

Florida Red Tide & Coastal Managers: *Commonly Asked Questions*



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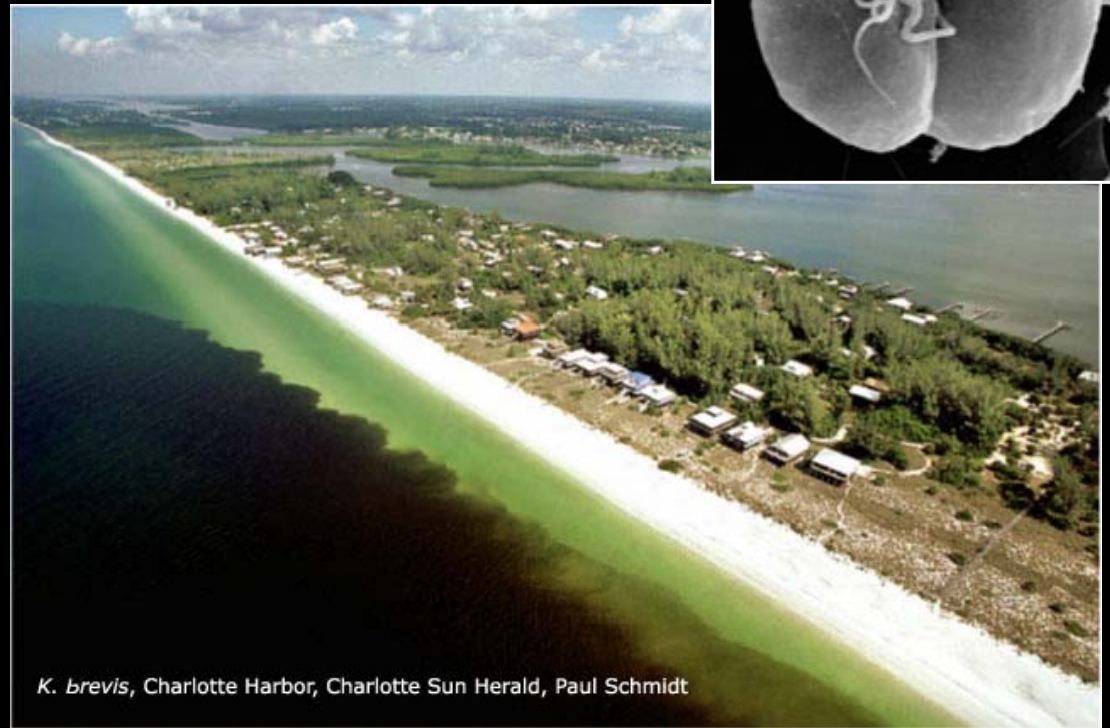
Florida Poison Information Center - Miami

The Front Lines

This presentation will provide answers to the most common questions asked of park and resource managers by the public during a red tide event in Florida.

“What is Florida red tide?”

- A massive “bloom” of a microorganism naturally present in FL waters
- *Karenia brevis*
- Produces brevetoxin
- Can kill fish, marine mammals, sea birds



Not to be confused with...

Red Drift Algae



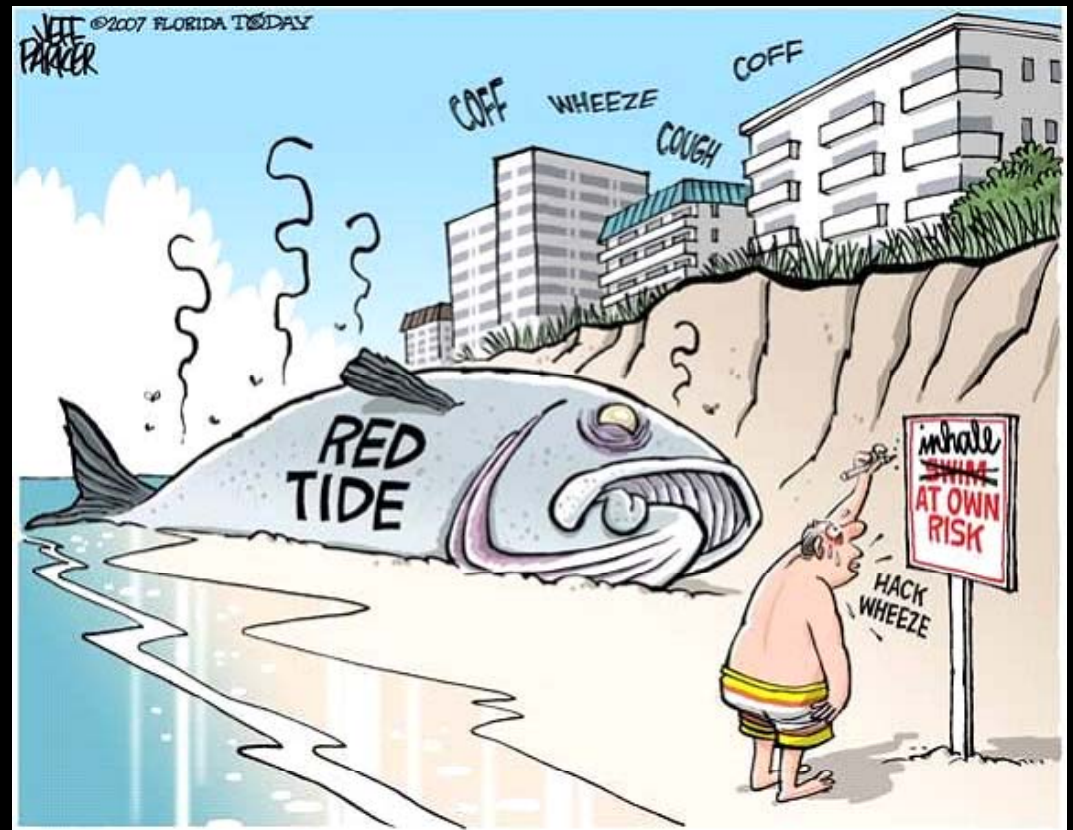
“Why does Florida red tide happen?”

- Dates back to 1800s at least
- Conditions which encourage growth:
 - Nutrients?
 - Salinity
 - Temperature
- Recent research



“How can I be exposed to Florida red tide?”

- Brevetoxins
- Contaminated seafood
 - Shellfish
 - Fish viscera?
- Contaminated water
- Aerosolized toxins in the air



“Can I eat the seafood?”

- Seafood is safe in restaurants
- Shellfish beds closed during a FL red tide
- Dead fish should not be collected from the beach
- No consumption of *organs* of locally caught fish



“Are my symptoms related to Florida red tide?”

- Sneezing
- Coughing
- Watery eyes and runny nose
- Swimmers may note skin irritation



“How long are my symptoms going to last?”

- Usually resolve after leaving beach
- Colds, bronchitis may prolong symptoms
- Some people report long term effects



“Are there long term health effects?”

- No *known* long term health effects
- Groups theoretically at risk
 - Those with lung disease
 - Beach workers



“I’m pregnant. Am I at special risk?”

- Animal research models
- Avoid the beach as an extra precaution until we have more solid research on this topic.



“What about my children or pets?”

- Limit exposure of children with asthma
 - Leave beach
 - Residents may need to adjust medications
- Prevent pets from eating dead fish, or swimming in water during red tide



“What can I do to feel better?”

- Leave the beach
- Go indoors
- Antihistamine use
- Use asthma Rx
- Masks may decrease (but not eliminate) effects



“Where is the red tide?”

- Current location information
 - Beach Conditions Reports
 - FWC Reporting
 - NOAA HAB Bulletin
- Predictions about future blooms & location still not possible



“Why aren’t they testing this beach every day?”

- Limited resources
- Department of Agriculture
 - Shellfish beds
- Healthy Beaches
 - Micro-organisms



NOAA HAB Bulletin



Gulf of Mexico Harmful Algal Bloom Bulletin

5 January 2006
 NOAA Ocean Service
 NOAA Satellites and Information Service
 Last bulletin: January 3, 2006

Forecast

Conditions Report

A harmful algal bloom has been identified in Monroe County. Patchy low impacts are possible for the gulfside Lower Keys today and Sunday, with low to moderate impacts possible Friday and Saturday. No impacts are expected elsewhere in SW Florida through Sunday. Dead fish have been reported between Key West and Marathon in the past few days. Dead fish smell, while unpleasant, does not produce the same respiratory irritation as red tide.

Analysis

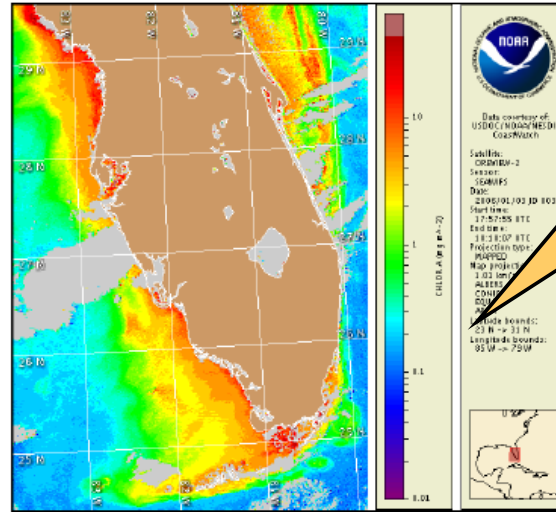
The bloom near the Lower Keys remains present. Chlorophyll levels are continually elevated north and south of the Lower Keys, with levels highest north and southeast of Big Mullett Key (24°35'N, 81°54'W and 24°34'N, 81°53'W), inside the Marquesas Keys, and northeast of the Horse shoe Keys (24°48'N, 81°16'W). Elevated chlorophyll extends along the eastern side of the Lower Keys, out to approximately 7 miles from shore. No recent samples are available for this area. A fish kill was reported on 1/3 at Egret Lane west of Marathon. Sampling is highly recommended throughout this area. Continued transport around the Lower Keys is possible throughout the weekend. Also, a slight possibility for the transport of additional *K. brevis* through the Lower passages on Friday and Saturday with the appearance of northwesterly winds.

Detailed Analysis

Results indicate the bloom is no longer present at the SW although background levels remain patchy in bay and Sarasota and Pinellas County (FWRI, 1/3). Elevated chlorophyll features remain offshore Collier and Monroe Counties near 25°36'N, 82°13'W, and offshore Lee and Collier Counties at 26°16'N, 82°27'W. Sampling, if possible, is recommended. Overall movement has been minimal; the features will likely remain offshore and continue southward migration. Fisher, Bronder

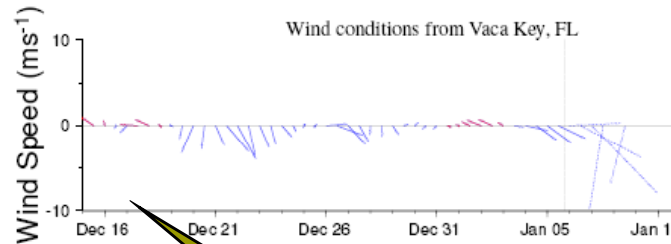
Please note the following restrictions on all SeaWiFS imagery derived from CoastWatch.

1. Data are restricted to civil marine applications only; i.e. federal, state, and local government use/distribution is permitted.
2. Image products may be published in newspapers. Any other publishing arrangements must receive OrbImage approval via the CoastWatch Program.



Satellite chlorophyll image with possible HAB areas shown by red polygon(s).

Infrared Satellite Imagery (Chlorophyll a)



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

SW Florida: Westerly winds (5-10 m/s) today will shift northwesterly, strengthening to 20kts (10m/s) after midnight through Friday. Continued northwesterlies on Saturday will weaken to 15kts (8m/s) and turn northerly Saturday night at 10kts (5m/s). Mild easterlies expected Sunday and Monday at 3-5m/s.

FL Keys: Northwest to north winds (10kts, 5m/s) will shift westerly this afternoon into tonight at 15kts (8m/s). Strong northwesterlies (up to 25kts, 13m/s and gusty) will shift northerly Friday night into Saturday at 15kts (8m/s). North to northeast winds near 15kts (8m/s) on Monday.

Wind Speed Graph

“Why didn’t someone tell me?”

- FL Red Tide is not predictable
- Changing wind conditions greatly influence effects
- Local Health Departments and the media cover blooms, but long blooms cease to be “news”



“Where can I get more information?”

- Florida Fish & Wildlife Conservation Commission
- Aquatic Toxins Program, Florida Dept of Health



Aquatic Toxins Hotline

- 1-888-232-8635
- Speak with a poison specialist, or
- Recorded information
 - Florida Red Tide
 - Ciguatera
 - Blue green algae (cyanobacteria)
 - Shellfish poisoning



Additional Resources

- Florida Dept of Health Aquatic Toxins (<http://www.myfloridaeh.com/medicine/aquatic/index.html>)
- Aquatic Toxins Hotline (tel: 888 232 8635) (www.miamipoison.org under the “Plants and Animals”)
- National HAB Website <http://www.whoi.edu/redtide/>
- Beach Conditions Reporting System (<http://coolgate.mote.org/beachconditions/>) and tel: 941 BEACHES (941 232-2437)
- Solutions to Avoid Red Tide (START) (www.start1.com)

Additional Resources

- Florida Fish and Wildlife Conservation Commission
(www.floridamarine.org)
- NOAA HAB Bulletins
(http://coastwatch.noaa.gov/hab/bulletins_ns.htm)
- Florida Dept. of Agriculture Shellfish Harvesting
beds around the state
(http://www.floridaaquaculture.com/SEAS/SEAS_intro.htm)
- Healthy Beaches Program
(<http://esetappsdo.h.doh.state.fl.us/irm00beachwater/default.aspx>)

Additional Resources

- FWCC Marine Fish Kill Hotline (1-800-636-0511) or fish kill web page (<http://research.myfwc.com/fishkill/submit.asp>)
- FWCC Sick birds, sea turtles or sea mammals (1 888 404 FWCC)

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