



Agriculture & Natural Resources Subcommittee

**Tuesday, February 4, 2014
12:30 PM
Reed Hall (102 HOB)**

**Will Weatherford
Speaker**

**Matthew H. "Matt" Caldwell
Chair**

Committee Meeting Notice

HOUSE OF REPRESENTATIVES

Agriculture & Natural Resources Subcommittee

Start Date and Time: Tuesday, February 04, 2014 12:30 pm
End Date and Time: Tuesday, February 04, 2014 03:30 pm
Location: Reed Hall (102 HOB)
Duration: 3.00 hrs

Presentation by the Department of Environmental Protection Regarding Implementation of Numeric Nutrient Criteria in Florida

Presentation by the Southwest Florida Water Management District Regarding its Facilitating Agricultural Resource Management Systems (FARMS) Program

Presentation by the South Florida Water Management District Regarding Water Storage Projects on Privately Owned Land

NOTICE FINALIZED on 01/28/2014 16:09 by Sims-Davis.Linda

Florida Department of Environmental Protection



Water Resources

House Agriculture & Natural Resources Subcommittee

February 4, 2014

Drew Bartlett, Deputy Secretary
Water Policy & Ecosystem Restoration





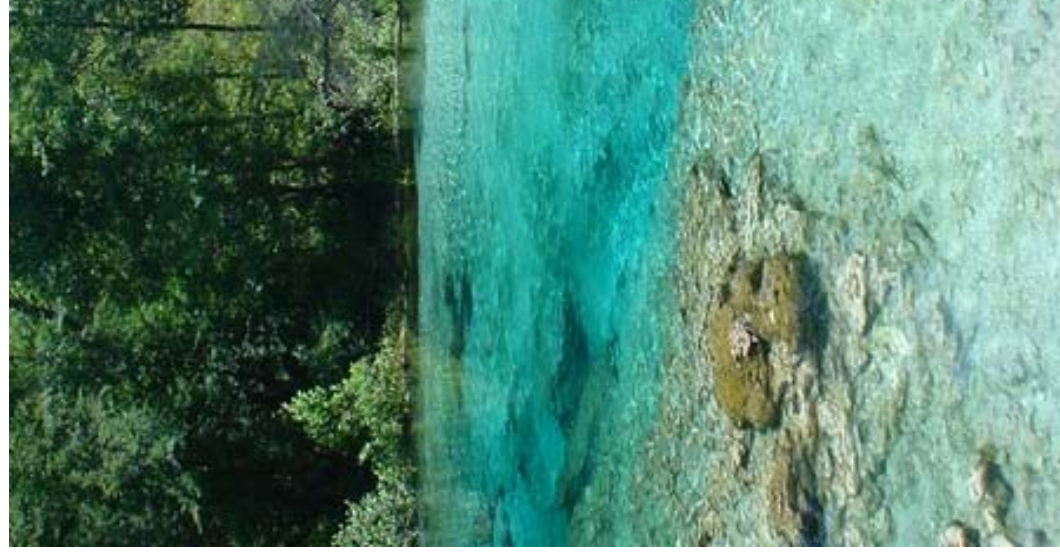
Nutrients and Water Quality Criteria

- Water quality criteria – Pollutant thresholds representing the quality of surface water that will support beneficial uses (*fishing, recreation, shellfish harvesting, drinking water*).
- Nutrients – Total nitrogen, total phosphorus and their various forms, which in excess can cause algae blooms.
 - *The narrative nutrient criterion limits nutrients to concentrations that will support healthy, well-balanced populations of aquatic life.*
 - *Numeric nutrient criteria set protective levels for nitrogen and phosphorus that also account for the unique, site-specific characteristics of different waterbodies and waterbody types.*





Numeric Nutrient Criteria - Timeline



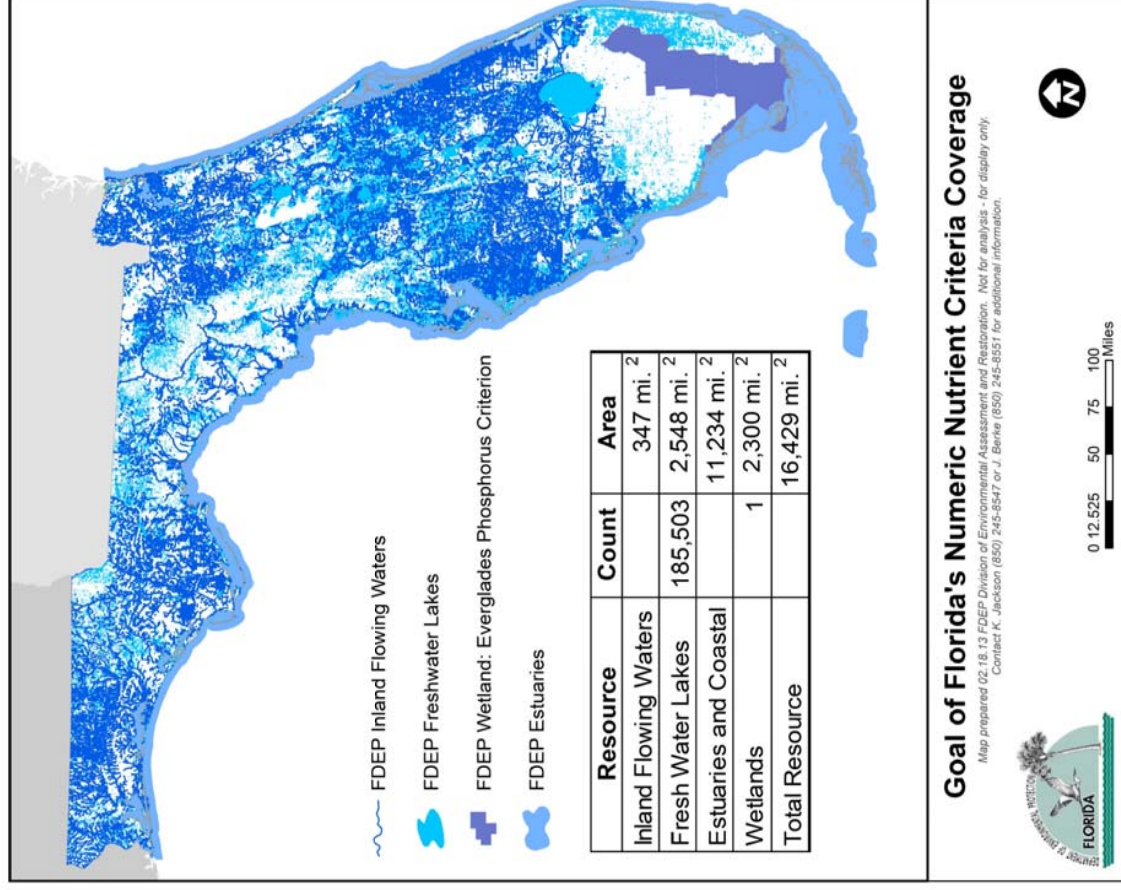
- August 2009 – EPA settled federal lawsuit & entered consent decree to establish federal numeric nutrient criteria if Florida does not
- November 2012 – EPA approved DEP rules and proposed more Federal rules
- March 2013 – DEP and EPA entered Agreement in Principle and Path Forward
- May 2013 – FL Legislature (SB 1808) supported the Agreement in Principle and Path Forward
- September 2013 – Federal Hearing
- January 2014 – Judge Hinkle orders Consent Decree to be modified, endorsing state level criteria



Numeric Nutrient Criteria in Florida

Comprehensive State-Adopted NNC

Florida has state-established numeric nutrient criteria for all lakes, springs, estuaries and coastal waters, and the vast majority of flowing waters

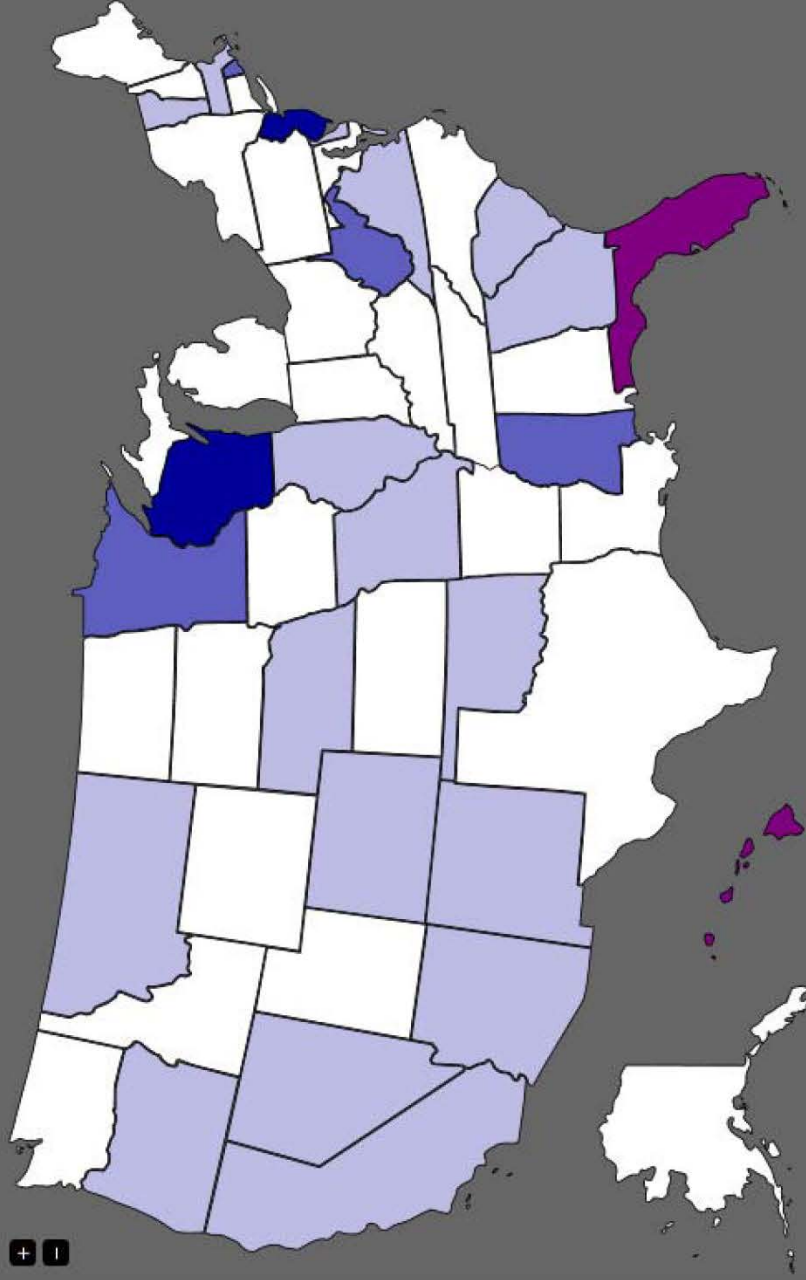




Numeric Nutrient Criteria Nationally

States with Total Nitrogen or Total Phosphorus Criteria

1998 2008 Current 2013* 2014* 2015* 2016*



District of Columbia	Level 5
American Samoa	Level 5
Commonwealth of Northern Marianas	Level 5
Guam	Level 5
Puerto Rico	Level 4
US Virgin Islands	Level 3

Level 5	Complete set of N and P criteria for all waternutrients**
Level 4	2 or more waternutrients with N and/or P criteria
Level 3	1 waternutrient with N and/or P criteria
Level 2	Some waters with N and/or P criteria
Level 1	No N and/or P criteria



Hinkle Decision – Outcome

- Grants EPA's request to modify the consent decree
- Provides legal basis for EPA to cease federal NNC rulemaking in Florida
- Allows the full suite of Florida's NNC to take effect statewide upon EPA rescinding their NNC
- Reaffirms that States are primarily responsible under the Clean Water Act for adopting water quality standards





Contact



Drew Bartlett, Deputy Secretary
Water Policy & Ecosystem Restoration
Drew.Bartlett@dep.state.fl.us, 850.245.2030



Southwest Florida Water Management District

Facilitating Agricultural Resource Management Systems (FARMS) Program

FARMS Program

FARMS is a Best Management Practice (BMP) cost-share reimbursement program for agricultural projects

- Created in 2003 as a cooperative program with FDACS
- Five Program Goals
 - Shell, Prairie, Joshua Creek
 - Upper Myakka River/Flatford Swamp
 - Southern Water Use Caution Area
 - Northern District
 - Dover/Plant City
- New Goal Consideration
 - Springs Protection/Restoration



FARMS Program

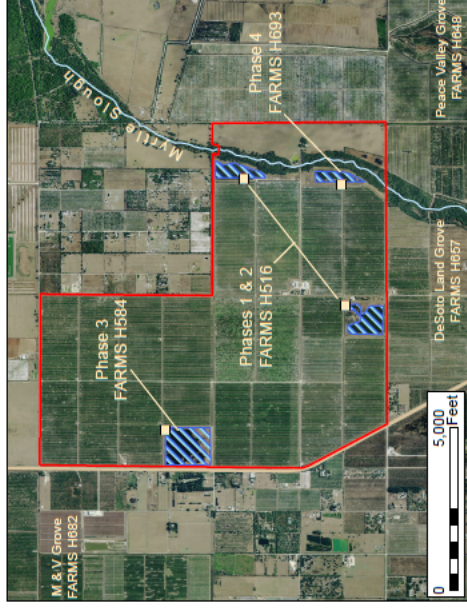
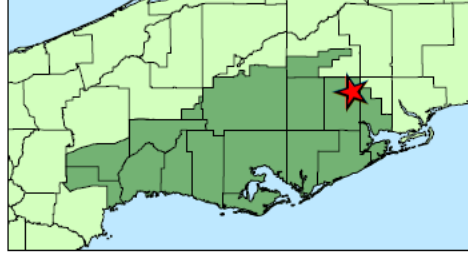
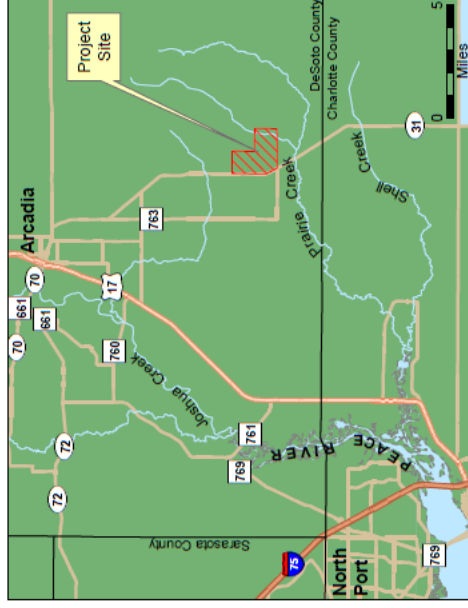
- Key Program Elements
 - Provide between 50-75% funding reimbursement
 - Eligible cost-share items are equipment/hardware
 - Pumps/Pipe
 - Precision irrigation systems
 - Surface water control structures
 - Must meet cost-benefit criteria
 - Must enter into cooperative agreement with District
 - 5-20 years
 - Modify Water Use Permit to reflect project changes



Hancock Grove – DeSoto County

- 1,556 acre citrus grove
- Permitted amount = 1,398,900 gpd
- Estimated groundwater savings = 734,980 gpd
- Total project cost = \$1,950,873
- FARMS cost = \$1,336,743

FARMS Project Location Map Hancock Grove - Blue Goose Growers Phases 1 & 2 (H516), Phase 3 (H584), Phase 4 (H693)



LEGEND

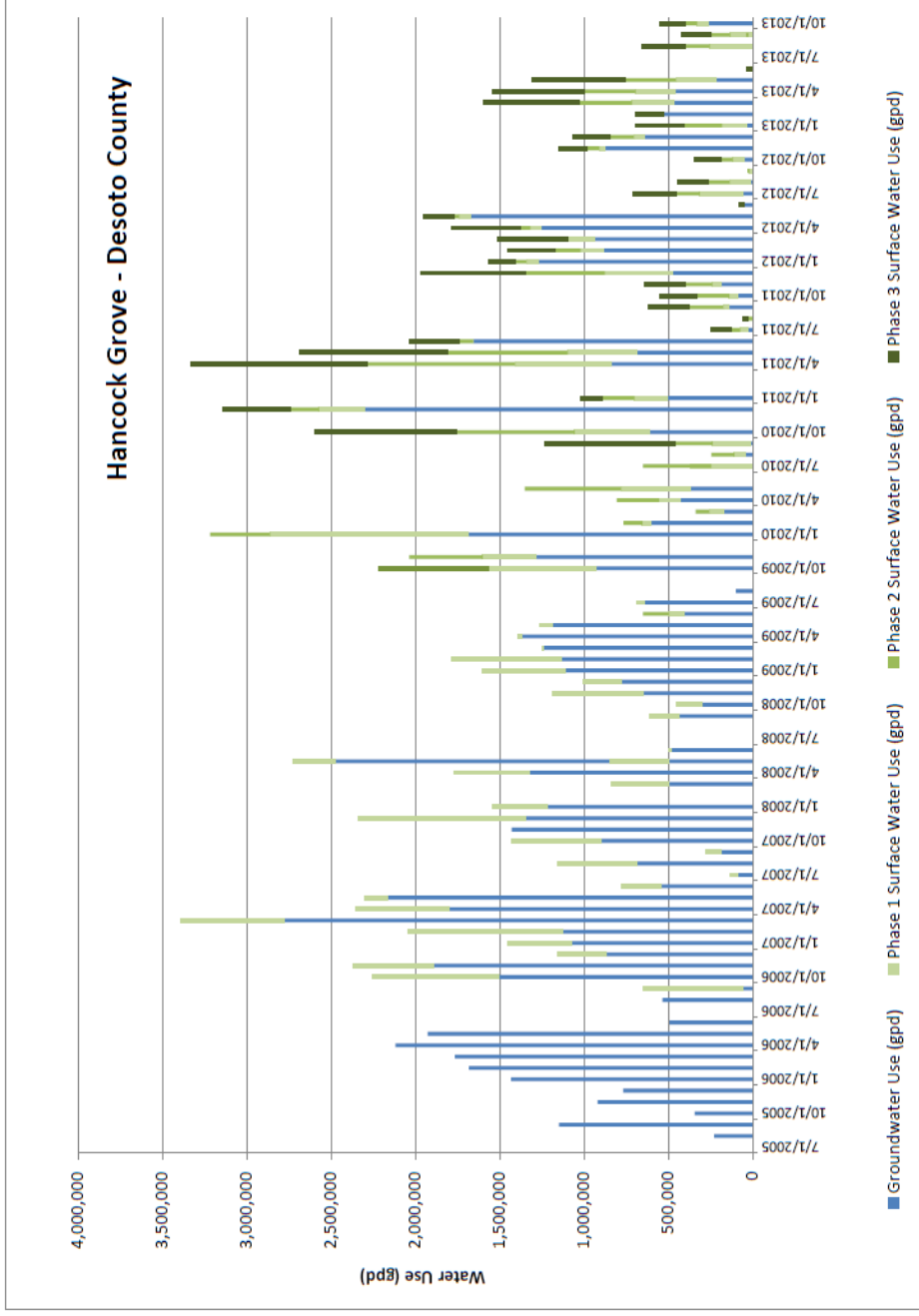
- SWFWMD Boundary Area & FARMS Project Location
- Boundary Hancock Grove Property & WUP 6765
- Irrigation Reservoir & Project Pump Station

DeSoto County

DLB 1/28/2014
2011 Aerial
2009 NAVTEC



Hancock Grove – DeSoto County

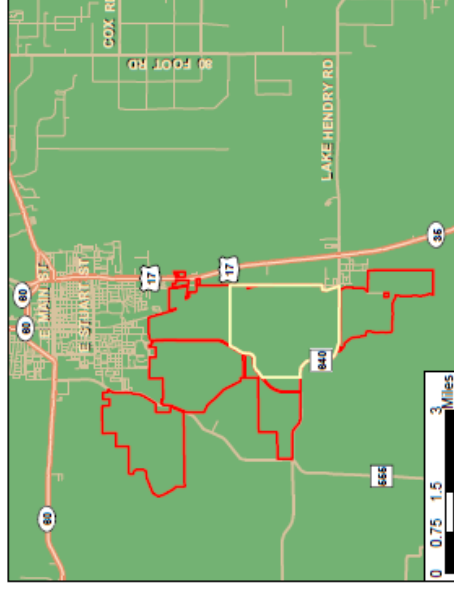


Actual groundwater use reduced to date is 737,045 gpd

Clear Springs Enterprises, LLC – Polk County

- 414 acre blueberry farm
- Permitted amount = 908,200 gpd
- Estimated groundwater savings = 439,120 gpd
- Total project cost = \$843,492
- FARMS cost = \$492,750

Location Map Clear Springs Enterprises LLC FARMS Project - (H627)



Legend

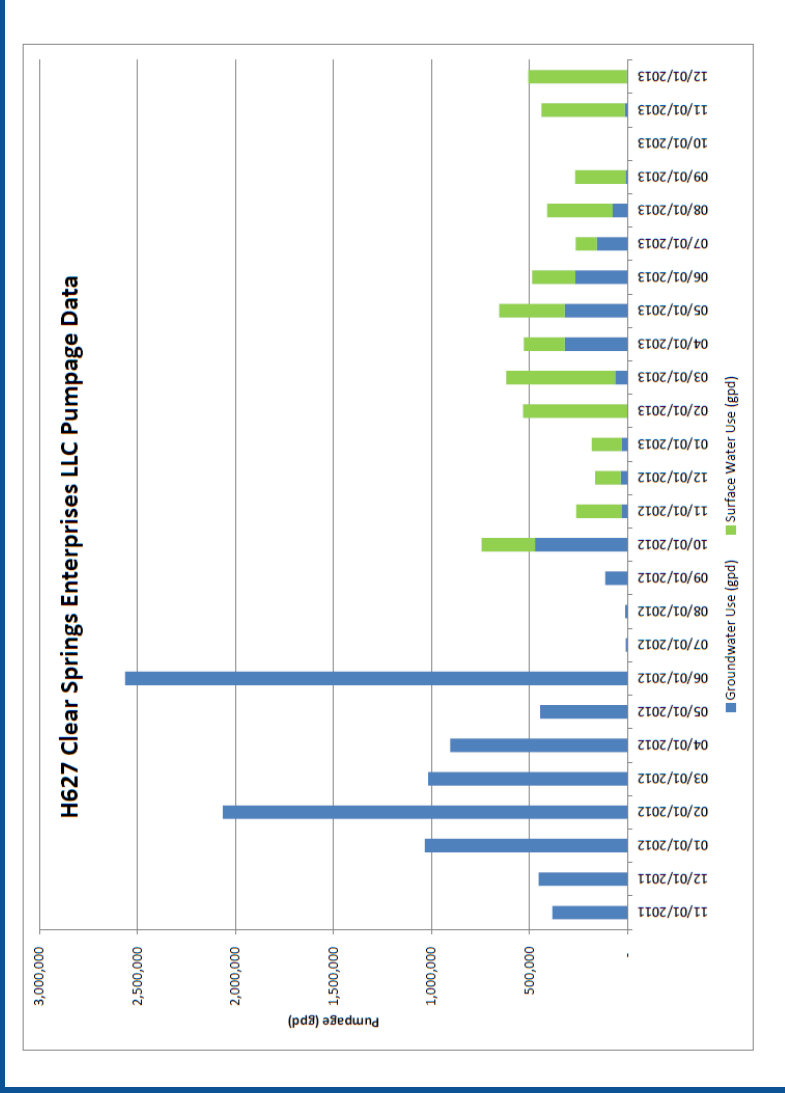
- Surface Water Pump Stations
- Connection to Mainline
- Existing Reservoir
- Project Area
- WUP Boundary 20 013867.065

Polk County

Southwest Florida
Water Management District

2011 ACSI
2013 NAWTQ

Clear Springs Enterprises, LLC – Polk County

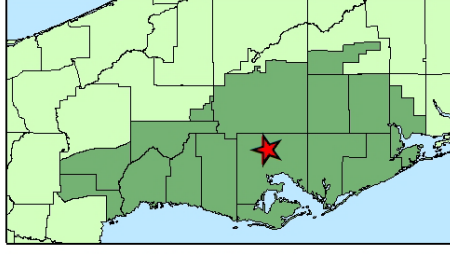
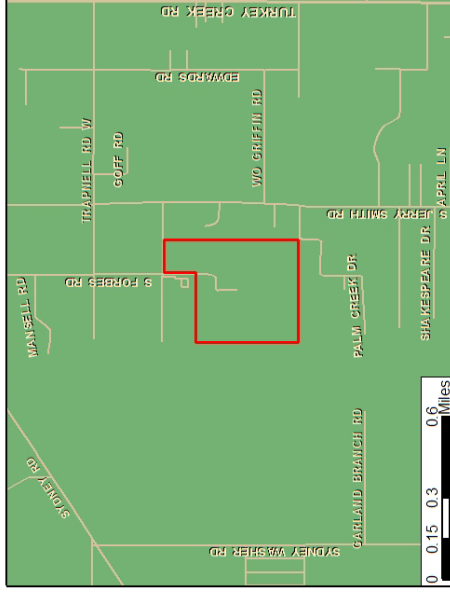
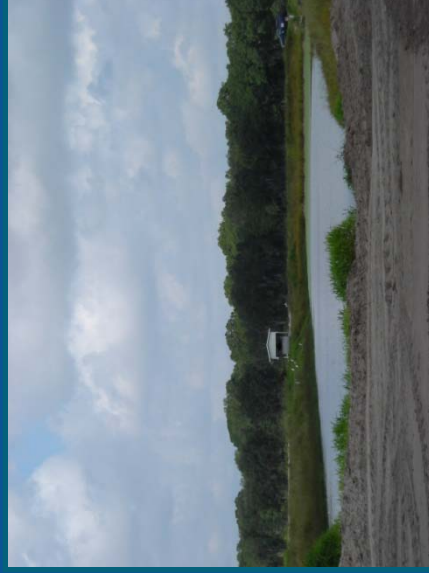


Actual groundwater use reduced to date is
303,464 gpd

Strawberry Red Ranch, LLC

Location Map Strawberry Red Ranch, LLC FARMS Project - (H561)

- 100 acre strawberry farm
- Permitted amount = 307,900 gpd
- Estimated groundwater savings = 60,800 gpd
- Total project cost = \$335,000
- FARMS cost = \$167,500



Legend

- Existing Groundwater Wells
- Proposed Culvert
- Proposed Surface Water Pump Stations
- Existing Pond
- Proposed Ponds

Hillsborough County

FARMS
Florida Agricultural Resource Management System

Southwest Florida
Water Management District

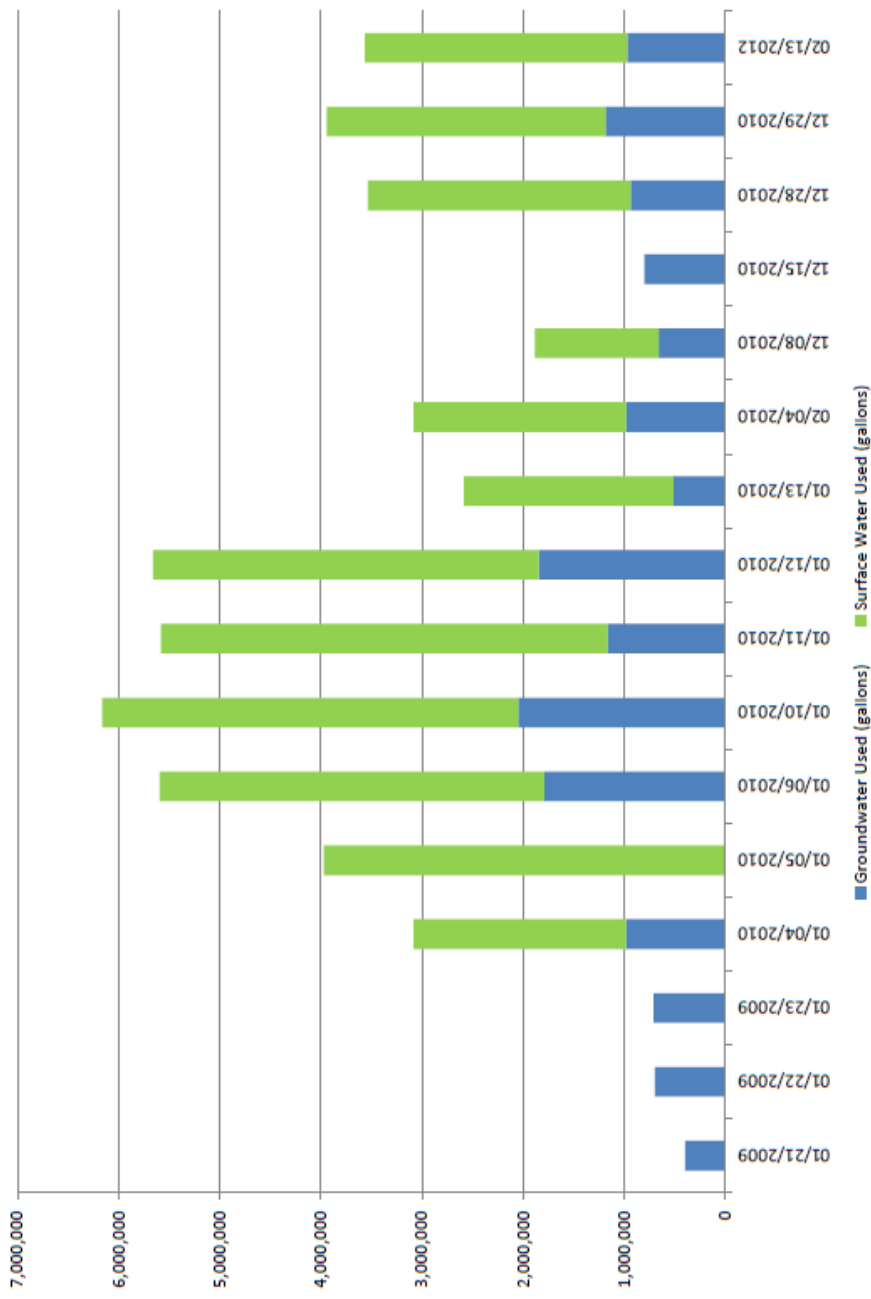
INITIALS: DATE
2017: Aarib
2012: NAVTEC

Strawberry Red Ranch, LLC

68% of all frost/freeze protection now provided by surface water



Strawberry Red Ranch Cold Protection Events



FARMS Program

...by the Numbers...

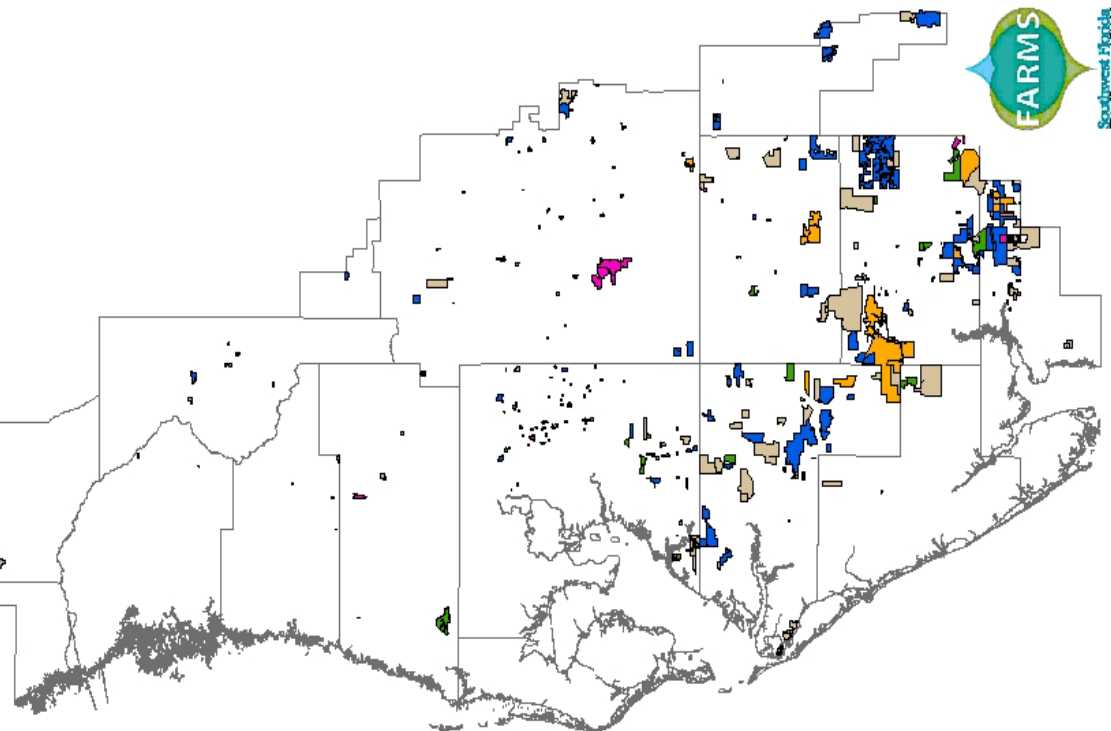
- 158 Governing Board approved projects
 - ~24.7 MGD projected groundwater offset
- 130 complete and operational projects
 - ~ 20.9 MGD measured offset
 - Average total project cost ~\$349,165
 - Average District/State funding ~53%
 - Average farmer funding ~47%
 - Average actual groundwater offset ~125,763 gallons per day





Board Approved and Potential FARMS Projects

- Legend**
- FARMS Projects - Pending Board Approval
 - FARMS Projects - Operational
 - FARMS Projects - Under Construction
 - FARMS Projects - Potential
 - FARMS Projects - Dormant
 - SWFWMD Boundary



FARMS Program

- Grower Incentives
 - Improved crop yield
 - Improved crop quality
 - Reduced costs
 - Resource protection and recovery





Dispersed Water Management Program Overview

Agriculture and Natural Resources Subcommittee Meeting

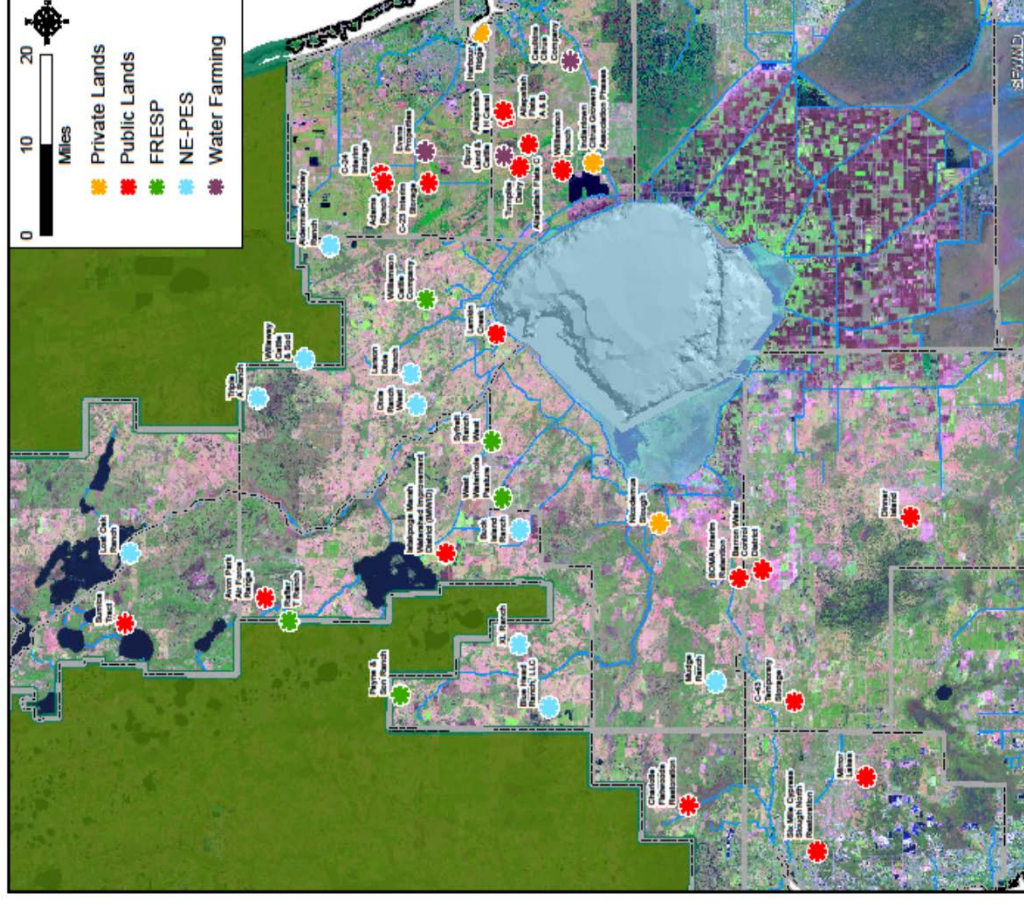
February 4, 2014

Blake Guillory
SFWMD Executive Director



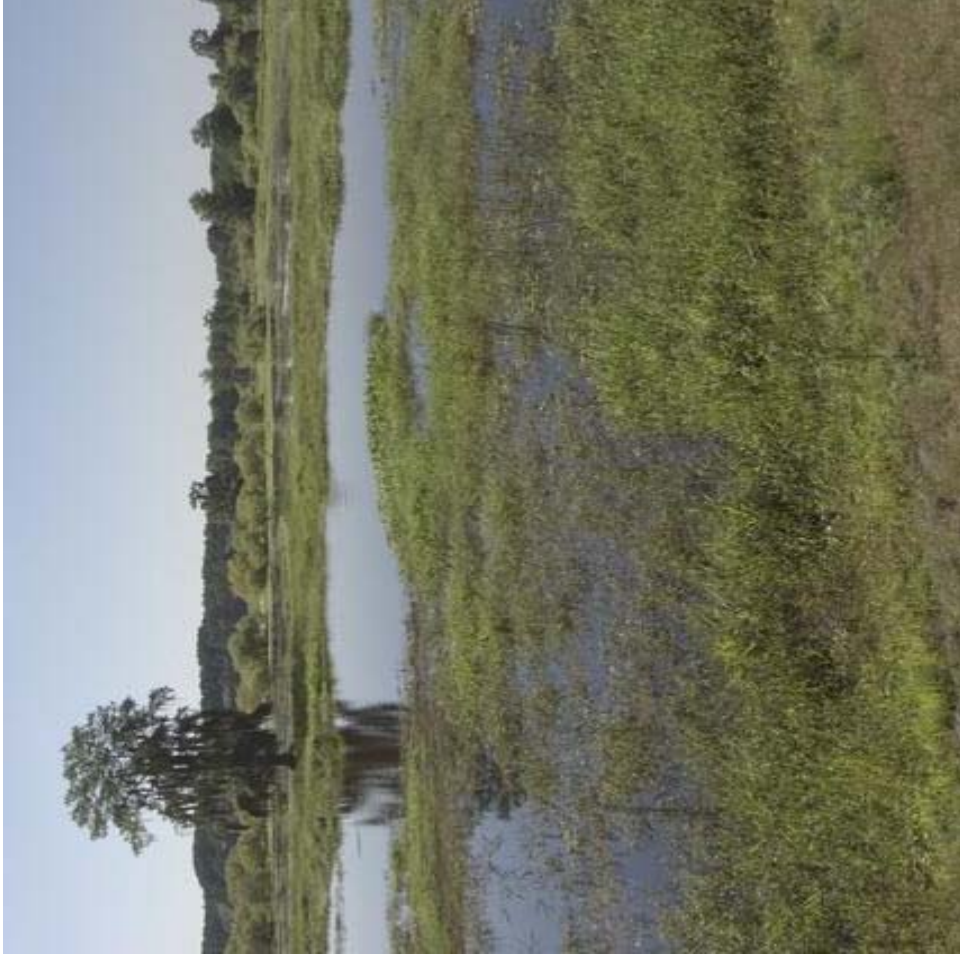
Primary Project Types

- Florida Ranchlands Environmental Services Project Pilot
- Northern Everglades - Payment for Environmental Services
- Private lands
- Water Farming
- Public Lands



Program Benefits

- Increased water storage
- Less water sent to Lake Okeechobee and estuaries
- Reduced nutrient loadings
- Increased groundwater recharge
- Improved habitat
- Rapid implementation



Dispersed Water Management (DWM)

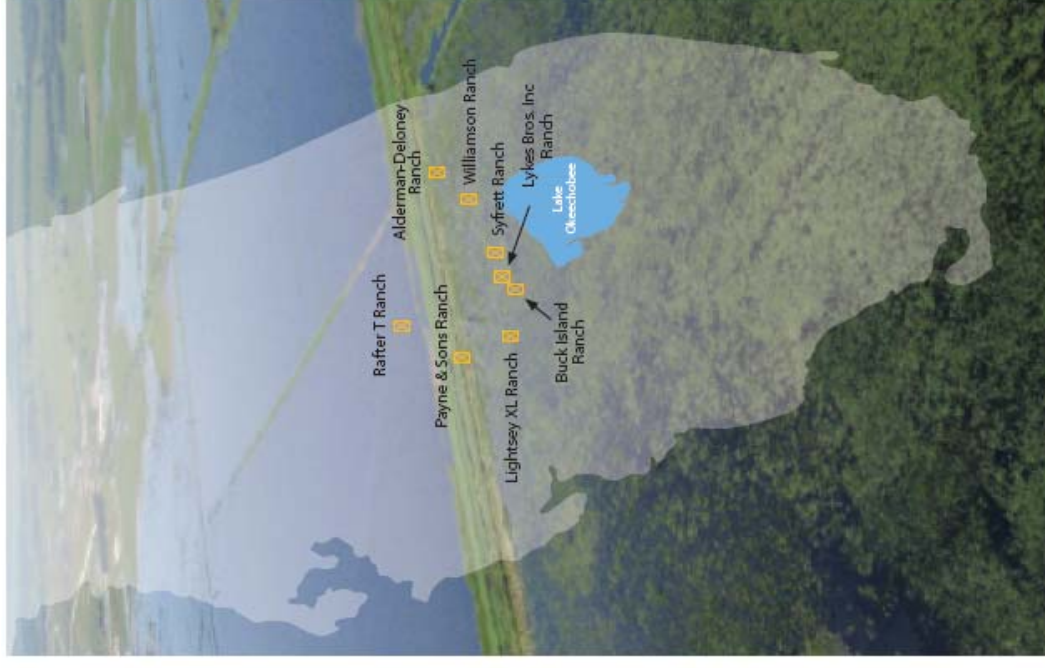
Definition: Shallow water distributed across parcel landscapes using relatively simple structures

DWM=FRESP=NEPES=Water farming

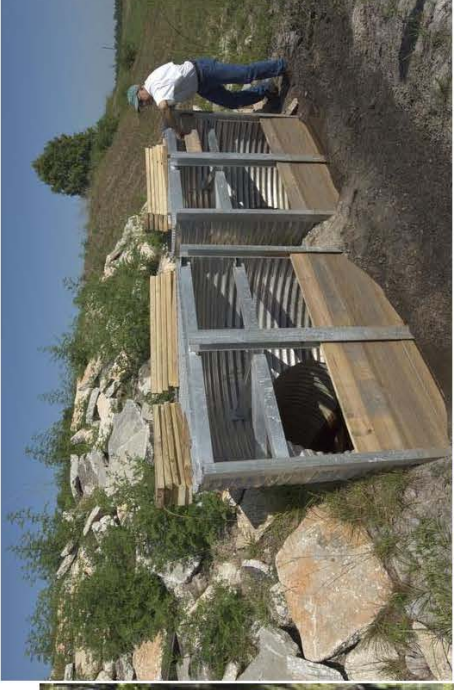
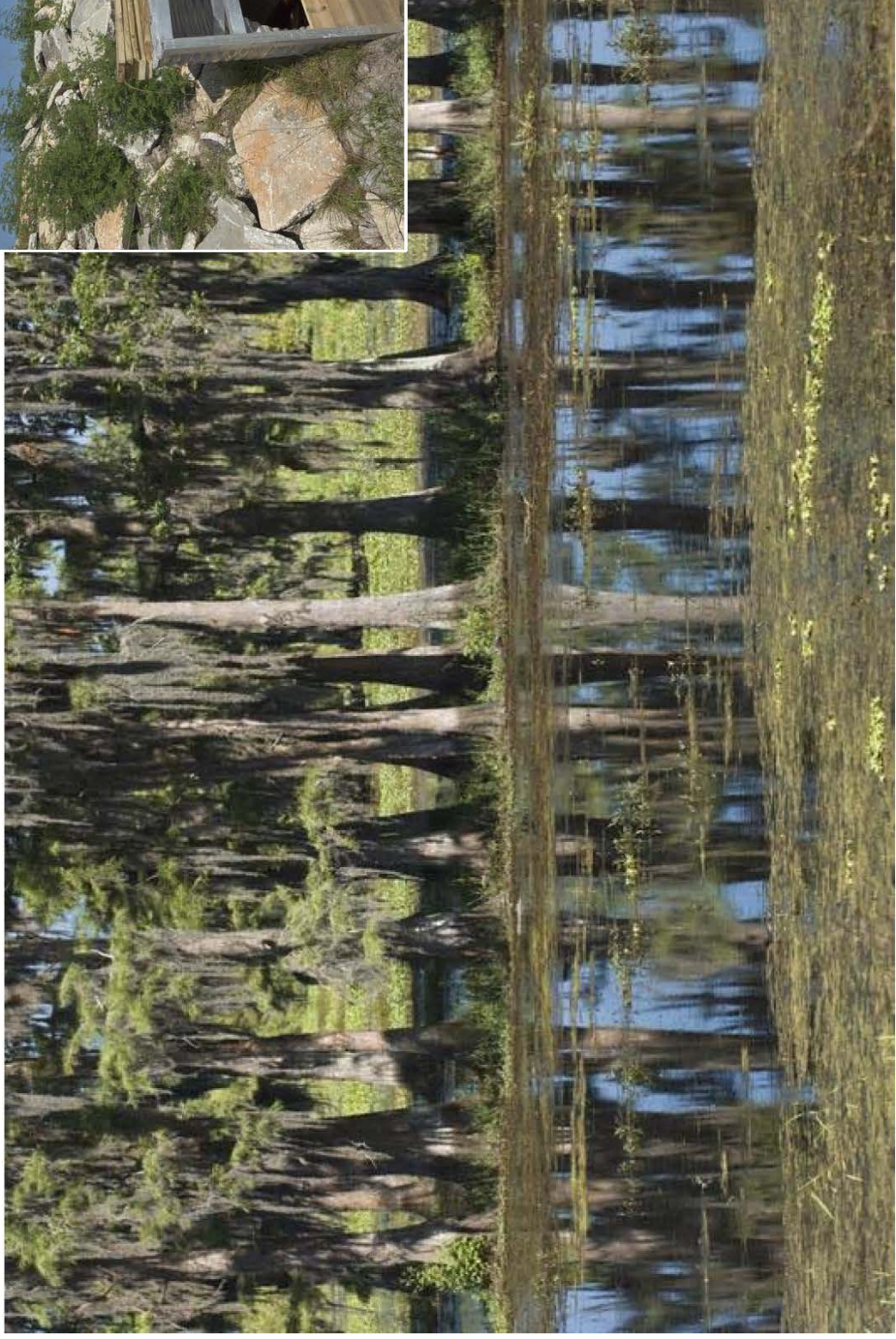


Florida Ranchlands Environmental Services Projects (FRESP)

- Public/private collaboration
- Field test market-based payment for water retention and phosphorus reduction
- Eight pilot projects; 3 years of operation



Example: FRESP



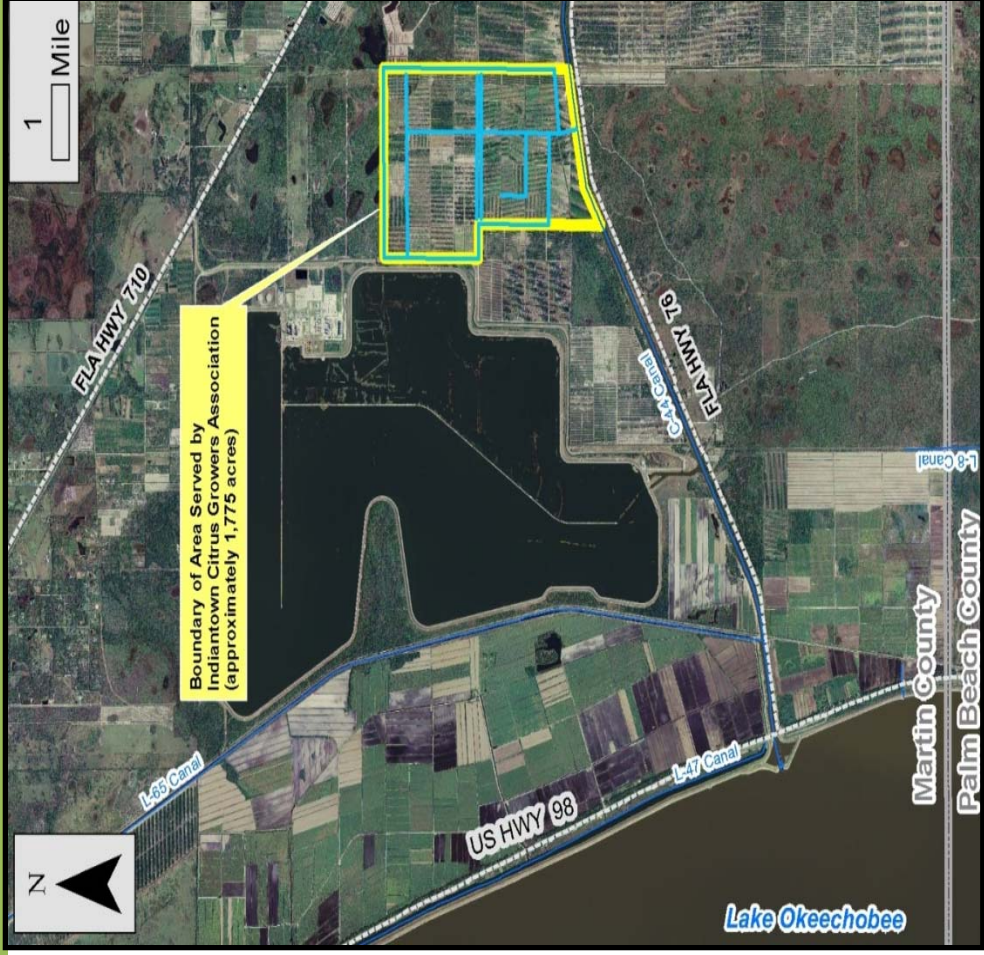
Rafter T Ranch – Highlands County

Example: Private Lands Projects



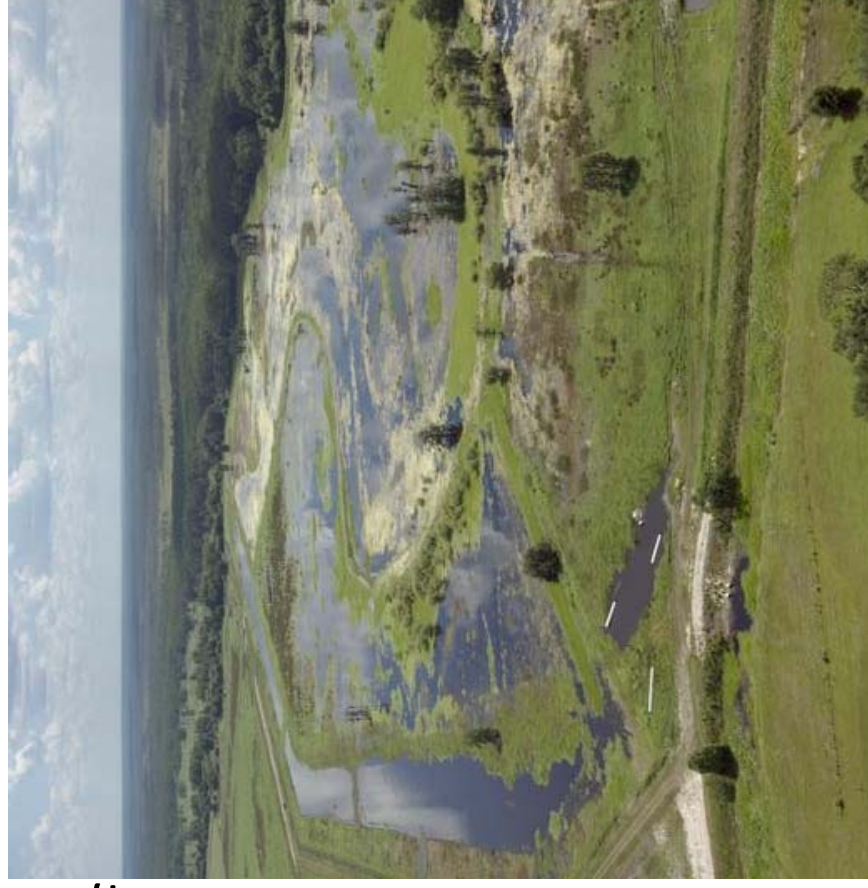
Nicodemus Slough – Glades County

Example: Private Lands Projects



Northern Everglades Payment for Environmental Services (NE-PES)

- 2011 Competitive bid process based on success of FRESP
- Eight initial contracts
 - Total 4,800 ac-ft/yr
- Two new projects added in 2013 (NEPES 2)



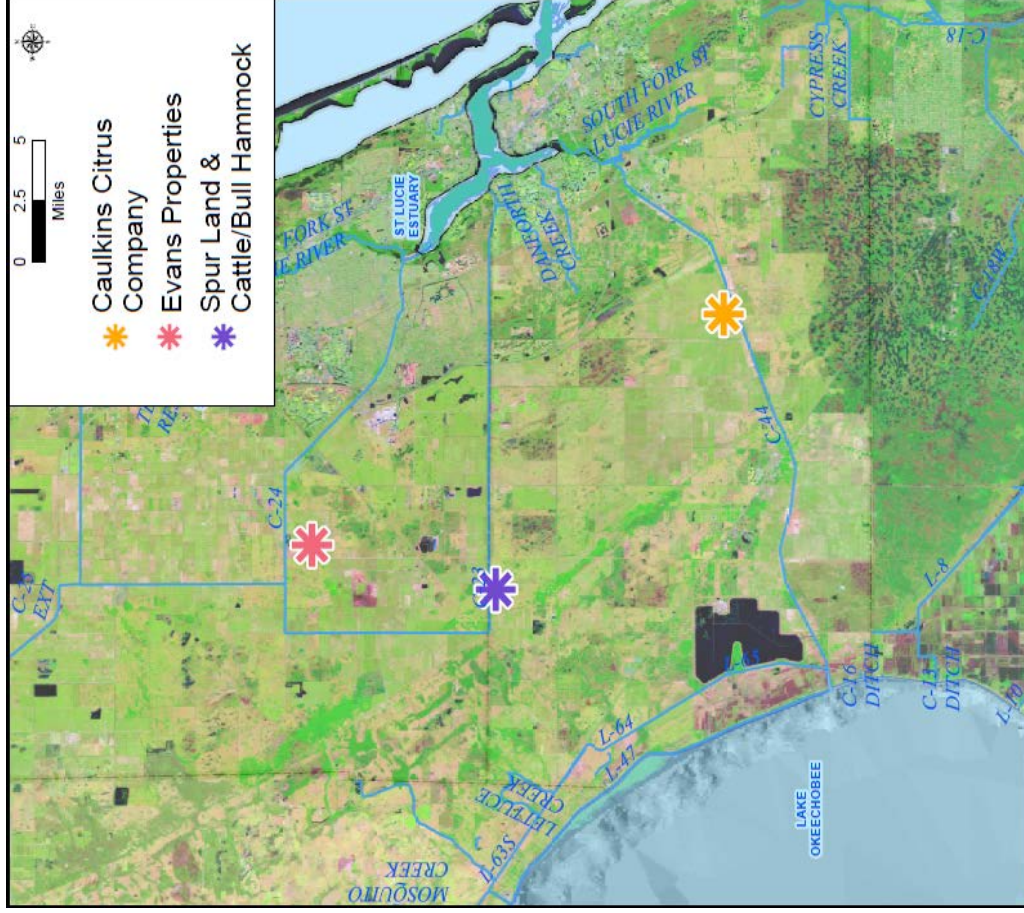
Example: NE Payment for Environmental Services



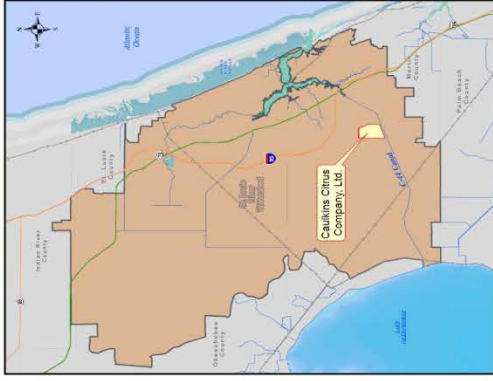
Dixie Ranch – Okeechobee County

Water Farming Payment for Environmental Services

- Cooperative Agreements to conduct feasibility analysis
 - Gulf Citrus Growers Association
 - Indian River Citrus League
- Grant funding for 3 pilots:
 - Caulkins Citrus
 - Evans Properties
 - Spur Land & Cattle/Bull Hammock Ranch



Example: Water Farming



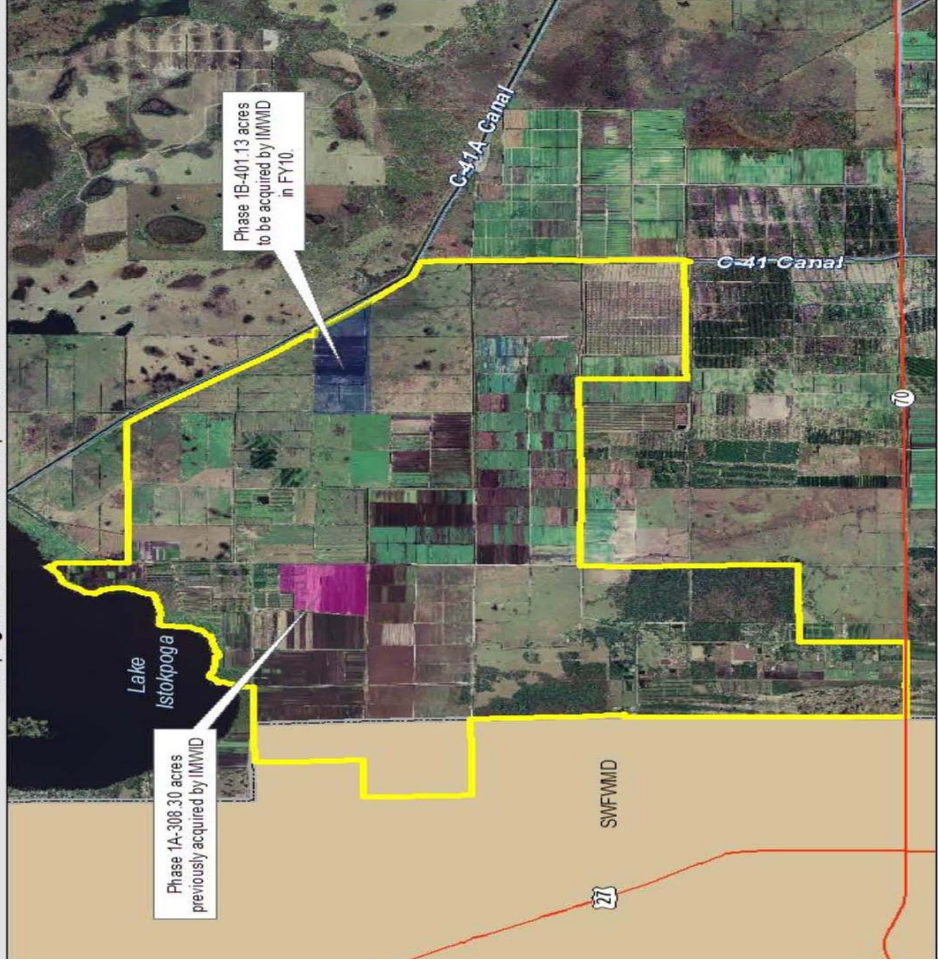
Caulkins Citrus Company – Martin County

Example: Public Lands Project



BOMA Site – Glades County

Example: Public Lands Project



Istokpoga Marsh Watershed Improvement District

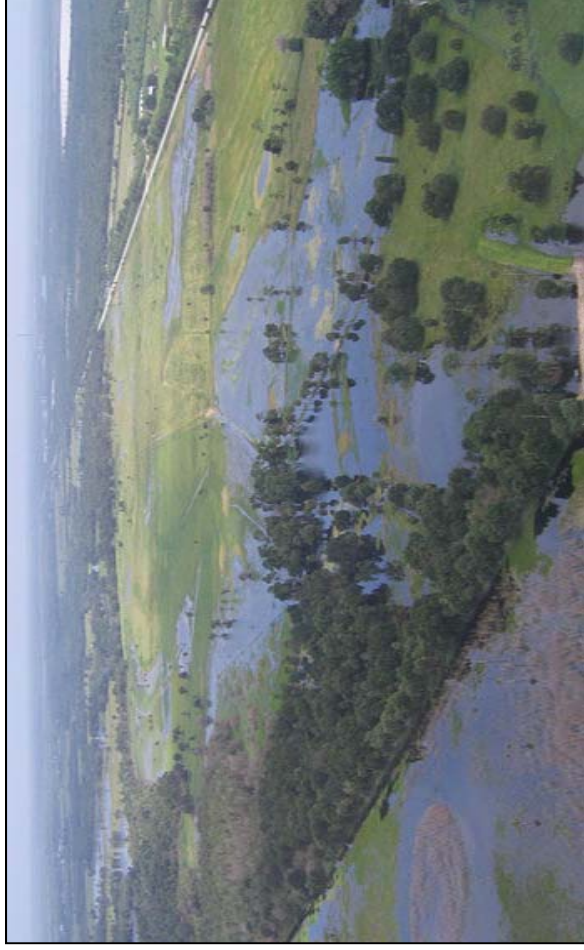
– Highlands County

Example: Public Lands Project

Allapattah Flats –
Martin County

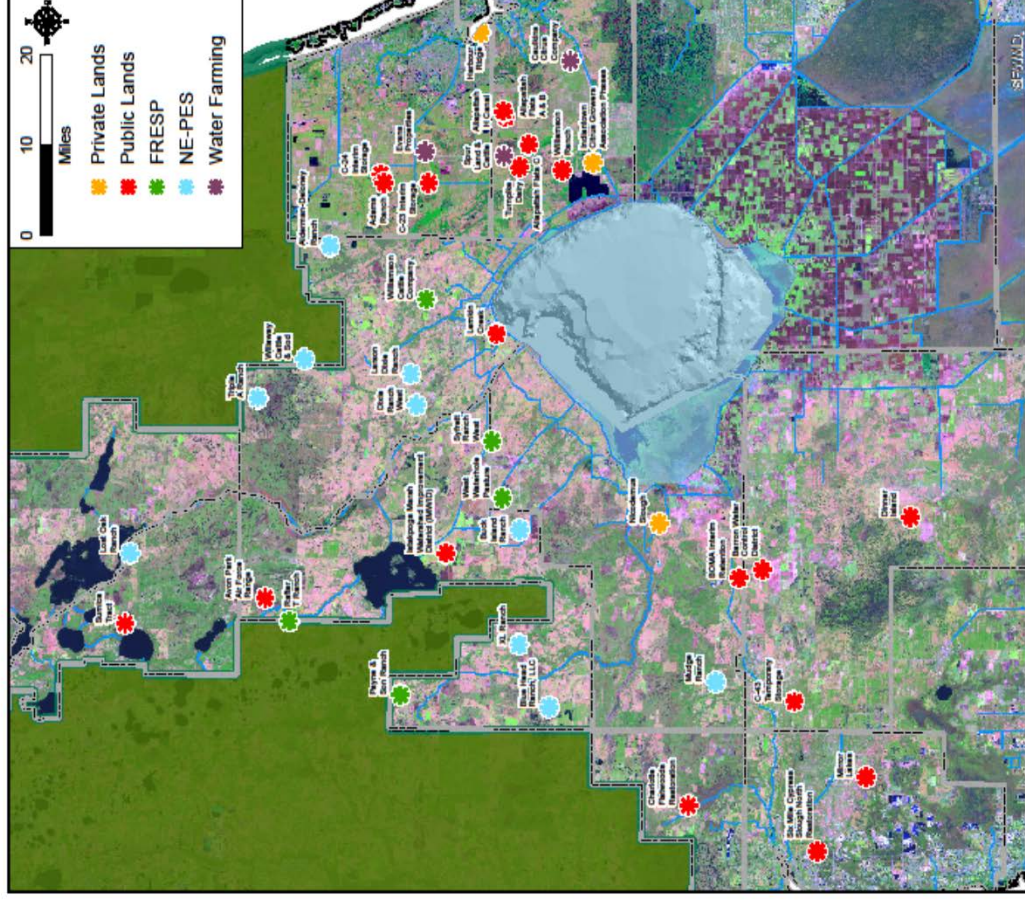


Williamson Ranch –
Martin County



Summary of Created Additional Storage

- 47,900 acre-feet of operational storage
- Another 53,000 ac-ft nearing completion
- ~\$6 million/yr.



South Florida Water Management District
16000 W. US Highway 1, Suite 100
Orlando, Florida 32837
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Economic Benefits

- Avoids high cost of land acquisition & management
- Keeps land on local tax rolls
- Supports community & economy
- Sustains jobs



Challenges

- Projects are temporary
- Limited operational flexibility
- Small volumes per acre require numerous contracts
- High monitoring costs per acre-feet provided
- Comparisons to regional projects is apples to oranges



Thank You