Regaining Overland Flow - Spreadercanals as an Adaptable and Secure Alternative for Flow Control and Habitat Recovery

A. Charles Rowney¹, Victoria Lehr², Dave Weston³ and Ron Armstrong⁴

¹ Manager, ACR, LLC, Orlando, Florida, USA.
² PWI, West Palm Beach, Florida.
³USACE, Jacksonville, Florida.
⁴ PWI, Tampa, Florida.
Huge Hydrologic Changes

Historic Flow

Current Flow
One of the world’s largest and most complex water resource management systems

- Over 1,800 miles of canals and levees
- 160 major drainage basins
- Over 2,000 water control structures
- ~ 200 major structures
- ~ 30 pump stations
Half of the Everglades are Gone
Goal

Restore historical flow distributions and hydrologic connectivity in the ridge and slough landscape, thereby creating an environment suitable for the recovery of native flora and fauna.
Reversing the Damage
Recovery is Beginning

March 2000

September 2000

July 2001
The Present Site
Numerous Potential Flow Paths
Interrupted by Canal System

General Flow Direction
The idea was to spread flows over land and rehydrate.
Canal Removal (Plugging) Efforts Are Well Under Way
A Simple Cut Could Become a Funnel

General Flow Direction
Multiple Outlets Mean Multiple Flow Paths
An Initial Approach
An Initial Approach
A Less Intense Approach
Integration with Terrain Is Key
The End Result

- Low berm along broad front
- Multiple overflow points to guide flow
- Advantages
  - Form sensitive to the situation
  - Minimal structural intervention
  - Maximum adaptive potential
  - Low(est) capital cost
  - Low(est) operating cost
Thank You