

## Success Story

### Essential Ocean Information Support U.S. Coast Guard Search and Rescue Operations



The island of O'ahu, Hawai'i, attracts approximately 5 million tourists each year. Beautiful beaches and pristine waters are the perfect setting for a beach vacation. For many visitors, learning how to surf, paddling an outrigger canoe, or trying out stand up paddle boarding are must-do activities during their vacation. Inexperienced ocean users unfamiliar with Hawai'i's ocean conditions, including rip currents, shore break, waves and winds, often underestimate the inherent danger of ocean sports.

#### Visitor Missing After Renting a Stand-up Paddleboard

In May 2015, a visitor from Seattle rented a paddleboard in Waikiki for an afternoon beach outing. Conditions were rough that day -- a high surf advisory was in affect for all south facing shores. While the Seattle man was on the ocean, he lost his paddle and could not get back to the shoreline. Instead, he was drifting out towards the open ocean.

Family members called the Honolulu Fire Department to report the missing man in the early evening. The Fire Department and U.S. Coast Guard (USCG) searched for the man on and offshore throughout the night, with the support of helicopters and rescue boats.

#### USCG Prepares for Search Mission

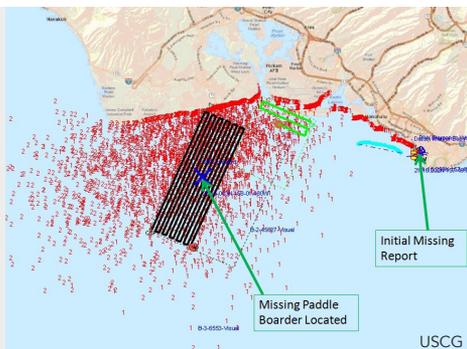
There are many variables that come into play when the USCG plans a search pattern to locate a missing person. The availability of accurate ocean data, such as observed and predicted currents, wind and wave conditions are key factors that feed into USCG's Search and Rescue Optimal Planning System (SAROPS).

“ *PacIOOS has been an instrumental partner to the U.S. Coast Guard allowing us to better predict surface currents surrounding the Hawaiian Islands, directly resulting in lives saved.* ”

- LT Kevin Edes, Command Center Chief,  
USCG Sector Honolulu

## Search Pattern to Locate Missing Man

To help narrow down the possible location of a missing person or a vessel lost at sea, PacIOOS provides forecasted ocean currents to the USCG through its Regional Ocean Modeling System (ROMS). For the South Shore of O'ahu and for Waikīkī, ROMS is available in 60m and 40m resolutions. PacIOOS also offers real-time surface currents.



## Happy Ending

SAROPS and ROMS were spot on. After a 15-hour search, the USCG located the man 11 miles away from his starting point in Waikīkī, three miles south of Ewa beach. Luckily, the man was in good condition, only suffering from dehydration. PacIOOS is proud to provide valuable data to our partner, the U.S. Coast Guard, to help save lives!



“*The individual was safely rescued the morning after he went missing because of the information flow between PacIOOS, Sector Honolulu, and the rescue boats and aircraft.*”

- LT Kevin Edes, Command Center Chief, USCG Sector Honolulu

## About ROMS

The Regional Ocean Modeling System (ROMS) is a mechanism to generate forecasts of ocean currents, salinity, water temperature, and sea surface height. Every day, all available observations collected for the past three days are assimilated to provide a “nowcast” for the current conditions. From this nowcast, an ensemble of 7-day forecasts is generated to provide the best ocean circulation estimate with uncertainty for the next week. The model is available in regional, island, and local scales for selected parts of the PacIOOS region.

## More information on the U.S. Coast Guard, District 14

[www.uscg.mil/d14/](http://www.uscg.mil/d14/)

## All ROMS grids can be found on PacIOOS Voyager

[www.pacioos.org/voyager](http://www.pacioos.org/voyager)

Contact us for questions and feedback at [info@pacioos.org](mailto:info@pacioos.org), or visit us at [www.pacioos.org](http://www.pacioos.org).

The Pacific Islands Ocean Observing System (PacIOOS) provides easily accessible and reliable ocean observation and forecasting data to keep Pacific Island communities safe, support livelihoods and lifestyles, and sustain ocean resources. PacIOOS is based within the School of Ocean and Earth Science and Technology at the University of Hawai'i at Mānoa. It is one of 11 regional associations of the U.S. Integrated Ocean Observing System (IOOS®).

