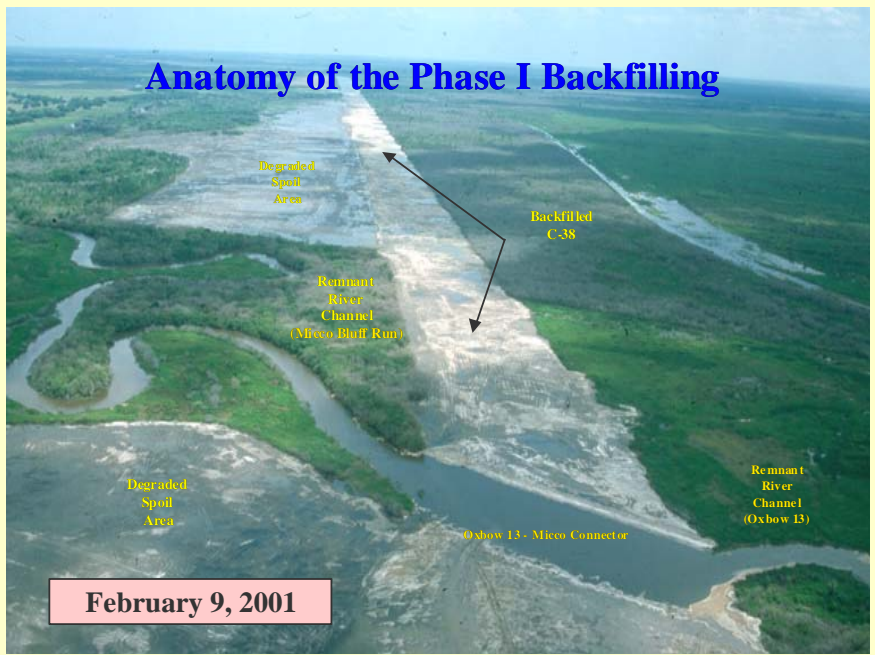


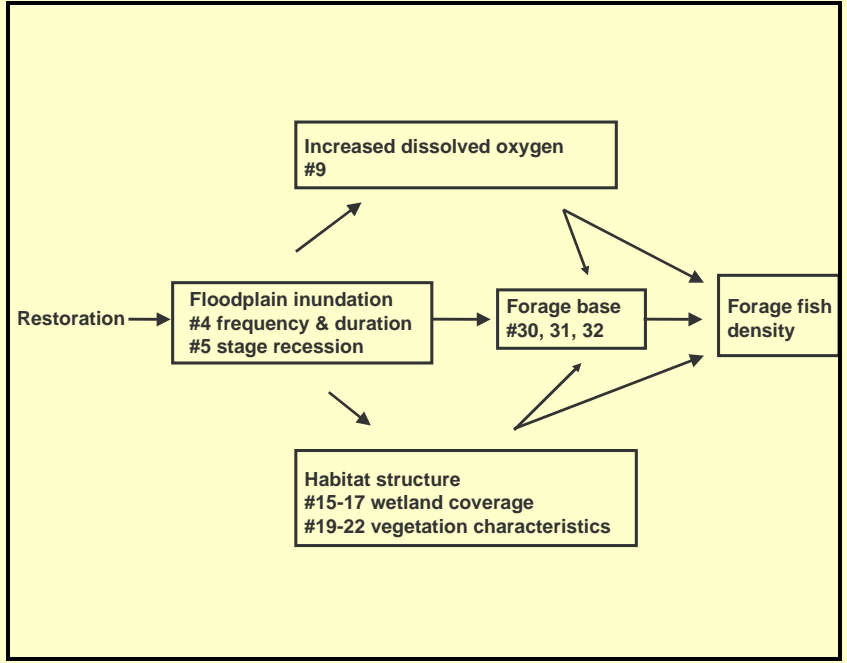
# Restoring the Kissimmee River

## Developing Restoration Expectations (Metrics)



?

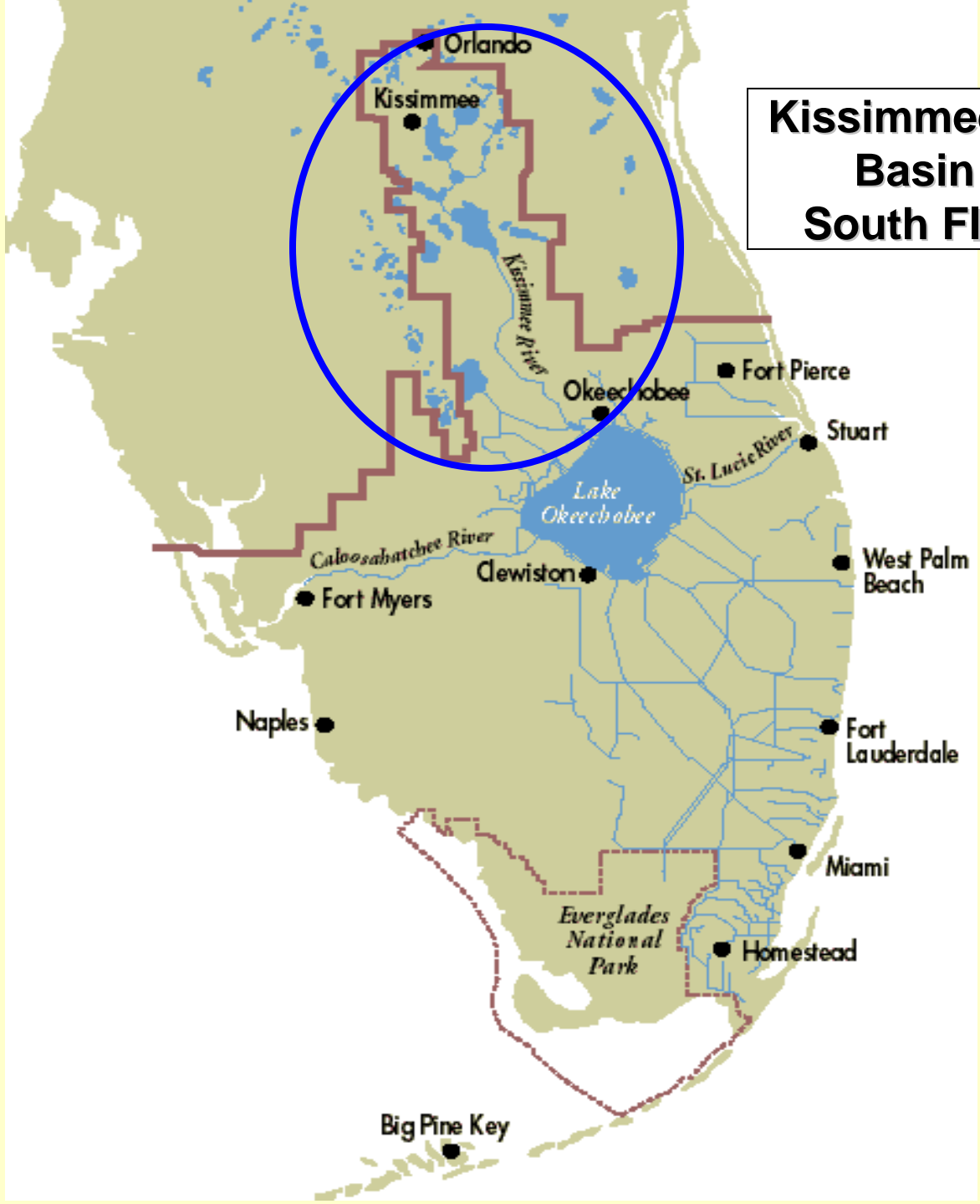
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Restoration of the Kissimmee River

Applying restoration expectations

**Kissimmee River  
Basin in  
South Florida**



# Pre-channelized Kissimmee River





**C-38 Canal and Remnant Kissimmee River  
Post-channelization circa 1980**

# Kissimmee River Restoration Project

## Monitoring and Metrics

- **Development (1992-1994) with external advisor input**
- **Dedicated Issue of Restoration Ecology – 1995**
- **Before-After Control-Impact (BACI) Design**
- **Multiple years of before implementation monitoring**
- **Phase I in 2001 – 14.2 miles and 7176 acres**



# Simple Conceptual Model

**Restoration** → **Abiotic** → **Biotic**

**Flow**

**Geomorphic**

**Substratum**

**Algae**

**Plants**

**Invertebrates**

**Hydrologic**

**Dissolved  
Oxygen**

**Fish**

**Amphibians**

**Birds**

**Hydroperiod**

# 60 Restoration Expectations (Metrics)

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- Hydrology - 6
  - Geomorphology - 2
  - Water Quality - 4
  - Vegetation - 10
  - Invertebrates - 11
  - Algae - 2
  - Amphibians - 2
  - Fish - 7
  - Birds - 11
  - Listed species - 5
- 

<http://my.sfwmd.gov/portal/page/portal/sfwmdmain/home%20page>

# Anatomy of the Phase I Backfilling



Degraded  
Spoil  
Area

Backfilled  
C-38

Remnant  
River  
Channel  
(Micco Bluff Run)

Degraded  
Spoil  
Area

Remnant  
River  
Channel  
(Oxbow 13)

Oxbow 13 - Micco Connector

February 9, 2001

# July 2001 Advisor Tour

