

Governing Board Workshop
April 14, 2010

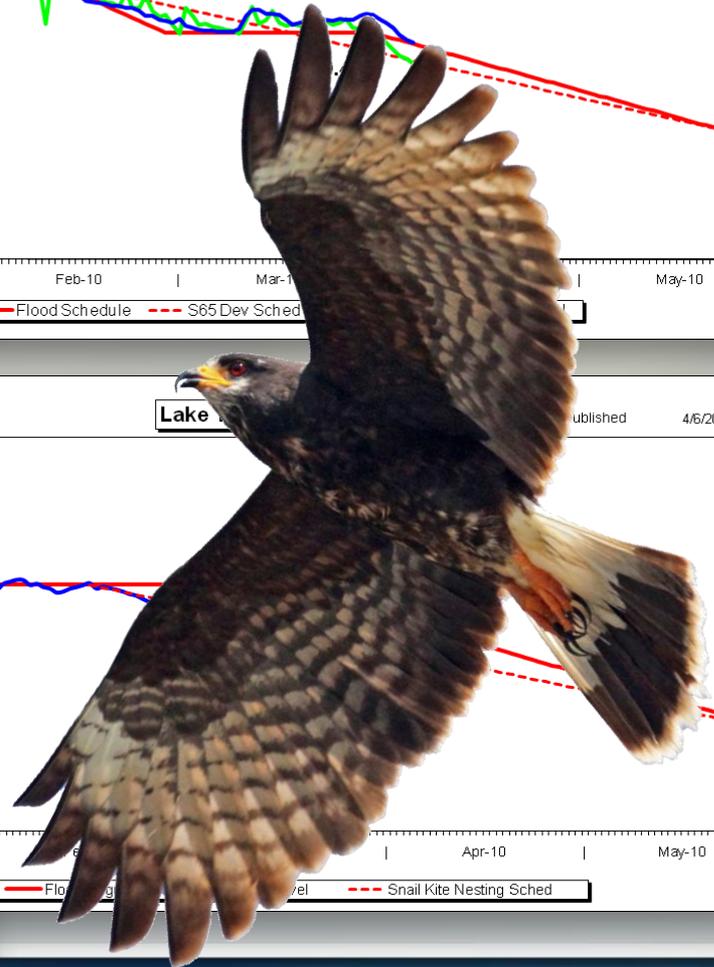
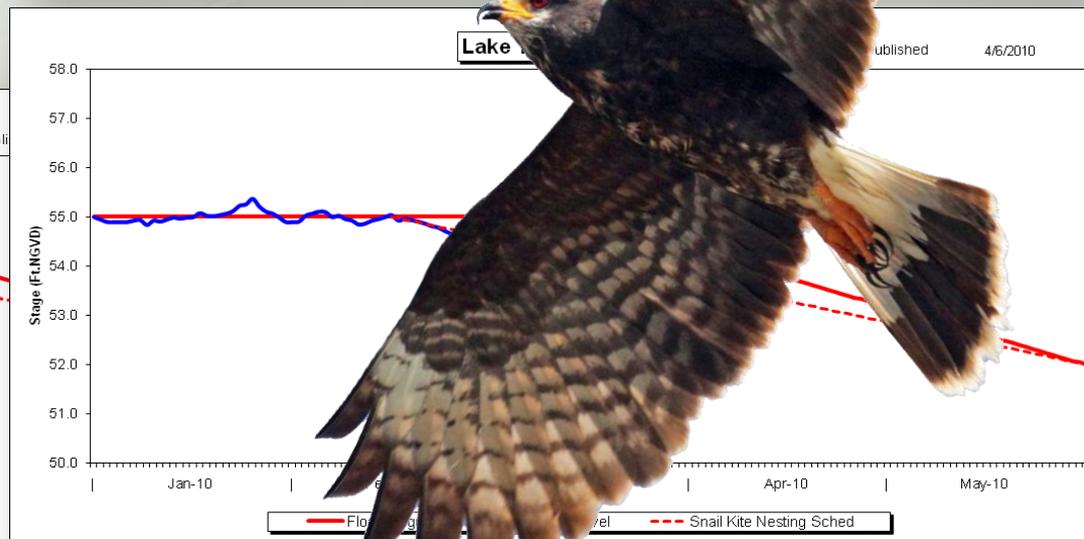
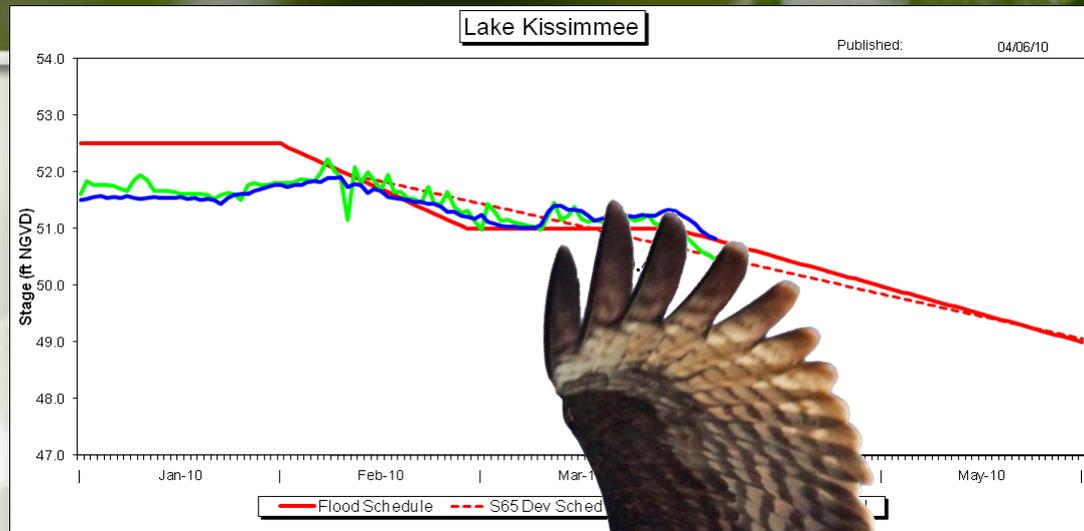
Ecological Conditions Update

Lawrence Glenn

Director, Kissimmee Division
Restoration Sciences Department

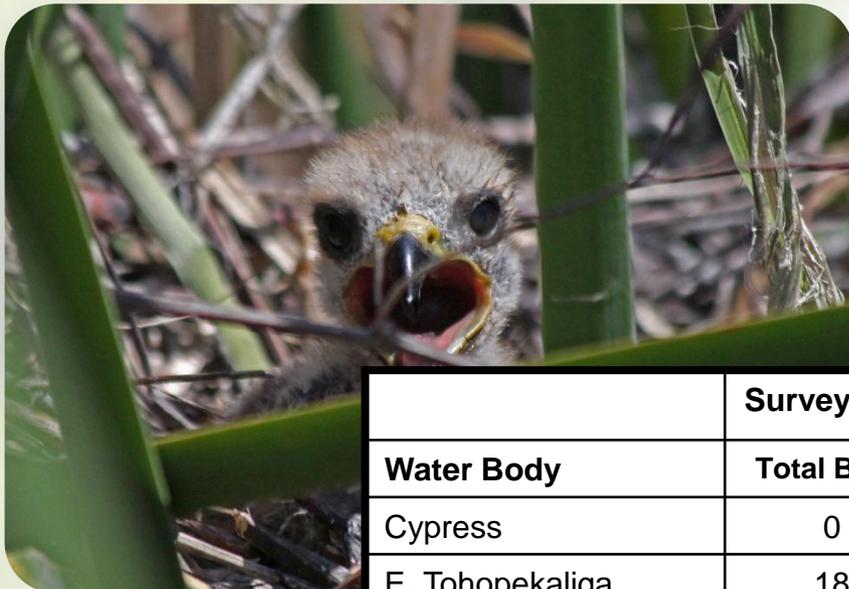
Kissimmee Basin

- Almost 8 inches of rain fell in the Kissimmee Basin in the past month
- Multiple stage reversals occurred in upper basin lakes
- The modified recession schedules for snail kites will likely be revised due to high lake levels



Kissimmee Basin

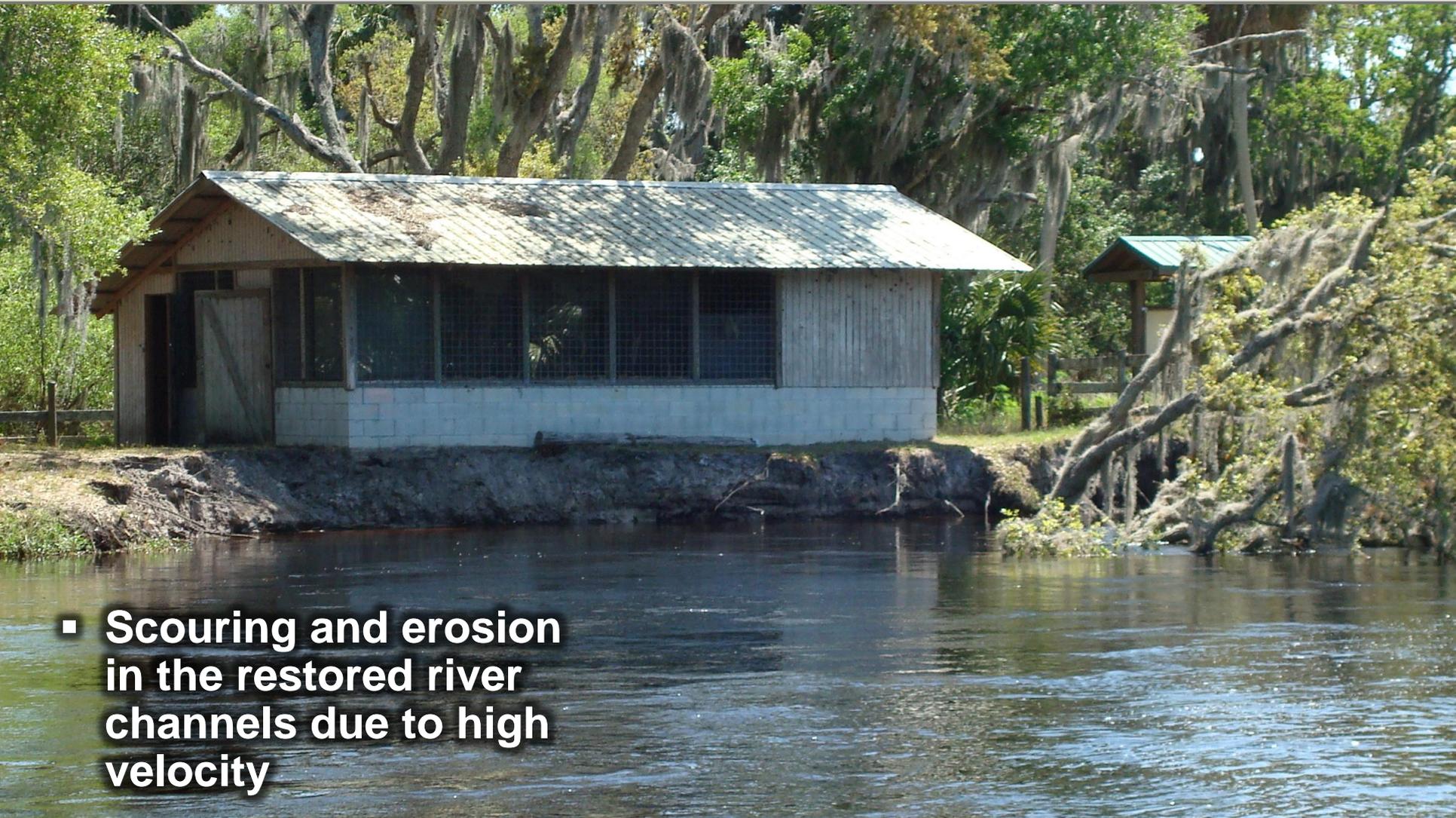
Snail Kite Nesting on Upper Basin Lakes as of Mid-March



Water Body	Survey1 (3/10-3/16/2010)		Survey2 (3/30-4/8/2010)	
	Total Birds	Active Nests	Total Birds	Active Nests
Cypress	0	0	1	0
E. Tohopekaliga	18	2	12	3
Hatchineaha	15	2	15	2
Jackson	8	0	0	1
Kissimmee	34	0	17	3
Mairan	3	0	0	0
Tiger	0	0	0	0
Tohopejaliga	58	5	96	27
	136	9	141	36

Data courtesy of
Wiley Kitchens, UF

Kissimmee Basin



- **Scouring and erosion in the restored river channels due to high velocity**

Kissimmee Basin

Despite the declines in floodplain wading bird foraging due to stage reversals, some flocks continue to use the shallow edges of the floodplain



Kissimmee Basin

Cabbage palms that are usually above water in the upper reaches of the Phase I restoration area



Lake Okeechobee

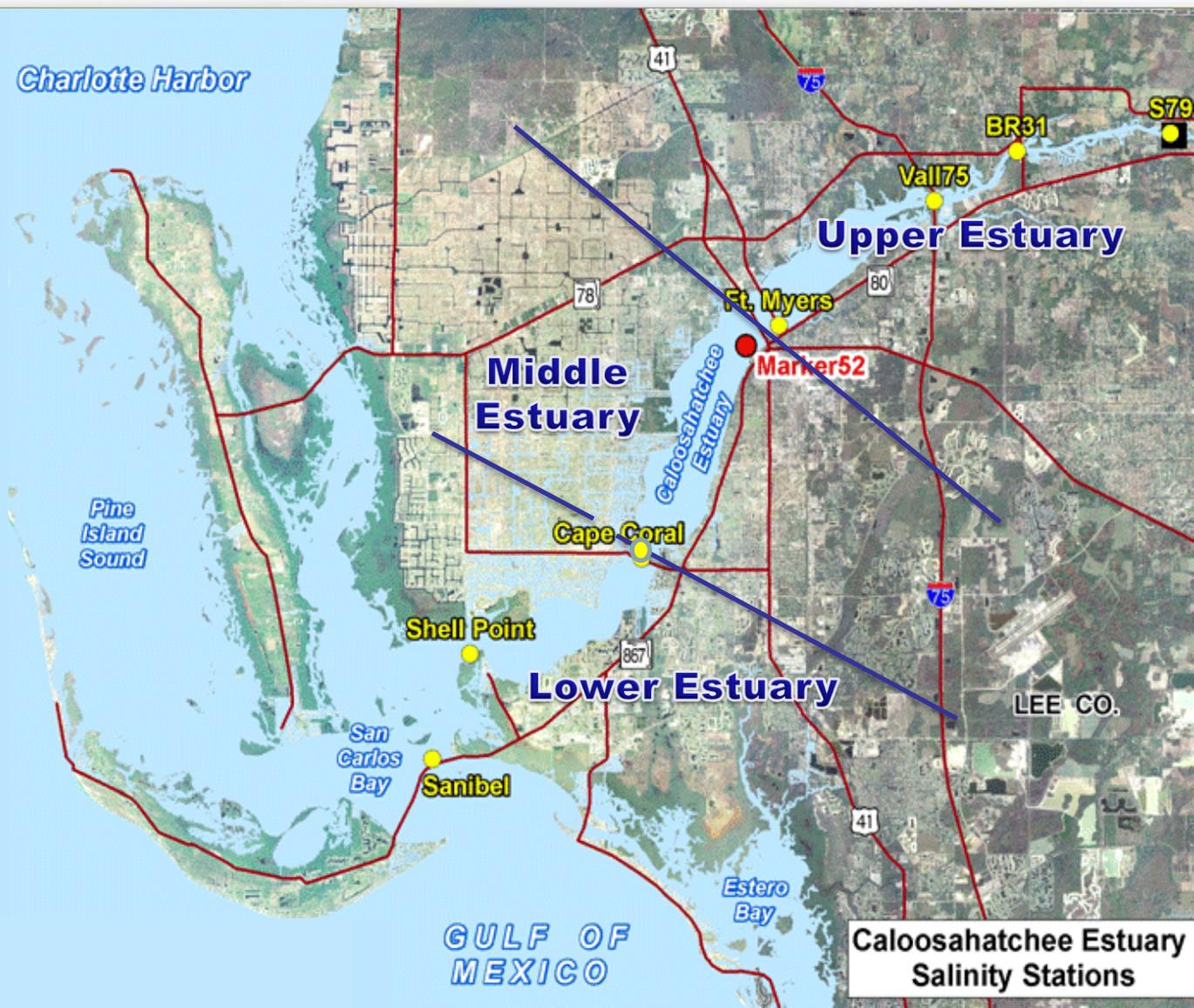


Lake Okeechobee

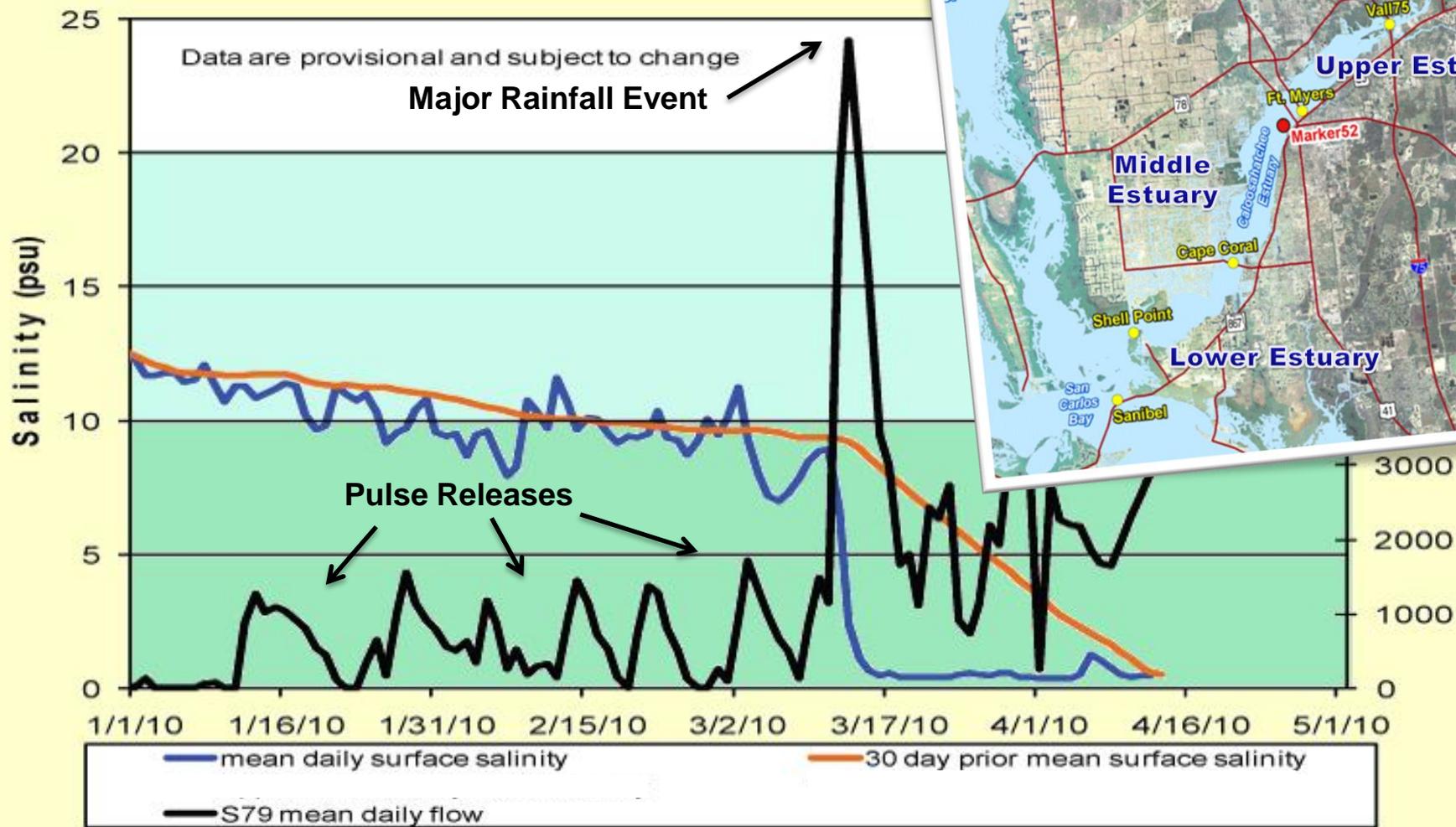


Caloosahatchee Salinity

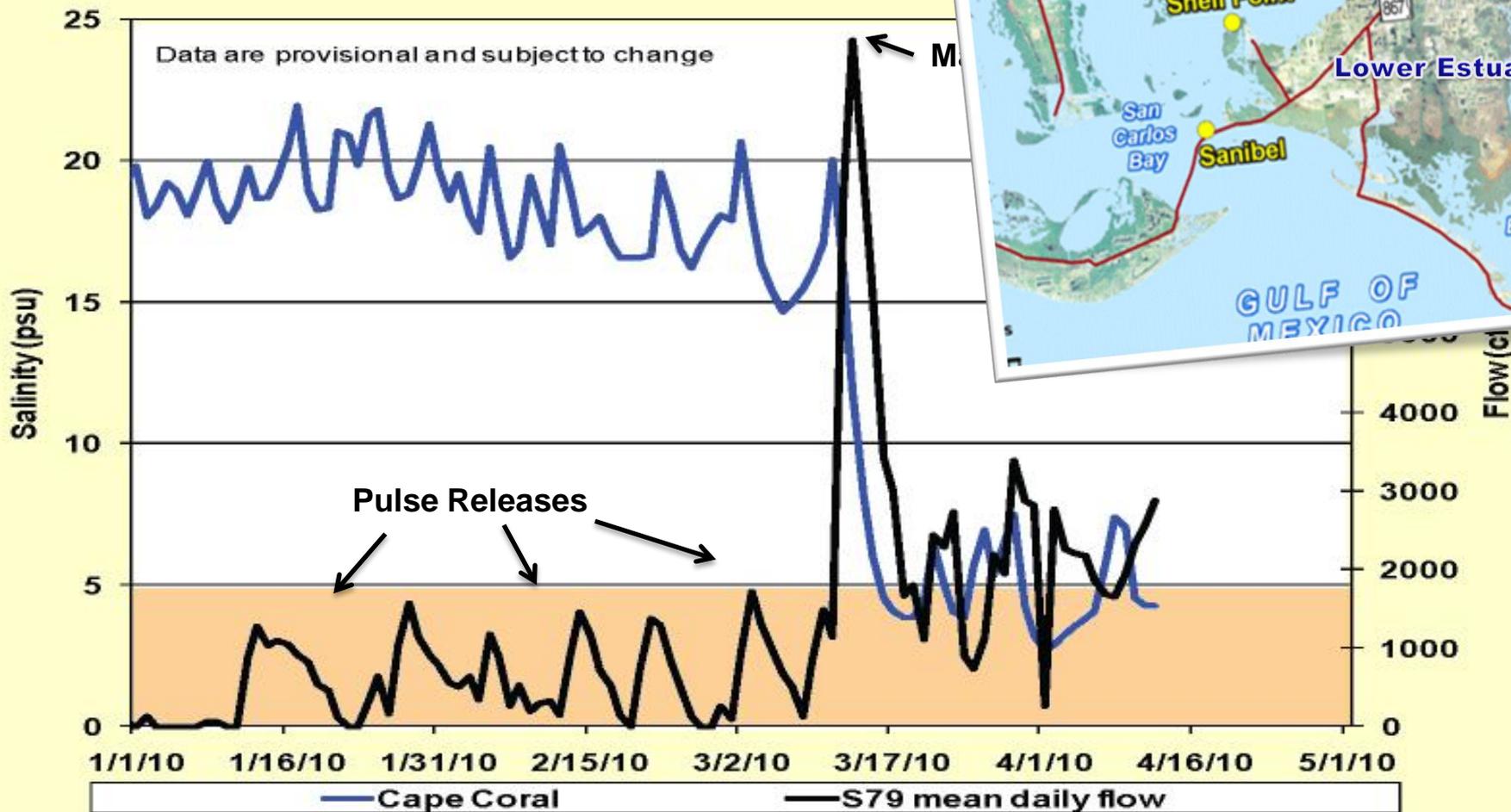
- Lake releases and local runoff have reduced salinity throughout the Caloosahatchee estuary
- Salinity conditions in the upper Estuary are favorable for tape grass and associated fauna
- Salinity downstream of Cape Coral is approaching unfavorably low limits



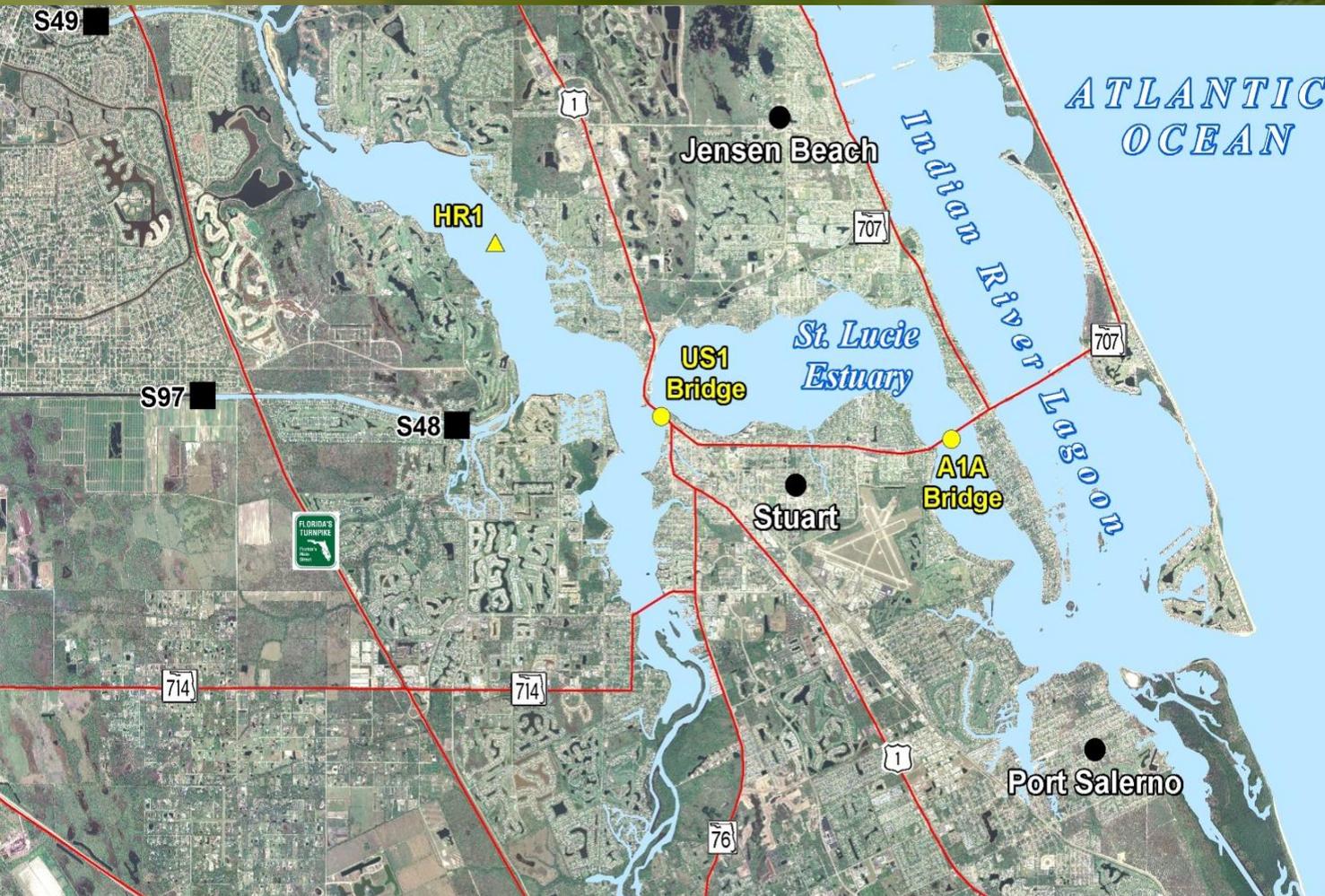
Caloosahatchee Salinity: Upper Estuary - Fort Myers



Caloosahatchee Salinity Lower Estuary and San Carlos Bay



St. Lucie Salinity: US 1 Bridge



In the St. Lucie, the daily salinity at the US1 Bridge was below the salinity envelope, threatening oyster survival

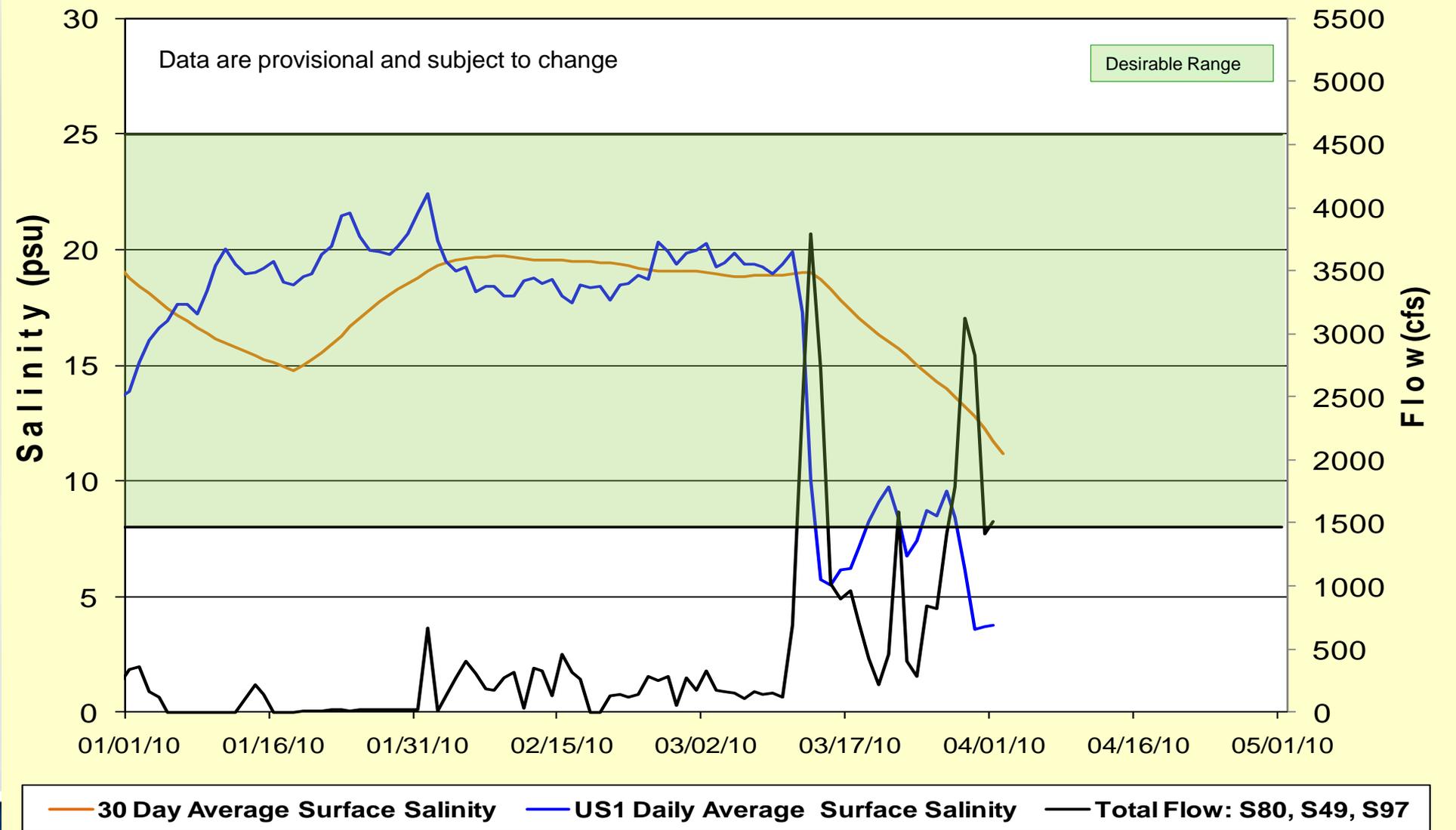
St. Lucie Estuary Salinity Recorders

- ▲ SFWMD Recorder
- USGS Recorders

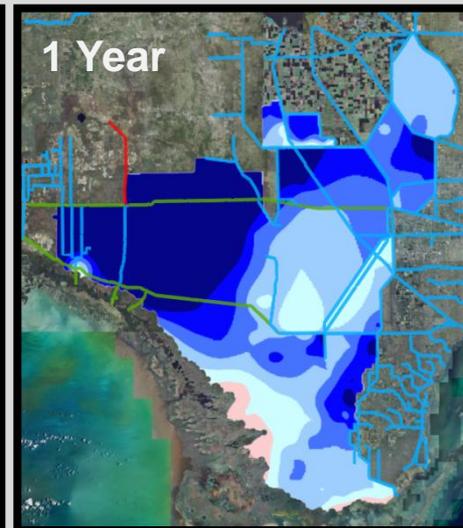
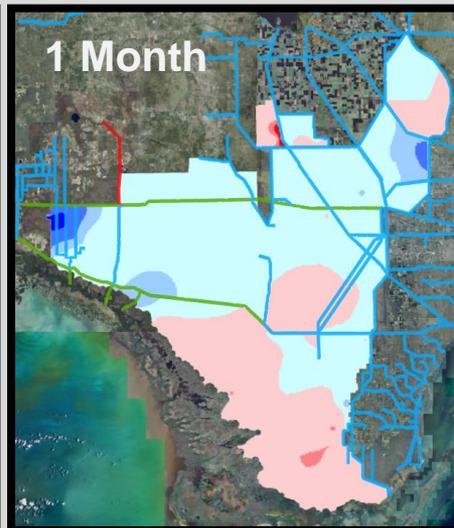
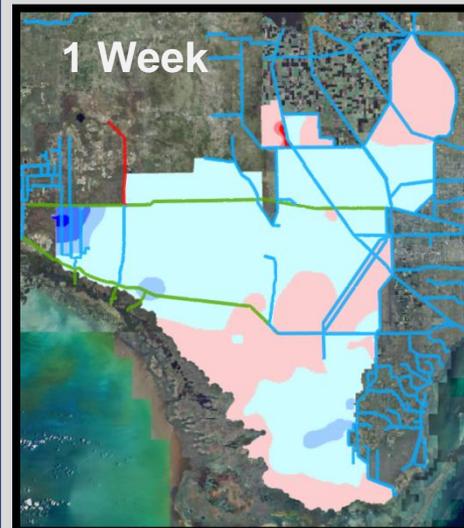
0 0.5 1 2 Miles

0 1 2 4 Kilometers

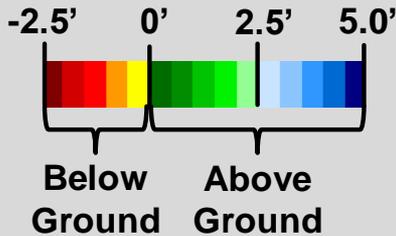
St. Lucie Salinity: US 1 Bridge



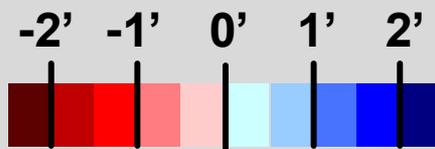
Everglades Water Depths and Difference Maps (Present minus Past)



Water Depth (feet)

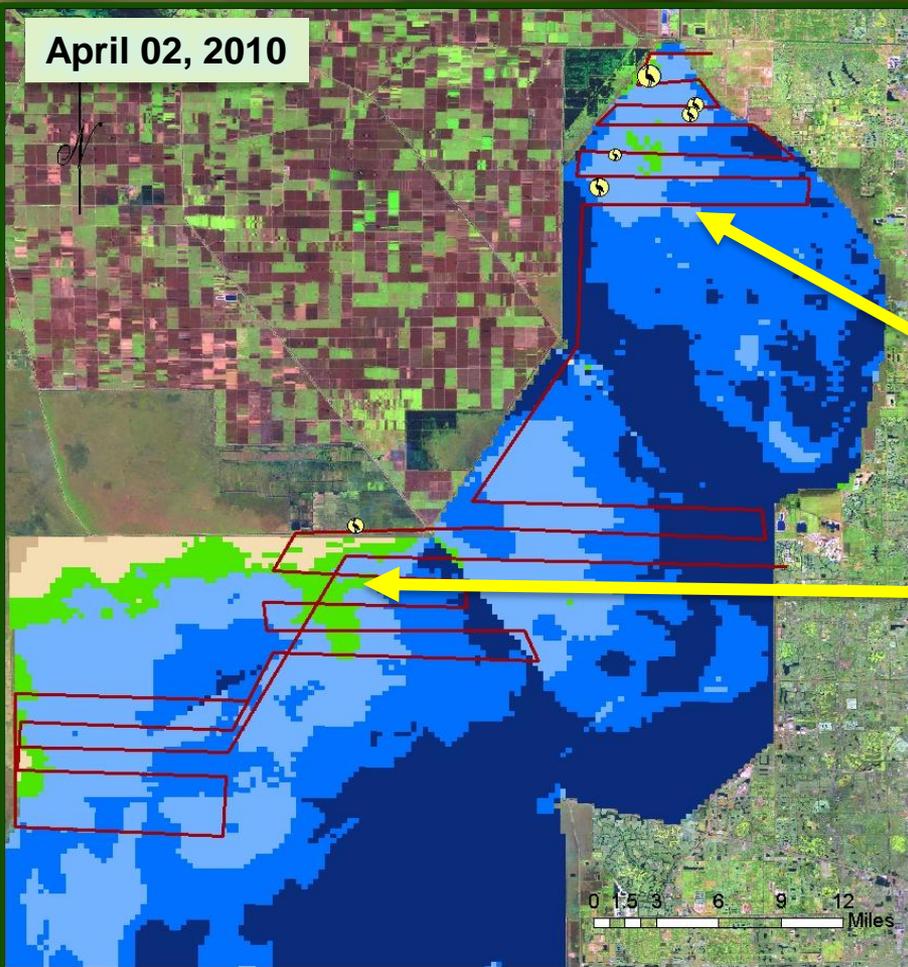


Water Depth Difference (feet)



Wading Bird Foraging Areas

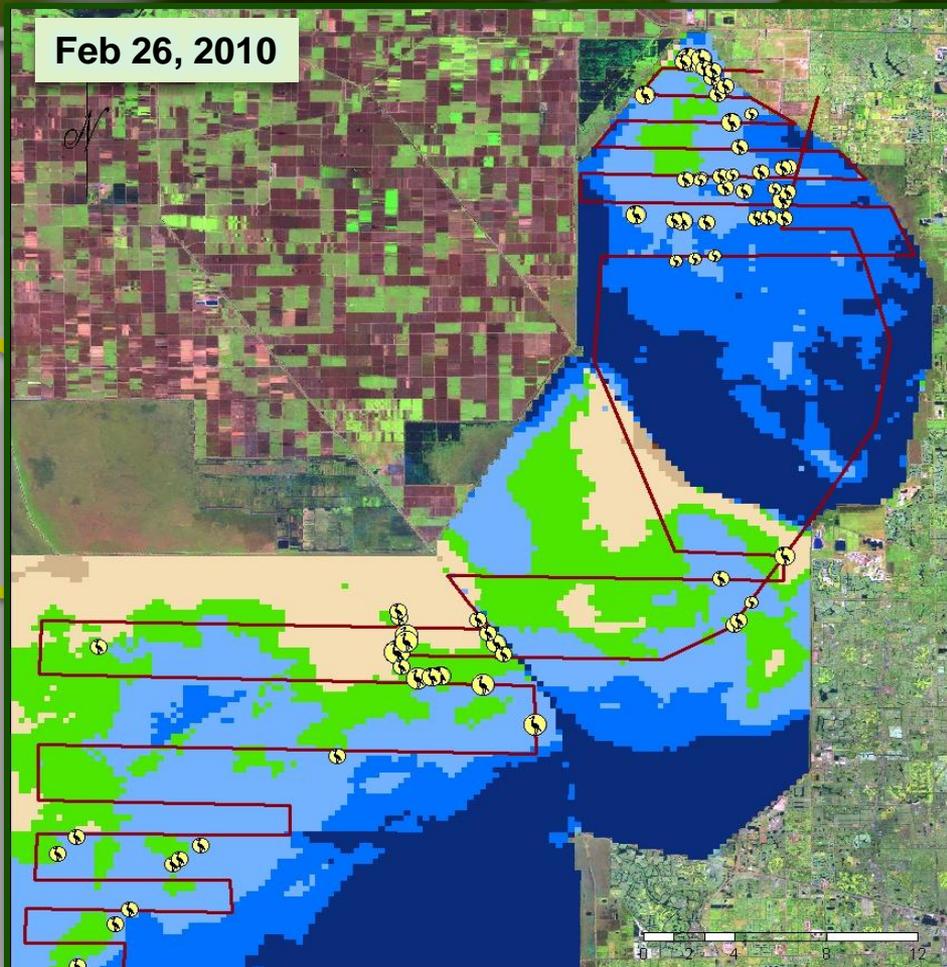
April 02, 2010



Legend

— Apr 02 Flight Path	☉ 21 - 50	Water Depth (ft)	0.24 - 0.53 (optimal)
☉ Flock	☉ 51 - 100	< -1.67	0.53 - 1.00 (suboptimal wet)
☉ 20	☉ 101 - 150	-1.67 - -0.48 (too dry)	1.00 - 1.45 (too wet)
		-0.48 - 0.24 (suboptimal dry)	> 1.45

Feb 26, 2010



Legend

— Feb 26 Flight Path	☉ 101 - 200	Water Depth (ft)	0.24 - 0.53 (optimal)
☉ Flock	☉ 201 - 500	< -1.67	0.53 - 1.00 (suboptimal wet)
☉ 0 - 20	☉ 501 - 1000	-1.67 - -0.48 (too dry)	1.00 - 1.45 (too wet)
☉ 21 - 100		-0.48 - 0.24 (suboptimal dry)	> 1.45

Ecological Conditions Update



Thank You!

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