System-wide Ecological Indicators for Everglades Restoration 2014

The South Florida
Ecosystem Restoration Task
Force
Strategy and Biennial Report
July 2012—June 2014

Working Group/Science Coordination Group Meeting April 2, 2014

Presented by Laura Brandt


SYSTEM - WIDE ECOLOGICAL
INDICATORS FOR
EVERGLADES RESTORATION
2012
www.sfrestore.org


THE SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE
JULY 2010 - JUNE 2012
STRATEGY AND BIENNIAL REPORT
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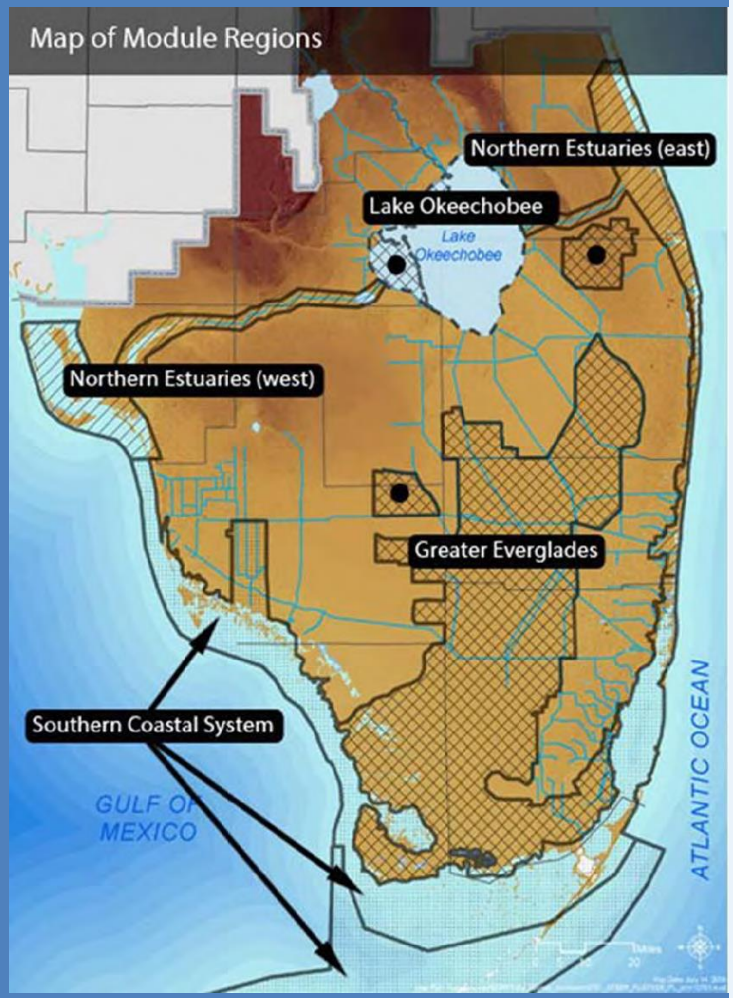
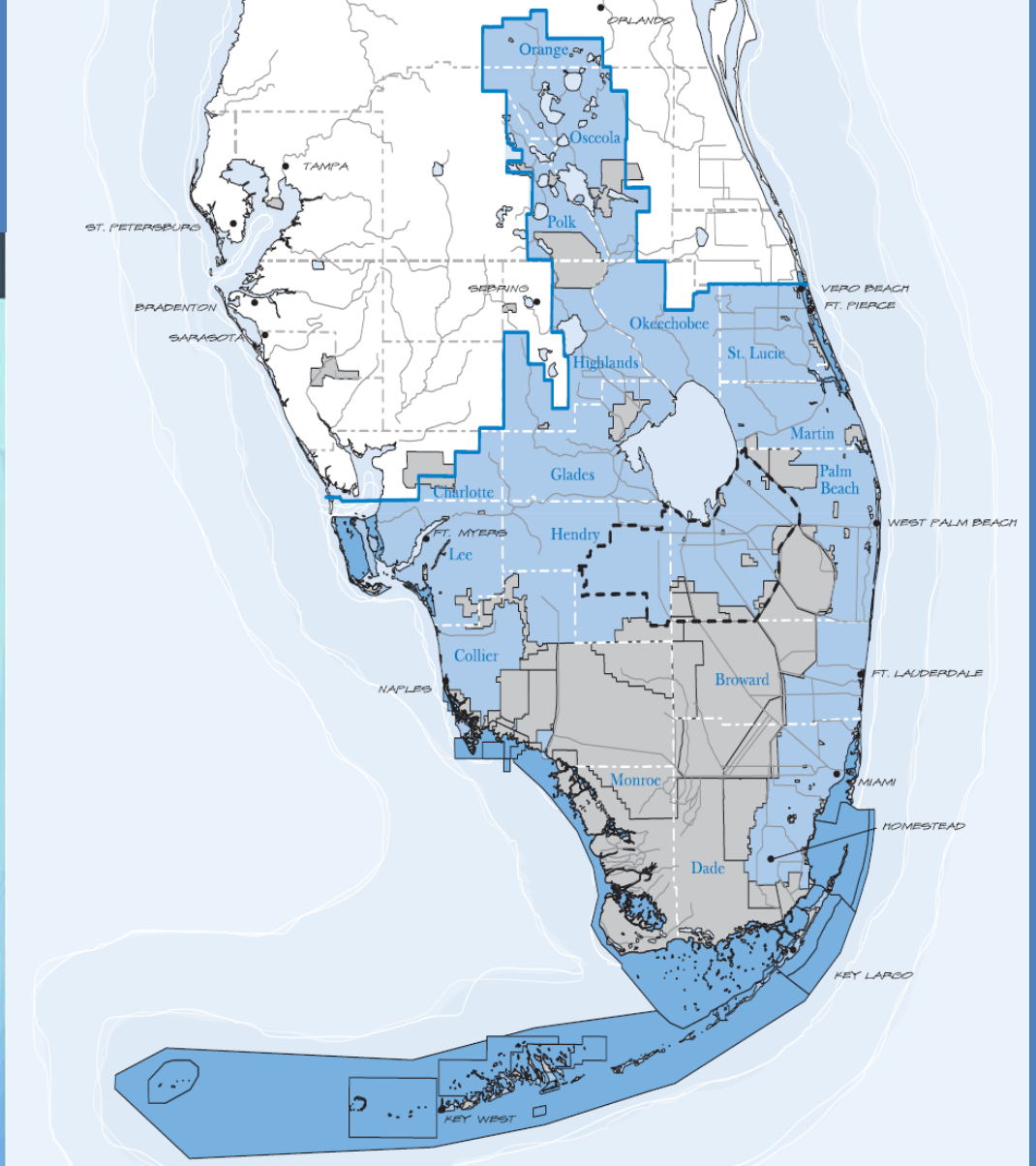
System-wide Ecological Indicators

- Invasive Exotic Plants
- Lake Okeechobee Nearshore Zone Submersed Aquatic Vegetation
- Eastern Oysters
- Crocodilians (American Alligators & Crocodiles)
- Fish and Macroinvertebrates
- Periphyton & Epiphyton
- Wading Birds (White Ibis and Wood Stork)
- Southern Estuaries Algal Blooms
- Florida Bay Submersed Aquatic Vegetation
- Juvenile Pink Shrimp
- Wading Birds (Roseate Spoonbill)

Drawn largely from longer list of measures from RECOVER





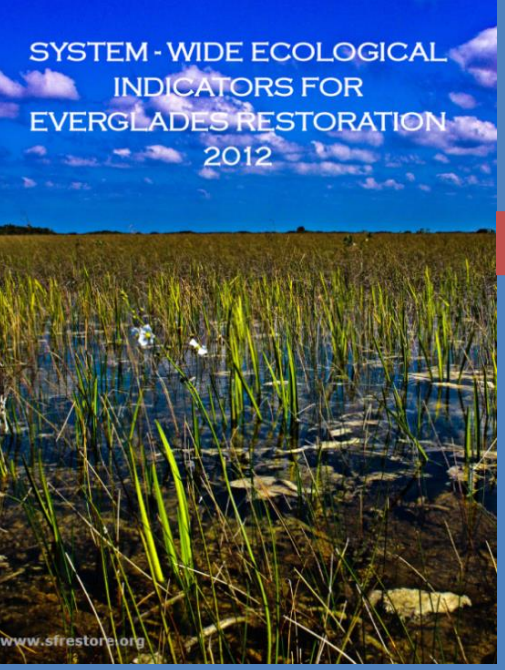
The South Florida Ecosystem

- South Florida Ecosystem Boundary
- Everglades Agricultural Area
- Conservation and Tribal Lands
- Non-Public Land

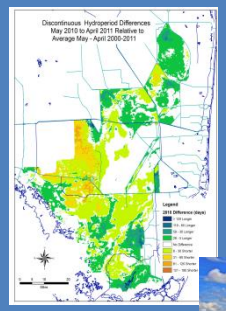
Challenge	Solution	Status
More consistency and common reporting year	Use SFWMD Water Year	Done
Need big picture management implications	Provide hydrologic context	Done
Integrated summary	Indicators at a glance	Done
Integrated summary	Interaction among scientists to prepare summary	Conversations started
Integrated with other reports	Coordination with RECOVER on SSR	Conversations started
Need big picture management implications	Tie results to management actions Explain the “so what”	Planned for 2014 report Planned for 2014 report
Do we have the right indicators?	Review what we have learned since 2006	Need to initiate conversation
Funding to continue monitoring to allow consistent reporting	Document value of indicators	Ongoing

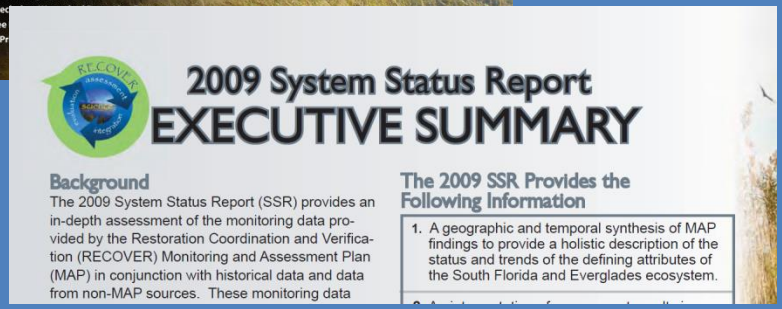
Next Steps (From September 2012)

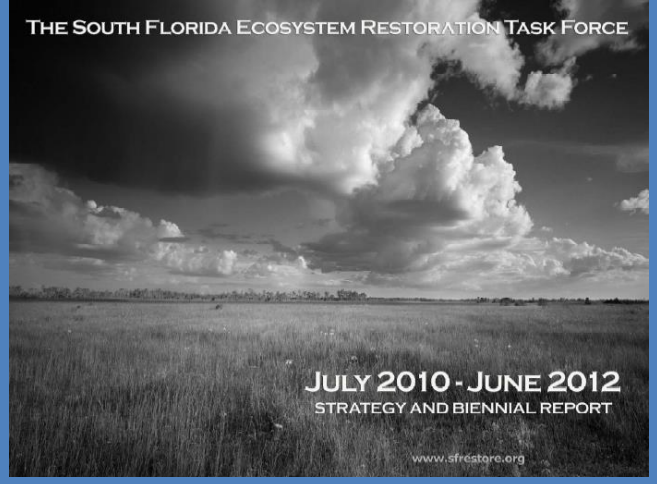
- Plan for 2014 report
  - Continue to improve integration of indicators
  - Continue to improve report as communication tool
  - Address challenges associated with funding cuts



2014 Integration







2014

- Summary of indicators (indicators at a glance)

- Highlight how restoration investments have resulted in changes to ecological conditions while maintaining system-wide perspective
  - Kissimmee River
  - C111 and aquatic fauna, SAV, crocodiles, spoonbills, algal blooms
  - Tamiami Trail bridge
  - Canal restoration Cape Sable and crocodiles
  - Others?……

Both Reports

- Better integration of regional hydrologic conditions and responses of indicators
  - Provide and discuss regional hydrology (WY13&14) with scientists
- Better integration among indicators
- More focus on the bottom line/so what
  - How can we use this information for better restoration decisions?

System-wide Ecological Indicators Section of Biennial Report

- Shorter
- Focus on audience of Congress, Legislature, and Tribes
- Message is the work we are doing is worth the investment
- Summary of indicators (indicators at a glance)
- Case studies/story lines- examples of ecological responses to investments (with link to system-wide)

Full Report

- Audience is more technical
- Show status and trends by area and system-wide in relation to hydrology and restoration actions
- Use all appropriate data (not limited to MAP funded)
- Begin better linkages with System Status Report (should have similar messages for similar time frames)
- Document how process of calculating indicators has changed (if applicable)

Timeline

- 18 July 2014 -Draft of System-wide indicator section of Biennial Report to Working Group for comments (3 weeks to review)
- 8 August 2014-Receive comments from Working Group
- 1 September 2014-Edits from Working Group incorporated into final document

Questions?

Lead Scientist for Indicator Report

First Name	Last Name	Agency	Indicator
Chris	Kelble	NOAA	Florida Bay Algal Blooms
Joan	Browder	NOAA	Pink Shrimp
Peter	Frederick	UF	White Ibis and Wood Stork
Evelyn	Gaiser	FIU	Periphyton
Jerry	Lorenz	Audubon of Florida	Roseate Spoonbill
Chris	Madden	SFWMD	Florida Bay SAV
Frank	Mazzotti	UF	Crocodilians
LeRoy	Rodgers	SFWMD	Invasive Exotic Species
Andy	Rodusky	SFWMD	Lake Okeechobee Nearshore
Joel	Trexler	FIU	Fish and Macroinvertebrates
Aswani	Volety	FGCU	Oysters

Other scientists involved

Joe	Boyer	NOAA	Florida Bay Algal Blooms
Dave	Rudnick	NPS	Florida Bay Algal Blooms
Steve	Kelly	SFWMD	Florida Bay Algal Blooms
Peter	Ortner	RSMAS	Florida Bay Algal Blooms
Mike	Roblee	USGS	Pink Shrimp
Dale	Gawlik	FAU	White Ibis and Wood Stork
Laura	Brandt	FWS	Crocodilians
Angie	Huebner	ACOE	Invasive Exotic Species
Bruce	Sharfstein	SFWMD	Lake Okeechobee Nearshore

Indicators at a Glance 2012

	Water Year 2008	Water Year 2009	Water Year 2010	Water Year 2011	Water Year 2012
Lake Okeechobee					
Invasive Exotic Plants					
Lake Okeechobee Nearshore Zone Submersed Aquatic Vegetation					
Northern Estuaries					
Invasive Exotic Plant Species					
Eastern Oysters					
Greater Everglades					
Crocodilians					
Fish and Macroinvertebrates (WCA 3 and ENP only)					
Invasive Exotic Plants					
Periphyton and Epiphyton					No species composition data
Wading Birds (White Ibis and Wood Stork)					
Southern Coastal System					
Crocodilians					
Southern Estuaries Algal Blooms**					
Florida Bay Submersed Aquatic Vegetation					
Invasive Exotic Plants					
Juvenile Pink Shrimp*	Data used as base	Data used as base	Data used as base		
Wading Birds (Roseate Spoonbill)					Prey community data not yet processed
Wading Birds (White Ibis and Wood Stork)					