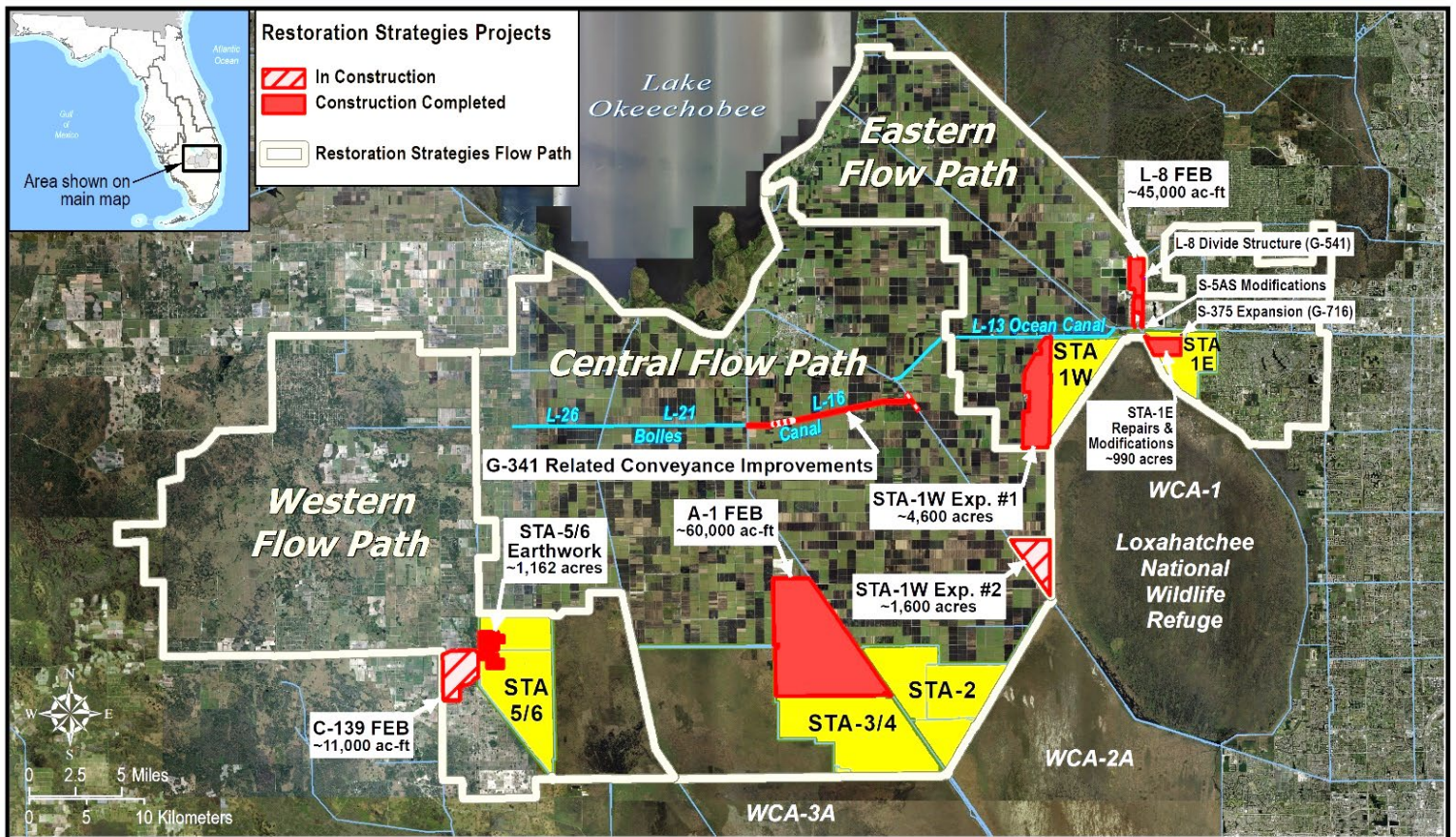


# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2023

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

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Restoration Strategies Flow Paths and Projects

# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2023

## Eastern Flow Path

### STA-1W Expansion #2

Construction of Civil Works and Inflow Pump Stations is ongoing. Formwork and reinforcing steel installation activities for pump stations G-780, G-781 and G-782 are ongoing. Construction was not completed by the milestone due date of December 31, 2022 due to contractor issues beyond the control of the District. The District continues working closely with the contractor to expeditiously obtain functional use of the project as early as possible.

### G-341 Related Conveyance Improvements

Segment 5 construction is ongoing. Construction of the Star Farms bridge began in early December 2022. Demolition of the Kennedy bridge is underway. Bridge construction completion expected by April 2023.

### STA-1W Refurbishment

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 and repair of 15 canal plugs are complete. Seeking GB contract approval for fill to repair 49 canal plugs in Cell 3 and remaining 22 canal plugs in Cell 2.

## 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. Modified EFA Permit and Section 404 Permit for southeastern boundary expansion area were received in December 2022. Construction activities in the expansion area are in progress. Substantial construction completion date is August 2023.

### 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. Expected construction start date of G-775 is in March, 2023.

# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2023

## Restoration Strategies Science Plan

Eleven Science Plan studies have been completed and ten studies are ongoing.

<u>Ongoing Science Plan Studies</u>	<u>Completion By</u>
Biomarker Study.....	Jun2023
Ecotopes Study .....	Sept 2023
Effects of Faunal Species on P Cycling in STAs.....	Sept 2023
L-8 FEB and STA Operational Guidance .....	Sept 2023
Landscape Study.....	Sept 2023
P Dynamics Study .....	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



P Flux Study soil sampling in STA-5/6.

# Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2023

EASTERN FLOW PATH			CENTRAL FLOW PATH			
<b>STA-1W Expansion #2 (100864)</b>			<b>G-341 Related Conveyance Improvements (100802)</b>			
<b>Activity</b>	<b>Deadline</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>L-8 Divide Structure (100817)</b>			
<b>Activity</b>	<b>Deadline</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	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>	✓				
Construction status report	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>S-5AS Modifications (100822)</b>			
<b>Activity</b>	<b>Deadline</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>S-375 Expansion (100819)</b>			
<b>Activity</b>	<b>Deadline</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	✓	
Long term operations commence	12/31/2022	✓				
<p><b>LEGEND</b></p> <p><span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black; margin-right: 5px;"></span> Flow Equalization Basin</p> <p><span style="display: inline-block; width: 15px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> Stormwater Treatment Area</p> <p><span style="display: inline-block; width: 15px; height: 10px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Conveyance Improvement</p> <p>✓ Complete</p>						
<b>CENTRAL FLOW PATH</b>						
<b>STA-2 Expansion: Compartment B</b>						
<b>Activity</b>	<b>COMPLETE</b>			<b>Deadline</b>		
Initial flooding and optimization period complete				5/31/2014	✓	
<b>A-1 FEB (100706)</b>						
<b>Activity</b>				<b>Deadline</b>		
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	<b>COMPLETE</b>			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>WESTERN FLOW PATH</b>						
<b>STA-5/6 Internal Improvements (100868)</b>						
<b>Activity</b>				<b>Deadline</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>COMPLETE</b>			<b>Deadline</b>		
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 = 9 of 13  
 Activities Complete = 66 of 74  
 % Activities Complete = 89 %  
 % Time Complete = 77 %

Revised December 27, 2022