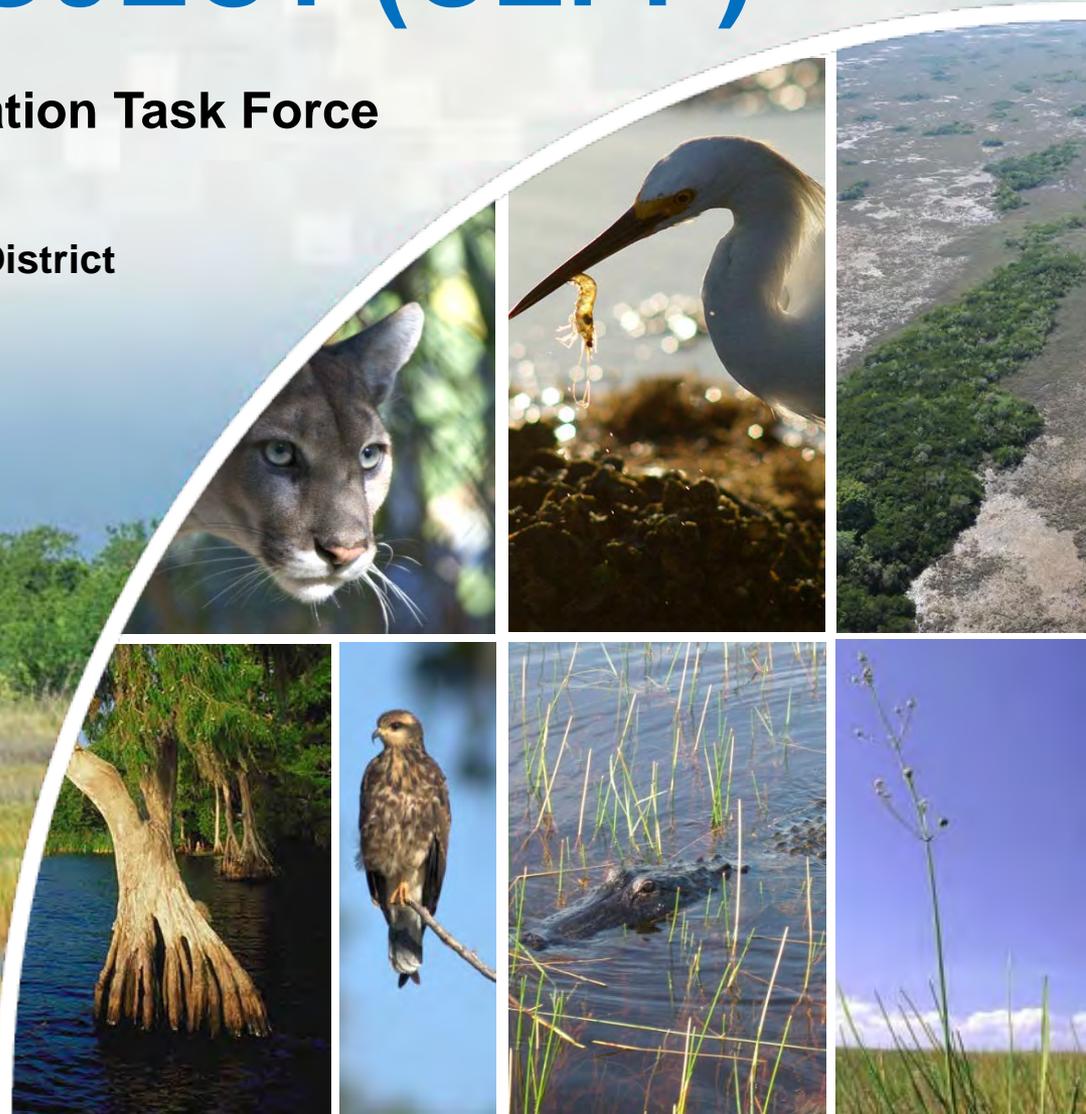


COMPREHENSIVE EVERGLADES RESTORATION PLAN CENTRAL EVERGLADES PLANNING PROJECT (CEPP)

South Florida Ecosystem Restoration Task Force

Presented by Kim Taplin, Chief,
Central Everglades Branch, Jacksonville District
US Army Corps of Engineers

07 May 2014



®



THE EVERGLADES

NATIONAL/INTERNATIONAL
SIGNIFICANCE

and more than half
of the original
Everglades is gone...
...what is left is dying

CENTRAL EVERGLADES PLANNING PROJECT

Achieves ~ 70% of targets for
central Everglades restoration

Increases water flow >20%
to the central Everglades
and Florida Bay

Reduces undesirable fresh
water discharges > 20%
to the Caloosahatchee
and St. Lucie estuaries



CENTRAL EVERGLADES LEGISLATIVE AUTHORITY AND THE NATIONAL INVESTMENT IN SOUTH FLORIDA

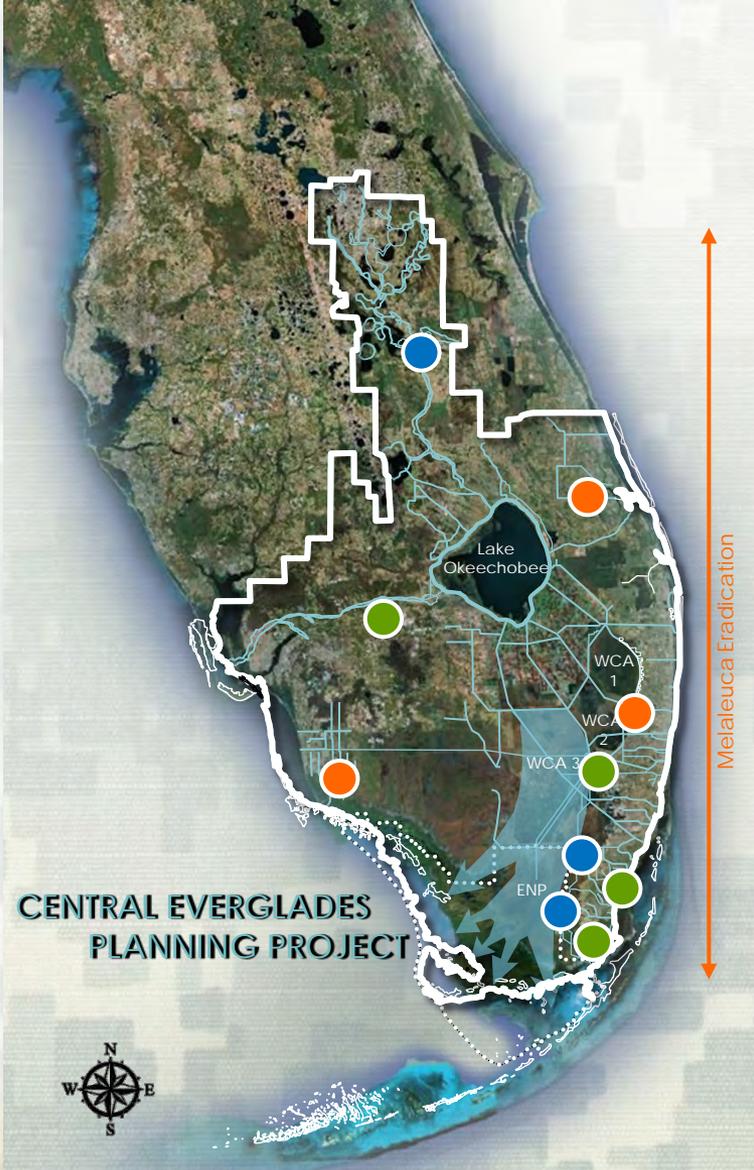
AUTHORIZATION:

WATER RESOURCES DEVELOPMENT ACT 2000

"...the Plan [CERP] is approved as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection."

NON-FEDERAL SPONSOR:

South Florida Water Management District



**CENTRAL EVERGLADES
PLANNING PROJECT**

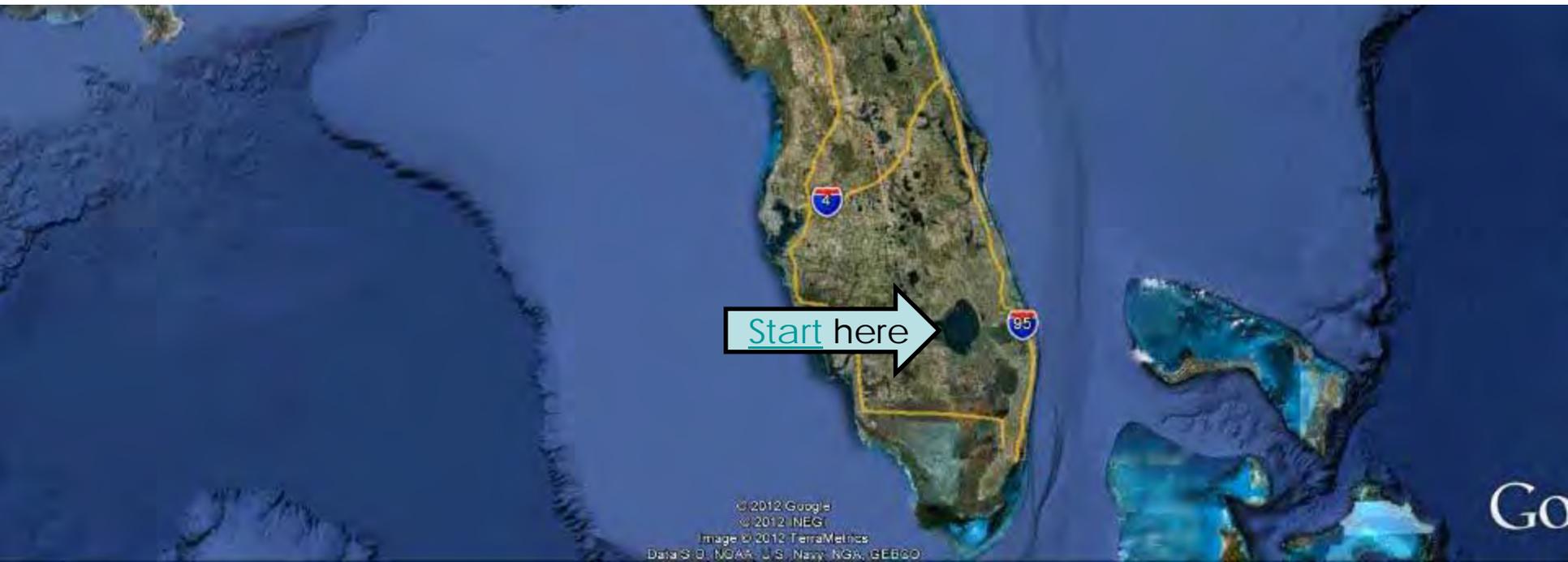
1930	HERBERT HOOVER DIKE AUTHORIZED
1948	C&SF PROJECT AUTHORIZED
1989	MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK
1992	KISSIMMEE RIVER RESTORATION C&SF RESTUDY
1994	C-111 SOUTH DADE
2000	CERP
2007	1 ST GENERATION CERP AUTHORIZED
2010/12	2 ND GENERATION CERP AWAITING AUTHORIZATION

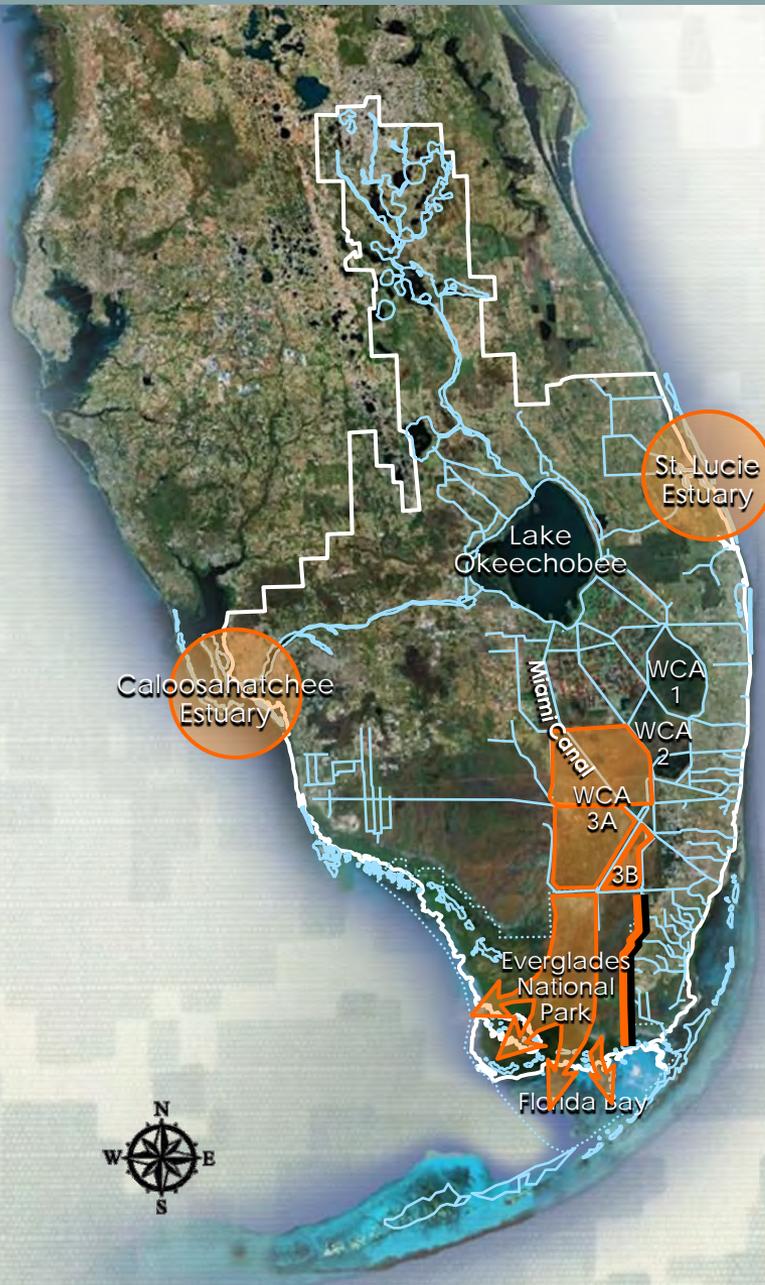


BUILDING STRONG®



CENTRAL EVERGLADES FLYOVER





DECLINING ESTUARY HEALTH
TOO MUCH OR TOO LITTLE WATER



SOIL OXIDATION, MUCK FIRES, LOSS OF SAWGRASS RIDGES, TREE ISLANDS & SLOUGHS
INTERIOR CANALS OVERDRAIN AREAS



LOSS OF TREE ISLANDS & SAWGRASS RIDGES
INTERIOR LEVEES HOLD WATER TOO DEEP FOR TOO LONG IN SOUTHERN WCA 3A

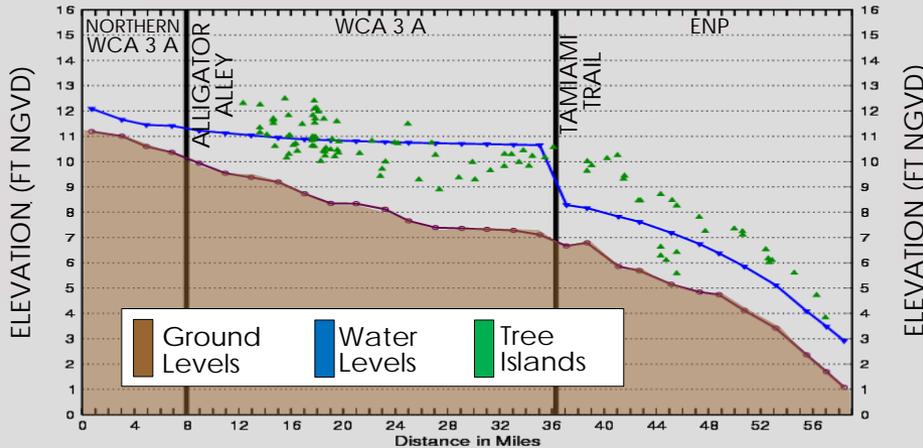


LOSS OF SOILS/SUBSIDENCE
DISCONNECTED FROM WATER FLOW



DECLINING EVERGLADES AND FLORIDA BAY HABITAT
TOO LITTLE WATER SENT TO EVERGLADES NATIONAL PARK AND FLORIDA BAY; TOO MUCH WATER SEEPS OUT OF EVERGLADES

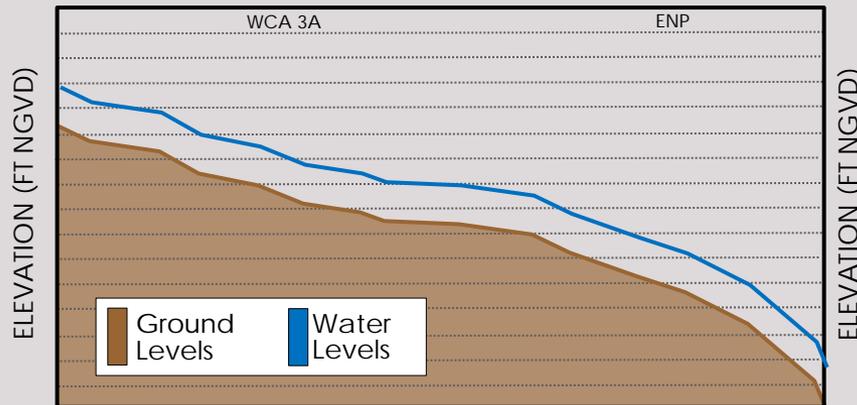
FUTURE WITHOUT-PROJECT



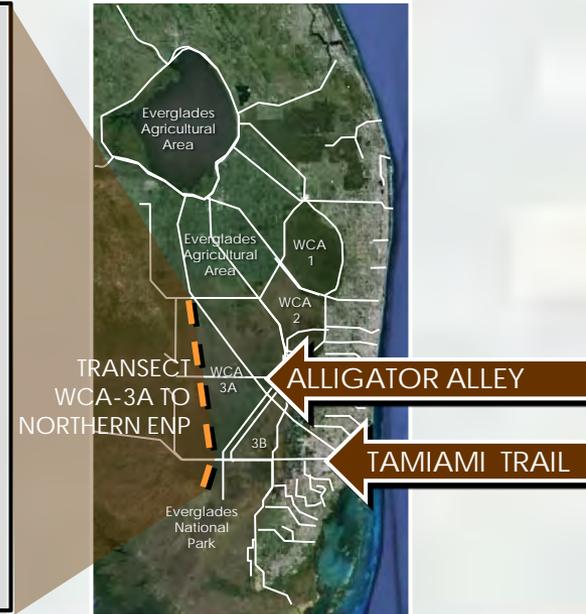
CROSS-SECTION (WCA-3A TO NORTHERN ENP)

WATER LEVELS SHOULD BE PARALLEL TO GROUND LEVELS TO MAINTAIN RIDGE AND SLOUGH

PRE-DRAINAGE SYSTEM



DISTANCE (MILES) - SOUTH



INCREASED DEGRADATION TO LANDSCAPE PATTERNS AND HABITAT IN THE INTERIOR OF THE SYSTEM

CENTRAL EVERGLADES THE RISK OF NOT ACTING



DIMINISHED HABITAT/ LANDSCAPE PATTERNS
that Support Biological Diversity



INCREASED LOSS OF SOIL
by Oxidation & Fires



INCREASED THREAT TO 68 LISTED SPECIES



DIMINISHED HEALTH OF COASTAL ESTUARIES
& Economies Dependent on Them



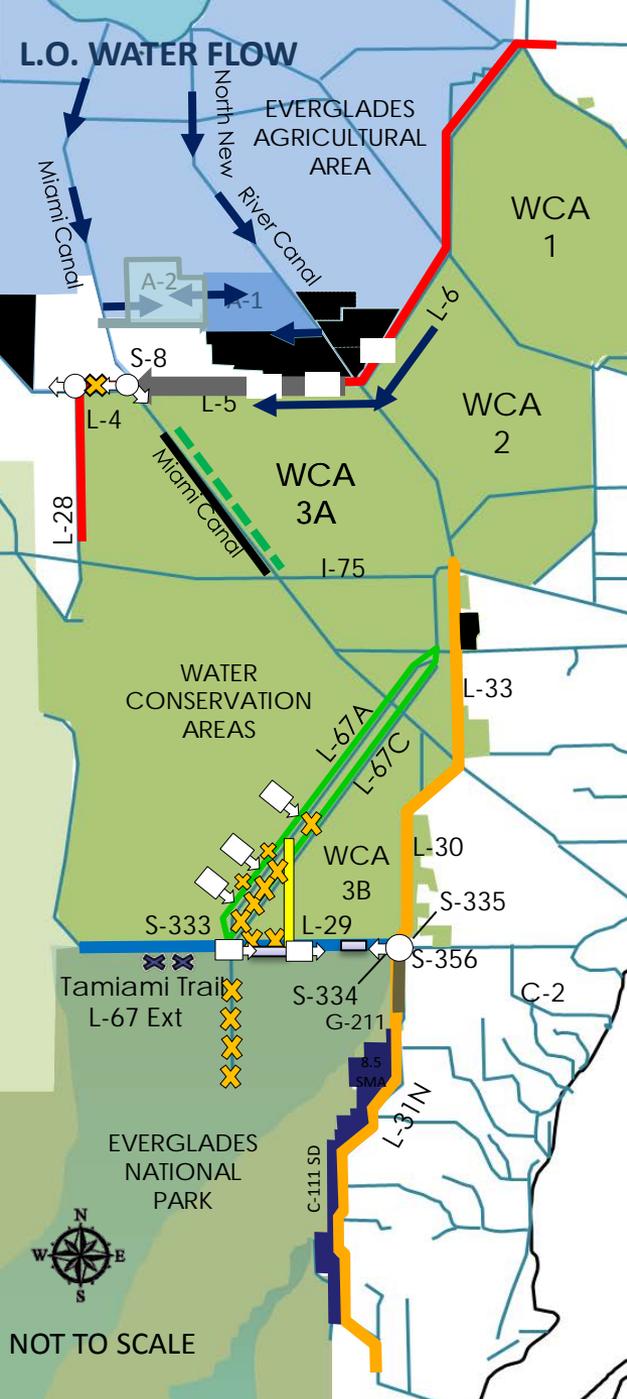
DIMINISHED OPPORTUNITIES TO ADDRESS WATER SUPPLY NEEDS
of Environmental, Agricultural & Urban Users



DECREASED OPPORTUNITY FOR CLIMATE ADAPTATION
to Reduce Salt Water Intrusion/ Sea-Level Rise



BUILDING STRONG®



RECOMMENDED PLAN (Alt 4R2)

STORAGE AND TREATMENT

- A flow equalization basin, or shallow reservoir, that will be integrated with the state's water quality treatment facilities to increase the amount of clean water flow to the Everglades from Lake Okeechobee

DISTRIBUTION/CONVEYANCE

- Increasing the L-5 canal capacity and modification to the S-8 pump station to convey water west
- Construction of a 360 cfs pump station to maintain water supply to the Seminole Tribe and western basin
- Removal of 2.9 miles of the L-4 levee to distribute inflow to WCA-3A and backfilling 13.5 miles of the Miami Canal

DISTRIBUTION/CONVEYANCE

- Construction of 8 miles of new levee and removal of 12 miles of existing levees to create a flowway through WCA-3B;
- Two 500 cfs gated culvert structures will provide inflow to the flowway and an 1150 cfs spillway will provide deliveries directly to eastern Shark River Slough;
- A 1,230 cfs spillway will maintain flow to the east of the flowway
- Additional 500 cfs gated culvert structure outside of the flowway to rehydrate the eastern portions of WCA-3B
- Removal of 5.5 miles of the L-67 extension levee and canal; and 6 miles of the Old Tamiami Trail within ENP

SEEPAGE MANAGEMENT

- A 1,000 cfs pump station and 4.2 miles of seepage barrier wall along the protective levee south of Tamiami Trail

Note: System wide operational changes and adaptive management considerations will be included in project

FEB	STA	Pump	Old Tamiami Trail Removal
Backfill	Levee Removal	Gated Structure	
Seepage Barrier	Canal Improvement	Levee	

Problems Opportunities	Existing Conditions	Future Without-Project	Objectives Constraints	Plan Formulation	Recommended Plan
------------------------	---------------------	------------------------	------------------------	------------------	------------------

ECOSYSTEM BENEFITS: %TARGETS ACHIEVED BY ZONE

■ ≥75%
 ■ 50-74%
 ■ <50%

WCA 3: 495,000 ACRES IMPROVED

ZONE	FWO	PLAN
Northeast WCA 3A	24	74
Northwest WCA 3A	43	77
Miami Canal	35	70
Central WCA 3A	77	81
WCA 3B	57	69



EVERGLADES NATIONAL PARK (ENP): 499,000 ACRES IMPROVED

Northern ENP	44	79
Southern ENP	53	71
Southeast ENP	60	62



FLORIDA BAY / CALOOSAATCHEE AND ST. LUCIE ESTUARIES: 476,000 / 86,000 ACRES IMPROVED

Florida Bay West	13	26
Florida Bay Central	10	18
Florida Bay South	15	29
Florida Bay E. Central	23	39
Florida Bay North	16	21
Florida Bay East	23	26
Caloosahatchee Estuary	48	55
St. Lucie Estuary	16	55



TOTAL: 1,556,000 ACRES

CENTRAL EVERGLADES THE BENEFITS



**IMPROVED
HABITAT/
LANDSCAPE
PATTERNS
TO SUPPORT
BIOLOGICAL
DIVERSITY**

**994,000
ACRES
IMPROVED IN
WCA 3 & ENP**



**REDUCED
SOIL LOSS
BY OXIDATION
& FIRES**

**213,000
ACRE-FEET
OF PEAT SOILS
RESTORED**

**REDUCED
GREENHOUSE
GAS**

**REDUCED TAX
PAYER COSTS,
HEALTH RISKS,
AND ROAD
CLOSURES**

**MORE DAYS OF
RECREATION
ANNUALLY**



**DECREASED
THREAT
TO 68 LISTED
SPECIES**

**1.5 MILLION
ACRES OF
IMPROVED
HABITAT**



**IMPROVED
HEALTH
OF COASTAL
ESTUARIES
& ECONOMIES
DEPENDENT
ON THEM**

**86,000
ACRES
IMPROVED
IN NORTHERN
ESTUARIES**
**COMMERCIAL
SHRIMP FISHERIES
IMPROVED**

**INCREASED
SALTWATER
FISHING
OPPORTUNITIES**

**REDUCED TAX
PAYER COSTS
(REDUCED
SEDIMENTATION)**



**MORE
OPPORTUNITIES
TO ADDRESS
WATER
SUPPLY NEEDS
OF ALL USERS**

**MORE
WATER FOR
ENVIRONMENT**

**\$25 MILLION
MORE IN
DRINKING
WATER
(~200,000
MORE
PEOPLE)**



**IMPROVED
OPPORTUNITY
FOR CLIMATE
ADAPTATION
TO DELAY
SEA-LEVEL
CHANGE EFFECTS
BY REDUCING
SALTWATER
INTRUSION**

**476,000
ACRES
IMPROVED
IN FLORIDA
BAY**

RECOMMENDED PLAN SUMMARY OF PROJECT COST

(FY14 Discount Rate of 3.5% and October 2013 Price Level)

	Federal Cost	Non-Federal Cost	Total
Total First Cost	\$ 950,875,000	\$ 949,125,000	\$ 1,900,000,000
Annual OMRR&R New CEPP Features	\$ 2,075,000	\$ 2,075,000	\$ 4,150,000
Annual OMRR&R State Facilities	\$ 2,000,000	\$ 2,000,000	\$ 4,000,000
Annual OMRR&R Invasive Species	\$ 1,550,000	\$ 1,550,000	\$ 3,100,000
Ecological Performance Monitoring (per year for 10 years)	\$ 1,350,000	\$ 1,350,000	\$ 2,700,000
Monitoring	\$ 1,400,000	\$ 1,400,000	\$ 2,800,000



BUILDING STRONG®

PROJECT IMPLEMENTATION

Preconstruction Engineering and Design (PED) Phase

- Phased concurrently with construction

Construction Phase

- Multi-year construction phase assuming \$50 M/year Federal and \$50M/year non-federal
- Subject to Authorization and Appropriations

CONSTRAINED CEPP IMPLEMENTATION/CONSTRUCTION DURATION (SCENARIO 1)																	 DEPENDENCIES	
Duration (Days)	CEPP		Cnt. No.	PPA	YR 1	YR 3	YR 4	YR 6	YR 7	YR 9	YR 10	YR 12	YR 13	YR 15	YR 16	YR 18	YR 19	
A-1 FEB & Restoration Strategies meeting WQBEL				N														
8.5 SMA, C-111 SD, Existing S-356 Operational																		
MWD 1- Mile Bridge & Road Raising																		
365	L-6 Diversion	1																
730	S-8 Pump Modifications	1																
730	L-4 Levee Degrade and Pump Station	1																
540	L-5 Canal Improvements	2																
913	Backfill Miami Canal	2																
BWPA C-11 Impoundment				S														
365	L-67A 500 CFS Structure North	3																
180	Spoil Mound Removal West L-67A (N)	3																
180	L-67C 6000' Levee Gap	3																
TTNS Bridging & Road Raising				S														
1186	Increase S-356	4																
365	Increase S-333	4a																
365	L-29 Gated Spillway	4b																
270	L-67A 500 CFS Structures 2 & 3 South	5																
180	Spoil Mound Removal West L-67A (S)	5																
730	L-67C Levee Degrade in BS (~8 miles)	6																
730	8.5 Mile Blue Shanty Levee	6																
365	Remove L-67 Extension Levee	6																
365	Remove L-29 Levee in Blue Shanty	7																
730	Remove Old Tamiami Trail *	X																
IRL-S C-44 Reservoir				NW														
LO Regulation Schedule Revisions																		
365	Seepage Barrier L-31N	8																
1825	A-2 FFB (8 sub contracts)	9																

CONCLUSION

- CEPP provides the next increment toward accomplishing the goals of the Comprehensive Everglades Restoration Plan (CERP)
- Florida is defined by its unique natural environment - its health directly benefits Florida economies such as tourism and recreation
- The project enjoys broad agency and stakeholder support

Achieves ~ 70% of restoration targets for the central Everglades

Increases water flow by >20% to the central Everglades and Florida Bay

> 20% reduction in undesirable freshwater discharges to St. Lucie and Caloosahatchee estuaries from Lake Okeechobee



BUILDING STRONG®

NEXT STEPS

- HQ USACE will complete policy assessment of Final PIR
- USACE will re-convene Civil Work Review Board no later than the end of June
- Response to comments (as needed) and any report revisions
- Release Final PIR for 30-day State and Agency Review
- Chief of Engineers Report to Congress



BUILDING STRONG®

Thank You

