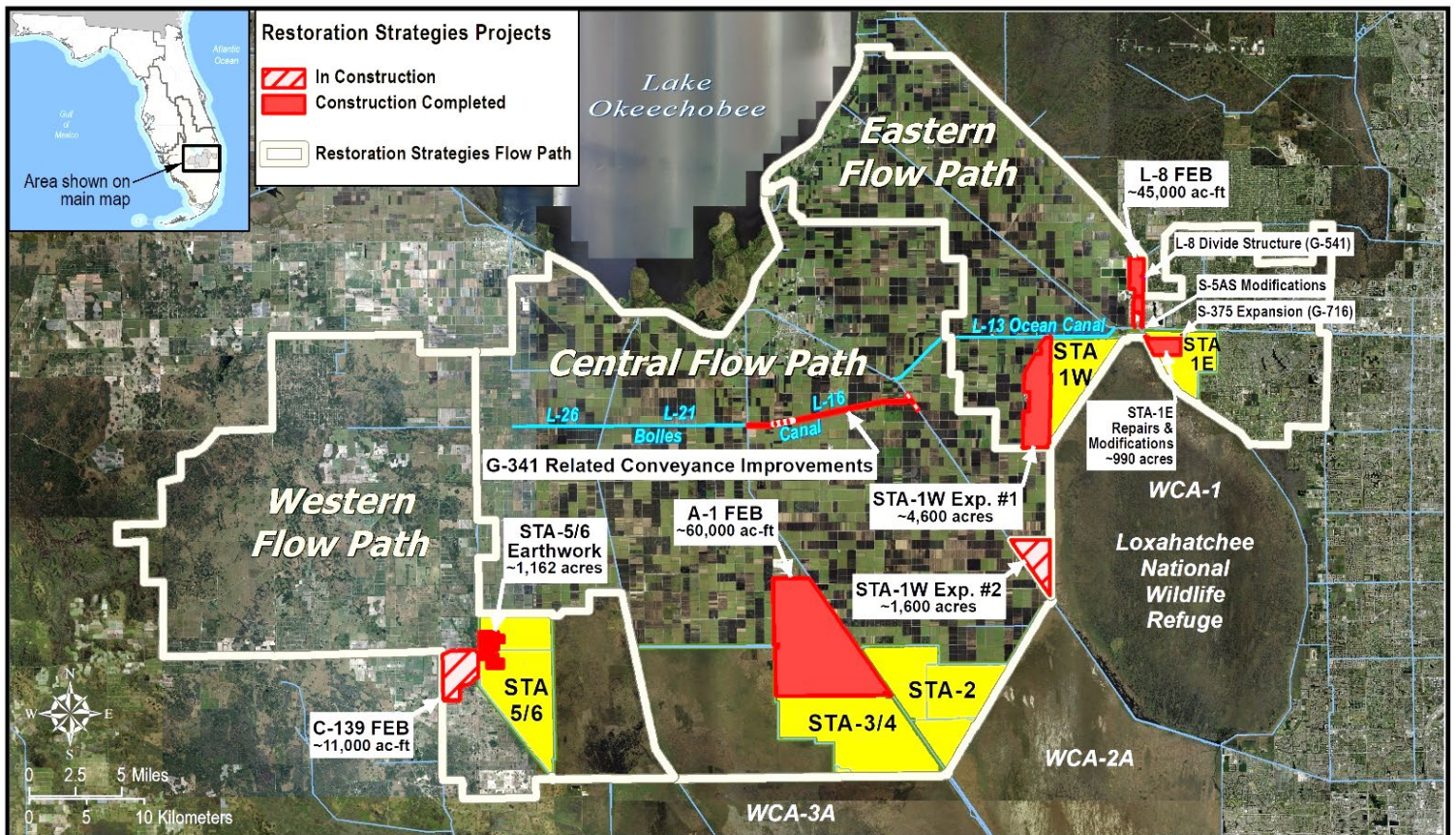


Restoration Strategies Program and Stormwater Treatment Area Enhancement Update December 2022

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

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Restoration Strategies Flow Paths and Projects

Restoration Strategies Program and Stormwater Treatment Area Enhancement Update December 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. Mobilization of equipment and materials for construction of Star Farms and Kennedy bridges impacted by Hurricane Ian is ongoing. Construction is expected to start in early December 2022. Currently approved date for bridge construction completion 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 is ongoing, 495 acres have been raised, and approximately 35 acres remain. Substantial completion is expected in January 2023.

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. South-eastern boundary expansion work approved by the District. Received authorization to work on the southern end from DEP. Modified EFA Permit and Section 404 Permit for S-E boundary expansion expected by early December, 2022.

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 December 2022

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.....	Jan2023
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



Photo depicts activities of the Ecotope Study. This aerial view shows the effect of short-circuits within a mixed SAV habitat using a tracer.

Restoration Strategies Program and Stormwater Treatment Area Enhancement Update December 2022

EASTERN FLOW PATH				CENTRAL FLOW PATH			
STA-1W Expansion #2 (100864)		Activity	Deadline	G-341 Related Conveyance Improvements (100802)		Activity	Deadline
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	✓		Construction status report	3/1/2024		
Complete construction	12/31/2022			Complete construction	12/31/2024		
Initial flooding and optimization period complete	12/31/2024						
STA-1W Expansion #1 (100818)		Activity	Deadline	L-8 Divide Structure (100817)		Activity	Deadline
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	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	✓					
STA-1E Repairs and Modifications		Activity	Deadline	S-5AS Modifications (100822)		Activity	Deadline
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	✓	
L-8 FEB (100813)		Activity	Deadline	S-375 Expansion (100819)		Activity	Deadline
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						
				LEGEND Flow Equalization Basin Stormwater Treatment Area Conveyance Improvement ✓ Complete			
STA-2 Expansion: Compartment B		Activity	Deadline	COMPLETE			
		Initial flooding and optimization period complete	5/31/2014				
A-1 FEB (100706)		Activity	Deadline	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				
WESTERN FLOW PATH							
STA-5/6 Internal Improvements (100868)		Activity	Deadline				
		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				
STA-5/6 Expansion: Compartment C		Activity	Deadline	COMPLETE			
		Initial flooding and optimization period complete	5/31/2014				
C-139 FEB (100867)		Activity	Deadline				
		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				
		Construction status report	3/1/2023				
		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