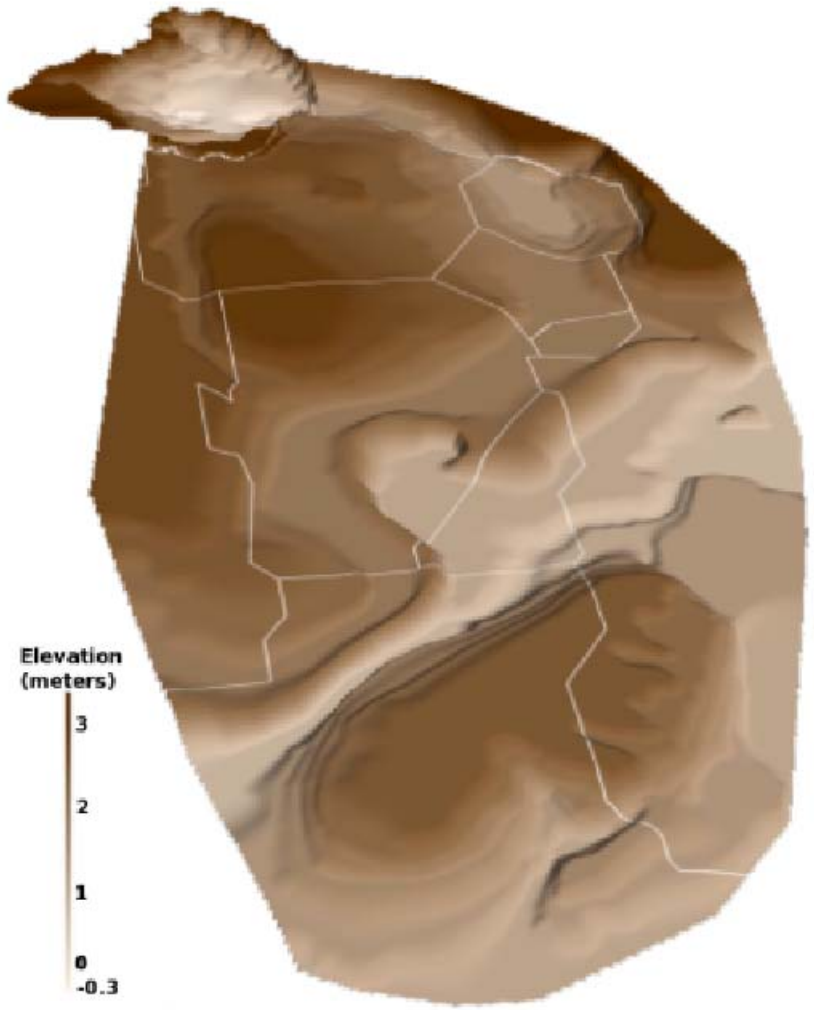
Hydrology of the Everglades Past and Present

Using historical data to re-construct pre-drainage topography

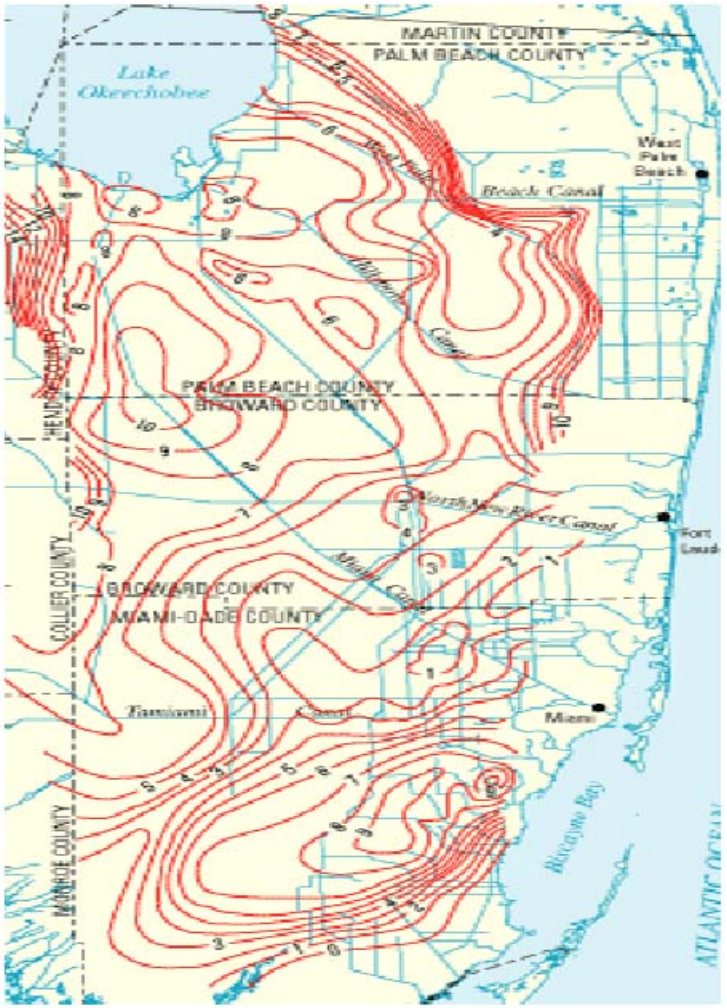
Elevation difference is the driving force

Comparisons of pre-drainage hydrology to current conditions

Bedrock surface

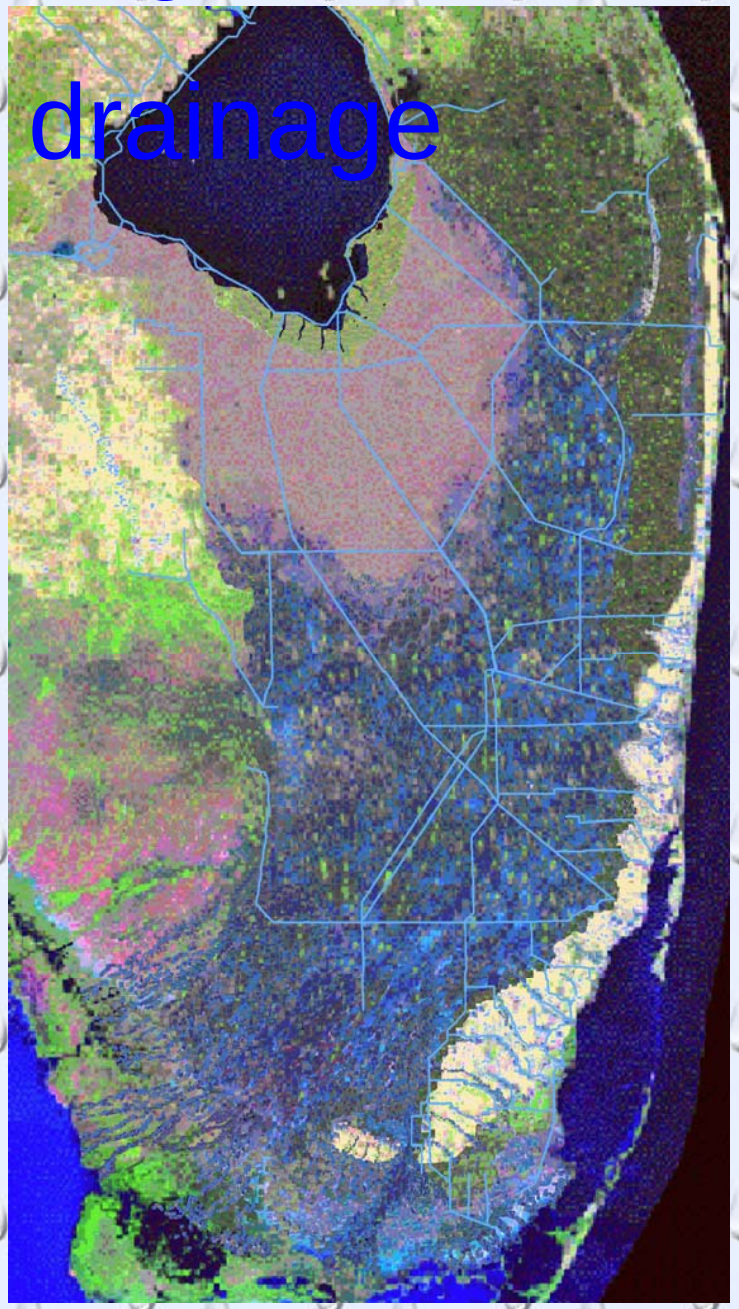


Tetra Tech, 1999



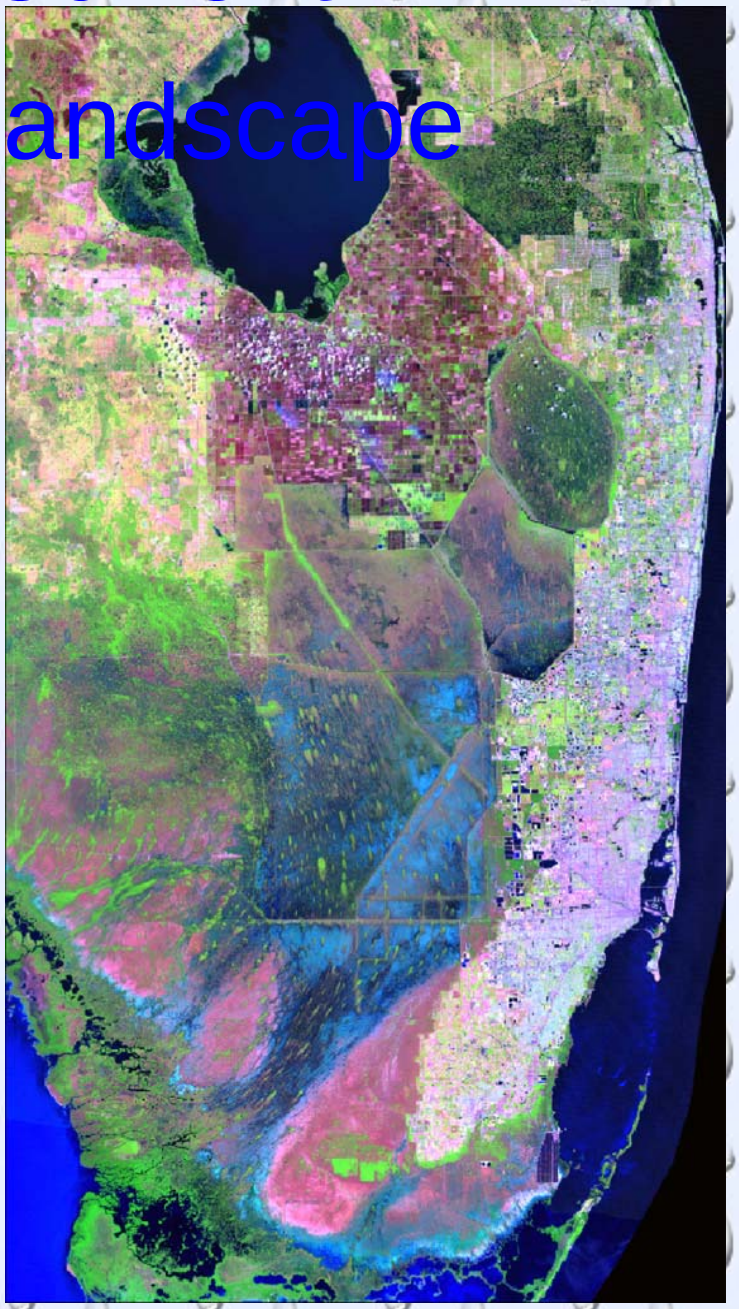
Ingebritsen et al. 1999

Pre-drainage



Source: Adapted from SFWMD

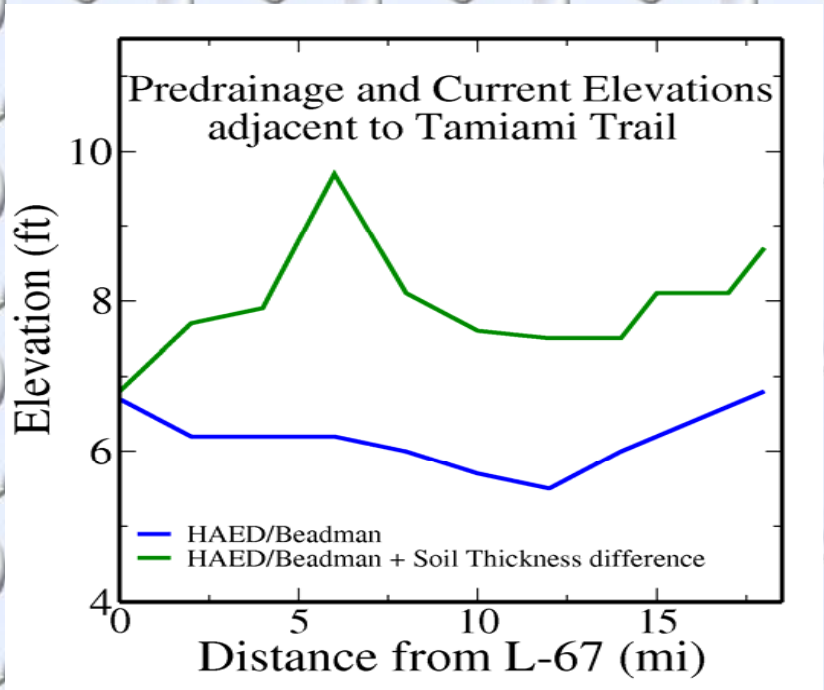
Current landscape

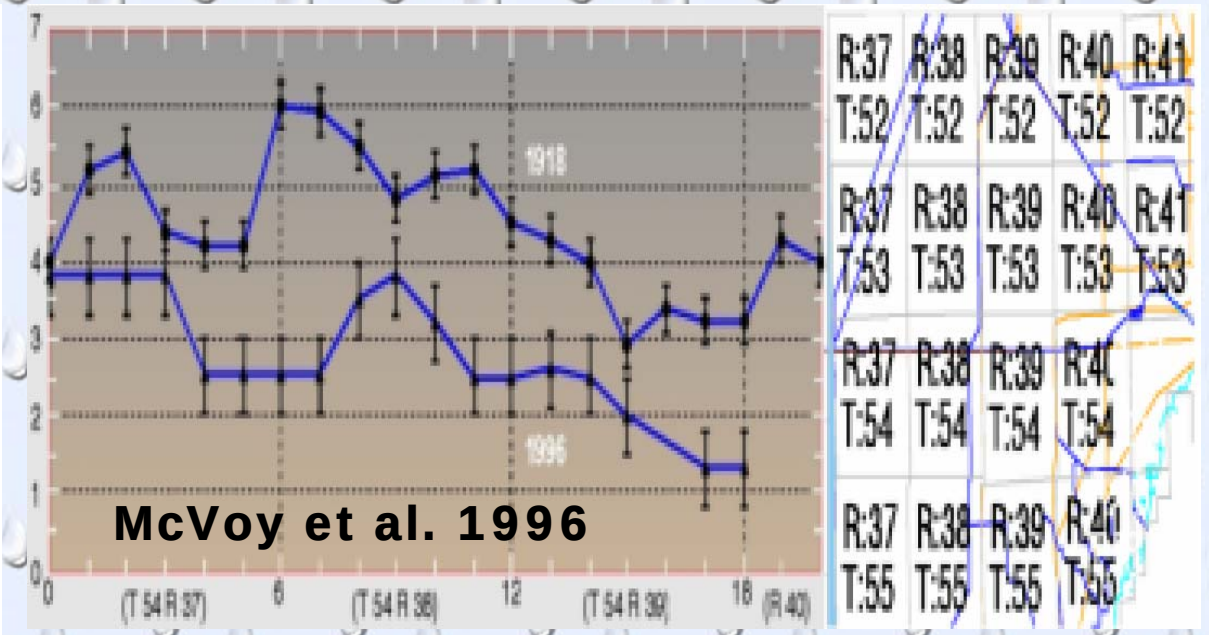


Source: SFWMD

Tamiami Trail

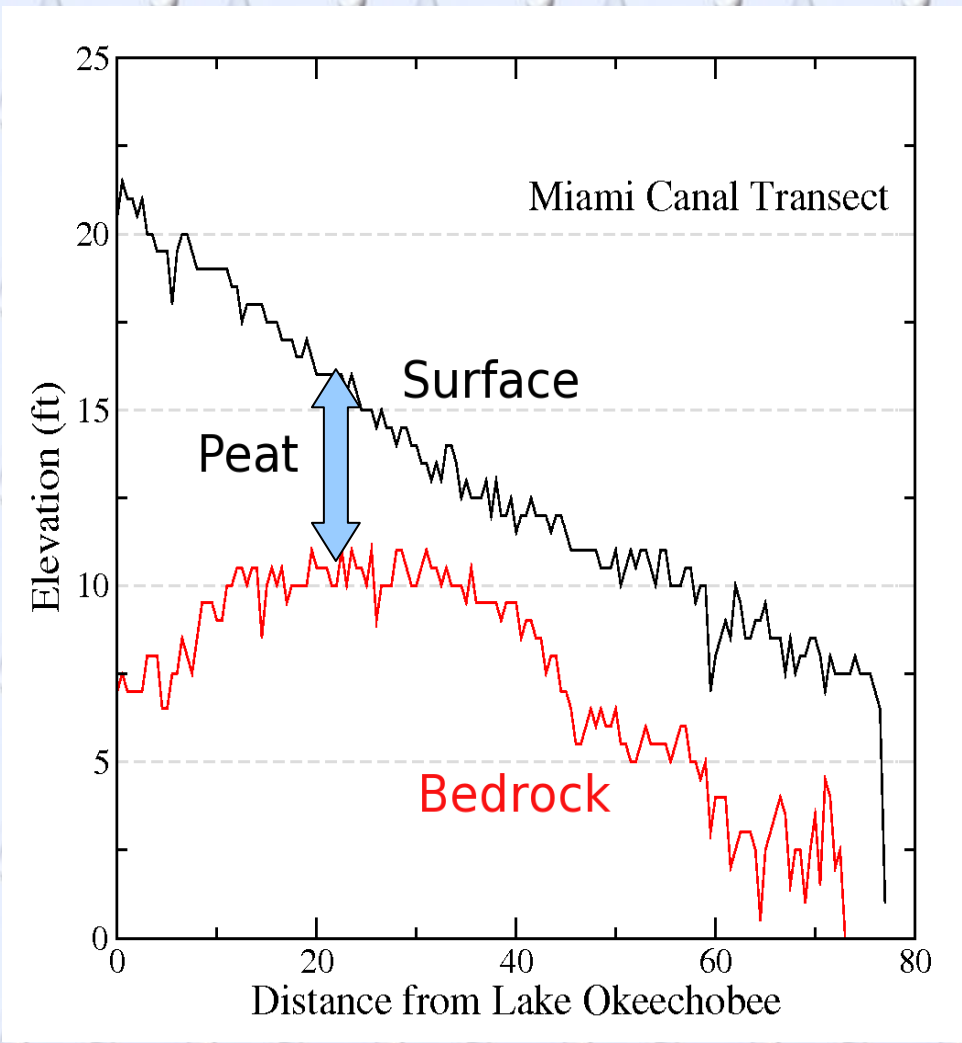
Peat thickness surveys available for several years from 1918 on. Difference in peat thickness between 1918 and 1996 added to elevation data. Indicates pre-project surface elevation exceeds 8 feet.





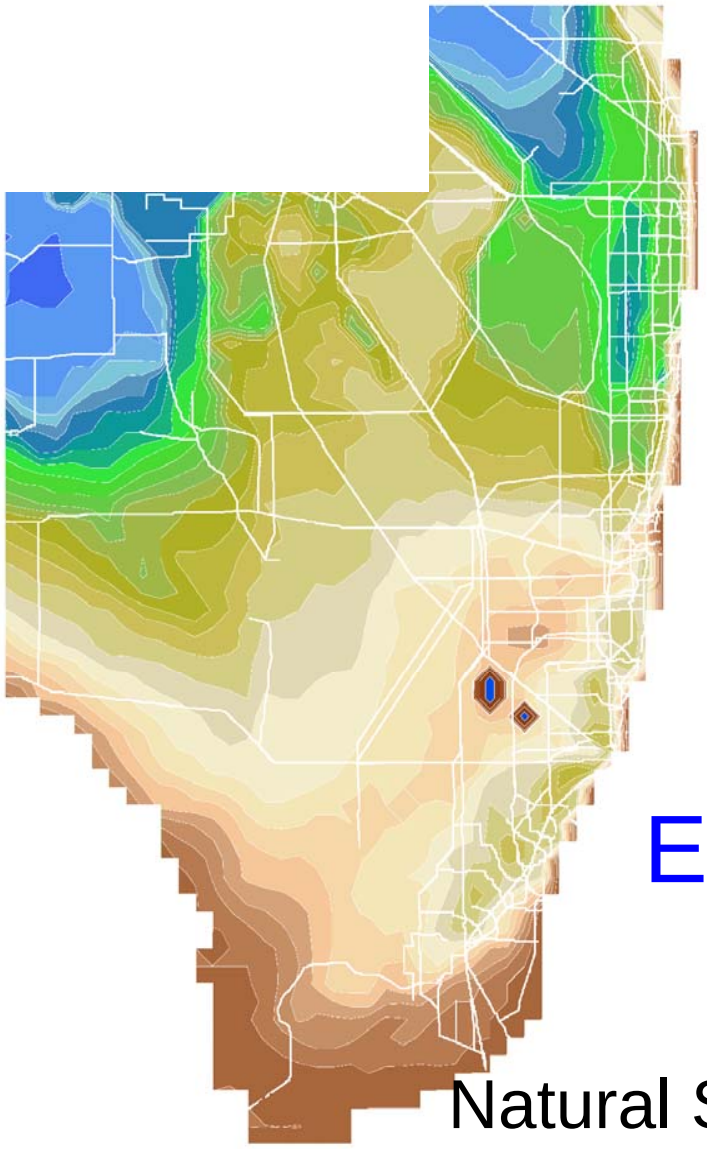
Profiles

West Palm Beach Canal
Hillsboro Canal
North New River
South New River
Miami Canal

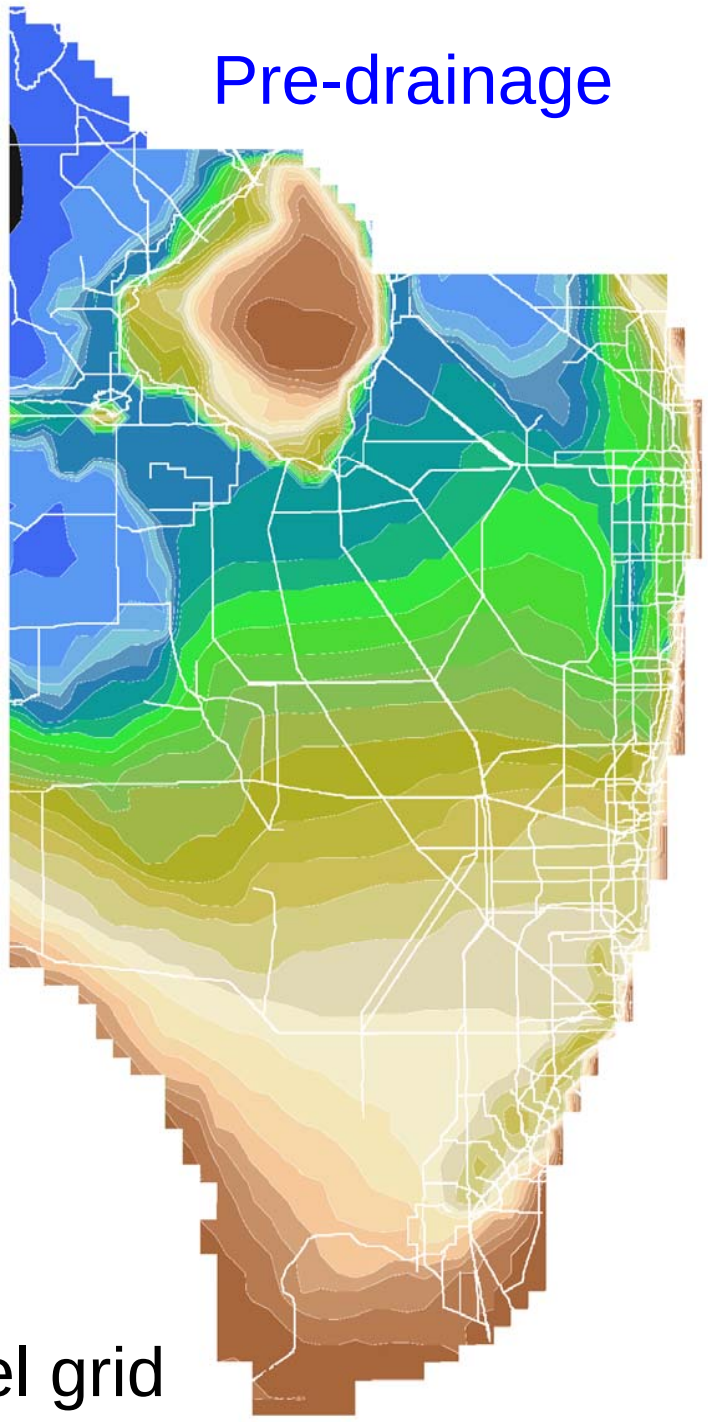


Florida Everglades Engineering Commission
in Senate Doc. 379, 1913

Current



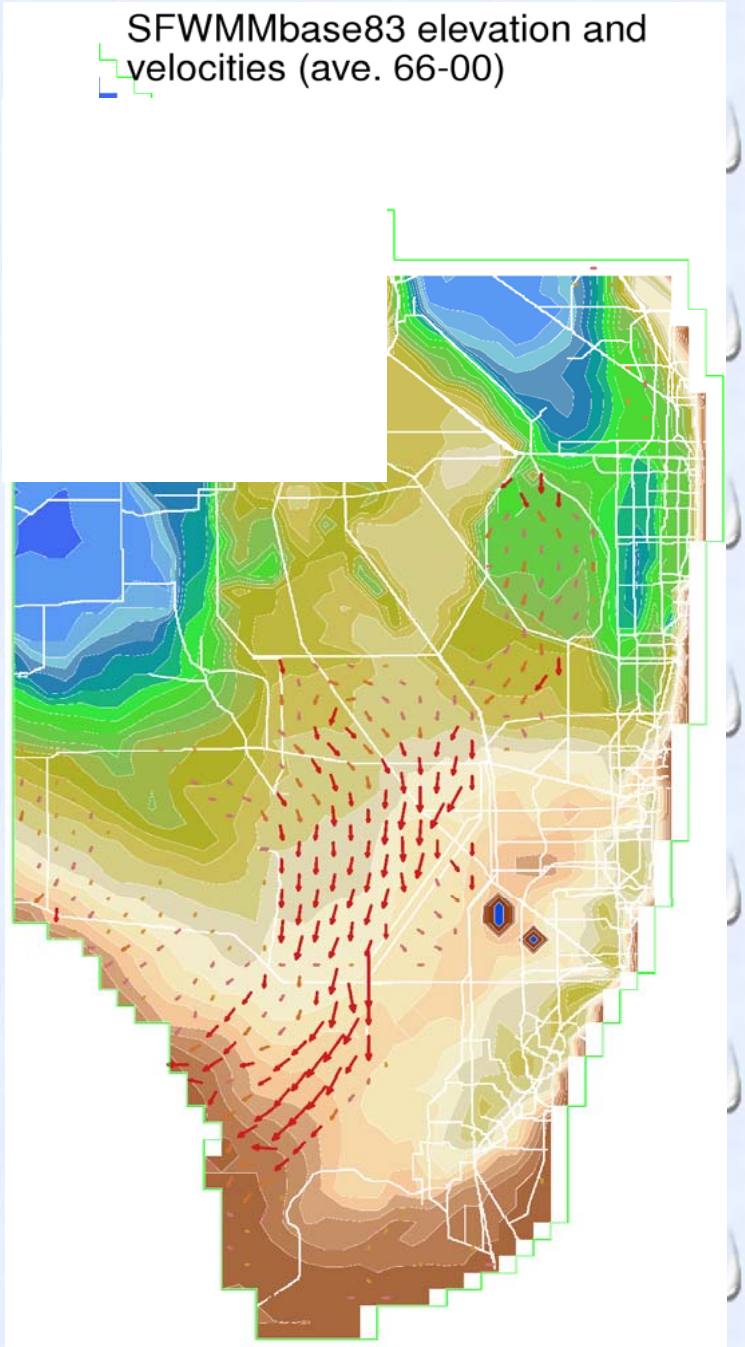
Pre-drainage



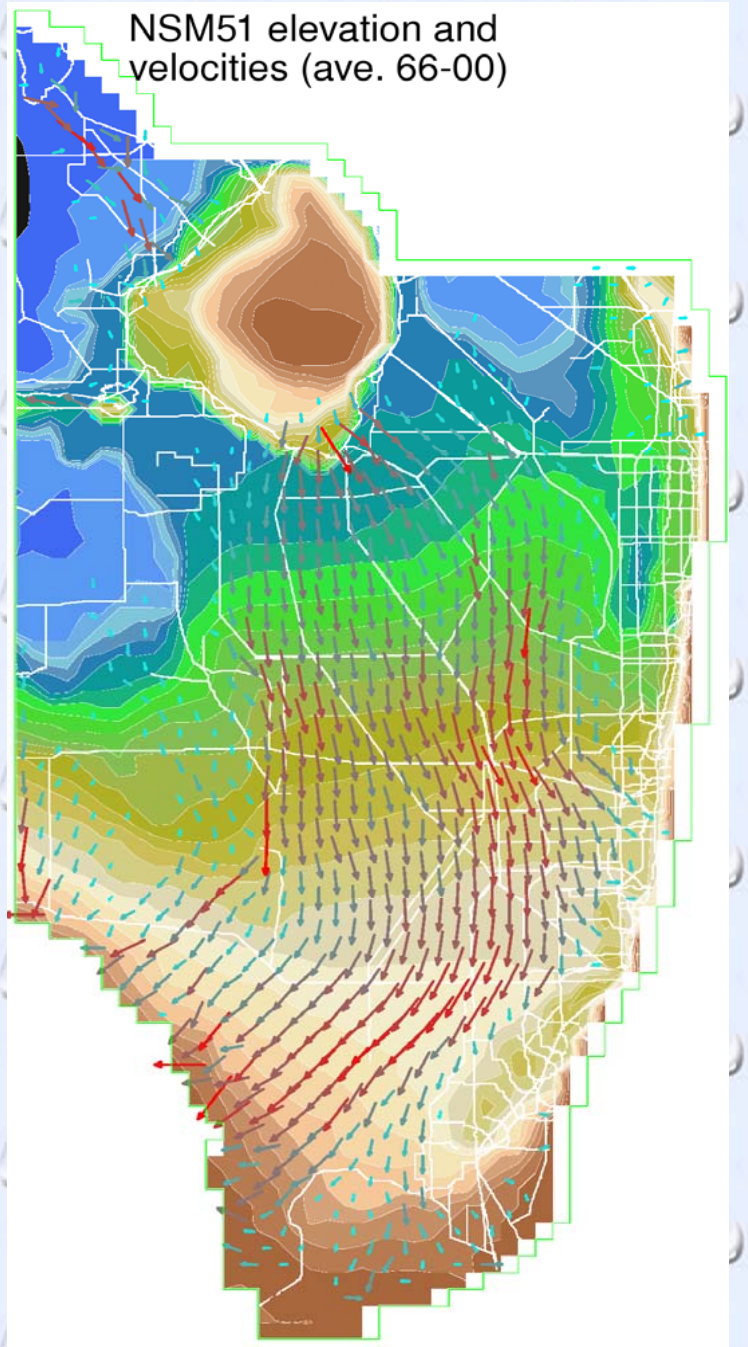
Elevations

Natural System Model grid

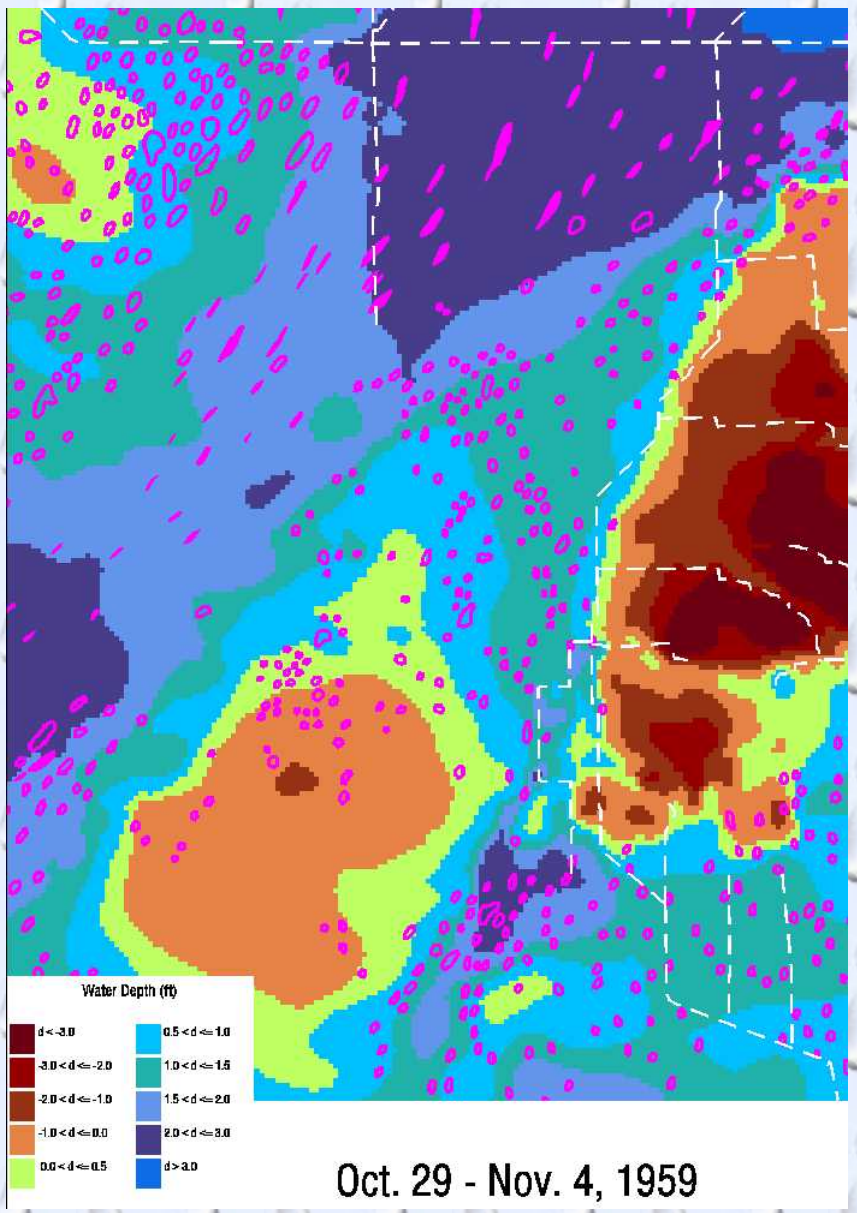
SFWMM-5

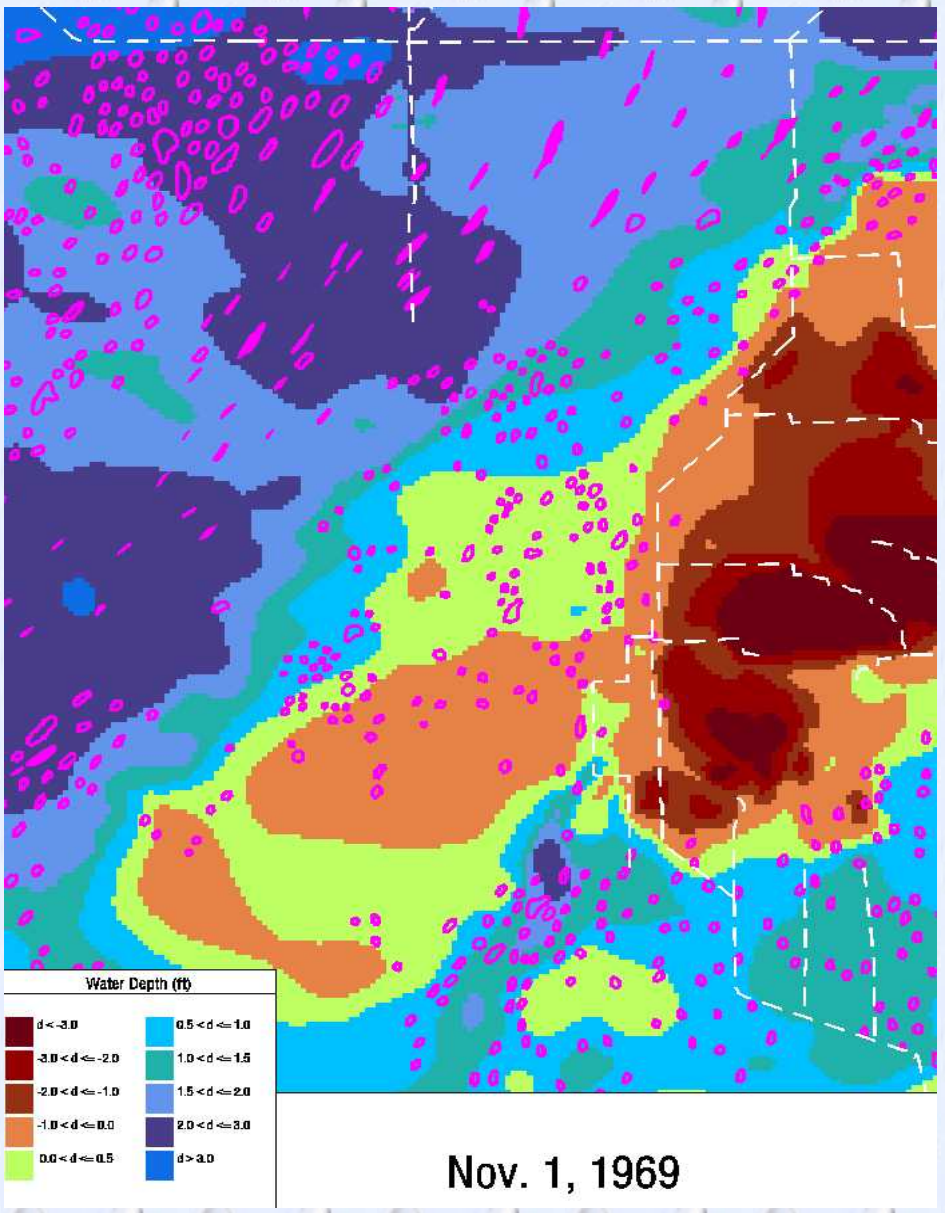

SFWMMbase83 elevation and
velocities (ave. 66-00)

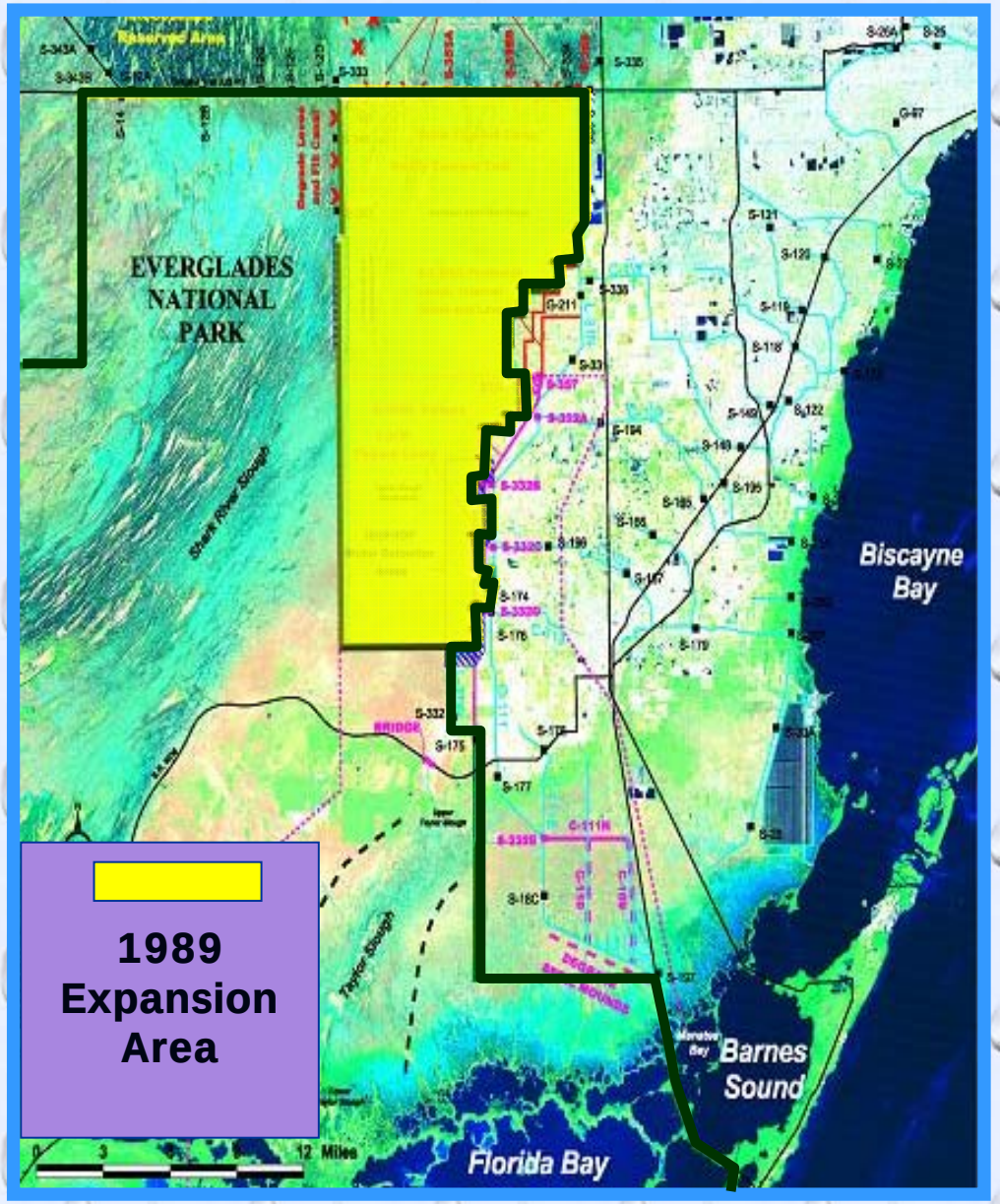
NSM-5


NSM51 elevation and
velocities (ave. 66-00)

Surface water depth contours from field data



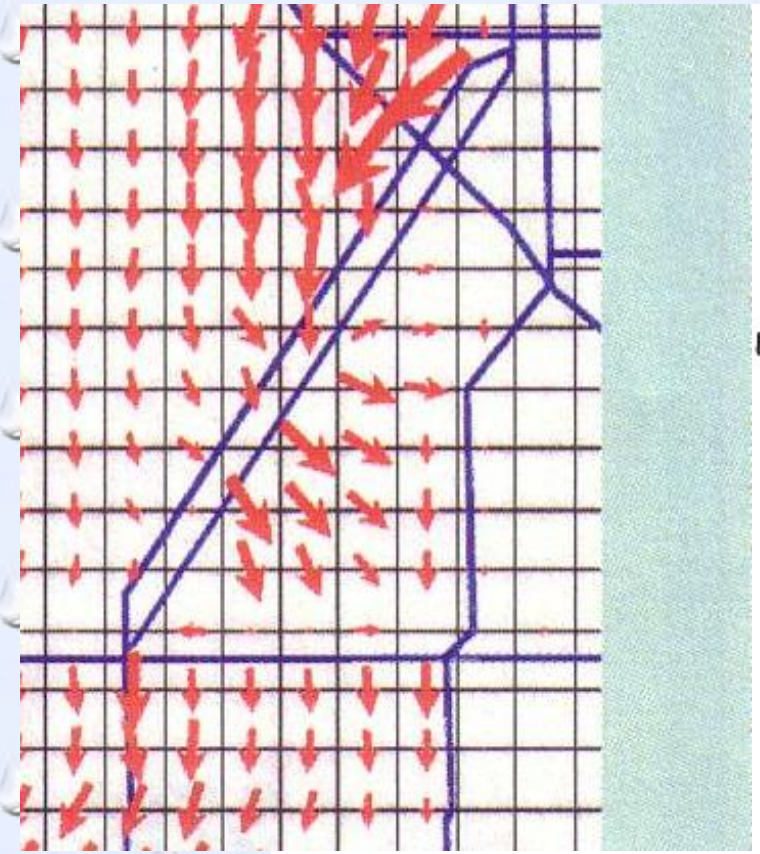




The Everglades National Park Protection and Expansion Act of 1989 (PL 101-229)

- Authorized the NPS to acquire 109,000 acres within Northeast Shark Slough.
- Authorized the Army Corps to make modifications “to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrologic conditions in the Park”.

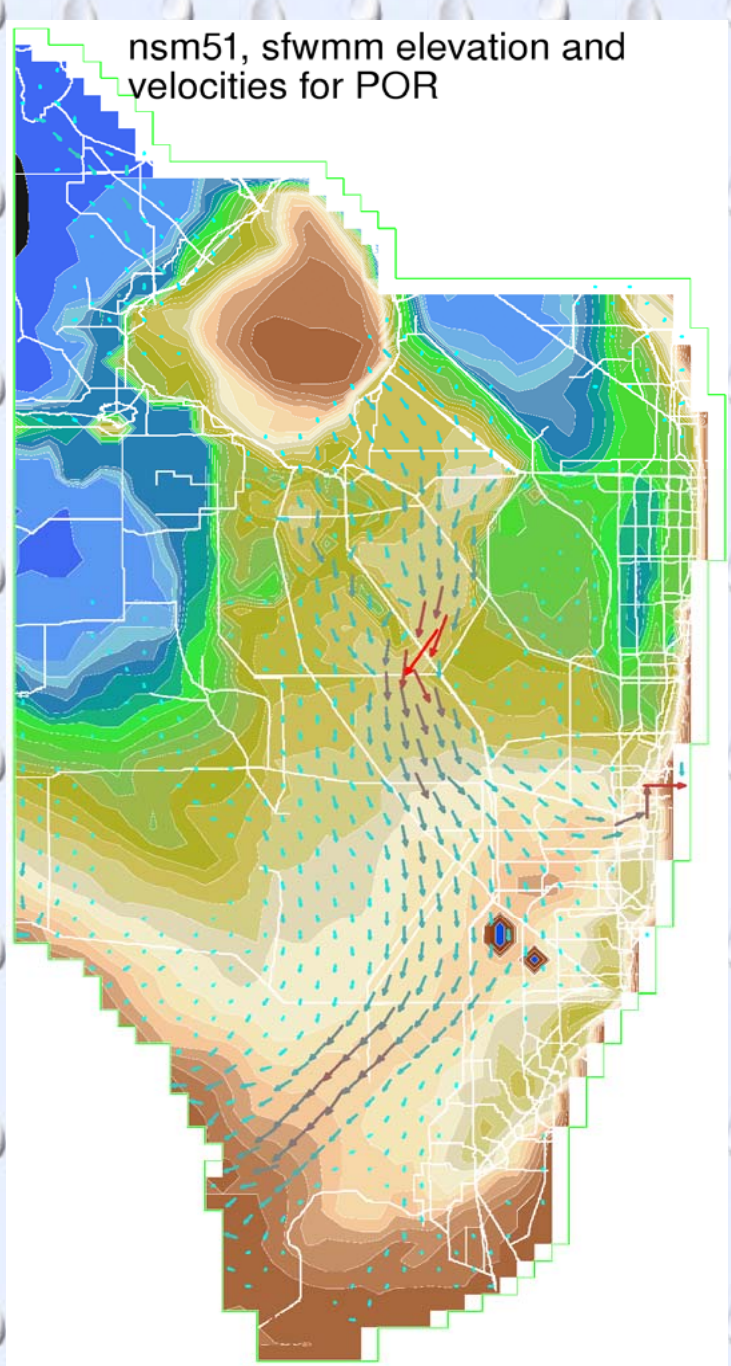
Modified Water Deliveries Project



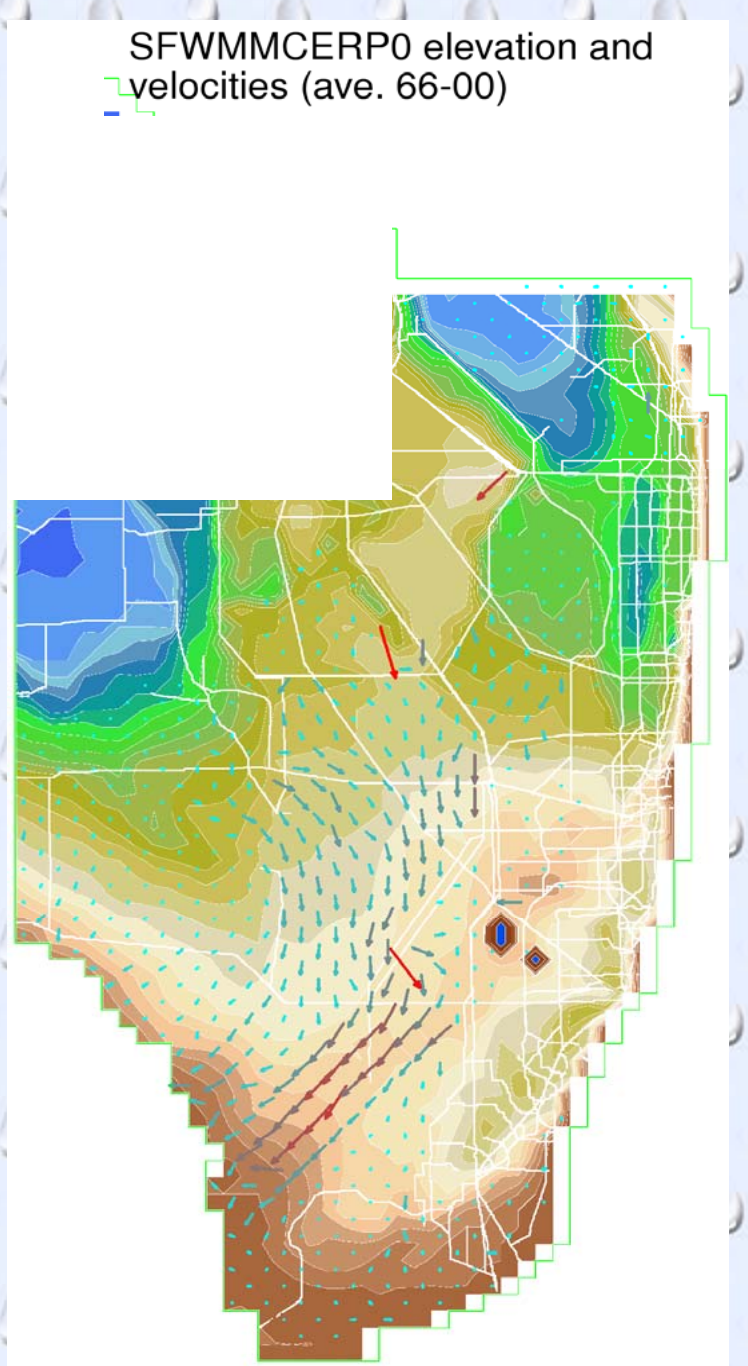
Gated Structures
S-355A and S-355B

Pump Station S-356

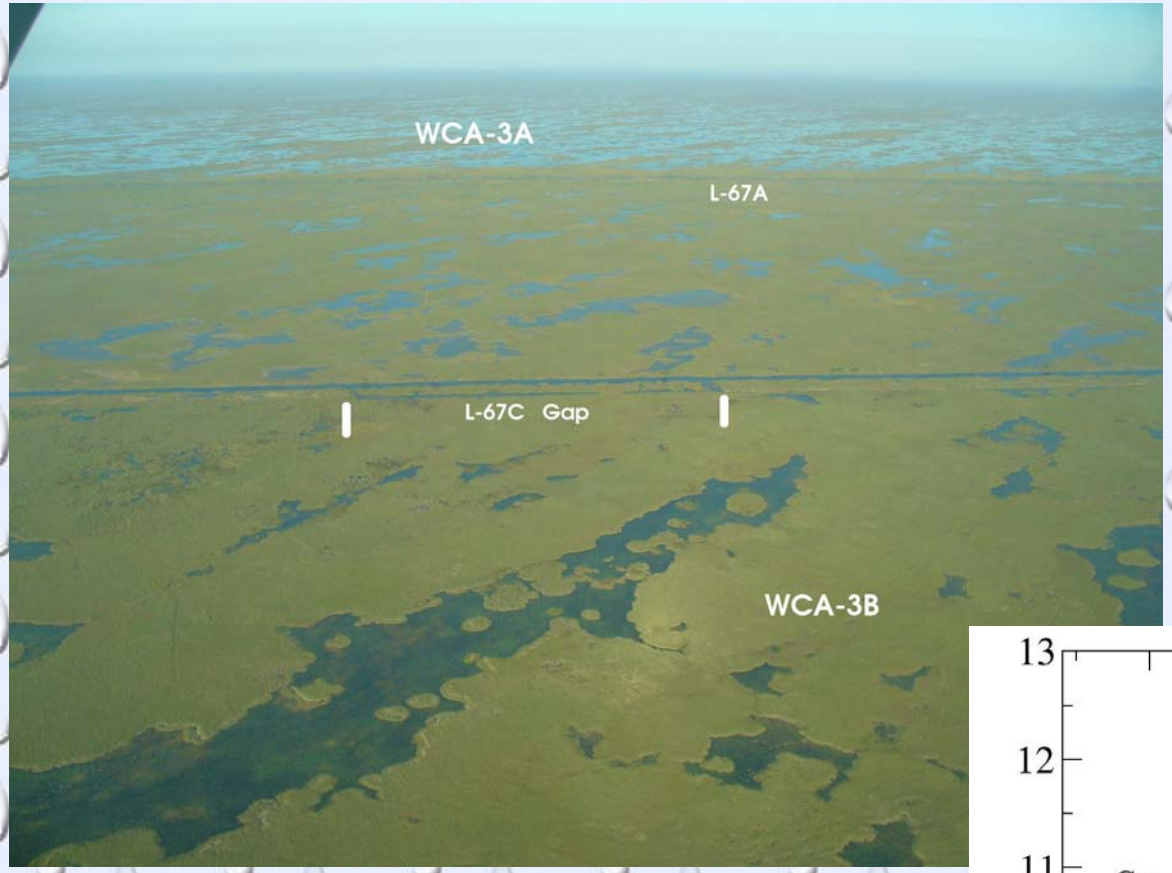
NSM-5



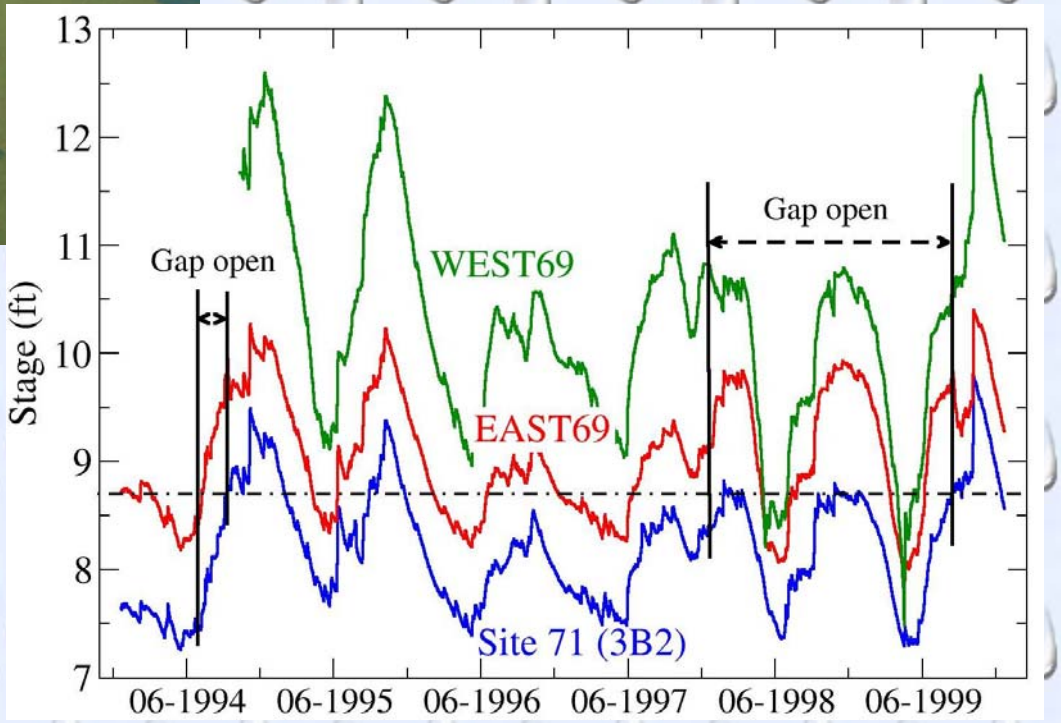
SFWMM-5 CERP0



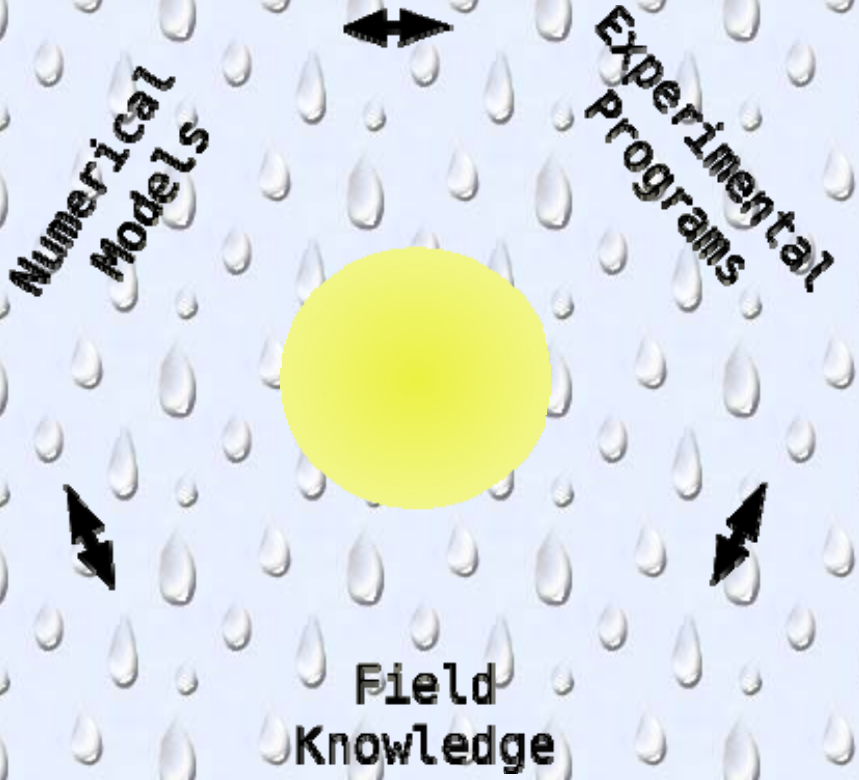
Modified Water Deliveries Field Test

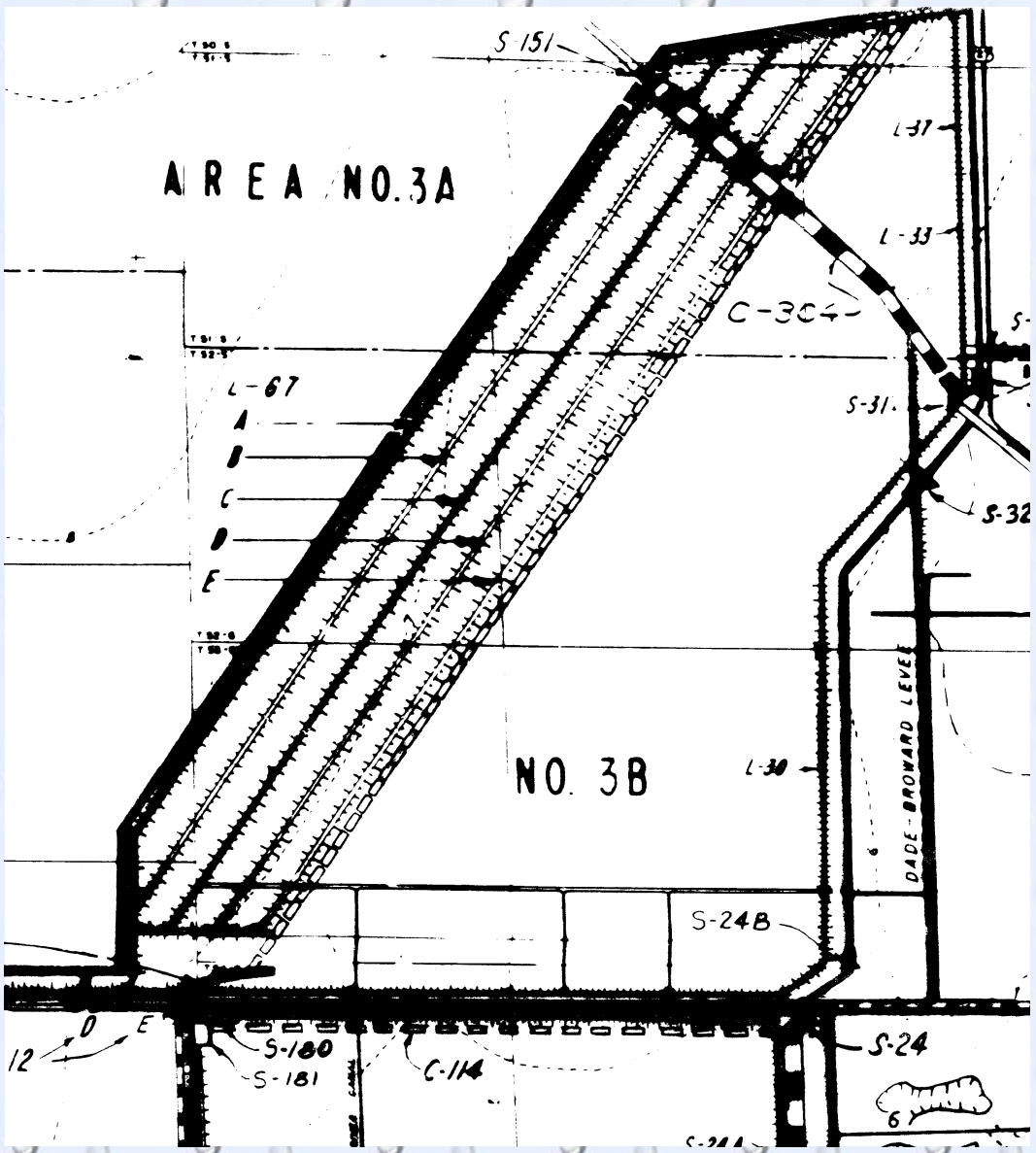


Gaps in L-67A and C



Adaptive Management





COE Survey Review Report 1968