

# CERP Adaptive Management Program

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COMPREHENSIVE  
EVERGLADES  
RESTORATION PLAN

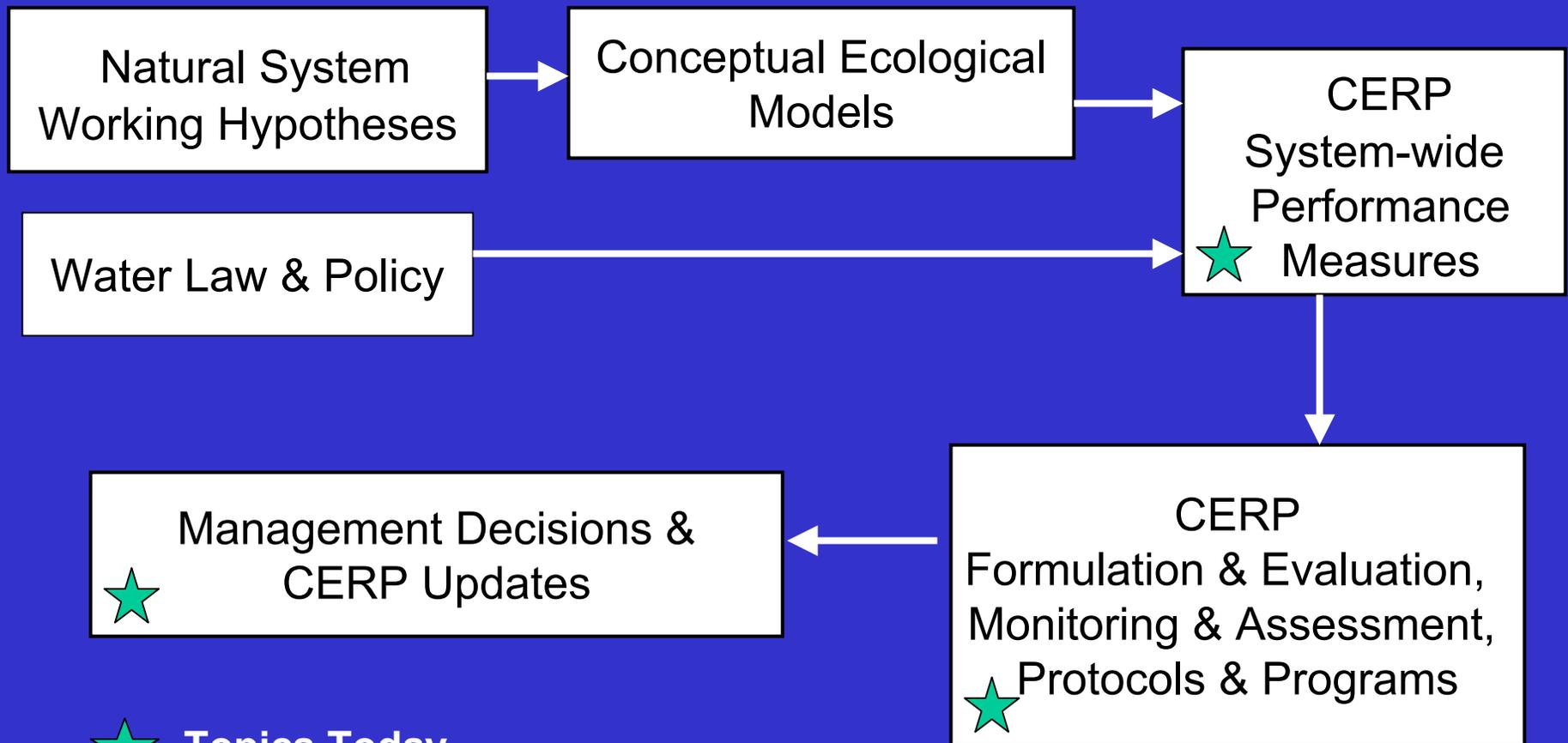
# CERP Adaptive Management Program

**Adaptive Management:** “...applies scientific methods to complex resource management challenges with the objective of designing robust policies for dealing with uncertainty and surprise inherent in such contexts...” (Blann & Light 2003)

# Key Elements of Adaptive Management

- **Anticipation:** Maximize flexibility of design & operation of projects, to place CERP in best possible position to deal with future uncertainties
- **Learning:** Maximize opportunities for learning, in project design, implementation, operation, monitoring & research in CERP
- **Communication:** Maximize coordination & integration among managers and scientists
- **Adjustment:** Use new information to refine and improve the predicted & actual performance of CERP, in the context of the goals of the Plan

# Important Links in the Development of the CERP Adaptive Management Program



 **Topics Today**

# CERP

## Performance Measures

- Performance measures are the quantitative measures of elements of the natural and human systems that have been selected as endpoints for restoration
- Collectively, a well-selected set of performance measures defines the system-wide patterns and conditions that will be used to determine achievement towards the objectives of restoration

# **Key Criteria for Selection of System-wide Performance Measures**

- **Establish restoration endpoints (targets) for the key elements of the natural or human systems that CERP has been designed to improve**
- **Maintain and support the integrated, total system restoration goals of the Plan**

# Practical Considerations

*The set of performance measures must:*

- Be comprehensive enough to fully reveal the performance of CERP
- Not be so large in number as to create evaluation and monitoring programs too unwieldy and costly to sustain
- Be able to be evaluated or assessed using available tools and protocols

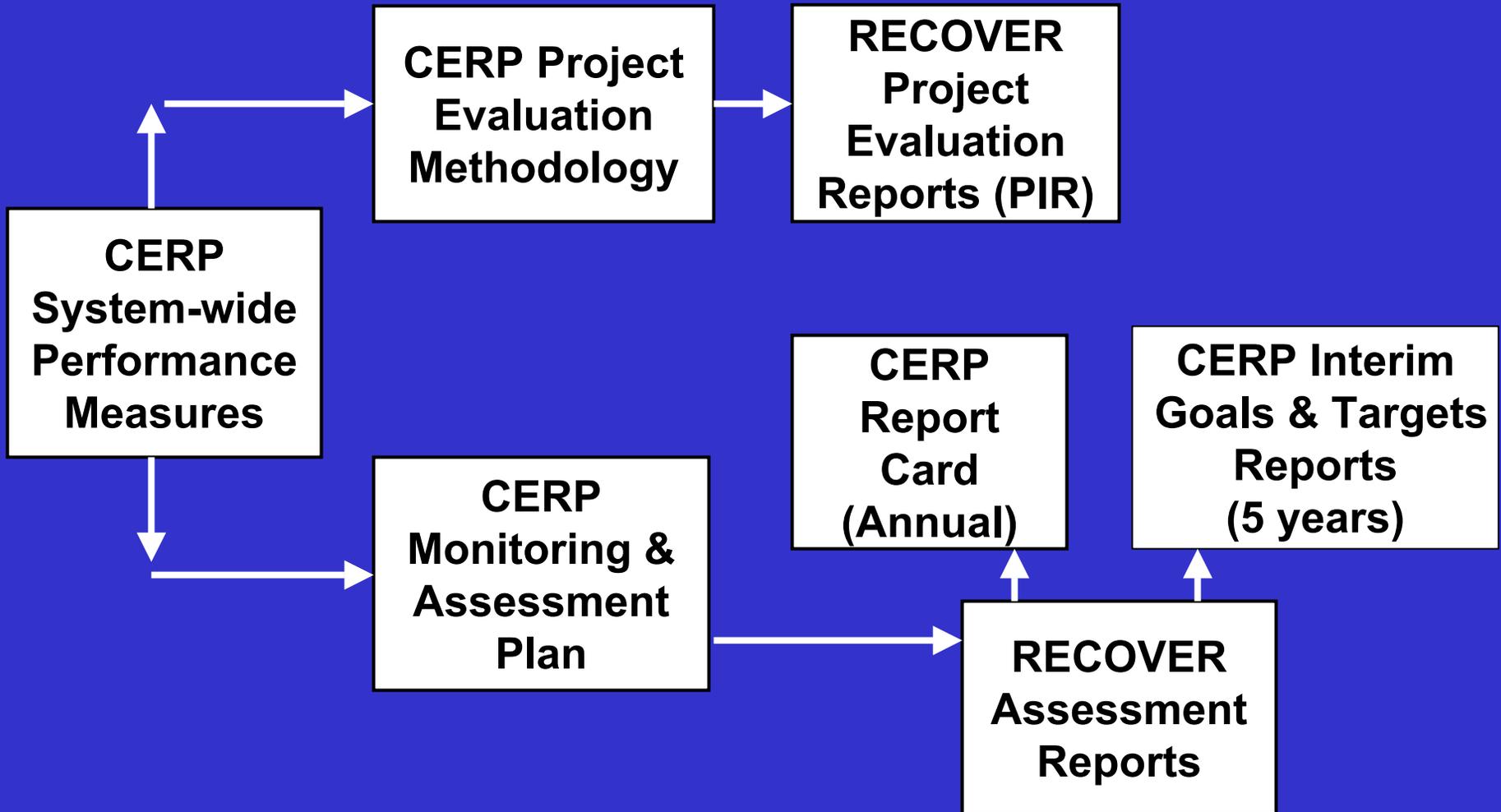
# **Each CERP Performance Measure identifies:**

- **An element to be measured (e.g., regional hydro patterns, or alligator nesting)**
- **The appropriate parameter (e.g., water depth, or number of eggs that hatch per nest)**
- **The restoration endpoint (e.g., maximum 2 foot surface depths, or 75% average hatching rate)**

# Evaluation and Assessment Performance Measures

- **Evaluation Performance Measure** – Used to evaluate (modeling) the predicted performance of a proposed plan, or to compare the predicted performance of alternative plans prior to construction, relative to the goals of CERP
- **Assessment Performance Measure** – Used to assess (monitoring) the actual performance of one or multiple projects following construction, relative to the goals of CERP

# CERP Evaluation & Assessment Components



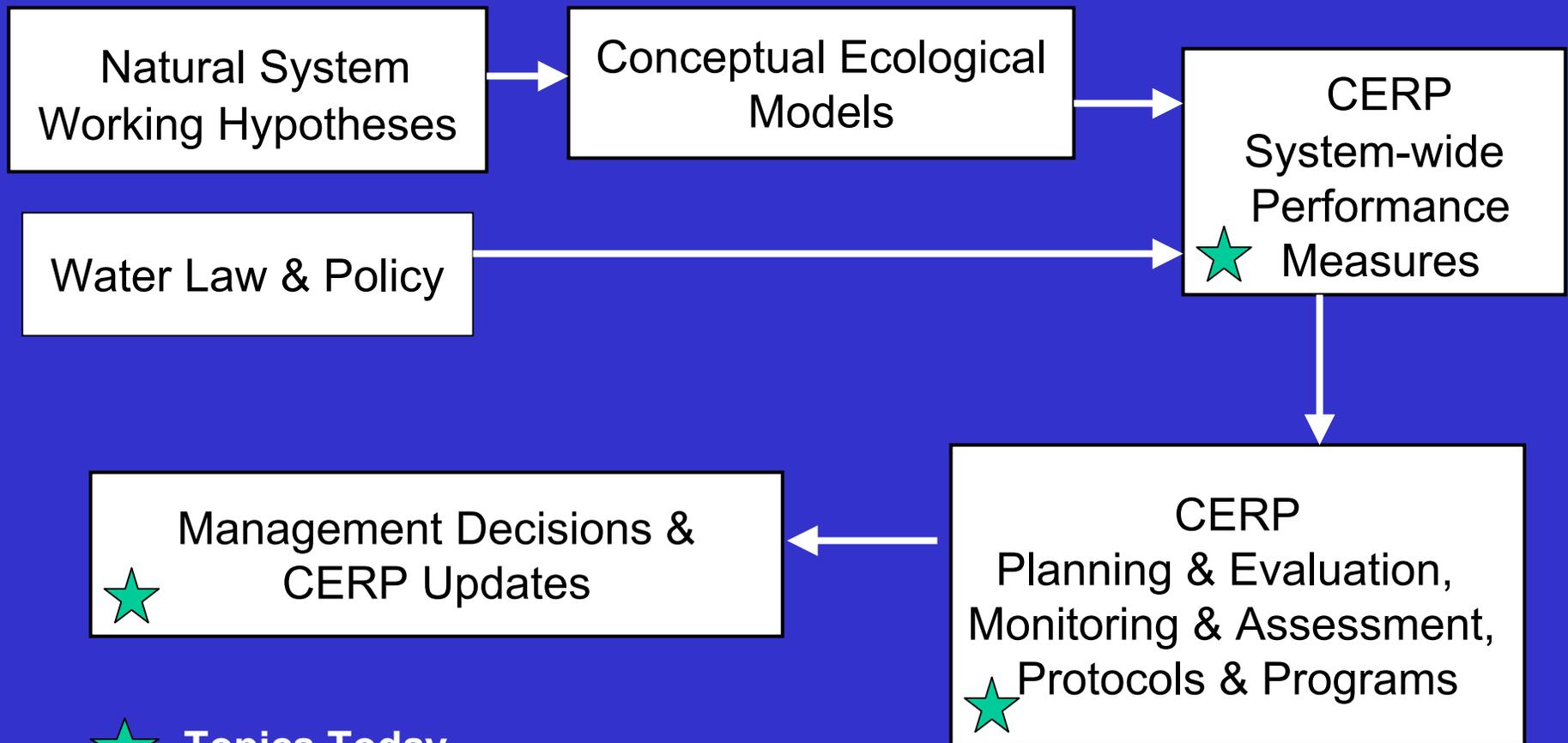
# Purpose of Performance Measure Documentation Report

Provide scientific and technical documentation for all of the current, accepted performance measures developed or refined by RECOVER to **evaluate** the system's response to CERP prior to implementation and to **assess** the system's response after implementation

# **CERP Performance Measure Documentation Report**

- **Developed by multi-agency RECOVER teams**
- **Contains all approved CERP system-wide performance measures**
- **Posted for internal RECOVER review – 29 May – 07 July**
- **40 evaluation & 73 assessment measures described individually on documentation sheets**
- **Scheduled for 60 day public and agency review, September/October 2003**
- **Planned annual reviews and revisions**

# Important Links in the Development of the CERP Adaptive Management Program



 **Topics Today**

# **CERP Adaptive Management Workshops**

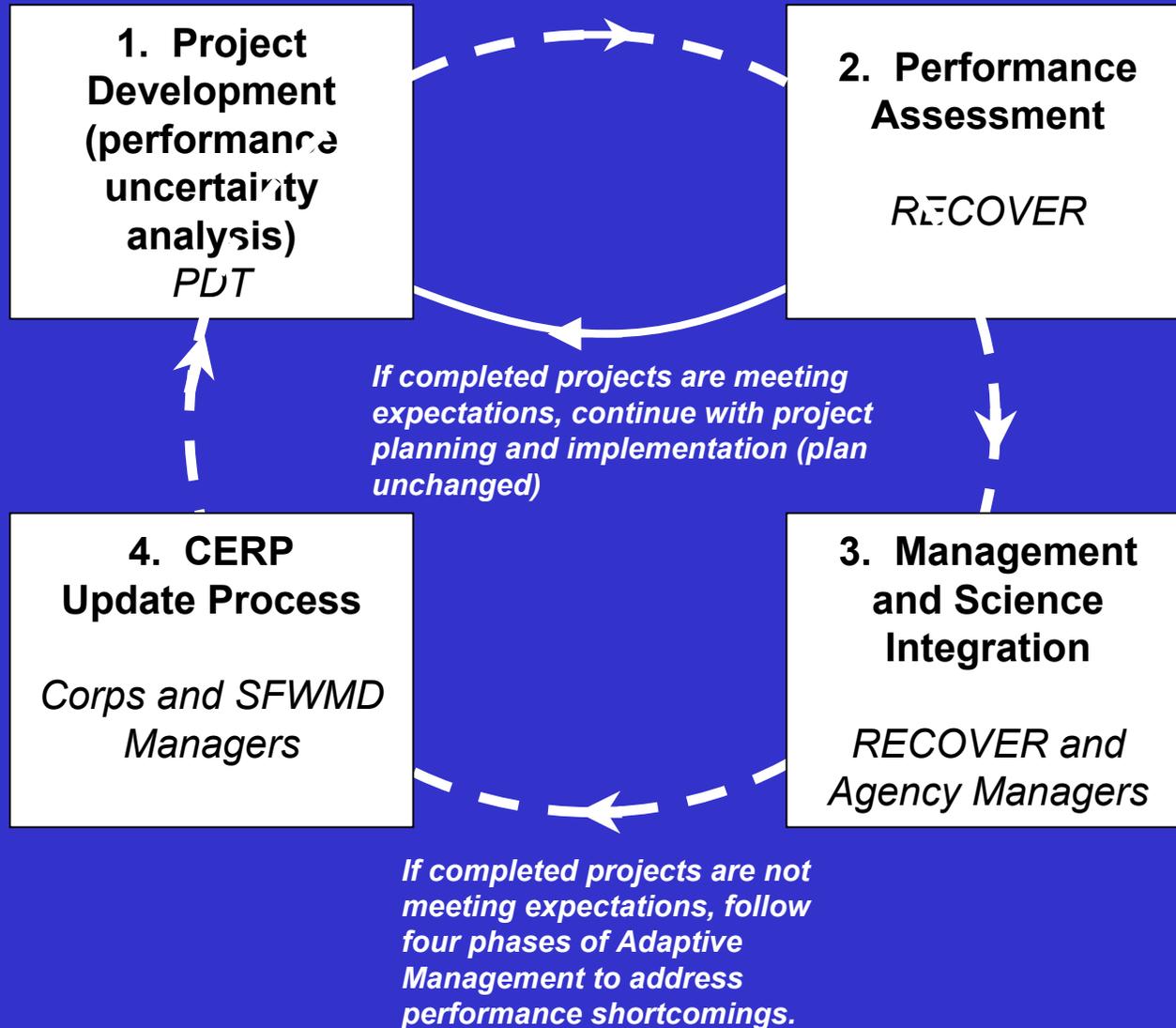
## **Major Goals of Workshops:**

- **Develop Adaptive Management Guiding Principles**
- **Develop a CERP Adaptive Management Framework (components & linkages)**
- **Develop a CERP Adaptive Management implementation strategy (how to implement)**
- **Create durable involvement, communication, relationship & decision-making channels between managers and scientists**

# **Goals of 2<sup>nd</sup> CERP Adaptive Management Workshop (Oct. 22-23, 2003)**

- **Engage CERP managers and RECOVER in the content & design of Adaptive Management framework & strategy**
- **Prepare for the development of the CERP Guidance Memorandum on Adaptive Assessment process**
- **Design Adaptive Management protocol for CERP project teams, and consider demonstration projects**

# The CERP Adaptive Management Framework: Overview





**Thank You**

