LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT

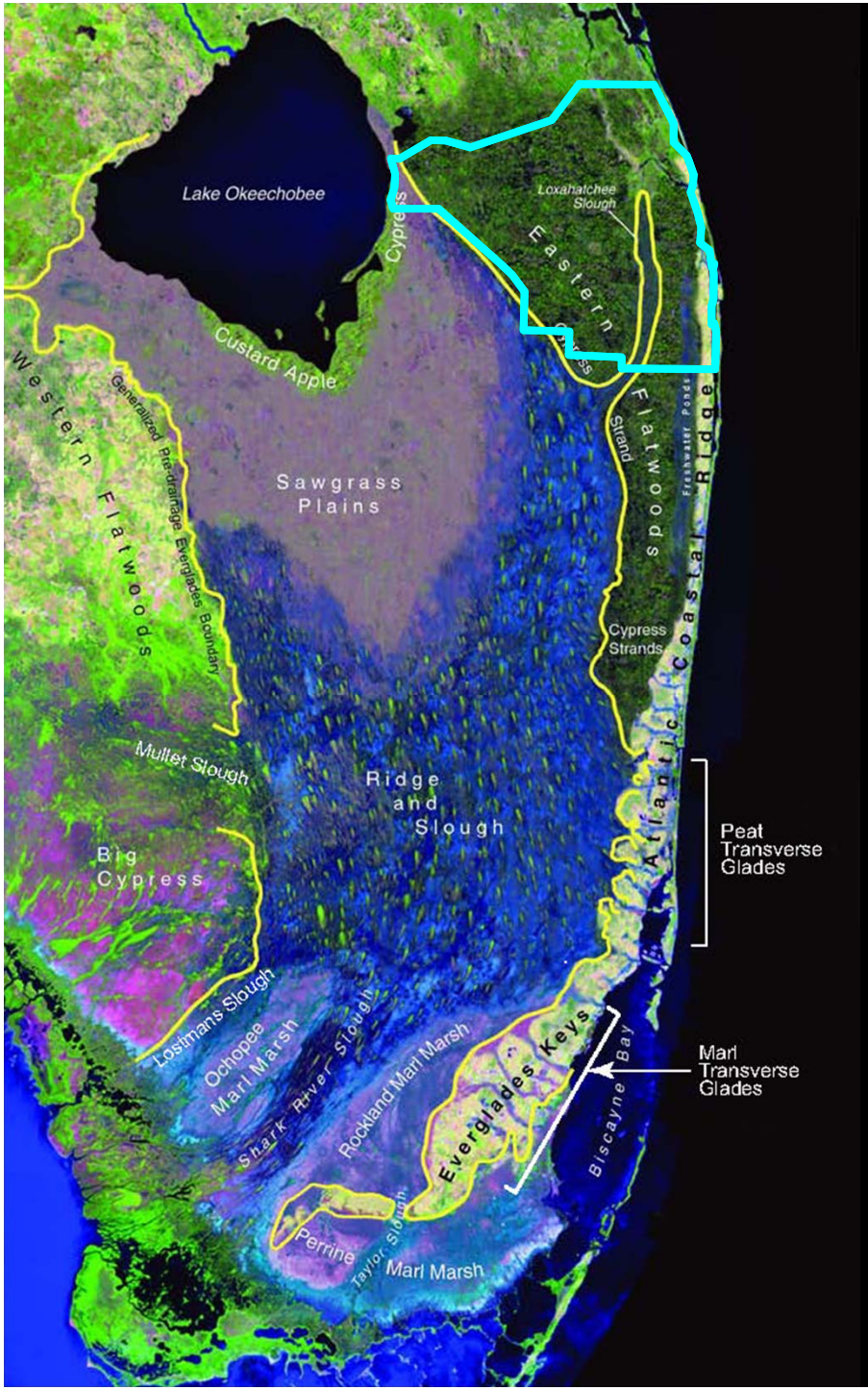
South Florida Ecosystem Restoration Task Force – Working Group and Science Coordination Group Meeting

April 2015

One of the Last Old Growth Cypress Floodplains in the SE Florida

Last Large Freshwater Wetland Corridor in Project Area

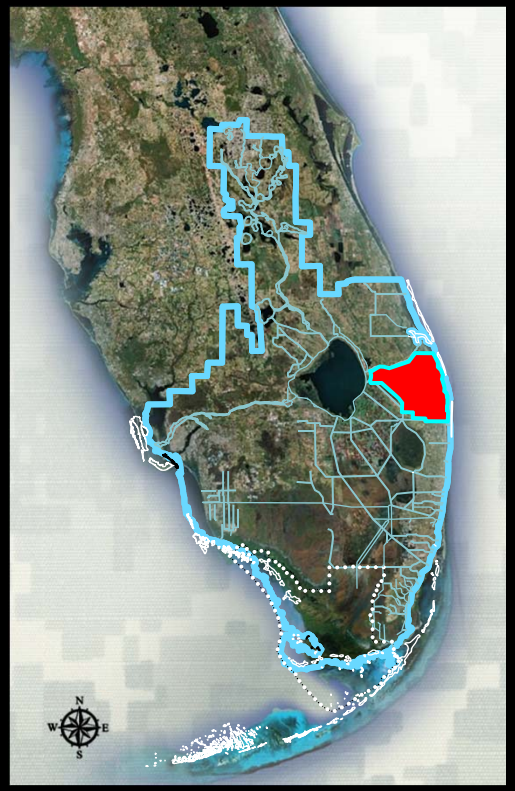
Vulnerable estuarine habitats



LOXAHATCHEE RIVER WATERSHED RESTORATION

PRE-DEVELOPMENT

CYPRESS STRANDS AND PINEWOODS



STUDY AREA

ST. LUCIE ESTUARY
LOXAHATCHEE RIVER
LAKE OKEECHOBEE
JUPITER INLET
ATLANTIC OCEAN
PRE-DEVELOPMENT LOXAHATCHEE SLOUGH
LAKE WORTH INLET
LAKE WORTH LAGOON
ARTHUR R. MARSHALL LOXAHATCHEE NATIONAL WILDLIFE REFUGE
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W
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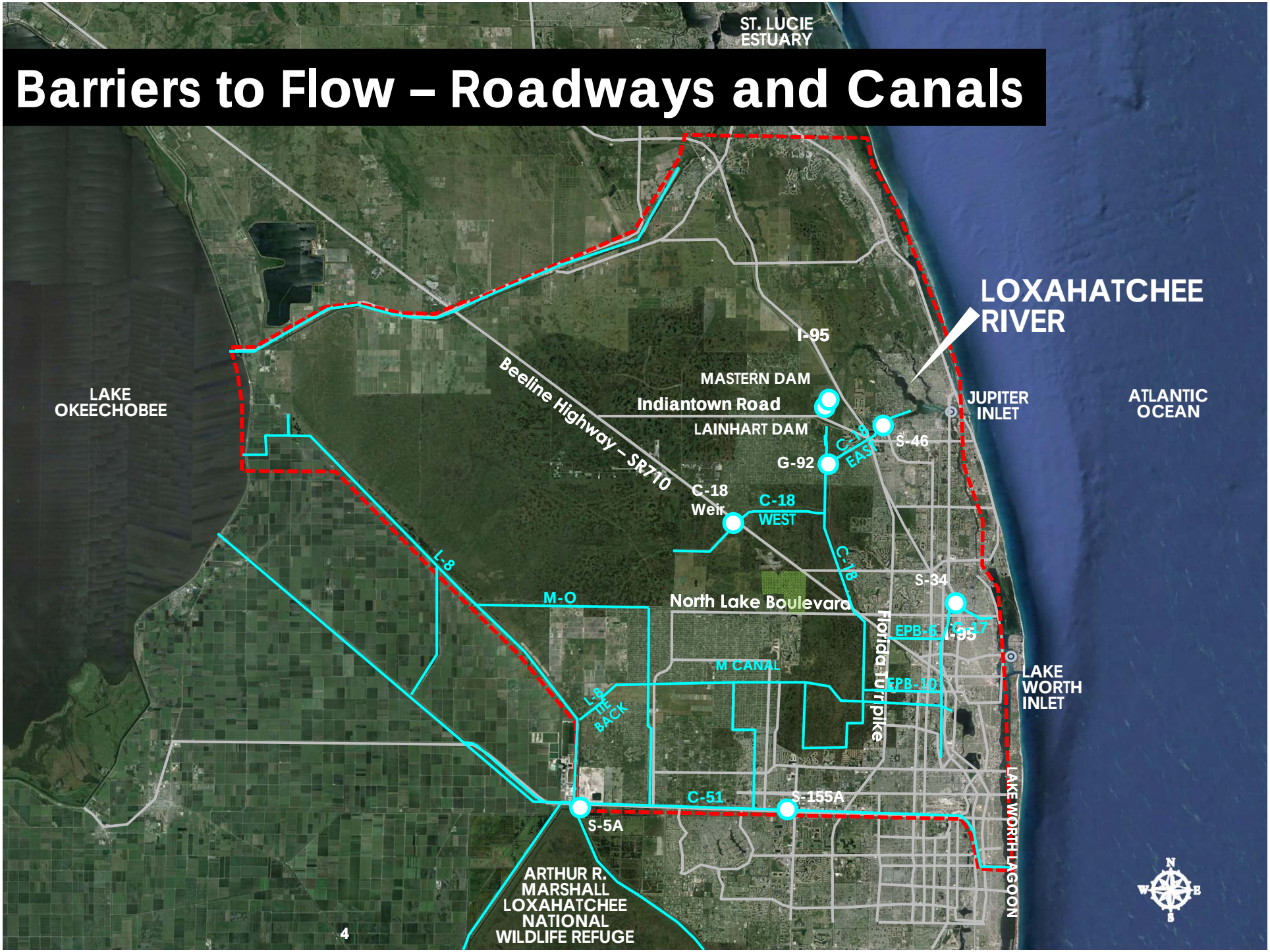
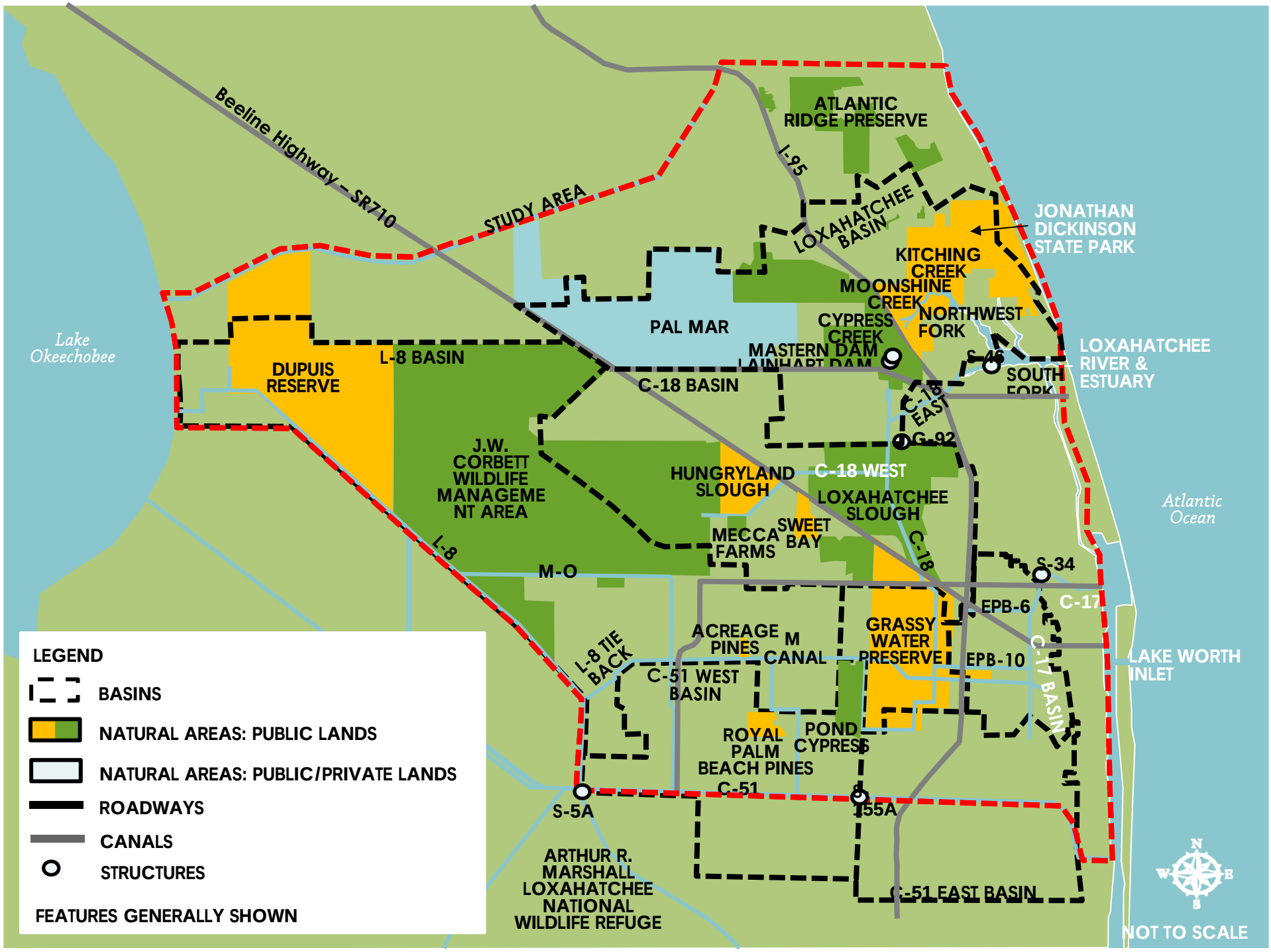
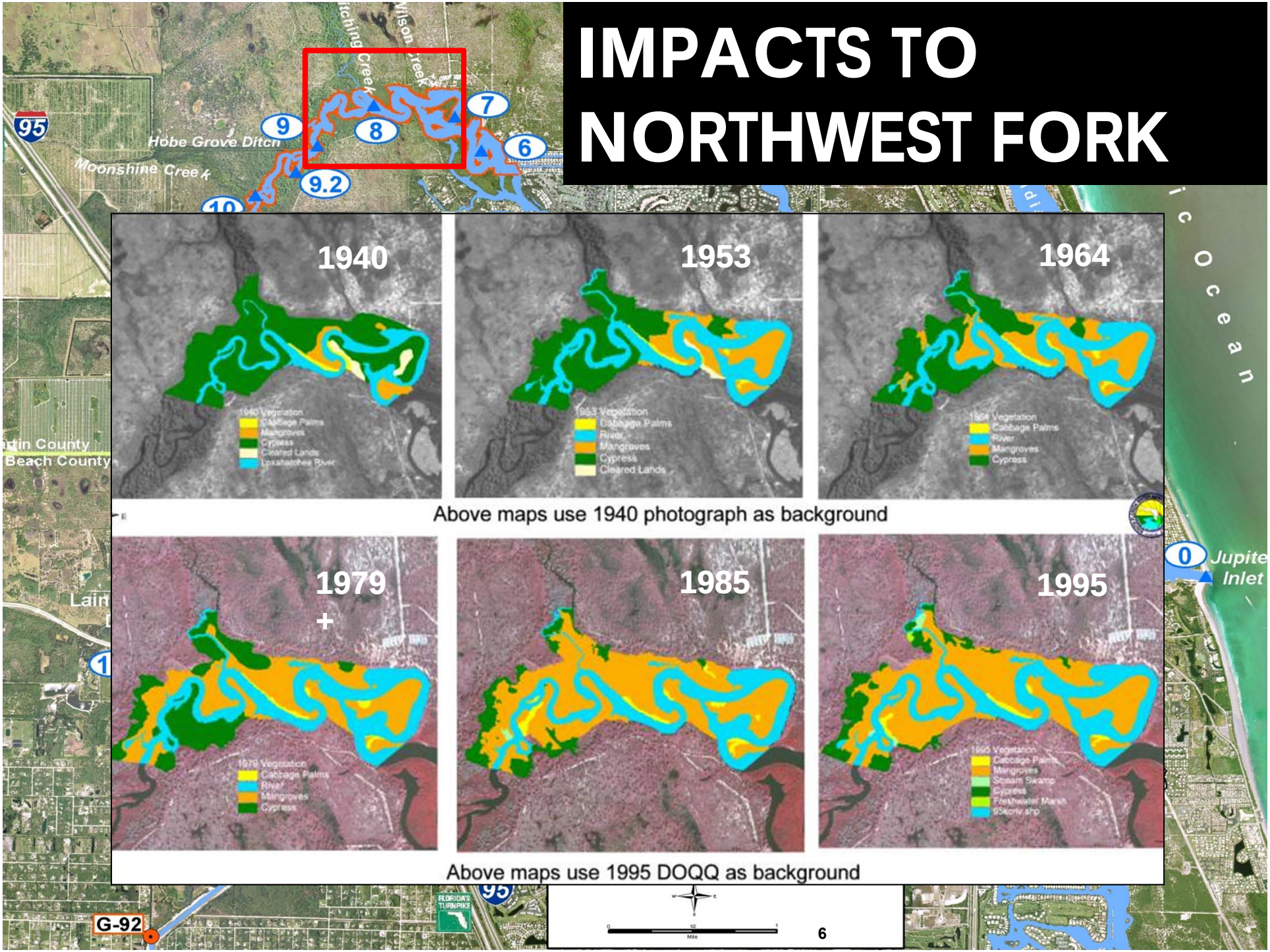
Barriers to Flow – Roadways and Canals




Beeline Highway - SR710
STUDY AREA
ATLANTIC RIDGE PRESERVE
I-95
LOXAHATCHEE BASIN
JONATHAN DICKINSON STATE PARK
KITCHING CREEK
MOONSHINE CREEK
NORTHWEST FORK
CYPRESS CREEK
PAL MAR
MASTERN DAM
LAINHART DAM
S-46
SOUTH FORK
LOXAHATCHEE RIVER & ESTUARY
Lake Okeechobee
DUPUIS RESERVE
L-8 BASIN
C-18 BASIN
C-18 EAST
G-92
J.W. CORBETT WILDLIFE MANAGEMENT AREA
HUNGRYLAND SLOUGH
C-18 WEST
LOXAHATCHEE SLOUGH
SWEET BAY
MECCA FARMS
C-18
Atlantic Ocean
L-8
M-O
S-34
EPB-6
C-17
GRASSY WATER PRESERVE
EPB-10
C-17 BASIN
LAKE WORTH INLET
L-8 TIE BACK
ACREAGE PINES
M CANAL
C-51 WEST BASIN
ROYAL PALM BEACH PINES
POND CYPRESS
C-51
S-5A
S-155A
ARTHUR R. MARSHALL LOXAHATCHEE NATIONAL WILDLIFE REFUGE
C-51 EAST BASIN
LEGEND
BASINS
NATURAL AREAS: PUBLIC LANDS
NATURAL AREAS: PUBLIC/PRIVATE LANDS
ROADWAYS
CANALS
STRUCTURES
FEATURES GENERALLY SHOWN
N
W
E
S
NOT TO SCALE

IMPACTS TO NORTHWEST FORK



Problems and Opportunities Summary

1. Altered timing and distribution of headwater base flows to the Northwest Fork of the Loxahatchee River
2. Increased salinity effects on formerly freshwater reaches of the Loxahatchee River
3. Loss of freshwater cypress floodplain adjacent to Loxahatchee River
4. Increased wet season flows to Southwest Fork and Loxahatchee Estuary
5. Degraded natural area structure and function from altered hydrology
6. Conversion of natural areas to agricultural, residential and industrial uses
7. Loss of connectivity and barriers to flow between natural areas, river, and estuary
8. Reduced native floral and faunal populations and diversity
9. Degraded water quality in natural areas

Restoration Objectives and Performance Measures

Objective (Abbreviated)	PM 1 – Salinity	PM 4 – Watershed Hydrology	PM 9 - Connectivity
1. Restore wet and dry season flows to Northwest Fork of Loxahatchee River	√		
2. Restore and/or maintain estuarine communities (oysters, fish, seagrass)	√		
3. Increase natural area extent of wetlands	√	√	
4. Restore connections between natural areas		√	√
5. Restore native plant and animal species abundance and diversity	√	√	

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PROJECT GOALS AND OBJECTIVES

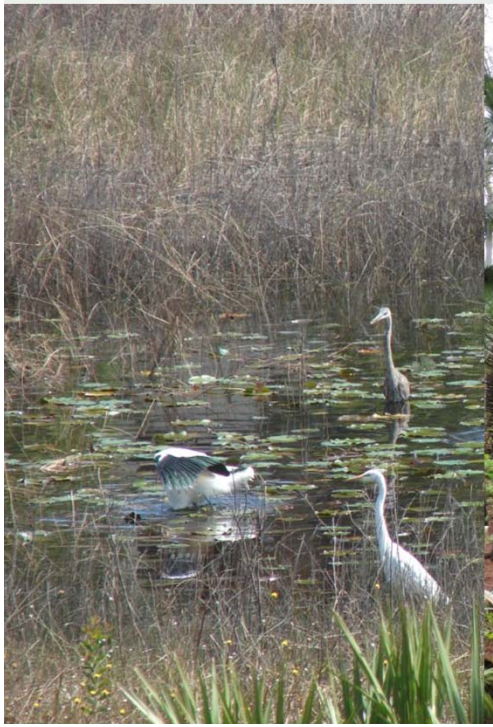
Consistent with CERP Goals and Objectives (Table 5-1)

1. **Enhance Ecological Values**
   A. Increase the total spatial extent of natural areas
   B. Improve habitat and functional quality
   C. Improve native plant and animal species abundance and diversity

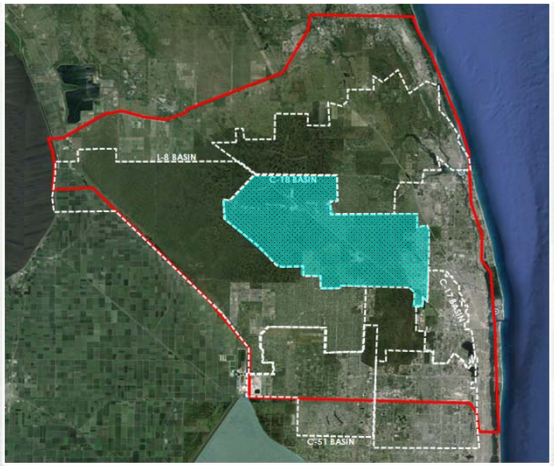
2. **Enhance Economic Values and Social Well Being**
   A. Increase availability of fresh water (agricultural/municipal and industrial)
   B. Reduce flood damages (agricultural/urban)
   C. Provide recreational opportunities
   D. Protect cultural and archeological resources and values

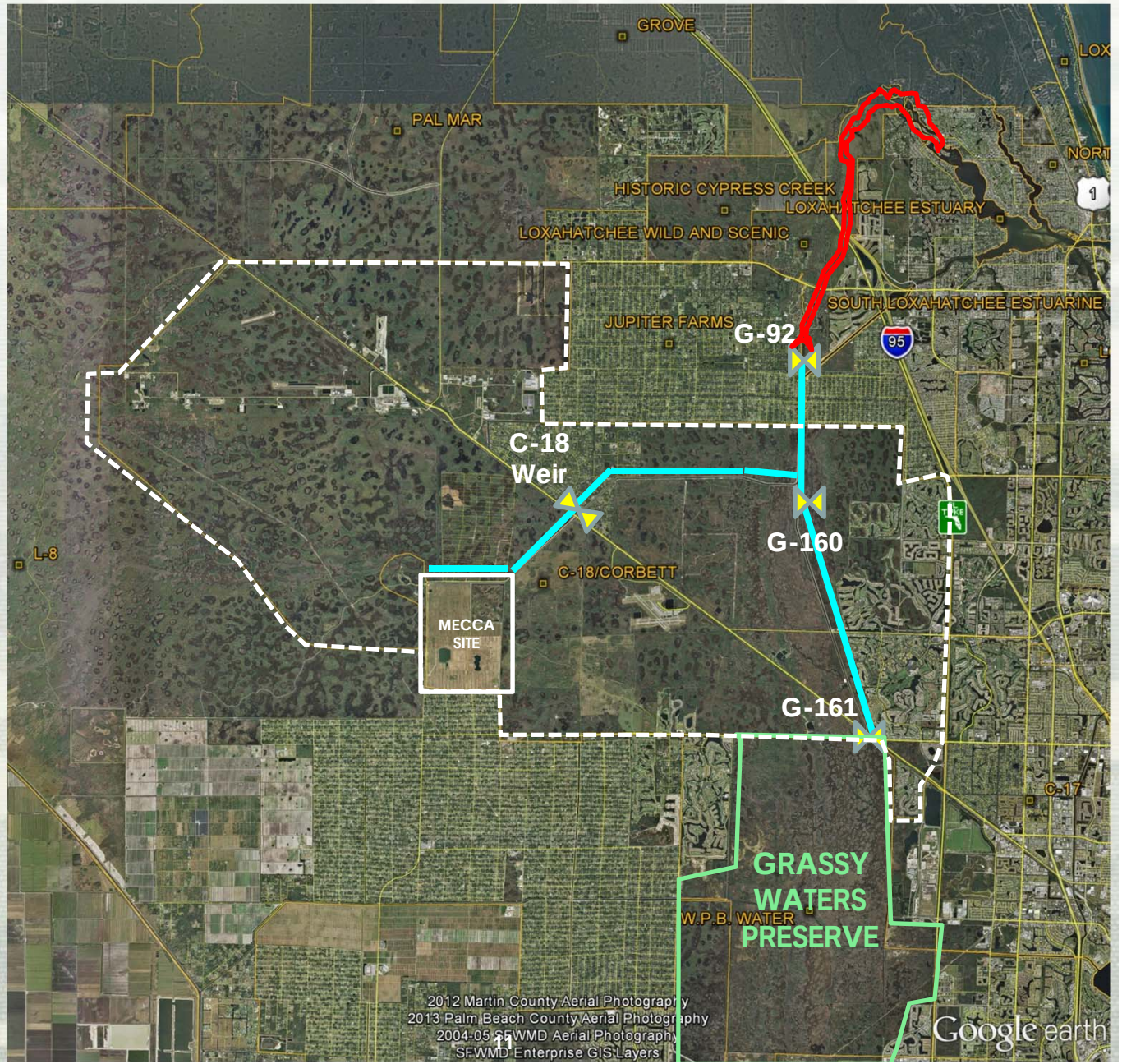
Ecosystem Focus Areas and PMs

Ecosystem Focus Area	PM 1	PM 4	PM 9
Watershed Wetlands – Freshwater Flora and Fauna		√	√
Cypress Swamp-River Floodplain - Freshwater Flora and Fauna	√		√
River with *Vallisneria americana* and Fish Larvae	√		
Estuary – Fish, Oysters, Seagrass	√		

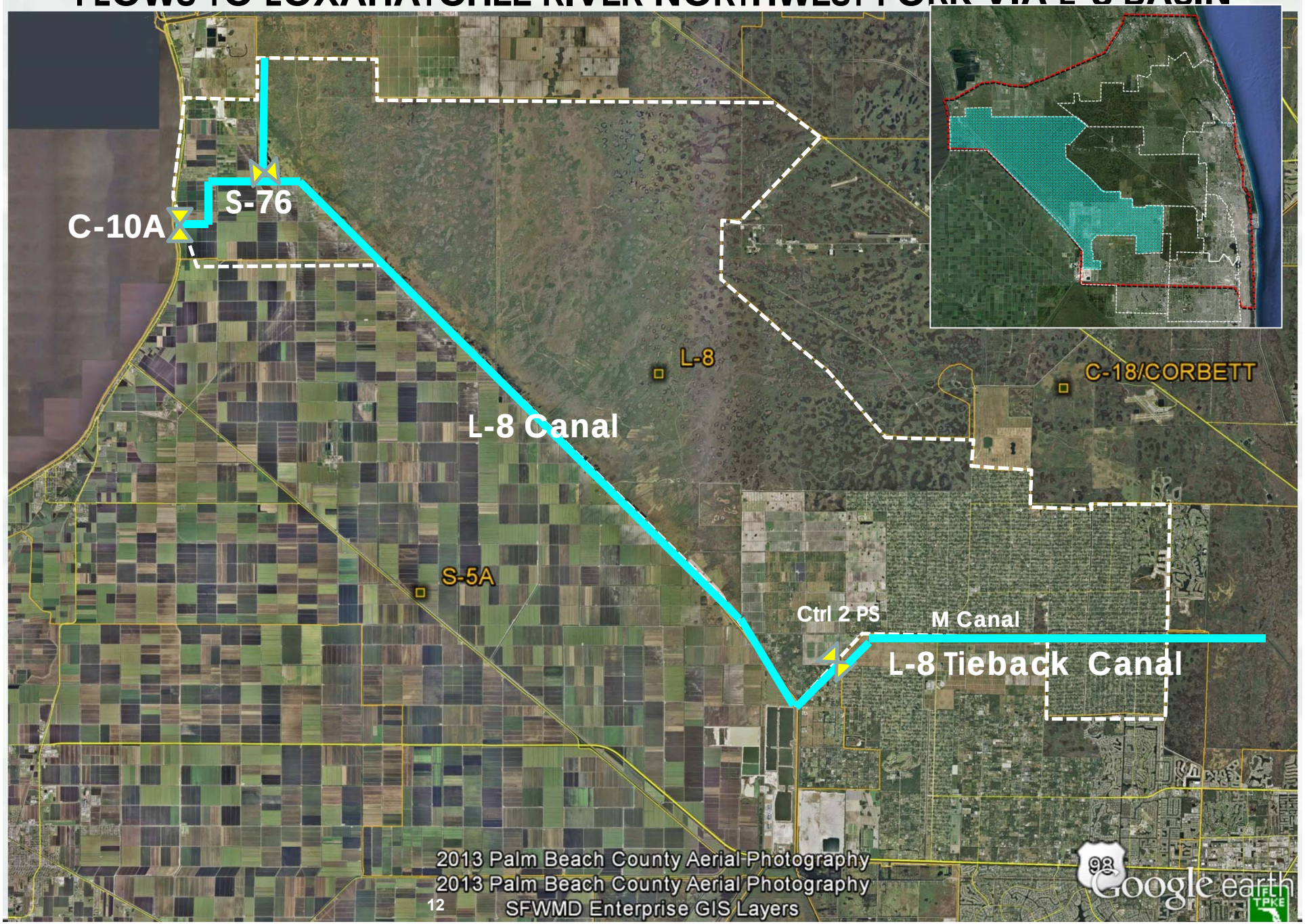


FLOWS TO LOXAHATCHEE RIVER NORTHWEST FORK VIA C-18 BASIN

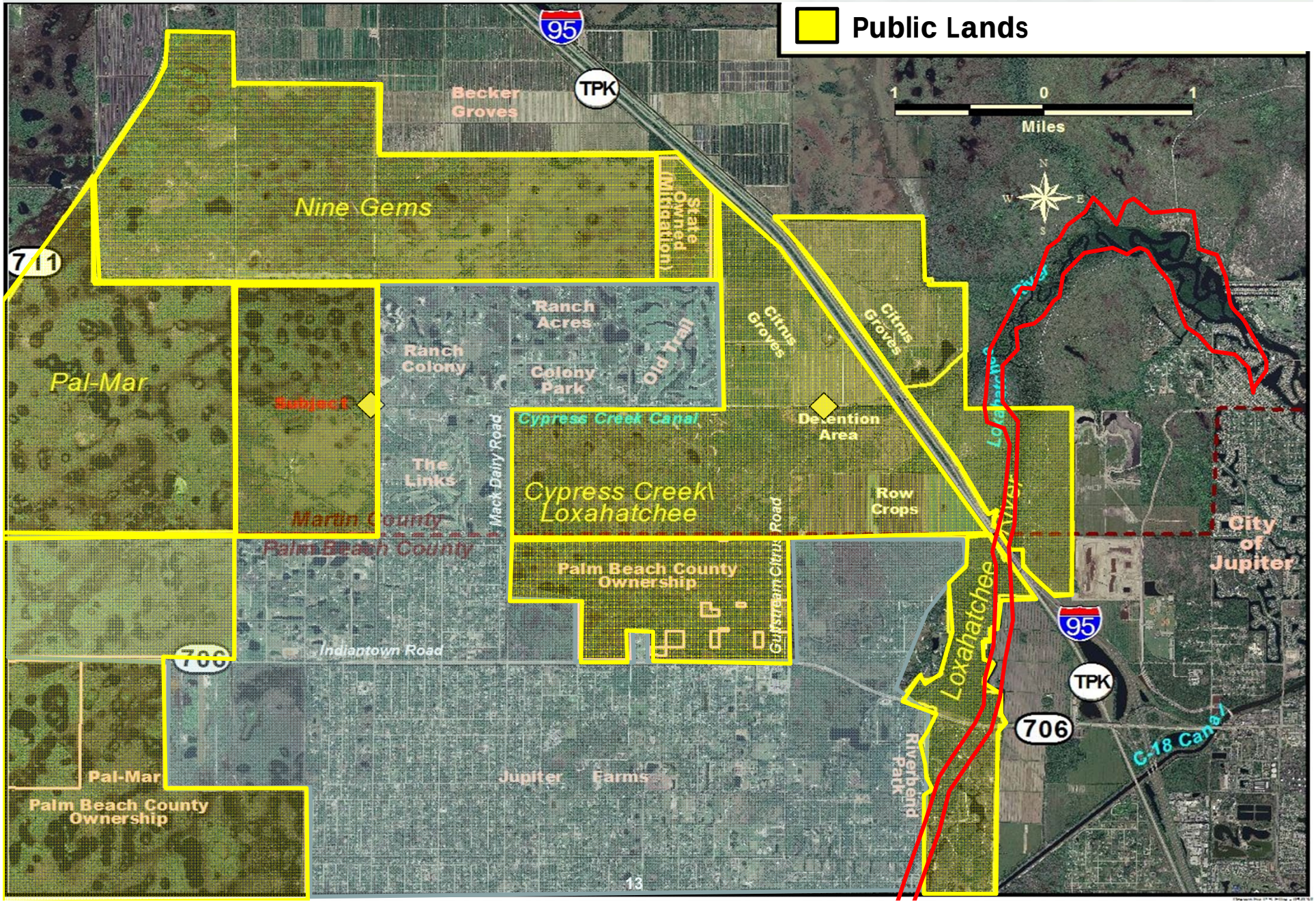




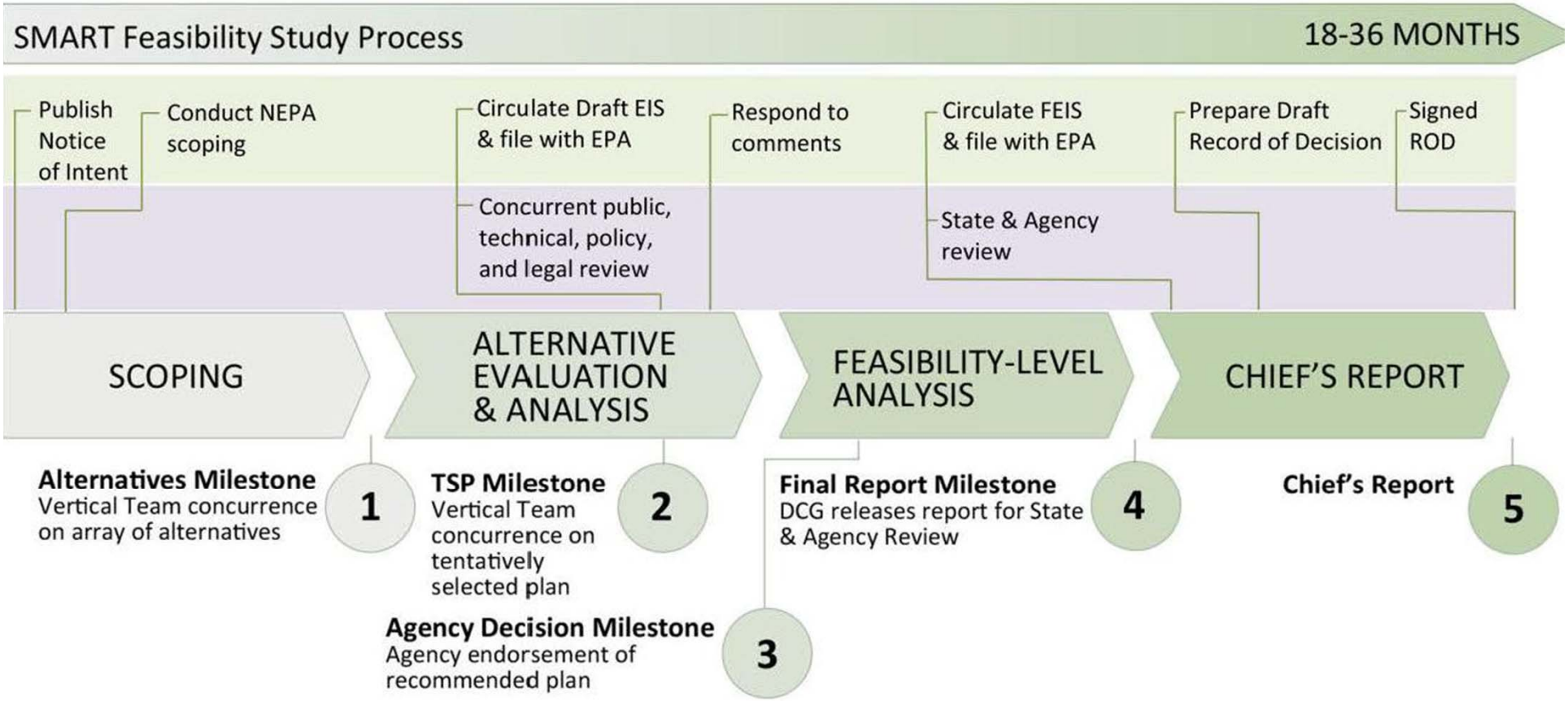
FLOWS TO LOXAHATCHEE RIVER NORTHWEST FORK VIA L-8 BASIN



FLOWS TO LOXAHATCHEE RIVER NORTHWEST FORK VIA CYPRESS CREEK



SMART Planning Process



Questions?

- **Project Website:** http://www.saj.usace.army.mil/Missions/Environmental/EcosystemRestoration/LoxahatcheeRiverWatershedRestorationProject.aspx

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