

Photo credit: NOAA, TPWD, FWRI, WHOI

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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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HAB-OFS Turns 10 Years Old!



On October 1st, NOAA's HAB Operational Forecast System for Florida celebrated its 10th Anniversary!! The past ten years have seen several enhancements to imagery products, tools, and technologies to monitor blooms, as well as new outreach tools, and the expansion of the operational forecast system to the coast of Texas. The HAB-OFS will continue to evolve in the future and there are many new developments on the horizon. For a look back to where it all began, [click here!](#)

Northwest Florida 2014 Bloom Summary

Blooms in northwest Florida occur far less frequently than offshore southwest Florida from Pinellas to Monroe counties. In fact, over the past 10 years of operational forecasting along the Florida coast, the HAB-OFS has reported on only two other northwest Florida blooms, occurring in 2005 and 2007-2008. This year's bloom season was even more unusual as it kicked off with a large bloom that was identified offshore the Big Bend area, in between the typical areas in either southwest or northwest Florida where blooms frequently form.

Background to high concentrations were first identified offshore Hernando County by the Florida Fish and Wildlife Research Institute (FWRI) on July 23rd. Satellite imagery and sampling efforts throughout the month of August revealed a very large bloom area from 7-80 miles offshore Dixie to northern Pinellas counties, and fish kills, discolored water, and respiratory irritation were reported from the bloom region. By late August, a distinct bloom feature was no longer visible in imagery due to increasing patchiness of the bloom and the presence of concentrations below 10,000 cells/L; however, sampling efforts continued to identify offshore bloom concentrations from Dixie to northern Pinellas counties, along with fish kills and respiratory irritation throughout the bloom region.

On September 8th, medium *K. brevis* concentrations were identified alongshore Levy County, and respiratory irritation forecasts were issued for the region. Over the course of the next month, bloom concentrations moved northward and were identified alongshore Dixie and Taylor counties, accompanied by fish kill reports throughout the region. Very low to high *K. brevis* concentrations were identified alongshore Dixie to Taylor counties into early October. They began dissipating in mid-October as the bloom continued to move northward. Background to very low concentrations were identified alongshore and within the bay regions of several counties from Escambia to Taylor through late October, but they did not linger. An anomalously high chlorophyll area visible in satellite imagery from 18-45 miles offshore was tracked through early November, at which point it had dissipated, all *K. brevis* concentrations in northwest Florida had diminished, and bulletins for this region were discontinued. Both fish kills and respiratory irritation were reported within the offshore bloom area, but no respiratory irritation was reported alongshore during the bloom.

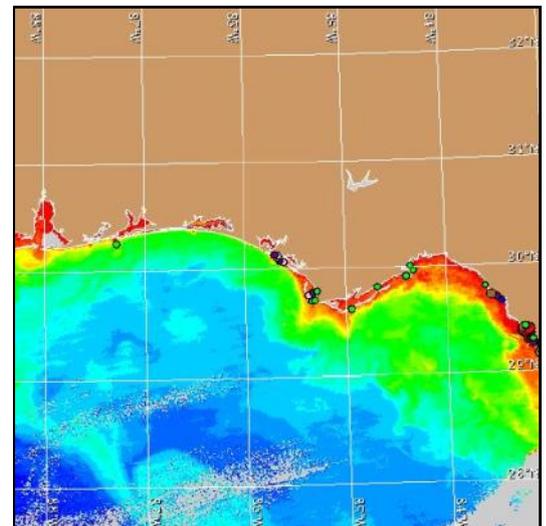


Figure 1. MODIS Aqua satellite imagery and *K. brevis* sample concentrations collected by FWRI from the Florida Panhandle on 10/4/2014.

A Day in the Life of a HAB Analyst

Bloom season is busy for the analysts to say the least. Recently, the analysts have been releasing bulletins for Florida on both Monday and Thursday in addition to a weekly Texas bulletin Monday mornings. But if the bulletins are only released two days a week, what is the HAB-OFS team doing with the rest of its time? In this month's newsletter, we take the reader through what has been a typical workday over the past several weeks with an active bloom in Florida, where analysts are busy not only predicting HAB conditions for today, but are also preparing the HAB-OFS for the requirements of tomorrow.

To prepare a bulletin on Mondays and Thursdays, analysts actually get started the night before. In order to meet the 12:30 deadline for the Florida forecast, analysts spend the evenings before a forecast day preparing data and organizing the numerous reports that are used to create a HAB forecast. Forecast days themselves are consumed by producing a forecast, reviewing the forecast for accuracy, putting the forecast into the HAB-OFS PDF format, and then archiving the forecast and associated data after the bulletin is sent out.

On the days between bulletins, analysts get to work bright and early and review the latest sampling wind data, MODIS Aqua imagery, and *K. brevis* samples to ensure that a conditions update and/or a Beach Hazards Statement is not required. After that, they're off to work on developing a next-generation software framework, plan the future expansion of the HAB-OFS to regions such as Lake Erie, organize the expansion of the Beach Hazard Statements product to additional Weather Forecast Offices, and design improvements of the current HAB-OFS products in the Gulf of Mexico. As the afternoon approaches, it's time to update the [HAB-OFS Facebook Page](#) and respond to questions from the public and bulletin subscribers received through both Facebook and the hab@noaa.gov email address. Once complete, HAB analysts dive into our historical forecast data as the team is busy compiling a report documenting the statistical assessment of the Texas forecasts from 2010-2014. With afternoon setting in, it's time for the team to switch focus and get to work modifying our SOPs and updating our webpage, testing new forecast tools, and collaborating with NOAA technical teams. As the day winds down, it's time for one last check of the latest wind forecast and *K. brevis* samples. The analysts will also document any new reports of respiratory irritation or fish kills along the coast as they prepare all the new data for the following day so that they may do it all over again the next day.

Whether it's the constant stream of forecast data for today's bulletin, or preparing the HAB-OFS system of tomorrow, analysts are challenged each day with the constantly evolving task of delivering a timely and accurate forecast to the communities of the Gulf coast and beyond. If you'd like more information on ongoing work within HAB-OFS and NOAA, visit our [Developmental Projects](#) page!

Read All About It! HAB-OFS Webpage Updates

Over the last year, the HAB-OFS Team has made several webpage updates and enhancements. Here are the highlights.

FAQs: The FAQ page now includes additional frequently asked questions about HABs in general as well as specific HAB-OFS forecast information, updated maps, and links to partner resources and information.

Developmental Forecasts: Learn more about the exciting progress of research and demonstration projects focusing on HAB forecasting in the Great Lakes, Gulf of Maine, Chesapeake Bay, and along the Pacific Coast.

The conditions reports, HAB trivia, facts, and news can also be found on the [NOAA HAB \(Red Tide\) Watch](#) Facebook page. And remember, these newsletters, along with other news and announcements, can be found on our [News & Updates](#) page. Happy reading!



Figure 2. The latest HAB-OFS webpage.

Many Thanks to our Partners and Data Providers

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

This newsletter was written and designed by:

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