



WELCOME TO
THE 2019 FRPA
CONFERENCE!



Red Tide,
Blue/Green algae,
King Tides, High
Bacteria Oh
My...What to Do?

LEARNING OBJECTIVES



- Discuss environmental occurrences that can impact parks and recreation activities.
- Learn what parks and recreation agencies did in 2018 in response to red tide, blue/green algae, king tides and high bacteria levels.
- Identify techniques to protect staff who are on the front lines of recovery and restoration efforts.

Your Panelists



Jennifer Cirillo, Assistant Director of Palm Beach County Parks and Recreation
jcirillo@pbcgov.org

Mark Lynch, Deputy Director of Martin County Parks and Recreation
mlynch@martin.fl.us

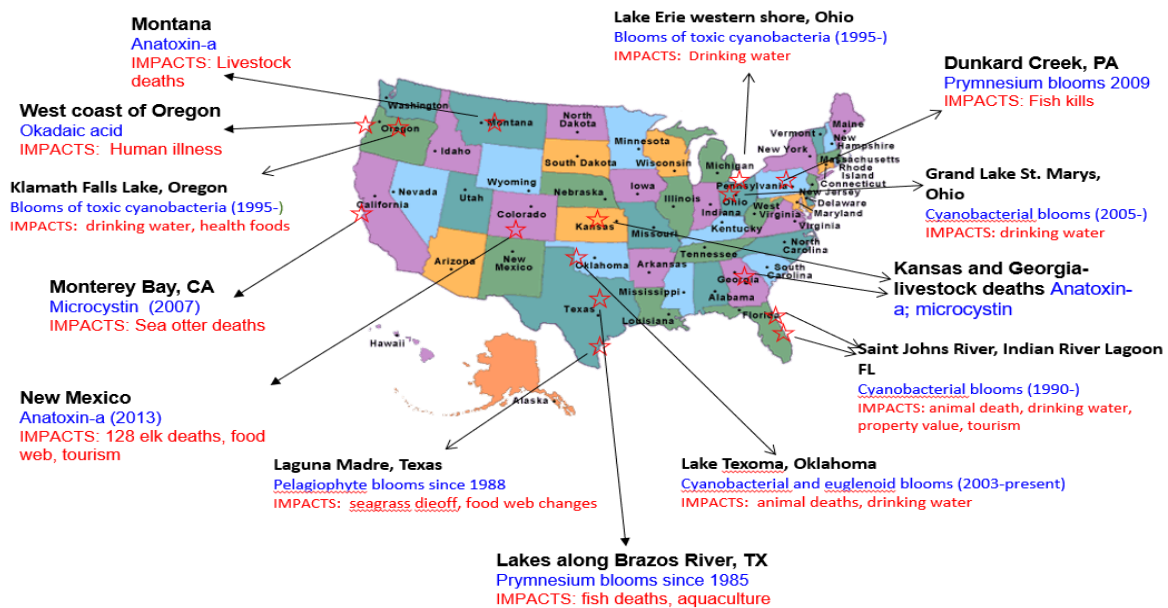
John Maehl, Ecosystem Restoration and Management Manager, Martin County Public Works
jmaehl@martin.fl.us

Nicole Rissler, Director of Sarasota County Parks, Recreation & Natural Resources
nrissler@scgov.net

Our Experiences

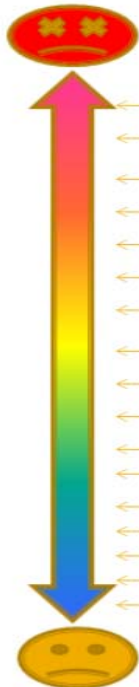


The Marine and Freshwater Impact of Harmful Algal Blooms are widespread



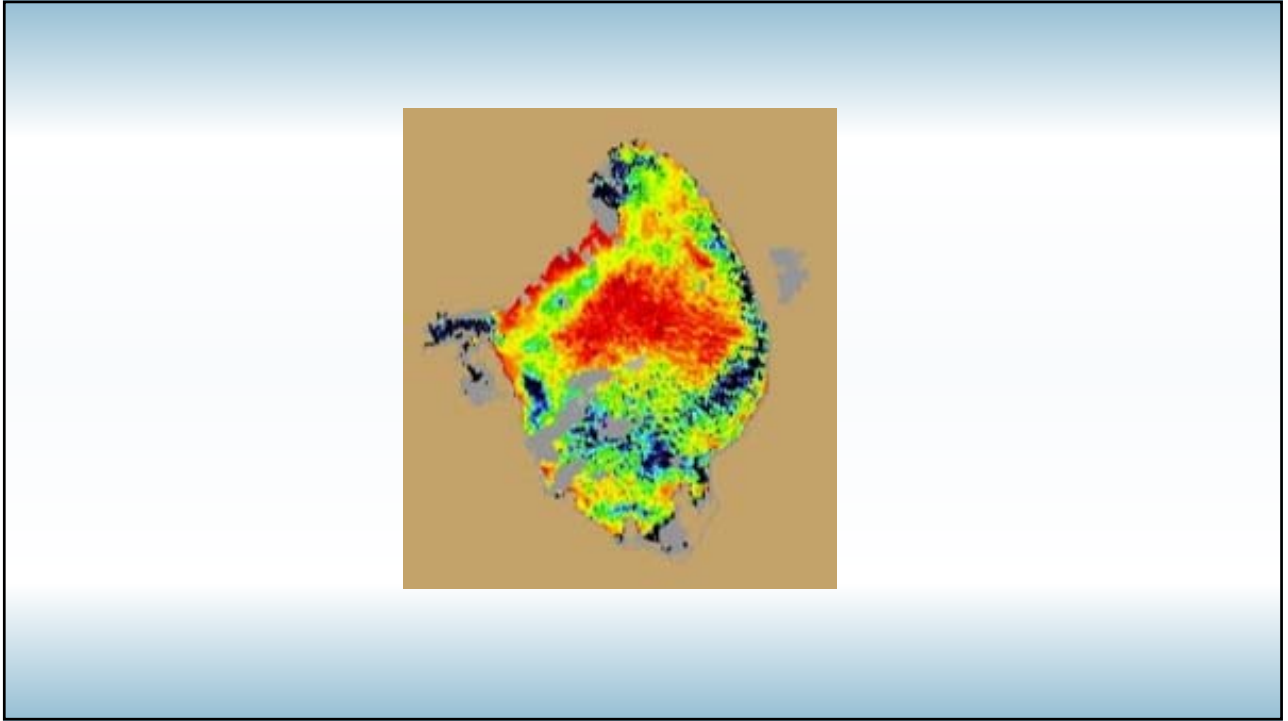
Toxicity of Algal Toxins Relative to Other Toxic Compounds found in Water

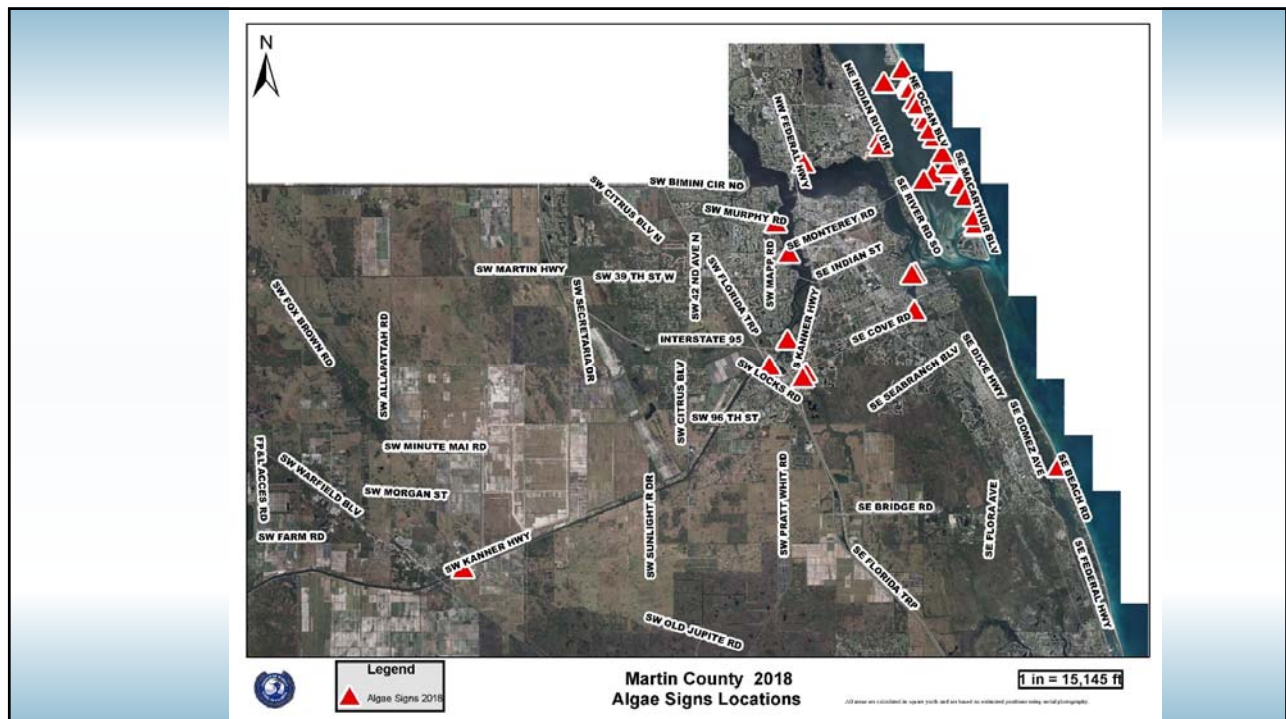
- Reference Dose = amount that can be ingested orally by a person, above which a toxic effect may occur, on a milligram per kilogram body weight per day basis.

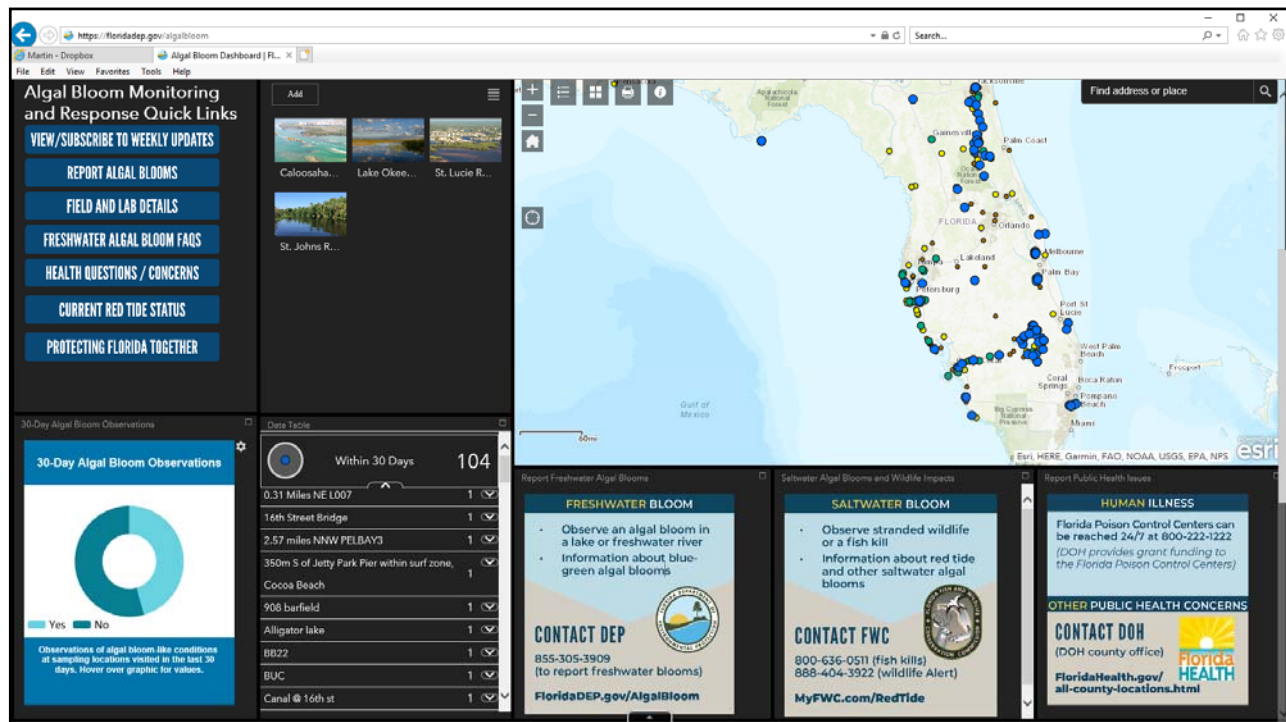


Toxin Reference Doses

←	Dioxin (0.000001 mg/kg-d)
←	Microcystin LR (0.000003 mg/kg-d)
←	Saxitoxin (0.000005 mg/kg-d)
←	PCBs (0.00002 mg/kg-d)
←	Cylindrospermopsin (0.00003 mg/kg-d)
←	Methylmercury (0.0001 mg/kg-d)
←	Anatoxin-A (0.0005 mg/kg-d)
←	DDT (0.0005 mg/kg-d)
←	Selenium (0.005 mg/kg-d)
←	Botulinum toxin A (0.001 mg/kg-d)
←	Alachlor (0.01 mg/kg-d)
←	Cyanide (0.02 mg/kg-d)
←	Atrazine (0.04 mg/kg-d)
←	Fluoride (0.06 mg/kg-d)
←	Chlorine (0.1 mg/kg-d)
←	Aluminum (1 mg/kg-d)
←	Ethylene Glycol (2 mg/kg-d)



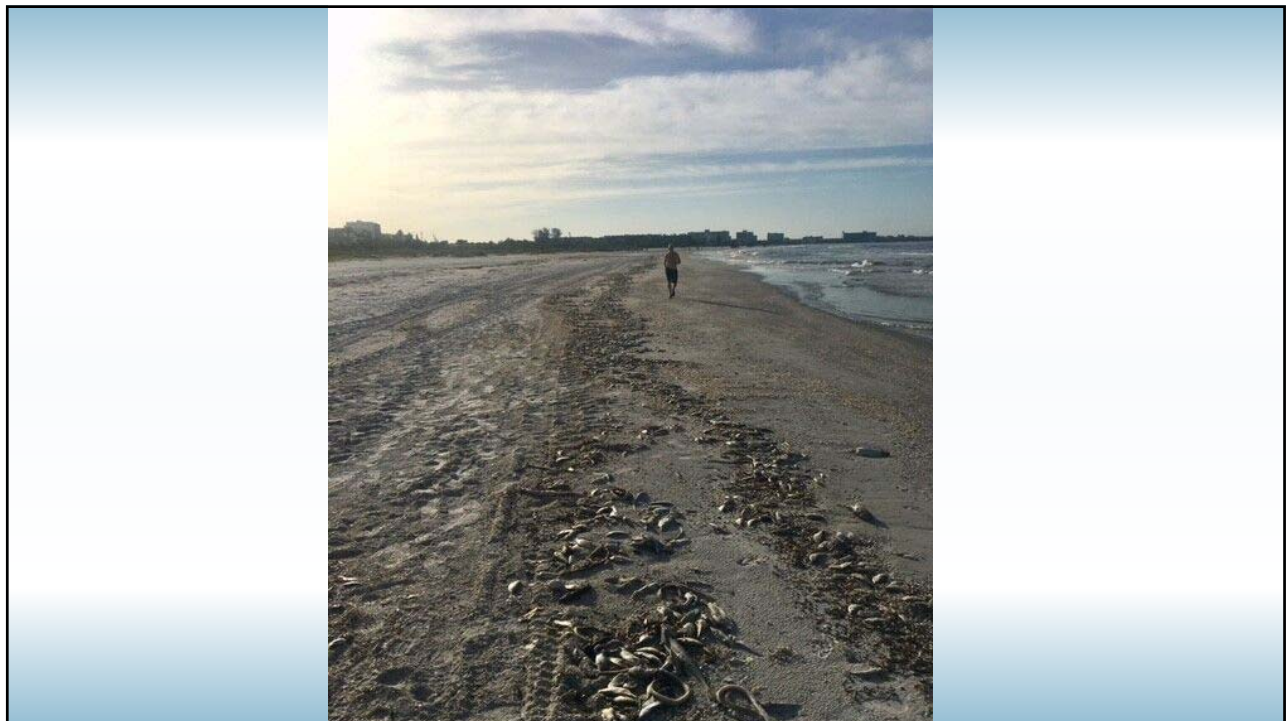








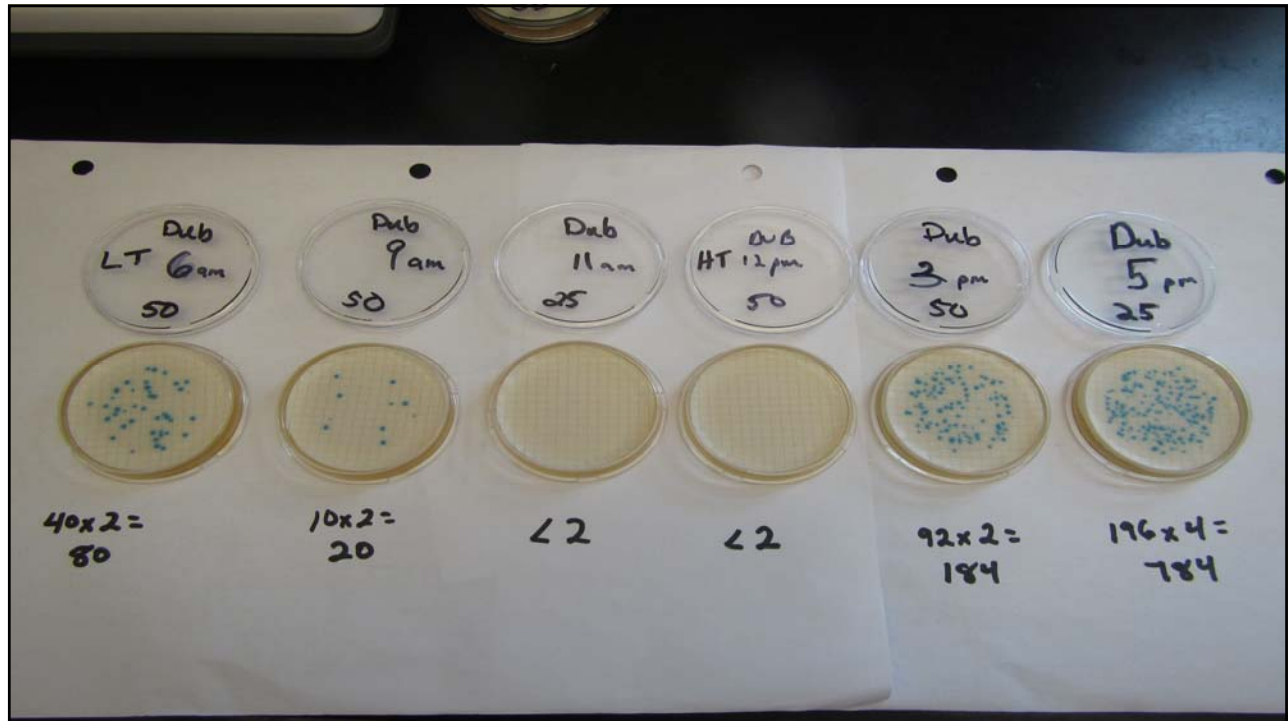














FLORIDA RED TIDE MAY BE PRESENT

May cause eye, throat or skin irritation

May cause coughing or sneezing

Avoid the beach if you have asthma or a respiratory condition

Onshore winds and rough surf worsen its effects

Red Tide is caused by naturally occurring algae

*Florida Red Tide may not be present
at all Palm Beach County beaches.*

FOR MORE INFORMATION

WWW.myfwc.com/redtidestatus







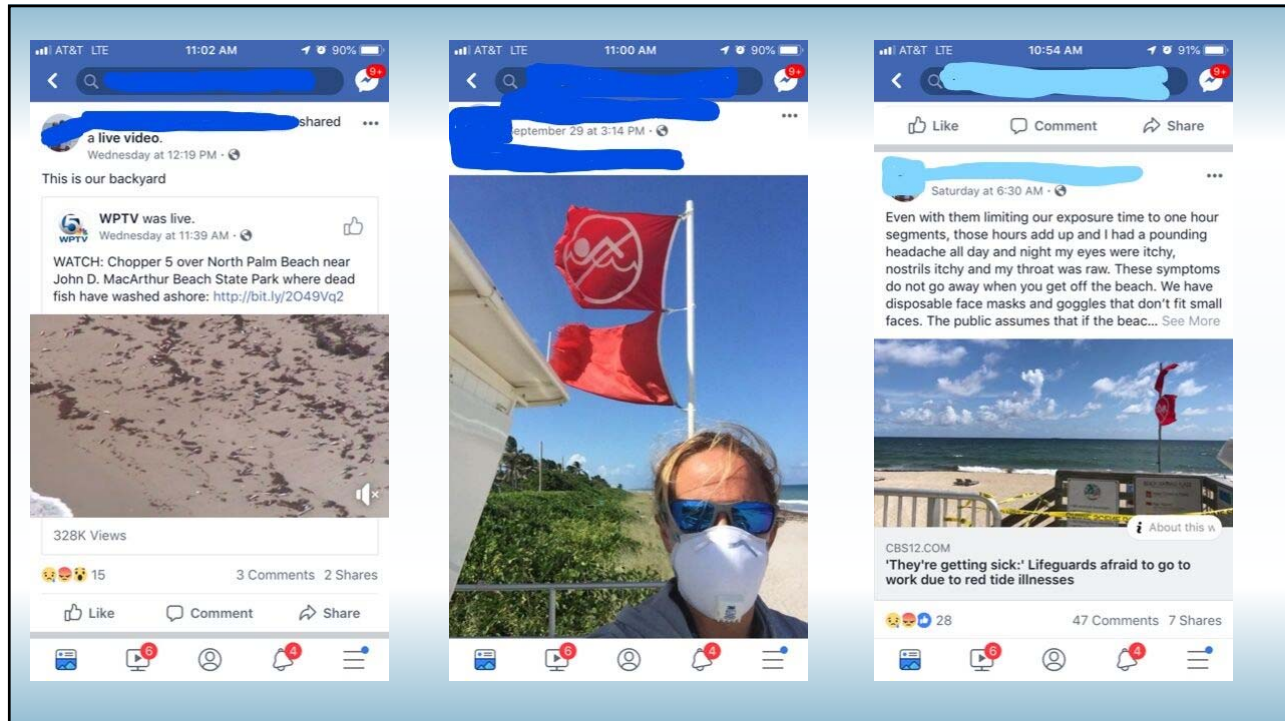
Timing and Staffing

MARTIN COUNTY BOCC
BLUE-GREEN ALGAE RESPONSE MATRIX

Milestone	Staff	Communication / Actionable Items	Emergency Management (EM)
Visible algae	<p>Ecosystems & Restoration staff participates in weekly calls with ACOE, SFWMD and other partner agencies.</p> <p>Conversations with DEP and ACOE</p> <p>Algae Response Team (BOCC, Stuart, Sewall's Point, Jupiter Island, FDOH and other members if necessary) meets regularly</p> <p>Regular conversations and coordination with JIC</p>	<ul style="list-style-type: none"> Facilitate community awareness meetings, if needed Coordinate with partners on messaging Determine call to action for residents Coordinate with partners to create and post appropriate signage (with plan in place for tracking and removal) Advocate for DEP testing Track status with photo and video evidence Continue writing and distributing press releases, as needed Continue weekly water quality report and distribute to executive team, Board, EM and partners Update water quality web page weekly, or as necessary Provide updates to BOCC as needed Continue to advocate for pulse discharges Continue visual observations Continue monitoring social media impressions Continue education campaign through website, social media, AlertMartin notifications and other appropriate communications tools 	Heightened awareness / monitoring
Visible algae, tests indicate microcystins present (toxicity within acceptable limit)	<p>Ecosystems & Restoration staff participates in weekly calls with ACOE, SFWMD and other partner agencies</p> <p>Conversations with DEP and ACOE continue</p> <p>Algae Response Team (BOCC, Stuart, Sewall's Point, Jupiter Island, FDOH and other members if necessary) continues to meet to review strategies, develop additional message points and consider next steps based on additional action required</p> <p>Regular conversations and coordination with JIC</p>	<ul style="list-style-type: none"> Post additional signage, if needed Contract for additional testing, if necessary Continue weekly water quality report and distribute to executive team, Board, EM and partners Update water quality web page as necessary Provide updates to BOCC as needed Continue to advocate for pulse discharges Continue visual and aerial observations Continue tracking status with photo and video evidence Continue writing and distributing press releases, as needed Continue monitoring social media impressions Continue education campaign through website, social media, AlertMartin notifications and other appropriate communications tools 	<ul style="list-style-type: none"> Heightened awareness / monitoring Discuss impacts of declaring a Local State of Emergency (LSE)







Media, Public Interaction & Partners








CAUTION:



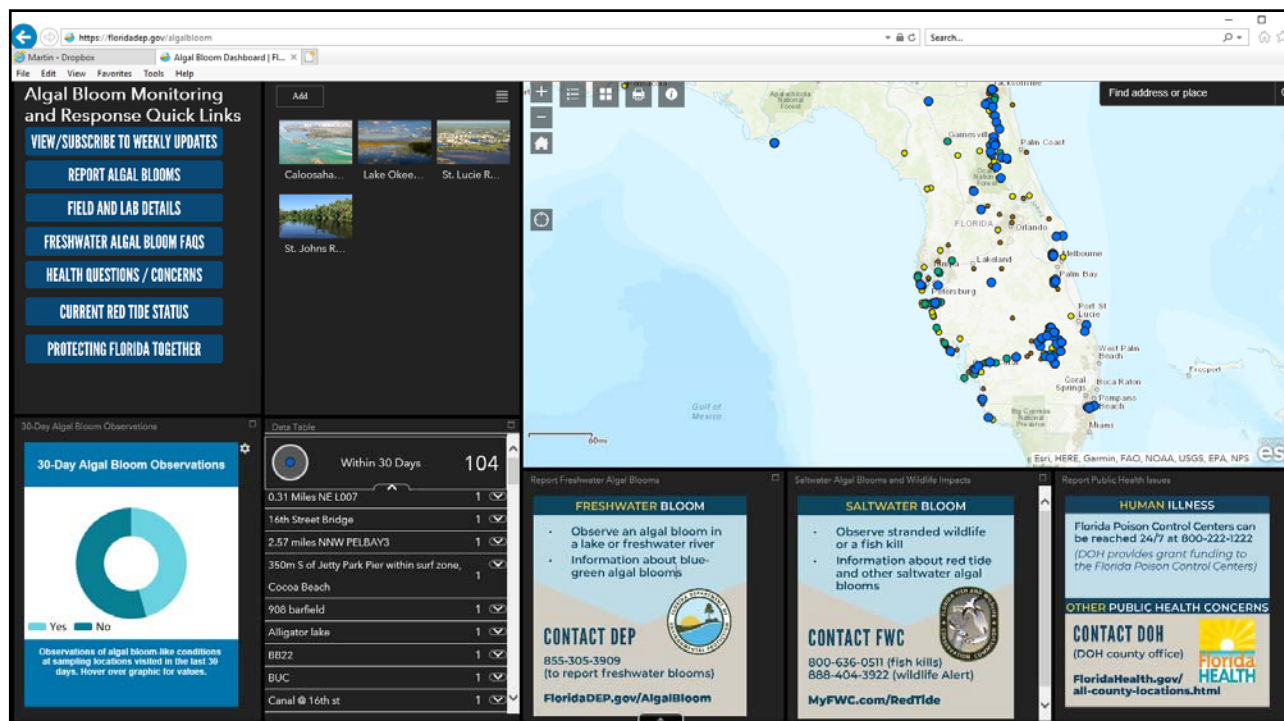
Blue Green Algae may be in these waters.
THERE MAY BE TOXINS


Use caution if you see algae at this time:

-  Do not swim at this location.
-  Do not get this water in your eyes, nose or mouth.
-  Do not eat shellfish from this location.
-  Rinse fish fillets with tap or bottled water. Throw out guts. Cook fish well.
-  Keep pets and livestock away from these waters.



(772) 221-4090 www.martincountyhealth.com






Sarasota County

Red Tide

Frequently Asked Questions



What is Sarasota County doing?

Sarasota County is actively monitoring the beaches, and cleanings will take place in accordance with the beach cleanup policy. All beaches are open. For the latest cleanup updates, visit scgov.net/redtide.

Who is responsible for cleanup on private property (canal, residence and hotel)?

Dead fish cleanup is the property owner's responsibility and should be prepared as regular garbage, not exceeding 10 pounds. It should be double bagged and set out on the regular collection day. Unless a special pickup is scheduled, it will not be picked up any sooner.


Where is the debris being taken once it's been removed from county beaches and boat launches?

It's being taken to the Central Sarasota County Landfill.

How can I report a stranded or dead dolphin, manatee, whale or sea turtle?

Please report by using the Florida Fish and Wildlife Conservation Commission Hotline at 1-888-404-3922. Be prepared to describe the location of the animal and take a picture, if possible. An FWC biologist will return the call to get additional details as well as the picture, if available.

For all other types of fish, call 800-636-0511 or report online at myfwc.com.



1660 Ringling Blvd., Sarasota, Florida 34236

941-861-5000 scgov.net



Sarasota County Play

July 27, 2018 · 🌐

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Curious about Red Tide? Here are some helpful links to stay informed:

FWC status report/map: <http://myfwc.com/research/redtide/statewide/>

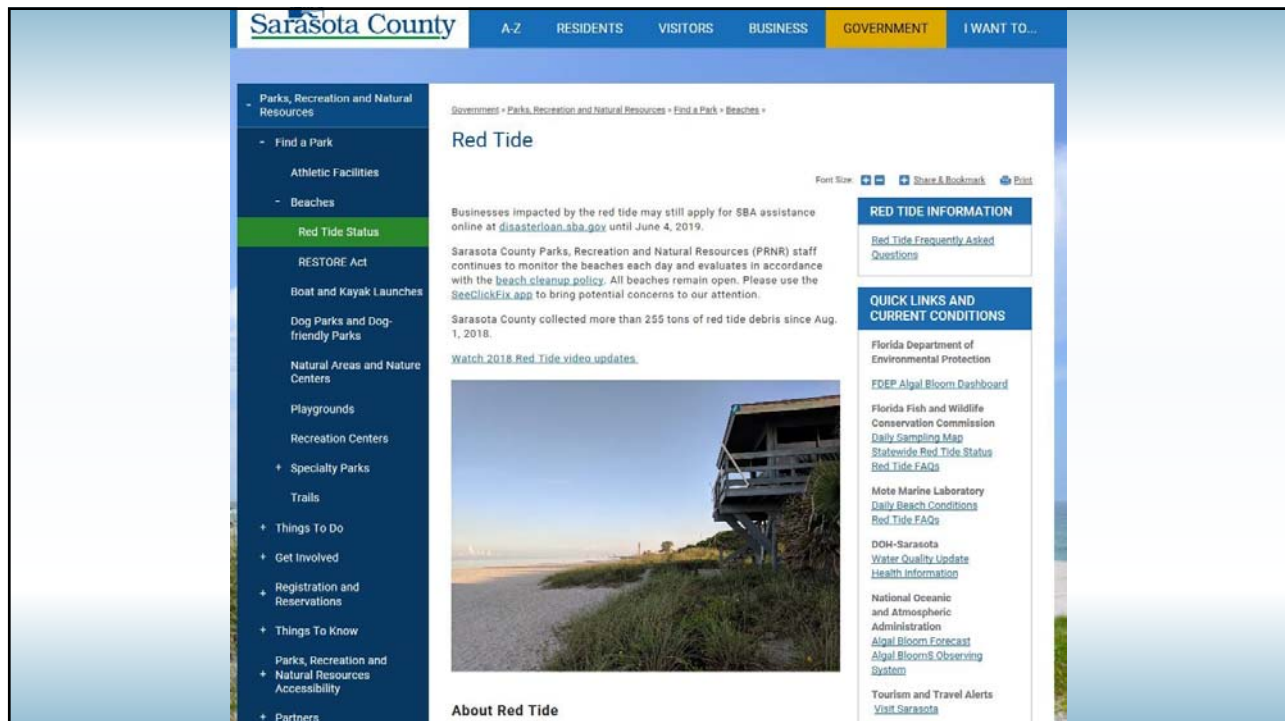
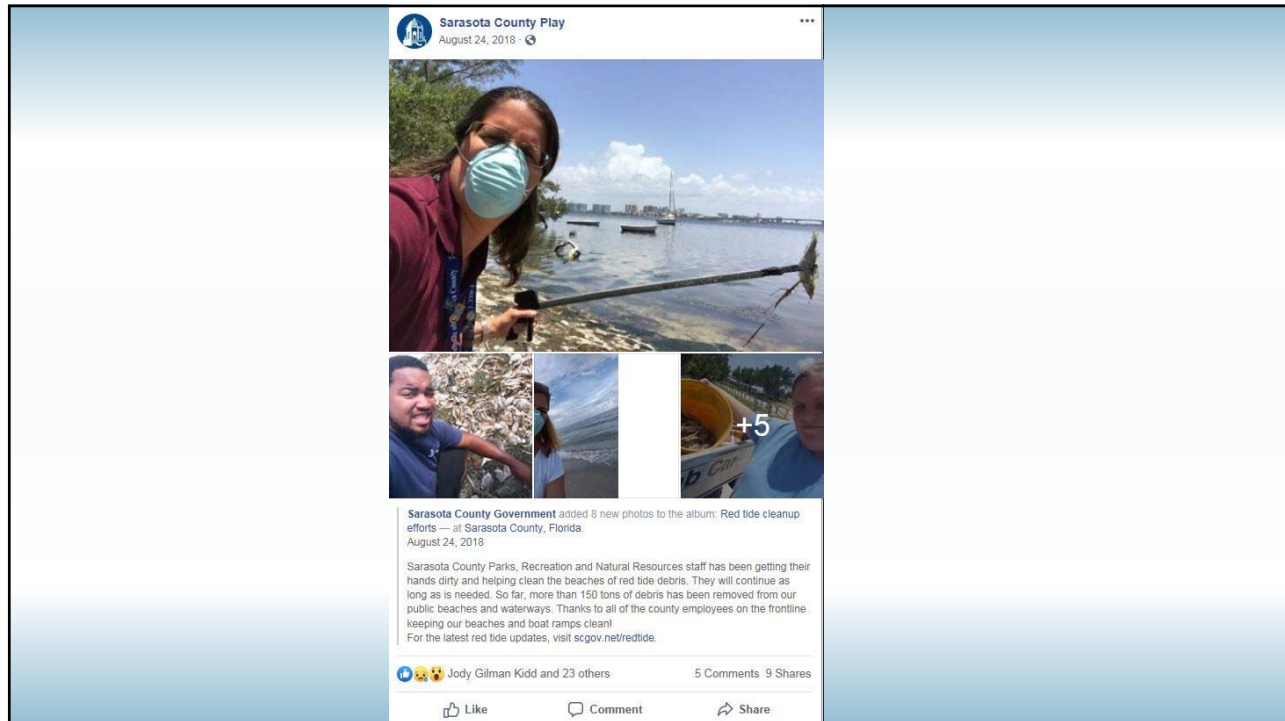
NOAA Beach Hazard Statement: Coastal Sarasota and Coastal Charlotte


Florida DOH: <http://www.floridahealth.gov/environmental-.../.../red-tide.html>

Florida Red Tide FAQ: <http://myfwc.com/research/redtide/faq/>

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Red Tide

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lost Popular

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Six years after teen swept into ocean, DNA test confirms remains

Florida woman makes custom swimwear



Press Release

Date: 7/25/2019

Palm Beach County Saltwater Beach Monitoring Results

The Florida Department of Health Palm Beach County has been conducting saltwater beach water quality sampling since August 5, 2002 as part of the Florida Healthy Beaches Monitoring Program. We are presently sampling thirteen (13) beaches on a bi-weekly basis. The water samples are being examined for enterococci bacteria that normally inhabit the intestinal tract of humans and animals, and which may cause human disease, infections or rashes. The presence of enteric bacteria is an indication of fecal pollution, which may come from storm water runoff, pets and wildlife, and human sewage. The purpose of the Healthy Beaches Monitoring Program is to determine Florida's beach water quality.

Date of Sample: 7/24/2019 7/22/2019

Site	Name	City	Enterococci	Water Quality	Status
1	Thelma Park	Jupiter	10	Good	Satisfactory
2	Jupiter Beach Park	Jupiter	<10	Good	Satisfactory
3	Carlin Park	Jupiter	<10	Good	Satisfactory
4	Riviera Beach	Riviera Bch	<10	Good	Satisfactory
5	Phil Center	Riviera Bch	<10	Good	Satisfactory
7	Palm Beach Municipal	Palm Beach	<10	Good	Satisfactory
8	Lake Worth-Krander	Lake Worth	<10	Good	Satisfactory
9	Ocean Inlet Park	Ocean Ridge	<10	Good	Satisfactory
10	Boynton Beach	Ocean Ridge	40	Moderate	Satisfactory
12	Stardeway-Johnny Rich	Delray Bch	<10	Good	Satisfactory
13	Spanish River	Boca Raton	<10	Good	Satisfactory
14	South Inlet Park	Boca Raton	<10	Good	Satisfactory
15	Lantana Beach	Lantana	10	Good	Satisfactory

Water quality classifications are based upon:

United States Environmental Protection Agency's (EPA) recommended criteria for enterococci is:

Good - 0-35 Enterococci per 100 milliliters of marine water**Moderate** - 36-70 Enterococci per 100 milliliters of marine water**Poor** - 71 or greater Enterococci per 100 milliliters of marine water or 36 or greater enterococci per 100ml of marine water as a geometric mean over a five week period.An **Advisory** is issued for a beach that samples in the "Poor" range of the EPA standards. **This should be considered a potential health risk to the bathing public.**

If you should have any questions, please contact the Florida Department of Health in Palm Beach County at (561)837-2998, or visit the Department of Health's Internet Beach Water Quality website (www.doh.state.fl.us), click on the drop-down menu next to "Choose Subject" and then select "Beach Water Quality".

RED TIDE

RED TIDE FACTS:

1. In Florida, red tide is caused by a naturally occurring microscopic alga (a plant-like microorganism) called *Karenia brevis* or *K. brevis*.
2. The organism produces a toxin that can affect the central nervous systems of fish, birds, mammals, and other animals.
3. At high concentrations (called blooms), the organism may discolor the water — sometimes red, light or dark green, or brown.
4. Red tides or harmful algal blooms (HABs) occur worldwide. *K. brevis* is found almost exclusively in the Gulf of Mexico but has been found on the east coast of Florida and off the coast of North Carolina.
5. Red tide blooms can last days, weeks, or months and can also change daily due to wind conditions and water currents. Onshore winds normally bring it near the shore and offshore winds drive it out to sea.
6. Red tide was first officially recorded in Florida in 1844.
7. A red tide bloom needs biology (the organism), chemistry (natural or man-made nutrients for growth), and physics (concentrating and transport mechanisms). No single factor causes it. Tests are being conducted to see if coastal nutrients enhance or prolong blooms.
8. Red tide can irritate the skin and breathing of some people. (See more about health effects on reverse.)
9. Seafood from restaurants and hotels is monitored and is safe to eat. (See reverse.)

If you have a question or a health problem related to red tide, please call the Florida Poison Control Information Center at:

1-800-222-1222

Health Info: www.floridahealth.gov

Report Fish Kills: 1-800-636-0511 [FWC]

Red Tide Info & Status Reports:

www.myfwc.com/redtideRed Tide Facts: www.start1.org

Current Beach Conditions:

www.thepalmbeaches.com/beach-conditions

RED TIDE

HEALTH TIPS:

1. Most people can swim in red tide, but it can cause skin irritation and burning eyes. If your skin is easily irritated, avoid red tide water. If you experience irritation, get out and thoroughly wash off with fresh water. Swimming near dead fish is not recommended.
2. Symptoms from breathing red tide toxins usually include coughing, sneezing, and itchy eyes. For most people, symptoms are temporary when red tide toxins are in the air. Wearing a particle filter mask may lessen the effects, and research shows that using over-the-counter antihistamines may decrease your symptoms. Check the marine forecast. Fewer toxins are in the air when the wind is blowing offshore.
3. People with chronic respiratory problems like asthma and COPD should avoid red tide areas. If you have symptoms that persist, seek medical attention.

SEAFOOD SAFETY TIPS:

1. Commercial seafood found in restaurants and grocery stores is safe because it comes from red tide-free water and is monitored by the government.
2. Recreational fishermen must be careful:
 - Do not eat mollusks (clams or oysters) taken from red tide waters, as they contain toxins that cause a food poisoning called NSP (Neurotoxic Shellfish Poisoning).
 - Fish caught live and healthy can be eaten if filleted.
 - Edible parts of other animals, commonly called shellfish (crabs, shrimp, and lobsters) are not affected by red tide and can be eaten. Do not eat the tamarie (green stuff / hepatopancreas).
 - Use common sense: harvesting diseased or dead animals is not advised under any circumstances.

Information sourced from:





FOR MORE INFORMATION ABOUT THE FLORIDA RECREATION AND PARK ASSOCIATION VISIT FRPA.ORG