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Fiscal Year 2021 Five-Year Water Resource Development Work Program

October 2020



sfwmd.gov

TABLE OF CONTENTS

Introduction..... 1

Work Program Summary 3

Water Resource and Water Supply Development..... 4

 Cooperative Funding Program 7

MFL and Water Reservation Activities 9

Appendix: Projects Associated with a Basin Management Action Plan for Fiscal Year 2019-2020
Through Fiscal Year 2023-2024 12

Literature Cited 15

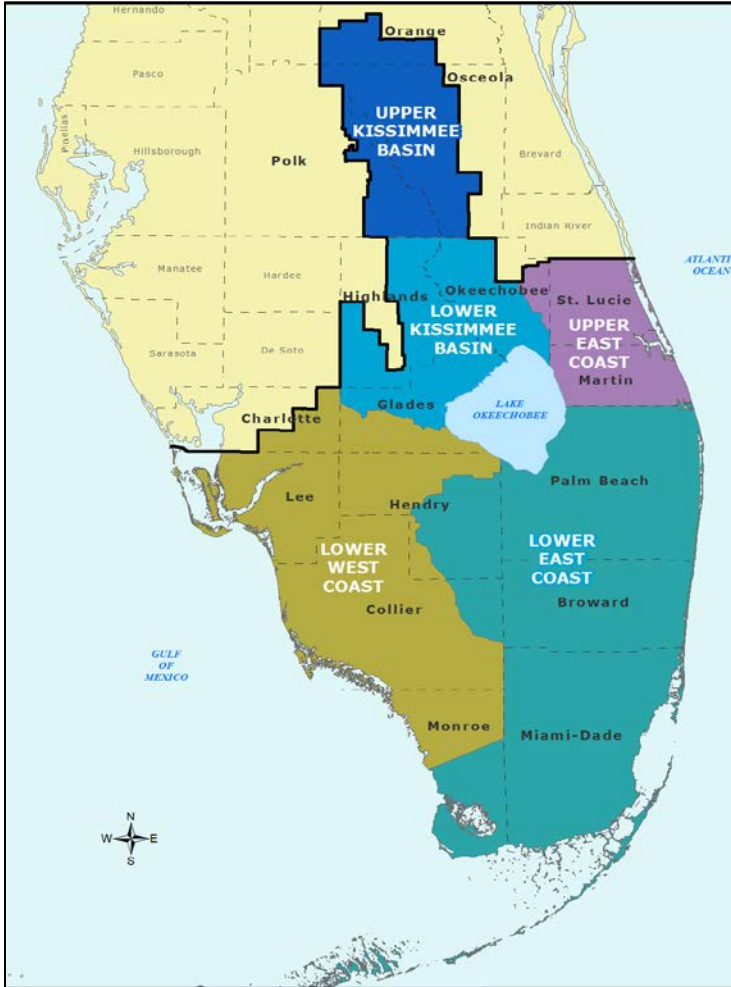
INTRODUCTION

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 (1) are 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 or District) is required to prepare a Five-Year Water Resource Development Work Program (Work Program) as part of its annual budget reporting process, pursuant to Section 373.536(6)(a)4., F.S. The Work Program must describe the SFWMD's implementation strategy and include an annual funding plan for each of the 5 years included in the Work Program for the water resource and water supply development components, including alternative water supply (AWS) development, of each approved RWSP. Furthermore, the Work Program must do the following:

- Address all elements of the water resource development component of the approved RWSPs as well as the water supply development 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) 2020-2021 through FY2024-2025 and is consistent with the planning strategies of the District's RWSPs. The 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) as well as other agencies and stakeholders 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 RWSPs (SFWMD 2016, 2017, 2018, 2019; CFWI 2020 [in prep]) and the next updates for each planning area are identified in **Table 1**. Starting in 2021, RWSP updates will have a common planning horizon of 2045. For additional information about the District's RWSPs, please visit <https://www.sfwmd.gov/our-work/water-supply>.



- **Upper Kissimmee Basin:** Portions of Osceola, 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 the SFWMD.

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

Planning Region	Current Water Supply Plan	Next Update
Upper East Coast	March 2016	November 2021
Lower West Coast	December 2017	December 2022
Lower East Coast	November 2018	November 2023
Lower Kissimmee Basin	December 2019	December 2024
Central Florida Water Initiative	November 2020 ^a	November 2025

a. The 2020 Central Florida Water Initiative Regional Water Supply Plan is scheduled for Governing Board approval in November 2020.

The population within the District’s boundaries is expected to increase by approximately 2.2 million people, to approximately 10.9 million people by 2040. The rate of population growth varies throughout the District, with some counties experiencing faster growth than others. Raw water demand for all water use categories is projected to increase by 571 million gallons per day (mgd), to approximately 4.1 billion gallons per day in 2040. Overall, demand projections in the most recent RWSP updates are lower than previous updates.

In response to rapid population increases between 2006 and 2010 and high population projections at that time, many utilities within the SFWMD’s boundaries expanded water treatment facilities, developed AWS

sources, and secured increased permit allocations to meet anticipated water needs. However, following the 2008 to 2012 economic recession, 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 RWSPs (except the CFWI RWSP) concluded few utilities need to construct additional water supply projects to meet their 2040 projected needs, and projects that may be needed are required at 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 the SFWMD's planned funding over the next 5 years, including implementation of projects associated with MFL prevention or recovery strategies and Water Reservations. Additionally, the **Appendix** to this Work Program includes the implementation costs and details of projects associated with basin management action plans.

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 the District's *South Florida Environmental Report (SFER) – Volume II* and SFER Consolidated Project Report Database, which are accessible at www.sfwmd.gov/sfer.

The FY2020-2021 through FY2024-2025 implementation schedule and projected expenditures (including salaries, benefits, and operating expenses) for water resource development activities are provided in this document and reflect the 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 approximately \$1.98 billion. This Work Program is estimated to make available more than 1,683 mgd annually as a result of these ongoing programmatic efforts. Most of this anticipated water will be delivered from the Central and Southern Florida Flood Control Project (C&SF Project) regional system to the Lower East Coast Planning Area through structure releases to maintain canal levels and through regional seepage that helps maintain Lower East Coast groundwater levels for water supply purposes. This amount will increase with water made available upon completion of water supply development projects, including reuse and non-reuse water for urban and agricultural water supply that will be funded through the Cooperative Funding Program (CFP).

As part of their annual progress reports required by Section 373.709(8)(b), F.S., potable water supply utilities have tentatively identified 37 reuse and non-reuse water supply development projects they plan to construct with local funding between FY2020-2021 through FY2024-2025. The 37 projects will create an estimated 117 mgd of AWS capacity and 65 mgd of reclaimed water distribution capacity.

In addition to salary, benefits, and operating expenses for MFL criteria and rule development, approximately \$1.32 billion 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 and operational. Funding for the CERP Caloosahatchee River (C-43) West Basin Storage Reservoir project is to be used solely for environmental purposes benefitting the Caloosahatchee River MFL. The water stored in the C-43 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.]. Most water resource development activities in the District support and enhance water supply development but do not directly yield specific quantities of water. Water resource development projects are regional in nature and primarily the responsibility of the SFWMD. Two examples are the C&SF Project and CERP projects. The C&SF Project canals move water from Lake Okeechobee and the Everglades water conservation areas to maintain coastal canal levels, augment water supplies during dry times, and prevent saltwater intrusion. The canals provide water to major ecosystems as well as agricultural and urban areas. They also are a crucial component of the region’s flood control system. CERP, a partnership between the United States Army Corps of Engineers and the SFWMD, is a critical part of water supply planning, which includes capital projects needed to protect and restore natural systems and enhance water availability. CERP capital projects include the Everglades Agricultural Area (EAA) Reservoir and Stormwater Treatment Area (STA), Caloosahatchee River (C-43) West Basin Storage Reservoir, and C-44 Reservoir and STA. The Governor’s *Executive Order 19-12: Achieving More Now for Florida’s Environment* directed funding be secured for projects that provide water quality, quantity, and supply benefits. In response to that Order, \$583 million in funding is budgeted or proposed in the next 5 years for the Lake Okeechobee Watershed Restoration Project and the EAA Storage Reservoir Conveyance Improvements and STAs, which also provide water supply benefits. 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 the SFWMD's RWSPs, not including the CFWI RWSP.
CFWI Planning Project	Work associated with developing the 5-year update to and implementation of the 2020 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 2025 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 AWS and water conservation projects that are consistent with the SFWMD's core mission and RWSPs. This includes AWS funding by Big Cypress Basin when budgeted.
Comprehensive Water Conservation Program	Activities associated with implementation of the 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 the 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 testing, 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.
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. FY2020-2021 through FY2024-2025 implementation schedule and projected expenditures (including salaries, benefits, and operating expenses) for water resource development activities.

Regional Water Activity	Plan Implementation Cost (\$ thousands)					Total
	FY2020-2021	FY2021-2022	FY2022-2023	FY2023-2024	FY2024-2025	
Water Supply Planning Estimated finish date: Ongoing	1,280	1,280	1,280	1,280	1,280	6,400
CFWI Water Supply Planning Project Estimated finish date: Ongoing	1,838	1,838	1,838	1,838	1,838	9,190
Comprehensive Plan, Documents Review, and Technical Assistance to Local Governments Estimated finish date: Ongoing	224	224	224	224	224	1,120
Water Supply Implementation Estimated finish date: Ongoing	243	243	243	243	243	1,215
MFL, Water Reservation, and Restricted Allocation Area Activities Estimated finish date: Ongoing	354	354	354	354	354	1,770
Comprehensive Water Conservation Program Estimated finish date: Ongoing	1,858 ^a	358 ^b	358 ^b	358 ^b	358 ^b	3,290
Cooperative Funding Program Estimated finish date: Ongoing	14,661	0 ^b	0 ^b	0 ^b	0 ^b	14,661
Groundwater Monitoring Estimated finish date: Ongoing	2,249	2,249	2,249	2,249	2,249	11,245
Groundwater Modeling Estimated finish date: Ongoing	1,033	1,033	1,033	1,033	1,033	5,165
Estimated Portion of C&SF Project Operation and Maintenance Budget Allocated to Water Supply ^c Estimated finish date: Ongoing	120,139	120,139	120,139	120,139	120,139	600,695
Subtotal	143,879	127,718	127,718	127,718	127,718	654,751
Regional Projects Benefiting Water Supply						
Lake Okeechobee Watershed Restoration ^d	98,000	50,000 ^e	50,000 ^e	50,000 ^e	50,000 ^e	298,000
EAA Storage Reservoir Conveyance Improvements and Stormwater Treatment Area ^{d,f}	77,532	70,468	61,229	29,811	46,095	285,135
Other Projects Associated with MFL Recovery/Prevention Strategies ^g	160,270	151,602	151,647	153,554	121,300	738,373
Subtotal	335,802	272,070	262,876	233,365	217,395	1,321,508
Total	479,681	399,788	390,594	361,083	345,113	1,976,259

- a. FY2020-2021 includes \$1.5 million of tentative, one-time funding for Cooperative Funding Program water conservation projects.
- b. A determination of what funds, if any, will be allocated for cooperative funding projects will be made by the Governing Board during the fiscal year budget development process.
- c. Approximated based on 50% of the FY2020-2021 operation and maintenance budget.
- d. Project cost based on information contained in the draft FY2021-2025 SFWMD Five-Year Capital Improvement Plan.
- e. Funding contingent upon future state appropriations.
- f. Includes the C-44/C-23 Interconnect, Site Preparation, Inflow Canal Reservoir/Stormwater Treatment Area (STA), A-2 STA, North New River and Miami Canal Improvements, and Bridges.
- g. Totals from **Table 8**, less the funding for the Lake Okeechobee Watershed Restoration and EAA Storage Reservoir Conveyance Improvements and STA.

Cooperative Funding Program

Water supply development components 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. To assist local water providers and users in implementation of the water supply development component, the SFWMD periodically provides funding assistance to public water suppliers, local governments, special districts, homeowners’ associations, and other public and private water users for AWS and water conservation projects consistent with the SFWMD’s core mission, through the CFP. The CFP provides partnership opportunities and financial incentives to implement local projects that complement regional water supply efforts. Water conservation and AWS projects and associated funding that was provided in FY2019-2020 through the Florida Department of Environmental Protection (FDEP) AWS Program will be carried forward into FY2020-2021 and are listed in **Tables 4** and **5**, respectively. Active projects funded by the Water Protection and Sustainability Program and the SFWMD in FY2019-2020 also will be carried forward into FY2020-2021 and are listed in **Tables 6** and **7**, respectively. The FY2020-2021 District budget tentatively includes \$15.0 million for the FDEP AWS Funding Program and \$1.08 million for CFP AWS and water conservation projects (\$540,000 from the State’s Water Protection and Sustainability Program and \$540,000 from SFWMD ad valorem). A list of funded projects will be included at a future date.

Table 4. Summary of Water Conservation project funding carried forward from the FY2019-2020 FDEP AWS Program.

County	Entity	Project	Estimated Water Savings (mgy)	Total Project Cost	FDEP AWS Approved Funding
Palm Beach	Palm Beach Soil & Water Conservation District	Nursery Overhead Efficiency Project 2	37.9	\$60,250	\$30,000
Miami-Dade	Miami-Dade Water and Sewer Department	HET Rebate Project FY2020-2021	27.4	\$230,020	\$100,000
Broward	BCEPCRD on behalf of Broward NatureScape Irrigation Service	NatureScape Residential Irrigation Rebate Program	27.1	\$200,000	\$100,000
Broward	BCEPCRD on behalf of Broward Water Partnership	Conservation Pays HET Rebate Program	16.8	\$200,000	\$100,000
Miami-Dade	Miami-Dade Water and Sewer Department	Landscape Irrigation Rebate Project FY2020-2021	29.5	\$237,280	\$100,000
Monroe	Florida Keys Aqueduct Authority	HET Rebate Program	4.6	\$60,000	\$30,000
Palm Beach	West Palm Beach, City of	Community Water Conservation Strategies – Phase VII – HETs	4.98	\$125,000	\$62,500
Palm Beach	Duda Farm Fresh Foods, Inc.	Belle Glade Celery Drip Agricultural Irrigation Retrofit (200 acres)	82.0	\$179,734	\$75,000
St. Lucie	Scott Groves, Inc.	Scott Grove #2 Citrus Agricultural Irrigation Retrofit (511 acres)	81.9	\$218,126	\$75,000
St. Lucie	Scott Groves, Inc.	Scott Grove #3 Citrus Agricultural Irrigation Retrofit (196 acres)	39.6	\$108,379	\$40,000
Okeechobee	Okeechobee Utility Authority	Water Conservation Software Technology for OUA Phase I	18.9	\$720,081	\$100,000
Orange	St. Johns River Water Management District	SJRWMD CFWI Water Conservation Projects	12.56	\$121,475	\$60,737
Osceola	Toho Water Authority	Irrigation Conversion and Retrofit Project	16.43	\$150,010	\$75,005
Polk	Southwest Florida Water Management District	SWFWMD CFWI Water Conservation Projects	18.08	\$340,523	\$151,758
Total			417.75	\$2,950,878	\$1,100,000

BCEPCRD = Broward County Environmental Planning and Community Resilience Division; HET = high-efficiency toilet; CFWI = Central Florida Water Initiative; mgy = million gallons per year; OUA = Okeechobee Utility Authority; SJRWMD = St. Johns River Water Management District; SWFWMD = Southwest Florida Water Management District.

Table 5. Summary of AWS project funding carried forward from the FY2019-2020 FDEP AWS Program.

County	Project Name	Entity Name	AWS Source	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	Total Capital Cost	FDEP AWS Approved Funding
Broward	Broward-Palm Beach Reclaimed Water Main Interconnect	Broward County Board of County Commissioners	Reclaimed water (for potable offset)	16.00	16.00	\$28,300,000	\$3,000,000
Lee	Reclaimed Water Expansion: Cape Coral and Fort Myers Interconnect under the Caloosahatchee River	Cape Coral, City of	Reclaimed water (for potable offset)	2.00	12.00	\$28,750,000	\$3,000,000
Broward	Reclaimed Water Expansion: NE 16 th Street to NE 24 th Street and NE 23 rd Avenue to Intracoastal Waterway	Pompano Beach, City of	Reclaimed water (for potable offset)	0.34 ^a	0.34 ^a	\$1,200,000	\$500,000
Palm Beach	Reclaimed Water Main Construction along SW 4 th Street	Delray Beach, City of	Reclaimed water (for potable offset)	0.21 ^a	0.21 ^a	\$1,195,634	\$450,000
Broward	TY Park Reclaimed Water Main Expansion	Broward County Environmental Planning and Community Resilience Division & Broward County Parks and Recreation	Reclaimed water (for potable offset)	0.46 ^a	0.46 ^a	\$2,285,000	\$500,000
Broward	Springtree Reclaimed Water Main Conversion	Sunrise, City of	Reclaimed water (for potable offset)	4.00 ^a	4.00 ^a	\$1,170,000	\$450,000
St. Lucie	McCarty Ranch Reservoir and Water Treatment Plant (Areas 3, 4, and 6)	Port St. Lucie, City of	Surface water storage (e.g., reservoirs)	8.50	11.10	\$5,725,169	\$1,000,000
Osceola	Cypress Lakes Wellfield: Concentrate Disposal Well IW-2 and Monitoring Well	Tohopekaliga Water Authority	Brackish groundwater	15.00	15.00	5,262,099	\$5,556,600
Total				41.50	54.10	\$73,887,902	\$14,456,600

a. Distribution/use type project; water made available accounted for in treatment plant capacity.

Table 6. Summary of Water Conservation project funding carried forward from the FY2019-2020 Water Protection and Sustainability Program.

County	Entity	Project	Estimated Water Savings (mgy)	Total Project Cost	State and SFWMD Approved Funding
St. Lucie	Wescott Groves, LLC	Wescott Grove 1 Citrus Agricultural Irrigation Retrofit (986 acres)	100.8	\$312,707	\$100,000
Palm Beach	Duda Farms Fresh Foods, Inc.	Belle Glade Celery Linear Agricultural Irrigation Retrofit (285 acres)	95.4	\$482,975	\$100,000
Lee	Bonita Springs Utilities, Inc.	High-Efficiency Toilet Rebate Program	0.93	\$20,000	\$10,000
Hendry	Norris Road, LLC	Norris Citrus Microjet Agricultural Irrigation Retrofit (47 acres)	11.6	\$263,554	\$50,000
Palm Beach	Delray Beach, City of	Automatic Line Flushing Devices	3.8	\$114,000	\$40,000
Total			212.53	\$1,193,236	\$300,000

mgy = million gallons per year.

Table 7. Summary of AWS project funding carried forward from the FY2019-2020 Water Protection and Sustainability Program.

County	Project Name	Entity Name	AWS Source	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	Total Construction Costs	State and SFWMD Approved Funding
Martin	Construct Floridan Aquifer System Production Well FA-1	Stuart, City of	Brackish groundwater	1.00	1.00	\$2,000,000	\$100,000
Martin	Tropical Farms: Floridan Aquifer System Wells 6 and 7	Martin County Utilities	Brackish groundwater	4.70 ^a	4.70 ^a	\$3,614,000	\$200,000
Total				1.00	1.00	\$5,614,000	\$300,000

a. Phased project; water accounted for previously or in future year upon completion of the project.

MFL 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. The 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 8**). 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 8**). No new MFLs are proposed for future adoption within the 5-year period of this Work Program.

MFL prevention or recovery strategy projects with implementation costs planned for FY2020-2021 through FY2024-2025 are listed in **Table 8**. 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 set aside water for the protection of fish and wildlife or public health and safety. They also support restoration efforts and recovery or prevention strategies for established MFLs. The legal protection of water for the project is required before the SFWMD and the United States Army Corps of Engineers enter into a project partnership agreement. This protection also is required by the Water Resources Development Act of 2000 for construction of CERP project components such as reservoirs or STAs. The SFWMD has adopted five Water Reservations.

For the upcoming 5-year period, the Kissimmee River and Chain of Lakes Water Reservations (including the Chain of Lakes, Headwaters Revitalization Lakes, and Kissimmee River and floodplain) currently are in the rule development process. The purpose of these Water Reservations is to ensure protection of the upstream watershed associated with the Kissimmee River Restoration Project and to protect the \$800 million taxpayer investment for restoration. District staff are in the process of revising the draft rules and supporting technical document. Public workshops were held on April 17, June 9, and September 3, 2020. An effective date for the proposed Kissimmee River and Chain of Lakes Water Reservations rule is targeted for December 2020.

A Water Reservation for the EAA Reservoir currently is under rule development as well. The EAA Reservoir is a component of the Central Everglades Planning Project (CEPP), which is designed to improve the quantity, quality, timing, and distribution of water flow from Lake Okeechobee to the Central Everglades, Everglades National Park, and Florida Bay, while maintaining flood control and water supply for existing legal users. The EAA Reservoir is the main storage feature in CEPP, which includes additional treatment and conveyance features. A public peer-review session occurred on May 29, 2020 to review the technical aspects of the proposed Water Reservation. A favorable peer-review report was received from the panel on June 15, 2020. Public rule development workshops were held on July 14 and August 6, 2020. Rule adoption for the EAA Reservoir Water Reservation is targeted for December 2020.

A priority water body list and schedule, including MFLs and Water Reservations, is approved by the SFWMD Governing Board annually and submitted to the FDEP for review and approval. A complete list of MFL and Water Reservation development activities can be found on the SFWMD website at <https://www.sfwmd.gov/our-work/mfl> and <https://www.sfwmd.gov/our-work/water-reservations>.

Table 8. Projects associated with an MFL prevention or recovery strategy for FY2020-2021 through FY2024-2025. (Note: All costs are subject to change until the FY2020-2021 Five-Year Capital Improvements Plan is approved by the SFWMD's Governing Board by February 2021, including development of FY2024-2025 project implementation costs.)

Projects	Project Implementation Costs ^a					5-Year Work Plan Cost Estimates
	FY2020-2021	FY2021-2022	FY2022-2023	FY2023-2024	FY2024-2025	
St. Lucie Estuary						
C-23/24 North Reservoir	\$548,010	\$14,102,124	-	-	-	\$14,650,134
C-23/24 South Reservoir	-	\$5,500,000	-	-	-	\$5,500,000
Everglades						
CEPP Predecessor New Water: C-44/C-23 Interconnect (EAA Reservoir) ^{b, c}	\$3,000,000	\$11,000,000	\$11,000,000	-	-	\$25,000,000
EAA Storage Reservoir Conveyance Improvements and Stormwater Treatment Area ^{a, d}	\$77,532,000	\$70,468,000	\$61,229,000	\$29,811,000	\$46,095,000	\$285,135,000
CEPP North ^e	\$10,900,000	\$20,000,000	\$39,000,000	\$112,800,000	\$120,300,000	\$303,000,000
Caloosahatchee River						
Caloosahatchee River (C-43) West Basin Storage Reservoir	\$144,822,389	\$100,000,000	\$100,647,176	\$39,754,346	-	\$385,223,911
Lake Okeechobee						
Lake Okeechobee Watershed Project ^f	\$98,000,000	\$50,000,000 ^g	\$50,000,000 ^g	\$50,000,000 ^g	\$50,000,000 ^g	\$298,000,000
Lake Okeechobee, Loxahatchee River, and Western Everglades						
Restoration Project Planning ^h	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000
Total	\$335,802,399	\$272,070,124	\$262,876,176	\$233,365,346	\$217,395,000	\$1,321,509,045

a. Project costs based on information contained in the draft FY2021-2025 SFWMD Five-Year Capital Improvement Plan.

b. The C-44/C-23 Interconnect project is associated with 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.

c. Project is a component of CEPP.

d. Includes the C-44/C-23 Interconnect, Site Preparation, Inflow Canal Reservoir/Stormwater Treatment Area (STA), A-2 STA, North New River and Miami Canal Improvements, and Bridges.

e. Includes the L-4 Levee Degrade/Pump Station, L-5 Canal Improvements, L-6 Diversion, S-8 Modifications, and Miami Canal Backfill.

f. Project is expected to provide new (recovered) water for the Lake Okeechobee MFL recovery strategy.

g. Funding contingent upon future state appropriations.

h. 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 2019-2020 THROUGH FISCAL YEAR 2023-2024

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. 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. The 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 the 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 the District’s 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 A-1** reflects BMAP projects planned costs for Fiscal Year 2020-2021 through Fiscal Year 2024-2025¹. Of the 22 total projects listed in this table, 21 projects are aligned with the Lake Okeechobee BMAP and 1 project is aligned with the St. Lucie River and Estuary BMAP.

¹ BMAP projects that the SFWMD is implementing are aligned with the *Florida Statewide Annual Report on Total Maximum Daily Loads, Basin Management Action Plans, Minimum Flows or Minimum Water Levels, and Recovery or Prevention Strategies* (FDEP 2018). Five-year (FY2020-2021 through FY2024-2025) cost estimates are shown as projections based on current BMAP-associated projects under contract by the SFWMD or based on prior year expenditure trends, and do not include salaries. FY2021-2022 through FY2024-2025 costs are contingent on future legislative funding and Governing Board approval of future fiscal year funding.

Table A-1. BMAP projects costs in dollars, excluding salaries, for FY2020-2021 through FY2024-2025.

(Note: All costs are from the FY2019-2020 Approved Five-Year Capital Improvements Plan and are subject to change until the FY2020-2021 Five-Year Capital Improvements Plan is approved by the SFWMD’s Governing Board by February 2021, including development of Fiscal Year 2024-2025 project implementation costs.)

BMAP	Lead Entity	Partners	FDEP Project Number	Project Name	Project Type	FY2020-2021	FY2021-2022	FY2022-2023	FY2023-2024	FY2024-2025	SFWMD Total	Comments
STLU	Troup-Indiantown WCD	SFWMD/USACE	TI-05	C-44 STA	Land Use Change	\$541,478	\$626,088	\$628,588	\$628,588	TBD	\$2,424,742	O&M costs only.
OKEE	Coordinating Agency	FDEP/SFWMD	CA-01	Brighton Valley DWM	DWM	\$3,125,000	\$3,125,000	\$3,125,000	\$3,000,000	TBD	\$12,375,000	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-14 & SFWMD-15	Dixie Ranch	DWM	\$146,500	\$146,500	TBD	TBD	TBD	\$293,000	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-16	Lost Oak Ranch	DWM	\$55,000	\$55,000	\$55,000	TBD	TBD	\$165,000	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-17	Willaway Cattle and Sod	DWM	\$1,879	\$1,879	\$1,879	TBD	TBD	\$5,637	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-18	XL Ranch (Lightsey)	DWM	\$137,000	\$68,500	TBD	TBD	TBD	\$205,500	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-19	Triple A Ranch	DWM	\$30,000	\$30,000	\$30,000	\$30,000	TBD	\$120,000	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-20	La Hamaca (Blue Head Ranch)	DWM	\$361,200	\$361,200	\$361,200	\$361,200	TBD	\$1,444,800	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-21	Nicodemus Slough	DWM	\$2,855,197	\$2,852,765	TBD	TBD	TBD	\$5,707,962	--
OKEE	SFWMD	USACE	SFWMD-22	Kissimmee River Headwater Revitalization	Hydrologic Restoration	--	--	--	--	--	--	The Kissimmee River Restoration Project (SFWMD-05) includes the Lower Kissimmee Basin (Highlands, Glades, and Okeechobee counties) and the Upper Kissimmee Basin – Kissimmee River Headwaters Revitalization Project (Osceola and Polk counties) (SFWMD-22). Costs may be included in SFWMD-05.

Table A-1. Continued.

BMAP	Lead Entity	Partners	FDEP Project Number	Project Name	Project Type	FY2020-2021	FY2021-2022	FY2022-2023	FY2023-2024	FY2024-2025	SFWMD Total	Comments
OKEE	SFWMD	FDEP/SFWMD	SFWMD-12	Buck Island Ranch (NE-PES-1)	DWM	\$173,600	\$173,600	TBD	TBD	TBD	\$347,200	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-11	Rafter T Ranch	DWM	\$162,736	\$162,736	\$162,736	\$162,736	TBD	\$650,944	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-23	Buck Island Ranch WMA (NE PES-2)	DWM	\$163,500	\$163,500	\$163,500	\$163,500	TBD	\$654,000	--
OKEE	SFWMD	FDEP/SFWMD	SFWMD-13	Dixie West	DWM	\$51,500	\$51,500	TBD	TBD	TBD	\$103,000	--
OKEE	SFWMD	FDEP/USACE	SFWMD-02	Nubbin Slough STA Project	STA	\$135,930	\$135,930	\$135,930	\$135,930	TBD	\$543,720	Cost estimates based on average annual O&M costs for FY2014-2015 through FY2016-2017.
OKEE	SFWMD	FDEP/USACE	SFWMD-01	Taylor Creek STA Project	STA	\$201,319	\$201,319	\$201,319	\$201,319	TBD	\$805,276	Cost estimates based on average annual O&M costs for FY2014-2015 through FY2016-2017.
OKEE	SFWMD	FDEP/USACE	SFWMD-03	Lakeside Ranch – Phase I	STA	\$518,416	\$399,128	\$406,029	\$399,128	TBD	\$1,722,701	O&M costs only.
OKEE	SFWMD	USACE	SFWMD-05	Kissimmee River Restoration Project	Hydrologic Restoration	\$2,037,048	\$1,263,653	\$1,539,903	\$1,313,653	TBD	\$6,154,257	O&M, monitoring, and evaluation costs.
OKEE	SFWMD	FDEP	SFWMD-06	Rolling Meadows Wetland Restoration – Phase I	Wetland Restoration	\$119,905	\$119,905	\$119,905	\$119,905	TBD	\$479,620	Phase I O&M costs only. No future legislative funding for Phase II.
OKEE	SFWMD	FDEP/SFWMD	SFWMD-10	Lykes West Waterhole	DWM	TBD	TBD	TBD	TBD	TBD	TBD	--
OKEE	Coordinating Agency	FDEP/SFWMD	CA-05	El Maximo Ranch DWM (previously Latt Maxcy DWM)	DWM	\$5,814,312	\$5,814,312	\$5,814,312	\$5,814,312	TBD	\$23,257,248	--
OKEE	Coordinating Agency	N/A	CA-04	Lakeside Ranch – Phase II	STA	\$1,500,000	TBD	TBD	TBD	TBD	\$1,500,000	Does not include O&M costs.
Total						\$18,131,520	\$15,752,515	\$12,745,301	\$12,330,271	TBD	\$58,959,607	--

BMAP = basin management action plan; FDEP = Florida Department of Environmental Protection; FY = Fiscal Year; DWM = dispersed water management; N/A = not applicable; NE-PES-1 = Northern Everglades – Payment for Environmental Services Solicitation 1; NE-PES-2 = Northern Everglades – Payment for Environmental Services Solicitation 2; 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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²All 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.

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