West Palm Beach Canal
C-51 STA-1 East Improvements

Jeff Couch, P.E., PMP
Chief, Okeechobee Section
Ecosystem Branch
Programs & Project Management Division
Jacksonville District

5 August 2011
Baltimore, MD
STA-1E Improvements

Outline

- Purpose & Location
- Project History and Background
- Project Features
- Project Deficiencies
- Issue Resolution
- Project Status
- Key Elements of Success
CENTRAL AND SOUTHERN FLORIDA PROJECT

WEST PALM BEACH CANAL (C-51) / STA 1E

Lake Okeechobee

A.R.M. Loxahatchee NWR

WCA 1

WCA 2

NOT TO SCALE
CENTRAL AND SOUTHERN FLORIDA PROJECT

WEST PALM BEACH CANAL (C-51) / STA 1E
CENTRAL AND SOUTHERN FLORIDA PROJECT

WEST PALM BEACH CANAL (C-51) / STA 1E
Cross Section of Typical Culvert

- Headwall
- Headwater
- Gate
- Embankment
- 8’ x 8’ Precast Box Culverts
- Tailwater
- Apron
- Foundation Soils
Culvert Installation

Segmented box culvert 8’ x 8’
Project Deficiencies

- Joint deterioration between precast culvert areas
- Avg bottom elevations in Cells 5 and 7 are about 0.6 and 1.2 feet lower than design targets
- Trash rakes – various issues
  - Spatial variability in bottom elevations in all cells exceed the design values.
  - In several cases, there are serially aligned low areas that are likely to induce short-circuiting from inlet to outlet.
Problems with Trash Racks

Accumulated debris at S-362

Deformed Trash Rack at S-319
Issue Resolution Timeline

- 2005 Project Transferred to SFWMD for O&M
- Jun 2008 - SFWMD identifies failure at S-375
- USACE initial response – not our problem, project transferred, it’s in O&M phase
- Jul 2008 – tune changed, discussions with SFWMD on fixing problems
- Dec 2008 – HQ/SAD listening session (no SAJ involvement)
**Issue Resolution Timeline (cont.)**

- Aug 2009 – Joint Technical Team requested (Project Delivery Team with focus)
- Jan 2010 – Plan presented to Joint PRB became basis for modifications report
- Jul 2011 - Modifications report approved
- Sep 2011- Scheduled contract awards for S-362 trash racks and 17 culvert repairs
Key Elements of Success

A combination of the right leadership and the right people involved...

- Good Collaborative Relationship
- SFWMD Operations Involved
- HQ/SAD spotlight
- Litigation spotlight
- Worked within authority
- Funds Availability
West Palm Beach Canal
C-51 STA-1 East Improvements

Questions