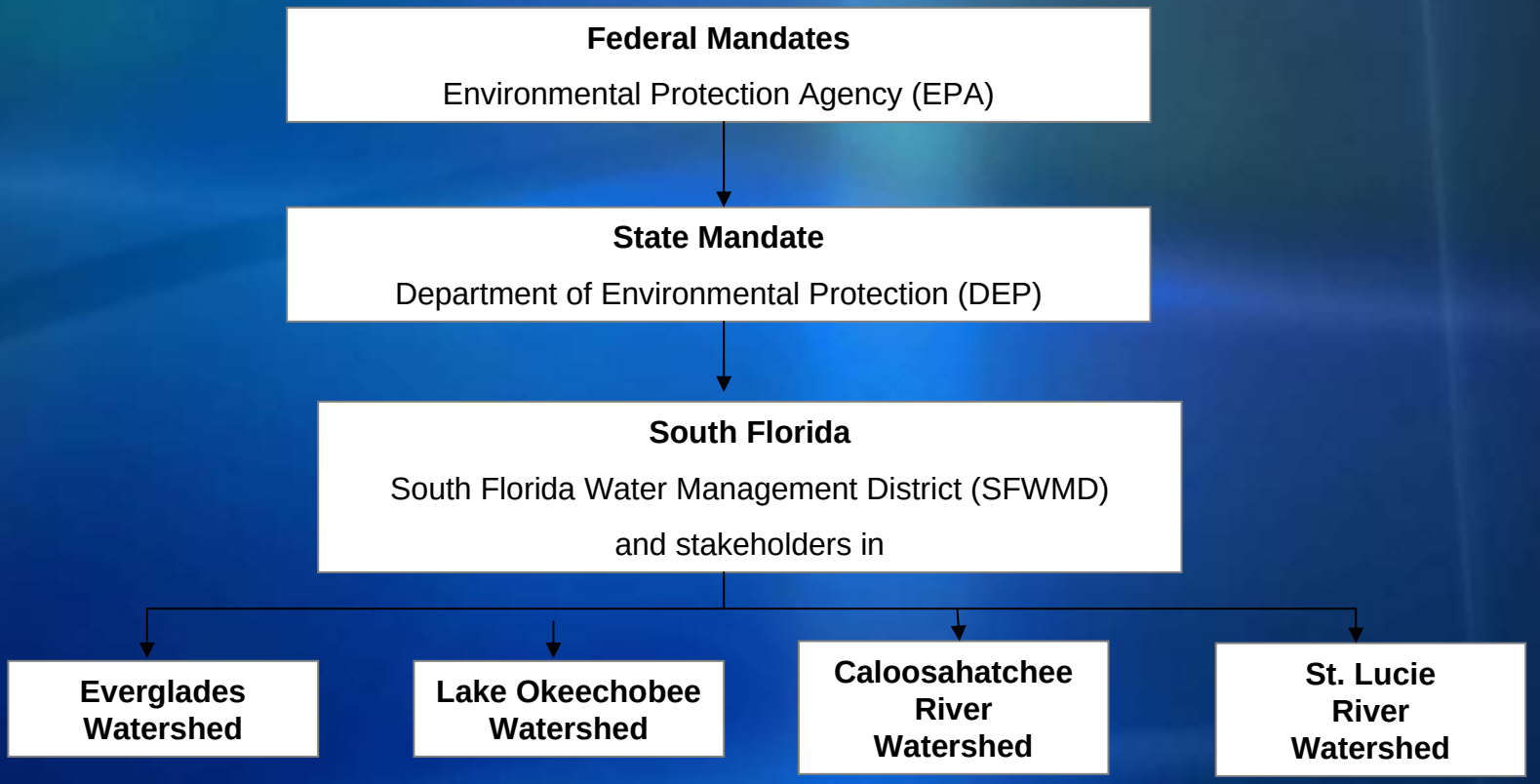
Proposed Source Control Program in support of the Northern Everglades and Estuaries Protection Program

August 28, 2008

Regulatory Framework



Hydropattern Restoration

Exotic Species Control

Water Quality Public Works Projects: STAs, Reservoirs, and Regional Construction Projects

Water Quality Improvements via Landowner Implemented Source Control Programs

Water Quality Component

Source Controls

BMPs

+

Wetland Treatment

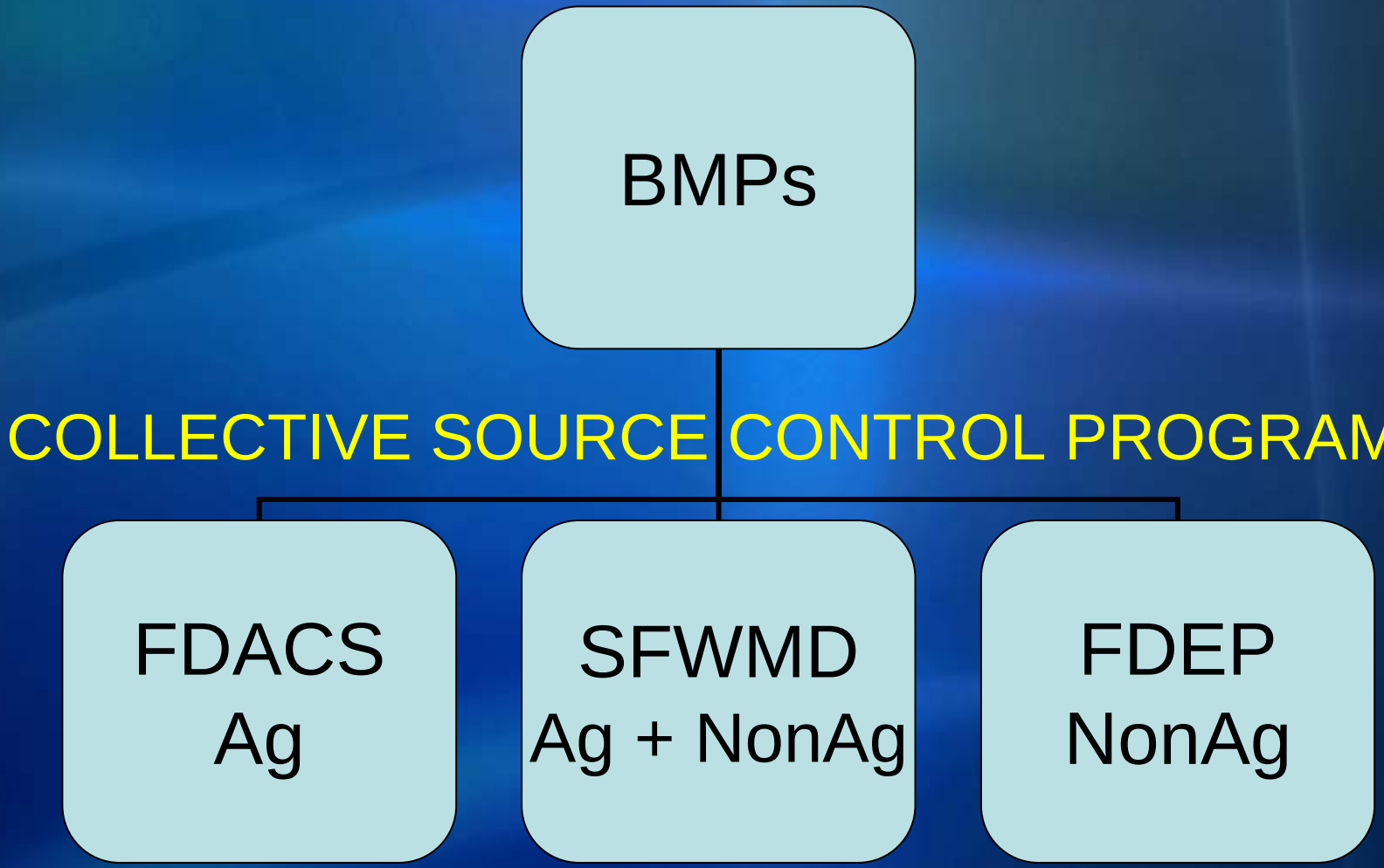
Reservoirs

Watershed

Performance Goals for Each Component

Water Quality Treatment Train

Landowner Component



Program History

- **Surface Water Improvement and Management (SWIM) Act -1987**
  - **Chapter 40E-61 – Lake Okeechobee Works of the District (WOD) rule - 1989**
- **The Lake Okeechobee Protection Act (LOPA) – 2000**
- **The Northern Everglades and Estuaries Protection Program (NEEPP) - 2007**

District Mandates

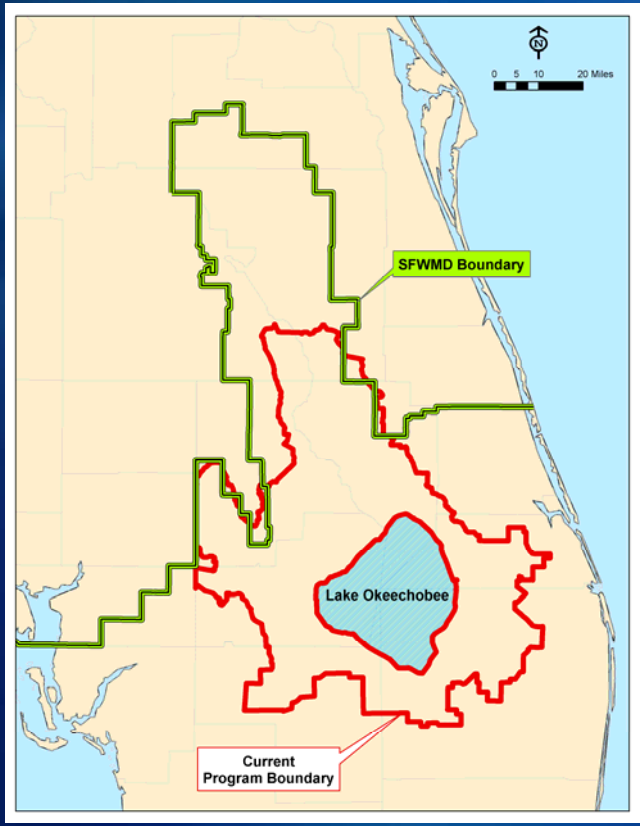
- **The Lake Okeechobee Protection Act (LOPA) and the Northern Everglades Legislation**
  - **Establish relationship of coordinating agencies**
  - **Expand the jurisdiction of 40E-61**
  - **Requires the District to Implement the Lake Okeechobee Protection Plan**
  - **Requires District to meet Total Maximum Daily Load (TMDL) – 1/1/2015**
  - **Required the District to modify and update the Lake Okeechobee Operating Permit which is regulated by Florida Department of Environmental Protection (FDEP)**

FDEP permit requirements

- **Implement the Lake Okeechobee Protection Plan (LOPP)**
- **Assess compliance with TMDL prior to 2015**
- **Comply with water quality standards to the maximum extent practicable**

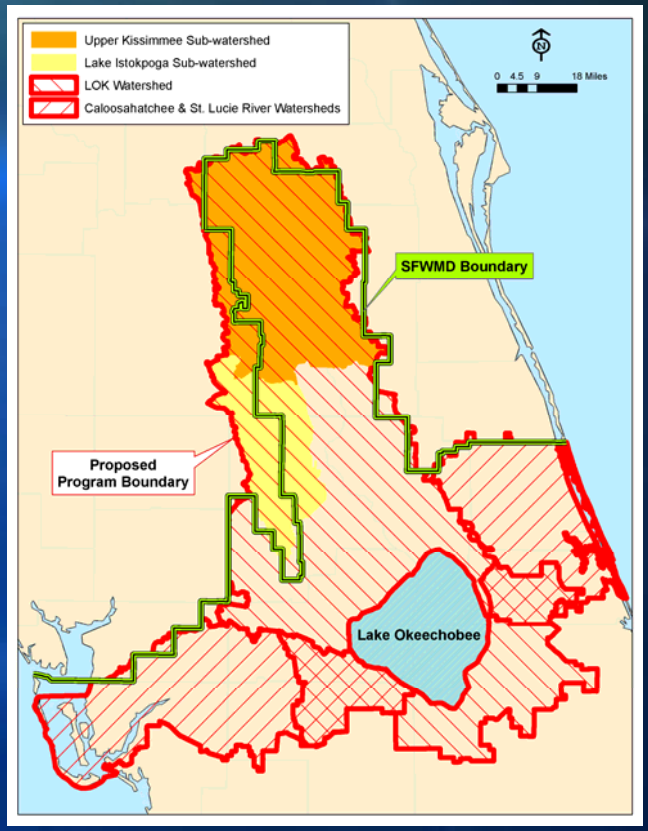
Expanded Program Boundary

Current 40E -61 Boundary



- Upper Kissimmee Sub-watershed
- Lake Istokpoga Sub-watershed
- Caloosahatchee River Watershed
- St. Lucie River Watershed

Proposed 40E-61 Boundary



Chapter 40E-61 – The Current Program

- **Current Rule**
  - **Performance based on limits set in Technical Publication 81-2. Load target – 397 tons by July 1, 1992**
  - **Permits required a general phosphorus control plan for Non-ag and ag (so no equity among permittees)**
- **Selective District monitoring was used to determine parcel level compliance.**

The Proposed Program's Role in Achieving Compliance

- **Establish a timeline for implementing source control programs by 2010.**
- **Continue to ensure a program that requires BMPs for Ag and Non-Ag**
- **Establish incentives for Demonstration Projects**
- **Establish a plan to verify that permittees are implementing BMPs**
- **Establish a plan for verifying overall program effectiveness.**

BMP strategy

Agricultural Land Use:

- **Greater than or equal to 100 acres**
  - **Recognizes FDACS BMP participants therefore no permit will be required.**
  - **OR landowner conducts parcel level load monitoring at their expense to demonstrate compliance that BMPs aren't necessary**
- **50 to 99 acres land use of citrus, ornamentals, row crops, or sod.**
  - **SFWMD BMP program required**
  - **Optional Parcel Level Monitoring**
- **< 50 acres and 50 to 100 not mentioned above – No notice permits**
  - **BMP plan**

The permitting and BMP strategy

Non-Agricultural Land Use Permits:

- **Water Control Districts**
- **Municipalities**
- **Counties**
- **Golf Courses**

Comprehensive BMP plan required

- **Water management**
- **Erosion control**
- **Nutrient control**

BMPs

Agricultural

BMPs

Non - Agricultural

Comparison of SFWMD Program and FDACS Program

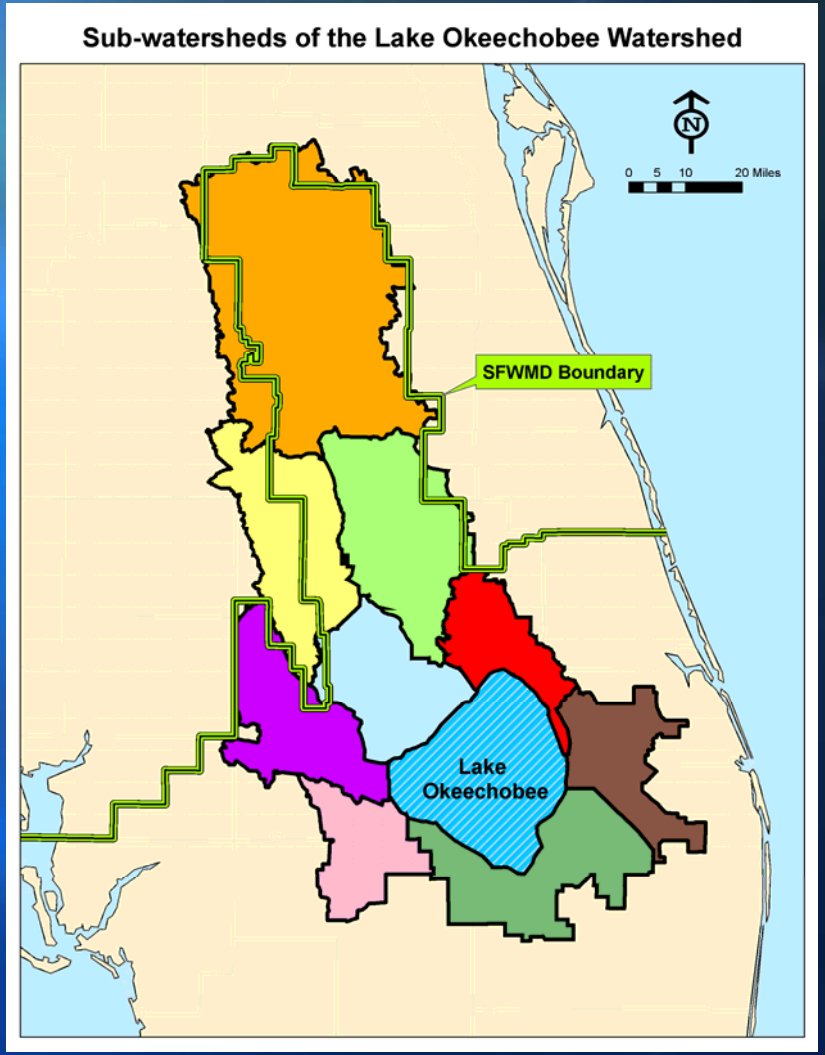
- **Existing and Proposed LOK Source Control Program**
  - **Only BMPs for phosphorus reduction.**
  - **Focused on non-structural BMPs (laser leveling, grassed waterways, soil testing, training of employees).**
- **FDACS Program**
  - **BMP through Conservation Plan through NRCS/FDACS**
  - **Comprehensive Resource Management**
  - **FDACS/NRCS Cost share may be available for implementing the Conservation Plan.**

Sub-Watershed monitoring network:

- District to monitor collective source control program effectiveness (differs from TMDL) at the sub-watershed level
- Use load-based performance measures for the combined BMP source control programs.
- Optimize the BMP programs if WQ problems are detected.
- Identify priority areas of water quality concern.
- Provide data to enhance performance of downstream treatment facilities.

Measuring Collective Program Performance

- **Monitoring by District at sub-watershed or summary basin level to track source control program performance**
- **Five-Year Rolling Avg**
- **Effective BMPs**
  - **Agricultural: 25% reduction of P loads**
  - **Non-Agricultural: 5% reduction of P loads**



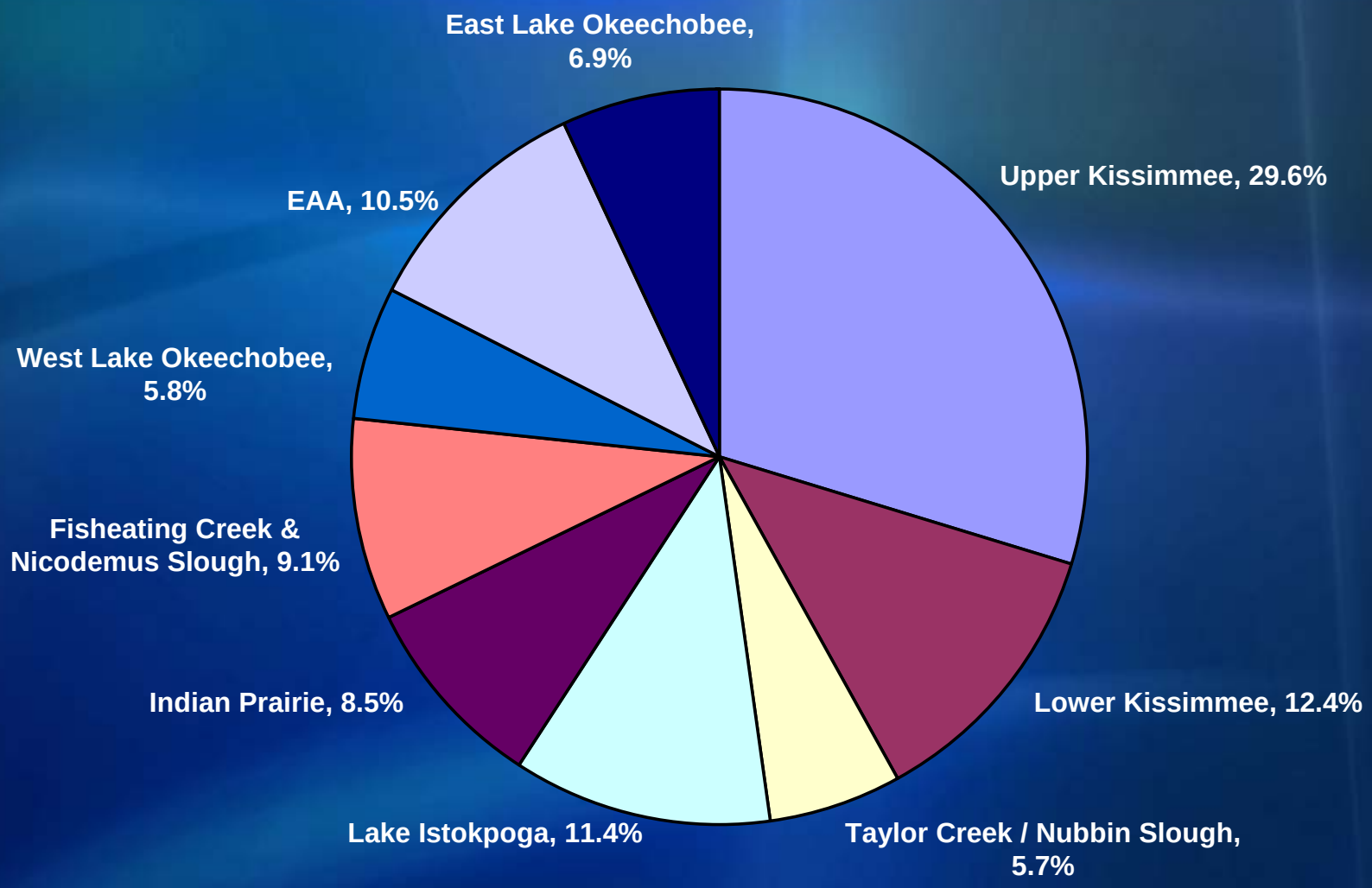
Path to Optimization

- **If program optimization is triggered:**
  - **First Instance**
    - **More intensive BMP verification**
    - **Optimize monitoring in the summary basin to pinpoint areas of concern**
    - **Additional permitting requirements**
    - **Allow 2 year response time**
  - **Second Instance**
    - **BMP optimization required**

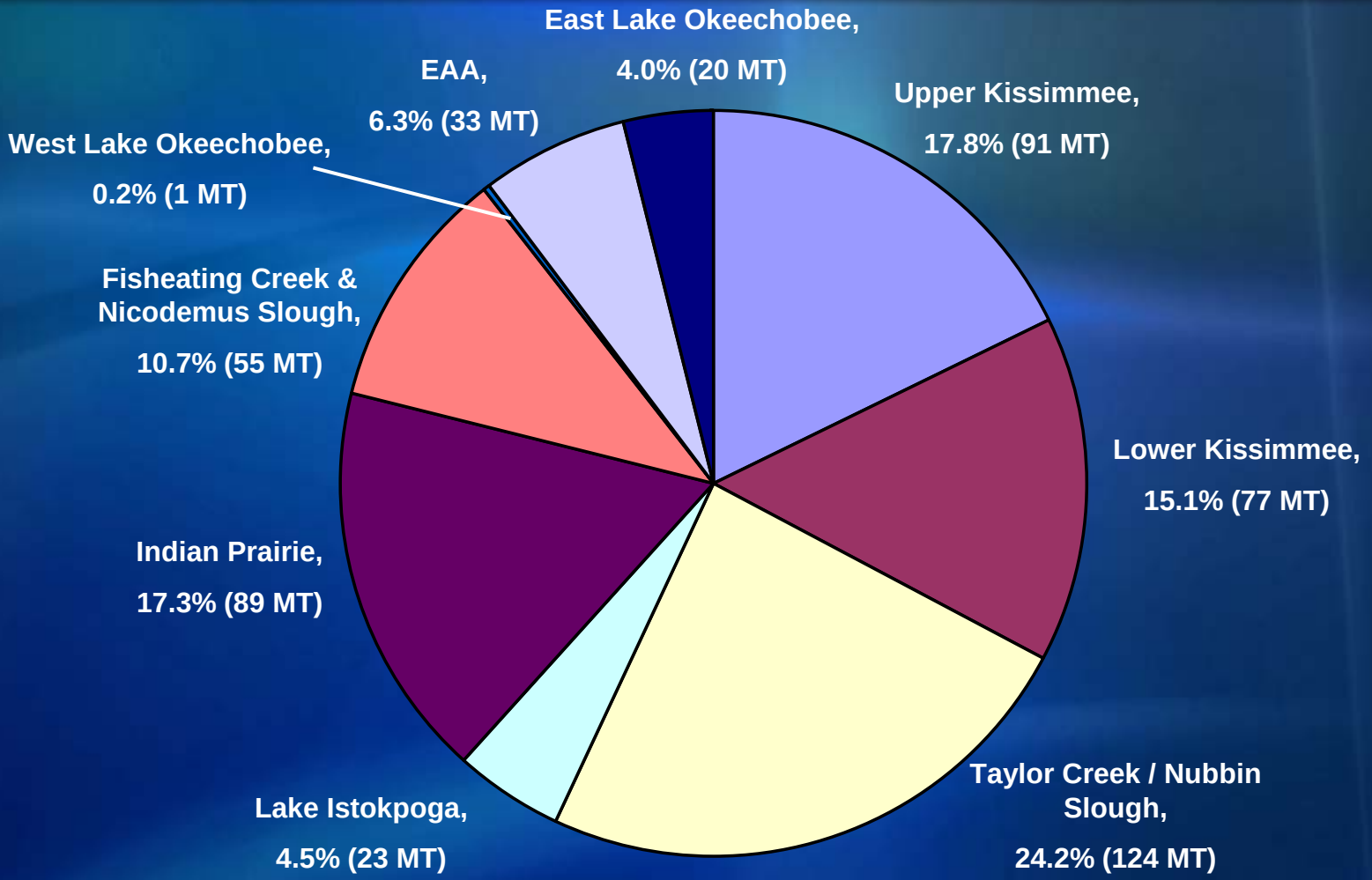
South Florida Environmental Report

- **South Florida Environmental Report (SFER)**
  - **Report on program activities and implementation, including coordination efforts with other agencies**
  - **Report on the number of BMP plans implemented and verified**
  - **Water quality data and evaluation of the source control program performance**

Sub-watershed's Percent of Total Area



Sub-watershed's Percent of Total Load



Sub-Watershed Summary

Sub-watershed	Area (acres)	Avg. Annual Discharge (ac-ft)	Avg. TP Load (MT)	Avg. TP Concentration (ppb)
Upper Kissimmee	1,021,674	954,204	91	78
Lower Kissimmee	429,283	378,836	77	166
Taylor Creek / Nubbin Slough	198,299	187,583	124	537
Lake Istokpoga	392,147	299,656	23	63
Indian Prairie	294,147	249,175	89	289
Fisheating Creek / Nicodemus Slough	315,007	224,368	55	199
West LOK	200,993	5,835	1	139
EAA	361,707	149,488	33	177
East LOK	237,831	109,134	20	151

Permit Application Processing Fees

Permit Type	New	Renewal	Modification	Transfer
No Notice General	Not Applicable	Not Applicable	Not Applicable	Not Applicable
General (Ag, Golf Courses)	$250	$250	$100	$100
Individual (Non-Ag)	$500	$500	$250	$100

Chapter 40E-61 Rulemaking Timeline

- **2008 Workshops**
  - **July 31 – Kissimmee**
  - **August 1 – Okeechobee**
  - **August 21 – Okeechobee**
  - **August 28 –Kissimmee**
  - **September 3 – Belle Glade**
- **Complete Rule Process by early 2009**

Benefits of Proposed Program

- All Ag landowners will be required to monitor or implement BMPs
- Non-Ag will be required to implement BMPs
- More defined in terms of BMP requirements
- BMP verifications performed over the long-term

Benefits of Proposed Program

- **Provides a watershed-based performance approach in concert with Northern Everglades Technical Plan**
- **Provides a long-term plan for re-evaluation of the BMPs if water quality problems are demonstrated**
- **Continuous monitoring to identify high phosphorus sources**
- **Incorporates sources not previously considered (expanded watershed boundary)**

Questions?