



Reviving
THE river OF grass

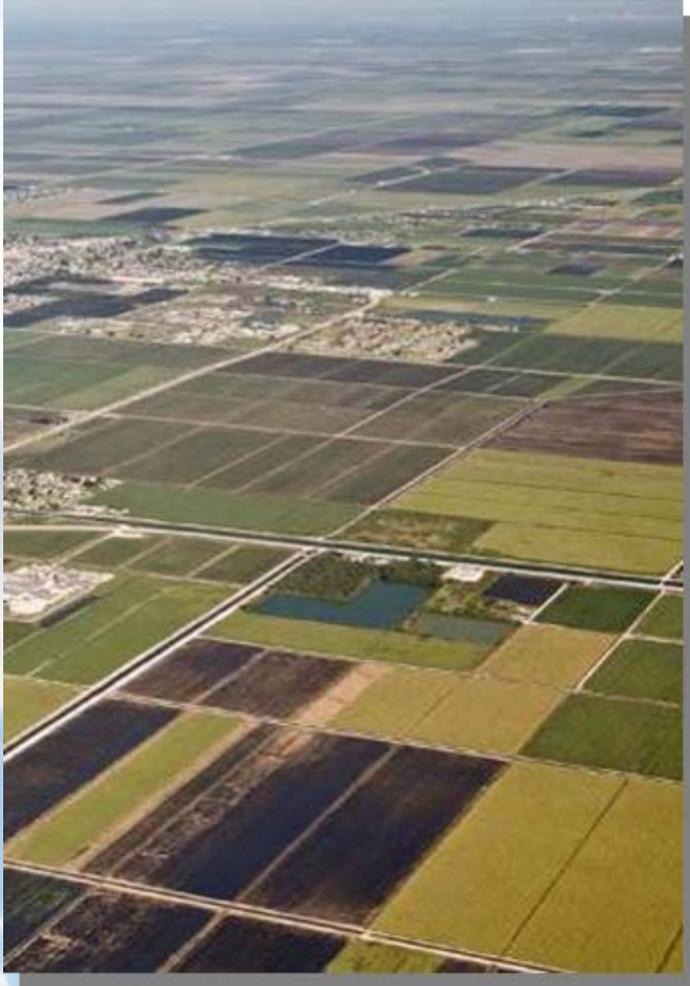
River of Grass Phase I Planning

Temperince Morgan, ROG Project Liaison/Northern
Everglades Program Implementation Manager

sfwmd.gov/riverofgrass

Everglades Land Acquisition Overview

RESTORATION PLANNING



- June 24, 2009: Governor Crist announces Everglades land acquisition opportunity and that the SFWMD would begin negotiations to acquire the assets of United States Sugar Corporation
- April 1, 2009: Governor Crist announced proposal to revise framework for acquiring land owned by United States Sugar Corporation for Everglades Restoration
- Proposed Revised Terms: Preserve District's ability to purchase 180,000 acres, a historic acquisition, but in affordable increments
 - Initial purchase of approximately 73,000 acres for \$536 million
 - Option to acquire remaining 107,000 acres during next ten years

River of Grass Planning – Activities to Date

RESTORATION PLANNING

- River of Grass Due Diligence Analysis
 - July to December 2008

- Everglades Hydrologic Restoration Targets Workshop
 - January 14 -16, 2009

- Public Planning Process – Phase I Planning Water Resources Advisory Commission (WRAC) Issues Workshops
 - January to September 2009

River of Grass WRAC Issues Workshops

Vision Statement

RESTORATION PLANNING



- Maximize restoration opportunities for the South Florida ecosystem by acquiring strategically located lands, establishing a managed system of water storage and treatment, and restoring a historic hydrologic connection to benefit America's Everglades, Lake Okeechobee, and the St. Lucie and Caloosahatchee rivers and estuaries.

River of Grass Goals



RESTORATION PLANNING

- Increase the availability of water storage to reduce harmful freshwater discharges from Lake Okeechobee to Florida's coastal rivers and estuaries and to redistribute more water to the south to restore the southern Everglades.
- Increase the availability of storage and treatment to enhance the delivery of cleaner water to the Everglades.
- Prevent harmful phosphorus flows from entering Lake Okeechobee and the Everglades.
- Eliminate the need for "back-pumping" water into Lake Okeechobee.

River of Grass Goals, *cont.*

RESTORATION PLANNING

- Improve the U.S. Army Corps of Engineers' options for managing Lake Okeechobee within a more desirable ecological range.
- Provide additional water storage alternatives to relieve some pressures on the Herbert Hoover Dike while continuing to pursue timely rehabilitation.
- Support continued regional agriculture, as well as economic diversification, where viable.

River of Grass Planning Process

RESTORATION PLANNING

- Long-term planning effort will include multiple phases
 - Due Diligence- July through December 2008
 - Phase I - January through September 2009
 - Future Phases – Fall 2009 and beyond



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Planning Process- Due Diligence

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- Due Diligence- July through December 2008
 - Prior to signing real estate contract
 - Provide data, analysis, and information for Governing Board deliberations related to this large land acquisition opportunity
 - If acquired, could these lands be utilized to further Everglades restoration efforts

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Review of Conclusions from 2008 Due Diligence

RESTORATION PLANNING

Key Summary Findings:

- Increasing the storage size in the Everglades Agricultural Area (EAA) generally improves system performance for most of the key performance measures
- There is generally a range of diminishing returns where additional increases in EAA storage capacity does not result in large performance improvements
- Based on the analysis to-date, the proposed acquisition can facilitate additional storage and treatment capacities to provide significant benefits to Lake Okeechobee, the Caloosahatchee, and St. Lucie Estuaries and the Everglades

Hydrologic Restoration Targets Workshop Summary

RESTORATION PLANNING

- Participants included a broad range of governmental and non-governmental Everglades scientists and hydrologists
- Presented hydrologic and ecological data that support restoration of the greater Everglades system
 - Reviewed latest science associated with hydrologic stage and flow targets
 - Presentations by workshop participants on possible approaches to defining flow estimates for the natural Everglades system
 - Constraints “tabled”
- Provided input to the State and District to determine policy opinion/position on restoration volumes for use in the River of Grass planning process

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Planning Process- Phase I and Beyond

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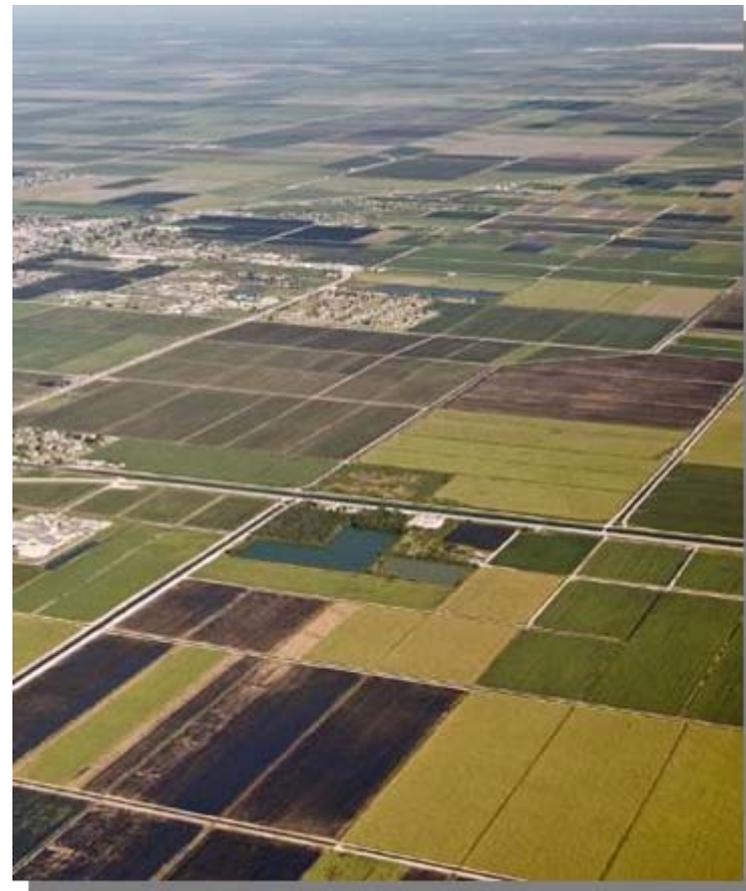
- Phase I- January through September 2009
 - Problems/Objectives/Constraints
 - Discussion of Phase I Modeling Tools
 - Discussion of Maps and Land Information
 - Conceptual Stakeholder Team Configurations Development and Evaluation
 - Relationships and Refined Concepts
- Future Phases– Fall 2009 and beyond
 - Detailed Planning and Modeling



Phase I Planning Process Scope

RESTORATION PLANNING

- Determine the range and general location of acreage needed north of the Everglades Protection Area for storing, treating and delivering the water flows needed to restore the Everglades, while enhancing ecological values in Lake Okeechobee and the northern estuaries.

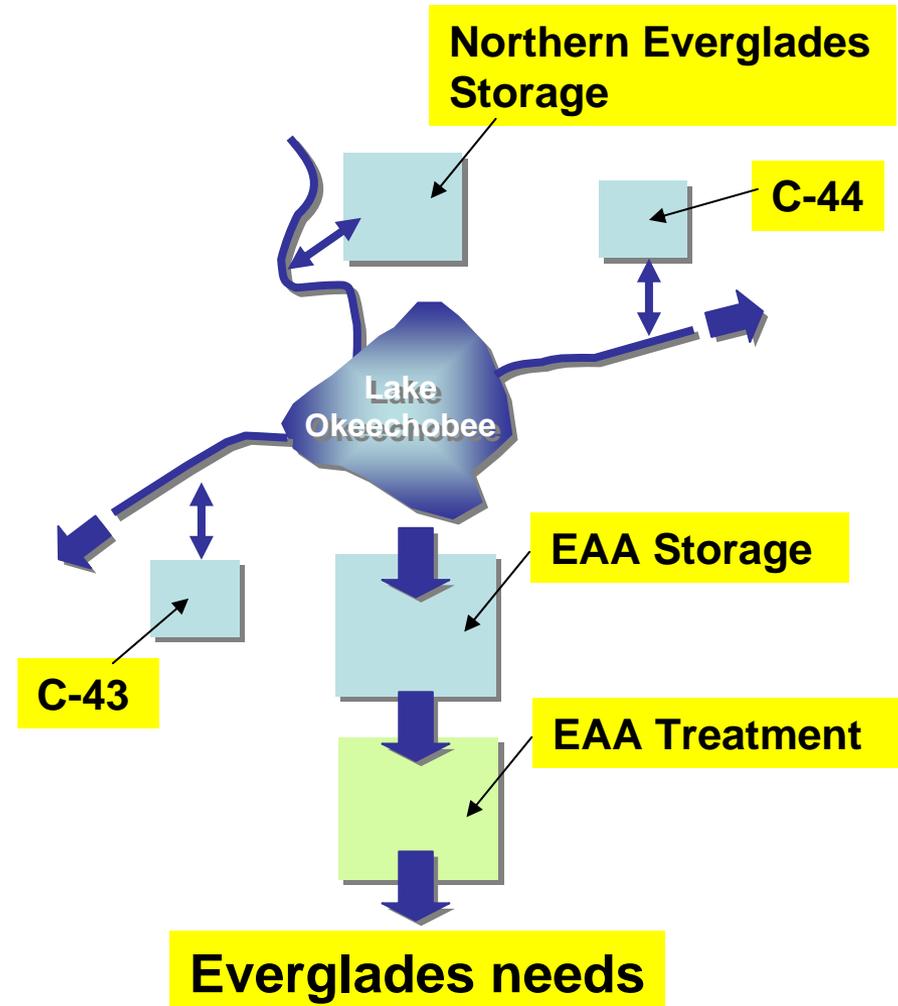


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RESOPS for Phase I Planning

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- Provides rapid screening-level testing of the integrated effects of storage and treatment features in the system
 - Able to run numerous scenarios for screening level testing in short timeframe
 - Provides information to inform stakeholders regarding system connectivity, relationships, and tradeoffs
 - Allowed us to develop tools to assist stakeholders with configuration development, particularly with providing guidance related to sizing and location of storage



Phase I Planning

Conceptual Configurations Development

RESTORATION PLANNING

- Provided stakeholders with an opportunity to develop Conceptual Configurations
 - Utilize information discussed during previous workshops that may be relevant
 - Maps/Land
 - Water Quality
 - Modeling
 - Economic Impacts
 - Costs
 - Generate discussion regarding what aspects of the configuration are most important to the team/authors
 - e.g., feature type, location, or operations

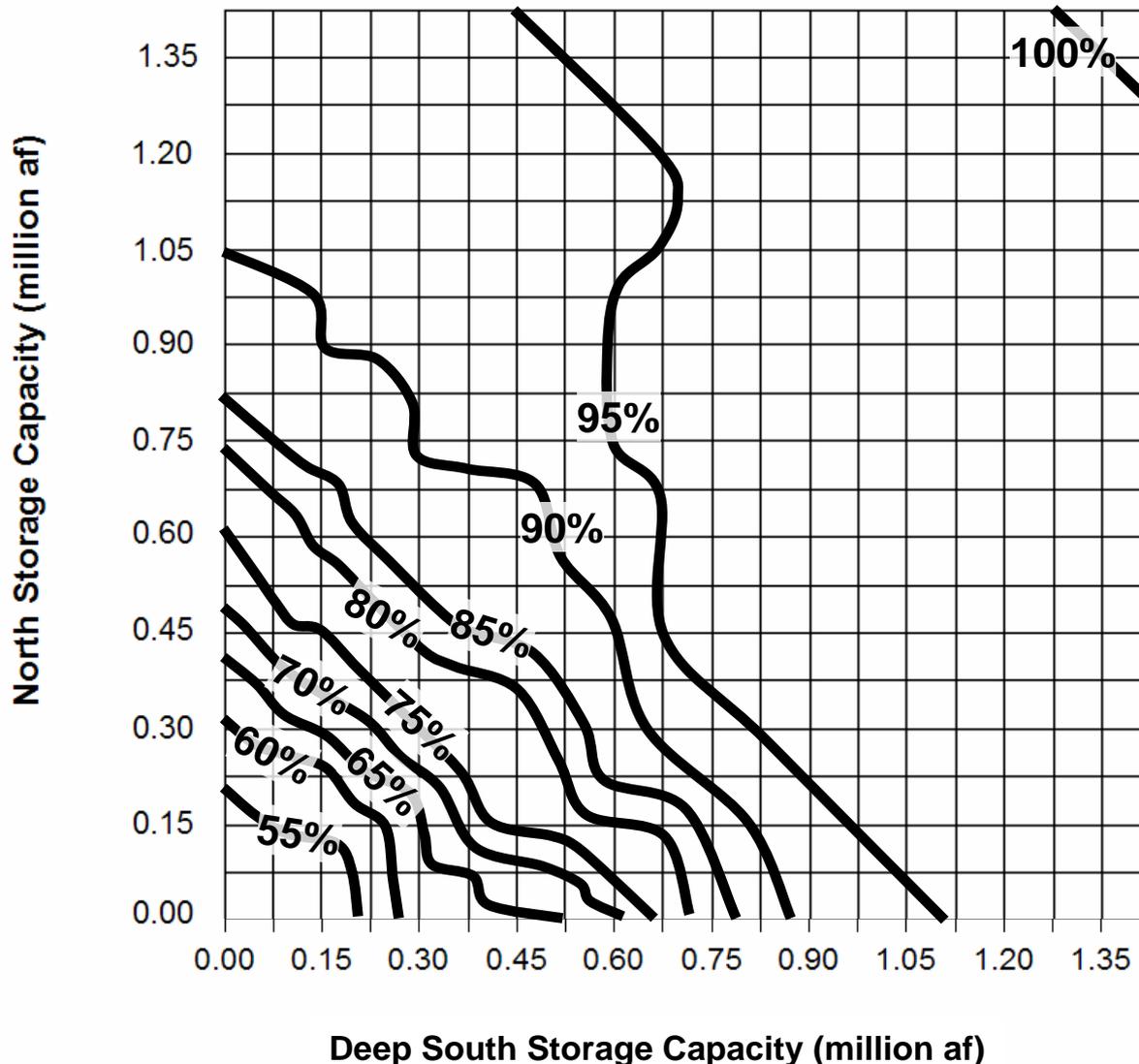
River of Grass – Phase I Planning

Modeling Tools – Hydrologic Modeling Performance Summary Maps

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- Hydrologic Modeling Performance Summary Maps were developed to provide general guidance for sizing of storage features north & south of Lake Okeechobee
- 5 key performance summary maps were utilized during the stakeholder configuration development exercise
 - Maps focused on different regions- Lake Okeechobee performance, Estuary Performance, or Everglades Performance
 - Total storage needs
 - Combinations of north versus south storage and deep versus shallow storage

% Reduction in Lake-Triggered High Discharges to the Northern Estuaries



Performance Maps provide guidance for selecting storage size combinations to achieve desired levels of performance.

Results from RESOPS Model simulations of specific configurations will consider more detailed specifications and performance may vary from the general guidance provided here.

Note:
 Each of the 400 points used to create this map represents an optimized operation of the corresponding storage configurations. Approx. 350 RESOPS model simulations were performed for each storage configuration.

Phase I Planning

Conceptual Configurations Development & Evaluation

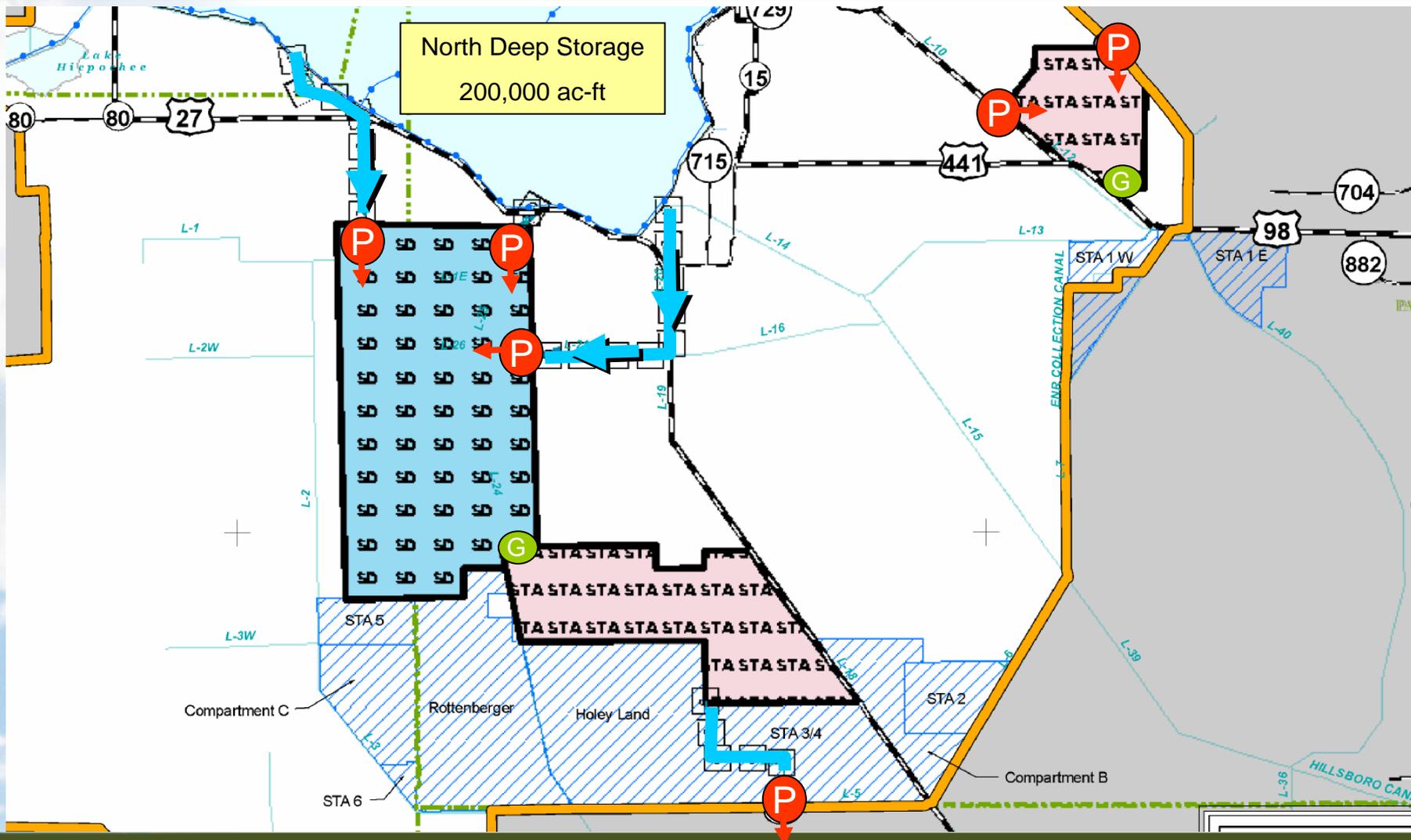
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- 9 proposed team configurations
- Each configuration assigned an engineer who developed design assumptions for configuration based on interaction/feedback from stakeholder team
- Design assumptions were used to assist with modeling and costing of each configuration



Performance - P Conceptual Configuration

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Phase I Planning

Conceptual Configurations Development & Evaluation

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- Each configuration was evaluated for its costs, benefits, and impacts including-
 - Physical Features
 - Footprint
 - Land Ownership
 - Land Use
 - Performance / Benefits
 - Hydrology (RESOPs)
 - Water Quality
 - Other
 - Cost Impacts
 - Remediation
 - Real Estate
 - Construction
 - Operation & Maintenance
 - Potential Project Impacts to Sugar Production Economics

Phase I Planning Process

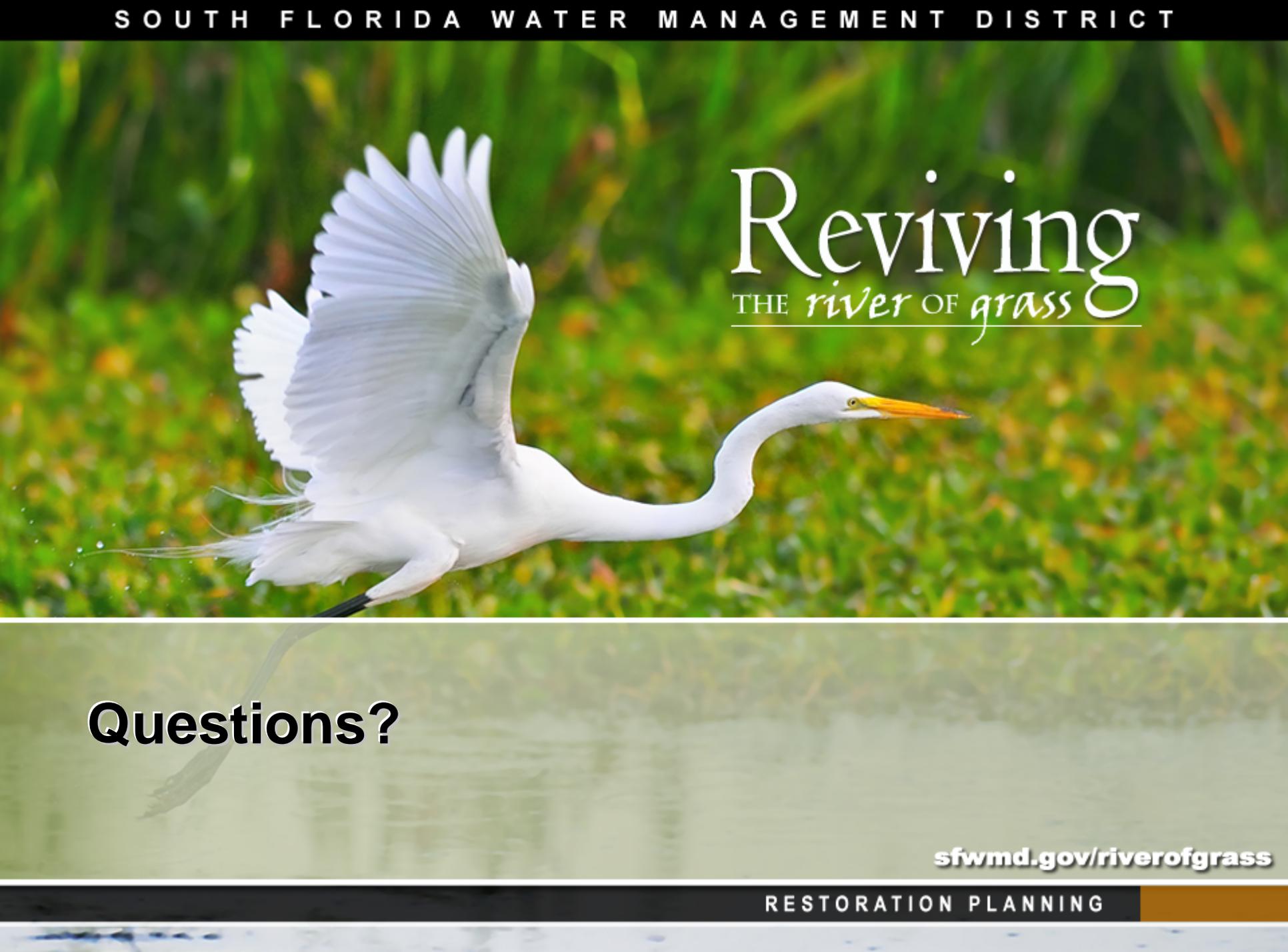
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- Where We Have Been and Where We Are Headed
 - ✓ Development of Vision and Goal Statements
 - ✓ Development of Problems, Objectives, and Constraints
 - ✓ Development of Tools (including modeling and maps)
 - ✓ Development of Team Configurations
 - ✓ Evaluation of Stakeholder Team Configurations
 - Evaluation of Relationships and Developing Refined Concepts (we are here)
 - Discuss next steps for Phase II Planning

Planning Process - Evaluating Relationships and Developing Refined Concepts

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- After June...
 - Evaluation of-
 - Relationships
 - Trends
 - Tradeoffs
 - Other Considerations
 - Discuss and Identify
 - Initial Findings/Areas of Agreement- What has this analysis of configurations shown us? What have we learned?
 - Areas Requiring Further Evaluation/Additional Information- What features show promise but require more detailed information or a greater understanding? For what issues is more data, detailed modeling, or additional discussion required?
 - Common Elements/Foundation Projects- What features are fundamental/common to all plans? What features should we pursue in the near term while planning and other evaluation activities continue?
 - Next Steps for Phase II- Detailed planning and modeling including evaluation of constraints

A white egret is captured in mid-flight, its wings fully extended, flying over a body of water. The background is a lush green field of grass. The text 'Reviving THE river OF grass' is overlaid on the right side of the image.

Reviving

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Questions?

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