AGENDA

SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
WATER RESOURCES ADVISORY COMMISSION (WRAC)
Lake Okeechobee Committee Meeting

Wednesday, March 25, 2009, 9:00 AM
Martin/St. Lucie Service Center
780 SE Indian Street
Stuart, FL

1.	**Welcome and Introductions** - Melissa Meeker, Chair	
2.	**Member Issues**	15m
3.	Water Conditions Update, Matahel Ansar, Deputy Director, Operations Control Department, Operations and Maintenance, SFWMD	15p 15d
4.	Northern Everglades and River Watershed Protection Plan Updates, Temperince Morgan, Program Implementation Manager, Everglades Restoration, SFWMD	30p 30d
5.	Water Quality Treatment Technologies Update - Dave Unsell, Director, Lake Okeechobee Division, Water Resources, SFWMD	30p 30d
• Public Comment		15m
6.	Lunch on own - 12:00 - 1:00 p.m.	60m
7.	Lake Okeechobee Controlled Burning Plan - Dave Unsell, Director, Lake Okeechobee Division, SFWMD	30p 30d
8.	Dispersed Storage and Treatment Update - Benita Whalen, Deputy Department Director, Regulation Department, Water Resources, SFWMD	30p 30d
9.	Martin County Stormwater and other Restoration Projects - Paul Millar, Manager, Water Resources, Martin County	15p 15d
	See supporting document: Millar[1].pdf	
• Public Comment		15m
10.	**Adjourn: 3:45 p.m**	

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1

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2

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See supporting document: Millar[1].pdf

- Public Comment 15m

9

Surface Water Quality Improvement … a local government perspective

Paul Millar
Engineering Department
Martin County

Lake Okeechobee WRAC

March 25, 2009

Steps toward Protection and Restoration

- 1987 SWIM Priority Water Body
- 1991 Estuary of National Significance
- Various Aquatic Preserve and Outstanding Florida Waters Designations
- 2004 First Approved PIR under CERP
- 2007 Northern Everglades Legislation

Northern Everglades and Estuary Protection Program

In 2007 the Florida Legislature Expanded the Okeechobee Protection Plan to Include Protection and Restoration of the Lake Okeechobee Watershed and the Caloosatchee and St. Lucie Estuaries

The Essentials of the St. Lucie Estuary Protection Plan

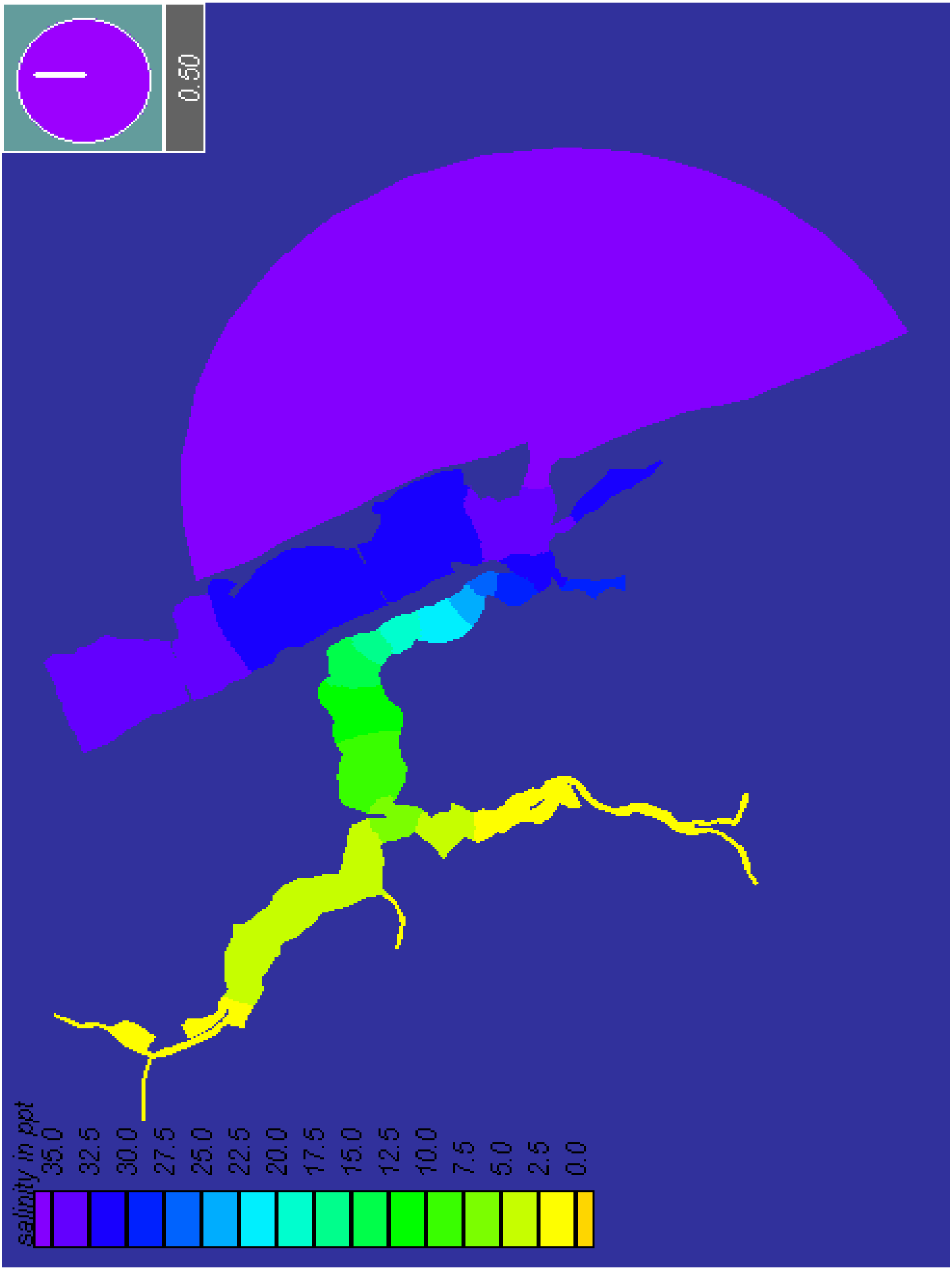
- A Completed Indian River Lagoon South Plan – a Key Component of the Comprehensive Everglades Restoration Plan
- Ramped Up Agricultural and Urban Best Management Practices
- An Ambitious Program of Local Gov‘ t Stormwater Retrofits to supplement CERP

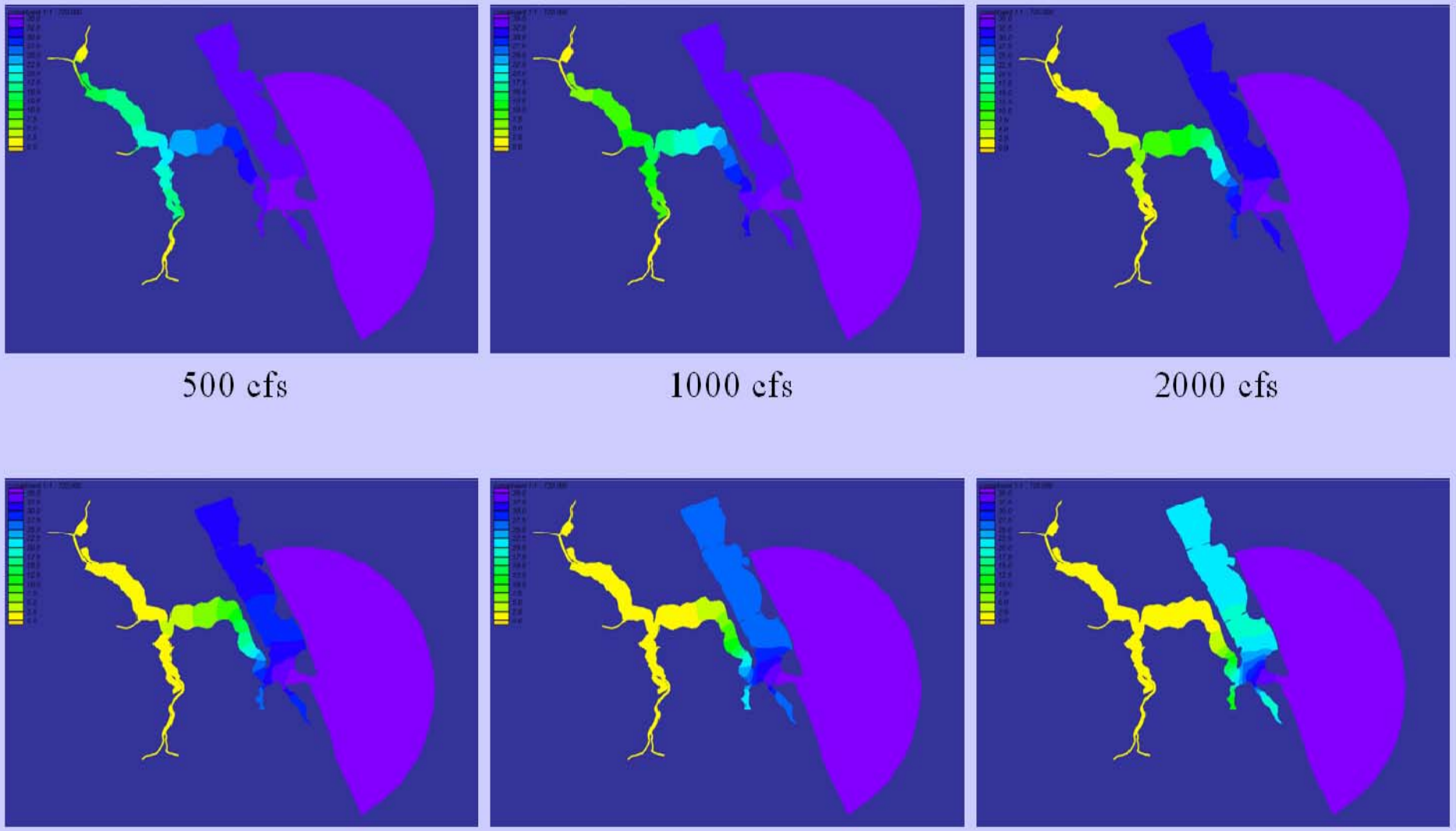
Northern Everglades and Estuary Protection Plan

Grew out of the Governor's "Corridor Advisory Committee" Whose #1 Recommendation was …

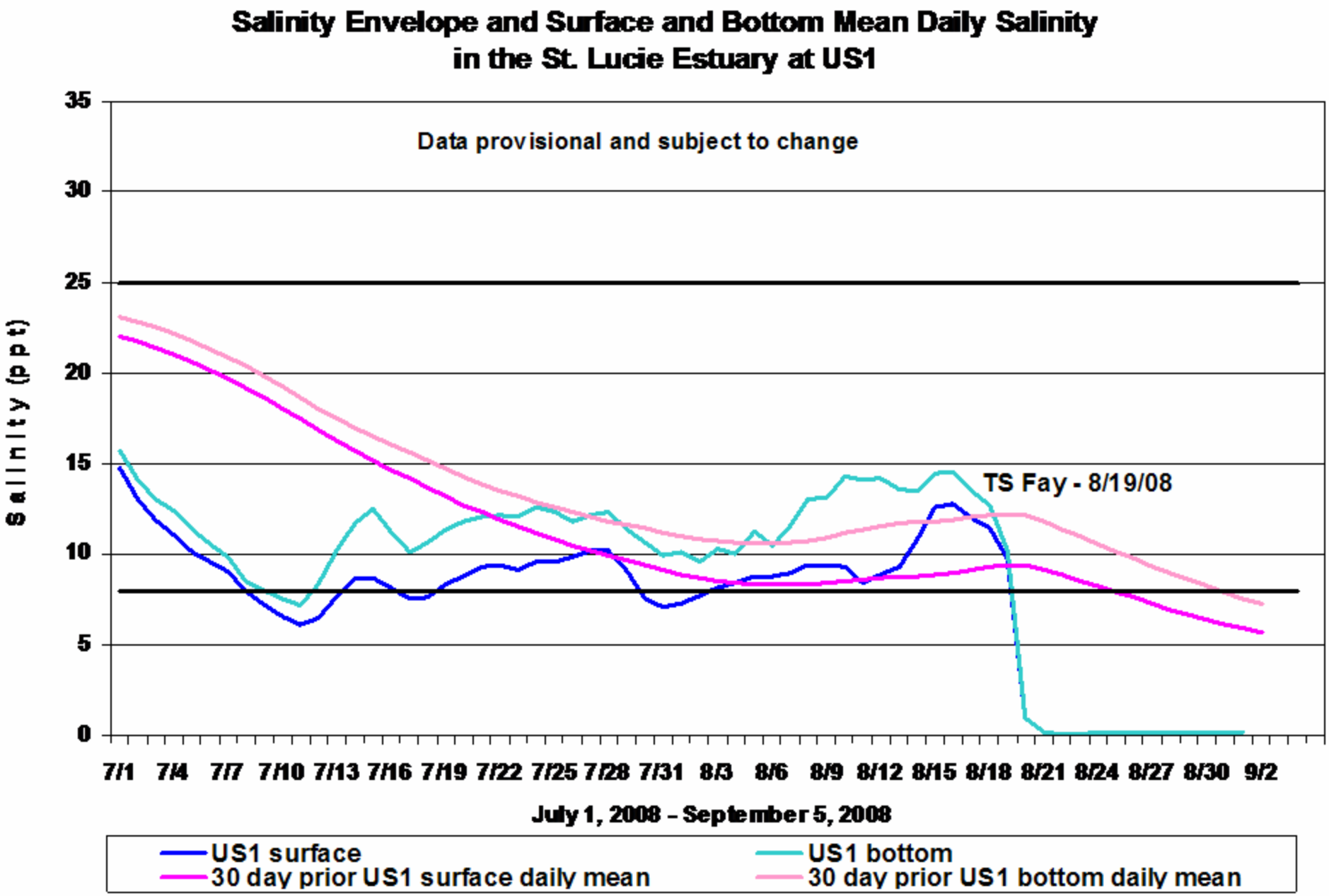
…to Provide Parity – an equal level of protection for the areas north, east and west of Lake Okeechobee

Typical Lake Okeechobee & Estuary Flows During Wet Periods
S80 Discharge to St. Lucie Estuary
C-44 Basin Runoff
Lake Release through EAA to WCAs (via STAs) &/or to tide
Lake Release at S-308
Lake Inflows
Lake Release at S-77
EAA Runoff
C-43 Basin Runoff
S79 Discharge to Caloosahatchee Estuary


0.50
salinity in ppt
35.0
32.5
30.0
27.5
25.0
22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0

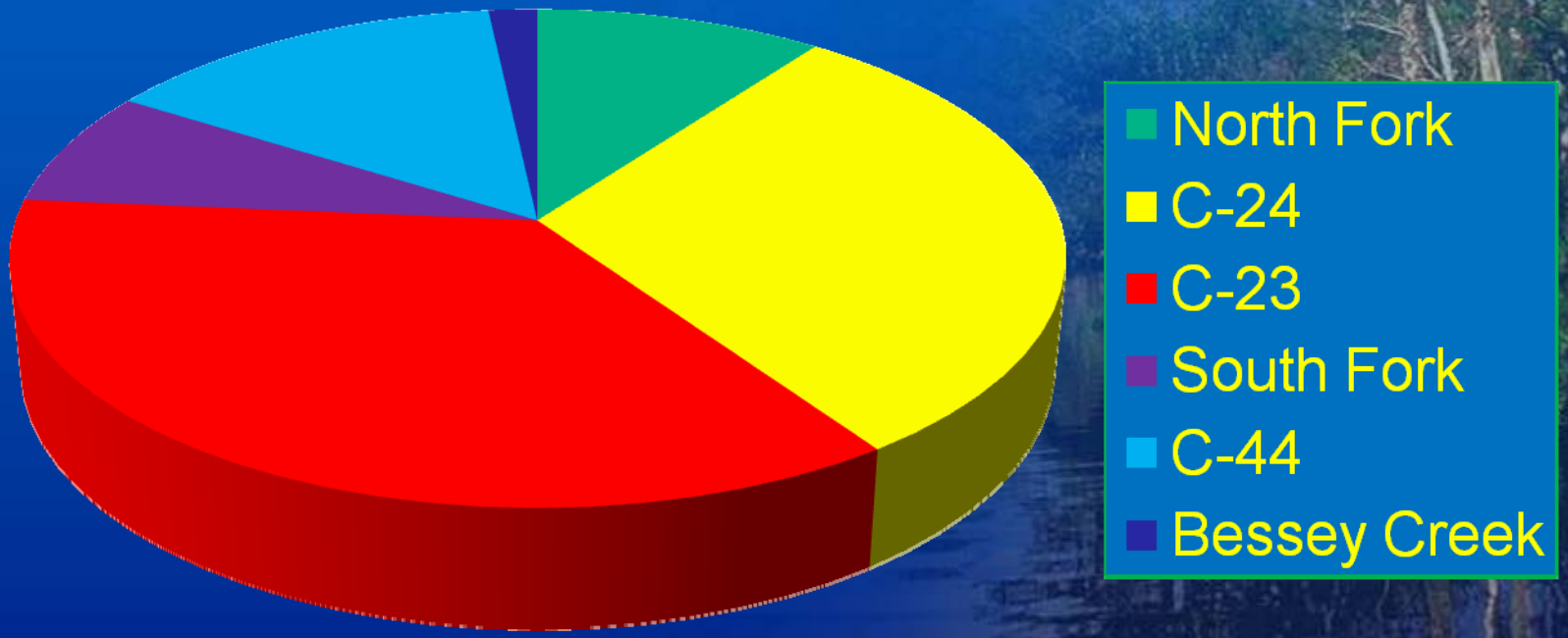


The Impact of Drainage Canal Discharge on the Salinity Gradient in St. Lucie estuary


Salinity Envelope and Surface and Bottom Mean Daily Salinity
in the St. Lucie Estuary at US1
Data provisional and subject to change
TS Fay - 8/19/08
Salinity (ppt)
35
30
25
20
15
10
5
0
7/1 7/4 7/7 7/10 7/13 7/16 7/19 7/22 7/25 7/28 7/31 8/3 8/6 8/9 8/12 8/15 8/18 8/21 8/24 8/27 8/30 9/2
July 1, 2008 – September 5, 2008
US1 surface
US1 bottom
30 day prior US1 surface daily mean
30 day prior US1 bottom daily mean

Stormwater Contributors

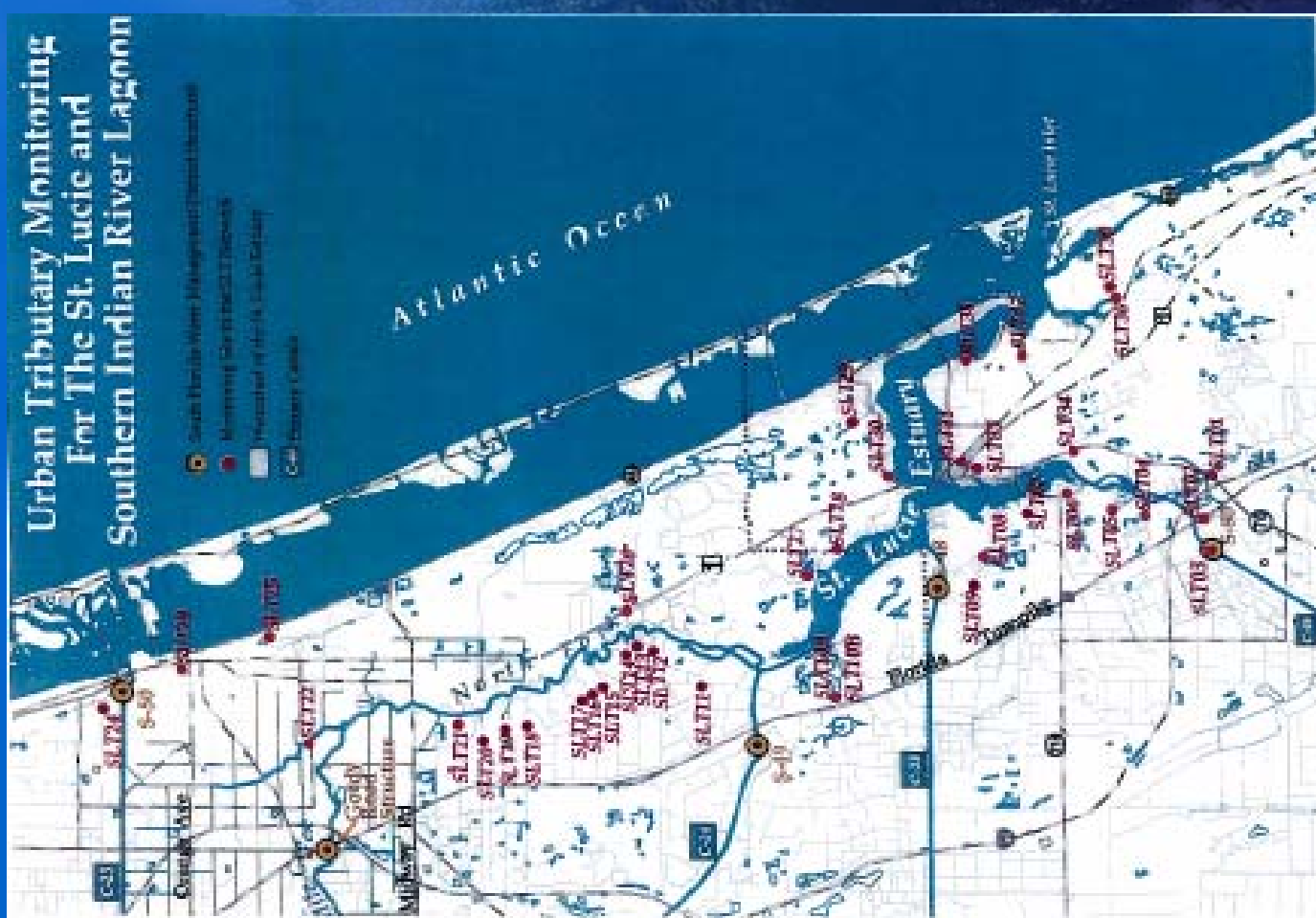
Phosphorus Loads – By Tributary



Total of 213 Metric Tons per Year - Estimated Annual Phosphorus Load

Martin/St. Lucie Impaired Waters According to FDEP

- St. Lucie Lower Estuary – Nutrients
- North Fork St. Lucie – Nutrients, D.O.
- C-24 – Nutrients, D.O.
- C-23 - Nutrients, D.O.
- South Fork St. Lucie – Nutrients, D.O.
- C-44 – D.O.


Urban Tributary Monitoring
For The St. Lucie and
Southern Indian River Lagoon
Atlantic Ocean
St. Lucie Estuary

Ranking of Stations Based on Concentrations Exceeding 75th Percentile

Station	Summary Rankings				Ranking by Parameter				
	Overall Ranking	Total Nitrogen, Total Phosphorus and Total Copper	Total Nitrogen and Total Phosphorus	Inorganic Nitrogen and Soluble Reactive Phosphorus	Total Copper	Total Phosphorus	Soluble Reactive Phosphorus	Total Nitrogen	Inorganic Nitrogen
SLT-36	1	1	2	1	4	3	1	2	1
SLT-2	2	2	4	4	9	1	2	12	12
SLT-3	2	2	3	4	13	6	6	3	8
SLT-39	4	6	7	2	11	4	3	17	4
SLT-6	5	6	1	3	29	2	5	1	3
SLT-24	6	4	6	8	8	8	10	12	15
SLT-22	7	10	12	10	10	5	11	23	16
SLT-7	7	9	10	11	14	11	14	12	14
SLT-35	9	11	20	9	3	30	15	11	11
SLT-37	9	5	15	21	NA	24	33	6	7
SLT-14	11	12	5	7	30	13	17	5	6
SLT-5	12	8	7	20	15	9	4	12	35
SLT-9	13	14	12	13	24	7	8	21	21
SLT-30	14	12	24	22	1[a]	17	12	30	30
SLT-34	14	20	15	11	32	20	23	10	5
SLT-8	14	15	27	18	1	26	18	26	19
SLT-13	17	17	9	14	36	18	20	4	13
SLT-33	17	28	29	6	16[a]	21	9	35	10
SLT-27	19	16	19	19	16[a]	16	13	22	25
SLT-28	20	19	29	22	5[a]	15	7	41	35
SLT-37A	21	26	23	14	25	37	31	9	2

NOTE:

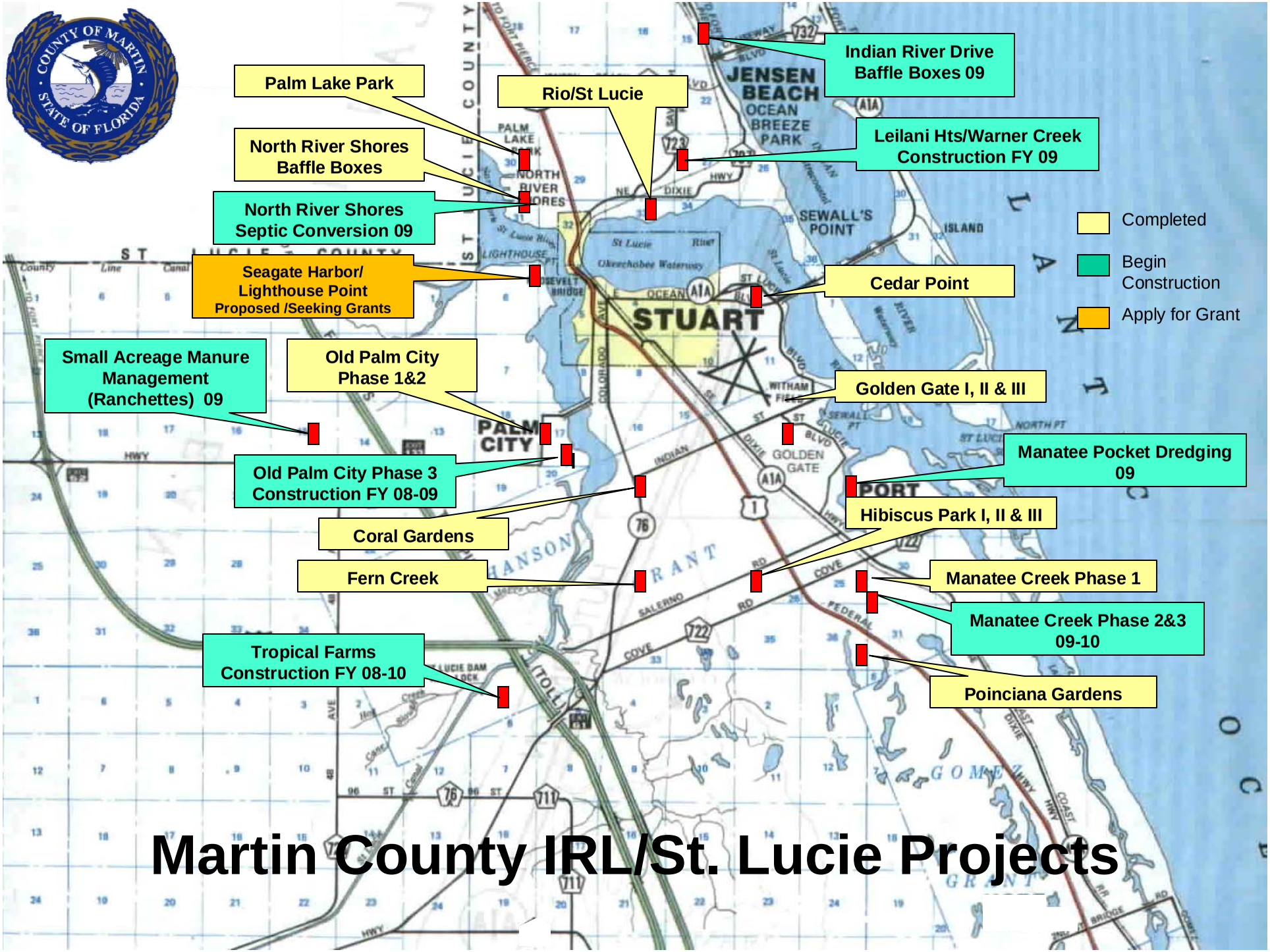
[a] Total number of samples collected at the station was eight or less.
NA - No available samples.
Ties are indicated by the ranks being equal in a column.

Martin County

Some Completed WQ Retrofits
Proposed WQ Retrofits
Possible Future WQ Retrofits

What Has Martin County Done? Stormwater

- Completed 14 Local Stormwater Retrofits
- Leveraged $10M of Local Funds with State and Regional Grants to Construct $31M of Local Projects serving 4,500 acres

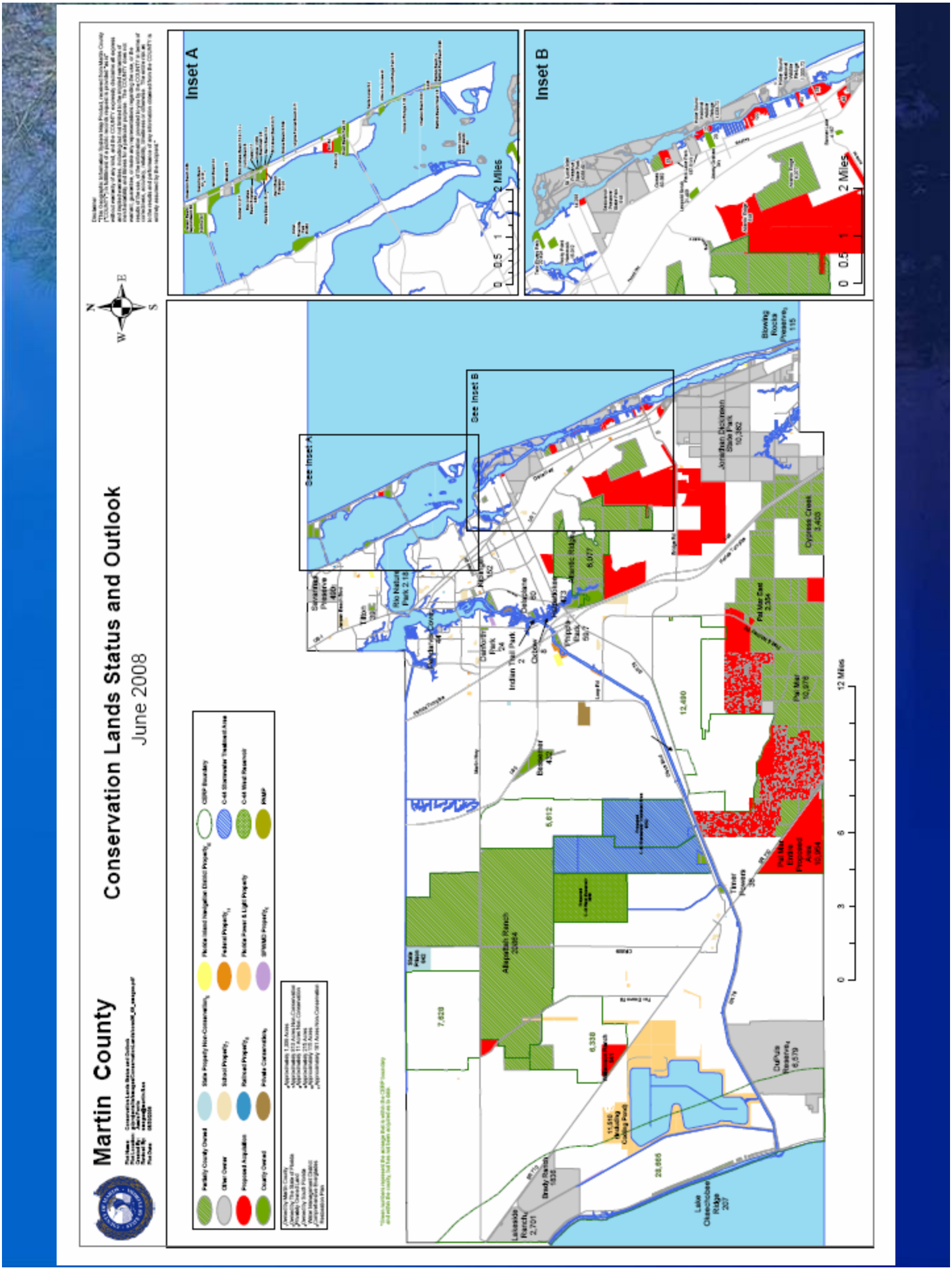

Indian River Drive Baffle Boxes 09
Palm Lake Park
Rio/St Lucie
Leilani Hts/Warner Creek Construction FY 09
North River Shores Baffle Boxes
North River Shores Septic Conversion 09
Seagate Harbor/ Lighthouse Point
Proposed /Seeking Grants
Cedar Point
Small Acreage Manure Management (Ranchettes) 09
Old Palm City Phase 1&2
Golden Gate I, II & III
Manatee Pocket Dredging 09
Old Palm City Phase 3 Construction FY 08-09
Hibiscus Park I, II & III
Coral Gardens
Fern Creek
Manatee Creek Phase 1
Manatee Creek Phase 2&3 09-10
Tropical Farms Construction FY 08-10
Poinciana Gardens
Completed
Begin Construction
Apply for Grant
JENSEN BEACH
OCEAN BREEZE PARK
SEWALL'S POINT
STUART
PALM CITY
GOLDEN GATE
PORT
Martin County IRL/St. Lucie Projects

Project Financing:

Project Name	Taxes	SRF	SLRIT	TMDL	Sec. 319	LRPI	SJR WMD	FDEP	LAND	FDOT	County Land / ROW	In - Kind Services	Contributions	# of Funding sources by Project
Coral Gardens	1	1	2								1			5
Cedar Pointe	1		1								1		1	4
Fern Creek	1	1	2								1	1	1	7
Golden Gate PI,PII,PIII	1	1	3		1						1			7
Hibiscus Park PI & PII	1		1								1	1		4
Kitching Creek/Flora Ave	1				1	1						1	2	6
Little Club PI & PII	1				1	1						1	1	5
Manatee Creek Retrofit P1	1	1	1	1	1									5
Old Palm City PI & PII	1				1						1			3
Palm Lake Park	1		3											4
Poinciana Garden PI & PII	1		1										2	4
Rio St Lucie PI	1	1	1				1				1	1		6
Salerno Creek / RPI & PII	1	1	2		1			1	2	1	1	2		12
Tropic Vista	1	1			1						1	1		5

What Has Martin County Done? Land Acquisition

- Citizen Approved Sales Tax 8 out of the Past 10 Years
- Generated $75M to Date – 45,000 Acres
- Environmentally Sensitive and/or Lands Necessary for CERP
- Leveraged Those Funds with Regional and State Dollars to Buy Land
- Increased Martin County Public Lands from 8% in 2000 to 24% today


Martin County
Conservation Lands Status and Outlook
June 2008
Inset A
Inset B
See Inset A
See Inset B
Allapattah Ranch
Jonathan Dickinson State Park
Blowing Rocks Preserve
Cypress Creek
Pal Mar
Pal Mar East
Timer Powers
Lake Okeechobee Ridge
Lakeside Ranch
Brady Ranch
Indian Trail Park
Rio Nature Park
Savannas Preserve
Delaplane
Beaverhead
Pal Mar Entire Proposed Area
12 Miles

January 2003

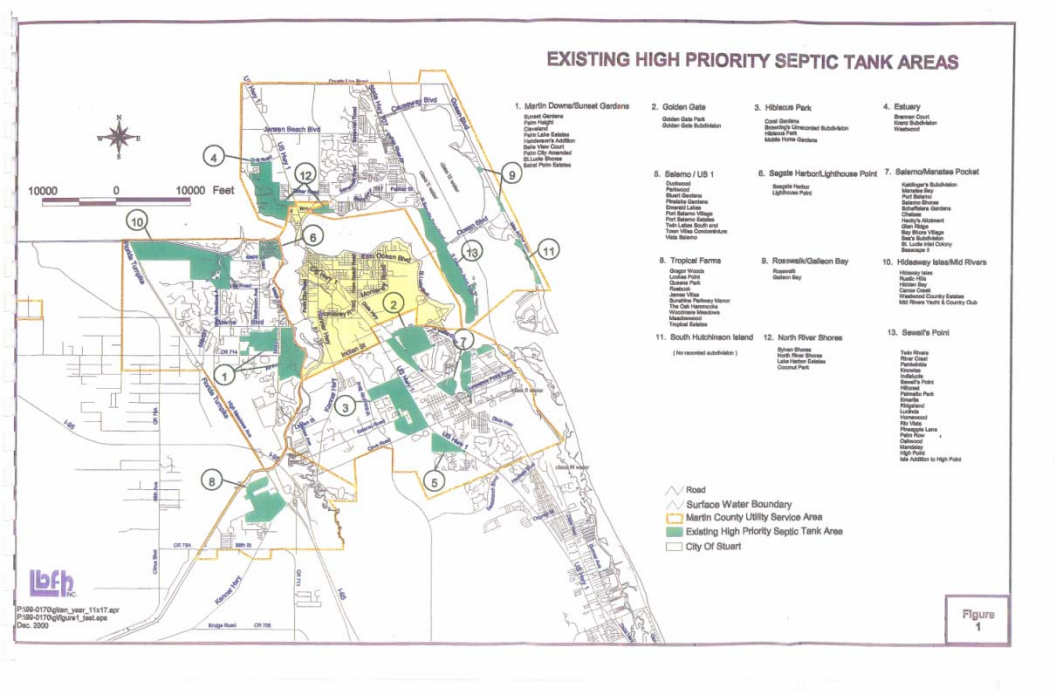
January 2008

ALLAPATTAH
RANCH
RESTORATION

What Has Martin County Done? Waste Water

- Pulled all Treated Effluent out of the River
- Implemented 100% Waste Water Reuse
- Converted Areas of Problematic Septic Tanks to Regional Sewer
- Banned the Land Disposal of BioSolids in Martin County

What Has Martin County Done? Waste Water



Septic Converted to Central Waste Water Projects 2001 Through 2009

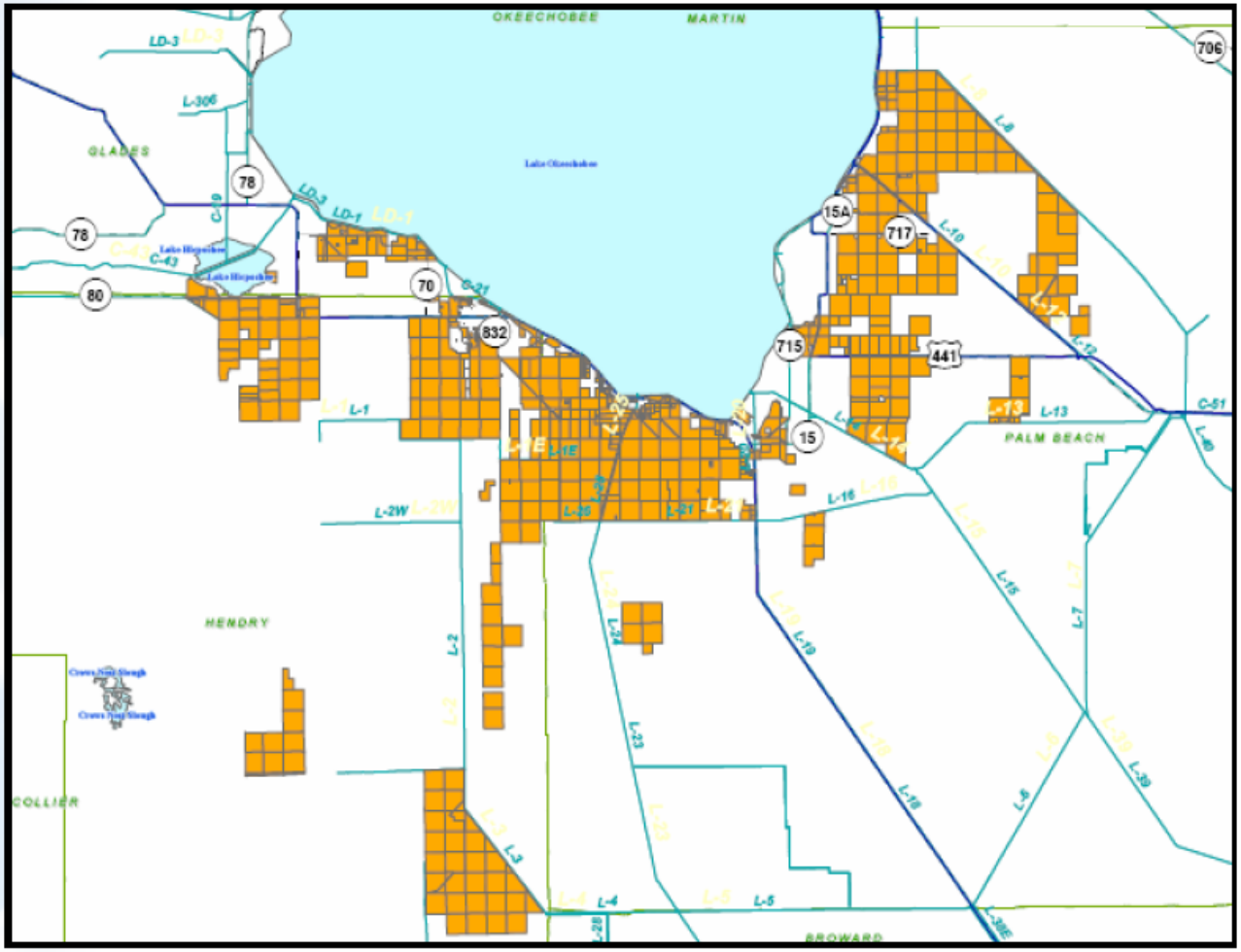
- McArthur Boulevard
- Seagate Harbor/Lighthouse Point
- North River Shores Phase 1
- Rio Community Redevelopment Area (CRA)
- Banner Lake in Hobe Sound
- Hobe Sound (CRA)

What Still Needs to be Done?

- Complete the IRL Plan
- Find Alternative Storage North of the Lake
- Adopt the Revisions to the Environmental Resource Permitting Program
- Acquire and Construct Additional Storage, Treatment and Conveyance South of the Lake

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Location of U.S. Sugar Properties



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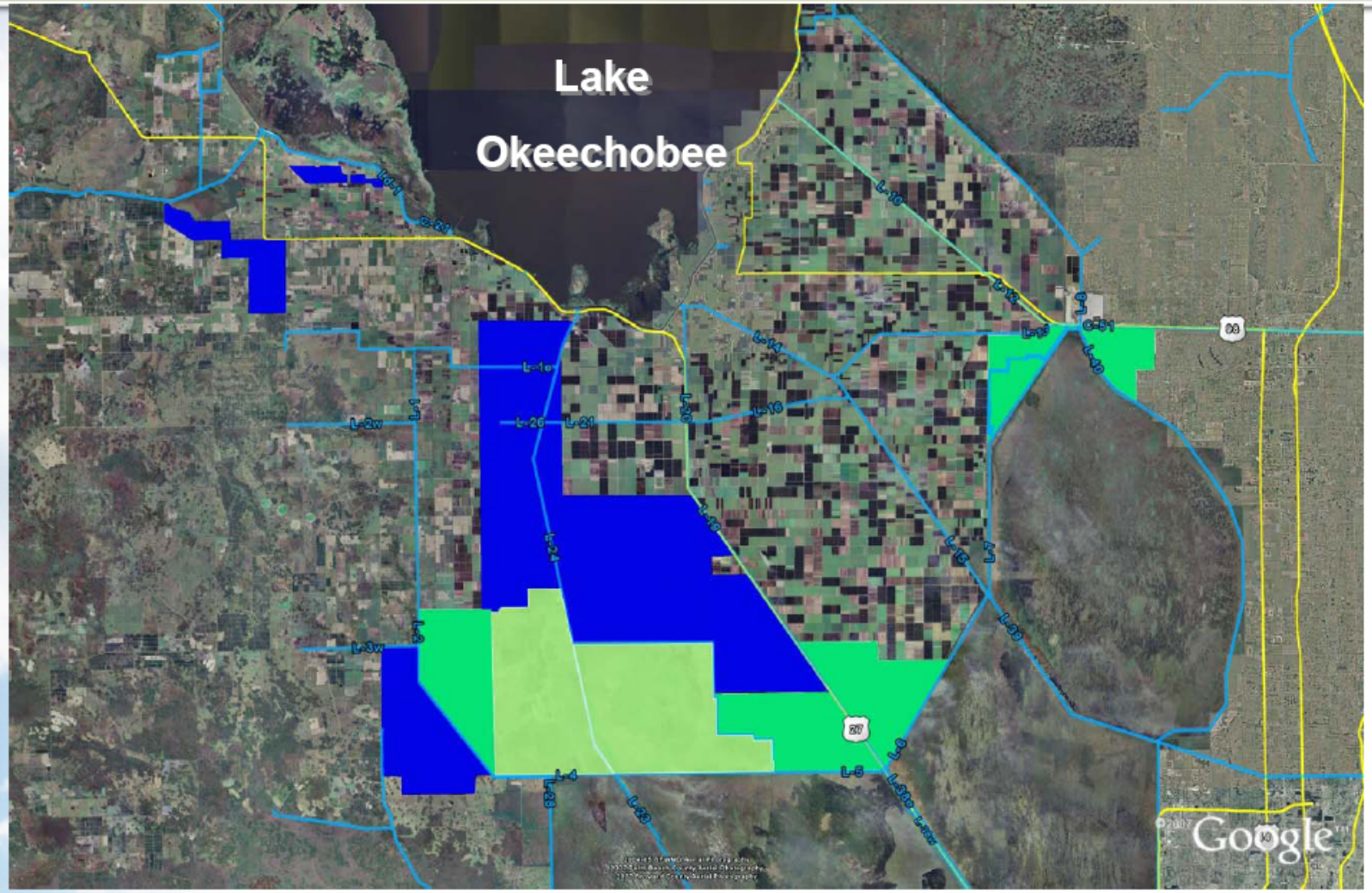
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Conceptual Project Configurations
Adjusted to Address Land Constraints



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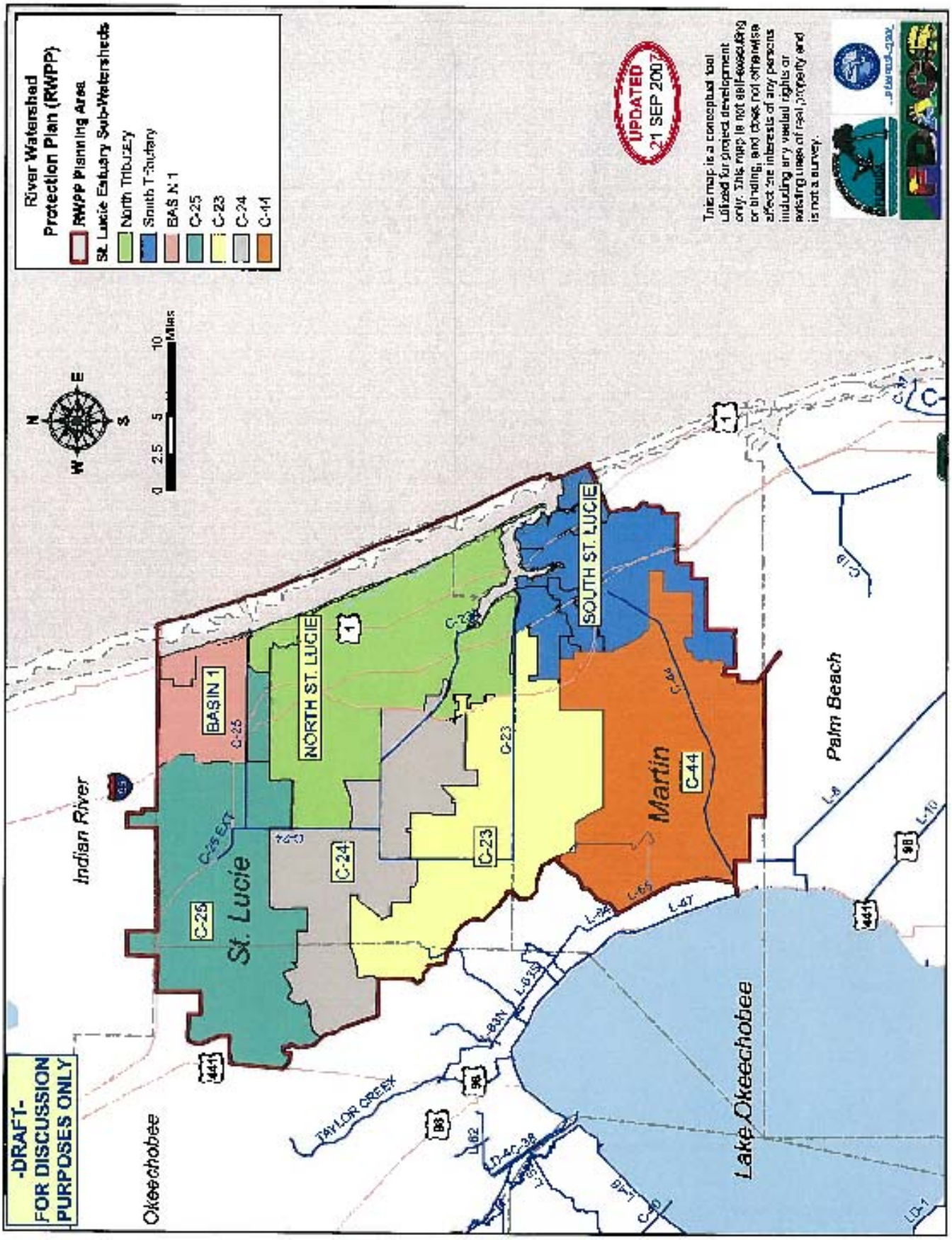
What Still Needs to be Done?

- Ramp up Ag and Urban BMP Program Including Fertilizer Ordinances
- Continue Tributary Monitoring
- Continue Local Retrofits Targeting Worse Offenders
- Continue to Acquire Land
- Dedicate State Funding for Estuary Restoration
- Diversion for Beneficial Use


-DRAFT-
FOR DISCUSSION
PURPOSES ONLY
River Watershed
Protection Plan (RWPP)
RWPP Planning Area
St. Lucie Estuary Sub-Watersheds
North Tributary
South Tributary
BASIN 1
C-25
C-23
C-24
C-44
UPDATED
21 SEP 2007
This map is a conceptual tool utilized for project development only. This map is not self-executing or binding, and does not otherwise affect the interests of any persons including any vested rights or existing uses of real property and is not a survey.
0 2.5 5 10 Miles
N
E
S
W
Indian River
Okeechobee
St. Lucie
Martin
Palm Beach
Lake Okeechobee
BASIN 1
NORTH ST. LUCIE
SOUTH ST. LUCIE
C-25
C-24
C-23
C-44
C-25 EXT
TAYLOR CREEK
L-47
L-8
L-10
L-62
LD-1

10. Adjourn: 3:45 p.m

10