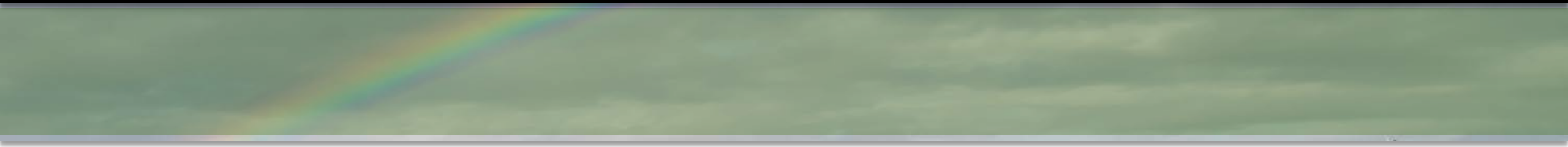
Recent Reports of Algae Blooms

WRAC Meeting June 7, 2018
Terrie Bates, Director
Water Resources



Blue-Green Algae Blooms

- Algal blooms are naturally occurring – common in summer and can appear in any body of water at any time when the right conditions occur
- Blue-green algae (cyanobacteria) can, but don't always, produce toxins that can be harmful to humans, pets and wildlife
- Elevated nutrient levels are principal cause of blue-green algal blooms
- Warm temperatures, long days and stagnant conditions are also factors
- Lake Okeechobee blue-green algal blooms are strongly associated with lake stages above 14' NGVD

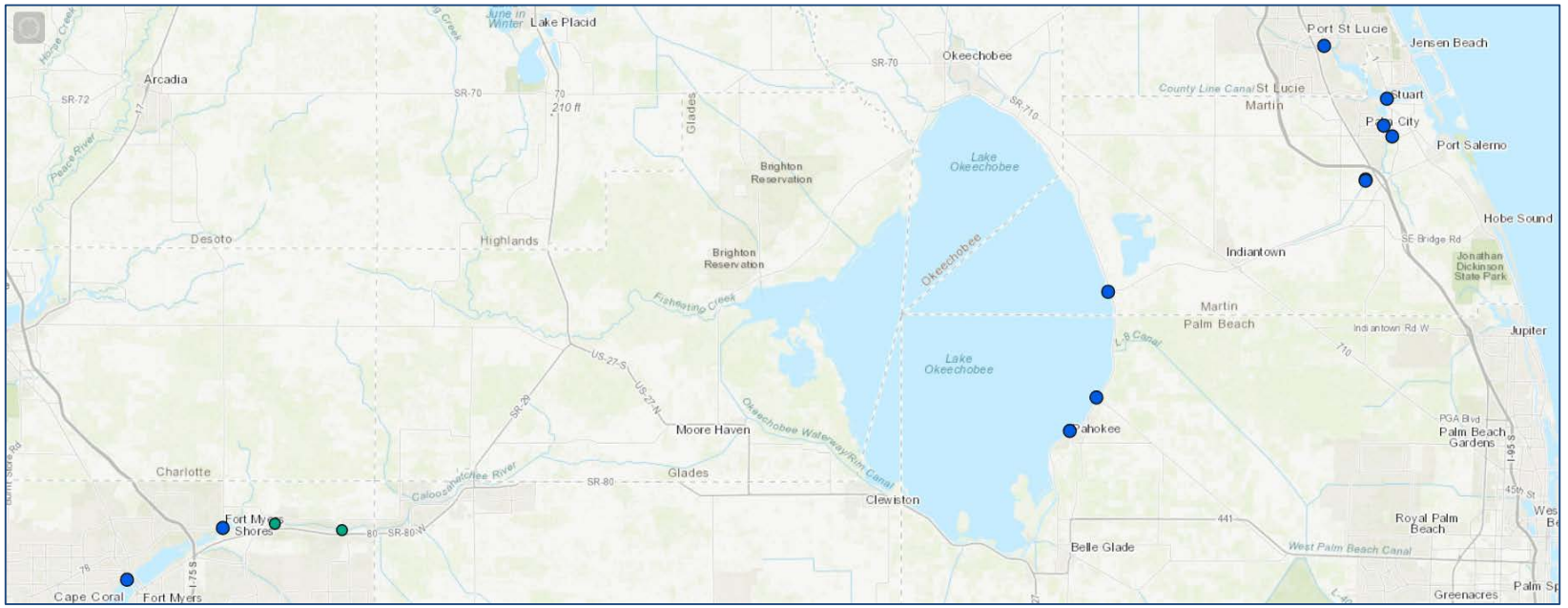
Blue-Green Algae Blooms

- Dept. of Environmental Protection and Florida Dept. of Health, Florida Fish & Wildlife Conservation Commission & SFWMD coordinate on bloom response
- DEP responds to algae reports from the public, conducts sampling & toxicity testing and provides central reporting of results on web page
- District water quality sampling in Lake Okeechobee (and where requested by DEP)

https://floridadep.gov/dear/algal-bloom

DEP Blue-Green Algae Testing & Reporting

- Samples taken by DEP or SFWMD
- Samples analyzed by DEP
- Algae identification
- Toxicity testing
- Web-based reporting



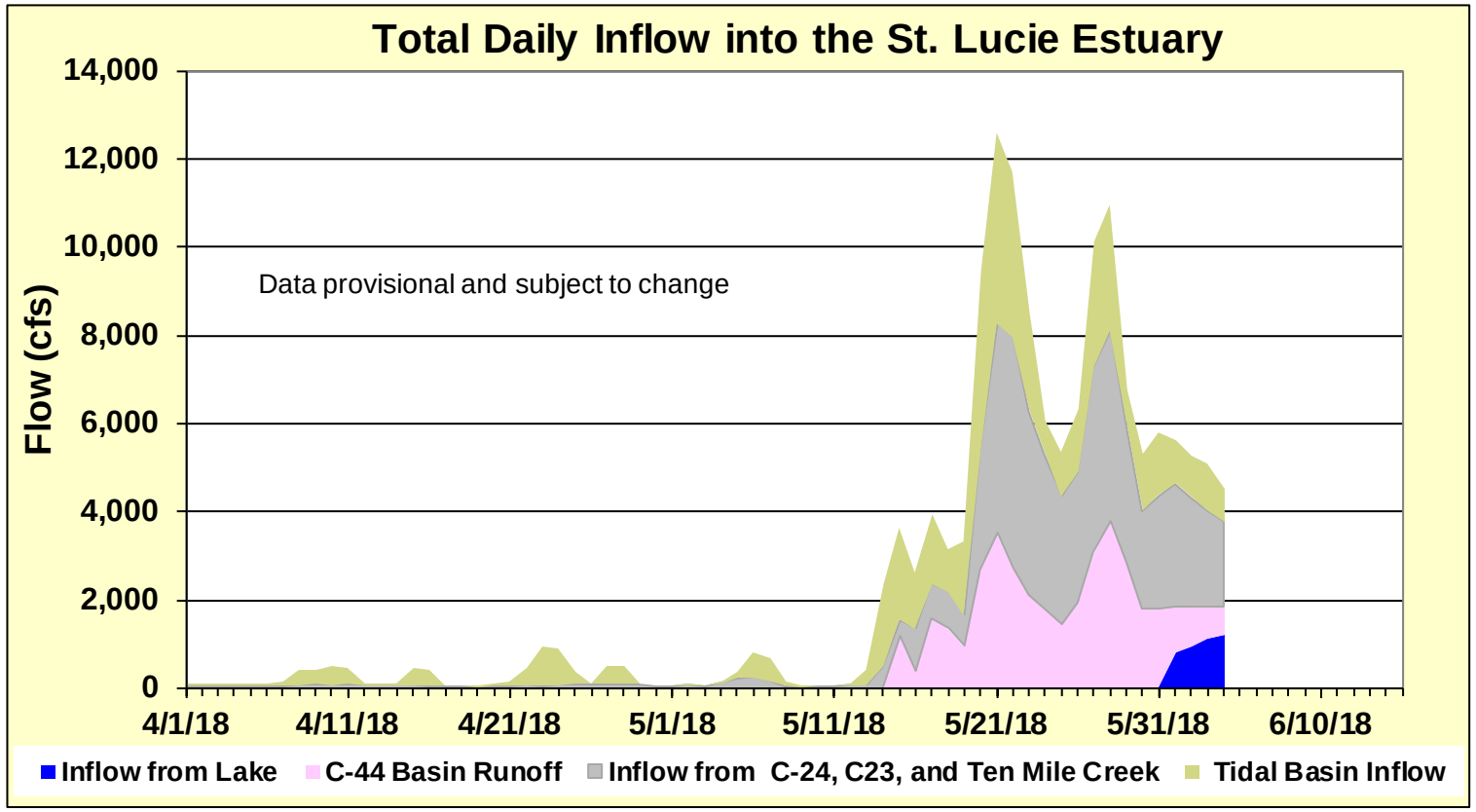
Site Visits - within 30 days | Site Visits - past 31-60 days | Site Visits - past 61-90 days | Site Visits - older than 90 days

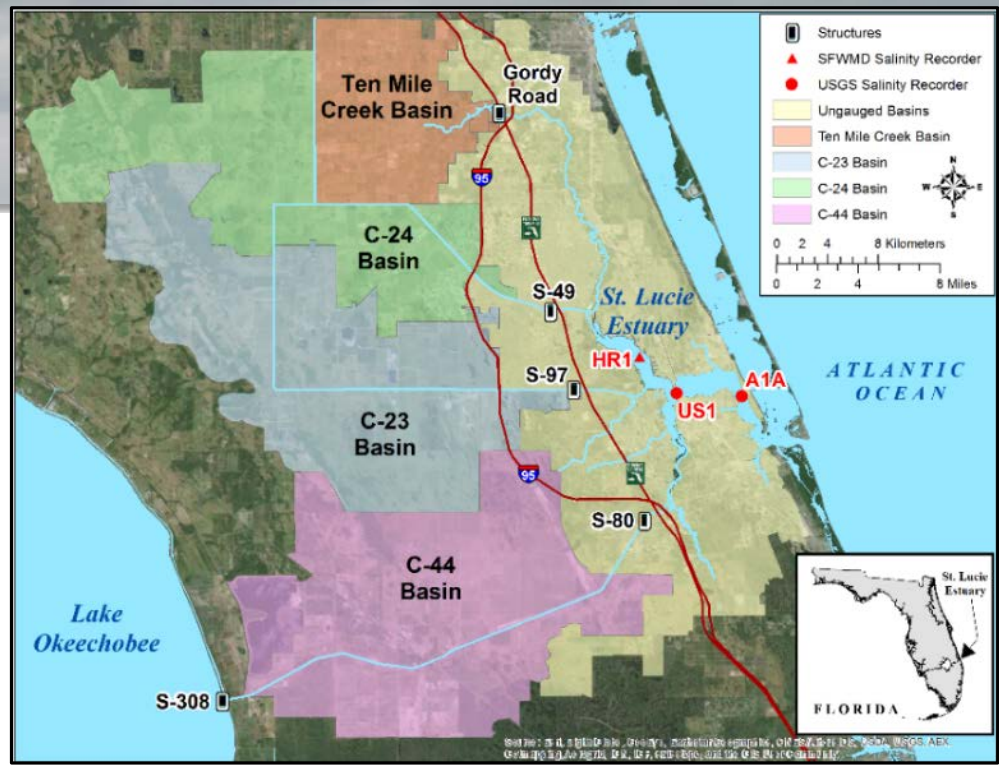
Options | Filter by map extent | Zoom to | Clear selection | Refresh

Site Visit Date and Time	Sample Location	County	Site Visited By	Sample Taken?	Analyzed By	Other Lab name	Comments	Latitude	Longitude	Algal ID	Total Microcystin Toxin (micrograms/L)	Other Toxin (micrograms/L)
6/6/2018, 11:10 AM	S-80	Martin	DEP-SE ROC	No			Algae observed	27.1103	-80.2857			

St. Lucie Estuary

- Over the past week, flow at S-80 averaged 1984 cfs with 583 cfs released from the Lake
- Total inflow averaged about 5496 cfs last week and 4701 cfs over last month
- Salinity at US1 is within the poor range for adult oysters



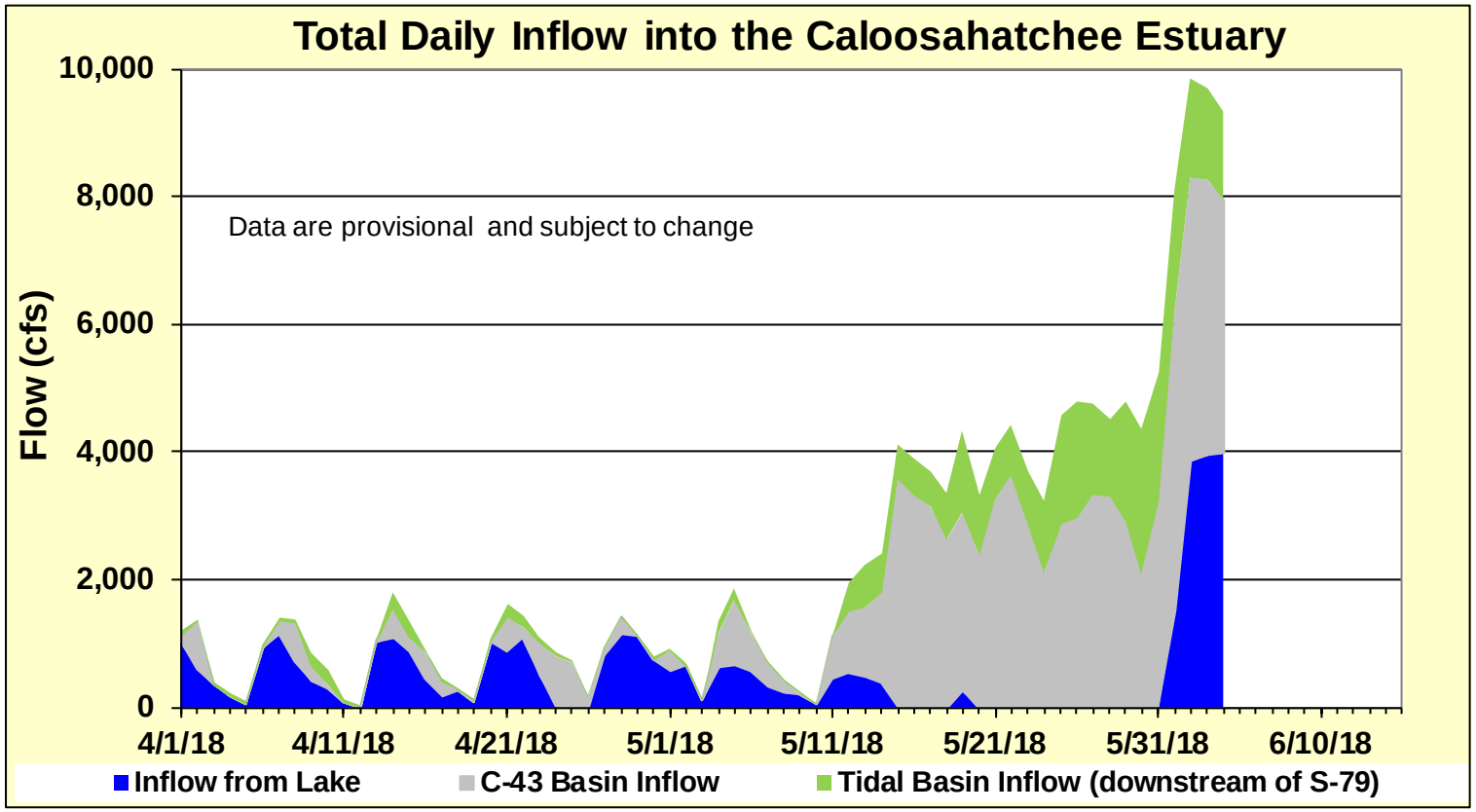


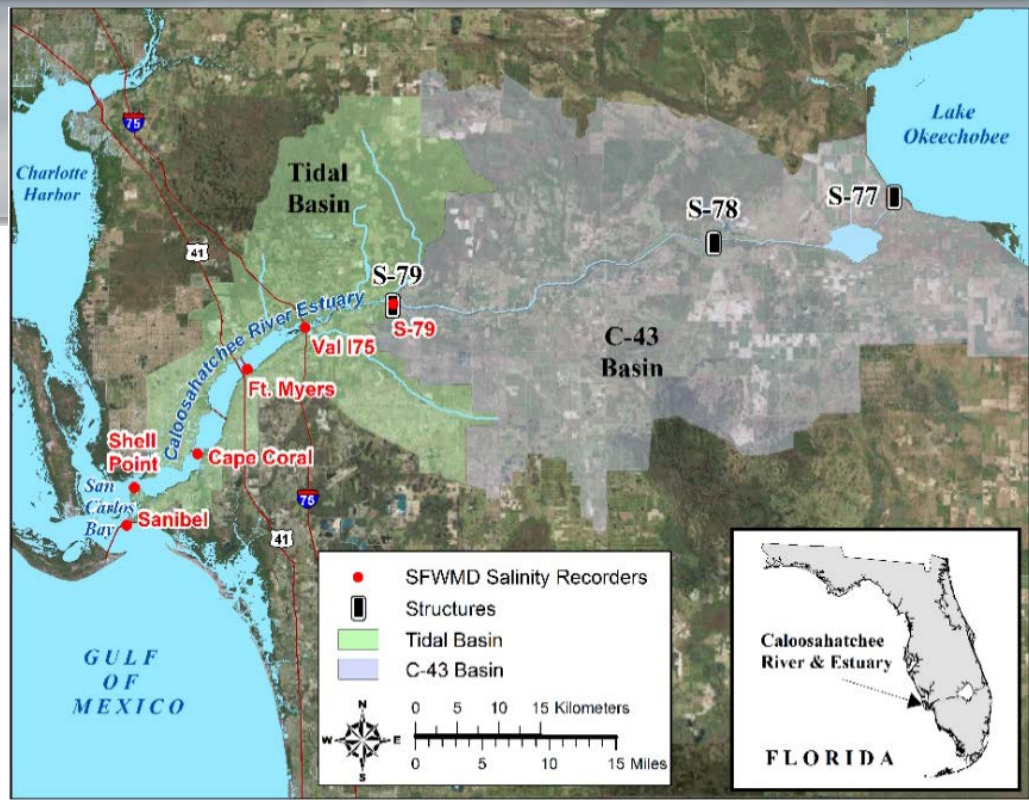
Weekly Average Inflow
May 29, 2018 – June 4, 2018

Inflow from Lake	583 cfs
C-44 Basin Inflow	1401 cfs
Ten Mile Creek	477 cfs
C-23	1031 cfs
C-24	955 cfs
Tidal Basin Inflow	1049 cfs
Total	**5496 cfs**

Caloosahatchee Estuary

- Over the past week, flow at S-79 averaged 5555 cfs with 1901 cfs released from the Lake
- Total inflow averaged 7337 cfs last week and 3955 cfs over last month
- Salinities were within the good range at Shell Point and in the fair range at Cape Coral for adult oysters (Sanibel salinity is missing)

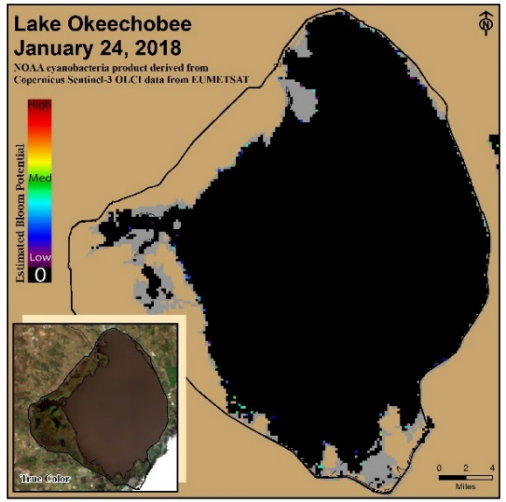


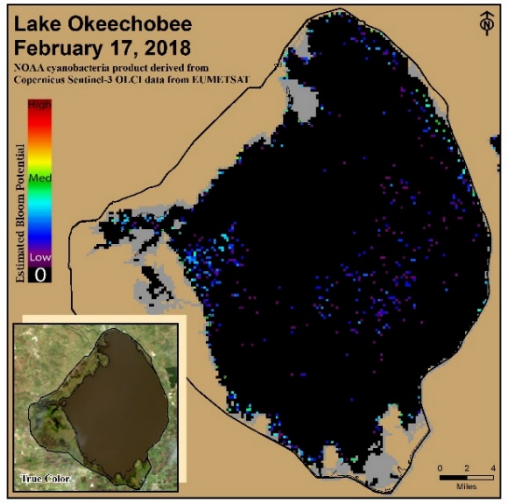


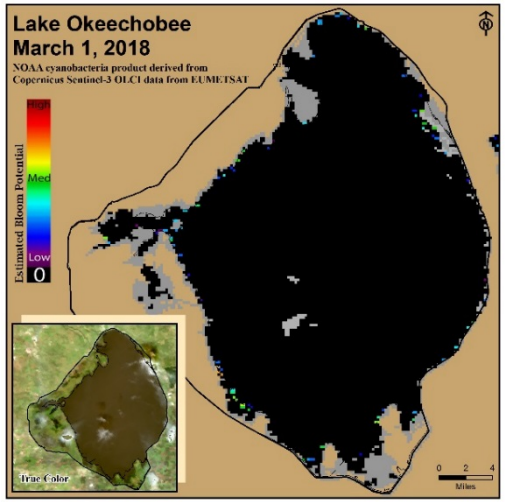
Weekly Average Inflow
May 29, 2018 – June 4, 2018

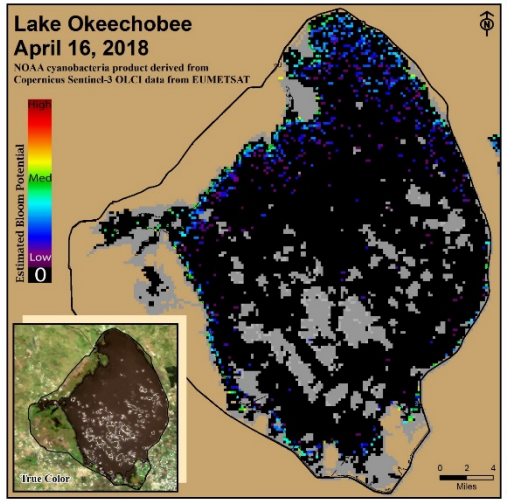
Inflow from Lake	1901 cfs
C-43 Basin Inflow	3654 cfs
Tidal Basin Inflow	1782 cfs
Total	**7337 cfs**

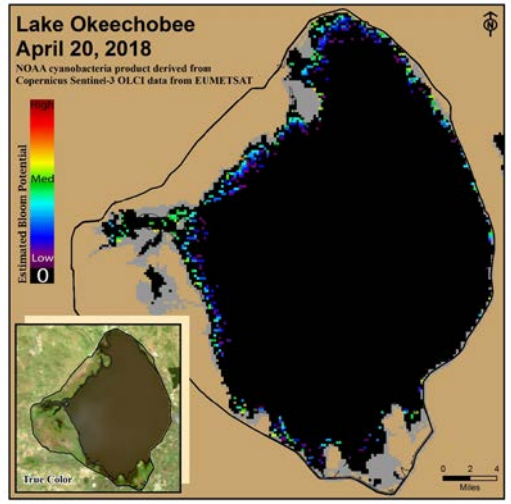
Lake Okeechobee
Cyanobacteria Bloom Potential

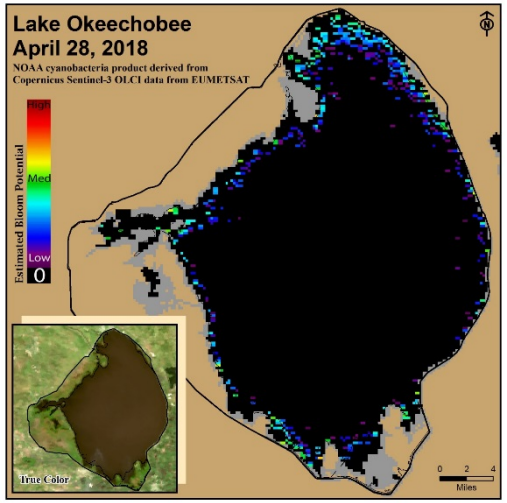


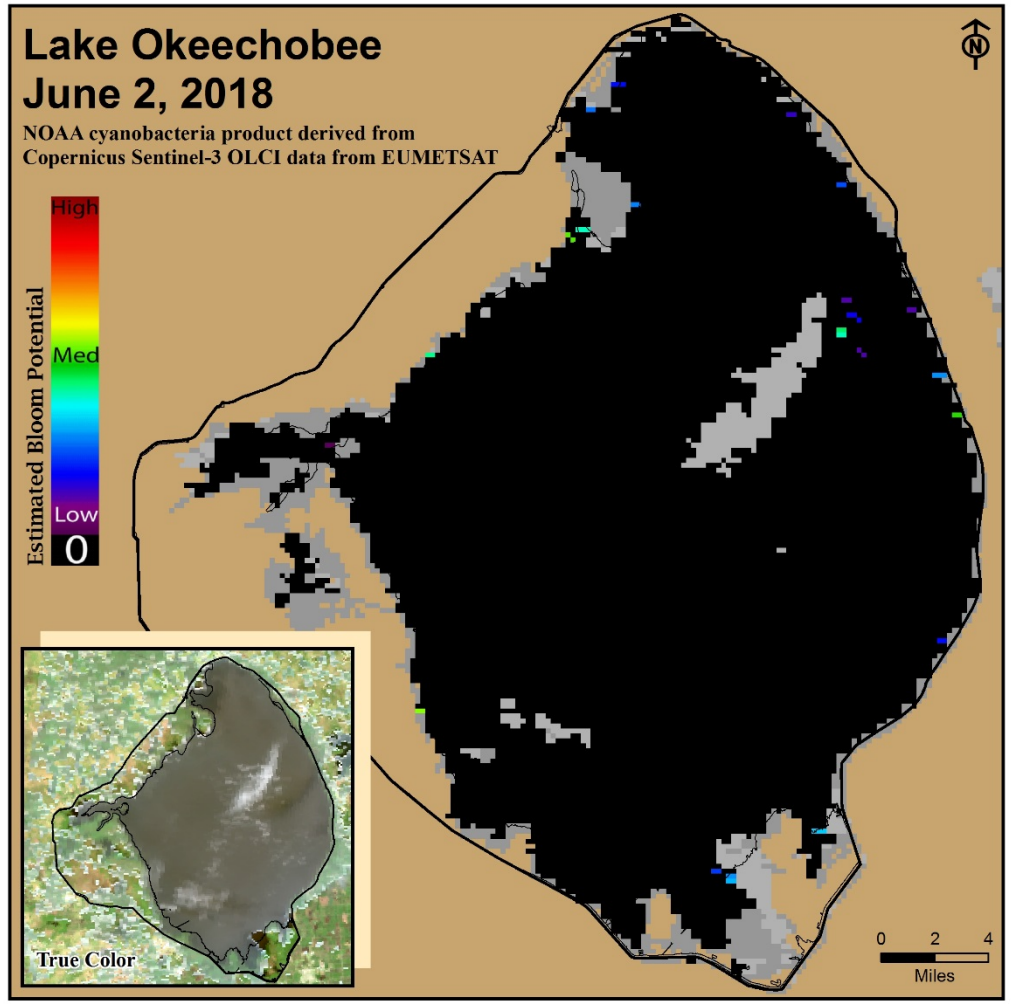








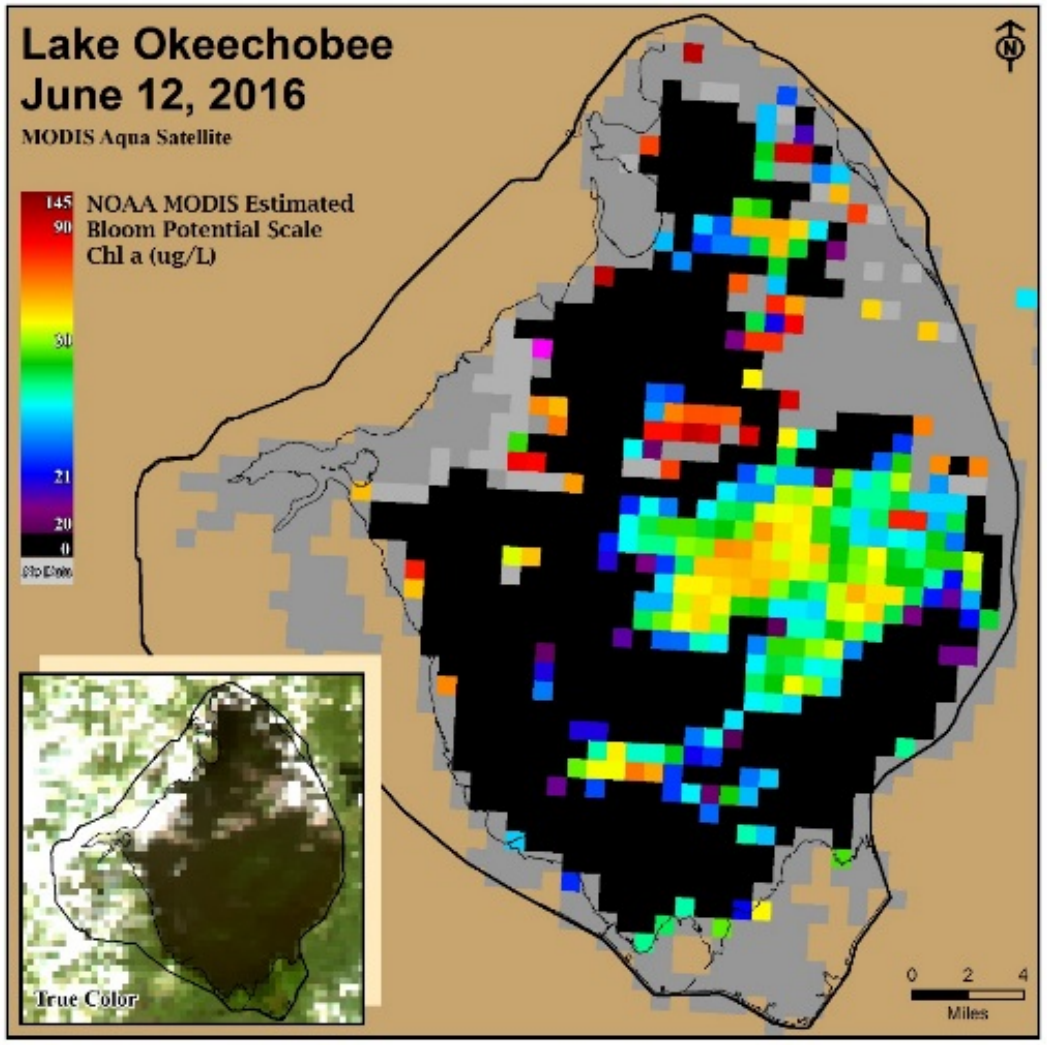


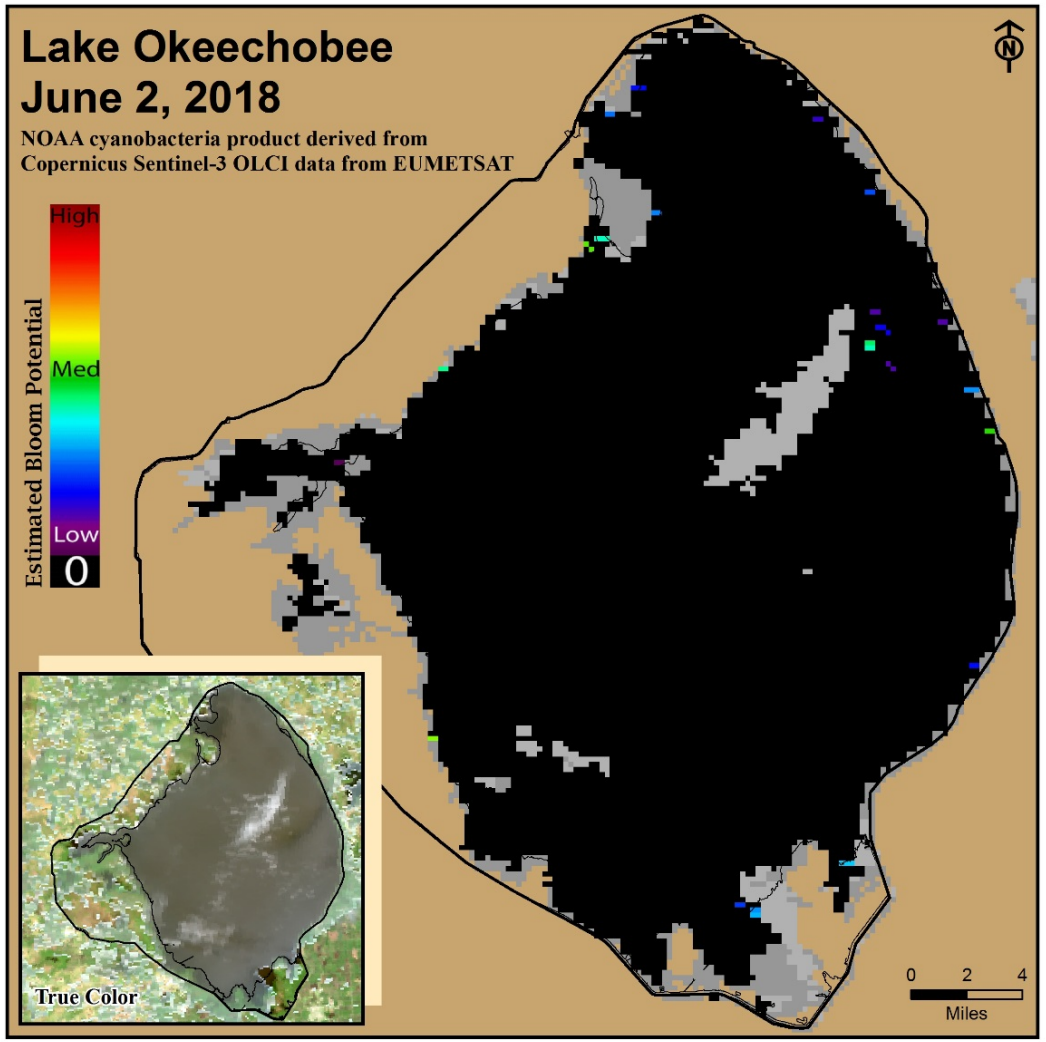


Gray = Cloud Cover

Lake Okeechobee NOAA Cyanobacteria Image*
June 2016 & June 2018

*Experimental Data





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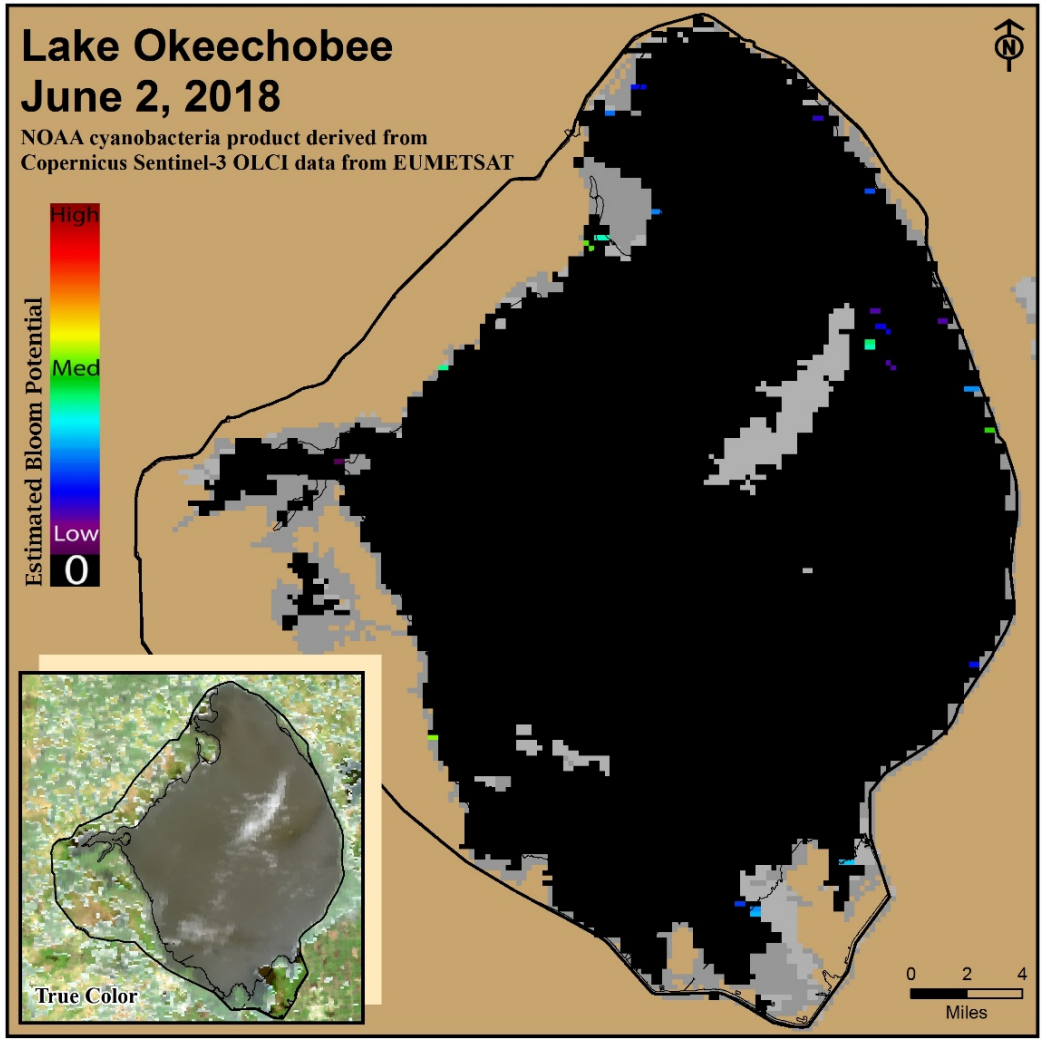
Lake Okeechobee NOAA Cyanobacteria Image*

*Experimental Data

S-352 DEP Sampling 6-6-2018



- Blue-green algae are buoyant
- Often float at surface and are easily pushed by the wind and accumulate in quiescent areas next to structures /boat ramps

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