

Update on Implementation of Restoration Strategies Plan

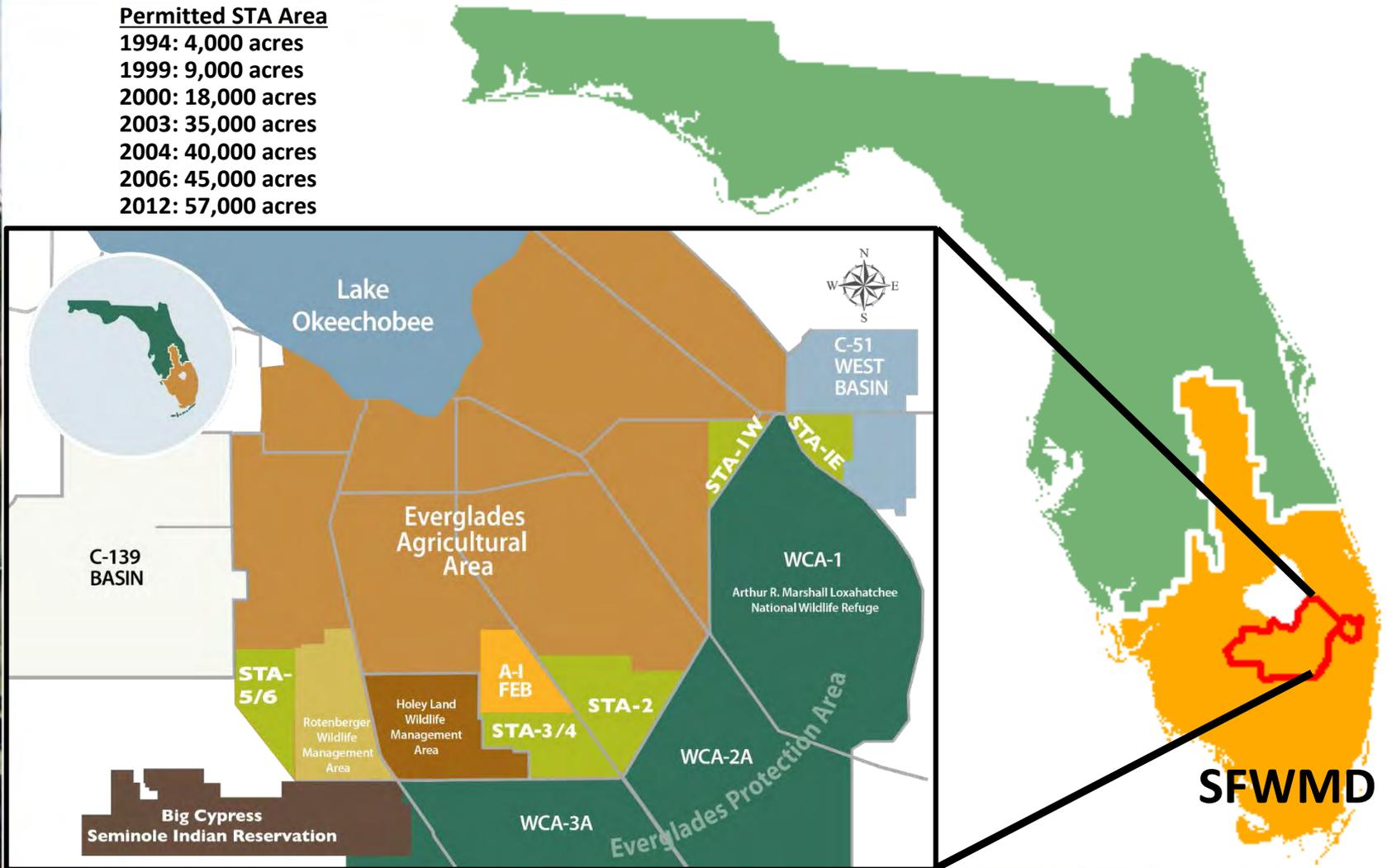


**Ernie Marks, Division Director
Everglades Policy and Coordination Division
Governing Board Meeting
November 10, 2016**

Stormwater Treatment Areas (STAs)

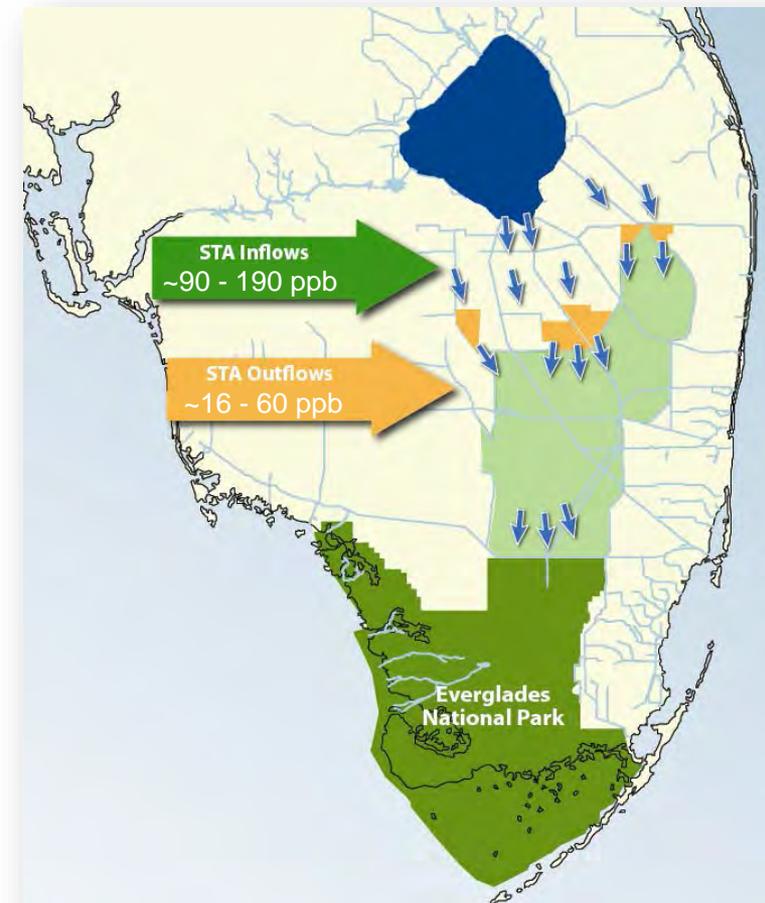
Permitted STA Area

- 1994: 4,000 acres
- 1999: 9,000 acres
- 2000: 18,000 acres
- 2003: 35,000 acres
- 2004: 40,000 acres
-
- 2006: 45,000 acres
- 2012: 57,000 acres



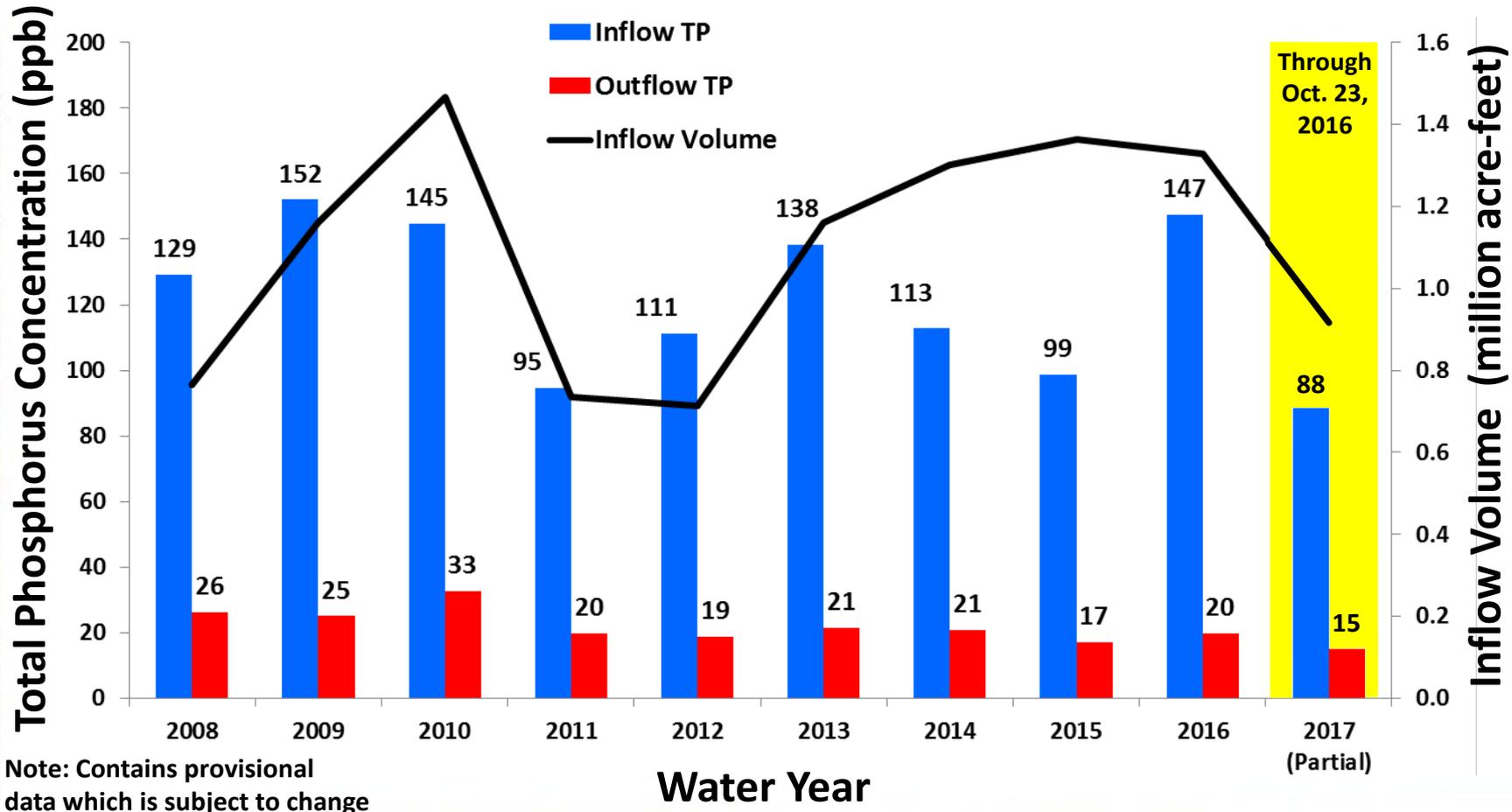
STA Performance Summary: 1995-2016

- 17.5 million acre-feet (5.7 trillion gallons) of water treated
- 2,220 metric tons of phosphorus removed (76% load reduction)
- STA-3/4 outflow phosphorus concentration averaging 16 parts per billion (ppb) since beginning operation in 2004
- STA-2 and STA-3/4 have achieved annual phosphorus concentrations as low as 12 ppb



STA Performance: 2008-2017

All STAs combined



Restoration Strategies: Key Projects

2012

- 57,000 ac of STA

2012-2016

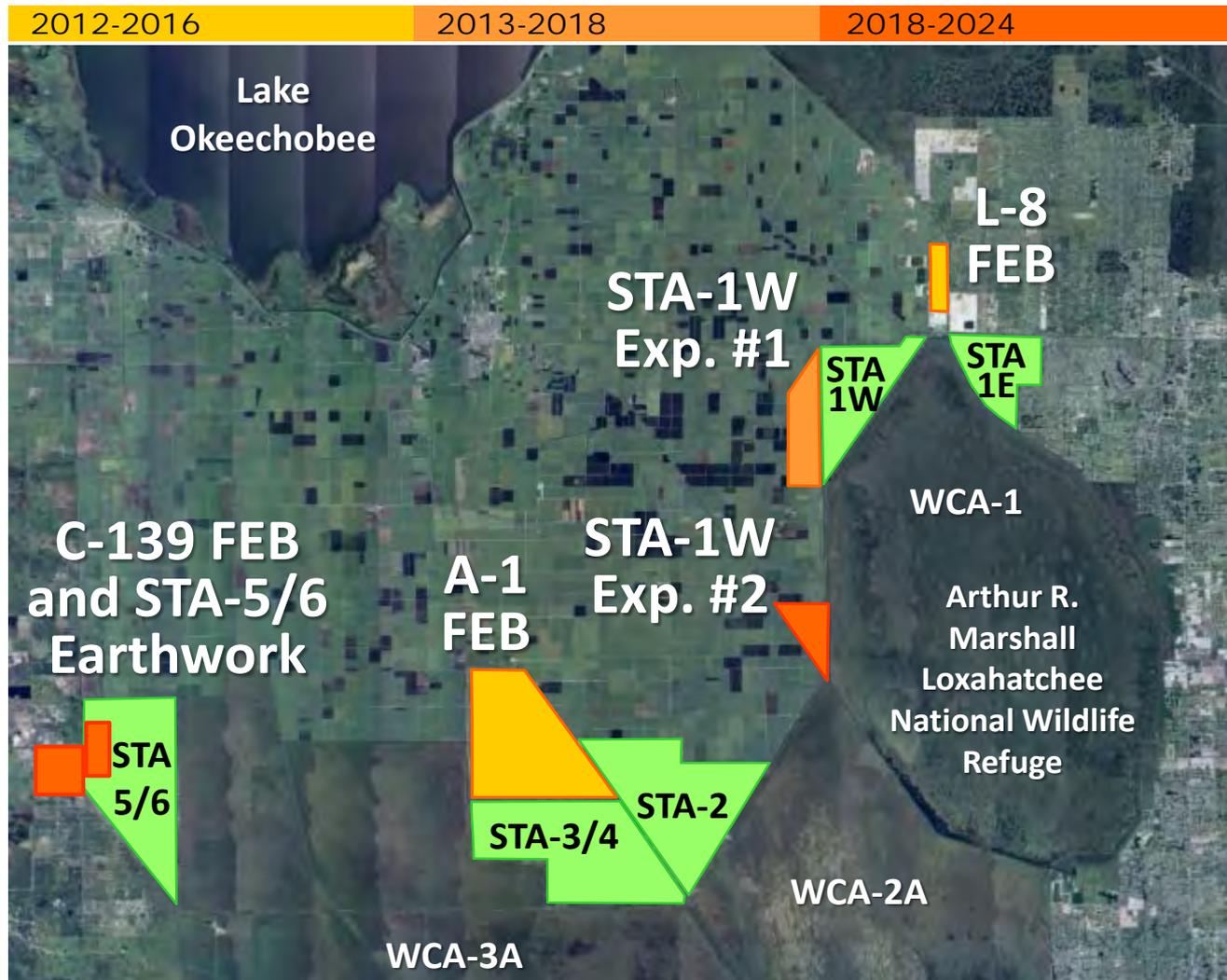
- L-8 FEB (45,000 ac-ft)
- A-1 FEB (60,000 ac-ft)

2013-2018

- STA (4,600 ac)

2018-2024

- STA (1,900 ac)
- C-139 FEB (11,000 ac-ft)
- STA Earthwork (800 ac)



A-1 Flow Equalization Basin (FEB)

- Designed to improve performance of STA-2 and STA-3/4
- 15,000 acres by 4 feet deep = ~60,000 acre-feet
- Operational Testing and Monitoring Phase ongoing

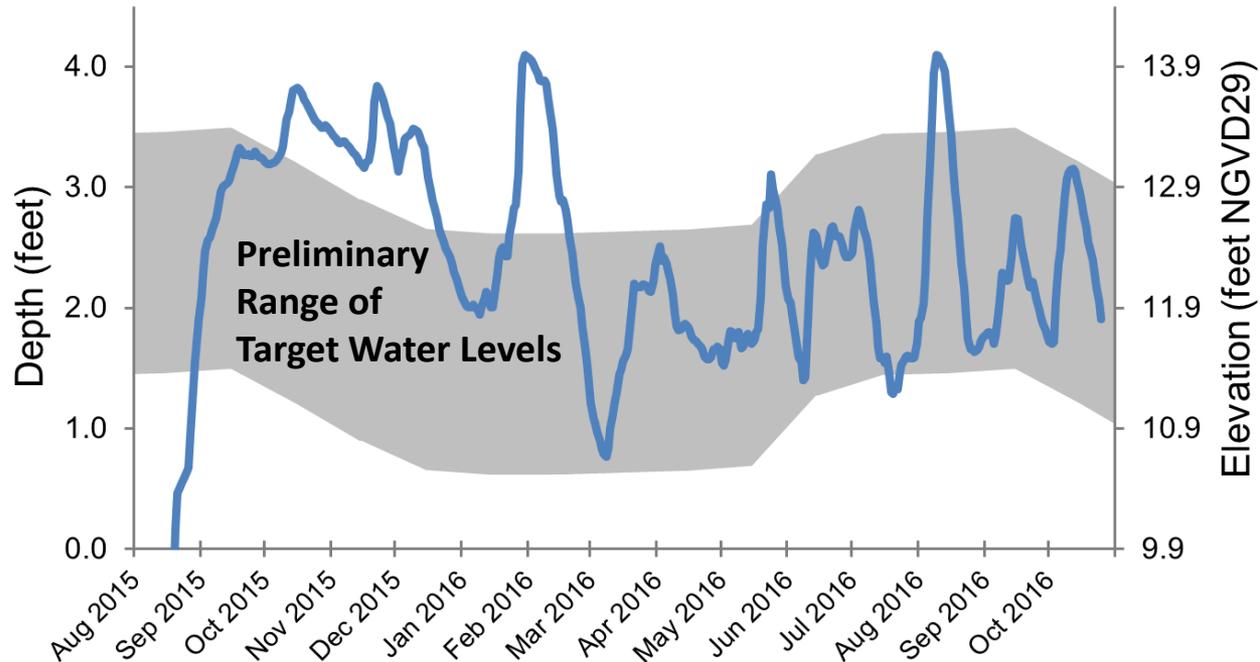
Operational Summary: Aug. 1, 2015 - Oct. 23, 2016

Inflow Volume
538,000 acre-feet

Inflow P Conc.
88 ppb

Outflow P Conc.
21 ppb

P Load Reduction
86%



Note: Contains provisional data which is subject to change

L-8 Flow Equalization Basin (FEB)

- Designed to improve performance of STA-1E and STA-1W
- 800 acres by 58 feet deep = ~45,000 acre-feet
- Construction 87% complete; completion expected by December 2016 (deadline is December 31, 2016)



L-8 Divide Structure (G-541)

- Enables efficient L-8 FEB inflow/outflow operations
- Construction completed July 2016 (more than 2 years ahead of September 2018 deadline)



S-5AS Modifications

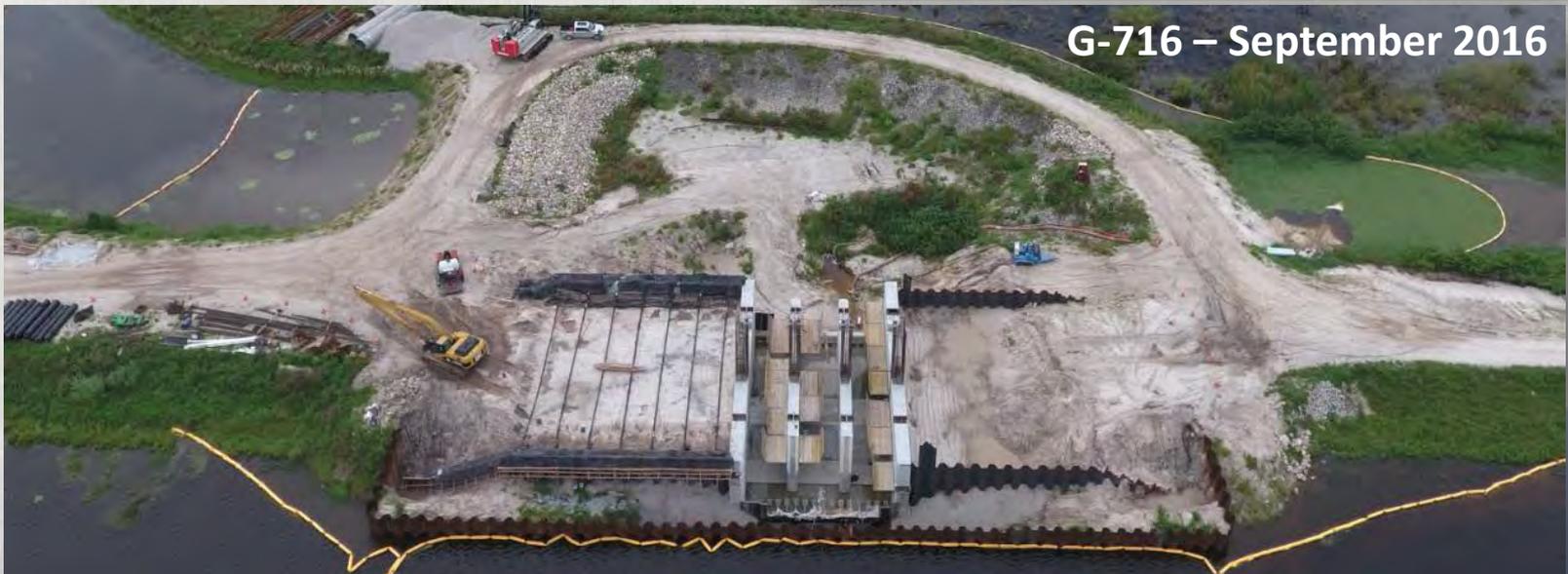
- Enable more efficient operations when directing flows to/from the L-8 FEB
- Construction completed May 2016
(4 months ahead of September 2016 deadline)



S-5AS – April 2016

S-375 Expansion (G-716)

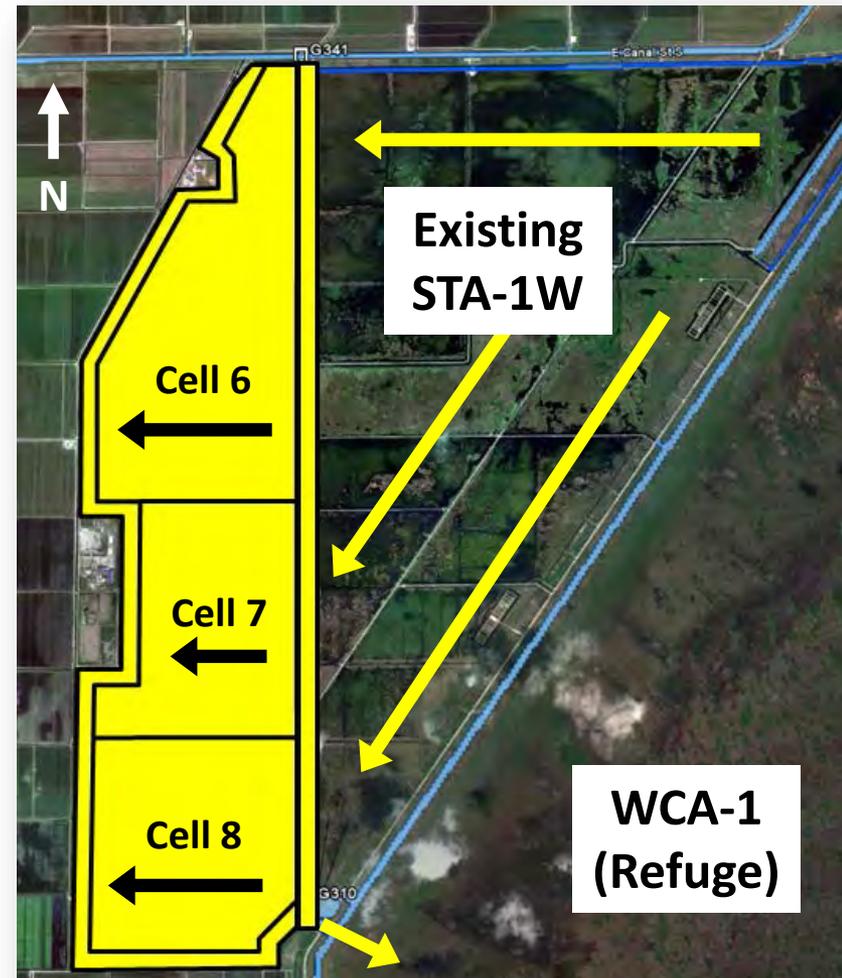
- Enables additional flow to be conveyed to L-8 FEB
- Construction is 65% complete
- Completion expected April 2017



G-716 – September 2016

STA-1W Expansion #1

- Designed to assist STA-1W and STA-1E
- 4,300 acres of additional effective stormwater treatment area
- Construction 25% complete
- Completion expected December 2018



STA-1W Expansion #1 (cont'd)

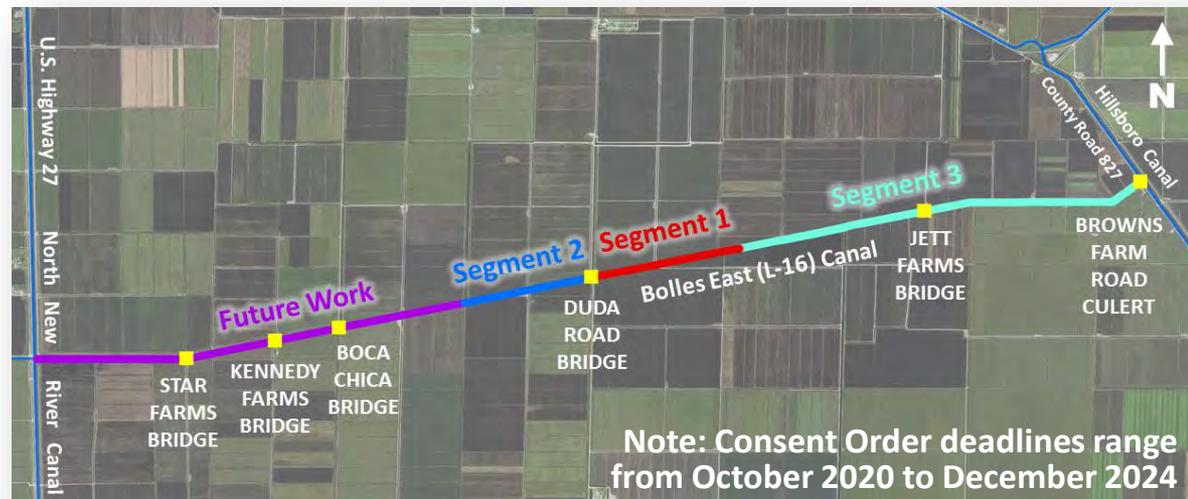


STA-1W Expansion #1
Perimeter Levee and
Discharge Canal
Construction – September 2016

G-341 Related Conveyance Improvements

Phase 1: Bolles East (L-16) Canal

- Segment 1 (~1.2 miles) construction completed September 2016
- Segment 2 (~1 mile) construction started July 2016 and is 20% complete; completion expected March 2017
- Segment 3 (~3.2 miles) design ongoing; construction expected to start by June 2017
- Duda Road bridge replacement to be complete by November 2016



G-341 Related Conveyance Improvements (cont'd)



Bolles East (L-16) Canal Blasting Event

G-341 Related Conveyance Improvements (cont'd)

Bolles East (L-16) Canal - April 2016



G-341 Related Conveyance Improvements (cont'd)

Duda Road Bridge - September 2016



STA-1E Repairs and Modifications

Implemented by USACE

- Slide gate repairs at all 44 culverts started February 2016; target completion April 2017
- Repairs of all 44 culverts completed July 2016
- USACE not planning to remedy topographic deficiencies in Cells 5 and 7



STA-1E Slide Gate Corrosion



Questions?

For more information go to:
www.sfwmd.gov/restorationstrategies



STA-3/4