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Fiscal Year 2019 Five-Year Water Resource Development Work Program

October 2018

sfwmd.gov

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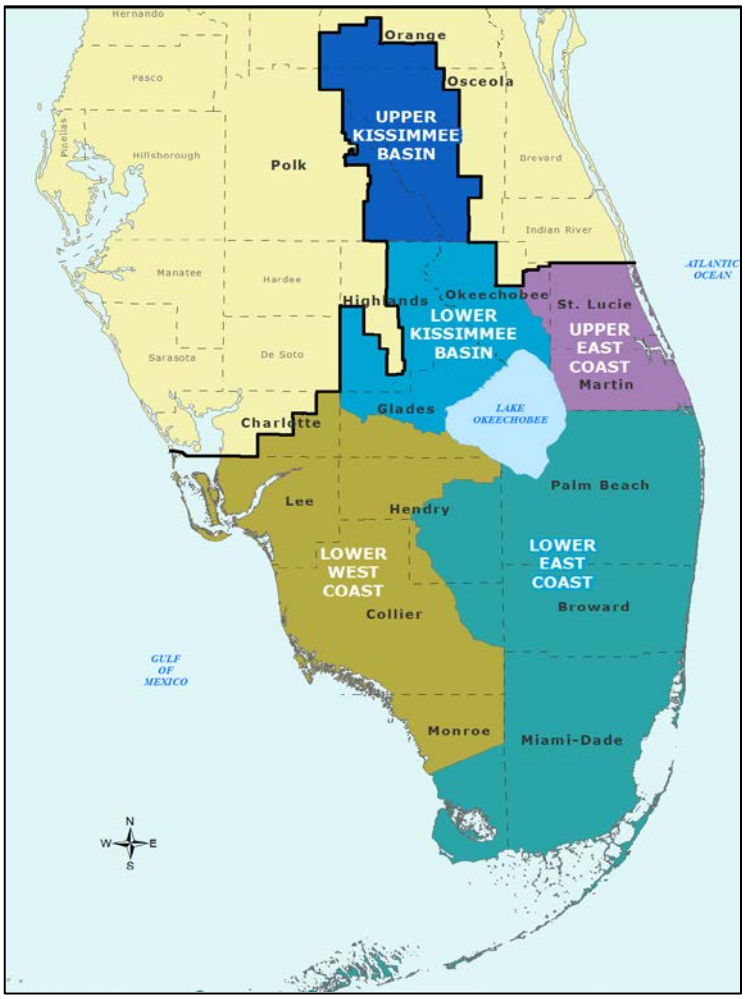
INTRODUCTION

Water management districts are required by Section 373.709, Florida Statutes (F.S.), to develop a regional water supply plan (RWSP) if they determine the existing sources of water are 1) inadequate to supply water for all existing and future reasonable-beneficial uses, and/or 2) may not sustain water resources and related natural systems for a 20-year planning period. RWSPs include analysis of current and future water demands, evaluation of available water sources, and identification of water resource and water supply development projects to meet demands.

The South Florida Water Management District (SFWMD) is required to prepare a Five-Year Water Resource Development Work Program (Work Program) as a part of its annual budget reporting process, pursuant to Subsection 373.536(6)(a)4, F.S. The Work Program must describe SFWMD's implementation strategy relating to its water resource development and water supply development (including alternative water supply [AWS] sources) components over the next 5 years. Furthermore, the Work Program must do the following:

- Address all the elements of the water resource development component of the approved RWSPs as well as the water supply projects proposed for SFWMD funding and assistance.
- Identify anticipated available SFWMD funding and additional funding needs for years 2 through 5 of the funding plan.
- Identify projects that will provide water, including an estimate of the quantity produced.
- Explain how each water resource and water supply development project will produce additional water supply for consumptive uses.
- Assess the contribution of the RWSPs in supporting the implementation of minimum flows and minimum water levels (MFLs) and water reservations.
- Ensure sufficient water is available to meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event and to avoid adverse effects of competition for water supplies.

This Work Program covers the period from Fiscal Year (FY) 2018-2019 through FY 2022-2023 and is consistent with the planning strategies of SFWMD's RWSPs. SFWMD has developed RWSPs for five distinct regional planning areas (**Figure 1**): Upper Kissimmee Basin, Lower Kissimmee Basin, Upper East Coast, Lower West Coast, and Lower East Coast. The Upper Kissimmee Basin is part of the Central Florida Water Initiative (CFWI), which covers Orange, Osceola, Polk, and Seminole counties as well as southern Lake County. The CFWI is a collaborative planning effort by three water management districts (SFWMD, Southwest Florida Water Management District, and St. Johns River Water Management District) to identify sustainable water supply options and potential projects to meet future demands while protecting, conserving, and restoring water resources in central Florida. The approval dates of the most recent SFWMD RWSPs (SFWMD 2014, 2016, 2017, 2018a, SFWMD et al. 2015) and the next updates for each planning area are identified in **Table 1**. Starting in 2016, RWSP updates have a common planning horizon of 2040. For additional information about SFWMD's RWSPs, please see https://www.sfwmd.gov/our-work/water-supply.



- **Upper Kissimmee Basin:** Portions of Osceola County, Orange, and Polk counties
- **Lower Kissimmee Basin:** Portions of Okeechobee, Highlands, and Glades counties
- **Upper East Coast:** Martin and St. Lucie counties and eastern Okeechobee County
- **Lower East Coast:** Palm Beach, Broward, and Miami-Dade counties, and portions of Monroe, Collier, and Hendry counties
- **Lower West Coast:** Lee County and portions of Collier, Glades, Hendry, Monroe, and Charlotte counties

Figure 1. Regional water supply planning areas in SFWMD.

Table 1. Current water supply plan and 5-year updates schedule.

Planning Region	Current Water Supply Plan	Next Update
Lower Kissimmee Basin	September 2014	September 2019
Central Florida Water Initiative	November 2015	November 2020
Upper East Coast	March 2016	March 2021
Lower West Coast	December 2017	December 2022
Lower East Coast	November 2018 [a]	November 2023

a. The *2018 Lower East Coast Water Supply Plan Update* is scheduled for Governing Board approval in November 2018.

The population within SFWMD's boundaries is expected to increase by approximately 2.5 million people to approximately 11 million people by 2040. The rate of population growth varies throughout the SFWMD area, with some counties experiencing faster growth than others. Raw water demand for all water use categories is projected to increase by 677.6 million gallons per day (mgd) to approximately 4.1 billion gallons per day (bgd) in 2040. Overall, demand projections in the most recent water supply plan updates are lower than previous updates due to the reasons explained below.

In response to rapid population increases between 2006 and 2010 and growth population projections at that time, many utilities within SFWMD's boundaries expanded water treatment facilities, developed alternative

water supplies, and secured increased permit allocations to meet anticipated water needs. Some of these activities received funding assistance through SFWMD's Cooperative Funding Program (CFP) and the state's Water Protection and Sustainability Program. However, following the economic recession in 2008 to 2012, the anticipated population growth did not occur and growth projections were substantially reduced. In addition, per capita use rates declined due to the economy, water shortage restrictions, implementation of year-round irrigation restrictions, and an emerging water conservation ethic. These conditions left many utilities with reduced future demands and constructed treatment capacity that may not be fully utilized until well into the future. As a result, current SFWMD RWSPs (except the CFWI RWSP) concluded few utilities need to construct additional projects to meet their 2035/2040 projected needs, and projects that may be needed are near the end of the planning period, not within the next 5 years.

WORK PROGRAM SUMMARY

The Work Program presented herein is adequate to ensure water is available to meet the water supply needs of existing and future reasonable-beneficial uses during a 1-in-10-year drought event, to avoid the adverse effects of competition for water supplies, and to maintain the function of natural systems. This Work Program outlines SFWMD's planned funding and assistance commitments over the next 5 years, including implementation of MFLs and Water Reservations.

SFWMD projects that supply water primarily for the environment, including projects associated with the Comprehensive Everglades Restoration Plan (CERP), Restoration Strategies, or other restoration projects are presented in SFWMD's Annual Consolidated Report, South Florida Environmental Report (SFER), and SFER Consolidated Project Report Database, which is accessible at www.sfwmd.gov/sfer.

The FY 2018-2019 through FY 2022-2023 implementation schedule and projected expenditures (including salaries, benefits, and operating expenses) for water resource development activities are detailed in this document and reflect SFWMD's continued commitment to ensuring adequate resources are available to meet existing and future reasonable-beneficial needs. The estimated funding allocation identified for the next 5 years is more than $583 million. This Work Program is estimated to make available more than 1,793 mgd annually as a result of these ongoing programmatic efforts. On average, approximately 1,755 mgd is delivered from the Central and Southern Florida Flood Control Project (C&SF Project) regional system to the Lower East Coast through structure releases to maintain Lower East Coast canal levels, and regional seepage that helps maintain Lower East Coast groundwater levels, for water supply purposes. The remaining amount (approximately 38 mgd) will be made available upon completion of water supply projects, including reuse and non-reuse water for urban and agricultural water supply.

In addition to SFWMD funded projects, potable water supply utilities have tentatively identified 24 reuse and non-reuse water supply development projects they plan to construct between FY 2018-2019 through FY 2022-2023 with local funding as part of their annual progress report required by Subsection 373.709(8)(b), F.S. The 24 projects will create an estimated 61 mgd of alternative water supply capacity and 20 mgd of reclaimed water distribution capacity.

In addition to salary, benefits, and operating expenses for MFL criteria and rule development, almost $455 million over the next 5 years is planned for construction projects supporting MFL prevention and recovery strategies. However, new water will not be available for many projects associated with MFL water bodies until all project components are completed. Funding for the CERP Caloosahatchee River (C-43) West Basin Storage Reservoir project is expected to make approximately 152 mgd of non-reuse water available upon completion to be used solely for environmental purposes benefitting the Caloosahatchee River MFL. The stormwater stored in the reservoir is protected by a water reservation to prevent allocation to consumptive uses.

WATER RESOURCE AND WATER SUPPLY DEVELOPMENT

Water resource development components are those that involve the "formulation and implementation of regional water resource management strategies, including the collection and evaluation of surface water and groundwater data; structural and nonstructural programs to protect and manage water resources; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood control, surface and underground water storage, and groundwater recharge augmentation; and related technical assistance to local governments, government-owned and privately owned water utilities, and self-suppliers to the extent assistance to self-suppliers promotes the policies as set forth in s. 373.019" (Section 373.019(24), F.S.). These types of projects are regional in nature and primarily the responsibility of SFWMD. Water resource development activities are listed in **Table 2**, and the implementation schedule and projected expenditures are listed in **Table 3**.

Table 2. SFWMD water resource development activities and descriptions.

Water Resource Development Activity	Activity Description
Water Supply Planning	Work associated with developing 5-year updates to SFWMD's RWSPs, not including the CFWI RWSP.
CFWI Planning Project	Work associated with developing the 5-year update to and implementation of the 2015 CFWI RWSP, including well drilling, wetlands monitoring, data collection and analysis, East-Central Florida transient expanded groundwater modeling, participation in technical and management teams, and production of the 2020 CFWI RWSP.
Local Government Assistance	Review of local government comprehensive plans and plan amendments, including water supply facilities work plans (Chapter 163, F.S.). Technical assistance to local governments (Sections 189.4156 and 373.711, F.S.) to develop and revise local government comprehensive plan elements.
Water Supply Implementation	Implementation of RWSPs, including coordination, execution, and facilitation of water resource development activities, operational changes, implementation of AWS development projects, conservation programs, and rulemaking associated with the RWSPs. This is a multi-year process that involves working closely with other agencies, local governments, utilities, the agricultural industry, and environmental interests.
Cooperative Funding Program	Funding assistance provided to local water users for stormwater, AWS, and water conservation projects that are consistent with SFWMD's core mission and RWSPs. Additional discussion and a list of AWS and water conservation projects is provided in the following sections. This also includes AWS funding by Big Cypress Basin when budgeted. Stormwater projects are not included in this Work Program.
Comprehensive Water Conservation Program	Activities associated with implementation of SFWMD's Comprehensive Water Conservation Program.
MFLs and Water Reservations Activities	Activities associated with development and re-evaluation of MFLs pursuant to Sections 373.042 and 373.0421, F.S., and water reservations. Further discussion and a list of projects associated with an MFL prevention or recovery strategy and water reservations for this report time period is provided in the following sections.
Hydrologic Investigations, Groundwater Monitoring, Data Collection, and Analysis	Costs associated with SFWMD's maintenance of extensive groundwater monitoring networks and partnering with the United States Geological Survey to provide additional support and funding for ongoing monitoring. Documentation (including location, well construction, geophysical logging, aquifer test, water level, and water quality, and saltwater intrusion data) is provided in various SFWMD technical publications (www.sfwmd.gov/techpubs) and its corporate environmental database, DBHYDRO (www.sfwmd.gov/dbhydro).
Groundwater Modeling	Work associated with groundwater modeling efforts in support of RWSP updates. This 5-year report includes completion and application of the Lower West Coast Surficial/Intermediate Aquifer Systems Model, application of the Lower West Coast Floridan Aquifer Model and East Coast Floridan Model, and revisions to the Lower East Coast Subregional Model.
C&SF Project Operations and Maintenance	The estimated costs for operations and maintenance of the C&SF Project that are attributed to providing water supply. Approximately 50% of the operations and maintenance budget is allocated to providing water supply to the region.

Table 3. Fiscal Year 2018-2019 through Fiscal Year 2022-2023 implementation schedule and projected expenditures (including salaries, benefits, and operating expenses) for water resource development activities.

Regional Water Activities	Plan Implementation Costs ($ thousands)					
	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22	Fiscal Year 2022-23	Total
Water Supply Planning Estimated finish date: Ongoing	1,159	1,344	1,344	1,344	1,344	**6,535**
CFWI Water Supply Planning Project Estimated finish date: Ongoing	2,998	541	541	541	541	**5,162**
Comprehensive Plan, Documents Review, and Technical Assistance to Local Governments Estimated finish date: Ongoing	211	206	206	206	206	**1,035**
Water Supply Implementation Estimated finish date: Ongoing	228	252	252	263	252	**1,247**
Subtotal	**4,596**	**2,343**	**2,343**	**2,354**	**2,343**	**13,979**
Districtwide Water Activities						
MFL, Water Reservation, and Restricted Allocation Area Activities Estimated finish date: Ongoing	304	380	380	380	380	**1,824**
Comprehensive Water Conservation Program Estimated finish date: Ongoing	287 [a]	351	351	311	351	**1,651**
Cooperative Funding Program Estimated finish date: Ongoing	51 [a]	64	0	0	0	**115**
Groundwater Monitoring Estimated finish date: Ongoing	1,416	1,450	1,450	1,450	1,450	**7,216**
Groundwater Modeling Estimated finish date: Ongoing	739	775	775	775	775	**3,839**
Estimated Portion of C&SF Project Operation and Maintenance Budget Allocated to Water Supply [b] Estimated finish date: Ongoing	110,904	110,904	110,904	110,904	110,904	**554,520**
Subtotal	**113,701**	**113,924**	**113,860**	**113,820**	**113,860**	**569,165**
Total	**118,297**	**116,267**	**116,203**	**116,174**	**116,203**	**583,144**

a. These prior initiatives are still under way, resulting in SFWMD's Governing Board not providing funding in Fiscal Year 2018-2019, and future discussions on funding allocations for the cooperative funding initiatives will be included in the next fiscal year budget development process.

b. Approximated based on 50% of the Fiscal Year 2018-2019 operation and maintenance budget.

Cooperative Funding Program

As part of the RWSPs' water resource development component and to assist local water users in implementation of the water supply development component, SFWMD periodically provides funding assistance to public water suppliers, local governments, special districts, homeowners' associations, water users, and other public and private organizations for stormwater, AWS, and water conservation projects that are consistent with SFWMD's core mission through the CFP. Water supply development components are those that involve "planning, design, construction, operation, and maintenance of public or private facilities for water collection, production, treatment, transmission, or distribution for sale, resale, or end use" (Section 373.019(26), F.S.) and are primarily the responsibility of local water providers. The CFP combines funding for these three project types into one streamlined program to provide partnership opportunities and financial incentives to implement local projects that complement regional flood control, restoration, water quality, and water supply efforts. The CFP water conservation and AWS projects will be rolled over into FY2018-19 and are listed in **Tables 4** and **5**, respectively.

Table 4. Summary of 2016–2019 CFP water conservation rollover projects.

County	Entity	Project	Estimated Water Savings (mgy)	Total Project Cost	SFWMD Funding
Broward	Broward Water Partnership	Conservation Pays High Efficiency Toilet Rebate Program	10.74	$200,000	$100,000
Broward	Coral Springs Improvement District	Toilet Rebate Program	1.00	$15,048	$7,520
Broward	Broward County Environmental Planning and Community Resilience Division	NatureScape Irrigation Service Smart Irrigation Technology Retrofit Program	41.10	$21,859	$10,930
Broward	City of Lauderdale Lakes	Water Savings Irrigation Retrofits	5.19	$15,647	$7,820
Broward	Broward County Water and Wastewater Services	United States Environmental Protection Agency WaterSense High Efficient Toilet Replacement/Credit Program	3.20	$60,000	$25,500
Broward	City of Cooper City	Water Conservation Software Technology Projects	32.85	$389,500	$60,000
Broward	City of North Lauderdale	Automatic Flushing Plan Program	0.74	$34,000	$10,200
Collier	Bishopwood East of Forest Glen Neighborhood Association Inc.	Bishopwood East of Forest Glen Neighborhood Irrigation Water Conservation Project	7.50	$41,415	$17,600
Hendry	Agreserves Inc. DBA - Deseret Farms of Ruskin	Bayrock Grove Irrigation Monitoring	20.00	$24,988	$12,490
Hendry	City of LaBelle	Indoor Plumbing Replacement	1.32	$35,960	$26,970
Martin	Field Operations Division of Martin County Engineering Department	Engineering Irrigation H2O Conservation Retrofit Project	3.80	$19,250	$8,180
Miami-Dade	Miami-Dade Water & Sewer Department	Residential High Efficiency Toilet Rebate Project 2017-2018	15.88	$202,373	$100,000
Miami-Dade	Miami-Dade Water & Sewer Department	Landscape Irrigation Evaluation and Rebate Project 2017–2018	29.51	$242,270	$60,000
Miami-Dade	Miami-Dade Water & Sewer Department	Water Conservation Software Technology Project FY2017 & FY2018	30.57	$57,000	$17,100
Miami-Dade	Malux Realty, LLC [a]	Cistern Project at 2337 5th Avenue – Mana Building	8.04	$250,000	$25,000
Monroe	Florida Keys Aqueduct Authority	Cisterns in Paradise: Florida Keys Rain Catchment Initiative	0.52	$30,000	$9,000
Orange	Orange County Utilities	Water Conservation Software Technology Project for Southwest Orange County	162.60	$169,981	$50,990
Osceola	City of St. Cloud	Toilet Rebate Program	3.42	$47,000	$23,500
Osceola	Toho Water Authority	Automatic Line Flushing Devices	23.20	$200,000	$76,500
Palm Beach	Palm Beach Soil and Water Conservation District	Nursery Overhead Efficiency Project	22.70	$40,000	$20,000
Palm Beach	City of West Palm Beach	Community Water Conservation Strategies, Phase VI – High Efficiency Toilet	4.80	$125,000	$62,500
Palm Beach	City of Lake Worth	Automatic Line Flushers	11.34	$67,500	$28,690
Palm Beach	City of West Palm Beach	Water Conservation Software Technology: Phase 2 & 3	174.50	$270,000	$60,000
Polk	AV Homes Inc.	Solivita Irrigation Central Control Retrofit Project	238.68	$1,957,535	$100,000
Polk	Polk County Board of County Commissioners	Water Conservation Software Technology for Oak Hills Water Use Area	5.20	$205,920	$60,000
St. Lucie	Nettles Island, Inc. A Condominium	Irrigation Water Conservation Retrofit	2.50	$33,046	$9,910
		Total	**860.91**	**$4,755,292**	**$990,400**

mgy = million gallons per year.
a. Canceled project.

Table 5. Overview of 2016–2019 CFP AWS rollover projects.

County	Project Name	Entity Name	AWS	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	2016-2019 Construction Cost	SFWMD Funding
Broward	Reclaimed Water Main Extension – Wiles Road	Coconut Creek	Reclaimed	0.00 [a]	0.50 [a]	$1,000,000	$300,000
Broward	Sawgrass Water Reclamation Facility – Phase I	Sunrise	Reclaimed	2.00	2.00	$15,408,000	$300,000
Broward	Reclaimed Water Main Extension – Springtree Drive	Sunrise	Reclaimed	0.20 [a]	0.20 [a]	$236,428	$115,000
Broward	Reclaimed Water System Expansion – Northeast Pompano and Lighthouse Point	Pompano Beach	Reclaimed	0.04 [a]	0.55 [a]	$1,650,000	$400,000
Collier	Phase III Reclaimed Water System Expansion – Lined Storage Pond and Reclaimed Water Main Extension along Anthem Parkway	Ave Maria Utility Company	Reclaimed	0.60	3.10	$1,021,623	$150,000
Lee	Reclaimed Water Aquifer Storage and Recovery (Fort Myers Beach/Fiesta Village)	Lee County Utilities	Aquifer Storage and Recovery	0.18	0.54	$1,350,000	$200,000
Lee	Water North 2 Utility Extension Program – Irrigation Canal Pump Station East #10 (City Priority #2)	Cape Coral	Reclaimed	7.00	7.00	$10,500,000	$200,000
Lee	Water North 2 Utility Extension Program – Irrigation Transmission (City Priority #1)	Cape Coral	Reclaimed	24.00 [a]	24.00 [a]	$17,150,000	$200,000
Orange	Lower Floridan Booster Pump Station (International Drive Area)	Orange County Utilities	Brackish	23.00	23.00	$2,364,600	$500,000
Osceola	12-inch Reclaimed Water Main Extension – Lakeshore Park and Downtown	Toho Water Authority	Reclaimed	0.05 [a]	0.05 [a]	$750,000	$300,000
Osceola	South Bermuda Water Reclamation Facility Reuse Pump Station Expansion	Toho Water Authority	Reclaimed	0.00	1.10	$300,000	$150,000
Osceola	Judge Farms Reservoir & Impoundment Project (CFWI ST-1 & RWSP #128) Phases 1 and 2	Osceola County	Reclaimed	5.00	5.00	$13,500,000	$400,000
Palm Beach	Reclaimed Water System Expansion – Area 12C	Delray Beach	Reclaimed	0.16 [a]	5.10 [a]	$1,182,611	$400,000
St. Lucie	Reverse Osmosis Expansion – 2nd Reverse Osmosis Concentrate Disposal Well	Fort Pierce Utilities Authority	Brackish	0.00 [b]	4.33 [b]	$4,200,000 [b]	$200,000 [b]
			Total	**37.78**	**41.74**	**$70,613,262**	**$3,815,000**

a. Distribution project; water accounted for in facility capacity.
b. Canceled project.

Minimum Flows and Minimum Water Levels and Water Reservation Activities

MFL implementation activities include conducting research to set scientifically based criteria for defining significant harm; conducting voluntary, independent scientific peer review of the associated science where needed; obtaining stakeholder input; and completing rulemaking. Prevention or recovery strategies are developed concurrently with MFLs to either maintain (prevention strategy) or achieve (recovery strategy) compliance with established MFLs. SFWMD has adopted MFLs for 9 water bodies, which include 40 MFL compliance monitoring sites. Five MFL water bodies have prevention strategies while the remaining four MFLs have recovery strategies. All four MFL water bodies that have recovery strategies have projects planned in the next 5 years to move toward meeting the minimum flow or level (**Table 6**). Three of the five MFL water bodies that have prevention strategies rely on existing regulatory components to meet the minimum flow or level and do not involve new projects. Of the two remaining MFL waterbodies that have prevention strategies (Florida Bay and St. Lucie Estuary), only the St. Lucie Estuary has CERP project components planned within this 5-year Work Program (**Table 6**). No new MFLs are proposed for future adoption within the 5-year period of this Work Program.

From 2011 to 2017, SFWMD scientists completed a comprehensive assessment of the science and research for the Caloosahatchee River Estuary to reevaluate the MFL (Appendix A in SFWMD 2018b). An MFL technical support document was developed and scientifically peer reviewed in 2017 (Buskey et al. 2017, SFWMD 2018b). In 2018, SFWMD staff began the rule development process and held two separate public rule development workshops. In September 2018, the Governing Board approved the adoption of the revised MFL rule criteria. The rule development process is expected to be complete by the end of 2018.

MFL prevention or recovery strategy projects with implementation costs planned for FY 2018-2019 through FY 2022-2023 are listed in **Table 6**. These projects are designed to provide new water for the MFL water body once all the project components are completed. This list does not include projects associated with improving water quality or providing additional storage within the watershed (e.g., dispersed water management projects).

Water reservations support restoration efforts and recovery or prevention strategies for established MFLs. The creation of a water reservation is necessary for SFWMD and the United States Army Corps of Engineers to enter into a project partnership agreement, as required by the Water Resources Development Act of 2000 for construction of CERP project components such as reservoirs or stormwater treatment areas. SFWMD has adopted five water reservations.

Priority water bodies, including MFLs and water reservations, require annual approval by the Governing Board and are submitted to the Florida Department of Environmental Protection (FDEP) for review and approval. For the upcoming 5-year period, the Kissimmee River and Chain of Lakes (including the Chain of Lakes, Headwaters Revitalization Lakes, and Kissimmee River and Floodplain) is the only water reservation under development.

A complete list of MFL and water reservation development activities can be found on SFWMD's web page at https://www.sfwmd.gov/our-work/mfl and https://www.sfwmd.gov/our-work/water-reservations.

Table 6. Projects associated with an MFL prevention or recovery strategy for Fiscal Year 2018-2019 through Fiscal Year 2022-2023. (Note: All costs are subject to state appropriation and are subject to change until the Five-Year Capital Improvements Plan is approved by SFWMD's Governing Board in February 2019.)

Projects	Project Implementation Costs [a]					
	Fiscal Year 2018-19 [a]	Fiscal Year 2019-2020 [a]	Fiscal Year 2020-2021 [a]	Fiscal Year 2021-2022 [a]	Fiscal Year 2022-23	5-Year Work Plan Cost Estimates
St. Lucie Estuary						
Indian River Lagoon (C-23/C-24/C-25)	$2,670,328	TBD	TBD	TBD	TBD	$2,670,328
Northwest Fork of Loxahatchee River						
Replacement Features [b]	$0	$6,000,000	$7,000,000	$7,000,000	TBD	$20,000,000
Everglades						
C-44/C-23 Interconnect [c]	$3,000,000	$8,500,000	$8,500,000	TBD	TBD	$20,000,000
Old Tamiami Trail Removal [d]	$5,000,000	$7,500,000	$7,500,000	TBD	TBD	$20,000,000
S-333N Increase [d]	$11,000,000	$6,000,000	TBD	TBD	TBD	$17,000,000
Caloosahatchee River						
Caloosahatchee River (C-43) West Basin Storage Reservoir	$145,072,295	$105,000,000	$105,000,000	TBD	TBD	$355,072,295
Lake Okeechobee						
Lake Okeechobee Watershed Projects [e]	TBD	TBD	TBD	TBD	TBD	TBD
Lake Okeechobee, Loxahatchee River, and Western Everglades						
Restoration Project Planning [f]	$5,000,000	$5,000,000	$5,000,000	$5,000,000	TBD	$20,000,000
Total	**$171,742,623**	**$138,000,000**	**$133,000,000**	**$12,000,000**	**TBD**	**$454,742,623**

TBD = to be determined.

a. Information provided by SFWMD's Budget Office in September 2018.
b. The Replacement Features are part of Restoration Strategies and are being evaluated as part of the Comprehensive Everglades Restoration Plan (CERP) Loxahatchee River Watershed Restoration Project. The schedule and costs provided are subject to change based on the results of the ongoing planning effort.
c. The C-44/C-23 Interconnect project is associated with the Central Everglades Planning Project (CEPP). It is listed under the Everglades MFL recovery strategy because it is a precursor project that must be completed first in order to provide the downstream benefits for the Everglades MFL water body.
d. Project is a component of the Central Everglades Planning Project (CEPP).
e. Project is expected to provide new water for the Lake Okeechobee MFL recovery strategy.
f. The costs for all three projects are combined due to a concurrent but independent planning process. Schedule and costs are subject to change based on the results of the ongoing planning process. All three projects are expected to be incorporated as part of the recovery strategies to provide new water for their respective MFL water bodies.

APPENDIX: PROJECTS ASSOCIATED WITH A BASIN MANAGEMENT ACTION PLAN FOR FISCAL YEAR 2018-2019 THROUGH FISCAL YEAR 2022-2023

Basin management action plans (BMAPs) are the "blueprint" for restoring impaired waters by reducing pollutant loadings to meet allowable levels established by a total maximum daily load (TMDL). In 2016, the Florida legislature amended Section 373.036(7)(b)8, F.S., to require the identification of projects in the Work Program that implement a BMAP or an MFL recovery or prevention strategy. SFMWD's Work Program historically has identified water resource development projects that support MFL recovery and prevention strategies but has not included specific descriptions of projects primarily intended to implement BMAPs. Consistent with Section 373.036(7)(b)8, F.S., and in a manner coordinated with FDEP and all five water management districts, a 5-year funding outlook for projects specifically identified in an adopted BMAP are included in this Work Program.

There are five adopted BMAPs within SFWMD boundaries: Caloosahatchee Estuary Basin (FDEP 2012a), Everglades West Coast (FDEP 2012a,b), Indian River Lagoon (FDEP 2013a), St. Lucie River and Estuary (FDEP 2013b), and Lake Okeechobee (FDEP 2014). **Table 7** reflects BMAP projects planned costs for Fiscal Year 2018-2019 through Fiscal Year 2022-2023[1]. Of the 22 total projects listed in this table, 1 project is aligned with the St. Lucie River and Estuary BMAP, and 21 projects are aligned with the Lake Okeechobee BMAP; none are aligned with the Caloosahatchee Estuary, Everglades West Coast, or Indian River Lagoon BMAPs.

[1] BMAP projects that SFWMD is implementing are aligned with the Final Statewide Annual Report (FDEP 2018). Five-year (Fiscal Year 2018-2019 through Fiscal Year 2022-2023) cost estimates are shown as projections based on current BMAP-associated projects under contract by SFWMD or based on prior year expenditure trends, and do not include salaries; Fiscal Year 2019-2020 through Fiscal Year 2022-2023 costs are contingent on future legislative funding and Governing Board approval of future fiscal year funding.

Table 7. BMAP projects costs in dollars, excluding salaries for Fiscal Year 2018-2019 through Fiscal Year 2022-2023.
(Note: All costs are subject to state appropriation and are subject to change until the Five-Year Capital Improvements Plan is approved by SFWMD's Governing Board in February 2019.)

BMAP	Lead Entity	Partners	DEP Project Number	Project Name	Project Type	Fiscal Year 2018-2019	Fiscal Year 2019-2020	Fiscal Year 2020-2021	Fiscal Year 2021-2022	Fiscal Year 2022-2023	SFWMD Total	Comments
STLU	Troup-Indiantown WCD	SFWMD/ USACE	TI-05	C-44 STA	Land Use Change	$394,593	$542,953	$1,290,834	$1,356,894	$1,389,454	$4,974,728	O&M costs only.
OKEE	Coordinating Agency	DEP/ SFWMD	CA-01	Brighton Valley DWM	DWM	$3,125,000	$3,125,000	$3,125,000	$3,125,000	$3,000,000	$15,500,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-14 & SFWMD-15	Dixie Ranch	DWM	$146,500	$146,500	$146,500	$146,500	TBD	$586,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-16	Lost Oak Ranch	DWM	$55,000	$55,000	$55,000	$55,000	$55,000	$275,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-17	Willaway Cattle and Sod	DWM	$1,879	$1,879	$1,879	$1,879	$1,879	$9,395	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-18	XL Ranch (Lightsey)	DWM	$137,000	$137,000	$137,000	$137,000	TBD	$548,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-19	Triple A Ranch	DWM	$30,000	$30,000	$30,000	$30,000	$30,000	$150,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-20	La Hamaca (Blue Head Ranch)	DWM	$361,200	$361,200	$361,200	$361,200	$361,200	$1,806,000	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-21	Nicodemus Slough	DWM	$2,656,481	$2,783,683	$2,855,197	$2,499,839	TBD	$10,795,200	--
OKEE	SFWMD	USACE	SFWMD-22	Kissimmee River Headwater Revitalization	Hydrologic Restoration	--	--	--	--	--	--	The Kissimmee River Restoration Project (SFWMD-05) includes the Lower Basin (Osceola, Polk, Highlands, and Okeechobee counties) and the Upper Basin – Kissimmee River Headwaters Revitalization Project (Osceola and Polk counties) (SFWMD-22). Costs may be included in SFWMD-05.
OKEE	SFWMD	DEP/ SFWMD	SFWMD-12	Buck Island Ranch (NE-PES-1)	DWM	$173,600	$173,600	$173,600	$173,600	TBD	$694,400	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-11	Rafter T Ranch	DWM	$162,736	$162,736	$162,736	$162,736	$162,736	$813,680	--

BMAP	Lead Entity	Partners	DEP Project Number	Project Name	Project Type	Fiscal Year 2018-2019	Fiscal Year 2019-2020	Fiscal Year 2020-2021	Fiscal Year 2021-2022	Fiscal Year 2022-2023	SFWMD Total	Comments
OKEE	SFWMD	DEP/ SFWMD	SFWMD-23	Buck Island Ranch WMA (NE PES-2)	DWM	$163,500	$163,500	$163,500	$163,500	$163,500	$817,500	--
OKEE	SFWMD	DEP/ SFWMD	SFWMD-13	Dixie West	DWM	$51,500	$51,500	$51,500	$51,500	TBD	$206,000	--
OKEE	SFWMD	DEP/ USACE	SFWMD-02	Nubbin Slough STA Project	STA	$124,675	$124,675	$124,675	$124,675	$124,675	$623,375	Cost estimates based on average annual O&M costs for Fiscal Years 2014-2015 through 2016-2017.
OKEE	SFWMD	DEP/ USACE	SFWMD-01	Taylor Creek STA Project	STA	$170,448	$170,448	$170,448	$170,448	$170,448	$852,240	Cost estimates based on average annual O&M costs for Fiscal Years 2014-2015 through 2016-2017.
OKEE	SFWMD	DEP/ USACE	SFWMD-03	Lakeside Ranch – Phase I	STA	$246,653	$246,653	$366,653	$386,653	$386,653	$1,633,265	O&M costs only.
OKEE	SFWMD	USACE	SFWMD-05	Kissimmee River Restoration Project	Hydrologic Restoration	$1,025,985	$842,985	$1,374,366	$1,353,366	$1,717,366	$6,314,068	O&M, monitoring, and evaluation costs.
OKEE	SFWMD	DEP	SFWMD-06	Rolling Meadows Wetland Restoration – Phase I	Wetland Restoration	$158,669	$158,669	$158,669	$158,669	$158,669	$793,345	Phase I O&M costs only. No future legislative funding for Phase II.
OKEE	SFWMD	DEP/ SFWMD	SFWMD-10	Lykes West Waterhole	DWM	$470,288	$470,288	TBD	TBD	TBD	$940,576	--
OKEE	Coordinating Agency	DEP/ SFWMD	CA-05	El Maximo Ranch DWM (previously Latt Maxcy DWM)	DWM	TBD	TBD	TBD	TBD	TBD	--	--
OKEE	Coordinating Agency	N/A	CA-04	Lakeside Ranch – Phase II	STA	$16,000,000	$16,000,000	$5,000,000	TBD	TBD	$37,000,000	Does not include O&M costs.
					Total	**$25,655,707**	**$25,748,269**	**$15,748,757**	**$10,458,459**	**$7,721,580**	**$85,332,772**	--

BMAP = basin management action plan; DEP = Department of Environmental Protection; DWM = dispersed water management; N/A = not applicable; NE-PES = Northern Everglades – Payment for Environmental Services; O&M = operations and maintenance; OKEE = Okeechobee; SFWMD = South Florida Water Management District; STA = stormwater treatment area; STLU = St. Lucie; TBD = to be determined; USACE = United States Army Corps of Engineers; WMA = Wildlife Management Area.

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[2] All the FDEP BMAPs and associated annual progress reports are available at www.dep.state.fl.us/water/watersheds/bmap.htm. The Final Statewide Annual Report (FDEP 2018) is available at www.floridadep.gov/star.