

Putting the Components Together:

Lessons Learned in Designing the
Northern Everglades PES Program



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Launched in Jan 2011: the Northern Everglades PES Program

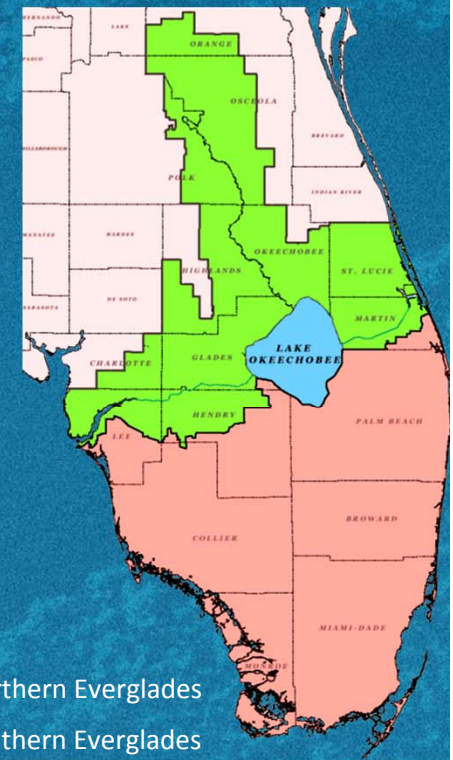
The Buyer – South Florida Water Management District (SFWMD)

The Seller – eligible Cattle ranchers

- **First Solicitation - 2011**

- SFWMD and ranchers enter into 10 year contracts for water or nutrient load reduction services
- 14 proposals submitted/8 projects selected providing 4,800 ac-ft/yr retention
- Contract obligation of \$7M over 10 yr life of contract
- Price per ac-ft ranged from \$99 to \$158

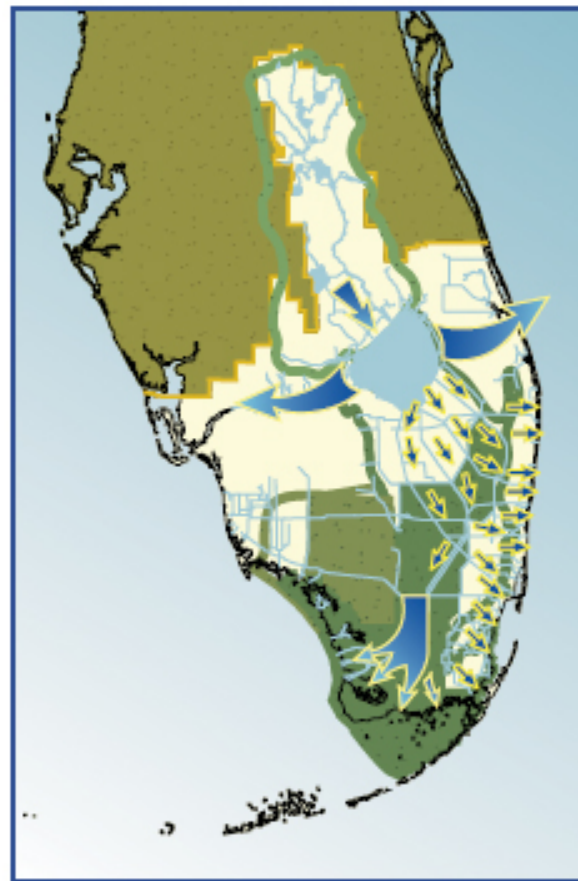
- **Preparing for 2nd solicitation Spring 2012**



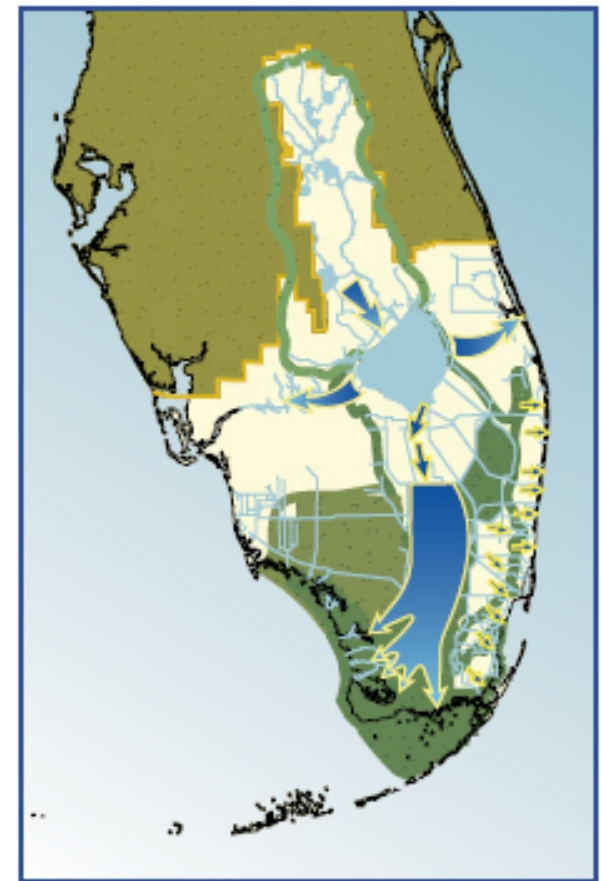
Northern Everglades and estuaries are plagued with water quality/quantity problems, land conversion & habitat loss



Pre-Drainage Flow

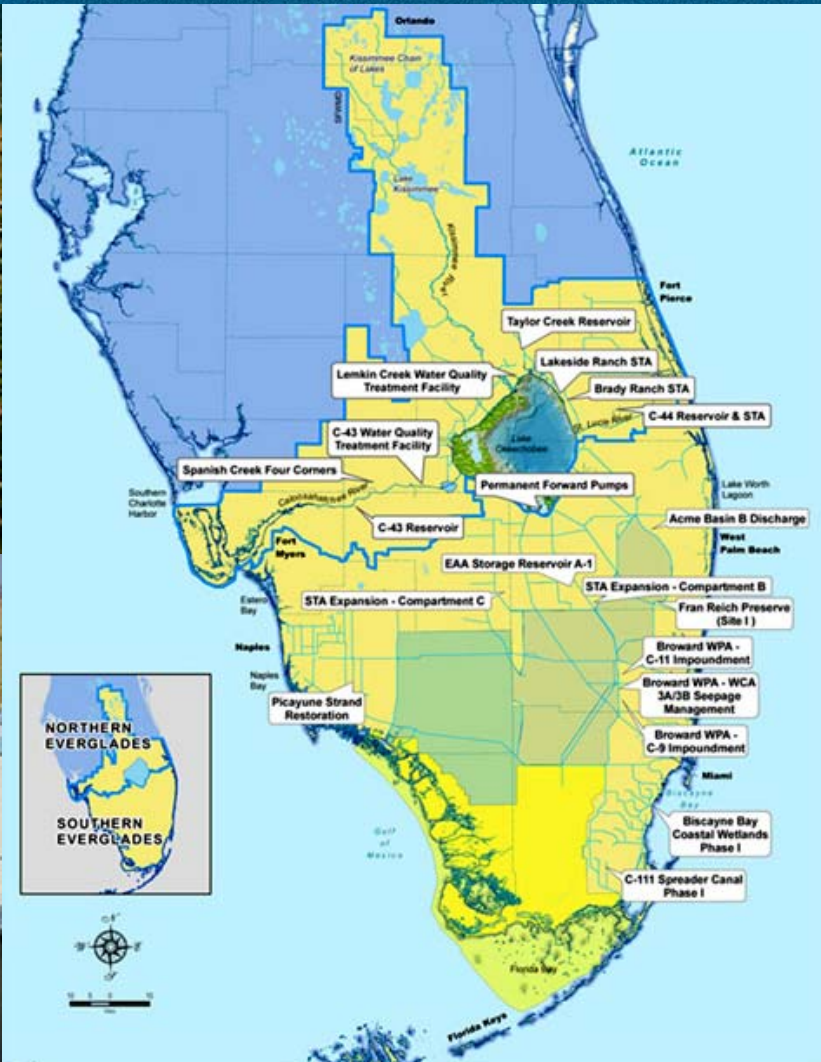


Current Flow



Restored Flow

Large scale regional public works are being planned to address water quality/quantity issues



The South Florida Ranch Landscape



Could/would: ranchers sell and state agencies buy water mgt services?

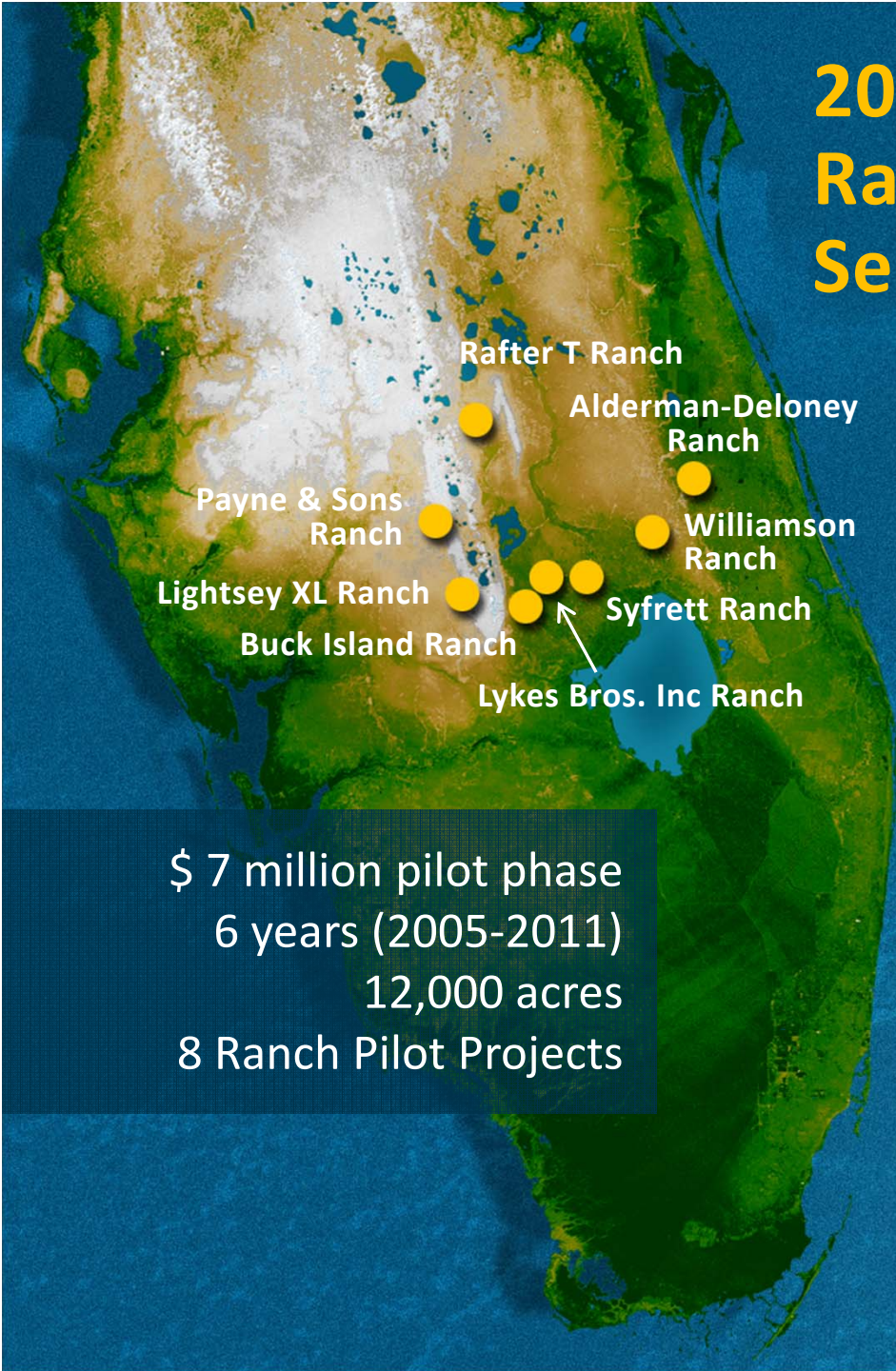


Participating Florida Ranchers



2005 Launched Florida Ranchlands Environmental Services Project (FRESP)

- Goal to design a PES program that is:
 - Based on market-like principles
 - Cost-effective
 - Transparent
 - Scalable
 - Feasible to administer
- Adaptive design process
 - Identify and work around and through constraints

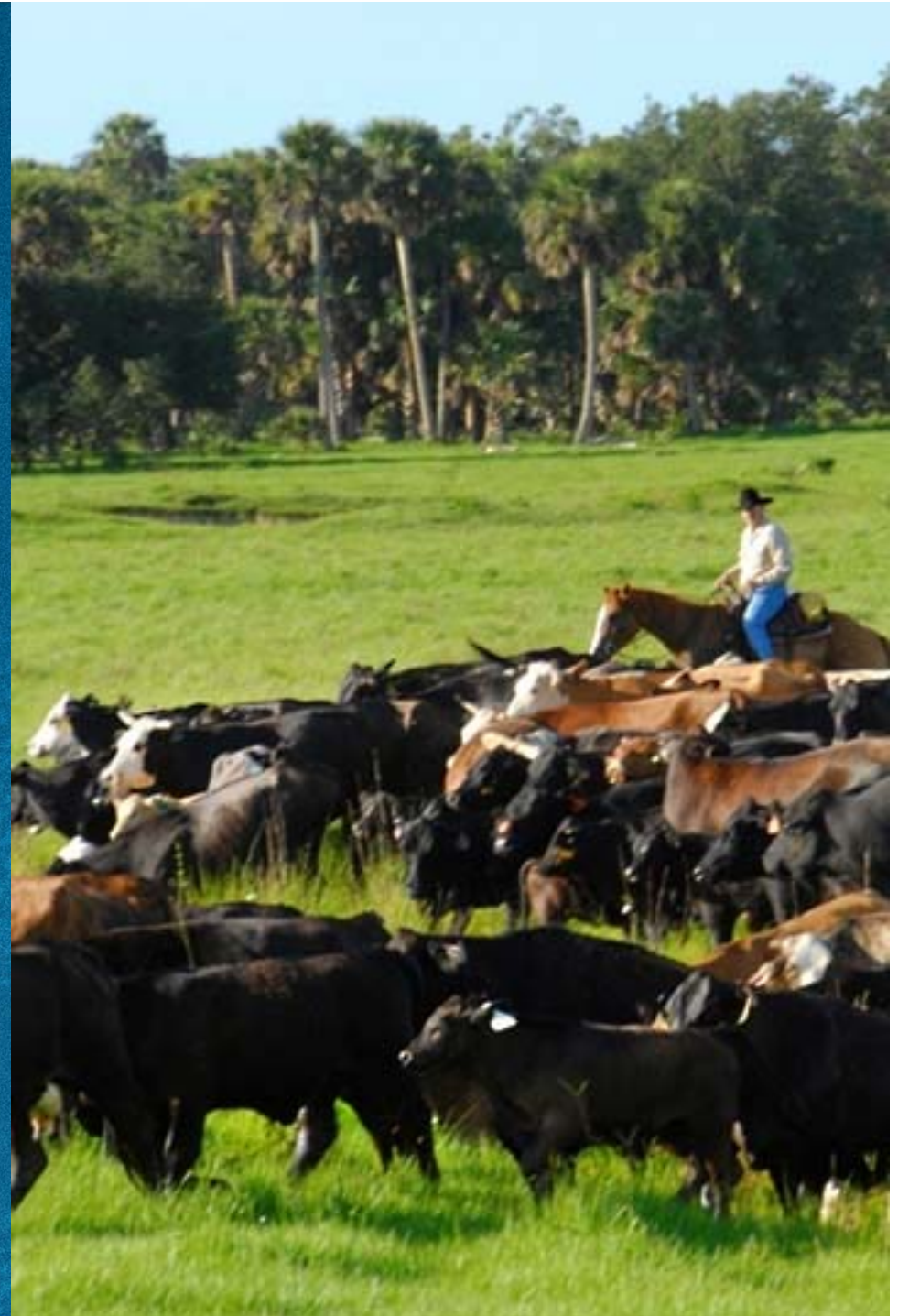


\$ 7 million pilot phase
6 years (2005-2011)
12,000 acres
8 Ranch Pilot Projects

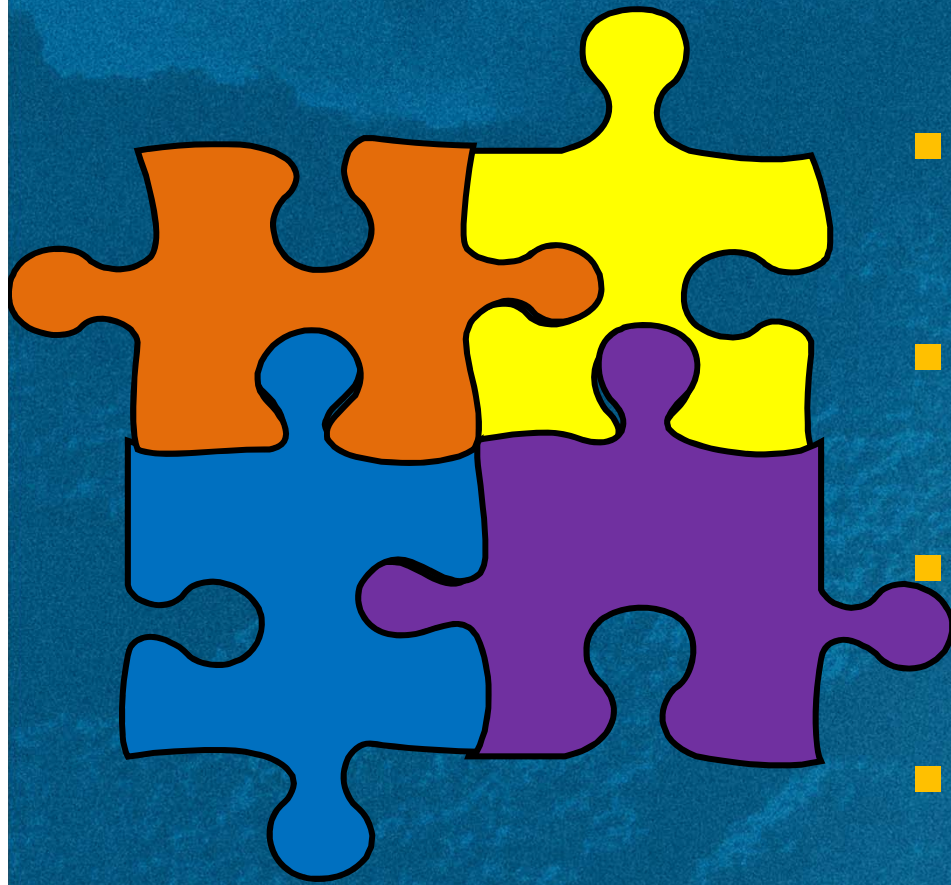
The map shows the state of Florida with eight yellow dots indicating the locations of the pilot projects. The dots are labeled as follows: Rafter T Ranch (north-central), Alderman-Deloney Ranch (north-east), Payne & Sons Ranch (west-central), Williamson Ranch (east-central), Lightsey XL Ranch (west-central), Syfrett Ranch (south-central), Buck Island Ranch (south-west), and Lykes Bros. Inc Ranch (south-central, indicated by an arrow).

Market Design Principles Guiding PES Program Design

Extensive *working ranch landscapes*, relying on modification to existing water management structures and strategies, enter into *fixed term contracts* to provide *documented water* related environmental services, *above and beyond regulatory requirements* creating a new *profit center* for ranch enterprises.



Adaptive design allows program to reflect and be supported by a complex web of constraints



- Buyer and seller preferences;
- Agricultural production systems & markets;
- Regulations--county, state and federal;
- Existing programs & institutions;
- Variation in site specific characteristics

Agree on service definition & feasibility

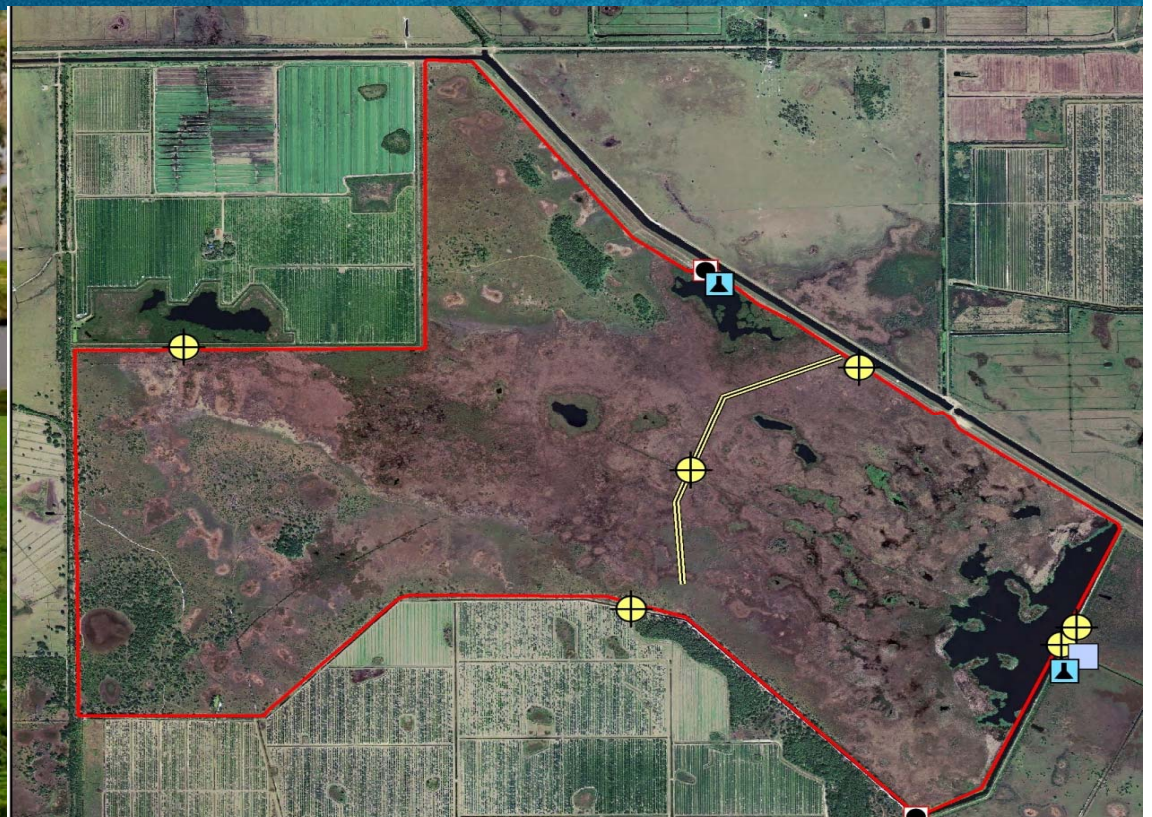
Nutrient Reduction Service

Lykes Bros. Inc. West Waterhole Marsh

2,500 acre marsh in existing reservoir treating off-site water



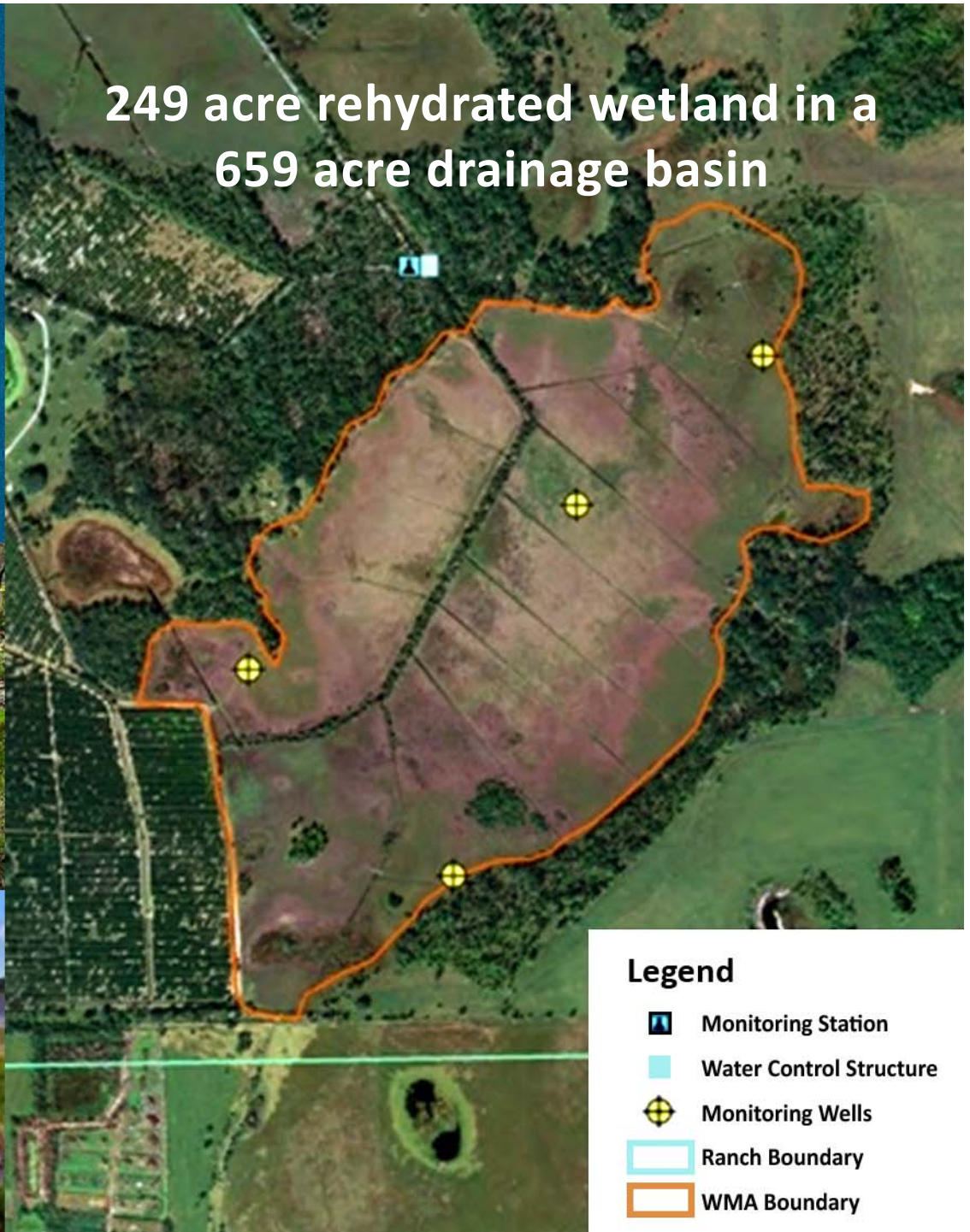
C 41 Canal



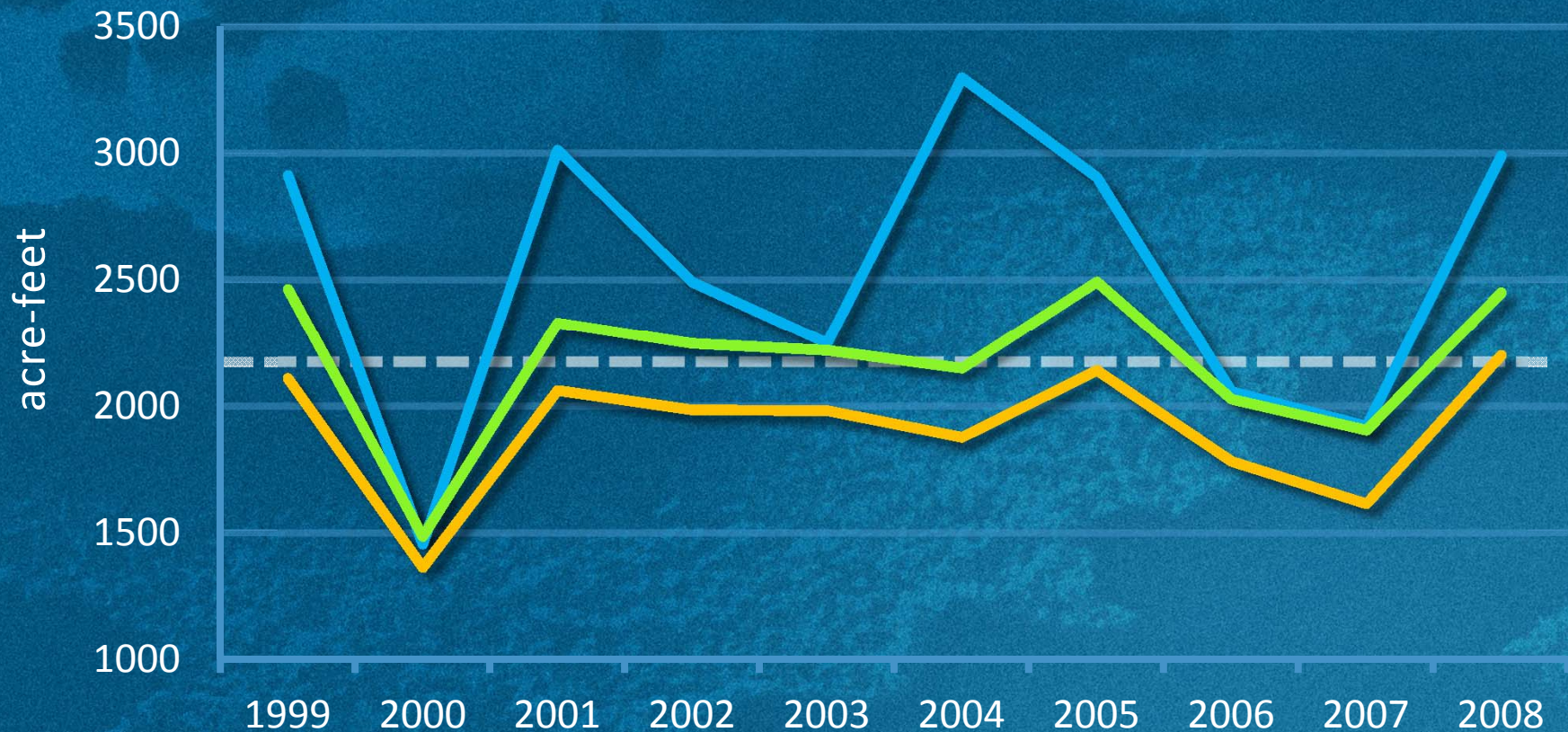
Water Retention Service

Williamson Cattle Company

249 acre rehydrated wetland in a 659 acre drainage basin



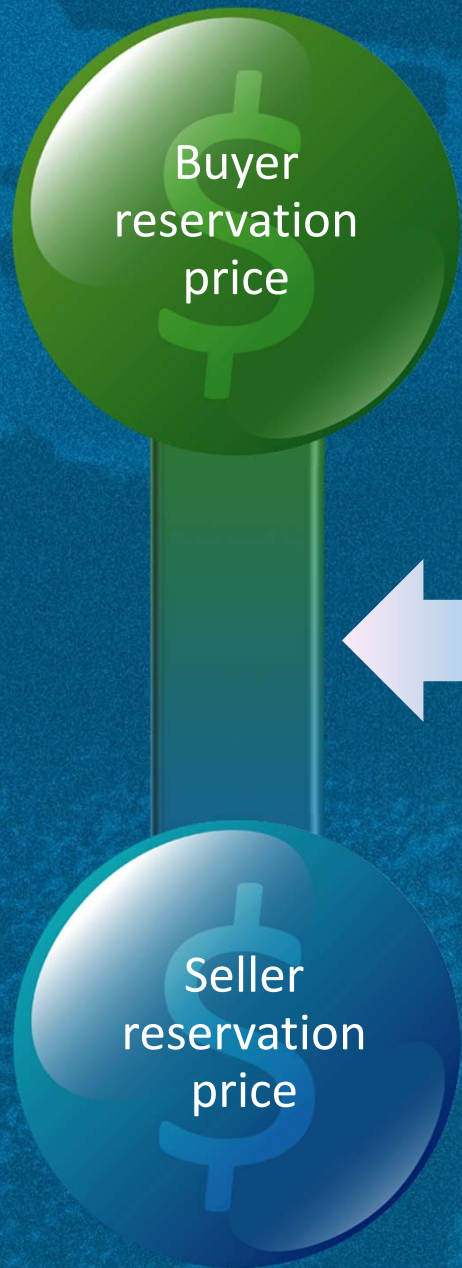
Agree on how to quantify expected level of service & baseline



- Rainfall
- Retention - uncontrolled
- Retention - controlled
- - - Average annual ac-ft water retention

Acre-feet of water retention:
Pre-project: 1912 acre feet
Post-project: 2178 acre feet
Environmental Service: 266 acre feet

FRESP Ranch Pilot Projects	WMA Impacted Acres	Ave Annual Incremental Water Retention Acre Feet	Ave Annual P Retention Pounds
Water Retention Projects			
Rafter-T	942	850	555
XL Ranch	364	227	154
Payne & Sons Ranch	367	164	111
Syfrett West Ranch	521	939	638
Williamson	241	303	132
Alderman	49	138	30
Buck Island Ranch	3,748	2,411	3,342
Total	6232	5,032	4,962 (2 mt)
Nutrient Removal Project			
Lykes Bros. Inc.	2,500		7,495 (3 mt)
Total	8732	5,032	12,457 (6 mt)

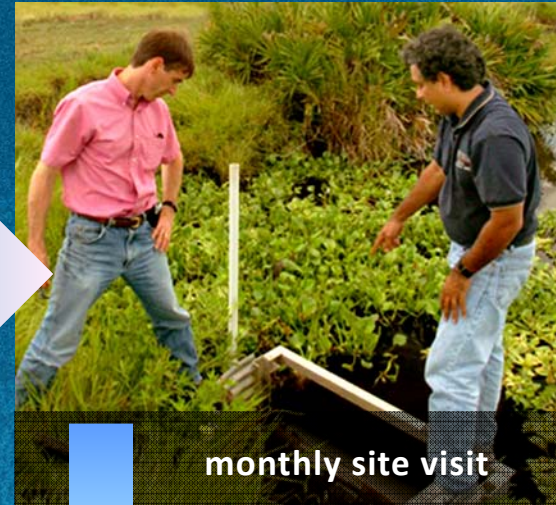
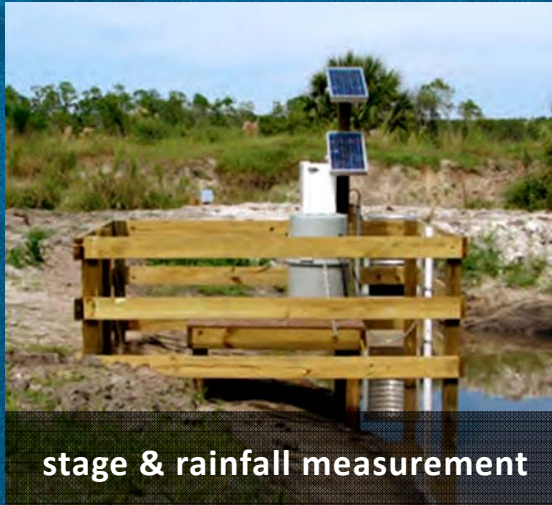


Agree on payment determination

Price agreement

- Fixed price offers
- Low bid
- Case by case negotiation

Agree on methods for verifying contract compliance



monthly rancher report

Address	...	Postcode	...	Total THB
Units 30, 35, 36 Beach Drive AB1 2CD	3	Anywhere HA	24	20
Units 1-10 Beach Drive AB1 2CD	10	Anywhere HA	18.00	19
Units 1-10 & 8100 Coast Road EF1 2GH	20	Somewhere HA	10.80	..
Units 1125 Coast Road EF1 2GH	15	Somewhere HA

1 For Record ID 21, a query using postcode has multiple hits

2 Upon inspection of the entire address, three records are assigned the Record ID 21

Transitional Service User	Means	Schedule	Postcode	NINO	Service Id	Total THB
Brown	Thomas	Unit 35 Beach Drive	AB1 2CD	NY33333C	21	20.0
Jones	Richard	Unit 1 Beach Drive	AB1 2CD	NY55555E	21	24
Newton	Sally	Unit 4 Beach Drive	AB1 2CD	NY88888H	21	24
Sinclair	Frank	Unit 36 Beach Drive	AB1 2CD	NY22222B	21	2
Watkins	Anne	Unit 30 Beach Drive	AB1 2CD	NY11111A	21	..



Agree on regulatory processes:

- Designed streamlined permitting process
 - Regional General Permit (US ACOE)
 - Fed and state MOU
 - T & E avoidance (NRCS & US FWS)
 - State permits
- End of Contract
 - T & E and wetlands footprint (state and federal)



Critical elements in designing a PES program

- Having a buyer
- Collaboration of key stakeholders
- Commitment to adaptive implementation
 - Willingness to stick to principles but be flexible
- Procedures that are feasibility to administer and cost-effective
 - Good enough



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thank you

