

Harmful algal blooms in Cape Coral

Jessica Cosden



Hi, I'm Jessica!

- Lifelong resident, mother of 3
- Councilmember elected in 2015
- Running for re-election
- *Not a scientist*; just a very concerned citizen



Why is this issue so important to me?

- Cape Coral has 400 miles of human-made canals, is surrounded by water on 3 sides
 - Every resident lives less than half a mile from water
 - My family's health
 - Our economy
 - Our environment
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What is cyanobacteria (a.k.a. blue-green algae?

- Occurs in salt/fresh water
- Normal levels are safe
- Conditions for overgrowth: stagnant water, high temperatures, nutrients
- During bloom: smelly, ugly, and microcystins released into the air

Health impacts

- Short term effects: mostly respiratory
 - Long term effects? University of Miami scientists found that dolphins that had come into contact with blue-green algae toxins displayed degenerative brain damage similar to Alzheimer's, Lou Gehrig's disease and Parkinson's in humans.
 - Air quality testing underway in Cape Coral and elsewhere
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Outbreaks

- 2018: double whammy (red tide and blue-green algae)
 - Many Florida cities saw the same thing
 - Gov. Scott declared state of emergency in 7 counties, including Lee
 - Current outbreak: blooms in 3 landlocked Cape Coral canals (2 adjacent to golf course, third within 2 miles of same golf course)
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Andrew Gillum - Yacht Club, August 2018



Prevention (the one thing we can control: nutrients)

- Reduce/eliminate discharges from Lake Okeechobee
 - Enhance fertilizer ordinance
 - Convert septic tanks to sewer
 - Pet waste
 - Use natural or man-made filtration before stormwater hits canals
 - Reduce nutrients in irrigation water
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Treatments

- Clay spray
- Barriers
- Other methods

Clay

- “Flocculation”
 - Non-toxic, approved by Florida Department of Environmental Protection
 - Dry clay mixed with water, sprayed directly into canal
 - Clay binds with algae, falls to bottom
 - Used widely in Asia, being tested here in Cape Coral
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Barriers

- Turbidity curtains
- Bubble curtains
- Booms (Cape Coral Fire Department used these during 2018 outbreak)

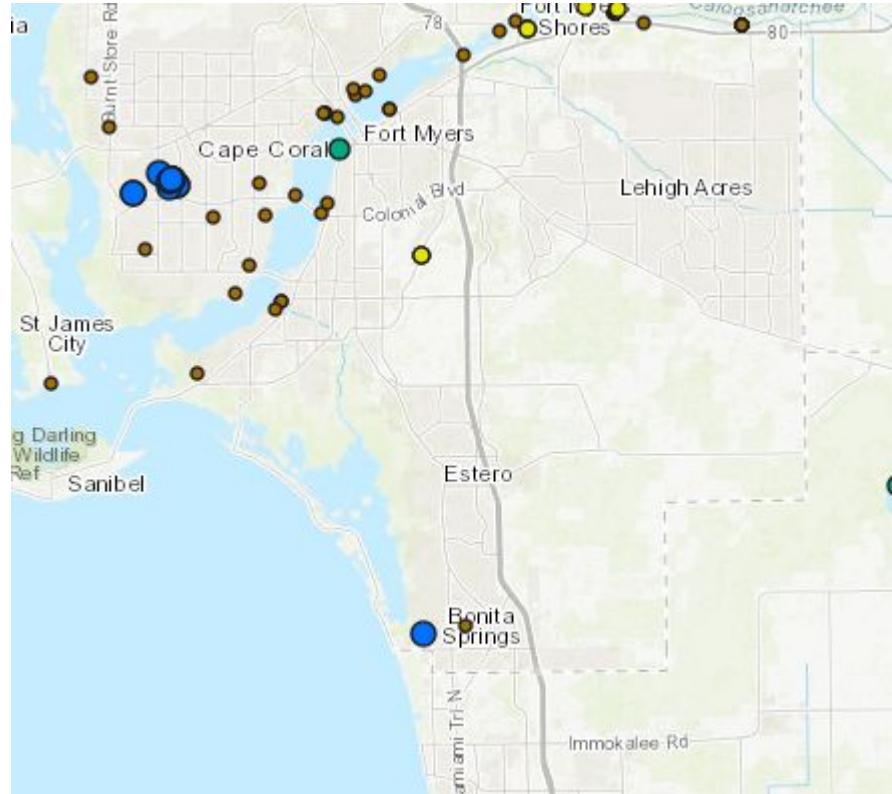
Other methods

- Foams/sponges
 - Suction -- in 2018, AECOM pulled 190,000 gallons of algae slurry out of 11 Cape Coral canals
 - Methods that kill cyanobacteria algae in the water
 - Any product used must be approved by FL DEP, as the canals are considered state waters
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Algal bloom tracker

Source: Florida Department of
Environmental Protection
<https://floridadep.gov/AlgalBloom>

(Image captured 9/4/20)



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