

**CERP**  
**(Yellow Book)**  
**Nine Years Later**  
*Unanticipated Issues and  
Lessons Learned in Science*

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# Introduction

- Purpose of this Presentation
- Organization of this Presentation
- What is the Yellow Book?

# Yellow Book/Restudy Assumptions

- 50-50 Federal/State partnership
- CERP would merge environmental, urban, and agricultural needs for water
- Ecosystem scale program needed to solve ecosystem scale problems
- Definition of success would be developed and refined over time

# Restudy Assumptions (cont'd)

- Adaptive management and new science would lead to improvements of The Plan
- All performance measures are created equal
- RECOVER would guide project teams to achieve maximum contribution towards total system restoration goals
- RECOVER would provide science-based recommendations to guide decision-makers

# Ongoing Challenges

*“The technical challenges of restoring the Everglades are exceeded only by the difficulty of getting people to work together to achieve it.”*

*Dr. Peter Frederick*

- Difficult for agencies to reconcile different cultures, technical strengths, and missions
- Difficult for agencies to collaborate and agree on a common goal and a set of priorities
- Slow pace of implementation has resulted in CERP not keeping pace with continued decline of the ecosystem

# Ongoing Challenges (2)

- Challenge of using traditional planning processes that treat multiple, interrelated projects as if they were separate
- Challenge of understanding and using adaptive management as planning framework for dealing with large unanswered questions (ecological & engineering)
- Challenge of developing dependable ecological models

# What Worked?

The objectives and design of C&SF Review Study greatly influenced by science.

Examples:

- ☀ Everglades Science Conference (1989)
- ☀ “Federal Objectives for The South Florida Restoration”, Science Sub-group report (1993)
- ☀ Everglades, the Ecosystem and its Restoration. Davis & Ogden eds., 1994

# What Worked? (2)

RECOVER products:

- ☀ Conceptual Ecological Models (CEMs)
- ☀ Suite of system-wide Performance Measures
- ☀ Monitoring and Assessment Plan (MAP)
- ☀ Interim Goals and Targets Indicators
- ☀ Bi-Annual System Status reports



# What Hasn't Worked Well

## “Two way street”:

- ✿ Inadequate, direct, timely science support to decision-makers, during program planning (e.g., bang for buck question, & on-going ecological changes)
- ✿ Inadequate technical/scientific guidance to project teams, especially total system objectives and multi-project planning strategies

# What Hasn't Worked Well (2)

RECOVER must show greater relevance, and provide guidance on:

- ✿ Refined definition of restoration success
- ✿ The role & strategy of Adaptive Management
- ✿ Prioritization and sequencing of projects
- ✿ Resolution of unanswered science questions
- ✿ A small set of Interim Goals as benchmarks

# Recommendations

## 1. Consider a Watershed Planning Team to Guide the Restoration Process

- Includes - and led by - stakeholders, agencies and tribes
- Includes senior scientists
- Uses formal collaboration to make key recommendations that agencies cannot make alone

# Recommendations (2)

## 2. Re-think RECOVER

- Form an ad hoc multi-agency team (managers & scientists) to re-think RECOVER organization, overall role, resource needs, for purpose of recovering an more effective, system-wide science support group
- Re-structure RECOVER to guide regional planning using Incremental Adaptive Restoration concepts, to take bolder steps in the face of ecological and engineering uncertainties

## Recommendations (3)

3. Revise Corps planning process for ecosystem restoration purposes, to employ watershed and adaptive management principles and guidelines
4. Add one or more permanent senior scientists seats to all policy and senior management decision-making and coordination “processes” dealing with restoration





**Thank you!**