

A photograph of a green frog sitting on a rock in a pond with lily pads. The frog is the central focus, positioned on a dark, mossy rock. The surrounding water is filled with bright green lily pads and other aquatic plants, creating a lush, natural environment. The lighting is bright, highlighting the textures of the frog's skin and the surrounding vegetation.

*4th Stakeholder Forum on
Federal Wetlands Mitigation
September 20-22, 2004
Tampa, FL*

**Watershed
Context
Guidance**

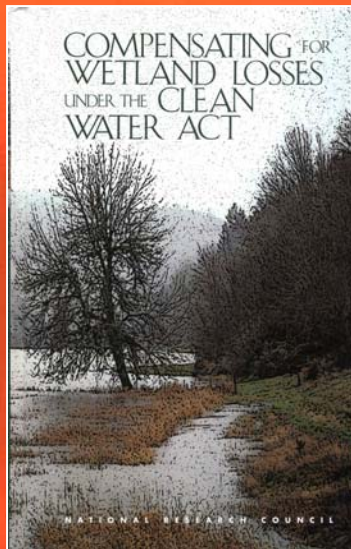
Photo by Dennis Demcheck

A Watershed-based Approach to Compensatory Mitigation

Many calls for a watershed approach

- **Federal Banking Guidance (1995)**
- *encourages watershed-based approach as overall bank goal*
- **NRC Mitigating Wetland Losses (2001)**
- *recommended watershed approach to improve permit decision-making*

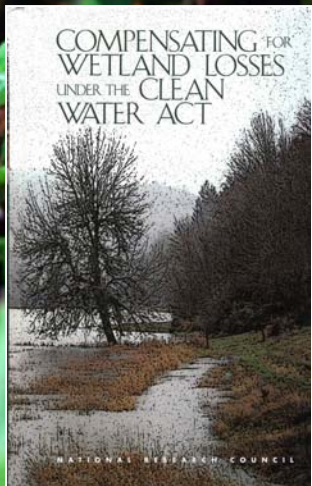
"... consider the resource needs of the watershed where impacts will occur, and also consider the resource needs of neighboring watersheds."



NRC Mitigating Wetland Losses (2001)

More on NRC Recommendation

- Site selection for wetland conservation and mitigation should be conducted on a **watershed scale** in order to maintain **wetland diversity, connectivity**, and appropriate proportions of **upland and wetland systems** needed to enhance the **long-term stability** of the wetland and riparian systems.



- Regional watershed evaluation should greatly enhance the protection of wetlands and/or the creation of wetland corridors that mimic natural distributions of wetlands in the landscape.

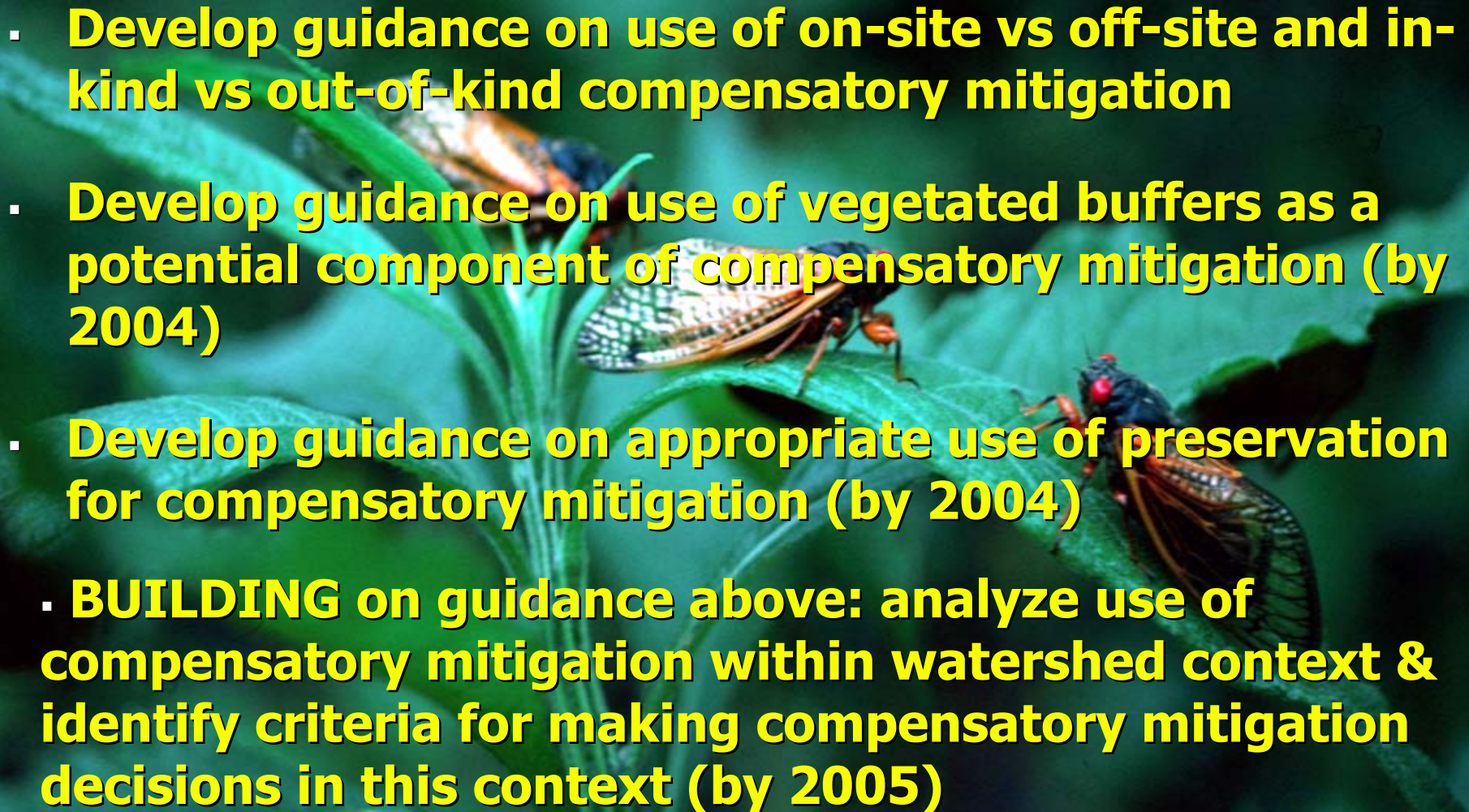
More NRC discussion

What is meant by watershed approach?

- **Watershed approach \neq watershed plan**
Concern about impracticality of implementation
- **Watershed approach =**
structured consideration of wetland types,
functions, & location
- **Watershed approach =**
 - **Collaboration within regional perspective**
 - **Integration with other programs**

Mitigation Action Plan

Action Item: Integrating Compensatory Mitigation into a Watershed Context

- **Develop guidance on use of on-site vs off-site and in-kind vs out-of-kind compensatory mitigation**
 - **Develop guidance on use of vegetated buffers as a potential component of compensatory mitigation (by 2004)**
 - **Develop guidance on appropriate use of preservation for compensatory mitigation (by 2004)**
 - **BUILDING on guidance above: analyze use of compensatory mitigation within watershed context & identify criteria for making compensatory mitigation decisions in this context (by 2005)**
- 
- A background image showing three cicadas on green leaves. One cicada is in the upper left, another in the center, and a third in the lower right. The leaves are vibrant green and the cicadas have dark bodies with translucent wings.

Mitigation Action Plan Item: Integrating Compensatory Mitigation into a Watershed Context

Analyze use of compensatory mitigation within watershed context & identify criteria for making compensatory mitigation decisions in this context

- *"...develop guidance to encourage placement of mitigation where it would have the greatest benefit and probability for long-term sustainability."*
- *"...guidance will help decision-makers utilize the watershed-based planning tools/resources already developed..."*

Photo by Jack Mills

National Symposium on Compensatory Mitigation and the Watershed Approach

May 19-21, 2004, Washington, DC

NATIONAL SYMPOSIUM
ON COMPENSATORY MITIGATION
AND THE WATERSHED APPROACH
Symposium Materials

Washington, DC

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USDA Natural Resources Conservation Service



**Purpose:
Provide MAP
Workgroup with
direction and input**

<http://www.eli.org/research/watershedsymposium.htm>

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Environmental Law Reporter

Wetlands



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National Wetlands Program

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National Symposium on Compensatory Mitigation and the Watershed Approach

Internet

<http://www.eli.org/research/watershedsymposium.htm>

Watershed Approach

**What do we mean by
watershed approach
and what can we learn from
agency perspectives?**

National Symposium

Desired Outcomes Included

- **ID/clarify what science says about making compensatory decisions in a watershed context**



National Symposium

Preliminary Findings

Science & compensatory decisions in a watershed context (ELI literature review & Symposium)

- **Define critical issues**
- **Determine appropriate scale**

Watersheds & basins –

can Ec Scale & scope adjusted to functions

National Symposium

Preliminary Findings

Science & contemporary decisions in

(ELI literature)

- **Defin**

- **Deter**

- **Under**

- **Conduct la**

- **Site prioritization**

- **How does landscape work?**

- **What happened in the past?**

- **Hydrologic equivalency**

- **Relative ecological significance**

- **Assessment of individual wetland importance**

to overall hydrologic functions by using

indicators such as position in the landscape

geomorphology, & other

ecological concepts and principles

National Symposium

Desired Outcomes Included

- ID/clarify what science says about making compensatory decisions in a watershed context
- **Examine existing watershed-based tools & resources and case examples of use in a regulatory context**

National Symposium

Preliminary Findings

Watershed-based tools & resources and case examples of use in a regulatory context (Symposium)

- **Case Studies of Tools and Applications**
 - Southern California SAMPs
 - Blackberry Creek, IL ADID
 - Others

National Symposium

Preliminary Findings

Watershed-based tools & resources and case examples of use in a regulatory context (Symposium)

- **Case Studies of Tools and Applications**

- So. California SAMPS

GIS, Ecologic integrity of riparian ecosystems, restoration potentials

- Blackberry Creek, IL ADID

- Others

GIS, Hydrologic simulation, Alternative Futures Analysis,

National Symposium

Desired Outcomes Included

- ID/clarify what science says about making compensatory decisions in a watershed context

- Examine case studies

- Should develop criteria categories
- Categories should be flexible
- Criteria depend on scale

- **ID most important criteria used by existing watershed-based planning tools & resources**

Social and logistical factors:

- Site constraints
- Community constraints

Ecological factors:

- site condition
- landscape condition

National Symposium

Desired Outcomes Included

- ID/clarify what science says about making compensatory decisions in a watershed context
- Examine existing watershed-based tools & resources and case examples of use in a regulatory context
- ID most important criteria used by existing watershed-based planning tools & resources to analyze priorities and restoration options – existing
- **Clarify “Logical Steps” of watershed-based approach to compensatory mitigation**

Five Logical Steps

- **Landscape assessment**
- **Historic assessment**
- **Assessment of remaining resources**
- **Analysis of priorities and restoration options**
- **Determination of where, when and how much aquatic resources to be restored**

Modified Common Watershed Approach

Identification of issues, goals, objectives

Inventory & Assessment

Historic \ Current \ Expected future

Determination of reference and/or desired future conditions

Analysis of opportunities and constraints

Determination of priorities and recommendations

Development of ongoing implementation plan

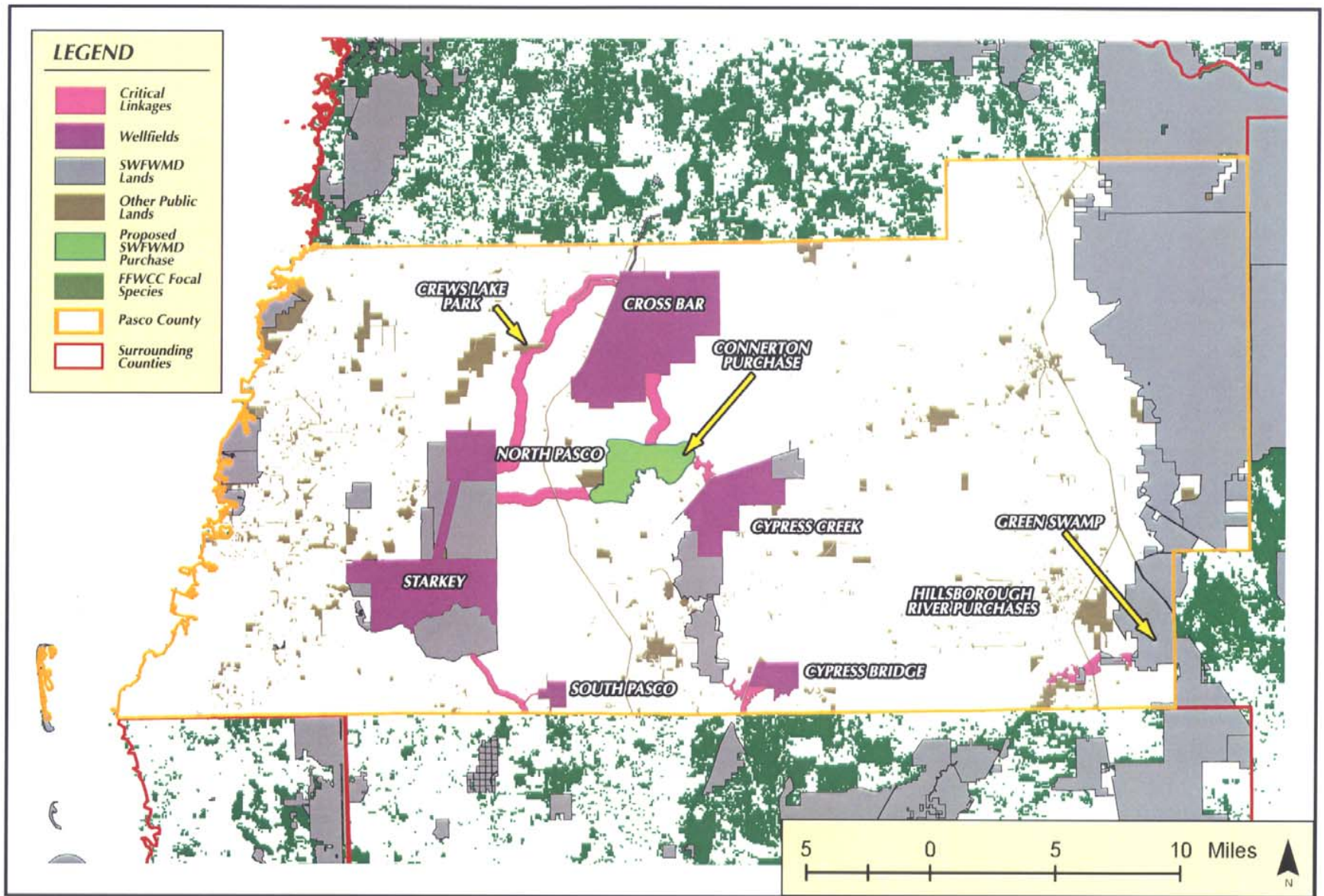
Monitoring and assessment \ Feedback and plan refinement \ Financing and data management

Collaboration w/ stakeholders

Integration w/ other programs
-water quality
-T&E species

At the End of the Day...

- **Primary Objectives:**
 - Provide “logic” for regulators
 - Stimulate mitigation providers to use existing watershed information, assessment tools
- **Secondary Objectives:**
 - Encourage watershed planners to include analysis that supports mitigation site selection



Source: Glatting Jackson and Pasco County

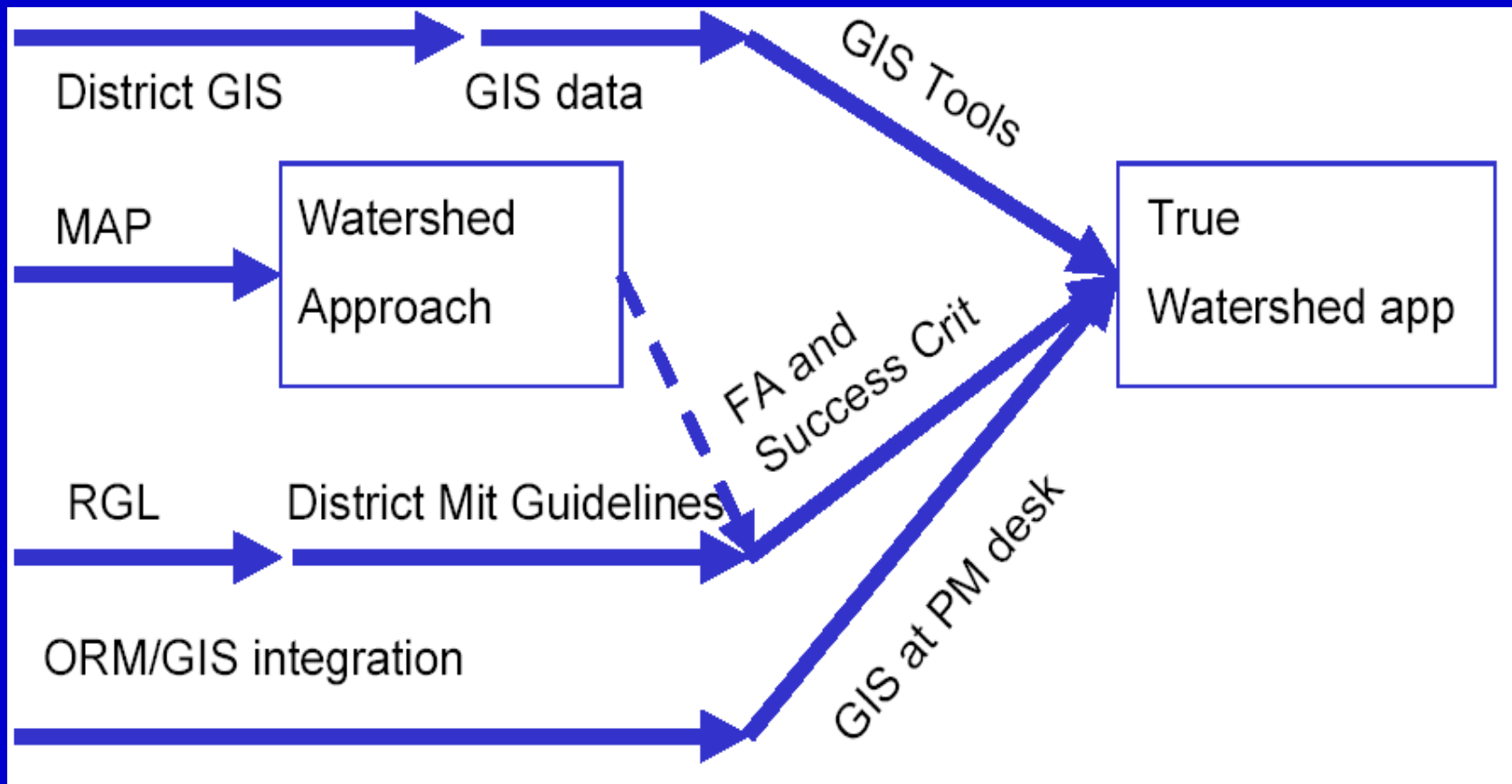


GLATTING
JACKSON
KERCHER
ANGLIN
LOPEZ
RINEHART

Pasco County, Florida

Figure 7
Critical Linkages (Corridors) of Wildlife Habitat
Between Existing Public Lands

Mark's BIG PICTURE



At the End of the Day...

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 - Provide “logic” for regulators
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QUESTIONS?



Photo by Jay Osenkowski