

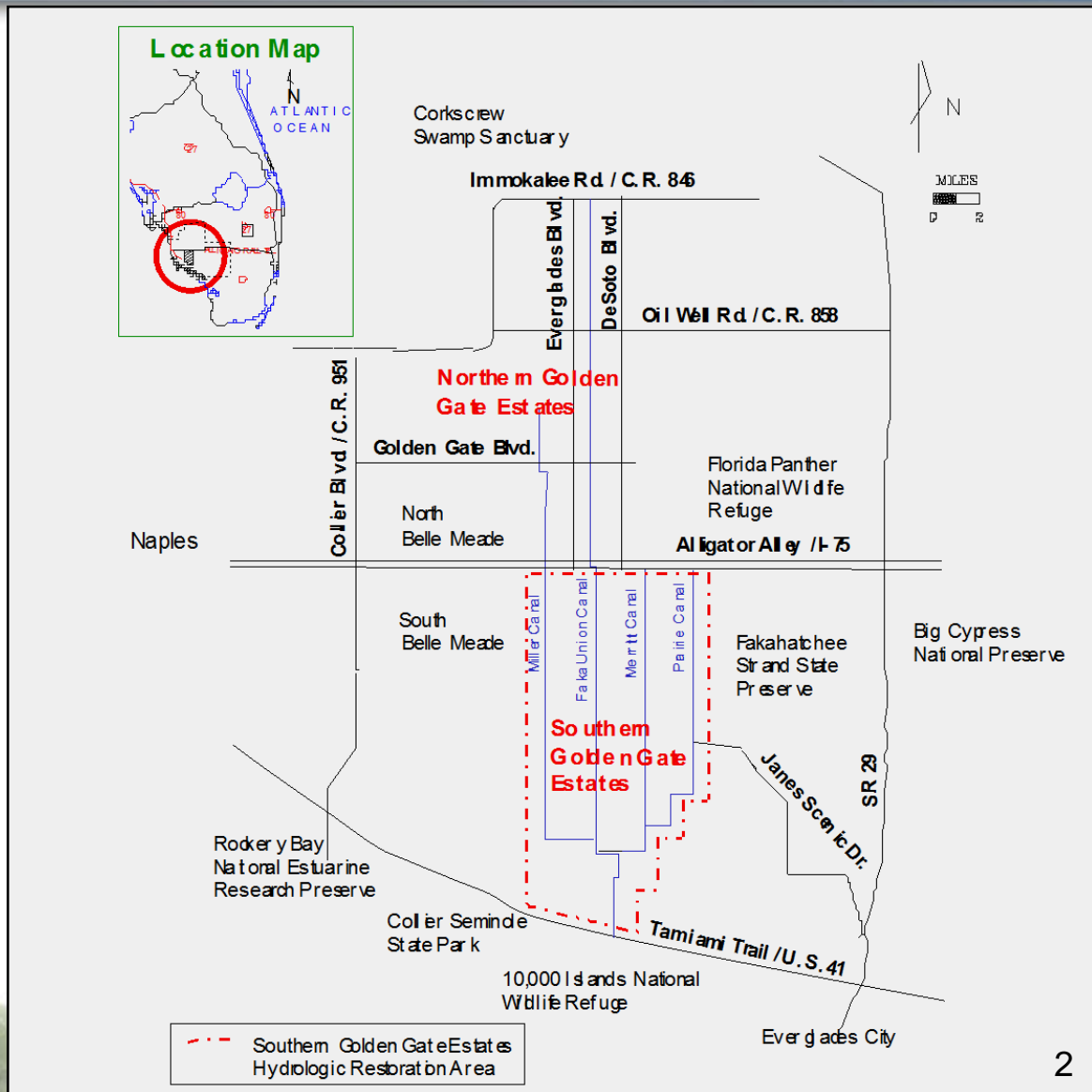
Hydrological and Ecological Benefits Observed from the Picayune Strand Restoration Project

Janet Starnes, Principal Project Manager
South Florida Water Management District
Office of Everglades Policy & Coordination

National Conference on Ecosystem Restoration
April 19, 2016

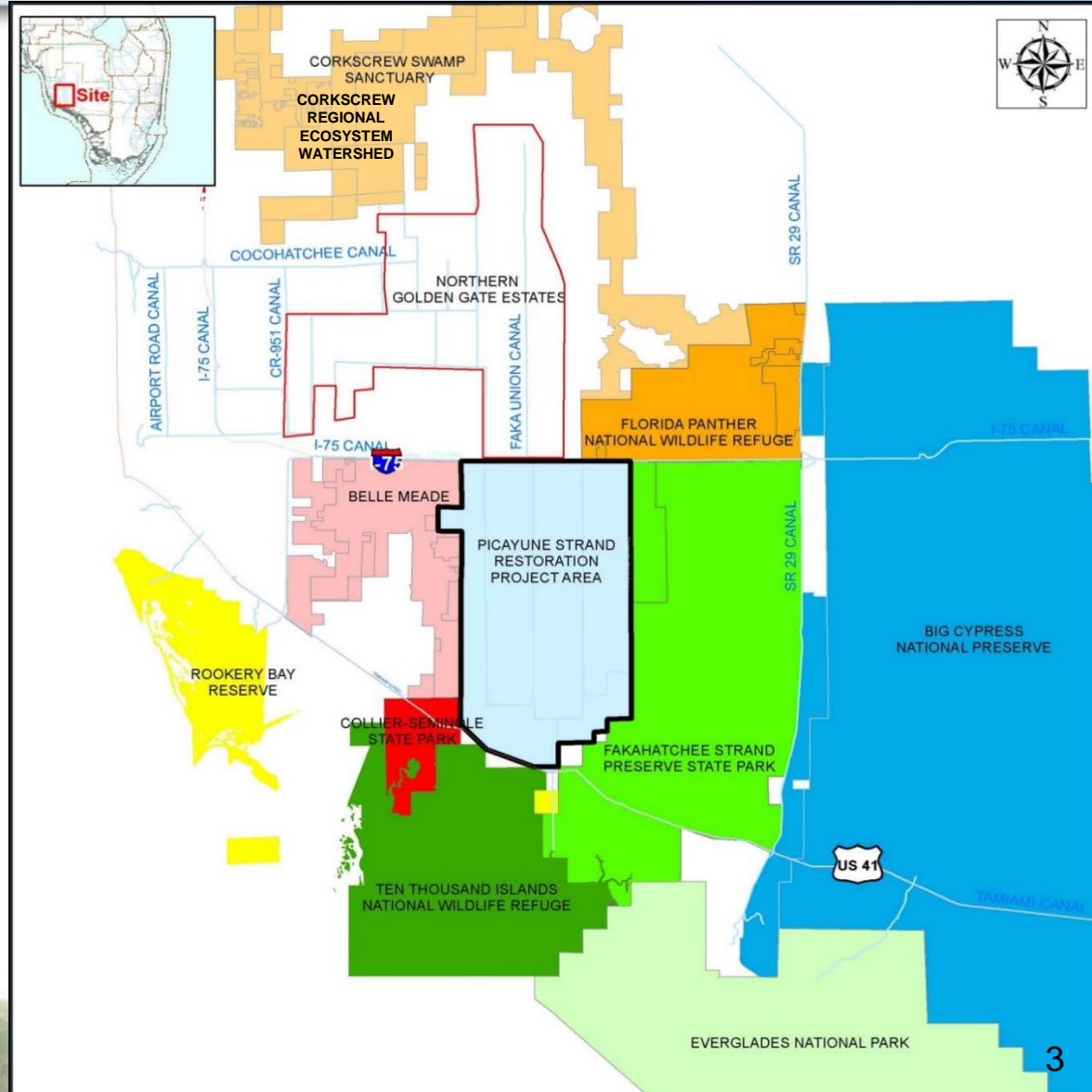
Southern Golden Glades Estates Hydrologic Restoration Area

➤ Golden Glade Estates was created in the 1960s



Picayune Strand Restoration Project

➤ Project area is surrounded by conservation lands



Hydrologic Restoration

- Sheet flow is key to restoration
 - Eliminate wet season surface water drainage
 - Plug canals – effects extend 1+ miles
 - Eliminate dry season groundwater drainage
 - Fill most of length of canals – effects extend 2-3 miles
 - Remove all unnaturally elevated substrates
 - Roads
 - Logging trams
 - Home sites
 - Spoil associated with roads and canals

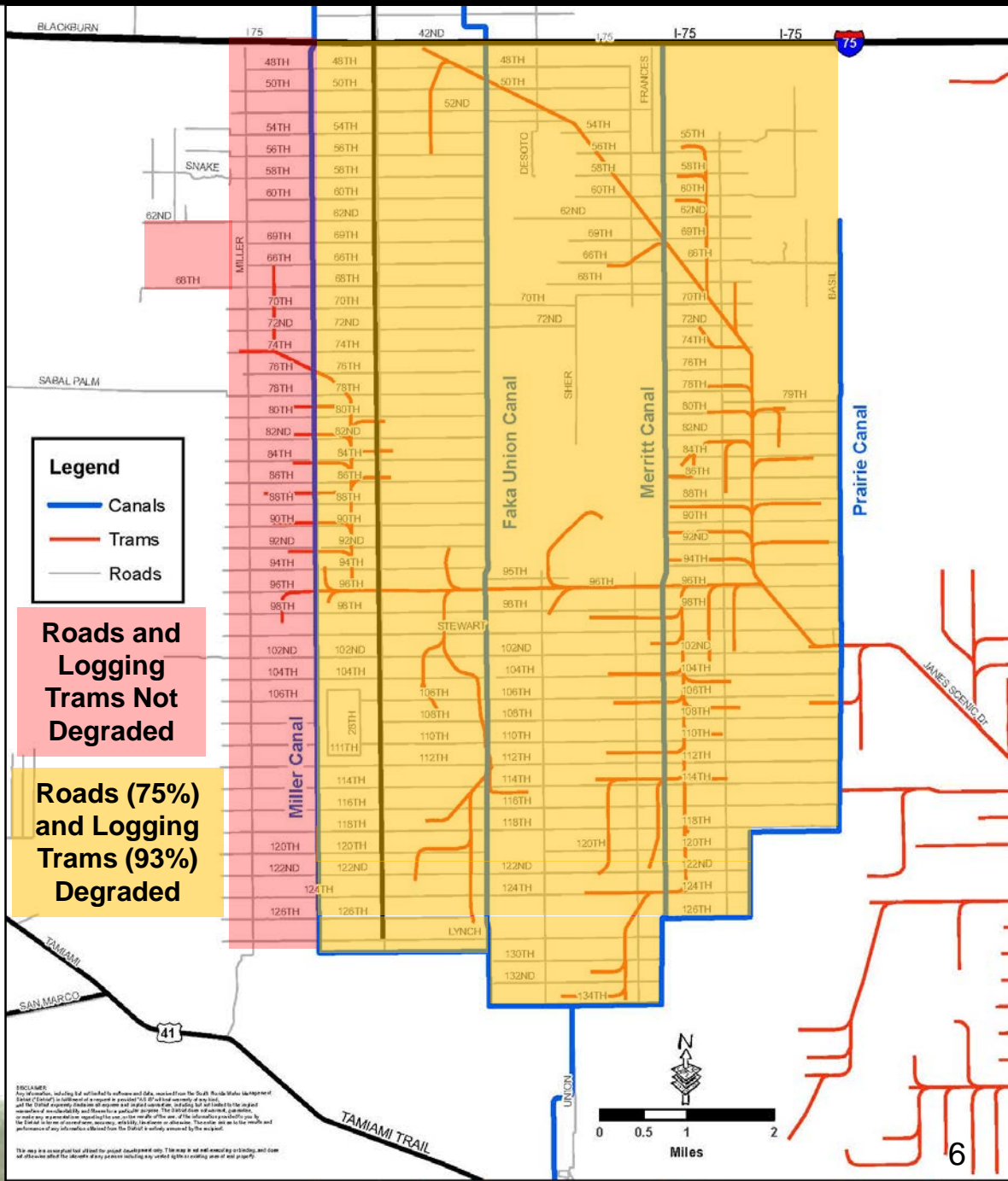


Picayune Strand State Forest

Aerial Picayune Strand State Forest
Pre-restoration, April 1978



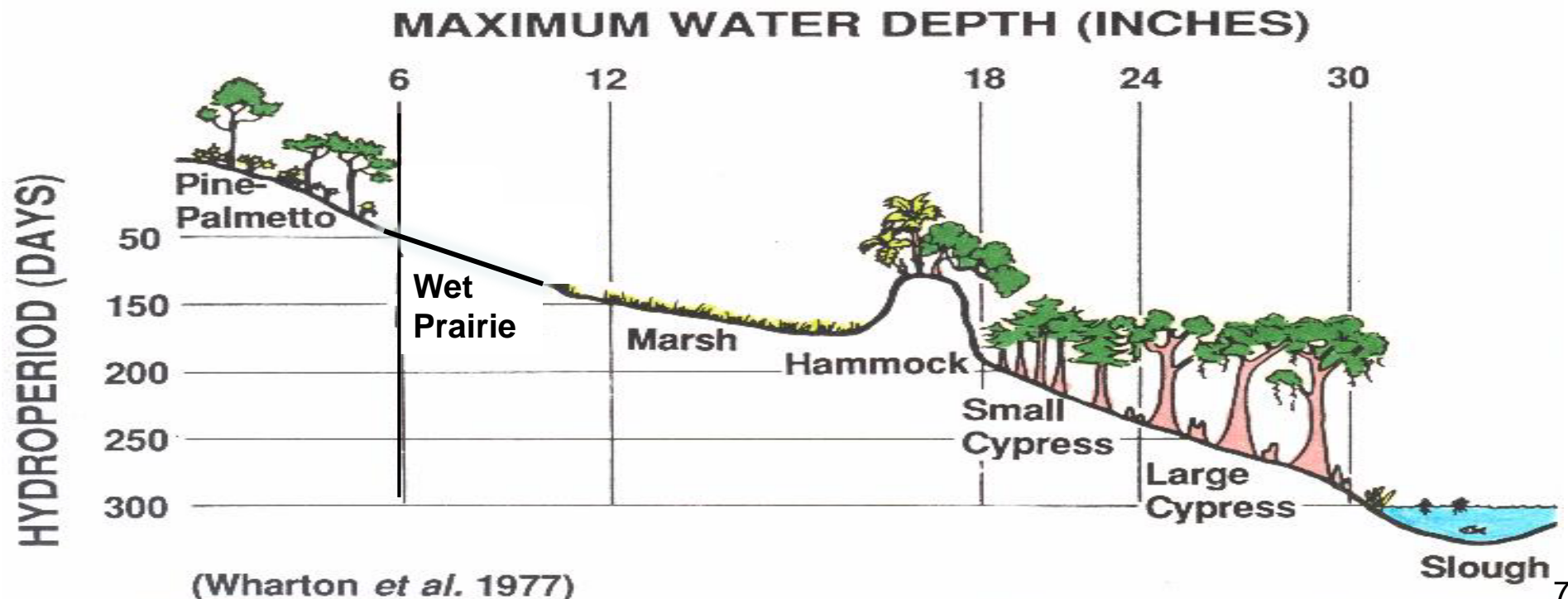
- Degrade 285 miles of roads and/or adjacent spoil
- Fill 42 miles of canals with adjacent spoil
- Degrade 62 miles of logging trams



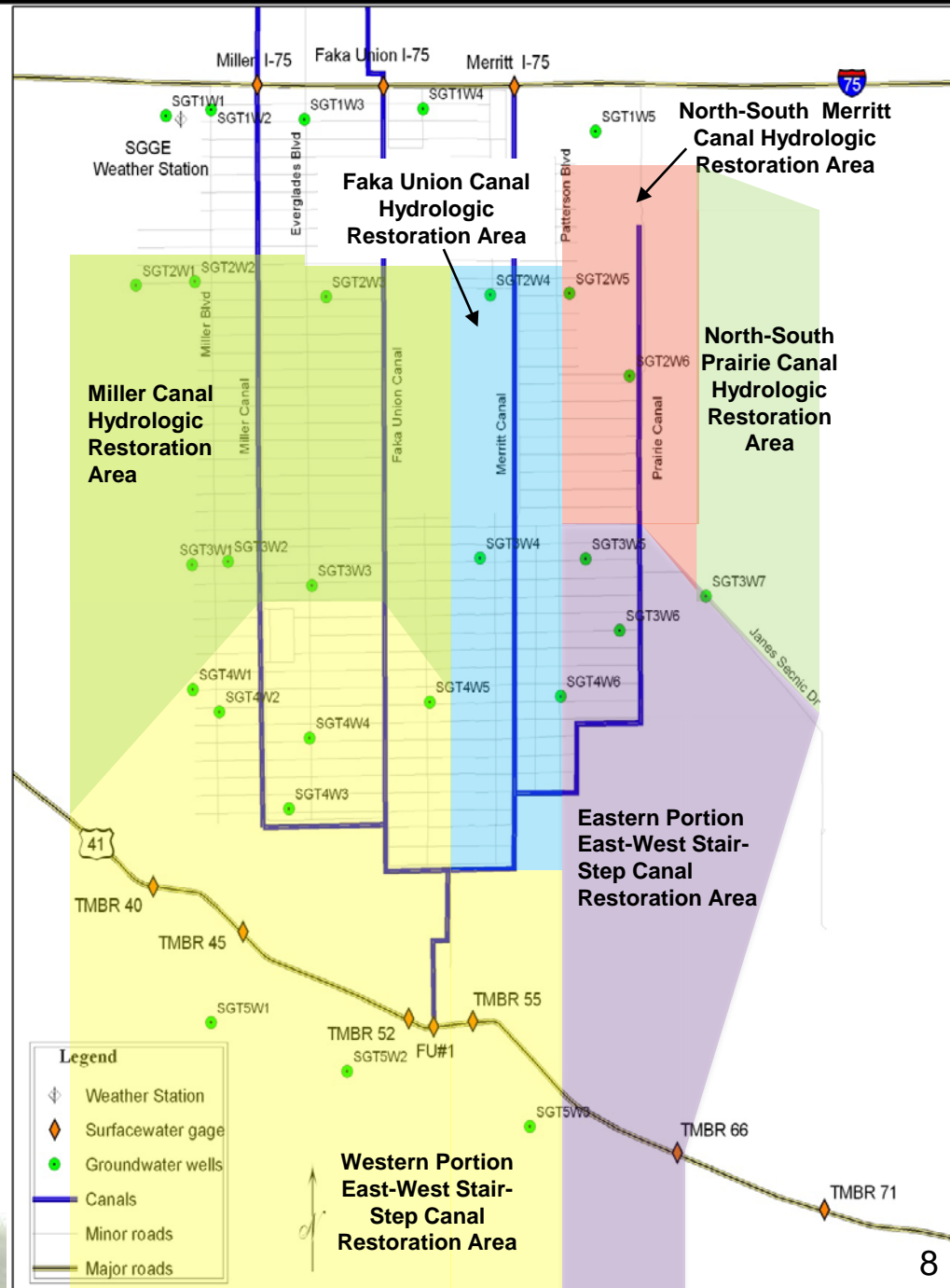
Ecological Basis for Picayune Restoration

- Full range of wetland communities exist over a 24" topographic gradient

HYDROPERIODS AND MAXIMUM WATER DEPTHS



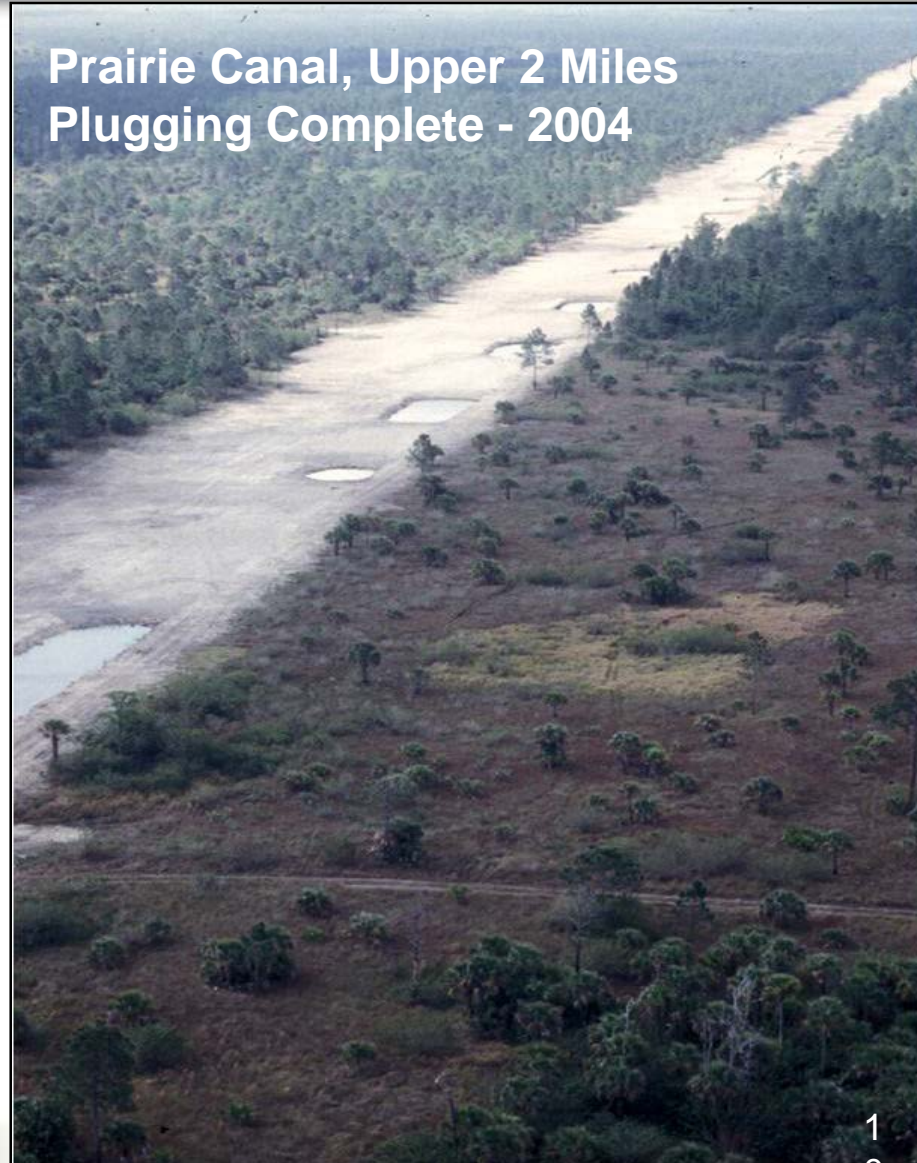
➤ Picayune Strand Hydrologic Restoration Progression



Prairie Canal

➤ North end of Prairie Canal after it was filled and the spoil was leveled

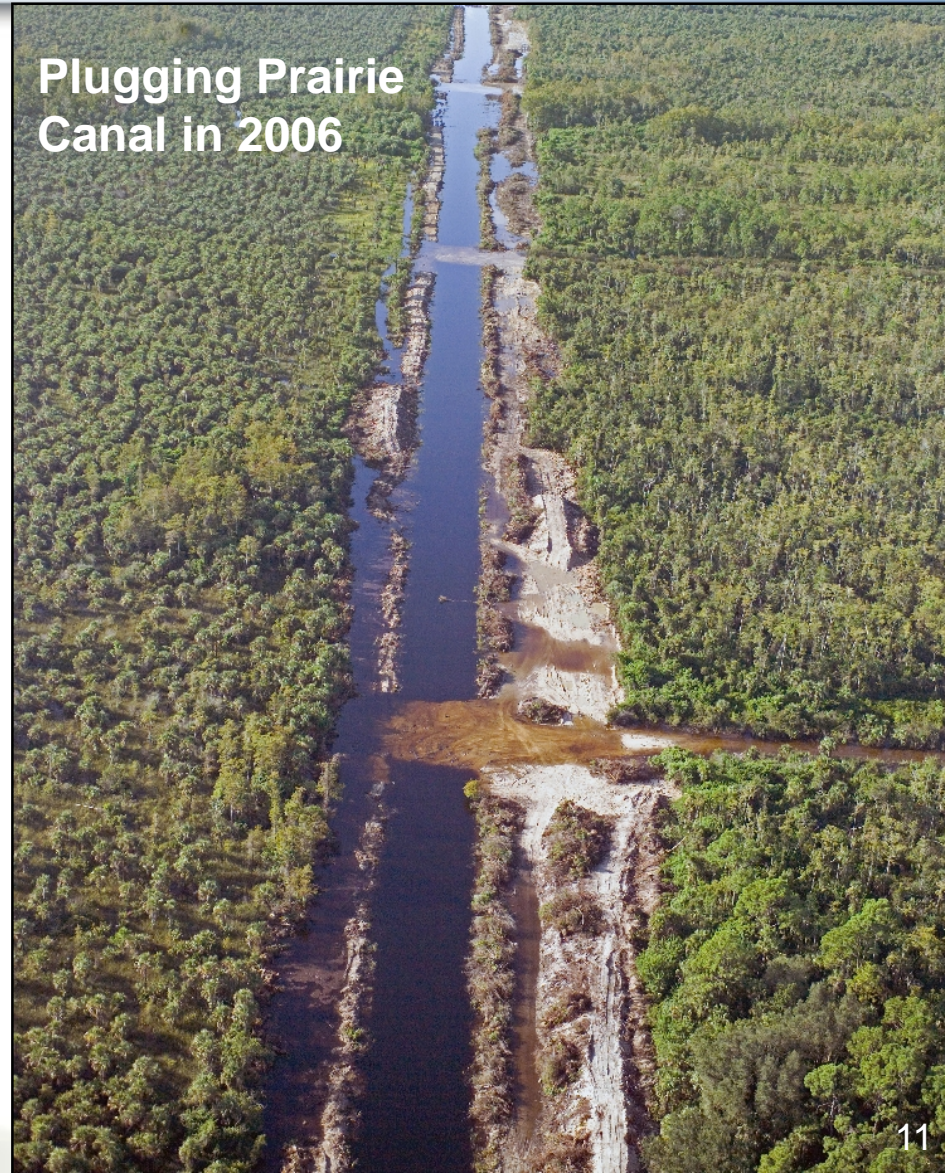
Prairie Canal, Upper 2 Miles
Plugging Complete - 2004



Prairie Canal

- Installation of plugs at ¼ mile intervals in Prairie Canal as the first step in filling the canal

Plugging Prairie Canal in 2006



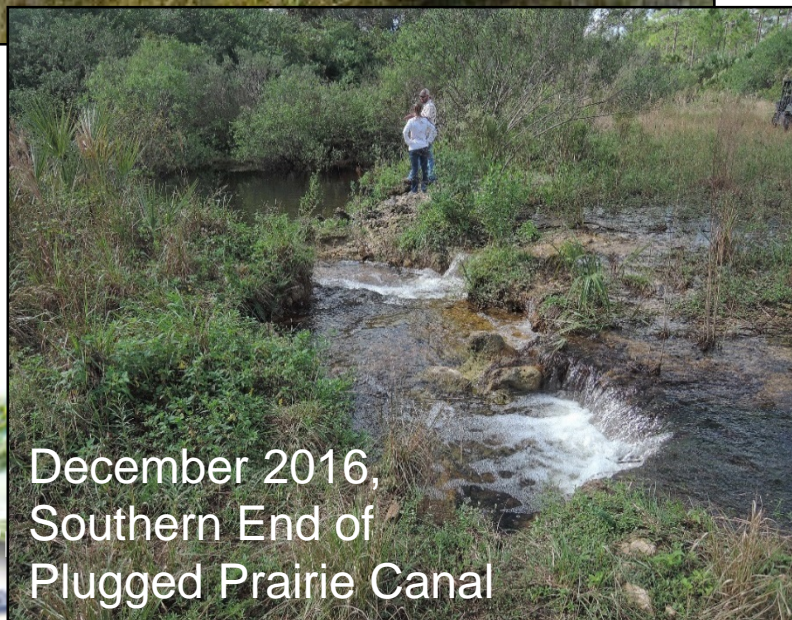
Prairie Canal Restoration to Date



Prairie Canal Summer 2008



Prairie Canal July 2009

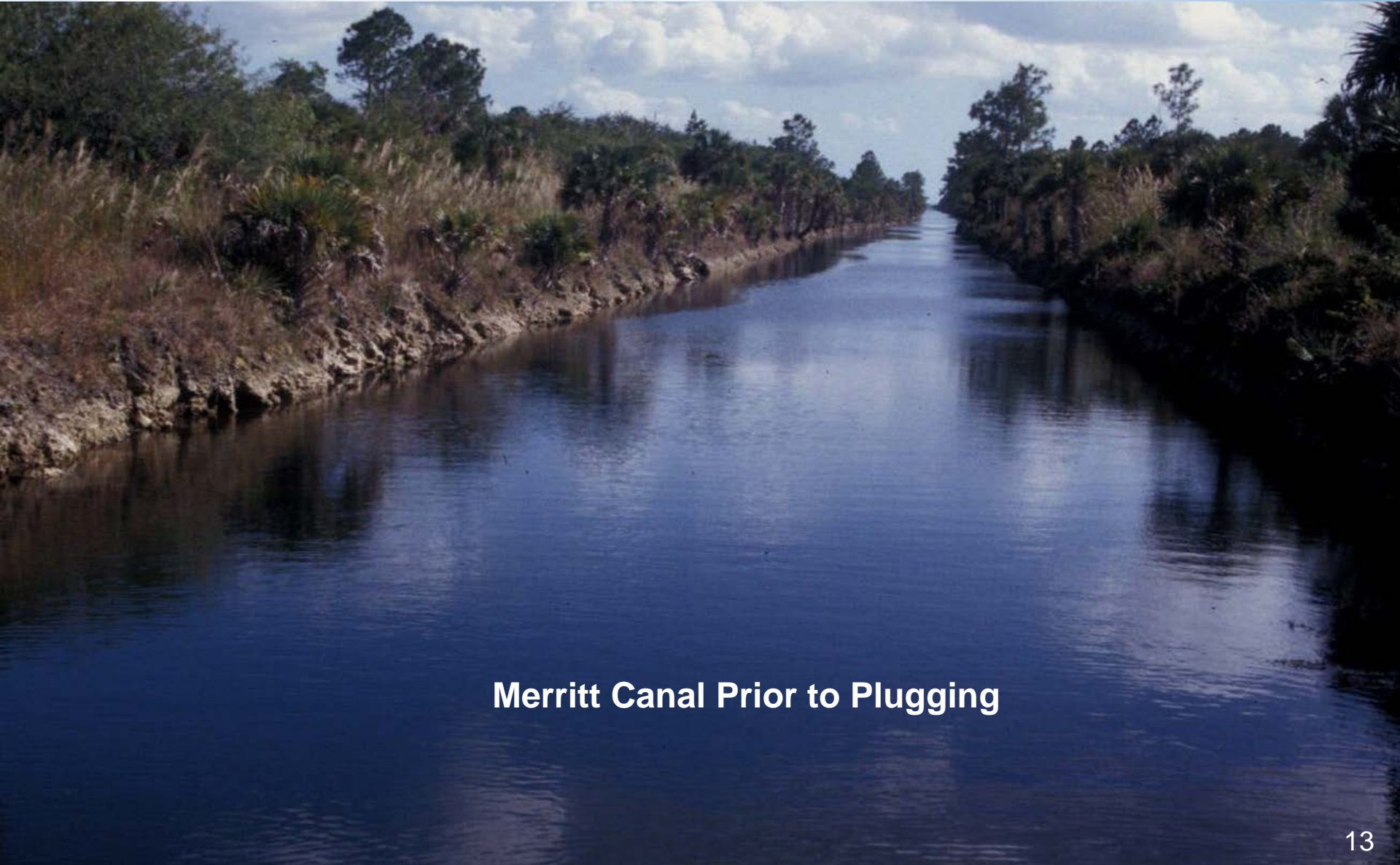


December 2016,
Southern End of
Plugged Prairie Canal



Prairie Canal March 2016

Merritt Canal



Merritt Canal Prior to Plugging

Merritt Canal

Merritt Canal Plugged
Looking North to Merritt Pump Station
December 2015

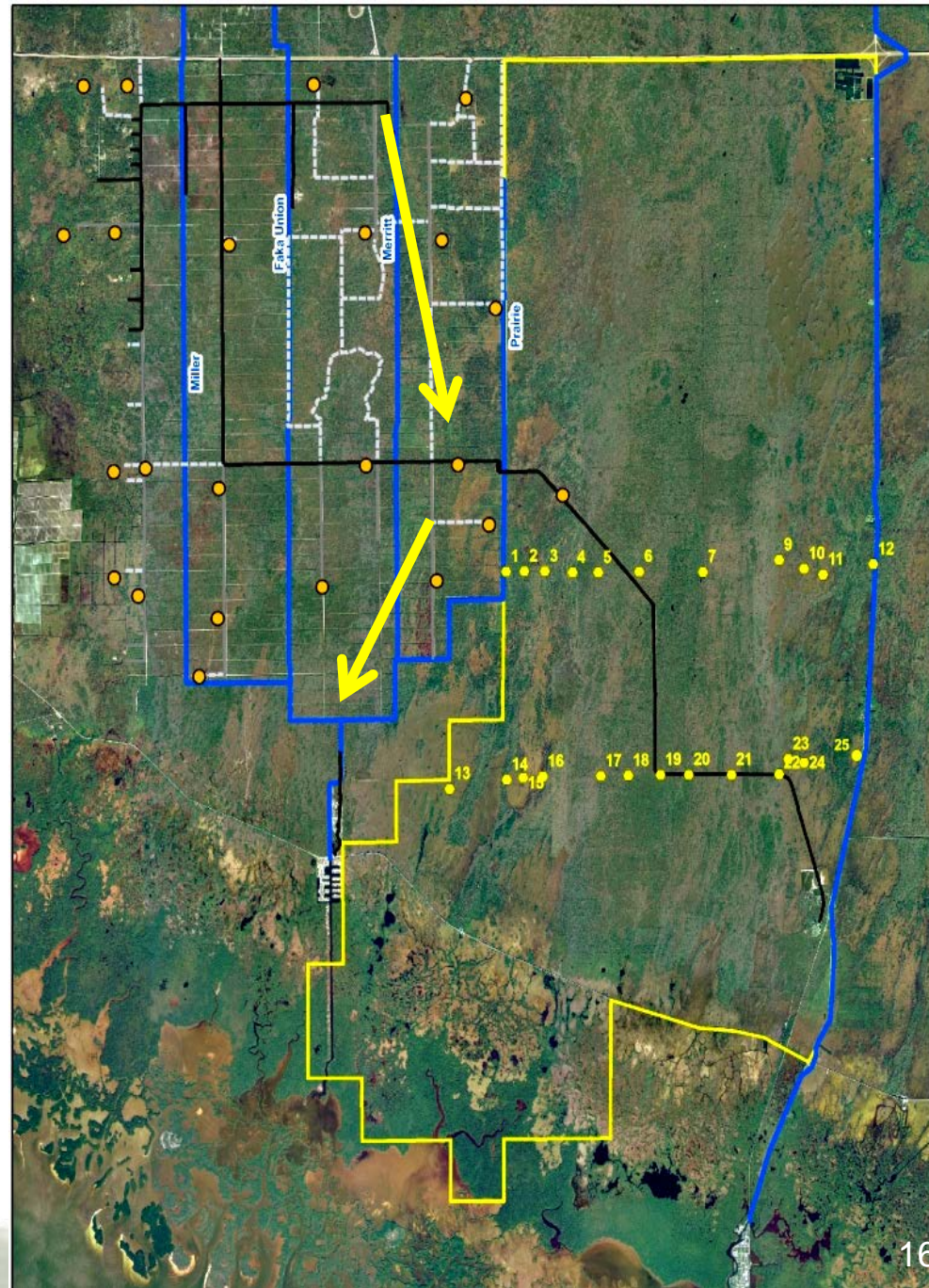


Merritt Canal

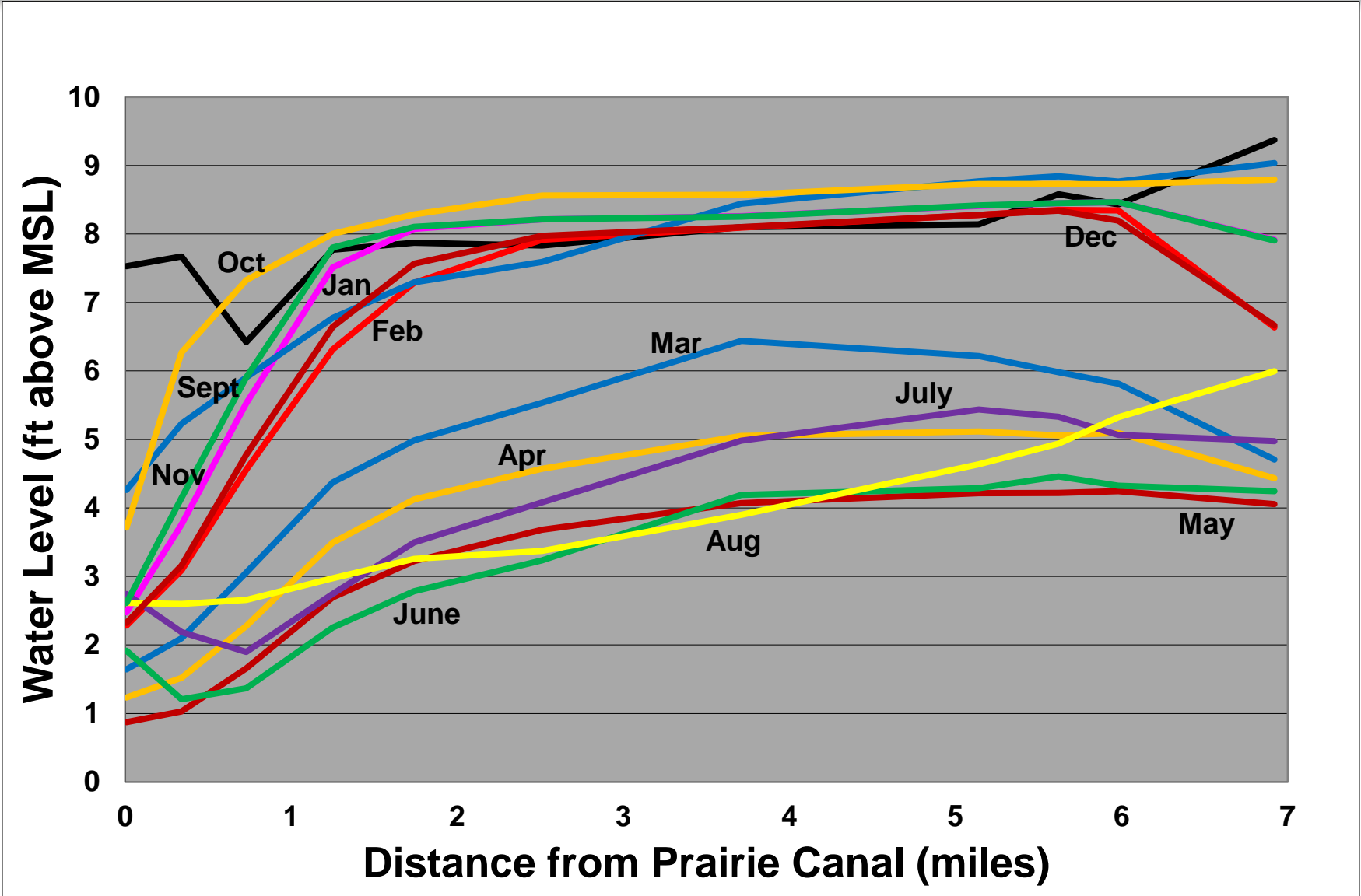
**Merritt Canal Plugged
Looking North from Stewart Boulevard
January 2016**



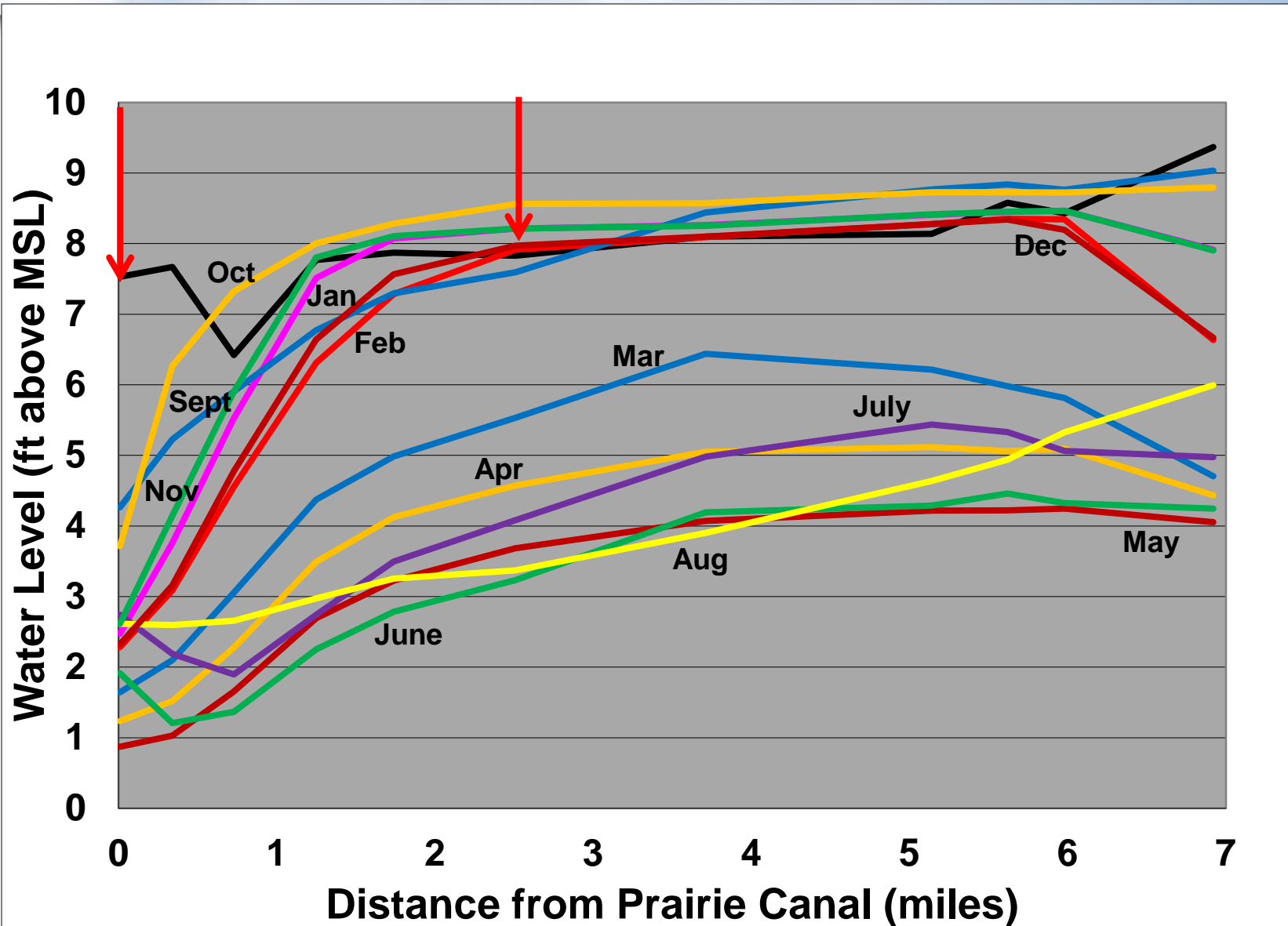
- The main Picayune Flow-way in relation to monitoring well locations in Fakahatchee (●) and the Picayune Strand Restoration Project (●)



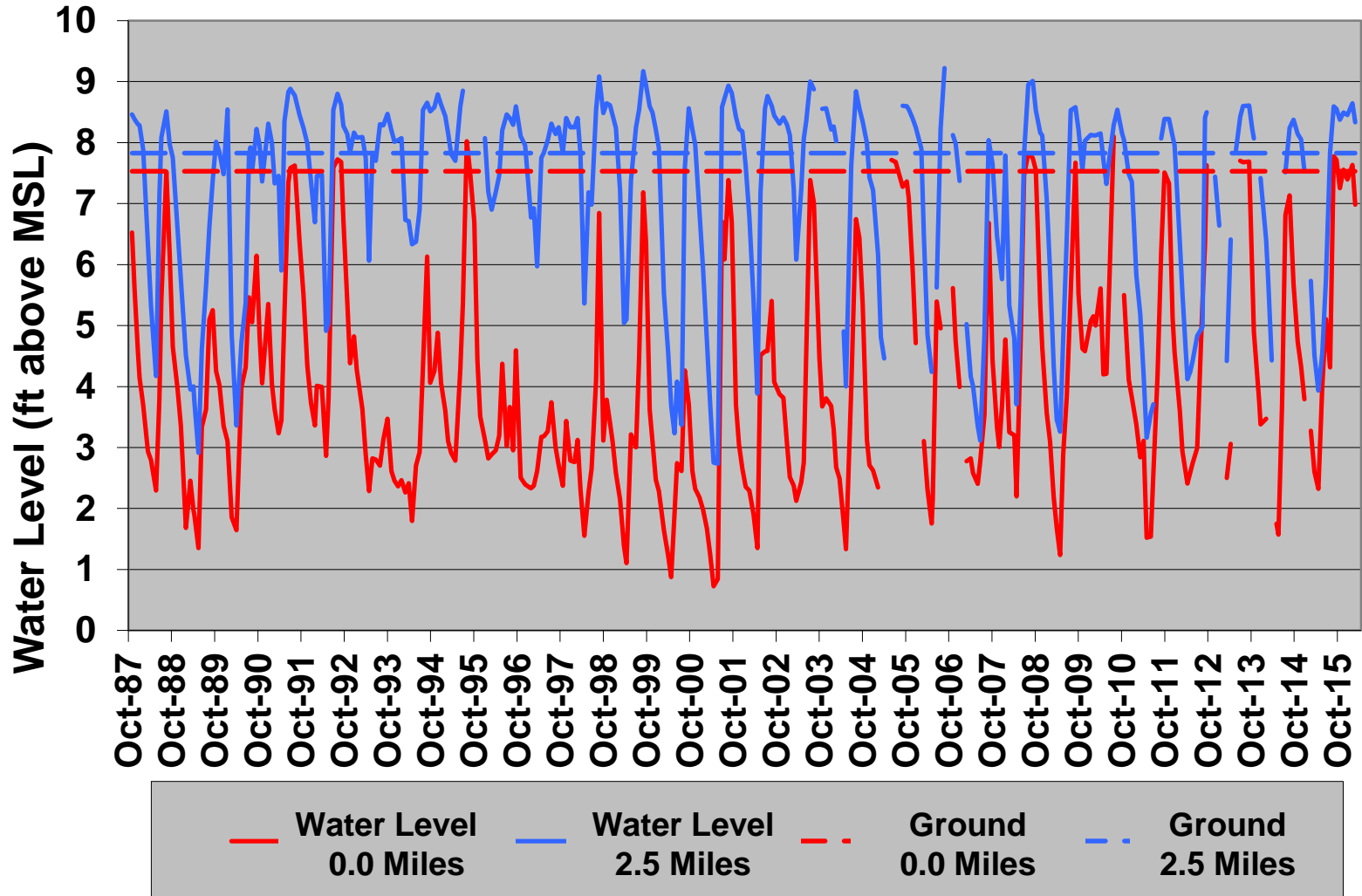
2000 Monthly Water Table Profiles North Transect Wells



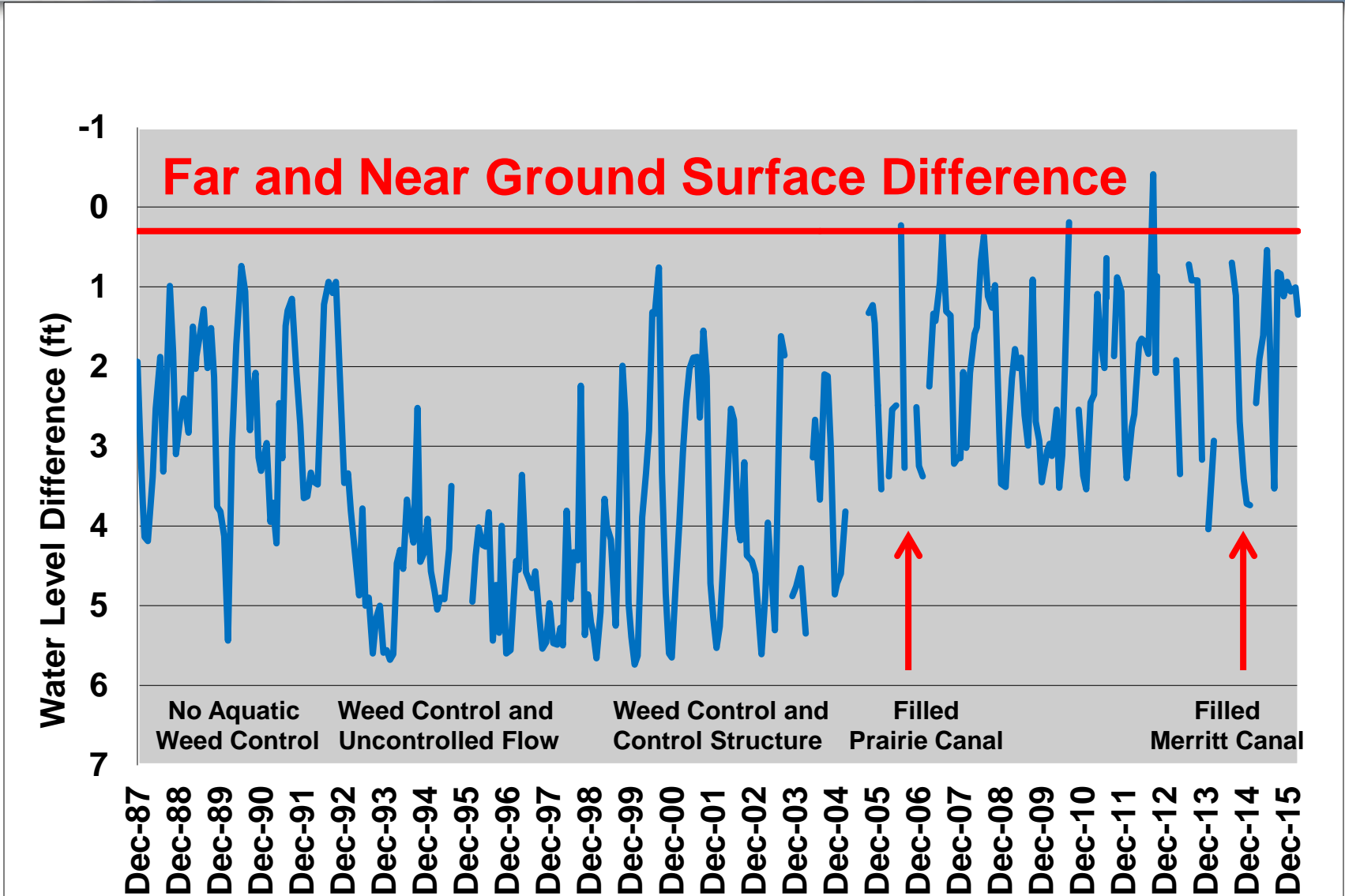
2000 Monthly Water Table Profiles North Transect Wells



North Transect Water Levels from Canal to 2.5 Miles Away

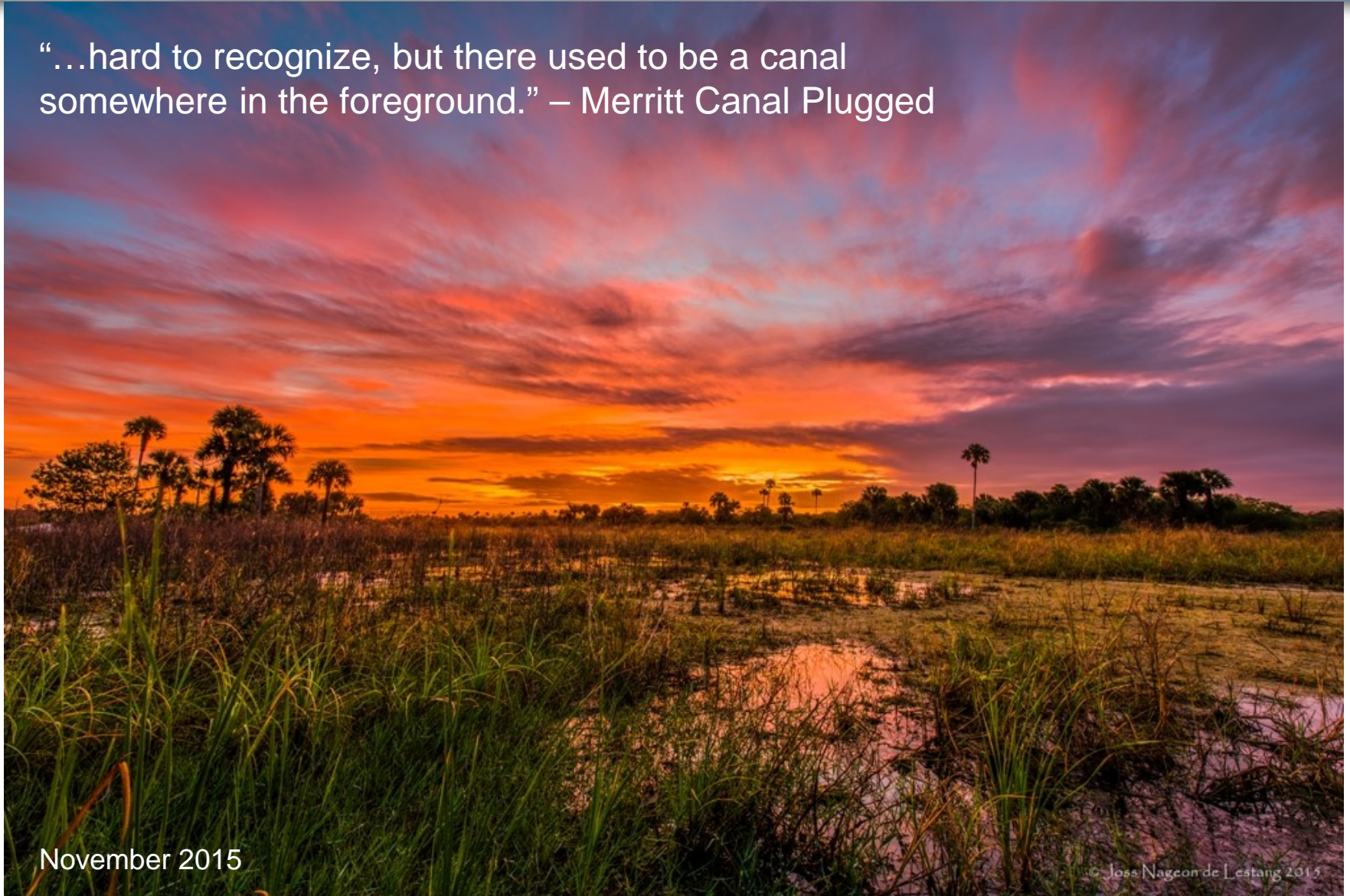


Far (2.51 miles) Minus Near (0.01 mile) Canal Water Level Differences



Questions?

“...hard to recognize, but there used to be a canal somewhere in the foreground.” – Merritt Canal Plugged



November 2015

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