



Photo: Ralph Arwood

RECENT HYDROLOGIC CHANGE AT AUDUBON'S CORKSCREW SWAMP SANCTUARY



Shawn E. Clem
Corkscrew Swamp Sanctuary

Michael Duever
Natural Ecosystems



Daily water level
data beginning in
1957

1953



Median daily surface water elevation (m NGVD29)



Median daily surface water elevation (m NGVD29)



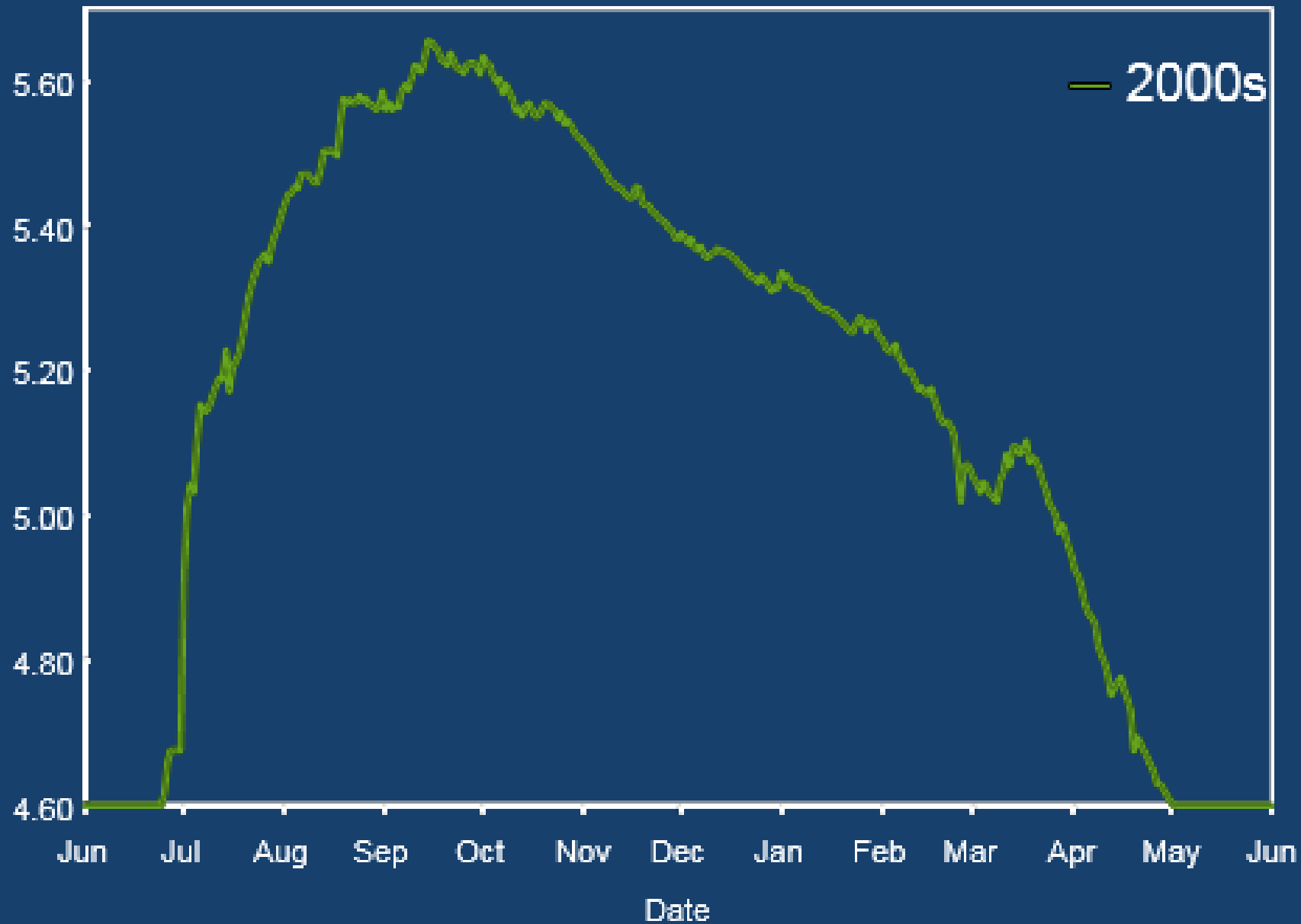
Median daily surface water elevation (m NGVD29)



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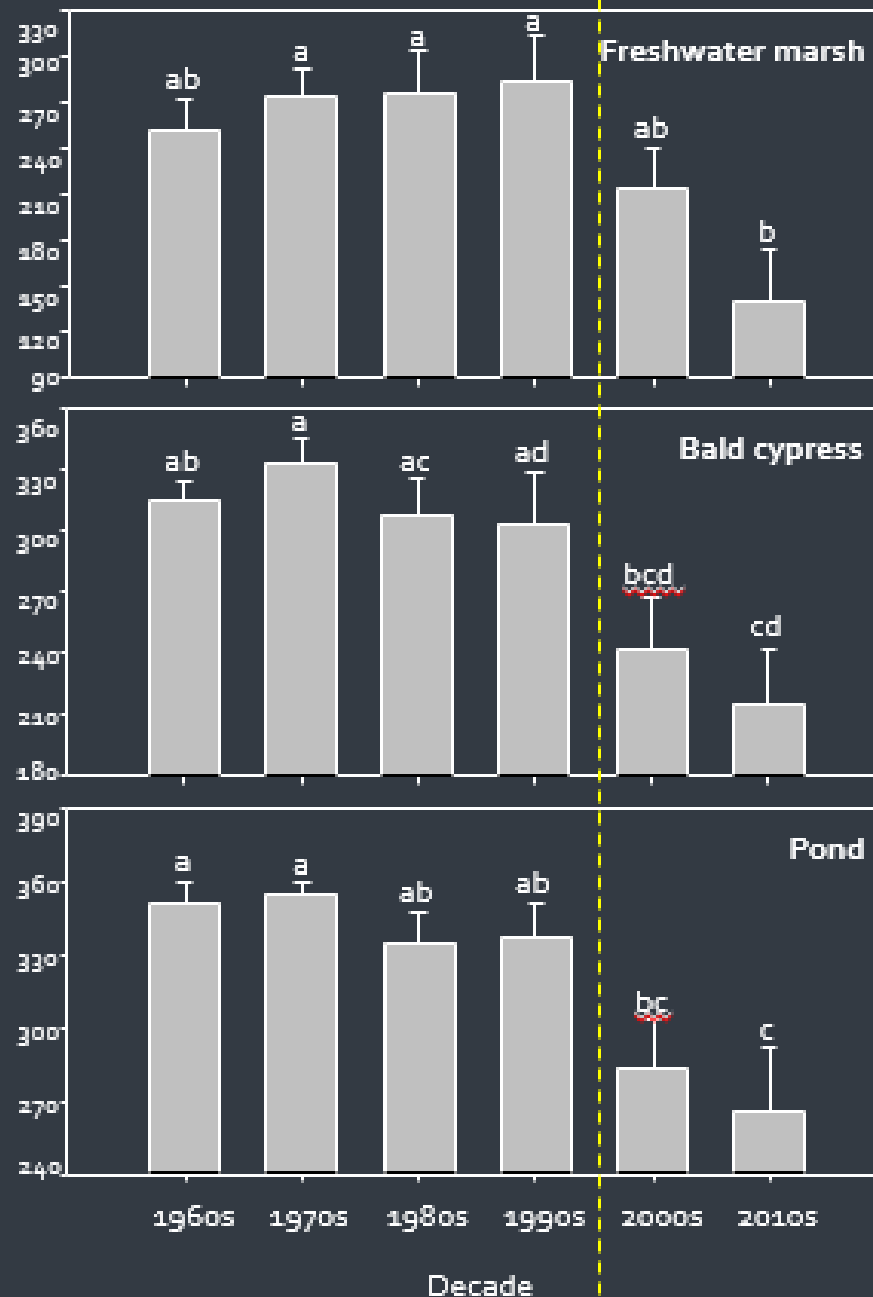


Median daily surface water elevation (m NGVD29)





Hydroperiod (days inundated)



1960s to 2010s:

47.1%
(4.2 mo.)

33.7%
(3.5 mo.)

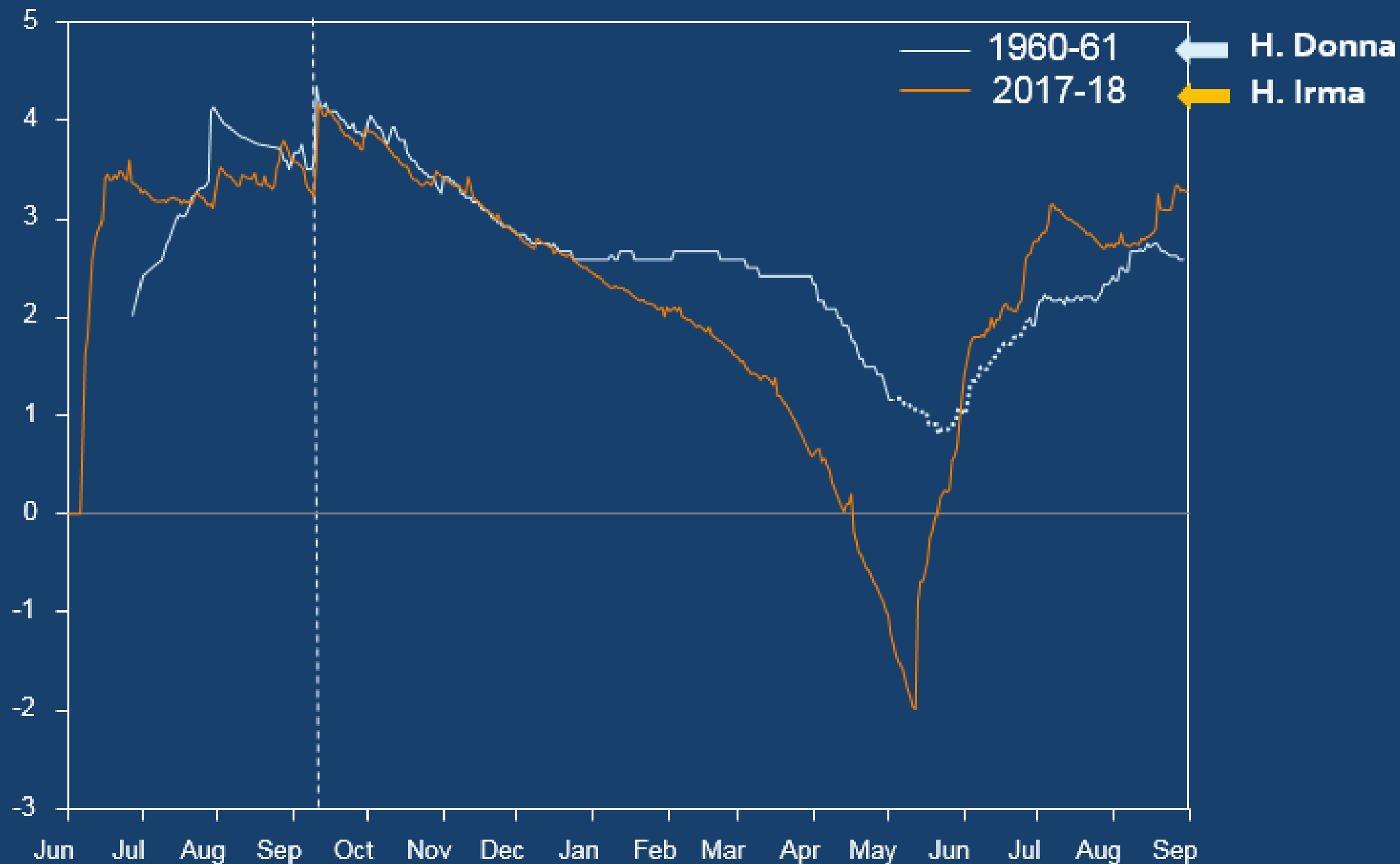
22.8%
(2.5 mo.)



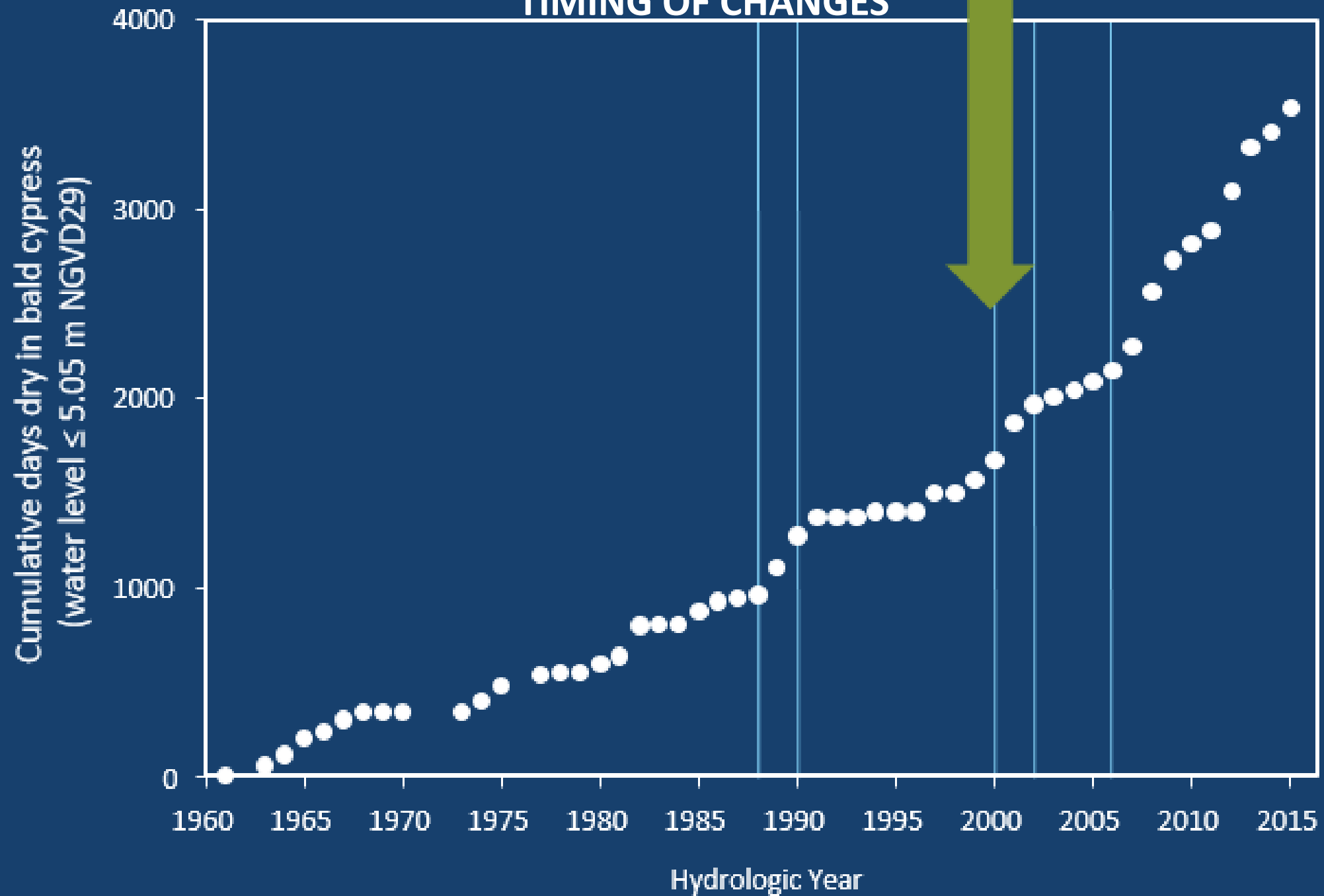
1960s to 1990s:
Dried down once every 5
years

2000s to present:
Dry down 4 of every 5
years
(dry downs last 40%
longer)

Water level at Corkscrew's "B" gauge (ft.)

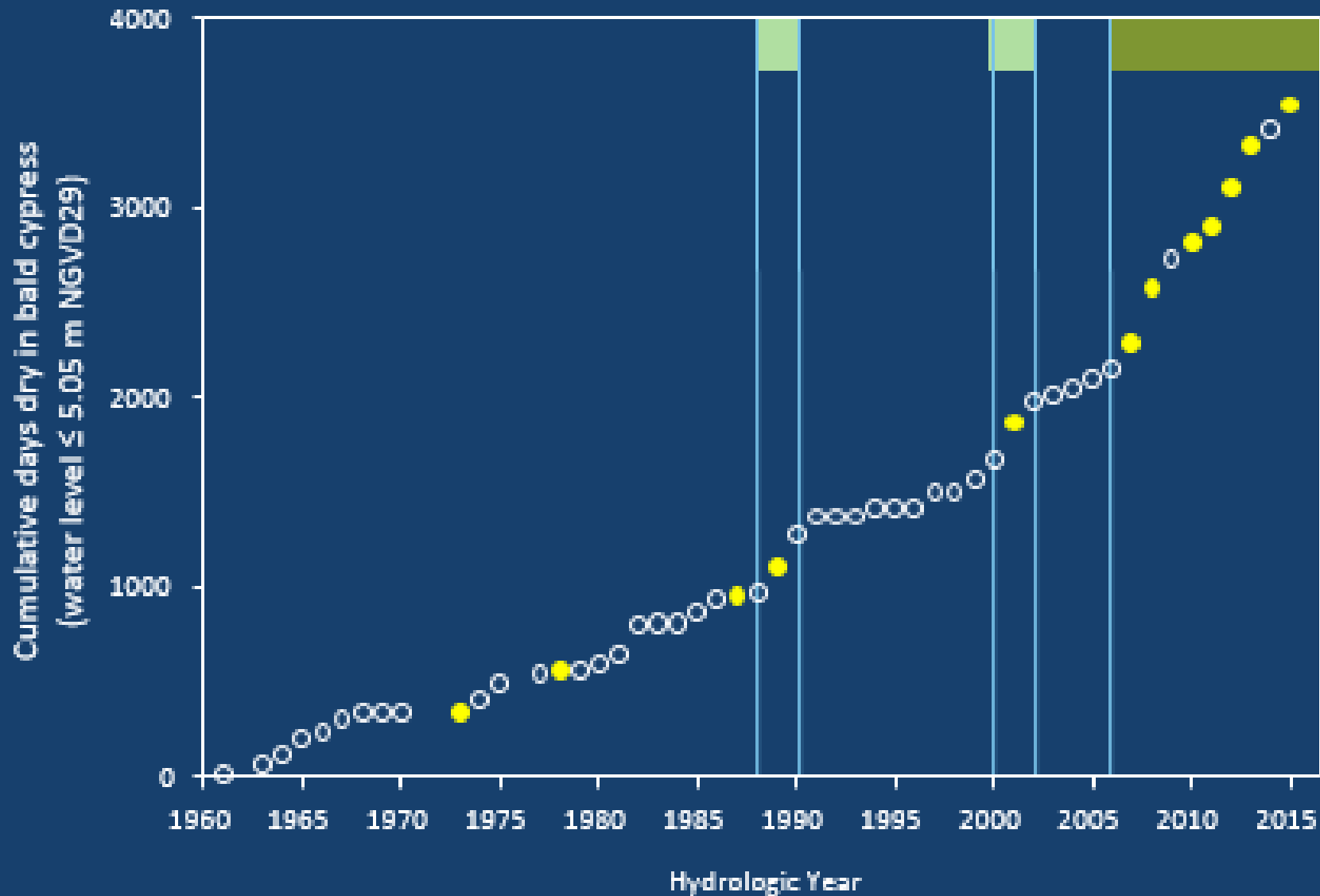


TIMING OF CHANGES



TIMING OF CHANGES

No nesting 13% of years \longrightarrow No nesting 78% of years



**No Wood Stork
nesting at
Corkscrew**



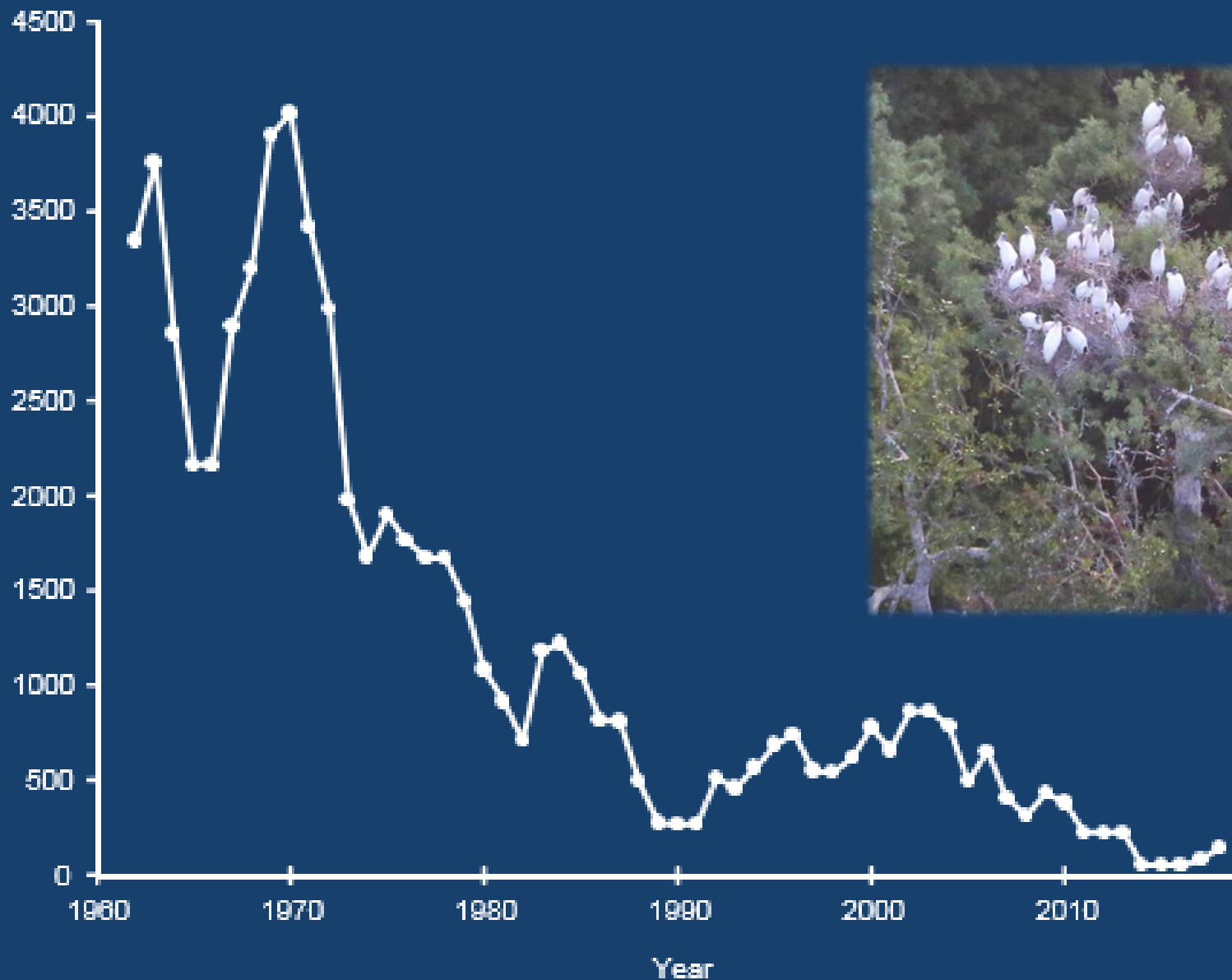
**Wading birds are indicators of
wetland health**

Wading birds are food limited



Water grows fish, fish feed birds

5-year running average of peak
WOST nests at Corkscrew Swamp
Sanctuary



Corkscrew's Wood Stork colony has declined severely—
is further stressed by hydrologic changes

Wood Storks are our canary in the coal mine

Hydrologic change also has implications for

- Other aquatic-dependent wildlife
- Plant communities
- Dry season severe fire risk
- Winter temperature buffering & microclimate



Questions?

Technical report:
<http://corkscrew.audubon.org/conservation/corkscrew-water-loss>