

Appendix 1-6: Northern Everglades and Estuaries Protection Program Annual Report

Lesley Bertolotti and Lisette Sori

Contributors: Deinna Nicholson¹ and Clegg Hooks²

INTRODUCTION

In 2007, the Florida legislature substantially expanded the Lake Okeechobee Protection Act to the Northern Everglades and Estuaries Protection Program [NEEPP; Section 373.4595, Florida Statutes (F.S.)]. Consequently, the Lake Okeechobee and Estuary Recovery Plan, announced in October 2005, was migrated into this program. The NEEPP requires the coordinating agencies [the South Florida Water Management District (District or SFWMD), the Florida Department of Environmental Protection (FDEP), and the Florida Department of Agriculture and Consumer Services (FDACS)] to develop Watershed Protection Plans for the Lake Okeechobee, St. Lucie, and Caloosahatchee watersheds, with updates every three years. The purpose of the Protection Plans is to identify and implement programs and projects necessary to achieve water quality and quantity objectives for the watersheds.

The NEEPP requires annual progress reporting as part of the consolidated annual report required in Subsection 373.036(7), F.S., including a summary of the conditions of the hydrology, water quality, and aquatic habitat in the Northern Everglades based on the results of the Research and Water Quality Monitoring Programs, status of the Lake Okeechobee Watershed Construction Project, status of the Caloosahatchee River Watershed Construction Project, and status of the St. Lucie River Watershed Construction Project. Furthermore, while the authority to use Save Our Everglades Trust Fund (SOETF) funds is provided in Section 373.470, F.S, the NEEPP also provides requirements for annual reporting on NEEPP expenditures from the SOETF.

Additional evaluations are also required on a three-year cycle in accordance with Paragraphs 373.4595(3)(b)3 and (4)(d), F.S. The reporting requirements vary by watershed but generally require additional evaluation of data, goals, and modifications to the Construction Projects. The Lake Okeechobee Protection Plan was originally submitted to the Florida legislature on January 1, 2004 (SFWMD et al., 2004), the Lake Okeechobee Phase II Technical Plan (LOP2TP) was submitted to the Florida legislature in February 2008 (SFWMD et al., 2008), and three-year evaluations to the Lake Okeechobee Watershed Protection Plan (LOWPP) were completed in 2011 and 2014 as required by the NEEPP (SFWMD et al., 2011 and 2014). Both the St. Lucie River Watershed Protection Plan (SLRWPP; SFWMD et al., 2009a) and the Caloosahatchee River Watershed Protection Plan (CRWPP; SFWMD et al., 2009b) were submitted to the

¹ Florida Department of Environmental Protection, Tallahassee, FL

² Florida Department of Agriculture and Consumer Services, Tallahassee, FL

legislature in January 2009, and three-year evaluations to the LOWPP were completed in 2012 (SFWMD et al., 2012) and 2015 (see Chapter 10 of this volume).

In addition, Paragraph 373.026(8)(b), F.S., states that prior to the release of state funds for the implementation of the Lake Okeechobee Watershed Protection Plan or the River Watershed Protection Plans (RWPP), on an annual basis, the South Florida Water Management District shall prepare an annual work plan as part of the consolidated annual report required in s. 373.036(7).

Subsequent sections of this appendix are intended to meet the reporting requirements in Section 373.4595, F.S. and annual work plan requirements in Paragraph 373.026(8)(b), F.S.

ANNUAL PROGRESS REPORT AND THREE-YEAR UPDATES

A detailed cross-reference for the NEEPP annual and RWPP three-year reporting in this volume is summarized below in **Table 1**.

Table 1. Cross-reference for Northern Everglades and Estuaries Protection Program (NEEPP) reporting in the 2015 South Florida Environmental Report (SFER) – Volume I.

Program Description	Cross-Reference in the 2015 SFER – Vol. I
<i>Lake Okeechobee Watershed Protection Program</i>	
Status of the Lake and Watershed	Chapter 8
Lake Okeechobee Watershed Construction Project Status	Chapter 8
Research and Water Quality Monitoring Program Results	Chapter 8
<i>St. Lucie and Caloosahatchee River Watershed Protection Programs</i>	
Status of the River Watersheds and Estuaries	Chapter 10
Pollutant Source Control Program Updates	Chapters 4 and 10
River Watershed Construction Project Updates	Chapter 10
Research and Water Quality Monitoring Program Results	Chapter 10
Strategies Moving Forward	Chapter 10
<i>Other Reporting</i>	
SOETF Expenditures	Appendix 1-6
NEEPP Annual Work Plan	Appendix 1-6

SOETF EXPENDITURES

The NEEPP requires that the annual progress report contain detailed annual accounting of the expenditure of SOETF funds, including information concerning the amount and use of funds from federal, state, or local government sources, and the funds being requested to be applied to meet match requirements. **Table 2** below provides an accounting of NEEPP expenditures during the District's FY2014. The report is prepared in cooperation with the other coordinating agencies and affected local governments.

Construction Projects: Reducing nutrient loading and excess freshwater discharge and inflow to the St. Lucie Estuary, Caloosahatchee River Estuary, and Lake Okeechobee requires action at the regional, sub-regional, and local levels. The Construction Projects' components include a suite of activities at each of these spatial scales. The focus on water quality and storage is intended to improve hydrology, water quality, and aquatic habitats in both the watersheds and receiving waters. The suite of projects builds upon the Source Control Program and includes water quality and quantity projects such as local stormwater retrofits, Stormwater Treatment Areas (STAS), reservoirs, and habitat restoration. Construction projects and activities that comprised the Fiscal Year 2014 (FY2014) (October 1, 2013–September 30, 2014) expenditures include the following: Rolling Meadows Restoration, Lakeside Ranch Stormwater Treatment Area, Lake Hicpochee Hydrologic Enhancement, Spanish Creek/Four Corners Initiative, Rio St. Lucie Retrofit, Dispersed Water Management Projects, in-lake phosphorus control projects, and other activities associated with the Lake Okeechobee Regulation Schedule and Watershed Protection Plan implementation. Comprehensive Everglades Restoration Plan (CERP components of the Construction Project are reported in the 470 Report (Appendix 1-4 of this volume) and not included here to avoid duplicative reporting and tracking.

District and FDACS Source Control Programs: The Pollutant Source Control Program is a multi-faceted approach for improving the management of pollution sources within the Northern Everglades watersheds. It includes source control programs, such as Best Management Practices (BMPs, on-site treatment technologies, stormwater and wastewater infrastructure upgrades and master planning, and regulatory programs focused on water quality and quantity. Source control programs that use SOETF funds include the District's 40E-61 Regulatory Source Control Program (per Chapter 40E-61, Florida Administrative Code) and the FDACS Agricultural Best Management Practices Program.

Research and Water Quality Monitoring Program: The Research and Water Quality Monitoring Program primarily assesses ecological health and progress toward achieving the water quality and storage targets and the plans, programs, and other responsibilities in the Watershed Protection Plans. The activities comprising FY2014 expenditures include ecological and water quality monitoring, applied research, model application and development, and exotic species control.

Table 2. Accounting of NEEPP expenditures for Fiscal Year 2014 (FY2014) (October 1, 2013 –September 30, 2014).

Programs	Expenditures by Funding Source				
	SOETF	Other State	Federal	Local Sponsor	District Ad Valorem ¹
Construction Projects ^{2,3,4}	\$2,203,428	\$3,796,885	\$393,736	---	\$7,832,346
District Source Control Programs	---	\$10,000	---	---	\$1,653,540
FDACS Agricultural BMP Program	\$3,000,000	---	---	---	---
District Research and Water Quality Monitoring Program	---	\$14,531	---	---	\$1,790,657
Total	\$5,203,428	\$3,821,416	\$393,736	---	\$11,276,543

¹ This figure includes personnel services.

² These figures exclude \$662,957 of anticipated SOETF and other state funding for which the District will seek reimbursement.

³ These figures do not include CERP projects in NEEPP watersheds, including C-44 STA/Reservoir, C-23/C-24 Reservoir and STA, Lake Okeechobee Retention/Phosphorous Removal, and C-43 West Storage Reservoir, totaling \$3.4 million (see Appendix 1-4 of this volume, Comprehensive Everglades Restoration Plan Annual Report – 470 Report).

⁴ Other state funding includes \$1,989,825 of General Revenue funds from FDEP tracked through SOETF.

NEEPP FISCAL YEAR 2014-2015 ANNUAL WORK PLAN

This Northern Everglades Annual Work Plan was prepared pursuant to the requirements of Paragraph 373.026(8)(b), F.S., which states that prior to the release of state funds for implementation of the Lake Okeechobee Watershed Protection Plan or the River Watershed Protection Plans, the SFWMD must prepare an annual work plan, as part of the annual consolidated report, that is consistent with the goals and objectives of Section 373.4595, F.S. Upon a determination by the FDEP secretary of the annual work plan's consistency with the goals and objectives of Section 373.4595, F.S., the secretary may approve the release of state funds.

The coordinating agencies have requested to spend SOETF dollars for implementation of the projects identified in the Lake Okeechobee, Caloosahatchee River, and St. Lucie River Watershed Protection Plans. The projects collectively identified by the coordinating agencies that will be implemented in FY2015 using SOETF funding are listed below with an asterisk (*) and are an integral part of the Lake Okeechobee and River Watershed Protection Plans. To provide a more comprehensive picture, projects that will be implemented in FY2015 to further the goals and objectives of the NEEPP but will be funded by other sources are also included in the list. It should be noted that this work plan is subject to change throughout the fiscal year as deemed appropriate by the coordinating agencies.

Lake Okeechobee Watershed**I. Construction Project and Other Related Activities**

- Lake Okeechobee Basin Management Action Plan ¹
- Lakeside Ranch – Phase I North (O&M) ²
- Taylor Creek and Nubbin Slough Critical Project Stormwater Treatment Areas (STAs) (O&M) ²
- Kissimmee River Restoration and Headwaters Revitalization* ²
- Rolling Meadows Wetland Restoration ²
- Dispersed Water Management Program
 - Florida Ranchlands Environmental Services Project ^{1,2,3}
 - Nicodemus Slough Water Management Project *²
 - Istokpoga Marsh Watershed Improvement District – Water Quality Improvement Project ³
 - Northern Everglades Payments for Environmental Services Program ²
 - Public Lands Projects ²
- Feasibility and Conceptual Planning Studies
 - Water Treatment and Storage Alternatives Feasibility Analysis for the Taylor Creek and Brady Ranch Properties – S-191 Basin ²
- Lake Okeechobee Regulation Schedule Support ²
- In-lake Navigation/Recreation Enhancements ⁴
- Hybrid Wetland Treatment Technology ³ and Floating Aquatic Vegetation ³
- Other Cooperative Local Projects ²

II. Pollutant Control Program

- Agricultural ³ and Urban ¹ Best Management Practices (BMPs)
- Regulatory Programs
 - SFWMD Regulatory Nutrient Source Control Program ²

III. Research and Water Quality Monitoring Program (as described in the Research and Water Quality Monitoring Plan)

- Regional Phosphorus Control Project Monitoring (Taylor Creek STA, Nubbin Slough STA, Lakeside Ranch STA) ²
- Water Quality Assessment and Reporting (Lake Okeechobee Operating Permit) ²

- Sub-basin Monitoring Flow Network (U.S. Geological Survey [USGS])³ and Sub-basin Water Quality Monitoring²
- Lake Okeechobee Watershed Assessment (LOWA) Monitoring in Upstream Tributaries²
- Kissimmee River Related ecological, water quality and flow monitoring²
- Lake Okeechobee In-Lake Assessment Projects²
- Exotics and Nuisance Species Control²
- Upper Chain of Lakes Nutrient Budget Development²
- BMP Demonstration and Optimization in District Lands and Private Partnerships
- In-lake and Watershed Modeling²
 - Lake Okeechobee Water Quality Model²
 - Watershed Assessment Model Calibration, Sensitivity and Uncertainty Analyses^{1,2,3}
 - PN- Budget Tool Application^{2,3}
 - Wading Bird Foraging Prediction Model
 - Storage Needs North of Lake Okeechobee

Caloosahatchee River Watershed

I. Construction Project and Other Related Activities

- Caloosahatchee Basin Management Action Plan¹
- C-43 BOMA – Water Quality Treatment and Testing²
- C-43 West Basin Storage Reservoir Early Start Project^{*1,2}
- Lake Hicpochee North Hydrologic Enhancement Project^{*2}
- Floating Aquatic Vegetation³
- Other Cooperative Local Projects²
- Dispersed Water Management Program
 - Northern Everglades Payment for Environmental Services Program²
 - Northern Everglades Cost-Share Projects²

II. Pollutant Control Program

- Agricultural³ and Urban¹ BMPs
- SFWMD Regulatory Nutrient Source Control Program²

III. Research and Water Quality Monitoring Program (as described in the Research and Water Quality Monitoring Plan)

- Caloosahatchee Monitoring Stations Maintenance ²
- Ecological Monitoring (oysters, seagrass) ²
- Applied Research, Model Development and Application ²
- Dissolved Organic Nitrogen Study ²
- Adaptive Protocol Research Studies ²
- Caloosahatchee Estuary Sediment Nutrients & Cycling ²
- Tidal Basin WaSh Model ²
- Linkages between Water Quantity and In Estuary Water Quality
- River Watershed Assessment Monitoring in Upstream Tributaries ²
- BMP Demonstration and Optimization in District Lands and Private Partnerships ²

St. Lucie River Watershed

I. Construction Project

- St. Lucie Basin Management Action Plan ¹
- C-44 Project ^{5,2} (Construction)*
- Local Cost-Share Stormwater Projects ⁵
 - St. Lucie River and Indian River Lagoon Issues Team Projects ^{7,6}
 - Other Cooperative Local Projects ²
- Dispersed Water Management Program
 - Northern Everglades Payment for Environmental Services Program ²
 - Northern Everglades Cost-Share Projects ²
 - Private Lands Projects ²
 - Public Lands Projects ²
 - Water Farming Pilot Projects ²
 - Allapattah Conservation & Recreation Area ^{2,7}

II. Pollutant Control Program

- Agricultural ³ and Urban ¹ BMPs
- SFWMD Regulatory Nutrient Source Control Program ²
- Innovative Treatment Technologies ³
- Hybrid Wetland Treatment Technology ³

III. Research and Water Quality Monitoring Program (as described in the Research and Water Quality Monitoring Plan)

- USGS St. Lucie Estuary Monitoring ²
- Applied Research, Model Development and Application ²
- St. Lucie Tributary Monitoring
- St. Lucie WaSh Model Upgrades ²
- St. Lucie Estuary Sediment Nutrients and Cycling ²
- Linkages between Water Quantity and In Estuary Water Quality
- River Watershed Assessment Monitoring in Upstream Tributaries ²
- BMP Demonstration and Optimization in District Lands and Private Partnerships ²

¹ Florida Department of Environmental Protection is the lead agency.

² South Florida Water Management District is the lead agency.

³ Florida Department of Agriculture and Consumer Services is the lead agency.

⁴ Glades County is the lead agency.

⁵ Martin County is the lead agency.

⁶ St. Lucie County is the lead agency.

⁷ Natural Resources Conservation Services is a co-lead agency.