



South Florida Water Management District

GOVERNING BOARD MONTHLY MEETING AGENDA

July 9, 2020

9:00 AM

via Communications Media Technology

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FINAL

1. Call to Order - Chauncey Goss, Chairman, Governing Board
2. Pledge of Allegiance
3. Employee Recognitions
 - July Employee of the Month: Jie Zeng, Engineer Principal
 - July Team of the Month: Lower West Coast Groundwater Modeling Team
 - 30-Year Service Award: Jose Otero, Section Administrator
4. Agenda Revisions
5. Agenda Item Abstentions by Board Members
6. Big Cypress Basin Board Report - Charlette Roman, Chair
7. Consider Approval of the Minutes for the June 10th Workshop and June 11th Meeting
8. General Public Comment
9. Board Comment

Consent Agenda

10. Move Consent Agenda Items to Discussion Agenda
11. Public Comment on Consent Agenda Items

12. Land Acquisition, Shingle Creek Project Area, Orange County (Staff contact, Stephen M. Collins)

Agenda Item Background:

The District is currently acquiring land from willing sellers for the Shingle Creek Project. Subject to Governing Board approval, the District has agreed to purchase a parcel totaling approximately 2.48 acres for a purchase price of \$69,440. The District's ownership within the Shingle Creek Project is currently configured in a scattered pattern. This acquisition will consolidate ownership with other District-owned land. Funding will be provided from the Wetland Mitigation Fund. The Seller will be responsible for all closing costs.

Recommended Action:

Resolution No. 2020 - 0701 Acquire land interests containing 2.48 acres, more or less, in the amount of \$69,440, located in the Shingle Creek Project Area in Orange County, for which dedicated funds (Wetland Mitigation Funds) are budgeted in Fiscal Year 2019-2020.

13. Funding Disclosure, U.S. Department of Interior, Hendry County (Staff contact, Stephen M. Collins)

Agenda Item Background:

The District is in the process of completing the C-43 West Basin Storage Reservoir ("C-43 Project"). This Project depends upon the use of large electric water pumps that will be used to bring water into the reservoir. Florida Power & Light will provide the needed electricity, but it will require the construction of an electrical substation due to the substantial electrical demand for the project. The electrical substation must be located on a suitable, 5-acre site close to the pump site. The District has located a suitable, 5-acre site adjacent to the northerly boundary of the C-43 Project ("Electrical Substation Tract"). The Electrical Substation Tract is located on lands that were originally acquired using U.S. Department of Interior (DOI) funding. In order to dedicate the site for use as an Electrical Substation Tract, the District needs to transfer the DOI funding restriction to another parcel acceptable to DOI. An acceptable parcel ("Replacement Tract") has been identified and staff is requesting approval to place the funding restriction on the Replacement Tract simultaneous with the release of the funding restriction on the Electrical Substation Tract by DOI.

Recommended Action:

Resolution No. 2020 - 0702 Authorize the transfer of a U.S. Department of the Interior federal grant funding restriction on lands in and around the Caloosahatchee River (C-43) West Basin Storage Reservoir, all in Hendry County.

14. Water Sampling License Agreement, Sailfish Point, Martin County (Staff contact, Stephen M. Collins)

Agenda Item Background:

In connection with the District's ongoing efforts to improve and document its right of access to and use of water monitoring and water sampling sites, this Water Sampling and Access License Agreement ("License Agreement") will allow the District access for the purpose of monitoring regional water quality by collecting data from a privately owned Floridan aquifer production well on property owned by Sailfish Point Property Owners' and Country Club Association. The District and the landowner have agreed upon the terms

and conditions of the License Agreement, and the owner has executed and delivered the License Agreement to the District. The term of the License Agreement is perpetual and terminates only upon a 180-day notice from either party.

Recommended Action:

Resolution No. 2020 - 0703 Approve for the purpose of monitoring regional water quality, the acquisition of a Water Sampling and Access License Agreement, at no cost, to collect data from an aquifer production well on property owned by Sailfish Point Property Owners' and Country Club Association, Inc. in Martin County.

15. Water Monitoring Well Right of Entry Agreement with the City of Deerfield Beach (Staff contact, Stephen M. Collins)

Agenda Item Background:

In connection with the District's ongoing efforts to improve and document its right of access to and use of monitoring sites, this Water Monitoring Well Right-of-Entry Agreement will allow the District access for the purpose of monitoring regional water levels and water quality by collecting data from a Floridan aquifer monitor well on property owned by the City of Deerfield Beach ("City") located in Broward County. The monitor well has been active and operated by the District since 2001. The District and the City have agreed upon the terms and conditions of the Agreement, and the City has executed and delivered the Agreement to the District. The term of the Agreement is perpetual and terminates only upon a 180-day notice from either party.

Recommended Action:

Resolution No. 2020 - 0704 Approve for the purpose of monitoring regional water levels and water quality, the acquisition of a Water Monitoring Well Right of Entry Agreement, at no cost, to maintain and collect data from a monitoring well on property owned by the City of Deerfield Beach in Broward County.

16. Monitoring of Lake Okeechobee Sediment Discharges to Caloosahatchee and St. Lucie Estuaries (Staff contact, Jennifer Reynolds)

Agenda Item Background:

Fine-grained sediments (silt and clay sized particles) cover 44% of the total bed area of Lake Okeechobee and can be resuspended by wind and associated waves. When conditions occur on Lake Okeechobee that resuspend fine particles and Lake regulatory releases occur, sediment can potentially be transported through the St. Lucie (C-44) and the Caloosahatchee (C-43) rivers and eventually reach the St. Lucie and Caloosahatchee estuaries. While there are several studies on Lake Okeechobee and estuaries sediments and their dynamics, after an in-depth literature review, there are no studies addressing Lake Okeechobee sediment discharges to the Caloosahatchee and St. Lucie rivers. Currently, despite the acknowledged critical role sediment may play in carrying nutrients (especially phosphorus), the sediment transport between Lake Okeechobee and estuaries is not well understood. The monitoring of suspended sediment discharges from Lake Okeechobee to the downstream estuaries is one piece of the complex and large puzzle of determining the processes and mechanisms responsible for the initiation, growth and development of harmful algae blooms in the St. Lucie and Caloosahatchee estuaries.

This project is identified as one of several initiatives that supports Governor DeSantis' Achieving More Now For Florida's Environment Executive Order (19-12), mainly focused

on the algae bloom issue previously observed in St. Lucie and the Caloosahatchee estuaries. This agenda item is the first of a two-part study focusing on Lake Okeechobee releases to the east and west coasts.

Recommended Action:

Resolution No. 2020 - 0705 Authorize entering into a four-year Cooperative Agreement with the U.S. Geological Survey (USGS) for the purpose of executing the Monitoring of Lake Okeechobee Sediment Discharges to Caloosahatchee and St. Lucie Estuaries, a project funded by the District and USGS Cooperative Matching Funds (CMF) by a joint-funding agreement, with the District's contribution in the amount of \$1,039,500 for which \$361,908 is budgeted in Fiscal Year 2019-2020 and the remainder is subject to Governing Board approval of future years budgets. (Contract Number 4600004248)

17. Interagency Agreement with U.S. Geological Survey for the Development of Future Rainfall Depth-Duration-Frequency Curves (Staff contact, Ana Carolina Maran)

Agenda Item Background:

It is anticipated that changing rainfall patterns will have large implications on the District's missions of ecosystem restoration, flood protection, and water supply. With the goal of reducing uncertainty in estimating future extreme rainfall conditions, the District is partnering with the U.S. Geological Survey (USGS) to develop Future Rainfall Depth-Duration-Frequency (DDF) Curves to support the evaluation of future changes in rainfall patterns, as part of the District's Resiliency efforts. The goal of the project is to evaluate best available climate downscaling datasets and compare them to historic observations, to support the determination of science-based future rainfall depth-duration curves for selected return frequencies Districtwide. The total cost for the project is \$367,304 and the District's cost share amount is \$183,652.

Recommended Action:

Resolution No. 2020 - 0706 Authorize the Executive Director, or his designee, to enter into an agreement with the U.S. Geological Survey, for the purpose of developing Future Rainfall Depth-Duration-Frequency (DDF) Curves for the entire 16-county region at a total project cost of \$367,304 for which the District's cost share amount is \$183,652 and is budgeted (Ad Valorem funds) in Fiscal Year 2019-2020. (Contract Number 4600004244)

18. Emergency Action by the Seminole Tribe of Florida (Staff contacts, Jennifer Brown and Armando Ramirez)

Agenda Item Background:

Under Section 7.2.1 of the Criteria Manual, *Emergency Action by the Tribe*, the Governing Board may require the Seminole Tribe of Florida ("Seminole Tribe") to conform its emergency action to the standards in the Water Rights Compact, Criteria Manual, and Right-of-Way Memorandum of Understanding.

Recommended Action:

Require the Seminole Tribe conform the emergency action and

lists specific conformance criteria, along with additional requirements, within the Final Order.

19. Board Vote on Consent Agenda

Technical Reports

20. Water Conditions Report - John P. Mitnik
21. Ecological Conditions Report - Lawrence Glenn
22. Public Comment

Discussion Agenda

23. Update on the Northern Everglades and Estuaries Protection Program (Staff contact, Jennifer Reynolds)

Agenda Item Background:

The South Florida Water Management District is committed to improving water quality and quantity with public input in the Lake Okeechobee, Caloosahatchee, and St. Lucie watersheds as part of the Northern Everglades and Estuaries Protection Program (NEEPP). This item will provide a briefing on the District's efforts in these watersheds including revising Chapter 40E-61 of the Florida Administrative Code (40E-61), updating the Watershed Protection Plan for each watershed in NEEPP, and launching the expanded water quality monitoring network.

24. Ground Application Services Work Order Contracts (Staff contact, Francois Laroche)

Agenda Item Background:

Invasive exotic and nuisance plants threaten the operation and maintenance of the Central & Southern Florida project and the health and stability of the natural ecosystems of South Florida. Plant species with the highest potential for impacting District infrastructure and District-managed natural areas are best controlled through an integrated management approach using chemical, biological, and physical methods. The District utilizes contractors to conduct vegetation plantings in the stormwater treatment areas, apply herbicides to various types of aquatic, wetland and upland vegetation using ground application equipment and associated support vehicles, in accordance with District project management directions. The District intends to issue 3-year work order contracts with two 1-year renewal options to firms subject to successful negotiations. The firms listed below may provide ground application services, as needed:

Recommended Action:

Resolution No. 2020 - 0707 Authorize the official ranking of firms and enter into 3-year work order contracts, with two 1-year renewal options with the twelve firms listed below, subject to successful negotiations to provide Ground Application Services in an amount not-to-exceed \$90,000,000 for all twelve work order contracts, for which Ad Valorem and dedicated funds are subject to Governing Board approval of future years budgets; the District will

proceed in ranked order until agreements have been successfully negotiated.

<u>FIRM</u>	<u>CONTRACT NUMBER</u>
Walker Environmental LLC, dba Walker Exotic Tree Eradication	4600004251
EarthBalance Corporation	4600004252
Mettauer Environmental, Inc.	4600004253
Applied Aquatic Management, Inc.	4600004254
Aquatic Vegetation Control, Inc.	4600004255
A+ Environmental Restoration, LLC	4600004256
NaturChem, Inc.	4600004257
Environmental Quality, Inc.	4600004258
Ground Level, Inc.	4600004259
Cardno, Inc.	4600004260
Sandhill Native Growers, Inc.	4600004261
Native Creations, Inc.	4600004262

25. Fiscal Year 2020-2021 Proposed Tentative Budget and Submission of Proposed Millage Rates (Staff contact, Candida Heater)

Agenda Item Background:

Pursuant to Section 373.536, Florida Statutes, the District shall, on or before July 15 of each year, submit for consideration by the Governing Board a tentative budget.

Pursuant to Section 200.065, Florida Statutes, the District shall, on or before August 4 of each year, advise each county property appraiser within the boundaries of the District of its proposed millage rates for inclusion in the notice of proposed property taxes.

Recommended Action:

Resolution No. 2020 - 0708 Consider the Fiscal Year 2020-2021 proposed tentative budget update and approve submittal of the Fiscal Year 2020-2021 proposed millage rates to county property appraisers for inclusion in the notice of proposed property taxes.

26. Project Partnership Agreement for the Central Everglades Planning Project South Phase (Staff contact, Jennifer Reynolds)

Agenda Item Background:

As part of the Comprehensive Everglades Restoration Plan (CERP), the Central Everglades Planning Project (CEPP) was federally authorized in 2016 and is a vital component of Everglades restoration. The plan is comprised of three phases for implementation purposes: North, South and New Water. The District seeks to enter into a Project Partnership Agreement (PPA) with the U.S. Department of the Army for the CEPP South phase, which helps deliver more water south into Everglades National Park. The PPA, coupled with the CERP Master Agreement, specifies the terms and conditions for implementing this project. The total estimated Federal project cost is estimated to be \$482,515,400, of which the District, as the non-Federal sponsor for CERP, is responsible for \$241,257,700 in construction costs and \$3,776,000 in annual Operation, Maintenance, Repair, Replacement and Rehabilitation costs.

Recommended Action:

Resolution No. 2020 - 0709 Authorize entering into a Project Partnership Agreement with the U.S.

Department of the Army for construction, operation, maintenance, repair, replacement, and rehabilitation of the Central Everglades Planning Project South phase, a component of the Comprehensive Everglades Restoration Plan, and affirming the District's financial capability to satisfy the obligations, as the non-Federal Sponsor, described in the Project Partnership Agreement, for which the District will be responsible for providing a 50 percent cost-share subject to Governing Board approval of future fiscal year budgets. (Contract Number 4600004250)

Staff Reports

27. Monthly Financial Report - Candida Heater
28. General Counsel's Report - Judith Levine (Acting)
29. Executive Director's Report - Drew Bartlett
 - Emergency Order to Respond to COVID-19
30. General Public Comment
31. Board Comment
32. Adjourn

MEMORANDUM

TO: Governing Board Members

FROM: Stephen M. Collins, Division Director, Real Estate

DATE: July 09, 2020

SUBJECT: Land Acquisition, Shingle Creek Project Area, Orange County

Agenda Item Background:

The District is currently acquiring land from willing sellers for the Shingle Creek Project. Subject to Governing Board approval, the District has agreed to purchase a parcel totaling approximately 2.48 acres for a purchase price of \$69,440. The District's ownership within the Shingle Creek Project is currently configured in a scattered pattern. This acquisition will consolidate ownership with other District-owned land. Funding will be provided from the Wetland Mitigation Fund. The Seller will be responsible for all closing costs.

Core Mission and Strategic Priorities:

This proposed acquisition of 2.48 acres of privately-owned land within the Shingle Creek Project, allows the District to achieve a more unified ownership consistent with its environmental goals, and enhances the efficiency of land management activities carried out by the Land Stewardship Section.

Funding Source:

The acquisition of this Tract is from a willing seller. The purchase price of \$69,440 is under the appraised value of \$100,000. The closing costs will be paid by the Seller. All costs, including acquisition and associated costs were or will be funded from the District's Shingle Creek Phase III Wetland Mitigation Fund.

Staff Contact and/or Presenter:

Stephen M. Collins, smcollins@sfwmd.gov, 561-682-2959

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0701

A Resolution of the Governing Board of the South Florida Water Management District to acquire land interests containing 2.48 acres, more or less, in the amount of \$69,440, located in the Shingle Creek Project Area in Orange County, for which dedicated funds (Wetland Mitigation Funds) are budgeted in Fiscal Year 2019-2020; providing an effective date.

WHEREAS, the South Florida Water Management District (the "District") is currently acquiring land from willing sellers in connection with the implementation of the Shingle Creek Project in Orange County; and

WHEREAS, the District desires to purchase land interests containing 2.48 acres, more or less, for the Shingle Creek Project, as shown on the location map Exhibit "A", attached hereto and made a part hereof, in the amount of \$69,440, and declare surplus, disposal of, and removal from the asset records, any such structures and improvements deemed unnecessary for the stated purpose for the original land acquisition; and

WHEREAS, all costs are to be funded from the District's Shingle Creek Wetland Mitigation Fund for the acquisition and associated costs; and

WHEREAS, the District is authorized to acquire land, or interests or rights in land, pursuant to Section 373.139, Florida Statutes.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby approves the purchase of land interests containing 2.48 acres, more or less, for the Shingle Creek Project in Orange County, in the amount of \$69,440, together with associated costs, for which dedicated funds (Wetland Mitigation Fund) have been budgeted as follows:

Owner	Tract Nos.	Interest	Acres	Appraised Value	Purchase Price
Edward S. Meiner	26102-161 & 26102-237	Fee	2.48	\$100,000	\$69,440

Amount	Fund	Fund Center	Functional Area	GL	Account Description
\$ 69,440	409025	3510144000	AA05	580020	Acquisition

Section 2. The Governing Board of the South Florida Water Management District hereby further approves declaring surplus, disposal of and removal from the asset

records, any such structures and improvements deemed unnecessary for the stated purpose of the original land acquisition.

Section 3. The Governing Board of the South Florida Water Management District hereby authorizes the Chairman or Vice Chairman to execute the Agreement for Sale and Purchase instrument. The Governing Board of the South Florida Water Management District hereby authorizes the Executive Director or the Executive Director's designee to make any determinations in connection with the transaction and execute all other documents necessary to consummate this transaction.

Section 4. This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

Legal form approved:
By:

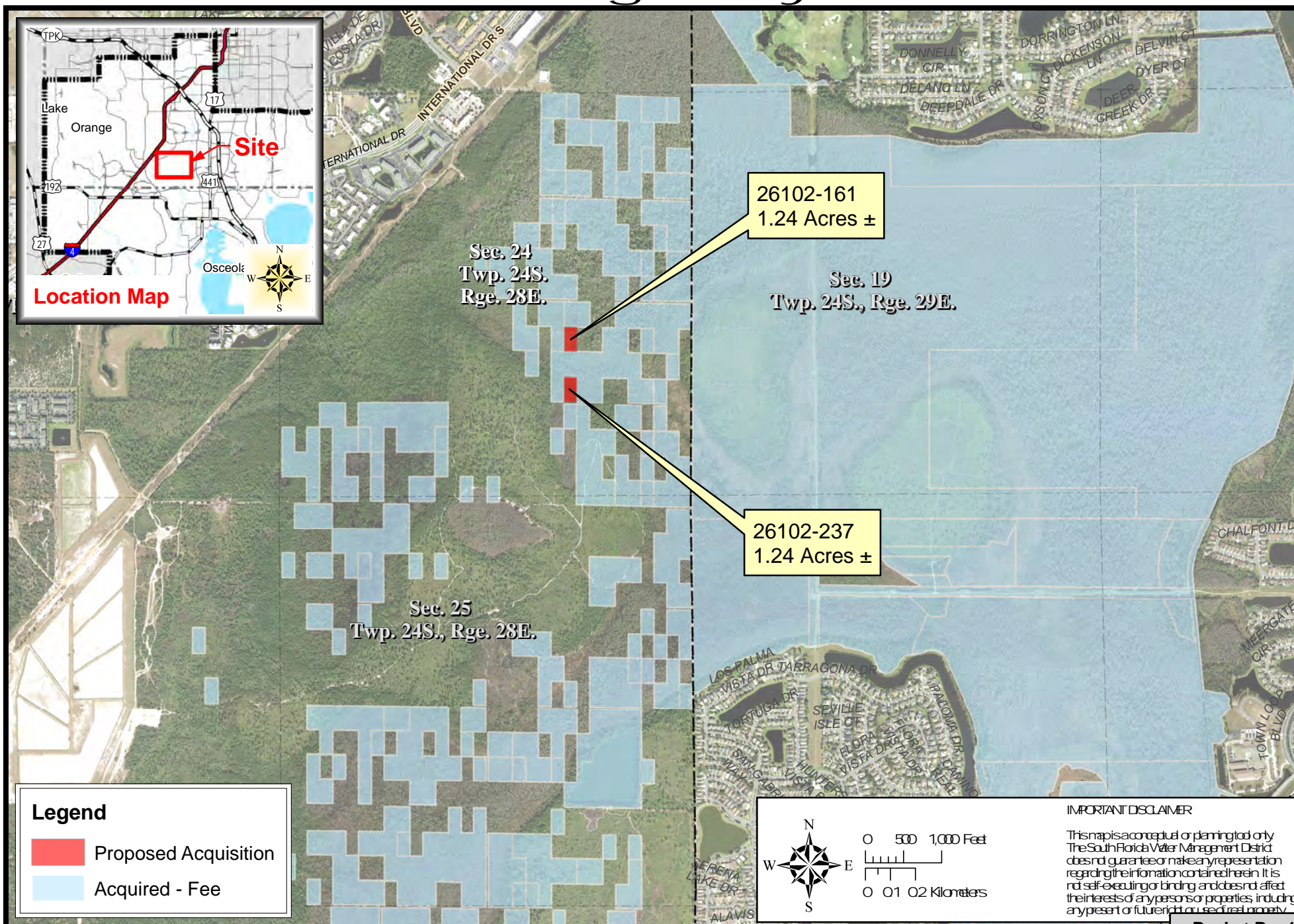
District Clerk/Secretary

Office of Counsel

Print name:

Shingle Creek Project

Orange County



MEMORANDUM

TO: Governing Board Members

FROM: Stephen M. Collins, Division Director, Real Estate

DATE: July 09, 2020

SUBJECT: Funding Disclosure, U.S. Department of Interior, Hendry County

Agenda Item Background:

The District is in the process of completing the C-43 West Basin Storage Reservoir ("C-43 Project"). This Project depends upon the use of large electric water pumps that will be used to bring water into the reservoir. Florida Power & Light will provide the needed electricity, but it will require the construction of an electrical substation due to the substantial electrical demand for the project. The electrical substation must be located on a suitable, 5-acre site close to the pump site. The District has located a suitable, 5-acre site adjacent to the northerly boundary of the C-43 Project ("Electrical Substation Tract"). The Electrical Substation Tract is located on lands that were originally acquired using U.S. Department of Interior (DOI) funding. In order to dedicate the site for use as an Electrical Substation Tract, the District needs to transfer the DOI funding restriction to another parcel acceptable to DOI. An acceptable parcel ("Replacement Tract") has been identified and staff is requesting approval to place the funding restriction on the Replacement Tract simultaneous with the release of the funding restriction on the Electrical Substation Tract by DOI.

Core Mission and Strategic Priorities:

By approving this item, the Governing Board determines that the terms and conditions of the federal grant agreement are consistent with the Project purposes and the District's present or future use of the C-43 Project property is not adversely affected by the Federal grant funding restriction.

Funding Source:

No financial impact.

Staff Contact and/or Presenter:

Stephen M. Collins, smcollins@sfwmd.gov, 561-682-2959

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0702

A Resolution of the Governing Board of the South Florida Water Management District, authorizing the transfer of a U.S. Department of the Interior federal grant funding restriction on lands in and around the Caloosahatchee River (C-43) West Basin Storage Reservoir, all in Hendry County; providing an effective date.

WHEREAS, the U.S. Department of the Interior (DOI) has approved the release of a federal grant restriction on 5 acres, more or less, owned by the South Florida Water Management District, located in Hendry County, north of the Caloosahatchee River (C-43) West Basin Storage Reservoir ("C-43 Project"), identified as Tract GX100-034 as shown on Exhibit "A", which will allow the District to provide a site for an Electrical Substation for much required electrical power to the District's large water pumps in connection with the C-43 Project; and

WHEREAS, pursuant to the pertinent federal grant agreement, the District has presented the DOI with suitable replacement property containing 5 acres, more or less, located within the C-43 Project, identified as Tract QD100-018 as shown on Exhibit "A", for replacement of the federal grant funding restriction; and

WHEREAS, the Governing Board, pursuant to Section 373.056(4), Florida Statutes, has the authority to convey to any governmental entity or to the United States Government, land or rights in land owned by the District, under terms and conditions determined by the Governing Board; and

WHEREAS, the terms and conditions of the federal grant agreement are consistent with the Project purposes of expanding and improving water storage and provide more options for water quality improvements; and

WHEREAS, the Governing Board has determined that the unencumbered ownership of the Property is not required by the District for present or future use and that it is in the public interest to subject the Property to the federal grant funding restriction.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby approves restricting land interests containing 5 acres, more or less, in Hendry County, with a federal grant funding restriction as a replacement property under a federal grant agreement in consideration of the release of other District land interests of approximately equal value from the federal grant funding restriction.

Section 2. The Governing Board of the South Florida Water Management District hereby approves the Funding Disclosure document.

Section 3. This resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

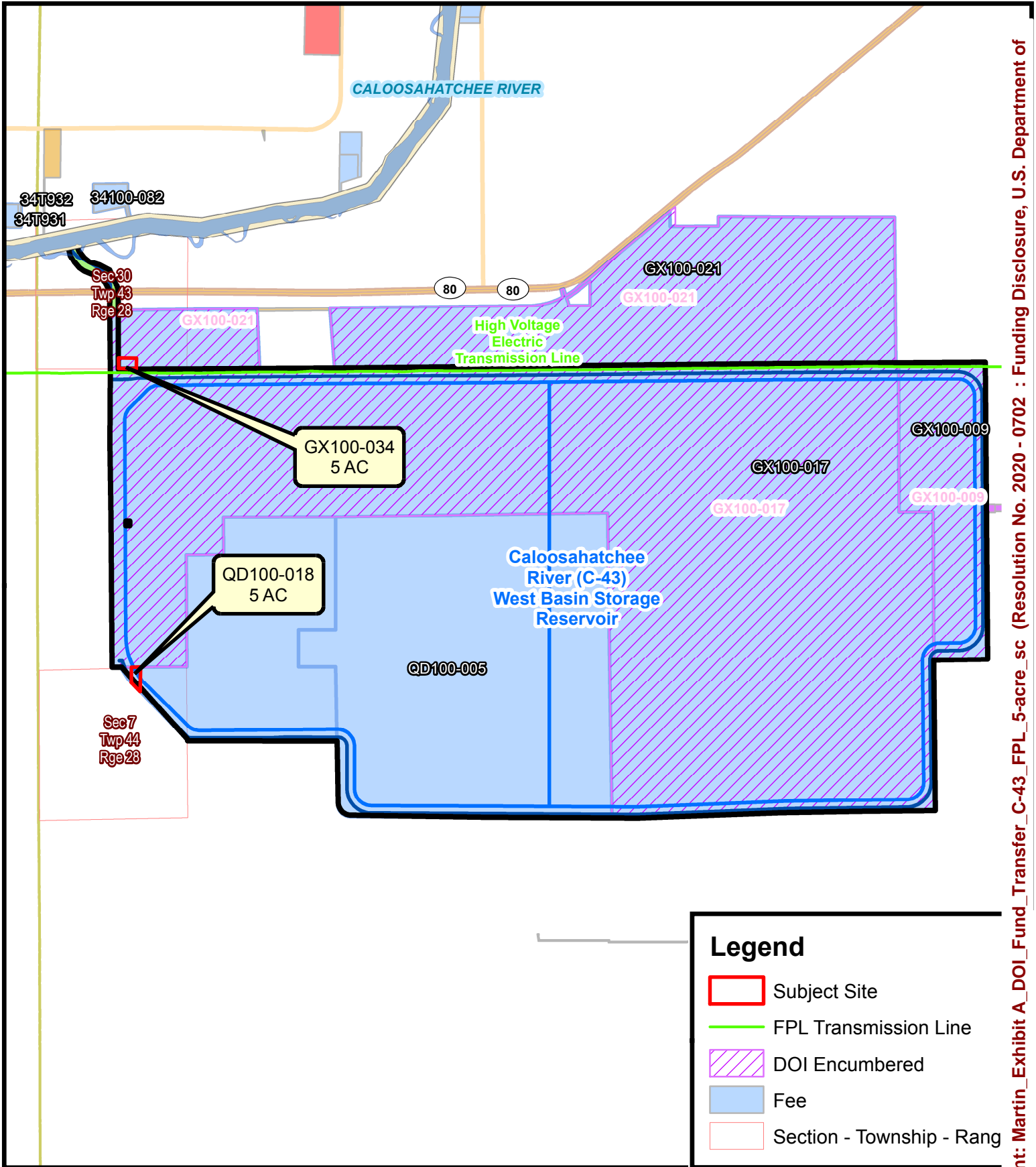
Attest:

Legal form approved:
By:

District Clerk/Secretary

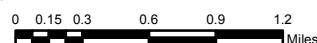
Office of Counsel

Print name:



Berry Groves Land Transfer General Location Map

BASE CREDITS:
State plane projection, Florida east zone, NAD 83-HARN, US feet.
South Florida Water Management District
3301 Gun Club Rd., West Palm Beach, Florida 33406
(561) 686-8800; www.sfwmd.gov



IMPORTANT DISCLAIMER:
This map is a conceptual or planning tool only. The South Florida Water Management District does not guarantee or make any representation regarding the information contained herein. It is not self-executing or binding, and does not affect the interests of any persons or properties, including any present or future right or use of real property.

Map Date: December 2019

Packet Pg. 15



MEMORANDUM

TO: Governing Board Members

FROM: Stephen M. Collins, Division Director, Real Estate

DATE: July 09, 2020

SUBJECT: Water Sampling License Agreement, Sailfish Point, Martin County

Agenda Item Background:

In connection with the District's ongoing efforts to improve and document its right of access to and use of water monitoring and water sampling sites, this Water Sampling and Access License Agreement ("License Agreement") will allow the District access for the purpose of monitoring regional water quality by collecting data from a privately owned Floridan aquifer production well (MF-53) on property owned by Sailfish Point Property Owners' and Country Club Association, Inc. ("Sailfish") as shown in the attached Exhibits "A-1" and "A-2". The MF-53 well is 1,111 feet deep and is active and operated by Sailfish. The District has not yet taken water samples from the well. The District and Sailfish have agreed upon the terms and conditions of the License Agreement, and Sailfish has executed and delivered the License Agreement to the District. The term of the License Agreement is perpetual and terminates only upon a 180-day notice from either party. Pursuant to Section 140-84(c) of the District's Policies and Procedures, any right of entry/license agreement which grants the District the right to enter lands owned by others to conduct specific activities and which exceeds one year in duration, shall require Governing Board approval.

Core Mission and Strategic Priorities:

The well is expected to be added to the regional monitoring network used to monitor groundwater levels and water quality throughout the Lower East Coast region. The data collected from this network supports the evaluation and assessment of the Floridan aquifer system for future water supply and sustainability. By working with property owners to utilize their existing wells, the regional monitoring network can be expanded without constructing or maintaining new wells.

Funding Source:

The License Agreement is being obtained at no cost to the District. The well site improvements are owned and maintained by Sailfish, so will require no funds from the District.

Staff Contact and/or Presenter:

Stephen M. Collins, smcollins@sfwmd.gov, 561-682-2959

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0703

A Resolution of the Governing Board of the South Florida Water Management District ("District") to approve, for the purpose of monitoring regional water quality, the acquisition of a Water Sampling and Access License Agreement, at no cost, to collect data from an aquifer production well on property owned by Sailfish Point Property Owners' and Country Club Association, Inc. in Martin County; providing an effective date.

WHEREAS, for the purpose of monitoring regional water quality, the District desires to acquire a water sampling license agreement, at no cost, to collect data from a Floridan aquifer production well on property owned by Sailfish Point Property Owners' and Country Club Association, Inc. in Martin County for a term commencing immediately and continuing perpetually, unless otherwise terminated by either party; and

WHEREAS, the District, pursuant to Section 373.139, Florida Statutes, is authorized to acquire land, or interests or rights in land.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District, for the purpose of monitoring regional water quality, hereby approves the acquisition and acceptance of a Water Sampling and Access License Agreement, at no cost, to collect data from a Floridan aquifer production well on property owned by Sailfish Point Property Owners' and Country Club Association, Inc. in Martin County, as shown on the attached Exhibits "A-1" and "A-2". The term of the License Agreement is perpetual, unless otherwise terminated by a party.

Section 2. This resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

District Clerk/Secretary

Legal form approved:
By:

Office of Counsel

Print name:

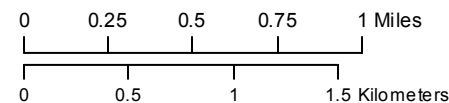
Exhibit "A-1"



Sailfish Point (Martin County) - Water Sampling License Agreement - MF-53



South Florida Water Management District
3301 Gun Club Road, West Palm Beach, Florida 33406
561-686-8800; www.sfwmd.gov



DISCLAIMER:
This map is a conceptual or planning tool only. The South Florida Water Management District does not guarantee or make any representation regarding the information contained herein. It is not self-executing or binding and does not affect the interests of any persons or properties, including present or future right or use of real property and is exempt from public records disclosure and confidential under Section 119.071(3)(a)(1), Florida Statute.

Exhibit "A-2"

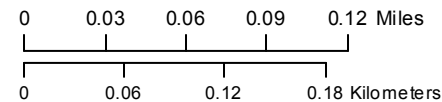


Attachment: Exh-A-2_Martin County Water Sampling Site (Resolution No. 2020 - 0703 : Water Sampling



Sailfish Point (Martin County) - Water Sampling License Agreement - MF-53

South Florida Water Management District
3301 Gun Club Road, West Palm Beach, Florida 33406
561-686-8800; www.sfwmd.gov



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MEMORANDUM

TO: Governing Board Members

FROM: Stephen M. Collins, Division Director, Real Estate

DATE: July 09, 2020

SUBJECT: Water Monitoring Well Right of Entry Agreement with The City of Deerfield Beach

Agenda Item Background:

In connection with the District's ongoing efforts to improve and document its right of access to and use of monitoring sites, this Water Monitoring Well Right-of-Entry Agreement ("Agreement") will allow the District access for the purpose of monitoring regional water levels and water quality by collecting data from a Floridan aquifer monitor well, identified as District monitoring well BF-6, on property owned by The City of Deerfield Beach ("City") located in Broward County, as shown on the attached Exhibit "A". The BF-6 monitor well is 1,128 feet deep and has been active and operated by the District since 2001. The District and the City have agreed upon the terms and conditions of the Agreement, and the City has executed and delivered the Agreement to the District. The term of the Agreement is perpetual and terminates only upon a 180-day notice from either party. Pursuant to Section 140-84(c) of the District's Policies and Procedures, any right of entry agreement which grants the District the right to enter lands owned by others to conduct specific activities and which exceeds one year in duration, shall require Governing Board approval.

Core Mission and Strategic Priorities:

The well is part of a regional monitoring network used to monitor groundwater levels and water quality throughout the Lower East Coast region. The data collected from this network supports the evaluation and assessment of the Floridan aquifer system for future water supply and sustainability.

Funding Source:

The Right of Entry Agreement is being obtained at no cost to the District. The well site improvements are already installed. Monitoring activities, along with routine maintenance and repair of the monitoring equipment and periodic repair of the wellhead, will continue to be performed by the District and will be funded from ad valorem funds.

Staff Contact and/or Presenter:

Stephen M. Collins, smcollins@sfwmd.gov, 561-682-2959

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0704

A Resolution of the Governing Board of the South Florida Water Management District ("District") to approve, for the purpose of monitoring regional water levels and water quality, the acquisition of a Water Monitoring Well Right of Entry Agreement, at no cost, to maintain and collect data from a monitoring well on property owned by The City of Deerfield Beach in Broward County; providing an effective date.

WHEREAS, for the purpose of monitoring regional water levels and water quality, the District desires to acquire a water monitoring well right of entry agreement, at no cost, to maintain and collect data from a monitoring well on property owned by The City of Deerfield Beach in Broward County for a term commencing immediately and continuing perpetually, unless otherwise terminated by either party; and

WHEREAS, the District, pursuant to Section 373.139, Florida Statutes, is authorized to acquire land, or interests or rights in land.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District, for the purpose of monitoring regional water levels and water quality, hereby approves the acquisition and acceptance of a Water Monitoring Well Right of Entry Agreement, at no cost, to maintain and collect data from a monitoring well on property owned by The City of Deerfield Beach in Broward County, as shown on the attached Exhibit "A". The term of the Agreement is perpetual, unless otherwise terminated by a party.

Section 2. The Governing Board of the South Florida Water Management District hereby authorizes the Chairman or Vice Chairman to execute the Right of Entry Agreement instrument.

Section 3. This resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

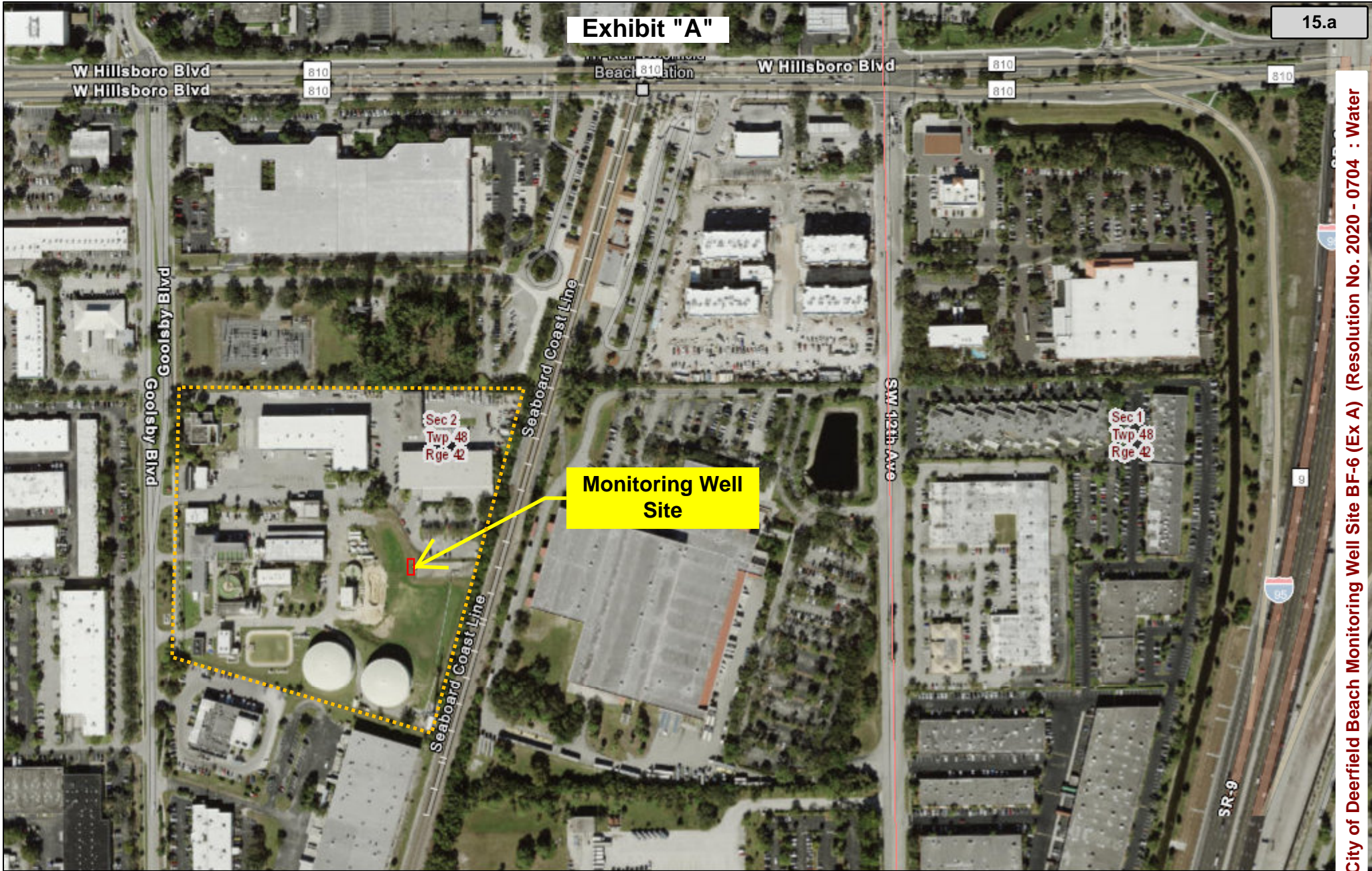
Attest:

District Clerk/Secretary

Legal form approved:
By:

Office of Counsel

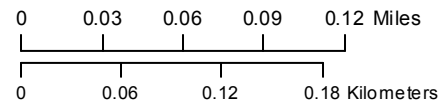
Print name:



City of Deerfield Beach Monitoring Well Site BF-6



South Florida Water Management District
3301 Gun Club Road, West Palm Beach, Florida 33406
561-686-8800; www.sfwmd.gov



DISCLAIMER:
This map is a conceptual or planning tool only. The South Florida Water Management District does not guarantee or make any representation regarding the information contained herein. It is not self-executing or binding and does not affect the interests of any persons or properties, including present or future right or use of real property and is exempt from public records disclosure and confidential under Section 119.071(3)(a)(1), Florida Statute.

M E M O R A N D U M

TO: Governing Board Members

FROM: Jennifer Reynolds, Director-Ecosystem Restoration & Capital Projects

DATE: July 09, 2020

SUBJECT: Monitoring of Lake Okeechobee Sediment Discharges to Caloosahatchee and St. Lucie Estuaries

Agenda Item Background:

Fine-grained sediments (silt and clay sized particles) cover 44% of the total bed area of Lake Okeechobee and can be resuspended by wind and associated waves. When conditions occur on Lake Okeechobee that resuspend fine particles and Lake regulatory releases occur, sediment can potentially be transported through the St. Lucie (C-44) and the Caloosahatchee (C-43) rivers and eventually reach the St. Lucie and Caloosahatchee estuaries. While there are several studies on Lake Okeechobee and estuaries sediments and their dynamics, after an in-depth literature review, there are no studies addressing Lake Okeechobee sediment discharges to the Caloosahatchee and St. Lucie rivers. Currently, despite the acknowledged critical role sediment may play in carrying nutrients (especially phosphorus), the sediment transport between Lake Okeechobee and estuaries is not well understood. The monitoring of suspended sediment discharges from Lake Okeechobee to the downstream estuaries is one piece of the complex and large puzzle of determining the processes and mechanisms responsible for the initiation, growth and development of harmful algae blooms in the St. Lucie and Caloosahatchee estuaries.

This project is identified as one of several initiatives that supports Governor DeSantis' Achieving More Now For Florida's Environment Executive Order (19-12), mainly focused on the algae bloom issue previously observed in St. Lucie and the Caloosahatchee estuaries. This agenda item is the first of a two part study focusing on Lake Okeechobee releases to the east and west coasts.

Core Mission and Strategic Priorities:

The objective of this project is to monitor and quantify sediment discharges and characteristics (such as sediment size distribution) immediately downstream of water-control structures on the C-43 and C-44 Canals. Upstream structures near Lake Okeechobee are S-308 (Port Mayaca) to the east and S-77 (Moore Haven) to the west. The goal is to provide continuous estimates of suspended sediment concentration and load, and bedload downstream of Lake Okeechobee. Bed material at each site will be characterized and the resulting information can support operational decision making and inform management of estuaries.

Key questions this study can potentially answer or provide some insights on are:

- 1) What type, quantity and rate of sediments are discharged from Lake Okeechobee?
- 2) What relationship, if any, exist between the sediment discharges and Lake Okeechobee releases at Port Mayaca (S-308) and Moore Haven (S-77)?
- 3) What role, if any, these sediment discharges play in the development of harmful algae blooms?

4) Are there lessons learned from this sediment monitoring study that can be leveraged to help develop potential mitigations measures to decrease the initiation and development of harmful algae blooms?

If the study is extended to include sediment monitoring at S-80 and S-79, additional information can be gleaned, such as; what sediments type and discharges are released to the estuaries and how do they compare with those released directly from the Lake? What are the sediment contributions of the Caloosahatchee River and St Lucie Canal tributary basins?

Funding Source:

The project funding is provided by SFWMD and U.S. Geological Survey (USGS) Cooperative Matching Funds (CMF) by a joint-funding agreement (www.usgs.gov/mission-areas/water-resources/science/usgs-cooperative-matching-funds)

Project funding in Year 1 is \$633,248 which will cover labor, equipment, laboratory (lab), administrative, and other (travel, equipment) costs. SFWMD costs would be \$361,908 of this total, and USGS CMF costs would be the remaining \$271,340. The funding for Years 2 and 3 is contingent on findings from Year 1. Assuming no additional sites are added, and bedload sampling continues, the total costs would be \$518,608. SFWMD costs would be \$288,348 while USGS CMF would total \$230,260.

Starting in Year 4, funding is significantly reduced because the continuous sediment rating curves have been developed and minimal sampling is needed to maintain the curves. Total funding in Years 4 and beyond is approximately \$177,096. The SFWMD share would be \$100,896/year and the USGS CMF contribution would total \$76,200/year. Costs in years 4 and beyond are difficult to accurately predict not knowing which methodologies will ultimately prove best, so these estimates are subject to change.

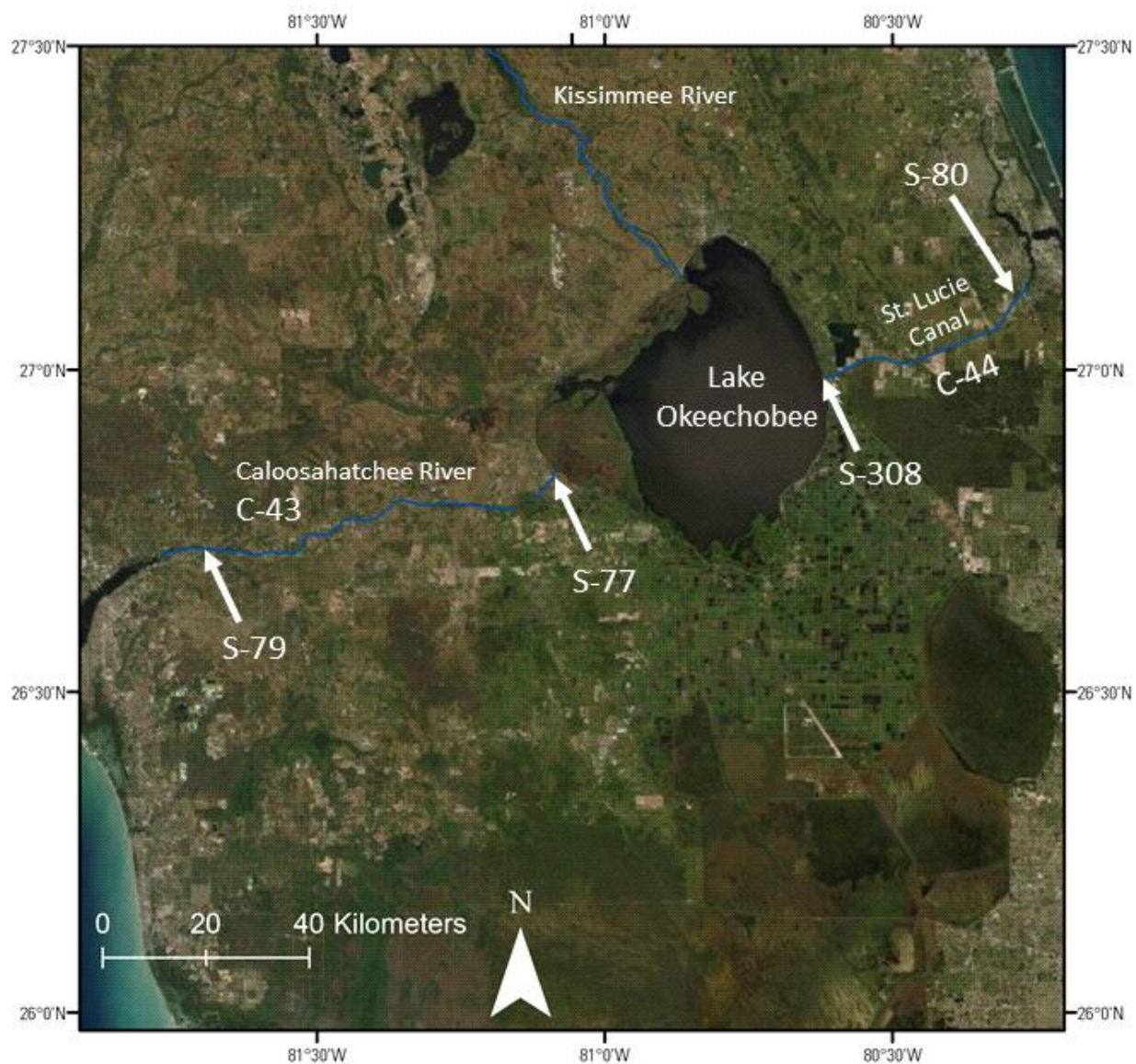


Figure 1. Index map showing locations of structures and monitoring sites along the Caloosahatchee River (C-43) and St. Lucie Canal (C-44). If methods developed at S-77 and S-308 are successful, in subsequent years of the project, two more monitoring sites may be installed at S-80 (USGS 02276998, St Lucie Lock), and S-79 (USGS 02292900, Franklin Lock).

Staff Contact and/or Presenter:

Matahel Ansar, mansar@sfwmd.gov, 561-682-2939

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0705

A Resolution of the Governing Board of the South Florida Water Management District to authorize entering into a four-year Cooperative Agreement with the U.S. Geological Survey (USGS) for the purpose of executing the Monitoring of Lake Okeechobee Sediment Discharges to Caloosahatchee and St. Lucie Estuaries, a project funded by the District and USGS Cooperative Matching Funds (CMF) by a joint-funding agreement, with the District's contribution in the amount of \$1,039,500 for which \$361,908 is budgeted in Fiscal Year 2019-2020 and the remainder is subject to Governing Board approval of future years budgets; providing an effective date. (Contract No. 4600004248)

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to enter into a Cooperative Agreement with U.S. Geological Survey (USGS) for the purpose of executing the Monitoring of Lake Okeechobee Sediment Discharges to Caloosahatchee and St. Lucie Estuaries; and

WHEREAS, sediments contribute to water quality deterioration including algae bloom in water bodies; and

WHEREAS, fine-grained sediments cover 44% of the total bed area of Lake Okeechobee and can be resuspended by wind and associated waves potentially resulting in sediment being routed through the C-43 and C-44 canals and eventually to St. Lucie and Caloosahatchee Estuaries; and

WHEREAS, the critical role of sediment transport in carrying nutrients from Lake Okeechobee to Caloosahatchee River and St Lucie canal requires monitoring and study; and

WHEREAS, the monitoring of sediment discharges from Lake Okeechobee to the downstream estuaries is one piece of the complex and large puzzle of determining the processes and mechanisms responsible for the initiation, growth, and development of harmful algae blooms in the St. Lucie and Caloosahatchee Estuaries; and

WHEREAS, this project is identified as one of the several initiatives that support the Governors' executive order on water quality with a focus on algae bloom occurrence in St. Lucie and the Caloosahatchee Estuaries.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into a Cooperative Agreement with the U.S. Geological Survey (USGS) for monitoring of Lake Okeechobee sediment discharges to the Caloosahatchee and St. Lucie Estuaries. (Contract No. 4600004248)

Section 2. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

District Clerk/Secretary

Legal form approved:
By:

Office of Counsel

Print name:

M E M O R A N D U M

TO: Governing Board Members

FROM: John P. Mitnik, Assistant Executive Director, Chief Engineer

DATE: July 09, 2020

SUBJECT: Interagency Agreement with U.S. Geological Survey for the Development of Future Rainfall Depth-Duration-Frequency Curves

Agenda Item Background:

It is anticipated that changing rainfall patterns will have large implications on the District's missions of ecosystem restoration, flood protection, and water supply. With the goal of reducing uncertainty in estimating future extreme rainfall conditions, the District is partnering with the U.S. Geological Survey (USGS) to develop Future Rainfall Depth-Duration-Frequency (DDF) Curves to support the evaluation of future changes in rainfall patterns, as part of the District's Resiliency efforts. The goal of the project is to evaluate best available climate downscaling datasets and compare them to historic observations, to support the determination of science-based future rainfall depth-duration curves for selected return frequencies Districtwide. The total cost for the project is \$367,304 and the District's cost share amount is \$183,652.

Additional Background:

Planning and regulation of stormwater management projects require estimates of current and future rainfall depths for specified return periods and durations characterizing extreme rainfall conditions. The Flood Protection Level of Service (FPLOS) Program, as an example, is assessing basin by basin, in the entire 16-county region, to determine their current and future level of service for flood protection. This effort requires an evaluation of current rainfall design standards and potential future rainfall pattern changes to account for future extreme rainfall conditions. In addition, the Environmental Resource Permit Applicant's Handbook Volume II contains, in its Appendix C, the rainfall design standards, adopted back in 1990s, which continue to inform both regulation and planning processes at the District. The need to modernize design standards to account for future conditions and better support resilient infrastructure investments in drainage and surface water management systems has been widely recognized in South Florida.

Results of this project will support the District in managing and developing South Florida's stormwater and water-supply infrastructure by providing more accurate estimates of future extreme rainfall conditions. Benefits of the project include:

- providing science-based information to support the implementation of the SFMWD's mission of safeguarding and restoring South Florida's water resources and ecosystems, protecting its communities from flooding, and meeting the region's water needs, now and under changing future climate conditions.
- strengthening the District's planning capacity by providing inputs to hydrologic models and anticipating future rainfall conditions districtwide, based on best available climate model downscaled datasets and science-based approaches.
- informing and supporting the District's Resiliency efforts about the increase in flood risk and helping our communities to understand exposure to extreme rainfall events under changing future climate conditions.
- supporting the assessment of the C&SF Project to ensure the system provides the desired

level of flood protection upstream of the tidal structures today, and will continue to do so into the future, with consideration of more intense rainfall events.

- characterizing potential changes in design standards and their impact over current and future operational decisions that rely upon the determination of rainfall frequencies.

Funding Source:

Development of the Future Rainfall Depth-Duration-Frequency (DDF) Curves would be cost shared 50:50 between the District and USGS. The funds will be disbursed to USGS according to a set payment schedule and the completion of the associated tasks by USGS, as included in the project's scope of work.

Core Mission and Strategic Priorities:

This project supports the District's core missions of flood protection, water supply and ecosystem restoration.

Staff Contact and/or Presenter:

Ana Carolina Maran, cmaran@sfwmd.gov, 561-682-6868

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0706

A Resolution of the Governing Board of the South Florida Water Management District authorizing the Executive Director, or his designee, to enter into an agreement with the United States Geological Survey (USGS), for the purpose of developing Future Rainfall Depth-Duration-Frequency (DDF) Curves for the entire 16-county region at a total project cost of \$367,304 for which the District's cost share amount is \$183,652 and is budgeted (Ad Valorem funds) in Fiscal Year 2019-2020; providing an effective date. (Contract No. 4600004244)

WHEREAS, changing climate conditions are being observed district wide, including sea level rise and extreme rainfall events.

WHEREAS, changing rainfall patterns have large implications over District's flood protection, water supply and restoration efforts.

WHEREAS, planning, adapting and designing water management infrastructure requires future extreme rainfall estimates, for specified return periods and durations, under reduced uncertainty ranges.

WHEREAS, developing rainfall scenarios is an essential step for the development of the Flood Protection Level of Service Program, as well as the C&SF Flood Resiliency Study, to be advanced in partnership with USACE.

WHEREAS, there is not a comprehensive analysis or unified rainfall scenarios developed for the South Florida region, despite local isolated advancements.

WHEREAS, USGS analysis is based on unbiased and impartial science and quality assured to the high technical standards that the USGS provides.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorize entering into an agreement with the United States Geological Survey for the purpose of developing Future Rainfall Depth-Duration-Frequency (DDF) Curves for the entire District's extent. (Contract No. 4600004244)

Section 3. A copy of the agreement and respective scope of work is attached hereto and made a part hereof.

Section 4. This Resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

District Clerk/Secretary

Legal form approved:
By:

Office of Counsel

Print name:



United States Department of the Interior U.S. Geological Survey

Caribbean-Florida Water Science Center
12703 Research Parkway, Suite 200
Orlando, FL 32826

Proposal Number: 20-CFWSC-P0007

Title: Development of future depth-duration-frequency curves for the South Florida Water Management District

Point of Contact: Michelle Irizarry-Ortiz, Hydrologist, 12703 Research Parkway, Suite 200, Orlando, FL 32826, (407) 803-5569, mirizarry-ortiz@usgs.gov

Cooperator: South Florida Water Management District

Background and Problem Statement:

Planning of stormwater management projects requires estimates of current and future rainfall depths for specified return periods and durations. The South Florida Water Management District's (SFWMD) permitting manual has specific descriptions of rainfall estimates for several return periods and durations, which have been used for both planning and permitting in the past years. With the initiation of the new Flood Protection Level of Service (FPLOS) Program the basins for the 16-county region in the SFWMD will be evaluated to determine their current and future level of service for flood protection. This effort requires an evaluation of the adopted design rainfall estimates to determine if changes are necessary to account for change in future rainfall patterns.

Driven by the need for evaluating future changes in rainfall patterns as part of the FPLOS program, the SFWMD reviewed existing methods for depth-duration-frequency curve (DDF) fitting including comparisons with the NOAA Atlas 14 official DDF curves at stations throughout the state of Florida (Irizarry et al., 2016). The selected method, called "At-site Regional Frequency Analysis", was employed to develop DDF curves at NOAA Atlas 14 stations for periods centered on the years 1970, 2030, and 2060. For this purpose, timeseries of annual maxima of precipitation for durations and periods of interest were obtained from bias-corrected and statistically-downscaled climate projections from the World Climate Research Programme (WCRP) Coupled Model Intercomparison Project phase 5 (CMIP5) based on: (1) the US Bureau of Reclamation's Bias-Corrected Constructed Analog (BCCA) technique (Maurer et al., 2007; Reclamation, 2013), and (2) the University of California, San Diego's Localized Constructed Analog (LOCA) technique (Pierce et al., 2014). Biases in modeled historical and projected precipitation extremes were corrected using a Multiplicative Quantile Delta Mapping (MQDM) technique (Li et al., 2010; Cannon, 2015). A concern with the results of this effort was that biases for the historical period (-30 to -60%) were larger than the estimated magnitude of the change from current to future projection periods (-5 to +30%) for both datasets, especially for BCCA.

As part of the Broward County Future Conditions Map Series, the same approach developed by SFWMD was extended to evaluate rainfall data from dynamically-downscaled climate projections, including the CORDEX project (Giorgi et al., 2009) and Jupiter's Weather Research and Forecasting model dataset (JupiterWRF; Madaus, 2019). The CORDEX project uses regional climate models (RCM) to dynamically downscale CMIP5 model scenarios for different regions around the globe including North America. Despite the relatively coarse resolution of the CORDEX output (25-50 km) their analysis shows smaller historical biases for the county in

some models than the statistical-downscaling products (on the order of 20%), which prompts consideration of this dataset for deriving future DDF curves for other areas across the state.

In addition, the JupiterWRF, similarly to LOCA, uses an analog and scaling method to produce downscaled future climate projects, but specifically focused on extreme events, and using the Weather Research and Forecasting model (WRF; Skamarock et al., 2019) to produce simulated precipitation fields at hourly resolution for known historical extreme events. For analog resampling, JupiterWRF uses 40 projections from the Community Earth System Model – Large Ensemble (CESM-LENS; Kay et al. 2015). For future scaling, JupiterWRF uses a 4 km dynamically-downscaled WRF simulation of the future climate of North America consistent with the Representative Concentration Pathways 8.5 (RCP) scenario (Liu et al. 2017) to highlight more localized climate changes than in a coarse GCM. The JupiterWRF analysis also shows smaller historical biases for Broward County than the previous products, which also prompts consideration of this dataset for deriving DDF curves in other areas across the state.

Furthermore, an alternative downscaling technique – Bias-Correction and Stochastic Analog method (BCSA) – was developed by University of Florida (Hwang and Graham, 2013) to produce stochastic realizations of bias-corrected daily GCM precipitation fields that preserve both the spatial autocorrelation structure of observed daily precipitation sequences and the observed temporal frequency distribution of daily rainfall over space. This technique was not evaluated as part of Broward County efforts.

It is worth noting that Broward County employed a “Spatial Regional Frequency Analysis” technique for DDF fitting and handled the problem of crossing curves described in Irizarry et al. (2016) by applying fixed offsets to rainfall values for durations after the intersection. This guarantees that rainfall depths monotonically increase across all durations and return periods but introduces uncertainties in the tails of the distribution where the problem of crossing occurs most often. Finally, an ensemble method was used to determine median changes in DDF curves as well as the variability in the estimates across models, scenarios, and downscaling products.

Objectives:

The main objective of this project is to develop future DDF curves for the 16 counties in the South Florida Water Management District. An ensemble method will be used to determine median change factors as well as variability (model spread) at each NOAA Atlas 14 station. Surfaces of rainfall depths for various durations (1-day and 3-day), return periods (5-, 10-, 25-, 50-, 100-, and 200-year) and future periods of interest (2070s, RCP 4.5 and 8.5) will be developed by interpolation of the station values.

Relevance and Benefits:

Results of this proposed study will help the SFWMD manage the south Florida drainage and water-supply protection infrastructure by providing an evaluation of predicted rainfall and runoff, and lead to more accurate simulations of effects of rainfall extremes and other meteorological factors. Ultimately, the approach could be applied across this and other states, and results could be used to:

- Provide science-based information to support the implementation of the SFWMD’s mission of safeguarding and restoring South Florida’s water resources and ecosystems, protecting its communities from flooding, and meeting the region’s water needs.
- Strengthen SFWMD planning capacity by anticipating future rainfall conditions districtwide, based on best available climate model downscaled datasets and science approaches.
- Inform and support the Flood Protection Level of Service and Canal Conveyance Programs, and additional SFWMD studies, about the increase in flood risk as a result of more intense rainfall events under changed future climate conditions.

- Support the reassessment of the C&SF Project to ensure the system provides the desired level of flood protection upstream of the tidal structures today and will continue to do so into the future, with consideration of more intense rainfall events.
- Characterize potential changes in design standards and their impact over current and future operational decisions that rely upon the determination of rainfall frequencies.

In addition, USGS analysis is based on unbiased and impartial science that has been scrutinized and quality assured to the high technical standards that the USGS provides. This study aligns directly with the strategic science direction for the Water Discipline outlined in USGS circular 1383-G (Evenson and others, 2013) by (1) providing inputs to hydrologic prediction models that help in predicting changes in the quantity of water resources in response to changing climate scenarios (Goal 3, Objective 1, Strategic Action 15); and (2) by anticipating water-related emergencies by developing analyses to help communities understand exposure to extreme hydrologic events (Goal 4, Objective 1, Strategic Action 19). It also aligns directly with priority question 4 as identified in National Academies of Science, Engineering and Medicine (2018), by addressing how changing climate affects water-related hazards and extreme events.

Scope:

As part of this project, future DDF curves for various durations (1-day and 3-day), return periods (5-, 10-, 25-, 50-, 100-year) and future periods of interest (2070s, RCP 4.5 and 8.5) will be developed for the 16 counties in the SFWMD.

- The downscaled climate products to be analyzed using the “Spatial Regional Frequency Analysis” technique include BCCA, BCSA, LOCA, JupiterWRF and CORDEX, up to 4 datasets, as available and prioritized by the interested parties.
- An ensemble method will be used to determine median changes as well as variability at each NOAA Atlas 14 station.
- Surfaces of rainfall extremes for will be developed by interpolation of the station values.

Approach:

- Task 1 – Download CORDEX and BCSA data from online repository and format as needed for subsequent tasks.
- Task 2 – Obtain JupiterWRF data (if available) and format as needed for subsequent tasks.
- Task 3 – Perform BCSA downscaling on CMIP5 climate models for the state of Florida using the code provided by Hwang and Graham (2013).
- Task 4 – Develop DDF curves at each NOAA Atlas 14 station within the 16 SFWMD counties for various durations (1-day and 3-day), return periods (5-, 10-, 25-, 50-, 100-, and 200-year), and current and future periods of interest (2070s, RCP 4.5 and 8.5) based on the 4 selected datasets. The evolution of seasonal and annual projected rainfall across decades will be evaluated to make sure that rainfall in the future period of interest (2070s) is not anomalous compared to previous and subsequent decades (i.e. that natural variability does not dominate and bias the results). The “Spatial Regional Frequency Analysis” technique will be used for DDF fitting along with Multiplicative Quantile Delta Mapping for bias-correction. NOAA's list of neighboring stations around each station, or an alternative advanced approach, will be utilized for the regional frequency analysis, for both observation and predicted data, with the understanding that the historical DDF curves will not be precisely reproduced at all stations and the results will be presented as change factors. The 5th, 16th, 50th, 84th, and 95th percentile of DDF curves among models, RCPs, and downscaled products, will be plotted at each NOAA Atlas 14 station, along with the (historical) official Atlas 14 rainfall depths and confidence intervals based on (a) the entire ensemble of model runs and downscaling products, and (b) a subset of the best-performing models and statistical downscaling products based on performance metrics described in Infanti et al. (2020), Srivastava et al. (2020), and others to be evaluated by Florida International University.

- Task 5 – Based on the ensemble of DDF curves developed at each NOAA Atlas 14 station in Task 4, surfaces of 5th, 16th, 50th, 84th, and 95th percentile of DDF values will be developed for each duration, return period, and future period of interest across the 16 counties in the SFWMD.
- Task 6 – Data release as described in the Deliverables section, including a more extensive set of graphics to support visualization of the results, as prioritized by the interested parties.
- Task 7 – Documentation of the methodology employed for the development of future DDF curves for the 16 counties in the SFWMD and publication as a USGS report.

QA/QC and Data Management:

All data collected or generated by the USGS through this project will be released according to USGS Fundamental Science Practices regarding Scientific Data Management, as described in the USGS Manual Chapter 502.6, <https://www.usgs.gov/about/organization/science-support/survey-manual/5026-fundamental-science-practices-scientific-data>. Details are provided in accompanying Data Management Plan.

All report(s) and/or journal article(s) authored by USGS personnel will conform to USGS Fundamental Science Practices (<http://www.usgs.gov/fsp/>), which include quality assurance and quality control elements.

Information Products:

- Task 6 – Data release with the ensemble of DDF values at each NOAA Atlas 14 station as well as maps showing the 5th, 16th, 50th, 84th, and 95th of DDF values for each duration, return period, and future period of interest. To be released approximately 14 months after project start date.
- Task 7 – Approved USGS report summarizing the methodology employed for the development of future DDF curves for the 16-county region in the SFWMD. To be published approximately 24 months after project start date.

Project Schedule (Based on start date of July 1, 2020):

Proposed start date: July 1, 2020

Proposed end date: June 30, 2022

Task	Description	FY20		FY21				FY22	
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	CORDEX data download and processing								
2	Jupiter WRF download and processing		See note						
3	BCSA downscaling of CMIP5 GCMs								
4	DDF curve development at NOAA Atlas stations for 4 selected datasets								
5	DDF curve surface interpolation								
6	Data release								
7	Report publication								

Notes: Timeline subject to modification pending contract execution. JupiterWRF download and processing subject to on-time availability of model output.

Primary Project Personnel:**USGS**

Michelle Irizarry-Ortiz, Hydrologist

SFWMD

Ana Carolina Coelho Maran, District Resiliency Officer
(561) 682-6868; cmaran@sfwmd.gov

Jenifer Barnes, Lead Hydrologic Modeler
(561) 682-6943; jabarne@sfwmd.gov

Budget Summary:

Funding at 50/50 cost share	FY20	FY21	FY22	Total
Funding - SFWMD	\$34,189	\$89,245	\$60,218	\$183,652
Funding - CFWSC	\$34,189	\$89,245	\$60,218	\$183,652
Funding - TOTAL	\$68,378	\$178,490	\$120,436	\$367,304

References:

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Evenson, E.J., Orndorff, R.C., Blome, C.D., Böhlke, J.K., Hershberger, P.K., Langenheim, V.E., McCabe, G.J., Morlock, S.E., Reeves, H.W., Verdin, J.P., Weyers, H.S., and Wood, T.M., 2013, U.S. Geological Survey water science strategy—Observing, understanding, predicting, and delivering water science to the Nation: U.S. Geological Survey Circular 1383–G, 49 p.

Giorgi, F., Jones, C., and Asrar, G. R. 2009. Addressing climate information needs at the regional level: the CORDEX framework. *World Meteorological Society Bulletin*, **58**(3), Jul. 2009, 175-183.

Hwang, S., Graham, W.D., 2013. Development and comparative evaluation of a stochastic analog method. *Hydrology and Earth Systems Sciences* 17, 4481-4502.

Infanti, J. M., Kirtman B. P., Aumen, N. G., Stamm, J., and Polsky C. 2020. Aligning Climate Models with Stakeholder Needs: Advances in Communicating Future Rainfall Uncertainties or South Florida Decision Makers. *Journal of Geophysical Research-Atmospheres*. *Under review*.

Irizarry, M. M., Obeysekera, J., and Dessalegne, T. 2016. Determination of Future Intensity-Duration-Frequency Curves for Level of Service Planning Projects. Task 2 of SFWMD Purchase order 4500095433 – Deliverable 2.1. Conduct an extreme rainfall analysis in climate model outputs to determine temporal changes in IDF curves.

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United States Department of the Interior

U.S. GEOLOGICAL SURVEY
 Caribbean-Florida Water Science Center
 4446 Pet Ln Suite #108
 Lutz, FL 33559
 P: (813) 498-5000
 F: (813) 498-5002

May 29, 2020

Ms. Ana C. Coelho Maran
 District Resiliency Officer
 South Florida Water Management District
 3301 Gun Club Road
 West Palm Beach, FL 33406

Dear Ms. Maran:

Enclosed are two signed originals of our standard joint-funding agreement for the project(s) Development of future depth-duration-frequency (DDF) curves for the South Florida Water Management District and the Caribbean-Florida Water Science Center, during the period July 1, 2020 through June 30, 2022 in the amount of \$183,652 from your agency. U.S. Geological Survey contributions for this agreement are \$183,652 for a combined total of \$367,304. Please sign and return one fully-executed original to Susan W. Jones at the address above.

Federal law requires that we have a signed agreement before we start or continue work. Please return the signed agreement by **July 1, 2020**. If, for any reason, the agreement cannot be signed and returned by the date shown above, please contact by phone number or email to make alternative arrangements.

This is a fixed cost agreement to be billed quarterly via Down Payment Request (automated Form DI-1040). Please allow 30-days from the end of the billing period for issuance of the bill. If you experience any problems with your invoice(s), please contact Susan Jones at phone number (813) 498-5009 or email at swjones@usgs.gov.

The results of all work performed under this agreement will be available for publication by the U.S. Geological Survey. We look forward to continuing this and future cooperative efforts in these mutually beneficial water resources studies.

Sincerely,

David M.
 Sumner

Digitally signed by David M.
 Sumner
 Date: 2020.05.29 14:02:26 -04'00'

David M. Sumner, Ph.D., PG
 Director, Caribbean-Florida Water Science Center

Enclosure
 20MCJFA0111 (2)

Attachment: 20MCJFA0111_Pending (Resolution No. 2020 - 0706 : Agreement with USGS)

Form 9-1366
(May 2018)

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR

Customer #: 6000001220
Agreement #: 20MCJFA0111
Project #: MC00E2A
TIN #: 59-6015290

Development of future Depth-Duration-Frequency
Curves (DDF Curves)

Fixed Cost Agreement YES[X] NO[]

SFWMD Contract #: 4600004244

THIS AGREEMENT is entered into as of the July 1, 2020, by the **U.S. GEOLOGICAL SURVEY**, Caribbean-Florida Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the **SOUTH FLORIDA WATER MANAGEMENT DISTRICT** party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation Water Resource Investigations (per attachment), herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50, and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) include In-Kind-Services in the amount of \$0.00

- (a) \$183,652.00 by the party of the first part during the period
July 1, 2020 to June 30, 2022
- (b) \$183,652.00 by the party of the second part during the period
July 1, 2020 to June 30, 2022
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00
- (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
- (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.

6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.

8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties. The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www.usgs.gov/about/organization/science-support/science-quality-and-integrity/fundamental-science-practices>).

Attachment: 20MCJFA0111_Pending (Resolution No. 2020 - 0706 : Agreement with USGS)

Form 9-1366
(May 2018)

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR

Customer #: 6000001220
Agreement #: 20MCJFA0111
Project #: MC00E2H
TIN #: 59-6015290

Development of future Depth-Duration-
Frequency Curves (DDF Curves)

9. Billing for this agreement will be rendered quarterly. Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

USGS Technical Point of Contact

Name: Michelle Irizarry-Ortiz
Hydrologist
Address: 12703 Research Parkway, Suite 200
Orlando, FL 32826
Telephone: (407) 803-5569
Fax:
Email: mirizarry-ortiz@usgs.gov

Customer Technical Point of Contact

Name: Ana C. Coelho Maran
District Resiliency Officer
Address: 3301 Gun Club Road
West Palm Beach, FL 33406
Telephone: (561) 682-6868
Fax:
Email: cmaran@sfwmd.gov

USGS Billing Point of Contact

Name: Susan Jones
Budget Analyst
Address: 4446 Pet Lane Suite 108
Lutz, FL 33559
Telephone: (813) 498-5009
Fax: (813) 498-5002
Email: swjones@usgs.gov
DUNS: 137783937

Customer Billing Point of Contact

Name: Accounts Payable
Address: 3301 Gun Club Road
West Palm Beach, FL 33406
Email: APInvoice@sfwmd.gov

U.S. Geological Survey
United States
Department of Interior

South Florida Water
Management District

Signature

David M. Sumner Digitally signed by David M. Sumner
Date: 2020.05.29 14:02:47 -04'00'
By _____ **Date:** ~~05/29/2020~~
Name: David M. Sumner, Ph.D., PG
Title: Director, Caribbean-Florida Water Science Center

Signatures

By _____ **Date:** _____
Name: Drew Bartlett
Title: Executive Director

By _____ **Date:** _____
Name: Candida Heater
Title: Director, Administrative Services Division

By _____ **Date:** _____
Name: Derek Brown
Title: Senior Attorney

By _____ **Date:** _____
Name: Rachel Clark
Title: Senior Contract Specialist

Attachment: 20MCJFA0111_Pending (Resolution No. 2020 - 0706 : Agreement with USGS)

ATTACHMENT “A” to JFA No. 20MCJFA0111/SFWMD Contract Order No. 4600004244

10. All work to be performed under this **AGREEMENT** is set forth in Exhibit “A,” Statement of Work, which is attached hereto and made a part of this **AGREEMENT**. No work specified in Exhibit “A” shall be performed beyond the expiration date of this **Agreement**. However, the parties may mutually agree to extend the term of the **Agreement** and authorize additional funding through execution of an amendment to cover succeeding periods. Future funding is subject to budgetary approval by the Governing Board of the **PARTY OF THE SECOND PART**. In the event no amendment is executed, this **AGREEMENT** shall automatically expire on the date noted in Paragraphs 2(a) and 2(b).

11. Either party may terminate this **AGREEMENT** at any time for convenience upon sixty (60) calendar days prior written notice to the other party. In the event of termination, the **PARTY OF THE SECOND PART** shall compensate the **PARTY OF THE FIRST PART** for all authorized work performed through the termination date. The **PARTY OF THE SECOND PART** may withhold all payments to the **PARTY OF THE FIRST PART** for such work until such time as the **PARTY OF THE SECOND PART** determines the exact amount due to the **PARTY OF THE FIRST PART**.

12. Liability of the **PARTY OF THE FIRST PART** is governed by the Federal Tort Claims Act (28 USC 2671 *et seq.*). Under that Act, the federal Government assumes liability only for loss, injury or damage to persons or property arising from negligent acts or omissions of USGS employees acting within the scope of their employment. As a federal agency, the **PARTY OF THE FIRST PART** is self-insured. Injuries suffered by federal employees are compensated, generally, under the Federal Employees Compensation Act (5 USC 8101 *et seq.*).

13. Federal laws and the laws of the State of Florida shall govern, respectively, all aspects of this **AGREEMENT**.

14. All travel expenses incurred by the **PARTY OF THE FIRST PART** are included in the budget for this **AGREEMENT** and no additional travel expenses shall be authorized in conjunction with this **AGREEMENT** without prior consent of the **PARTY OF THE SECOND PART**.

15. Any equipment purchased under this **AGREEMENT**, other than that specified in the budget, shall be purchased with funding provided by the **PARTY OF THE FIRST PART** provided that the total contribution of the **AGREEMENT** by the **PARTY OF THE FIRST PART** shall not exceed the amount contributed by the **PARTY OF THE SECOND PART**. No funding provided by the **PARTY OF THE SECOND PART** shall be used for this purpose, without prior consent of the **PARTY OF THE SECOND PART**. Title to all equipment purchased by the **PARTY OF THE FIRST PART** with funds provided by the **PARTY OF THE FIRST PART** during the term of this **AGREEMENT** shall vest in the **PARTY OF THE FIRST PART** following expiration of this **AGREEMENT**. Title to all equipment purchased by the **PARTY OF THE FIRST PART** with funds provided by the **PARTY OF THE SECOND PART** during the term of this **AGREEMENT** shall vest in the **PARTY OF THE SECOND PART** following expiration of this **AGREEMENT**.

16. The **PARTY OF THE FIRST PART** is governed by federal law and by state law made applicable by federal law. The **PARTY OF THE FIRST PART** will comply with other Florida statutes if not inconsistent with Federal statutes. Pursuant to Section 216.347, Florida Statutes, the expenditure of any of the funds under this **AGREEMENT** to lobby the Legislature, the judicial branch or a state agency is prohibited.

Attachment: USGS_AttachmentA revised (Resolution No. 2020 - 0706 : Agreement with USGS)

17. As part of the investigations to be provided by the **PARTY OF THE FIRST PART** under this **AGREEMENT**, the **PARTY OF THE FIRST PART** shall substantiate, in whatever forum reasonably requested by the **PARTY OF THE SECOND PART**, the methodology, scientific theories, data, reference materials, research notes, any work completed by assistants, models, concepts, analytical theories, computer programs and conclusions utilized as the basis for the final work product required by this **AGREEMENT**. This paragraph shall survive the expiration or termination of this **AGREEMENT**.

18. Append Paragraph 7 of this **AGREEMENT** to add the following: The **PARTY OF THE FIRST PART** shall maintain records and the **PARTY OF THE SECOND PART** shall have inspection and audit rights as follows:

A. Maintenance of Records: The **PARTY OF THE FIRST PART** shall maintain all financial and non-financial records and reports directly or indirectly related to the negotiation or performance of this **AGREEMENT** including supporting documentation for any rates, expenses, research or reports. Such records shall be maintained and made available for inspection for a period of five (5) years from completing performance and receiving final payment under this **AGREEMENT**.

B. Examination of Records: The **PARTY OF THE SECOND PART** or designated agent shall have the right to examine in accordance with generally accepted governmental auditing standards all records directly or indirectly related to this **AGREEMENT**. Such examination may be made only within five (5) years from the date of final payment under this **AGREEMENT** and upon reasonable notice, time and place.

C. Extended Availability of Records for Legal Disputes: In the event that the **PARTY OF THE SECOND PART** has been sued by a third party prior to the expiration of the period of maintaining records under this **AGREEMENT** and timely informs USGS in writing of it, the **PARTY OF THE FIRST PART** shall extend the period of maintenance for all records relating to the **AGREEMENT** until the final disposition of the legal dispute, and all such records shall be made readily available to the **PARTY OF THE SECOND PART**.

19. Paragraph 8 of this **AGREEMENT** is hereby modified by this reference to add the following: All documents, including, but not limited to, technical reports, research notes, scientific data and computer programs in draft and final form including the source code and object code, which are developed by the **PARTY OF THE FIRST PART** in connection with this **AGREEMENT**, may be utilized by the **PARTY OF THE SECOND PART** in its normal course of business. The use by the **PARTY OF THE SECOND PART** may include, but shall not be limited to, reproduction, distribution and preparation of derivative works permissible under Chapter 119 F.S. Documents, excluding those consisting of raw data (hydrologic measurements resulting from observations and laboratory analysis), made available to the **PARTY OF THE SECOND PART** prior to USGS Director's approval and general release to the public, and any works of the **PARTY OF THE SECOND PART** deriving from those documents, shall not be published by the **PARTY OF THE SECOND PART** until the original documents have been released by the **PARTY OF THE FIRST PART**. Nothing contained herein shall be construed to obligate the **PARTY OF THE SECOND PART** to take any action in violation of Florida Statutes.

20. The Parties anticipate cost sharing on this project. The **PARTY OF THE FIRST PART** will contribute an amount not to exceed the amount specified in Paragraph 2(a). The **PARTY OF THE SECOND PART** will contribute an amount not to exceed the amount specified in Paragraph 2(b), all of which is subject to Governing

Board Budgetary approval. The **PARTY OF THE FIRST PART** may contribute no more than the amount contributed by the **PARTY OF THE SECOND PART**.

21. Paragraph 9 of the **AGREEMENT** is hereby modified by this reference to add the following: Billing for this **AGREEMENT** shall be rendered in equal quarterly installments. Payment by the **PARTY OF THE SECOND PART** shall be made within thirty (30) days following receipt of invoices from the **PARTY OF THE FIRST PART** provided that deliverables required in accordance with Exhibit "A" have been completed by the **PARTY OF THE FIRST PART** to the satisfaction of the **PARTY OF THE SECOND PART**. **PARTY OF THE FIRST PART** shall send its invoices and any attachments to APInvoice@sfwmd.gov and a copy to the District Project Manager. All invoices must reference the **PARTY OF THE FIRST PART's** legal name as authorized to do business with the State of Florida; **PARTY OF THE SECOND PART's** Contract Number and Purchase Order (PO) Number as specified on the cover/signature page of the **AGREEMENT**; a unique invoice number not previously used; date; a description of the services performed, and the amount to be invoiced. **PARTY OF THE FIRST PART** shall: 1) submit invoices using a pdf file at a resolution of no less than 300 dpi; 2) name the pdf file with the **PARTY OF THE FIRST PART** name and the PO number; 3) provide all required attachments with the invoice file, and 4) include the PO number and Invoice number in the subject line of the email. If email or pdf filing is not possible, the **PARTY OF THE FIRST PART** must provide the above to the following address:

*South Florida Water Management District
Accounts Payable
P.O. Box 24682
West Palm Beach, FL 33416-4682*

PARTY OF THE FIRST PART must submit its invoices in compliance with the requirements of this subsection and all other terms and conditions of this **AGREEMENT** in order to receive prompt payment by the **PARTY OF THE SECOND PART** as described in Section 218.70, F.S. **PARTY OF THE FIRST PART's** failure to follow the instructions set forth in the **AGREEMENT** regarding a proper invoice and acceptable services and/or deliverables may result in an unavoidable delay in payment by the **PARTY OF THE SECOND PART**.

22. This **AGREEMENT** may be modified only through mutually agreed to amendment(s) to this **AGREEMENT**.

23. Paragraph 2(c) is hereby modified by this reference to require that any mutually agreed upon additional or reduced amounts contributed by either party during the above period or succeeding periods be set forth in an exchange of letters between the parties and memorialized in a duly executed amendment to the **AGREEMENT**.

24. In the event any provisions of this **AGREEMENT** shall conflict, or appear to conflict, the **AGREEMENT**, including all exhibits, attachments and all documents specifically incorporated by reference, shall be interpreted as a whole to resolve any inconsistency.

LEGAL FORM APPROVED
SFWMD OFFICE OF COUNSEL

SFWMD PROCUREMENT APPROVED

BY: _____

BY:  _____

DATE: _____

DATE: June 3, 2020 _____

MEMORANDUM

TO: Governing Board Members

FROM: Jennifer Reynolds, Director-Ecosystem Restoration & Capital Projects

DATE: July 09, 2020

SUBJECT: Emergency Action by the Seminole Tribe of Florida

Agenda Item Background:

Under Section 7.2.1 of the Criteria Manual, *Emergency Action by the Tribe*, the Governing Board may require the Seminole Tribe of Florida ("Seminole Tribe") to conform its emergency action to the standards in the Water Rights Compact ("Compact"), Criteria Manual, and Right-of-Way Memorandum of Understanding ("MOU"). Staff recommends the Seminole Tribe conform the emergency action and lists specific conformance criteria, along with additional requirements, within the Final Order.

Core Mission and Strategic Priorities:

In 1987, the Seminole Tribe and the District executed the *Water Rights Compact Among the Seminole Tribe of Florida, the State of Florida, and the South Florida Water Management District* and related *Criteria Manual*, regulating water use and establishing a procedural mechanism for resolving conflicts between the parties. The District serves as the local sponsor for the Flood Control Project constructed by the US Army Corps of Engineers, which includes the L-28I West Feeder canal, pursuant to Section 373.1501, Florida Statutes.

Funding Source:

No funding is associated with this matter.

Staff Contact and/or Presenter:

Armando Ramirez, aramirez@sfwmd.gov, 561-682-6684

M E M O R A N D U M

TO: Governing Board Members

FROM: Jennifer Leeds,

DATE: July 09, 2020

SUBJECT: Update on the Northern Everglades and Estuaries Protection Program

Agenda Item Background:

The South Florida Water Management District is committed to improving water quality and quantity with public input in the Lake Okeechobee, Caloosahatchee, and St. Lucie watersheds as part of the Northern Everglades and Estuaries Protection Program (NEEPP). This item will provide a briefing on the District's efforts in these watersheds including revising Chapter 40E-61 of the Florida Administrative Code (40E-61), updating the Watershed Protection Plan for each watershed in NEEPP, and launching the expanded water quality monitoring network.

Additional Background Information:

In October of 2019, the Governing Board approved initiation of Rule Development to revise Chapter 40E-61 of the Florida Administrative Code (40E-61), also known as the Lake Okeechobee Works of the District Basins rule. Chapter 40E-61, which governs "specified basins within the District which are integral to operation, maintenance and protection of the District's water resources" has not been substantively updated since the District adopted it in 1989. A 2016 amendment to the Northern Everglades and Estuaries Protection Program (NEEPP or 373.4595, Florida Statutes), specifically requires the District to revise 40E-61. An update on the rule development process and a summary of the public comments received during the rulemaking workshops will be provided. Below is a list of process steps and the current schedule.

Description	Completed Tasks and Current Schedule
Governing Board presentation - Rule Amendment Process	Completed - August 2019
Governing Board approval of Notice of Rule Development	Completed - October 2019
Round 1 Public Workshops & Initiated Request for Public Comments (Draft Concepts Only) Stuart, Kissimmee, Ft. Myers, Okeechobee, West Palm Beach	Completed - November 2019
Update to Governing Board	Completed - March 2020
Posted Draft Rule Text on website	Completed - April 2020
Round 2 Public Workshops (Zoom) with Draft Rule	Completed May 2020 - June 2020
Deadline for Public Comments on Draft Rule	July 3, 2020
Update to Governing Board	July 9, 2020

Revise Draft Rule and Complete Economic Analysis	July - October 2020
Governing Board Review Notice of Proposed Rule Publish Statement of Economic Regulatory Costs if needed File Proposed Rule with Joint Administrative Procedures Committee	October 2020
Governing Board to Consider Final Adoption of Proposed Rule	December 2020
File with the Legislature for Ratification if needed	December 2020
2021 Regular Legislative Session	March 2021 - May 2021
Process Steps	Current Schedule
Governing Board approval of Notice of Rule Development	Completed - October 2019
Round 1 - Public Workshops in 5 regions: Stuart, Kissimmee, Ft. Myers, Okeechobee, West Palm Beach	Concepts only: Completed - November 2019
Legislative Change	March 2020
Update to Governing Board	Completed - March 2020
Publish Draft Rule Text on website	Completed - April 2020
Round 2 - Zoom Workshops	With Draft Rule Text: Completed May - June 2020
Revise Draft Rule Text	June - September 2020
Governing Board approval Publish Notice of Proposed Rule Publish Statement of Economic Regulatory Costs, if needed File Proposed Rule with JAPC	October 2020
File with the Legislature for Ratification if needed	December 2020
Legislative Ratification, if needed	April 2021

The District is starting the process to update the Watershed Protection Plans for the Lake Okeechobee watershed, and the St. Lucie and Caloosahatchee River watersheds and estuaries. The District will engage the public and stakeholders for input on the planning process for water quality improvements in the Northern Everglades. Watershed Protection Plans will identify projects, activities and programs to improve the quality, quantity, timing and distribution of water in the Northern Everglades to support Basin Management Action Plans (BMAPs) adopted by the Florida Department of Environmental Protection (DEP) to achieve Total Maximum Daily Loads (TMDLs) for the Lake Okeechobee watershed, and the St. Lucie and Caloosahatchee River watersheds and estuaries. The District will consider local and regional expertise in tailoring actions for the most effective holistic approach for water quality improvements, both near- and long-term, as the District develops the latest Watershed Protection Plans.

The South Florida Water Management District's Governing Board voted to dramatically expand the water quality monitoring network in South Florida's water bodies in August

2019. The expanded water quality monitoring network is now complete and fully operational. This expansion of the water quality network in the Northern Everglades and Lake Okeechobee added new water quality monitoring stations and increases both the frequency and parameters to determine water quality. The expanded water quality data will support science for water quality improvements through projects and programs.

Staff Contact and/or Presenter:

Jennifer Reynolds, jreynolds@sfwmd.gov, 561-682-6672

M E M O R A N D U M

TO: Governing Board Members

FROM: Stephen M. Collins, Division Director, Real Estate

DATE: July 09, 2020

SUBJECT: Ground Application Services Work Order Contracts

Agenda Item Background:

Invasive exotic and nuisance plants threaten the operation and maintenance of the Central & Southern Florida project and the health and stability of the natural ecosystems of South Florida. Plant species with the highest potential for impacting District infrastructure and District-managed natural areas are best controlled through an integrated management approach using chemical, biological, and physical methods. The District utilizes contractors to conduct vegetation plantings in the stormwater treatment areas, apply herbicides to various types of aquatic, wetland and upland vegetation using ground application equipment and associated support vehicles, in accordance with District project management directions. The District intends to issue 3-year work order contracts with two 1-year renewal options to firms subject to successful negotiations. The firms listed below may provide ground application services, as needed:

<u>FIRM</u>	<u>CONTRACT NUMBER</u>
Walker Environmental LLC,	
dba Walker Exotic Tree Eradication	4600004251
EarthBalance Corporation	4600004252
Mettauer Environmental, Inc.	4600004253
Applied Aquatic Management, Inc.	4600004254
Aquatic Vegetation Control, Inc.	4600004255
A+ Environmental Restoration, LLC	4600004256
NaturChem, Inc.	4600004257
Environmental Quality, Inc.	4600004258
Ground Level, Inc.	4600004259
Cardno, Inc.	4600004260
Sandhill Native Growers, Inc.	4600004261
Native Creations, Inc.	4600004262

Core Mission and Strategic Priorities:

Vegetation management is required to maintain efficient operation of the C&SF project, maximum performance capability of the STAs and additional CERP projects, environmental integrity of District-managed conservation lands and waters, and to facilitate recreational use of lands open to the public. District project sites include the canals, levees, rights-of-way, and interim project lands. Natural areas include, but are not limited to, the Everglades Water

Conservation Areas, Lake Okeechobee marsh, the Kissimmee River floodplain, the Kissimmee Chain of Lakes and other conservation lands.

Funding Source:

Funding comes from many dedicated funding sources, including State and Federal funds (Water Management Land Trust Fund, Invasive Plant Management Trust Fund, Land Acquisition Trust Fund, Wetland Mitigation, and Comprehensive Everglades Restoration Plan Fund). The total spending authority request is \$90,000,000 for 3-year work order contracts with two 1-year renewal options, for which ad valorem and dedicated funds are subject to Governing Board approval of future years budgets. FWC provides matching funds to the District melaleuca program under a cooperative agreement, 4600002523. USFWS provides funding for Loxahatchee National Wildlife Refuge (WCA1) under Memorandum of Understanding, 4600003179. The District is also reimbursed by the FWC for aquatic plant treatments in sovereign waters of the State, under agreement 4600002640.

Staff Contact and/or Presenter:

Francois Laroche, flaroche@sfwmd.gov, 561-682-6193

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0707

A Resolution of the Governing Board of the South Florida Water Management District to authorize the official ranking of firms and enter into 3-year work order contracts, with two 1-year renewal options with twelve (12) firms: Walker Environmental LLC, dba Walker Exotic Tree Eradication, EarthBalance Corporation, Mettauer Environmental, Inc., Applied Aquatic Management, Inc., Aquatic Vegetation Control, Inc., A+ Environmental Restoration, LLC, NaturChem, Inc., Environmental Quality, Inc., Ground Level, Inc., Cardno, Inc., Sandhill Native Growers, Inc., Native Creations, Inc., subject to successful negotiations to provide Ground Application Services in an amount not-to-exceed \$90,000,000 for all twelve (12) work order contracts, for which Ad Valorem and dedicated funds are subject to Governing Board approval of future years budgets; the District will proceed in ranked order until agreements have been successfully negotiated; providing an effective date.

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate and in the public interest to authorize the official ranking of firms and enter into 3-year work order contracts, with two 1-year renewal options, with twelve (12) firms: Walker Environmental LLC, dba Walker Exotic Tree Eradication, EarthBalance Corporation, Mettauer Environmental, Inc., Applied Aquatic Management, Inc., Aquatic Vegetation Control, Inc., A+ Environmental Restoration, LLC, NaturChem, Inc., Environmental Quality, Inc., Ground Level, Inc., Cardno, Inc., Sandhill Native Growers, Inc., Native Creations, Inc., subject to successful negotiations to provide Ground Application Services in an amount not-to-exceed of \$90,000,000 for all twelve (12) work order contracts, for which ad valorem and dedicated funds are subject to Governing Board approval of future years budgets; the District will proceed in ranked order until contracts have been successfully negotiated

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into contracts with the following firms subject to successful negotiations to provide Ground Application Services for the District's management of vegetation, in an amount not-to-exceed \$90,000,000 for all twelve (12) work order contracts; if negotiations are unsuccessful with any of the firms, the District may proceed with negotiations in ranked order until contracts are successfully negotiated.

Walker Environmental LLC, dba
Walker Exotic Tree Eradication
EarthBalance Corporation
Mettauer Environmental, Inc.
Applied Aquatic Management, Inc.
Aquatic Vegetation Control, Inc.
A+ Environmental Restoration, LLC
NaturChem, Inc.
Environmental Quality, Inc.
Ground Level, Inc.

Contract No. 4600004251
Contract No. 4600004252
Contract No. 4600004253
Contract No. 4600004254
Contract No. 4600004255
Contract No. 4600004256
Contract No. 4600004257
Contract No. 4600004258
Contract No. 4600004259

Cardno, Inc.
 Sandhill Native Growers, Inc.
 Native Creations, Inc.

Contract No. 4600004260
 Contract No. 4600004261
 Contract No. 4600004262

Section 2. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
 DISTRICT, BY ITS GOVERNING BOARD
 By:

 Chauncey P. Goss, II
 Chairman

Attest:

Legal form approved:
 By:

 District Clerk/Secretary

 Office of Counsel

Print name:

M E M O R A N D U M

TO: Governing Board Members

FROM: Candida Heater, Division Director, Administrative Services

DATE: July 09, 2020

SUBJECT: Fiscal Year 2020-2021 Proposed Tentative Budget and Submission of Proposed Millage Rates

Agenda Item Background:

Pursuant to Section 373.536, Florida Statutes, the District shall, on or before July 15 of each year, submit for consideration by the Governing Board a tentative budget.

Pursuant to Section 200.065, Florida Statutes, the District shall, on or before August 4 of each year, advise each county property appraiser within the boundaries of the District of its proposed millage rates for inclusion in the notice of proposed property taxes.

Additional Background:

Below, for the Governing Board's consideration, are the Fiscal Year 2020-2021 proposed millage rates based on the certification of taxable values from all 16 county property appraisers within the District boundaries:

District-at-Large	0.1103 mills
Okeechobee Basin	0.1192 mills
<u>Everglades Construction Project</u>	<u>0.0380 mills</u>
Okeechobee Basin Total Millage Rate	0.2675 mills
District-at-Large	0.1103 mills
<u>Big Cypress Basin</u>	<u>0.1152 mills</u>
Big Cypress Basin Total Millage Rate	0.2255 mills

For illustration purposes, based on the proposed millage rates, a homeowner residing within the Okeechobee Basin (all counties except Collier and northwest Monroe) with a home assessed at \$150,000 less a \$50,000 homestead exemption will pay \$26.75 in property taxes to the District this upcoming fiscal year. A comparable homeowner in the Big Cypress Basin will pay \$22.55 in property taxes.

The county property appraisers will be notified of these rates, upon Governing Board approval, for inclusion in the notice of proposed property taxes which is sent to each property owner by the Property Appraiser in each county within District boundaries.

Approval of Fiscal Year 2020-2021 proposed millage rates for TRIM (truth in millage) purposes by the Governing Board is a key milestone within the annual budget development cycle for statutory compliance.

Core Mission and Strategic Priorities

Certification of the proposed millage rates to county property appraisers for TRIM purposes is

statutorily required under Chapter 200, Florida Statutes.

Staff Contact and/or Presenter

Candida Heater, cheater@sfwmd.gov, 561-682-6486

Julie Maytok, jmaytok@sfwmd.gov, 561-682-6027

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0708

A Resolution of the Governing Board of the South Florida Water Management District to consider the Fiscal Year 2020-2021 proposed tentative budget update and approve submittal of the Fiscal Year 2020-2021 proposed millage rates to county property appraisers for inclusion in the notice of proposed property taxes; providing an effective date.

WHEREAS, Section 373.536, Florida Statutes, provides that on, or before, July 15 of each year, the Governing Board of the District shall receive for consideration a tentative budget; and

WHEREAS, Section 200.065, Florida Statutes, provides that the property appraiser shall certify to each taxing authority the taxable value within the jurisdiction of the taxing authority; and

WHEREAS, Section 200.065, Florida Statutes, provides that within 35 days from July 1, typically August 4 of each year, each taxing authority shall advise each county property appraiser of its Fiscal Year 2020-2021 proposed millage rates; and

WHEREAS, Section 193.023, Florida Statutes, provides that a county property appraiser may request and receive an approved extension for good cause shown or be required to recertify values beyond the initial July 1 statutory deadline, taxing authorities shall calculate or recalculate the millage rates contingent upon receipt of all certified or recertified values.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. Pursuant to Section 200.065, Florida Statutes, the millage rates for the District are calculated based on the certification of taxable values from all 16 county property appraisers within the District boundaries.

Section 2. The Governing Board of the South Florida Water Management District hereby authorizes submission of the Fiscal Year 2020-2021 proposed millage rates to the property appraisers for inclusion in the notice of proposed property taxes:

District-at-Large:	0.1103 mills
Okeechobee Basin:	0.1192 mills
Everglades Construction Project:	0.0380 mills
Big Cypress Basin:	0.1152 mills

Section 3. If needed, the Governing Board of the South Florida Water Management District hereby authorizes submission of the delayed or recalculated millage rates as the proposed Fiscal Year 2020-2021 millage rates to the county property appraisers for inclusion in the notice of proposed property taxes when a county property appraiser recertifies values to the District beyond the initial July 1 statutory deadline.

Section 4. This Resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

Legal form approved:
By:

District Clerk/Secretary

Office of Counsel

Print name:

M E M O R A N D U M

TO: Governing Board Members

FROM: Jennifer Reynolds, Director-Ecosystem Restoration & Capital Projects

DATE: July 09, 2020

SUBJECT: Project Partnership Agreement for the Central Everglades Planning Project South Phase

Agenda Item Background:

As part of the Comprehensive Everglades Restoration Plan (CERP), the Central Everglades Planning Project (CEPP) was federally authorized in 2016 and is a vital component of Everglades restoration. The plan is comprised of three phases for implementation purposes: North, South and New Water. The District seeks to enter into a Project Partnership Agreement (PPA) with the U.S. Department of the Army for the CEPP South phase, which helps deliver more water south into Everglades National Park. The PPA, coupled with the CERP Master Agreement, specifies the terms and conditions for implementing this project. The total estimated Federal project cost is estimated to be \$482,515,400, of which the District, as the non-Federal sponsor for CERP, is responsible for \$241,257,700 in construction costs and \$3,776,000 in annual Operation, Maintenance, Repair, Replacement and Rehabilitation costs.

Funding Source:

The Central Everglades Planning Project is a 50-50 cost share project under the Comprehensive Everglades Restoration Plan. Future financial commitments are contingent on continued funding support from the State of Florida legislative appropriations.

Staff Contact and/or Presenter:

Jennifer Reynolds, jreynolds@sfwmd.gov, 561-682-6672
Megan Jacoby, mjacoby@sfmwd.gov, 561-682-6517

* - Total annual OMRR&R project costs are estimated at \$7,384,000 for which the District is responsible for 50%. Annual OMRR&R costs for recreation features are estimated at \$84,000 for which the District is responsible for 100%.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2020 - 0709

A Resolution of the Governing Board of the South Florida Water Management District authorizing entering into a Project Partnership Agreement with the U.S. Department of the Army for construction, operation, maintenance, repair, replacement, and rehabilitation of the Central Everglades Planning Project South phase, a component of the Comprehensive Everglades Restoration Plan, and affirming the District's financial capability to satisfy the obligations, as the non-Federal Sponsor, described in the Project Partnership Agreement, for which the District will be responsible for providing a 50 percent cost-share subject to Governing Board approval of future fiscal year budgets; providing an effective date. (Contract No. 4600004250)

WHEREAS, the Central Everglades Planning Project (CEPP), a component of the Comprehensive Everglades Restoration Plan, was authorized by Congress by Section 1401(4) of the Water Resources Development Act of 2016 (Public Law 114-322); and

WHEREAS, the South Florida Water Management District (District) and the U.S. Army Corps of Engineers completed a Final Project Implementation Report and Environmental Impact Statement in July 2014, revised December 2014, that recommended implementing the CEPP; and

WHEREAS, the CEPP is comprised of three phases: South, North, and New Water; and

WHEREAS, the District desires to enter into a Project Partnership Agreement with the U.S. Department of the Army (Contract No. 4600004250) to set forth the parties' responsibilities for construction, operation, maintenance, repair, replacement, and rehabilitation for the CEPP South phase; and

WHEREAS, the total initial cost for the CEPP South phase is estimated to be \$482,515,400, including the costs for construction and land acquisition, which will be added to the total cost of the Comprehensive Everglades Restoration Plan to be cost-shared 50-50 on a programmatic basis; and

WHEREAS, the District will be responsible for operating, maintaining, repairing, replacing, and rehabilitating the project features, with a 50% cost-share from the U.S. Army Corps of Engineers; and

WHEREAS, the District will also be responsible for operating, maintaining, repairing, replacing, and rehabilitating the recreation features at 100% District expense, which is currently estimated at \$84,000 per year.

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to authorize entering into a Project Partnership Agreement with the U.S. Department of the Army for construction, operation, maintenance, repair, replacement, and rehabilitation of the Central Everglades Planning Project South phase, a component of the Comprehensive Everglades Restoration Plan, and affirming South Florida Water Management District's financial capability to satisfy the obligations, as the of the non-Federal Sponsor, described in the Project Partnership Agreement, for which the South Florida Water Management District will be responsible for providing a 50 percent cost-share

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER

MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District authorizes entering into a Project Partnership Agreement with the U.S. Department of the Army for construction, operation, maintenance, repair, replacement, and rehabilitation of the Central Everglades Planning Project South phase, a component of the Comprehensive Everglades Restoration Plan, and affirming South Florida Water Management District's financial capability to satisfy the obligations, as the of the non-Federal Sponsor, described in the Project Partnership Agreement, for which the South Florida Water Management District will be responsible for providing a 50 percent cost-share

Section 2. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 9th day of July, 2020.

SOUTH FLORIDA WATER MANAGEMENT
DISTRICT, BY ITS GOVERNING BOARD
By:

Chauncey P. Goss, II
Chairman

Attest:

Legal form approved:
By:

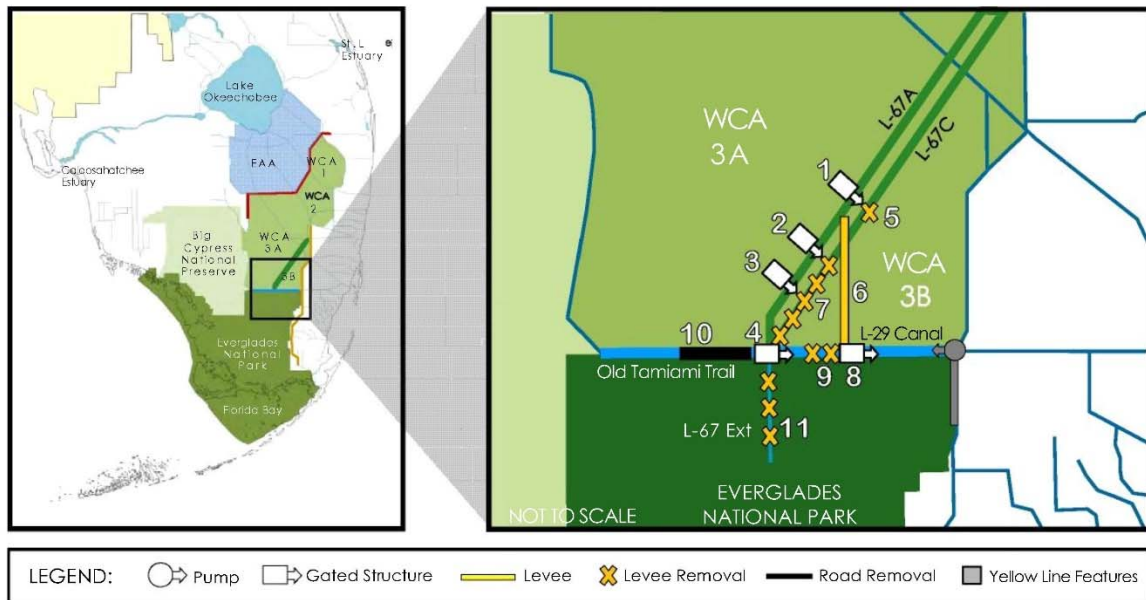
District Clerk/Secretary

Office of Counsel

Print name:

Figure 1

CEPP South Project Features



#	STRUCTURE	STRUCTURE/FEATURE TYPE	CFS	TECHNICAL NOTES
1	S-631	Gated Culvert	500	Delivers water from WCA 3A to 3B, east of L-67D Levee
2	S-632	Gated Culvert	500	Delivers water from WCA 3A to 3B, west of L-67D Levee
3	S-633	Gated Culvert	500	Delivers water from WCA 3A to 3B, west of L-67D Levee
4	S-333 (N)	Gated Spillway w/new canal	1150	Delivers water from L-67A Canal to L-29 Canal; supplements existing S-333 gated spillway
5		L-67C Levee Removal Gap		Gap, ~ 6000 feet (corresponding to S-631)
6	L-67D	Blue Shanty Levee		Levee, ~ 8.5 miles, connecting from L-67A to L-29 (6 feet high, 14-foot crest width, 3:1 side slopes)
7		L-67C Levee Removal		Complete removal of ~ 8 miles from New Blue Shanty Levee (L-67D) south to intersection of L-67A/L-67C; L-67C canal is not backfilled
8	S-355W	Gated Spillway	1230	Maintains water deliveries to eastern L-29 Canal
9		Levee removal (L-29)		Removal of ~4.3 miles between L-67A and Blue Levee intersection with L-29 Levee
10		Removal of remnants of Old Tamiami Trail roadway		Removal of ~6 miles of roadway west of L-67 Extension
11		L-67 Extension Levee Removal and Canal Backfill)		Complete removal of ~ 5.5 miles of remaining L-67 Extension, including S-346 culvert
12	S-356	Pump Station	1000	Provides seepage management for WCA 3B and NESRS stages

M E M O R A N D U M

TO: Governing Board Members

FROM: Candida Heater, Division Director, Administrative Services

DATE: July 09, 2020

SUBJECT: Monthly Financial Report

M E M O R A N D U M

TO: Governing Board Members

FROM: Candida Heater, Director, Administrative Services Division

DATE: July 9, 2020

SUBJECT: Monthly Financial Statement – May 31, 2020

This report provides an overview of the District's unaudited financial activity for Fiscal Year 2019-2020, including revenue collections, expenditures and encumbrances made against the \$1.4 billion current budget, including a \$386.7 million encumbrance carryforward from Fiscal Year 2018-2019. The carryforward is predominantly planning, design and construction of large restoration projects. Encumbrances represent orders for goods and services which have not yet been received. Attached is a summary in the State Program format in compliance with Section 373.536(4)(e), Florida Statutes, which states that each District shall provide a monthly financial statement in the form and manner prescribed by the Department of Financial Services to the District's Governing Board and make such monthly financial statement available for public access on its website.

Summary of Revenue Sources - New operating revenue collected (excluding prior year reserves) totals \$511.8 million. Including reserves, the total Fiscal Year 2019-2020 revenue sources collected were 59.8% of budget or \$823.8 million.

- Taxes collected in the amount of \$284.7 million or 96.4% were distributed to the District through the Tax Collectors within the District's 16 counties. Compared to the five-year average of 98.2%, as of the end of May, tax collections are 1.8% lower in this fiscal year. The total amount of Ad Valorem the District levied was \$296.1 million and was discounted to \$281.4 million for budgeting purposes.
- Intergovernmental revenues of \$190.8 million were recognized as of the end of May. Intergovernmental revenues are comprised of local, state and federal sources with the majority being allocated by the Florida Legislature. Specific funding sources include Save Our Everglades Trust Fund, Land Acquisition Trust Fund, Florida Fish and Wildlife Conservation Commission, Natural Resources Conservation Service and U.S. Army Corps of Engineers federal cost share of transferred projects. The majority of these revenues are received through reimbursement requests submitted monthly or quarterly based on actual expenses incurred.
- Interest on Invested Funds of \$6.7 million was recognized as of the end of May. Last year, at this time, \$8 million was recognized.
- License and Permit Fees of \$4 million have been received, including \$1.3 million from Lake Belt mitigation fees, \$134,325 from Corkscrew Mitigation Bank, \$2 million from environmental resource permits, and \$364,200 from water use permits.

- Other budgeted revenues of \$25.7 million received include leases, sale of District property and revenue supporting District self-insured programs:
 - \$1.5 million in rock mining royalties have been collected and \$2.7 million in lease revenues, for a total of \$4.2 million. The timing of revenues received is based on the fee schedules within the agreements.
 - \$625,804 has been collected from cash discounts refunded from prior year expenditures, civil penalties, enforcement fees, and sale of recycled oil and scrap metal.
 - \$3.2 million from the sale of District property has been received. This amount includes \$2,975,460 as the third and final installment payment for 581.24 acres in Palm Beach County.
 - \$17.6 million in revenues recognized through the end of May for the District's self-insured programs. This includes District funding as well as premiums paid by employees, retirees, and COBRA participants.

Summary of Expenditure and Encumbrance - the District has spent **\$373.6 million** and has encumbered **\$511.6 million** of its budget. The District has obligated (encumbrances plus expenditures) **\$885.2 million** of its budget.

- **Water Resources Planning and Monitoring Program** includes water supply and other water resources planning, development of minimum flows and levels and technical assistance (including local and regional plan and program review). District regional water supply plans for each planning area address the unique resources and needs of specific regions – Lower West Coast, Upper and Lower East Coast, Upper and Lower Kissimmee Basin. District work includes research, data collection, modeling, environmental monitoring and assessment activities that support various regulatory-driven mandates/agreements and comply with federal and state-issued permits for all restoration projects. Of the \$58.6 million budgeted for this program, the District has obligated \$39.8 million: \$30.5 million expended and \$9.3 million encumbered.
- **Land Acquisition, Restoration and Public Works Program** includes the acquisition, planning, design, engineering and construction of all restoration projects unique to the District including: Kissimmee River Restoration Project, Northern Everglades and Estuaries Protection Program (NEEPP), Everglades Forever Act (EFA), Critical Restoration, Comprehensive Everglades Restoration Plan (CERP) and Restoration Strategies (RS). This category also includes water resource development and water supply assistance projects, water control projects and cooperative projects. Of the \$905.2 million budgeted for this program, the District has obligated \$603.2 million: \$183 million expended and \$420.2 million encumbered.
- **Operation and Maintenance of Lands and Works Program** includes all operation and maintenance of facilities, flood control and water supply structures, lands, and other works authorized by Chapter 373, Florida Statutes. The District operates and maintains a multi-purpose water management system comprised of approximately 2,179 miles of canals and 2,131 miles of levees/berms, 87 pump stations, 781 water control structures and weirs, and 621 project culverts, throughout the Central and Southern Florida (C&SF) Project, Big Cypress Basin system, Storm Water Treatment Areas (STA's), CERP and RS completed projects. Of the \$349.3 million budgeted for this program, the District has obligated \$199.2 million: \$120.9 million expended and \$78.3 million encumbered.

Governing Board Members
 July 9, 2020
 Page 3

- **Regulation Program** includes water use permitting, water well construction permitting, water well contractor licensing, environmental resource and surface water management permitting, permit administration and enforcement, and any delegated regulatory program. Additional regulatory enforcement activities include the Southern and Northern Everglades Nutrient Source Control Program, and the Everglades Long-Term Plan, which mandates the implementation of Best Management Practices (BMP) programs in the Everglades Construction Project (ECP) and non-ECP Basins for the Southern Everglades. Of the \$21.9 million budgeted for this program, the District has obligated \$13.1 million: \$12 million expended and \$1.1 million encumbered.
- **Outreach Program** includes all environmental education activities, such as water conservation campaigns and water resource education; public information activities; activities relating to local, regional, state, and federal governmental affairs; and all public relations activities, including public service announcements and advertising in any media. Of the \$1.2 million budgeted for this program, the District has obligated \$741,775: \$737,822 is expended and \$3,953 is encumbered.
- **District Management and Administration** includes all Governing and Basin Board support, executive support; management information systems, unrestricted reserves; and general counsel, ombudsman, human resources, budget, finance, audit, risk management, and administrative services. Additionally, this program includes property appraiser, tax collector & self-insurance fees in support of district and basin activities. Of the \$40.3 million budgeted for this program, the District has obligated \$29.1 million: \$26.5 million expended and \$2.6 million encumbered.

We hope this report will aid in understanding the District's financial condition as well as expenditure performance against the approved budget. If you have any questions, please feel free to contact me at (561) 682-6486.

CJH/MD
 Attachment

South Florida Water Management District
Statement of Sources and Uses of Funds (Unaudited)
For the month ended: May 31, 2020. Percent of fiscal year completed: 66.7%

	CURRENT BUDGET	ACTUALS THROUGH May 2020	VARIANCE (UNDER) / OVER BUDGET	ACTUALS AS A % OF BUDGET
Sources				
Taxes ¹	\$ 295,312,890	\$ 284,706,506	\$ (10,606,384)	96.4%
Intergovernmental Revenues	716,230,929	190,796,664	(525,434,265)	26.6%
Interest on Invested Funds	7,860,000	6,664,680	(1,195,320)	84.8%
License and Permit Fees	3,311,000	4,007,165	696,165	121.0%
Other ²	41,843,307	25,652,789	(16,190,518)	61.3%
SUB-TOTAL OPERATING REVENUES	1,064,558,126	511,827,804	(552,730,322)	48.1%
Reserves	311,982,898	311,982,898	-	100.0%
Total Sources	\$ 1,376,541,024	\$ 823,810,703	\$ (552,730,322)	59.8%

¹ Includes Ad Valorem and Agricultural Privilege Taxes

² Includes Leases, Sale of District Property, and Self Insurance Premiums

	CURRENT BUDGET	EXPENDITURES	ENCUMBRANCES ³	AVAILABLE BUDGET	% EXPENDED	% OBLIGATED ⁴
Uses						
Water Resources Planning and Monitoring	\$ 58,597,262	\$ 30,477,236	\$ 9,340,501	\$ 18,779,525	52.0%	68.0%
Land Acquisition, Restoration and Public Works	905,214,009	183,036,640	420,203,177	301,974,192	20.2%	66.6%
Operation and Maintenance of Lands and Works	349,302,728	120,896,091	78,256,506	150,150,131	34.6%	57.0%
Regulation	21,924,754	12,026,471	1,113,179	8,785,104	54.9%	59.9%
Outreach	1,217,043	737,822	3,953	475,269	60.6%	60.9%
District Management and Administration	40,285,228	26,473,024	2,636,140	11,176,064	65.7%	72.3%
Total Uses	\$ 1,376,541,024	\$ 373,647,283	\$ 511,553,456	\$ 491,340,285	27.1%	64.3%

³ Encumbrances represent unexpended balances of open purchase orders and contracts.

⁴ Represents the sum of expenditures and encumbrances as a percentage of the current budget.

This unaudited financial statement is prepared as of May 31, 2020, and covers the interim period since the most recent audited financial statements.

M E M O R A N D U M

TO: Governing Board Members

FROM: Paula Cobb, General Counsel

DATE: July 09, 2020

SUBJECT: General Counsel's Report

**TOTAL NUMBER OF AUTHORIZATIONS
APPROVED BY THE EXECUTIVE DIRECTOR
From: June 1, 2020 to June 30, 2020**

Environmental Resource Permits		Total
a.	Conceptual Approvals	1
b.	Conceptual Modifications	0
c.	New Construction and Operation (C&O)	1
d.	Modifications of Previously Approved C&O	0
e.	Mitigation Banks / Offsite Mitigation Areas	0
f.	Wetland Restoration Projects	0
		2
 Water Use Permits		
a.	Renewals	1
b.	Modifications	1
c.	New Water Use	0
d.	Master Dewatering	2
		4
		6
ERP and WU Total = 6		

**TABLE OF CONTENTS
INDIVIDUAL PERMITS ISSUED BY
AUTHORITY DELEGATED TO EXECUTIVE DIRECTOR
FROM June 1, 2020 TO June 30, 2020**

I PERMIT APPLICATIONS	PAGES
HENDRY COUNTY	2
LEE COUNTY	4
PALM BEACH COUNTY	8
ST LUCIE COUNTY	10

1.	TECAN 1 GROUNDWATER	APPL. NO.	200602-8
	OKEELANTA CORPORATION	PERMIT NO.	26-01330-W
	SEC 28 TWP 44S RGE 34E	ACREAGE:	588.00
		LAND USE:	DIV & IMP
			SECONDARY USER
			AGRICULTURAL

PERMIT TYPE: WATER USE EXISTING/PREVIOUSLY PERMITTED
WATER SOURCE: BOLLES CANAL,LOWER TAMIAMI AQUIFER
ALLOCATION: 197.32 MILLION GALLONS PER MONTH
LAST DATE FOR AGENCY ACTION: AUGUST 31, 2020

Attachment: IP Issued by ED report for June (5174 : Executive Director's Report - Drew Bartlett)

Summary Report for Application Number: 200602-8, Project Name: TECAN 1 GROUNDWATER,
Default Date: 8/31/2020

Project Summary:

Okeelanta Corporation is requesting a water use permit as a secondary independent user of a Diversion and Impoundment for a project known as Tecan 1 Groundwater to add groundwater as a new source to supplement the water lost throughout the conveyance system. The use is for the continued agricultural irrigation of 588 acres of sugarcane in Hendry County. The project is located within the Everglades Agricultural Area and Lake Okeechobee Service Area (LOSA) restricted allocation basin. Although there will be an increase, due to supplemental groundwater, to the annual allocation from 1,017.24 million gallons (MG) to 1,525.86 MG and to the maximum month allocation from 131.55 MG to 197.32 MG, there is no increase in surface water allocation from LOSA.

- **Water Source**
Bolles Canal (via the L-25 Canal) and the lower Tamiami aquifer.
- **Annual Allocation**
The annual allocation for the Project is 1,525.86 million gallons.
- **Impact Assessment**
Based on the impact assessment submitted with the application, the use will not cause harm to the water resource availability, wetlands, existing legal users, and existing off-site land uses or result in the migration of saline water or pollution.

Project Description:

Tecan 1 Groundwater (Project) is located within the Everglades Agricultural Area, north of Country Road 835 and east of the L-1 Canal in Hendry County, as shown in Exhibits 1 through 3. This application is proposing to add groundwater as a new source to supplement surface water lost throughout the conveyance system. Consequently, there will be allocation increases (i.e. from 1,017.24 million gallons [MG] to 1,525.86 MG annually and from 131.55 MG to 197.32 MG maximum month). The irrigated acreage and crop types remain unchanged. Operational Plan: Primary withdrawals are from one existing surface water pump located on the L-25 Canal, which receives water from the Bolles Drainage District (Water Use Permit 50-00880-W). Due to the conveyance losses of surface water over large distances, a secondary groundwater source, via four proposed LTA wells, is required to provide the irrigation demand for the sugar cane. The LTA secondary source is to be used when the total allocation from the Bolles Canal has been reached. The pump specification details are shown on Exhibit 4, and the well specifications details are shown on Exhibit 5.

Projected Water Use Demands:

The recommended allocation for agricultural irrigation of 588 acres of sugar cane using flood irrigation system/seepage was calculated using the Modified Blaney-Criddle method as described in Subsection 2.3.1.C of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). Using this method, the total irrigation demands were calculated at 197.32 MG maximum month and 1,525.86 MG annually. Calculations of the supplemental irrigation requirements are detailed on Exhibit 6. The allocations from Bolles Drainage District are limited to the historic uses of 1,017.24 MG annually and 131.55 MG maximum month. The LTA allocations are limited to 508.62 MG annually and 65.77 maximum month to supplement conveyance losses.

Attachment: IP Issued by ED report for June (5174 : Executive Director's Report - Drew Bartlett)

1.	HUDSON CREEK	APPL. NO.	181015-895
	GA-PINNACLE CAPE CORAL, LLC	PERMIT NO.	36-101043-P
		ACREAGE:	871.56
		LAND USE:	RESIDENTIAL

PERMIT TYPE: ENVIRONMENTAL RESOURCE (CONCEPTUAL APPROVAL)

LAST DATE FOR AGENCY ACTION: JUNE 29, 2020

2.	VERDANA VILLAGE IRRIGATION	APPL. NO.	200226-5
	CAMERATTA COMPANIES, LLC	PERMIT NO.	36-00883-W
	SEC 29,30,31,32 TWP 46S RGE 27E	ACREAGE:	2138.00
		LAND USE:	AGRICULTURAL

PERMIT TYPE: WATER USE MODIFICATION

WATER SOURCE: SURFICIAL AQUIFER SYSTEM, SANDSTONE AQUIFER, ON-SITE LAKE(S)

ALLOCATION: 297.85 MILLION GALLONS PER MONTH

LAST DATE FOR AGENCY ACTION: JULY 17, 2020

3.	VERDANA VILLAGE	APPL. NO.	200115-2632
	TPL-LAND-SUB, LLC	PERMIT NO.	36-103223-P
		ACREAGE:	959.90
		LAND USE:	RESIDENTIAL

PERMIT TYPE: ENVIRONMENTAL RESOURCE (NEW CONSTRUCTION/OPERATION)

LAST DATE FOR AGENCY ACTION: JULY 17, 2020

Project Summary

This Environmental Resource Permit authorizes the Conceptual approval of a stormwater management (SWM) system serving 871.56 acres of residential development within a 1,496.95 acre site for a project known as Hudson Creek, the remainder of the site consists of preserves outside of the controlled basin. The proposed Hudson Creek development will consist of a single-family residential development with associated amenity centers and supporting infrastructure.

- **Water Quality**

Water quality treatment will be provided in wet detention lakes and dry detention ponds. The project will provide 79.77 acre-feet of water quality treatment volume exceeding the required volume of 71.09 acre-feet. Pursuant to the Applicant's Handbook Volume II, Section 4.2 the water quality volume requirements were evaluated based upon the greater of 1 inch over the controlled basin area and 2.5 inches times the percentage of imperviousness. Issuance of this permit constitutes certification of compliance with state water quality standards in accordance with Rule 62-330.062, FAC.

- **Water Quantity**

The project discharge of 83.22 CFS is within the allowable discharge of 84.23 CFS for the subject area, per the Lee County Surface Water Management Plan (June 1991).

- **Wetlands**

The project mitigates for the proposed wetland impacts through on-site mitigation. The project site contains 703.65 acres of wetlands and 1.61 acres of other surface waters (OSW) totaling 705.26 acres. The project will result in 156.93 acres of direct wetland impacts. Pursuant to Section 10.2.1 of Applicant's Handbook Volume I (Volume I), the applicant reduced the amount of direct wetland impacts from 177.09 acres initially proposed, to 156.93 acres of direct wetland impacts now being authorized. In addition, the applicant also increased the total amount of preserve proposed for the project, from 649.48 acres initially proposed, to 668.41 acres of preserve now being authorized. The amount of required mitigation was determined using the Uniform Mitigation Assessment Method (UMAM) in Chapter 62-345, F.A.C. There is no net loss of wetland or other surface water functional value associated with the proposed project (Section 10.3.3.1, Vol. I).

- **Fish, Wildlife, and Listed Species**

Pursuant to Section 10.2.2 of the Applicant's Handbook, Volume 1, through review and coordination with FWC, there is reasonable assurance that the proposed project will not impact the values of wetland and other surface water functions so as to cause adverse impacts to the abundance, diversity, or habitat of fish, wildlife and listed species.

Additional Information:**Site Description/Proposed Project**

The site is located approximately 5 miles north of Diplomat Parkway along the east side of Burnt Store Road in Cape Coral, Lee County, Florida. A location map is attached as Exhibit 1.0. There are no permitted SWM facilities within the subject property. The property is currently undeveloped and is comprised of a mix of uplands and wetlands and is sparsely wooded with a number of ATV trails traversing the parcels.

Wetlands and Other Surface Waters

The project site contains 703.65 acres of wetlands and 1.61 acres of other surface waters (OSW) totaling 705.26 acres. The wetlands can generally be described as hydric open lands, hydric melaleuca, willow, hydric pine, freshwater marsh, wet prairie, and hydric disturbed land, all with varying levels of exotic vegetation. The OSW can generally be described as an upland-cut ditch along the northern project boundary. The project will result in 156.93 acres of direct wetland impacts. Pursuant to Section 10.2.1 of Applicant's Handbook Volume I (Volume I), the applicant reduced the amount of direct wetland impacts from 177.09 acres initially proposed, to 156.93 acres of direct wetland impacts now being authorized. In addition, the applicant also increased the total amount of preserve proposed for the project, from 649.48 acres initially proposed, to 668.41 acres of preserve now being authorized.

Fish, Wildlife, and Listed Species

Pursuant to a listed species survey conducted from August 2017 through January 2018 and commentary from the Florida Fish and Wildlife Conservation Commission (FWC), the wetlands or surface waters to be impacted provide habitat for wetland-dependent species including various wading birds and least terns. The proposed mitigation will provide or improve habitat for wetland-dependent and aquatic species. No aquatic or wetland-dependent listed species or species having special protection were observed to be using the uplands within the project for nesting or denning.

Summary Report for Application Number: 200226-5, Project Name: VERDANA VILLAGE IRRIGATION Default
Date: 7/17/2020

Project Summary:

TPL-Land-Sub, LLC is requesting modification of their water use permit for a project known as Verdana Village Irrigation located in Lee County. The purpose of this application is to modify Water Use Permit 36-00883-W and Water Use Permit 36-00327-W by combining the two existing water use permits into one permit (36-00883-W) for the irrigation of 482 acres of potatoes, 1,134 acres of citrus and 312.2 acres of landscape. The permit is bifurcated to allow the continuation of agricultural irrigation for one year and residential landscape irrigation after that.

- **Water Source**

On-site lakes, surficial aquifer system, Sandstone aquifer

- **Water Use Volume**

1,506 million gallons per year – Agriculture for year 1

407 million gallons per year – Landscape Irrigation for year 2 through 20

After the full transition from agricultural to landscape the modified WUP 36-00883-W will result in approximately 74% reduction of current allocation on an annual basis and 83% reduction of current allocation on a maximum monthly basis.

- **Impact Assessment**

Based on the impact assessment submitted with the application the use will not cause harm to water resource availability, wetlands, existing legal users, and existing off-site land uses or result in the migration of saline water or pollution.

Project Description:

Verdana Village (Project) is an existing agricultural irrigation site located in southeastern Lee County, southeast of the intersection of Corkscrew Road and Six L's Farm Road (Exhibits 1 and 2). The Applicant has proposed to continue agricultural irrigation for one year until the planned modification of the site to a residential development with landscape irrigation in accordance with the Environmental Resource Permit (ERP) 36-103223-P (Application 200115- 2632). Water Use Permit (WUP) 36-00883-W is located on the south side of Corkscrew Road, approximately eight miles east of Interstate 75, in Lee County.

In this application, the Permittee requests to merge WUP 36-00883-W and WUP 36-00327-W, including the centrally located 40-acre parcel, into WUP 36-00883-W (Exhibit 3). The WUP 36-00883-W is currently permitted for the irrigation of 482 acres of potatoes by using 13 existing SAS wells, and the adjacent WUP 36-00327-W authorizes the irrigation of 1,134 acres of citrus by utilizing 19 existing SAS wells and 4 existing SSA wells. Additionally, the Permittee requests the continuation of irrigation of 482 acres of potatoes and 1,134 acres of citrus at their current allocations until approximately June 2021. After that time, the merged WUP will be modified to remove all agricultural operations and transition the site into the new proposed residential development, as shown on Exhibit 2C. All wells associated with the agricultural operation (32 existing SAS wells and 4 SSA wells) will be properly plugged and abandoned in phases once the transition to residential development begins.

The proposed Project for residential development encompasses approximately 2,138.26 acres and will include 567.7 acres of development area, 45.6 acres of which will be utilized for amenity centers and 17.1 acres will be utilized for a commercial development. The Permittee assumes that approximately 55% of the total development area (residential, commercial and amenity areas) will be irrigated. Therefore, the requested irrigated area is approximately 312.2 acres. The proposed Project for landscape irrigation will utilize both groundwater and captured stormwater. The groundwater will be used to supplement surface water irrigation within the Project's stormwater management system (on-site lakes). Four proposed surface water pumps will provide surface water withdrawals from the interconnected on-site lakes and four SAS wells will be utilized to provide groundwater recharge into the lake system.

Projected Water Use Demands:

The recommended allocations for flood/seepage irrigation of 482 acres of potatoes at the Project (109.66 million gallons (MG) maximum month and 421.38 MG annual) are based on the Supplemental Irrigation Requirements as defined in Subsection 2.3.1.C of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). Calculations of the supplemental irrigation requirements for the existing agricultural operation are listed on Exhibit 5A. The recommended allocations for micro-sprinkler

irrigation of 1,134 acres of citrus at the Project (188.18 MG maximum month and 1,085.54 annual) are shown on Exhibit 5B. Agricultural operations will cease on July 31, 2021. The assessments for the modifications proposed in this application are based on the proposed reduction in withdrawals that will occur at the Project, as limited by the irrigation demand for residential landscape irrigation. Calculations of the irrigation requirements for 312.2 acres of residential landscape (51.23 MG maximum month and 407.48 MG annual) are listed on Exhibit 5C. Therefore, the total maximum month and annual allocations for the Project are 297.85 MG and 1,506.92 MG, respectively, until July 31, 2021; and 51.23 MG and 407.48 MG from August 1, 2021 through May 31, 2040. A freeze protection allocation of 21.05 MG per day is recommended based on the rated capacity of the Project's existing withdrawal facilities that are used for citrus irrigation.

Project Summary

This Environmental Resource Permit authorizes construction and operation of a stormwater management (SWM) system serving 959.9 acres of residential development within a 2,138.30-acre site for a project known as Verdana Village in Lee County. This authorization merges two previously permitted projects, Pepperland (Permit No. 36-08885-P, Application No. 160520-30) and Verdana (Permit No. 36-08972-P, Application No. 160930-3) and incorporates a new 40 acre parcel, all with a unified stormwater management system

- **Water Quality**

Water quality treatment is provided in wet and dry detention areas. The proposed system provides 97.19 acre-feet of water quality treatment volume. Pursuant to Appendix E, Applicant's Handbook Volume II, this includes an additional 50% treatment volume above the requirements in Section 4.2 of Volume II and site-specific nutrient loading analyses to provide reasonable assurance that the project will not have an adverse impact on the quality of the downstream receiving body. Issuance of this permit constitutes certification of compliance with state water quality standards in accordance with Rule 62-330.062, FAC.

- **Water Quantity**

The project meets the allowable discharge rate of 159 cfs, per the Lee County Surface Water Management Plan (June 1991).

- **Wetlands**

The project area contains 143.76 acres of wetlands and 101.27 acres of other surface waters (OSW) totaling 245.03 acres. The wetland boundaries for the site were established in 2001. While this project does not propose wetland impacts, subsequent to the 2001 delineation, it was determined that there was a loss of 10.9 acres from the original wetland delineation. These areas no longer exhibit wetland characteristics. This loss will be treated as direct wetland impacts and will be mitigated through enhancement and preservation of 19.85 acres of on-site wetlands and 6.42 acres of associated upland buffer pursuant to this permit.

- **Fish, Wildlife, and Listed Species**

Pursuant to Section 10.2.2 of the Applicant's Handbook, Volume 1, through review and coordination with FWC, there is reasonable assurance that the proposed project will not impact the values of wetland and other surface water functions so as to cause adverse impacts to the abundance, diversity, or habitat of fish, wildlife and listed species.

Additional Information:

Site Description/Proposed Project

The site is located on the south side of Corkscrew Road, with the western entry approximately 3.5 miles east of the intersection of Corkscrew Road and Alico Road, in Estero, Lee County, Florida. Existing conditions within the project area consist of primarily agriculturally cultivated land as well as wetland and upland areas. The approximately 640 acres located on the western side of the project area was originally permitted for agricultural operations under Application No. 931025-12, Permit No. 36-02292-S. Subsequently, this area received an Environmental Resource Permit for residential development under Application No. 160520-30, Permit No. 36-08885-P for a project known as Pepperland Ranch. The approximately 1,454 acres located on the eastern side of the project area was originally permitted for agricultural operations under two permits (Permit No. 36-00326-S and Permit No. 36-00327-S). Subsequently, this area received an Environmental Resource Permit for residential development under Application No. 160930-3, Permit No. 36-08972-P for a project known as Verdana. These properties, along with an unpermitted 40-acre parcel in the center of the project, are being combined into a single project with a unified stormwater management system known as Verdana Village.

Wetlands and Other Surface Waters

The project area contains 143.76 acres of wetlands and 101.27 acres of other surface waters (OSW) totaling 245.03 acres. The wetlands can be generally described as hydric melaleuca, willow, cypress, cypress/pine, cypress/pine/cabbage palm, hydric pine, mixed wetland forest, freshwater marsh, and hydric disturbed land all with varying levels of exotic infestation. The OSW can generally be described as agricultural ditches and OSW located on disturbed land. While the project will not result in direct or secondary wetland impacts, there has been a loss of 10.9 acres of wetlands from the wetland areas established in 2001. This loss will be treated as direct impacts and mitigated through enhancement and preservation of 19.85 acres of on-site wetlands and 6.42 acres of associated upland buffers.

Fish, Wildlife, and Listed Species

Pursuant to listed species surveys in conjunction with a protected species management and human-wildlife coexistence plan dated January 2020, the wetlands or OSW to be impacted provide habitat for wetland-dependent species including the American alligator, various wading birds, Big Cypress fox squirrel, Florida black bear, and Florida panther. The proposed mitigation will provide or improve habitat for wetland-dependent or aquatic species. The project's on-site conservation lands were designed to align with Corkscrew Regional Mitigation Bank and the conservation lands within The Place at Corkscrew (located north of the project) to Panther Island Mitigation Bank (located south of the project site). This has allowed the project site to accommodate wildlife corridors along the east and west boundaries.

1. CRESSWIND PALM BEACH
KH WESTLAKE LLC
SEC 1,6, 7 TWP 43,43S RGE 40,41E

APPL. NO. 200312-1
PERMIT NO. 50-11882-W
ACREAGE: 191.87
LAND USE: DEWATERING

PERMIT TYPE: WATER USE PROPOSED
WATER SOURCE: WATER TABLE AQUIFER
ALLOCATION: NOT REQUIRED
LAST DATE FOR AGENCY ACTION: JULY 10, 2020

Attachment: IP Issued by ED report for June (5174 : Executive Director's Report - Drew Bartlett)

Summary Report for Application Number: 200312-1, Project Name: CRESSWIND PALM BEACH, Default Date: 7/10/2020

Project Summary:

This master dewatering water use permit authorizes dewatering to facilitate the construction and installation of nine lakes and associated storm and sewer utilities for a project known as Cresswind Palm beach located in Palm Beach County.

- **Water Source**
Water table aquifer.
- **Estimated Dewatering Volume**
The estimated dewatering volume for the Project is 898.28 million gallons.
- **Dewatering Effluent Disposal**
All dewatering effluent will be retained on-site in previously constructed lakes until it percolates back into the WTA. No off-site discharge will occur.
- **Impact Assessment**
Based on the impact assessment submitted with the application the use will not cause harm to water resource availability, wetlands, existing legal users, and existing off-site land uses or result in the migration of saline water or pollution.

Additional Information:

Project Description:

Cresswind Palm Beach (Project) is a proposed residential development located approximately half a mile east of Seminole Pratt Whitney Road and 2.5 miles north of Okeechobee Boulevard in central Palm Beach County (Exhibits 1 through 3). Open pits/trenches shall be dewatered using 8-inch diameter centrifugal pumps that may be attached to a well point system. The facility specifications are shown in Exhibit 4. In order to complete all the proposed phases (i.e. Phases 2 through 6), the Applicant provided a tentative schedule that potentially anticipates up to six years in duration (Exhibit 5). Site-specific plans were not available at the time of this water use permit application; therefore, a Master Dewatering Permit has been requested, pursuant to Subsection 2.3.2.B of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). For future proposed dewatering activities, site-specific plans (Special Permit Condition 21) that include depth, duration, areal extent, and an impact assessment of the dewatering activities shall be submitted at least two weeks prior to the commencement of dewatering operations. Operational Plan: The maximum extent of the dewatering activities will be to an elevation of -5.0 feet North American Vertical Datum (NAVD), which is approximately 25 feet below the average land surface elevation. All dewatering effluent will be retained on-site in previously constructed lakes until it percolates back into the WTA. No off-site discharge will occur, pursuant to Special Permit Condition 13. If exceptional storm conditions occur that exceed the on-site storage capacity, the Permittee is required to cease dewatering operations until adequate storage is available to contain all of the dewatering effluent on-site. Dewatering details are provided in Exhibit 6 Pages 1 through 5. Permit History: Under this water use application, the Applicant also provided site-specific plans for evaluating dewatering operations associated with Phase 2, which includes construction of two lakes (W-6 and W-7) and associated utility installation within Phase 2 boundaries (Exhibit 6 Pages 3 and 4). Phase 1 of the Project was completed under Water Use Permit 50-11673-W/Application 190207-14.

Projected Water Use Demands:

As stipulated in Subsection 2.3.2.B.2 of the AH, neither maximum month nor annual withdrawal volumes are specified in the recommended conditions for dewatering water use permits. However, the Applicant has estimated that the maximum day and total Project withdrawal volumes are 2.16 million gallons (MG) and 898.28 MG (i.e. 604.8 MG for the lake construction, 168.48 MG for Phase 2 utilities, and 125.0 MG for Phases 3-6 utilities) as shown in Exhibit 6 page 2 and Exhibit 7.

Attachment: IP Issued by ED report for June (5174 : Executive Director's Report - Drew Bartlett)

1. RIVERLAND DEWATERING	APPL. NO.	200422-12
RIVERLAND/KENNEDY II, LLC	PERMIT NO.	56-03771-W
SEC 16-22,27-28,32-34 TWP 37S RGE 39E	ACREAGE:	3845.00
	LAND USE:	DEWATERING

PERMIT TYPE: WATER USE PROPOSED
WATER SOURCE: WATER TABLE
ALLOCATION: NOT REQUIRED
LAST DATE FOR AGENCY ACTION: AUGUST 18, 2020

Summary Report for Application Number: 200422-12, Project Name: RIVERLAND DEWATERING, Default Date: 8/18/2020

Project Summary:

This master dewatering water use permit authorizes dewatering to facilitate the construction and installation of 54 lakes and associated storm and sewer utilities for a project known as Riverland in St. Lucie County.

- **Water Source**
Water table aquifer (WTA)
- **Estimated Dewatering Volume**
The estimated dewatering volume for the Project is 2,300 million gallons.
- **Dewatering Effluent Disposal**
All dewatering effluent will be retained on-site in previously constructed lakes until it percolates back into the WTA. No off-site discharge will occur.
- **Impact Assessment**
Based on the impact assessment submitted with the application the use will not cause harm to water resource availability, wetlands, existing legal users, and existing off-site land uses or result in the migration of saline water or pollution.

Project Description:

Riverland (Project) is a proposed residential development located east of I-95 between Range Line Road and SW Community Boulevard, north of Canal C-23 in central St. Lucie County (Exhibits 1 through 3). Dewatering will occur in phases (i.e. 1 through 4, 5 through 9 east and 5 through 9 west). The Applicant anticipates that each phase will occur over a two-year duration with active dewatering occurring on 365 days to accommodate for construction breaks between phases. In order to complete all the proposed phases (i.e. Phases 1 through 9 and Exhibit 5, the Applicant anticipates up to 13 years in duration. Site-specific plans were not available at the time of this water use permit application; therefore, a Master Dewatering Permit has been requested, pursuant to Subsection 2.3.2.B of the Applicant's Handbook (AH) for Water Use Permit Applications within the South Florida Water Management District (District). For future proposed dewatering activities, site-specific plans (Special Permit Condition 22) that include depth, duration, areal extent, and an impact assessment of the dewatering activities shall be submitted at least two weeks prior to the commencement of dewatering operations. No dewatering activities are allowed prior to approval of each site-specific plan. Environmental Resource Permits will be approved concurrently with each site-specific plan (Special Permit Condition 21). Operational Plan: The maximum extent of the dewatering activities will be to an elevation of 2.5 feet North American Vertical Datum (NAVD), which is approximately 26 feet below the average land surface elevation. The lakes shall be dewatered using 10-inch diameter pumps, with a pump capacity of 1,600 gallons per minute (GPM). Most smaller lakes will only need one pump to facilitate dewatering whereas the larger lakes will require two pumps. The utilities and storm drain system will utilize an 8-inch diameter pump (capacity of 600 GPM) attached to a well point system. The facility specifications are shown in Exhibit 4. All dewatering effluent will be retained on-site in temporary holding basins and previously constructed lakes until it percolates back into the WTA. Recharge trenches will be constructed as shown on Exhibit 5. The recharge trenches are located between the Project and off-site wetland. Water levels in the recharge trenches will be maintained at 25.5 feet NAVD, which is 1 foot above the groundwater level of 24.5 feet NAVD. Turbidity barriers will be placed in existing ditches on the perimeter of the Project site to ensure that no off-site discharge will occur, pursuant to Special Permit Condition 16. If exceptional storm conditions occur that exceed the on-site storage capacity, the Permittee is required to cease dewatering operations until adequate storage is available to contain all the dewatering effluent on-site. Dewatering details are provided in Exhibit 5.

Permit History: A Water Use Permit 56- 00558-W was issued on the Project site on November 14, 1985 for the use of groundwater and surface water from the Floridan aquifer and C-23 for agricultural irrigation serving 2,871 acres of Citrus. The water use permit was renewed and modified several times and was transferred to Riverland/Kennedy II LLC on May 24, 2018. The current irrigation water use permit is for 2,457.96 acres of Citrus, via the C-23 Canal. The annual allocation is 2,457.96 million gallons (MG) and the maximum monthly allocation is 412.63 MG. Water Use Permit 56-00058-W will need to be modified to reduce the irrigated acreage, prior to approval of each site-specific plan (Special Permit Condition 19). Dewatering activities for Parcel A were conducted under General Permit by Rule. Parcel C (i.e. phases 1 and 2) has been approved for construction. Dewatering activities for Parcel C are not approved and shall not commence until site-specific plans are submitted and approved.

Projected Water Use Demands:

As stipulated in Subsection 2.3.2.B.2 of the AH, neither maximum month nor annual withdrawal volumes are specified in the recommended conditions for dewatering water use permits. However, the Applicant has estimated that the maximum day and annual Project withdrawal volumes are 6.3 million gallons (MG) and 2,300 MG, respectively.

**SFWMD Regulation Governing Board Report
July 9, 2020**

Regulatory Public Meeting

- The June 17, 2020 meeting was cancelled; District offices were closed to the public.

Regulatory Public Meeting Schedule

- The next scheduled meeting will be on September 16, 2020.