

Review of Water Shortage Conditions

*Dean Powell, Director,
Watershed Management Department*

*April 9, 2008
Governing Board Workshop*

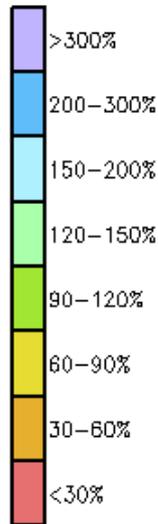
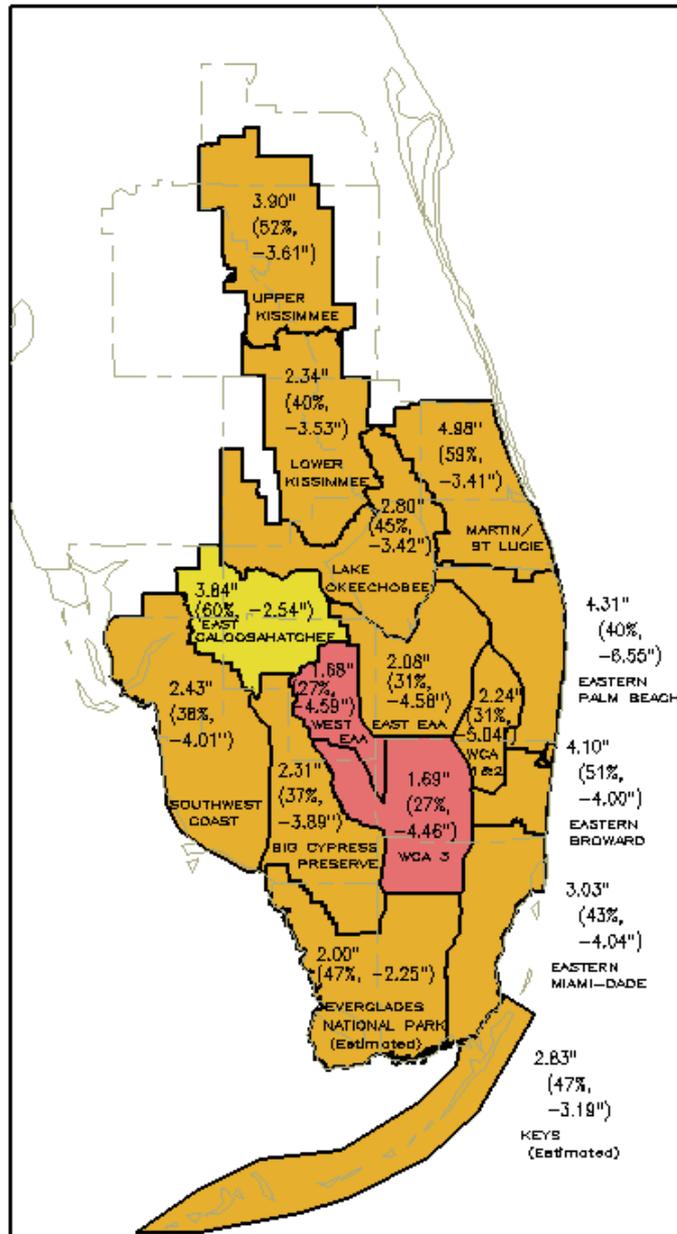


sfwmd.gov

GB Workshop

April 9, 2008

SFWMD Rainfall
02-nov-2007 to 01-feb-2008



Measured
(% of Avg,
Diff From Avg)

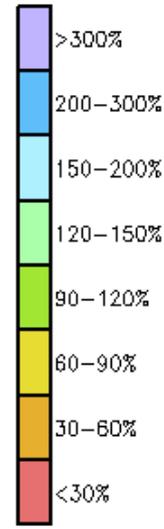
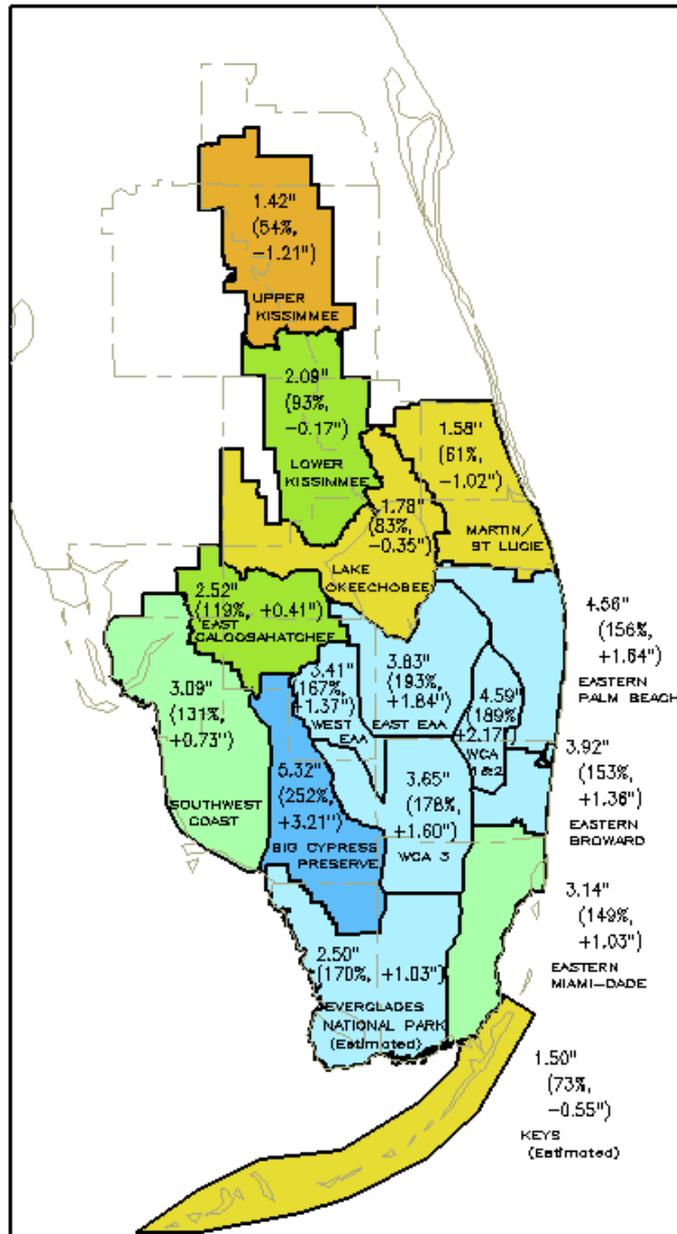
First Half of Dry Season Was Very Dry

DISTRICT-WIDE: 2.95" (43%, -3.95")



sfwmd.gov

SFWMD Rainfall
02-feb-2008 to 01-mar-2008



Measured
(% of Avg,
Diff From Avg)

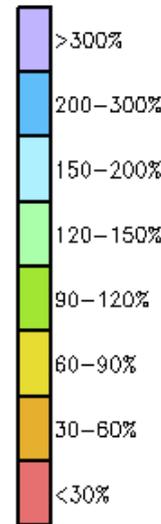
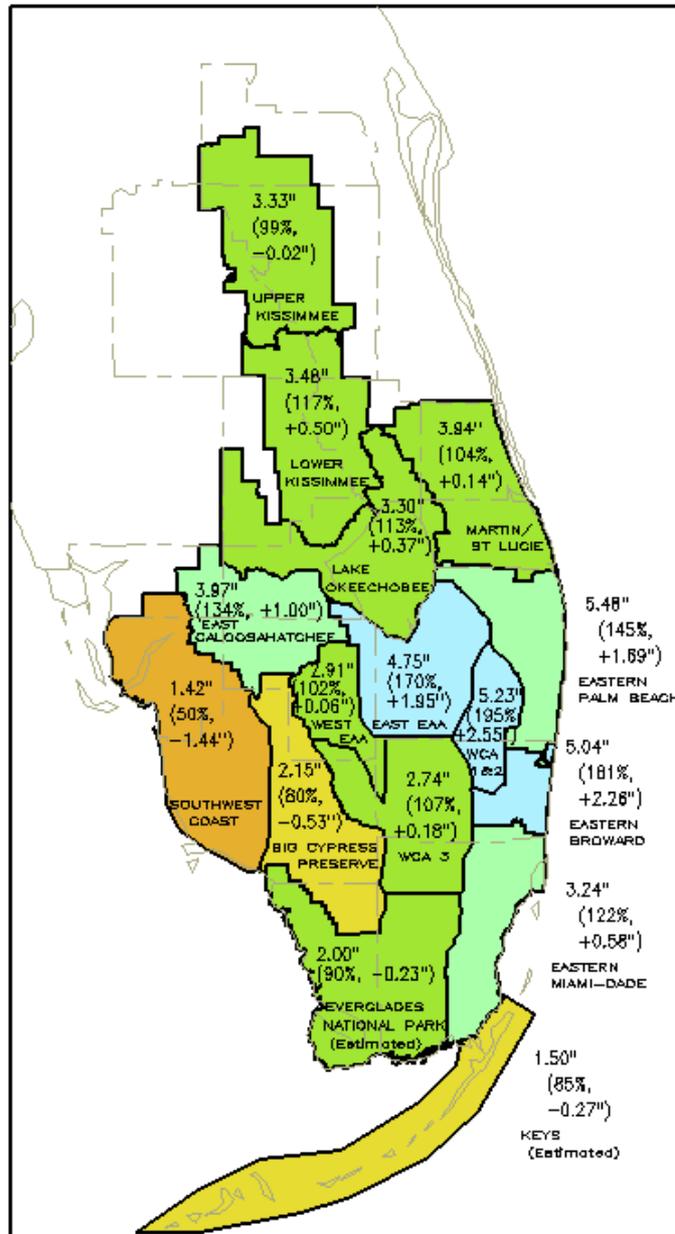
February Rainfall was Above Normal

DISTRICT-WIDE: 2.99" (132%, +0.72")



sfwmd.gov

SFWMD Rainfall
02-mar-2008 to 01-apr-2008



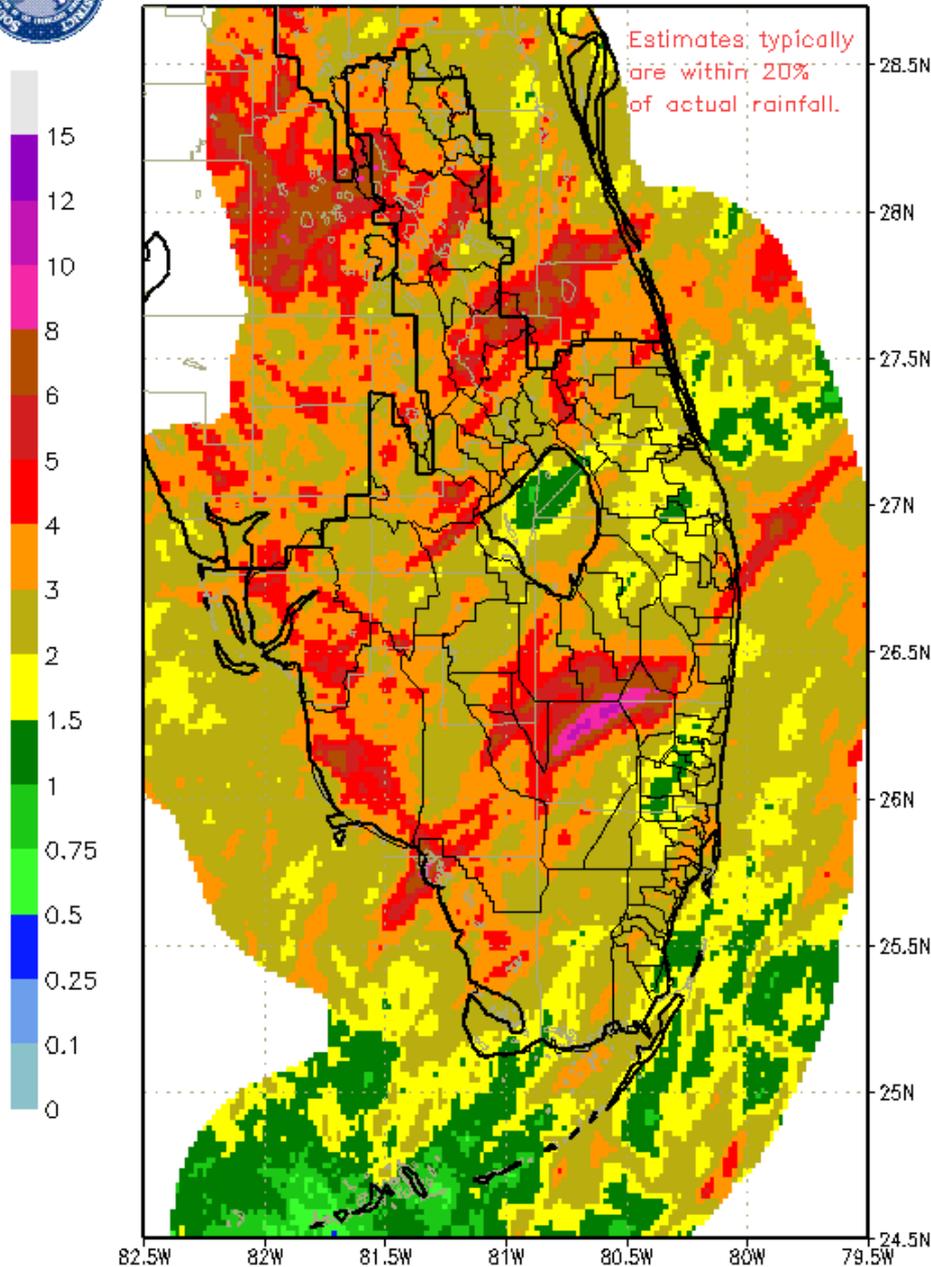
Measured
(% of Avg,
Diff From Avg)

March Rainfall was Well Above Normal

DISTRICT-WIDE: 3.35" (111%, +0.34")



sfwmd.gov



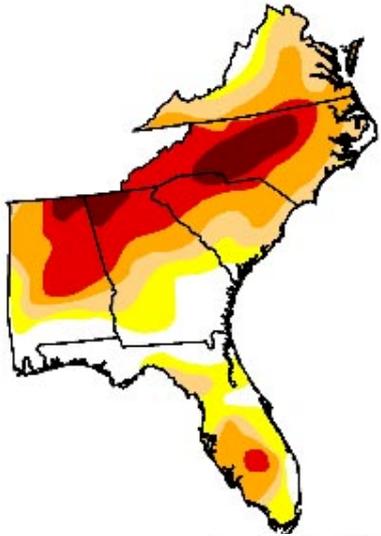
DISTRICT-WIDE RAINFALL ESTIMATE: 3.263"

First 7 Days of April Rainfall Also Well Above Normal

- District-wide 3.18 inches
- 636% above normal for 1st week of April
- More than the entire month of April 07

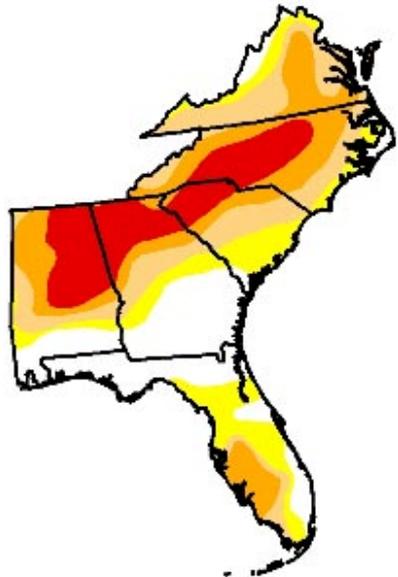
March 4, 2008

Valid 7 a.m. EST



April 1, 2008

Valid 7 a.m. EST



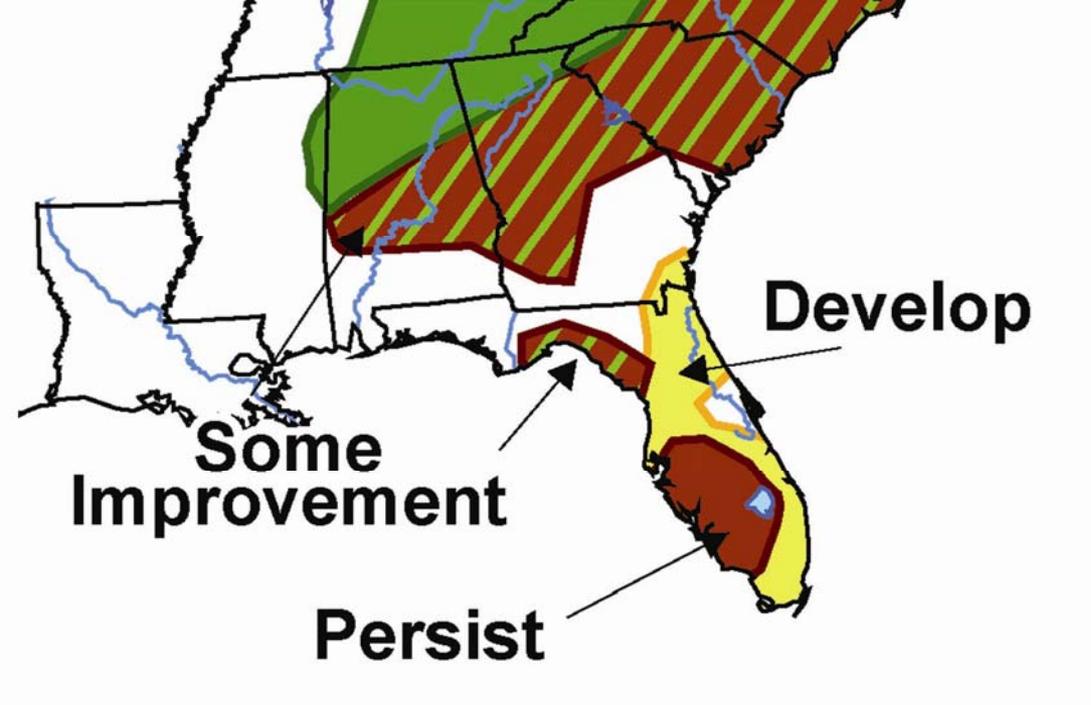
Drought conditions have improved

- **March 4, 2008 - conditions classified as “extreme” to “abnormally dry”**
- **April 1, 2008 – conditions classified as “severe” to “normal”**

Drought Forecast has also improved

- February 21, 2008 drought forecasted to persist or develop

- April 3, 2008 drought forecasted to improve

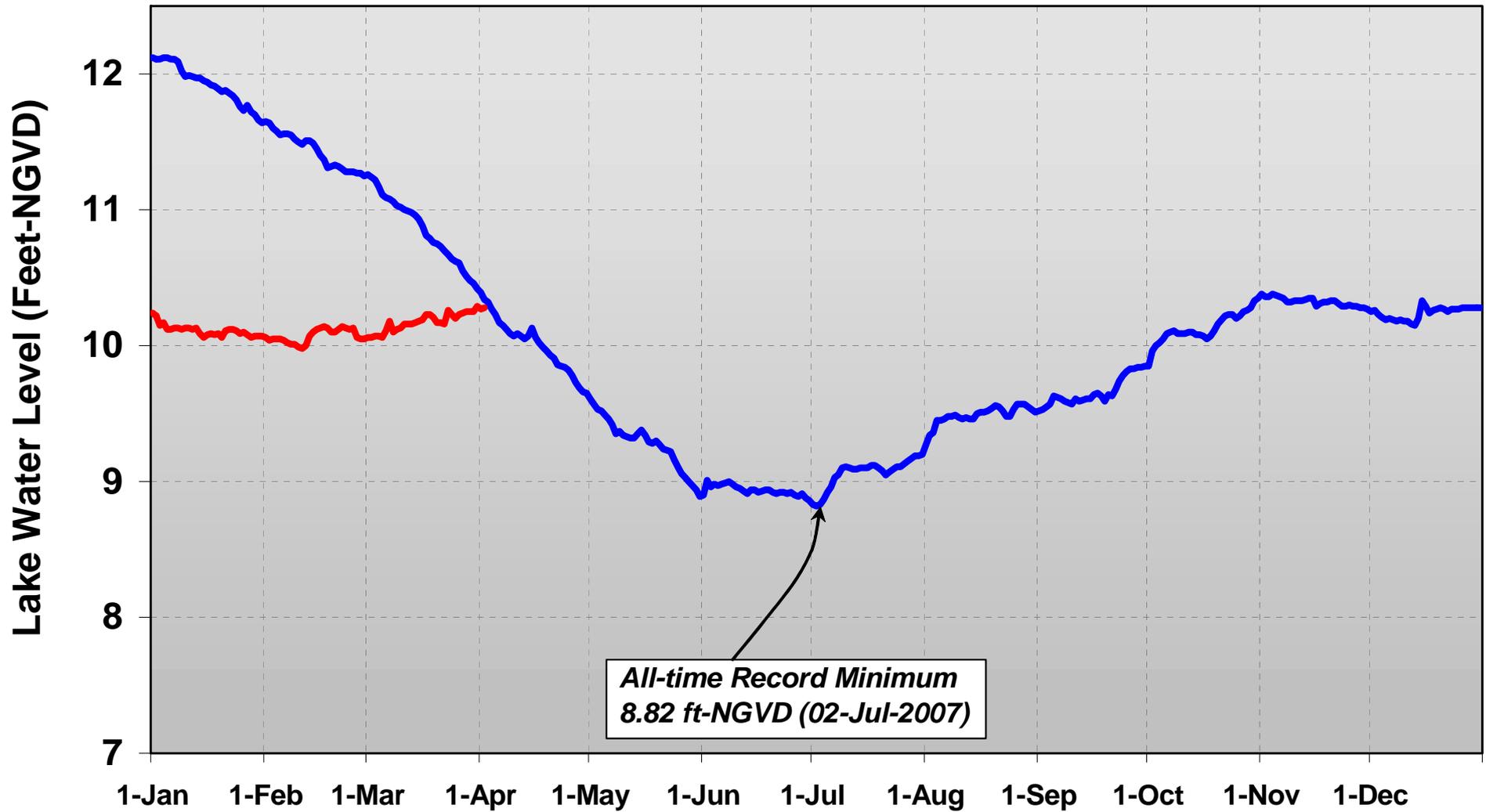


Water Shortage Transition Resource Indicators

- Lake Okeechobee stage
- Water Conservation Area stages
- Coastal Structures Discharging to Tide
- Groundwater Conditions Recovered
- Secondary Canals Discharging
- Minimum Flow & Levels
- Coastal Wellfield Conditions
- Utilities “at risk” & “of concern”
- Regional Wetlands & Tributaries

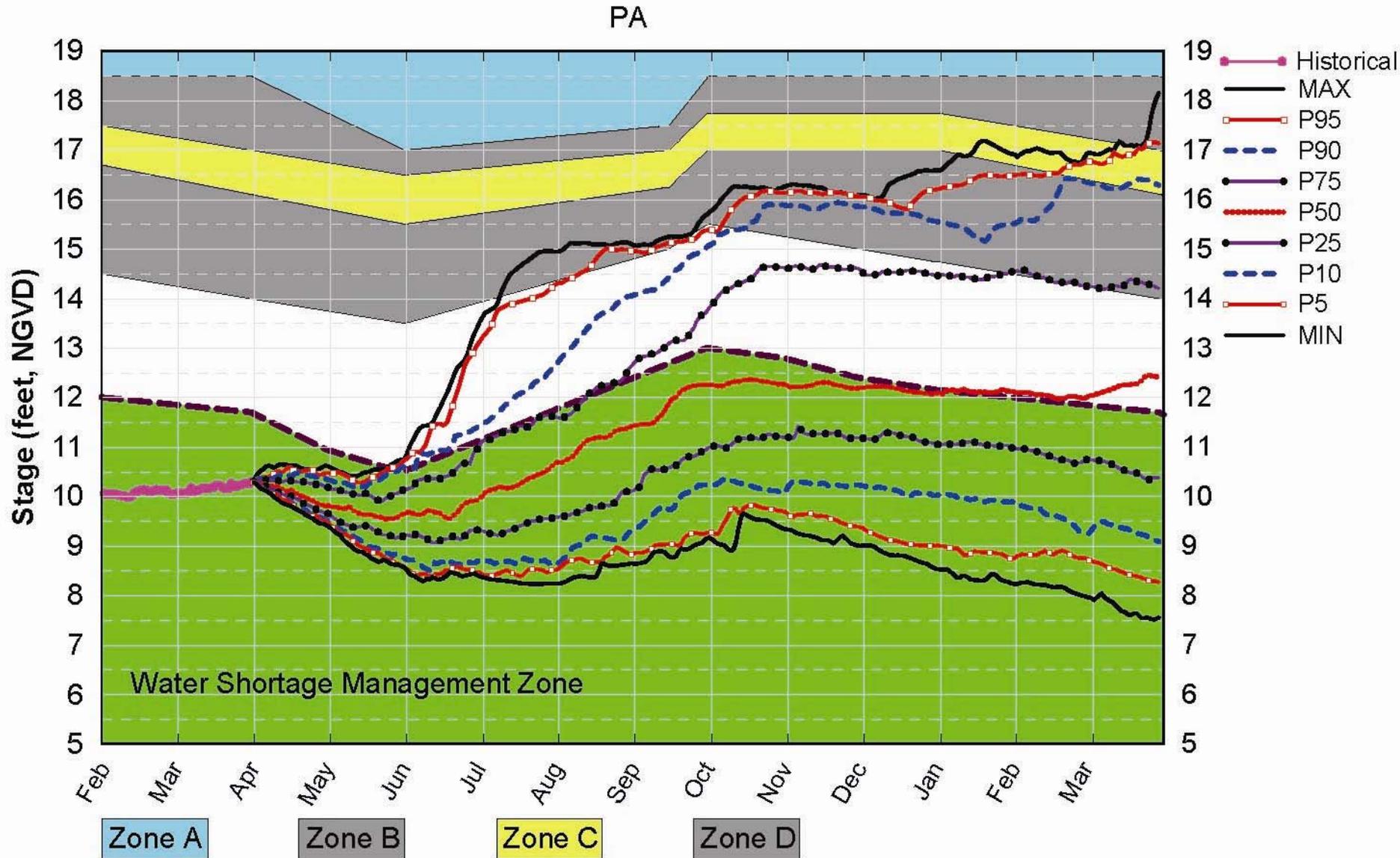
Lake Okeechobee Water Levels

— 2007 — 2008

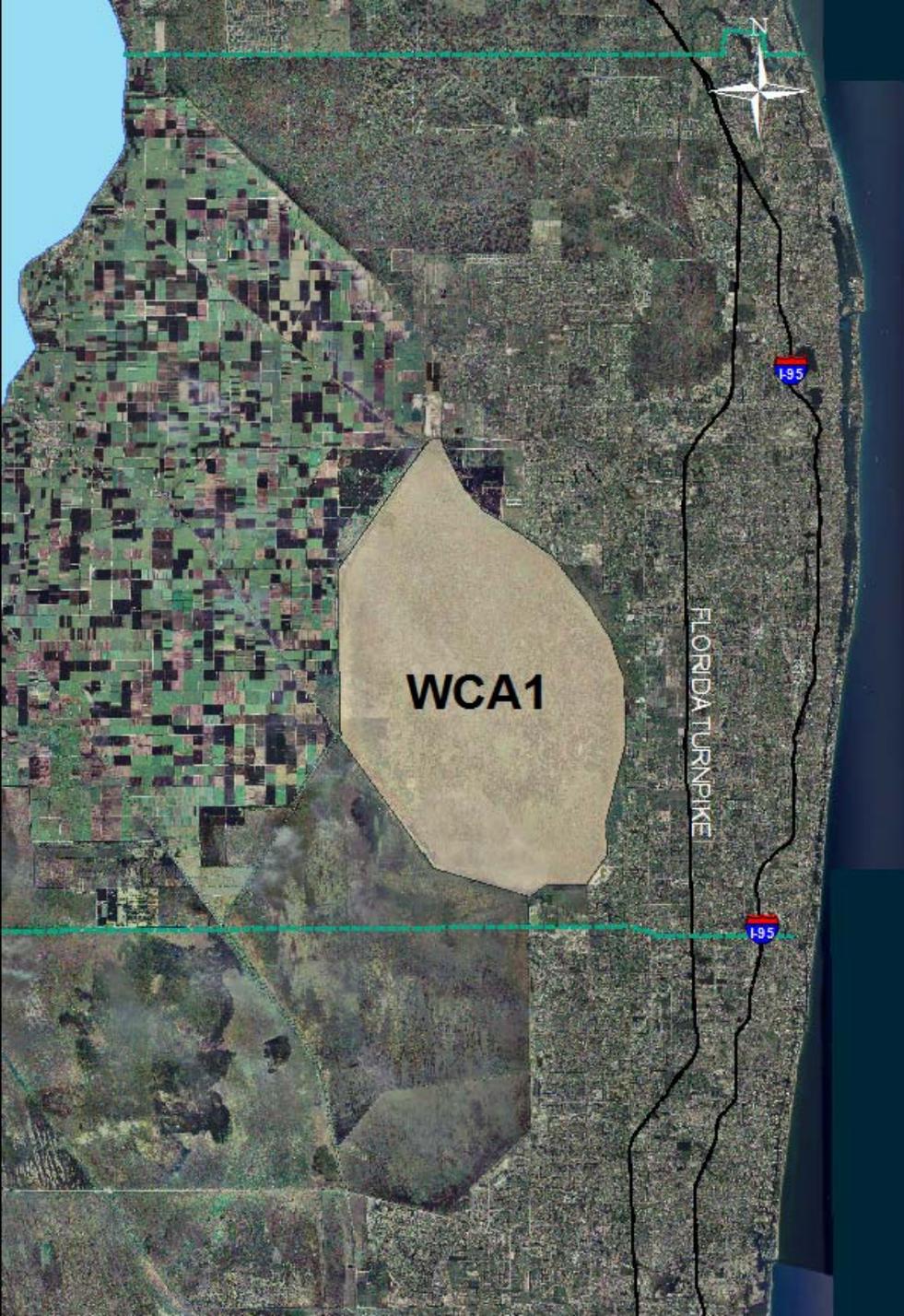


*All-time Record Minimum
8.82 ft-NGVD (02-Jul-2007)*

Lake Okeechobee SFWMM April 2008 Position Analysis

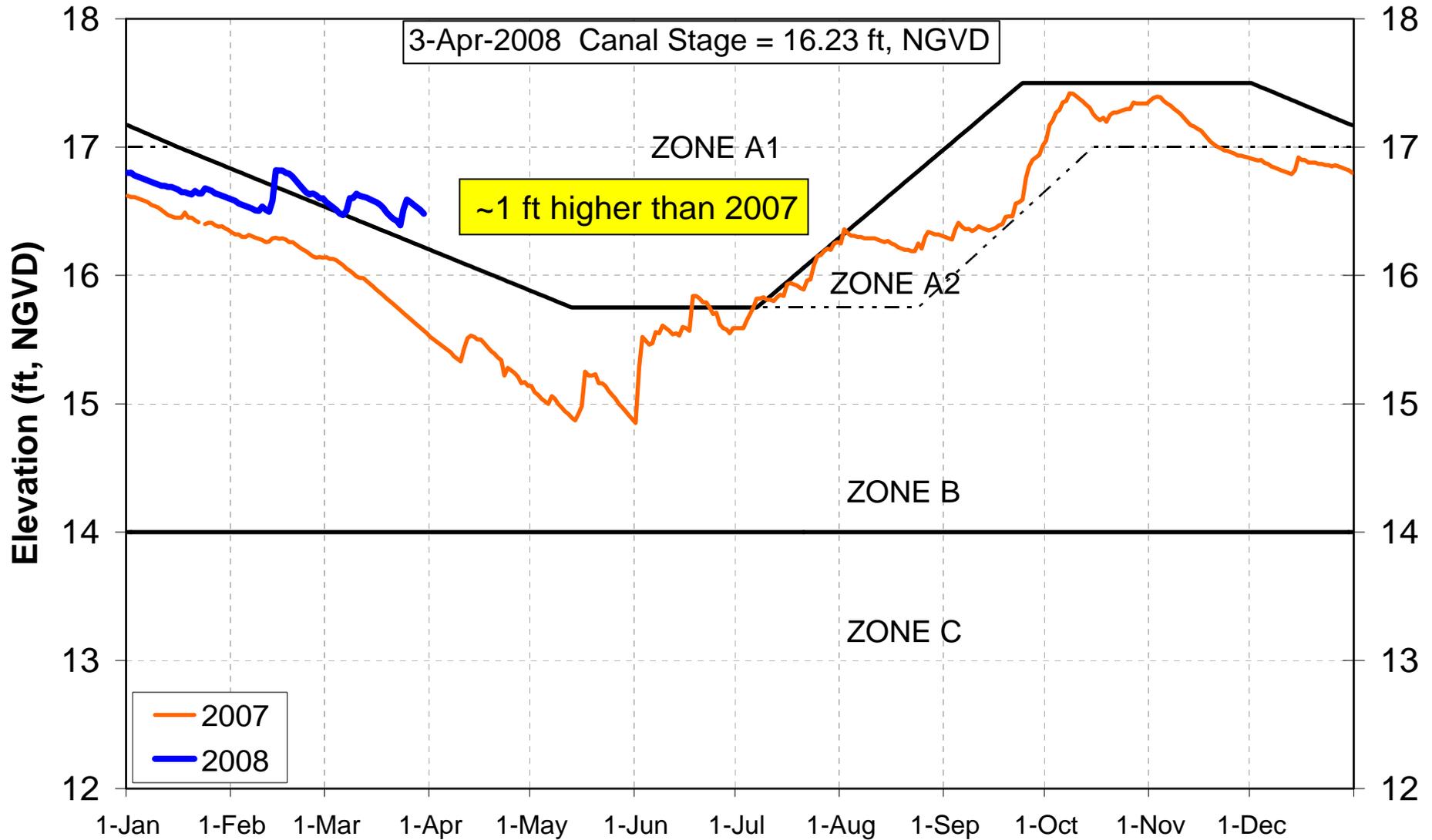


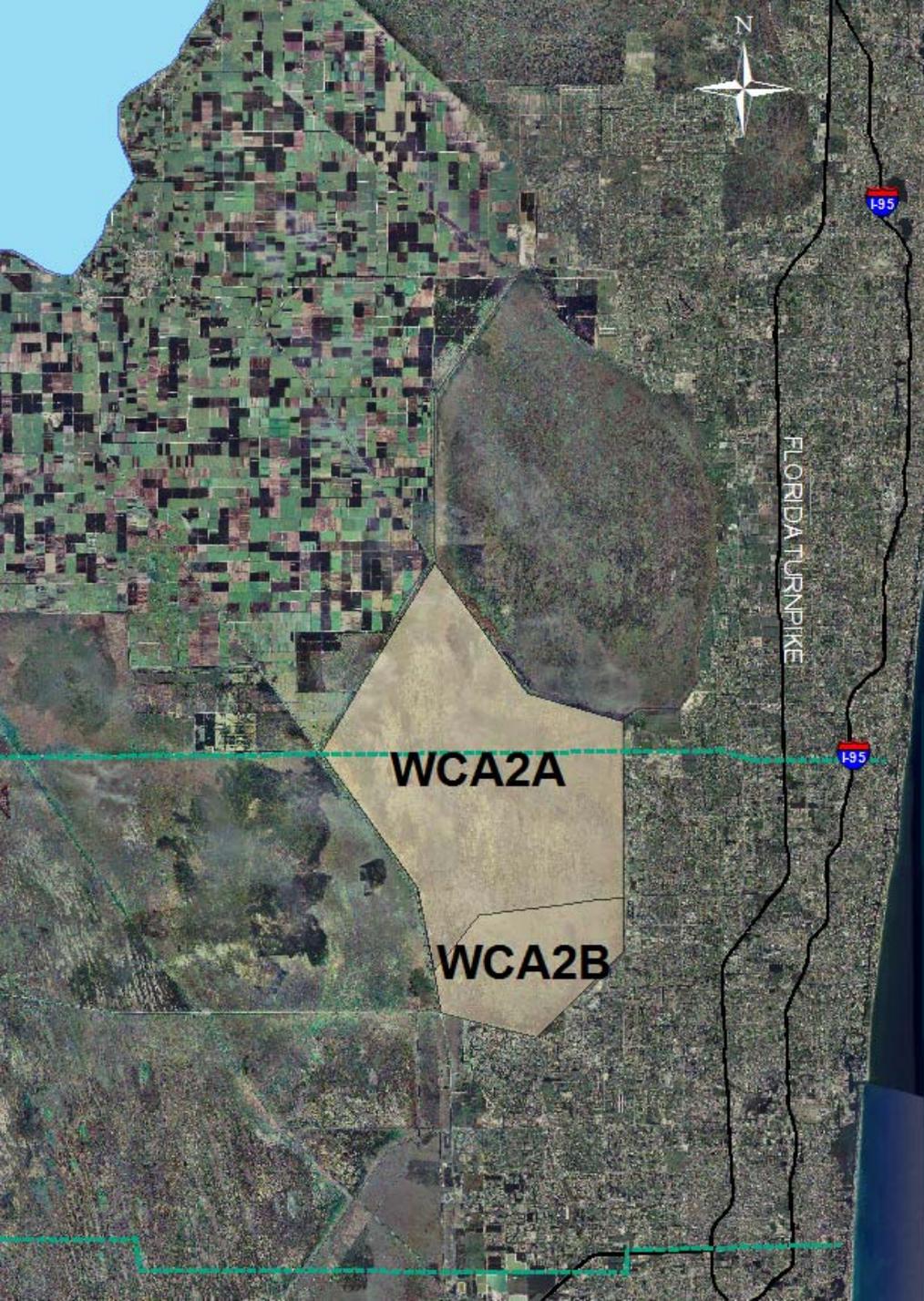
(See assumptions on the Position Analysis Results website)



Water Conservation Area 1

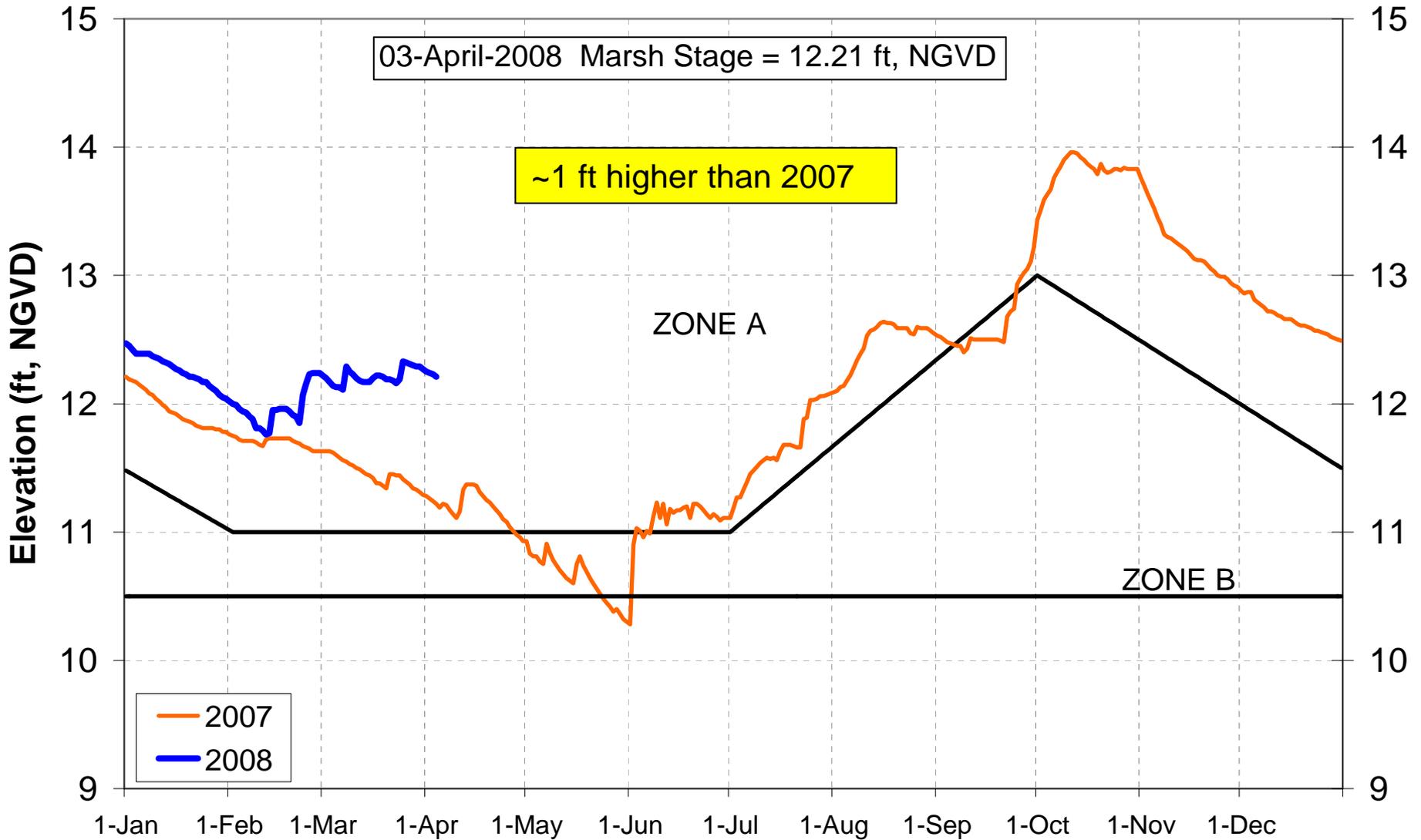
WCA-1 Stage and Regulation Schedule

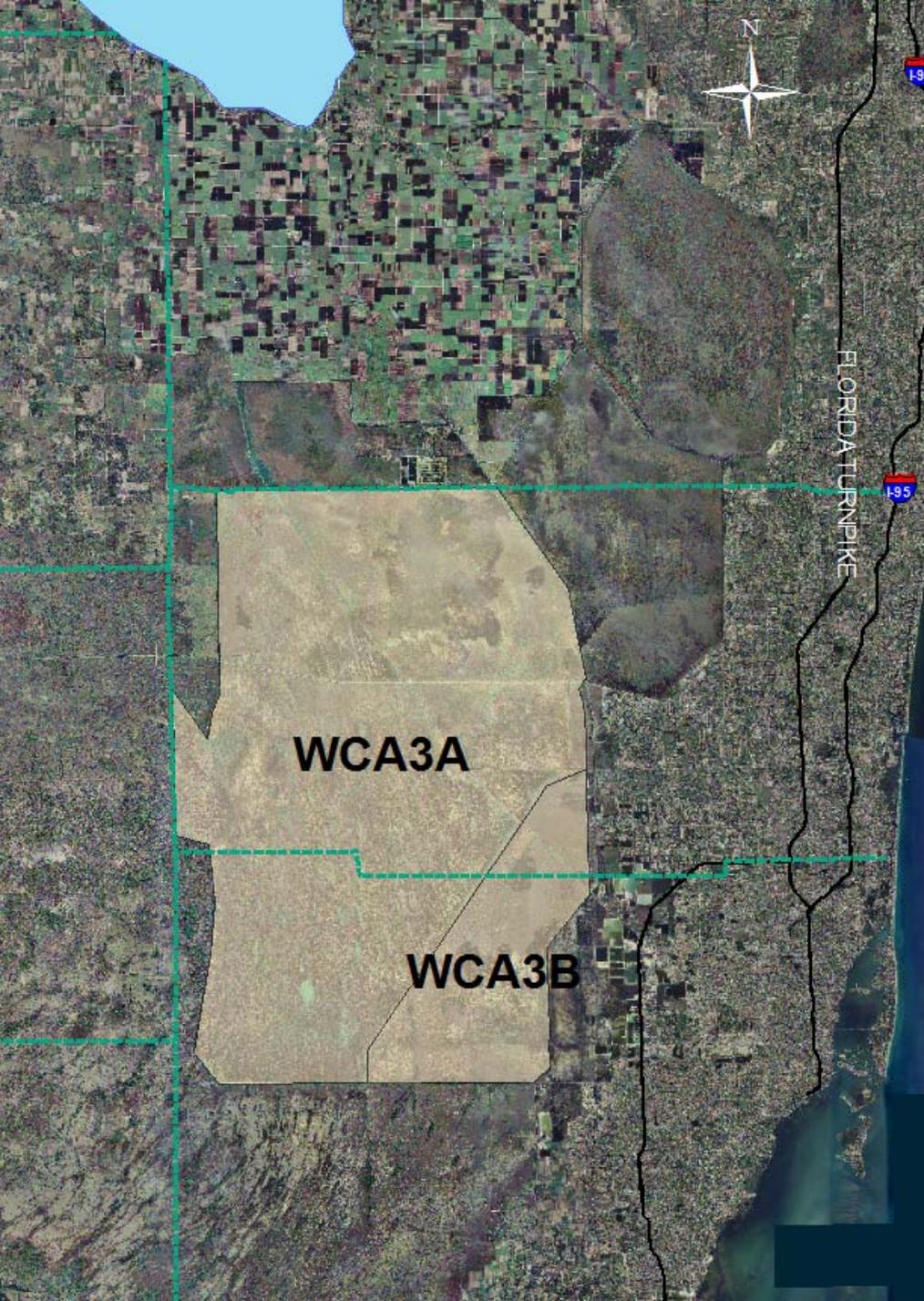




Water Conservation Area 2

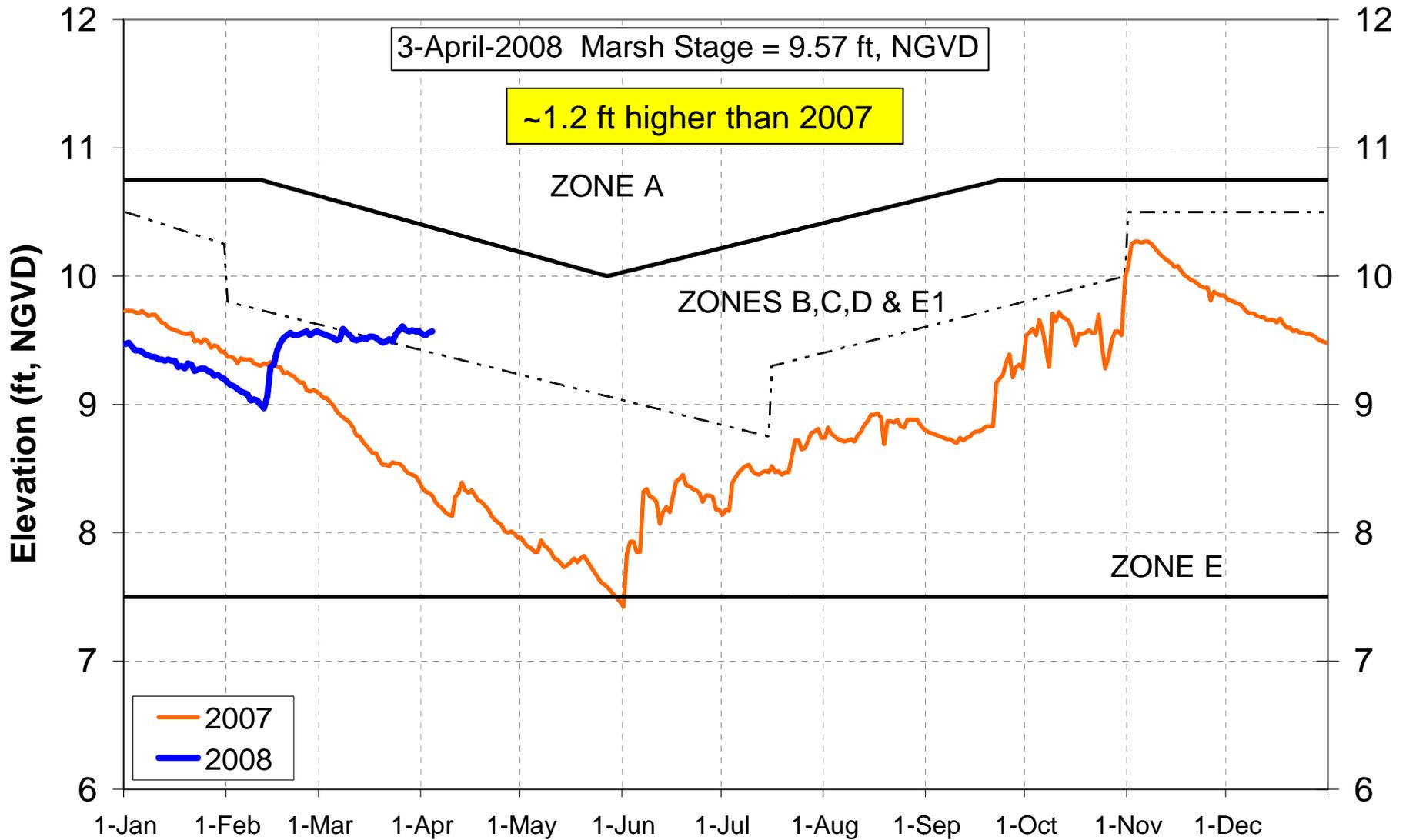
WCA-2A Stage and Regulation Schedule





Water Conservation Area 3

WCA-3A Stage and Regulation Schedule

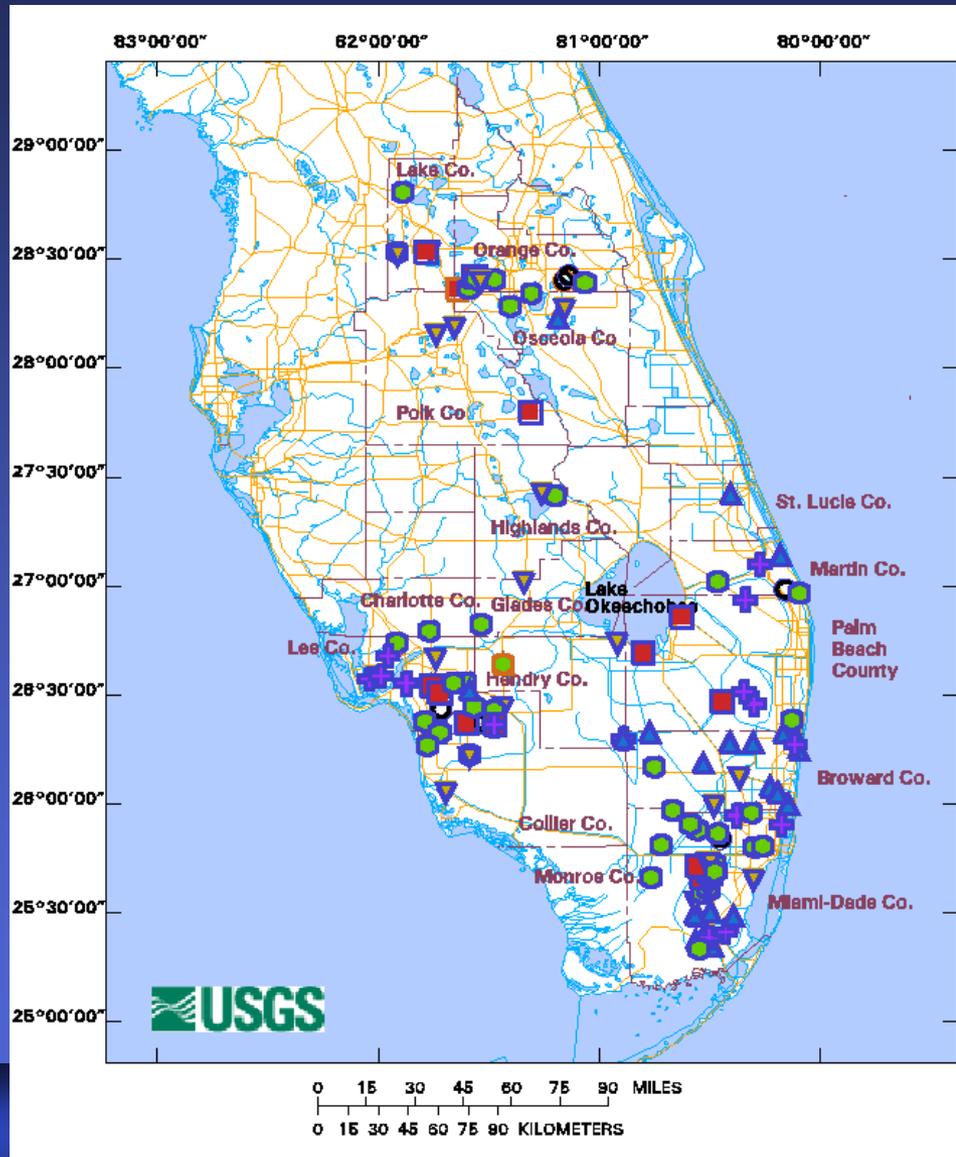
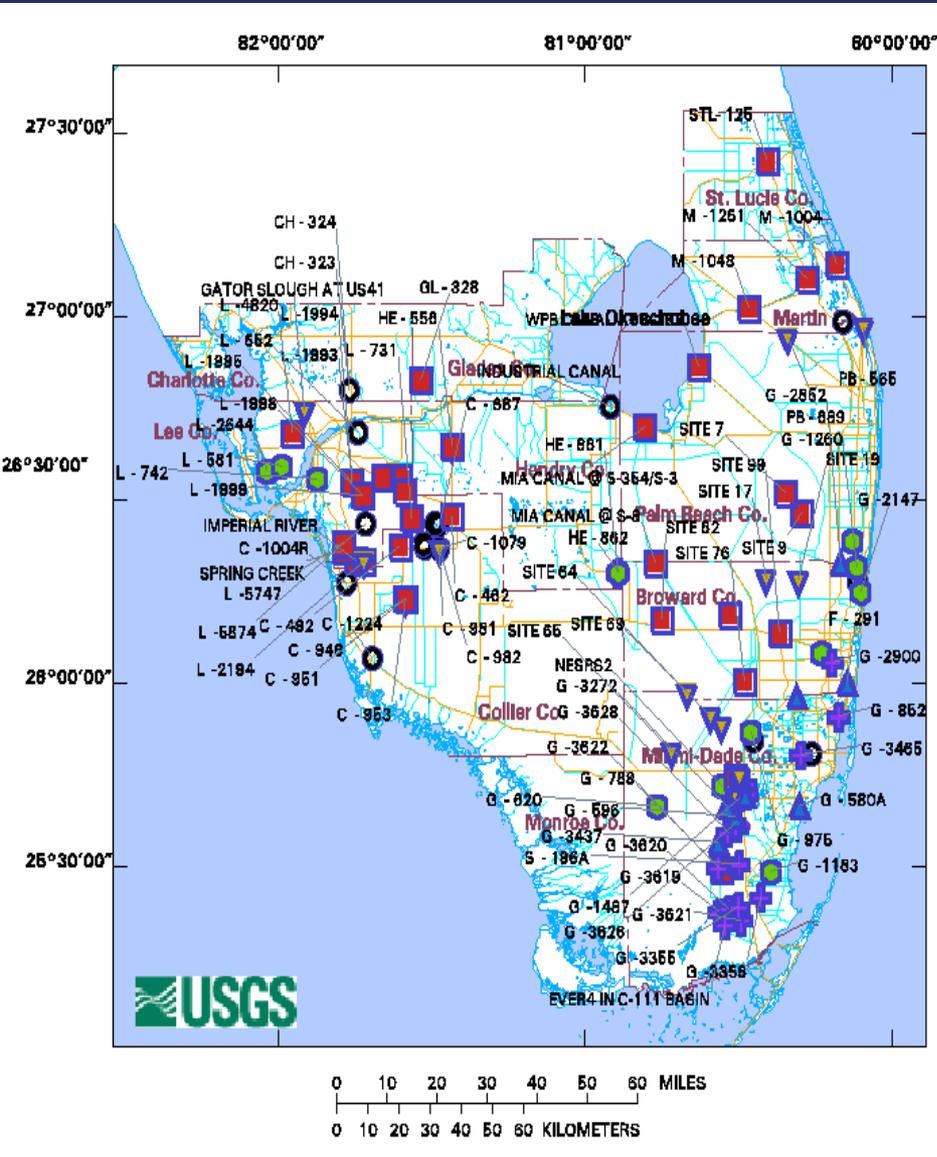


Groundwater Levels

April 19, 2007

Groundwater Levels

April 4, 2008



Water Shortage Transition Resource Indicators

- Lake Okeechobee stage
- Water Conservation Area stages
- Coastal Structures Discharging to Tide
- Groundwater Conditions Recovered
- Secondary Canals Discharging
- Minimum Flow & Levels
- Coastal Wellfield Conditions
- Utilities “at risk” & “of concern”
- Regional Wetlands & Tributaries

Resource Evaluation

Upper East Coast Region

<u>Status</u>	<u>Resource Indicator</u>
Green	Coastal Structures Discharging to Tide
Green	Groundwater Conditions
Green	Coastal Wellfields
Yellow	Utilities “at risk”
Green	C-23, C-24, C-25
Green	Local Tributaries and Wetlands

Resource Evaluation

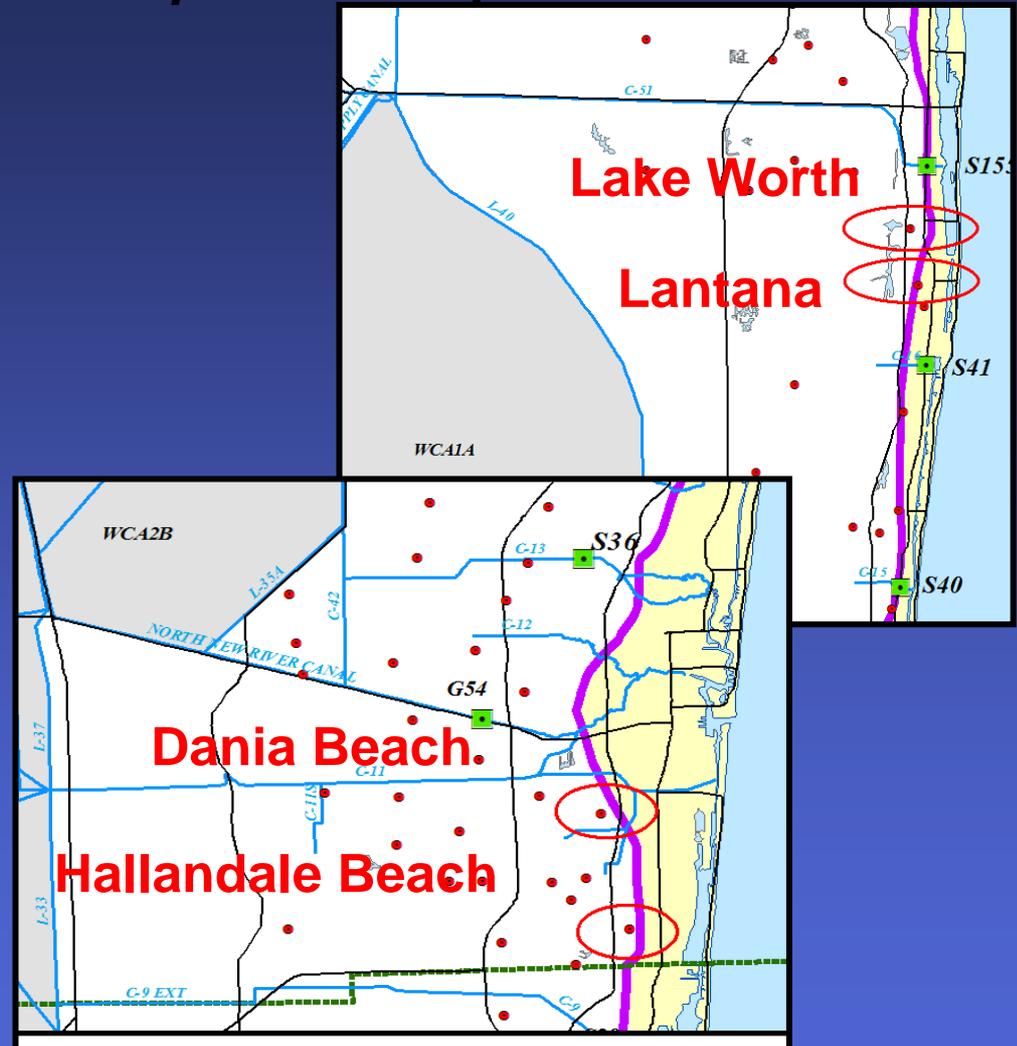
Lower East Coast Region

<u>Status</u>	<u>Resource Indicator</u>
	Water Conservation Area 1
	Water Conservation Area 2
	Water Conservation Area 3
	Coastal Structures Discharging to Tide
	Groundwater Conditions
	Secondary Canals / 298 Districts
	Minimum Flows & Levels
	Coastal Wellfields
	Utilities “at risk”

Utilities at Risk

Lake Worth, Lantana, Dania, Hallandale

- Eastern wellfields subject to saltwater intrusion
- No alternative sources
- No interconnects with other utilities



Resource Evaluation

Lower West Coast Region

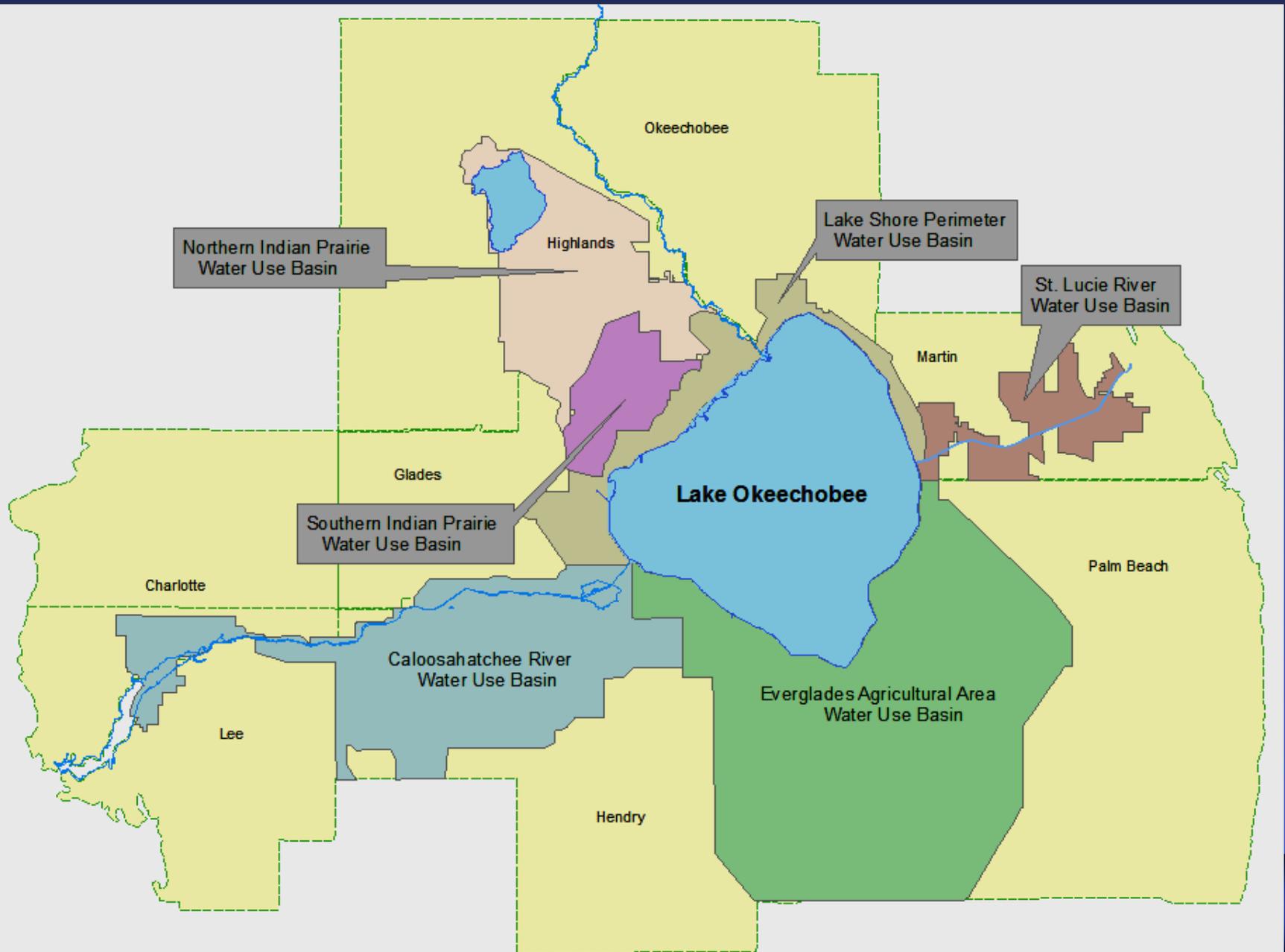
<u>Status</u>	<u>Resource Indicator</u>
	Big Cypress Basin
	Groundwater Conditions
	Sandstone Aquifer / Lehigh Acres
	Local Tributaries and Wetlands

Resource Evaluation

Upper Kissimmee Region

<u>Status</u>	<u>Resource Indicator</u>
	Groundwater Conditions
	Stage in Upper Chain of Lakes

Lake Okeechobee Service Area



Resource Evaluation

Lake Okeechobee Service Area

<u>Status</u>	<u>Resource Indicator</u>
	Lake Okeechobee Stage
	Temporary Forward Pumps
	Tributary Inflows

Resource Evaluation

Indian Prairie Basin

<u>Status</u>	<u>Resource Indicator</u>
	Lake Istokpoga Stage
	Lake Okeechobee Stage

Staff Recommendations

- **Maintain modified Phase III Restrictions:**
 - **Lake Okeechobee Service Area**
 - **Indian Prairie Basin**
 - **Lower East Coast Utilities at Risk**
(Lake Worth, Lantana, Hallandale Beach, Dania Beach)
 - **M-Canal Basin**
(including City of West Palm Beach)
 - **Sandstone Aquifer Users**
(Unincorporated Lee County, Lehigh Acres)

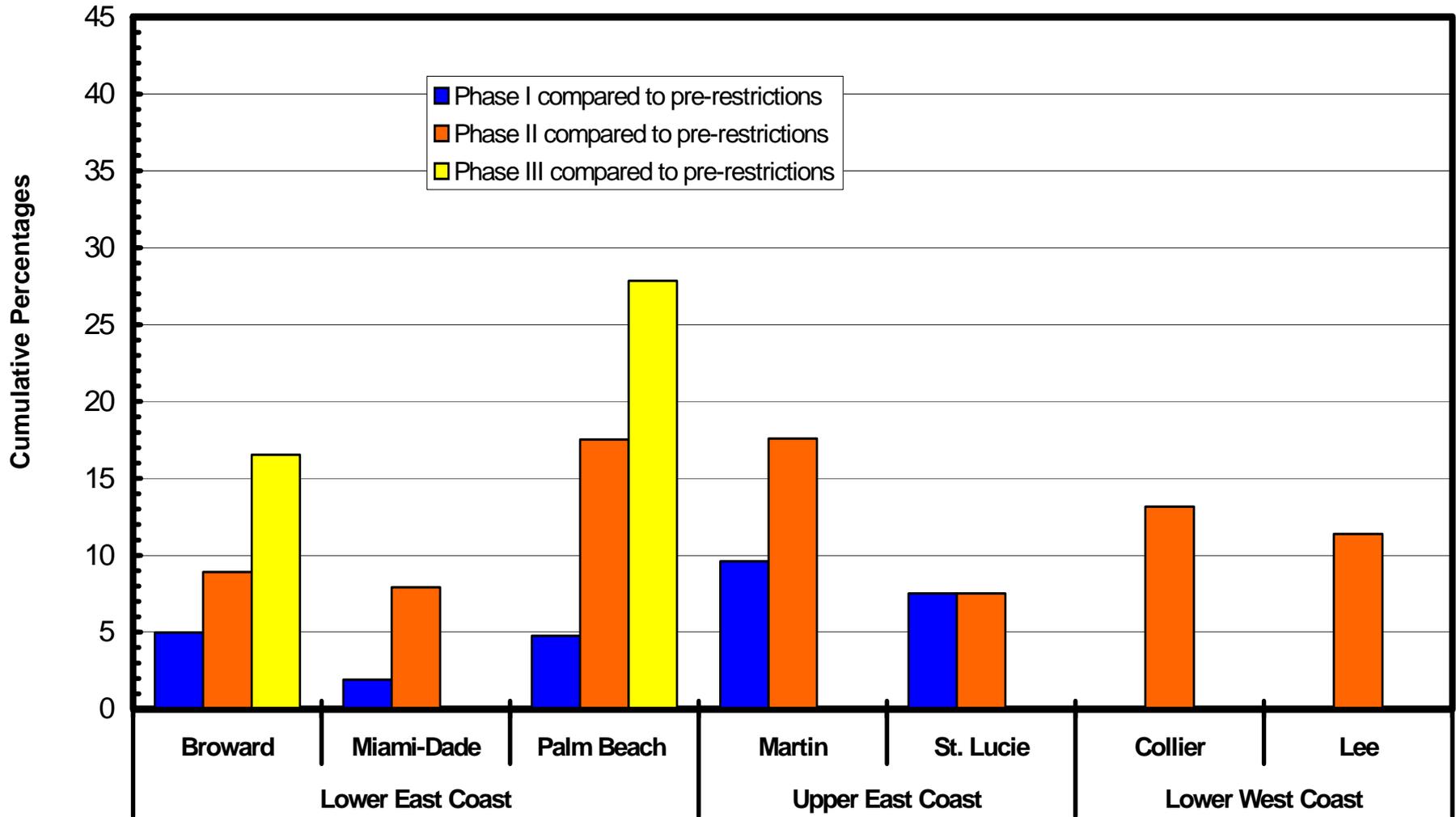
Staff Recommendations

(cont'd)

- **Reduce restrictions from Modified Phase III to Modified Phase II:**
 - **Landscape irrigation restrictions reduced from 1 to 2 day a week**
 - **Reduce golf course cutbacks from 45% to 30%**
 - **Upper East Coast**
 - **Lower East Coast**
 - **Lower West Coast**
 - **Kissimmee Basin**
- **Eliminate restrictions on Diversions and Impoundments, except within M Canal Basin**
- **Effective Date: April 18, 2008**

Summer 2007

District Wide Total Percent Savings Compared to 28 Day Period Preceding Water Restrictions



Closing Thoughts

- **We still have 2 months to go in the dry season**
 - **Continued Compliance with Restrictions**
 - **Continued Monitoring of Conditions**

- **Couldn't Have Gotten Here Without Help of:**
 - **Public embracing water conservation**
 - **Utilities**
 - **Diversion & Impoundment Permittees**
 - **Golf Courses**
 - **A lot of help from Mother Nature**

Agenda Item #45a

- Enter an Order 1) Rescinding Modified Phase III Extreme Water Shortage Restrictions and 2) Imposing Modified Phase II Restrictions within the Upper East Coast, Lower East Coast, Lower West Coast and Kissimmee Basin Regions

Agenda Item #45b

- Enter an Order 1) Rescinding Modified Phase III Extreme Water Shortage Restrictions for Diversion and Impoundment permittees within the Lower East Coast Region, except for those within the M Canal water use basin