

Dispersed Water Management Program Update



**Temperince Morgan, Director
Office of Everglades Policy and Coordination
South Florida Water Management District
July 11, 2013**

Dispersed Water Management (DWM)

Goals and Objectives

- Shallow water storage, retention and detention
- Enhance Lake Okeechobee and estuary health by reducing discharge volumes
- Reduce nutrient loading to downstream receiving systems
- Expand groundwater recharge opportunities

Project Types

- Private Lands Projects
- Public Lands Projects
- FRESP & NE-PES Projects
- Water Farming Pilot Projects

DWM Private Lands Projects

Cooperative Agreements with Private Landowners

- Agreements with private entities to cost share the design, permitting, or construction of water resource related projects
- Typically exceptional circumstance to justify an individual agreement such as, large cost effective benefit to the regional system, also solves local or regional water resource related problem, benefits to multiple watersheds
- Costs (based on 4 typical projects)
 - Average: 31 \$/ac-ft/yr
 - Range: 3-97 \$/ac-ft/yr



DWM Public Lands Projects

Dispersed Water Management Projects on Public Owned Lands

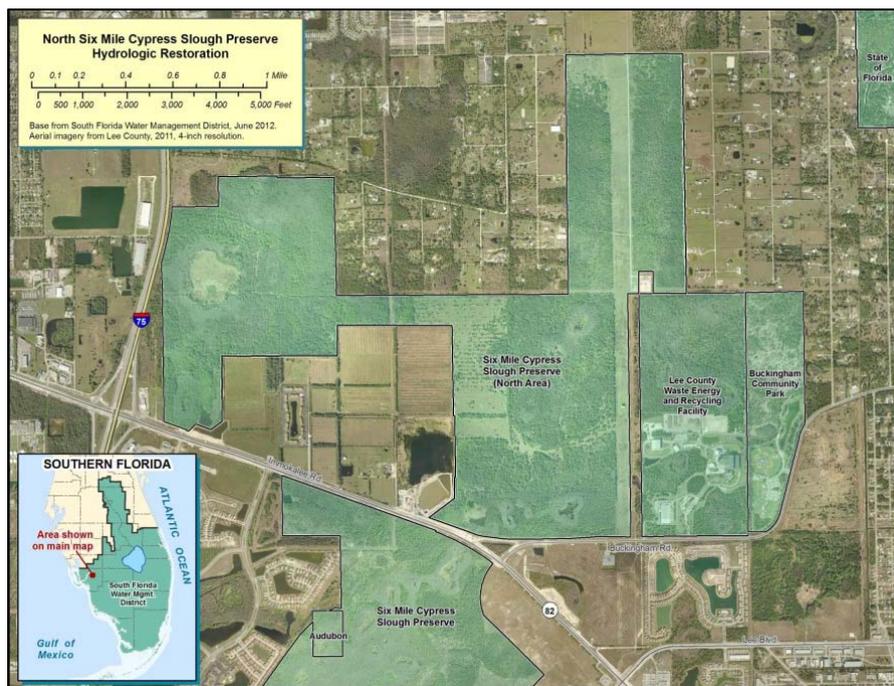
Interim Projects

- Retention on District lands in the interim while regional projects are being planned, authorized, designed and constructed
- Level of retention based on site specific conditions, funding, timing of regional project, and optimizing lease revenue and land management activities while providing retention
- Costs (based on 2 typical interim projects)
 - Average: 35 \$/ac-ft/yr
 - Range: 3-67 \$/ac-ft/yr



DWM Public Lands Projects

Dispersed Water Management Projects on Public Owned Lands



Cooperative Agreements

- Agreements with other public entities (local govt., WCDs, state agencies) to cost share portions of the planning, design, permitting, and construction of water resource projects
- Costs (based on 5 typical cooperative projects)
 - Average: 18 \$/ac-ft/yr
 - Range: 3-40 \$/ac-ft/yr

Florida Ranchlands Environmental Services Projects (FRESP)

Collaboration of Ranchers, NGOs, Scientists/Engineers, and State & Federal Agencies to Design and Implement a Market Based Payment for Environmental Services Program

Design Challenges Addressed

- How to measure performance:
 - Contracts require control structures to be set at specific levels and maintained during rainfall events
 - Ensure compliance by verifying structure elevations and measuring rainfall and water levels that would indicate a change in the structure elevation



Florida Ranchlands Environmental Services Projects (FRESP)

Design Challenges Addressed (Continued)

- How to set the payment for services:
 - Reimburse implementation costs and negotiate service payment based on average rainfall year conditions (10 yr period of record)
- Accommodating regulatory requirements:
 - Establish streamlined approval process and allow for reversion back to pre-contract hydrologic conditions (but maintaining regulatory requirements) upon termination of contract



Florida Ranchlands Environmental Services Projects (FRESP)

- Status
 - Eight pilot projects implemented with 3 years of operation after construction certification
 - Three operating under NE-PES 1
 - Two operating under NRCS Wetland Reserve Program (WRP)
 - Two continuing under extended agreements
 - One contemplating future activity
- Retention and TP Removal Provided
 - Total Retention (8 projects): 9,974 ac-ft/yr
 - Average Retention (8 projects): 1,247 ac-ft/yr
 - Average: 192 \$/ac-ft/yr, Range: 37-517 \$/ac-ft/yr
 - TP Removal (1 project*): 3.274 mt/yr

* West Waterhole Pasture

Northern Everglades Payment for Environmental Services (NE-PES)

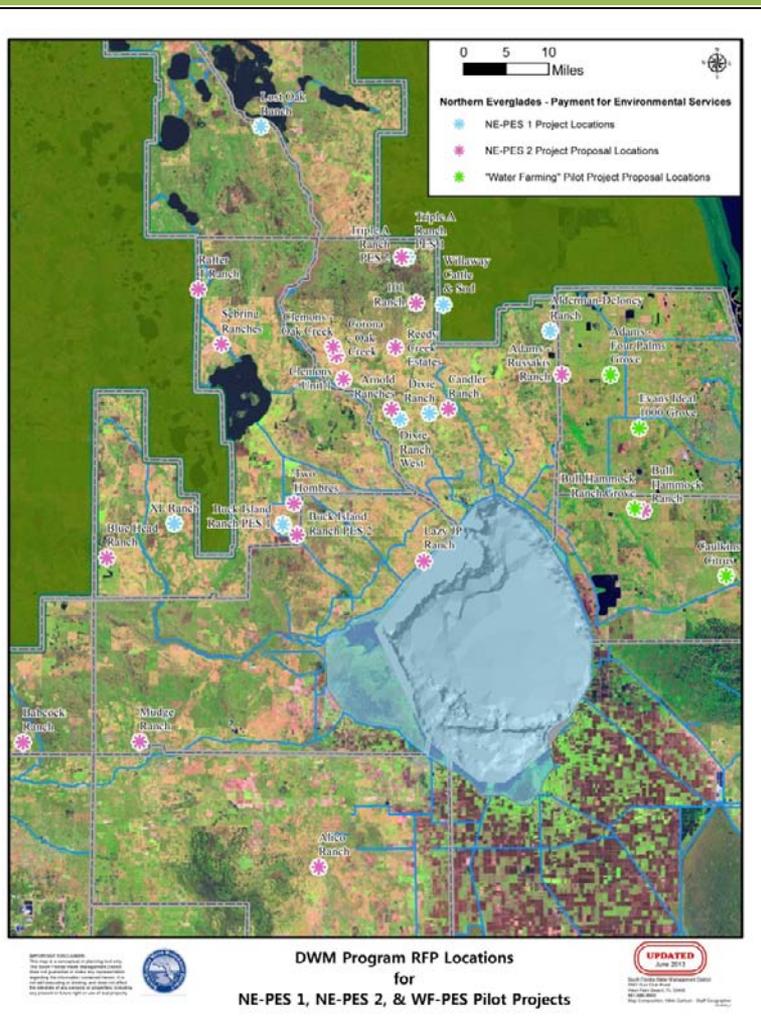
Public-Private partnerships that enhance opportunities for storing excess surface water on privately owned ranchlands

First Solicitation

- Thirteen Proposals Submitted
 - Model used to estimate average annual retention (consultant hired to run model for all projects)
 - Present worth analysis of costs conducted (District staff performed analysis)
- Eight Water Retention Project Contracts Executed (10 Years)

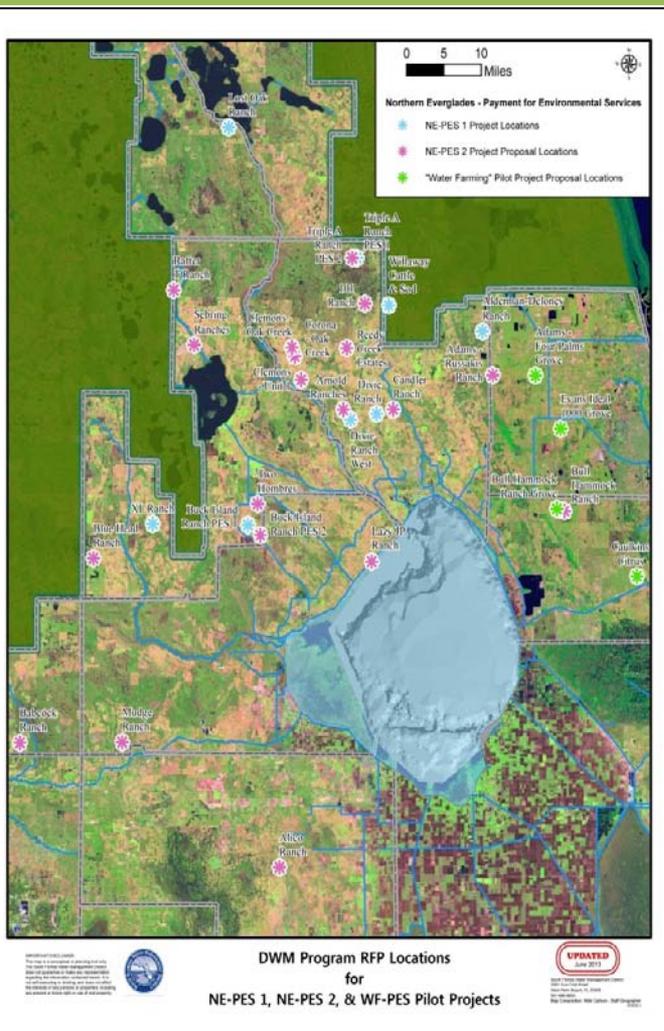
Eight Projects	Original Pre-Negotiation	Final Post-Negotiation	Reduction (\$)	Reduction (%)
Average (\$/ac-ft/yr)	318	146 (99-158)	-172	-54%
Total Contracts (\$)	12.4M	7M	-5.4M	-44%

Northern Everglades Payment for Environmental Services (NE-PES)



- Monthly monitoring of each project
 - Verification of weir elevations
 - Download of daily water levels
 - Download of daily rainfall
 - Quarterly grab samples if flowing
- Initial comparison of measured data to modeled estimate of retention indicates a reasonable correlation. The last year of rainfall exceeded the wettest year of the 10 year period of record used in the model

Northern Everglades Payment for Environmental Services (NE-PES)



Second Solicitation

- Nineteen Proposals Submitted
 - Model used to estimate average annual retention (by applicants)
 - Present Worth analysis of costs conducted (by applicants using template)
 - Based on 10 years of service
- Costs:
 - Average: 177 \$/ac-ft/yr
 - Range: 120-493 \$/ac-ft/yr
 - However, 17 of the projects range from 120-195 \$/ac-ft/yr

Northern Everglades Payment for Environmental Services (NE-PES)

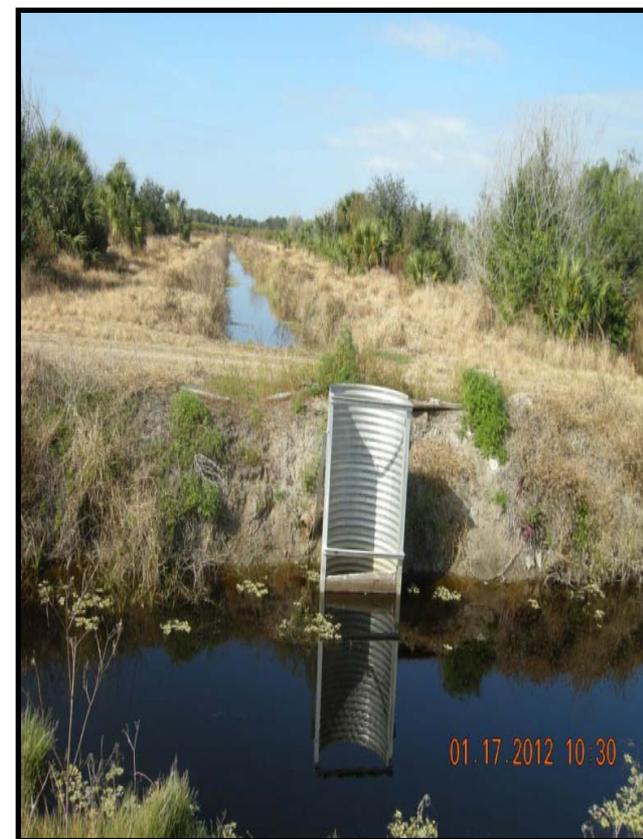
Second Solicitation RFP 6000000518

Vendor Name	Rank	Vendor Name	Rank
Blue Head Ranch, LLC	1	Corona Holdings XIV, LLC	11
Mudge Ranch	2	Clemons Okeechobee, LLC (Unit 1)	12
Babcock Property Holdings, LLC	3	Two Hombres, LLC	13
Bull Hammock Ranch, LTD	4	Abington Holdings (Triple A Ranch)	14
Rafter T Realty, Inc.	5	Arnold Ranches	15
Adams – Russakis Ranches	6	Reedy Creek Estates	16
Archbold Expeditions (Buck Island Ranch)	7	Daniel & Marcia Candler	17
Alico, Inc.	8	Larry “Dusty” Davis, Jr. (Davis Cattle)	18
Lazy JP, Inc.	9	101 Ranch, Inc.	18
Clemons Okeechobee, LLC (Oak Creek)	10		

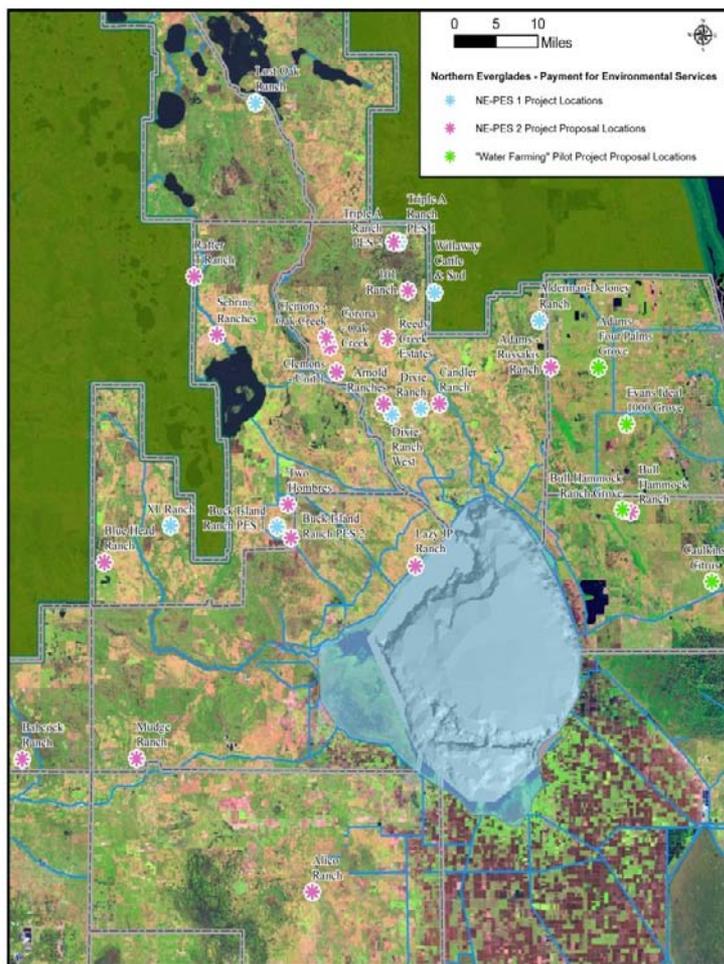
Water Farming Payment for Environmental Services Pilot

Public-Private partnerships that enhance opportunities for storing excess surface water on privately owned fallow citrus lands

- Two Cooperative Agreements for Feasibility Reports
 - Gulf Citrus Growers Association
Feasibility Report – In Progress
 - Indian River Citrus League
Feasibility Report – April 2012
- Section 319 Grant Proposal Submitted for IRL-St Lucie Watersheds - \$3.1M
 - FDEP Grant - \$1.5M
 - SFWMD Match - \$1.6M



Water Farming Payment for Environmental Services Pilot



DWM Program RFP Locations
for
NE-PES 1, NE-PES 2, & WF-PES Pilot Projects



Solicitation for Pilot Projects within St. Lucie Estuary Watershed

- Five proposals submitted (two for same site different alternatives)
- Water budget analysis used to estimate average annual retention (by applicants)
- Present Worth analysis of costs conducted (by applicants using template)
- Costs
 - Average: 248 \$/ac-ft/yr
 - Range: 72-359 \$/ac-ft/yr

Water Farming Payment for Environmental Services Pilot

Solicitation RFP 6000000576

Vendor Name	Rank
Caulkins Citrus Company, LTD	1
Bull Hammock Ranch, LTD	2
Evans Properties, Inc. (E-1 & E-1a)	2
Evans Properties, Inc. (E-2)	4
Adams Ranch, Inc.	5

DWM Program Benefits

Benefit	DWM Program Projects	District Regional Projects
Emphasis on Detention- assists in peak flow and low flow events		X
Emphasis on Retention- assists in peak flow events	X	
Nutrient Load Reduction	X	X
Groundwater Recharge	X	X
Habitat Improvement	X	X
Keeps Land on Tax Rolls	X	
Improved Viability of Agriculture & Community Economics	X	
Reduces Conversion of Land to More Intense Ag or Urban Use	X	X
No (or Minimal) Land Costs	X	
Interim vs. Long Term (10/50 Years)	Interim	Long Term

Costs and Comparisons of DWM and District Regional Project Types

Project Category	Private Lands*	Public Lands	NE-PES Ranch Lands	WF-PES Fallow Citrus	District Regional Projects
Land Purchase					X
Land Management					X
Planning		X			X
Design & Permitting	X	X	X	X	X
Construction	X	X	X	X	X
O & M		X	X	X	X
Monitoring & Compliance			X	X	X
Service Payment			X	X	
Project Term (Years) *	*	*	10	TBD	50
District Funding Term (Years)*	*	1 or 2	10	TBD	50

* Values are Project Dependent

Costs and Comparisons of DWM and District Regional Project Types

	Project or Project Type	Average Annual Retention (ac-ft)	Average Cost per ac-ft/yr (10 Yr)	Average Cost per ac-ft/yr (50 Yr)
Dispersed Water Management	DWM Private Lands (Actual)	45,717	31	25
	DWM Public Lands (Actual)	19,647	23	13
	DWM FRESP (Actual)	9,974	192	175
	DWM NE-PES 1 (Actual)	4,778	146	134
	DWM NE-PES 2 (Proposed) *	118,357	177	147
	DWM SLE WF-PES (Proposed) *	13,338	248	219
Regional	C-43 Basin Reservoir (10,700 acres)	170,000		162
	C-44 Basin Reservoir (3,400 acres)	50,600		264

For DWM project types, Annual Retention is the total of all the projects within that category and the Cost per ac-ft/yr is the average for that category

5 Year DWM Budget Discussion

Funds available beginning of FY14: \$24M

- Option 1
 - Fund only current contract obligations until DWM Spend Down Plan funds are expended
 - Full funding available into 1st quarter of FY21



5 Year DWM Budget Discussion

Option 2

- Fund current contract obligations through FY18, leaving \$7.7M in Spend Down Plan
- Use \$7.7M for new obligations
 - Approximately \$2.2M to extend existing short term agreements
 - Remaining \$5.5M to new projects in one or more DWM project type (\$5M) and associated increase in monitoring costs (\$500K)



Path Forward

- In August: Governing Board Action Requested
 - NE-PES 2 and Water Farming Pilot RFP responses
 - GB direction regarding RFP negotiations
- Continue planning, design, construction, operation and monitoring of Private & Public Projects
- Continue existing NE-PES Projects
- 319 grant application decision from DEP anticipated in September 2013 for Water Farming Pilot projects
- Seek a dedicated funding source to support the Dispersed Water Management Program

Dispersed Water Management

An aerial photograph of a vast wetland landscape. The foreground is dominated by a dense forest of green trees. Beyond the forest, a wide, shallow waterway or canal winds through a flat, green field. In the distance, a large, flat, brownish field stretches towards the horizon under a blue sky with scattered white clouds. A semi-transparent white rectangular box is centered over the middle of the image, containing the word "Discussion" in a large, bold, black font.

Discussion