ocean acidification monitoring.



Fig. 3 Photographs of CARICOOS CO² buoy.

CARICOOS Asset Up (Working) Time

Field Operations Division objective is to ensure that CARICOOS assets are working and providing real-time oceanographic data to CARICOOS stakeholders, beachgoers, emergency management agencies, water and coastal managers, scientists, among others. Therefore, it is essential to maintain all systems up and running (Fig. 4). During this performance period, CariCOOS-UMaine data buoys and CariCOOS Rincón buoy had minimum downtime, except for the months of April and May, when the buoys were retrieved for the annual maintenance. UVI-EPSCOR St. Thomas buoy is still out of service, waiting for the permits and approvals for the redeployment.



Fig. 4 CARICOOS assets uptime from December 2016 to May 2017.



During the months of December 2016 – February 2017, WeatherFlow meteorological stations (MESONET) had issues with 2G comms technology and software updates. Therefore, during those months, the meteorological stations had low availability. Windnet meteorological stations and High-Frequency (HF) Radars have been running with almost 0 days of data acquisition gaps, providing reliable data to the stakeholders and users.

WORK PLAN FOR UPCOMING PERFORMANCE PERIOD

1. Perform the yearly maintenance of the CARICOOS Rincón wave buoy to provide another year of oceanographic data.
2. Deploy NOAA-AOML Gliders off La Parguera and San Juan, PR to monitor / study the ocean conditions along the Caribbean and Atlantic track, respectively.
3. Maintain and operate CARICOOS data buoy network, MESONET and HF radar network.

REFERENCES

NONE

PUBLICATIONS & PRODUCTS

NONE