What Could Be Lost if Lostmans Slough Gets Lost in the Hydro Shuffle?

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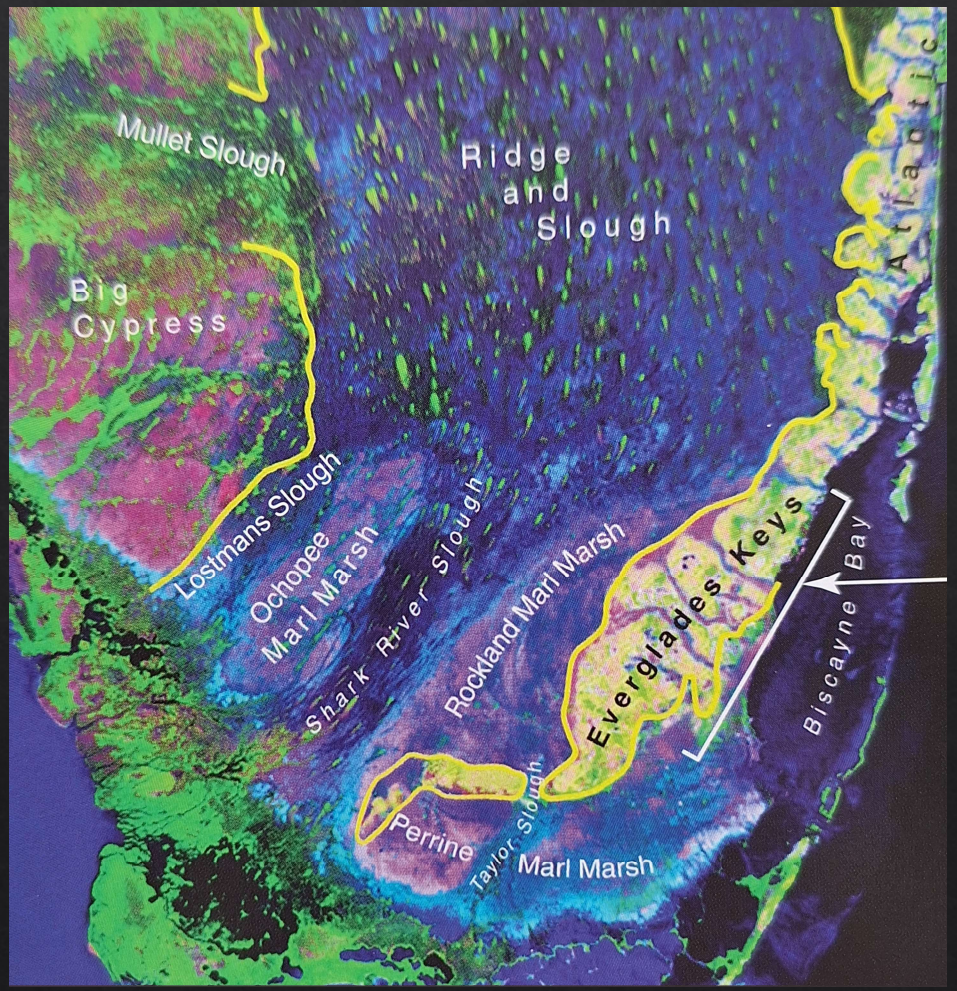
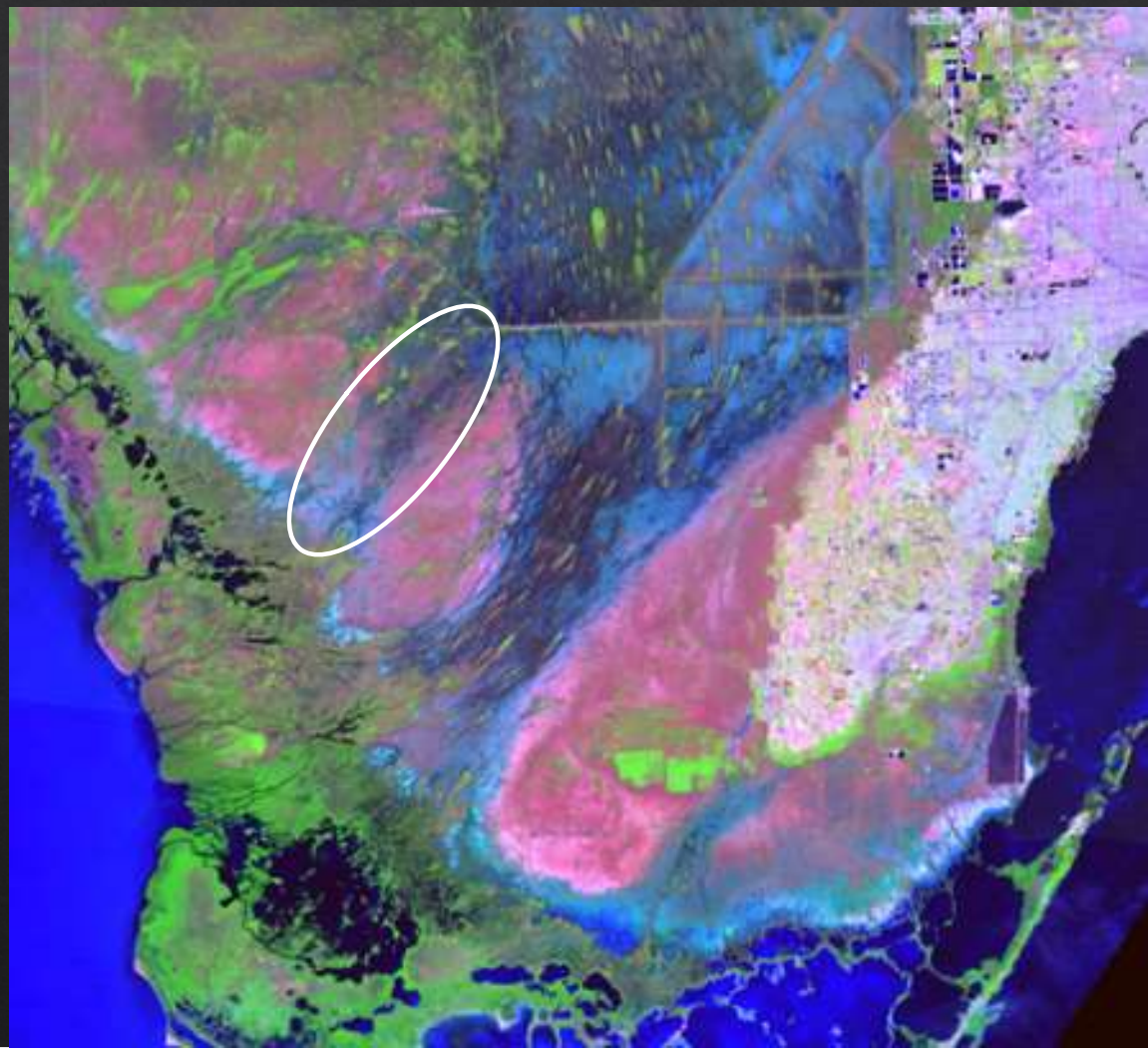
A. Where is Lostmans slough?
B. The Hydro Shuffle
C. Wading bird indicator
    1. NESRS
    2. Recent past nesting
    3. Hydro triggers?
D. What to do with the Western Everglades?
E. Summary observations and comments

1. Where is Lostmans Slough?

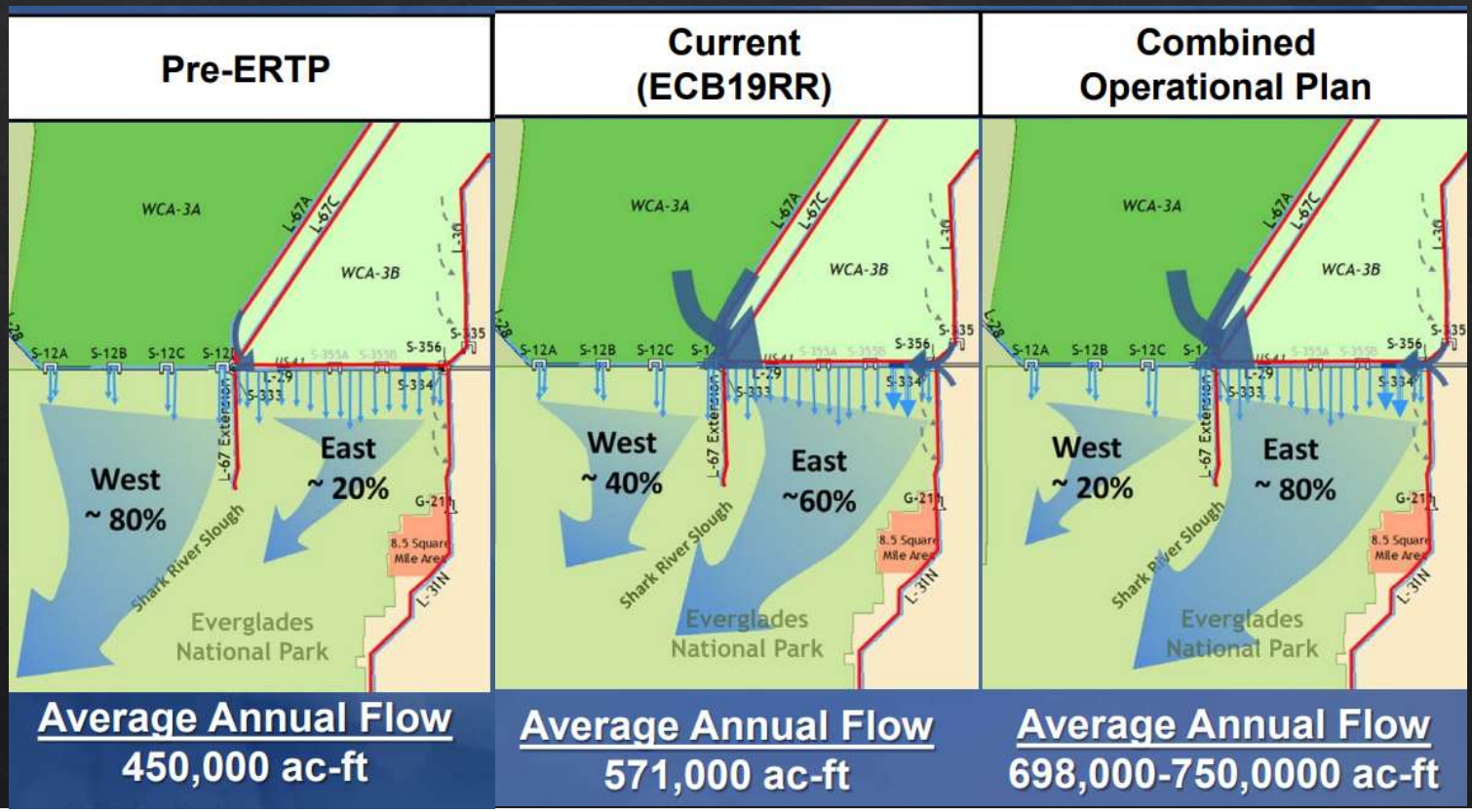


McVoy et al. 2011

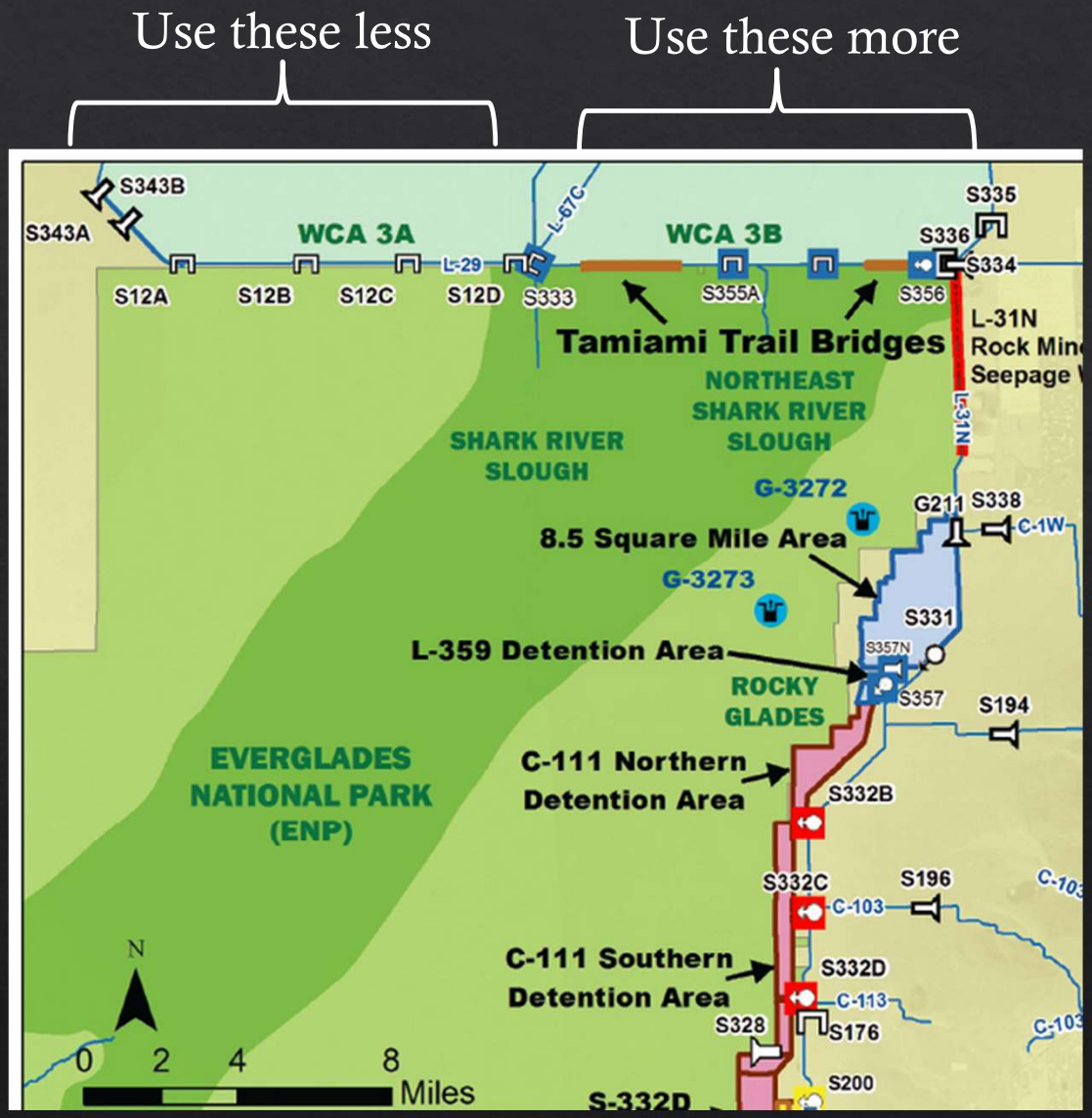


B. Hydro Shuffle: Discharge increasing and going East….

IOP (2000-2011)	ERTP (2012-2016)	COP (~2020…)
Discharge to W. ENP 360,000 ac-ft	Discharge to W. ENP 230,000 ac-ft	Discharge to W. ENP 150,000 ac-ft



LAKE OKEECHOBEE WATERSHED RESTORATION PROJECT

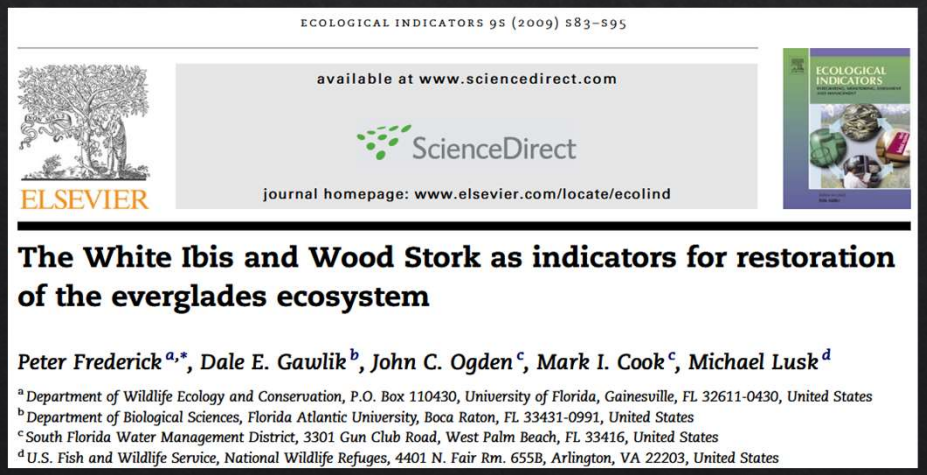


Hydrating SRS is a primary feature of Everglades Restoration

Progress Towards Restoring the Everglades Biennial Rev 2020. National Academies Press

C. Wading Bird Indicator of Everglades Restoration

1. Wading bird nesting relocated toward the coastal ecotone (70-90%).
2. Supercolonies (dominated by White Ibis) should return every 2-3 years



ECOLOGICAL INDICATORS 9S (2009) S83–S95

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The White Ibis and Wood Stork as indicators for restoration of the everglades ecosystem

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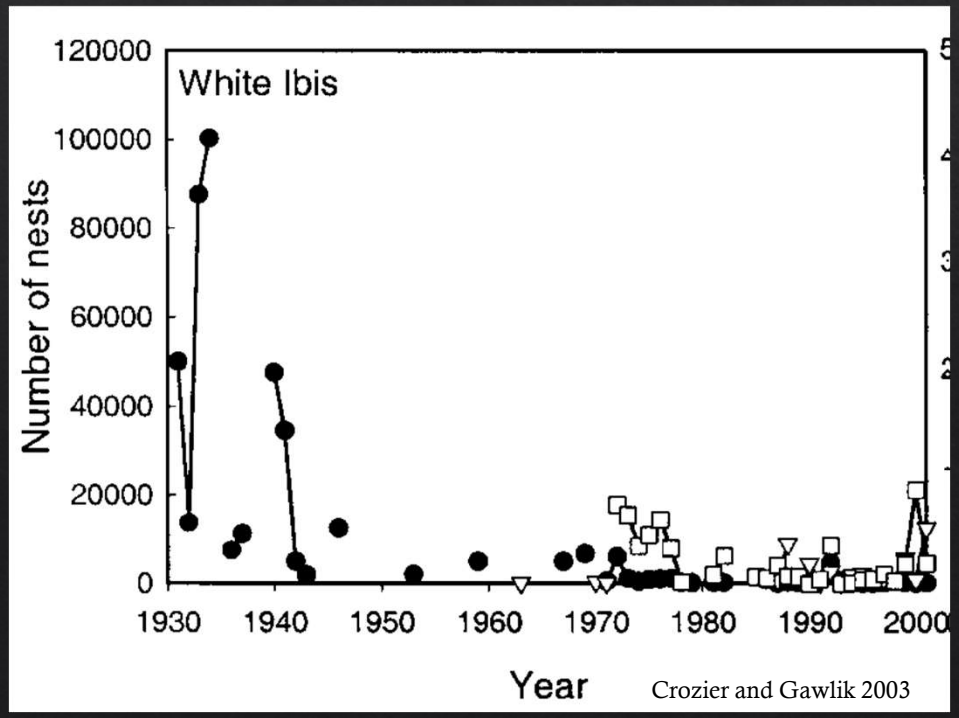
[d] *U.S. Fish and Wildlife Service, National Wildlife Refuges, 4401 N. Fair Rm. 655B, Arlington, VA 22203, United States*



Crozier and Gawlik 2003

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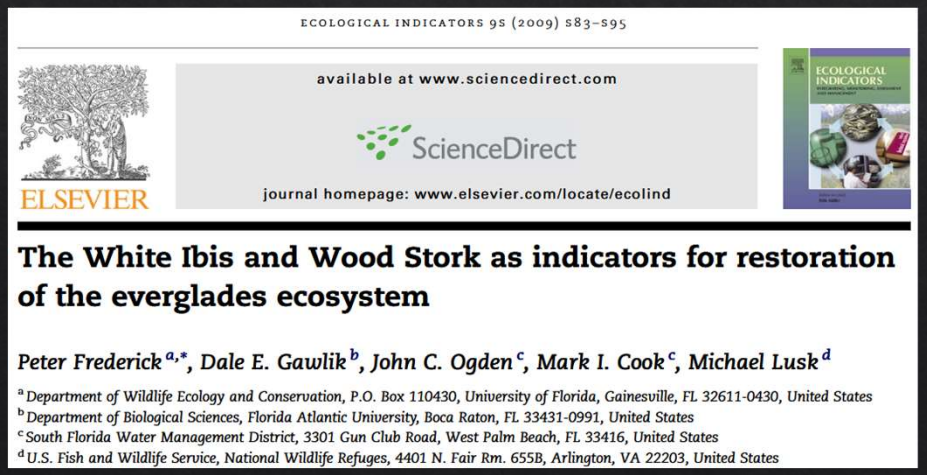

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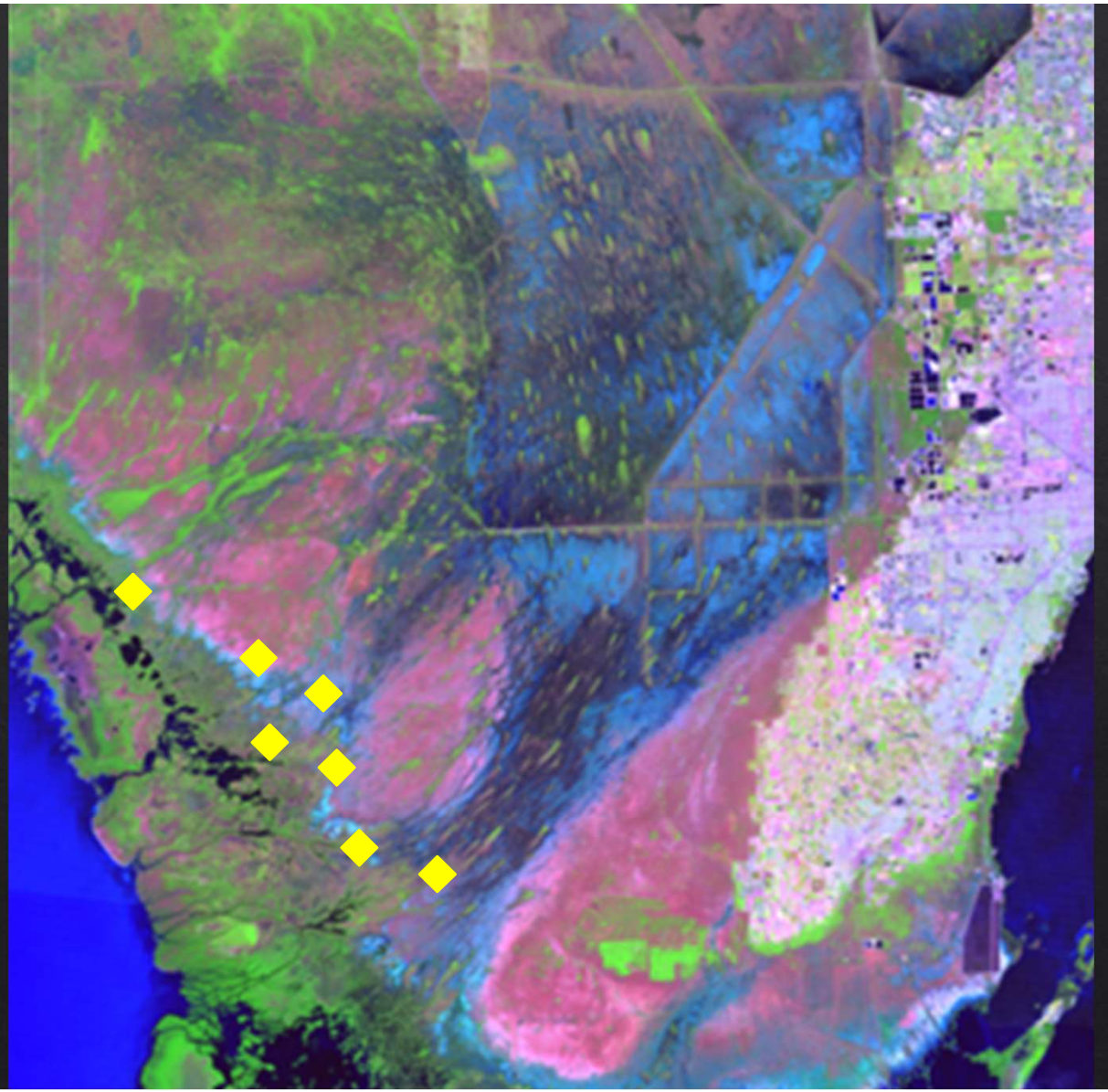
Questions circa 2009:

1. What will move wading bird nesting to the coast?

2. What are the relationships between White Ibis nesting effort, crayfish and hydrology?

Crozier and Gawlik 2003

◆ Coastal colonies



Big nesting colonies of ibis rely on freshwater prey with a heavy emphasis on crayfish.

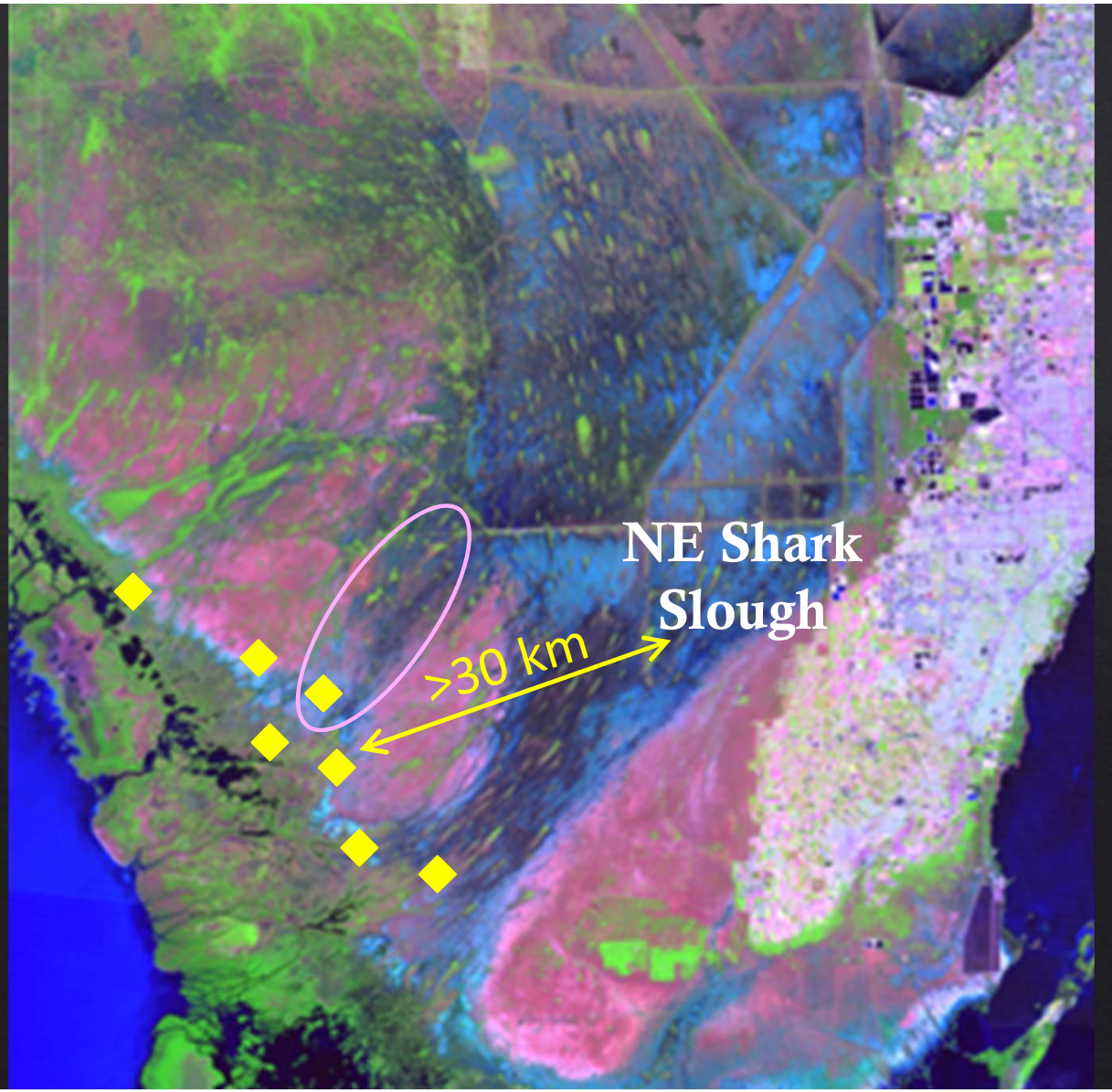
Could NESRS be the answer?

no

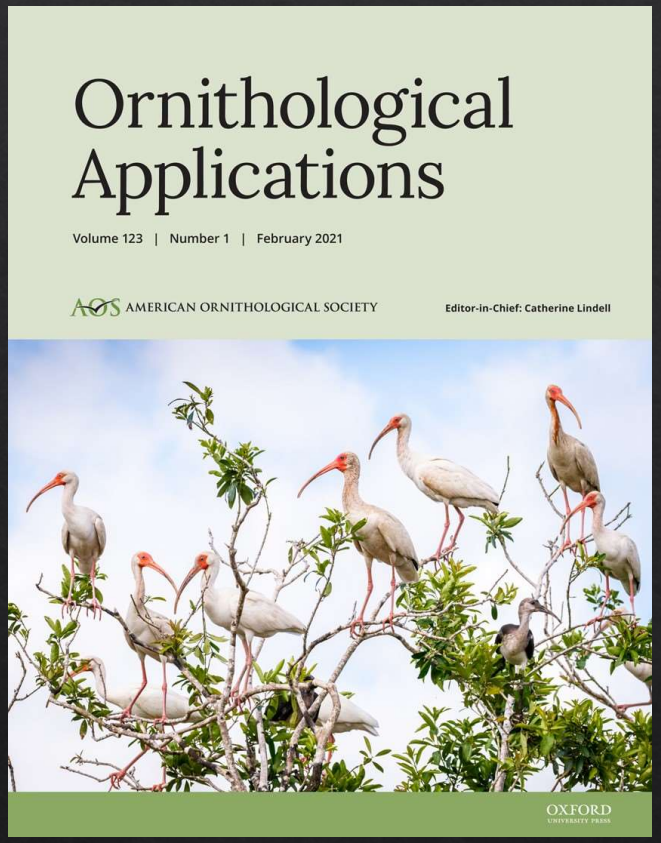
Mean Foraging Distance from Breeding Colony < 15 km

(Beerens et al. 2011, Auk)

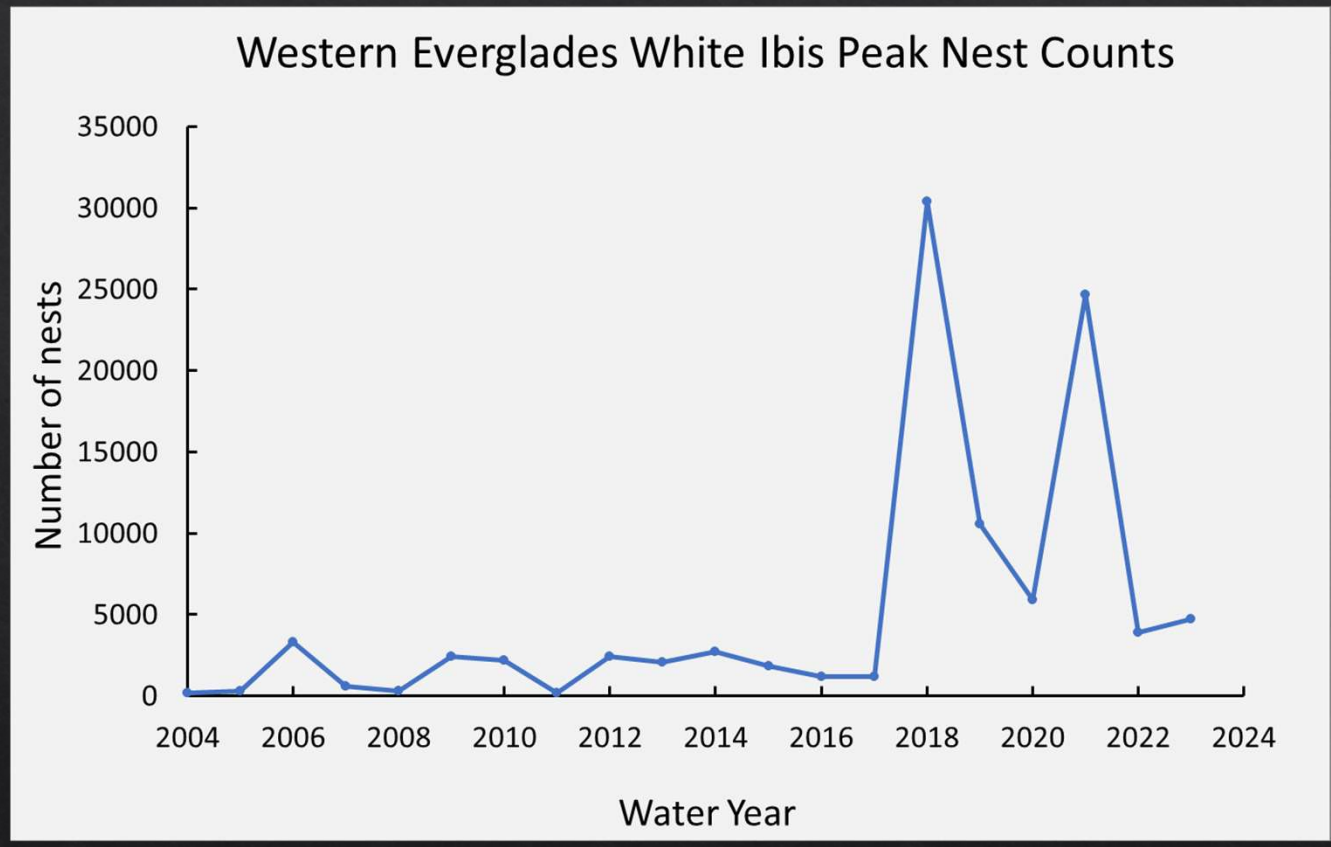
◆ Coastal colonies



Recent Nesting Trends

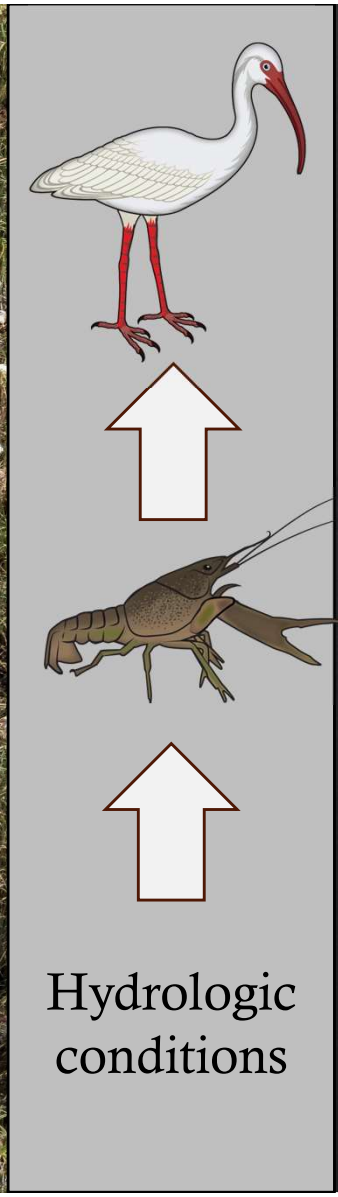


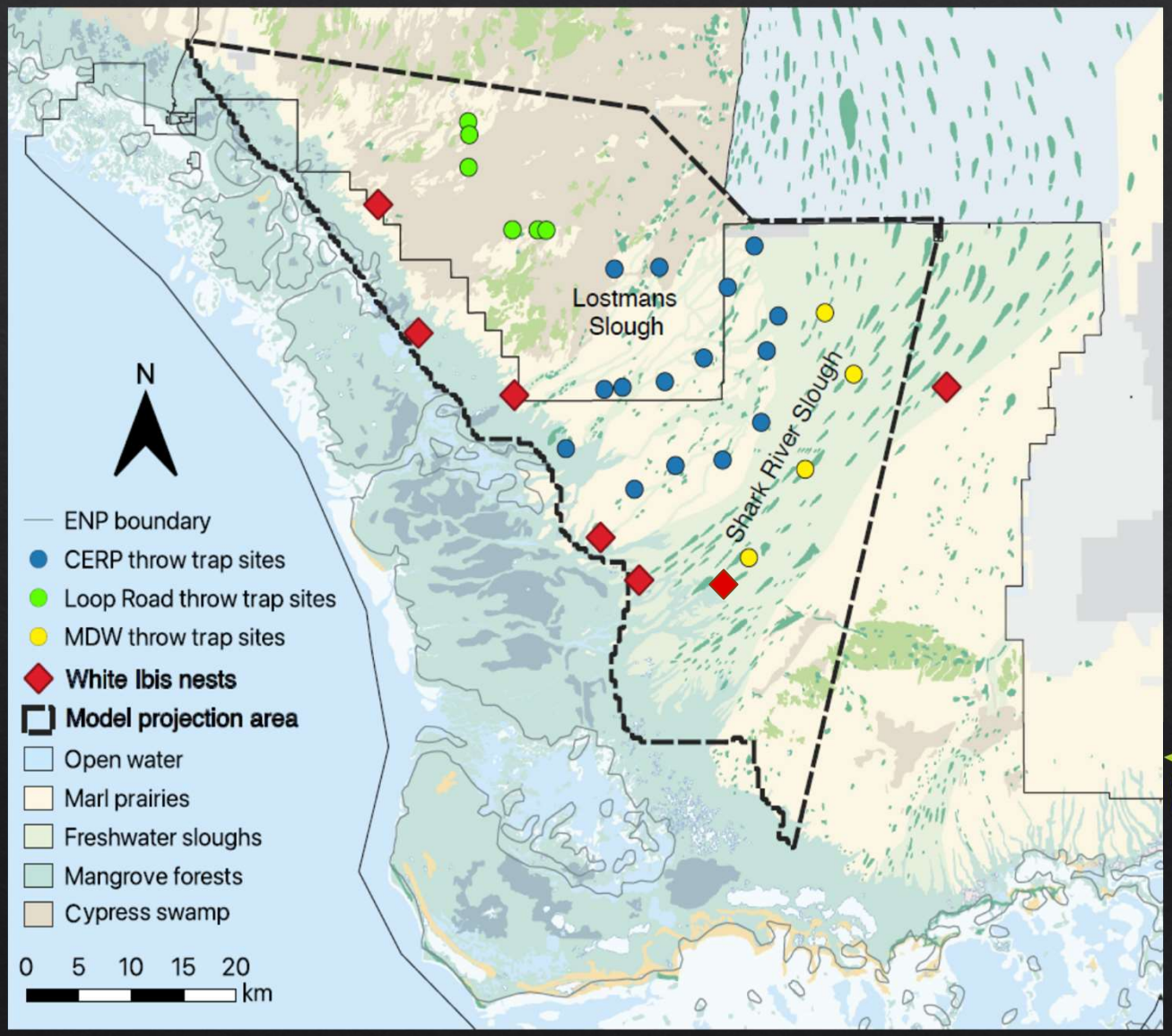
Cocoves et al. 2021



Everglades Crayfish (*Procambarus alleni*)

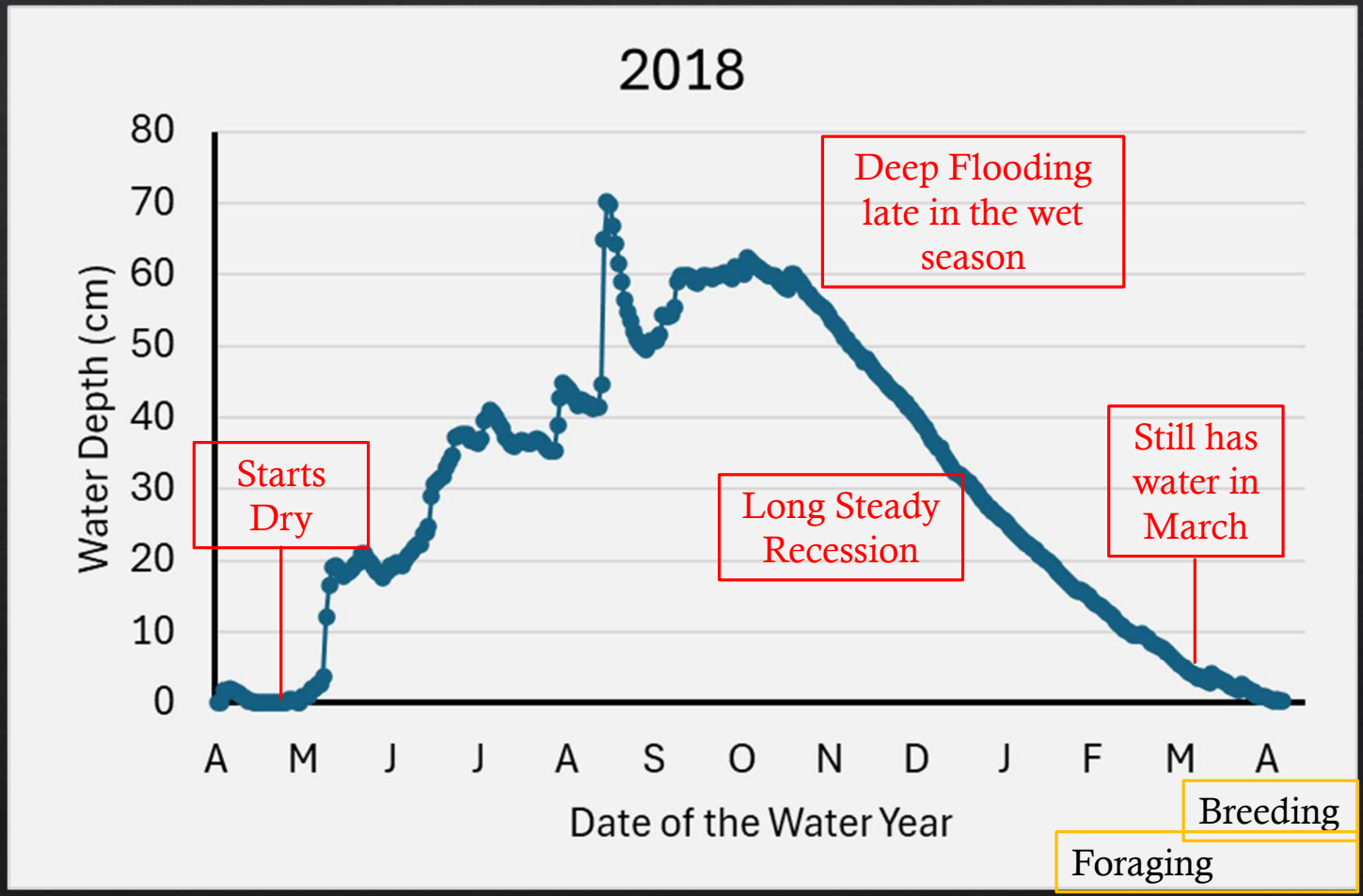

Photo: Mark Cook

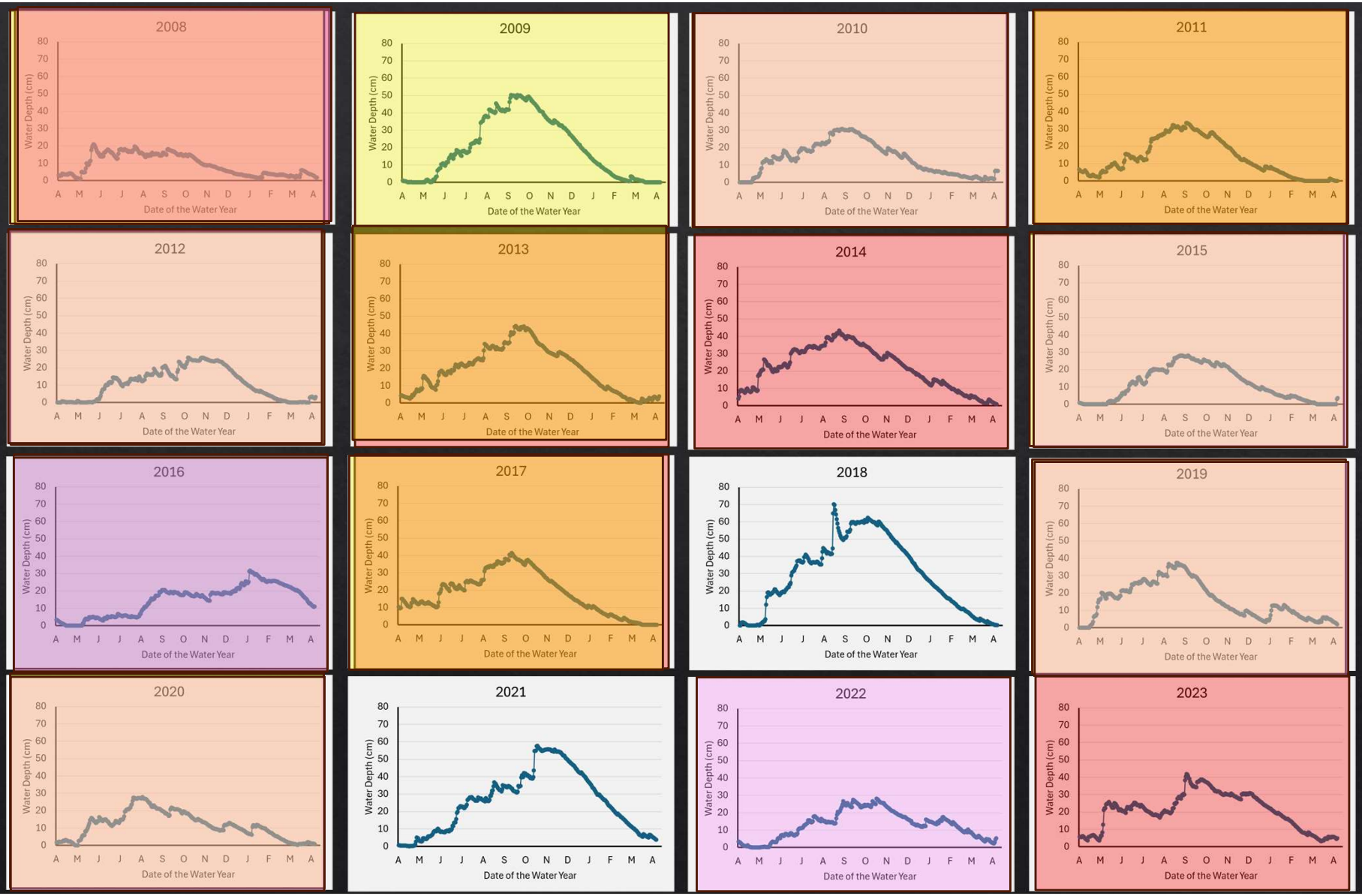

Hydrologic conditions



Water depths in the Western Everglades in years with and without supercolonies?

Mean Daily Water Depths across the Western Everglades Primary Sampling Units (CERP MAP)

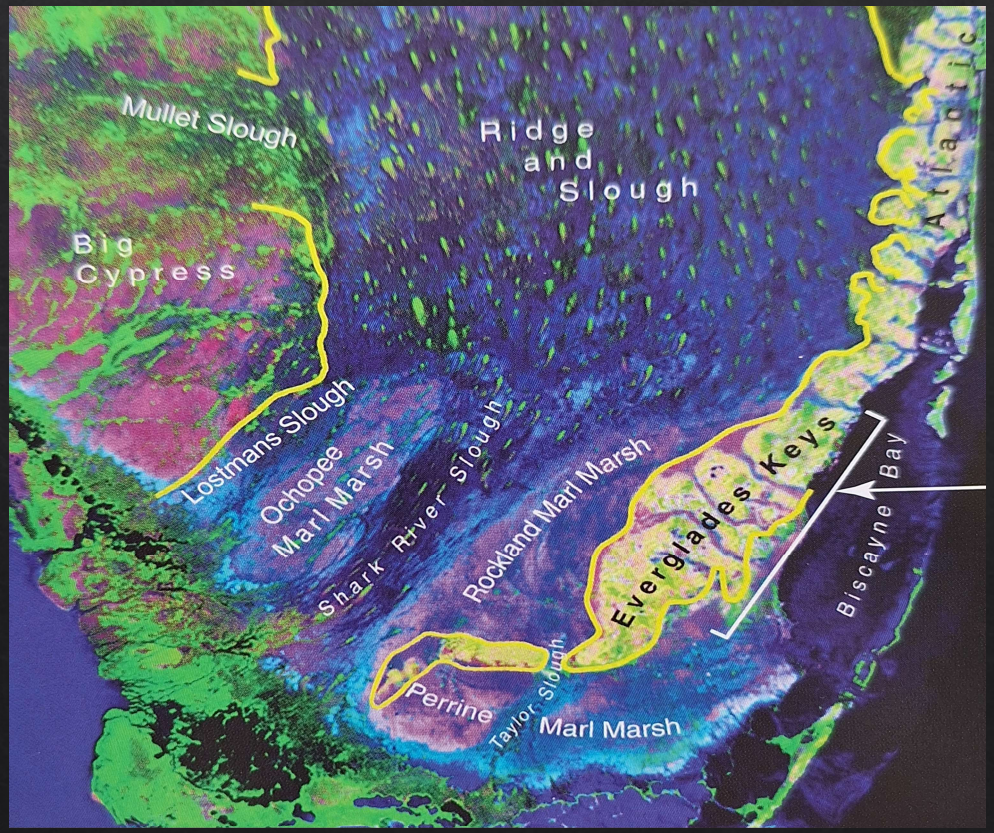



2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Water Depth (cm)
0 10 20 30 40 50 60 70 80
A M J J A S O N D J F M A
Date of the Water Year

Wetter years (after extensive drying) in the Western Everglades produces high wading bird nesting effort.

D. What to do with the Western Everglades?

Drier vs. Wetter Narratives



McVoy et al. 2011

Narrative 1: Make it Drier

Marl Prairie with <5-mo hydroperiods

Basis: Habitat and hydrologic requirements of an endangered seaside sparrow. (Subpop A)

Narrative 2: Make it wetter

Basis: Hydrologic simulations, Paleoecological studies, Old survey notes, Wading bird patterns

Is there any evidence that the Ochopee Marl Marsh with < 5-month hydroperiods is a natural feature of the pre-drainage Everglades?

NO.

E. Summaries, Notes and Comments:

1. Hydrating NESRS is crucial… but it is not the end of Restoration.

2. Making the Western Glades drier is going against predrainage conditions and the wading bird restoration indicator.

3. Western Everglades Restoration Plan is important here, but hydro-restoration plans appear to bypass Lostmans slough.

4. Suggestion: water movement westward might be a tool to benefit wading birds nesting in some years…(?)

Thank you for listening.