

History of STA-1 East

Paul J. DuBow, Ph.D.

CESAJ-PD-ES

paul.j.dubow@usace.army.mil



Technical Oversight Committee, 3 Feb 2004, 1

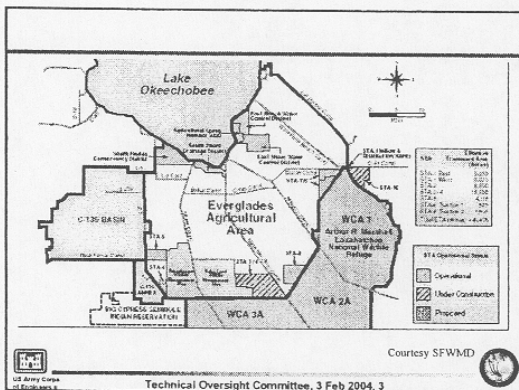


Background

- West Palm Beach Canal (C-51) has evolved from flood control project to incorporate water quality improvements to C-51 basin area
- Project currently includes enlarged/improved stormwater detention area known as Stormwater Treatment Area 1 East (STA-1E)
- STA-1E located northeast of WCA-1 (Loxahatchee NWR)



Technical Oversight Committee, 3 Feb 2004, 2



Technical Oversight Committee, 3 Feb 2004, 3



Background

- Facility designed to reduce long-term flow-weighted average concentrations of total phosphorous in runoff from C-51 west drainage basin and part of runoff from Structure 5A basin (northwest of C-51)



Technical Oversight Committee, 3 Feb 2004, 4



Authority

- Planning for stormwater treatment area originally began in 1994
- However, Federal funding for detailed design only became available in October 1996
- When Congress passed Water Resources Development Act of 1996, Public Law 104-303 authorized USACE to substitute its previously planned 1,600-acre detention area with enlarged stormwater area, to be known as Stormwater Treatment Area 1 East



Technical Oversight Committee, 3 Feb 2004, 5



Design

- Designed in accordance with February 1994 Burns and McDonnell Conceptual Design Report
- USACE began detailed design for STA-1E upon authorization in October 1996 and awarded first C-51/STA-1E construction contract in May 1999



Technical Oversight Committee, 3 Feb 2004, 6



C-51/STA-1E Components

- Approximately 4 miles of improvements to C-51
- Gated spillway water control structure which serves to separate east and west portions of C-51
- 6,500-acre stormwater treatment area
- Approximately 25 miles of levees
- Over 40 water control structures
- Two large pump stations, each with capacity of approximately 4,000 cfs



Technical Oversight Committee, 3 Feb 2004, 7

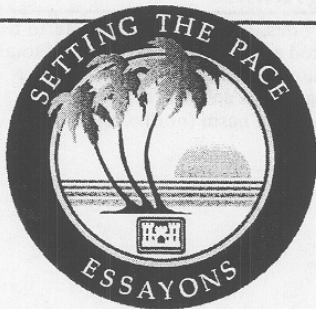


C-51/STA-1E Components

- New control structure in Levee 40 and Pump Station 319 will control inflow
- Treated outflow can be delivered to WCA-1 by new outflow pumping station, Pump Station 362



Technical Oversight Committee, 3 Feb 2004, 8



Technical Oversight Committee, 3 Feb 2004, 9

