



Lake Okeechobee Status Update

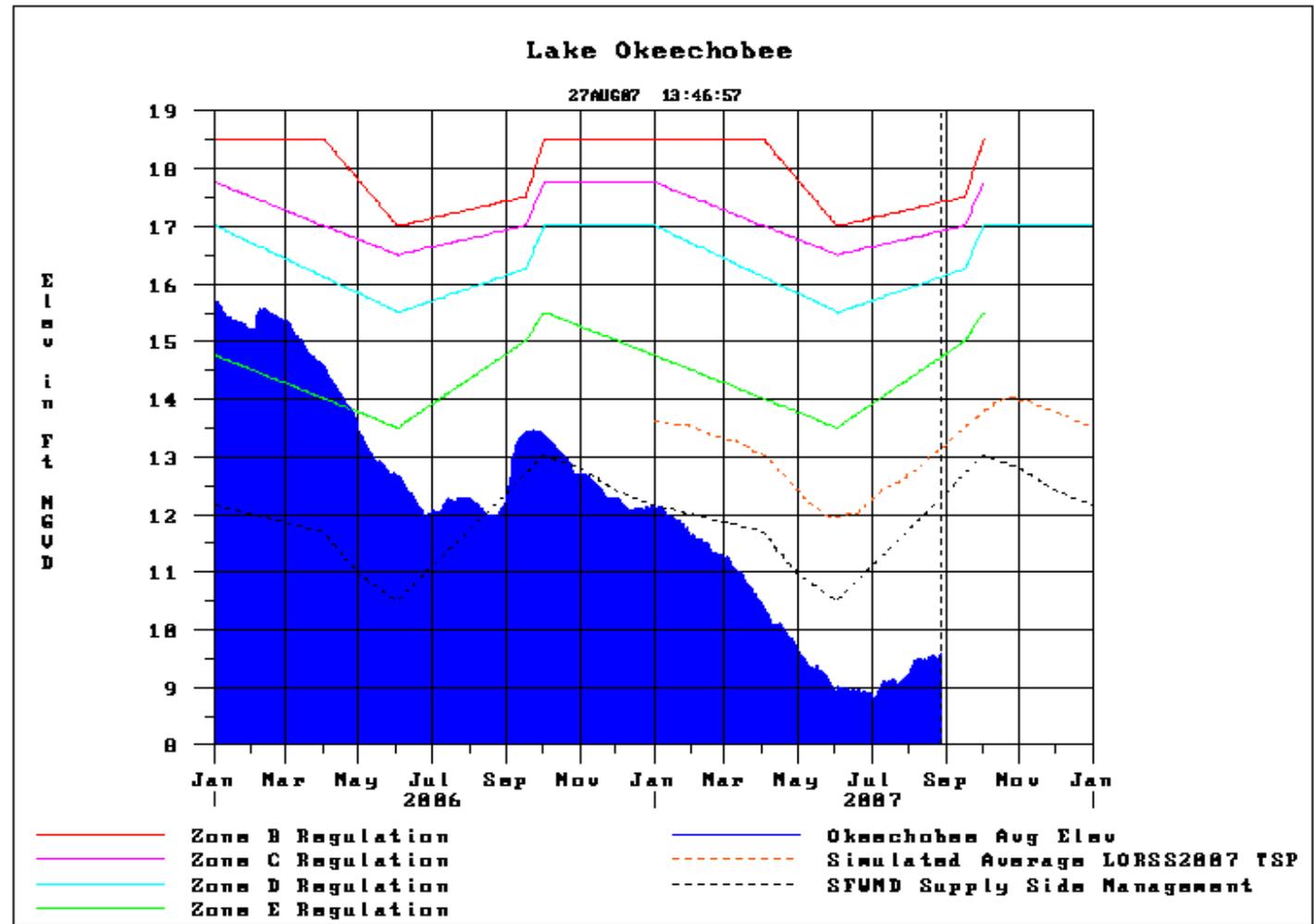
Technical Oversight Meeting – August 28, 2007

Susan Gray, Ph.D.

Deputy Director, Watershed Management Department

South Florida Water Management District

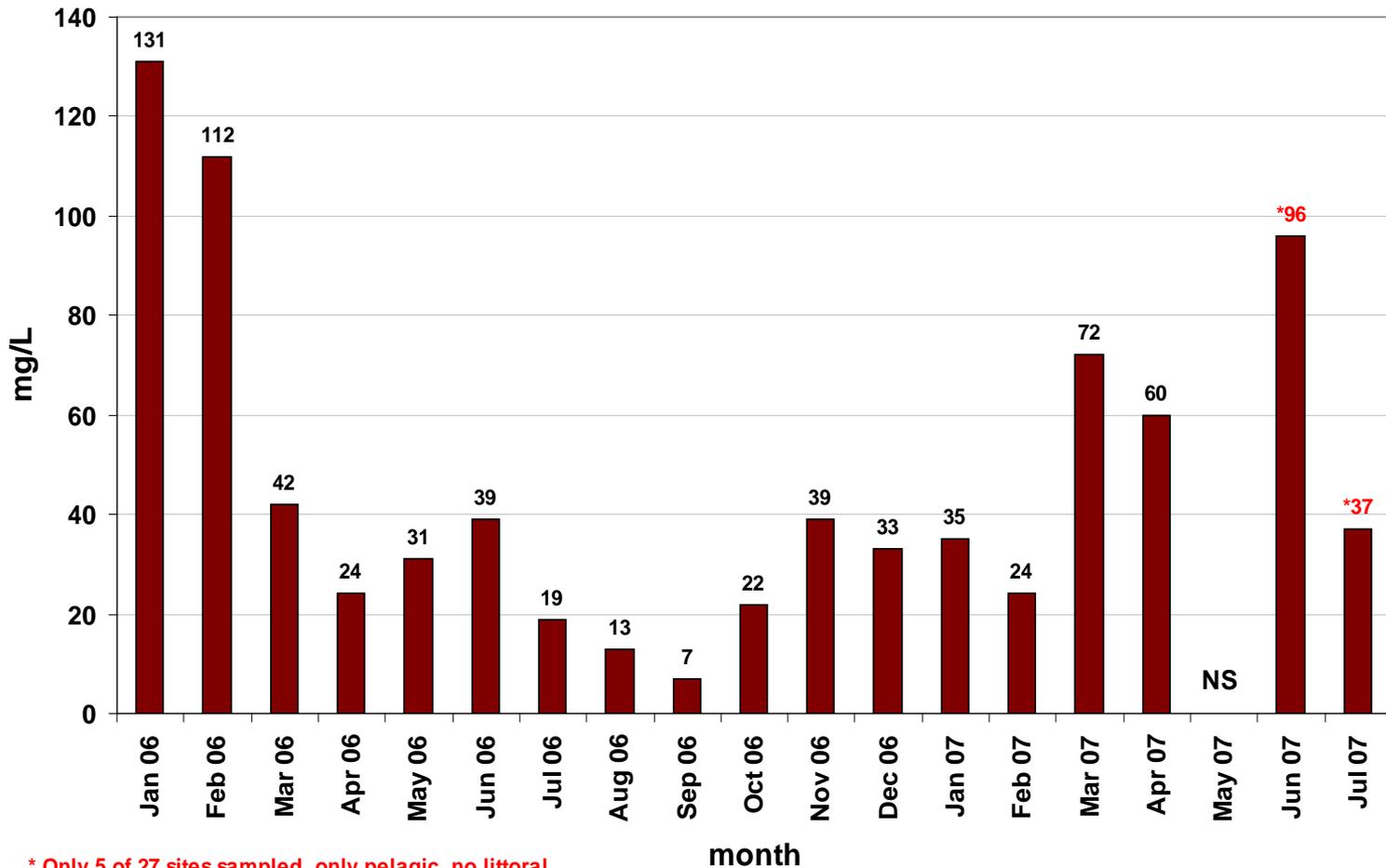
Lake Okeechobee Stage



Water Quality – Total Suspended Solids

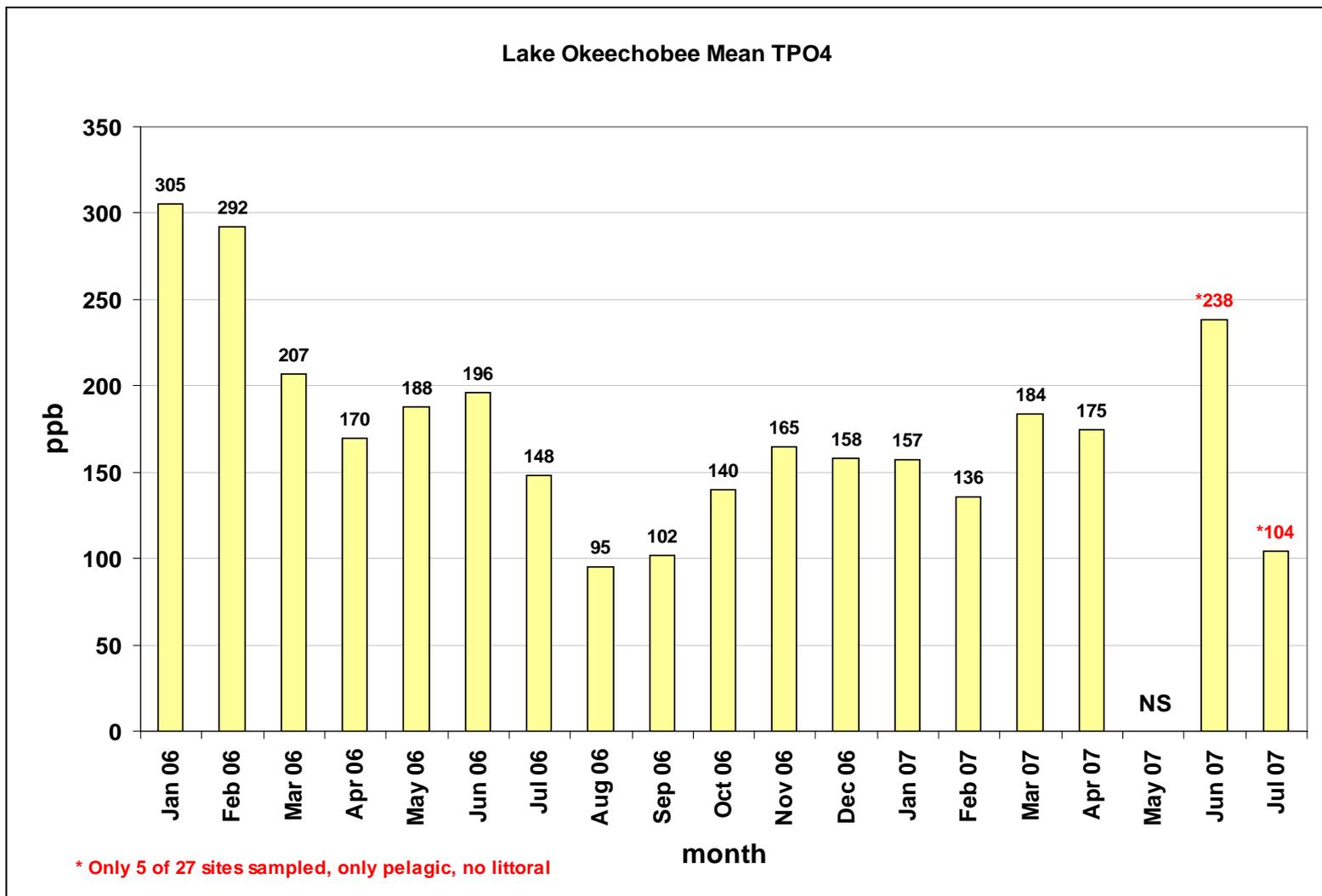


Lake Okeechobee Mean TSS



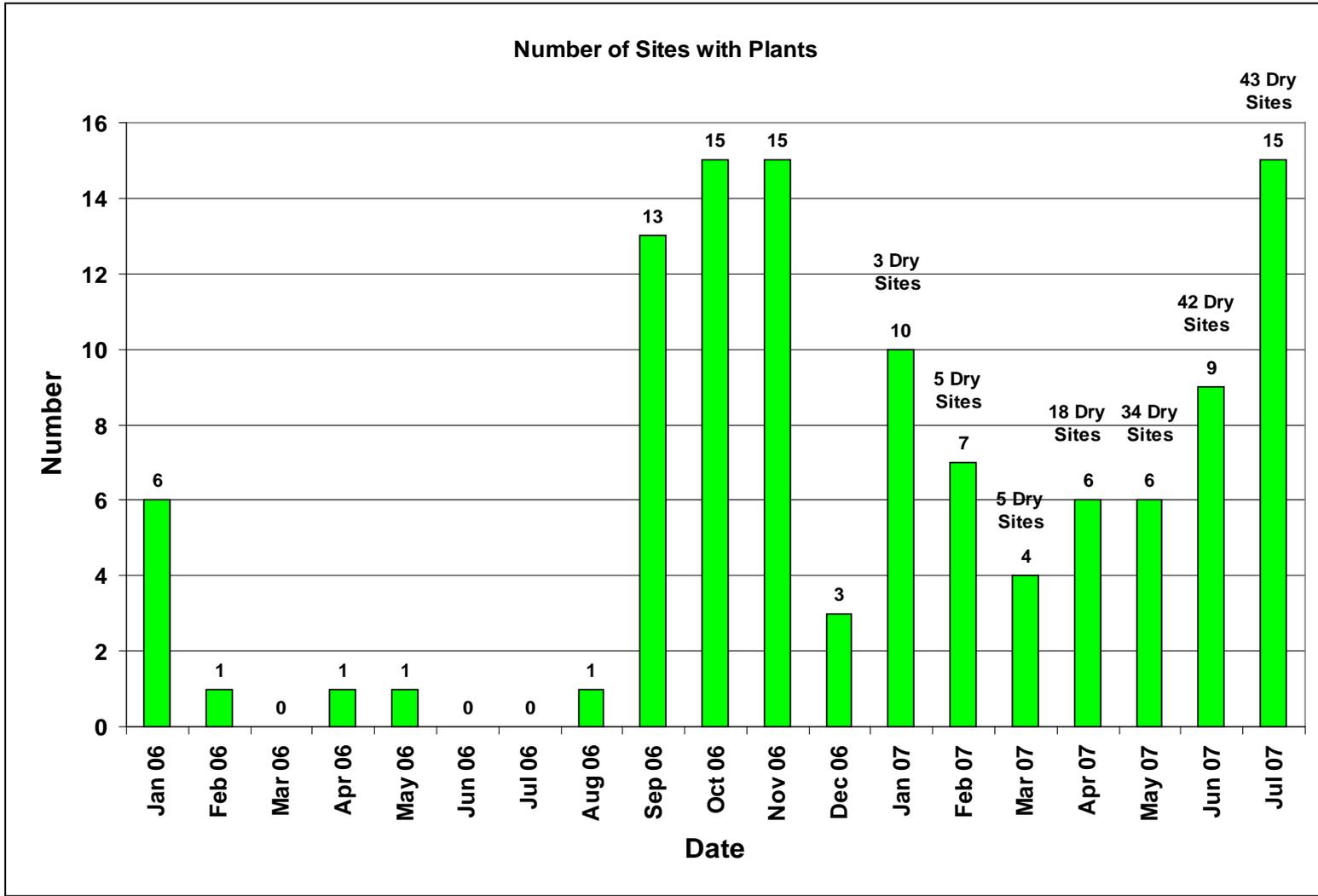
* Only 5 of 27 sites sampled, only pelagic, no littoral

Water Quality – Total Phosphorus

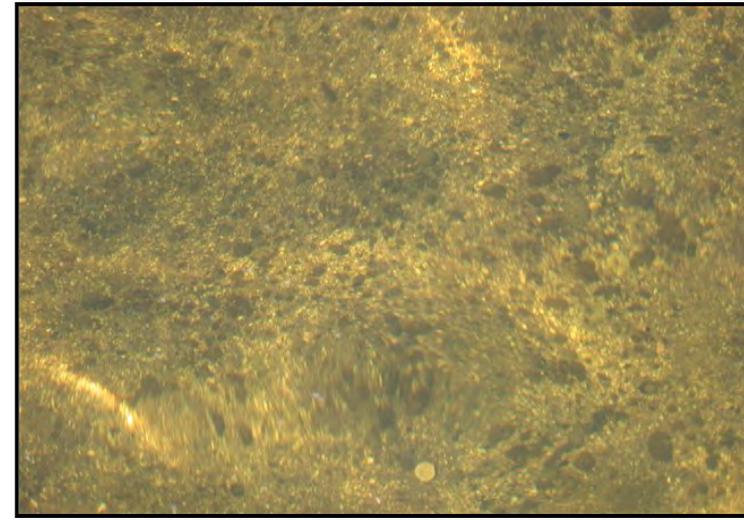


Submerged Aquatic Vegetation

Transect Sites



Submerged Aquatic Vegetation



Submerged Aquatic Vegetation Mapping

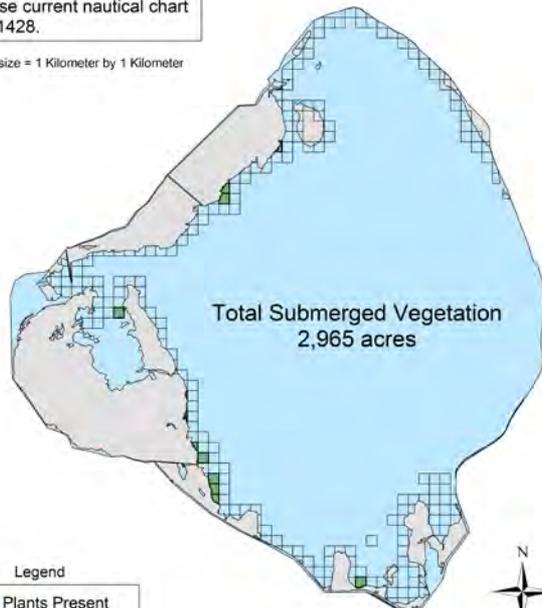


Submerged Vegetation Map
For Lake Okeechobee
August 2006

Lake Okeechobee Division

Note: Not intended for navigation.
Use current nautical chart
11428.

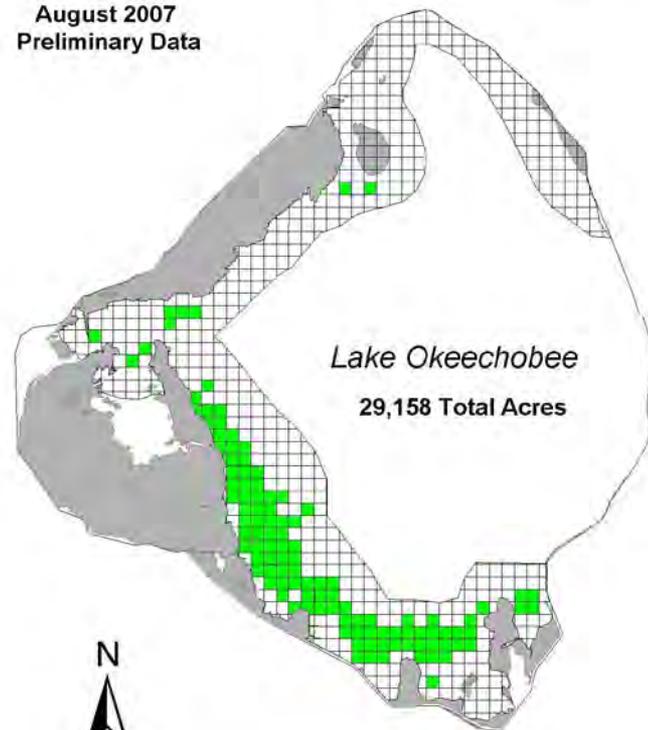
Grid cell size = 1 Kilometer by 1 Kilometer



- Legend
- Plants Present
 - No Plants Present
 - Littoral Zone

For additional details log on to WWW.sfwmd.gov, or
Contact Dr. Bruce Sharfstein at 561.686.8800 Ext. 4570

Submerged Aquatic Vegetation Sampling Grid
August 2007
Preliminary Data



- Legend
- Plants Present
 - No Plants Present
 - Littoral Zone

Low Lake Restoration Projects

- Muck removal - improved habitat
- Reduced re-suspension of sediments
- Restored recreational access
- Upland disposal
- Phosphorus removal
- Exotics removal
- Planting of native vegetation





Pond Apple and Cypress Re-vegetation





2008 SFER Lake Okeechobee Chapter Updates / Highlights

- Water Shortage
 - Lake Level at record low of 8.82 feet on July 3, 2007
 - Water Restrictions put in place and increased over time (from 15% to 45% reduction in agricultural use and lawn watering reduced from 3 to 1 day per week)
 - Fourteen temporary forward pumps deployed to move water from the lake to the Everglades Agricultural Area

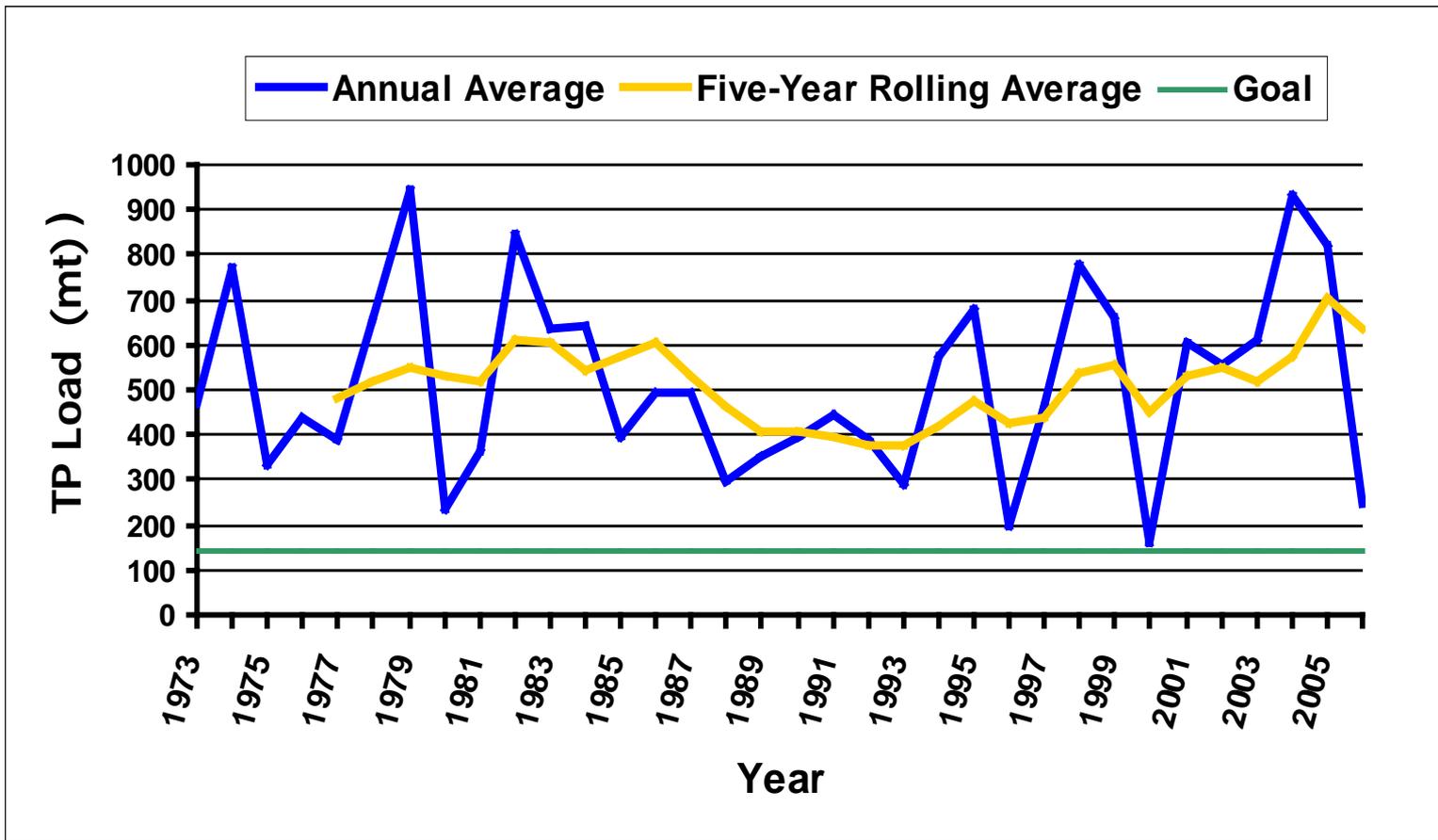


2008 SFER Lake Okeechobee Chapter Updates / Highlights

- Lake Conditions
 - In-Lake Phosphorus - 176 ppb
 - Decline from 214 ppb in WY2006
 - Submerged Aquatic Vegetation
 - August 2006 lakewide mapping
 - Less than 3,000 acres of coverage
 - Monthly transect monitoring
 - Increased biomass observed in July 2007
 - Primarily *Chara*
 - Expect continued improvements



2008 SFER Lake Okeechobee Chapter Updates / Highlights



2008 SFER Lake Okeechobee Chapter Updates / Highlights

- Loads and Flows
 - Water flow declined to 575,283 acre-feet (ac-ft)
 - Less than 50% of 15 year (1991-2005) average of 1.2 million ac-ft
 - Load reduced to 202 metric tons of P
 - Approximately 1/3 of 15 year average (514 mt)



2008 SFER Lake Okeechobee Chapter Updates / Highlights

Table 10-7. Ongoing and future phosphorus reduction activities in the Lake Okeechobee watershed, with lead agencies and estimated percent of total load reduction to meet the P TMDL of 140 t.

Category	Lead Agency	Estimated Percent TP Load Reduction
P Load Reduction Activities Underway		
Owner ¹ & Typical Cost Share ² BMPs	Agriculture – FDACS Non agriculture – FDEP	19%
Watershed P Reduction Projects (P source control projects as shown in Table 10-4)	SFWMD	9.5%
Regional Public Works Projects (EAA reservoir and flow diversion projects, Kissimmee river restoration, critical projects)	SFWMD	15%
P Load Reduction Activities Requiring Future Funding (2007-2015)		
Typical Cost Share BMPs and Additional Agricultural ³ BMPs that Require Funding	FDACS SFWMD	19%
Other Regional Projects (Lemkin Creek STA, Lake O Fast Track Projects, Brighton reservoir)	SFWMD	8%
CERP LOWP (2003-2015)	USACE and SFWMD	16.5%
LOPP Strategies (aquifer storage and recovery, public-private partnership project, chemical treatment with reservoir, additional regional storage and treatment, managed aquatic plant system, deep well injection)	SFWMD, FDEP, FDACS	13%

¹ Operational BMPs that can be implemented by landowners without cost-share.

² Typical BMPs (primarily cow-calf) implemented under cost share programs offered by FDACS and NRCS.

³ The category describes advanced BMPs that require extensive cost-share including chemical treatment with retention/detention for citrus, dairy, row crop, ornamental, and sod.

