



The Northern Everglades

Chip Merriam, Deputy Executive Director





Lake Okeechobee Mandates & Initiatives

- **1987: Surface Water and Improvement Management (SWIM) Plan**
- **1996: Critical projects (WRDA)**
- **1999: Comprehensive Everglades Restoration Plan (CERP)**
- **2000: Lake Okeechobee Protection Act (LOPA)**
- **2004: Lake Okeechobee Protection Plan (LOPP)**
- **2005: Lake Okeechobee & Estuary Recovery (LOER)**



Overview of Lake Okeechobee Projects

	SWIM	C.P.	CERP	LOPP	LOER
Research & Assessment	✓	✓	✓	✓	✓
Public Awareness	✓	✓	✓	✓	✓
Works of the District	✓	✓	✓	✓	✓
Taylor Creek STA		✓		✓	✓
Nubbin Slough STA		✓		✓	✓
CERP Lake O. Watershed Project			✓	✓	✓
Fast Track Projects					✓
Watershed Phosphorus Control				✓	✓
Exotics Control				✓	✓
Fertilizer BMP					✓
Revised ERP Criteria					✓
Revised Lake Regulation Schedule					✓
Additional Storage Projects					✓



Overview of Estuary Projects

	SWIM	C.P.	CERP	LOPP	LOER
Research & Assessment	✓	✓	✓	✓	✓
Public Awareness	✓	✓	✓	✓	✓
Ten Mile Creek		✓			
Indian River Lagoon PIR			✓		
SW Florida Feasibility Study			✓		
C-43 Reservoir			✓		
C-44 Reservoir/STAs			✓		
Phosphorus Control Projects				✓	
Sediment Dredging				✓	
Fertilizer BMP					✓
Revised ERP Criteria					✓
Revised Lake Regulation Schedule					✓
Additional Storage Projects					✓
Reduced Land Appl. of Residuals					✓



Getting the Water Right

Quantity



Quality



Timing

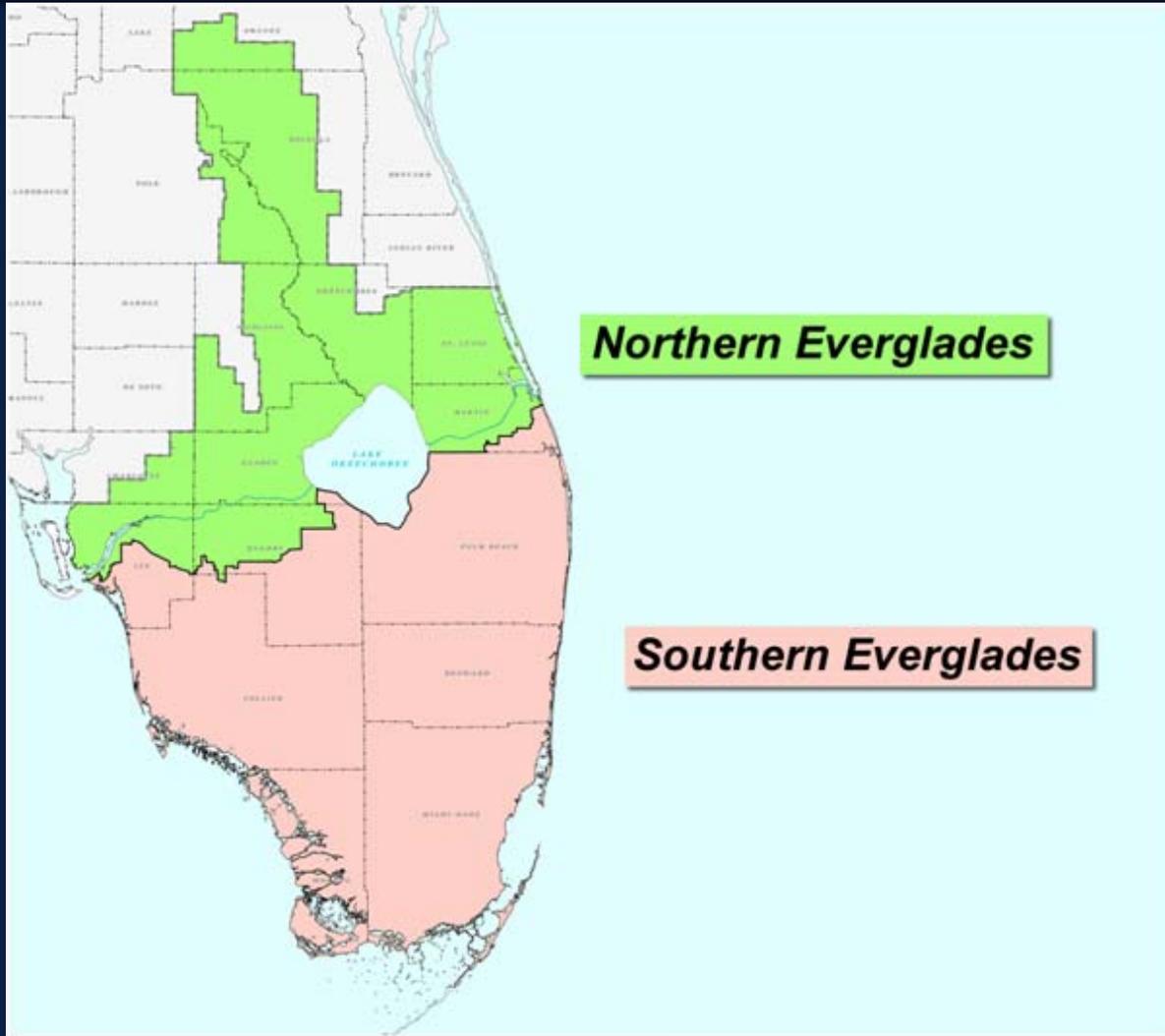


Distribution





Everglades Ecosystem





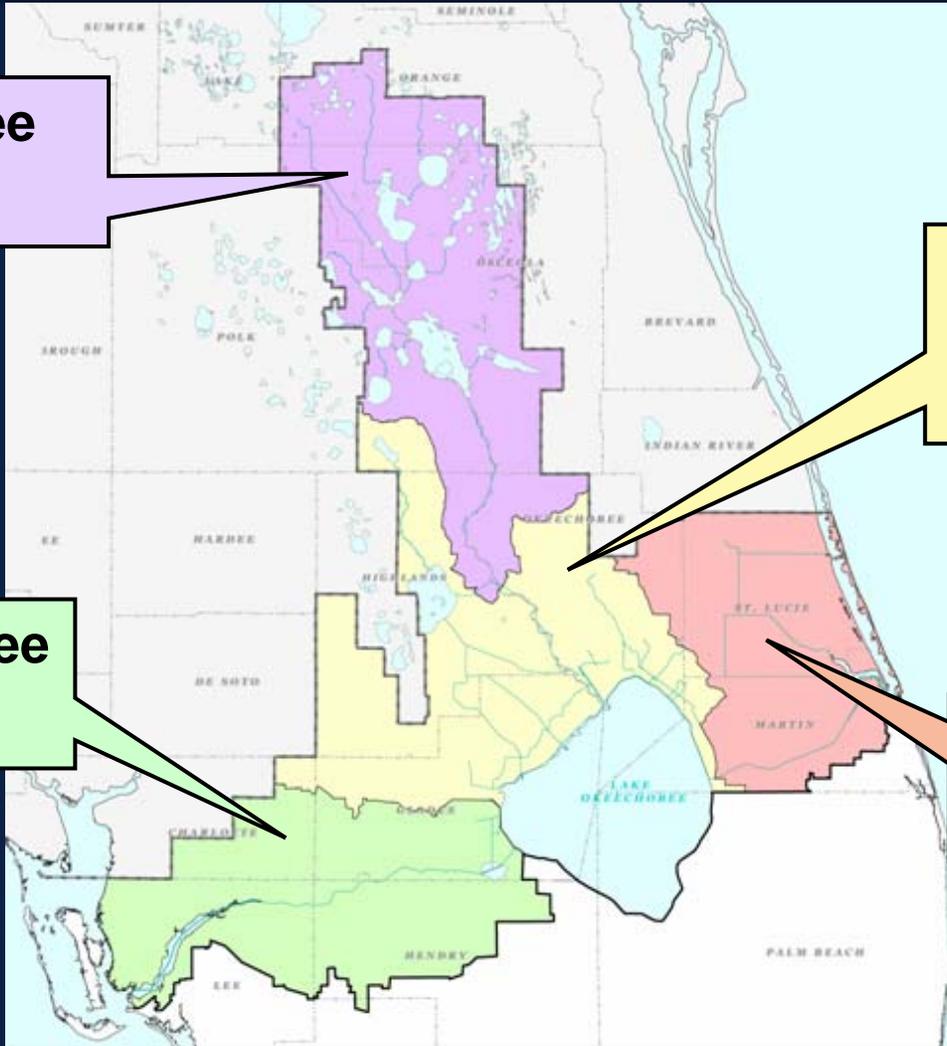
Northern Everglades

**Kissimmee
Region**

**Lake
Okeechobee
Region**

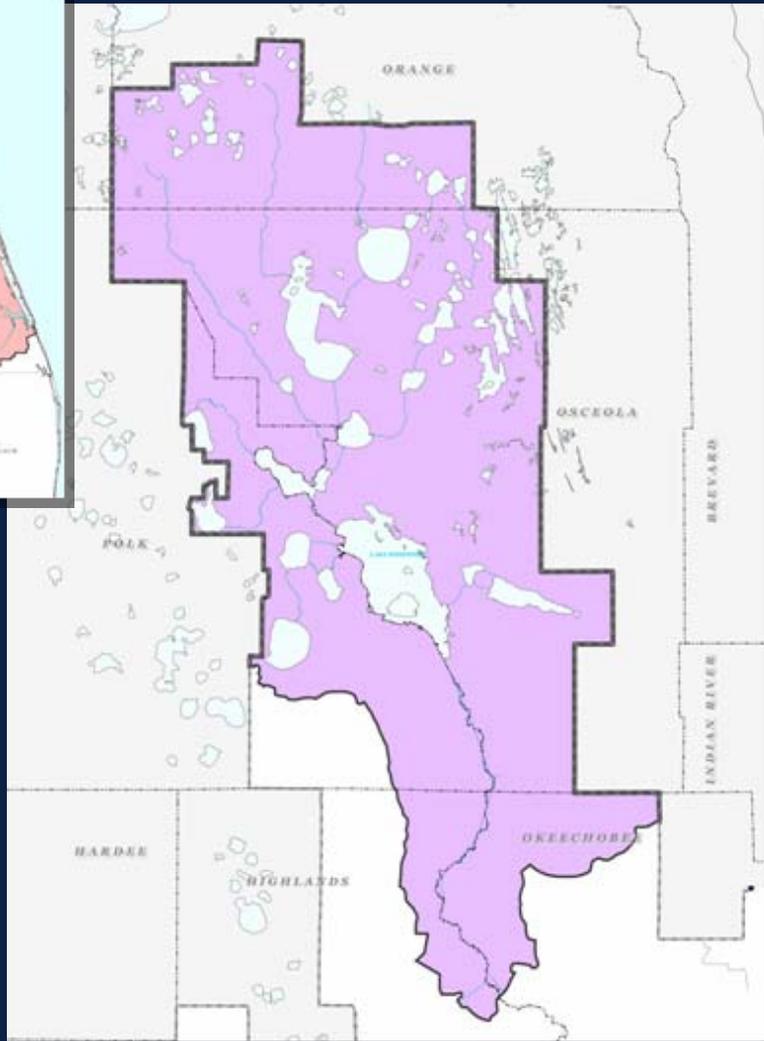
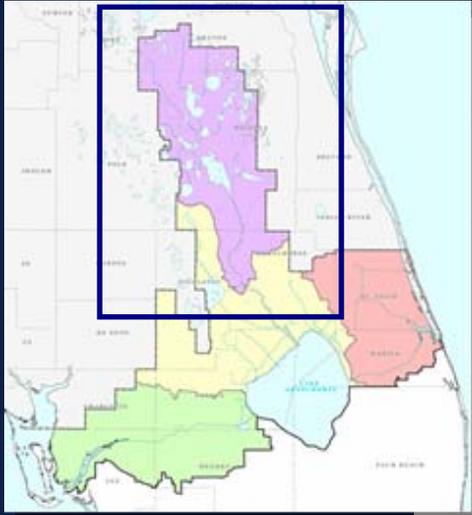
**Caloosahatchee
Region**

**St Lucie
Region**





Kissimmee Region





Kissimmee Region Issue: River Restoration





Kissimmee Region Issue: Local Runoff





Kissimmee Region Issue: Exotic Control





Kissimmee Region Issue: Flood Protection

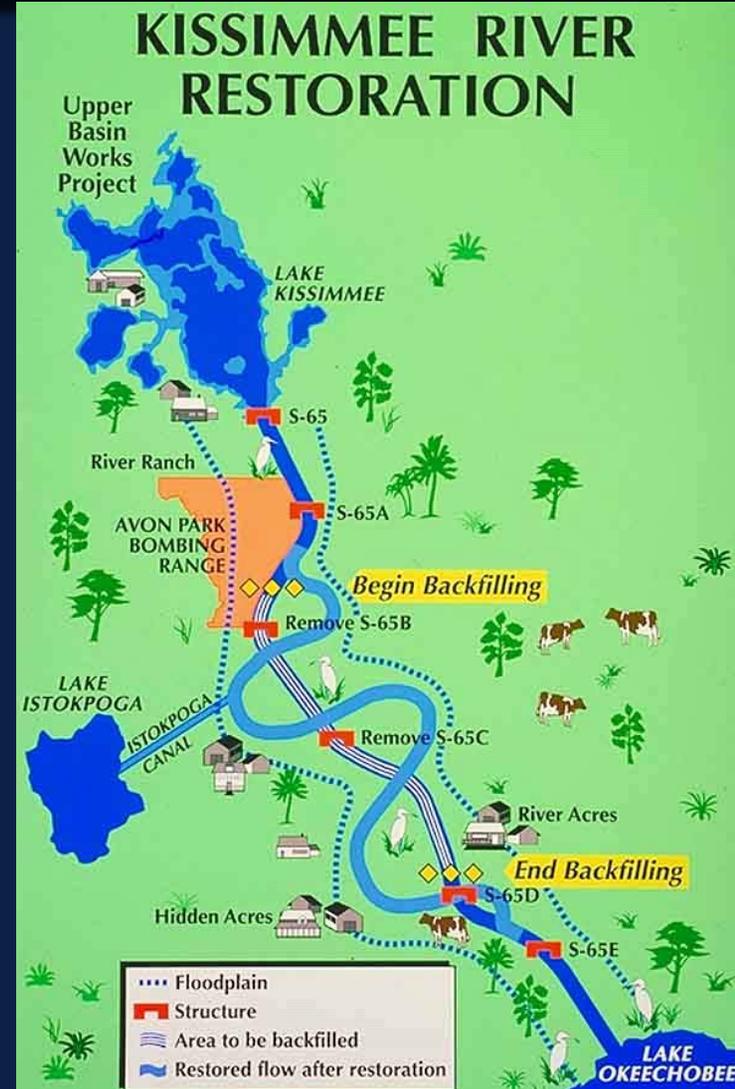




Kissimmee Region Types of Projects



- Construction / Backfilling
- Planning Studies
- Research & Modeling
- Local Stormwater Projects



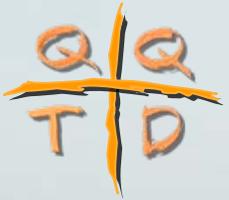


Kissimmee Region Example: Land Acquisition Complete



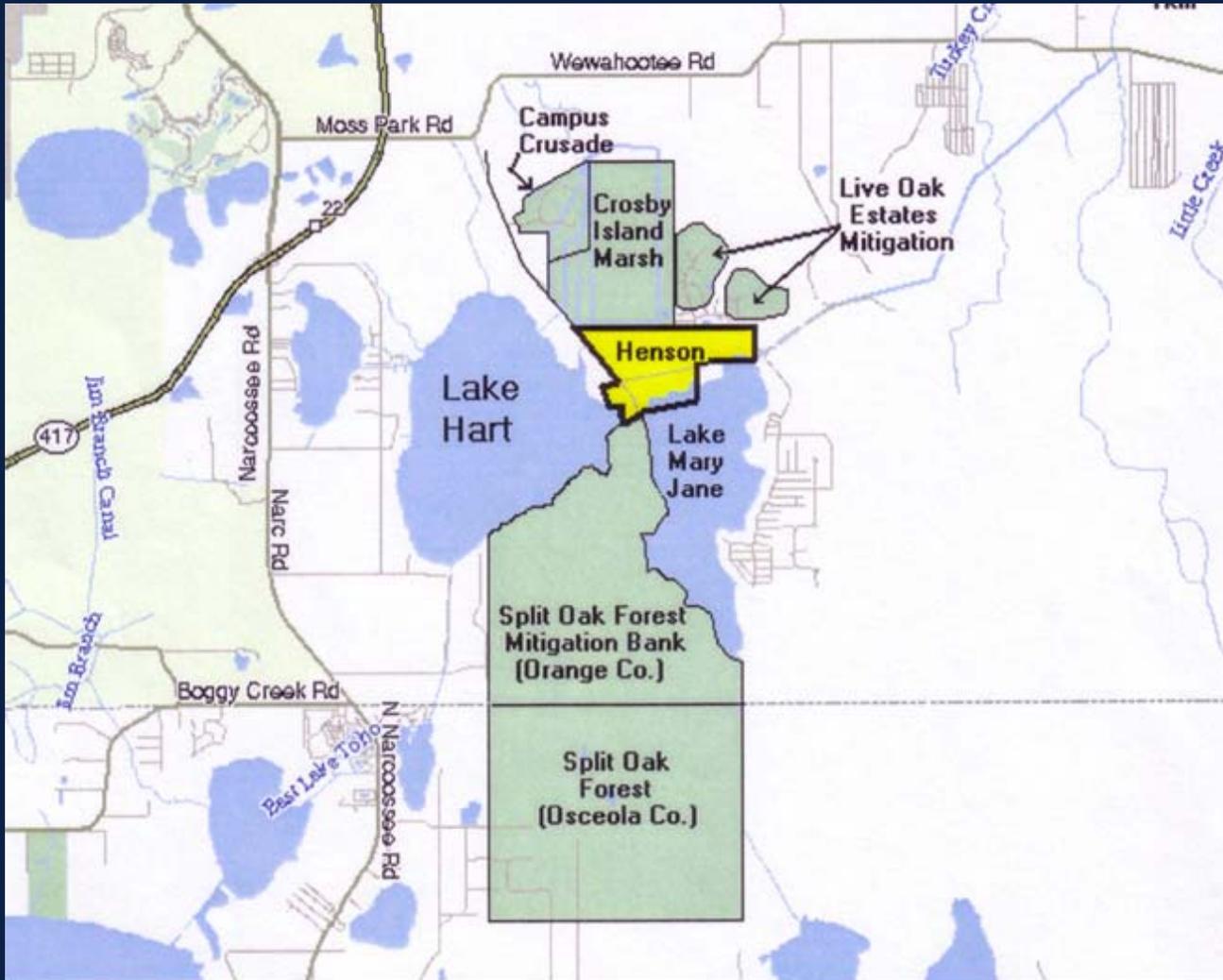


Kissimmee Region
Example:
City of St. Cloud Stormwater Project





Kissimmee Region Example: Orange County Green PLACE





Kissimmee Region Challenges



Kissimmee Region Challenge: Complete river restoration





Kissimmee Region Challenge: Legacy phosphorus



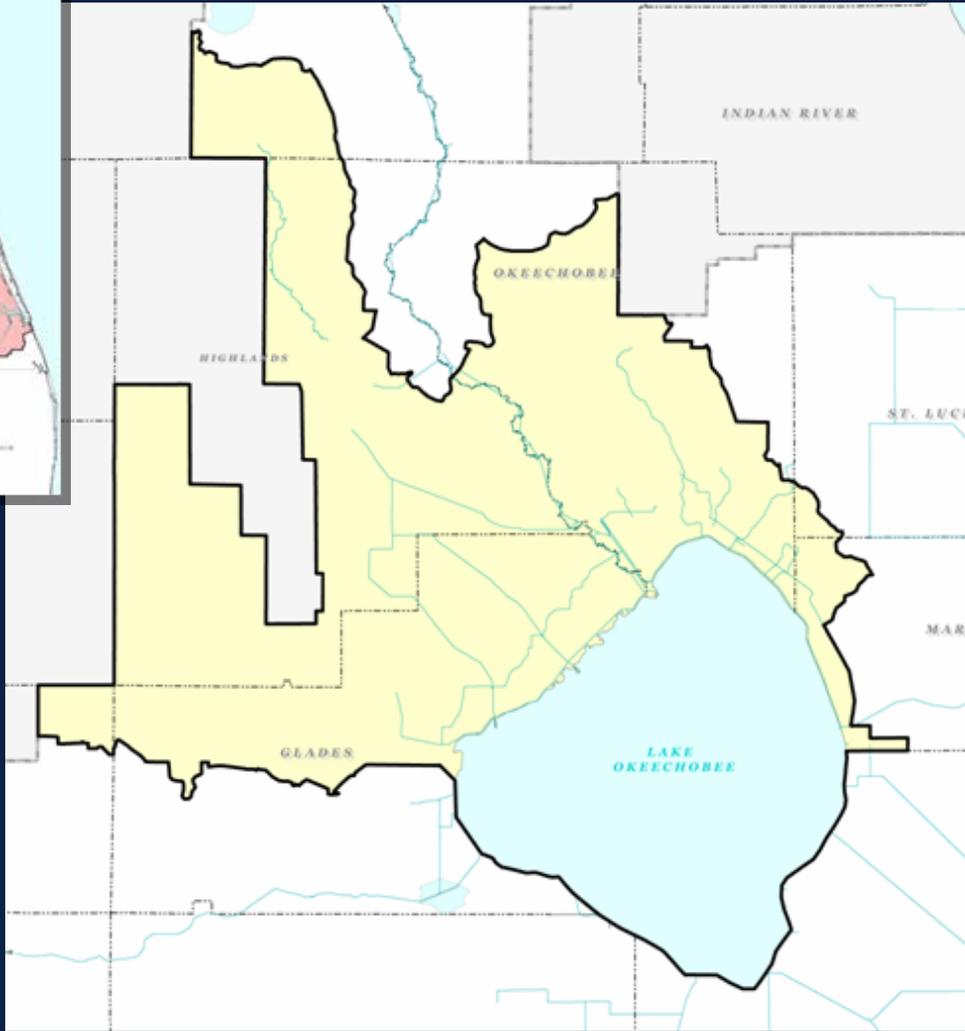


Kissimmee Region Challenge: Intensification of land use



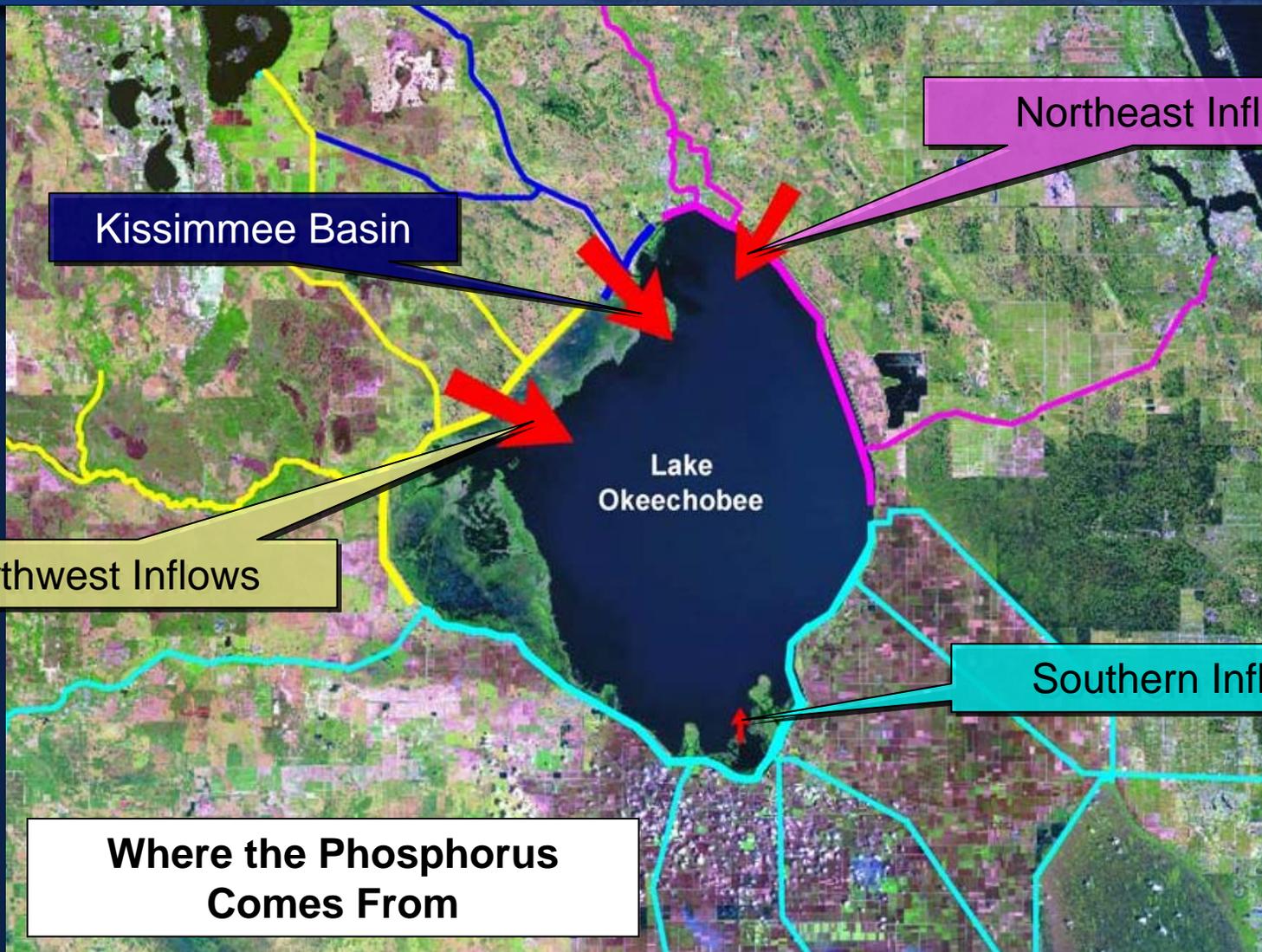


Lake Okeechobee Region





Lake Okeechobee Region Issue: High Nutrient Inflows



Kissimmee Basin

Northeast Inflows

Northwest Inflows

Lake Okeechobee

Southern Inflows

Where the Phosphorus
Comes From



Lake Okeechobee Region Issue: Extreme Water Levels





Lake Okeechobee Region Issue: Exotic Plants



Healthy ecosystem



Melaleuca



Torpedograss



Lake Okeechobee Region Issue: Herbert Hoover Dike





Lake Okeechobee Region Types of Projects



- Reservoirs / Aquifer Storage & Recovery
- Natural wetlands
- Temporary pumps
- Stormwater treatment areas
- Best Management Practices
- Regulatory changes
- Stormwater projects
- Enhanced source control
- Sediment removal analysis
- Advanced technologies
- Exotic removal





Lake Okeechobee Region Example: Taylor Creek & Nubbin Slough



Nubbin Slough



Taylor Creek



Lake Okeechobee Region Example: Alternate Water Storage

Q/Q
T/D





Lake Okeechobee Region Example: Sediment Dredging Pilot





Lake Okeechobee Region Example: City of Okeechobee Partnership - Sediment Traps

Q/Q
T/D

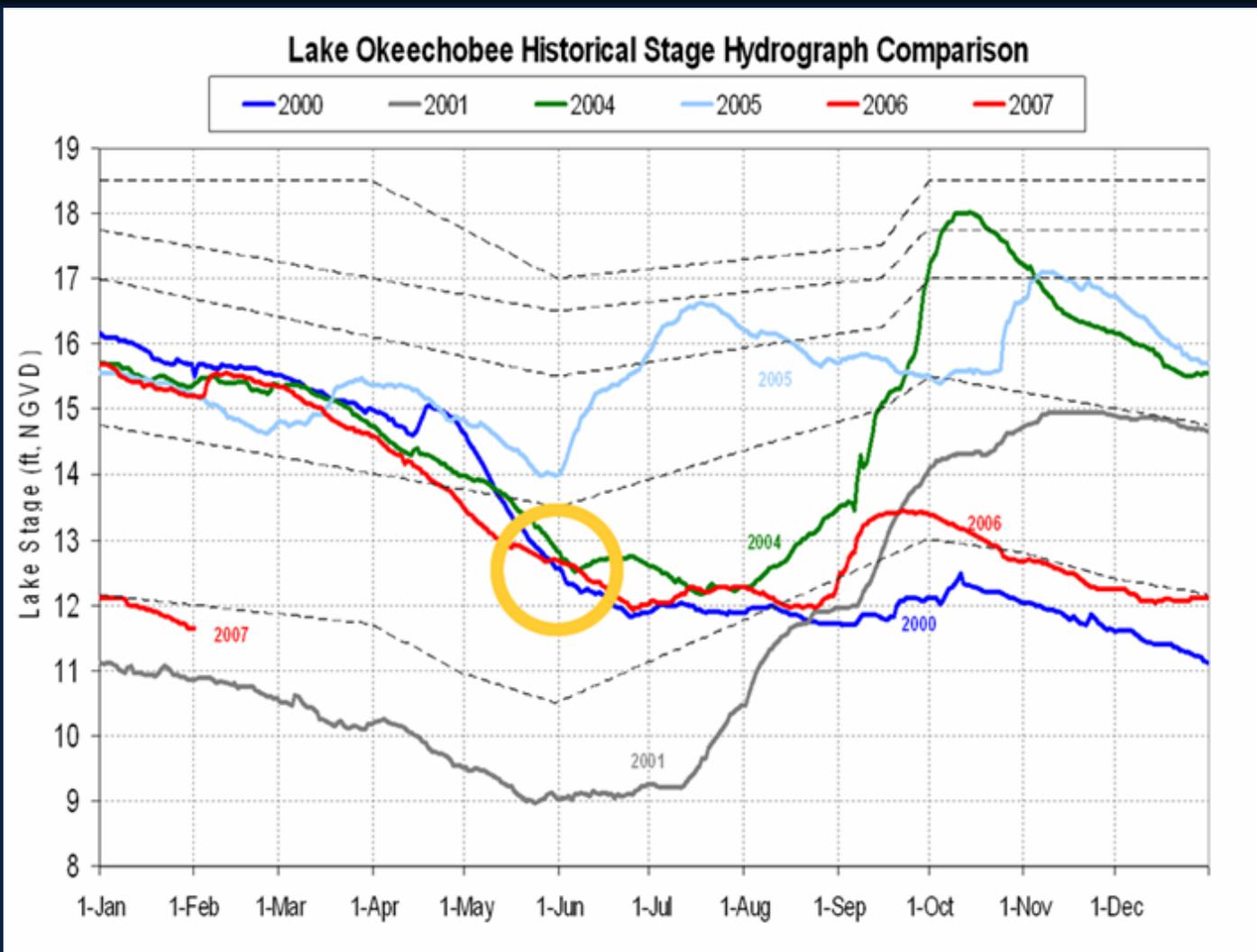




Lake Okeechobee Region Challenges



Lake Okeechobee Region Challenge: Lake schedule





Lake Okeechobee Region Challenge: Legacy Phosphorus





Lake Okeechobee Region Challenge: Land acquisition

A large, semi-transparent white arrow points upwards from the bottom center of the image. The background is a landscape featuring a body of water in the foreground, a line of trees in the middle ground, and a flat, grassy field extending to the horizon under a blue sky with scattered clouds.

20% - 100%



Lake Okeechobee Region Challenge: Water quality & storage improvements



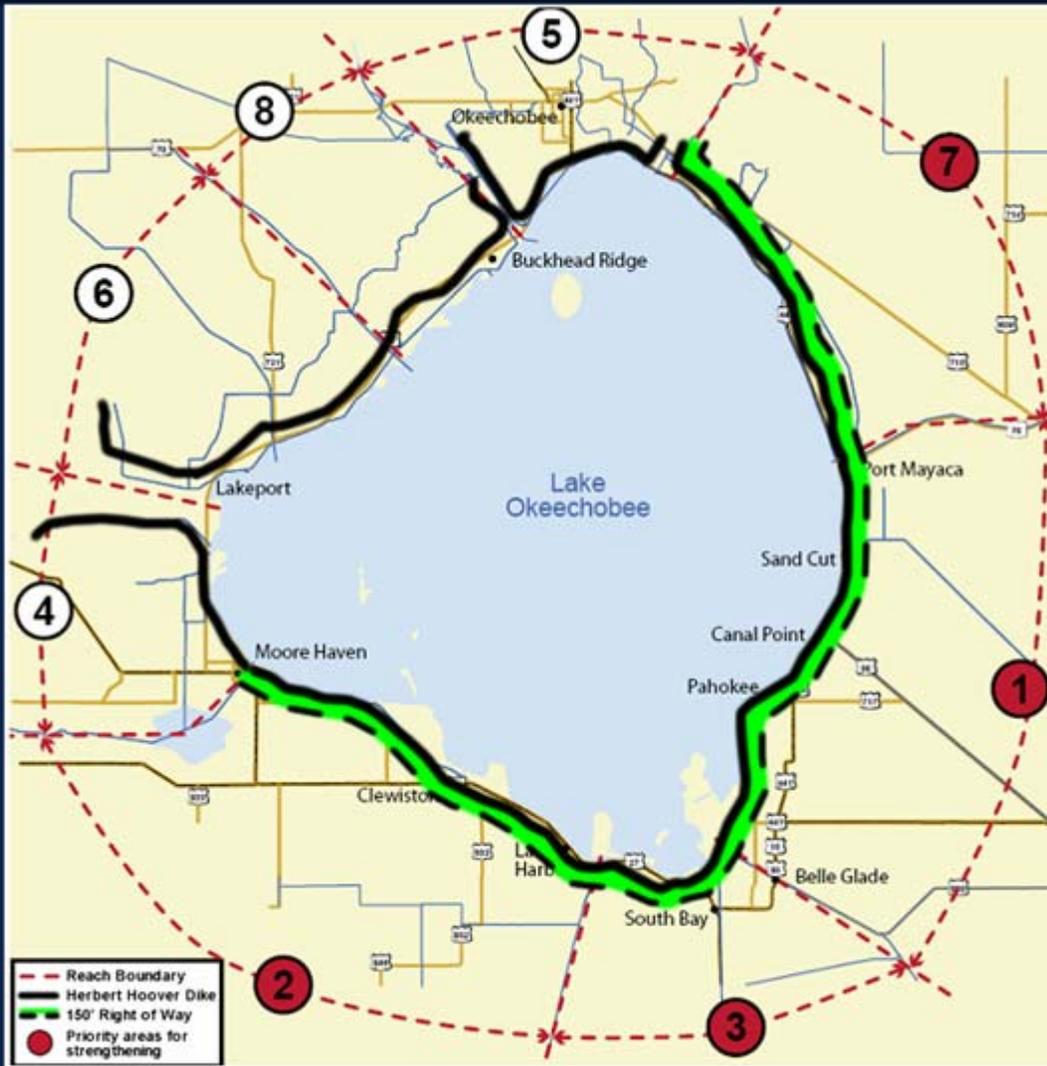


Lake Okeechobee Region Challenge: Technology effectiveness



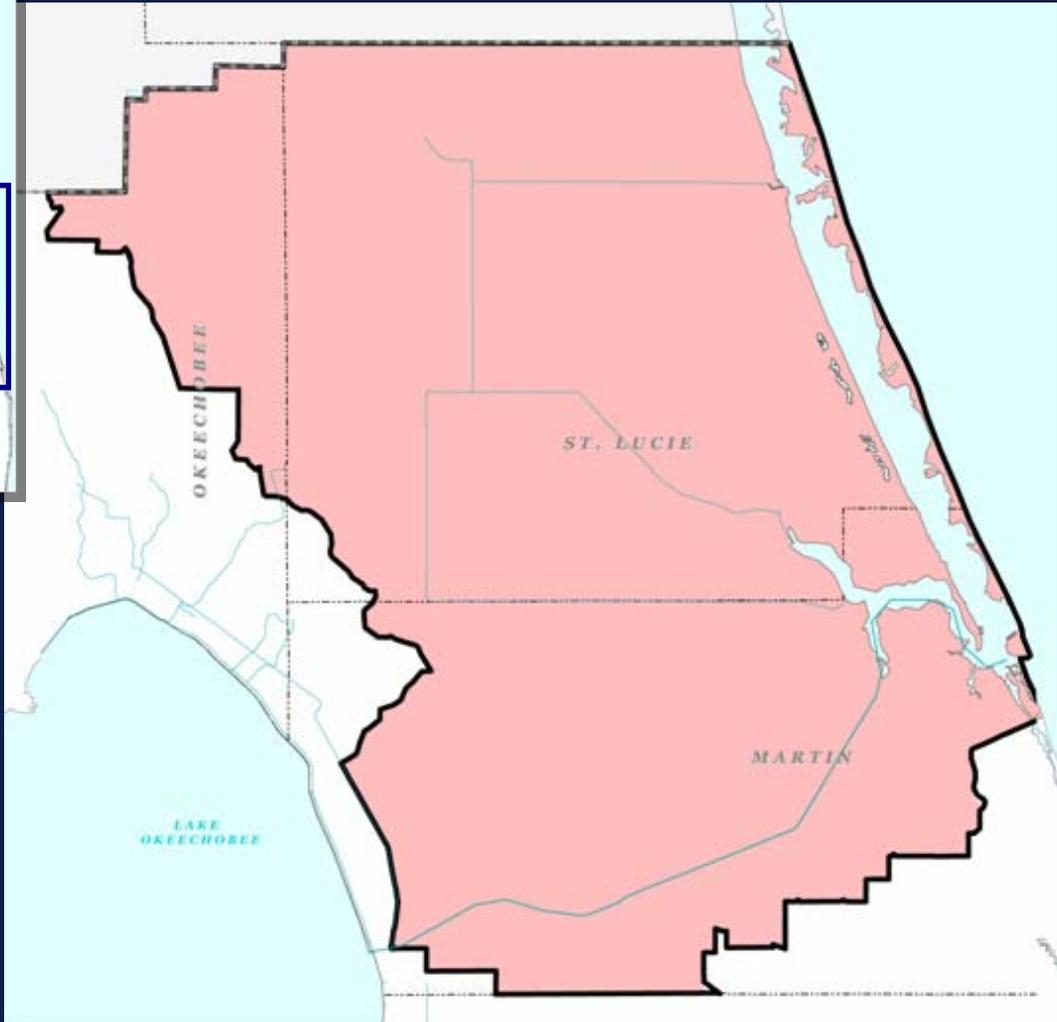
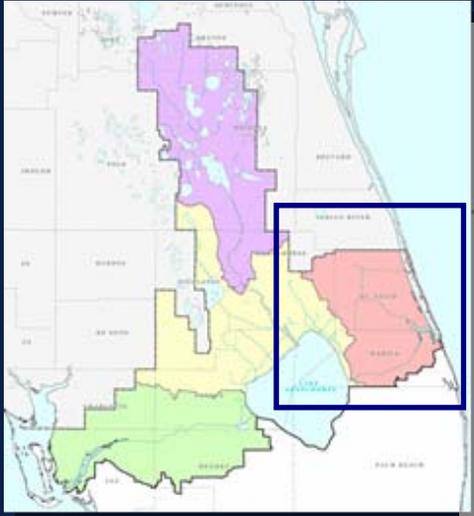


Lake Okeechobee Region Challenge: Herbert Hoover Dike - land acquisition





St Lucie Region



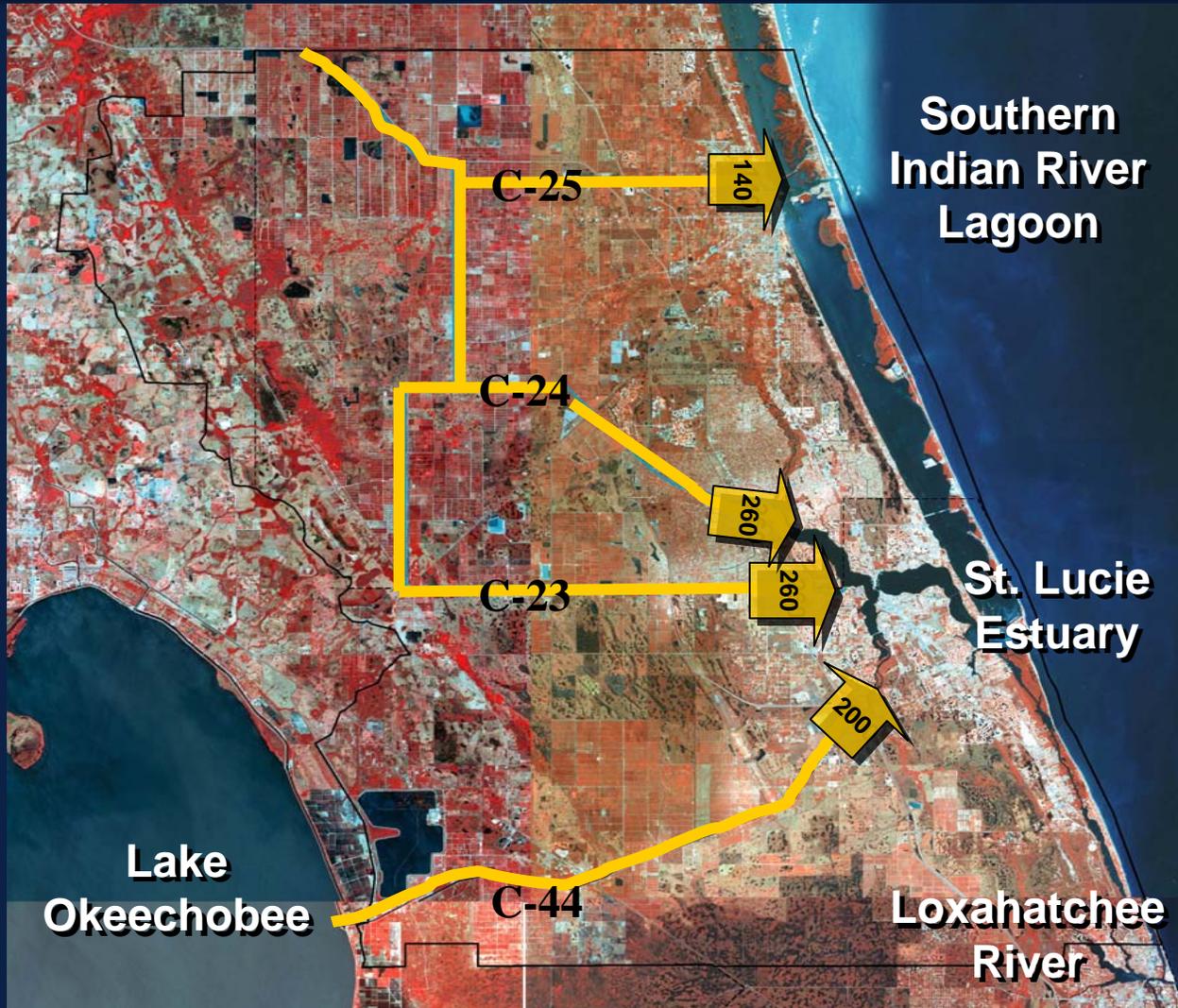


St Lucie Region Issue: Lake Okeechobee Releases





St Lucie Region Issue: Local Runoff





St Lucie Region Types of Projects

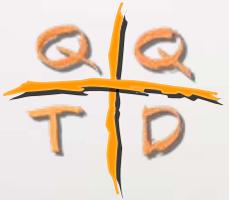


- Reservoirs
- Natural wetlands
- Stormwater treatment areas
- Best Management Practices
- Regulatory changes
- Stormwater projects
- Exotic removal





St Lucie Region Example: C-44 Reservoir and STA



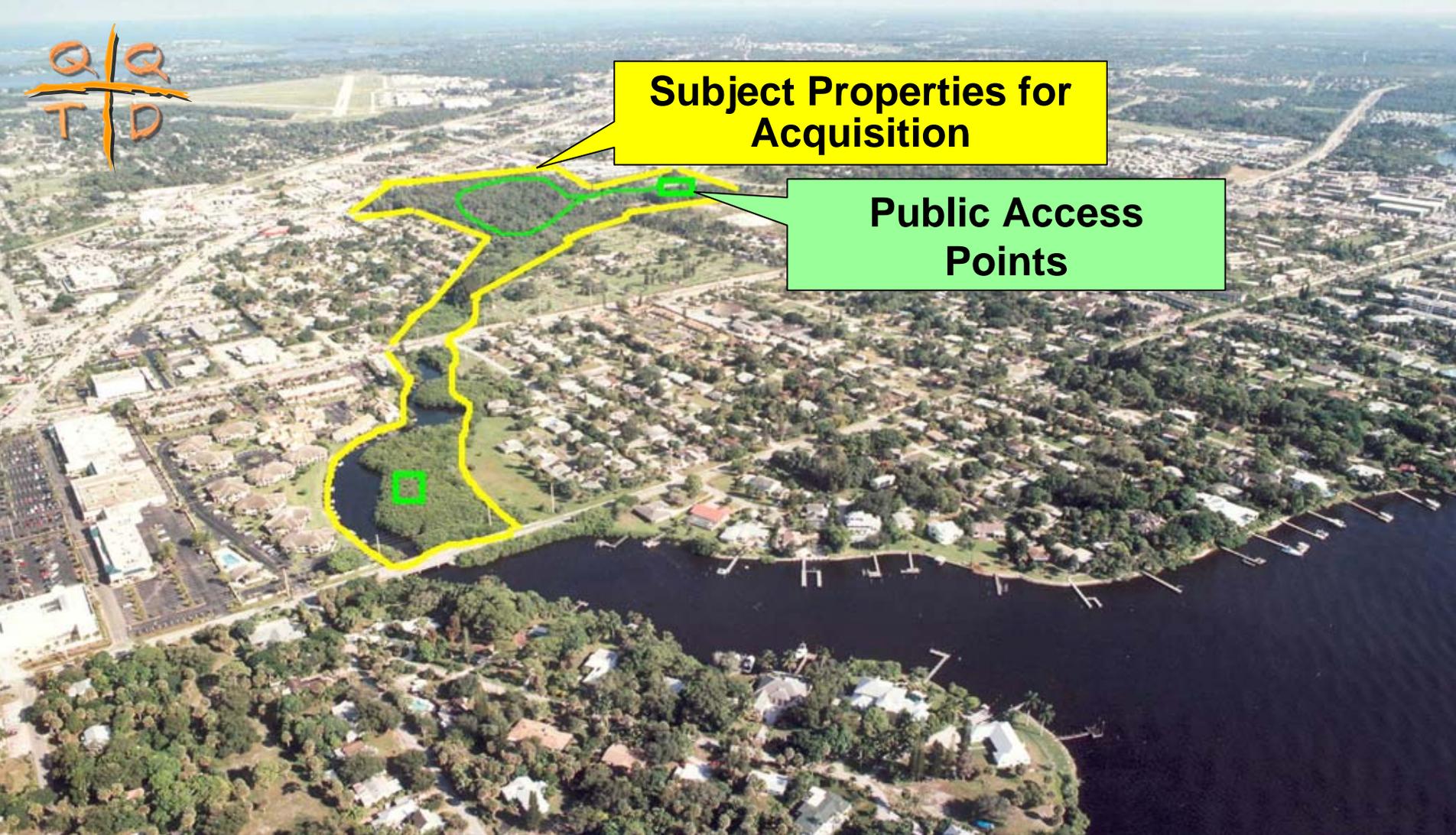


St Lucie Region Example: Allapattah Ranch





St Lucie Region Example: City of Stuart Stormwater Project



Subject Properties for Acquisition

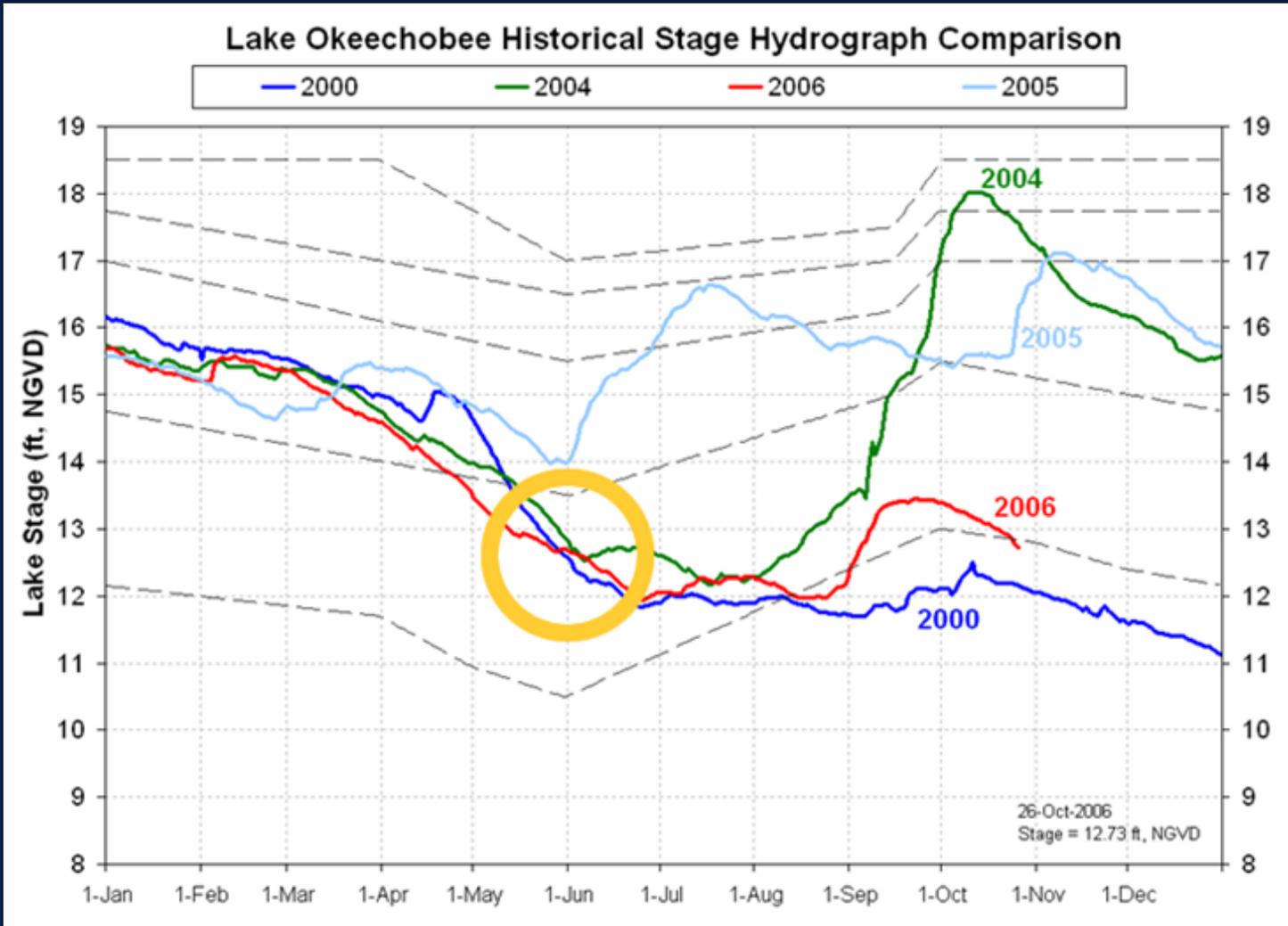
Public Access Points



St Lucie Region Challenges



St Lucie Region Challenge: Lake schedule





St Lucie Region Challenge: Additional storage





St Lucie Region Challenge: Excess Nutrients





St Lucie Region Challenge: Land acquisition

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20% - 100%

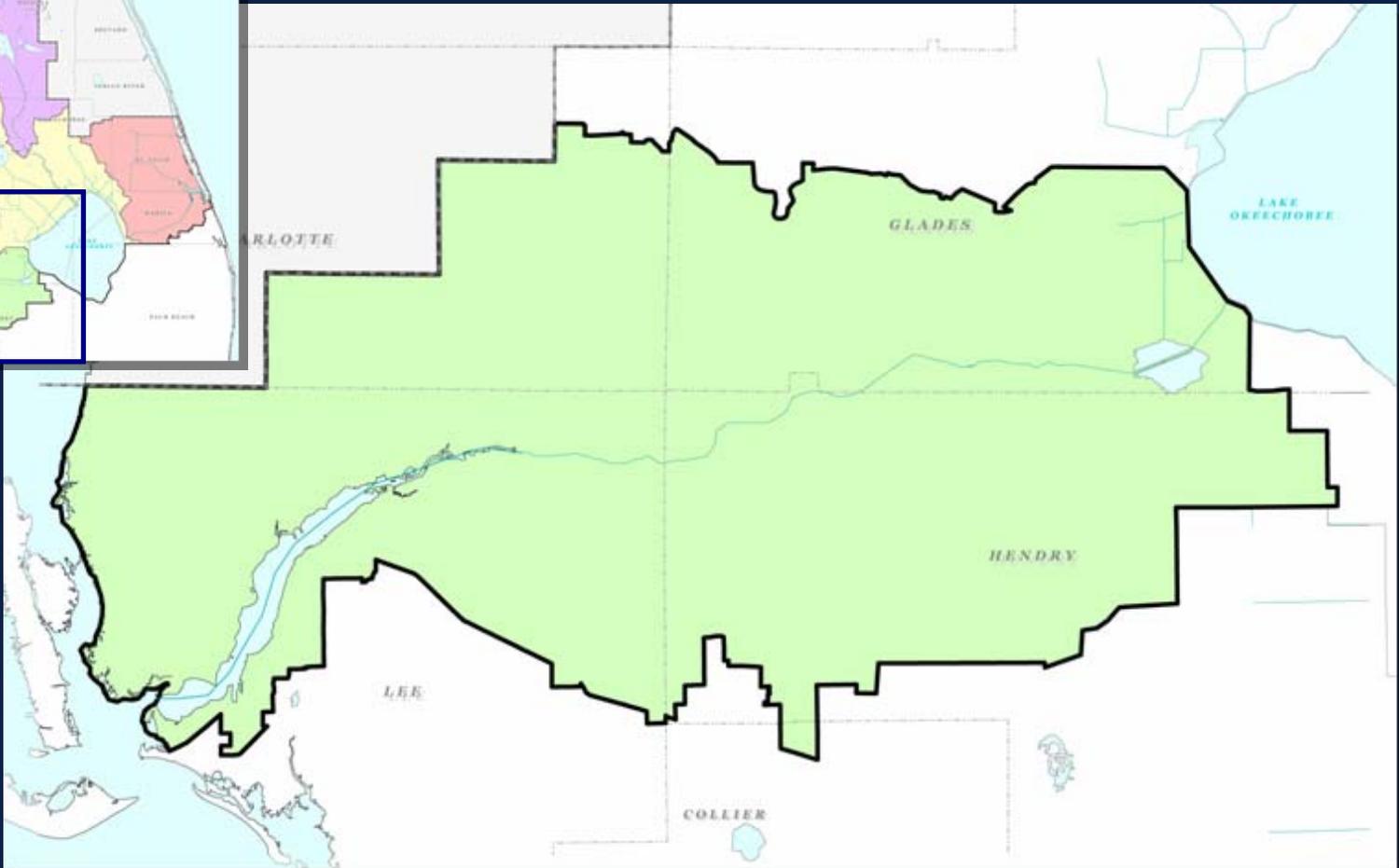
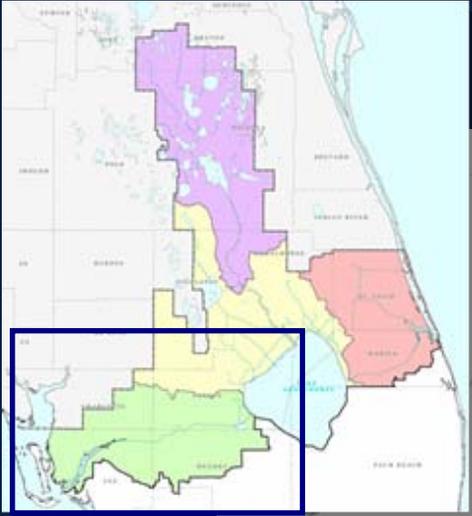


St Lucie Region Challenge: Water quality & storage improvements





Caloosahatchee Region





Caloosahatchee Region Issue: Lake Okeechobee Releases





Caloosahatchee Region Issue: Urban Runoff





Caloosahatchee Region Issue: Agricultural Runoff

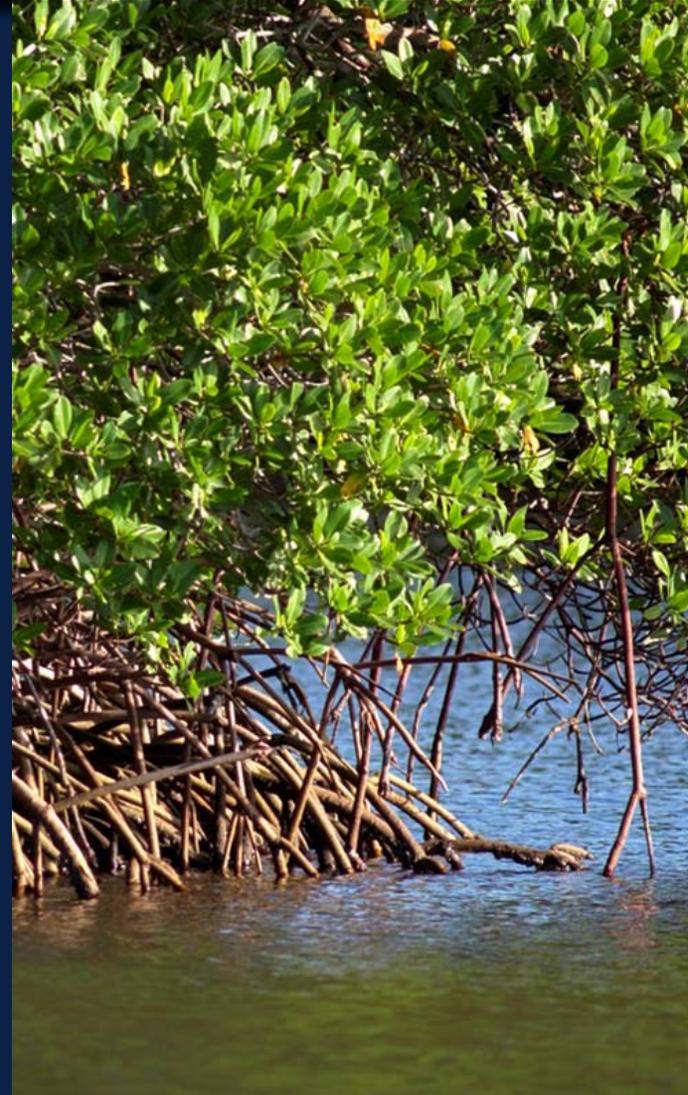




Caloosahatchee Region Types of Projects



- Reservoirs
- Natural wetlands
- Water quality projects
- Best Management Practices
- Regulatory changes
- Stormwater projects
- Exotic removal





Caloosahatchee Region Example: C-43 Reservoir





Caloosahatchee Region Example: Oxbow Restoration





Caloosahatchee Region Example: Ten-Mile Canal Stormwater Project

Q/Q
T/D

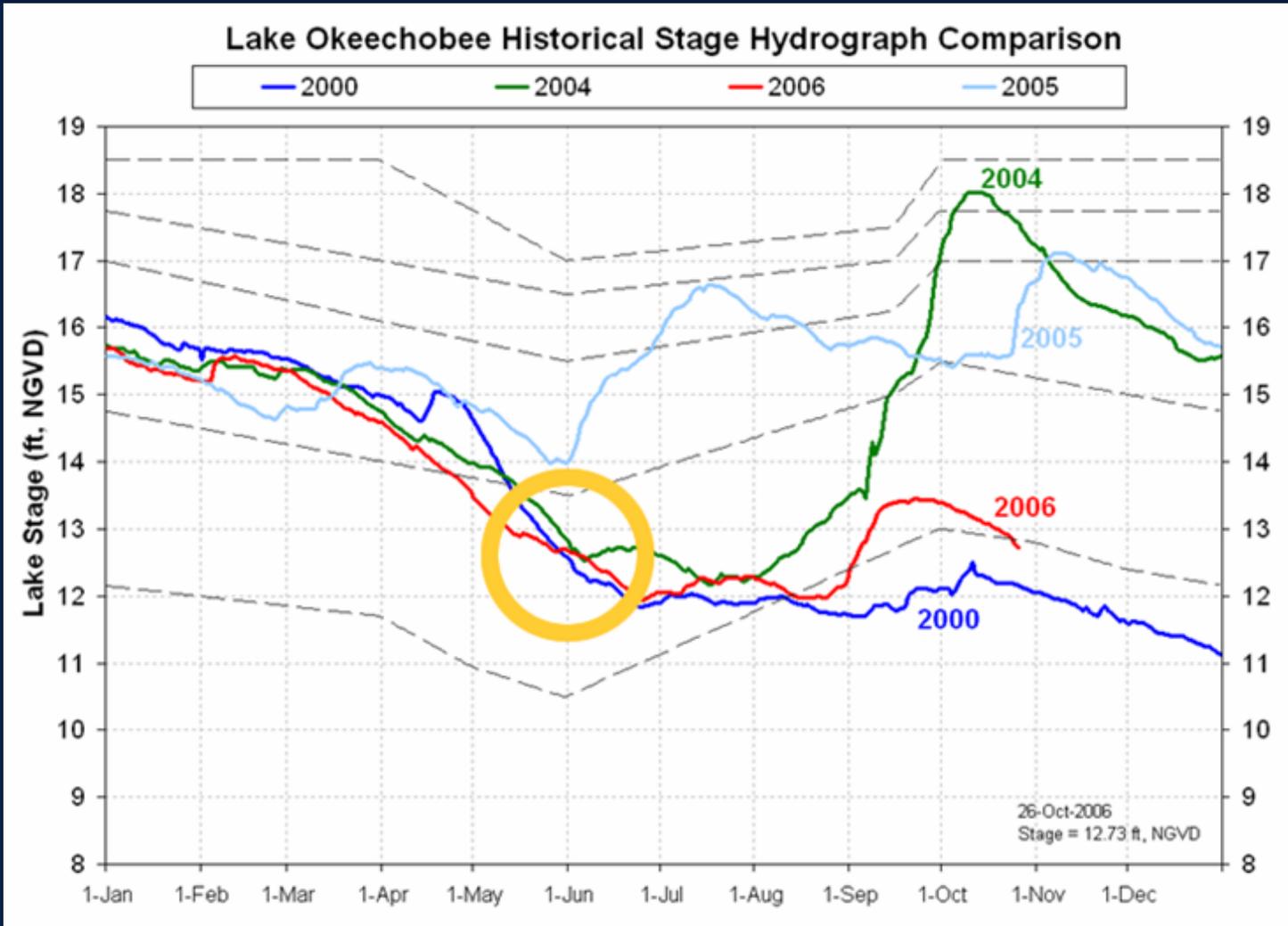




Caloosahatchee Region Challenges

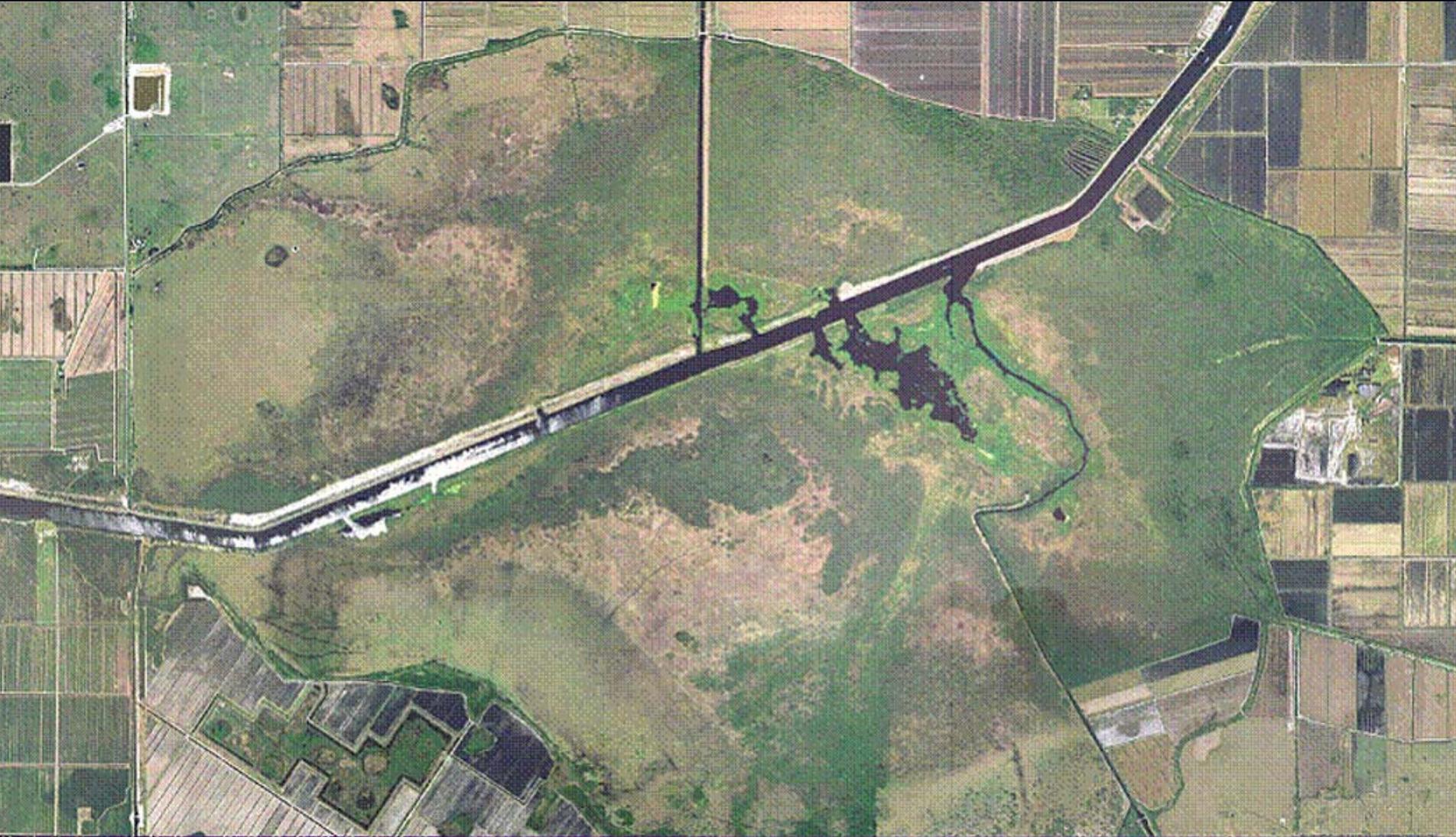


Caloosahatchee Region Challenge: Lake schedule





Caloosahatchee Region Challenge: Additional storage





Caloosahatchee Region Challenge: Land acquisition

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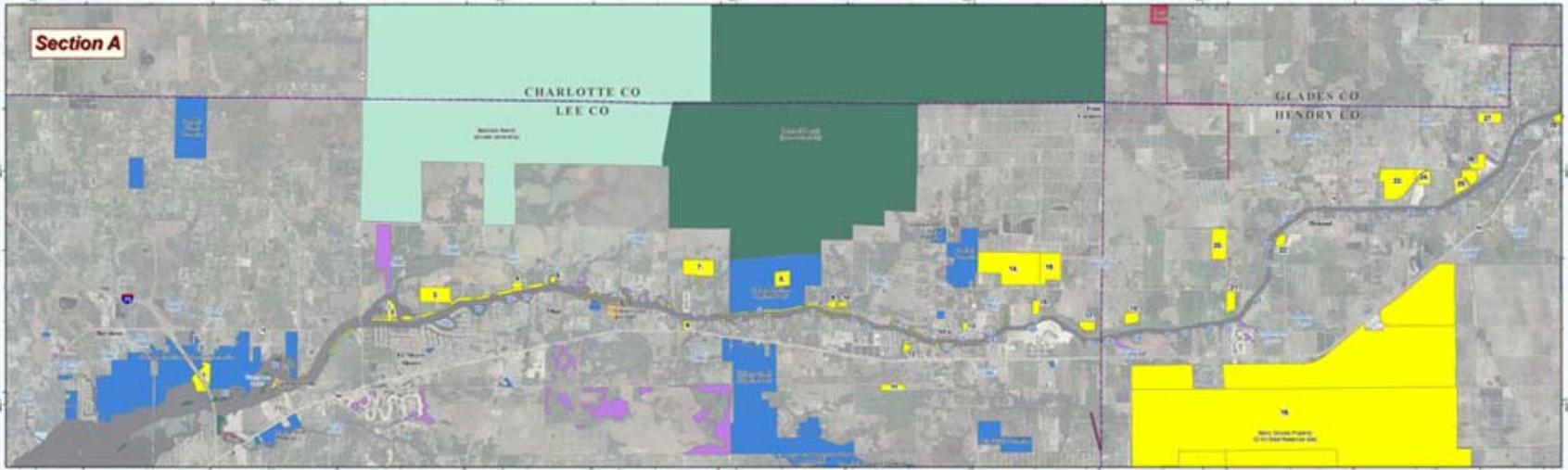


Caloosahatchee Region Challenge: Excess Nutrients





Caloosahatchee Region Challenge: Water quality & storage improvements





Future Challenges

- **Northern Everglades Focus**
- **Health of Lake Okeechobee and Caloosahatchee & St Lucie Estuaries**
- **State/Federal Fiscal Partnerships**
- **Increasing Land Values**
- **Development Pressures**
- **Cost of Construction – Concrete, Steel and Fuel**
- **Herbert Hoover Dike**



Next Steps

- **2007/08 Priorities**
- **Caloosahatchee/ St. Lucie Estuary Plans**
- **2008/09 10-Year Plan**



Thank you

