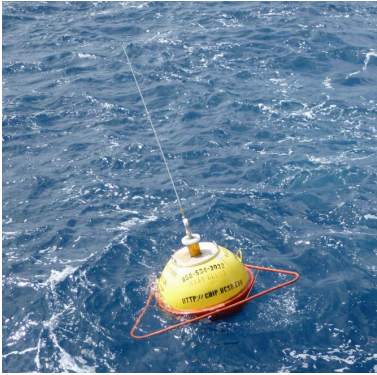


Success Story

National Weather Service Guam Protects Lives During Large North Swell

A Challenge Arises

The beach draws in many beachgoers, and the sunny, fair weather with low surf convinces them to stay. Unassuming residents and visitors spend the day enjoying the environment around them, taking part in various activities such as swimming, snorkeling, sunbathing, and playing near the shore. Meanwhile, a large swell makes its way to Guam's shores, yet those on the beach are unaware of the approaching hazard. Without advanced notice of the changing conditions, beachgoers are caught off guard and cannot react in time to the high surf and strong rip currents. Unfortunately, many have drowned in situations like this, including a young teenage boy who died in June 2012 at Ritidian Point at the northwest tip of Guam. In order to avoid future lost lives and injuries, and ensure the safety of beachgoers, something needed to be done.



PacIOOS' wave buoys are located off Ritidian Point and Ipan (Guam) and Tanapag (Saipan).

“
The PacIOOS wave buoys not only improve our forecasts and advisories, but also improve the model guidance we use – primarily Wave Watch III.
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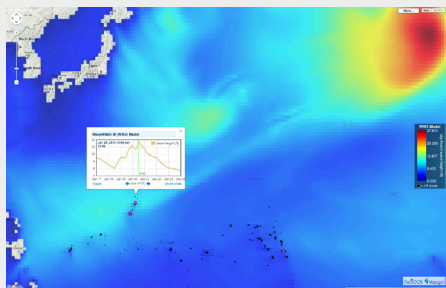
- Chip Guard,
Warning Coordination Meteorologist,
NOAA NWS Guam

Springing into Action

To address this urgent need, NOAA's National Weather Service (NWS) Guam strongly and effectively advocated for PacIOOS to deploy additional Datawell Directional WaveRider Buoys in the region. PacIOOS responded, and a new wave buoy was deployed off Ritidian Point, Guam in October 2012. Another buoy was moored off Tanapag, Saipan shortly after. Both PacIOOS wave buoys provide real-time data on wave height, wave direction, wave period, and sea surface temperature. Data streaming from the buoys is made possible through long-term partnerships between PacIOOS, the Coastal Data Information Program at Scripps Institution of Oceanography, and the U.S. Army Corps of Engineers.

An Approaching Swell

In late January 2013, the value of the PacIOOS wave buoys was put to the test. It was a sunny day, with fair weather and small surf, but NWS was forecasting a large north swell. Conditions such as these have caused devastating problems in the past for unaware recreationalists. "Fortunately," Landon Aydlett, NOAA NWS Meteorologist, exclaimed, "the PacIOOS wave buoys enabled us to produce accurate high surf forecasts and advisories, and surf zone



Wave model forecasts a large swell in January 2013. PacIOOS wave buoys off Saipan and Guam measure actual wave conditions.

forecasts that warned beach goers of the coming hazard. We were able to indicate that inundations of 1-2 feet could occur on north and northwest exposures." Once the advisories were issued, NWS Guam spread the word via their website, social media, NOAA Weather Radio (available in Mariana Islands by dialing 211), local radio and television stations, local newspapers, and live interviews. The public was well informed; residents and visitors had time to prepare for the impending hazard.

A Happy Ending

NWS watched the swell arriving via the PacIOOS wave buoys in Tanapag, followed by Ritidian Point. Then, the forecasters witnessed the swell as high surf at Paseo Park, a popular surfing and recreational area with northern exposure in Hagåtña. With advanced warning for Guam and Rota beachgoers, no one was injured, despite the large north swell event. Thanks to the team at the NWS Forecast Office on Guam and their effective use of the new PacIOOS wave buoys, this story has a happy ending.



War in the Pacific Park Beach, Asan, Guam. A beach impacted by the swell event in January 2013.

PacIOOS wave buoys

www.pacioos.org/wavebuoy

More information on the National Weather Service Guam

www.prh.noaa.gov/pr/guam

Contact us for questions and feedback at info@pacioos.org, or visit us at 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®).

