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NOAA HAB-OFS Newsletter

Welcome to the NOAA HAB-OFS Quarterly Newsletter. We are always happy to hear from you so please send your topic suggestions, questions, comments and feedback to hab@noaa.gov.

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More Updates to the HAB-OFS Website Include Mobile-Friendly Design

Recently, the HAB-OFS website was redesigned to make it mobile-friendly, and since then we have made a few additional improvements. An [Overview](#) page has been added containing background information about the program. Descriptions of the [Conditions Reports](#) and [Bulletins](#) have also been revised. For those interested in the NOAA technical reports, conference posters and outreach materials our team has authored, a new [Publications](#) page has been created. Stay-tuned for more enhancements planned in the near future!

Planned Expansion of NOAA's HAB-themed Beach Hazard Statements

Since 2004, the CO-OPS Harmful Algal Bloom Operational Forecast System (HAB-OFS) group has issued forecasts for the short term risk of experiencing respiratory irritation associated with *Karenia brevis* blooms (commonly known as red tide) in the Gulf of Mexico. In an effort to reach a broader audience, as of February 2013, in collaboration with the National Weather Service (NWS) Weather Forecast Office (WFO) in Tampa Bay, the HAB-OFS team has been issuing an alert in the form of a [Beach Hazards Statement](#). The Beach Hazards Statement product is being tested as a simplified way of alerting the public about a variety of coastal hazards in a single statement. The HAB-specific alerts are issued when the HAB-OFS bulletins include forecasts for potentially high levels of respiratory irritation due to *K. brevis* that might affect the coastal areas between Levy and Lee counties. The HAB Beach Hazards Statements were first tested during the 2012-2013 bloom that impacted a widespread area along the southwest Florida coast. While the HAB Beach Hazards Statements were being issued, visits to the HAB-OFS website and general inquiries increased dramatically when compared to the bloom period during the previous year (>100%). This was strong

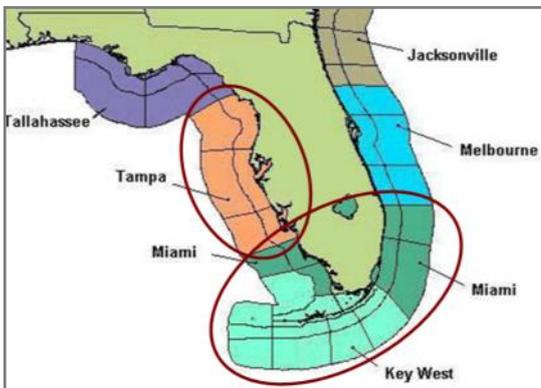


Figure 1. Boundaries of NWS Weather Forecast Offices in Florida. Source: www.nws.noaa.gov/os/marine/zone/south/sttheastmz.htm

evidence that the HAB Beach Hazards Statements successfully helped increase public awareness of the potential health effects associated with HABs and the resources available for additional information.

Following its success with the Tampa Bay pilot, the HAB-OFS team is currently working to incorporate the lessons learned and expand the HAB Beach Hazards Statements to the Miami and Key West WFOs. This would incorporate Collier and Monroe counties, matching the geographic coverage of the HAB-OFS bulletins for southwest Florida which already provide operational forecasts for *K. brevis* HAB events along the southern Gulf Coast of Florida. As part of this expansion effort, Karen Kavanaugh recently led a HAB training, along with Mike Gittinger from the Tampa Bay WFO, to give representatives of the Miami and Key West WFOs an overview of HAB forecasting and the lessons learned from the Tampa Bay WFO's pilot effort. The goal is to be ready to expand to these two new WFOs by the end of this fiscal year (September 30, 2014).

2013 Bloom in Southwest Florida Shorter-lived than in Recent Years

In comparison to the *Karenia brevis* blooms in the last two years, the Gulf of Mexico had a relatively mild year with respect to duration and impacts. This season, while Texas has been bloom free since before the December issue of the HAB-OFS newsletter, the coast of southwest Florida experienced a short-lived bloom spanning from southern Sarasota to central Collier counties from late October to mid-December.

(continued from page 1) Low concentrations of *K. brevis* began appearing along the coastline from Pinellas to Lee counties throughout October. On October 29th, bloom-level concentrations were detected alongshore southern Sarasota by Florida Fish and Wildlife Conservation Commission (FWC), prompting twice-weekly HAB-OFS bulletin dissemination. Throughout November, the bloom expanded southward along the coastline from southern Sarasota County, alongshore and into the bay regions of Charlotte and Lee counties, and was present along- and offshore northern and central Collier County by early December. Beginning in mid- to late November, several patches of *K. brevis* spanning from low to high concentrations were also detected as far as 20 miles offshore northern and central Lee County, as well as offshore northern Collier County. The bloom gradually diminished from north to south along the coast, just as it had begun, terminating in the Marco Island region of Collier County in mid-December.

The HAB-OFS team issued 13 bulletins and 1 conditions update over the duration of the bloom period, including forecasts for bloom intensification, transport, and respiratory irritation. While a prevalence of offshore winds minimized respiratory irritation along the coast of southwest Florida throughout much of early November, late November to early December saw some reports of respiratory irritation and dead fish along beaches from Sarasota to Collier Counties. Similar to the findings of previous evaluations of patchy blooms with low to medium cell concentrations, preliminary results indicate that the HAB-OFS forecasts for this season may be difficult to assess because of the limited detection ability in satellite imagery and other sources of observational data at lower concentration levels.

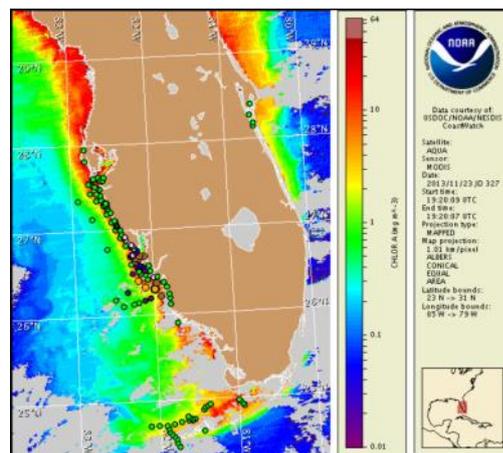


Figure 2. MODIS AQUA ocean color satellite image from 11/23 showing elevated chlorophyll along the Florida coastline with not present to high *K. brevis* cell concentrations in the Charlotte to Collier county regions. Cell count data were provided by the FWC.

Getting to Know the HAB-OFS Analysts: Meet Kate Derner

This is the second installment in a series designed to acquaint our subscribers with the analysts on the NOAA Harmful Algal Bloom (HAB) team. The HAB team is composed of analysts from both biological and physical science backgrounds that are based out of three different NOAA offices. For this article, we spoke with Kate Derner, a 6th year analyst based out of NOAA's Chesapeake, VA office.

Kate Derner came to NOAA with degrees in Geography and Environmental Science, starting as an intern for CO-OPS' Ocean Systems Test and Evaluation Program (OSTEP) in 2006 and becoming a full-time contractor by 2007. As part of OSTEP, Kate was the lead for the BreveBuster project, a technical effort to test the integration of a HAB field sensor (Mote Marine Lab's BreveBuster sensor), at an existing water level station in Naples, FL. During the project, Kate began communicating with the HAB-OFS team to receive their forecast bulletins and began assisting the team part-time with HAB forecasting in Florida in early 2009. In 2010, she transitioned to be a HAB-OFS analyst full-time in support of the HAB-OFS expansion of forecasting along the Texas coast. The decision to join the HAB team was an easy one for Kate, "I liked how HAB forecasting and research was a combination of many sciences, from biological to physical, as well as a mix of human and physical geography. I also love maps, so I enjoy working with satellite imagery and analyzing the layers of spatial data – from water samples to chlorophyll levels and winds." Kate's unique experience with both the technical and forecasting aspects of HABs make her a valuable part of the team. "I've really enjoyed working as part of this team" explains Kate, "The HAB community is a small one, and it's been great to get to know the community and see familiar faces at the conferences and events."



Many Thanks to our Partners and Data Providers

<http://tidesandcurrents.noaa.gov/hab/contributors.html>

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