

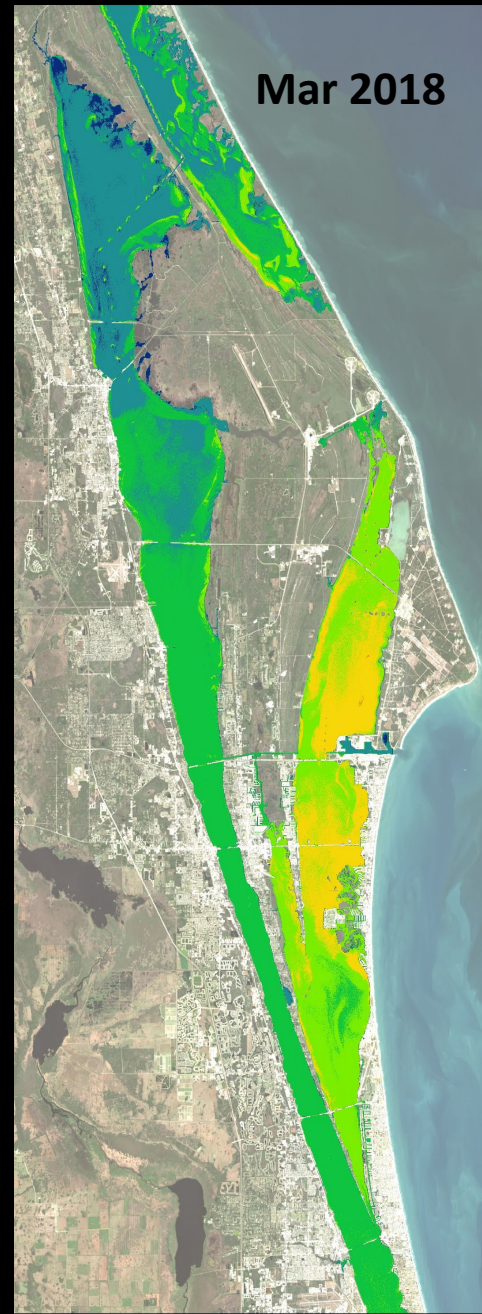
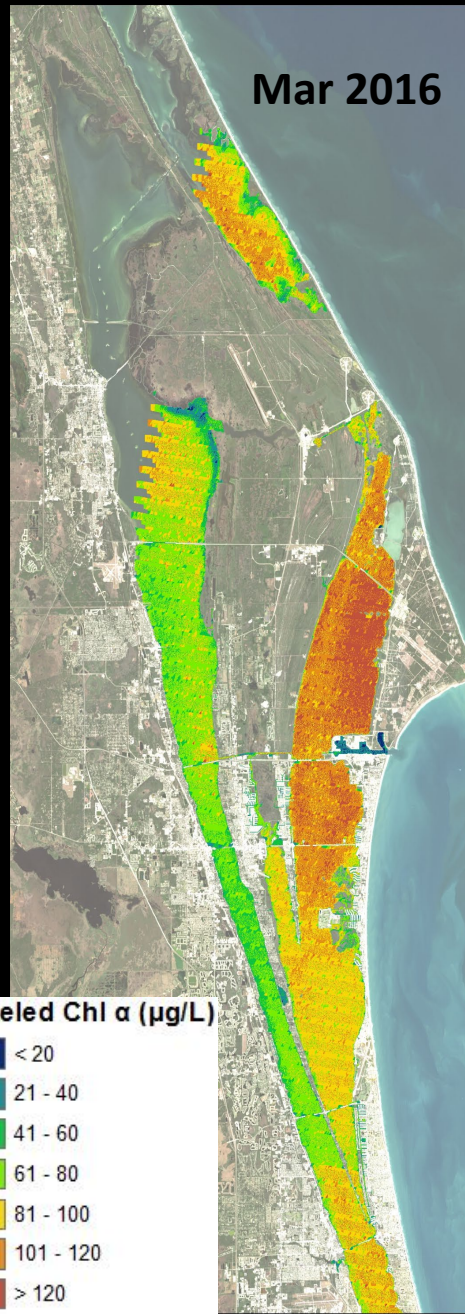
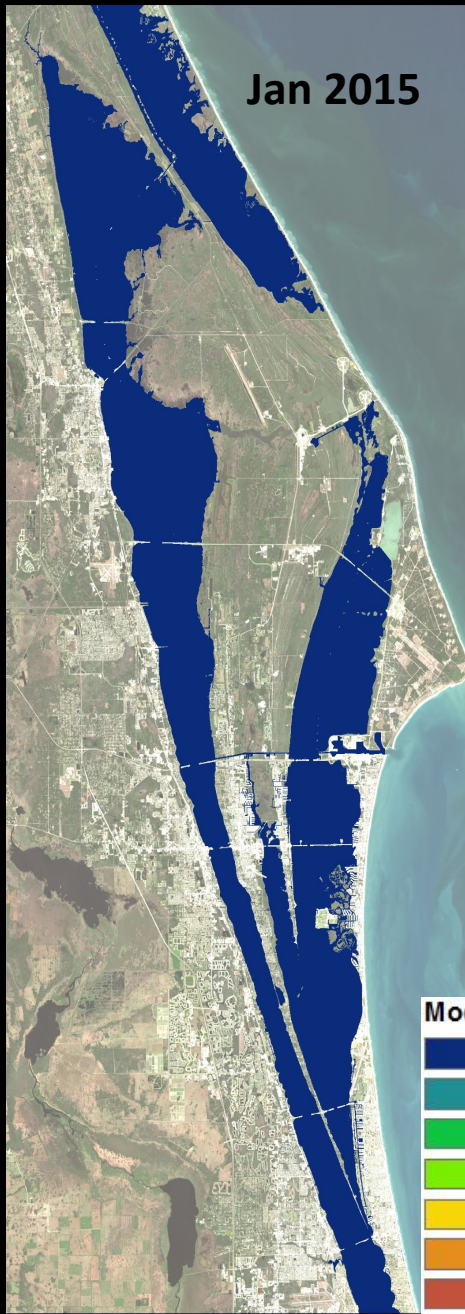
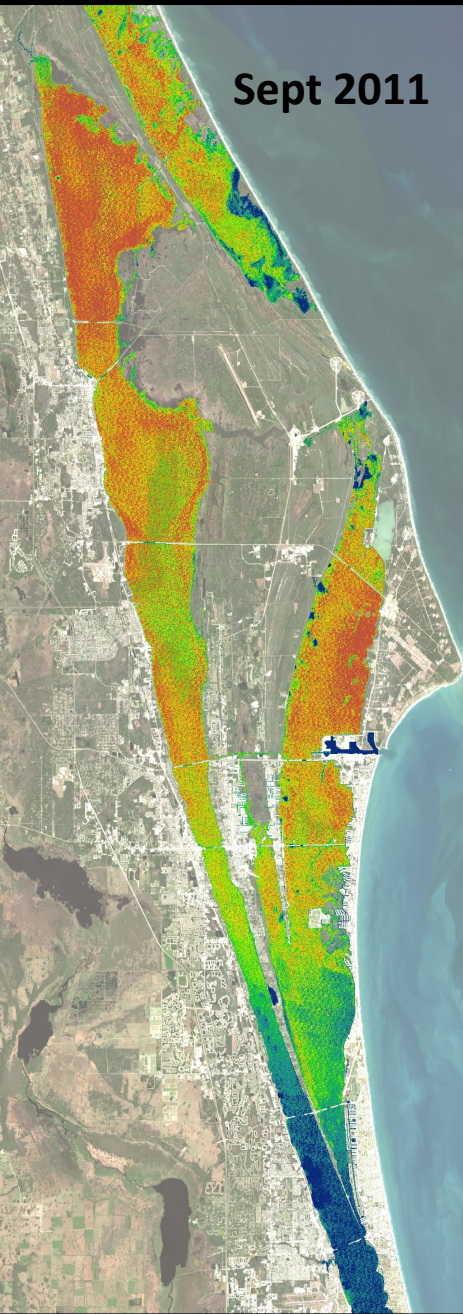
Indian River Lagoon: 2018 update



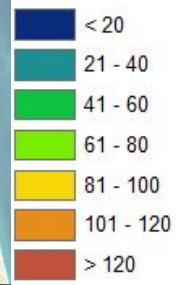
Presented by: Chuck Jacoby

**Co-authored by: Lori Morris, Bob Chamberlain, Rex Ellis,
Ali Simpson, Jan Miller, Margie Lasi, and Lauren Hall**

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Modeled Chl *a* ($\mu\text{g/L}$)

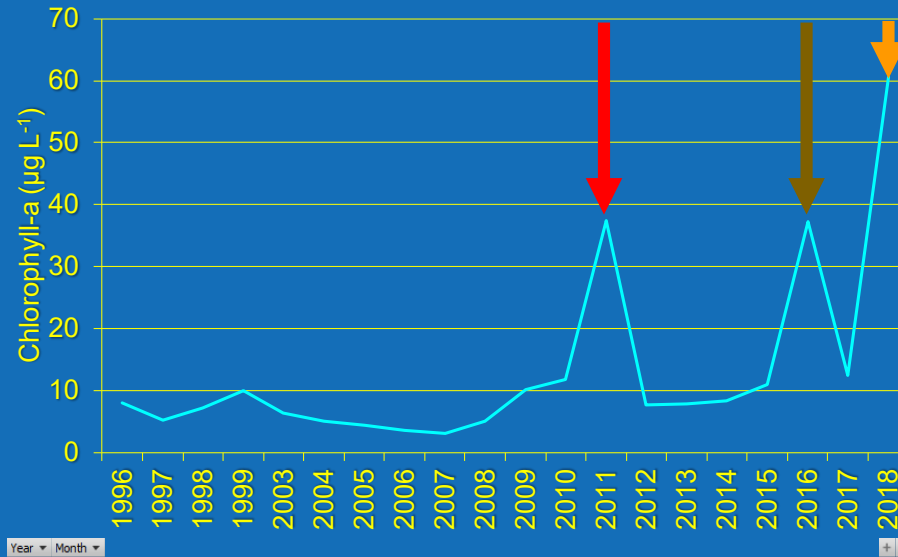


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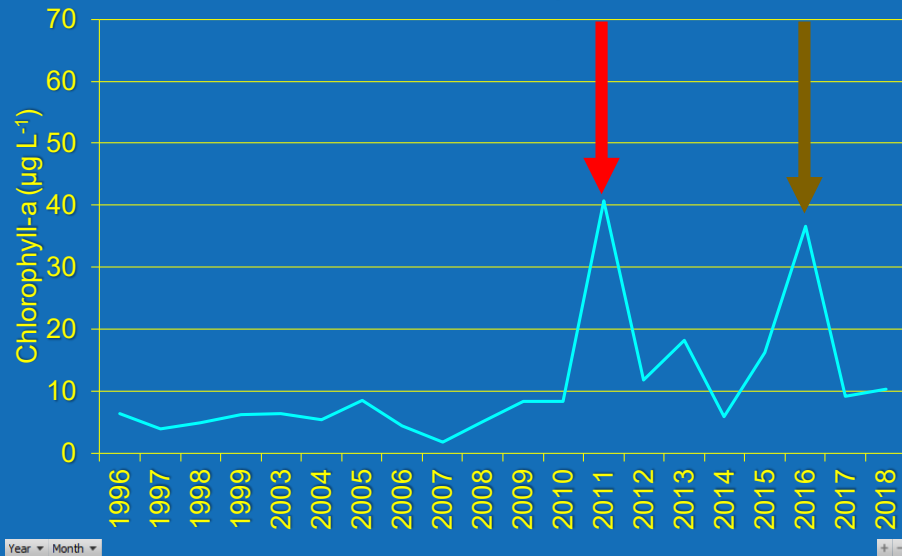
Sample Type ▾ Depth of Collection-m ▾ Primary Waterbody ▾ Planning Unit ▾ STATION ▾ Loading Segment ▾ Seagrass Segment ▾

Average of Chl-a Corrected

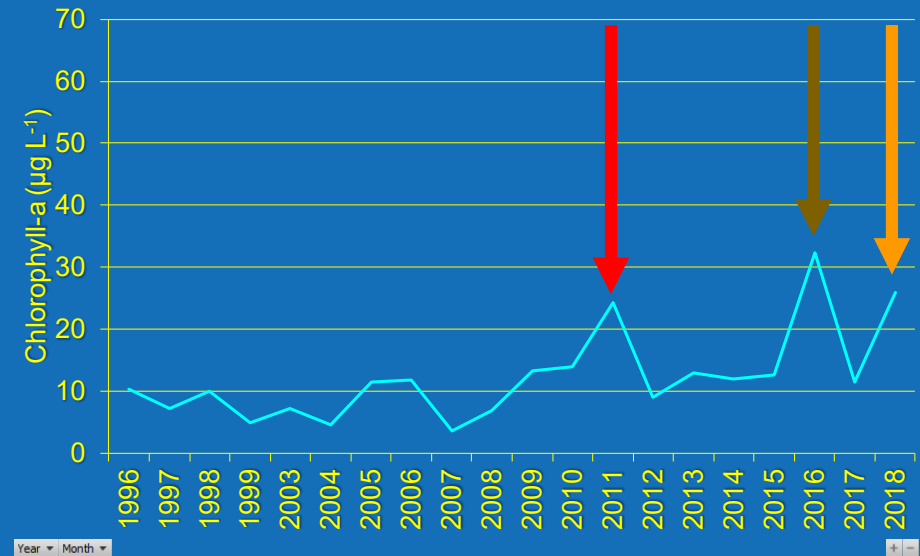
Banana River Lagoon



North Indian River Lagoon A



North Indian River Lagoon B

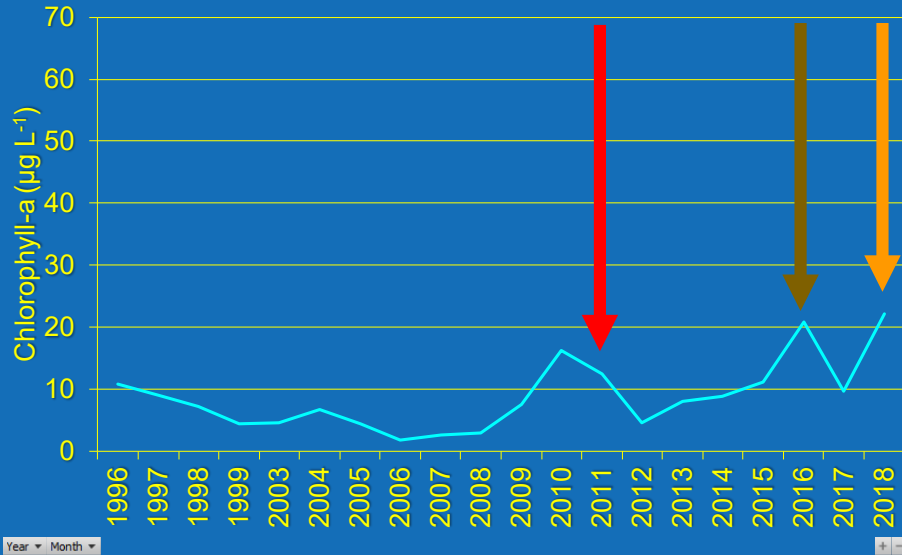


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Sample Type ▾ Depth of Collection-m ▾ Primary Waterbody ▾ Planning Unit ▾ STATION ▾ Loading Segment ▾ Seagrass Segment ▾

Average of Chl-a Corrected

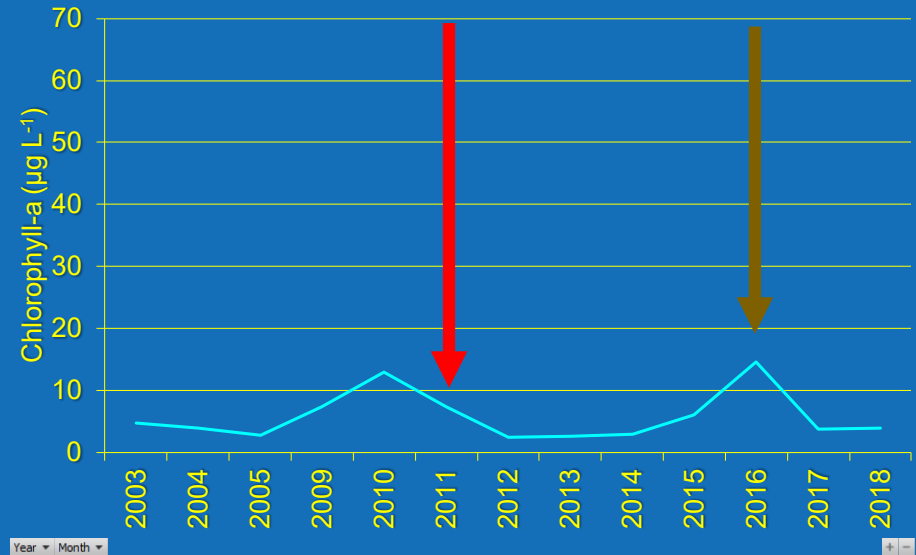
Central Indian River Lagoon A



Sample Type ▾ Depth of Collection-m ▾ Primary Waterbody ▾ Planning Unit ▾ STATION ▾ Loading Segment ▾ Seagrass Segment ▾

Average of Chl-a Corrected

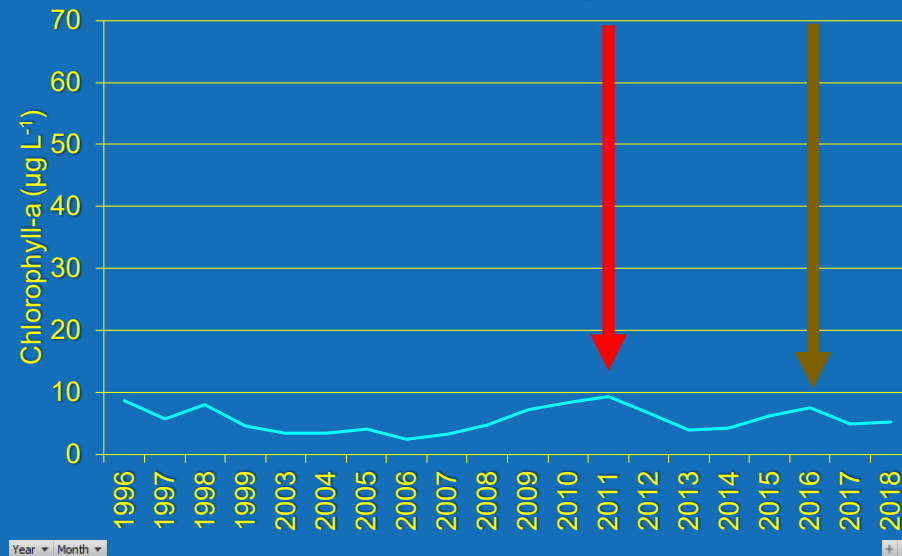
Central Indian River Lagoon Sebastian



Sample Type ▾ Depth of Collection-m ▾ Primary Waterbody ▾ Planning Unit ▾ STATION ▾ Loading Segment ▾ Seagrass Segment ▾

Average of Chl-a Corrected

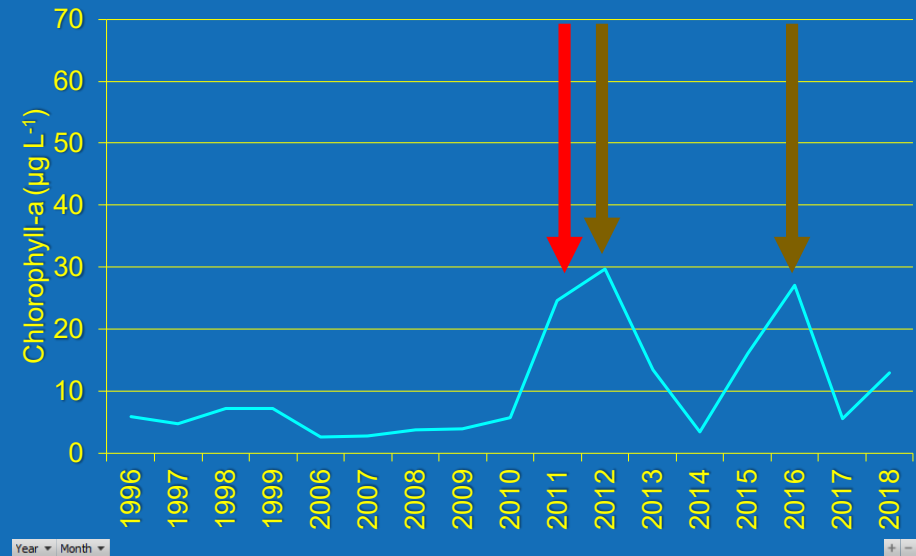
Central Indian River Lagoon B



Sample Type ▾ Depth of Collection-m ▾ Primary Waterbody ▾ Planning Unit ▾ STATION ▾ Loading Segment ▾ Seagrass Segment ▾

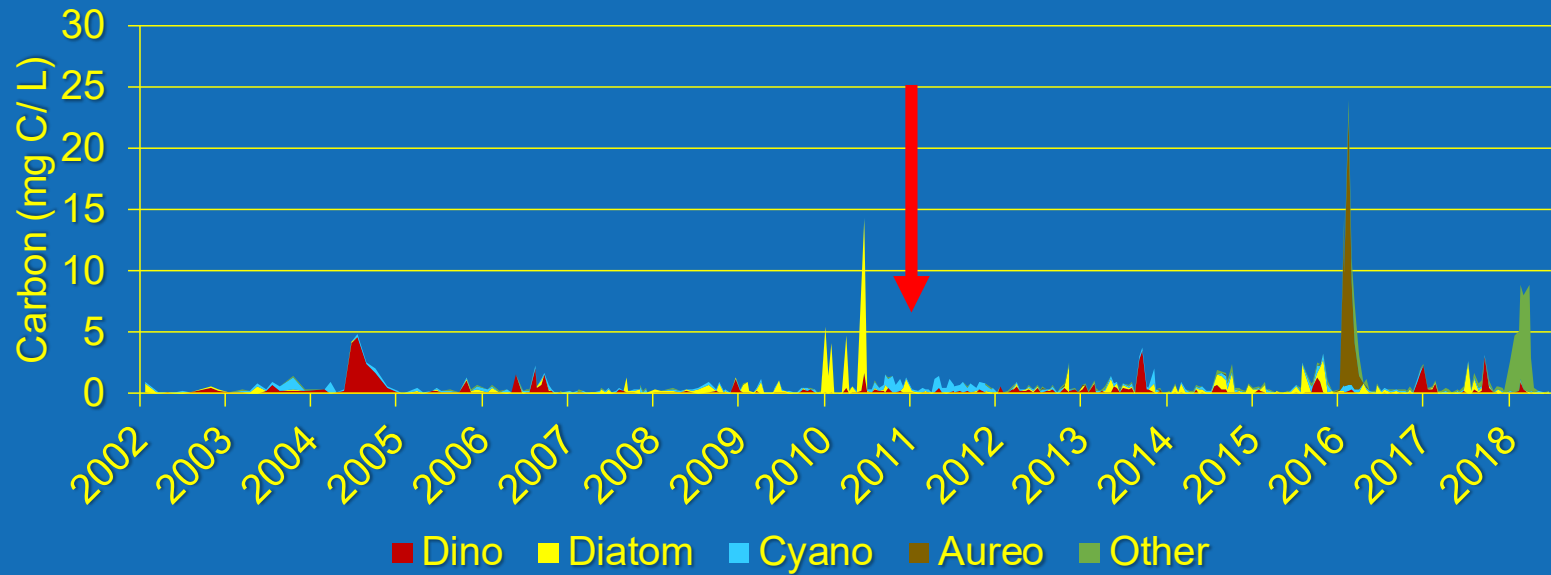
Average of Chl-a Corrected

Mosquito Lagoon

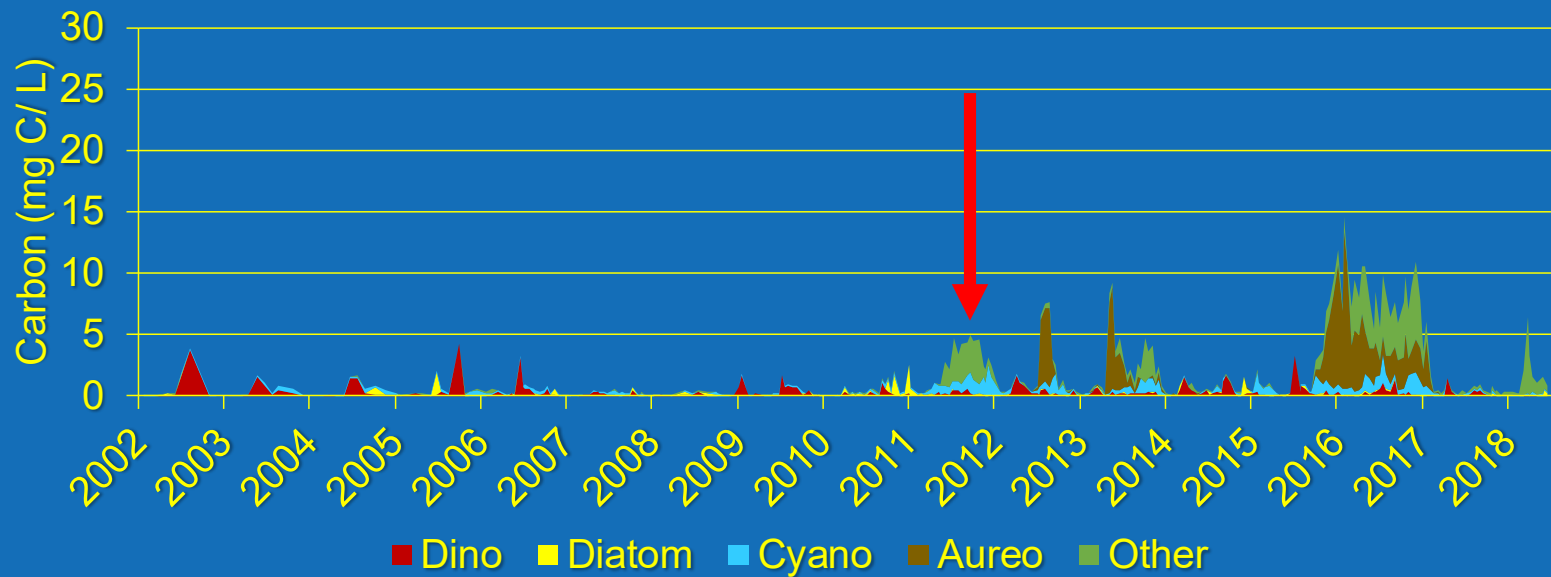


St. Johns River Water Management District

Banana River Lagoon

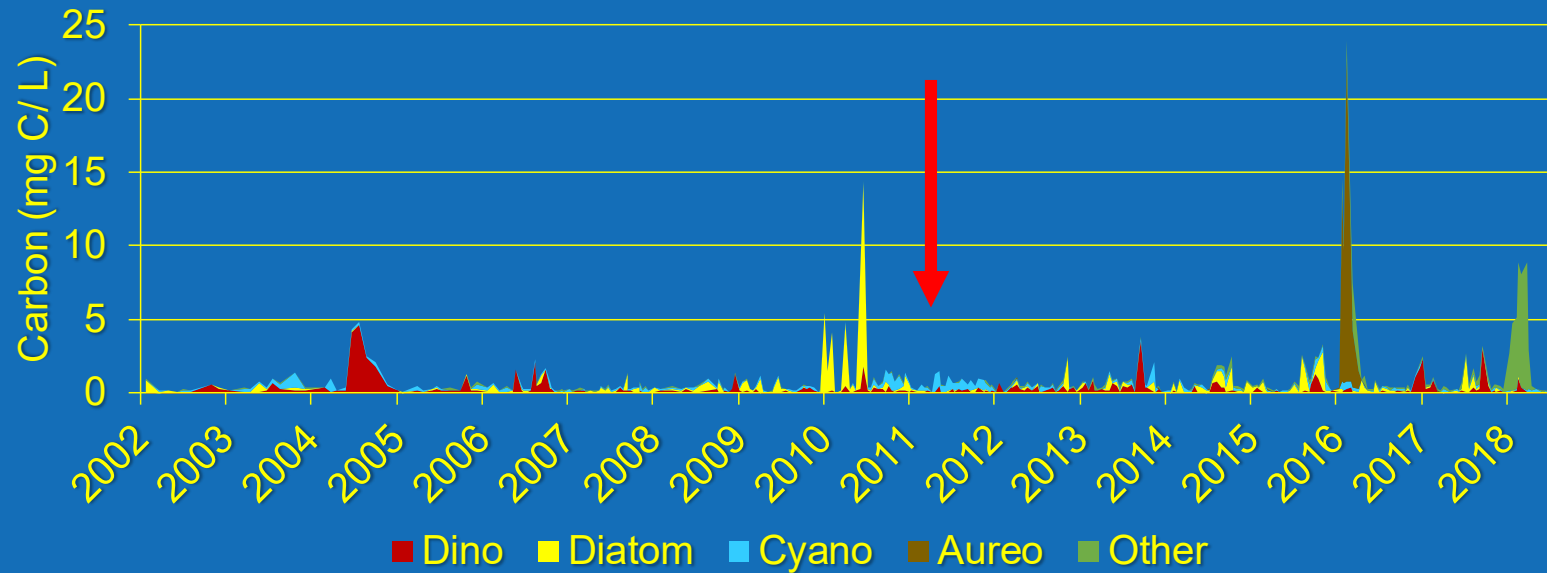


North Indian River Lagoon

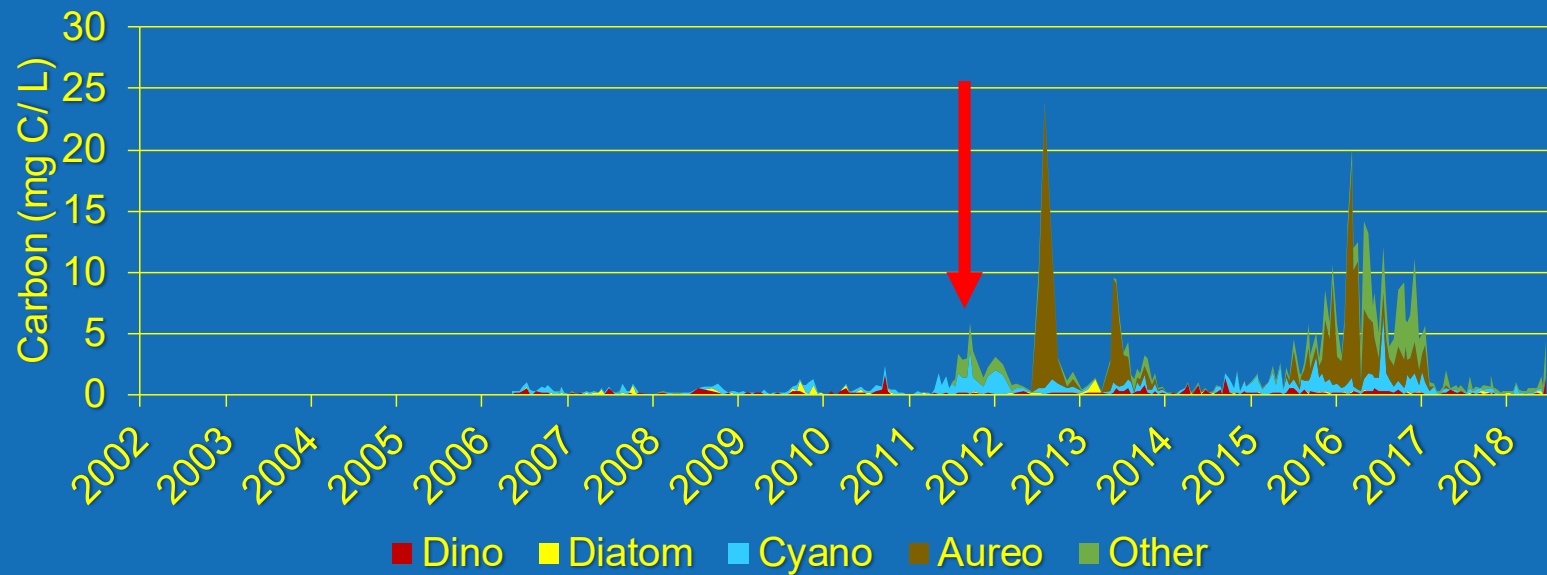


St. Johns River Water Management District

Central Indian River Lagoon



Southern Mosquito Lagoon

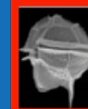


- **Players changed**
- **Smaller**
(> 200 side-by-side across“.”)
- **Turn over faster**
- **Use “organic” N and P**
(bypass microbial loop)
- **Fix N?**
(potentially including picocyanobacteria)
- **[N] ↓ or [P] ↑ ⇒ N fixation ↑**

Newer
dominants



Diatoms



Pyrodinium bahamense



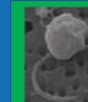
Dino-
flagellates



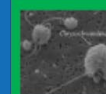
Filamentous
cyanobacteria



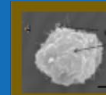
Pico-
cyanobacteria



Chlorophyte



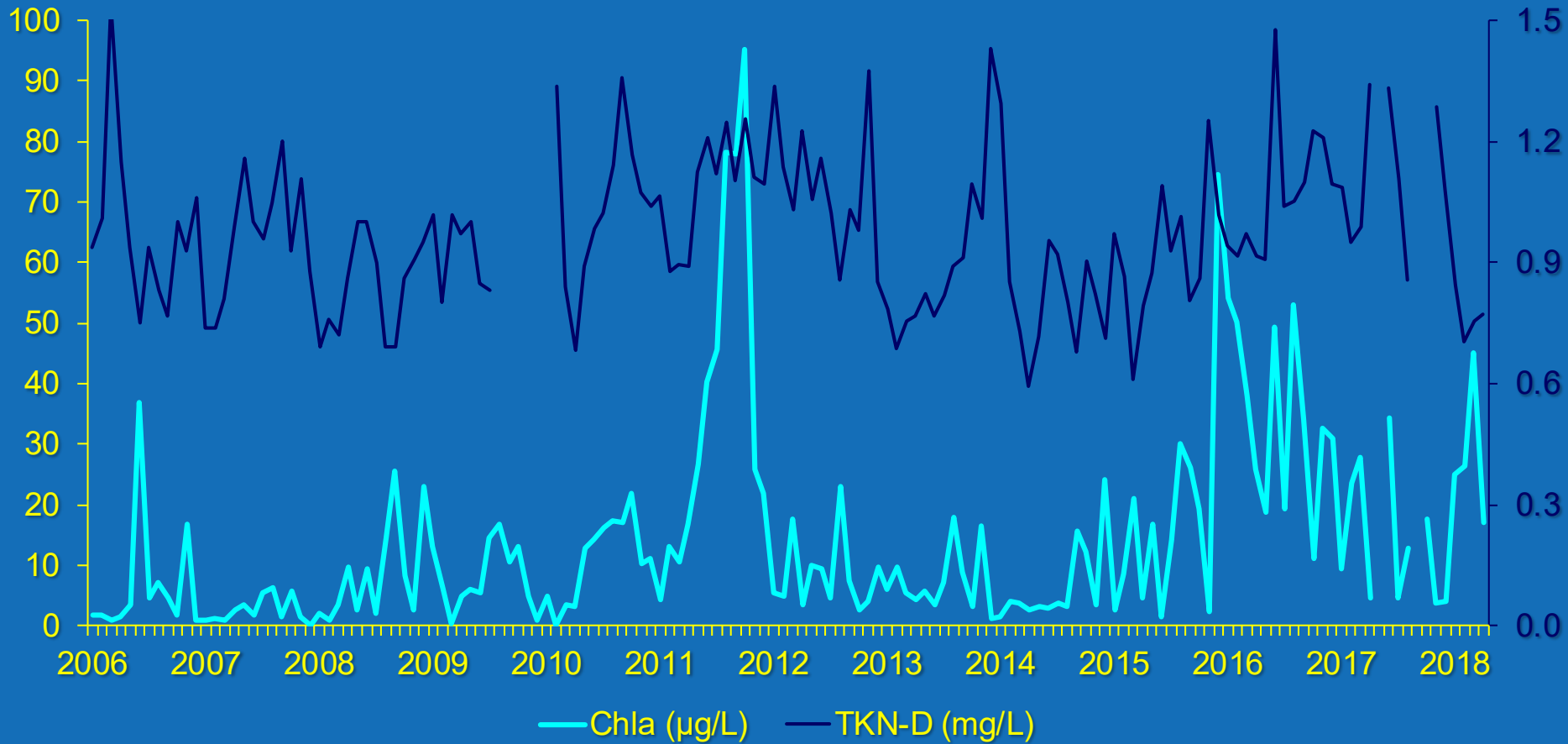
Mixed nano-
flagellates



Aureoumbra lagunensis

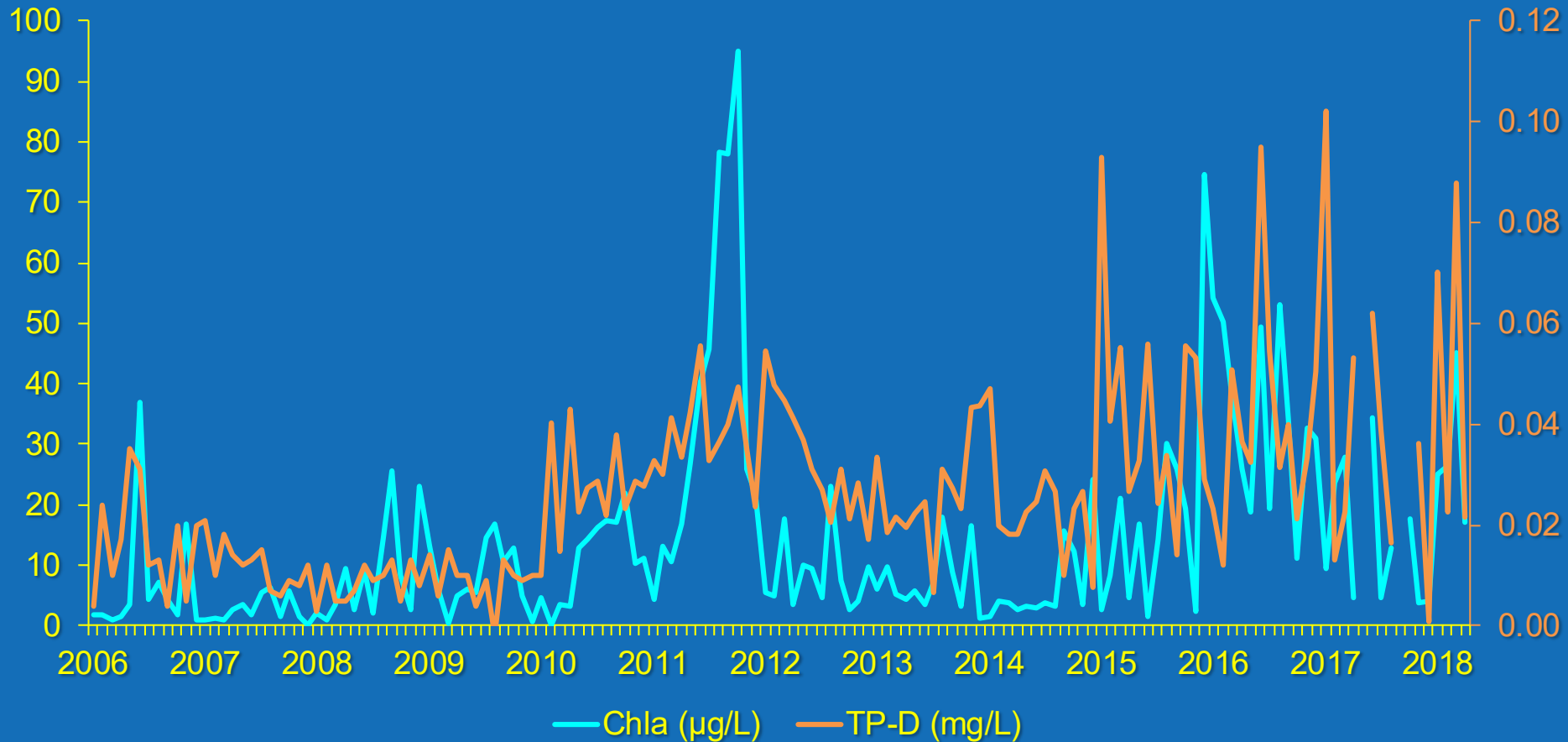
St. Johns River Water Management District

Titusville (Seagrass transect #22 and WQ site I-10)

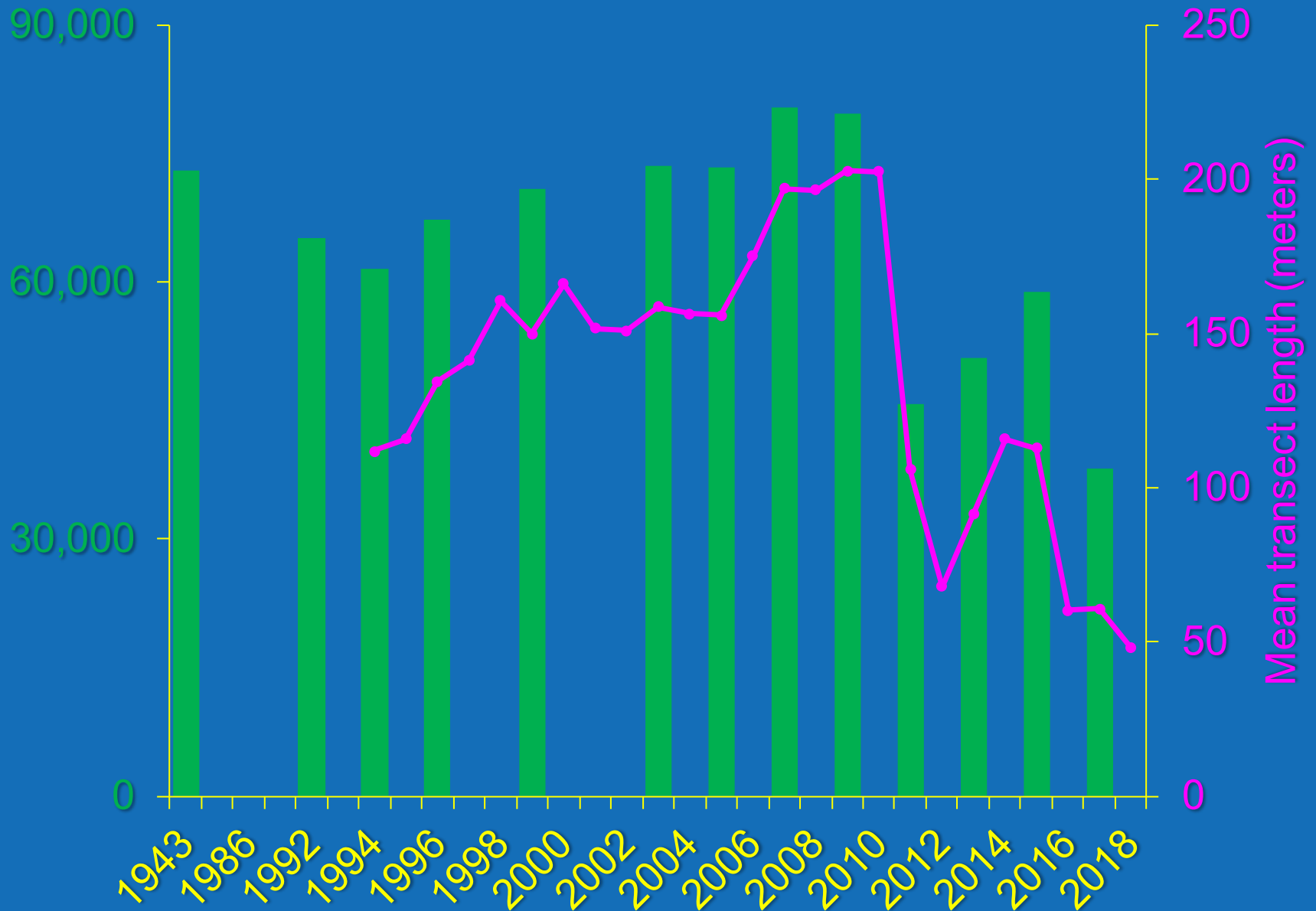


St. Johns River Water Management District

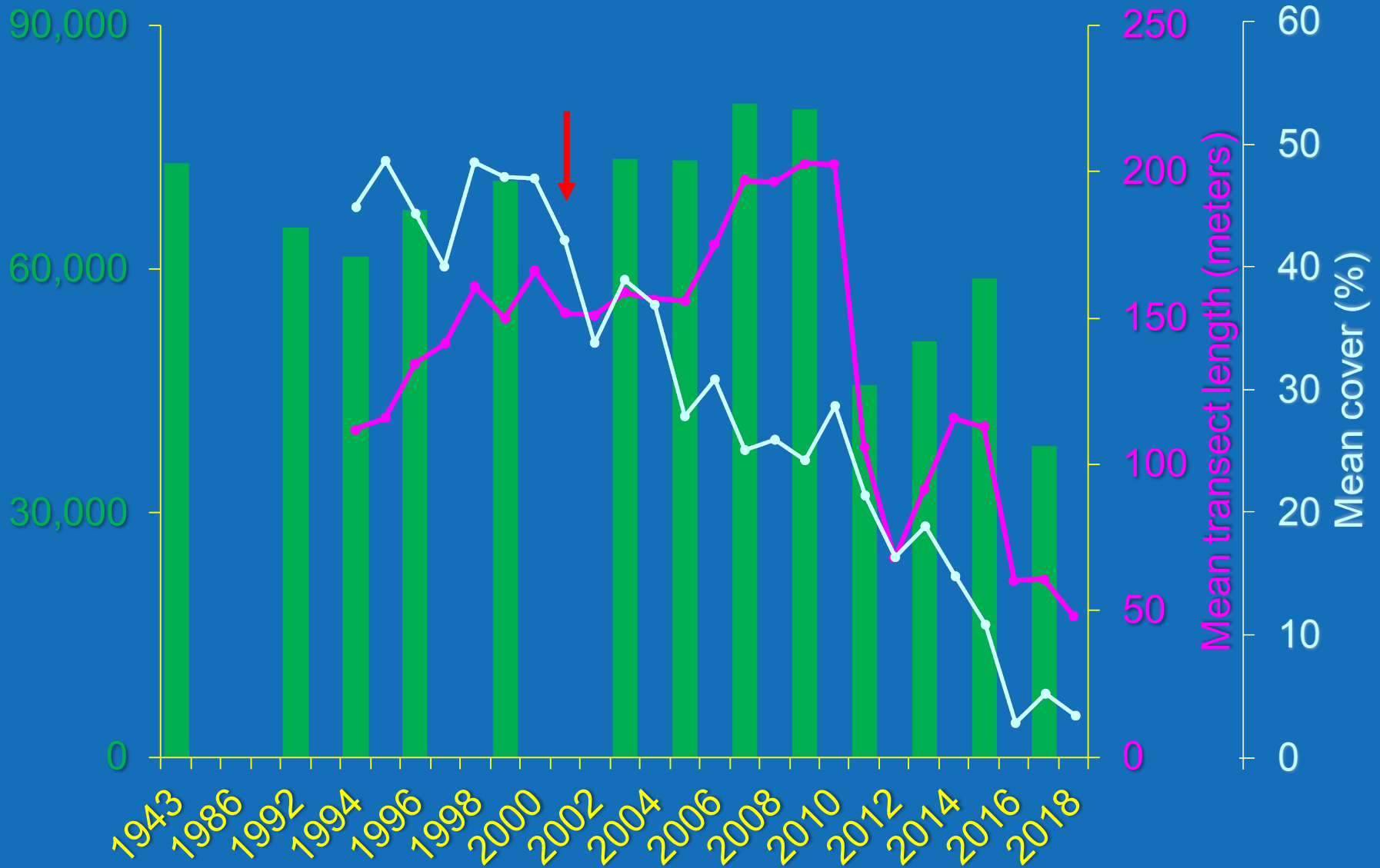
Titusville (Seagrass transect #22 and WQ site I-10)



Indian River Lagoon seagrass

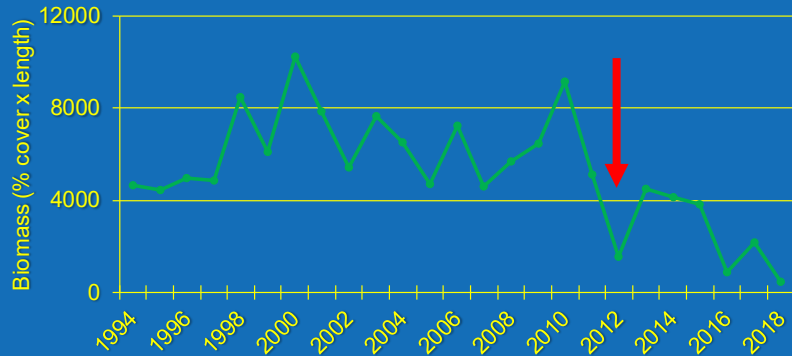


Indian River Lagoon seagrass

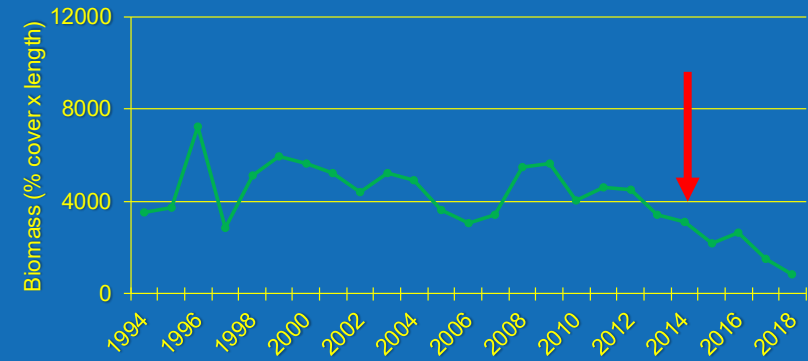


St. Johns River Water Management District

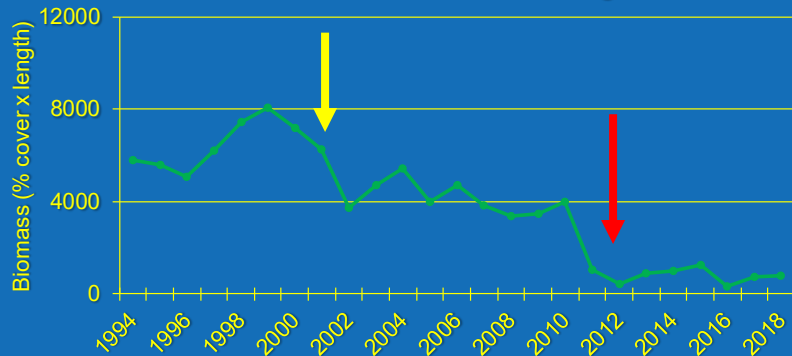
North Indian River Lagoon



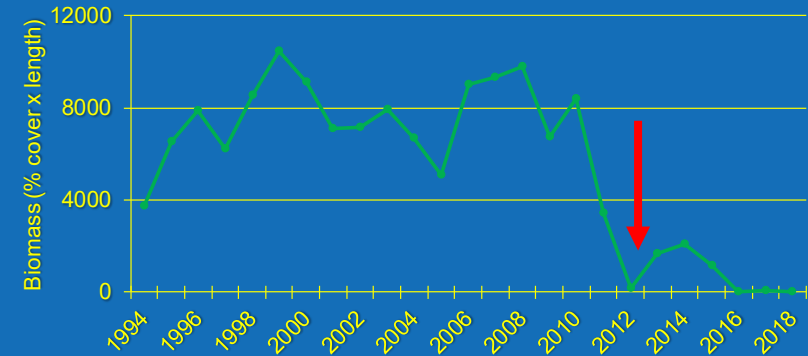
Mosquito Lagoon



Central Indian River Lagoon

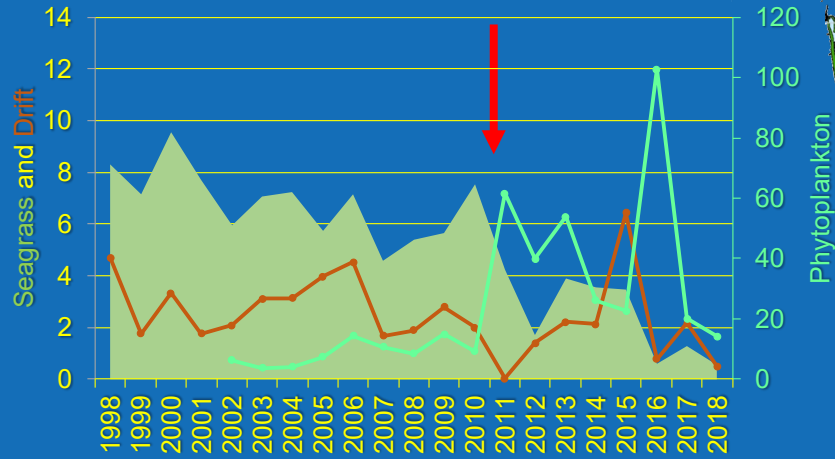


Banana River Lagoon

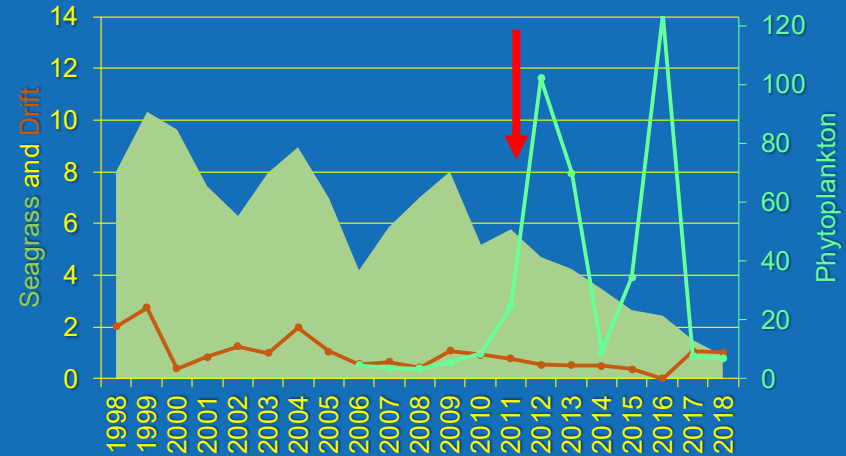


St. Johns River Water Management District

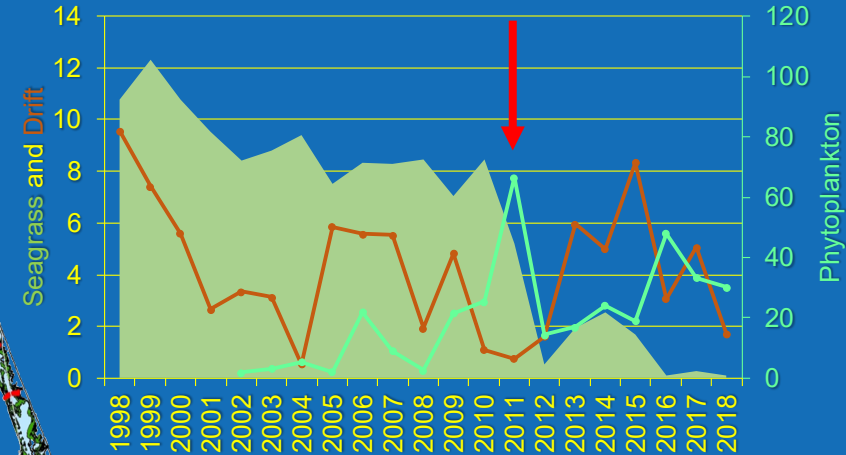
North Indian River Lagoon



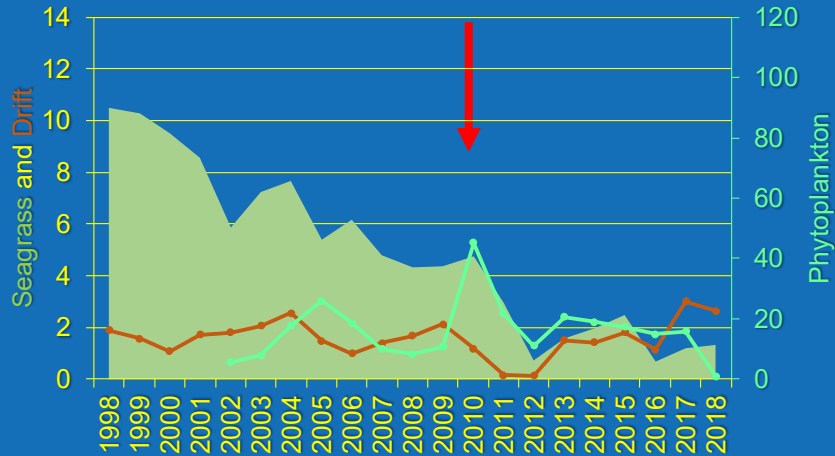
Mosquito Lagoon



Banana River Lagoon



Central Indian River Lagoon



- Seagrass carbon (g /m²)
- Drift algae carbon (g /m²)
- Phytoplankton carbon (g /m³)

Take-homes

So what?

event driven shift in 1° producers

event driven shift in cycling

lost slower growing seagrass and drift

gain faster growing “bad actors”

What next?

decrease external and internal loads

decrease loads further than anticipated

help seagrass reestablish

other help?

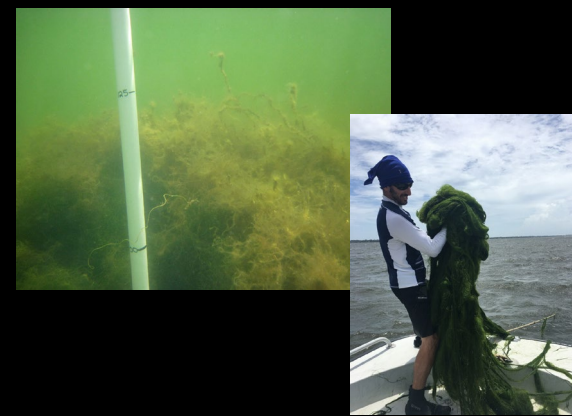
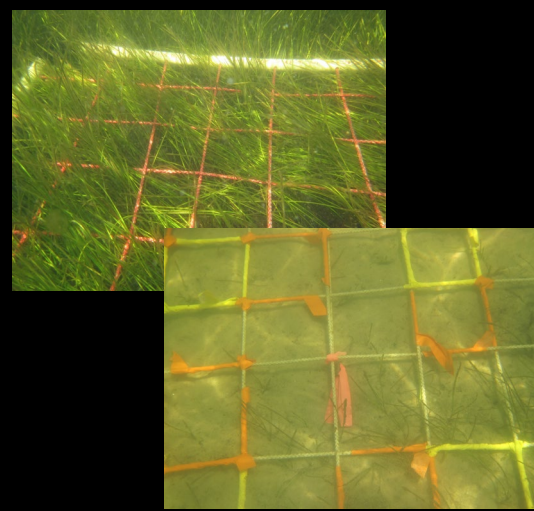


Photo: T. Miller
02/12/2016

St. Johns River Water Management District

