L-31N Seepage Barrier Project

Next Steps

Lake Belt Mitigation Committee

March 5, 2014
Schematic of Barrier Installation: 36 feet deep; 2 miles long
Seepage into the L-31N Canal between S-335 and AVM3 vs. stage difference between the water table west of the barrier and the canal

Seepage into L-31N Canal vs. Groundwater Gradient - North

- pre Wall
- post Wall

Wet Season
Control Site. Seepage into the L-31N Canal between AVM3 and AVM5 vs. Stage difference between the water table west of the barrier and the canal.
Gradient from the levee to the canal vs. gradient from the marsh to the levee
With data after construction

Local vs. Regional Gradient - North

- Wet Season

- pre Wall
- post Wall
Gradient from the levee to the canal vs. gradient from the marsh to the levee
Control Site - with data after construction

Local vs. Regional Gradient - South

Wet Season
Cunningham (2006)
Model simulation of water level change in Northeast Shark River Slough

Effect of a 2-Mile Barrier Wall on Groundwater Levels Inside the ENP
Barrier Depth: 30 ft; Daily Average: 7/1/2008-10/31/2008 (Wet)
Model simulation of water level change in Northeast Shark River Slough
Model simulation of water level change in Northeast Shark River Slough

Effect of a 5-Mile Barrier Wall on Groundwater Levels Inside the ENP
Barrier Depth: 30 ft; Daily Average: 7/1/2008-10/31/2008 (Wet)
Model simulation of water level change in Northeast Shark River Slough
Model simulation of groundwater flow change into the L-31N Canal
WRAP Score

• 2-mile barrier      262 units
• 5-mile barrier    1,423 units
• 7-mile barrier    1,467 units

• Committee awarded 150 units in 2011 due to construction uncertainty

• Completion of 5-mile barrier – 1,273 units
  \( (1423-150) \)
Cost Estimate

- 3 additional miles - $12-13 million

- Funding
  
  Previously approved 8.5 SMA ~ $8 million
  
  Remainder from Lake Belt Mitigation Fund
S-24A Structure:
Must be removed or blocked off.
Next Steps

• Get new proposals from Contractors
• Coordinate with key agencies
  Corps: Section 408 Issues
  Corps and District: Removal of S-24A
• Return to Committee at next meeting with recommendation