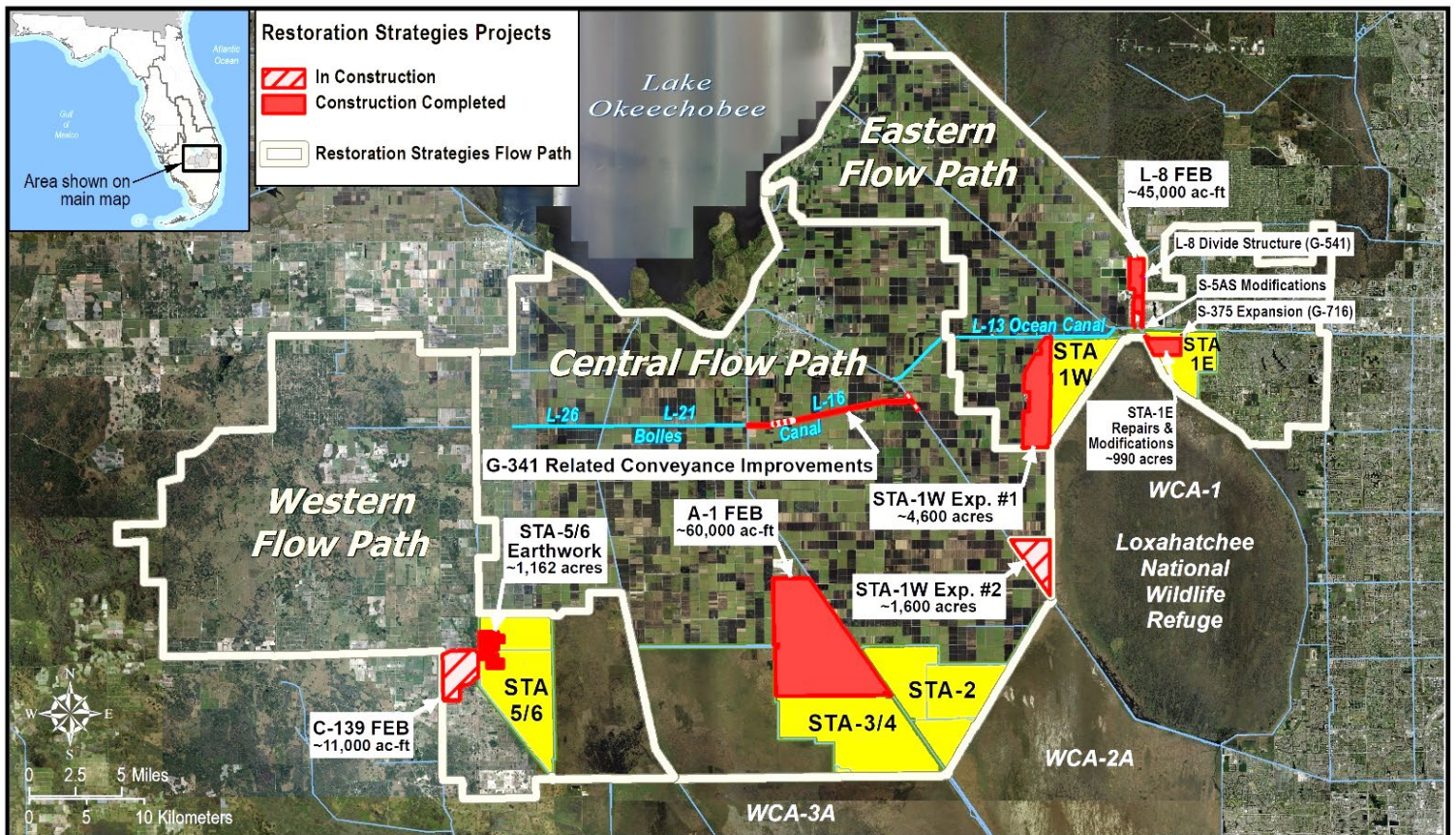


# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update October 2022

The South Florida Water Management District's (District) \$880 million Restoration Strategies Program is improving water quality flowing into America's Everglades by implementing a suite of flow equalization basins (FEB's), stormwater treatment area (STA) expansions, and conveyance improvement projects over a 13-year timeline. The program includes a robust Science Plan focused on investigating the critical factors that influence phosphorus reduction and a better understanding of improving treatment performance at low phosphorus concentrations. A third part of the program is investigation of additional sub-regional source controls – where pollution is reduced at the source – in areas where phosphorus levels in stormwater runoff have been historically higher.

In 2012, FDEP issued watershed National Pollutant Discharge Elimination System (NPDES) and Everglades Forever Act (EFA) permits to the District to continue to operate its STAs. At the same time, Consent Orders were issued with these permits that require the District to construct 13 projects on an aggressive timeline to be completed by December 2025 with specific milestone due dates for each project activity. To date, eight projects and 88% of all Consent Order activities have been completed with one additional project to be completed in 2022. Upon completion of all Restoration Strategies projects, the permits require each STA to meet the Water Quality Based Effluent Limit (WQBEL), to ensure that the State's water quality standard for the Everglades is achieved.

In addition to the Restoration Strategies projects, the District is enhancing the performance of all five Everglades STAs through a series of construction projects to refurbish, rehabilitate, and renew large portions of the STAs, some of which have been in operation for the last 20 years. Refurbishments have been completed at STA-1E, STA-1W, and STA-3/4.



User Name: ermoylan  
Remedy Ticket: 00166428

Map Produced: 6/10/2022 10:47:08 AM

Document Path: \\ad.sfwmd.gov\dfsroot\GIS\GSBizi\SWPROJ\LongTermPlan\mxd\20220610\_LTP\_RestorationStrategiesRegionalWQPlan\_Status.mxd

Restoration Strategies Flow Paths and Projects

# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update October 2022

## Eastern Flow Path

### STA-1W Expansion #2

Construction of Civil Works and Inflow Pump Stations is ongoing. Formwork and reinforcing steel installation activities for G-780, G781 and G782 are ongoing.

### G-341 Related Conveyance Improvements

Segment 5 construction is ongoing. Construction of Star Farms Bridge and Kennedy Bridge to commence in November 2022. Bridge subcontractor will initiate mobilization of equipment and materials by early October 2022. Estimated date for bridge construction completion by April, 2023.

### STA-1W Refurbishment

All refurbishment construction is complete and as-built documents accepted. Vegetation management activities are ongoing in newly graded areas. Replacement of structures between Cells 1B and 3 will occur in 2023.

## Central Flow Path

### STA-2 Refurbishment

Earthwork to raise a 530-acre low-lying area in northwest Cell 2 to design elevation is ongoing, 480 acres have been raised, and approximately 50 acres remain.

## Western Flow Path

### STA-5/6 Internal Improvements

Cells 2A and 3A are currently in the initial flooding and optimization period.

### C-139 Flow Equalization Basin (FEB)

Construction activity for the G-550 inflow pump station, G-551 outflow structure, and G711E divide structure are ongoing. ERP Permits for G-552 are complete. Levee and canal construction and land-levelling are ongoing.

### Connection of STA-5/6 to Lake Okeechobee

Phase 1 design to improve conveyance, build a pump station, and rely on temporary facilities to connect the Miami Canal to the inflow of STA-5/6 is ongoing. Embankment/Canal Design analysis is ongoing. Design of G-775 interim pump station is ongoing.



# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update October 2022

## Restoration Strategies Science Plan

Nine Science Plan studies have been completed and twelve studies are ongoing.

| <u>Ongoing Science Plan Studies</u>                               | <u>Completion By</u> |
|---|----------------------|
| Soil Management Study .....                                       | Sept 2022            |
| Improving Resilience of Submerged Aquatic Vegetation in STAs..... | Sept 2022            |
| Biomarker Study.....  | Sept 2022            |
| Ecotopes Study .....  | Sept 2023            |
| L-8 FEB and STA Operational Guidance .....                        | Sept 2023            |
| P Dynamics Study .....  | Sept 2023            |
| Landscape Study.....  | Sept 2023            |
| Effects of Faunal Species on P Cycling in STAs.....               | Sept 2023            |
| Periphyton and Phytoplankton P Uptake and Release.....            | Sept 2023            |
| Advection Study.....  | Sept 2024            |
| Data Integration Study .....                                      | Sept 2024            |
| Marl Study .....  | Sept 2024            |

PICTURE OF THE MONTH



RS Science Plan Landscape Study in STA-1W South Test Cell 13. This study evaluates the effect of vegetation resistance, flow velocity and water levels on mixing and P transport through wetlands.

# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update October 2022

| EASTERN FLOW PATH                                 |                   |  |                 | CENTRAL FLOW PATH  |                 |                 |                 |
|---|-------------------|--|-----------------|--|-----------------|-----------------|-----------------|
| <b>STA-1W Expansion #2 (100864)</b>               |                   | <b>Activity</b>                                    | <b>Deadline</b> | <b>G-341 Related Conveyance Improvements (100802)</b>  |                 | <b>Activity</b> | <b>Deadline</b> |
| Complete land acquisition                         | 3/31/2018         | ✓  |                 | Initiate design  | 10/1/2020       | ✓               |                 |
| Initiate design                                   | 10/1/2018         | ✓  |                 | Submit state and federal permit applications   | 8/1/2021        | ✓               |                 |
| Submit state and federal permit applications      | 8/1/2019          | ✓  |                 | Complete land acquisition (if required)  | 9/30/2021       | ✓               |                 |
| Complete design                                   | 7/31/2020         | ✓  |                 | Complete design  | 7/31/2022       | ✓               |                 |
| Initiate construction                             | 11/30/2020        | ✓  |                 | Initiate construction  | 11/30/2022      | ✓               |                 |
| Construction status report                        | 3/1/2021          | ✓  |                 | Construction status report   | 3/1/2023        | ✓               |                 |
| Construction status report                        | 3/1/2022          | ✓  |                 | <b>Construction status report</b>  | <b>3/1/2024</b> |                 |                 |
| <b>Complete construction</b>                      | <b>12/31/2022</b> |  |                 | Complete construction  | 12/31/2024      |                 |                 |
| Initial flooding and optimization period complete | 12/31/2024        |  |                 |  |                 |                 |                 |
| <b>STA-1W Expansion #1 (100818)</b>               |                   | <b>Activity</b>                                    | <b>Deadline</b> | <b>L-8 Divide Structure (100817)</b>   |                 | <b>Activity</b> | <b>Deadline</b> |
| Complete land acquisition                         | 9/30/2013         | ✓  |                 | Initiate design  | 10/1/2012       | ✓               |                 |
| Initiate design                                   | 9/30/2013         | ✓  |                 | Complete design  | <b>COMPLETE</b> | 9/30/2014       | ✓               |
| Submit state and federal permit applications      | 7/30/2014         | ✓  |                 | Initiate construction  | 10/1/2016       | ✓               |                 |
| Complete design                                   | 7/30/2015         | ✓  |                 | Complete construction  | 9/30/2018       | ✓               |                 |
| Initiate construction                             | <b>COMPLETE</b>   | 1/31/2016  | ✓               |  |                 |                 |                 |
| Construction status report                        | 3/1/2017          | ✓  |                 |  |                 |                 |                 |
| Construction status report                        | 3/1/2018          | ✓  |                 |  |                 |                 |                 |
| Complete construction                             | 12/31/2018        | ✓  |                 |  |                 |                 |                 |
| Initial flooding and optimization period complete | 12/31/2020        | ✓  |                 |  |                 |                 |                 |
| <b>STA-1E Repairs and Modifications</b>           |                   | <b>Activity</b>                                    | <b>Deadline</b> | <b>S-5AS Modifications (100822)</b>  |                 | <b>Activity</b> | <b>Deadline</b> |
| PSTA Decommissioning complete                     | 12/31/2022        | ✓  |                 | Initiate design  | 10/1/2012       | ✓               |                 |
| Culvert repairs complete                          | 12/31/2022        | ✓  |                 | Complete design  | 9/30/2014       | ✓               |                 |
| Cell 5 and 7 improvements complete                | 12/31/2022        | ✓  |                 | Initiate construction  | 10/1/2014       | ✓               |                 |
|   |                   |  |                 | Complete construction  | 9/30/2016       | ✓               |                 |
|   |                   |  |                 |  |                 |                 |                 |
| <b>L-8 FEB (100813)</b>                           |                   | <b>Activity</b>                                    | <b>Deadline</b> | <b>S-375 Expansion (100819)</b>  |                 | <b>Activity</b> | <b>Deadline</b> |
| Submit state and federal permit applications      | 1/31/2014         | ✓  |                 | Initiate design  | 9/30/2013       | ✓               |                 |
| Construction status report                        | 3/1/2014          | ✓  |                 | Complete design  | 7/30/2015       | ✓               |                 |
| Construction status report                        | 3/1/2015          | ✓  |                 | Initiate construction  | 1/31/2016       | ✓               |                 |
| Complete construction (begin multi-purpose ops)   | 12/31/2016        | ✓  |                 | Complete construction  | 12/31/2018      | ✓               |                 |
| <b>Long term operations commence</b>              | <b>12/31/2022</b> |  |                 |  |                 |                 |                 |
|   |                   |  |                 | <b>LEGEND</b><br><span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black; margin-right: 5px;"></span> Flow Equalization Basin<br><span style="display: inline-block; width: 15px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> Stormwater Treatment Area<br><span style="display: inline-block; width: 15px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> Conveyance Improvement<br>✓ Complete |                 |                 |                 |
| <b>STA-2 Expansion: Compartment B</b>             |                   | <b>Activity</b>                                    | <b>Deadline</b> | COMPLETE   |                 |                 |                 |
|   |                   | Initial flooding and optimization period complete  | 5/31/2014       |  |                 |                 |                 |
| <b>A-1 FEB (100706)</b>                           |                   | <b>Activity</b>                                    | <b>Deadline</b> | COMPLETE   |                 |                 |                 |
|   |                   | Initiate design                                    | 4/1/2012        |  |                 |                 |                 |
|   |                   | Submit state and federal permit applications       | 12/1/2012       |  |                 |                 |                 |
|   |                   | Design status report                               | 3/1/2013        |  |                 |                 |                 |
|   |                   | Complete design                                    | 8/1/2013        |  |                 |                 |                 |
|   |                   | Initiate construction                              | 6/30/2014       |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2015        |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2016        |  |                 |                 |                 |
|   |                   | Complete construction                              | 7/30/2016       |  |                 |                 |                 |
|   |                   | Operational monitoring and testing period complete | 7/29/2018       |  |                 |                 |                 |
| <b>STA-5/6 Internal Improvements (100868)</b>     |                   | <b>Activity</b>                                    | <b>Deadline</b> | <b>WESTERN FLOW PATH</b>   |                 |                 |                 |
|   |                   | Initiate design                                    | 10/31/2019      |  |                 |                 |                 |
|   |                   | Submit state and federal permit applications       | 8/30/2020       |  |                 |                 |                 |
|   |                   | Complete design                                    | 10/31/2021      |  |                 |                 |                 |
|   |                   | Initiate construction                              | 1/31/2022       |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2023        |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2024        |  |                 |                 |                 |
|   |                   | Complete construction                              | 12/31/2024      |  |                 |                 |                 |
|   |                   | Initial flooding and optimization period complete  | 12/31/2025      |  |                 |                 |                 |
| <b>STA-5/6 Expansion: Compartment C</b>           |                   | <b>Activity</b>                                    | <b>Deadline</b> | COMPLETE   |                 |                 |                 |
|   |                   | Initial flooding and optimization period complete  | 5/31/2014       |  |                 |                 |                 |
| <b>C-139 FEB (100867)</b>                         |                   | <b>Activity</b>                                    | <b>Deadline</b> |  |                 |                 |                 |
|   |                   | Initiate design                                    | 10/31/2018      |  |                 |                 |                 |
|   |                   | Submit state and federal permit applications       | 8/30/2019       |  |                 |                 |                 |
|   |                   | Complete design                                    | 10/31/2020      |  |                 |                 |                 |
|   |                   | Initiate construction                              | 1/31/2021       |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2021        |  |                 |                 |                 |
|   |                   | Construction status report                         | 3/1/2022        |  |                 |                 |                 |
|   |                   | <b>Construction status report</b>                  | <b>3/1/2023</b> |  |                 |                 |                 |
|   |                   | Complete construction                              | 12/31/2023      |  |                 |                 |                 |
|   |                   | Operational monitoring and testing period complete | 12/31/2024      |  |                 |                 |                 |

Projects Complete = 8 of 13  
 Activities Complete = 65 of 74  
 % Activities Complete = 88 %  
 % Time Complete = 74 %

Revised June 15, 2022