

Evaluation of Conveyance Improvement Options

**Lower East Coast Regional Water
Supply Plan (c. 1996)**

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Lower East Coast Regional Conveyance Alternatives Study

- LECRWSP evaluated numerous physical facility options to address urban, agricultural and environmental water issues for the 2010 planning horizon
- LECRWS preceded CERP
 - Primary focus was not ecosystem restoration
- Physical water conveyance was an important consideration
 - Conveyance from storage to use
 - Lake Okeechobee
 - Lower East Coast
 - Conveyance capacity
 - Loss due to seepage

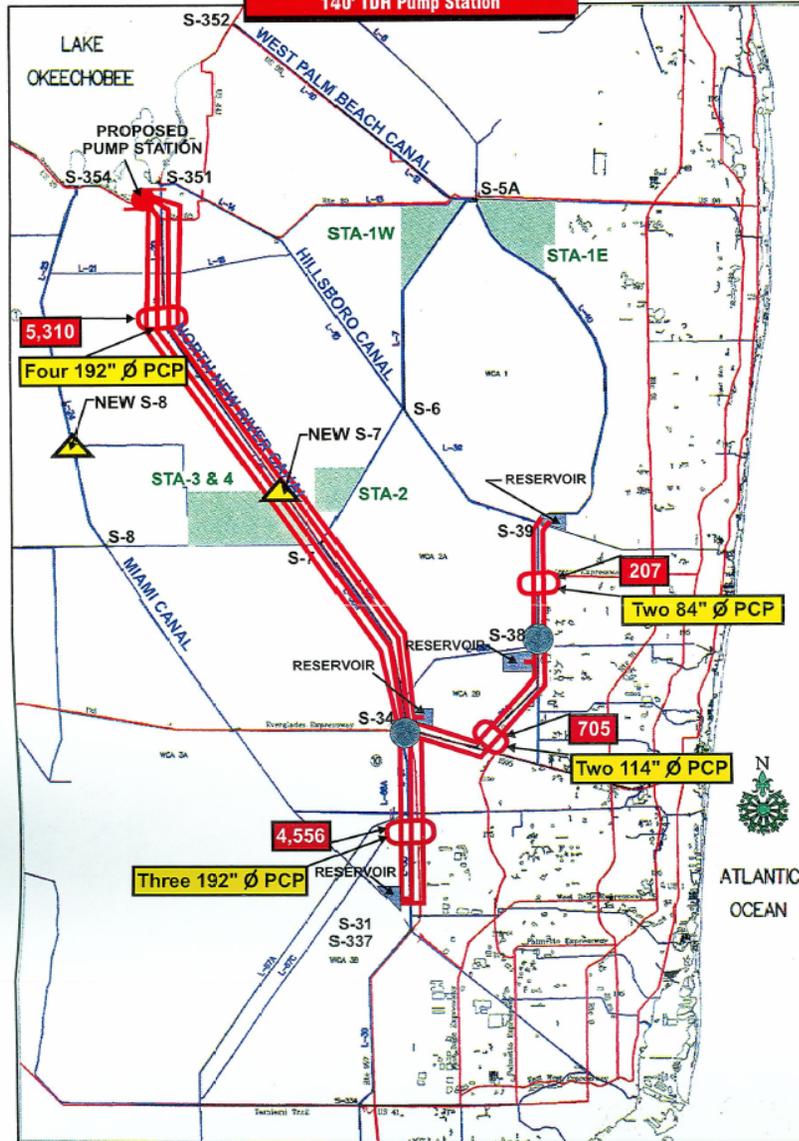
Lower East Coast Regional Conveyance Alternatives Study

- SFWMD contracted with Gee & Jenson Engineers-Architects-Planners, Inc.
- Report delivered in February, 1996
- Evaluated regional conveyance options
 - Canal improvements
 - Widening
 - Deepening
 - Channel lining
 - Pipelines

Pipeline Conveyance Options

- Evaluated wide-range of water deliveries to LEC
 - 33%, 67%, & 99% of 2010 regulatory, environmental and water supply discharges
 - 500 to 5,300 cfs
 - Determined by early version of the SFWMM
- Configuration used North New River Canal
 - Source: Lake Okeechobee
 - Use: Miami-Dade, Broward & Palm Beach counties

99 Percentile 2010 Water Supply Flows
Multiple Pipelines Option
140' TDH Pump Station



Pipeline Conveyance Options

- Single large diameter pressurized concrete pipeline
 - 2 to 4 parallel pipes
 - Diameters ranged from 70” (5 ft) to 192” (16 ft)
- 1-High capacity, High head pump station
 - Discharge pump head ranged from 70 ft. to 140 ft.
- 3 Attenuation reservoirs conceptually envisioned at discharge points in Miami-Dade, Broward & Palm Beach counties
- Conceptual costs ranged from \$0.7 B to \$2.5 B
 - 1996 dollars

Conveyance Alternative Study Findings

- Canal channel conveyance improvements were more cost effective
 - Several reaches currently have sufficient capacity
- NNRC was the most cost effective route to deliver water from Lake Okeechobee to the LEC
 - Most direct route from supply to demand
 - Best accessibility for operations and maintenance
 - Minimal environmental impact
- Existing EAA canal hydraulics identified by the study were incorporated into the SFWMM
 - Remain a key component of the model today.

Questions