

Bird Drive Basin Update

Background and Current Status

December 14, 2011

*Ernie Barnett, Director
Everglades Policy and Coordination*

Today's Discussion

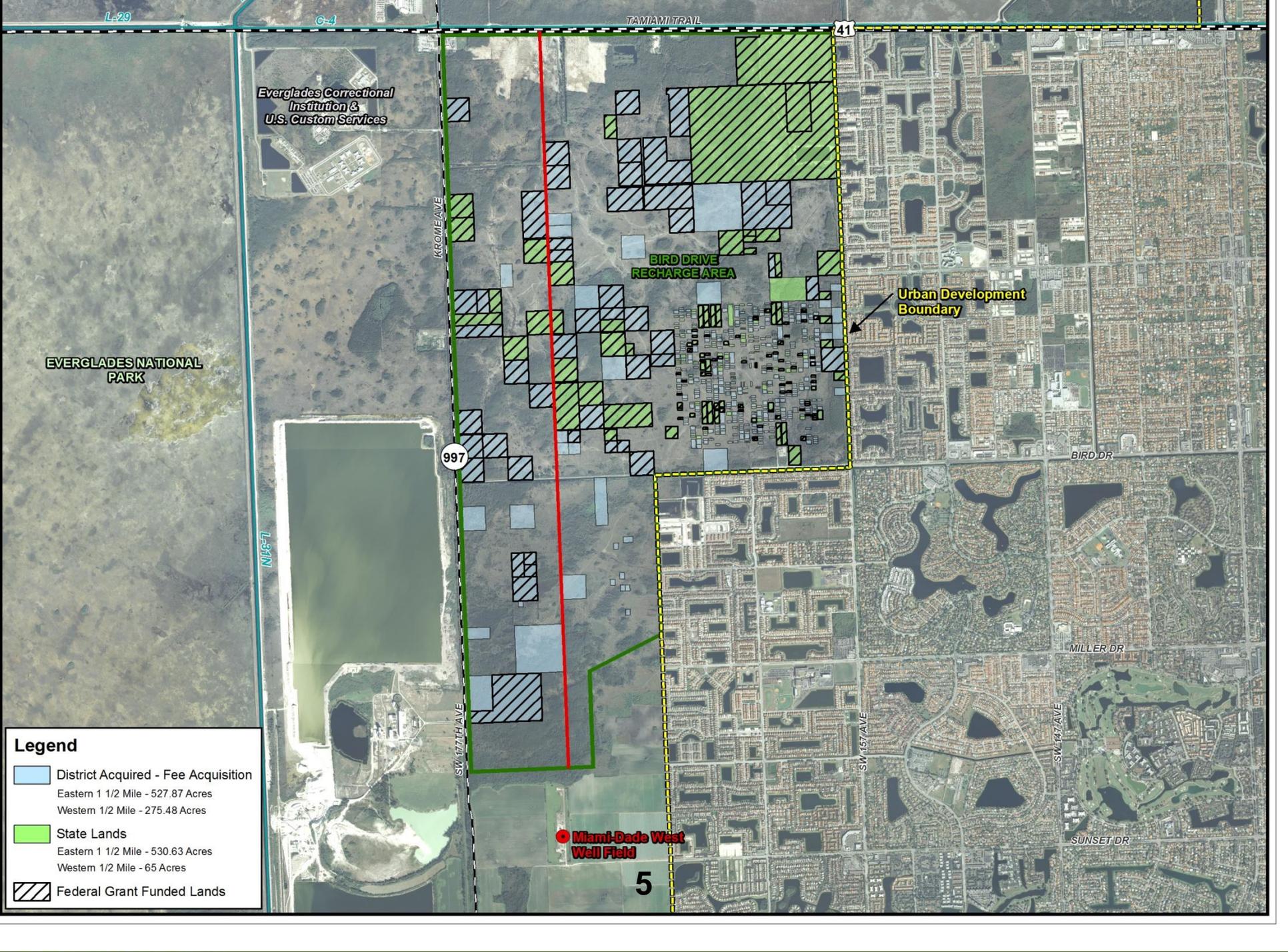
- Ownership Interests in Bird Drive Basin
- Bird Drive Component of Comprehensive Everglades Restoration Plan (CERP)
 - Project alternative
- Public Input
 - December 8th Stakeholder Workshop
- Recommendations for Next Steps



Bird Drive Ownership Interests

Ownership Interests and Issues

- Checkerboard of ownership
 - District/State-owned lands
 - Lands acquired with federal funds
 - Tribal/private interests
 - Inverse condemnation
- Consolidation/Surplus Opportunities:
 - Consolidation of interests for viable and implementable project
 - Analyzed restoration project concept utilizing western half-mile
 - FIU Proposal
 - Potential for transferring federal interests



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EVERGLADES NATIONAL PARK

BIRD DRIVE RECHARGE AREA

Urban Development Boundary

Miami-Dade West Well Field

5

Legend

- District Acquired - Fee Acquisition
 Eastern 1 1/2 Mile - 527.87 Acres
 Western 1/2 Mile - 275.48 Acres
- State Lands
 Eastern 1 1/2 Mile - 530.63 Acres
 Western 1/2 Mile - 65 Acres
- Federal Grant Funded Lands

L-29

C-2

TAMIAMI TRAIL

41

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EVERGLADES NATIONAL PARK

BIRD DRIVE RECHARGE AREA

Urban Development Boundary

KROME AVE

997

BIRD DR

L-31N

SW 177TH AVE

SW 157 AVE

SW 147 AVE

MILLER DR

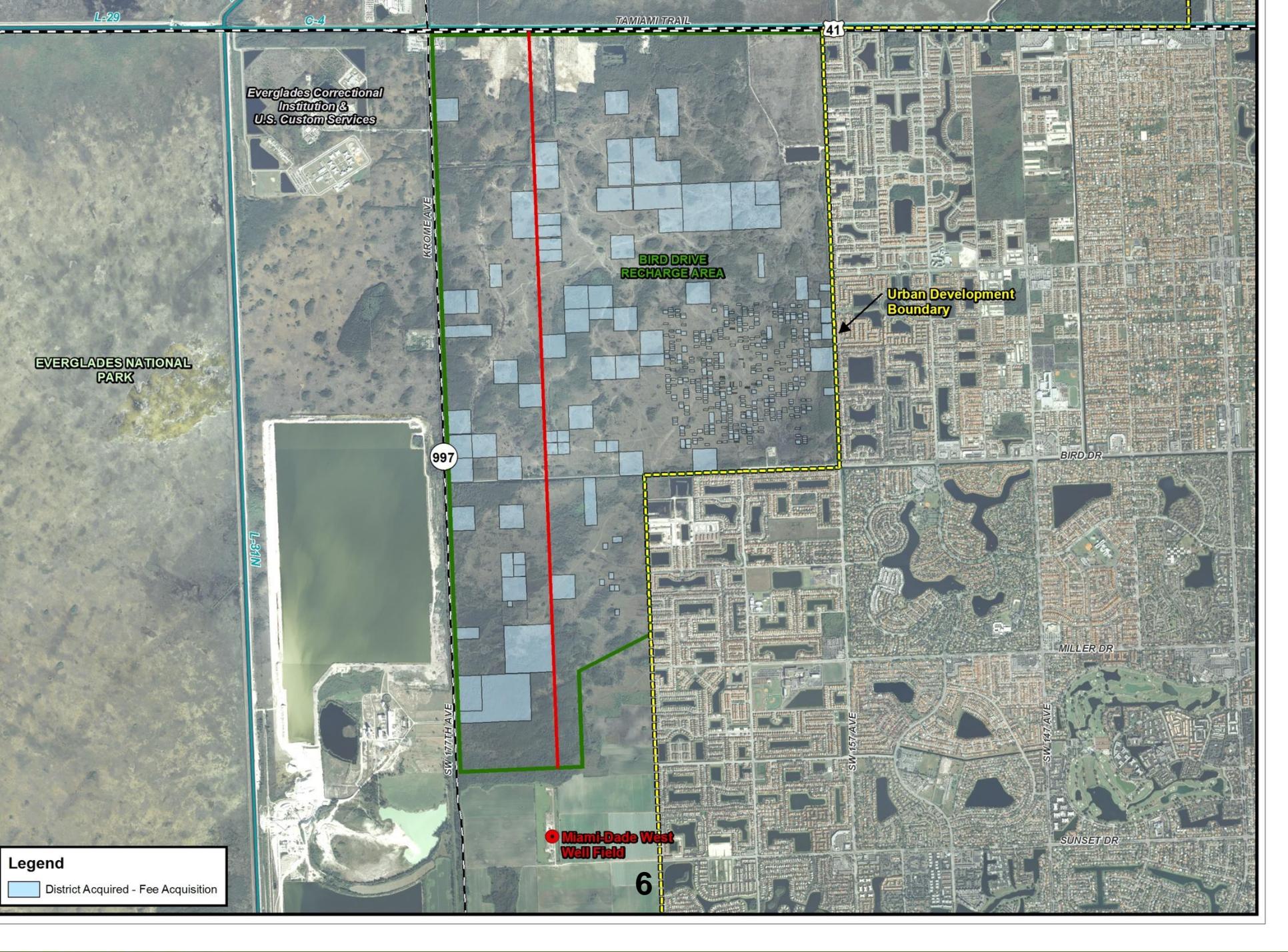
SUNSET DR

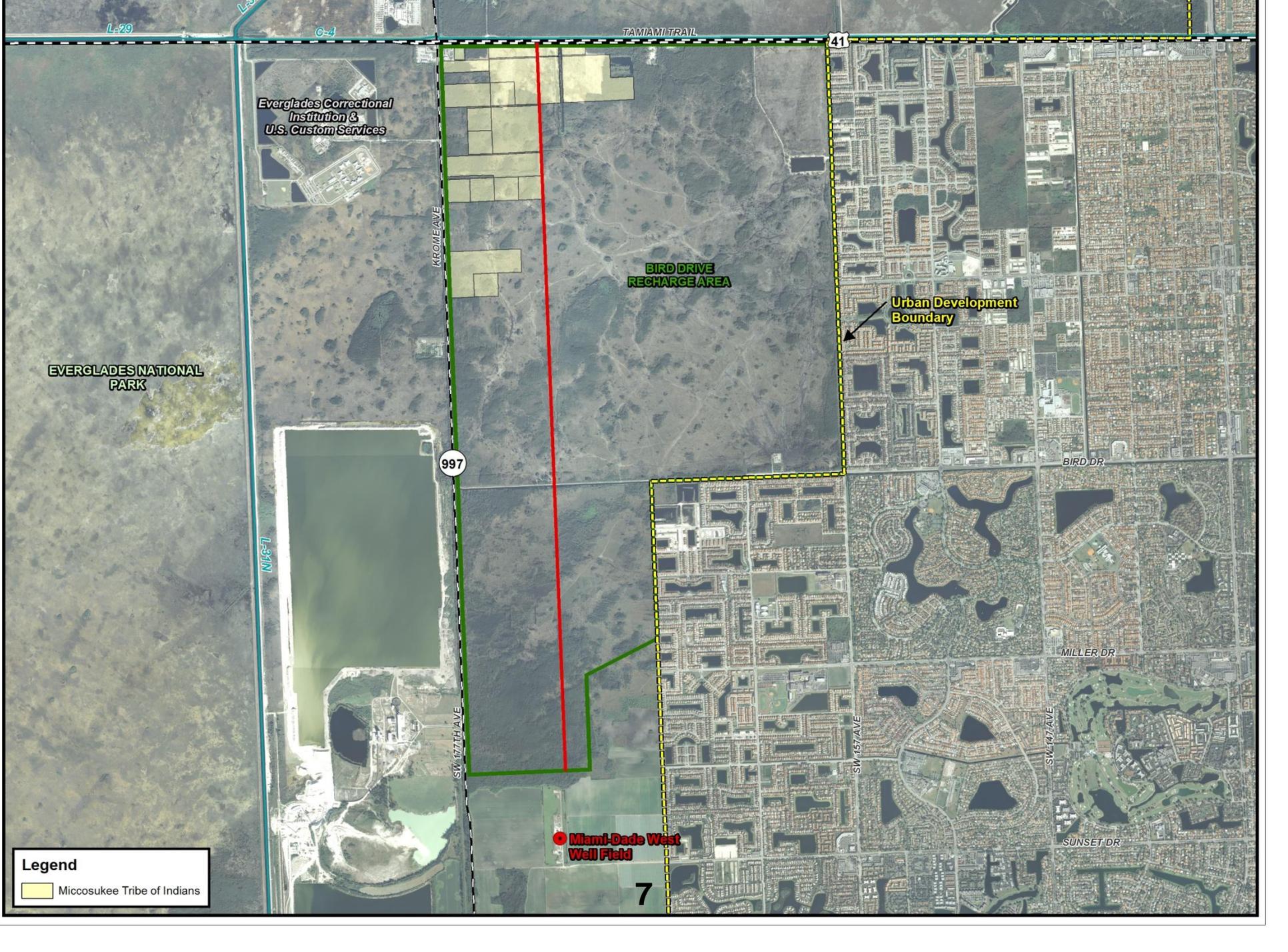
Miami-Dade West Well Field

6

Legend

 District Acquired - Fee Acquisition





L-29

G-4

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KROME AVE

BIRD DRIVE RECHARGE AREA

Urban Development Boundary

EVERGLADES NATIONAL PARK

997

BIRD DR

L-31

MILLER DR

SW 177TH AVE

SW 157 AVE

SW 147 AVE

Miami-Dade West Well Field

SUNSET DR

Legend

 Micosukee Tribe of Indians

7

L-29

C-2

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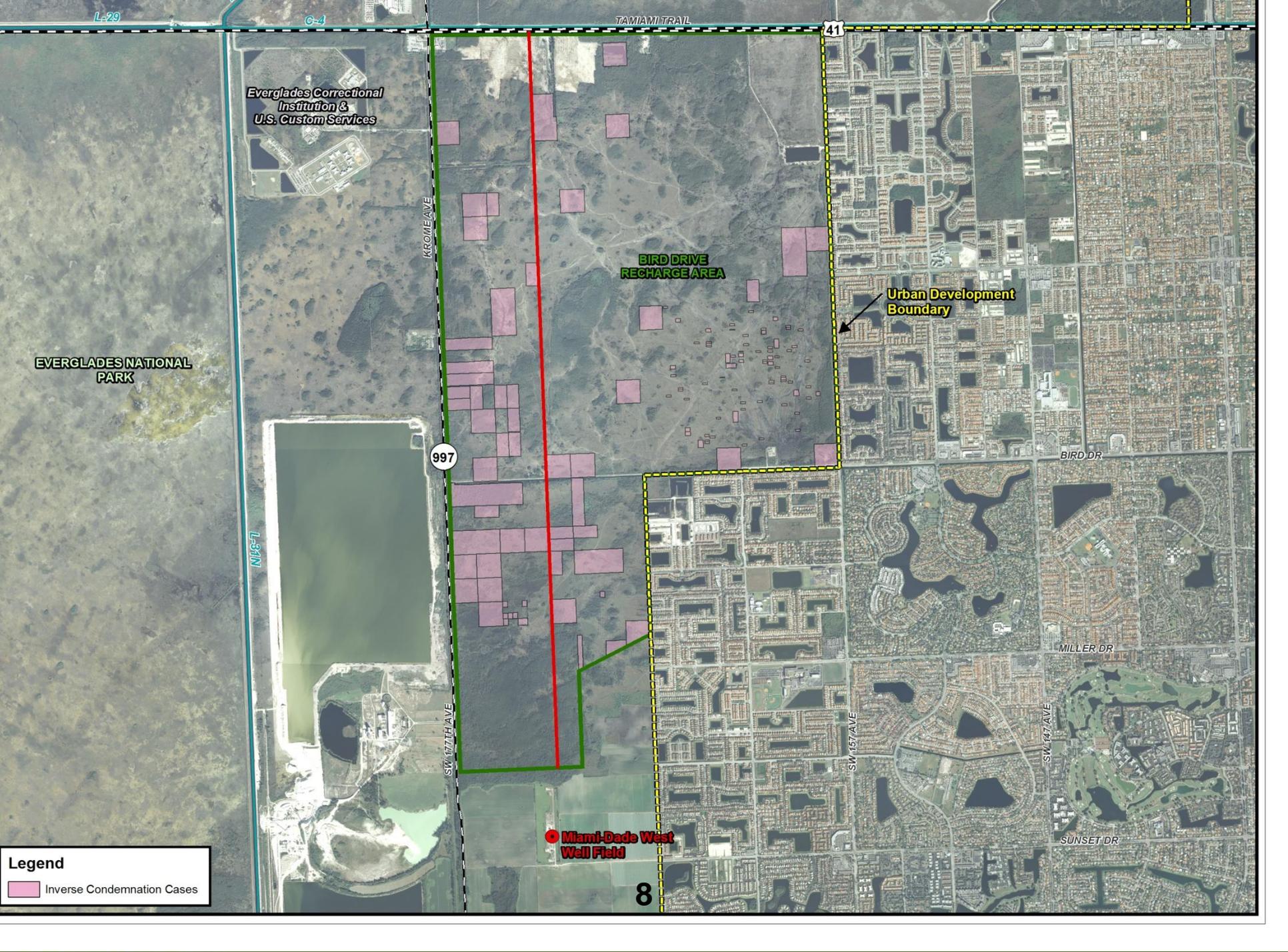
SUNSET DR

● Miami-Dade West
Well Field

8

Legend

- Inverse Condemnation Cases



L-29

C-2

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BIRD DR

MILLER DR

SUNSET DR

● Miami-Dade West
Well Field

9

Legend

-  Reservations





Bird Drive Component of Comprehensive Everglades Restoration Plan



Pennsuco

**C-4
Detention**

Tamiami Trail

**Bird Drive
Recharge
Area**

**Everglades
National Park**

**M-D West
Well Field**

Yellow Book Purpose for Bird Drive

- Reduce seepage from Everglades National Park
- Recharge groundwater east of Krome Avenue
- C-4 peak flood attenuation
- Water supply deliveries to South Dade Conveyance System (SDCS)
- Increase spatial extent of wetlands

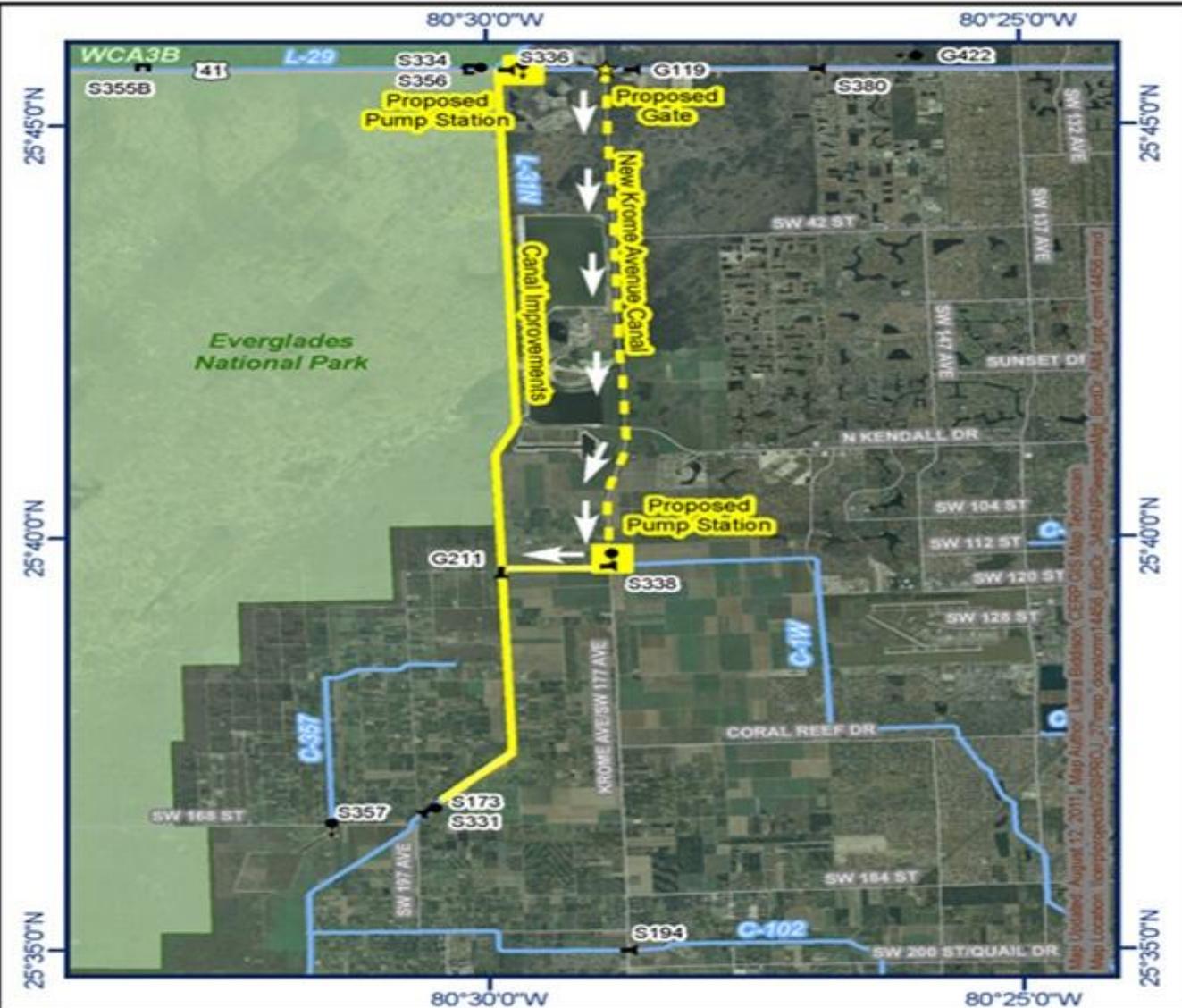
Plan Formulation

- Yellow Book - Project Concept Deficiencies
 - Highly transmissive project site
 - Unable to hold water on project site for delivery to SDCS
 - Likely to cause flooding impacts of urban areas east of project site
 - Design and operation “not feasible”
- Project Delivery Team prepared white paper (June 2008)
 - Concept as envisioned in Yellow book is “not implementable”
- Acquisition of the entire Bird Drive Recharge Area screened out due to high cost/low benefit ratio

Hydraulics Analysis

- Bird Drive Deliveries Assessment (Jun - Oct 2011)
 - Evaluated potential conveyance concepts
 - Basin inflow/outflow capacity ~1,800 cfs
 - Potential water delivery options
 - Everglades National Park
 - South Dade Conveyance System
 - Biscayne Bay Coastal Wetlands

Proposed Conveyance Concept






Proposed Concept





Legend

Concept Features

- Proposed Gate
- Proposed Pump Station

Canal Improvements

- Canal Improvements
- New Krome Avenue Canal

SFWMD Structures

- Culvert
- Pump
- Spillway

Existing Canals

- Existing Canals

Hydraulics Analysis - Conclusions

- **Proposed Concept** - combination of elements capable of accomplishing original Yellow Book Purpose
- **Reduce seepage from ENP** - By using a pumped system along the L-31N northern reach, a higher stage can be maintained adjacent to ENP
- **Recharge groundwater east of Krome Avenue**— A pump/gate managed water level control along Krome Avenue allows seasonally controlled levels
- **C-4 Peak Flood Attenuation** – System can operate in conjunction with the C-4 Emergency Detention Area to help attenuate flood levels
- **Water supply to SDCS** – Multiple pump system allows for substantial flexibility to deliver water south



Public Input and Involvement

Bird Drive Basin Public Involvement

- Four public meetings held on surplus lands recommendations
- At Governing Board direction, three-hour workshop held on December 8, Ft. Lauderdale Field Station
- ~30 attendees, including:
 - Miami-Dade County
 - Florida Departments of Environmental Protection, Transportation
 - Department of Interior, U.S. Fish and Wildlife Service, Everglades National Park, South Florida Ecosystem Restoration Task Force
 - Miccosukee Tribe
 - Environmental Interests: Audubon of Florida, Tropical Audubon, Sierra Club, National Parks Conservation Association, NRDC
 - Florida International University
 - Florida Power and Light
 - Adjacent Homeowners

Bird Drive Basin Public Input

Considerations Raised by Stakeholders:

- Project Concept
 - Ability of new proposal to achieve original CERP intent
 - Benefit of canal expansions
 - Synchronization with other CERP projects
 - Adaptive management considerations
 - Need greater understanding of science, engineering
 - Benefit of modified project footprint to FPL, FDOT projects
- Ecological Value
 - Value of existing lands in public ownership (including county lands) for recharge, wildlife habitat, water storage and for increasing spatial extent of wetlands
 - Value of short hydroperiod wetlands
 - Avian Habitat

Bird Drive Basin Public Input

Considerations Raised by Stakeholders (continued):

- Land-Holdings & Surplus Decision
 - Potential for urban development with land surplus
 - Impact of modifying buffer to Everglades National Park
 - Level of service for flood control associated with expanded development
 - Transparent process for surplus of lands
 - Role of DEP in approving surplus lands
 - Transfer of federal land interests to other CERP project components
 - Affect on other projects (road expansion, transmission line siting, FIU) and timelines for those proposals
 - Potential FIU land exchange
 - Benefits to FIU/Miami-Dade County
 - Consideration for adjacent homeowners

Recommendation for Next Steps

- Inclusive stakeholder process
- Analyze project footprint and reformulate to meet project objectives
 - Foster understanding of science, technical underpinnings
- Evaluate land surplus/consolidation opportunities based on reformulation
- Proceed with evaluating feasibility of FIU objectives



Discussion