Peer Review of the Everglades Landscape Model (ELM)

Workshop I

Community Foundation for Palm Beach & Martin Counties

West Palm Beach, Florida

August 1, 2006

Outline

- Introductions
- Everglades Landscape Model (ELM)
- Peer Review Process
 - -Goals & Objectives
 - Review
 - Facilitation
 - Responsibilities
 - Panel Members
 - Facilitator
 - Model Developers
 - Stakeholders
- Workshop Agenda

Facilitation

• Dr. Victor J. Bierman, Jr.

Senior Scientist, Limno-Tech, Inc. Technical Director, Limno-Tech/HydroQual, LLC

Ms. Wendy M. Larson

Senior Project Manager, Limno-Tech, Inc.

Peer Review Panel

• Dr. Lawrence E. Band

Voit Gilmore Distinguished Professor and Chair Department of Geography University of North Carolina Chapel Hill, NC

• Dr. Carl F. Cerco

Research Hydrologist U.S. Army Engineer Research and Development Center Vicksburg, MS

• Dr. William J. Mitsch (Panel Chair)

Distinguished Professor of Natural Resources and Environmental Science Director, Olentangy River Wetland Research Park The Ohio State University Columbus, OH

SFWMD Staff

Everglades Landscape Model (ELM)

Regional-scale, integrated ecological assessment tool designed to understand and evaluate the potential landscape responses to different water management scenarios in south Florida, USA

Web site address: http://my.sfwmd.gov/elm

ELM Goals

- Develop a simulation modeling tool for integrated ecological assessment of water management scenarios for Everglades restoration
 - Integrate hydrology, biology, and nutrient cycling in spatially explicit, dynamic simulations
 - Synthesize these interacting hydro-ecological processes at scales appropriate for regional assessment
 - Understand and predict the relative responses of the landscape to different water and nutrient management scenarios
 - Provide a conceptual and quantitative framework for collaborative field research and other modeling efforts

Model Application Niche What are the Questions and Issues?



ELM Version 2.5

Application Niche

 Represent phosphorus water quality responses of the ecosystems within the regional landscape

Performance Measures

- Make relative comparisons of management alternatives with respect to:
 - Total P concentration gradients in marsh surface water
 - Total P accumulation gradients in the marsh ecosystems

ELM Version 2.5 (cont.)

Spatial Scales

Regional spatial domain (~10,000 km²)
 Multiple-kilometer spatial resolution
 Temporal Scales

 Decadal simulation period
 Annual temporal resolution

ELM Review Goal

Judge the quality and credibility of the science of the ELM, particularly in its applicability to decisionmaking for Everglades management

ELM Review Objectives

- Find critical defects, if any, in the model relative to the goal of understanding and predicting relative landscape responses to alternate management scenarios
- Suggest remedies for such defects, and/or suggest the appropriate caveats to be understood by those who must interpret the model results for decision support
- Recommend avenues for future model refinement

ELM Facilitation Goal

Ensure that the review remains focused on the topics of greatest importance to decision support for Everglades applications

ELM Facilitation Objectives

- Support the Review Panel so that they can best meet the Goals of the peer review
- Maintain clear and open communications among the Panelists and Model Developers
 - The Facilitator does not provide opinions on the science of the ELM
 - The Facilitator does interject expert guidance on how to best understand and focus on the issues involving the Everglades landscape and its simulation

Responsibilities

Panel Members

- Provide unbiased opinions on the topic(s) considered
- Fully participate in understanding and critiquing the model application to restoring the Everglades

Facilitator

 Ensure that communications among all parties are clearly understood

Model Developers

- Respond to panel member comments and requests for information

Stakeholders

 Participate in the peer review process via the public workshops and the web site

Peer Review of the Everglades Landscape Model (ELM): Agenda for Workshop I

<u>Topic</u> :	Public Workshop for expert Review Panel questions and initial comments on the ELM documentation.
<u>Date</u> :	August 1, 2006: 9:00 am – 5:00 pm August 2, 2006: 9:00 am – 1:00 pm
<u>Location</u> :	Facilities of the "Community Foundation for Palm Beach & Martin Counties", 700 South Dixie Highway, West Palm Beach, FL 33401. Phone: (561) 659-6800
ELM information:	Model documentation and current Peer Review Schedule & Agenda found at: http://my.sfwmd.gov/elm

1-Aug				
	9:00 - 9:30	Introductions, peer review process	Vic Bierman	
	9:30 - 9:45	Peer Review in the Sunshine	Frank Bartolone	
	9:45 - 10:05	CERP & RECOVER goals	CERP mgr/scientist	
	10:05 - 10:25	LTPIan goals, Everglades "data universe"	EvDiv mgr/scientist	
	10:25 - 10:40	Break		
	10:40 - 11:00	SFWMD "model universe"	Jayantha Obeysekera	
	11:00 - 11:20	2002 interagency review of ELM by MRT	Ken Tarboton	
	11:20 - 11:45	ELM conceptual overview, application niche	Carl Fitz	
	11:45 - 13:00	Lunch	1-2 blocks to restaurants	
	13:00 - 13:30	ELM refinements since 2002; discussion	Carl Fitz	
	13:30 - 15:00	ELM topics as desired by Panel; discussion	As needed	
	15:00 - 15:15	Break		
	15:15 - 16:45	ELM topics as desired by Panel; discussion	As needed	
	16:45 - 17:00	Panel information needs for Tuesday agenda	Panel	
2-Aug				
	9:00 - 9:15	Welcome back	Vic Bierman	
	9:15 - 10:45	ELM topics as desired by Panel; discussion	As needed	
	10:45 - 11:00	Break		
	11:00 - 12:30	Working session for Panelists to plan for Draft Report	Panel (public may remain)	

Acronyms:

CERP: Comprehensive Everglades Restoration Plan

RECOVER: CERP's REstoration COordination VERification program

MRT: RECOVER's Model Refinement Team

LTPlan: Florida's Long Term Plan for Achieving Everglades Water Quality Goals

SFWMD: South Florida Water Management District