

# Appendix 5B-2: Implementation of the Long-Term Plan for Achieving Water Quality Goals for the Everglades Protection Area Tributary Basins

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In accordance with the Everglades Forever Act (EFA; Section 373.4592(13), Florida Statutes), this appendix provides an annual update for Water Year 2016 (WY2016) (May 1, 2015–April 30, 2016) on the implementation of the *Long-Term Plan for Achieving Water Quality Goals for the Everglades Protection Area Tributary Basins* (Long-Term Plan; Burns & McDonnell 2003) and subsequent amendments. Achieving Everglades water quality standards by implementing the Long-Term Plan is one of the strategic priorities of the South Florida Water Management District (SFWMD or District) and is required by state and federal law. Additional supporting information on the Long-Term Plan and associated reporting is available in the 2005 through 2012 *South Florida Environmental Reports* (SFERs) – Volume I, Chapter 8; 2013 SFER – Volume I, Chapter 5; and 2014 through 2016 SFER – Volume I, Chapter 5B. All reports are available at [www.sfwmd.gov/sfer](http://www.sfwmd.gov/sfer).

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## BACKGROUND

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In 1994, the Florida legislature enacted the EFA, requiring the District to submit a plan for achieving compliance with the total phosphorus (TP) criterion and other state water quality standards in the Everglades Protection Area (EPA)—including estimated costs, funding mechanisms, and implementation schedules—to the Florida Department of Environmental Protection (FDEP) by December 31, 2003. The Long-Term Plan was developed and the Florida legislature incorporated the plan by reference in the EFA amendments of 2003. The Long-Term Plan consisted of structural and operational enhancements as well as research on source control and agricultural best management practices (BMPs) along with a science-based stormwater treatment area (STA) optimization program.

To improve the performance of the initial phase of the Long-Term Plan, an adaptive approach was used to develop nine revisions to the initial Long-Term Plan between 2004 and 2007. These revisions were vetted with stakeholders and approved by FDEP (see 2005 through 2009 SFERs – Volume I, Chapter 8).

Consistent with the Long-Term Plan, the District expanded the original Everglades STAs by an additional 17,000 acres (ac), resulting in a total STA area including infrastructure components of roughly 68,000 ac, with approximately 57,000 ac of effective treatment area (STA-1 East [STA-1E], STA-1 West [STA-1W], STA-2, STA-3/4, and STA-5/6; see Appendix 5B-1 of this volume) south of Lake Okeechobee. The key STA expansions and enhancements described in the 2003 Long-Term Plan have been completed and significant stormwater quality improvements have been realized.

As of April 30, 2016, the Everglades Agricultural Area (EAA) best management practices (BMPs) and the Everglades STAs collectively have removed more than 5,120 metric tons (t) of TP that otherwise would

37 have entered the EPA. Of this total, the STAs have retained approximately 2,220 t of TP since 1994. As  
38 described in Chapter 3A of this volume, the effectiveness of the BMP and STA TP removal efforts is  
39 demonstrated by decreased TP loading to the water conservation areas (WCAs) in recent years compared  
40 to the baseline period, despite increased flows to the EPA. The implementation of the STA expansions and  
41 Long-Term Plan enhancements resulted in reductions in TP concentrations in discharges; however, the  
42 Everglades STAs have not achieved compliance with target discharge limits, therefore, additional  
43 enhancements are required.

44 In June 2012, the District, FDEP, and United States Environmental Protection Agency concluded  
45 technical discussions and reached consensus on new strategies for further improving Everglades water  
46 quality (referred to as Restoration Strategies), as documented in the *Restoration Strategies Regional Water*  
47 *Quality Plan* (SFWMD 2012a). Subsequently, the District and FDEP entered into two consent orders along  
48 with associated National Pollutant Discharge Elimination System (NPDES) and EFA watershed permits  
49 issued to the District by FDEP in September 2012. The permits and associated consent orders are consistent  
50 with the consensus plan to achieve the ultra-low water quality based effluent limit (WQBEL) established  
51 for TP in discharges from Everglades STAs to the EPA (SFWMD 2012b). Design and construction of  
52 storage and water quality treatment projects to assist in achieving the WQBEL is scheduled to be  
53 accomplished in three phases over a 12-year timeframe, with completion set for 2025. In addition to creating  
54 more than 6,500 ac of new treatment area and 116,000 acre-feet of additional water storage in the flow  
55 equalization basins, subregional source controls are being implemented, and the *Science Plan for the*  
56 *Everglades Stormwater Treatment Areas* (Science Plan, SFWMD 2013) is being implemented to focus  
57 research on further improving treatment performance.

58 In 2013, the Florida legislature modified the EFA to incorporate the *Restoration Strategies Regional*  
59 *Water Quality Plan* into the Long-Term Plan, as defined in Section 373.4592(13), Florida Statutes. Pursuant  
60 to the 2013 legislation, an annual update on the status of implementation of the Long-Term Plan is provided  
61 in the following section of this appendix for the WY2016 reporting period. The status of design and  
62 construction of the Restoration Strategies water quality improvement projects, STA performance, and  
63 implementation of the Science Plan, is addressed in Volume I, Chapter 5A and Volume III, Appendix 3-3;  
64 Volume I, Chapter 5B; and Volume I, Chapter 5C, respectively.

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## 65 STATUS OF LONG-TERM PLAN 66 PROJECTS AND ACTIVITIES

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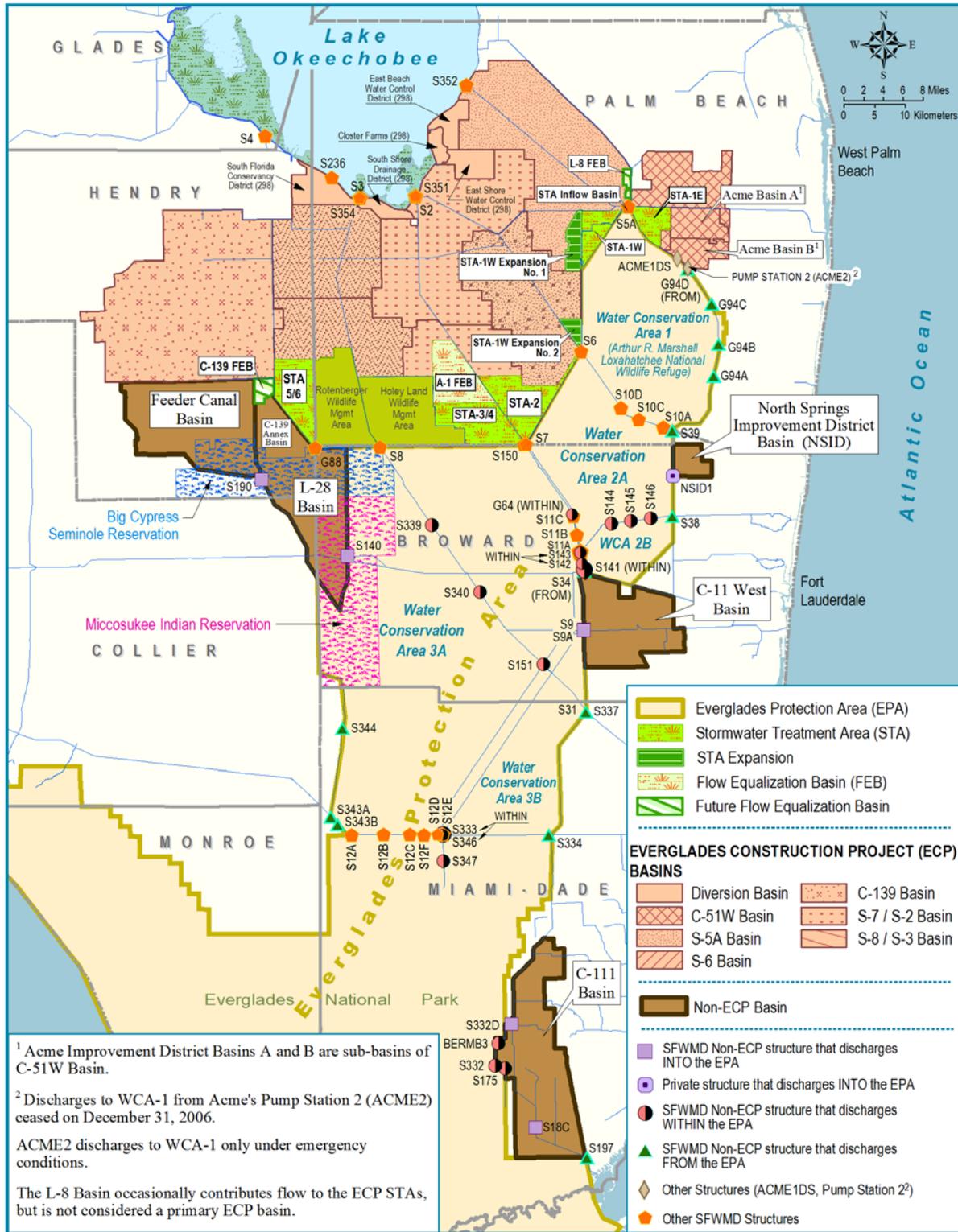
67 The initial phase of the Long-Term Plan included 48 individual projects and processes, each having a  
68 schedule, scope, and cost estimate. These projects and processes are either complete, on-going, or have  
69 been superseded by Restoration Strategies projects and/or the Science Plan. BMPs continue to be  
70 implemented as part of the Long-Term Plan to improve the water quality of discharges to the EPA from the  
71 tributary basins and are described in Chapter 4 of this volume. The design and construction status of  
72 Restoration Strategies projects are described in Chapter 5A and Long-Term Plan projects relating to the  
73 Everglades STAs are discussed in Chapter 5B of this volume. Detailed data summaries and findings related  
74 to the individual performance of the BMPs and STAs are also covered in Chapters 4 and 5B, respectively.  
75 EPA tributary basins, categorized as either Everglades Construction Project basins or Non-Everglades  
76 Construction Project basins, STAs, and receiving WCAs are summarized in **Table 1**. Relevant basin and  
77 project locations are shown in **Figure 1**. Financial reporting related to the implementation of the Long-  
78 Term Plan is summarized in Appendix 1-5 of this volume.

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**Table 1.** STA Tributary and Receiving Basins

<b>Basin</b>	<b>STAs</b>	<b>Receiving WCAs</b>
S-5A (EAA)	STA-1W, STA-1E, STA-2	WCA-1
S-6 (EAA)	STA-2	WCA-2A
S-7 (EAA)	STA-2, STA-3/4	WCA-2A
S-8 (EAA)	STA-3/4	WCA-3A
C-51 West	STA-1E, STA-1W	WCA-1
C-139	STA-5/6	WCA-3A
ACME Basin B	STA-1E	WCA-1
North Springs Improvement District	not applicable	WCA-2A
North New River Canal (G-123)	not applicable	Not applicable; G-123 has been removed and no longer discharges to WCA-3A
C-11 West	not applicable	WCA-3A
Feeder Canal	not applicable	WCA-3A
L-28	not applicable	WCA-3A

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Figure 1. Overview of the EPA and tributary basins.

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**LITERATURE CITED**

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- 83
- 84 Burns and McDonnell. 2003. *Everglades Protection Area Tributary Basins Long-Term Plan for Achieving*  
85 *Water Quality Goals*. October 2003. Report prepared for the South Florida Water Management District,  
86 West Palm Beach, FL.
- 87 SFWMD. 2012a. *Restoration Strategies Regional Water Quality Plan*. South Florida Water Management  
88 District, West Palm Beach, FL. April 27, 2012.
- 89 SFWMD. 2012b. *Technical Support Document for Derivation of the Water Quality Based Effluent Limit*  
90 *for Total Phosphorus in Discharges from Everglades Stormwater Treatment Areas to the Everglades*  
91 *Protection Area*. South Florida Water Management District, West Palm Beach, FL. June 27, 2012.
- 92 SFWMD. 2013. *Science Plan for the Everglades Stormwater Treatment Areas*. South Florida Water  
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