Governing Board Meeting
December 15, 2011

December 2011

ECOLOGICAL CONDITIONS UPDATE

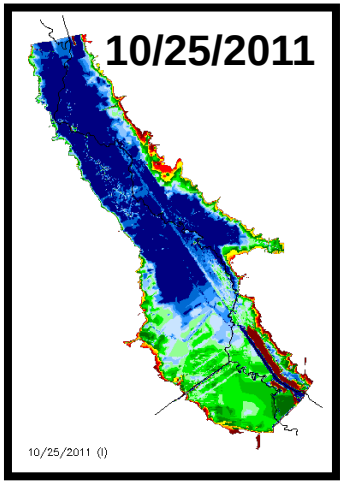
Terrie Bates
Director, Water Resources Division

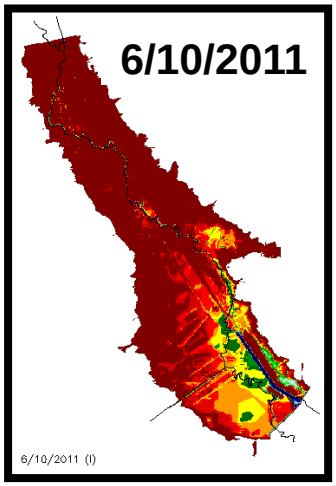
Kissimmee Basin

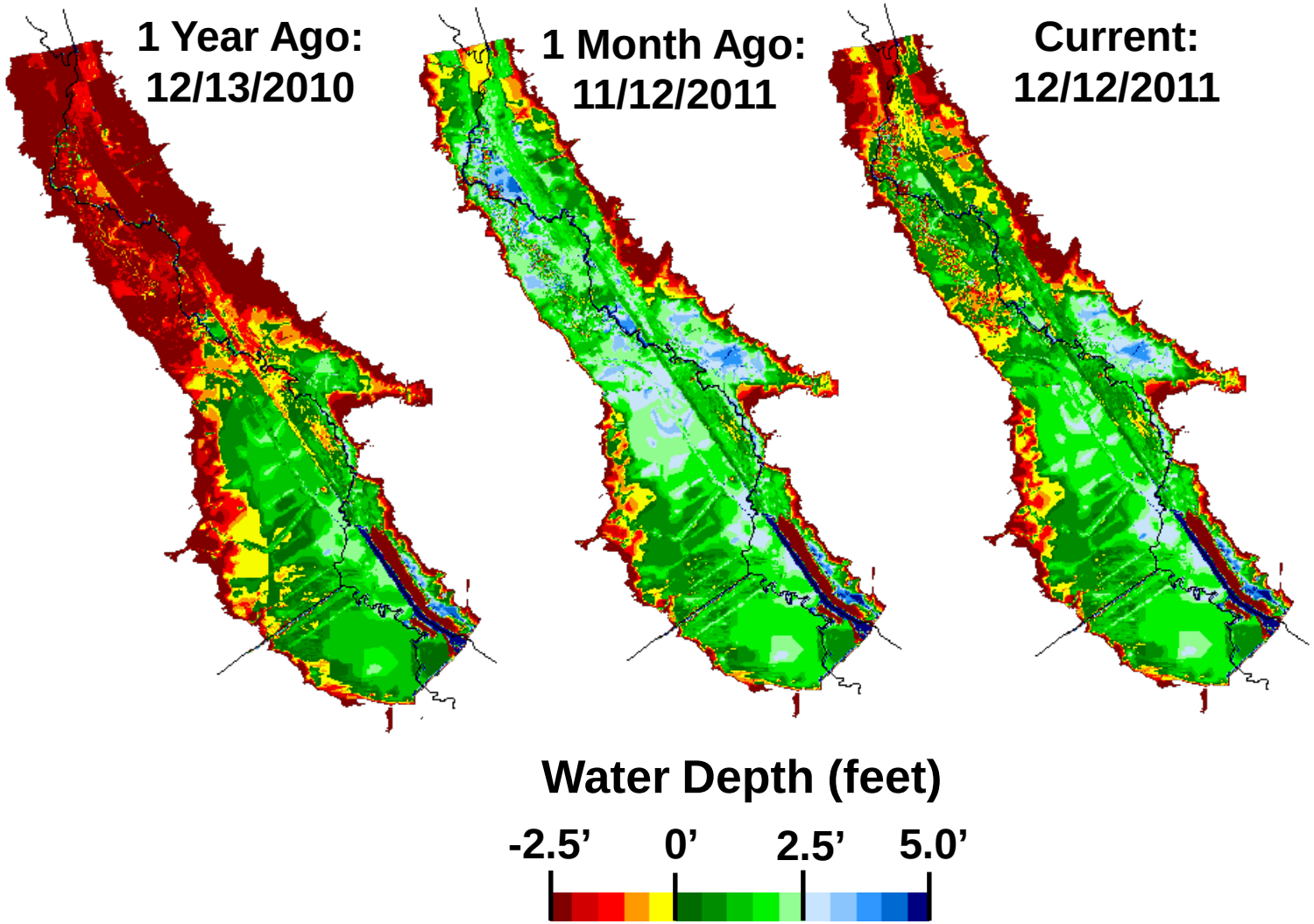
Kissimmee Basin

Kissimmee River Floodplain Water Depth Maps

Extremes

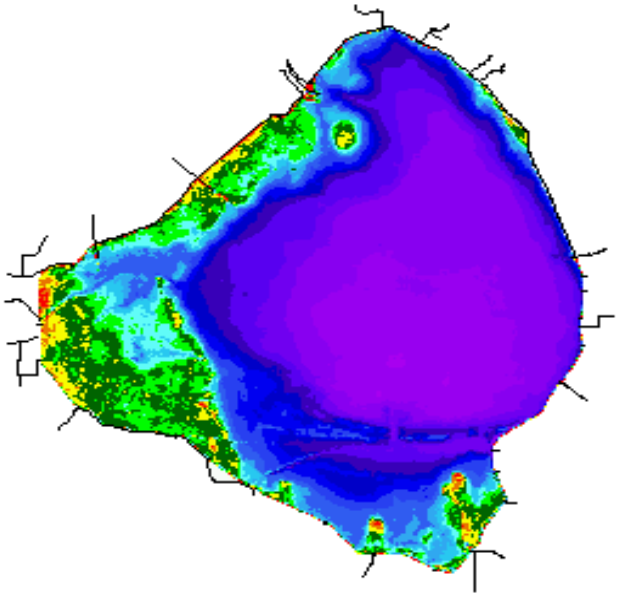






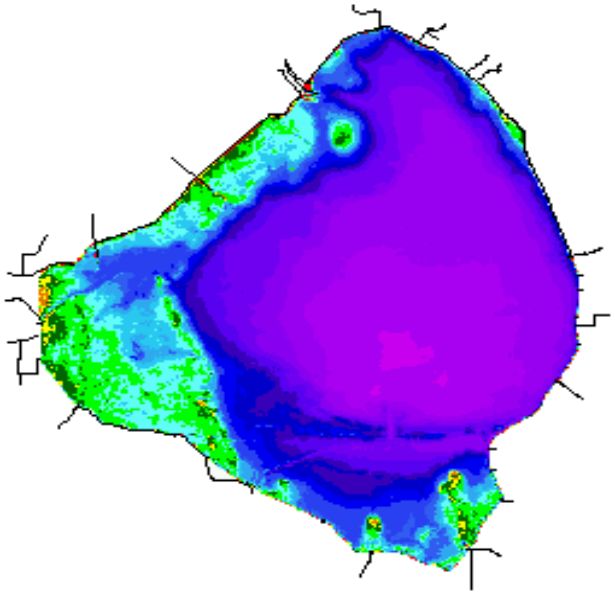
Lake Okeechobee
Water Depth Timeseries Maps

1 Year Ago: 12/12/2010



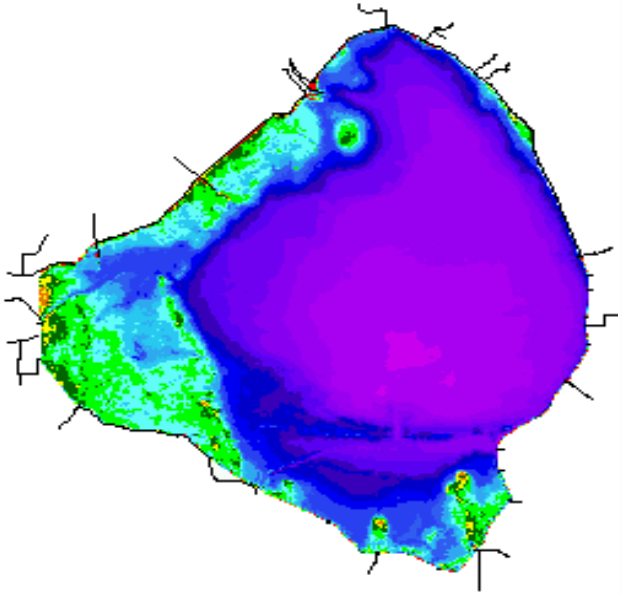
(12.68 ft NGVD29)

1 Month Ago: 11/12/2011



(13.79 ft NGVD29)

Current: 12/12/2011



(13.78 ft NGVD29)

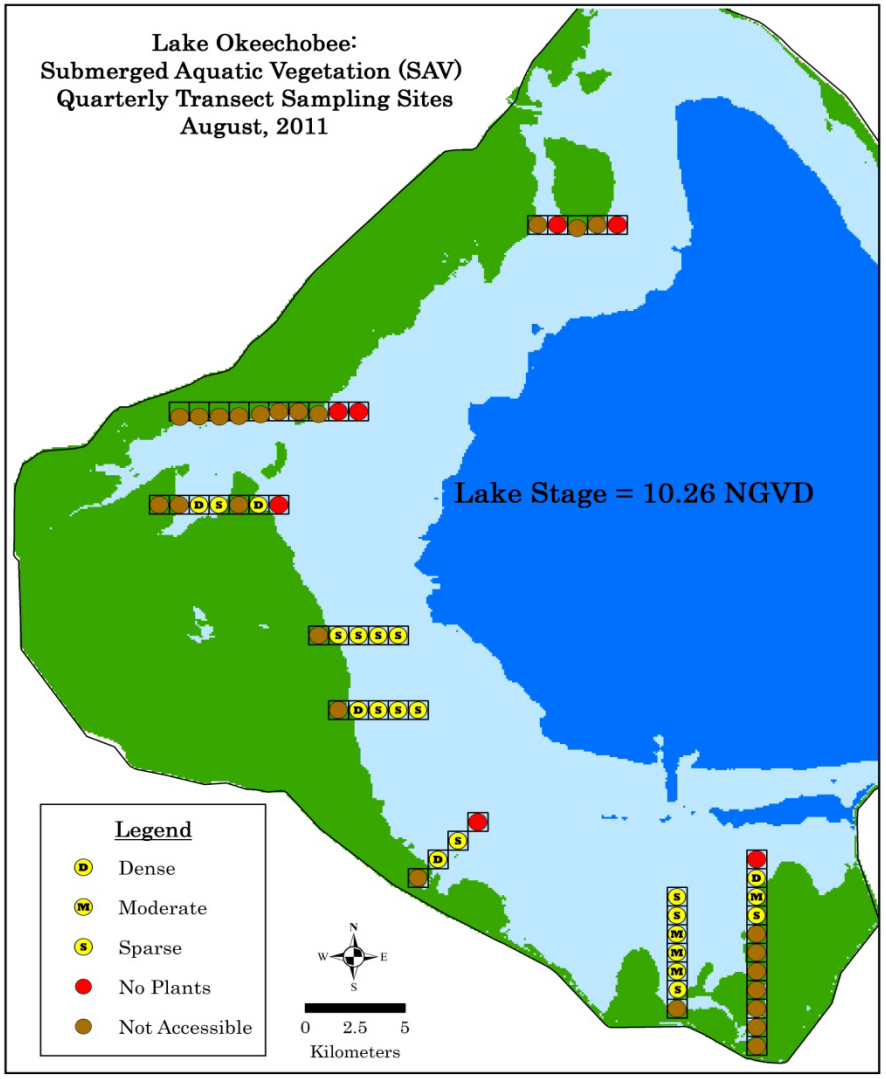
Lowest lake stage this year:
9.53 ft NGVD29 (06/24/11)

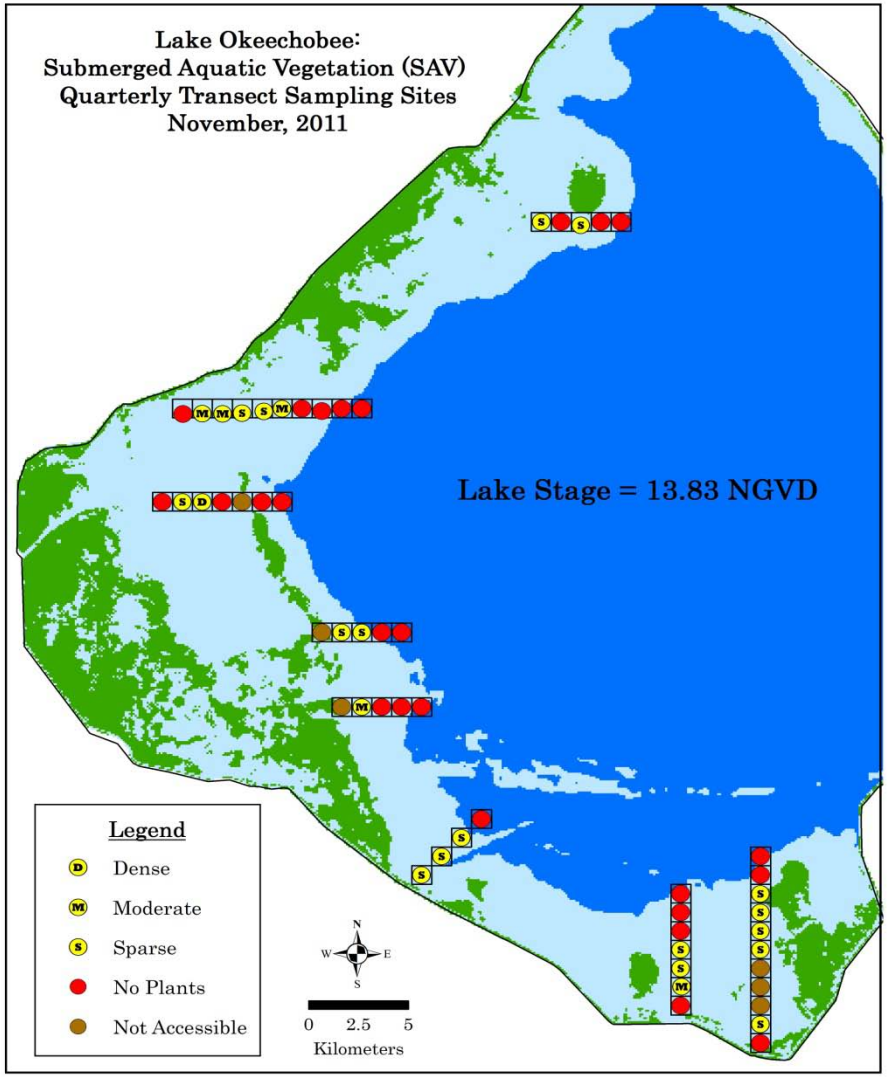
Record low lake stage:
8.82 ft NGVD29 (7/2/07)

CURRENT LAKE LEVEL:
(13.78 ft NGVD29 12/12/11)

Water Depth (ft)

Lake Okeechobee
Submerged Aquatic Vegetation

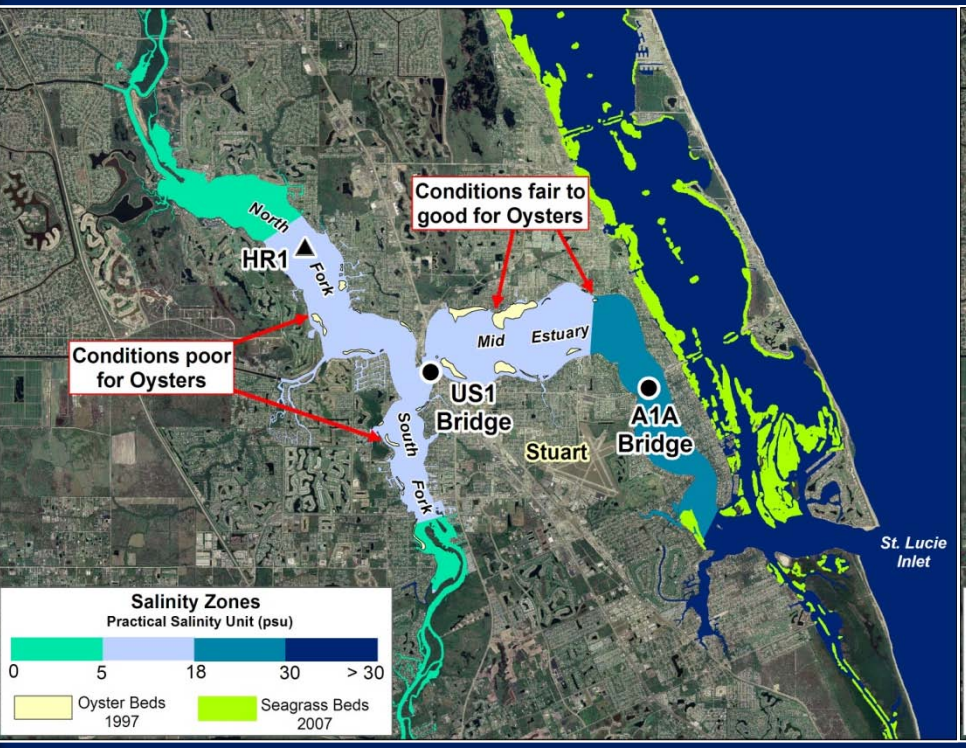




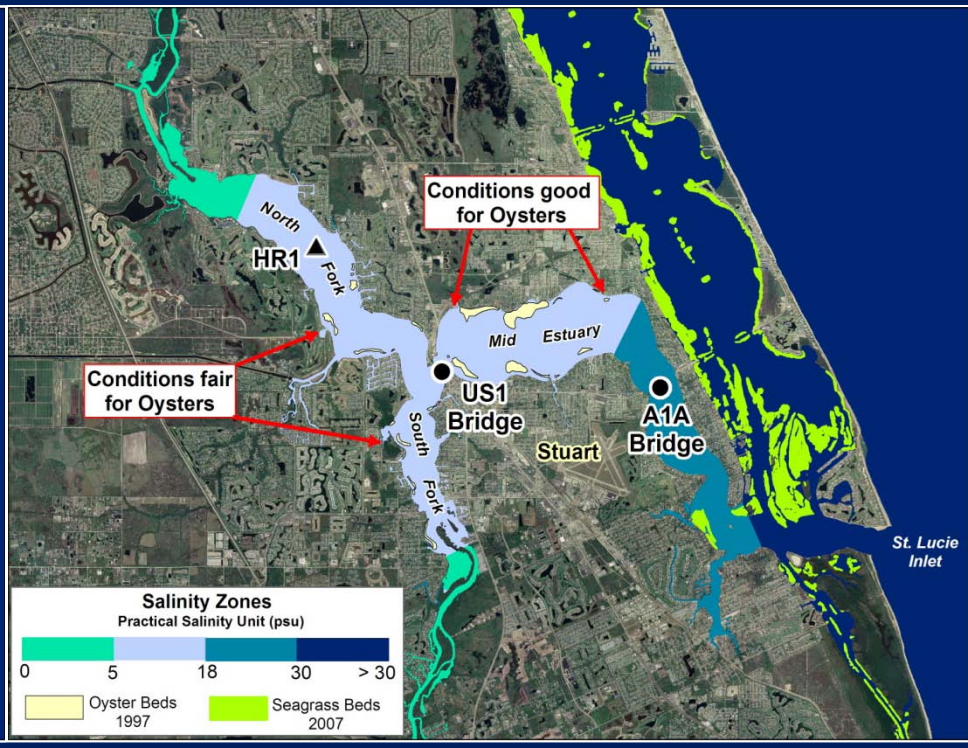
St. Lucie Estuary

Salinity Conditions

November 7, 2011



December 12, 2011

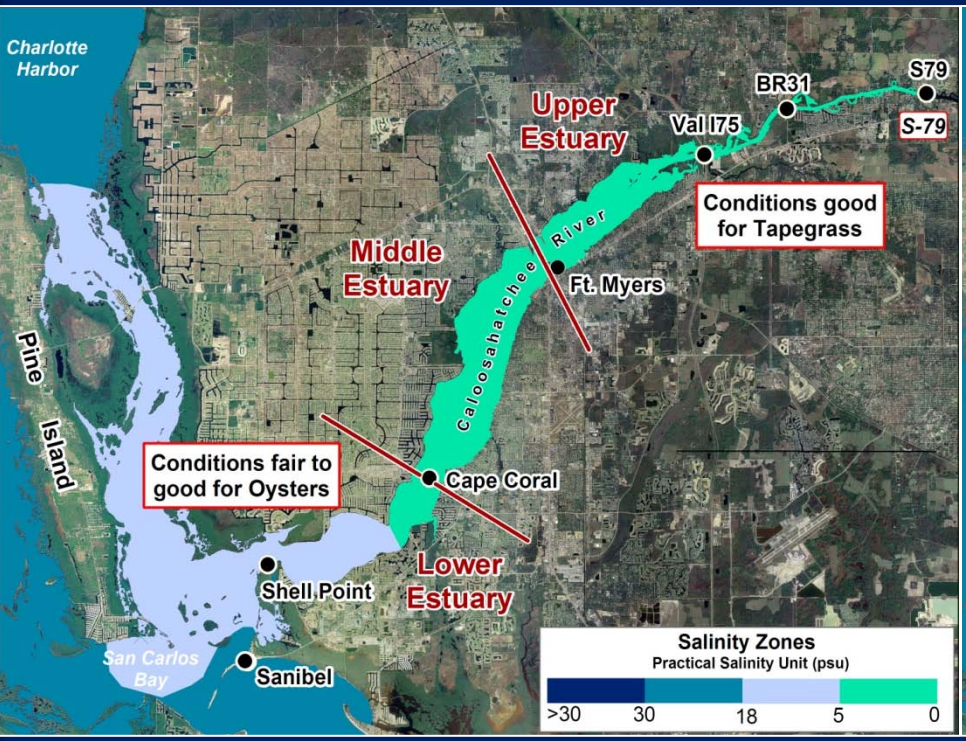


NOTE: Good Range for Oysters: 10 – 30 psu

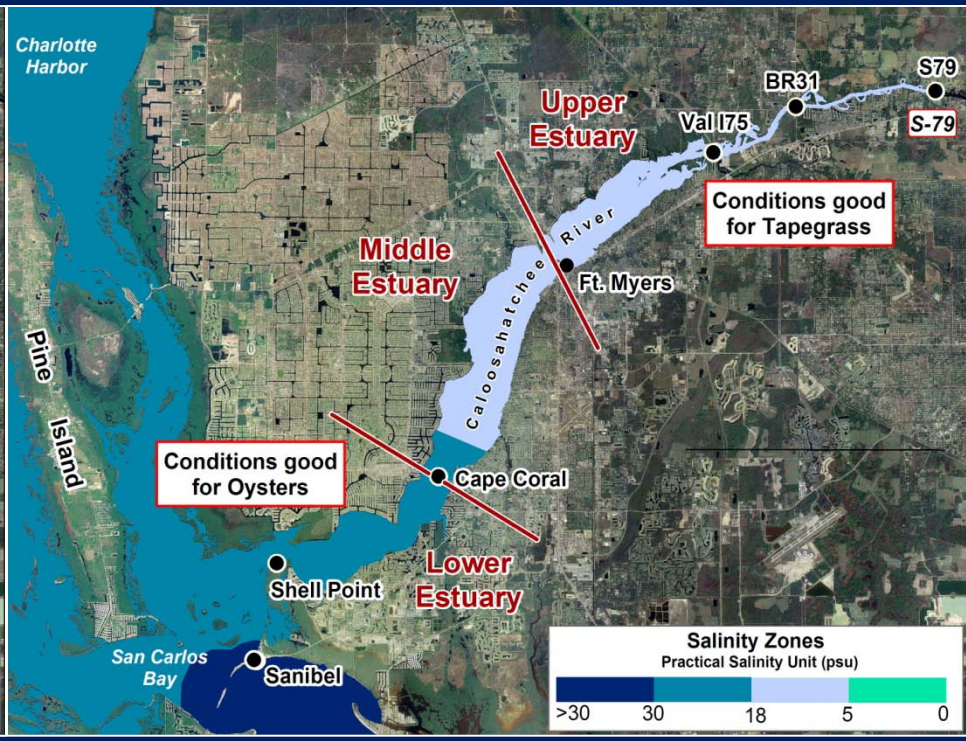
Caloosahatchee Estuary

Salinity Conditions

November 7, 2011

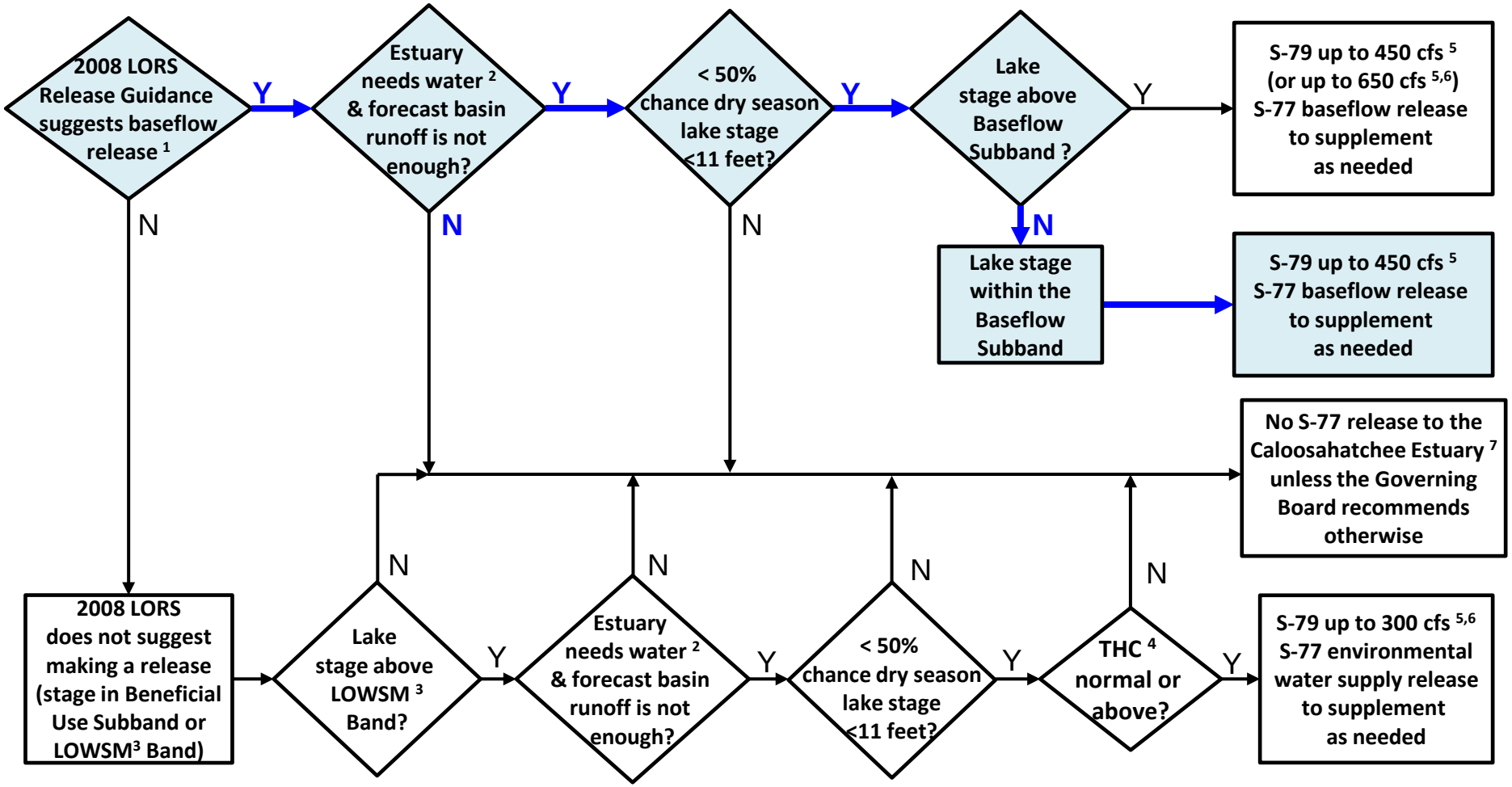


December 12, 2011



NOTE: Good Range for Oysters: 10 – 30 psu Optimal Range for Tape Grass: 0 – 5 psu

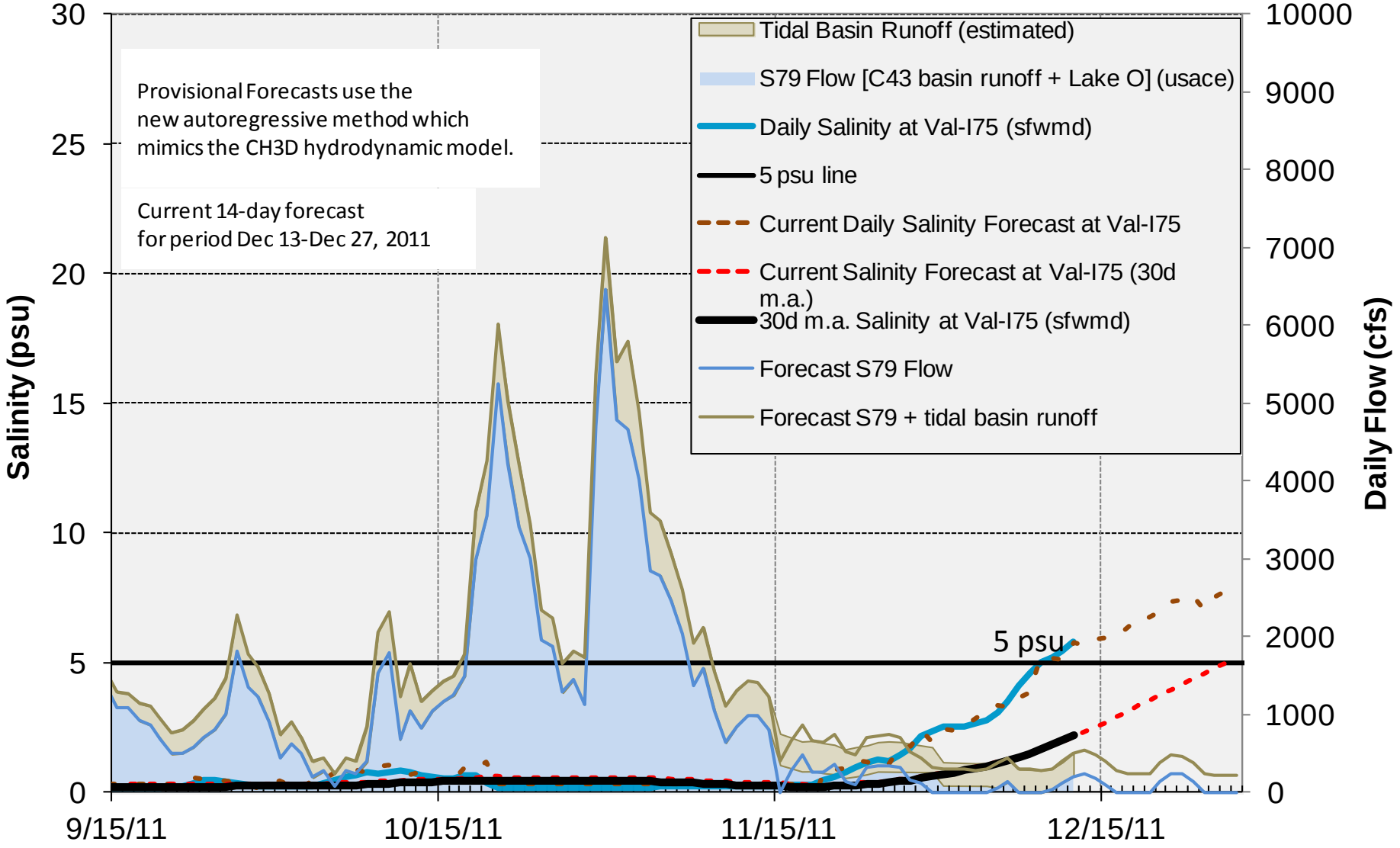
Flowchart to Guide Recommendations for Lake Okeechobee Releases to the Caloosahatchee Estuary for 2008 LORS Baseflow & for Environmental Water Supply



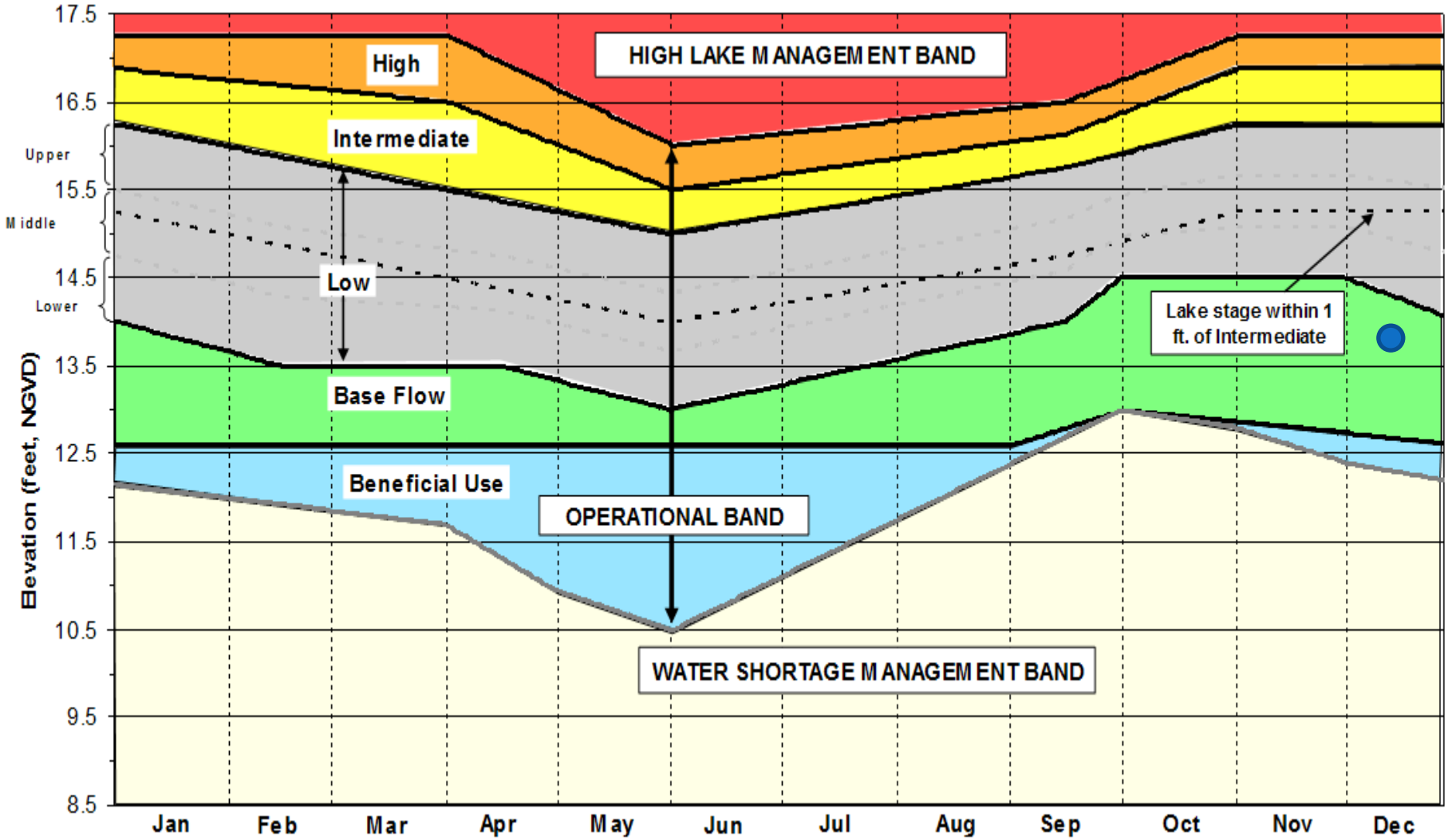
[1]The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.
[2]Estuary "needs" water when the 30-day moving average salinity at I-75 bridge is projected to exceed 5 practical salinity units (psu) within 2 weeks.
[3]LOWSM = Lake Okeechobee Water Shortage Management.
[4]Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.
[5]Can release less than the "up to" limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.
[6]After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.
[7]Should this condition be reached, the Governing Board will be briefed at their next regularly scheduled meeting as part of the State of the Water Resources agenda item.

Caloosahatchee Estuary Flows and Salinity
Observed and Forecast Salinity at Val I-75

Forecast 1: S-79=80 cfs & TBR = 250 cfs



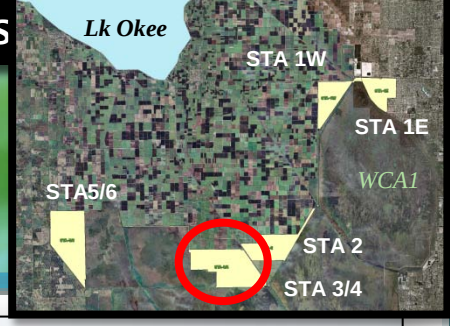
2008 Lake Okeechobee Interim Regulation Schedule *(aka 2008 LORS)*

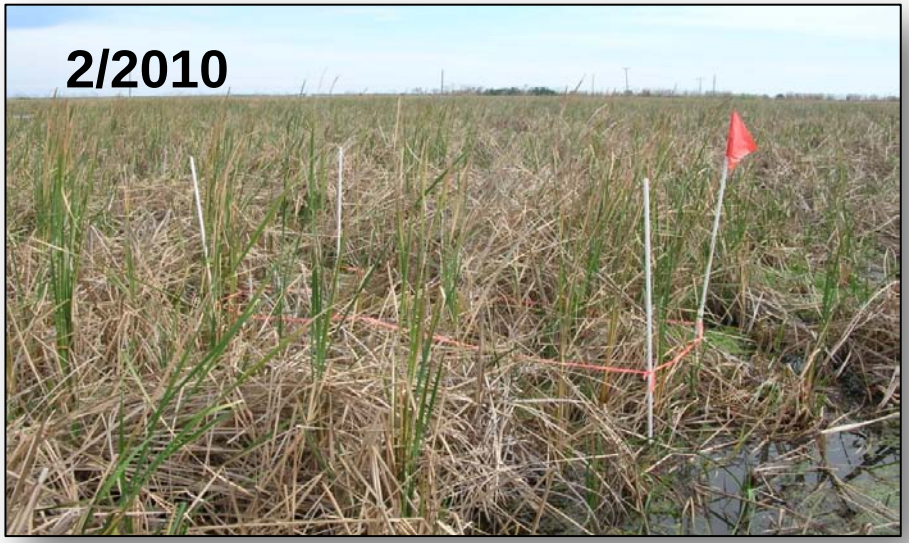


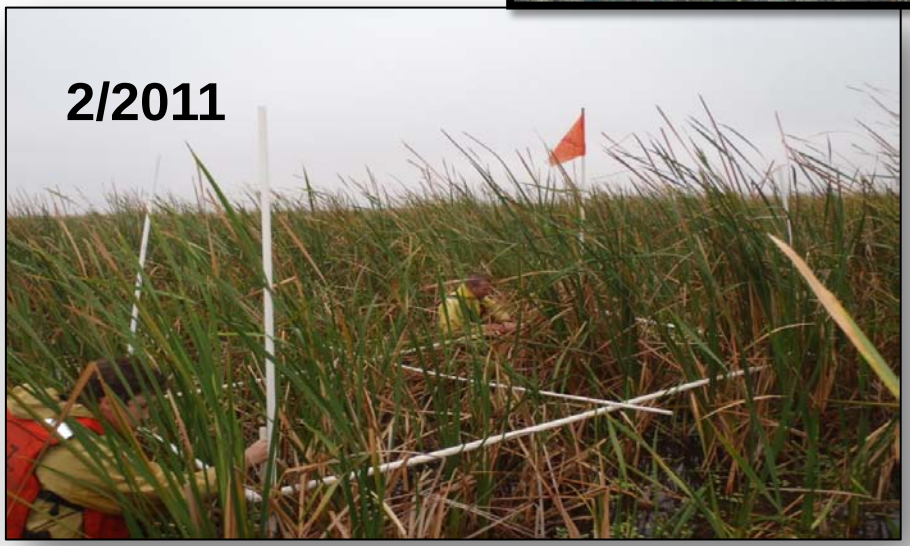
Adaptive Protocols

- 30-day moving average salinity at I-75 bridge is projected to exceed 5 psu within 14 days
- Lake stage is within the Baseflow Subband
- Less than 50% chance lake stage will fall below 11' NGVD during the dry season
- Release guidance suggests up to 450 cfs baseflow releases to the Caloosahatchee Estuary
- SFWMD recommended the ACOE initiate a 7-day pulse release averaging 450 cfs per day

STA-3/4 Cell 1A Vegetation Enhancement





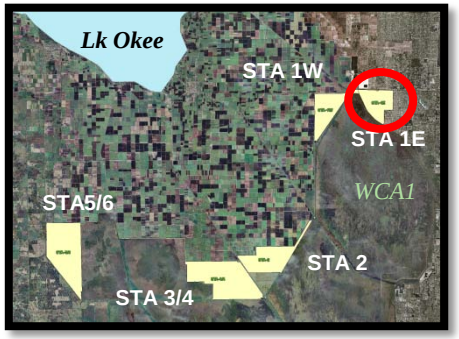


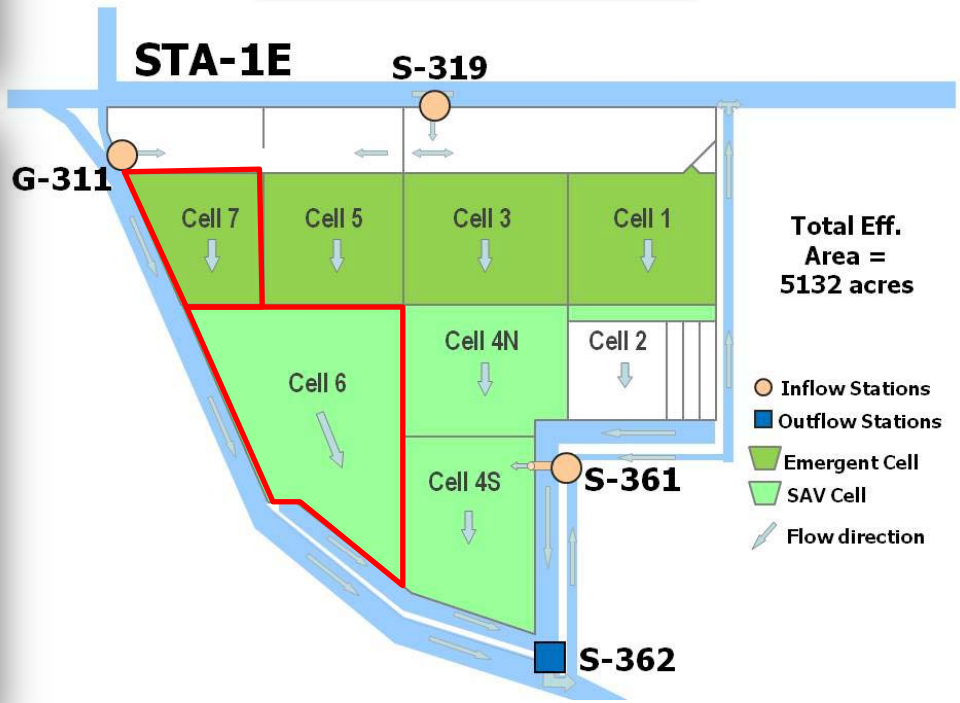
- Cell vegetation has been impacted by chronic deepwater condition
- Water level drawn down in March 2010, then again in March 2011 to allow cattails to re-establish
- Recent survey indicates improvement in cattail establishment, with higher density and healthier plants

STA-1E
Rehabilitation Activities

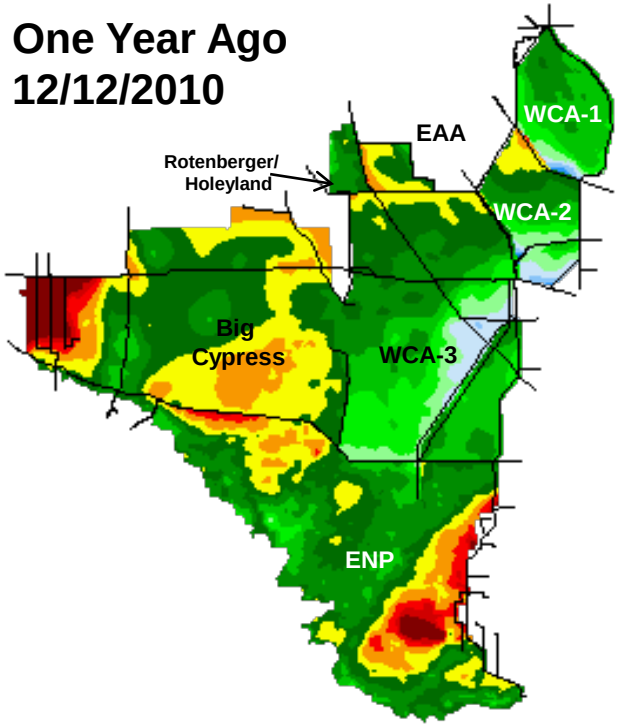
Mechanical harvester removing floating cattails in STA-1E Cell 7

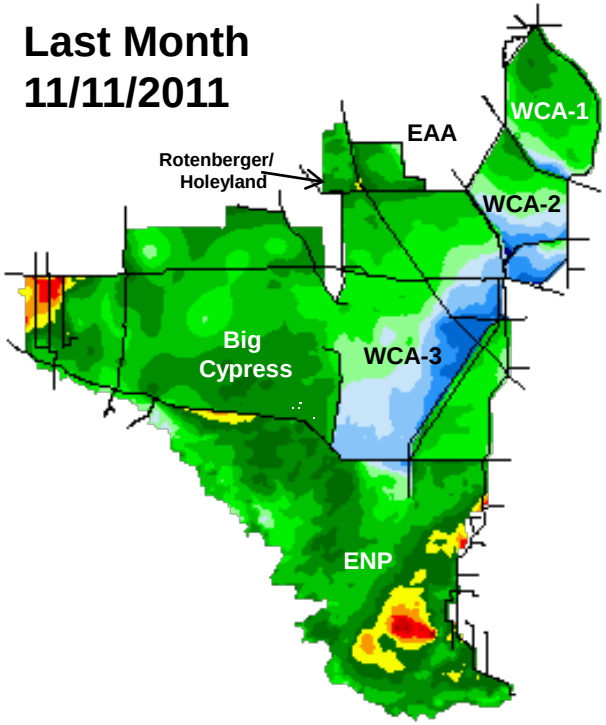
Manual planting of bulrush in open areas in STA-1E Cell 6

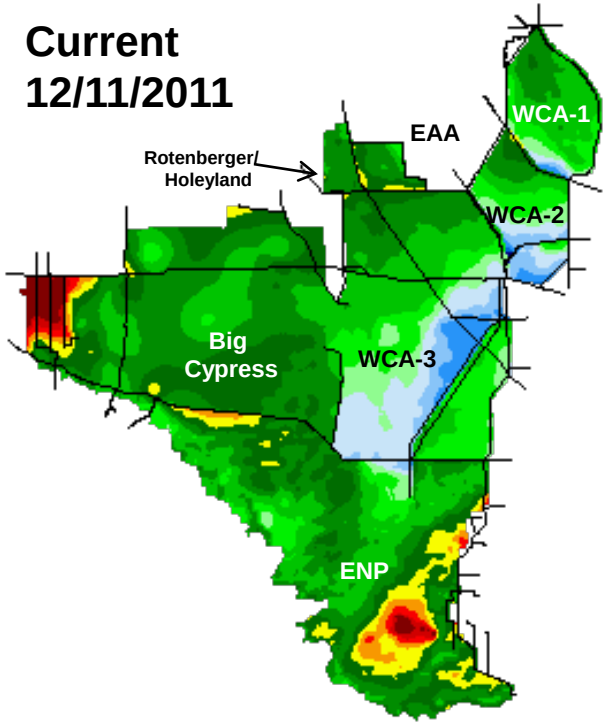




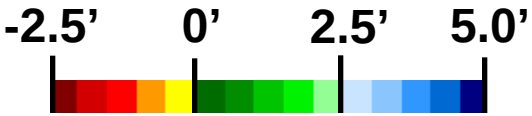
Greater Everglades
Water Depth Monthly Snapshots



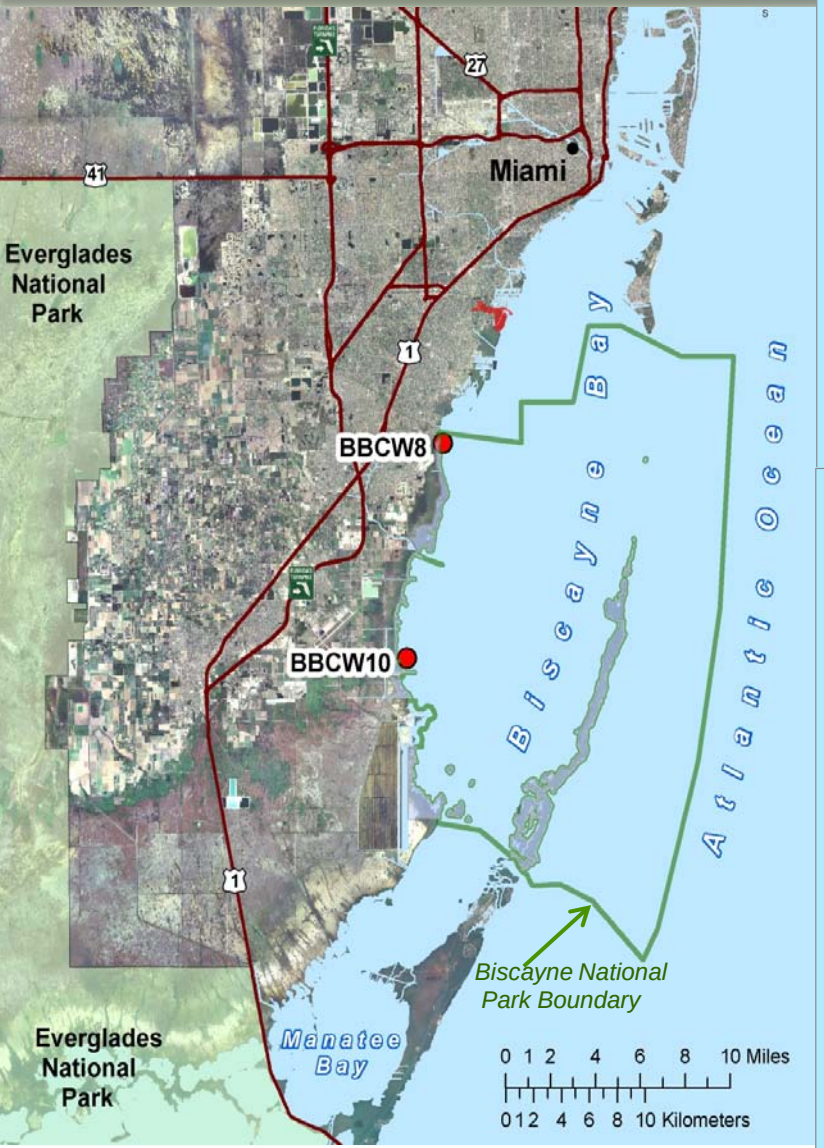


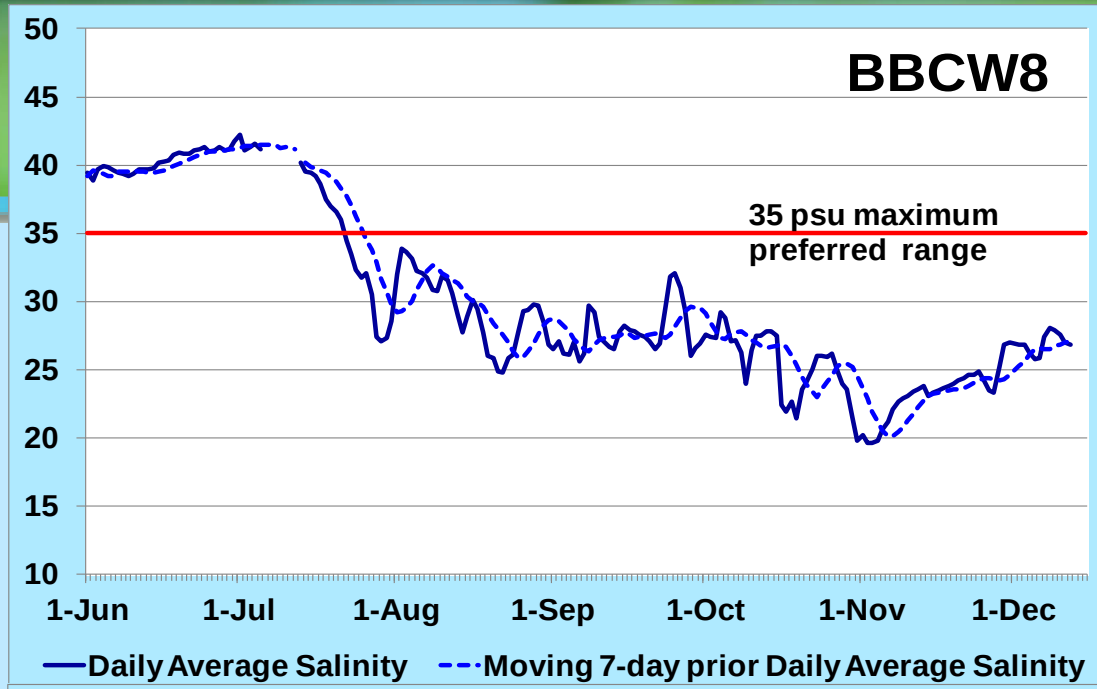


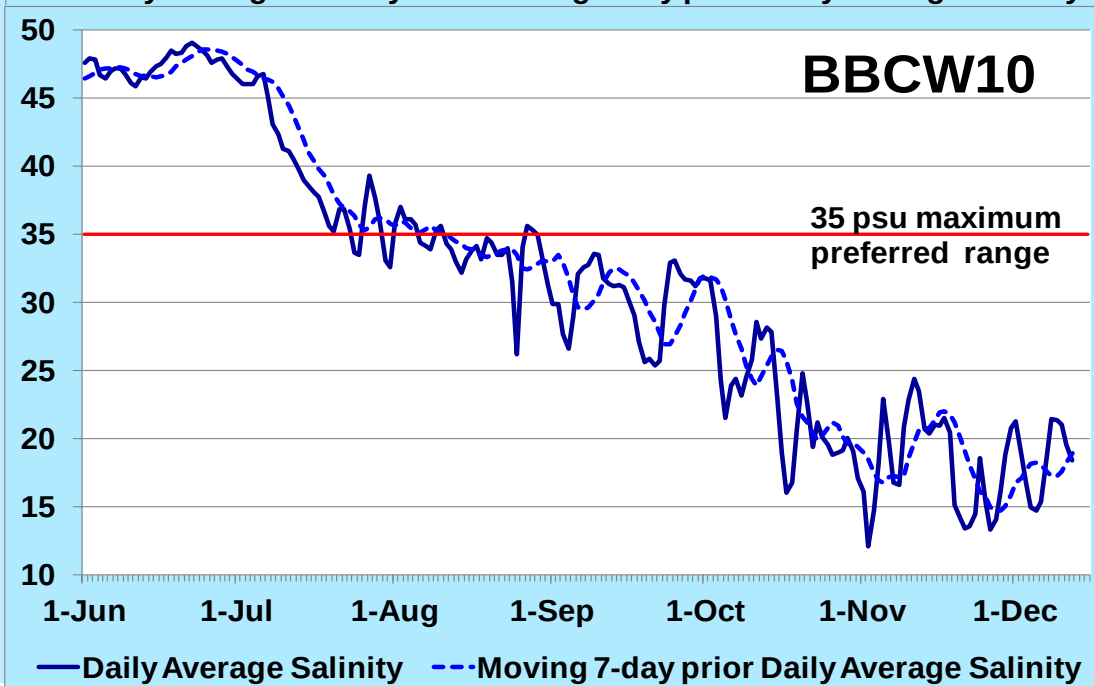
Water Depth (feet)



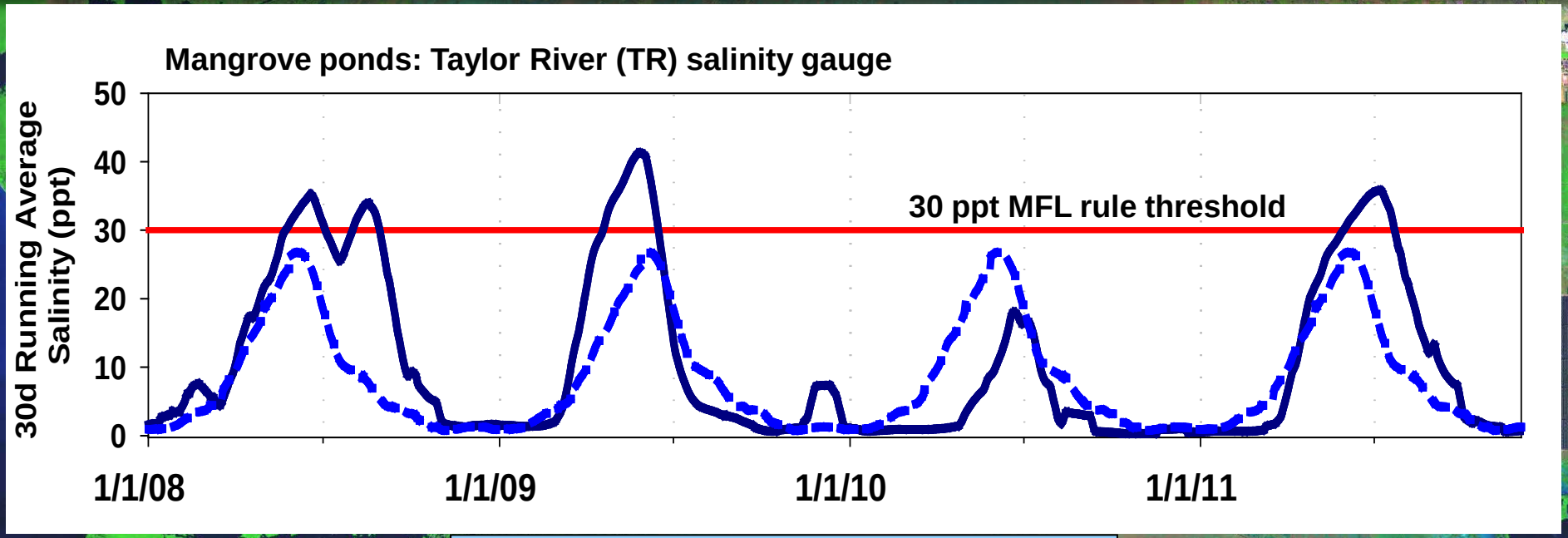
Biscayne Bay Salinity



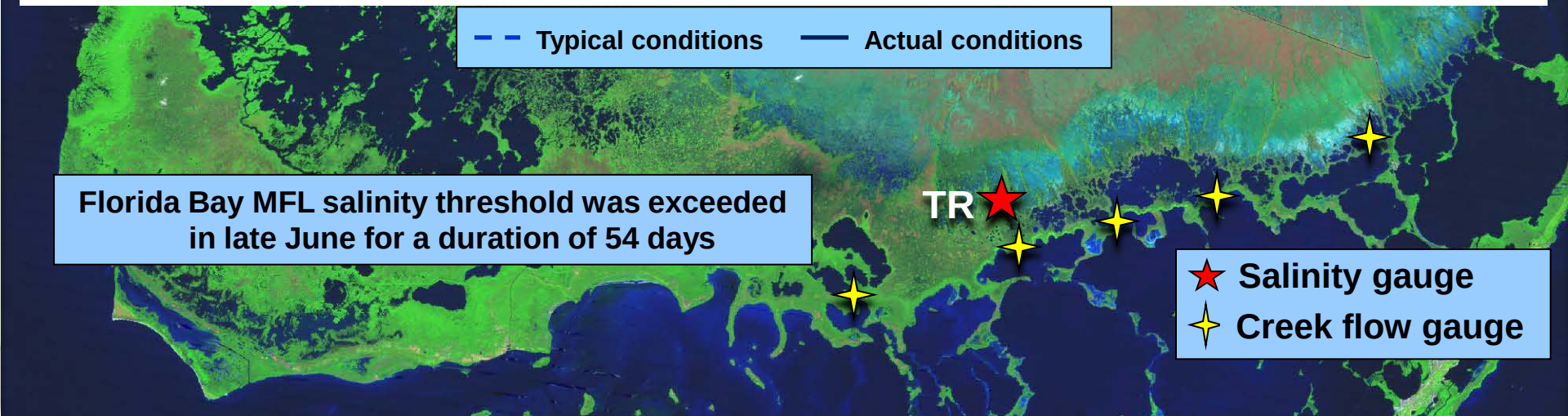




Tracking Salinity in Florida Bay



Florida Bay MFL salinity threshold was exceeded in late June for a duration of 54 days



Thank You

Terrie Bates
Director, Water Resources Division