



# Restoring America's Everglades: Current State of Affairs & Next Steps

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Celeste De Palma  
Director of Everglades Policy  
Audubon Florida  
[cdepalma@audubon.org](mailto:cdepalma@audubon.org)

# Plume Hunting





# Draining the Everglades





“Florida Bay is falling apart like a rotting piece of cloth”  
Miami Herald, 1992



EVERGLADES NATIONAL PARK

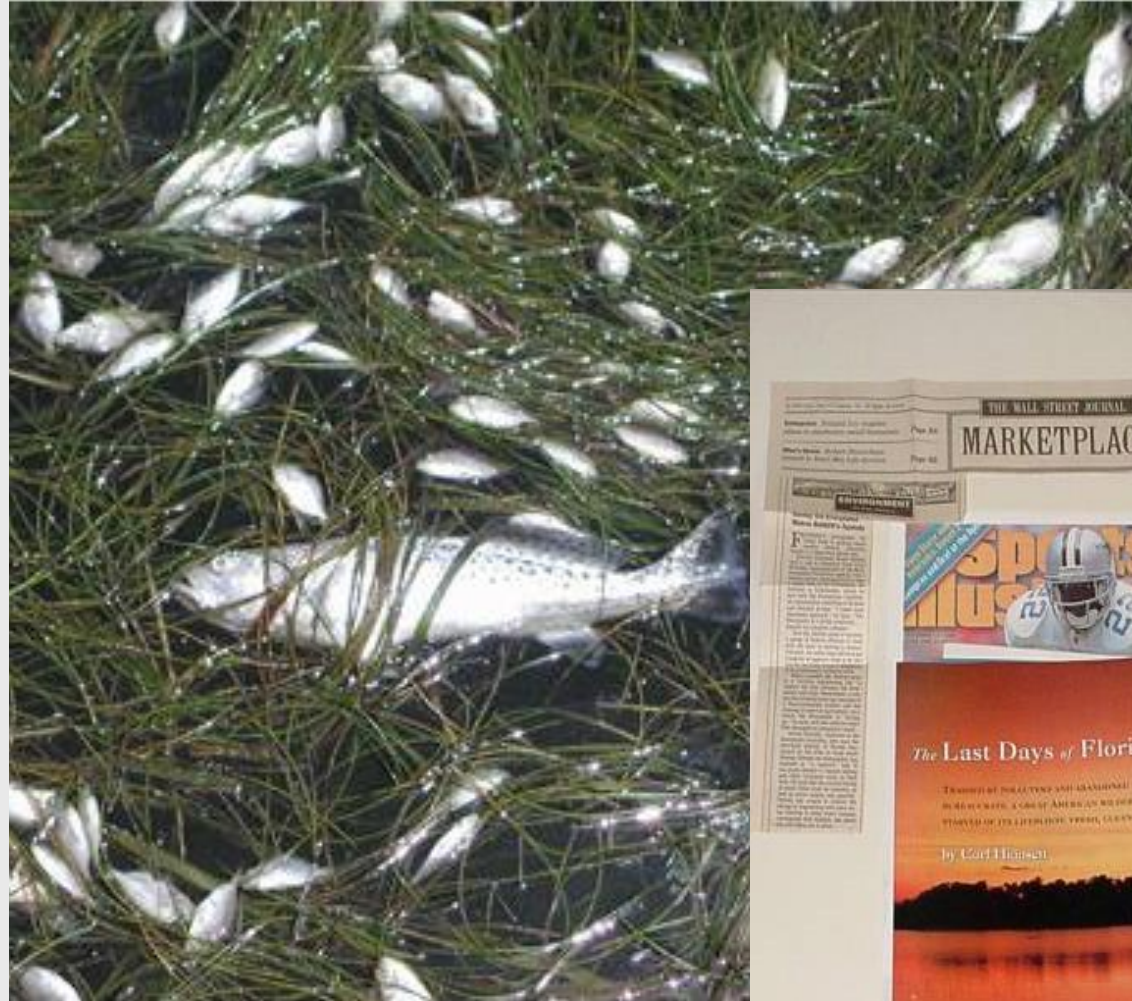
## Fish suffocate in Florida Bay

Hundreds of fish have died in an area of Florida Bay that has seen previous fish kills, which may be a sign of a deteriorating bay.

The fish, which included redfish, sea trout and sea catfish, were found dead in a shallow area east of Flamingo.

They died from suffocation; oxygen levels in the bay drop off as the water heats up, Everglades National Park spokeswoman Pat Tolle said Thursday.

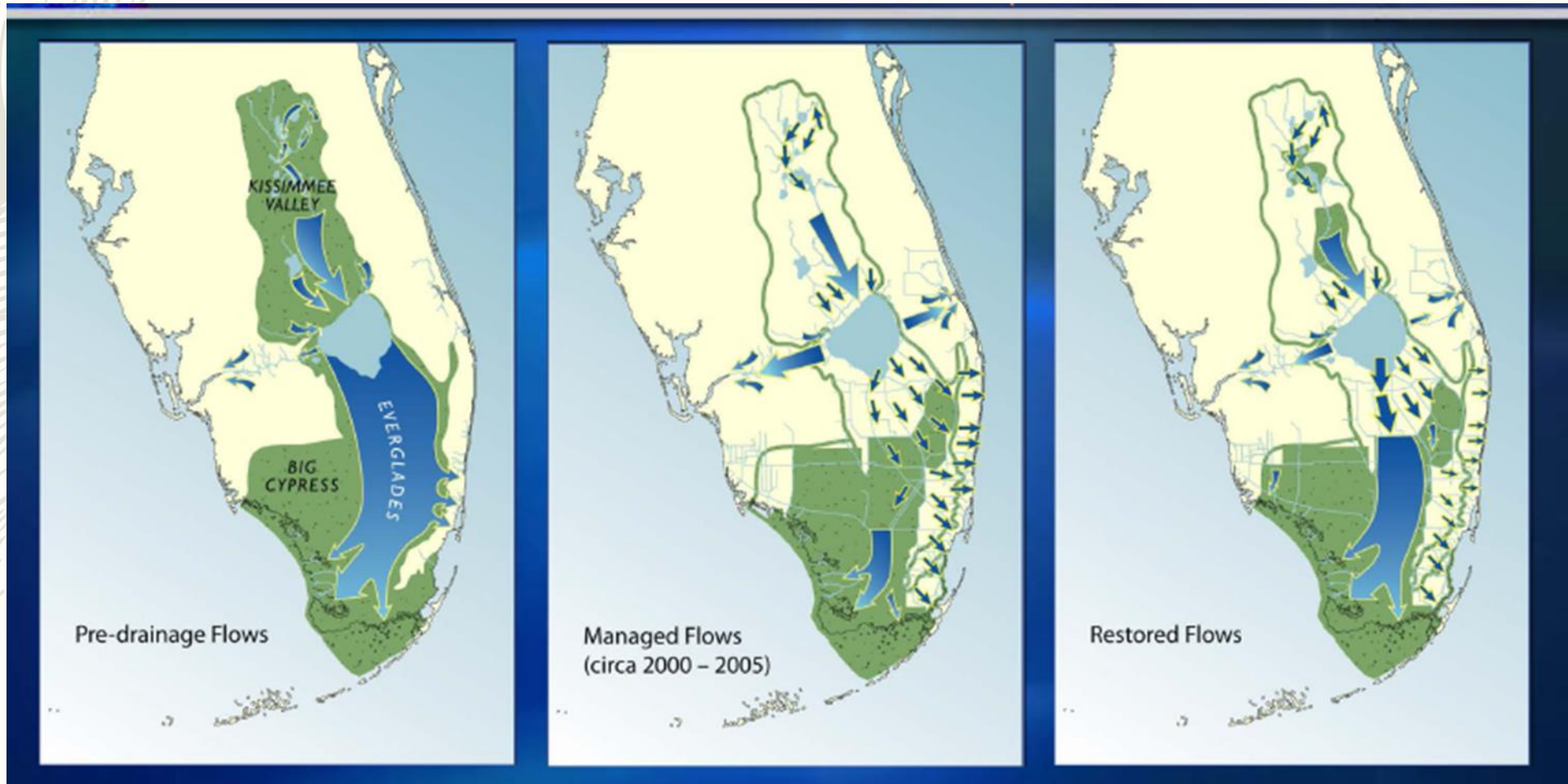
During August, September and October, the shallow waters heat up and the water circulation deteriorates, Tolle said. Kills are most likely to occur during the late summer and early fall, she said.



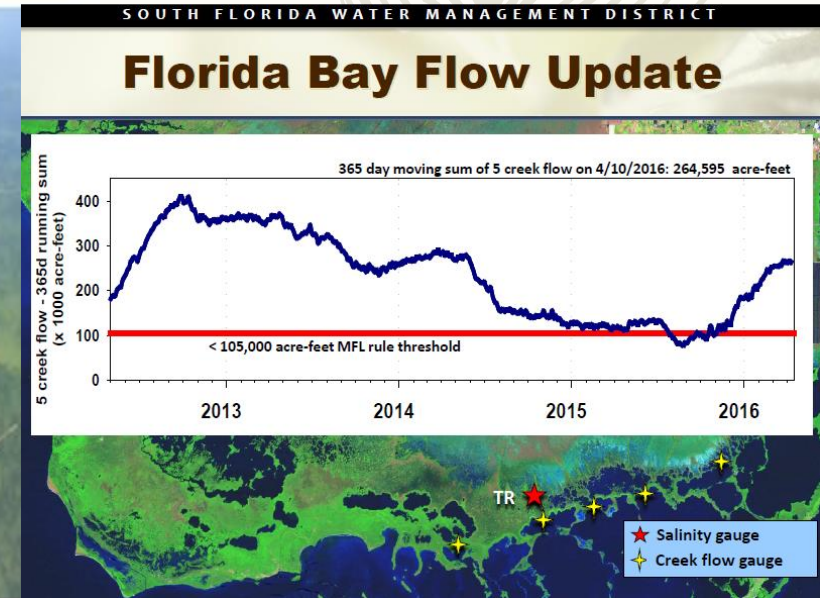


# Comprehensive Everglades Restoration Plan “CERP”

- Largest restoration in history
- 68 projects, 30 years
- 50-50 partnership
- Quantity, Quality, Timing & Distribution



# 2015 seagrass die-off in Florida Bay







WOULD YOU SWIM IN THIS?

#RippleEffect



**WARNING: ALGAE ALERT**  
**STAY OUT OF WATER**  
NO DRINKING  
BY HUMANS OR ANIMALS  
NO EATING FISH  
FOR MORE INFORMATION:  
CALL (239) 274-2204  
LEE COUNTY HEALTH DEPARTMENT

## 2016 State of Emergency

- 242 days: Lee, Martin, St. Lucie, Palm Beach counties
- Too much freshwater + too many nutrients in the water = dead fish + toxic algae blooms

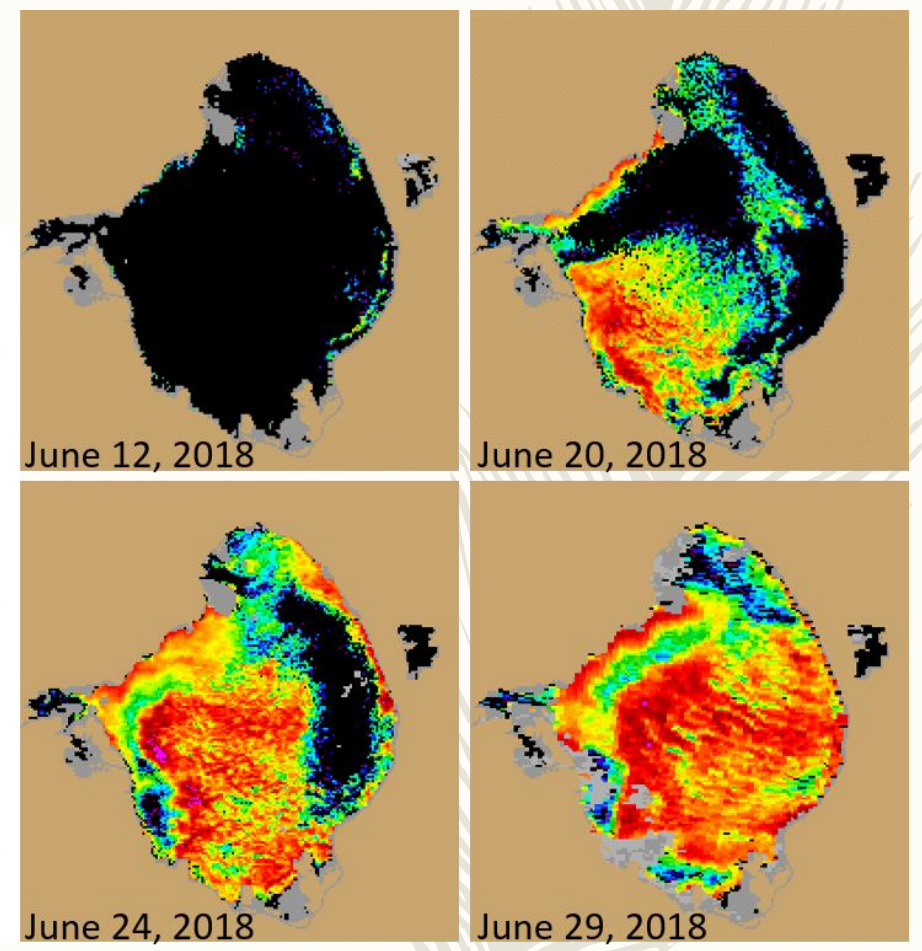
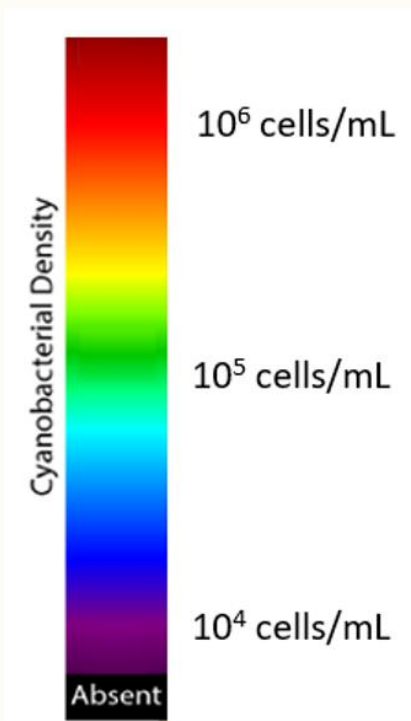
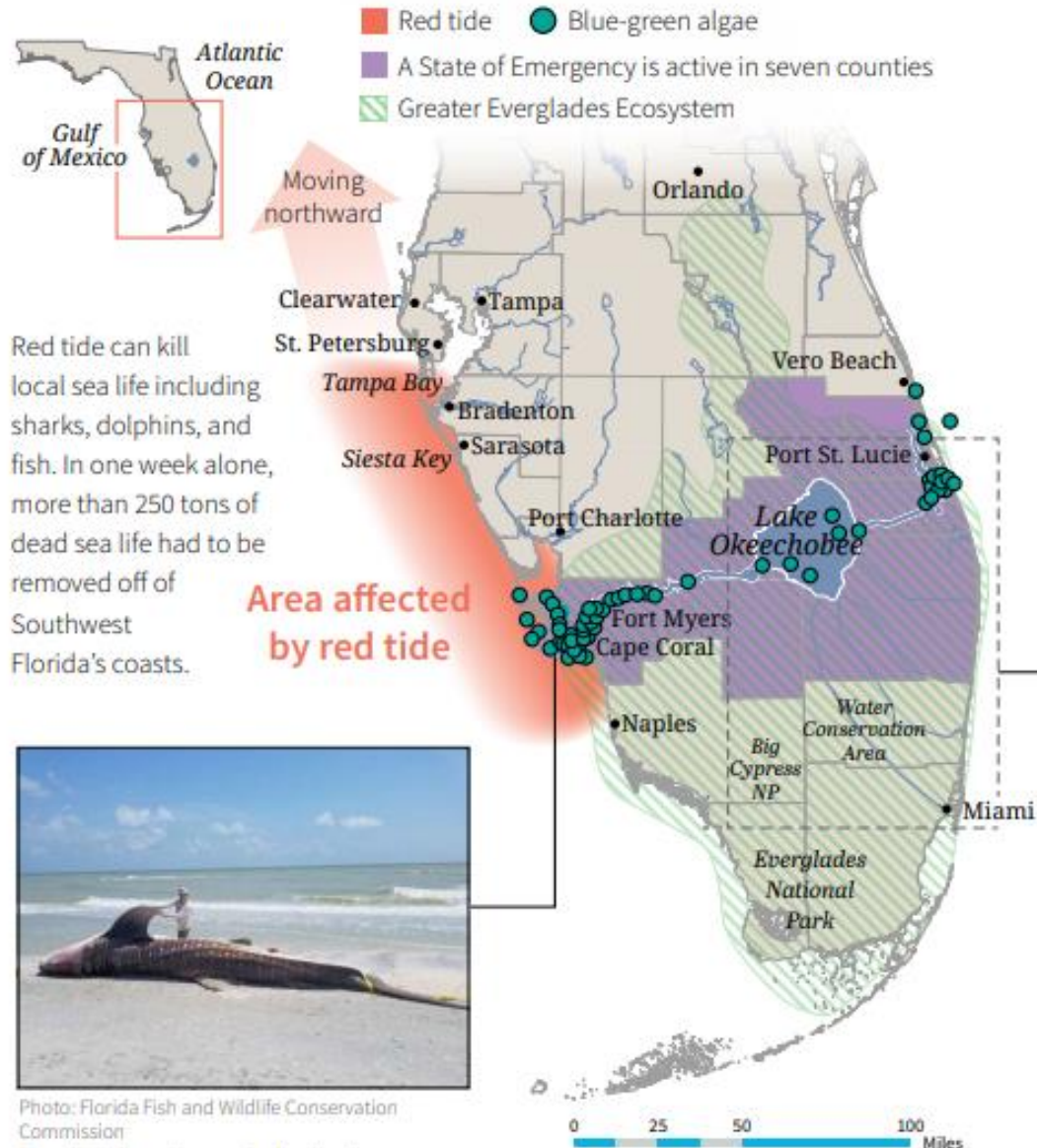


WOULD YOU EAT THIS?

#RippleEffect



# Current state of affairs: More blue-green algae with a dash of monster red tide, please!



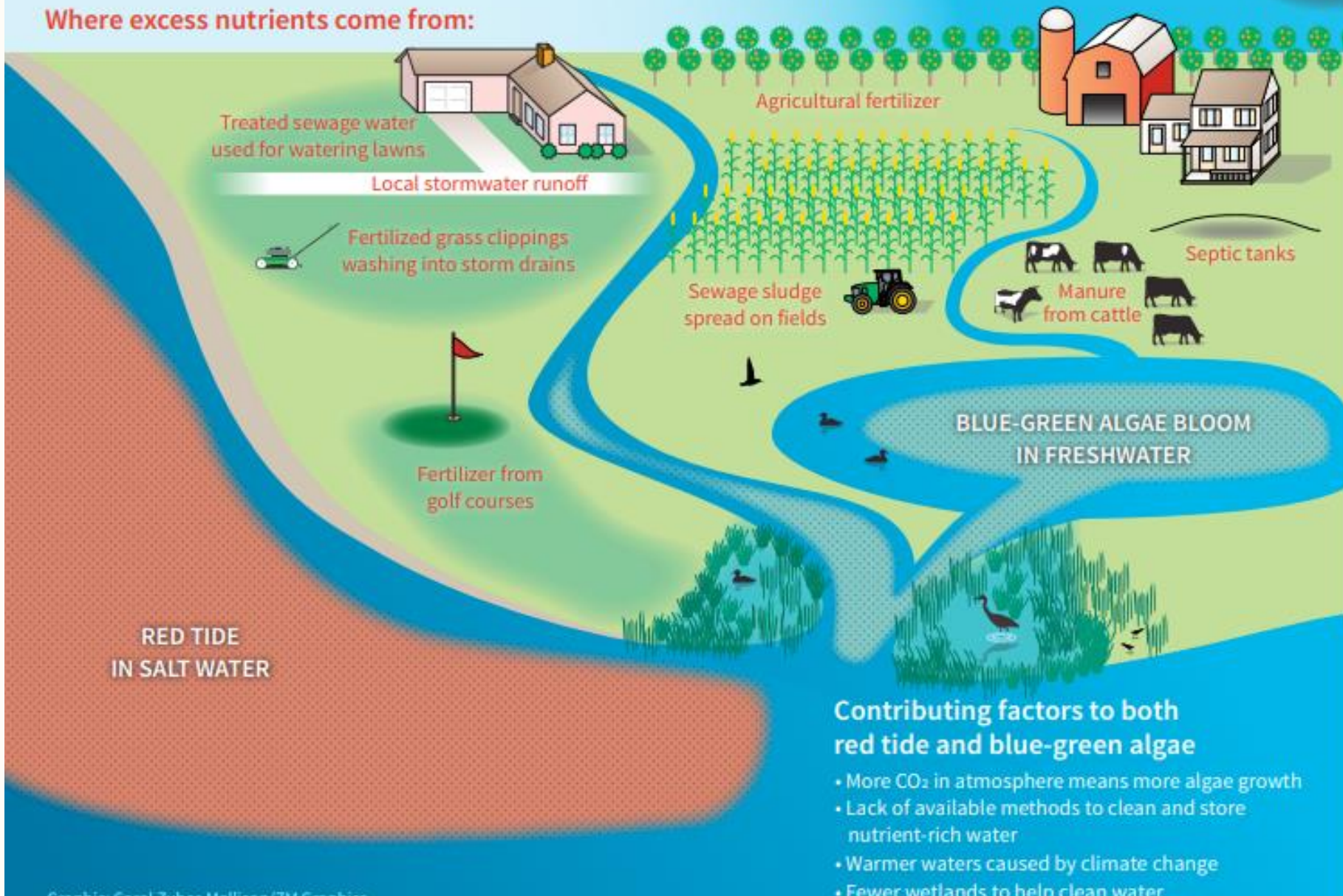
Algae has covered 90% of Lake Okeechobee's open water



# Excess nutrients make it worse

Both red tide and blue-green algae are fueled by an excessive amount of nitrogen and phosphorus in the water.

## Where excess nutrients come from:



- Multiple sources of nutrients seep into our waters
- Lack of monitoring and reduced enforcement brew a perfect storm
- Too much freshwater + too many nutrients in the water = dead fish + toxic algae blooms in freshwater estuaries
- Gulf currents bring red tide to shore, interaction with urban runoff loaded with nutrients = super red tide



Restoration doesn't stop

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Clean it up!

Send it south!

Restore, go, go, go!





# Everglades Agricultural Area Storage Reservoir



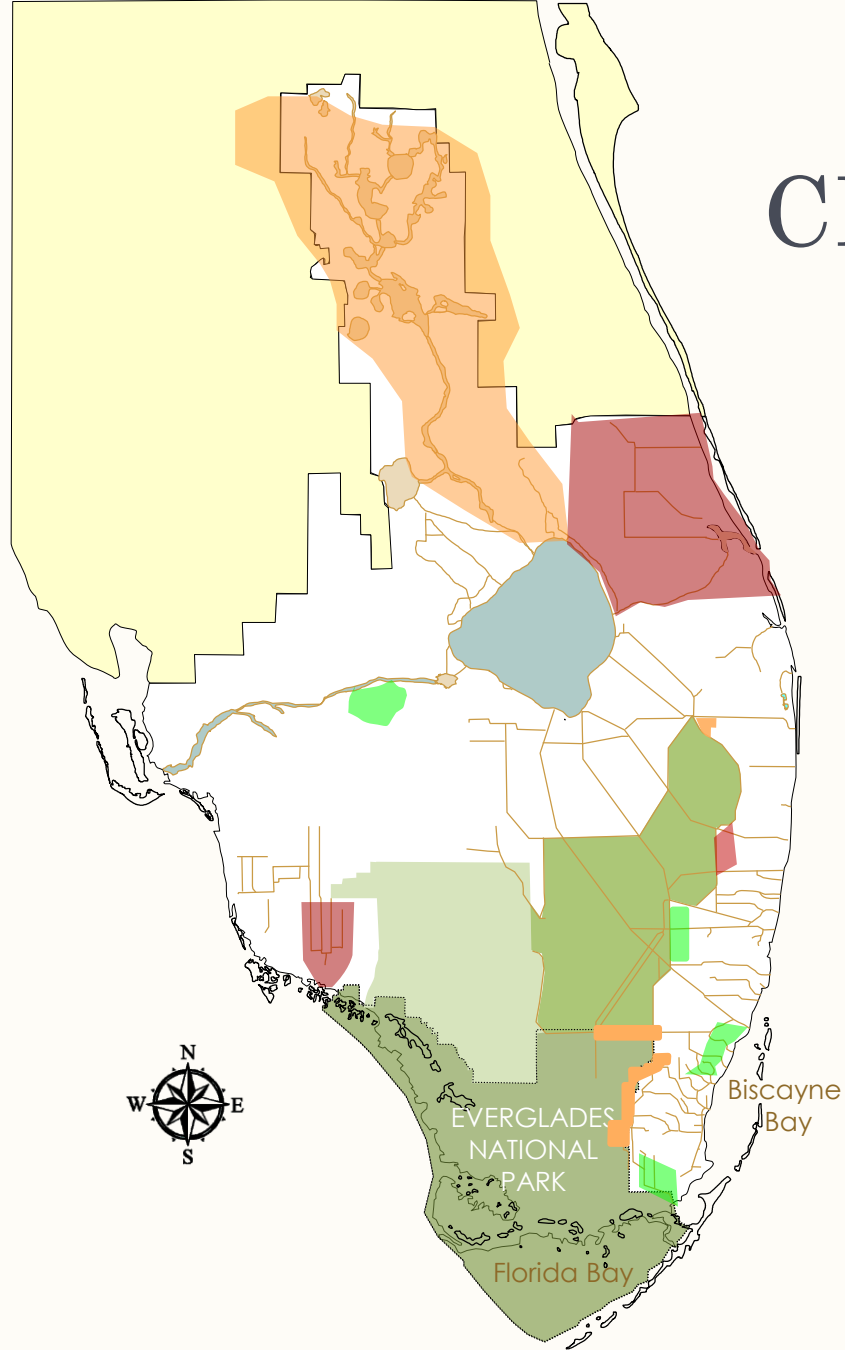
- An original CERP project
- Approved by Florida Legislature in 2017, “SB10”
- 370,000 acre-feet of water flowing south into Southern Everglades
- Reduction of harmful Lake O discharges to Caloosahatchee & St. Lucie Estuaries
  - Vol. of discharges reduced by 56%
  - N° discharge events reduced by 63%
  - 24% increase in dry season freshwater flows to Florida Bay



- Fast-tracked planning under Section 203 of 1986 WRDA
- Approved by U.S. Assistant Secretary of the Army
- Approved by White House Office of Budget and Management
- Passed by House of Representatives in 2018 Water Bill
- Awaiting vote by U.S. Senate
- Pending President’s signature to become Law



# CERP Implementation



## Foundation Projects

Kissimmee River– 2020

C-111 South Dade – June 2018

C-51/STA-1E – 2018

Modified Water Deliveries – completed March 2018

Tamiami Trail Next Steps – 2.6 mi.-bridge Jan. 2019

## 1<sup>st</sup> Generation CERP

Site 1 Impoundment – complete, operational testing

IRL-South (including C-44) – 2022; (C-44 STA June 2018)

Picayune Strand – 2021

## 2<sup>nd</sup> Generation CERP

C-43 Reservoir – 2022 -- 2 out of 4 contracts done!

\*Broward County WPA – beyond 2023, C-11 design 2021

C-111 Spreader Canal Phase 1 – *complete*

\*Biscayne Bay Coastal Wetlands – 2023

\*PPA signed 2016

**+ Central Everglades Planning Project**

**+ LOWRP; WERP; Loxahatchee planning**

# Kissimmee Restoration

- Pre-CERP; “Foundation” project
- 90% complete, anticipated completion by 2020
- Restore historic flow + 20,000 acres of floodplain wetlands

March 10, 2013

The C-38 canal and remnant river channels in the Pool A (unrestored) section of the Kissimmee River







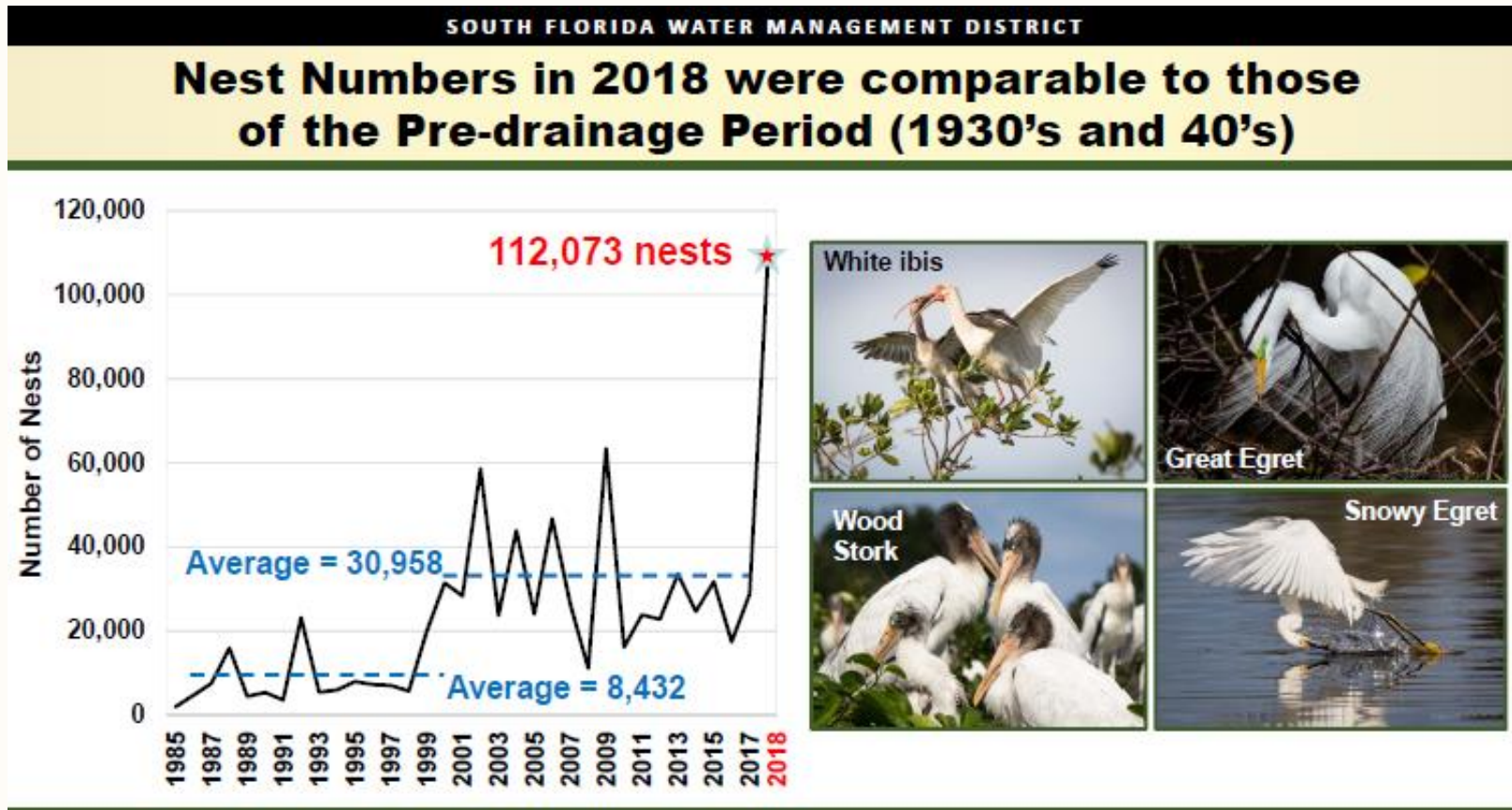








# 2018 Wading Bird Nesting Season



*Large Ibis colony feeding in WCA-3A*



Cabbage Bay, ENP, more than 20,000 nests. First time wading birds nested in this part of the system since the 1940s!









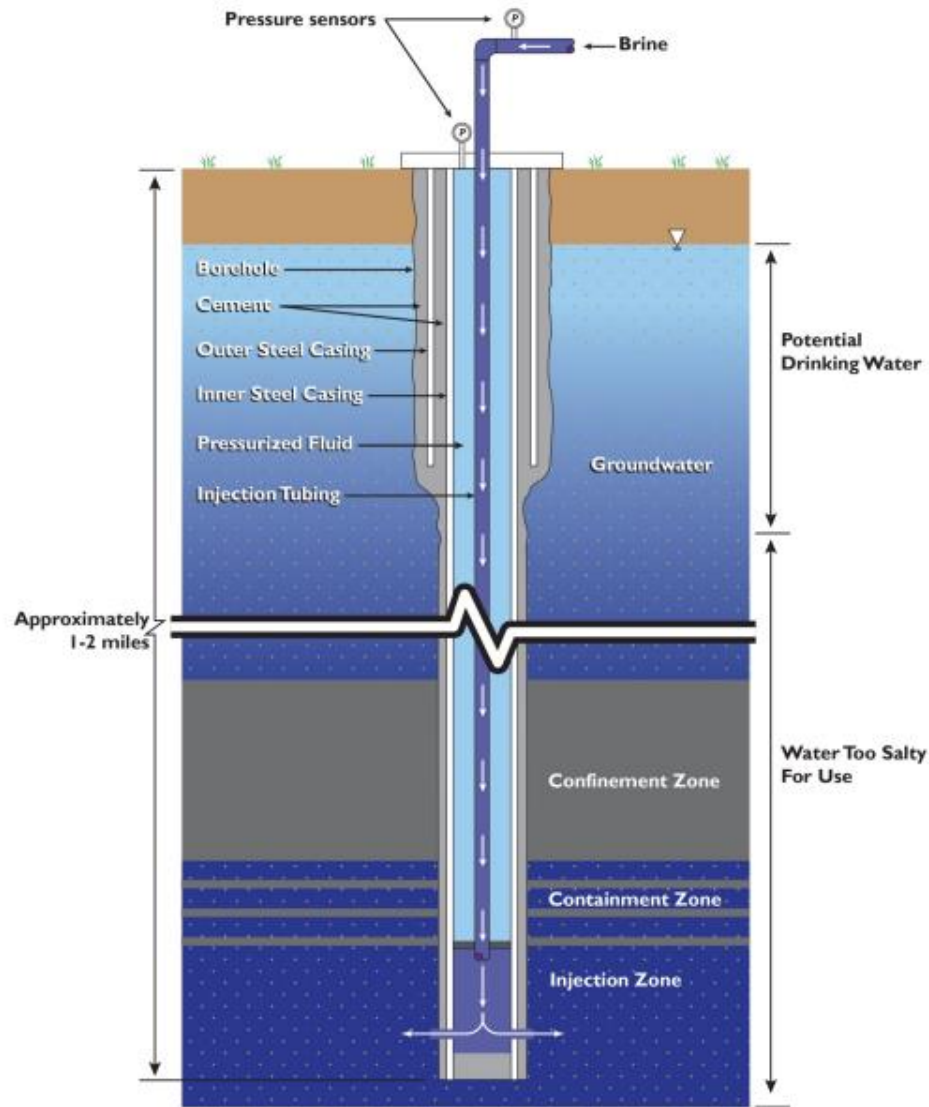


Lots of big challenges + a dash of  
bad ideas floated as “solutions”

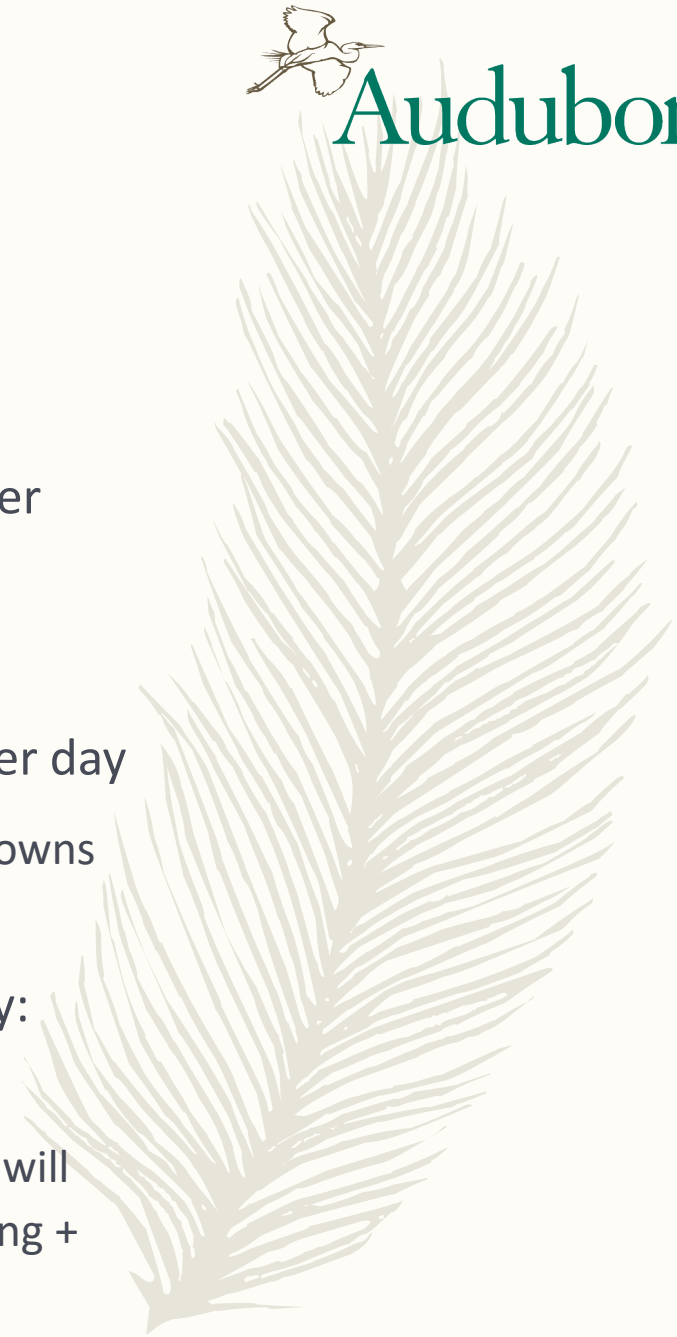




# Deep Injection Wells, a.k.a “Estuary Protection Wells”

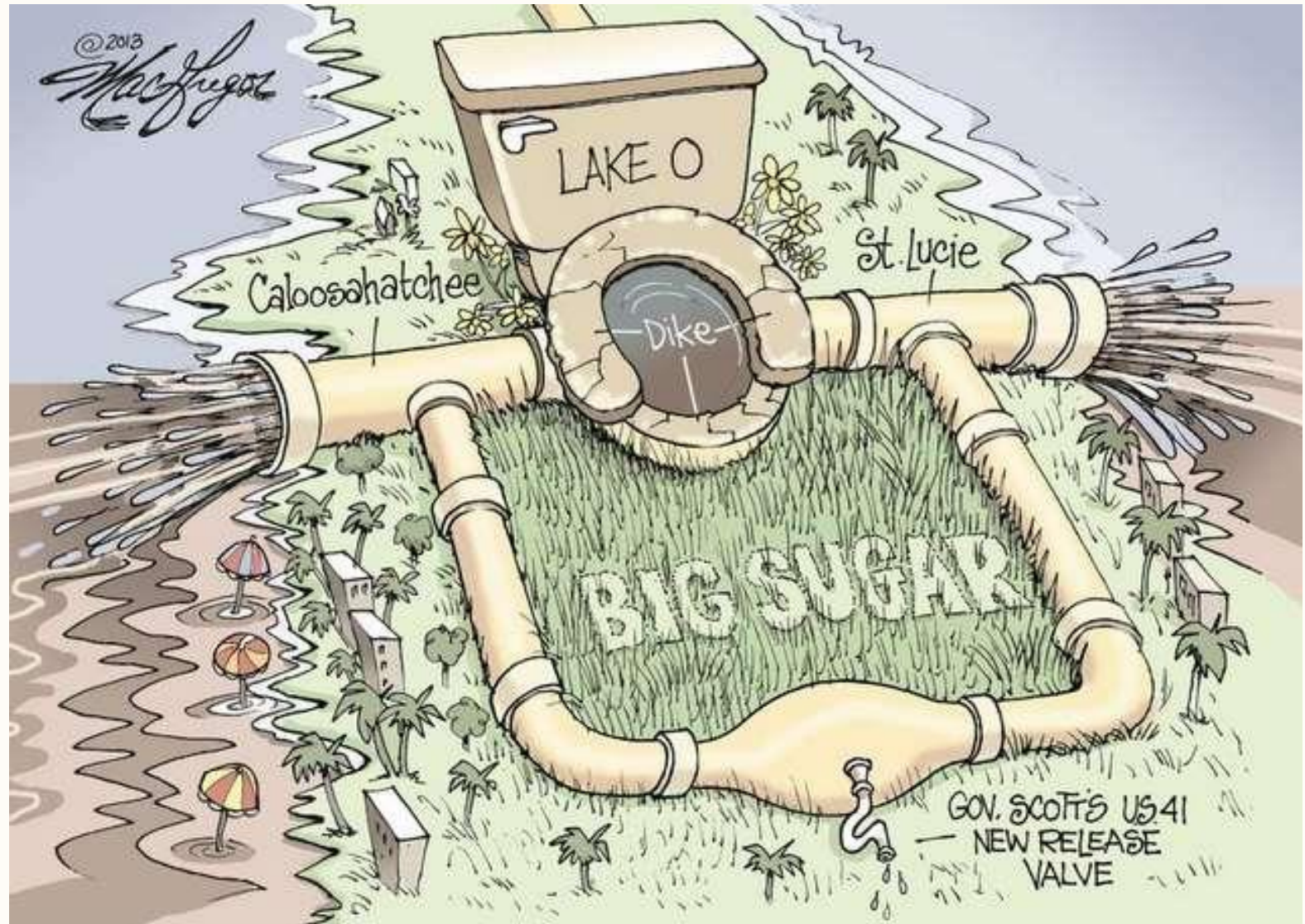


- Eliminate, dispose, remove water from the ecosystem forever
- Exacerbate drought conditions
- 50 wells at 15 M Gal of water per day
  - too large of a scale, many unknowns remain
- Shift of focus away from priority: restoration
  - No infinite amount of \$, so this will compete with restoration funding + attention from lawmakers





“Fix the Dike and  
all our problems  
are gone”









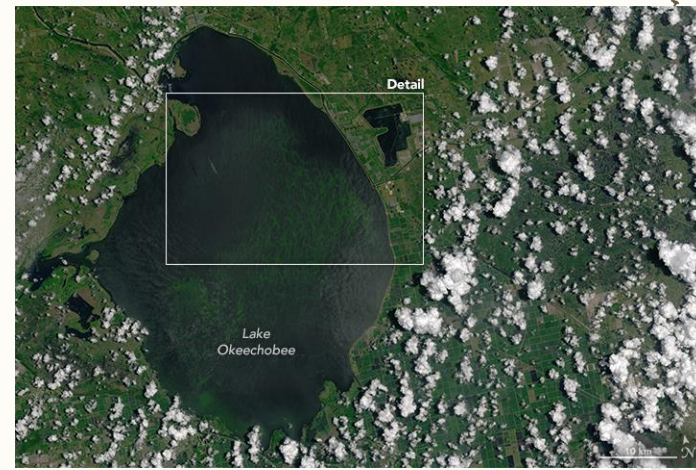
A deeper Lake Okeechobee is...

A dirtier

unhealthy &

more dangerous lake

What's bad for the Lake is bad for the Northern Estuaries, bad for the Everglades

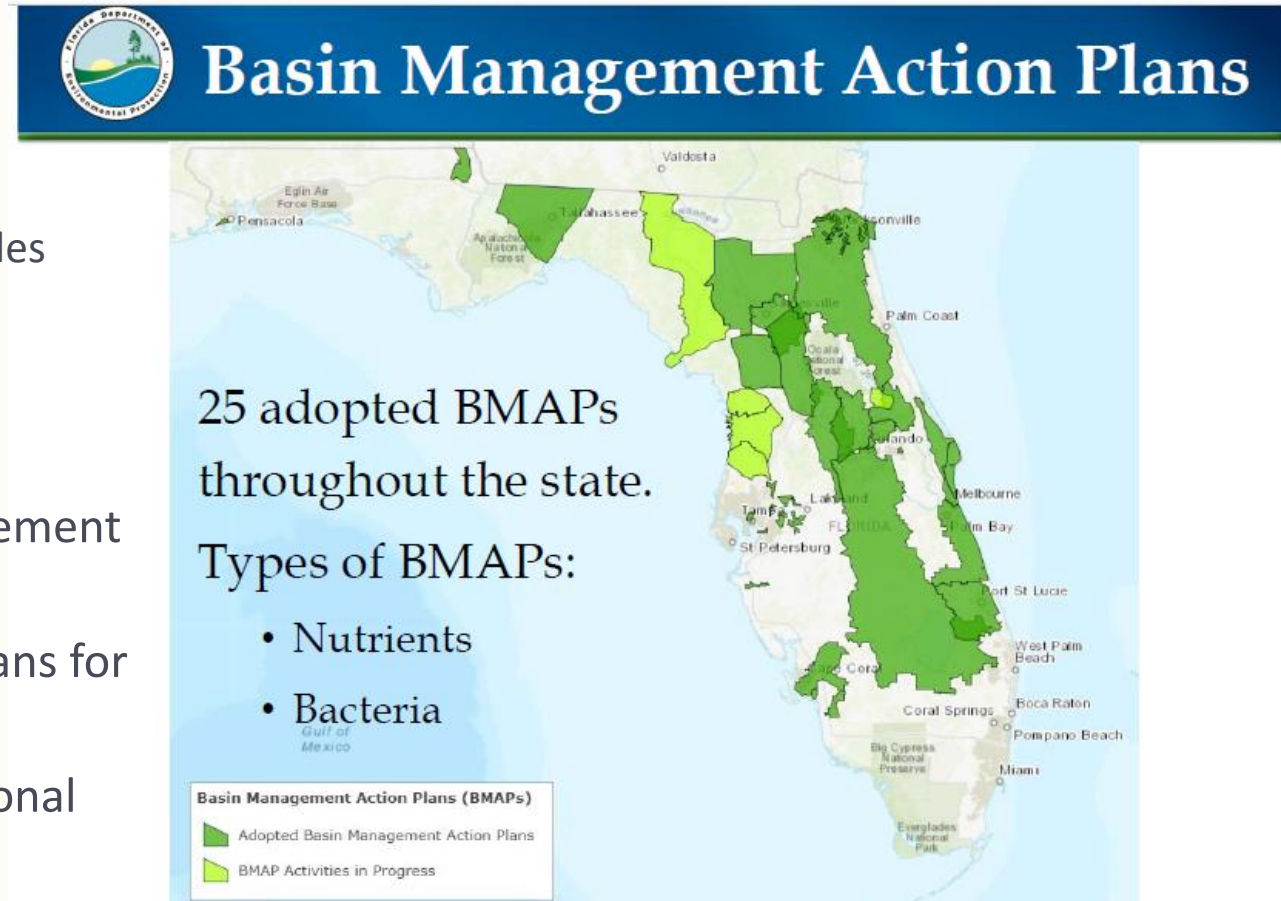


Audubon



# Audubon key Everglades priorities:

- Funding 2019, 2020, and beyond
  - State: Restoring WMDs budgets; sustained Everglades restoration funding
  - Federal: Everglades restoration funding; retain Everglades science monitoring
- EAA Reservoir Authorization in **2018** Water Bill
  - [Audubon.org/PassWRDA](http://Audubon.org/PassWRDA)
- Protecting Lake Okeechobee from bad water management decisions (LORS) – kick-off **2019**
- Advancing WQ efforts: Basin Management Action Plans for L.O. and Northern Estuaries – 5-yr Milestone **2019**
- Securing water for Florida’s natural systems (operational plans) – ongoing



Lake Okeechobee's phosphorous levels:





FLORIDA MOM & POP ATTRACTION, CA. 2050







Thank you!

[Cdepalma@audubon.org](mailto:Cdepalma@audubon.org)  
Twitter: @EvergladesCele