

Bird Drive Component of Comprehensive Plan

**Background and Current Status
December 8, 2011**

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Everglades Policy and Coordination***



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

Yellow Book Concept for Bird Drive

- Bird Drive Recharge Component (U)
- Above ground impounded recharge area
 - 2,877 acres
 - 11,500 ac-ft of storage
- Pumps and Water Control Structures
 - Deliveries to SDCS
- Wastewater Treatment Plant Flows
 - 155 cfs to recharge well field

Plan Formulation

- Yellow Book - Project Concept Deficiencies
 - Detailed modeling and physical analysis
 - 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”

Plan Formulation

- Project Delivery Team prepared white paper (June 2008)
 - Evaluated conditions affecting project benefits and cost
 - Design and operation are not feasible
 - Concept as envisioned in Yellow book is “not implementable”
- Bird Drive Recharge Area screened out due to high cost/low benefit ratio

L-29

S-20

64

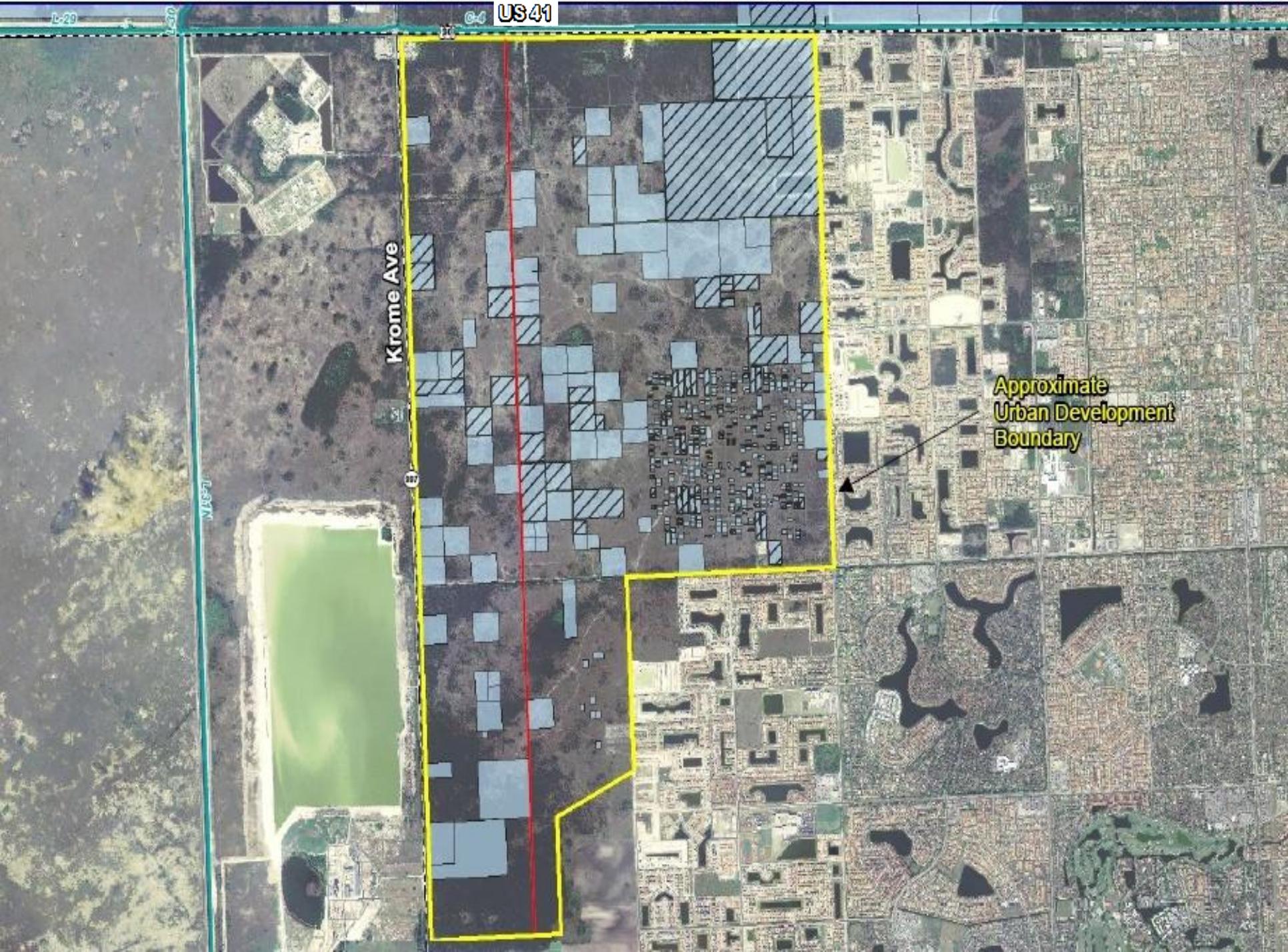
US41

M-87

Krome Ave

887

Approximate
Urban Development
Boundary



Typical L-31 Width



L-31N Right of Way

Canal Reservations Adjacent to Krome Avenue

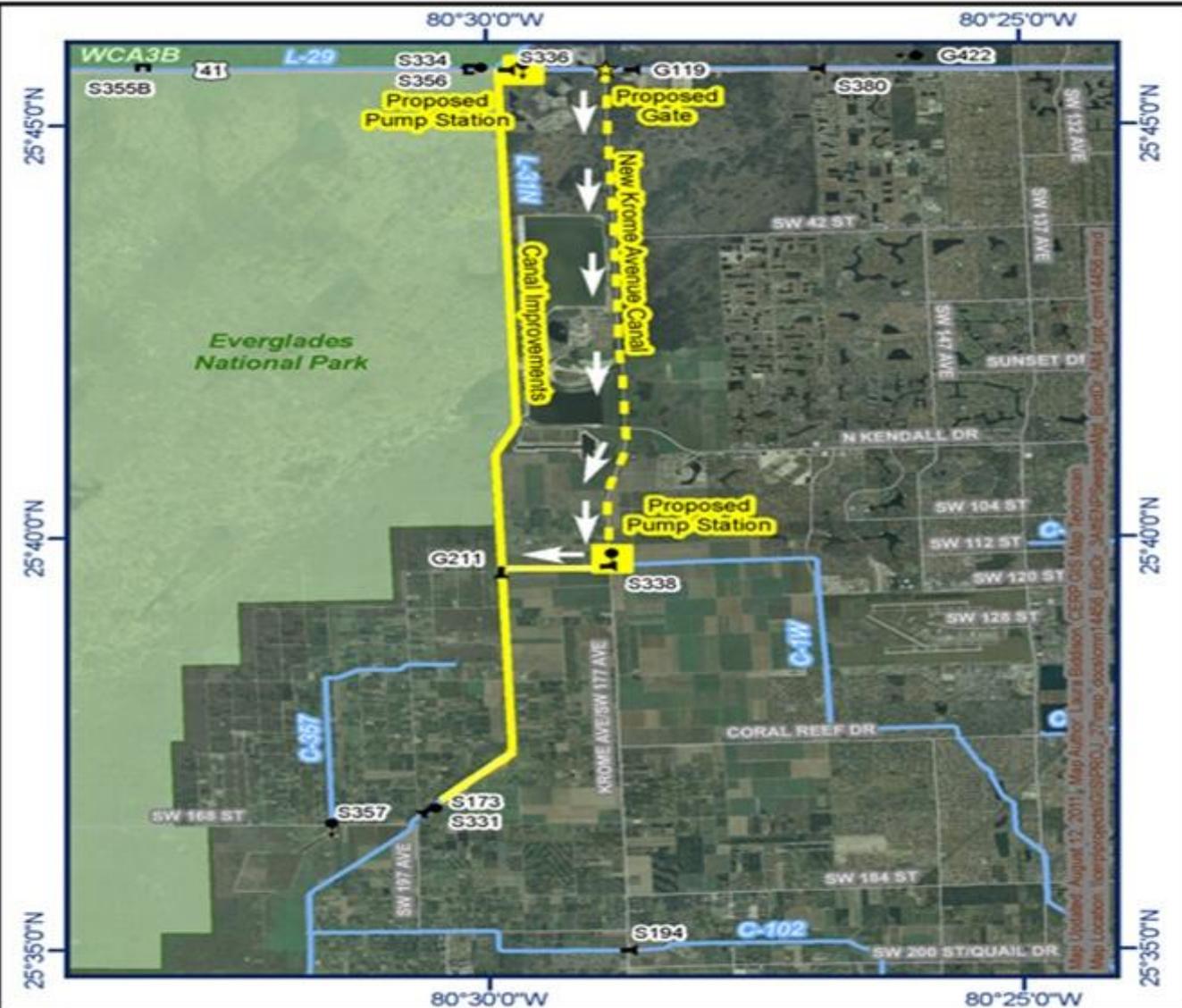
- Acquired Lands - Fee Title
- Acquired Lands - Fee Title- External Partner
- Properties in Litigation
- Tribal Ownership
- Reservations



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

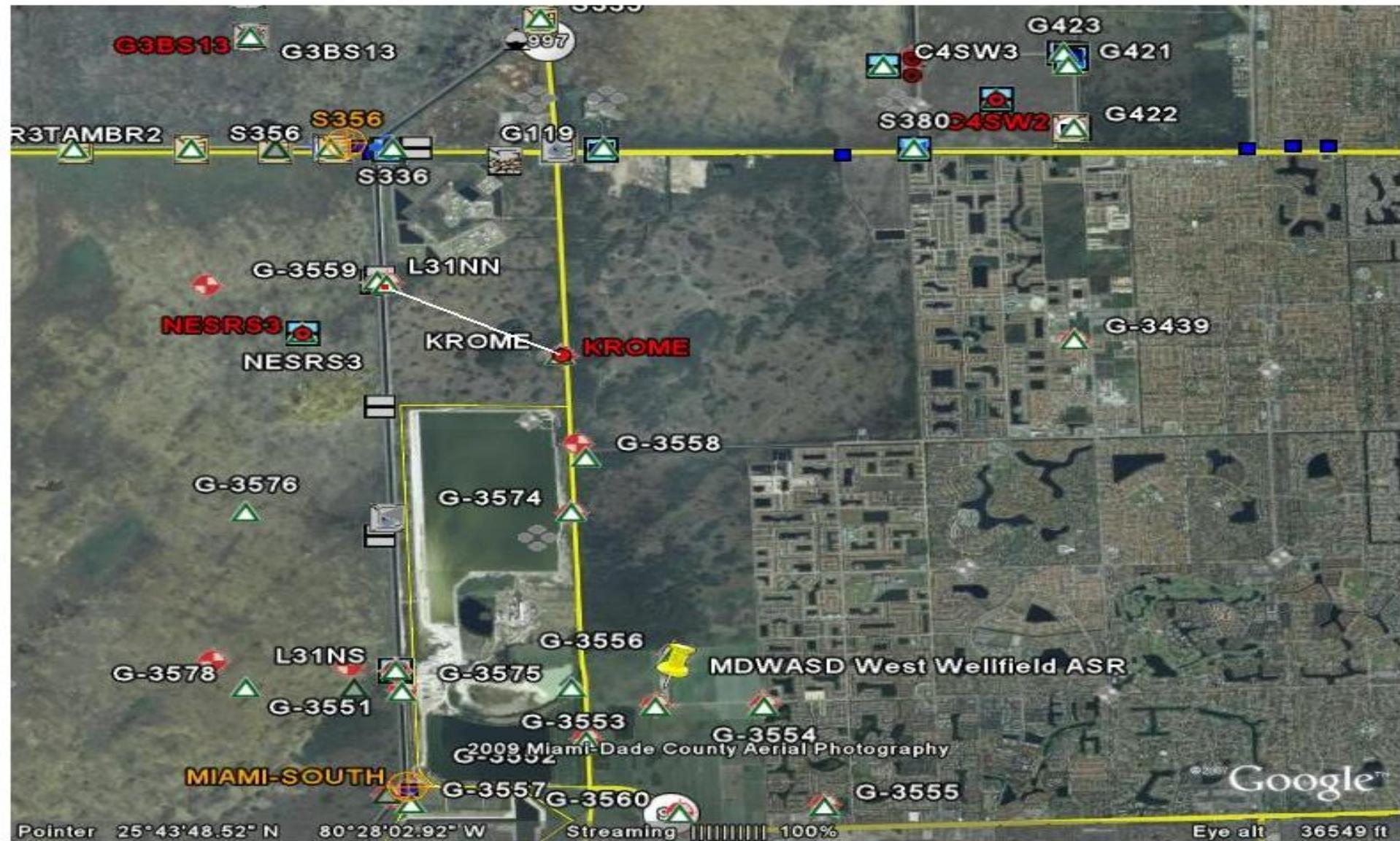
SFWMD Structures

- Culvert
- Pump
- Spillway

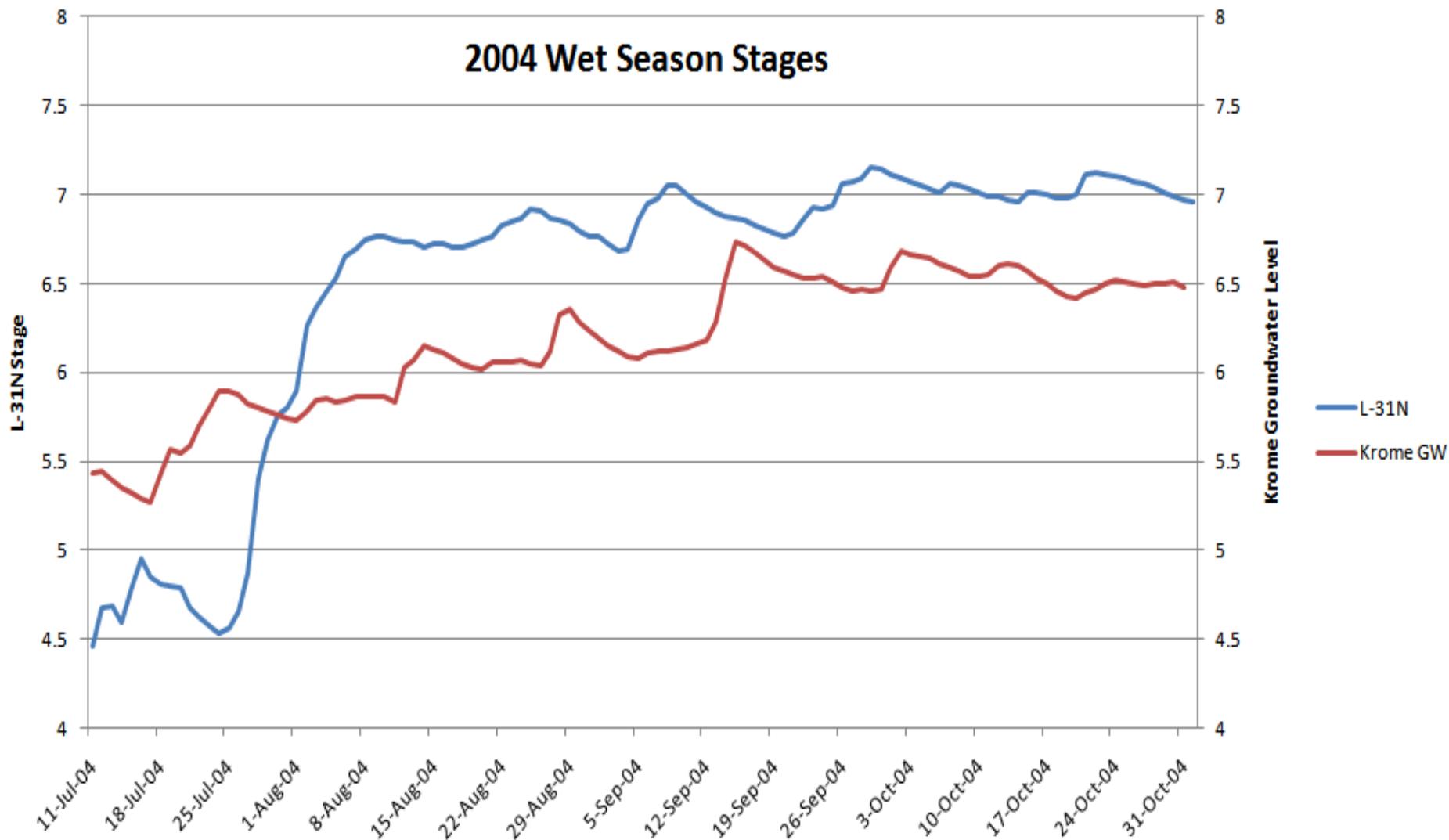
Existing Canals

- Existing Canals

Seepage Effects Existing Condition



Seepage Effects Existing Condition

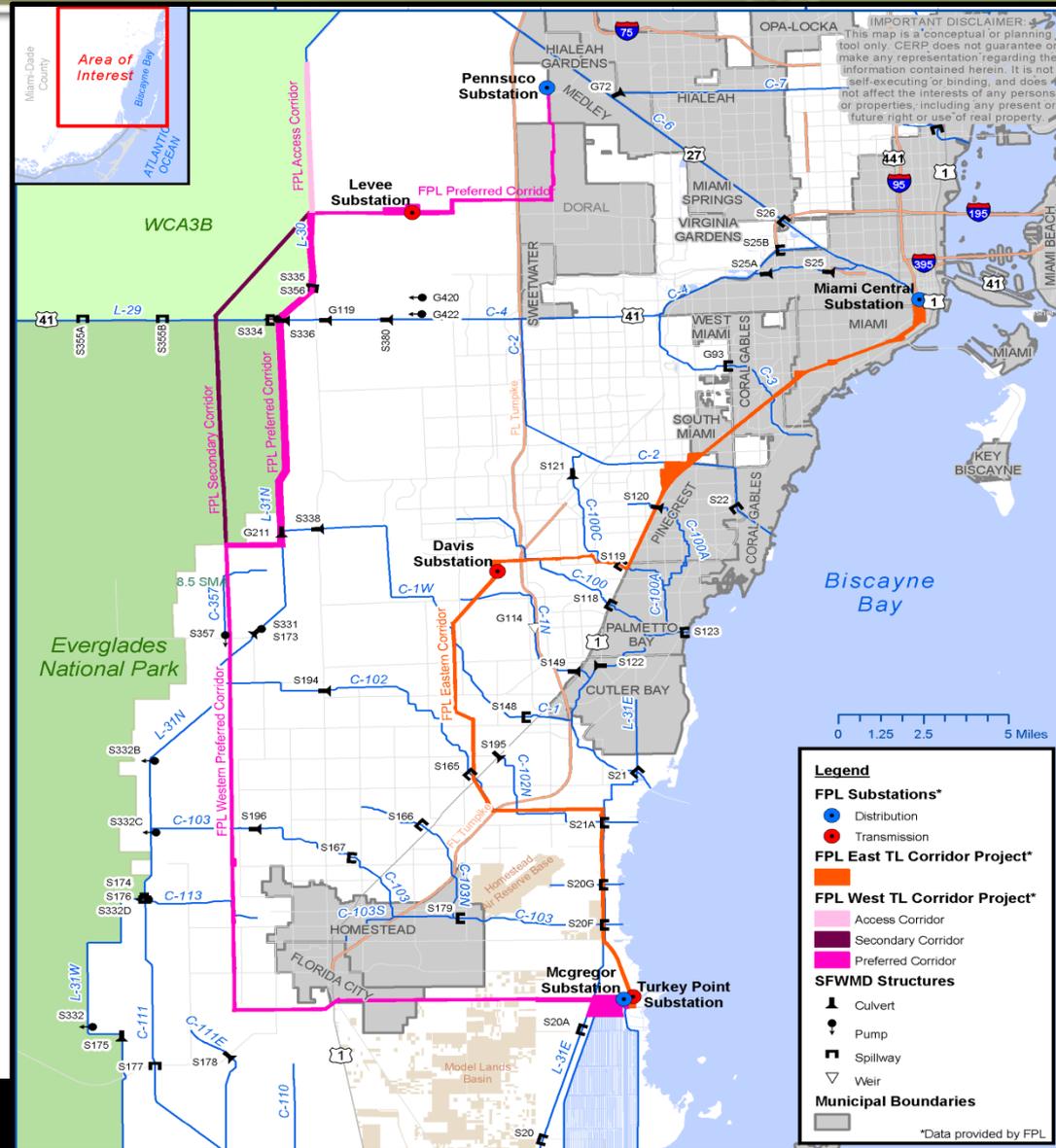


Proposed Concept Implementation Sequence

- Proposed Concept could be constructed in a programmed sequence with monitoring to evaluate performance and potential impacts
- Construct the new Krome Avenue Canal, associated Pump Station near S-338, relocate S-338 to east side of Krome Avenue and improve C-1W to L-31N intercept
- Improve L-31N canal from G-211 south to the S-331 Pump Station
- Improve L-31N canal north of G-211 to new Pump Station/Gated Structure at the C-4 intercept

Florida Power and Light Transmission Line Corridors

- Potential Transmission Line Corridor Alignments
- FPL Transmission Line ROW requirements
 - 330' straight line
 - 540' in turns
- Future potential alignment of Transmission Lines will require some coordination with Florida Power and Light



Proposed SR-836 Southwest Expansion

- Alternative alignments to improve connectivity and enhance north/south mobility needs
- Project Development and Environment (PD&E) Study currently underway
- Future potential alignment of SR-836 will require some coordination with the Florida Department of Transportation and Miami-Dade Expressway Authority
- Location Design Concept scheduled to be completed Fall 2015



Hydraulics Analysis - Conclusions

- **Proposed Concept** - provides best combination of elements that accomplishes 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 GW 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



Discussion?