There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

EAA Regional Feasibility Study

Presentation to the Technical Oversight Committee

May 17, 2005

ACCELER8
everglades**now**.org

Objectives of EAA Regional Feasibility Study

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

- Operational analysis moving water & phosphorus loads from S-5A Basin to central & western areas
  - Immediate operational changes
- Determine near-term minor structural modifications
  - Existing STAs with STA-2 Cell 4 and STA-5 Flow-way 3
- Determine optimal operation and configuration of STAs on Compartments B & C to assist existing STAs in improving water quality in EPA
  - A-1 Reservoir
  - Bolles and Cross Canal Improvements

ACCELER8
everglades**now**.org

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Summary of SOW for EAA Regional Feasibility Study

- Phase 1
  - Develop a Work Plan
  - Develop an Evaluation Methodology
  - Analyze Hydraulic Capacity of Existing Canals
- Phase 2
  - Develop Baseline Data
  - Establish Optimum Allocation of Phosphorus and Hydraulic Loading to Existing STAs

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

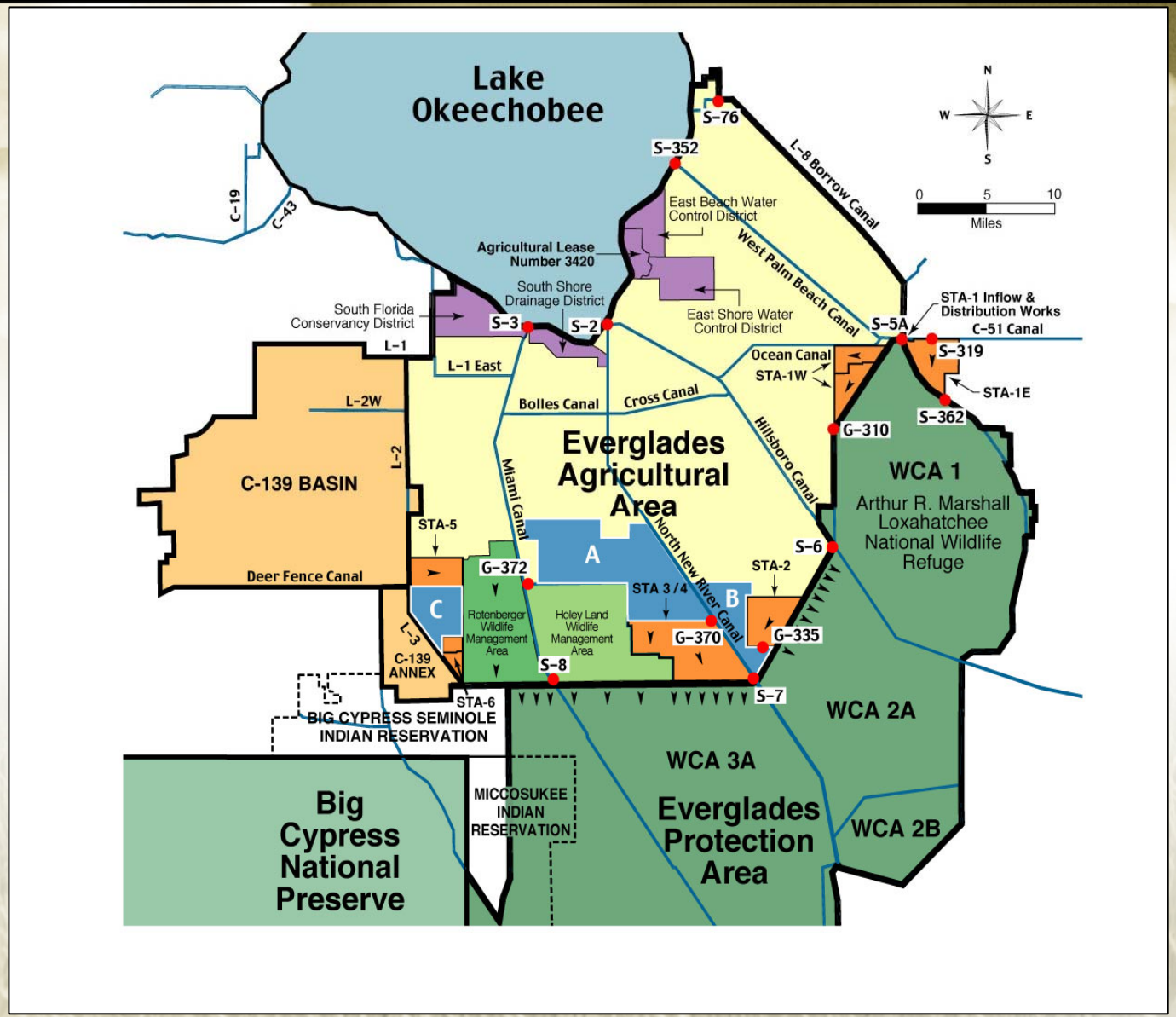
Marjory Stoneman Douglas
"The Everglades: River of Grass"

Summary of SOW cont'd.

- Phase 2 Cont'd.
  - Establish Optimum Allocation of phosphorus and hydraulic Loading to STAs, Compartments B&C, A-1 Reservoir
  - Identify Optimum EAA Canal Improvement for STAS, Compartments B&C, and A-1 Reservoir
  - Determine Optimum Use of A-1 Reservoir
  - Determine Optimum Use of A-2 Reservoir
  - Prepare EAA Regional Feasibility Study Report

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"



ACCELER8
everglades**now**.org

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Draft Evaluation Methodology

- Water quality performance projections for STAs
  - Concentrations and load reductions
- Flood impact analysis
- Operational flexibility
- Effective use of storage volume
- Implementation schedule (including real estate)
- Capital and O&M cost estimates (50-yr PW)
- Cash flow analysis
- Environmental factors
  - Re-distribution of flows and TP loads to the receiving waters
  - Benefits/Impacts to Refuge

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Status of Evaluation Methodology

- Developed with input from stakeholder technical working group
- Draft document currently being revised to incorporate review comments
- Final Evaluation Methodology document complete end of May

Hydraulic Analysis of Existing Canals

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

- Will utilize MIKE 11 Model developed by USACE for the EAA Storage Reservoir Project Implementation Report
  - Refinements, revisions to be made as appropriate
- Determine existing (2006) capacity of EAA Canals to convey as much water as possible from S-5A basin to S-6, S-7 and S-8 basins
  - Treatment in STA-2 and STA-3/4

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Develop Baseline Data

- Evaluate 2006 SFWMM simulation results
- Evaluate 2010 and 2015 SFWMM simulation results
- Define Historic Inflow Volumes and TP by source
- Define Method to Estimate Daily TP Concentrations
- Establish Inflow Data Sets for 2010 condition
- Establish Inflow Data Sets for 2015 condition

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Optimum Allocation of Phosphorus and Hydraulic Loads to Existing STAS

- Use baseline data and define optimum allocation of flow and TP to existing STAs using DMSTA
- It is anticipated that this optimum allocation will require some form of canal improvements
- The difference between the allocation specified by this task and the results of the hydraulic analysis represents potential near term improvements

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Optimum Allocation to STAs, Compartments B&C, and A-1

- Uses Inflow Data Sets for 2010 Condition
- Uses DMSTA to determine best distribution of flows to maximize TP removal
- Assumes existing canal conveyance capacities
- Assumes STA-5/STA-6/Compartment C will treat water from C-139 and C-139 Annex only

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Optimum Canal Improvements w/ Compartments B&C & A-1

- Evaluate canal improvements to optimize flows and loads across the STAs (including Comp. B and C)
  - North New River, Miami, Ocean, Bolles and Cross, etc.
- Results will used during design of related projects:
  - A-1 Reservoir
  - Bolles and Cross Canal Improvements
  - STAs on Compartments B & C
- Alternatives will be evaluated using evaluation methodology and evaluation criteria
  - Performance projections, schedules, costs, etc.

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

TASKS 5 & 6 - Optimum Use of A-1 and A-2 Reservoirs

- Develop Recommendations for:
  - Effective use of storage volume
  - Structural Modifications
  - Operational Refinements
  - Operational Flexibility

Schedule

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

Task	Description	Draft
Ph 1 - 1	Work Plan	April 15
Ph 1 - 2	Evaluation Methodology	April 15
Ph 1 - 3	Operating Strategy for Exist. System	July 28
Ph 2 - 1	Develop Baseline Data	July 12
Ph 2 - 2	Optimum Alloc. to Existing STAs	July 28
Ph 2 - 3	Opt. Alloc. STAs, Compart B&C, A-1	Aug 5
Ph 2 - 4	Canal Improvements w/ STAs, B&C, A-1	Aug 5
Ph 2 - 5	Optimum Use of A-1 Reservoir	Aug 5
Ph 2 - 6	Optimum Use of A-2 Reservoir	Sept 9

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known.

Marjory Stoneman Douglas
"The Everglades: River of Grass"

QUESTIONS?

ACCELER8
everglades**now**.org