



## SEAKEYS C-MAN Stations Record Real-Time Sea Conditions

*Jon Fajans, SEAKEYS Program Manager*

The SEAKEYS C-MAN (Coastal Marine Automated Network) stations provide a wealth of oceanographic and weather data used by marine ecosystem managers and scientists conducting research in the Keys. Scientists studying phenomena like coral bleaching and algae blooms depend upon the real-time data collected by the oceanographic stations. Marine managers use the sea surface temperature readings to help predict coral bleaching events. But they are not the only ones who use SEAKEYS data. Boaters, anglers, and divers, including commercial operators, also take advantage of being able to check sea conditions on the internet, especially the wind speed and direction, before they leave the dock for an outing on the water.

SEAKEYS, which stands for Sustained Ecological Research Related to the Management of the Florida Keys Seascape, is a research framework for scientists organized by the Florida Institute of Oceanography (FIO) in 1989 with funding from the John D. and Catherine T. MacArthur Foundation. FIO, in cooperation with the National Data Buoy Center, established six enhanced C-MAN environmental monitoring stations as part of the SEAKEYS framework. The program is now sustained annually through grants from NOAA and the EPA.

The SEAKEYS network encompasses the geographic scale of the Florida Keys and the Dry Tortugas. Data are transmitted hourly via a geostationary orbiting environmental satellite (GOES) providing near real-time environmental baseline data for researchers, resource managers, and the public. Stations record hourly wind speed, wind direction, air temperature, barometric pressure, sea temperature, salinity, and terrestrial solar irradiance, and will soon record wave height and tidal height. This information is available at [www.ndbc.noaa.gov/maps/Florida.shtml](http://www.ndbc.noaa.gov/maps/Florida.shtml) or [www.coral.noaa.gov/seakeys/real\\_data.shtml](http://www.coral.noaa.gov/seakeys/real_data.shtml).

A seventh monitoring station, a cooperative effort between FIO and the University of South Florida's Coastal Oceanographic Monitoring Program, is located in Northwest Florida Bay. This site has been down since hurricanes Katrina and Wilma destroyed the monitoring equipment and is currently being rebuilt. An eighth station, in partnership with the Coastal Oceanographic Monitoring Program, will be established at Carysfort Reef Light.

For more information about this program visit [www.keysmarinelab.org/seakeys.htm](http://www.keysmarinelab.org/seakeys.htm) or contact the program manager at [jfajans@keysmarinelab.org](mailto:jfajans@keysmarinelab.org).

*Note:* This article appeared in the Winter 2007-Spring 2008 edition of *Sounding Line*, the newsletter of the Florida Keys National Marine Sanctuary. For more information, please visit: <http://floridakeys.noaa.gov/>.



**Fowey Rocks Lighthouse, located on the reefline off Miami, is one of the reef lighthouses that houses SEAKEYS oceanographic and meteorological instruments. The reef lighthouses, built along the reef tract in the 1800s, are navigational aids maintained by the U.S. Coast Guard. Photo: SEAKEYS**