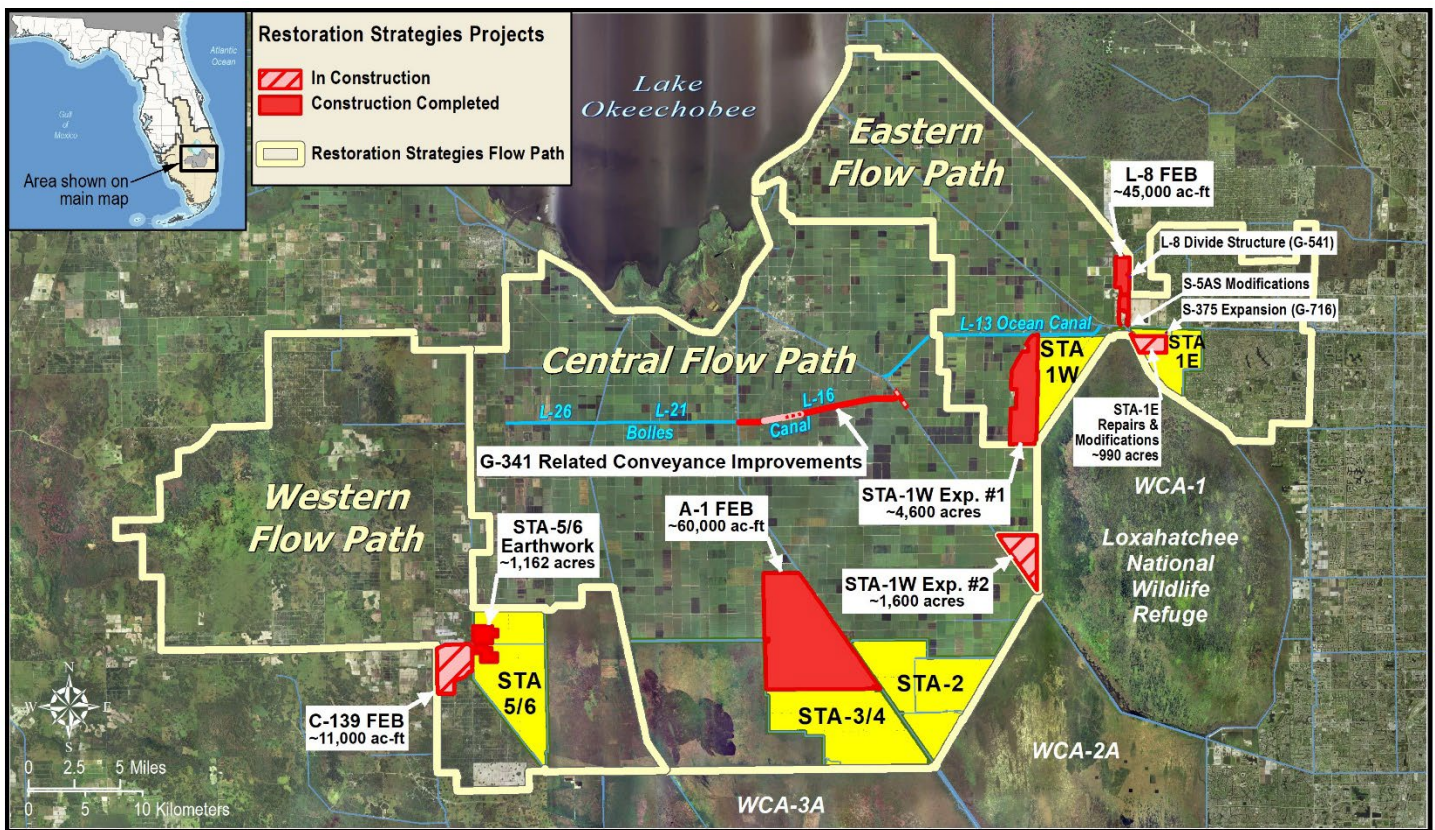


Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2022

The South Florida Water Management District's (District) \$880 million Restoration Strategies Program will improve 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. The existing Everglades STAs, an essential component of Restoration Strategies, are unique constructed treatment wetlands designed to improve the quality of water flowing into the Everglades. 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 the existing Everglades STAs through a series of construction projects to refurbish, rehabilitate, and renew large portions of the existing facilities, some of which have been in operation for the last 20 years.



Restoration Strategies Flow Paths and Projects

Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2022

Eastern Flow Path

STA-1E Repairs and Modifications (Cells 5 and 7)

Earthwork to regrade Cell 5 to correct topographic deficiencies of the original construction is complete. Vegetation management planting activities are nearly complete. Cell 7 construction is complete and as-built surveys are ongoing. Vegetation management activities to start February 2022.

STA-1W Expansion #2

Construction of Civil Works and Inflow Pump Station is ongoing. Formwork and reinforcing steel installation for the lower walls and columns of G-780 and G-781 pump stations is ongoing. Sheet pile installation for G-782 pump station is complete. Blasting for Collection Canal is complete. Construction Status Milestone Compliance Report (MCR) to be submitted in February.

G-341 Related Conveyance Improvements

Construction of Segment 4 is complete and as-built surveys are being prepared. Segment 5 final design is complete and expected to be advertised in February 2022.

STA-1W Refurbishment

Earthwork for various enhancements is ongoing. Work includes 50-acre regrade in Cell 3 to remove finger canals, levee realignment between Cells 5B and 2A for improved flow patterns, removal of levees and structures between Cells 2B and 4, and replacement of structures between Cells 1B and 3. The 2B /4 levee removal is complete. The Cell 3 earthwork is complete; vegetation planting of the dewatering berm footprint is ongoing. The levee extension between 5B and 2A is nearly complete; removal of the east and south levees is ongoing. Substantial completion of all STA-1W refurbishments is expected in February 2022.

Central Flow Path

STA-2 Refurbishment

Earthwork to regrade uneven topography in the northern portion of Cell 2 is ongoing. The earthwork involves lowering an area in northeast Cell 2 and raising a 500-acre low-lying area in northwest Cell 2. The northeastern regrade area is complete. Earthwork to make 49 cuts through remnant farm berms in Cell 3 is complete.

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 and G-551 structures are ongoing. ERP Permits for G-552 and G-711E complete. Construction Status MCR to be submitted in February.

Connection of STA-5/6 to Lake Okeechobee

Phase 1 design will commence in February 2022 to improve conveyance, build a pump station, and rely on temporary facilities to connect the Miami Canal to the inflow of STA-5/6.

Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2022

Restoration Strategies Science Plan

Of the fourteen Science Plan studies, eight have been completed and six are in progress. Six additional study proposals have been approved.

Ongoing Science Plan Studies

Completion By

Factors for Formation of Floating Tussocks in STAs.....	Sept 2022
L-8 FEB and STA Operational Guidance	Sept 2022
Improving Resilience of Submerged Aquatic Vegetation in STAs.....	Sept 2022
Effects of Faunal Species on P Cycling in STAs.....	Sept 2023
Periphyton and Phytoplankton P Uptake and Release.....	Sept 2023
Soil Amendments to Control P Flux.....	Sept 2023

Additional Studies

Biomarker Study.....	Sept 2022
Fauna study	Sept 2023
Ecotopes Study	Sept 2022
P Dynamics Study	Sept 2023
Data Integration Study	Sept 2024
Marl Study	Sept 2024



District employee showing soil sample collected as part of the Phosphorus Dynamics Study.

Restoration Strategies Program and Stormwater Treatment Area Enhancement Update February 2022

EASTERN FLOW PATH				CENTRAL FLOW PATH			
STA-1W Expansion #2 (100864)				STA-2 Expansion: Compartment B			
Activity	Deadline			Activity	Deadline		
Complete land acquisition	3/31/2018	✓		Initial flooding and optimization period complete	5/31/2014	✓	
Initiate design	10/1/2018	✓		A-1 FEB (100706)			
Submit state and federal permit applications	8/1/2019	✓		Activity	Deadline		
Complete design	7/31/2020	✓		Initiate design	4/1/2012	✓	
Initiate construction	11/30/2020	✓		Submit state and federal permit applications	12/1/2012	✓	
Construction status report	3/1/2021	✓		Design status report	3/1/2013	✓	
Construction status report	3/1/2022			Complete design	8/1/2013	✓	
Complete construction	12/31/2022			Initiate construction	6/30/2014	✓	
Initial flooding and optimization period complete	12/31/2024			Construction status report	3/1/2015	✓	
STA-1W Expansion #1 (100818)				COMPLETE			
Activity	Deadline			Construction status report	3/1/2016	✓	
Complete land acquisition	9/30/2013	✓		Complete construction	7/30/2016	✓	
Initiate design	9/30/2013	✓		Operational monitoring and testing period complete	7/29/2018	✓	
Submit state and federal permit applications	7/30/2014	✓		WESTERN FLOW PATH			
Complete design	7/30/2015	✓		STA-5/6 Internal Improvements (100868)			
Initiate construction	1/31/2016	✓		Activity	Deadline		
Construction status report	3/1/2017	✓		Initiate design	10/31/2019	✓	
Construction status report	3/1/2018	✓		Submit state and federal permit applications	8/30/2020	✓	
Complete construction	12/31/2018	✓		Complete design	10/31/2021	✓	
Initial flooding and optimization period complete	12/31/2020	✓		Initiate construction	1/31/2022	✓	
STA-1E Repairs and Modifications				COMPLETE			
Activity	Deadline			Construction status report	3/1/2023	✓	
PSTA Decommissioning complete	12/31/2022	✓		Construction status report	3/1/2024	✓	
Culvert repairs complete	12/31/2022	✓		Complete construction	12/31/2024	✓	
Cell 5 and 7 improvements complete	12/31/2022			Initial flooding and optimization period complete	12/31/2025	✓	
L-8 FEB (100813)				STA-5/6 Expansion: Compartment C			
Activity	Deadline			Activity	Deadline		
Submit state and federal permit applications	1/31/2014	✓		Initial flooding and optimization period complete	5/31/2014	✓	
Construction status report	3/1/2014	✓		COMPLETE			
Construction status report	3/1/2015	✓		COMPLETE			
Complete construction (begin multi-purpose ops)	12/31/2016	✓		COMPLETE			
Long term operations commence	12/31/2022			COMPLETE			
G-341 Related Conveyance Improvements (100802)				COMPLETE			
Activity	Deadline			COMPLETE			
Initiate design	10/1/2020	✓		COMPLETE			
Submit state and federal permit applications	8/1/2021	✓		COMPLETE			
Complete land acquisition (if required)	9/30/2021	✓		COMPLETE			
Complete design	7/31/2022			COMPLETE			
Initiate construction	11/30/2022	✓		COMPLETE			
Construction status report	3/1/2023	✓		COMPLETE			
Construction status report	3/1/2024			COMPLETE			
Complete construction	12/31/2024			COMPLETE			
L-8 Divide Structure (100817)				COMPLETE			
Activity	Deadline			COMPLETE			
Initiate design	10/1/2012	✓		COMPLETE			
Complete design	9/30/2014	✓		COMPLETE			
Initiate construction	10/1/2016	✓		COMPLETE			
Complete construction	9/30/2018	✓		COMPLETE			
S-5AS Modifications (100822)				COMPLETE			
Activity	Deadline			COMPLETE			
Initiate design	10/1/2012	✓		COMPLETE			
Complete design	9/30/2014	✓		COMPLETE			
Initiate construction	10/1/2014	✓		COMPLETE			
Complete construction	9/30/2016	✓		COMPLETE			
S-375 Expansion (100819)				COMPLETE			
Activity	Deadline			COMPLETE			
Initiate design	9/30/2013	✓		COMPLETE			
Complete design	7/30/2015	✓		COMPLETE			
Initiate construction	1/31/2016	✓		COMPLETE			
Complete construction	12/31/2018	✓		COMPLETE			
<p>LEGEND</p> <p>■ Flow Equalization Basin</p> <p>■ Stormwater Treatment Area</p> <p>■ Conveyance Improvement</p> <p>✓ Complete</p>				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 = 7 of 13
 Activities Complete = 61 of 74
 % Activities Complete = 82 %
 % Time Complete = 70 %

Revised: January, 2022