



Ecological Conditions Report

***Governing Board Workshop
January 12, 2009***

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Kissimmee River



- Floodplain dry
- 325 cfs of flow
- Dissolved oxygen good



Drought- induced ecological benefits: Pond apple seedlings in Lake Okeechobee along Kreamer Island





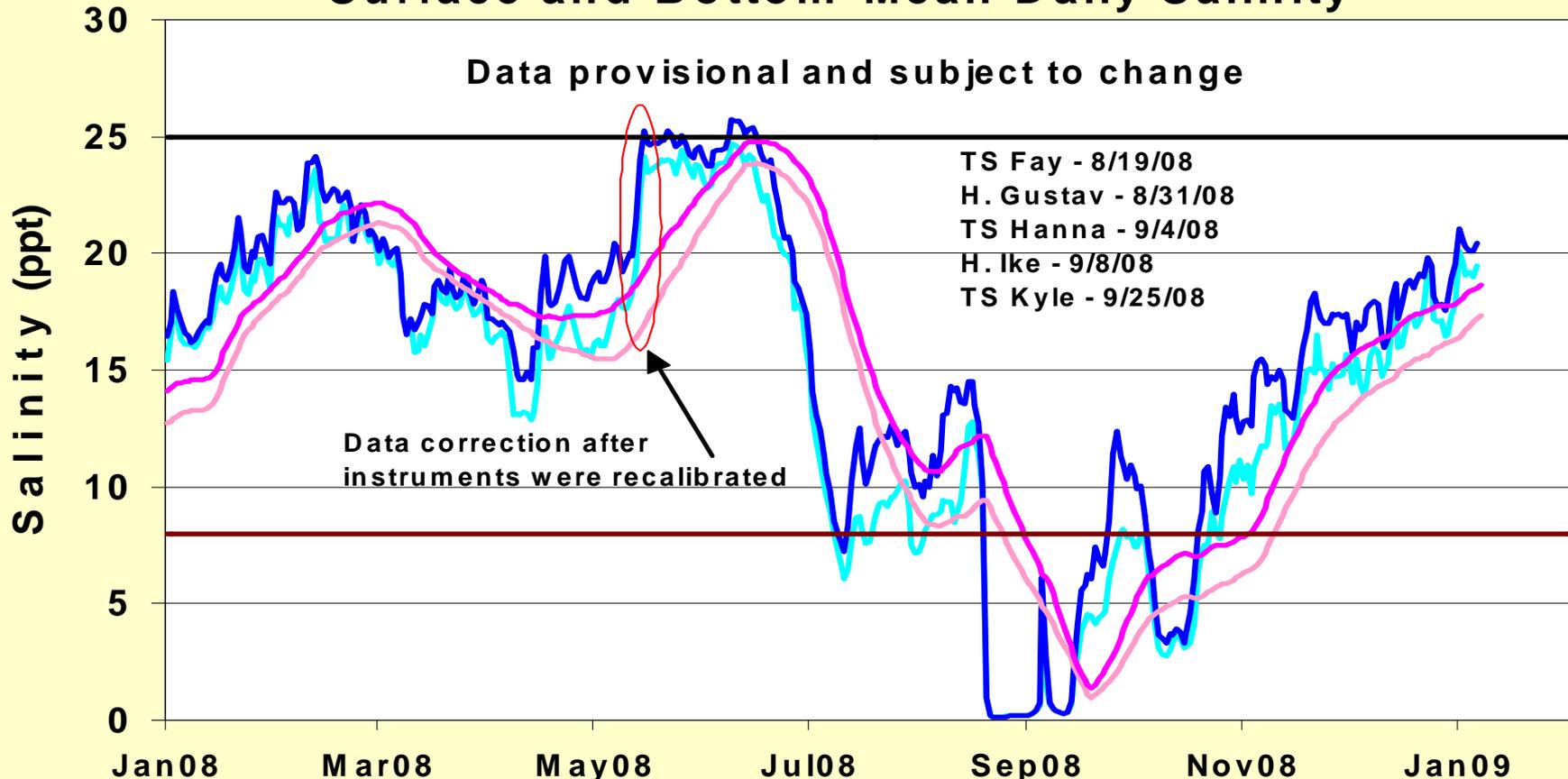
Drought-induced ecological benefits: Endangered Okeechobee gourd populations on the islands of the Lake's south shore





St. Lucie Estuary Salinity: US 1 Bridge

Salinity Envelope Surface and Bottom Mean Daily Salinity

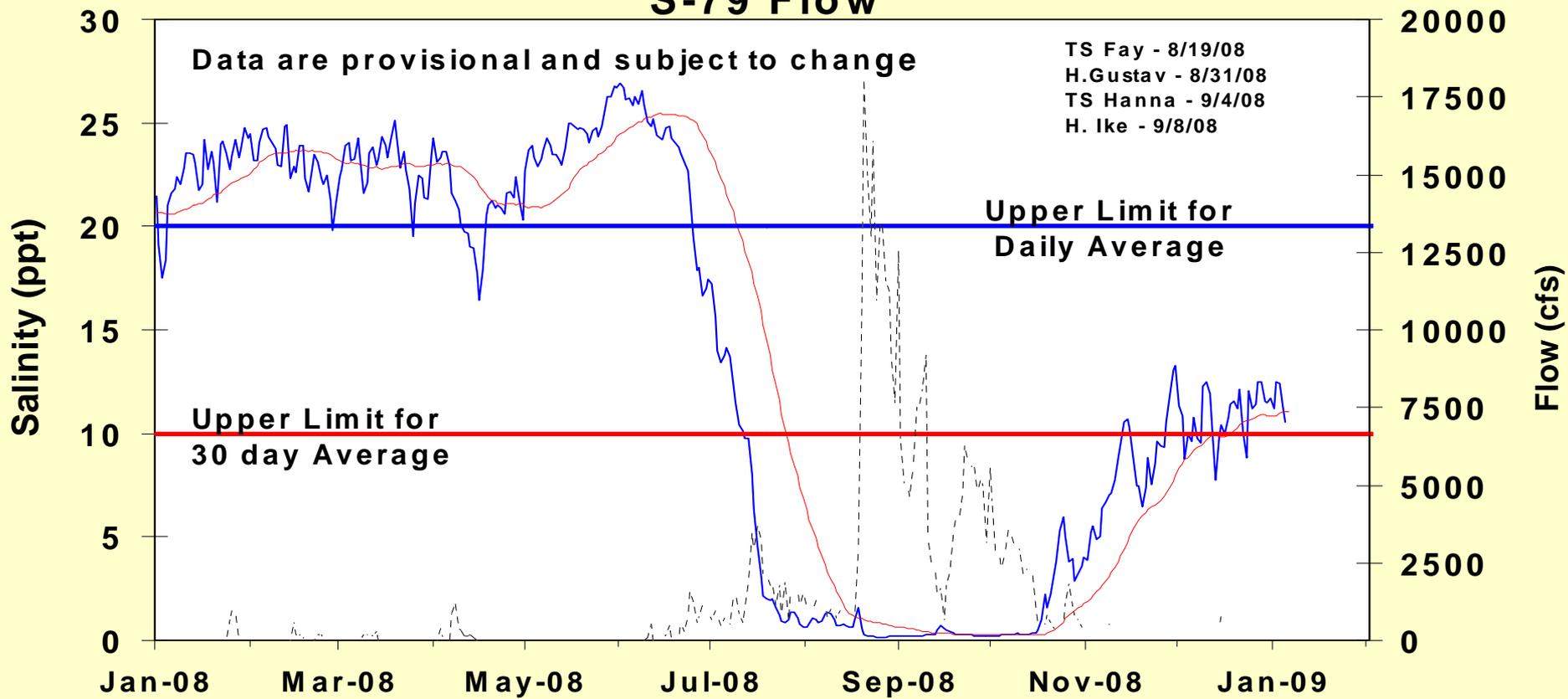


- US1 surface Daily mean salinity
- US1 bottom daily mean
- 30 day mean surface salinity
- 30 day prior US1 bottom daily mean



Caloosahatchee Salinity: Ft. Myers

Surface Salinity at Ft. Myers: MFL S-79 Flow



- Daily average salinity
- 30 day average salinity surf. salinity
- upper limit for daily mean salinity
- upper limit for 30d mean salinity
- - - S-79 Mean Daily Flow



STA-5 Rehabilitation Project

Background:

- STA-5 performance poor compared to other STAs.
 - 58% load reduction vs. 80% average for all STAs.
- High historical inflow load.
- Highly variable topography.
- Hydraulic inefficiency.



Current project (Cell 1A) will help remedy current short-circuiting, improve vegetation establishment, and help improve phosphorus removal performance.



Hydraulic Inefficiency



Significant short-circuiting
in Cell 1A



Minimal plugs placed
in 2008

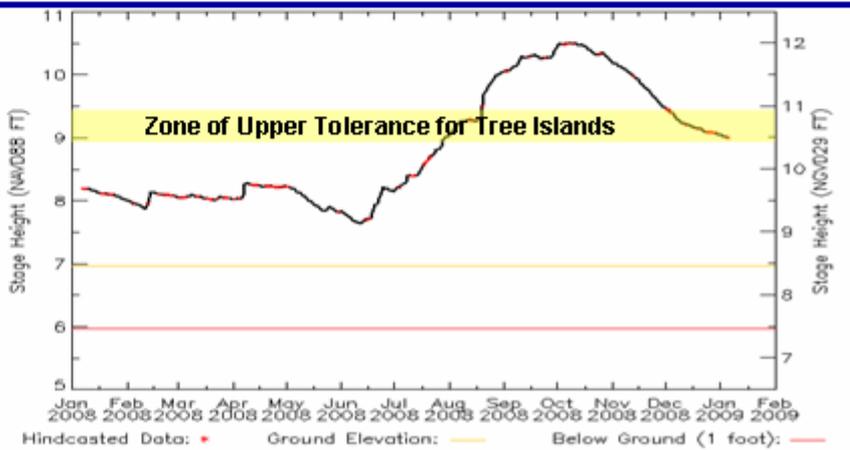
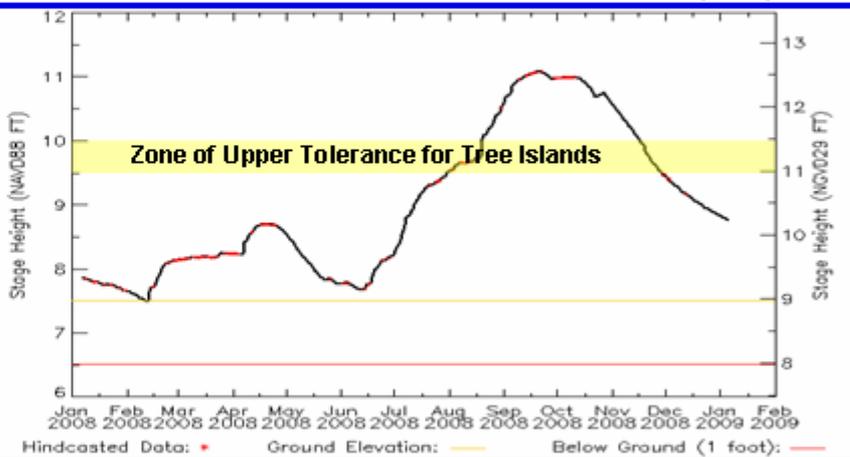
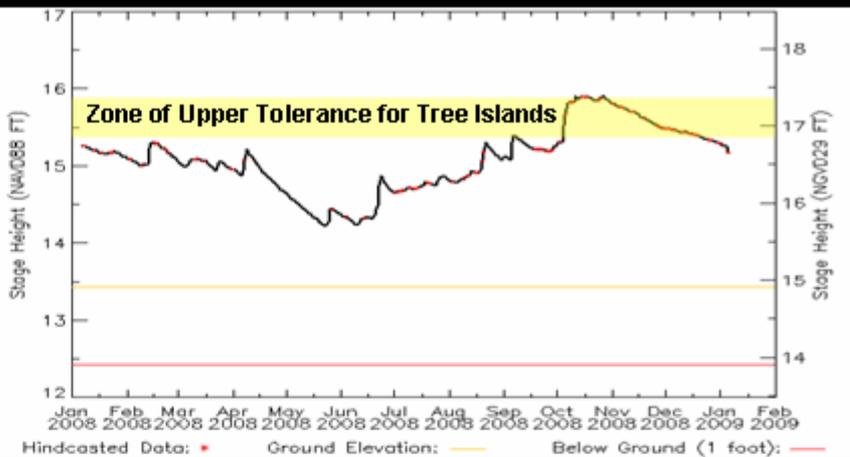
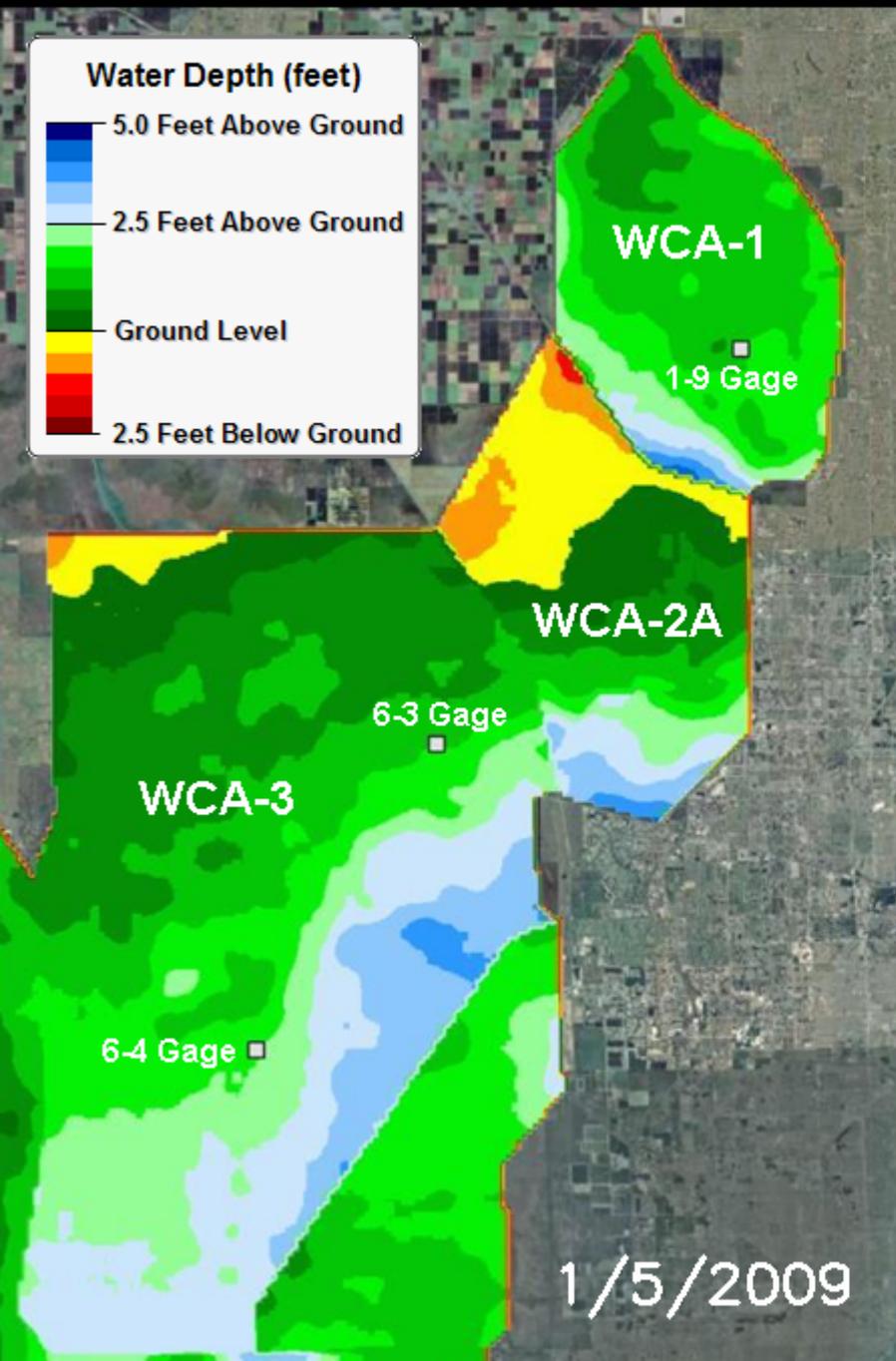
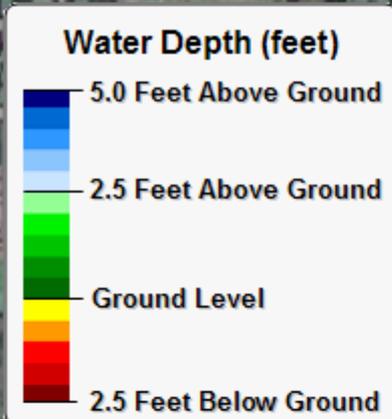


Project Plan and Progress

- Work being done by Clewiston Field Station.
- Began early December 2008; complete within 4 months.



- Obtain fill material from non-effective treatment area.
- Current work: dewatering cell.



1-9 Gage

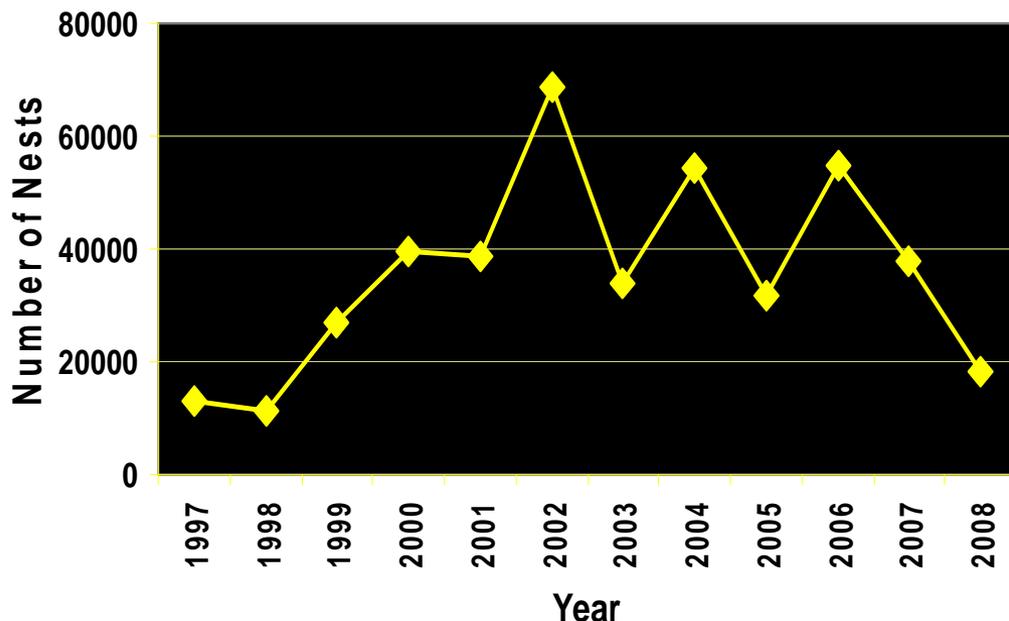
6-3 Gage

6-4 Gage



The 2008 Breeding Season was Unsuccessful for all Wading Bird Species

Total Number of Wading Bird Nests in South Florida, 1997-2008



- **Total number of nests in 2008 was 18,418**
- **Nest total was lowest since 1998**



- **Nest total was 59% lower than 8-year average**
- **Chick fledging success was poor**



Wood Storks and Roseate Spoonbills are a Particular Cause for Concern



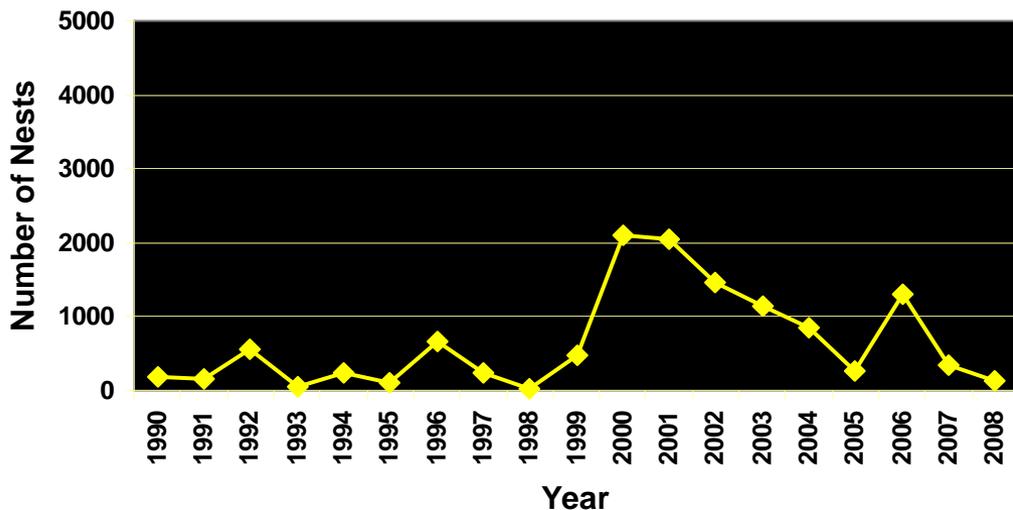
Total stork nests: 154

Total stork chicks fledged: 0

Stork nesting did not occur in Corkscrew Swamp Sanctuary for the 2nd consecutive year (an historic first).

Spoonbills had the worst nesting season on record.

Total Number of Wood Stork Nests in the Everglades, 1990-2008





Breeding Fell Short of CERP Nesting Targets in 2008

1. Number of nests (3-year mean):

Only Great Egrets and White ibis met nest number targets; Wood Storks, Tricolored Herons and Snowy Egrets did not meet targets.

2. Colony Locations:

Most birds (93%) nested in the northern Everglades rather than the target marsh/mangrove ecotone in Everglades National Park.

3. Timing of Wood Stork nesting:

Nesting started very late (March) rather than the target period of November/December.





General Scientific Consensus from Authors of the 2008 South Florida Wading Bird Report



- Reduced nest numbers were likely due to two prior years of dry conditions, which reduced aquatic prey production and availability.
- Rain driven reversals during nesting caused widespread nest abandonments and poor nesting success.