Everglades and the Caloosahatchee

Economically and ecologically sustainable EcoReservoirs as new lakes

Greater Everglades Ecosystem Restoration Conference 2008
Forest Michael, Transystems, fgmichael@transystems.com
Introductory Discussions:

THIS IS NOT CURRENTLY A PUBLIC PROJECT

STATE OF FLORIDA
- FL Dept. of Environmental Protection, Everglades Restoration
- Office of Greenways and Trails, Director & Land Manager
- SFWMID WRAC July 2008
- SFWMID Various Governing Board Members
- SFWMID Deputy Director, CERP and Acceler8
- SFWMID Assistant Deputy Executive Director, EERR Area
- SFWMID Northern Everglades, Program Manager
- SFWMID Lower West Coast, Director
- SFWMID Everglades Engineering Director
- SFWMID Northern Everglades Engineering Program Director
- SFWMID Okeechobee Service Center, Upper Lakes PM
- FDOT District One / REDI & Community Liaison
- Florida Tourism Community Program, REDI

SEMINOLE and MICCOSUKEE TRIBES
- Communication will occur soon

US GOVERNMENT
- US Department of Interior
- USACE, Jacksonville District, C-43 PM
- USACE EAA A-1 Reservoir PM
- USACE Everglades Recreational Plan PM/Comments
- USACE EAA A-1 Pump Station PM

GLADES COUNTY
- Glades County Commissioner Butch Jones
- Glades County Commissioner Russell Echols
- Glades County Manager

HENDRY COUNTY
- Hendry County Commission July 2008
- Hendry County Managers and Staff

LEE COUNTY
- Lee County Chairman Ray Judah
- Lee County Manager’s Office and Staff

REGIONAL
- Florida Heartland Rural Development Initiative FHREDI
- Florida’s Freshwater Frontier, FHREDI
- Southwest Florida Regional Planning Council Staff

NON-GOVERNMENTAL ENTITIES & PRIVATE
- Glades County Economic Development Inc.
- 10 County Coalition Glades Representative
- US Sugar Corporation, Director (Future discussion)
- Lykes Ranches (Landowner) and Chairman, Glades EDC
- Duda Agriculture (Future discussion)
- Kitson Babcock Holdings
- Florida Wildlife Federation SW Office (Re: Panthers)
- The Nature Conservancy (Ag Land Acquisition)
- The Trust for Public Land (River Land Acquisition)
- 1000 Friends of Florida (Rural Land S. Program)
- Caloosahatchee Riverwatch and Sanibel - Captiva
- Southwest Florida Watershed Council
- Audubon of Florida

EVERGLADES and the CALOOSAHATCHEE
“Our human ability to understand the world around us, gives us an immense responsibility, as stewards of the planet...which fortunately more and more people are beginning to understand.”

Jane Goodall
Jane Goodall Institute
Economically and ecologically sustainable EcoReservoirs as new lakes

Lake Talquin Reservoir State Park, Tallahassee
Everglades: economically and ecologically sustainable reservoirs

or

less cost – increased water quality – same storage – commerce – community benefits
E VERGLADES and the CALOOSAHATCHEE
Florida Agricultural Partnerships
Potential shared interpretive Center for the Tribe and Communities near Lake Okeechobee and the Caloosahatchee

Credits and copyrights:
Seminole Tribe Museum; Theodore Morris, Artist; Florida Tribes Artists; and the Florida Department of Environmental Protection

SEMINOLE, MICCOSUKEE AND HISTORIC CALOOSA
Increased recreational boat usage for economic prosperity

Ortona Lock & Dam
Fact Sheet

The U.S. Army Corps of Engineers welcomes you to Ortona Lock and Dam, located on the Okeechobee Waterway. Stretching out from both directions, the waterway extends to the Gulf of Mexico using the Caloosahatchee River and to the Atlantic Ocean using the St. Lucie Canal. Covering 152 miles, the waterway serves as both a commercial and recreational link with several overnight-docking facilities along the way. The Corps constructed and currently manages five locks along the Waterway. Ortona Lock and Dam were constructed in 1937 for navigation purposes.

Ortona Facts
- Waterway distances: 15.5 miles east to Moore Haven Lock and 27.9 miles west to W.P. Franklin Lock
- Cost of construction: Approximately $14 million
Wildlife and Habitat Restoration
Current: C-43 Reservoir next to LaBelle

C-43 Test Cell

C-43 West Reservoir

~ 18 Square Miles
200 Acres of Concrete

SR 80
SR 29
City of LaBelle

Babcock Ranch
Glades
Lee
Hendry

CALOOSAHATCHEE RIVER
PERIMETER CANAL

PERIMETER CANAL

LPDD CANAL
PERIMETER CANAL

N. E. RIM DITCH
FUTURE RESIDENTIAL

PUMPING STATIONS
Economic sustainability

C-43 Reservoir  Riverway Alternative
C-43 Reservoir: expensive untested methods

Riverway: natural, lower cost, tested simple methods
~ $50 million initial construction savings

~ $200 million in 30-year savings

C-43 Reservoir: large scale levees, canals, pumps...

Riverway: low landforms and smaller structures
C-43 Reservoir: high fuel, pumping, O&M, capital costs

Riverway: uses sustainable gravity flow with low O&M
C-43 Reservoir: high fuel, pumping, O&M, capital costs

$3.5 million annual O&M (C-43 Reservoir)
= $105 million 30-year O&M (C-43 Reservoir)
+ 30-year capital costs? (C-43 Reservoir)

Riverway: significantly lower costs

$1 million annual O&M cost
= $2.5 million annual O&M savings
= $75 million 30-year O&M savings and lower capital cost savings

All costs are approximated
Caloosahatchee Riverway

Native American culture, native habitat, hydrating lakes, commerce, waterway, agriculture, Quality of Life

MODEL: Great Seal
Model: Florida State Parks and Restorations
Model: SFWMD Kissimmee River Restoration
Model: Traditional Urban

1893 Boston’s Regional Reservoirs
Olmsted and Eliot, Landscape Architects

and Emerald Necklace

Creek, Lakes, Wetlands
“Greatest good for the greatest number,” Olmsted, Eliot, 1890

Boston’s Emerald Necklace
1. EcoReservoirs integrated as the “Caloosahatchee Riverway”

2. Best practices of FDEP, SFWMD, and USACE

3. Sustainable alternative to Florida’s expensive and energy consuming reservoirs

4. Everglades infrastructure benefits the communities with impacted revenues from the US Sugar buy-out
EcoReservoir Program

Creeks, marshes, prairies, glades, sloughs and lakes for water quantity and quality; additional uplands for greenways management

Example of an EcoReservoir System

Existing Natural River With Lakes, Ponds and Sloughs
(Do not disturb natural ecosystem - assure adequate water flow during dry season)
Current approach
C-43 Reservoir
as Lake Labelle

Restore 4 Upper Lakes
(Pre-1880s)

Riverway Alternative with 5 Lakes
for less cost and more community benefits
MOORE HAVEN, FL. -- Glades Commissioner Donna Storter Long this week sent the following to Governor Charlie Crist's special assistant Marureen Jaeger:

6. Lake Hicpochee may have development potential, either for hydrating and restoration for eco-tourism projects or part of the proposed inland port...
Community Waterfronts

NEW LAKES = Greater economic sustainability
Lake LaBelle alternative to the C-43 West Reservoir

Hendry's Marina
(Free Park, Restaurant, EMS, Retail, Rentals)

Berry's Lodge
(Lodging, Restaurant, Rentals, Conferencing, Educational, HQ)

Possible Future Neighborhood
CERP C-43 West Reservoir  **Single-use**
- Water Storage Reservoir

Everglades and the Caloosahatchee  **Multi-use**
- Riverway - Naturalistic EcoReservoir System  *Restoration*
- Ecosystem Restoration & Panther Habitat  *Restoration*
- Historic Upper Lakes Flirt, Bonnet, Lettuce & Hicpochee  *Restoration*
- Pre-1880s Waterfalls  *Restoration*
- New Lake LaBelle
- Stormwater Quality – Estuary  *Restoration*
- Local Parks & Recreation
- EcoTourism & Region-wide Commerce
- Native American Opportunity
- Agricultural Rural Land Stewardship & Water Quality
- Real Estate Land Value & Revenue Increase
- Okeechobee Waterway Safety and Operational Improvement
- Caloosahatchee Regional Mitigation Bank as  *Restoration*?
- Caloosahatchee Riverway State Park as  *Restoration*?
- Northern Everglades “Big Sawgrass”  *Restoration*

"Greatest good for the greatest number"
Our alternative legacies?

Rod Sterling

5 Lakes
Everglades and the Caloosahatchee

Thank you

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