

ESPA Comprehensive Aquifer Management Plan

Adaptive Management

CDR Associates

March 27, 2008



Outline

- What is adaptive management?
- Examples from the field
- What conditions warrant an adaptive management approach?
- Steps in the process of adaptive management
- Principles for adaptive management
- Next steps for the ESPA



What is adaptive management?

- Testing assumptions and monitoring
- Adapting and adjusting in response to feedback
- Ongoing learning
- Taking action while confronting uncertainty



What is adaptive management NOT?

- Random trial-and-error
- Unscientific
- A “cover” for not being able to make decisions



Examples from the Field

- Used primarily for species recovery
- Plans range from large to small scale
- Examples:
 - Platte River Recovery Implementation Program (covered 4 species)
 - Comprehensive Everglades Restoration Plan (general ecosystem restoration)
 - Klamath Basin (mitigate impacts of drought)
 - Smaller, local ecosystems and species







When to use Adaptive Management

- Complex system
- Unpredictability and constant change
- “Competitors” changing and adapting
- Immediate action required
- No such thing as complete information
- Desire to learn and improve



The Adaptive Management Process

- Establish clear and common purpose
- Model of the system
- Management plan that maximizes results and learning
- Monitoring plan to test assumptions
- Implement plans
- Analyze data and communicate results
- Iterate: use results to adapt and learn



Principles for Adaptive Management

- Do it yourself
- Promote institutional curiosity and innovation
- Value failures
- Expect surprise and capitalize on crisis
- Encourage personal growth
- Create learning organizations and partnerships
- Practice the art of adaptive management



Next Steps for the ESPA

- Develop operational target/goal
- Determine initial set of actions
- Create monitoring plan
- Develop institutional arrangement for implementing actions and monitoring
- Develop institutional arrangement for making decisions on how to adjust plan to achieve targets



For more information ...

- **Everglades**

http://www.evergladesplan.org/pm/recover/recover_docs/am/rec_am_strategy_brochure.pdf

- **Klamath Basin**

<http://www.nrcs.usda.gov/feature/klamath/images/workplan.pdf>

