SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Governing Board Meeting

Agenda and Meeting Information

July 22, 2025

9:00 a.m.

Tampa Office

7601 US 301 North • Tampa, Florida

(813) 985-7481 • 1-800-423-1476

Southwest Florida Water Management District

WATERMATTERS.ORG • 1-800-423-1476

Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604
(352) 796-7211 or 1-800-423-1476 (FL only)
WaterMatters.org

An Equal Opportunity Employer

The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs, services and activities. Anyone requiring reasonable accommodation, or who would like information as to the existence and location of accessible services, activities, and facilities, as provided for in the Americans with Disabilities Act, should contact the Human Resources Office Chief, at 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only); or email ADACoordinator@WaterMatters.org. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (Voice). If requested, appropriate auxiliary aids and services will be provided at any public meeting, forum, or event of the District. In the event of a complaint, please follow the grievance procedure located at WaterMatters.org/ADA.

MEETING NOTICE

Final Agenda
GOVERNING BOARD MEETING

JULY 22, 2025
9:00 AM

7601 US 301 North, Tampa, FL 33637
(813) 985-7481

All meetings are open to the public

- Viewing of the Board meeting will be available through the District's website at *WaterMatters.org*.
- Public input will be taken only at the meeting location.
- Public input for issues not listed on the published agenda will be heard shortly after the meeting begins.

Pursuant to Section 373.079(7), Florida Statutes, all or part of this meeting may be conducted by means of communications media technology in order to permit maximum participation of Governing Board members.

The Governing Board may take official action at this meeting on any item appearing on this agenda and on any item that is added to this agenda as a result of a change to the agenda approved by the presiding officer of the meeting pursuant to Section 120.525, Florida Statutes.

The order of items appearing on the agenda is subject to change during the meeting and is at the discretion of the presiding officer.

Public Comment will be taken after each presentation and before any Governing Board action(s) except for Governing Board hearings that involve the issuance of final orders based on recommended Orders received from the Florida Division of Administrative Hearings.

Unless specifically stated, scheduled items will not be heard at a time certain.

The current Governing Board agenda and minutes of previous meetings are available at *WaterMatters.org*.

1. CONVENE PUBLIC MEETING

1.1 Call to Order

1.2 Invocation and Pledge of Allegiance

1.3 Employee Recognition

1.4 Additions/Deletions to Agenda

1.5 Public Input for Issues Not Listed on the Published Agenda

2. CONSENT AGENDA

2.1 **Finance/Outreach and Planning Committee:** Knowledge Management: Advisory Committee Policies

2.2 **Resource Management Committee:** FARMS – Green Grass Farms of Hardee County, LLC – H835 (Hardee County)

2.3 **Resource Management Committee:** Final Lake Tarpon Surface Water Improvement and Management (SWIM) Plan (W726)

2.4 **Operations, Lands and Resource Monitoring Committee:** Fifth Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County, and the School Board of Pasco County – SWF Parcel No. 16-010-031X (Pasco County)

2.5 **Regulation Committee:** Water Use Permit No. 20 021107.001, NC Real Estate Projects, LLC / Grenelefe Utility (Polk County)

2.6 **Regulation Committee:** Water Use Permit No. 20 011794.003, Tampa Bay Water / Alafia River Withdrawal Facility (Hillsborough County)

2.7 **Regulation Committee:** Initiation and Approval of Rulemaking to Amend Rules 40D-2.321 and 40D-2.331, Florida Administrative Code, to Promote the Use of Reclaimed Water and Encourage Quantifiable Potable Water Offsets, in Accordance with Section 373.250(9), Florida Statutes

2.8 **General Counsel's Report:** Approval of Consent Order – Environmental Resource Violations; Unauthorized Activities – Joseph A. Brown (Pasco County)

2.9 **Executive Director's Report:** Approve Governing Board Minutes – June 24, 2025

3. RECOGNITION OF FORMER GOVERNING BOARD MEMBER

3.1 Recognition of Former Governing Board Member Joel Schleicher

4. FINANCE/OUTREACH AND PLANNING COMMITTEE

4.1 **Discussion:** Consent Item(s) Moved to Discussion

4.2 **Discussion:** Action Item: Investment Strategy Quarterly Update

4.3 **Discussion:** Action Item: Proposed Millage Rate and Tentative Budget Update for Fiscal Year 2026

4.4 **Discussion:** Information Item: Knowledge Management: Fund Balance Policy

4.5 **Submit & File:** Information Item: Budget Transfer Report

4.6 **Submit & File:** Information Item: Office of Inspector General Quarterly Update – April 1, 2025 to June 30, 2025

5. OPERATIONS, LANDS, AND RESOURCE MONITORING COMMITTEE

5.1 **Discussion:** Consent Item(s) Moved to Discussion

5.2 **Discussion:** Action Item: Offer for Surplus Lands – Tampa Bypass Canal (TBC-32) – SWF Parcel No. 13-001-764S (Hillsborough County)

6. RESOURCE MANAGEMENT COMMITTEE

6.1 **Discussion:** Consent Item(s) Moved to Discussion

7. REGULATION COMMITTEE

7.1 **Discussion:** Consent Item(s) Moved to Discussion

8. GENERAL COUNSEL'S REPORT

8.1 **Discussion:** Consent Item(s) Moved to Discussion

8.2 **Discussion:** Action Item: Affirm Governing Board Committee Actions

9. COMMITTEE/LIAISON REPORTS

9.1 **Discussion:** Information Item: Agricultural and Green Industry Advisory Committee

10. EXECUTIVE DIRECTOR'S REPORT

10.1 **Discussion:** Information Item: Executive Director's Report

11. CHAIR'S REPORT

11.1 **Discussion:** Information Item: Chair's Report

11.2 **Discussion:** Information Item: Employee Milestones

ADJOURNMENT

Southwest Florida Water Management District

An Equal Opportunity Employer

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
WaterMatters.org

Bartow Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Office
78 Sarasota Center Boulevard
Sarasota, Florida 34240-9770
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Office
7601 U.S. 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

GOVERNING BOARD OFFICERS, COMMITTEES AND LIAISONS

Approved June 2025

OFFICERS	
Chair	John Mitten
Vice Chair	Jack Bispham
Secretary	Ashley Bell Barnett
Treasurer	John E. Hall

OPERATIONS, LANDS AND RESOURCE MONITORING COMMITTEE
Chair Robert Stern

RESOURCE MANAGEMENT COMMITTEE
Chair Dustin Rowland

REGULATION COMMITTEE
Chair James Holton

FINANCE/OUTREACH AND PLANNING COMMITTEE
Chair John E. Hall*

All Governing Board members are a member of each committee.
** Board policy requires the Governing Board Treasurer to chair the Finance/Outreach and Planning Committee.*

STANDING COMMITTEE LIAISONS	
Agricultural and Green Industry Advisory Committee	Dustin Rowland
Environmental Advisory Committee	Josh Gamblin
Industrial Advisory Committee	James Holton
Public Supply Advisory Committee	Robert Stern

OTHER LIAISONS	
Central Florida Water Initiative	Ashley Bell Barnett
Springs Coast Steering Committee	Kelly Rice
Coastal & Heartland National Estuary Partnership Policy Committee	John E. Hall
Sarasota Bay Estuary Program Policy Board	Jack Bispham
Tampa Bay Estuary Program Policy Board	Nancy Watkins
Tampa Bay Regional Planning Council	Vacant

Southwest Florida Water Management District Schedule of Meetings
Fiscal Year 2025

Governing Board Meeting

October 22, 2024 – 9:00 a.m., Brooksville Office
November 19, 2024 – 9:00 a.m., Tampa Office
December 17, 2024 – 9:00 a.m., Brooksville Office
January 28, 2025 – 9:00 a.m., Tampa Office
February 25, 2025 – 9:00 a.m., Brooksville Office
March 25, 2025 – 9:00 a.m., Tampa Office
April 22, 2025 – 9:00 a.m., Brooksville Office
May 20, 2025 – 9:00 a.m., Tampa Office
June 24, 2025 – 9:00 a.m., Brooksville Office
July 22, 2025 – 9:00 a.m., Tampa Office
August 26, 2025 – 9:00 a.m., Brooksville Office
September 23, 2025 – 3:00 p.m., Tampa Office

Governing Board Workshop

December 17, 2024 – 9:30 a.m., Brooksville Office
March 25, 2025 – 9:30 a.m., Tampa Office

Governing Board Budget Hearing – 5:01 p.m., Tampa Office

2025 – September 9 & 23

Agricultural & Green Industry Advisory Committee – 10:00 a.m.

2024 – December 3
2025 – March 11 (meeting replaced with March 7 tour), June 10, September 9

Environmental Advisory Committee – 10:00 a.m.

2024 – October 8 (canceled)
2025 – January 14, April 8, July 8

Industrial Advisory Committee – 10:00 a.m.

2024 – November 5
2025 – February 11 (meeting replaced with Feb. 28 tour), May 6, August 12

Public Supply Advisory Committee – 1:00 p.m.

2024 – November 5
2025 – February 11 (meeting replaced with Feb. 28 tour), May 6, August 12

Springs Coast Management Committee – 1:30 p.m.

2024 – October 23, December 4
2025 – January 8, February 19, May 21 (canceled), July 9

Springs Coast Steering Committee – 2:00 p.m.

2024 – November 6
2025 – January 22, March 5, July 23

Meeting Locations

Brooksville Office – 2379 Broad St., Brooksville, FL 34604
Tampa Office – 7601 US Highway 301 North, Tampa, FL 33637

Governing Board Meeting
July 22, 2025

1. CONVENE PUBLIC MEETING

CONVENE PUBLIC MEETING

July 22, 2025

Call to Order

The Board Chair calls the meeting to order. The Board Secretary confirms that a quorum is present. The Board Chair then opens the public meeting. Anyone wishing to address the Governing Board concerning any item listed on the agenda or any item that does not appear on the agenda should fill out and submit a speaker's card. Comments will be limited to three minutes per speaker, and, when appropriate, exceptions to the three-minute limit may be granted by the Chair. Several individuals wishing to speak on the same issue/topic should designate a spokesperson.

Presenter:
John Mitten, Chair

CONVENE PUBLIC MEETING

July 22, 2025

Invocation and Pledge of Allegiance

An invocation is offered. The Board Chair conducts the Pledge of Allegiance to the Flag of the United States of America.

Presenter:
John Mitten, Chair

CONVENE PUBLIC MEETING

July 22, 2025

Employee Recognition

Staff that have reached 20 or more years of service at the District will be recognized.

Presenter:
John Mitten, Chair

CONVENE PUBLIC MEETING

July 22, 2025

Additions/Deletions to Agenda

According to Section 120.525(2), Florida Statutes, additions to the published agenda will only be made for "good cause" as determined by the "person designated to preside." Based upon that authority, the Chair has determined that good cause exists to make certain changes to the agenda. These changes are being made in order to permit the Governing Board to efficiently accomplish necessary public business at this meeting and to reflect the items on the agenda that have been requested or suggested to be deleted, revised, supplemented or postponed.

ADDITIONS: The items that have been added to the agenda were received by the District after publication of the regular agenda. The Board was provided with the information filed and the District staff's analyses of these matters. Staff has determined that action must be taken on these items prior to the next Board meeting. Therefore, it is the District staff's recommendation that good cause has been demonstrated and should be considered during the Governing Board's meeting.

Staff Recommendation:
Approve the recommended additions and deletions to the published agenda if necessary.

Presenter:
Brian J. Armstrong, P.G., Executive Director

CONVENE PUBLIC MEETING

July 22, 2025

Public Input for Issues Not Listed on the Published Agenda

At this time, the Board will hear public input for issues not listed on the published agenda.

Presenter:
John Mitten, Chair

Governing Board Meeting

July 22, 2025

2. CONSENT AGENDA

All matters listed under the Consent Agenda are considered routine and action will be taken by one motion, second of the motion and approval by the Board. If discussion is requested by a Board member, that item(s) will be deleted from the Consent Agenda and moved to the appropriate Committee or Report for consideration.

CONSENT AGENDA

July 22, 2025

Finance/Outreach and Planning Committee: Knowledge Management: Advisory Committee Policies

Purpose

As part of the District's Knowledge Management initiative, all the District's Governing Board Policies are being reviewed by the respective divisions.

Background/History

The District's Knowledge Management initiative was launched in FY2016 and is now a Core Business Process in the District's Strategic Plan. Knowledge Management is the practice of systematically and actively collecting, managing, sharing and leveraging the organization's data, information and processes. The focus since FY2018 has been on improving the organization of governing documents to facilitate knowledge sharing, ensure the alignment of division and bureau practices with Governing Board Policies and Executive Director Procedures, and allow for timely retrieval and review of existing governing documents.

The Governing Board created the Advisory Committees to give professional and technical input into District programs and activities. In addition, representatives of member organizations who serve on the committees, function as liaisons with the District and also act as an education extension of the District by helping to disseminate information.

The District has four Advisory Committees: the Agricultural and Green Industry Advisory Committee, the Environmental Advisory Committee, the Industrial Advisory Committee, and the Public Supply Advisory Committee. All of the policies were updated to the latest Knowledge Management template and the lists of member organizations were updated.

Additionally, the Industrial Advisory Committee has been renamed the Industrial, Commercial & Institutional Advisory Committee (ICIAC) to reflect the expansion of the committee. This expansion was presented and approved by the Governing Board in October 2023. The ICIAC was expanded in 2024 from seven industrial users to 12 members representing the industrial, commercial and institutional sectors. The goal of the expansion was to reach a broader spectrum of water users and increase attendance, engagement and water use efficiency. The revised policy reflects the new name of the committee and the five new member organizations.

Benefits

Updating existing Governing Board Policies increases efficiencies and ensures organizational alignment.

Staff Recommendation:

Approve the proposed changes to the policies.

Presenter:

Robyn Felix, Bureau Chief, Communications & Board Services Bureau

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Agricultural and Green Industry Advisory Committee

Document Owner:	Communications and Board Services Bureau Chief		
Approved By:	Board Chair	**Effective Date:**	07/22/2025
		Supersedes:	02/26/2019

CONTENTS

PURPOSE

The purpose of this policy is to establish the Agricultural and Green Industry Advisory Committee (AGIAC) to the Southwest Florida Water Management District (District), and to set forth the purpose, activities and membership guidelines of the AGIAC.

The District Governing Board has established this Advisory Committee for the purpose of obtaining input on District programs, projects and related resource management issues. The Governing Board recognizes and appreciates the significant commitment of the organizations and individuals who agree to serve on this Committee. This Advisory Committee is a valuable resource to the District and the input it provides helps to ensure the District is meeting its responsibilities in an effective and efficient manner.

The District has a 13-member Governing Board composed of gubernatorial appointees. The Board appointees are citizens from throughout the District representing the numerous and varied interests which exist. These Governing Board appointees are the policy makers of the District and ensure that the District achieves its statutory responsibilities. It is the intent of these Board members that the Advisory Committees not be engaged in policymaking but continue in the mission of providing valuable feedback and advice on issues that are determined by Board members to be directly related to the District's statutory responsibilities.

It is in recognition of staff's ongoing obligations to the Governing Board that this Advisory Committee is established. District staff is charged with providing administrative support to the Committee, including developing and posting meeting notices and agendas, making

arrangements for meeting facilities, recording meetings and providing meeting summaries, monitoring membership and officer terms, and performing other related administrative matters.

SCOPE

The purpose of the AGIAC is to provide professional and technical input into District programs and activities including regulatory programs, rule revisions, water conservation activities, water resource planning, water resource and supply development projects, research and other water resource management projects that relate to the agricultural and green industries. Subject matter considered by the AGIAC shall relate to the statutory duties and responsibilities of the District. AGIAC member representatives serve as liaisons with the District, maintaining communication with other members of their organizations and conveying input from the organization to the AGIAC. In addition, the AGIAC acts as an education extension of the District by helping to disseminate information and by advising and assisting the District in education programs and projects. A function of the AGIAC shall be to provide two-way communication between the District and the agricultural and green industries.

AUTHORITY

Chapter 373, Florida Statutes

DEFINITIONS

N/A

STANDARDS

Section 286.011, Florida Statutes (Government-in-the-Sunshine Law)
Robert's Rules of Order Newly Revised

POLICY

Membership will consist of representatives of agricultural and green industry commodity groups; professional associations, educational agencies and civic organizations which are involved in agriculture, outdoor landscaping or irrigation chosen on the basis of whether they are prevalent within the District. Member organizations will be selected by the Executive Director at the recommendation of the Governing Board, designated District staff or from nominations by other member organizations. The chair of the AGIAC may also recommend new members to the District. Each AGIAC member organization shall designate a primary representative. Alternates may also be designated to represent their organization in the absence of the primary member. The alternate representative shall have full voting rights in the absence of the primary. AGIAC member representatives shall be designated as authorized travelers of the District.

The organizations listed below are examples of AGIAC member organizations. This list may be supplemented or revised as deemed appropriate by the District to achieve optimal representation of the agricultural and green industries:

City of Tampa Parks and Recreation Department
Florida Cattlemen's Association
Florida Citrus Mutual
Florida Farm Bureau Federation
Florida Forestry Association
Florida Fruit and Vegetable Association
Florida Golf Course Superintendent's Association
Florida Irrigation Society
Florida Nursery, Growers and Landscape Association
Florida Strawberry Growers Association
Florida Tropical Fish Farms Association

Florida Turfgrass Association
Hillsborough Soil & Water Conservation District
On Top of the World Utilities/CSW Mgmt., Inc.
Turfgrass Producers of Florida
UF/IFAS Extension Service Hillsborough County
University of Florida – Institute of Food and Agricultural Sciences Extension (UF/IFAS)

TERMS OF MEMBERSHIP
AGIAC member representatives serve three-year terms. Multiple terms may be served with the approval of the member organizations and the District. If an organization's representative misses three consecutive meetings without prior notice to the District, the District shall request the member organization select a representative who is better able to attend meetings. The Executive Director or his/her designee can remove a membership or a member representative from the Committee for nonparticipation.

OFFICERS AND DUTIES
The AGIAC will elect a chair and vice chair who will serve two-year terms of office and may be elected to those positions a maximum of two consecutive times. Election shall be by majority vote.

The chair shall be responsible for assisting the District staff in establishing meeting agendas, in soliciting input from AGIAC members, for chairing AGIAC meetings, for establishing subcommittees as may be appropriate, and for representing the AGIAC when necessary. The vice chair shall serve as chair in the chair's absence.

MEETINGS
Meetings of the AGIAC will be held, at a minimum, quarterly or as authorized by the Executive Director or his/her designee. The chair of the AGIAC may request that special meetings be held. Notices of AGIAC meetings will be emailed in advance of the meetings by the District to members and interested persons and posted on the District's web calendar. The AGIAC's meetings will be recorded by the District staff. Abbreviated meeting summaries will be provided to the AGIAC members. Topics for discussion at AGIAC meetings will be focused on priorities set by the Governing Board and limited to issues specific to those priorities. Other topics may be proposed by the AGIAC which shall be placed on the agenda for discussion; however, requests of staff requiring more than routine support will be subject to approval by the Executive Director or his designee. All determinations of the AGIAC shall be by majority vote of the members present (no quorum requirement). Requested input from the AGIAC to the District will be reported to the Governing Board when requested by the AGIAC or when otherwise deemed appropriate. Such reports may be presented by the Governing Board liaison, AGIAC chair, other AGIAC members designated by the chair or selected by the AGIAC, or by District staff. Meetings shall be conducted in accordance with "Robert's Rules of Order Newly Revised," unless specified otherwise by law or this policy. The AGIAC is subject to the Government-in-the-Sunshine Law and all other applicable laws and regulations.

DISTRIBUTION
This Policy will be stored in the designated Governing Board Policy Repository.

REFERENCES
Section 286.011, Florida Statutes (Government in the Sunshine Law)
Robert's Rules of Order Newly Revised

REVIEW PERIOD

This Policy will be reviewed every three years.

DOCUMENT DETAILS

Document Name	Agricultural and Green Industry Advisory Committee
Formerly Known As	N/A
Document Type	Policy
Author(s)	Board and Executive Services Manager
Reviewing Stakeholder(s)	Office of General Counsel, Inspector General
Document Owner Name	Robyn Felix
Document Owner Title	Communications and Board Services Bureau Chief
Review Period (in days)	1,095
Span of Control	Governing Board
Supersedes Date	02/26/2019
Effective Date	07/22/2025

APPROVAL

_____ _____

John R. Mitten Date
Chair

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Environmental Advisory Committee

Document Owner:	Communications and Board Services Bureau Chief		
Approved By:	Board Chair	**Effective Date:**	07/22/2025
		Supersedes:	02/26/2019

CONTENTS

PURPOSE

The purpose of this policy is to establish the Environmental Advisory Committee (EAC) to the Southwest Florida Water Management District (District), and to set forth the purpose, activities and membership guidelines of the EAC.

The District Governing Board has established this Advisory Committee for the purpose of obtaining input on District programs, projects and related resource management issues. The Governing Board recognizes and appreciates the significant commitment of the organizations and individuals who agree to serve on this Committee. This Advisory Committee is a valuable resource to the District and the input it provides helps to ensure the District is meeting its responsibilities in an effective and efficient manner.

The District has a 13-member Governing Board composed of gubernatorial appointees. The Board appointees are citizens from throughout the District representing the numerous and varied interests which exist. These Governing Board appointees are the policy makers of the District and ensure that the District achieves its statutory responsibilities. It is the intent of these Board members that the Advisory Committees not be engaged in policymaking but continue in the mission of providing valuable feedback and advice on issues that are determined by Board members to be directly related to the District's statutory responsibilities.

It is in recognition of staff's ongoing obligations to the Governing Board that this Advisory Committee is established. District staff is charged with providing administrative support to the

Committee, including developing and posting meeting notices and agendas, making arrangements for meeting facilities, recording meetings and providing meeting summaries, monitoring membership and officer terms, and performing other related administrative matters.

SCOPE

The purpose of the EAC is to provide professional and technical input into District programs and activities including regulatory programs, rule revisions, water conservation activities, water resource planning, water resource and supply development projects, research and other water resource management projects that relate to the environment. Subject matter considered by the EAC shall relate to the statutory duties and responsibilities of the District. EAC member representatives serve as liaisons with the District, maintaining communication with other members of their organizations and conveying input from the organization to the EAC. In addition, the EAC acts as an education extension of the District by helping to disseminate information and by advising and assisting the District in education programs and projects. A function of the EAC shall be to provide two-way communication between the District and the environmental community.

AUTHORITY

Chapter 373, Florida Statutes

DEFINITIONS

N/A

STANDARDS

Section 286.011, Florida Statutes (Government-in-the-Sunshine Law)
Robert's Rules of Order Newly Revised

POLICY

Membership will consist of representatives of groups concerned in protecting the environment. These representatives are chosen based on their active interest in the environmental issues of the area. Member organizations will be selected by the Executive Director at the recommendation of the Governing Board, designated District staff or from nominations by other member organizations. The chair of the EAC may also recommend new members to the District. Each EAC member organization shall designate a primary representative. Alternates may also be designated to represent their organizations in the absence of the primary member. The alternate representative shall have full voting rights in the absence of the primary. EAC member representatives shall be designated as authorized travelers of the District.

The organizations listed below are examples of EAC member organizations. This list may be supplemented or revised as deemed appropriate by the District to achieve optimal representation of the environmental community:

Coastal and Heartland National Estuary Partnership
Environmental Confederation of Southwest Florida
Florida Trail Association - Suncoast and Heartland Chapters
Manatee Chamber of Commerce
The Ocala Metro Chamber & Economic Partnership
Sarasota Bay Estuary Program
Save the Homosassa River Alliance
Sierra Club - Tampa Bay Group
St. Petersburg Audubon Society
Tampa Bay Estuary Program

TERMS OF MEMBERSHIP

EAC member representatives serve three-year terms. Multiple terms may be served with the approval of the member organization and the District. If an organization's representative misses three consecutive meetings without prior notice to the District, the District shall request the member organization select a representative who is better able to attend meetings. The Executive Director or his/her designee can remove a membership or a member representative from the committee for nonparticipation.

OFFICERS AND DUTIES

The EAC will elect a chair and vice chair who will serve two-year terms of office and may be elected to those positions a maximum of two consecutive times. Election shall be by majority vote.

The chair shall be responsible for assisting the District staff in establishing meeting agendas, in soliciting input from EAC members, for chairing EAC meetings, for establishing subcommittees as may be appropriate, and for representing the EAC when necessary. The vice chair shall serve as chair in the chair's absence.

MEETINGS

Meetings of the EAC will be held, at a minimum, quarterly or as authorized by the Executive Director or his/her designee. The chair of the EAC may request that special meetings be held. Notices of EAC meetings will be emailed in advance of the meetings by the District to members and interested persons and posted on the District's web calendar. The EAC's meetings will be recorded by the District staff. Abbreviated meeting summaries will be provided to the EAC members. Topics for discussion at EAC meetings will be focused on priorities set by the Governing Board and limited to issues specific to those priorities. Other topics may be proposed by the EAC which shall be placed on the agenda for discussion; however, requests of staff requiring more than routine support will be subject to approval by the Executive Director or his designee. All determinations of the EAC shall be by majority vote of the members present (no quorum requirement). Requested input from the EAC to the District will be reported to the Governing Board when requested by the EAC or when otherwise deemed appropriate. Such reports may be presented by the Governing Board liaison, EAC chair, other EAC members designated by the chair or selected by the EAC, or by District staff. Meetings shall be conducted in accordance with "Robert's Rules of Order Newly Revised," unless specified otherwise by law or this Policy. The EAC is subject to the Government-in-the-Sunshine Law and all other applicable laws and regulations.

DISTRIBUTION

This Policy will be stored in the designated Governing Board Policy Repository.

REFERENCES

Section 286.011, Florida Statutes (Government in the Sunshine Law)
Robert's Rules of Order Newly Revised

REVIEW PERIOD

This Policy will be reviewed every three years.

DOCUMENT DETAILS

Document Name	Environmental Advisory Committee
Formerly Known As	N/A
Document Type	Policy
Author(s)	Board and Executive Services Manager
Reviewing Stakeholder(s)	Office of General Counsel, Inspector General
Document Owner Name	Robyn Felix
Document Owner Title	Communications and Board Services Bureau Chief
Review Period (in days)	1,095
Span of Control	Governing Board
Supersedes Date	02/26/2019
Effective Date	07/22/2025

APPROVAL

_____ _____

John R. Mitten Date
Chair

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Industrial, Commercial & Institutional Advisory Committee

Document Owner: Communications and Board Services Bureau Chief

Approved By: Board Chair

Effective Date: 07/22/2025

Supersedes: 02/26/2019

CONTENTS

PURPOSE

The purpose of this policy is to establish the Industrial, Commercial & Institutional Advisory Committee (ICIAC) to the Southwest Florida Water Management District, and to set forth the purpose, activities and membership guidelines of the ICIAC.

The District Governing Board has established this Advisory Committee for the purpose of obtaining input on District programs, projects and related resource management issues. The Governing Board recognizes and appreciates the significant commitment of the organizations and individuals who agree to serve on this Committee. This Advisory Committee is a valuable resource to the District and the input it provides helps to ensure the District is meeting its responsibilities in an effective and efficient manner.

The District has a 13-member Governing Board composed of gubernatorial appointees. The Board appointees are citizens from throughout the District representing the numerous and varied interests which exist. These Governing Board appointees are the policy makers of the District and ensure that the District achieves its statutory responsibilities. It is the intent of these Board members that the Advisory Committees not be engaged in policymaking but continue in the mission of providing valuable feedback and advice on issues that are determined by Board members to be directly related to the District's statutory responsibilities.

It is in recognition of staff's ongoing obligations to the Governing Board that this Advisory Committee is established. District staff is charged with providing administrative support to the

Committee, including developing and posting meeting notices and agendas, making arrangements for meeting facilities, recording meetings and providing meeting summaries, monitoring membership and officer terms, and performing other related administrative matters.

SCOPE

The purpose of the ICIAC is to provide professional and technical input into District programs and activities including regulatory programs, rule revisions, water conservation activities, water resource planning, water resource and supply development projects, research and other water resource management projects that relate to the environment. Subject matter considered by the ICIAC shall relate to the statutory duties and responsibilities of the District. ICIAC member representatives serve as liaisons with the District, maintaining communication with other members of their organizations and conveying input from the organization to the ICIAC. In addition, the ICIAC acts as an education extension of the District by helping to disseminate information and by advising and assisting the District in education programs and projects. A function of the ICIAC shall be to provide two-way communication between the District and the industrial, commercial and institutional communities.

AUTHORITY

Chapter 373, Florida Statutes

DEFINITIONS

N/A

STANDARDS

Section 286.011, Florida Statutes (Government-in-the-Sunshine Law)
Robert's Rules of Order Newly Revised

POLICY

Membership will consist of representatives of industrial, commercial and institutional water users; these representatives are chosen on the basis of whether they are prevalent within the District. Member organizations will be selected by the Executive Director at the recommendation of the Governing Board, designated District staff or from nominations by other member organizations. The Chair of the ICIAC may also recommend new members to the District. Each ICIAC member organization shall designate a primary representative. Alternates may also be designated to represent their organization in the absence of the primary member. The alternate representative shall have full voting rights in the absence of the primary. ICIAC member representatives shall be designated as authorized travelers of the District.

The organizations listed below are examples of ICIAC member organizations. This list may be supplemented or revised as deemed appropriate by the District to achieve optimal representation of the industrial, commercial and institutional sectors.

CEMEX
Duke Energy Florida
Mosaic Fertilizer
PepsiCo
Port Tampa Bay
Publix
Saint Leo University
Seminole Electric Cooperative, Inc.
Standard Sand and Silica
Tampa Electric Company
Tropicana Brands Group
University of South Florida

TERMS OF MEMBERSHIP
ICIAC member representatives serve three-year terms. Multiple terms may be served with the approval of the member organization and the District. If an organization's representative misses three consecutive meetings without prior notice to the District, the District shall request the member organization to select a representative who is better able to attend meetings. The Executive Director or his/her designee can remove a membership or a member representative from the Committee for nonparticipation.

OFFICERS AND DUTIES
The ICIAC will elect a chair and vice chair who will serve two-year terms of office and may be elected to those positions a maximum of two consecutive times. Election shall be by majority vote.

The chair shall be responsible for assisting the District staff in establishing meeting agendas, in soliciting input from ICIAC members, for chairing ICIAC meetings, for establishing subcommittees as may be appropriate, and for representing the ICIAC when necessary. The vice chair shall serve as chair in the chair's absence.

MEETINGS
Meetings of the lCIAC will be held, at a minimum, quarterly or as authorized by the executive director or his/her designee. The Chair of the lCIAC may request that special meetings be held. Notices of lCIAC meetings will be emailed in advance of the meetings by the District to members and interested persons and posted on the District's web calendar. The lCIAC's meetings will be recorded by the District staff. Abbreviated meeting summaries will be provided to the lCIAC members. Topics for discussion at lCIAC meetings will be focused on priorities set by the Governing Board and limited to issues specific to those priorities. Other topics may be proposed by the lCIAC, which shall be placed on the agenda for discussion; however, requests of staff requiring more than routine support will be subject to approval by the executive director or his/her designee. All determinations of the lCIAC shall be by majority vote of the members present (no quorum requirement). Requested input from the lCIAC to the District will be reported to the Governing Board when requested by the lCIAC or when otherwise deemed appropriate. Such reports may be presented by the Governing Board Liaison, lCIAC chair, other lCIAC members designated by the chair or selected by the lCIAC, or by District staff. Meetings shall be conducted in accordance with "Robert's Rules of Order Newly Revised," unless specified otherwise by law or this policy. The lCIAC is subject to the Government-in-the-Sunshine Law and all other applicable laws and regulations.

DISTRIBUTION
This Policy will be stored in the designated Governing Board Policy Repository.

REFERENCES
Section 286.011, Florida Statutes (Government-in-the-Sunshine Law)
Robert's Rules of Order Newly Revised

REVIEW PERIOD
This Policy will be reviewed every three years.

DOCUMENT DETAILS

Document Name	Industrial, Commercial & Institutional Advisory Committee
Formerly Known As	Industrial Advisory Committee
Document Type	Policy
Author(s)	Board and Executive Services Manager
Reviewing Stakeholder(s)	Senior Staff, Office of General Counsel, Inspector General
Document Owner Name	Robyn Felix
Document Owner Title	Communications and Board Services Bureau Chief
Review Period (in days)	1,095
Span of Control	Governing Board
Supersedes Date	02/26/2019
Effective Date	07/22/2025

APPROVAL

_____ _____

John R. Mitten Date
Chair

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Public Supply Advisory Committee

Document Owner:	Communications and Board Services Bureau Chief		
Approved By:	Board Chair	**Effective Date:**	07/22/2025
		Supersedes:	02/26/2019

CONTENTS

PURPOSE

The purpose of this policy is to establish the Public Supply Advisory Committee (PSAC) to the Southwest Florida Water Management District (District), and to set forth the purpose, activities and membership guidelines of the PSAC.

The District Governing Board has established this Advisory Committee for the purpose of obtaining input on District programs, projects and related resource management issues. The Governing Board recognizes and appreciates the significant commitment of the organizations and individuals who agree to serve on this Committee. This Advisory Committee is a valuable resource to the District and the input it provides helps to ensure the District is meeting its responsibilities in an effective and efficient manner.

The District has a 13-member Governing Board composed of gubernatorial appointees. The Board appointees are citizens from throughout the District representing the numerous and varied interests which exist. These Governing Board appointees are the policy makers of the District and ensure that the District achieves its statutory responsibilities. It is the intent of these Board members that the Advisory Committees not be engaged in policymaking but continue in the mission of providing valuable feedback and advice on issues that are determined by Board members to be directly related to the District's statutory responsibilities.

It is in recognition of staff's ongoing obligations to the Governing Board that this Advisory Committee is established. District staff is charged with providing administrative support to the

Committee, including developing and posting meeting notices and agendas, making arrangements for meeting facilities, recording meetings and providing meeting summaries, monitoring membership and officer terms, and performing other related administrative matters.

SCOPE

The purpose of the PSAC is to provide professional and technical input into District programs and activities including regulatory programs, rule revisions, water conservation activities, water resource planning, water resource and supply development projects, research and other water resource management projects that relate to the public supply industry. Subject matter considered by the PSAC shall relate to the statutory duties and responsibilities of the District. PSAC member representatives serve as liaisons with the District, maintaining communication with other members of their organizations and conveying input from the organization to the PSAC. In addition, the PSAC acts as an education extension of the District by helping to disseminate information and by advising and assisting the District in education programs and projects. A function of the PSAC shall be to provide two-way communication between the District and the public supply community.

AUTHORITY

Chapter 373, Florida Statutes

DEFINITIONS

N/A

STANDARDS

Section 286.011, Florida Statutes (Government-in-the-Sunshine Law)
Robert's Rules of Order Newly Revised

POLICY

Membership will consist of representatives of both public and private water supply utilities. These representatives are chosen on the basis of achieving representation of the types and sizes of water supply utilities located throughout the District. Member organizations will be selected by the Executive Director at the recommendation of the Governing Board, designated District staff or from nominations by other member organizations. The chair of the PSAC may also recommend new members to the District. Each PSAC member organization shall designate a primary representative. Alternates may also be designated to represent their organization in the absence of the primary member. The alternate representative shall have full voting rights in the absence of the primary. PSAC member representatives shall be designated as authorized travelers of the District.

The organizations listed below are examples of PSAC member organizations. This list may be supplemented or revised as deemed appropriate by the District to achieve optimal representation of the public supply sector.

Bay Laurel Center Community Development District
Citrus County Water Resources
City of Bradenton Utilities
City of Lakeland Water Utilities
City of North Port Utilities
City of Plant City Utilities
City of Punta Gorda Utilities
City of St. Petersburg Utilities
City of Tampa Water Department
City of Tarpon Springs Utilities
DeSoto County Utilities
Hernando County Utilities
Hillsborough County Utilities

Manatee County Utilities
Marion County Utilities
Peace River Manasota Regional Water Supply Authority
Pinellas County Utilities
Polk County Utilities/Environmental Resources
Polk Regional Water Cooperative
Sarasota County Utilities
Tampa Bay Water
The Villages
Withlacoochee Regional Water Supply Authority

TERMS OF MEMBERSHIP

PSAC member representatives serve three-year terms. Multiple terms may be served with the approval of the member organizations and the District. If an organization's representative misses three consecutive meetings without prior notice to the District, the District shall request the member organization select a representative who is better able to attend meetings. The executive director or his/her designee can remove a membership or a member representative from the Committee for nonparticipation.

OFFICERS AND DUTIES

The PSAC will elect a chair and vice chair who will serve two-year terms of office and may be elected to those positions a maximum of two consecutive times. Election shall be by majority vote.

The chair shall be responsible for assisting the District staff in establishing meeting agendas, in soliciting input from PSAC members, for chairing PSAC meetings, for establishing subcommittees as may be appropriate, and for representing the PSAC when necessary. The vice chair shall serve as chair in the chair's absence.

MEETINGS

Meetings of the PSAC will be held, at a minimum, quarterly or as authorized by the executive director or his/her designee. The chair of the PSAC may request that special meetings be held. Notices of PSAC meetings will be emailed in advance of the meetings by the District to members and interested persons and posted on the District's web calendar. The PSAC's meetings will be recorded by the District staff. Abbreviated meeting summaries will be provided to the PSAC members. Topics for discussion at PSAC meetings will be focused on priorities set by the Governing Board and limited to issues specific to those priorities. Other topics may be proposed by the PSAC which shall be placed on the agenda for discussion; however, requests of staff requiring more than routine support will be subject to approval by the executive director or his designee. All determinations of the PSAC shall be by majority vote of the members present (no quorum requirement). Requested input from the PSAC to the District will be reported to the Governing Board when requested by the PSAC or when otherwise deemed appropriate. Such reports may be presented by the Governing Board liaison, PSAC chair, other PSAC members designated by the chair or selected by the PSAC, or by District staff. Meetings shall be conducted in accordance with "Robert's Rules of Order Newly Revised," unless specified otherwise by law or this policy. The PSAC is subject to the Government-in-the-Sunshine Law and all other applicable laws and regulations.

DISTRIBUTION

This Policy will be stored in the designated Governing Board Policy Repository.

REFERENCES

Section 286.011, Florida Statutes (Government in the Sunshine Law)
Robert's Rules of Order Newly Revised

REVIEW PERIOD

This Policy will be reviewed every three years.

DOCUMENT DETAILS

Document Name	Public Supply Advisory Committee
Formerly Known As	N/A
Document Type	Policy
Author(s)	Board and Executive Services Manager
Reviewing Stakeholder(s)	Office of General Counsel, Inspector General
Document Owner Name	Robyn Felix
Document Owner Title	Communications and Board Services Bureau Chief
Review Period (in days)	1,095
Span of Control	Governing Board
Supersedes Date	02/26/2019
Effective Date	07/22/2025

APPROVAL

_____ _____

John R. Mitten Date
Chair

CONSENT AGENDA

July 22, 2025

Resource Management Committee: FARMS – Green Grass Farms of Hardee County, LLC – H835 (Hardee County)

Purpose

To request approval for a Facilitating Agricultural Resource Management Systems (FARMS) project with Green Grass Farms of Hardee County, LLC and approval to reimburse FARMS eligible costs up to a not-to-exceed limit of $771,933 (66 percent of total project costs). The District funding is requested from the Governing Board FARMS Fund. Total project costs are estimated at $1,173,838.

Project Proposal

The District received a project proposal from Green Grass Farms of Hardee County, LLC for their property totaling 254 acres located 13 miles southeast of Zolfo Springs in southeastern Hardee County, within the Southern Water Use Caution Area (SWUCA). The proposal is for an alternative water supply project and will involve the utilization of two proposed 3-acre reservoirs to collect tailwater and surface water from the property and surrounding watershed to offset Upper Floridan aquifer groundwater used for the irrigation of 210 acres of sod. The Water Use Permit (WUP) authorizes annual average groundwater withdrawals of 494,400 gallons per day (gpd). FARMS project components consist of two linear overhead irrigation systems with automated surface water pumps and fertigation systems. Components also include a weather station with soil moisture probes and water control structures. These linear overhead irrigation systems will convert the site from seepage irrigation and reduce surface water runoff.

Benefits/Costs

The proposed project involves water quantity and water quality best management practices for supplemental irrigation of sod and qualifies for 75 percent cost-share reimbursement under the FARMS Program. The project is expected to reduce groundwater use by approximately 36 percent or 180,000 gpd for supplemental irrigation and reduce nitrogen application by 378 pounds per year. The conservation components are integrated with the nutrient reduction components to maximize nutrient reduction. Based on the estimated groundwater offset, a reduction of nitrogen application, and a proposed six-year contract term, the cost per thousand gallons of water saved is $3.29 and the cost per pound of nitrogen reduced per year is $13.89 (based on the fertigation components). These values are within the guidelines for the generally accepted average cost savings per thousand gallons for the implementation of alternative water supplies, improved irrigation techniques, and nutrient reduction BMPs for sod operations. Reimbursement will be from the Governing Board FARMS Fund. Upon approval of the project presented at this meeting, the Governing Board will have $1,454,497 remaining in its FARMS Program budget.

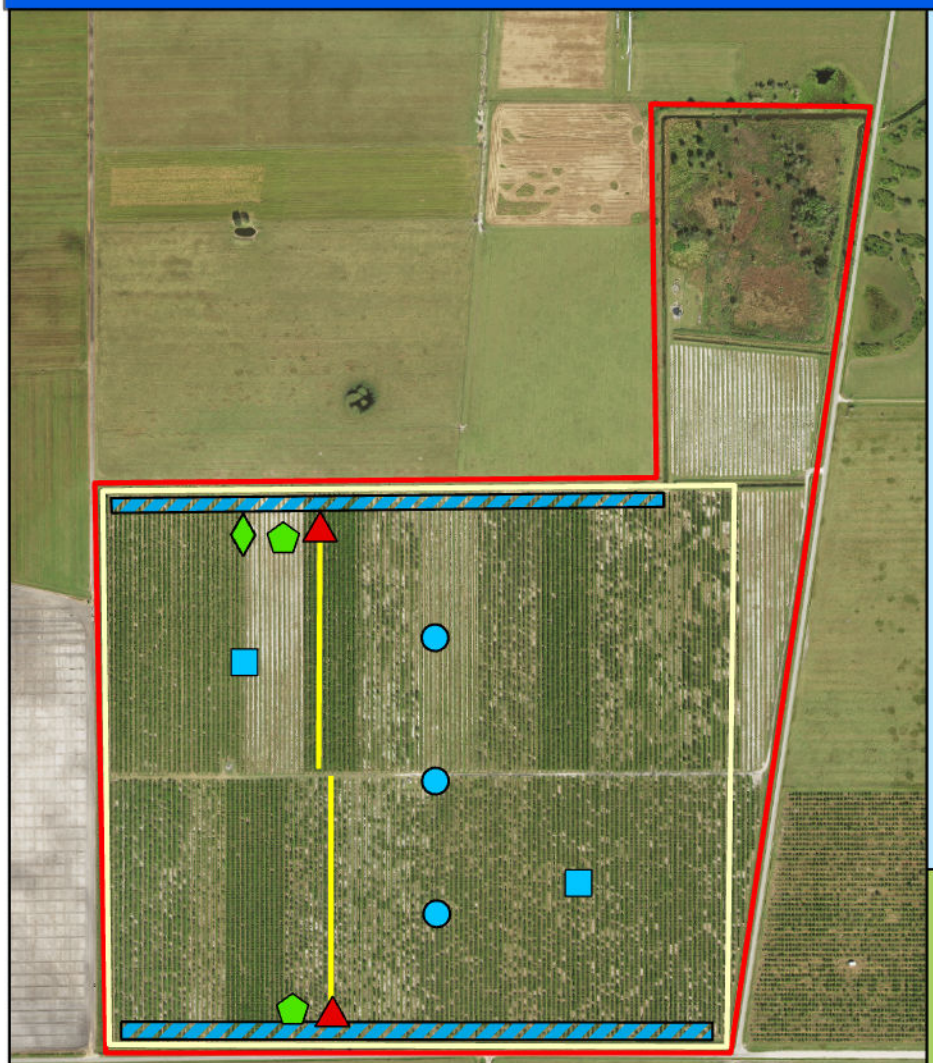
Staff Recommendation:

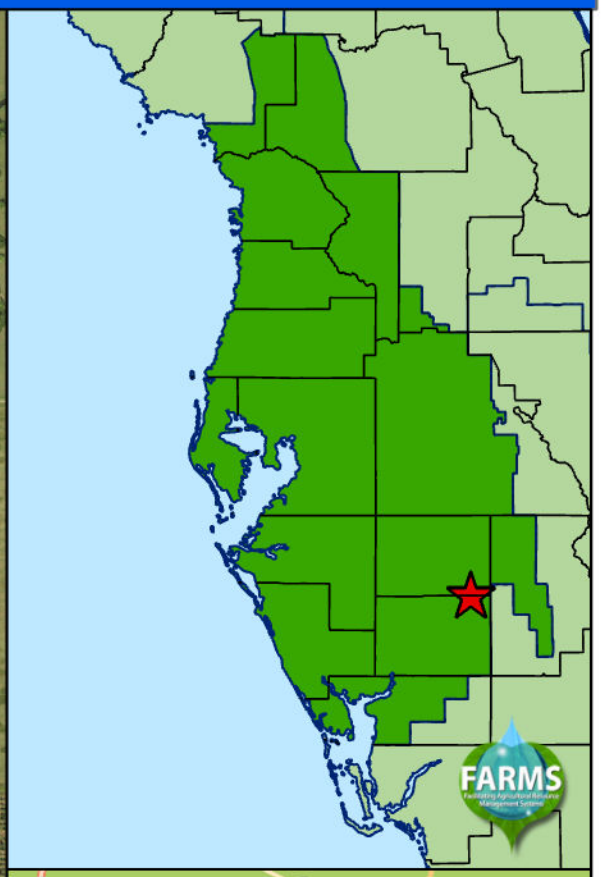
1. Approve the Green Grass Farms of Hardee County, LLC project for a not-to-exceed project reimbursement of $771,933 provided by the Governing Board;
2. Authorize the transfer of $771,933 from fund 010 H017 Governing Board FARMS Fund to the H835 Green Grass Farms of Hardee County, LLC project fund;
3. Authorize the Assistant Executive Director to sign the agreement.

Presenter:

Carole Estes, P.G., FARMS Program Manager, Water Resources Bureau

Location Map
Green Grass Farms of Hardee County, LLC
FARMS Project H835





Legend

- WUP 8907 Boundary
- Project H835 Boundary
- Proposed Reservoir
- Existing Groundwater Well
- Proposed Weather Station
- Proposed Fertigation system
- Proposed Surface Water Pump Station and Linear Irrigation System
- Proposed Soil Moisture Sensor

*Proposed locations of project components may change based on site conditions.

0 0.25 0.5 Miles

PAR 06/09/2025
2023 Aerial
2012 NAVTEQ

CONSENT AGENDA

July 22, 2025

Resource Management Committee: Final Lake Tarpon Surface Water Improvement and Management (SWIM) Plan (W726)

Purpose

The purpose of this item is to request approval of the Lake Tarpon SWIM Plan in accordance with Section 373.453, Florida Statutes (F.S.).

Background/History

In 1987, the Florida Legislature established the Surface Water Improvement and Management (SWIM) Act in response to the increasing occurrence of surface waterbodies that either were determined to be degraded or were trending towards degradation. The Act requires the five water management districts to maintain and update a priority list of water bodies of regional or statewide significance within their boundaries and develop plans and programs for the improvement of those water bodies.

Lake Tarpon is the largest lake in Pinellas County with a surface area of approximately 2,500 acres and a watershed of approximately 37,000 acres. It was designated a SWIM priority waterbody following a major blue-green algae bloom in 1987 that covered 80% of the lake. This bloom was seen as an indicator of degraded water quality and fisheries conditions.

For the past 20 years, as a result of improved lake management and watershed management practices, Lake Tarpon has been considered a healthy system. The Florida Fish and Wildlife Conservation Commission consistently ranks Lake Tarpon as one of the top 10 bass fishing lakes in Florida with more than 90% of the lake consisting of desirable aquatic plant species. Given the lake's overall health, this Lake Tarpon SWIM Plan update takes a "hold the line" strategy for managing the lake.

The Lake Tarpon SWIM Plan update was coordinated with technical stakeholders, the District's Environmental Advisory Committee (EAC), presented to the public through a workshop held on February 13, 2025, at the Brooker Creek Preserve, and at a hearing held at the District's Governing Board meeting on March 25, 2025 fulfilling the public input requirements of Section 373.453 (3).

At its meeting on March 25, 2025, the Governing Board authorized staff to submit the final draft Lake Tarpon SWIM Plan to the Florida Department of Environmental Protection (FDEP), Florida Department of Agriculture and Consumer Services (FDACS), Florida Fish and Wildlife Conservation Commission (FFWCC) and appropriate local governments for their official review and comment, according to Section 373.453(3). Several comments were received, and minor changes were incorporated as appropriate into the final Lake Tarpon SWIM Plan. The final Lake Tarpon SWIM Plan can be viewed at https://www.swfwmd.state.fl.us/projects/swim/lake-tarpon .

Staff Recommendation:

Approve the Lake Tarpon SWIM Plan in accordance with Section 373.453, F.S.

Presenter:

Vivianna Bendixson, SWIM Manager, Natural Systems and Restoration Bureau

CONSENT AGENDA

July 22, 2025

Operations, Lands and Resource Monitoring Committee: Fifth Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County, and the School Board of Pasco County – SWF Parcel No. 16-010-031X (Pasco County)

Purpose

The purpose of this item is to request Governing Board approval of the Fifth Amendment to the Agreement for Construction, Operation and Maintenance of an Environmental Education Center at Jay B. Starkey Wilderness Park between the Southwest Florida Water Management District (District), the Board of County Commissioners of Pasco County (County) and the School Board of Pasco County, Florida (Board) SWF Parcel No. 16-010-031X. A Location Map, Site Map and the Fifth Amendment (Amendment) are attached as Exhibits 1, 2, and 3 respectively.

Background/History

Jay B. Starkey Wilderness Park (Park) site was acquired between 1972 and 1987 and is an 8,000-acre premier regional park operated and maintained by Pasco County since 1989 under a Management Agreement with the District. The purpose of acquisition was to protect, restore, and maintain the quality and natural functions of the land, water, and wetland systems, natural flood control and water detention, and to provide natural resource-based public recreational opportunities within the region. Additionally, the Park serves as a public water supply wellfield and supports the District's core mission of flood protection, water supply, water quality, and natural systems.

In 1983, the Coastal Rivers and Pinellas-Anclote River Basin Boards jointly funded a preliminary design report and master plan for the Park. The master plan envisioned a park, historical museum, and environmental education center. On August 25, 1998, the District, County and the Board entered into an Agreement for Construction and Maintenance of an Environmental Education Center (Agreement), on a seven-acre portion within the Park. The Agreement and subsequent amendments are attached hereto as Exhibit 4.

The Agreement contained five-year renewal options up to a maximum of fifty years. The initial term of the Agreement ended August 31, 2005, and the Agreement has been amended four times to date. The First Amendment modified a District contribution for construction of the environmental education center from $250,000 to $771,845, and the District has fulfilled that financial responsibility under the Agreement in its entirety. The Second and Third Amendments renewed the Agreement for five years each and the Fourth Amendment amended the renewal term from five years to ten years with up to three ten-year renewals and replaced and updated the names of the project managers.

This Fifth Amendment will extend the term of the Agreement until August 25, 2035, and revises conditions to create efficiencies between the County and the Board that will not impact the District.

Benefits/Costs

The District has fulfilled its financial responsibility under the Agreement, and there are no financial responsibilities for the District associated with the Fifth Amendment. The County and the Board are responsible for all costs associated with operation and maintenance. The Starkey

Environmental Education Center provides education opportunities to school children about watersheds, freshwater features, and natural areas of the “Springs Coast.”

Deliverables

- The County must submit annual reports of environmental educational activities conducted by the County, including the number of visitors/students to the center.
- Prior to establishing any education or research activities on the site, the Board must submit plans and specifications of all proposed activities, including the development of a freshwater/natural systems curriculum, to the District for written approval.
- The Board must submit annual reports of environmental education activities conducted by the Board, including the number of students/visitors to the center.
- The Board must submit a schedule of proposed use of the facilities by June 1st of each year.

Staff Recommendation:

- Approve the Fifth Amendment to the Agreement for Construction, Operation and Maintenance of an Environmental Education Center at Jay B. Starkey Wilderness Park and;
- Authorize the Governing Board Chair to execute the Fifth Amendment on behalf of the District.

Presenter:
Ellen Morrison, Bureau Chief, Land Resources Bureau

Exhibit 1
Starkey Wilderness Preserve
SWF Parcel No. 16-010-031X Location Map

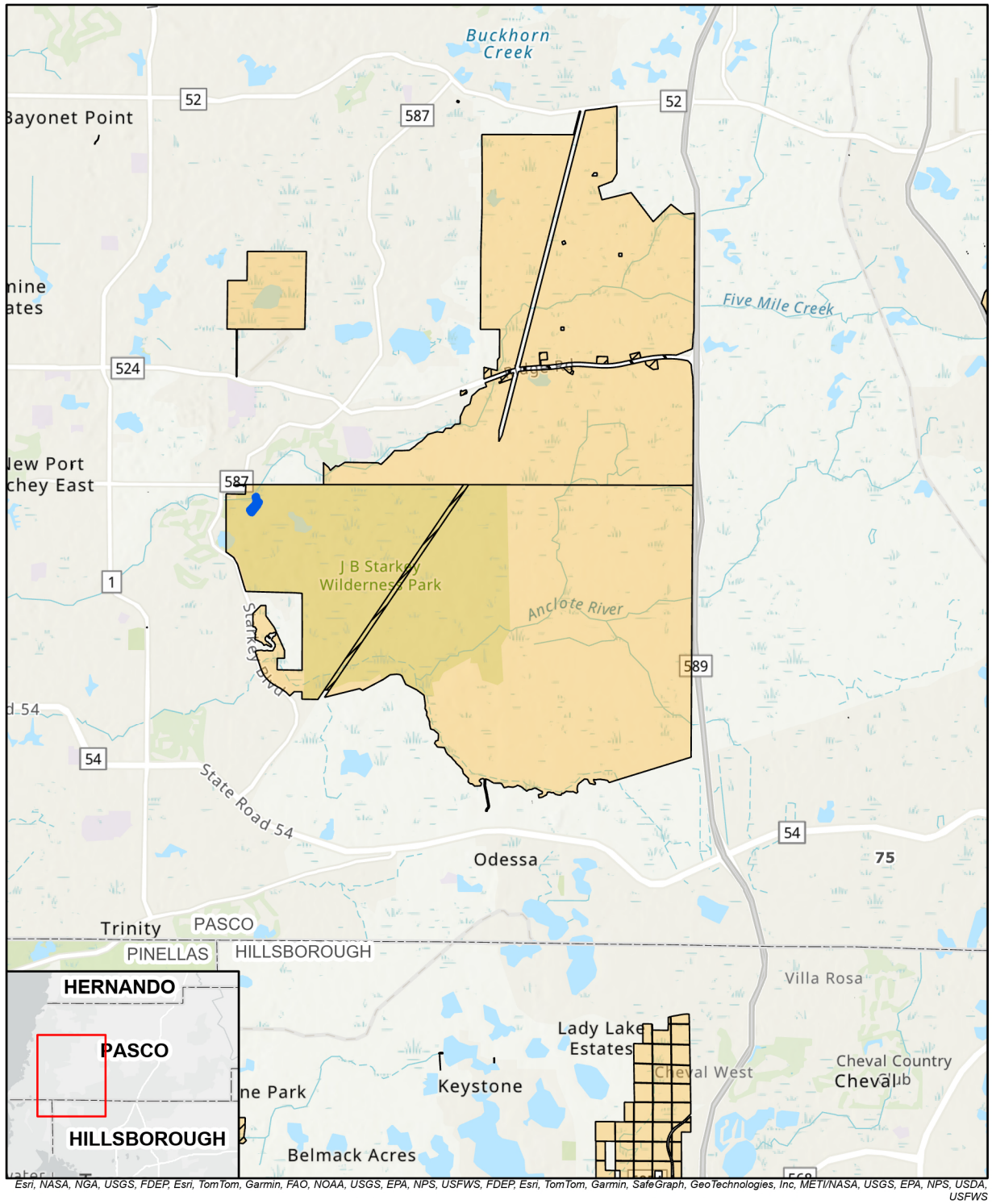


Exhibit 2
Starkey Wilderness Preserve
SWF Parcel No. 16-010-031X Site Map

Southwest Florida Water Management District

SWF Parcel No. 16-010-031X

0 100 200
Feet

N

Southwest Florida Water Management District

Fifth Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County and the School Board of Pasco County, Florida

This Amendment is made and entered into by and between the Southwest Florida Water Management District, a public corporation, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as the "District," and the Board of County Commissioners of Pasco County, Florida, a political subdivision of the State of Florida, whose address is 37918 Meridian Avenue, Dade City, Florida 33523-3819, hereinafter referred to as the "County," and the School Board of Pasco County, Florida, a public corporation of the State of Florida, whose address is 7227 Land O' Lakes Boulevard, Land O' Lakes, Florida 34639, hereinafter referred to as the "Board."

WITNESSETH

WHEREAS, the District, the County, and the Board entered into an Agreement for the construction, operation, and maintenance of an environmental education center at Jay B. Starkey Wilderness Park dated August 25, 1998 ("Agreement"), as shown in Exhibit "A" attached hereto and which Agreement was amended on February 26, 2001, December 20, 2005, August 24, 2010, and July 28, 2015, which amendments are attached hereto as Exhibits "B", "C," and "D," respectively; and

WHEREAS, the District, the County and the Board wish to amend the Agreement to extend it for an additional ten-year term under the same terms and conditions as stated in the Agreement and subsequent amendments thereto, as amended herein.

NOW THEREFORE, for and in consideration of the promises, terms and mutual covenants herein contained, the sufficiency of which the parties acknowledge, the parties hereto agree as follows:

Section 1. “Paragraph 2. Term” in its entirety is replaced with the following:

2. TERM: This Agreement is extended for an additional ten years and shall commence upon the execution by all parties and shall terminate on August 25, 2035.

Section 2. “Paragraph 4. Use” in its entirety is replaced with the following:

4. USE: Upon execution of this Agreement, occurrence of all conditions precedent, and completed construction of the Project, the Facility shall be divided into three designated areas: Meeting Room, Laboratory,

and Porch—each governed by specific usage rights and priorities as outlined below. Exhibit A attached here to and incorporated here in visually represent the designated areas. Pursuant to the conditions of the use outlined in this section, all parties shall coordinate and maintain a joint-use calendar to facilitate scheduling. The County will be responsible for the joint-use calendar in a manner that is consistent with the provisions set forth herein.

A: Meeting Room: The Board shall have priority use of the Meeting Room on weekdays for a number of days not to exceed the minimum instructional days required under Florida Statutes to provide environmental educational training with an emphasis on the wisdom of protecting, conserving, and preserving natural and freshwater systems. The County shall have priority use of the Meeting Room on weekends and during periods when school is not in session, including, but not limited to, summer recess and designated school breaks. The County may sub-lease out the Meeting Room for meeting space on an hourly or daily rate for a reasonable user fee when the Meeting Room is not being used by the Board for public environmental education purposes. The District shall be allowed to use Meeting Rooms at no charge based upon the availability of the Meeting Room and the District reserving the room from the County at least 30 days in advance. Additionally, all parties to this Agreement shall allow access to the Meeting Room to other parties of this Agreement when the Meeting Room is not in active use. No party shall restrict access to the Meeting Room for extended periods, such as reserving a space over the weekend for setup, unless the space is actively being utilized.

B: Laboratory: The Laboratory is designated exclusively for Board use which is designated for the sole use of the Board and thereby is inaccessible for use by the County or the District under the terms of this Agreement. No other party to this Agreement may access or utilize the Laboratory without prior written approval from the Board at least 30 days in advance.

C: Porch: The Board shall have priority use of the Porch for environmental educational purposes. Other parties may access and use the Porch when it is not actively in use by the Board.

Section 3. “Paragraph 6. Project Manager and Notices” in its entirety is replaced with the following:

6. PROJECT MANAGER AND NOTICES: Each party hereby designates the employee set forth below as its respective Project Manager. Project Managers shall assist with Project coordination and shall be the party's prime contact person. Notices or reports shall be sent to the attention of the parties' Project Manager by U.S. Mail, postage paid, to the parties'

addresses as follows:

Project Manager for the District:	Land Resources Bureau Chief Southwest Florida Water Management District 2379 Broad Street Brooksville, Florida 34604-6899
Project Manager for the County:	Director Pasco County Parks, Recreation and Natural Resources 4111 Land O' Lakes Boulevard, Suite 202 Land O'Lakes, Florida 34639
Project Manager for the Board:	Director Innovation, Advanced Studies, and Choice Pasco County Schools 7227 Land O' Lakes Blvd Land O' Lakes, FL 34638

Section 4. "Paragraph 10. School Board Responsibilities" in its entirety is replaced with the following:

10. SCHOOL BOARD RESPONSIBILITIES:

(A) The Board shall provide a full-time teacher and necessary bus transportation for any educational program it conducts pursuant to and in accordance with this agreement. The Board shall also be responsible for any direct costs related to the above-mentioned program.

(B) Prior to the establishment or institution of any education or research programs on the site, the Board shall submit plans and specifications of all proposed activities, including the development of a freshwater/natural systems curriculum, to the District for written approval.

(C) The Board shall work with the District and the County in developing the master plan/curriculum.

(D) The Board shall submit to the District and the County annual reports of environmental education activities conducted by the Board, including number of students/visitors to the center

(E) The Board shall obtain all permits and authorizations that may be necessary to operate, maintain and manage the project.

(F) The Board shall submit to the District and County a schedule of proposed use of the Facility by June 1st of each year.

(G) The Board shall be responsible for providing janitorial services in the Laboratory

Section 5 “Paragraph 11. County Responsibilities” in its entirety is replaced with the following:

11. COUNTY RESPONSIBILITIES

(A) Prior to construction of the Facility or improvements, the County shall submit to the District for written approval all final design plans, specifications and construction drawings for the environmental education facility as identified in the master plan/curriculum. Upon construction if the Facility is modified in the future the County shall cooperate and collaborate with the Board in designing the remodel of the Facility to ensure such the Facility are compatible with the needs and usage of all parties hereto.

(B) The County shall be responsible for the maintenance of the Facility, including the cost of monthly utilities, janitorial services not within the Laboratory and repairs.

(C) The County shall be responsible for coordinating the use of the Facility in a manner that is consistent with the provisions set forth herein.

(D) The County shall submit to the District and the Board annual reports of environmental educational activities conducted by the County, including number of visitors/students to the center.

All other terms, covenants and conditions set forth in the original Agreement executed on August 25, 1998, as amended on February 26, 2001, December 20, 2005, August 24, 2010, and July 28, 2015, are hereby ratified and affirmed, except as specifically amended herein. The signatures of all parties need not appear on the same counterpart. In accordance with the Electronic Signature Act of 1996, electronic signatures, including facsimile transmissions, may be used and will have the same force and effect as a written signature. Each person signing this

Agreement warrants that he or she is duly authorized to do so and to bind the respective party to Agreement.

IN WITNESS WHEREOF, the lawful representatives of the parties hereto have executed this Amendment the ____ day of _____, 2025.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, a public corporation of the State of Florida

By: _____
John R. Mitten, Chair

(Corporate Seal)

ATTEST:

By: _____
Ashley Bell Barnett, Secretary

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me, **by means of ☐ physical presence or ☐ online notarization**, this ____ day of _____, 2025, by John R. Mitten as Chair of the Governing Board of the Southwest Florida Water Management District, on behalf of the Southwest Florida Water Management District, who is personally known to me.

(Notary Seal)

_____
Notary Public
Print: _____
Commission No. _____
My Commission Expires:_____

BOARD OF COUNTY COMMISSIONERS OF PASCO COUNTY, FLORIDA, a political subdivision of the State of Florida

By: _____
Print Name: _____
Title: _____

ATTEST:

By: _____
Print Name: _____
Title: _____

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me, **by means of ☐ physical presence or ☐ online notarization**, this ____ day of _____, 2025, by _____ as _____ of the BOARD OF COUNTY COMMISSIONERS OF PASCO COUNTY, FLORIDA, on behalf of the BOARD OF COUNTY COMMISSIONERS OF PASCO COUNTY, FLORIDA, who is personally known to me.

(Notary Seal)

_____
Notary Public
Print: _____
Commission No. _____
My Commission Expires:_____

THE SCHOOL BOARD OF PASCO COUNTY, FLORIDA, a political subdivision of the State of Florida

By: _____
Print Name: _____
Title: _____

ATTEST:

By: _____
Print Name: _____
Title: _____

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF _____

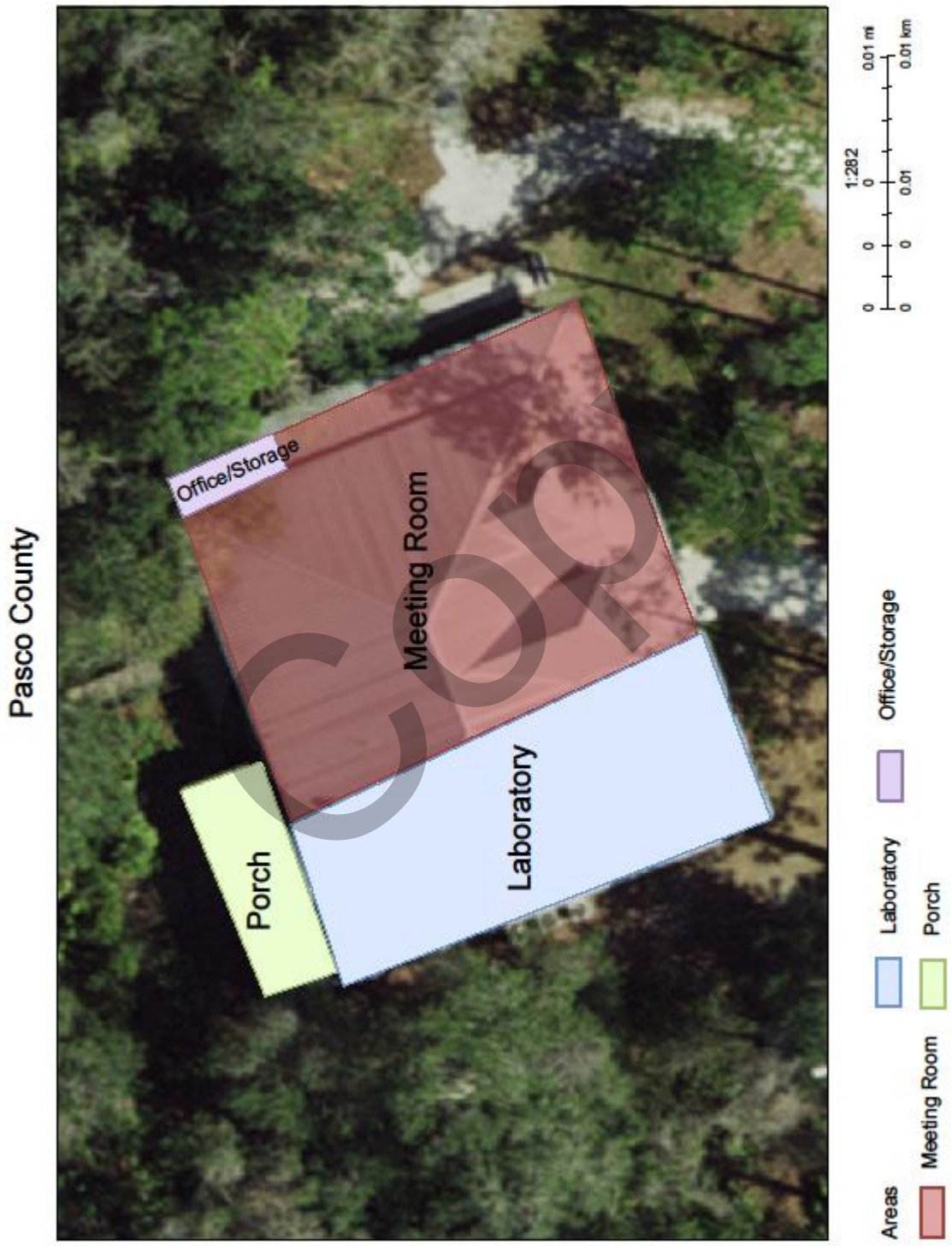
The foregoing instrument was acknowledged before me, **by means of ☐ physical presence or ☐ online notarization**, this ____ day of _____, 2025, by _____ as _____ of the SCHOOL BOARD OF PASCO COUNTY, FLORIDA, on behalf of the SCHOOL BOARD OF PASCO COUNTY, FLORIDA, who is personally known to me.

(Notary Seal)

_____
Notary Public
Print: _____
Commission No. _____
My Commission Expires:_____

Exhibit A

Facility Map



This instrument prepared by:
Southwest Florida Water
Management District
2379 Broad Street
Brooksville, FL 34609-6899

SWF Parcel No. 16-010-031X
Approved by Attorney AW

AGREEMENT FOR
CONSTRUCTION, OPERATION AND MAINTENANCE
OF AN
ENVIRONMENTAL EDUCATION CENTER
AT JAY B. STARKEY WILDERNESS PARK

This Agreement is made and entered into this 25th day of August, 1998, by and between the Southwest Florida Water Management District, a public corporation created by Chapter 61-691, Laws of Florida, as amended, for itself and on behalf of the COASTAL RIVERS AND PINELLAS-ANCLOTE RIVER BASINS, hereinafter referred to as "the DISTRICT", PASCO COUNTY, FLORIDA, a political subdivision of the State of Florida, hereinafter referred to as "the County", and the DISTRICT SCHOOL BOARD OF PASCO COUNTY, a public corporation of the State of Florida, hereinafter referred to as the "Board."

WITNESSETH:

Whereas, the District owns certain real property located in Pasco County, Florida, known as Jay B. Starkey Wilderness Park; and

Whereas, on Jay B. Starkey Wilderness Park The District, Board, and County shall agree to a location and property description for the construction of an environmental education center hereafter referred to as "Project Lands"; and

Whereas, the County has constructed and is operating and maintaining all of the recreational facilities within the park, pursuant to an agreement with the District, dated November 21, 1989; and

Whereas, the District, the County, and the Board desire to combine their resources and efforts to construct, operate and maintain on the Project Lands an environmental education facility, hereinafter referred to as the "Project"; and

Whereas, the County and the Board represent that they possess the requisite skills, knowledge, expertise and resources and do agree to provide the desired services to the District; and

Whereas, the District has agreed to provide the County with up to $250,000 to construct the necessary building; and

Whereas, The District shall provide the County with up to $250,000.00 to construct the Project subject to an agreeable location and other conditions precedent herein; and

Whereas, joint cooperation between the District, the County and the Board is in the best interest of the public.

Now, therefore, the District, the County and the Board, in consideration of the mutual terms, covenants and conditions set forth herein, hereby mutually agree as follows:

1. WHEREAS CLAUSES: The Whereas clauses set forth above are hereby adopted and incorporated in this Agreement.

2. TERM: The initial term of this Agreement shall commence upon the execution by all parties and shall terminate on August 31, 2005.

3. RENEWAL TERM: Upon the expiration of the initial term of this Agreement, the Board and the County may renew this Agreement for additional incremental periods of five (5) years up to a maximum of fifty years upon terms and conditions set forth by the District at each five-year renewal term. In the event the Board and the County do not accept the terms and conditions for each renewal period set forth by the District prior to the expiration of this Agreement or any renewal term, this Agreement shall expire automatically and the District shall have the right to possession of the environmental education center.

4. USE: Upon execution of this Agreement, occurrence of all conditions precedent, and completed construction of the Project, the Board shall use the facilities to provide environmental educational training with emphasis on the wisdom of protecting, conserving and preserving natural and freshwater systems. The County may sub-lease out part of the Facility for meeting space on an hourly or daily rate for a reasonable user fee when the Facility is not being used by the Board for public environmental education purposes. The District shall be allowed to use meeting rooms in the facility at no charge based upon the availability of the meeting room and the District reserving the room from the County at least 30 days in advance. The County shall be allowed to use the environmental education center at its option and at no cost provided said use does not conflict with Board use.

5. CONDITIONS PRECEDENT: In addition to an agreed upon location and property description for the Project, the County, Board, and District agree as a condition precedent to the effectiveness of this agreement to develop a Master Plan/Curriculum. The Master Plan/Curriculum shall be developed and acceptable to all parties within eighteen (18) months of execution of this Agreement by all parties. Failure of any condition precedent shall result in this Agreement being voidable by any party and all parties to the Agreement shall be responsible for its own costs incurred. The Master Plan/Curriculum shall identify:

5.1 Permitted activities;

5.2 Project task deadlines;

5.3 Line item project budget;

5.4 Project plan; and

5.5 Any other items agreeable to all parties to be incorporated into the master plan/curriculum.

6. PROJECT MANAGER AND NOTICES: Each party hereby designates the employee set forth below as its respective Project Manager. Project Managers shall assist with Project coordination and shall be the party's prime contact person. Notices or reports shall be sent to the attention of the parties' Project Manager by U.S. mail, postage paid, to the parties' addresses as follows:

Project Manager for the District:
Denise L. Tenuto
District Lands Coordinator
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899

Project Manager for the County:
Jim Slaughter, Director
Pasco County Parks and Recreation Department
Central Pasco Professional Center, Suite 202
4111 Land O'Lakes Boulevard
Land O'Lakes, FL 34639

Project Manager for the Board:
Jay Feliciani
Supervisor of Science Department
District School Board of Pasco County
7227 Land O' Lakes Boulevard
Land O'Lakes, Florida 34639

6.1 The District's Project Manager is hereby authorized to approve requests to extend a project task deadline set forth in the master/plan curriculum . Such approval shall be in writing, shall explain the reason for the extension and shall be signed by the Project Manager and his/her Department Director. The District's Project Manager is not authorized to approve any time extension that will result in an increased cost to the District or any time extension which will likely delay the final project task deadline.

6.2 The District's Project Manager is authorized to adjust a line item amount of the project budget set forth in the master plan/curriculum, if such adjustment does not exceed ten percent (10%) of the line item amount, aggregate adjustments are less

than $10,000, and such adjustment does not result in an increase in the total project cost to be paid by The District. Such approval shall be in writing, shall explain the reason for adjustment, and shall be signed by the Project Manager and his/her Department Director and their Deputy Executive Director. The District's Project Manager is not authorized to make changes to the Scope of Work *and is* not authorized to approve any increase in the not-to-exceed amount set forth in the compensation section of this Agreement.

7. SCOPE OF WORK: The County shall arrange for and or furnish all services necessary and required to accomplish and complete the Project and in accordance with the proposed project plan set forth in the master plan/curriculum.

7.1 County Acts as Project Administrator: The District, Board and the County herein acknowledge that the County shall act as project administrator for the design and construction of the Project. The County shall make reasonable efforts to ensure the development of an energy-efficient design and construction plans for the Project. Final design and construction plans shall be forwarded to the District for review and approval. The District shall have (60) days to review the final design and construction plans and to provide the County with written approval of same. After obtaining the District's written approval of the design and construction plans, the County shall forward three (3) signed and sealed copies of the approved plans to the District and the Board for its files. The District's and Board's approval of the design and construction plans does not constitute a representation or warranty that the District has verified the architectural, engineering, mechanical, electrical, or other components of the design and construction plans, or that such documents are in compliance with District rules and regulations or any other applicable rules, regulations, or laws. The District's approval shall not constitute a waiver of the County's obligation to assure that the County performs and complies with professional design standards that other design professionals would be required to comply with in accordance with the standards of his/her profession. The County shall provide signed and sealed plans and construction documents in accordance with standard engineering practices for construction of the Project.

7.2 Permits: The Project Administrator shall ensure that all necessary permits, approvals, and licenses from all appropriate agencies prior to construction of the Project. When the Project requires obtaining any District permit, the permitting applicant shall be the owner or the authorized agent of the land to be occupied or otherwise used by the proposed Project development. If District owned land is involved, the District is a co-applicant, and the Florida Department of Environmental Protection shall be the permitting agency.

7.3 Selection of Contractors: The County shall be responsible for the selection of any and all contractors needed to accomplish the work set forth in the approved design

and construction plans. Said selection shall be in accordance with the Purchasing Ordinance of Pasco County, unless performed by the County's own forces. If required by law and the Purchasing Ordinance of Pasco County, the County shall select the contractors by the competitive bid process. The District, at the request of the County shall assist the County in evaluating prospective contractors for the purposes of carrying out the requirements of this Agreement. The District shall approve in writing the selection of the contractor by the County.

7.4 Approval of Contract: The County shall obtain the District's approval of all contracts between the County and the Contractor. The District shall not unreasonably withhold such approval.

7.5. Project Construction: The County shall require the Contractor to construct the Project in substantial compliance with the approved design and construction plans for the Project. All construction shall be in conformance with the State of Florida Building Codes and Construction Standards for publicly owned buildings. The County shall require that the contractor be responsible for all labor, equipment and materials needed for the Project.

7.6 Completion Dates: If the County does not complete said work within the period described in the master plan/curriculum , the County shall reimburse the District the full amount paid to the County by the District unless mutually agreed upon otherwise. However, in the event of any national, state or local emergency which significantly affects the County's ability to perform, such as hurricanes, tornadoes, floods, acts of God, acts of war, other such catastrophes, or other man-made emergencies beyond the control of the County such as labor strikes or riots, or for any other reason beyond the control of the County, then the County's obligation to complete said work within aforementioned time frames shall be suspended for the period of time the condition continues to exist. The District agrees that it shall not unreasonably withhold its approval of any extension of time.

8. NO AGENCY RELATIONSHIP: Nothing herein shall be construed to create an agency relationship among any of the parties to this Agreement.

9. COMPENSATION/FUNDING: For satisfactory completion of all contractual requirements, the District agrees to pay the County an amount not to exceed $250,000. Payment will be made to the County in accordance with the following schedule:

9.1 First Installment Payment: After obtaining the District's written approval of the design and construction plans as set forth in paragraph 7.1 of this Agreement, the County shall forward three (3) sealed and certified copies of the approved plans to the District and Board for their files and shall forward an invoice to the District for 25 percent of the budgeted funds for the Project. Within thirty (30) days of receipt of the invoice, the District shall forward a check to the County for 25

percent of the District's budgeted cost for the Project.

9.2 Second Installment Payment: At such time as the County has concluded that 50 percent of the construction work for the Project has been completed, the County shall forward an invoice to the District for an additional 50 percent of the remaining budgeted funds for the Project. The County shall warrant that the construction completed thus far is in compliance with the design and construction plans for the Project approved by the District. Within thirty (30) days of receipt of the invoice and upon the District's acceptance of the County's said warrant, the District shall forward a check to the County for 50 percent of the remaining budgeted cost of the District.

9.3 Final Installment Payment: Upon completion and acceptance of the construction of the Project by the County, the County shall provide three sets of as-built plans for the Project to the District. The County shall provide to the District a certification that the Project has been constructed in substantial compliance with the design and construction plans for the Project approved by the District. The County shall forward an invoice to the District for the remaining budgeted funds for the Project. Within thirty (30) days of receipt of the invoice and upon the District's acceptance of the County's said warrant, the District shall forward a check to the County for the remaining budgeted funds of the District.

The maximum amount of $250,000 includes any travel expenses which may be authorized under this Agreement or as specifically outlined in the master plan/curriculum and reimbursement shall be paid only in accordance with Section 112.061, Florida Statutes, District Policy 130-5 and District Procedure 13-5. Invoices shall be submitted to the District at the following address.

Accounts Payable Section
Southwest Florida Water Management District
Post Office Box 1166
Brooksville, FL 34605-1166

10. SCHOOL BOARD RESPONSIBILITIES:

(A) The Board shall provide a full-time teacher and necessary bus transportation for the program. The Board shall also be responsible for any direct costs related to the program.

(B) Prior to the establishment or institution of any education or research activities on the site, the Board shall submit plans and specifications of all proposed activities, including the development of a freshwater/natural systems curriculum, to the District for written approval.

(C) The Board shall work with the District and the County in developing the master plan/curriculum.

(D) The Board shall submit to the District and the County annual reports of environmental education activities conducted by the Board, including number of students/visitors to the center.

(E) The Board shall obtain all permits and authorizations that may be necessary to operate, maintain and manage the project.

(F) The Board shall submit to the District and County a schedule of proposed use of the facilities by June 1st of each year.

11. COUNTY RESPONSIBILITIES

(A) Prior to construction of the facilities or improvements, the County shall submit to the District for written approval all final design plans, specifications and construction drawings for the environmental education facility as identified in the master plan/curriculum.

(B) The County shall be responsible for the maintenance of the facilities, including the cost of monthly utilities and janitorial services and repairs.

(C) The County shall be responsible for coordinating the use of the facilities.

(D) The County shall submit to the District and the Board annual reports of environmental educational activities conducted by the County, including number of visitors/students to the center.

12. DISTRICT RESPONSIBILITIES

(A) The District shall allow use of the Project Lands for the purposes described in this Agreement and the master plan/curriculum and shall contribute up to $250,000.00 toward construction oft environmental education facility.

(B) The District shall coordinate in advance all necessary land management activities such as plans for prescribed burning and land restoration with the Board and the County.

(C) The District shall cooperate with the Board and County in providing District staff as speakers or guides with adequate advance notice.

(D) The District shall submit to the County and the Board annual reports of any environmental education activities conducted by the District, including number of students/visitors to the center.

13. GENERAL USE RESTRICTIONS

(A) This Agreement shall not be deemed to create or vest in the Board or County any interest or title to the Project Lands, other than that specifically provided in this Agreement or in the master plan/curriculum.

(B) All vehicular travel within the Project Lands shall be done on roadways and trails.

(C) The possession, consumption, or other use of any alcoholic beverage, intoxicant and unlawful drug or substance by anyone within or on the Project Lands and the improvements thereon, shall be specifically prohibited.

(D) The escape of or discharge of any sewage or effluent into the waters upon, under or from the Project Lands shall be prohibited except for those purposes currently permitted in connection with the existing improvements on the Projects Lands.

(E) The Board and the County shall not discriminate against any person or persons because of race, color, creed, religion, sex, or national origin in its uses of the Project Lands stated herein.

(F) The possession or use of any weapons or firearms on the Project Lands shall be prohibited with the exception of law enforcement officials.

(G) Hunting, trapping, or the removal, release, or destruction of flora or fauna on the Project Lands shall be prohibited. However, control of exotic species may be necessary to preserve the lands in their natural condition.

14. ASSIGNABILITY: No party may assign or transfer its rights or obligations under this Agreement, including any operation or maintenance duties related to the Project, without the prior written consent of the other parties.

15. RIGHT TO INSPECT: The District shall have the right, at any reasonable time, to inspect the Project Lands and the improvements thereon, and the operation and maintenance activities for the Facility to insure compliance with the approved terms and conditions of this Agreement. The right is reserved to the District, its officers, agents, employees and assigns, to enter upon and travel upon, over, or across the Project Lands at any time. The District's officers, agents, employees and assigns shall identify themselves and present sufficient identification to the Board and County upon request.

16. LIABILITY. Each party hereto agrees that it shall be solely responsible for the negligent acts or omissions of its officers, employees, contractors and agents, however, nothing contained herein shall constitute a waiver by any party of its sovereign immunity or the limitations set forth in Section 768.28, Florida Statutes.

17. INSURANCE: The Board and the County, as a public corporation of the State of Florida and a political subdivision of the State of Florida, respectively, may be fully insured or self-insured for liability coverage. The Board and County shall maintain in force during the entire term of the Agreement, general liability and vehicle liability coverage and workers' compensation benefits in accordance with Florida Statute 440.

17.1 The Board and the County shall provide documentation to the District from their insurance carriers, or on their letterhead, that the above insurance is in effect for the full term of the Agreement.

17.2 The District shall receive thirty (30) days prior written notice of any material change, cancellation or claim that would affect the required coverage.

17.3 Certificates of insurance verifying general liability, vehicle liability and workers' compensation and any other line of coverage specifically relevant to the Agreement shall also be required from any contractor or subcontractor who performs services for the Board or County pursuant to this Agreement.

18. PROJECT RECORDS AND DOCUMENTS: Each party shall, upon request, permit the other party to examine or audit all Project related records and documents during or following completion of the Project. Each party shall maintain all such records and documents for at least three (3) years following completion of the Project. All records and documents generated or received by either party in relation to the Project are subject to the Public Records Act in Chapter 119, Florida Statutes.

19. OWNERSHIP OF DOCUMENTS AND MATERIALS: All documents, including reports, drawings, estimates, programs, manuals, specifications, and all goods or products, including intellectual property and rights thereto, purchased under this Agreement with District funds or developed in connection with this Agreement shall be and remain the property of the District. Copies of all documents may be retained by the County for its own records.

20. WORKS OF THE DISTRICT: The parties hereto expressly acknowledge and agree that the District reserves the right to operate, use and maintain the Project Lands and the improvements thereon for the primary purposes of water management and/or water supply, which rights are paramount and superior to the uses authorized by this Agreement, and the parties hereto recognize that said uses are subordinate thereto.

21. TAXES/ASSESSMENTS: If any ad valorem taxes, intangible property taxes, personal property taxes, or other taxes or assessments of any kind are assessed or levied lawfully on the lands of the Project as described pursuant to the whereas clauses and condition precedents and the improvements thereon based on the School Board or County's use thereof during the term of this Agreement, the Board shall pay said taxes within thirty (30) days after receiving written notice thereof from the District. In the event the Board fails to pay all said taxes assessed or levied on the facility or appurtenances thereto within thirty (30) days after receiving written notice thereof from the District, the District may, at its sole option, pay said taxes subject to

immediate reimbursement thereof in full together with any interest thereon at the maximum rate allowed by law and any administrative costs thereof incurred by the District, including reasonable attorney's fees. Failure of the Board to pay said taxes shall constitute a material breach of this Agreement.

22. DISTRICT RECOGNITION: The Board shall recognize District and Basin Board funding in any reports, models, studies, maps or other documents resulting from this Agreement, and the form of said recognition shall be subject to District approval. The County shall provide signage at the Facility that recognizes funding for the project provided by the District and Basin Boards. All signage must meet District written approval as to form, content and location, and must be in accordance with local sign ordinances.

23. TERMINATION : Any of the parties may terminate this Agreement upon another party's failure to fully comply with the terms and conditions of this Agreement. The party considering termination shall provide the other parties with a written "Notice of Termination" stating its intent to terminate and describing those terms and conditions with which the other party has failed to comply. If the party failing to comply has not remedied its failure within thirty (30) days after receiving notice of termination, this Agreement shall terminate.

24. RELEASE OF INFORMATION: The parties shall not initiate any verbal or written media interviews or issue press releases on or about the Project without providing advance copies to the other party. This provision shall not be construed as preventing the parties from complying with the public records disclosure laws set forth in Chapter 119, Florida Statutes.

In Witness Whereof, the lawful representatives of the parties hereto have executed this Agreement the day and year above first written.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Witness

By: _____
James L. Allen, Chairman

APPROVED AS TO FORM

_____
Attorney for SWFWMD

DISTRICT SCHOOL BOARD OF PASCO COUNTY

_____
Witness

By: _____
Dr. John W. Long, Superintendent

APPROVED AS TO FORM

_____
Attorney for the School Board

BOARD OF COUNTY COMMISSIONERS, PASCO COUNTY, FLORIDA

COUNTY COMMISSIONERS ORGANIZED JUNE 2ND 1887 PASCO COUNTY, FLORIDA

Witness

By: _____
Sylvia Young, Chairman

APPROVED AS TO FORM

_____
Attorney for Pasco County

This instrument prepared by:
Southwest Florida Water
Management District
2379 Broad Street
Brooksville, FL 34604-6899

SWF Parcel No. 16-010-031X
Approved by Attorney RH 3/6/01

FIRST AMENDMENT TO AGREEMENT BETWEEN THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, PASCO COUNTY, AND THE DISTRICT SCHOOL BOARD OF PASCO COUNTY

THIS AMENDMENT TO AGREEMENT, made and entered into this 26th day of February, 2001, by and between the Southwest Florida Water Management District, a public corporation of the State of Florida, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, for itself and on behalf of the Coastal Rivers and Pinellas-Anclote River Basins, hereinafter referred to as the "DISTRICT", Pasco County, Florida, a political subdivision of the State of Florida, whose address is 38053 Live Oak Avenue, Dade City, FL 33525-3819, hereinafter referred to as the "COUNTY", and the District School Board of Pasco County, a public corporation of the State of Florida, whose address is 7227 Land O'Lakes Boulevard, Land O'Lakes, Florida 34639, hereinafter referred to as the "BOARD."

WITNESSETH:

WHEREAS, the DISTRICT, the COUNTY, and the BOARD entered into an Agreement for the construction, operation and maintenance of an environmental education center at Jay B. Starkey Wilderness Park dated August 25, 1998; and

WHEREAS, the parties hereto wish to amend the payment amount of this Agreement and to provide a specific legal description for the site of the environmental education center as described in the attached Exhibit "A."

NOW, THEREFORE, in consideration of the mutual covenants and considerations contained herein, and for other good and valuable considerations, the parties hereto agree that Paragraph 9. COMPENSATION/FUNDING is hereby amended to increase PROJECT funding's not to exceed amount from a total of $250,000 to a maximum total of $771,845 for construction of the environmental education center.

All other terms, conditions and covenants of the Agreement dated August 25, 1998, are hereby ratified and affirmed, except as specifically amended herein.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment to the Agreement on the day and year first above written.

Signed, sealed and delivered
in the presence of:

WITNESSED:

Deanna M Brass 5-2-01
Date

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

By: 5-02-01
E. D. "Sonny" Vergara Date
Executive Director

WITNESSED:

Florence B. Fasken 4-26-01
Date

DISTRICT SCHOOL BOARD OF PASCO COUNTY

By: 4/26/01
Dr. John W. Long Date
Superintendent

WITNESSED:

Elaine H. Phillips, 4/17/01
Deputy Clerk Date

BOARD OF COUNTY COMMISSIONERS, PASCO COUNTY, FLORIDA

BY:
Steve Simon, Chairman Date

APPROVED AS TO LEGAL FORM & SUFFICIENCY*
Office of the County Attorney

Attorney
5 April 2001

* Prior to execution by SWFWMD

APPROVED BY:
ATTORNEY: R.H. 3/16/01
MANAGER:
DIRECTOR: BCC 5-14-01
DEPUTY EXEC. DIR: 3-22-01
Risk Management ldp

ORIGINAL

SWF Parcel No.16-010-031X

Second Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County, and the District School Board of Pasco County

This Amendment to Management Agreement, made and entered into this 20th day of December, 2005, by and between the Southwest Florida Water Management District, a public corporation created by Chapter 61-691, Laws of Florida, as amended, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as the "District" and Pasco County, a political subdivision of the State of Florida, whose address is 37918 Meridian Avenue, Dade City, Florida 33523-3819, hereinafter referred to as the "County," and the District School Board of Pasco County, a Public corporation of the State of Florida, whose address is 7227 Land O' Lakes Boulevard, Land O' Lakes, Florida 34639, hereinafter referred to as the "Board" .

WITNESSETH

WHEREAS, the District, the County and the Board entered into an Agreement for the construction, operation and maintenance of an environmental education center at Jay B. Starkey Wilderness Park dated August 25, 1998, and amended on February 26, 2001, as shown in Exhibit "A" attached hereto; and

WHEREAS, the District, the County and the Board wish to amend Agreement to extend it another five (5) year term under the same terms and conditions as stated in the August 25, 1998 Agreement and subsequent amendment thereto.

NOW THEREFORE, for and in consideration of the promises, terms and mutual covenants herein contained, the parties hereto agree as follows:

2. TERM: This Agreement is extended for an additional five years and shall commence upon the execution by all parties and shall terminate on August 31, 2010.

All other terms, covenants and conditions set forth in the original Agreement dated August 25, 1998, are hereby ratified, and affirmed, except as specifically amended herein.

[Rest of this page intentionally left blank]

In Witness Whereof, the lawful representatives of the parties hereto have executed this Agreement the day and year above first written.

Southwest Florida Water Management District, A Public Corporation

By: _____
Witness

By: _____
Heidi McCree, Chairman

Date: 12-20-2005

COUNTY COMMISSIONERS ORGANIZED JUNE 2nd 1887 PASCO COUNTY FLORIDA

Board of County Commissioners, Pasco County, Florida

By: _____
Witness

By: _____
, Chairman

APPROVED

Date: DEC 20 2005

District School Board of Pasco County

By: _____
Witness

By: _____
Heather Fiorentino, Superintendent

Date: 12/6/05

Revised 08-05-2005

APPROVED AS TO LEGAL FORM & SUFFICIENCY
OFFICE OF THE PASCO COUNTY ATTORNEY

_____
ATTORNEY

APPROVED BY:	INITIALS	DATE
ATTORNEY		8/11/05
MANAGER		9/6/05
DIRECTOR		20 oct 05
DEPUTY EXEC DIR		10-20-5

SWF Parcel No.16-010-031X

Third Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County and the District School Board of Pasco County

This Amendment to Management Agreement, made and entered into this 2 day of February, 2010, by and between the Southwest Florida Water Management District, a public corporation, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as the "District" and Pasco County, a political subdivision of the State of Florida, whose address is 37918 Meridian Avenue, Dade City, Florida 33523-3819, hereinafter referred to as the "County," and the District School Board of Pasco County, a Public corporation of the State of Florida, whose address is 7227 Land O' Lakes Boulevard, Land O' Lakes, Florida 34639, hereinafter referred to as the "Board" .

WITNESSETH

WHEREAS, the District, the County and the Board entered into an Agreement for the construction, operation and maintenance of an environmental education center at Jay B. Starkey Wilderness Park dated August 25, 1998, and amended on February 26, 2001, and on December 20, 2005, as shown in Exhibit "A" attached hereto; and

WHEREAS, the District, the County and the Board wish to amend Agreement to extend it another five (5) year term under the same terms and conditions as stated in the August 25, 1998 Agreement and subsequent amendment thereto.

NOW THEREFORE, for and in consideration of the promises, terms and mutual covenants herein contained, the parties hereto agree as follows:

2. TERM: This Agreement is extended for an additional five years and shall commence upon the execution by all parties and shall terminate on August 31, 2015.

All other terms, covenants and conditions set forth in the original Agreement dated August 25, 1998, are hereby ratified, and affirmed, except as specifically amended herein.

[Rest of this page intentionally left blank]

In Witness Whereof, the lawful representatives of the parties hereto have executed this Agreement the day and year above first written.

By: _____
Witness

Southwest Florida Water Management District, A Public Corporation

By: _____
Eric Sutton,
Land Resources Director

Date: 19 Oct 10

COUNTY COMMISSIONERS ORGANIZED JUNE 2nd 1887 PASCO COUNTY, FLORIDA

By: _____
Attest

Board of County Commissioners, Pasco County, Florida

By: _____
Ann Hildebrand, Chairman

APPROVED

Date: FEB 22 2011

BOCC

By: _____
Attest

District School Board of Pasco County

By: _____
, Superintendent

Date: 10-27-11

Approved as to legal form and sufficiency
Office of the Pasco County Attorney

_____
Attorney

Revised 05-31-2010

APPROVED BY:	INITIALS	DATE
Attorney		8/17/10
LND Manager		10-11-10
LND Director		19 Oct 10

SWF Parcel No. 16-010-031X

Fourth Amendment to Agreement Between the Southwest Florida Water Management District, Pasco County and the District School Board of Pasco County

This Amendment is made and entered into by and between the Southwest Florida Water Management District, a public corporation, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as the "District," and the Board of County Commissioners of Pasco County, Florida, a political subdivision of the State of Florida, whose address is 37918 Meridian Avenue, Dade City, Florida 33523-3819, hereinafter referred to as the "County," and the District School Board of Pasco County, a public corporation of the State of Florida, whose address is 7227 Land O' Lakes Boulevard, Land O' Lakes, Florida 34639, hereinafter referred to as the "Board."

WITNESSETH

WHEREAS, the District, the County, and the Board entered into an Agreement for the construction, operation and maintenance of an environmental education center at Jay B. Starkey Wilderness Park dated August 25, 1998 ("Agreement"), as shown in Exhibit "A" attached hereto and which Agreement was amended on February 26, 2001, December 20, 2005, and August 24, 2010, which amendments are attached hereto as Exhibits "B", "C," and "D," respectively; and

WHEREAS, the District, the County and the Board wish to amend the Agreement to extend it for a ten-year term under the same terms and conditions as stated in the Agreement and subsequent amendments thereto.

NOW THEREFORE, for and in consideration of the promises, terms and mutual covenants herein contained, the parties hereto agree as follows:

Paragraph 2. Term is replaced with the following:

2. TERM: This Agreement is extended for an additional ten years and shall commence upon the execution by all parties and shall terminate on August 25, 2025.

Paragraph 3. Renewal Term is replaced with the following:

3. RENEWAL TERM: The Board and the County may renew this Agreement for additional incremental periods of ten years. Requests for extension of this Agreement must be in writing to the District at least one year prior to the termination of the then-current renewal term. Upon the District's receipt of the request for extension, this Agreement will extend for an additional ten-year period, upon approval by the District's Executive Director in writing. This Agreement may not be extended for more than three

District School Board of Pasco County
JUN 16 2015
BOARD APPROVED

CONTRACT REVIEWED AND APPROVED:
6.5.15

successive ten-year terms. Thereafter, the parties are required to execute an amendment to the Agreement.

Paragraph 6. Project Manager and Notices is replaced with the following:

6. PROJECT MANAGER AND NOTICES: Each party hereby designates the employee set forth below as its respective Project Manager. Project Managers shall assist with Project coordination and shall be the party's prime contact person. Notices or reports shall be sent to the attention of the parties' Project Manager by U.S. Mail, postage paid, to the parties' addresses as follows:

Project Manager for the District: Land Manager
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899

Project Manager for the County: Director
Pasco County Parks & Recreation Department
Central Pasco Professional Center, Suite 202
Land O'Lakes, Florida 34639

Project Manager for the Board: Director
Office of Teaching and Learning
District School Board of Pasco County
4111 Land O'Lakes Boulevard
Land O'Lakes, Florida 34639

All other terms, covenants and conditions set forth in the Agreement, as amended, are hereby ratified and affirmed, except as specifically amended herein.

IN WITNESS WHEREOF, the lawful representatives of the parties hereto have executed this Amendment the day and year above first written.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Attest: _____
Secretary

By: _____
Chairman

Date: July 28, 2015

[Seal]

District School Board of Pasco County

JUN 16 2015

BOARD APPROVED

CONTRACT REVIEWED AND APPROVED:
MW/SS 6.5.15

By: _____
Paula S. O'Neil, Ph.D.
Pasco County Clerk & Comptroller

BOARD OF COUNTY COMMISSIONERS
OF PASCO COUNTY, FLORIDA

By: _____
Theodore J. Schrader, Chairman

APPROVED
IN SESSION
JUL 14 2015
PASCO COUNTY
BCC

Date: 7-14-2015

By: _____
Kurt S. Browning, Superintendent

DISTRICT SCHOOL BOARD OF
PASCO COUNTY

By: _____ vice chairman
Steve Luikart, Chairman

Date: 6-16-15

APPROVED BY:	INITIALS	DATE
Attorney		6/11/15
Manager		
Bureau Chief		
Division Director		

District School Board
of Pasco County
JUN 16 2015
BOARD APPROVED

CONTRACT REVIEWED
AND APPROVED:
6-5-15

CONSENT AGENDA

July 22, 2025

Regulation Committee: Water Use Permit No. 20 021107.001, NC Real Estate Projects, LLC / Grenelefe Utility (Polk County)

This is a modification of an existing water use permit for public supply use. The authorized quantities have changed from the previous permit. This permit authorizes an increase in the annual average quantity from 477,500 gallons per day (gpd) to 754,500 gpd and an increase in the peak month quantity from 620,800 gpd to 1,056,300 gpd. The increase in quantities is due to an increase in projected population which incorporates the Smokey Groves subdivision and the conversion of golf course into a residential development. There is no change in use type from the previous permit. Quantities are based on a projected population of 5,276 for the year 2029 and a per capita of 130 gallons per person per day. Concurrently with the increase in this water use permit, a reduction will be issued for Water Use Permit No. 20005251.011 to reduce golf course irrigated acreage and associated quantities. There is an overall reduction in Upper Floridan quantities between the two permits. This permit is located in the Central Florida Water Initiative (CFWI) and the Southern Water Use Caution Area (SWUCA). This permit utilizes strictly alternative water sources from the Lower Floridan aquifer.

Special Conditions include those that require the Permittee to record and report monthly meter readings, modify the permit to reflect incorporation of any new alternative sources of water, cap all withdrawals not in use, submit a public supply annual report, submit an aquifer recharge annual report, conduct meter accuracy testing every five years, and implement water conservation and best management practices.

This permit application meets all Conditions for Issuance pursuant to Florida Administrative Code Rule 40D-2.301.

Staff Recommendation:
Approve the proposed permit attached as an exhibit.

Presenter:
April D. Breton, Bureau Chief, Water Use Permit Bureau

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
WATER USE PERMIT
Individual
PERMIT NO. 20 021107.001

PERMIT ISSUE DATE: **July 22, 2025** **EXPIRATION DATE:** **August 11, 2029**

The Permittee is responsible for submitting an application to renew this permit no sooner than one year prior to the expiration date, and no later than the end of the last business day before the expiration date, whether or not the Permittee receives prior notification by mail. Failure to submit a renewal application prior to the expiration date and continuing to withdraw water after the expiration date is a violation of Chapter 373, Florida Statutes, and Chapter 40D-2, Florida Administrative Code, and may result in a monetary penalty and/or loss of the right to use the water. Issuance of a renewal of this permit is contingent upon District approval.

TYPE OF APPLICATION: Modification

GRANTED TO: NC Real Estate Projects, LLC / Attn: Frederick Scott House
3425 Turnberry Dr.
Lakeland, FL 33803

PROJECT NAME: Grenelefe Utility

WATER USE CAUTION AREA(S): SOUTHERN WATER USE CAUTION AREA

COUNTY: Polk

TOTAL QUANTITIES AUTHORIZED UNDER THIS PERMIT (in gallons per day)	
ANNUAL AVERAGE	754,500 gpd
PEAK MONTH [1]	1,056,300 gpd
DROUGHT ANNUAL AVERAGE [2]	754,500 gpd

1. Peak Month: Average daily use during the highest water use month.
2. Drought Annual Average: Annual average limit when less than historical average rainfall if sufficient Water Conservation credits exist in the Permittee's account.

ABSTRACT:

This is a modification of an existing water use permit for public supply use. The authorized quantities have changed from the previous permit. This permit authorizes an increase in the annual average quantity from 477,500 gallons per day (gpd) to 754,500 gpd and an increase in the peak month quantity from 620,800 gpd to 1,056,300 gpd. The increase in quantities is due to an increase in projected population which incorporates the Smokey Groves subdivision and the conversion of golf course to residential development. There is no change in use type from the previous permit. Quantities are based on a projected population of 5,276 for the year 2029 and a per capita of 130 gallons per person per day. Concurrently with the increase in this water use permit, a reduction will be issued for Water Use Permit No. 20005251.011 to reduce golf course irrigated acreage and associated quantities. There is an overall reduction in Upper Floridan quantities between the two permits. This permit is located in the Central Florida Water Initiative (CFWI) and the Southern Water Use Caution Area (SWUCA). This permit utilizes strictly alternative water sources from the Lower Floridan aquifer.

Special Conditions include those that require the Permittee to record and report monthly meter readings, modify the permit to reflect incorporation of any new alternative sources of water, cap all withdrawals not in use, submit a public supply annual report, submit an aquifer recharge annual report, conduct meter accuracy testing every five years, and implement water conservation and best management practices.

WATER USE TABLE (in gpd)

USE	ANNUAL AVERAGE	PEAK MONTH	DROUGHT ANNUAL AVERAGE
Public Supply	754,500	1,056,300	754,500

USE TYPE

Residential Single Family

PUBLIC SUPPLY:

Population Served: 5,276

Per Capita Rate: 130 gpd/person

WITHDRAWAL POINT QUANTITY TABLE

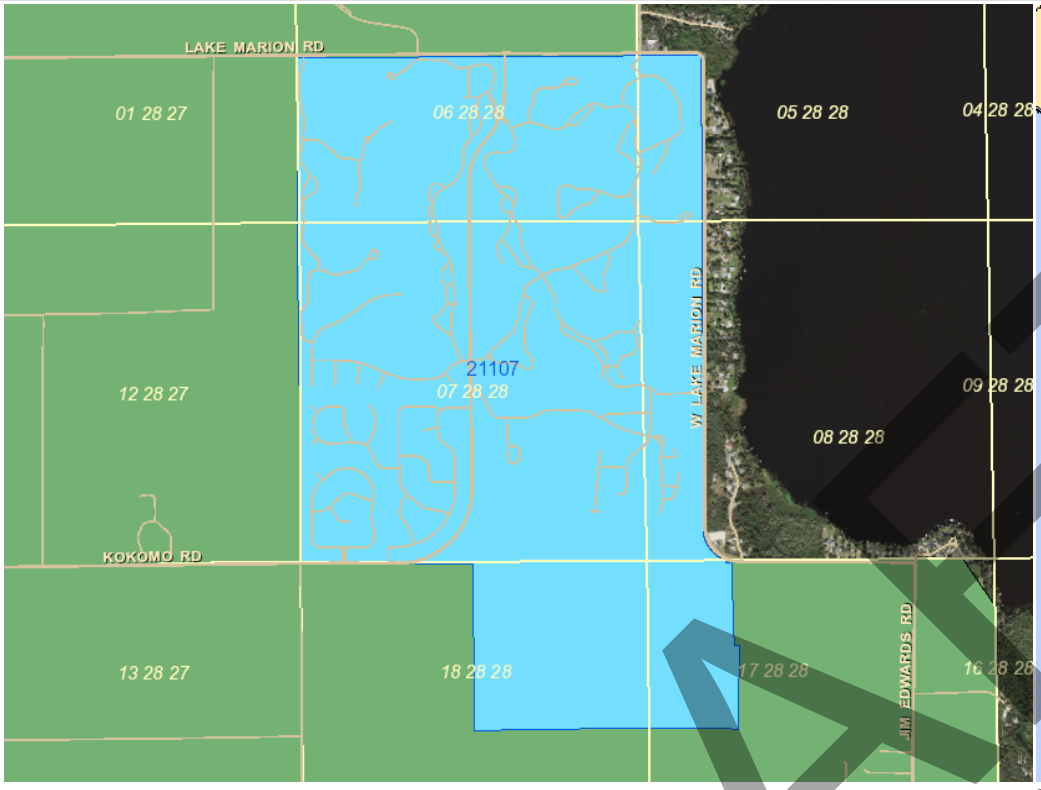
Water use from these withdrawal points are restricted to the quantities given below:

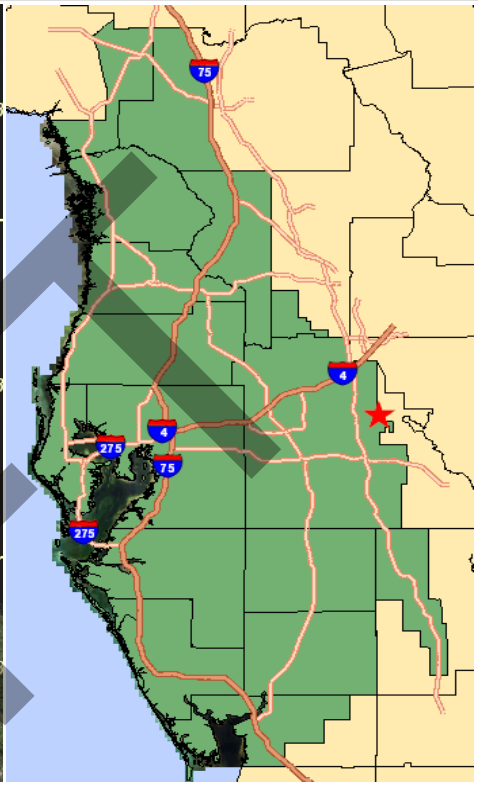
I.D. NO. PERMITTEE/ DISTRICT	DIAM (in.)	DEPTH TTL./CSD.FT. (feet bls)	USE DESCRIPTION	AVERAGE (gpd)	PEAK MONTH (gpd)
6 / 6	12	904 / 674	Public Supply	754,500	1,056,300
10 / 10	10	1,410 / 710	Public Supply	754,500	1,056,300

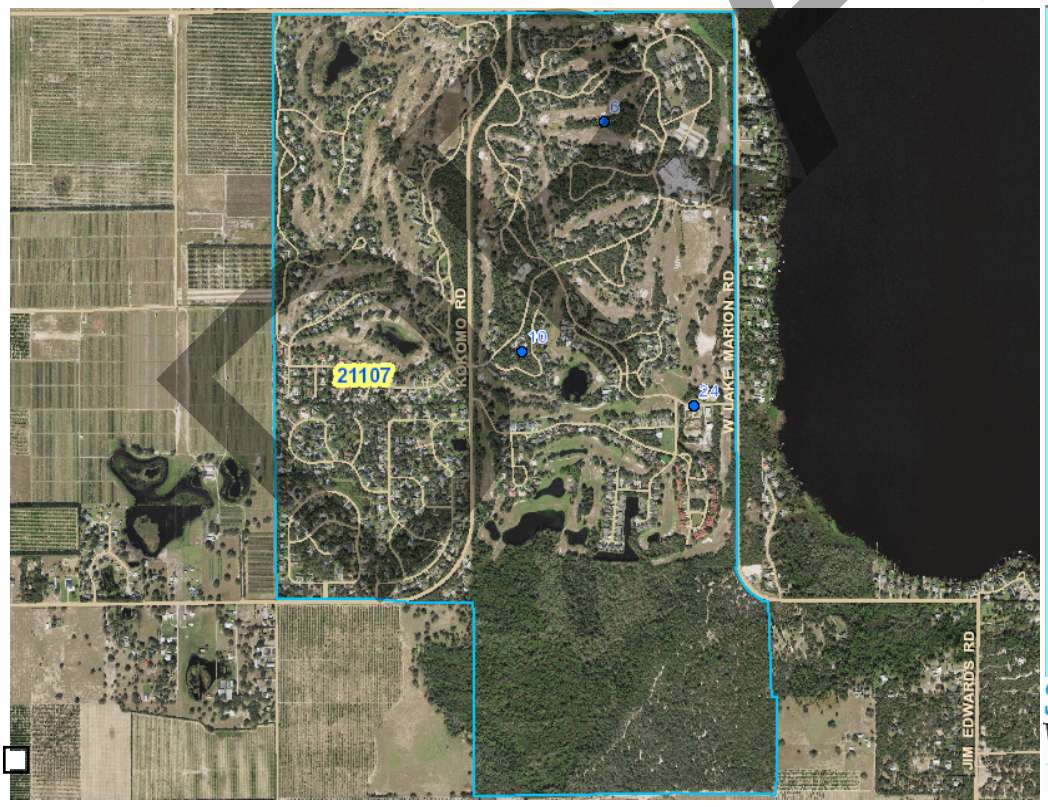
WITHDRAWAL POINT LOCATION TABLE

DISTRICT I.D. NO.	LATITUDE/LONGITUDE
6	28° 04' 23.71"/81° 32' 55.44"
10	28° 03' 53.28"/81° 33' 07.92"

Location Map
NC Real Estate Projects, LLC / Attn: Frederick Scott House
WUP No. 20 021107.001







Legend

DIDs

WUP Boundary

Natural Color Imagery

POLK COUNTY

N
W E
S

Southwest Florida Water Management District

STANDARD CONDITIONS:

The Permittee shall comply with the Standard Conditions attached hereto, incorporated herein by reference as Exhibit A and made a part hereof.

SPECIAL CONDITIONS:

1. All reports and data required by condition(s) of the permit shall be submitted to the District according to the due date(s) contained in the specific condition. If the condition specifies that a District-supplied form is to be used, the Permittee should use that form in order for their submission to be acknowledged in a timely manner. The only alternative to this requirement is to use the District Permit Information Center (www.swfwmd.state.fl.us/permits/epermitting/) to submit data, plans or reports online. There are instructions at the District website on how to register to set up an account to do so. If the report or data is received on or before the tenth day of the month following data collection, it shall be deemed as a timely submittal.

   All mailed reports and data are to be sent to:

   Southwest Florida Water Management District
   Tampa Service Office, Water Use Permit Bureau
   7601 U.S. Hwy. 301 North
   Tampa, Florida 33637-6759

   Submission of plans and reports: Unless submitted online or otherwise indicated in the special condition, the original and two copies of each plan and report, such as conservation plans, environmental analyses, aquifer test results, per capita annual reports, etc. are required.

   Submission of data: Unless otherwise indicated in the special condition, an original (no copies) is required for data submittals such as crop report forms, meter readings and/or pumpage, rainfall, water level, evapotranspiration, or water quality data.

   (499)

2. The quantities included in the permit are based on an average per capita rate of 130 gpd. By rule, the per capita rate in any given year shall not exceed 150 gpd. However, failure to maintain, on average, the per capita rate on which the permitted quantity is based could result in noncompliance with the terms of the permit. The per capita rate will be monitored via the Annual Report and the Reclaimed Water Supplier Report that are required to be submitted by April 1 of each year for the term of the permit.(67)

3. This permit shall be modified if an additional source of water is provided for public supply use from a separate entity. This includes additional Alternative Water Supply quantities and irrigation water for lawn/landscape and common areas. The Permittee shall notify the District of the additional water source and submit an application to modify the permit to acknowledge receipt.(68)

4. The permittee shall develop and maintain an Annual Conservation Goal Implementation Plan (ACGIP) pursuant to section 2.7 of the CFWI Supplemental Applicant's Handbook for Consumptive Use Permitting. The ACGIP shall outline conservation goals for no less than 5 years. Agricultural permittees implementing BMPs in lieu of an ACGIP must maintain documentation supporting the enrollment and implementation of selected BMPs. The permittee shall submit the ACGIP upon request by the District, during a 10-year compliance report, and with an application for permit renewal or modification except for a public water supply permittee with an annual average daily quantity of 100,000 gpd or greater and whose commercial use equals or exceeds 30 percent of its total water use, shall report its progress toward achieving the conservation goals within the ACGIP annually.(92)

5. The annual average, drought annual average, and peak month quantities for District ID Nos. 6 and 10, Permittee ID Nos. 6 and 10, shown in the withdrawal point quantity table are estimates based on historic and/or projected distribution of pumpage, and are for water use inventory and impact analysis purposes only. The quantities listed for these individual sources are not intended to dictate the distribution of pumpage from permitted sources. The Permittee may make adjustments in pumpage distribution as necessary up to 754,500 gallons per day on an annual average basis and up to 1,056,300 gallons per day on a peak month basis for the individual wells, so long as adverse

environmental impacts do not result and the Permittee complies with all other conditions of this Permit. In all cases, the total annual average daily withdrawal, the total peak month daily withdrawal, and the total crop protection withdrawal are limited to the quantities set forth above.(221)

6. Within 90 days of the replacement of any or all withdrawal quantities from ground water or surface water bodies with an Alternative Water Supply, the Permittee shall apply to modify this permit to place equal quantities of permitted withdrawals from the ground and/or surface water resource on standby. The standby quantities can be used in the event that some or all of the alternative source is not available.(363)

7. The Permittee shall immediately implement the District-approved water conservation plan dated May 8, 2024, that was submitted in support of the application for this permit. Conservation measures that the Permittee has already implemented shall continue, and proposed conservation measures shall be implemented as proposed in the plan. (449)

8. The Permittee shall investigate the feasibility of increasing the use of or using reclaimed water for irrigation when notified by the District that reclaimed water may be available in sufficient supply to be utilized for this permit . The Permittee shall submit a report documenting the feasibility investigation within six months of the notification. The report shall contain an analysis of reclaimed water sources for the area, including the relative location of these sources to the Permittee's property, the quantity of reclaimed water available, the projected date(s) of availability, costs associated with obtaining the reclaimed water, and an implementation schedule for reuse, if feasible. Infeasibility shall be supported with a detailed explanation. If the use of reclaimed water is determined to be feasible by the Permittee or by the District, then the Permittee shall submit an application to modify this water use permit to include reclaimed water as a source of water. The modification application shall include a date when the reclaimed water will be available and shall indicate a proposed reduction in permitted quantities. If the permit application is not submitted by the Permittee, the District may reduce, following notice to the Permittee, the quantities authorized with this permit to account for the availability of reclaimed water. (458)

9. Any wells not in use, and in which pumping equipment is not installed shall be capped or valved in a water tight manner in accordance with Chapter 62-532.500, F.A.C.(568)

10. Beginning January 1, 2012, the Permittee shall comply with the following requirements:

A. Customer billing period usage shall be placed on each utility-metered, customer's bill.

B. Meters shall be read and customers shall be billed no less frequently than bi-monthly.

C. The following information, as applicable to the customer, shall be provided at least once each calendar year and a summary of the provisions shall be provided to the District annually as described in Section D, below. The information shall be provided by postal mailings, bill inserts, online notices, on the bill or by other means. If billing units are not in gallons, a means to convert the units to gallons must be provided.

1. To each utility-metered customer in each customer class - Information describing the rate structure and shall include any applicable:

a. Fixed and variable charges,

b. Minimum charges and the quantity of water covered by such charges,

c. Price block quantity thresholds and prices,

d. Seasonal rate information and the months to which they apply, and

e. Usage surcharges

2. To each utility-metered single-family residential customer - Information that the customer can use to compare its water use relative to other single-family customers or to estimate an efficient use and that shall include one or more of the following:

a. The average or median single-family residential customer billing period water use calculated over the most recent three year period, or the most recent two year period if a three year period is not available to the utility. Data by billing period is preferred but not required.

b. A means to calculate an efficient billing period use based on the customer's characteristics, or

c. A means to calculate an efficient billing period use based on the service area's characteristics.

D. Annual Report: The following information shall be submitted to the District annually by October 1 of each year of the permit term to demonstrate compliance with the requirements above. The information shall be current as of the October 1 submittal date.

1. Description of the current water rate structure (rate ordinance or tariff sheet) for potable and non-potable water.

2. Description of the current customer billing and meter reading practices and any proposed changes to these practices (including a copy of a bill per A above).

3. Description of the means the permittee uses to make their metered customers aware of rate structures, and how the permittee provides information their metered single-family residential customers can use to compare their water use relative to other single-family customers or estimate an efficient use (see C 1 & 2 above).
(592)

11. This Permit is located within the Southern Water Use Caution Area (SWUCA). Pursuant to Section 373.0421, Florida Statutes, the SWUCA is subject to a minimum flows and levels recovery strategy, which became effective on January 1, 2007. The Governing Board may amend the recovery strategy, including amending applicable water use permitting rules based on an annual assessment of water resource criteria, cumulative water withdrawal impacts, and on a recurring five-year evaluation of the status of the recovery strategy up to the year 2025 as described in Chapter 40D-80, Florida Administrative Code. This Permit is subject to modification to comply with new rules.(652)

12. The Permittee shall maintain a water conserving rate structure for the duration of the permit term. Any changes to the water conserving rate structure described in the application shall be described in detail as a component of the next Annual Report on Water Rate, Billing and Meter Reading Practices of the year following the change.(659)

13. The Permittee shall submit a "Public Supply Annual Report" to the District by April 1 of each year on their water use during the preceding calendar year using the form, "Public Supply Water Use Annual Report Form" (Form No. LEG-R.103.00 (05/14)), referred to in this condition as "the Form," and all required attachments and documentation. The Permittee shall adhere to the "Annual Report Submittal Instructions" attached to and made part of this condition in Exhibit B. The Form addresses the following components in separate sections.

Per Capita Use Rate
A per capita rate for the previous calendar year will be calculated as provided in Part A of the Form using Part C of the Form to determine Significant Use deduction that may apply. Permittees that cannot achieve a per capita rate of 150 gpd according to the time frames included in the "Instructions for Completion of the Water Use Annual Report," shall include a report on why this rate was not achieved, measures taken to comply with this requirement, and a plan to bring the permit into compliance.

Residential Use
Residential use shall be reported in the categories specified in Part B of the Form, and the methodology used to determine the number of dwelling units by type and their quantities used shall be documented in an attachment.

Non-Residential Use
Non-residential use quantities provided for use in a community but that are not directly associated with places of residence, as well as the total water losses that occur between the point of output of the treatment plant and accountable end users, shall be reported in Part B of the Form.

Water Conservation
In an attachment to the Form, the Permittee shall describe the following:

1. Description of any ongoing audit program of the water treatment plant and distribution systems to address reductions in water losses.

2. An update of the water conservation plan that describes and quantifies the effectiveness of measures currently in practice, any additional measures proposed to be implemented, the scheduled implementation dates, and an estimate of anticipated water savings for each additional measure.

3. A description of the Permittees implementation of water-efficient landscape and irrigation codes or ordinances, public information and education programs, water conservation incentive programs, identification of which measures and programs, if any, were derived from the Conserve Florida Water Conservation Guide, and provide the projected costs of the measures and programs and the projected water savings.

Water Audit
If the current water loss rate is greater than 10% of the total distribution quantities, a water audit as

described in the "Instructions for Completion of the Water Use Annual Report" shall be conducted and completed by the following July 1, with the results submitted by the following October 1. Indicate on Part A of the Form whether the water audit was done, will be done, or is not applicable.

Alternative Water Supplied Other Than Reclaimed Water
If the Permittee provides Alternative Water Supplies other than reclaimed water (e.g., stormwater not treated for potable use) to customers, the information required on Part D of the Form shall be submitted along with an attached map depicting the areas of current Alternative Water Use service and areas that are projected to be added within the next year.

Suppliers of Reclaimed Water
1. Permittees having a wastewater treatment facility with an annual average design capacity equal to or greater than 100,000 gpd:

The Permittee shall submit the "SWFWMD Annual Reclaimed Water Supplier Report" on quantities of reclaimed water that was provided to customers during the previous fiscal year (October 1 to September 30). The report shall be submitted in Excel format on the Compact Disk, Form No. LEG-R.026.00 (05/09), that will be provided annually to them by the District. A map depicting the area of reclaimed water service that includes any areas projected to be added within the next year, shall be submitted with this report.

2. Permittees that have a wastewater treatment facility with an annual average design capacity less than 100,000 gpd:

a. The Permittee has the option to submit the "SWFWMD Annual Reclaimed Water Supplier Report," Form No. LEG-R.026.00, as described in sub-part (1) above, or

b. Provide information on reclaimed water supplied to customers on Part E of the Form as described in the "Instructions for Completion of the Water Use Annual Report".

Updated Service Area Map
If there have been changes to the service area since the previous reporting period, the Permittee shall update the service area using the map that is maintained in the District's Mapping and GIS system.

(660)

14. The following withdrawal facilities shall continue to be maintained and operated with existing, non-resettable, totalizing flow meter(s) or other measuring device(s) as approved by the Water Use Permit Bureau Chief: District ID Nos. 6 and 10**,** Permittee ID Nos. 6 and 10. Monthly meter reading and reporting, as well as meter accuracy checks every five years shall be in accordance with instructions in Exhibit B, Metering Instructions, attached to and made part of this permit.(719)

15. The Permittee shall submit an annual report beginning April 1, 2026, that provides monthly quantities utilized for aquifer recharge at each location. The report should also include an analysis and evaluation of whether the recharge quantities are accomplishing the intended mitigation effects that were proposed in the impact analysis that was provided in support of this application. The quantities used for aquifer recharge in the impact assessment submitted in support of this application were as follows:

GL 24 37,000 gpd (990)
(990)

40D-2
Exhibit A

WATER USE PERMIT STANDARD CONDITIONS

1. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, collect samples, take measurements, observe permitted and related facilities and collect and document any information deemed necessary to determine compliance with the approved plans, specifications and conditions of this permit. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.

2. When necessary to analyze impacts to the water resource or existing users, the District shall require the Permittee to install flow metering or other measuring devices to record withdrawal quantities and submit the data to the District.

3. A District identification tag shall be prominently displayed at each withdrawal point that is required by the District to be metered or for which withdrawal quantities are required to be reported to the District, by permanently affixing the tag to the withdrawal facility.

4. The Permittee shall mitigate any adverse impact to environmental features or offsite land uses as a result of withdrawals. When adverse impacts occur or are imminent, the District shall require the Permittee to mitigate the impacts. Examples of adverse impacts include the following:
   A. Significant reduction in levels or flows in water bodies such as lakes, impoundments, wetlands, springs, streams or other watercourses; or
   B. Damage to crops and other vegetation causing financial harm to the owner; and
   C. Damage to the habitat of endangered or threatened species.

5. The Permittee shall mitigate any adverse impact to existing legal uses caused by withdrawals. When adverse impacts occur or are imminent, the District may require the Permittee to mitigate the impacts. Adverse impacts include:

   A. A reduction in water levels which impairs the ability of a well to produce water;
   B. Significant reduction in levels or flows in water bodies such as lakes, impoundments, wetlands, springs, streams or other watercourses; or
   C. Significant inducement of natural or manmade contaminants into a water supply or into a usable portion of an aquifer or water body.

6. Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and / or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit documentation showing that it continues to have legal control or transfer control of the permitted system / project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40D-1.6105, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.

7. All withdrawals authorized by this WUP shall be implemented as conditioned by this permit, including any documents submitted as part of the permit application incorporated by reference in a permit condition. This permit is subject to review and modification, enforcement action, or revocation, in whole or in part, pursuant to Section 373.136 or 373.243, F.S.

8. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the Permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.

9. The Permittee shall cease or reduce surface water withdrawal as directed by the District if water levels in lakes fall below the applicable minimum water level established in Chapter 40D-8, F.A.C., or rates of flow in streams fall below the minimum levels established in Chapter 40D-8, F.A.C.

10. The Permittee shall cease or reduce withdrawal as directed by the District if water levels in aquifers fall below the minimum levels established by the Governing Board.

11. A Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that section 373.239, F.S., and Rule 40D-2.331, F.A.C., are applicable to permit modifications.

12. The Permittee shall practice water conservation to increase the efficiency of transport, application, and use, as well as to decrease waste and to minimize runoff from the property. At such time as the Governing Board adopts specific conservation requirements for the Permittee's water use classification, this permit shall be subject to those requirements upon notice and after a reasonable period for compliance.

13. The District may establish special regulations for Water-Use Caution Areas. At such time as the Governing Board adopts such provisions, this permit shall be subject to them upon notice and after a reasonable period for compliance.

14. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order.

15. This permit is issued based on information provided by the Permittee demonstrating that the use of water is reasonable and beneficial, consistent with the public interest, and will not interfere with any existing legal use of water. If, during the term of the permit, it is determined by the District that a statement in the application and in the supporting data are found to be untrue and inaccurate, the use is not reasonable and beneficial, in the public interest, or does impact an existing legal use of water, the Governing Board shall modify this permit or shall revoke this permit following notice and hearing, pursuant to sections 373.136 or 373.243, F.S. The Permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

16. Within the Southern Water Use Caution Area, if the District determines that significant water quantity or quality changes, impacts to existing legal uses, or adverse environmental impacts are occurring, the District, upon reasonable notice to the Permittee, including a statement of facts upon which the District based its determination, may reconsider the quantities permitted or other conditions of the permit as appropriate to address the change or impact, but only after an opportunity for the Permittee to resolve or mitigate the change or impact or to request a hearing.

17. All permits are contingent upon continued ownership or legal control of all property on which pumps, wells, diversions or other water withdrawal facilities are located.

Exhibit B
Instructions

METERING INSTRUCTIONS

The Permittee shall meter withdrawals from surface waters and/or the ground water resources, and meter readings from each withdrawal facility shall be recorded on a monthly basis within the last week of the month. The meter reading(s) shall be reported to the Water Use Permit Bureau on or before the tenth day of the following month for monthly reporting frequencies.

For bi-annual reporting, the data shall be recorded on a monthly basis and reported on or before the tenth day of the month
following the sixth month of recorded data.

The Permittee shall submit meter readings online using the Permit Information Center at www.swfwmd.state.fl.us/permits/epermitting/ or on District supplied scanning forms unless another arrangement for submission of this data has been approved by the District. Submission of such data by any other unauthorized form or mechanism may result in loss of data and subsequent delinquency notifications. Call the Water Use Permit Bureau inTampa at (813) 985-7481 if difficulty is encountered.

The meters shall adhere to the following descriptions and shall be installed or maintained as follows:

1. The meter(s) shall be non-resettable, totalizing flow meter(s) that have a totalizer of sufficient magnitude to retain total gallon data for a minimum of the three highest consecutive months permitted quantities. If other measuring device(s) are proposed, prior to installation, approval shall be obtained in writing from the Water Use Permit Bureau Chief.
2. The Permittee shall report non-use on all metered standby withdrawal facilities on the scanning form or approved alternative reporting method.
3. If a metered withdrawal facility is not used during any given month, the meter report shall be submitted to the District indicating the same meter reading as was submitted the previous month.
4. The flow meter(s) or other approved device(s) shall have and maintain an accuracy within five percent of the actual flow as installed.
5. Meter accuracy testing requirements:
   A. For newly metered withdrawal points, the flow meter installation shall be designed for inline field access for meter accuracy testing.
   B. The meter shall be tested for accuracy on-site, as installed according to the Flow Meter Accuracy Test Instructions in this Exhibit B, every five years in the assigned month for the county, beginning from the date of its installation for new meters or from the date of initial issuance of this permit containing the metering condition with an accuracy test requirement for existing meters.
   C. The testing frequency will be decreased if the Permittee demonstrates to the satisfaction of the District that a longer period of time for testing is warranted.
   D. The test will be accepted by the District only if performed by a person knowledgeable in the testing equipment used.
   E. If the actual flow is found to be greater than 5% different from the measured flow, within 30 days, the Permittee shall have the meter re-calibrated, repaired, or replaced, whichever is necessary. Documentation of the test and a certificate of re-calibration, if applicable, shall be submitted within 30 days of each test or re-calibration.
6. The meter shall be installed according to the manufacturer's instructions for achieving accurate flow to the specifications above, or it shall be installed in a straight length of pipe where there is at least an upstream length equal to ten (10) times the outside pipe diameter and a downstream length equal to two (2) times the outside pipe diameter. Where there is not at least a length of ten diameters upstream available, flow straightening vanes shall be used in the upstream line.
7. Broken or malfunctioning meter:
   A. If the meter or other flow measuring device malfunctions or breaks, the Permittee shall notify the District within 15 days of discovering the malfunction or breakage.
   B. The meter must be replaced with a repaired or new meter, subject to the same specifications given above, within 30 days of the discovery.
   C. If the meter is removed from the withdrawal point for any other reason, it shall be replaced with another meter having the same specifications given above, or the meter shall be reinstalled within 30 days of its removal

from the withdrawal. In either event, a fully functioning meter shall not be off the withdrawal point for more than 60 consecutive days.

8. While the meter is not functioning correctly, the Permittee shall keep track of the total amount of time the withdrawal point was used for each month and multiply those minutes times the pump capacity (in gallons per minute) for total gallons. The estimate of the number of gallons used each month during that period shall be submitted on District scanning forms and noted as estimated per instructions on the form. If the data is submitted by another approved method, the fact that it is estimated must be indicated. The reason for the necessity to estimate pumpage shall be reported with the estimate.

9. In the event a new meter is installed to replace a broken meter, it and its installation shall meet the specifications of this condition. The permittee shall notify the District of the replacement with the first submittal of meter readings from the new meter.

FLOW METER ACCURACY TEST INSTRUCTIONS

1. Accuracy Test Due Date - The Permittee is to schedule their accuracy test according to the following schedule:

A. For existing metered withdrawal points, add five years to the previous test year, and make the test in the month assigned to your county.

B. For withdrawal points for which metering is added for the first time, the test is to be scheduled five years from the issue year in the month assigned to your county.

C. For proposed withdrawal points, the test date is five years from the completion date of the withdrawal point in the month assigned to your county.

D. For the Permittee's convenience, if there are multiple due-years for meter accuracy testing because of the timing of the installation and/or previous accuracy tests of meters, the Permittee can submit a request in writing to the Water Use Permit Bureau Chief for one specific year to be assigned as the due date year for meter testing. Permittees with many meters to test may also request the tests to be grouped into one year or spread out evenly over two to three years.

E. The months for accuracy testing of meters are assigned by county. The Permittee is requested but not required to have their testing done in the month assigned to their county. This is to have sufficient District staff available for assistance.

January	Hillsborough
February	Manatee, Pasco
March	Polk (for odd numbered permits)*
April	Polk (for even numbered permits)*
May	Highlands
June	Hardee, Charlotte
July	None or Special Request
August	None or Special Request
September	Desoto, Sarasota
October	Citrus, Levy, Lake
November	Hernando, Sumter, Marion
December	Pinellas

* The permittee may request their multiple permits be tested in the same month.

2. Accuracy Test Requirements: The Permittee shall test the accuracy of flow meters on permitted withdrawal points as follows:

A. The equipment water temperature shall be set to 72 degrees Fahrenheit for ground water, and to the measured water temperature for other water sources.

B. A minimum of two separate timed tests shall be performed for each meter. Each timed test shall consist of measuring flow using the test meter and the installed meter for a minimum of four minutes duration. If the two tests do not yield consistent results, additional tests shall be performed for a minimum of eight minutes or

longer per test until consistent results are obtained.

C. If the installed meter has a rate of flow, or large multiplier that does not allow for consistent results to be obtained with four- or eight-minute tests, the duration of the test shall be increased as necessary to obtain accurate and consistent results with respect to the type of flow meter installed.

D. The results of two consistent tests shall be averaged, and the result will be considered the test result for the meter being tested. This result shall be expressed as a plus or minus percent (rounded to the nearest one-tenth percent) accuracy of the installed meter relative to the test meter. The percent accuracy indicates the deviation (if any), of the meter being tested from the test meter.

3. Accuracy Test Report: The Permittees shall demonstrate that the results of the meter test(s) are accurate by submitting the following information within 30 days of the test:

A. A completed Flow Meter Accuracy Verification Form, Form LEG-R.101.00 (5/14) for each flow meter tested. This form can be obtained from the District's website (www.watermatters.org) under "ePermitting and Rules" for Water Use Permits.

B. A printout of data that was input into the test equipment, if the test equipment is capable of creating such a printout;

C. A statement attesting that the manufacturer of the test equipment, or an entity approved or authorized by the manufacturer, has trained the operator to use the specific model test equipment used for testing;

D. The date of the test equipment's most recent calibration that demonstrates that it was calibrated within the previous twelve months, and the test lab's National Institute of Standards and Testing (N.I.S.T.) traceability reference number.

E. A diagram showing the precise location on the pipe where the testing equipment was mounted shall be supplied with the form. This diagram shall also show the pump, installed meter, the configuration (with all valves, tees, elbows, and any other possible flow disturbing devices) that exists between the pump and the test location clearly noted with measurements. If flow straightening vanes are utilized, their location(s) shall also be included in the diagram.

F. A picture of the test location, including the pump, installed flow meter, and the measuring device, or for sites where the picture does not include all of the items listed above, a picture of the test site with a notation of distances to these items.

ANNUAL REPORT SUBMITTAL INSTRUCTIONS

The "Public Supply Water Use Annual Report Form" (Form No. LEG-R.023.00 (01/09)), is designed to assist the Permittee with the annual report requirements, but the final authority for what must be included in the Water Use Annual Report is in this condition and in these instructions. Two identical copies of the "Public Supply Water Use Annual Report Form" and two identical copies of all required supporting documentation shall be included if submitted in hard copy. "Identical copy" in this instance means that if the original is in color, then all copies shall also be printed in color. If submitted electronically, only one submittal is required; however, any part of the document that is in color shall be scanned in color.

1. **Per Capita Use Rate** - A per capita rate for the previous calendar year will be progressively calculated until a rate of 150 gpd per person or less is determined whether it is the unadjusted per capita, adjusted per capita, or compliance per capita. The calculations shall be performed as shown in Part A of the Form. The Permittee shall refer to and use the definitions and instructions for all components as provided on the Form and in the Water Use Permit Applicant's Handbook Part B. Permittees that have interconnected service areas and receive an annual average quantity of 100,000 gpd or more from another permittee are to include these quantities as imported quantities. Permittees in the Southern Water Use Caution Area (SWUCA) or the Northern Tampa Bay Water Use Caution Area (NTBWUCA), as it existed prior to October 1, 2007, shall achieve a per capita of 150 gpd or less, and those in these areas that cannot achieve a compliance per capita rate of 150 gpd or less shall include a report on why this rate was not achieved, measures taken to comply with this requirement, and a plan to bring the permit into compliance. Permittees not in a Water Use Caution Area that cannot achieve a compliance per capita rate of 150 gpd or less by December 31, 2019 shall submit this same report in the Annual Report due April 1, 2020.

2. **Residential Use** - Residential water use consists of the indoor and outdoor water uses associated with each category of residential customer (single family units, multi-family units, and mobile homes), including irrigation uses, whether separately metered or not. The Permittee shall document the methodology used to determine the number of dwelling units by type and the quantities used. Estimates of water use based upon meter size will not be accepted. If mobile homes are included in the Permittees multi-family unit category, the information for them does not have to be separated. The information for each category shall include:

A. Number of dwelling units per category,
B. Number of domestic metered connections per category,
C. Number of metered irrigation connections,
D. Annual average quantities in gallons per day provided to each category, and
E. Percentage of the total residential water use provided apportioned to each category.

3. **Non-Residential Use** - Non-residential use consists of all quantities provided for use in a community not directly associated with places of residence. For each category below, the Permittee shall include annual average gpd provided and percent of total non-residential use quantities provided. For each category 1 through 6 below, the number of metered connections shall be provided. These non-residential use categories are:

A. Industrial/commercial uses, including associated lawn and landscape irrigation use,
B. Agricultural uses (e.g., irrigation of a nursery),
C. Recreation/Aesthetic, for example irrigation (excluding golf courses) of Common Areas, stadiums and school yards,
D. Golf course irrigation,
E. Fire fighting, system testing and other accounted uses,
F. K-through-12 schools that do not serve any of the service area population, and
G. Water Loss as defined as the difference between the output from the treatment plant and accounted residential water use (B above) and the listed non-residential uses in this section.

4. **Water Audit** - The water audit report that is done because water losses are greater than 10% of the total distribution quantities shall include the following items:

A. Evaluation of:
1) leakage associated with transmission and distribution mains,
2) overflow and leakage from storage tanks,
3) leakage near service connections,
4) illegal connections,
5) description and explanations for excessive distribution line flushing (greater than 1% of the treated water volume delivered to the distribution system) for potability,
6) fire suppression,
7) un-metered system testing,
8) under-registration of meters, and
9) other discrepancies between the metered amount of finished water output from the treatment plant less the metered amounts used for residential and non-residential uses specified in Parts B and C above, and

B. A schedule for a remedial action-plan to reduce the water losses to below 10%.

5. **Alternative Water Supplied other than Reclaimed Water** - Permittees that provide Alternative Water Supplies other than reclaimed water (e.g., stormwater not treated for potable use) shall include the following on Part D of the Form:

A. Description of the type of Alternative Water Supply provided,
B. County where service is provided,
C. Customer name and contact information,
D. Customer's Water Use Permit number (if any),
E. Customer's meter location latitude and longitude,
F. Meter ownership information,
G. General customer use category,
H. Proposed and actual flows in annual average gallons per day (gpd) per customer,
I. Customer cost per 1,000 gallons or flat rate information,
J. Delivery mode (e.g., pressurized or non-pressurized),
K. Interruptible Service Agreement (Y/N),

L. Month/year service began, and

M. Totals of monthly quantities supplied.

6. **Suppliers of Reclaimed Water** - Depending upon the treatment capacity of the Permittees wastewater treatment plant, the Permittee shall submit information on reclaimed water supplied as follows:

A. Permittees having a wastewater treatment facility with an annual average design capacity equal to or greater than 100,000 gpd shall utilize the “SWFWMD Annual Reclaimed Water Supplier Report” in Excel format on the Compact Disk, Form No. LEG-R.026.00 (05/09). The “SWFWMD Annual Reclaimed Water Supplier Report” is described in Section 3.1 of Chapter 3, under the subheading “Reclaimed Water Supplier Report” and is described in detail in the Water Use Permit Applicant's Handbook Part B.

B. Permittees that have a wastewater treatment facility with an annual average design capacity less than 100,000 gpd can either utilize the “SWFWMD Annual Reclaimed Water Supplier Report,” Form No. LEG-R.026.00, as described in sub-part (1) above or provide the following information on Part E of the Form:

1) Bulk customer information:
   a) Name, address, telephone number,
   b) WUP number (if any),
   c) General use category (residential, commercial, recreational, agricultural irrigation, mining),
   d) Month/year first served,
   e) Line size,
   f) Meter information, including the ownership and latitude and longitude location,
   g) Delivery mode (pressurized, non-pressurized).
2) Monthly flow in gallons per bulk customer.
3) Total gallons per day (gpd) provided for metered residential irrigation.
4) Disposal information:
   a) Site name and location (latitude and longitude or as a reference to the service area map),
   b) Contact name and telephone,
   c) Disposal method, and
   d) Annual average gpd disposed.

Authorized Signature
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

This permit, issued under the provision of Chapter 373, Florida Statues and Florida Administrative Code 40D-2, authorizes the Permittee to withdraw the quantities outlined above, and may require various activities to be performed by the Permittee as described in the permit, including the Special Conditions. The permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the Permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.

CONSENT AGENDA

July 22, 2025

Regulation Committee: Water Use Permit No. 20 011794.003, Tampa Bay Water / Alafia River Withdrawal Facility (Hillsborough County)

This is a modification of an existing water use permit for public supply. Actual withdrawals are not limited by the Annual Average quantity and instead will be based on a percentage withdrawal schedule provided within the permit, which is increased from the previous revision of 10% to 19% of the available flow above the Minimum Flow threshold. Tampa Bay Water is a regional utility that relies on multiple sources to meet demand, including the Alafia River Withdrawal Facility which has been developed for conjunctive use to meet regional demand, optimize wellfield withdrawals, and relieve associated environmental stresses. There is no change in Use Type from the previous revision. The Annual Average quantity is an estimate only of the long-term average yield. The Maximum Daily quantity represents maximum system pumping capacity, and is increased with this modification from 60 mgd to 75 mgd.

Special Conditions include those that require the Permittee to submit the Annual Surface Water Withdrawal Report by July 1 of each year, monthly reporting of withdrawals, continued monitoring of river stage, streamflow and spring discharge. Report compliance with the Minimum Flow for the Alafia River, daily calculations of Baseline Flow and permitted withdrawal rates, and continued implementation of the Hydrobiological Monitoring Plan, with annual data and periodic interpretive reports also due by July 1 of each year.

This permit application meets all Conditions for Issuance pursuant to Florida Administrative Code Rule 40D-2.301.

Staff Recommendation:
Approve the proposed permit attached as an exhibit.

Presenter:
April D. Breton, Bureau Chief, Water Use Permit Bureau

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
WATER USE PERMIT
Individual
PERMIT NO. 20 011794.003

PERMIT ISSUE DATE: **July 22, 2025** **EXPIRATION DATE:** **November 27, 2032**

The Permittee is responsible for submitting an application to renew this permit no sooner than one year prior to the expiration date, and no later than the end of the last business day before the expiration date, whether or not the Permittee receives prior notification by mail. Failure to submit a renewal application prior to the expiration date and continuing to withdraw water after the expiration date is a violation of Chapter 373, Florida Statutes, and Chapter 40D-2, Florida Administrative Code, and may result in a monetary penalty and/or loss of the right to use the water. Issuance of a renewal of this permit is contingent upon District approval.

TYPE OF APPLICATION: Modification

GRANTED TO: Tampa Bay Water/Attn: Cathleen Beaudoin Jonas
2575 Enterprise Road
Clearwater, FL 33763

PROJECT NAME: Alafia River Withdrawal Facility

WATER USE CAUTION AREA(S): SOUTHERN WATER USE CAUTION AREA

COUNTY: Hillsborough

TOTAL QUANTITIES AUTHORIZED UNDER THIS PERMIT (in gallons per day)

ANNUAL AVERAGE	32,200,000 gpd *
MAXIMUM	75,000,000 gpd

* The actual quantities authorized under the permit are based on the flows and levels in the Alafia River. The annual average quantity shown above is a projection based on Historical Flows.

ABSTRACT:

This is a modification of an existing water use permit for public supply. Actual withdrawals are not limited by the Annual Average quantity and instead will be based on a percentage withdrawal schedule provided below, which is increased from the previous revision of 10% to 19% of the available flow above the Minimum Flow threshold. Tampa Bay Water is a regional utility that relies on multiple sources to meet demand, including the Alafia River Withdrawal Facility which has been developed for conjunctive use to meet regional demand, optimize wellfield withdrawals, and relieve associated environmental stresses. There is no change in Use Type from the previous revision. The Annual Average quantity is an estimate only of the long-term average yield. The Maximum Daily quantity represents maximum system pumping capacity.

TBW ALAFIA RIVER DIVERSION SCHEDULE

Permitted daily withdrawal	When baseline flow for previous day is:
No withdrawals	≤128 cfs (82.7 mgd)
All flow above 128 cfs (82.7 mgd)	>128 cfs (82.7 mgd) and ≤ 158 cfs (102.1 mgd)
19% of Flow, up to 116.1 cfs (75 mgd)	>158 cfs (102.1 mgd)

Special Conditions include those that require the Permittee to submit the Annual Surface Water Withdrawal Report by July 1 of each year, monthly reporting of withdrawals, continued monitoring of river stage, streamflow and spring discharge. Report compliance with the Minimum Flow for the Alafia River, daily calculations of Baseline Flow and permitted withdrawal rates, and continued implementation of the Hydrobiological Monitoring Plan, with annual data and periodic interpretive reports also due by July 1 of each year.

USE TYPE

Regional Public Supply System

WITHDRAWAL POINT QUANTITY TABLE

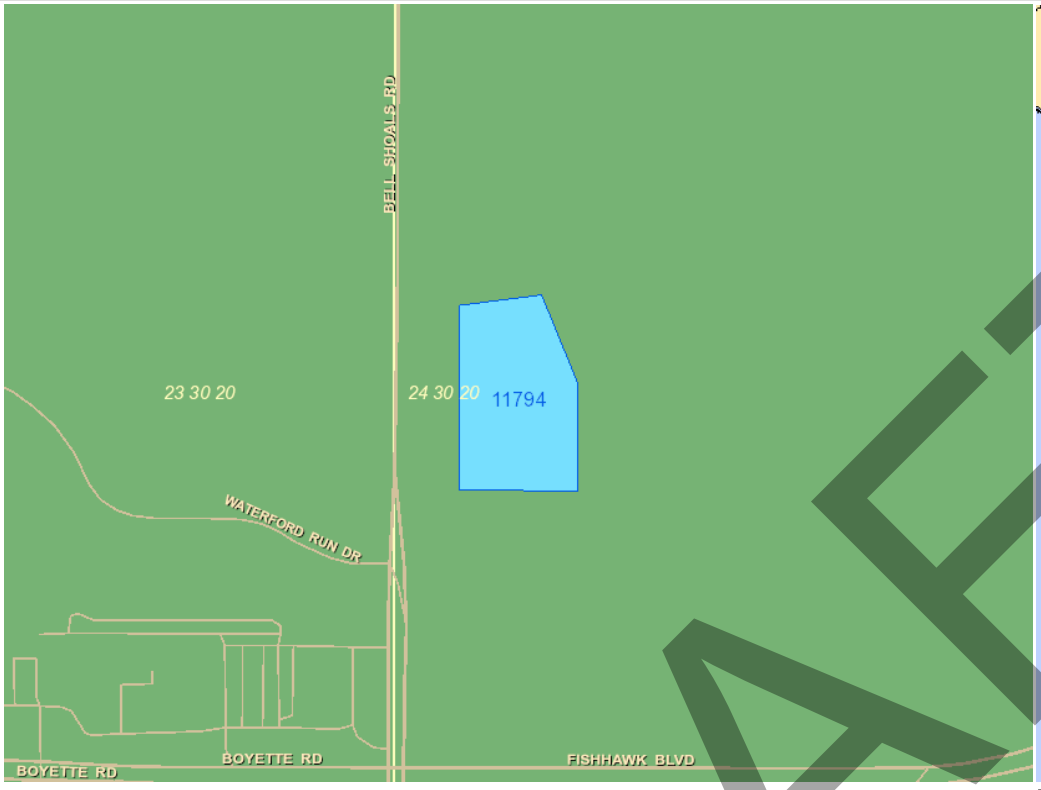
Water use from these withdrawal points are restricted to the quantities given below:

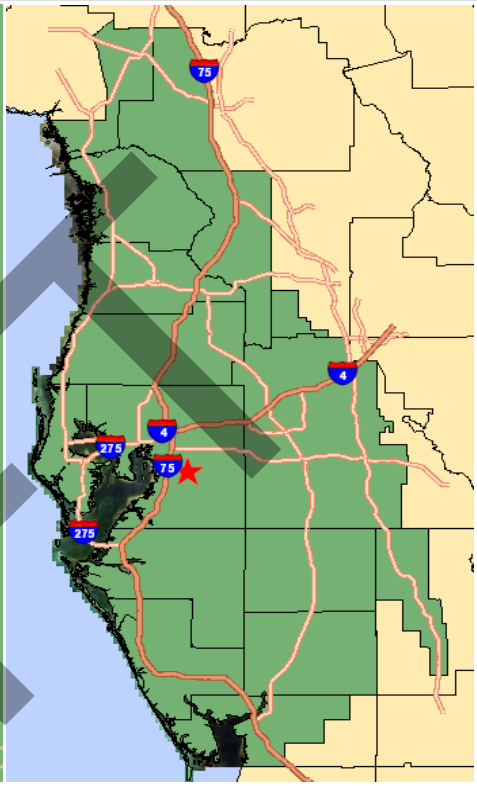
I.D. NO. PERMITTEE/ DISTRICT	DIAM (in.)	DEPTH TTL./CSD.FT. (feet bls)	USE DESCRIPTION	AVERAGE (gpd)	PEAK MONTH (gpd)	MAXIMUM (gpd)
1 / 1	120	N/A / N/A	Public Supply	Flow Based	Flow Based	75,000,000

WITHDRAWAL POINT LOCATION TABLE

DISTRICT I.D. NO.	LATITUDE/LONGITUDE
1	27° 51' 25.74"/82° 16' 07.22"

Location Map
Tampa Bay Water/Attn: Cathleen Beaudoin Jonas
WUP No. 20 011794.003





Legend

DIDs

WUP Boundary

Natural Color Imagery

HILLSBOROUGH COUNTY

N
W E
S

Southwest Florida Water Management District

STANDARD CONDITIONS:

The Permittee shall comply with the Standard Conditions attached hereto, incorporated herein by reference as Exhibit A and made a part hereof.

SPECIAL CONDITIONS:

1. All reports and data required by condition(s) of the permit shall be submitted to the District according to the due date(s) contained in the specific condition. If the condition specifies that a District-supplied form is to be used, the Permittee should use that form in order for their submission to be acknowledged in a timely manner. The only alternative to this requirement is to use the District Permit Information Center (www.swfwmd.state.fl.us/permits/epermitting/) to submit data, plans or reports online. There are instructions at the District website on how to register to set up an account to do so. If the report or data is received on or before the tenth day of the month following data collection, it shall be deemed as a timely submittal.

   All mailed reports and data are to be sent to:

   Southwest Florida Water Management District
   Tampa Service Office, Water Use Permit Bureau
   7601 U.S. Hwy. 301 North
   Tampa, Florida 33637-6759

   Submission of plans and reports: Unless submitted online or otherwise indicated in the special condition, the original and two copies of each plan and report, such as conservation plans, environmental analyses, aquifer test results, per capita annual reports, etc. are required.

   Submission of data: Unless otherwise indicated in the special condition, an original (no copies) is required for data submittals such as crop report forms, meter readings and/or pumpage, rainfall, water level, evapotranspiration, or water quality data.

   (499)

2. The Annual Average Daily quantity for District ID No. 1, Permittee ID No. 1, shown in the Withdrawal Point Quantity Table, is an estimate only of the long-term average yield, and is not intended to restrict the withdrawal quantities authorized from the Alafia River. The quantities withdrawn from the Alafia River are limited by the adopted Minimum Flow; the Baseline Flow calculations and diversion schedule referenced in the applicable Special Condition; and the Maximum Daily quantity of 75 MGD.(221)

3. The Permittee shall investigate complaints related to withdrawals. This condition shall be an ongoing effort for the duration of this permit. All complainants will make an application to the Permittee and must receive an investigation report, including any action to be taken within a reasonable time by the Permittee. The Permittee shall file a report of the complaint, the findings of facts, and any mitigation action taken or to be taken by the Permittee, to the Water Use Bureau Chief for review and approval within 90 days of the receipt of any complaint. The report shall include:

   a. The name and address of each complainant;
   b. The date and nature of the complaint;
   c. A summary of the Permittee's investigation;
   d. A summary of the Permittee's determination, including details of any mitigation activities; and
   e. Cost of mitigation activity for each complaint.

   Full mitigation shall not exceed 180 days from complaint receipt, unless additional time is granted by the District. A summary of the investigations of complaint and mitigation activities related to the Alafia River Withdrawal Facility for the annual reporting period shall be provided in the Annual Report.(448)

4. The Permittee shall submit a concise individual annual report ("Alafia River Surface Water Withdrawal Annual Report") to the District which compiles the data collected during the course of the year, by Special Condition of this permit and as part of the HBMP, and provides an assessment of the water resources and environmental systems in the area of the Alafia River. The Surface Water Withdrawal Annual Report shall concisely summarize the elements listed below, and any other elements within this

permit which require annual environmental reporting, with emphasis on the interactions between these elements, where appropriate. Three hard copies of each Surface Water Withdrawal Annual Report, plus one copy in electronic format, shall be submitted to the Water Use Bureau Chief by July 1 of each year. The report shall cover the preceding water year from October 1 to September 30.

1. Hydrologic Data and Water Production Summary. Flow metering, stage, streamflow and spring discharge monitoring data collected as part of this permit shall be summarized. This section shall also include a summary of activities conducted to maintain accuracy of flow metering, and discussion as to how this facility is operated in compliance with the Tampa Bay Water Optimized Regional Operations Plan.
2. Environmental Conditions and HBMP Implementation. Data collected as part of the HBMP shall be summarized and analyzed by the Permittee to document any effects of surface water withdrawals on the Alafia River and its estuary. Each annual report will contain a HBMP data report of all raw data collected during the past year. A brief summary of any recommended changes to the monitoring requirements shall also be included. More comprehensive analyses for the HBMP shall be included in the HBMP Interpretive reports which shall be submitted every five years.
3. Investigation of Complaints. A summary of the investigations of all complaints concerning adverse impacts to existing legal users, land uses and environmental features, as well as all of the Permittee's efforts to mitigate such adverse impacts, shall be provided for each reporting period.
(524)

5. This Permit is located within the Southern Water Use Caution Area (SWUCA). Pursuant to Section 373.0421, Florida Statutes, the SWUCA is subject to a minimum flows and levels recovery strategy, which became effective on January 1, 2007. The Governing Board may amend the recovery strategy, including amending applicable water use permitting rules based on an annual assessment of water resource criteria, cumulative water withdrawal impacts, and on a recurring five-year evaluation of the status of the recovery strategy up to the year 2025 as described in Chapter 40D-80, Florida Administrative Code. This Permit is subject to modification to comply with new rules.(652)

6. A. Flow Metering
Flow data recorded at the Alafia River intake structure pipeline shall represent the total surface water source pumpage for the Alafia River Withdrawal Facility. For flow monitoring points equipped with SCADA, the Permittee shall maintain the following for each flow monitoring point: one venturi-type flow meter or other approved flow meter, one non-resettable totalizing recording device at each monitoring point, and one remote transmitter unit that transfers the recorded flow data by telemetry to the remote SCADA master station. The SCADA master station flow data shall be recorded on a daily basis for each flow monitoring point and for the combined facility pumpage. For all SCADA-equipped monitoring points, the non-resettable totalizing recording device at each monitoring point shall be recorded on an annual basis, and reported in the Annual Report with a comparison to the SCADA-retrieved cumulative flow for each monitoring point. If and when any part of the facility becomes equipped with SCADA, the provisions of this paragraph shall apply.

The Permittee shall undertake regular and routine testing, calibration and preventive/corrective maintenance for all flow meters to ensure that they have and maintain an accuracy within 5 percent of actual flow as installed. Within 3 working days of identification of a meter that does not meet this standard, the Permittee shall inform the District in writing of the facts regarding the problem. Until the problem is corrected, flows through the metered point shall be estimated. The Permittee shall correct the problem within 15 days following identification of the problem, or discontinue use of the withdrawal until the problem is corrected, unless an extension is confirmed in writing from the Water Use Permit Bureau Chief. The Annual Report shall summarize activities conducted to maintain accuracy of flow metering.

B. Stage, Streamflow and Spring Discharge Monitoring
The Permittee shall monitor the average daily stage and estimated average daily flow for the Alafia River, and the average daily stage and spring discharge for Buckhorn and Lithia Springs at the sites and frequencies listed in Exhibit D. The sites listed in Exhibit D are currently monitored in accordance with the South Central Hillsborough Regional Wellfield (SCHRWF) and Brandon Urban Dispersed Wellfield (BUDWF) Water Use Permits (WUPs 4352 and 11732, respectively). The Permittee may utilize data obtained from the SCHRWF and BUDWF to satisfy the permit monitoring requirements for this condition. However, should monitoring at the sites listed in Exhibit D cease to be required under the SCHRWF and/or BUDWF WUPs, the Permittee shall be required to monitor the listed sites for this

permit, or establish new District-approved sites to replace the lost sites.

The sites listed in Exhibit D shall continue to be monitored and reported in accordance with the SCHRWF and BUDWF permits. Data from these sites shall not be reported for this permit as long as the data is submitted in support of the SCHRWF and BUDWF permits. For the purpose of this permit, data obtained from the listed sites during the annual reporting period shall be summarized in the Annual Report required by this permit. Any proposed changes to the recording frequency and locations shall be approved by the Water Use Permit Bureau Chief, and shall be summarized in the Annual Report as described in the applicable Special Condition.

(675)

7. The Permittee shall continue implementation of the Tampa Bypass Canal/Alafia River Water Supply Projects Hydrobiological Monitoring Plan 2010 Update (HBMP), dated February 2011 and as modified on 8/1/2012, which is incorporated herein as Exhibit C. Any proposed changes to the HBMP should be submitted in writing to the Water Use Permit Bureau Chief for review and approval.

   The HBMP includes an annual Data report due by July 1 each year, and periodic Interpretive reports on a five-year cycle with the next due by July 1, 2026. Upon completion of each five-year cycle of the HBMP, a draft Interpretive report shall be submitted to the District as part of the overall annual Data report. The District shall review and provide written comments within 45 days of the submittal of each draft Interpretive report. Final Interpretive reports shall be submitted by the Permittee within 90 days of receipt of District comments.

   The District will review the results of these reports to determine if the withdrawals have or are expected to result in unacceptable environmental impacts to the natural resources of the Alafia River and its estuary as addressed in Section 4 of the District's Basis of Review, Water Use Permit Information Manual, Part B. If unacceptable environmental impacts have or are expected to occur due to the withdrawals, then the District shall require a revision to the withdrawal schedule.(676)

8. The following withdrawal facilities shall continue to be maintained and operated with existing, non-resettable, totalizing flow meter(s) or other measuring device(s) as approved by the Water Use Permit Bureau Chief:

   District ID No. 1, Permittee ID No. 1 (Alafia River Withdrawal Facility intake near Bell Shoals Road)
   District ID No. 2, Permittee ID No. ALF-2 (Influent meter into the Regional Water Treatment Plant from all sources)

   Meter reading and reporting, as well as meter accuracy checks every five years shall be in accordance with instructions in Exhibit B, Metering Instructions, attached to and made part of this permit.(719)

9. Surface water withdrawals at DID No.1 will be based on adjusted previous day’s average flow of the Alafia River at the "Alafia River at Lithia" gage (USGS Gage 02301500) combined with weekly measured flows at Buckhorn Springs and Lithia Springs Major. This will be referred to as Baseline Flow and shall be determined on a daily basis using the following formula:

   1. Average daily river flow as measured at the Lithia gage for the previous day shall be multiplied by a factor of 1.117, to account for additional watershed contributions between the gage and the Alafia River Withdrawal Facility intake.
   2. The most recent springflow measured at Buckhorn Springs and Lithia Springs Major shall be added to the product in Step One.
   3. The Annual Average Daily withdrawal of 5.06 MGD (approximately 8 cfs) permitted to upgradient existing legal user Mosaic (WUP 1532) shall be added to the sum in Step Two.
   4. The resulting quantity is the Baseline Flow for purposes of determining Tampa Bay Water's permitted daily withdrawal.

   Baseline Flow shall be calculated and recorded on a daily basis and reported to the Permit Data Section (using District approved forms) on or before the fifteenth (15th) day of the following month, as DID No. 110. The recordings shall include daily average water flow in million gallons per day (MGD), and daily average water flow in cubic feet per second (cfs).

The quantities withdrawn from the lower Alafia River by Tampa Bay Water are limited by the adopted Minimum Flow, delineated in Rule 40D-8.041(8), Florida Administrative Code, and the maximum diversion capacity, and are set forth as referenced below:
a. No diversion from the Alafia River may occur when the calculated Baseline Flow for the previous day is 128 cfs (82.7 mgd) or less, representing the Low Flow Threshold of 120 cfs plus the Annual Average Daily withdrawal of 8 cfs permitted to Mosaic;
b. For a calculated Baseline Flow between 128 cfs (82.7 mgd) and 158 cfs (102.1 mgd) for the previous day, the daily diversion is limited to the difference between the Baseline Flow and 128 cfs (82.7 mgd).
c. For a calculated Baseline Flow of 158 cfs (102.1 mgd) or greater for the previous day, the daily diversion is limited to 19% of the Baseline Flow.
d. The maximum diversion on any single day shall not exceed 75 MGD (116.1 cfs).
(990)

10. This permit and the facilities governed by the permit shall be operated in accordance with the Tampa Bay Water Optimized Regional Operations Plan, and all modifications thereof, as approved by the District.(991)

11. Total influent quantities delivered to the C.W. Bill Young Reservoir shall be calculated on a daily basis and reported to the District as District ID No. 4, Permittee ID No. RES INF by the fifteenth day of each month.(992)

12. The remedies for violation of this permit are cumulative. Thus, the pursuit of one remedy shall not preclude the pursuit of other remedies provided by this permit or by applicable law. The pursuit of any remedy provided in this permit or by applicable law shall not constitute a forfeiture or waiver of any other remedy. The waiver of one violation shall not be deemed a waiver of any other violation. Forbearance to enforce one or more of the remedies provided by this permit or by applicable law on an event of violation shall not be deemed or construed to constitute a waiver of the right to any remedy for that violation.(995)

40D-2
Exhibit A

WATER USE PERMIT STANDARD CONDITIONS

1. With advance notice to the Permittee, District staff with proper identification shall have permission to enter, inspect, collect samples, take measurements, observe permitted and related facilities and collect and document any information deemed necessary to determine compliance with the approved plans, specifications and conditions of this permit. The Permittee shall either accompany District staff onto the property or make provision for access onto the property.

2. When necessary to analyze impacts to the water resource or existing users, the District shall require the Permittee to install flow metering or other measuring devices to record withdrawal quantities and submit the data to the District.

3. A District identification tag shall be prominently displayed at each withdrawal point that is required by the District to be metered or for which withdrawal quantities are required to be reported to the District, by permanently affixing the tag to the withdrawal facility.

4. The Permittee shall mitigate any adverse impact to environmental features or offsite land uses as a result of withdrawals. When adverse impacts occur or are imminent, the District shall require the Permittee to mitigate the impacts. Examples of adverse impacts include the following:
   A. Significant reduction in levels or flows in water bodies such as lakes, impoundments, wetlands, springs, streams or other watercourses; or
   B. Damage to crops and other vegetation causing financial harm to the owner; and
   C. Damage to the habitat of endangered or threatened species.

5. The Permittee shall mitigate any adverse impact to existing legal uses caused by withdrawals. When adverse impacts occur or are imminent, the District may require the Permittee to mitigate the impacts. Adverse impacts include:

   A. A reduction in water levels which impairs the ability of a well to produce water;
   B. Significant reduction in levels or flows in water bodies such as lakes, impoundments, wetlands, springs, streams or other watercourses; or
   C. Significant inducement of natural or manmade contaminants into a water supply or into a usable portion of an aquifer or water body.

6. Permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and / or related facilities from which the permitted consumptive use is made. Where Permittee's control of the land subject to the permit was demonstrated through a lease, the Permittee must either submit documentation showing that it continues to have legal control or transfer control of the permitted system / project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40D-1.6105, F.A.C. Alternatively, the Permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.

7. All withdrawals authorized by this WUP shall be implemented as conditioned by this permit, including any documents submitted as part of the permit application incorporated by reference in a permit condition. This permit is subject to review and modification, enforcement action, or revocation, in whole or in part, pursuant to Section 373.136 or 373.243, F.S.

8. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the Permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.

9. The Permittee shall cease or reduce surface water withdrawal as directed by the District if water levels in lakes fall below the applicable minimum water level established in Chapter 40D-8, F.A.C., or rates of flow in streams fall below the minimum levels established in Chapter 40D-8, F.A.C.

10. The Permittee shall cease or reduce withdrawal as directed by the District if water levels in aquifers fall below the minimum levels established by the Governing Board.

11. A Permittee may seek modification of any term of an unexpired permit. The Permittee is advised that section 373.239, F.S., and Rule 40D-2.331, F.A.C., are applicable to permit modifications.

12. The Permittee shall practice water conservation to increase the efficiency of transport, application, and use, as well as to decrease waste and to minimize runoff from the property. At such time as the Governing Board adopts specific conservation requirements for the Permittee's water use classification, this permit shall be subject to those requirements upon notice and after a reasonable period for compliance.

13. The District may establish special regulations for Water-Use Caution Areas. At such time as the Governing Board adopts such provisions, this permit shall be subject to them upon notice and after a reasonable period for compliance.

14. Nothing in this permit should be construed to limit the authority of the District to declare a water shortage and issue orders pursuant to chapter 373, F.S. In the event of a declared water shortage, the Permittee must adhere to the water shortage restrictions, as specified by the District. The Permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order.

15. This permit is issued based on information provided by the Permittee demonstrating that the use of water is reasonable and beneficial, consistent with the public interest, and will not interfere with any existing legal use of water. If, during the term of the permit, it is determined by the District that a statement in the application and in the supporting data are found to be untrue and inaccurate, the use is not reasonable and beneficial, in the public interest, or does impact an existing legal use of water, the Governing Board shall modify this permit or shall revoke this permit following notice and hearing, pursuant to sections 373.136 or 373.243, F.S. The Permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

16. Within the Southern Water Use Caution Area, if the District determines that significant water quantity or quality changes, impacts to existing legal uses, or adverse environmental impacts are occurring, the District, upon reasonable notice to the Permittee, including a statement of facts upon which the District based its determination, may reconsider the quantities permitted or other conditions of the permit as appropriate to address the change or impact, but only after an opportunity for the Permittee to resolve or mitigate the change or impact or to request a hearing.

17. All permits are contingent upon continued ownership or legal control of all property on which pumps, wells, diversions or other water withdrawal facilities are located.

Exhibit B
Instructions

METERING INSTRUCTIONS

The Permittee shall meter withdrawals from surface waters and/or the ground water resources, and meter readings from each withdrawal facility shall be recorded on a monthly basis within the last week of the month. The meter reading(s) shall be reported to the Water Use Permit Bureau on or before the tenth day of the following month for monthly reporting frequencies.

For bi-annual reporting, the data shall be recorded on a monthly basis and reported on or before the tenth day of the month
following the sixth month of recorded data.

The Permittee shall submit meter readings online using the Permit Information Center at www.swfwmd.state.fl.us/permits/epermitting/ or on District supplied scanning forms unless another arrangement for submission of this data has been approved by the District. Submission of such data by any other unauthorized form or mechanism may result in loss of data and subsequent delinquency notifications. Call the Water Use Permit Bureau inTampa at (813) 985-7481 if difficulty is encountered.

The meters shall adhere to the following descriptions and shall be installed or maintained as follows:

1. The meter(s) shall be non-resettable, totalizing flow meter(s) that have a totalizer of sufficient magnitude to retain total gallon data for a minimum of the three highest consecutive months permitted quantities. If other measuring device(s) are proposed, prior to installation, approval shall be obtained in writing from the Water Use Permit Bureau Chief.
2. The Permittee shall report non-use on all metered standby withdrawal facilities on the scanning form or approved alternative reporting method.
3. If a metered withdrawal facility is not used during any given month, the meter report shall be submitted to the District indicating the same meter reading as was submitted the previous month.
4. The flow meter(s) or other approved device(s) shall have and maintain an accuracy within five percent of the actual flow as installed.
5. Meter accuracy testing requirements:
   A. For newly metered withdrawal points, the flow meter installation shall be designed for inline field access for meter accuracy testing.
   B. The meter shall be tested for accuracy on-site, as installed according to the Flow Meter Accuracy Test Instructions in this Exhibit B, every five years in the assigned month for the county, beginning from the date of its installation for new meters or from the date of initial issuance of this permit containing the metering condition with an accuracy test requirement for existing meters.
   C. The testing frequency will be decreased if the Permittee demonstrates to the satisfaction of the District that a longer period of time for testing is warranted.
   D. The test will be accepted by the District only if performed by a person knowledgeable in the testing equipment used.
   E. If the actual flow is found to be greater than 5% different from the measured flow, within 30 days, the Permittee shall have the meter re-calibrated, repaired, or replaced, whichever is necessary. Documentation of the test and a certificate of re-calibration, if applicable, shall be submitted within 30 days of each test or re-calibration.
6. The meter shall be installed according to the manufacturer's instructions for achieving accurate flow to the specifications above, or it shall be installed in a straight length of pipe where there is at least an upstream length equal to ten (10) times the outside pipe diameter and a downstream length equal to two (2) times the outside pipe diameter. Where there is not at least a length of ten diameters upstream available, flow straightening vanes shall be used in the upstream line.
7. Broken or malfunctioning meter:
   A. If the meter or other flow measuring device malfunctions or breaks, the Permittee shall notify the District within 15 days of discovering the malfunction or breakage.
   B. The meter must be replaced with a repaired or new meter, subject to the same specifications given above, within 30 days of the discovery.
   C. If the meter is removed from the withdrawal point for any other reason, it shall be replaced with another meter having the same specifications given above, or the meter shall be reinstalled within 30 days of its removal

from the withdrawal. In either event, a fully functioning meter shall not be off the withdrawal point for more than 60 consecutive days.

8. While the meter is not functioning correctly, the Permittee shall keep track of the total amount of time the withdrawal point was used for each month and multiply those minutes times the pump capacity (in gallons per minute) for total gallons. The estimate of the number of gallons used each month during that period shall be submitted on District scanning forms and noted as estimated per instructions on the form. If the data is submitted by another approved method, the fact that it is estimated must be indicated. The reason for the necessity to estimate pumpage shall be reported with the estimate.

9. In the event a new meter is installed to replace a broken meter, it and its installation shall meet the specifications of this condition. The permittee shall notify the District of the replacement with the first submittal of meter readings from the new meter.

FLOW METER ACCURACY TEST INSTRUCTIONS

1. Accuracy Test Due Date - The Permittee is to schedule their accuracy test according to the following schedule:

A. For existing metered withdrawal points, add five years to the previous test year, and make the test in the month assigned to your county.

B. For withdrawal points for which metering is added for the first time, the test is to be scheduled five years from the issue year in the month assigned to your county.

C. For proposed withdrawal points, the test date is five years from the completion date of the withdrawal point in the month assigned to your county.

D. For the Permittee's convenience, if there are multiple due-years for meter accuracy testing because of the timing of the installation and/or previous accuracy tests of meters, the Permittee can submit a request in writing to the Water Use Permit Bureau Chief for one specific year to be assigned as the due date year for meter testing. Permittees with many meters to test may also request the tests to be grouped into one year or spread out evenly over two to three years.

E. The months for accuracy testing of meters are assigned by county. The Permittee is requested but not required to have their testing done in the month assigned to their county. This is to have sufficient District staff available for assistance.

January	Hillsborough
February	Manatee, Pasco
March	Polk (for odd numbered permits)*
April	Polk (for even numbered permits)*
May	Highlands
June	Hardee, Charlotte
July	None or Special Request
August	None or Special Request
September	Desoto, Sarasota
October	Citrus, Levy, Lake
November	Hernando, Sumter, Marion
December	Pinellas

* The permittee may request their multiple permits be tested in the same month.

2. Accuracy Test Requirements: The Permittee shall test the accuracy of flow meters on permitted withdrawal points as follows:

A. The equipment water temperature shall be set to 72 degrees Fahrenheit for ground water, and to the measured water temperature for other water sources.

B. A minimum of two separate timed tests shall be performed for each meter. Each timed test shall consist of measuring flow using the test meter and the installed meter for a minimum of four minutes duration. If the two tests do not yield consistent results, additional tests shall be performed for a minimum of eight minutes or

longer per test until consistent results are obtained.

C. If the installed meter has a rate of flow, or large multiplier that does not allow for consistent results to be obtained with four- or eight-minute tests, the duration of the test shall be increased as necessary to obtain accurate and consistent results with respect to the type of flow meter installed.

D. The results of two consistent tests shall be averaged, and the result will be considered the test result for the meter being tested. This result shall be expressed as a plus or minus percent (rounded to the nearest one-tenth percent) accuracy of the installed meter relative to the test meter. The percent accuracy indicates the deviation (if any), of the meter being tested from the test meter.

3. Accuracy Test Report: The Permittees shall demonstrate that the results of the meter test(s) are accurate by submitting the following information within 30 days of the test:

A. A completed Flow Meter Accuracy Verification Form, Form LEG-R.101.00 (5/14) for each flow meter tested. This form can be obtained from the District's website (www.watermatters.org) under "ePermitting and Rules" for Water Use Permits.

B. A printout of data that was input into the test equipment, if the test equipment is capable of creating such a printout;

C. A statement attesting that the manufacturer of the test equipment, or an entity approved or authorized by the manufacturer, has trained the operator to use the specific model test equipment used for testing;

D. The date of the test equipment's most recent calibration that demonstrates that it was calibrated within the previous twelve months, and the test lab's National Institute of Standards and Testing (N.I.S.T.) traceability reference number.

E. A diagram showing the precise location on the pipe where the testing equipment was mounted shall be supplied with the form. This diagram shall also show the pump, installed meter, the configuration (with all valves, tees, elbows, and any other possible flow disturbing devices) that exists between the pump and the test location clearly noted with measurements. If flow straightening vanes are utilized, their location(s) shall also be included in the diagram.

F. A picture of the test location, including the pump, installed flow meter, and the measuring device, or for sites where the picture does not include all of the items listed above, a picture of the test site with a notation of distances to these items.

WELL COMPLAINT INSTRUCTIONS

The permittee shall adhere to the following process for handling water resource, surface or ground water withdrawal point impact, dewatering complaints, or discharge/seepage of water from their property:

1. Within 48 hours of a complaint received by the Permittee related to their withdrawal or use of water or dewatering activity, the Permittee shall notify the District, perform a preliminary investigation to determine whether the Permittee's pumpage, dewatering activity, or discharge/seepage from their property may have caused the problem.
2. If this preliminary assessment indicates that the Permittee may be responsible, the Permittee shall, within 72 hours of complaint receipt, supply the complainant with any water necessary for health and safety purposes, such as drinking water.
3. If the resulting investigation determines that the Permittee was not responsible for the well problem, the Permittee shall document the reasons for this determination.
4. If the detailed investigation confirms that the complainant's problem was caused by the Permittee's pumpage, dewatering, or discharge or water impoundment activities:
   A. The complainant's problem shall be fully corrected within 15 days of complaint receipt.
   B. Impacts to wells: Full correction shall be restoration of the complainant's well to pre-impact condition or better, including the aspects of pressure levels, discharge quantity, and water quality. This detailed investigation shall include, but not be limited to, an analysis of water levels and pumpage impacts at the time of the complainant's problem, well and pump characteristics including depths, capacity, pump

curves, and irrigation system requirements.

5. The Permittee shall file a report of the complaint, the findings of facts, appropriate technical data, and any mitigating action taken or to be taken by the Permittee, to the Water Use Permit Bureau Chief, for review and approval within 20 days of the receipt of any complaint. The report shall include:
   A. The name and address of each complainant;
   B. The date and nature of the complaint;
   C. A summary of the Permittee's investigation;
   D. A summary of the Permittee's determination, including details of any mitigation activities; and
   E. Cost of mitigation activity for each complaint.
6. A copy of the report shall be sent to the complainant within 20 days of complaint receipt.

Authorized Signature
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

This permit, issued under the provision of Chapter 373, Florida Statues and Florida Administrative Code 40D-2, authorizes the Permittee to withdraw the quantities outlined above, and may require various activities to be performed by the Permittee as described in the permit, including the Special Conditions. The permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the Permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.

Exhibit C
Tampa Bypass Canal / Alafia River
Water Supply Projects
Hydrobiological Monitoring Program
2010 Update

Tampa Bypass Canal / Alafia River Water Supply Projects Hydrobiological Monitoring Program 2010 Update

FINAL

Prepared by

TAMPA BAY WATER
Supplying Water To The Region

2575 Enterprise Road
Clearwater, Florida 33763

PBS&J

4030 Boy Scout Boulevard
Tampa, Florida 33607

February 2011

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Abbreviations and Acronyms

AR	Alafia River
Chl-a	Chlorophyll-a
DOC	Dissolved Organic Carbon
DO	Dissolved Oxygen
EMAP	Environmental Monitoring and Assessment Program
EPA	Environmental Protection Agency (U.S.)
EPCHC	Environmental Protection Commission of Hillsborough County
FIM	FWRI Fisheries Independent Monitoring Program
FWRI	Fish and Wildlife Research Institute (formerly Florida Marine Research Institute)
GIS	Geographic Information System
HBMP	Hydrobiological Monitoring Program
HR	Hillsborough River
MB	McKay Bay
NRC	National Research Council
NWS	National Weather Service
PBS&J	PBS&J, Inc.
PR	Palm River
PSU	Practical Salinity Units
PPT	Parts per Thousand
QA/QC	Quality Assurance/ Quality Control
Rkm	River Kilometer
SAV	Submerged Aquatic Vegetation
SAS	Software system developed by the SAS Institute, Cary, NC.
SWFWMD	Southwest Florida Water Management District
TBC	Tampa Bypass Canal
TOC	Total Organic Carbon
TSS	Total Suspended Solids
USF	University of South Florida
USGS	U.S. Geological Survey
WUP	Water Use Permit

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1.0 Introduction

Special conditions in the Southwest Florida Water Management District (SWFWMD or District) Water Use Permits (WUPs) 2011794.00 and 2011796.00 required development and implementation of comprehensive hydrobiological monitoring programs (HBMPs) for the Alafia River and the Tampa Bypass Canal/Hillsborough River Water Supply Projects. Because of the consistent elements and the close proximity of the two water supply projects, a single, integrated HBMP was designed and implemented to meet the permit requirements for both projects (PBS&J, 2000).

This document, the HBMP 2010 Update, incorporates all previously approved program modifications and reflects the current HBMP as of July 2010.

1.1. Background

Design of the Alafia River/Tampa Bypass Canal HBMP began in May 1999. The HBMP was designed in a series of workshops and subcommittee meetings attended by regulatory agency and local government representatives, and other stakeholders. A final HBMP design document was completed in late 1999 (PBS&J, 2000).

HBMP field sampling was initiated in April 2000, and continued implementation of the HBMP has been required under special conditions for the renewed and modified water use permits for these regional public water supply projects. The HBMP was intended to be routinely modified based on field conditions and the ongoing evaluation of HBMP data.

In the ten years since the acceptance of the final HBMP design by both the design group and the Tampa Bay Water Board, several modifications have been made to the HBMP design. These modifications were in response to requests by the District and other stakeholders, logistical problems encountered during early implementation, and the sampling modifications identified based on evaluations of HBMP data.

Potential modifications to improve the monitoring program have been provided in HBMP annual and multi-year interpretative reports and discussed at Annual HBMP Meetings. All modifications approved by the District and incorporated into the program are listed in Appendix A.

1.2. HBMP Goals and Objectives

In accordance with the District's Basis for Review for water use permitting, the minimal goal of the HBMP is to generate information at an appropriate scale and resolution to determine if the permitted water supply projects are in compliance with District rules. Accordingly, the overall goals established for the HBMP are consistent with the District's performance standards provided in the Basis of Review.

The goal of the HBMP is to ensure that reduced flows in the Tampa Bypass Canal, Hillsborough River and Alafia River attributable to Tampa Bay Water's permitted surface water withdrawals do not deviate from the normal rate and range of fluctuation to the extent that:

- Water quality, vegetation, and animal populations are adversely impacted in streams and estuaries
- Salinity distributions in tidal streams and estuaries are significantly altered as a result of withdrawals
- Recreational use or aesthetic qualities of the resource are adversely impacted.

In addition to the above stated goals, the 1999 design process also generated programmatic objectives to address the District's process for evaluating compliance with these Water Use Permits. Accordingly, stakeholders agreed upon HBMP objectives as follows:

- Document existing conditions in the potentially affected waterbodies
- Enable the detection of changed conditions in the potentially affected waterbodies
- Determine if the detected changed conditions are attributable to reductions in freshwater inflows
- Provide a scientifically defensible means to evaluate whether the permitted surface water withdrawals are causing or significantly contributing to the detected changed conditions
- Determine whether the detected changed conditions constitute or could result in unacceptable adverse impacts
- Recommend appropriate management actions or operational changes designed to eliminate or mitigate unacceptable adverse impacts if they occur or are expected to occur.

As reflected in the above listed objectives, the overall purpose and scope of the HBMP extend beyond just data acquisition, analysis, and reporting. The HBMP also incorporates programmatic criteria that have been developed to ensure that the permitted withdrawals are consistent with District rules throughout the lifetime of the permits.

1.3. HBMP Monitoring Areas

Stakeholders involved in the 1999 design process came to consensus that any potential impacts from the permitted surface water withdrawals would likely first be manifested in the river systems where surface water withdrawals will take place, and possibly Hillsborough Bay. Therefore, the potentially affected waterbodies or portions of waterbodies were identified based on geographic areas of concern; these were defined as "reporting units" for purposes of monitoring program design.

HBMP reporting units were established for each of five potentially affected waterbodies:

- The lower Alafia River below Bell Shoals Road
- The Tampa Bypass Canal/Palm River below Structure S-160
- McKay Bay
- The lower Hillsborough River below the City of Tampa dam
- Hillsborough Bay

The design stakeholder group concluded that Hillsborough Bay proper could be potentially affected by the permitted water supply projects, but that additional sampling in Hillsborough Bay

as a component of the HBMP was not warranted for two reasons. First, impacts from Tampa Bay Water withdrawals should be detected in the other reporting units before being detected in Hillsborough Bay. Second, the data gathered from existing long-term EPCHC and FWRI monitoring programs can be used to characterize the status of this reporting unit.

1.4. HBMP Monitoring Elements

The HBMP has three monitoring program elements:

- Hydrology/Water quality
- Biota
- Habitat/Vegetation

During the design of the HBMP, critical indicators were identified for each monitoring element in each reporting unit. Critical indicators are units of measure that describe the status of the statistical populations or subpopulations of interest, usually in response to some environmental stressor. Structural and hydrobiological differences among the reporting units necessitate slightly different groups of critical indicators for each.

Specific monitoring objectives for each of the three HBMP elements adopted by the stakeholder group are summarized briefly below.

- Hydrology/Water Quality
    - Estimate the daily freshwater inflows, freshwater withdrawals, and water levels in each reporting unit.
    - Estimate the distribution of water quality indicators by reporting unit on an appropriate temporal basis.

Estimates of freshwater inflows and withdrawals, and water levels, are to be made on a daily basis. The temporal basis is consistent for all water quality indicators; however, the temporal basis differs among the spatial reporting units. All reporting units have adequate sample size to ensure both annual and seasonal estimates of water quality conditions.

- Biota
    - Estimate by reporting unit on an appropriate temporal basis, the species composition (to the lowest practical identifiable level), and abundance and distribution of:
        - Juvenile and adult fishes
        - Benthic macroinvertebrate infauna and epifauna
        - Ichthyoplankton and other macrozooplankton.

As with water quality, the temporal basis is consistent for all biotic indicators, however, the temporal basis differs among the spatial reporting units. All reporting units have adequate sample size to ensure both annual and seasonal estimates of biotic conditions in all reporting units.

An additional indicator for the biota element, “estimate the species composition (to the lowest practical identifiable level) and abundance of water-dependent birds in upper McKay Bay and

the Alafia Banks on an appropriate temporal basis", was included in the initial design, but was discontinued from the program based on evaluation of data collected (see Appendix A).

- Habitat/Vegetation
    - Estimate the areal extent and upstream/downstream limits of emergent vegetation communities by reporting unit on a periodic basis.
    - Estimate species composition and relative abundance of submerged aquatic vegetation communities in the Alafia River on periodic basis.
    - Estimate the distribution of sediment grain size and sediment total organic matter by reporting unit on an appropriate temporal basis (derived from benthic sampling).

Typically, there is little within-year variation in the habitat indicators, therefore, estimation of the status of these indicators on an annual or multi-year basis was considered appropriate. The temporal basis is consistent for all habitat indicators across all spatial reporting units. All reporting units have adequate sample size to ensure annual estimates of habitat conditions.

2.0 HBMP Design Approach

This section provides an overview of the sampling techniques and strategies used in the HBMP. Sections 2.1 and 2.2 discuss the general design of the program. Section 2.3 discusses the general indicators used in the program. HBMP geographic reporting units, spatial strata and randomization, temporal stratification, and considerations for each reporting unit are discussed in Sections 2.4-2.6.

2.1. HBMP Design - General Considerations

Appropriate environmental monitoring programs are critical components of effective resource management. According to the National Research Council (1990), effective environmental monitoring:

- Provides the information needed to evaluate the effectiveness of, and to appropriately adjust, resource management actions
- Provides an early warning system, allowing for lower cost solutions to environmental problems
- Contributes to the knowledge of ecosystems and how they are affected by human activity, and such knowledge allows for the establishment of priorities for environmental protection and for the assessment of status and trends
- Provides information that helps to answer layperson questions
- Is essential for the construction, adjustment, and verification of quantitative predictive models which are an important basis for evaluating, developing, and selecting environmental management strategies
- Provides resource managers the scientific rationale for setting environmental standards
- Determines legal compliance with established environmental standards and conditions as set forth in regulatory programs.

Environmental monitoring programs need to have clearly articulated goals and objectives to minimize data gaps and unanswered critical questions. Therefore, monitoring programs need to be properly designed at the outset, and monitoring methods appropriately applied, if they are to meet the multiple expectations of all those who rely on the information generated. Even when monitoring programs are technically sound, it is their overall design and institutional context that often limits the usefulness of the resulting information.

The National Research Council (1990) has identified the following factors for sound program design and objective implementation of monitoring programs:

- The goals and objectives of the monitoring program must be clearly articulated in terms that pose questions that are meaningful to the public and that provide the basis for scientific investigation
- Not only must data be gathered, but attention must also be paid to their management, synthesis, interpretation, and analysis
- Procedures for quality assurance are needed, including multiple levels of peer review

- Well-designed monitoring programs often result in unanswered questions about environmental processes or human impacts. Therefore, where feasible, supportive research should be provided
- Adequate resources are needed not only for data collection but also for detailed analysis, evaluation, and reporting over the long term
- Programs should be sufficiently flexible to allow for their modification when and where changes in conditions or new information suggests the need
- Provision should be made to ensure that monitoring information is made available to all interested parties in a form that is useful to them.

2.2. General Design Criteria Associated with HBMP Monitoring Elements

The initial step undertaken in the development of the HBMP was to define those parameters that were thought to be indicators of potential changes in each of the potentially affected water bodies. The next step was to define the geographical areas where data collection should be implemented. It was agreed that the HBMP sampling design should provide technically sound and practical methods for collecting the data needed to obtain unbiased population, subpopulation, and variance estimates.

Unbiased population and subpopulation estimates are metrics whose average value, taken over all possible samples, is equal to the population parameter value of the metric. In other words, the estimate gives the correct value for some measure of the population. Here, the term **population** refers to the totality of individual observations about which inferences are to be made within a definitely specified sampling area limited in space and time.

Cochran et al. (1954) point out that the population to be sampled (the *sampled* population) should coincide with the population about which inferences are to be drawn (the *target* population). Cochran (1977) further states that at times, for reasons of practicability or convenience, the sampled population is more restricted than the target population. In such cases, it should be noted that conclusions drawn from the sample apply to the sampled population. Judgment must be used to determine the extent to which the conclusions will also apply to the target population. One way in which this problem can be avoided is to ensure at the design phase that the sampled population is carefully defined to closely agree with the target population definition.

A **subpopulation** is a specific portion of the population, defined either in space or time. For example, the subpopulation may be the shallow portion (defined by some specific depth) of the waterbody of concern. A subpopulation could also be all measurements made in a particular season of the year (e.g., wet or dry season subpopulations).

Sampling theory was employed to determine the best design for the HBMP sampling strategy. There are basically two common types of sampling strategies (Cochran, 1977):

Probability Sampling - Employing this approach requires a definition of the set of distinct samples that the sampling program is capable of sampling if applied to a specific population.

Each possible sample must have a known probability of selection. The samples are selected by a random process in which each sample receives its appropriate probability of being selected.

Nonprobability Sampling - Common approaches include: sampling a restricted portion of the population that is readily accessible (e.g., fixed station sampling of salinity from a bridge); haphazard sample selection without conscious planning; and a selection of "typical" or "representative" sample units that are considered close to the average of the target population.

If conditions are appropriate, each of the methods can provide useful results. However, the only way to verify if an estimate is unbiased is to compare it with the actual population values or an estimate derived from a probability sampling approach. Even if such a test comparison demonstrates that the nonprobability sampling estimate is unbiased, this does not necessarily mean that method will continue to give unbiased results under all circumstances. For example, future changes in drainage patterns in a watershed may cause more or less runoff to enter the waterbody of concern. Therefore, in this example, checks of the unbiased nature of the nonprobability sample estimate would have to continue throughout the length of the monitoring program. A probability sampling approach yields unbiased estimates regardless of changing conditions.

Unbiased variance estimates will provide a measure of uncertainty in the population and subpopulation estimates. In order to ensure that variance estimates are unbiased, it is recommended that the sampling design follow the basic rules for probability sampling and variance estimation. Thus, for all elements of the sampling design, at least two samples must be collected from each subpopulation for which an unbiased estimate of variance is required, and each sampling unit in the subpopulation must have a known, non-zero probability of inclusion in the sample. In addition, the pairwise inclusion probabilities of all possible combinations of the two samples must be known and non-zero. Logistical constraints may require that some sampling units have a lower inclusion probability than others, and can be incorporated into the sampling design, if necessary. The inclusion probabilities used to select sampling units will be specified quantitatively, introduced as weights in all computations of estimates and associated variances, and hence allow all estimates to be unbiased.

Given the above conditions, and based on the efforts of the HBMP design stakeholder group, it was concluded that a probability-based design was best suited to meet the programmatic goals and objectives of the HBMP. It should, however, be noted that several other data needs were also identified that would not be best addressed using a probability-based approach. These informational needs were anticipated to be addressed separately as "special studies" (see Appendix A and PBS&J, 2000 for additional information).

To implement the design approach, a series of decisions were made regarding the specifics of the monitoring program design. First, specific **monitoring objectives** were defined. Second, the **indicators** of the status of the population (or subpopulations) were defined. Third, the **reporting units** were defined with respect to both space and time.

The general probability sampling approach allows inferences to be drawn not only about the target populations but also a variety of subpopulations. As a general rule of thumb, if it is desired

to draw an inference with regard to a particular subpopulation, then that subpopulation or **stratum** should be designed into the overall monitoring plan (Summers and Maddox, 1999). The use of strata within a sampling design enhances the power to detect differences because it optimizes the design based on the natural variability characteristics of the indicators being measured.

Cochran (1977) concludes that incorporating strata into the sampling design, referred to as **stratified random sampling**, is a common and indicated technique if:

- Data of known precision are wanted for certain subpopulations, in which case it is advisable to treat each such subdivision as a "population" in its own right
- Convenience dictates the use of stratification
- Sampling problems differ markedly in different parts of the population
- It is desired to increase the precision of estimates of the characteristics of the population as a whole.

The HBMP design stakeholder group concluded that a stratified random sampling approach was the best sampling design to meet HBMP objectives.

2.3. General Indicator Characteristics for HBMP Monitoring Elements

Following the identification of specific measurable monitoring objectives, the next step in the monitoring design process is the definition of appropriate indicators. Indicators are units of measure that describe the status of the statistical populations, or subpopulations, of interest, usually in response to some environmental stressor. The term **indicator** in this context is somewhat analogous to the term *parameter*, as it is applied in environmental monitoring jargon; however, it is broader in scope.

Indicators can be generally broken down into two classes: 1) desirable indicators, and 2) critical indicators. General characteristics for each of these are listed below.

General characteristics of desirable indicators include:

- Sampling Unit Stable - measurements of the response indicator taken at a sampling unit should be stable over the course of the sampling period
- Available Method - should have a generally accepted, standardized method of measurement that can be applied on a regional scale
- Historical Record - has a historical database, or a historical database can be generated from acceptable data sources
- Retrospective - can be related to past conditions via retrospective analyses
- Anticipatory - provides an early warning of widespread changes in ecosystem processes or conditions
- Cost-Effective - has low incremental cost relative to its information value
- New Information - provides new information; does not merely duplicate data already collected by other agencies or investigators

General characteristics of critical indicators include:

- Regionally Responsive - must reflect changes in ecosystem conditions and respond to stressors of concern across most resource classes and habitats in a region
- Unambiguously Interpretable - must be related to an assessment endpoint or relative exposure or habitat variable that forms part of the investigators' overall conceptual model of ecological structure and function
- Low Measurement Error - exhibits low measurement error and stability of regional cumulative frequency distribution during the index period
- Simple Quantification - can be quantified by cost-effective synoptic or automated monitoring
- Environmental Impact - sampling must have minimal environmental impact
- Low Year-to-Year Variability - must have sufficiently low natural inter-annual variation to detect ecologically significant changes within a reasonable time frame

It is important to note that, with respect to surface water supply projects, all potentially applicable response indicators must have either a direct relationship to changes in freshwater inflows, or an indirect relationship (e.g., center of fish population distribution). Indicators with a direct relationship to freshwater inflows are typically physical or chemical in nature (e.g., salinity), and respond more or less instantaneously to changing inflows. Indicators with an indirect relationship to freshwater inflows are typically biological in nature (e.g., center of fish population distribution), are mediated by physical and chemical changes, and generally respond on a slower time scale (e.g., days, months, and seasons).

The HBMP design stakeholder group deliberated on critical and desirable indicators over the course of several workshops, applied the criteria described above, and generated a list of potential indicators for each of the three identified monitoring elements: hydrology/water quality, biota, and habitat. This list was ultimately reduced to a final recommended suite of critical indicators for each monitoring element (see PBS&J, 2000) that is summarized in the following sections.

2.4. Reporting Units and Spatial Strata

The spatial and temporal extents, statistically often referred to as the *target population*, of the sampling program were defined during the development of the HBMP.

The potentially affected waterbodies or portions of waterbodies were identified based on geographic areas of concern; these were defined as spatial "reporting units" for purposes of program design and monitoring for withdrawal-related changes on an annual basis.

HBMP spatial reporting units include:

- Lower Hillsborough River – Figure 2.4.1
- Tampa Bypass Canal/Palm River - Figure 2.4.2
- McKay Bay – Figure 2.4.3
- Lower Alafia River – Figure 2.4.4
- Hillsborough Bay – Figure 2.4.5

HBMP sampling is conducted in each of the four primary reporting units: the lower Hillsborough River, the Tampa Bypass Canal/Palm River, McKay Bay, and the lower Alafia River.

For the fifth reporting unit, Hillsborough Bay, the HBMP design stakeholder group concluded that this reporting unit could be affected by the permitted water supply projects, but that additional sampling in Hillsborough Bay as a component of the HBMP was not warranted for two reasons. First, impacts from Tampa Bay Water withdrawals should be detected in the other reporting units before being detected in Hillsborough Bay. Second, the data gathered from existing monitoring programs can be used to characterize the status of this reporting unit.

HBMP data collection sites in Hillsborough Bay are located near the mouth of each primary reporting unit. The Environmental Protection Commission of Hillsborough County (EPCHC) and the FWRI have long-term monitoring programs in Hillsborough Bay that are independent of the HBMP. In Water Year 2005, the Fisheries Independent Monitoring Program of the Fish and Wildlife Research Institute (FWRI) also began HBMP-specific sampling in Hillsborough Bay at the mouth of the Alafia River. Results from these programs comprise the majority of the data evaluated by the HBMP for Hillsborough Bay reporting unit.

2.5. Spatial Randomization

To develop the HBMP stratified random sampling design, a randomized method for choosing monthly sampling sites is used for each of the spatial strata within each reporting unit. The centerlines of the linear reporting units were generated using an ARCINFO function that interpolates intermediate topographic contours. The function used the riverbanks as contours and interpolated the centerlines as intermediate contours between the banks. The centerlines were then divided into 1-meter long segments, and each of these was defined as a potential sampling station and named according to its distance from the river mouth and the strata in which it was located.

HBMP monthly sampling stations for the linear reporting units are selected by stratum. Each station in the stratum is assigned a unique consecutive whole number. A series of random numbers is then created using the SAS “ranuni()” statement. These random numbers are matched with the numbers assigned to the stations, and the corresponding stations are selected. Lists of primary and alternate stations by stratum are provided to the field staff. In the event that a primary station cannot be sampled, field staff must choose the first alternate station (not the closest station). If an alternate station cannot be sampled, field staff must choose the next alternate station in the sequence.

A “right”, “left”, or “center” (“shallow right”, “shallow left”, or “deep” in the Palm River) designation is also chosen in the monthly sample selection process. A “left” designation instructs the field staff to take a sample on the left 33% of the river (with left defined as the left side looking upstream). A “center” designation instructs the crew to sample in the center 33% of the river and a “right” designation in the right 33%. The designations are the same for the Palm River except that the “shallow” stations are sampled in water less than 2 meters deep. The lateral positions are randomly selected using the SAS “ranuni()” statement. Each portion of a river has

an equal chance of being selected for any given station. The depth strata of the Palm River are treated as substrata. Lateral position is not randomly selected in the deep Palm River substrata. The "left" or "right" lateral positions are randomly selected in the Palm River shallow strata.

Stations for water quality, benthos, and fish sampling are randomly selected for each monthly sampling. Stations for plankton sampling were randomly selected one time at the beginning of the program.

McKay Bay monthly stations are grouped by hexagon or cell. Initially a cell is randomly selected for sampling. Then the station within the selected cell is selected in a manner consistent with the technique described above for the linear reporting units. Lists of the primary and alternate stations are provided to the field staff. There is only one primary station in each cell. If that station cannot be sampled, field staff must select the first alternate station. If an alternate station cannot be sampled, crews must select the next alternate station in that cell. There are no lateral sample station designations in McKay Bay.

McKay Bay cells are selected using a method weighted for the number of stations in each cell. Each of the McKay Bay cells is the same size, but some of the cells on the edge of the bay overlap land areas. These overlap areas do not constitute valid stations. McKay Bay cells are selected using a weighted formula in SAS. Each cell is assigned a sequential percentage of the values from 0 to 1 in accordance with the proportion of the total stations in McKay Bay located in that cell. For instance, if Cell 1 contains 15% of the total stations it would be assigned values from 0.00001 to 0.15000 in the formula. If Cell 2 contained 5% of the stations in McKay Bay, it would be assigned values from 0.15001 to 0.20000 in the formula. Though the water quality, benthos, fish, and plankton efforts may sample the same cell during a given month, a single sampling element is never sampled twice within one cell in a given month.

2.6. Temporal Strata

Temporal strata are specific to each of the four reporting units. In general, these strata were defined to ensure that the key within-year sources of variation were taken into account. Specifically, two sources of within-year variation were considered critical. One source dealt with the intra-annual variation in flows due to the seasonal differences in rainfall. Typically, flows are higher in the normal wet season period (July through September) when compared to flows observed in the dry season (October through June). Flows in the months of April and May in particular can be extremely low due to prolonged periods of low rainfall. The second within-year source of expected variation in flows would be the manifestation of the permitted withdrawal schedules. Since the withdrawal schedules vary as a function of ambient flow, the reductions in freshwater flow due to the withdrawals will not be consistent throughout the year. Based on historical flow conditions, the greatest daily withdrawals will typically occur during the months of July through September.

Two other sources of temporal variation, tides and diel variability, were considered during the development of the sampling program but were determined to be adequately addressed to meet HBMP objectives based on other sampling criteria and constraints.

2.6.1. Lower Hillsborough River

The general temporal sampling strategy for the lower Hillsborough River ensures that an adequate sample size is available for drawing inferences about river-wide status on an annual or seasonal basis. A temporally even sampling effort exists for water quality, fish, and plankton sampling. By comparison, the benthic sampling program currently includes two different sampling intensities. Benthic sampling effort in both the wet season (i.e., July through September) and in the late dry season (April through June) is greater than that during the periods of October through December and January through March. Thus, the lower Hillsborough River sampling strategy for benthos is on a wet season/dry season basis.

In addition, continuous monitoring (every 15 minutes) of conductivity and temperature is conducted at three permanent fixed locations (Sligh Ave., Columbus Ave., and a third station located between Sligh and Columbus). These stations provide information on short-term responses in water quality to changes in freshwater flow. Rainfall and flow measurements are determined on a daily basis. Vegetation sampling consists of aerial photography and shoreline surveys conducted every three years between October and December.

2.6.2. TBC/Palm River

The temporal sampling strategy for the TBC/Palm River focuses on the expected differences in river status that are likely to occur between the wet and dry seasons. Sampling for benthos and water quality during the wet season, when mean daily withdrawals will be largest, is more intense than during the dry season. To this end, there are two temporal sampling strata for both water quality and benthos, with adequate sampling intensity for inferences to be made regarding the status of water quality or benthos in the river for both the wet and dry seasons. Equivalent sampling intensities are employed across all months of the year for zooplankton sampling. Based on stakeholder consensus and District approval, fish sampling in the TBC/Palm River was discontinued in Water Year 2009 (see Appendix A).

Continuous monitoring (every 15 minutes) of conductivity and temperature is conducted at the Maydell Drive recorder. This monitoring provides information on short-term responses in water quality to changes in freshwater flow. Rainfall and flow measurements are collected on a daily basis. Vegetation sampling consists of aerial photography and shoreline surveys conducted every three years during the months of October through December.

2.6.3. McKay Bay

The temporal sampling strategy for McKay Bay closely follows that for the TBC/Palm River and focuses on the expected differences in the status of McKay Bay between the wet and dry seasons. Continuous monitoring (every 15 minutes) of conductivity and temperature is conducted at the 22nd Street Causeway station. Sampling of benthos and water quality is more intense during the wet season, when mean daily withdrawals are expected to be greatest based on historical flow conditions. Equivalent sampling intensities are employed across all months for both fish and plankton sampling.

The sampling schedule is based on temporal randomization around a selected day within each month. This method provides estimates of within-temporal stratum variability, increases the power of any tests of significance, and also best represents the range of flow conditions expected.

2.6.4. Lower Alafia River

The temporal sampling strategy for the lower Alafia River is very similar to that defined for the lower Hillsborough River. Equal sampling intensities are employed across all months for water quality, benthos, fish, and plankton sampling. The sampling intensity is meant to be sufficient to allow meaningful river-wide inferences regarding each of these HBMP elements to be drawn on a quarterly basis. An additional fish sampling effort occurs once annually in the freshwater stratum.

During the HBMP design process, stakeholders recommended that an inset stratum for benthic sampling be specifically addressed, extending approximately 1 km upstream and 1 km downstream of the freshwater interface based on an analysis of pre-operational water quality data. Additional benthic sampling is currently conducted in the inset stratum during the months of June through August. This sampling was initially designed to be sufficiently intense to allow inferences to be drawn about the status of this stratum during the wet season.

Continuous monitoring (every 15 minutes) of conductivity and temperature is conducted at one fixed station currently located on the River south of Buckhorn Creek. In addition, the USGS collects data from two additional fixed sites on the Alafia River. These data provide information on short term responses in water quality to changes in freshwater flow. The frequency of rainfall and flow measurements is daily. Vegetation sampling consists of aerial photography and shoreline surveys conducted every three years during the October through December period. Submerged aquatic vegetation is currently monitored every five years in two strata.

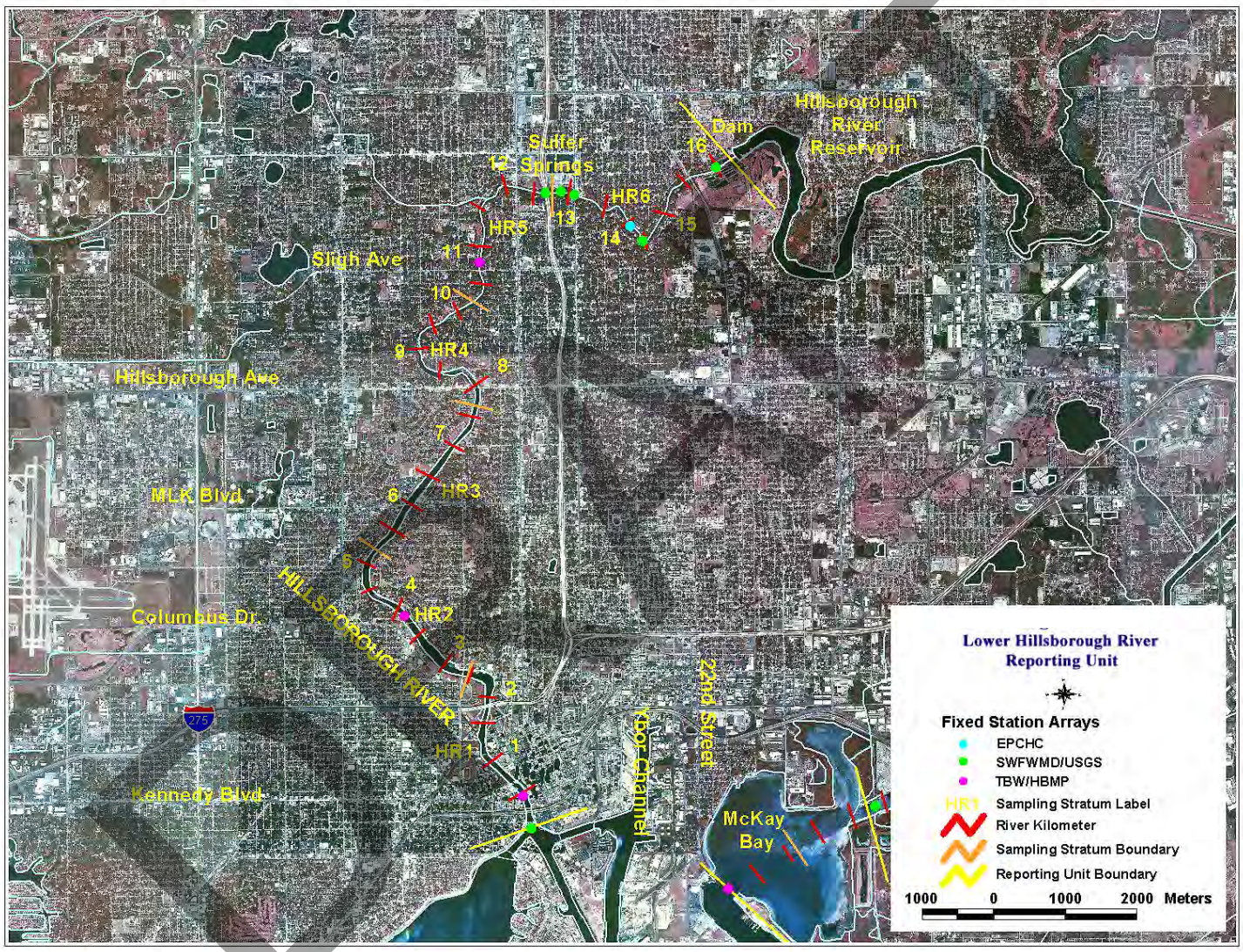

Figure 2.4.1. Lower Hillsborough River Reporting Unit

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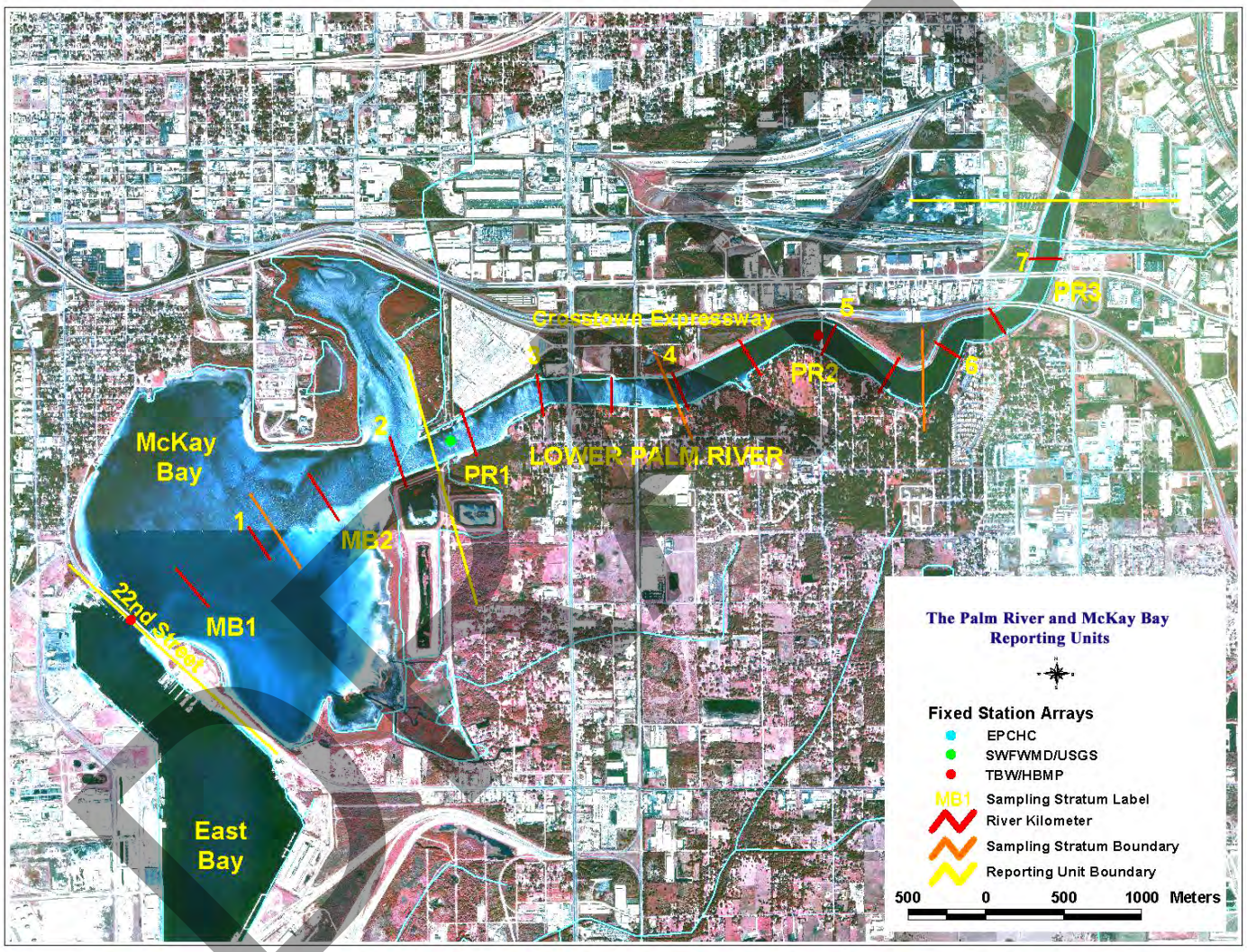

Figure 2.4.2. The Palm River and McKay Bay Reporting Units

Figure 2.4.3. McKay Bay Reporting Unit

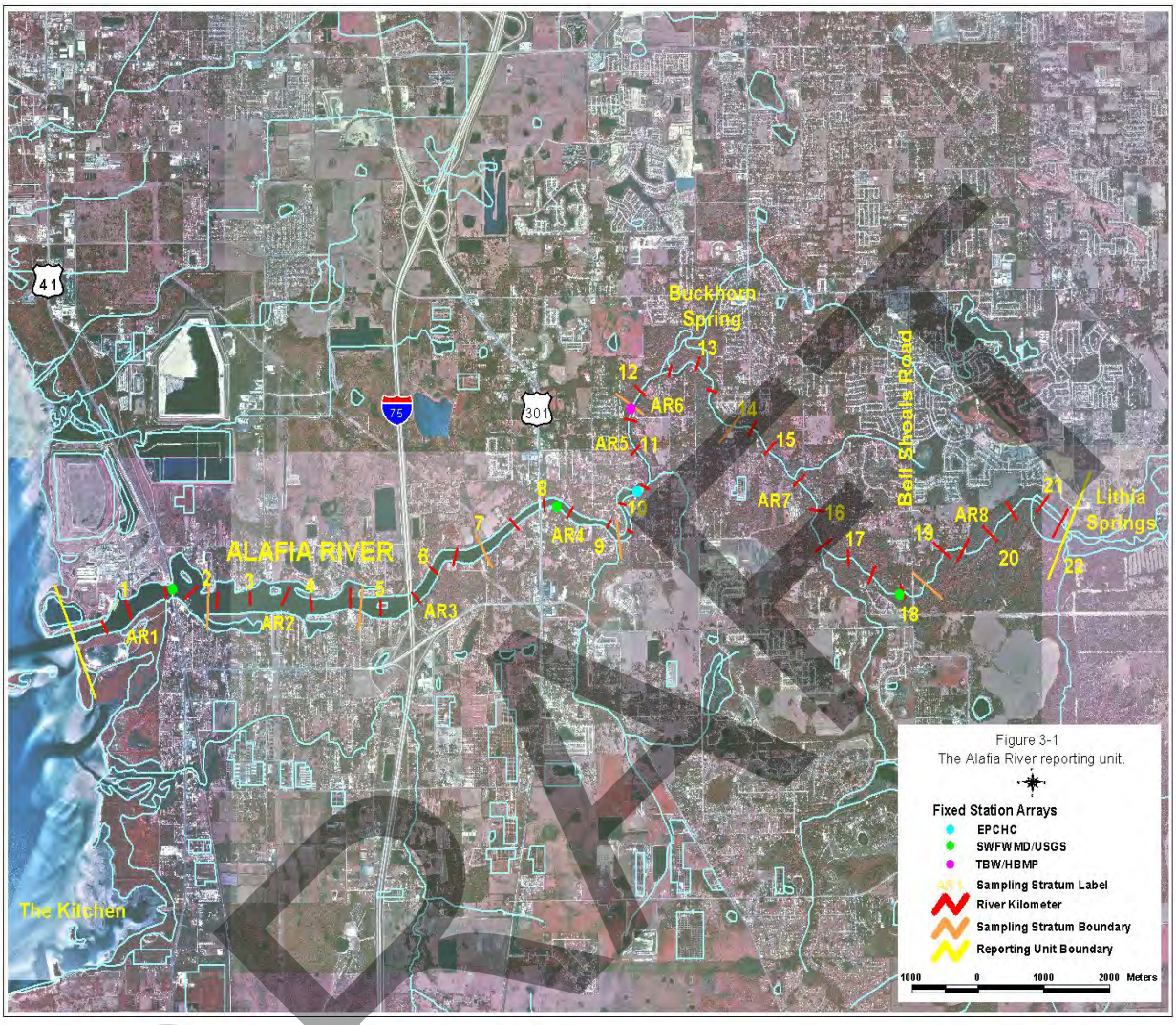

Figure 2.4.4. The Alafia River Reporting Unit

Figure 2.4.5. Hillsborough Bay Reporting Unit

3.0 Tampa Bypass Canal/Hillsborough River HBMP

3.1. Introduction

This section describes the special permit conditions, flow, water quality, and biological data collection efforts in the lower Hillsborough River, Tampa Bypass Canal (TBC), and McKay Bay conducted under the HBMP. The sampling programs for these reporting units are summarized in Tables 3.1.1 through 3.1.3 at the end of this section. Modifications to the initial HBMP sampling design and the rationale for these modifications are provided in Appendix A.

Additional information and specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

3.2. Lower Hillsborough River, Tampa Bypass Canal and McKay Bay Reporting Units

The Lower Hillsborough River (HR) reporting unit (Figure 2.4.1) extends from the mouth of the river at Platt Street to the City of Tampa Dam, covering a distance of 16.34 river kilometers. This spatial reporting unit was divided into six strata, five of equal length (2.55 km) below Sulphur Springs, and one of 3.61 km in length from Sulphur Springs upstream to the dam. These strata are used for all of the HBMP elements (i.e., water quality, benthos, adult and juvenile fish, ichthyoplankton and vegetation).

The TBC/Palm River reporting unit (Figure 2.4.2) extends from the mouth upstream to Structure S-160. This spatial reporting unit is divided into 3 strata of equal length (1.75 km). In addition to these longitudinal strata, it was also recognized during HBMP design that significant variation in both water quality and benthos might exist due to differences in depth. Therefore, both shallow and deep water substrata within each longitudinal stratum were defined in the Palm River for both water quality and benthos monitoring elements.

The McKay Bay reporting unit (Figure 2.4.3) extends from the 22nd Street Causeway to the mouth of the TBC. This spatial reporting unit was divided into 2 strata: 1) the channel that runs approximately along the centerline of the Bay; and 2) the shallow remainder of the Bay. The channel portion was further divided into 2 strata of equal length (1.1 km). Sample selection for water quality and benthic sampling locations is based on a hexagonal grid framework, similar to that used by the Environmental Protection Commission of Hillsborough County (EPCHC), except using a finer grid scale of approximately 0.2 km^2. These hexagons were then divided into a 1-m^2 grid and potential sample stations established at the 1-m^2 grid nodes. The hexagons, grids, and stations were generated by Janicki Environmental (PBS&J, 2000).

3.3. Lower Hillsborough River and Tampa Bypass Canal Permit Conditions

Water Use Permit 20011796.002 for the Tampa Bypass Canal (TBC)/Hillsborough River Water Supply Projects authorizes Tampa Bay Water to divert water from the Hillsborough River and withdraw water from Tampa Bypass Canal according to the schedule provided in the permit.

This permit requires that Tampa Bay Water continue to implement the approved TBC/Hillsborough River HBMP in order to address the following objectives:

- Use baseline conditions to compare the effects of the permitted water use upon streamflow rates, salinity distributions, and selected water quality and biologic variables within the lower Hillsborough River below Tampa Dam, TBC, Palm River, and McKay Bay

- Monitor diversions from the Hillsborough River and withdrawals from the TBC at the withdrawal points and evaluate streamflow data for the lower Hillsborough River at the Tampa Dam, and the TBC at the District's Structures 160 and 162

- Evaluate the ecological relationships of the lower Hillsborough River below Tampa Dam, TBC, Palm River, and McKay Bay to freshwater flows

- Monitor selected water quality and biologic variables in order to determine if the ecological characteristics of the lower Hillsborough River below Tampa Dam, TBC, Palm River, and McKay Bay relate to freshwater flow change over time

- Determine the relative effect of permitted diversions and withdrawals on any ecologic changes that may occur in the lower Hillsborough River below Tampa Dam, TBC, Palm River, and McKay Bay

- Determine if these withdrawals cause or significantly contribute to any unacceptable adverse environmental impacts to the natural resources of the lower Hillsborough River below Tampa Dam, TBC, Palm River, and McKay Bay exhibit as a result of changes in freshwater flows. The HBMP shall identify criteria that will be used to determine unacceptable adverse environmental impacts to the resources

- Coordinate with appropriate agencies that have or are currently collecting data that can be incorporated into the HBMP to avoid duplication of effort and to facilitate the most efficient use of resources.

3.4. Sampling Site Selection

All but one of the monthly sample sites (stations) for water quality, fish, benthos, and plankton are randomly selected. There is a fixed water quality sampling station at the mouth of the Hillsborough River and East Bay. This station is collocated with EPCHC water quality sampling Station 52. Sampling stations for water quality, fish, and benthos are randomly selected each month. Sampling stations for plankton were randomly selected at the beginning of the HBMP and remain fixed.

Sampling stations for the Hillsborough River and TBC are identified by stratum and location relative to the mouth of the river. Thus, the station in Hillsborough River Stratum 1, 1000 meters from the mouth of the river, is identified as “HR101000”. The prefix “HR1” designates the river and stratum and the suffix “01000” identifies the distance from the mouth of the river. The “HR”

and "PR" designations identify Hillsborough and Palm River stations, respectively. All potential stations and their corresponding latitude and longitude have been determined and are listed in the project database. Stations are chosen in each stratum by randomly selecting from the list of potential stations.

Plankton sampling stations in McKay Bay are identified by the "MB" prefix and are oriented on a centerline that begins at the 22nd Street Causeway Bridge and ends at the downstream terminus of the TBC centerline. Plankton sampling in McKay Bay occurs in two strata. The naming convention for McKay Bay plankton stations follows that of the rivers with the distance designation representing meters from the 22nd Street Causeway. The TBC stations for water quality, fish, benthos, and plankton are also defined in meters from the 22nd Street Causeway.

In addition to the station location along the river's length, the location relative to the river's width (left, middle, or right) is also randomly selected for water quality, fish, and benthos sampling. Finally, the starting point of a day's sample collection (e.g. river mouth or upstream boundary) is randomly selected each month for water quality.

River width and starting point selection parameters are not used for water quality, fish, or benthos sampling in McKay Bay, as the McKay Bay sampling design is not based upon linear stratification. For sampling purposes, McKay Bay has been divided into hexagons, which are further partitioned into 1-meter cells. Each potential sample station is located within a single grid cell. Stations are selected by randomly selecting a hexagon, then randomly selecting a grid cell within the hexagon. The prefix "M" and a unique suffix number that identifies the hexagon and grid cell identify McKay Bay stations.

The week in which sampling is conducted for each month is randomly selected for water quality and fish. Plankton sampling dates are chosen based upon the appropriate correspondence of tide stage with time of day. The Environmental Protection Commission of Hillsborough County (EPCHC) performs water quality and benthos sampling in Hillsborough Bay at fixed sampling stations during fixed weeks of the month or a late summer/early fall index period.

3.5. Hydrology / Water Quality

Current data collection activities for the hydrology/water quality element of the TBC/Hillsborough River HBMP are described briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

River flow and rainfall measurements are obtained from Tampa Bay Water maintained equipment or equipment maintained and operated by USGS. Salinity data are obtained from HBMP continuous water quality recording stations installed specifically for this project; these stations were installed in the early part of Water Year 2001.

Water quality samples and measurements are taken monthly in each of the three reporting units, lower Hillsborough River, TBC, and McKay Bay. Water quality sampling consists of a water column profile and an associated grab sample. The water column profiles measure temperature,

specific conductance, pH, salinity (calculated from specific conductance), and dissolved oxygen. These measurements are typically made at the water column surface, bottom, and 0.5 meter increments from the surface. The grab samples are analyzed by a subcontracted laboratory for parameters specific to each reporting unit. Sampling is typically conducted over a two- to three-day period. An increased number of samples are taken during the summer wet-season as shown in the HBMP sampling summary tables below. Hydrologic and water quality parameters measured in the lower Hillsborough River, TBC, and McKay Bay are shown in Table 3.5.1. In addition, the EPCHC collects water quality samples once monthly at fixed stations in Hillsborough Bay. This effort measures all water quality parameters included in the HBMP.

As described above, the HBMP maintains one continuous water quality recorder in the TBC, one in McKay Bay, and three in the Hillsborough River (Sligh Ave., Columbus Ave., and between Sligh and Columbus). These recorders were installed in Water Year 2001 as part of the HBMP and are listed in the sampling summary tables (Tables 3.7.1-3.7.3). In addition, the USGS maintains several long-term real-time water quality recorders that are used for the HBMP.

Table 3.5.1. Hydrologic and water quality parameters measured in the three reporting units.

Lower Hillsborough River	Tampa Bypass Canal Lower Palm River	McKay Bay
stream flow	stream flow	stream flow
surface water elevation	surface water elevation	surface water elevation
salinity	salinity	salinity
specific conductance	specific conductance	specific conductance
temperature	temperature	temperature
pH	pH	pH
dissolved oxygen	dissolved oxygen	dissolved oxygen
chlorophyll *a*	chlorophyll *a*	chlorophyll *a*
----------	color	color
orthophosphorus*	orthophosphorus*	orthophosphorus*
total phosphorus*	total phosphorus*	total phosphorus*
ammonia/ammonium *	ammonia/ammonium *	ammonia/ammonium *
nitrate+nitrite*	nitrate+nitrite*	nitrate+nitrite*
total Kjeldahl nitrogen*	total Kjeldahl nitrogen*	total Kjeldahl nitrogen*
total nitrogen*	total nitrogen*	total nitrogen*

*Sampling for these parameters is not specified or required in the original or the current HBMP design. These parameters have been collected during certain water years for other Tampa Bay Water projects.

3.6. Biota

Current data collection activities for the biota element of the TBC/Hillsborough River HBMP (benthic macroinvertebrates, ichthyoplankton and other zooplankton, and fish) are described

briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

3.6.1. Benthic Macroinvertebrates

Benthic macroinvertebrate samples are also taken monthly in each of the three reporting units. Sampling is typically conducted over a three- to four-day period. A greater number of samples are taken during the summer wet-season. Hillsborough River samples are archived in an unsorted condition in April, May, June, October, November, and December. Samples during these months were not included in the draft HBMP design. During its review of the draft HBMP design, SWFWMD requested that samples be collected during these months, but archived for potential future analysis (see Appendix A). Samples for the remainder of the year are sorted and analyzed.

The sample collection and analysis techniques of the HBMP and the EPCHC programs are the same. The EPCHC benthos-sampling program includes Hillsborough Bay. EPCHC samples once per year during a late summer/early fall index period.

Water column casts or profiles and Secchi-depth measurements are performed at each station. Sediment samples are also taken at each station to be analyzed for percent fines and organic matter content. Benthic macroinvertebrate samples are sieved and stored for later sorting and analyses by the subcontracted invertebrate taxonomy laboratory.

3.6.2. Ichthyoplankton and other Zooplankton

Plankton collections are made monthly in each reporting unit by University of South Florida (USF) staff. The sampled locations within each reporting unit were selected using a one-time stratified-random approach as described above.

Dates of sampling are chosen to correspond with the occurrence of night-time flood tides. Night-time zooplankton catches are known to be generally larger than daytime catches. This phenomenon was confirmed during preliminary sampling of the lower Alafia River prior to 2000. Similarly, existing data indicate that, during flood tides, the estuarine water column tends to contain more organisms that are moving upstream or are trying to maintain position within the estuary, whereas ebb tidal waters tend to contain more organisms that are in the process of leaving the estuary. Night-time flood tides were therefore chosen as the standard conditions for zooplankton sampling. A water column profile is performed at the end of each tow.

3.6.3. Fish

Fish sampling is conducted once monthly in each reporting unit except the TBC by Florida Fish and Wildlife Research Institute (FWRI) staff. The sampling effort in each stratum typically consists of utilizing two 21-m seines and one 6.1-m otter trawl, though some strata in the Hillsborough River are not sampled with trawls. Most of the animals traditionally sampled by the FWRI Fisheries Independent Monitoring Program are included in this effort. These include all fishes, blue crabs, stone crabs, horseshoe crabs and penaeid shrimp. A water profile is performed at each station.

3.7. Habitat / Vegetation

Current data collection activities for the habitat/vegetation element of the TBC/Hillsborough River HBMP are described briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

Vegetation sampling consists of interpretation of aerial photography and shoreline surveys conducted every three years during the October through December period. The boundaries of floodplain vegetation associations delineated during previous HBMP mapping events are plotted on false-color infrared aerial photographs provided by Tampa Bay Water. Paper and/or electronic versions of the photographs and boundaries are used in the field to map changes in floodplain vegetation. These photographs are supplemented with other aerial photographs if necessary. The observed vegetation-association boundaries are compared with the previous event's boundary to determine any shifts. Changes in vegetation boundaries are made by creating a copy of the previous event's coverage and editing only those polygons with changed boundaries or shapes. This procedure is designed to minimize observer bias.

If changes are identified on paper maps, the resulting polygons are digitized to create a GIS coverage for each reporting unit. Inter-annual changes in the area and extent of major vegetation associations in the reporting units are calculated by comparing the association boundaries and areas over time. These vegetation association polygons are also used to calculate linear estimates of vegetation shoreline extents. Estimation of the first and last occurrence of vegetation community indicator species (e.g., black needlerush (*Juncus roemerianus*)) for each monitoring event is based on the population occurrence of each species rather than the occurrence of individual plants of each species.

Table 3.1.1
Sampling Program Summary for the Lower Hillsborough River Reporting Unit

Element	Spatial Strata	Month												Total
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
Water Quality	6 strata 1 fixed bay station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	1/stratum 1/station	72 12
Benthos	6 strata	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	144[1]
Fish	Seine samples in 6 longitudinal strata (HR1 – HR6) Trawl samples in 3 longitudinal strata (HR1 - HR3)	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	2 seines/ stratum 2 trawl/ stratum	144 seines 72 trawls
Ichthyoplankton and other Zooplankton	6 strata	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ Stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	144 hauls
Hydrology/ Water Quality	Temperature, conductivity and salinity (bottom and surface) at Sligh Ave., Columbus Ave., and a third station located between Sligh and Columbus													
Vegetation/Habitat	Entire reporting unit										polygon mapping shoreline survey[2]			1 1

[1] Only samples collected from January through March, and July through September (72 samples a year), are processed; the remaining samples are preserved and archived after sieving but before sorting and other analyses. Sediment samples are not collected for the archived samples.
[2] Conducted once every three years (Fall 2011 (WY 2012), Fall 2014 (WY 2015), etc.).

Table 3.1.2
Sampling Program Summary for the TBC/Palm River Reporting Unit

Element	Spatial Strata	Month												Total
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
Water Quality	3 longitudinal strata (PR1 - PR3,) with Deep channel & shallow substrata	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	2 deep & 2 shallow/ stratum	2 deep & 2 shallow/ stratum	2 deep & 2 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	1 deep & 1 shallow/ stratum	90
	1 Fixed Station on upstream side of S-160	1	1	1	1	1	1	1	1	1	1	1	1	12
Benthos	1 Stratum (PR1 downstream of US41) with Deep channel / shallow substrata	1 Deep 1 Shallow		1 Deep 1 Shallow		1 Deep 1 Shallow		1 Deep 1 Shallow	1 Deep 1 Shallow	1 Deep 1 Shallow		1 Deep 1 Shallow		14
Ichthyoplankton and other Zooplankton	1 Stratum (PR1 downstream of US41) in deep center channel	2 hauls/ stratum	2 hauls/ Stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ Stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	24 hauls
Hydrology/ Water Quality	Maydell Drive (temperature, conductivity, and salinity @ surface and bottom).													
Vegetation/Habitat	Entire reporting unit										polygon mapping[1]			1
											shoreline survey[1]			1

[1] Conducted once every three years (Fall 2011 (WY 2012), Fall 2014 (WY 2015), etc.).

Table 3.1.3
Sampling Program Summary for the McKay Bay Reporting Unit

Element	Spatial Strata	Month												Total
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
Water Quality	34 cells	3	4	3	4	3	3	10	10	10	3	4	3	60
Benthos	34 cells	3	4	3	4	3	3	10	10	10	3	4	3	60
Fish	1 shallow (seine: 26 cells) and 1 deep (trawl: 18 cells) strata	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	1 seine in each of 10 cells 1 trawl in each of 4 cells	120 seines 48 trawls
Ichthyoplankton and other Zooplankton	6 cells – fixed location stations - shallow 2 strata – fixed location stations – deep channel	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ Stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 haul/s stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	1 haul/ cell 2 hauls/ stratum	72 hauls 48 hauls
Hydrology/ Water Quality	22nd Street Causeway (temperature, conductivity, and salinity @ surface and bottom).													
Vegetation/Habitat	Entire reporting unit										polygon mapping [1]			1

[1] Conducted once every three years (Fall 2011 (WY 2012), Fall 2014 (WY 2015), etc.).

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4.0 Alafia River HBMP

4.1. Introduction

This section described the flow, water quality, and biological data collection efforts in the lower Alafia River conducted under the HBMP. The sampling program for this reporting unit is summarized in Table 4.1.1 at the end of this section. Modifications to the initial sampling design and the rationale for these modifications are provided in Appendix A.

Additional information and specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

4.2. Lower Alafia River Reporting Unit

The current lower Alafia River (AR) spatial reporting unit (Figure 2.4.4) is about 18.5 kilometers long. The estuarine portion of the river extends from the mouth to approximately river kilometer 14 (Rkm 14). This estuarine portion of the river was divided into 6 strata of equal length (2.33 km). The remaining 4.5 kilometers of the reporting unit, from kilometer 14 to kilometer 18.5 slightly upstream of Bell Shoals Road, is generally considered to be a freshwater system. An additional freshwater segment, upstream of the intake (stratum AR8, Rkm 18.5 to 21.0) was removed from the original HBMP design because the sampling methods required in this stratum were not compatible with those used in the other strata, and potential impacts related to withdrawals are most likely to be observed downstream of Tampa Bay Water's intake near Bell Shoals Road.

These strata are used for all of the HBMP study elements. An additional inset stratum for benthos sampling was defined in consultation with Hillsborough County and the SWFWMD. This stratum extends approximately 1 km upstream (Rkm 13) and 1 km downstream (Rkm 7) of the freshwater interface and includes additional sampling for portions of Strata AR4 and AR6 and all of AR5.

4.3. Alafia River Permit Conditions

Water Use Permit 2011794.01 for the Alafia River authorizes Tampa Bay Water to withdraw water from the Alafia River at Bell Shoals Road according to the schedule provided in the permit.

The original water use permit (Permit 2011794.00) required Tampa Bay Water to develop and implement an HBMP) for the Alafia River. The permit specified that the HBMP address the following objectives:

- Establish baseline conditions prior to permitted use for streamflow rates, salinity distributions, and selected water quality and biological variables within the Alafia River and its estuary

- Monitor withdrawals from the Alafia River at the withdrawal point and evaluate streamflow data for the river at all applicable locations

- Evaluate the ecological relationships of the Alafia River and its estuary to freshwater flows

- Monitor selected water quality and biological variables in order to determine if the ecological characteristics of the river and its estuary related to freshwater flow change over time

- Determine the relative effect of permitted withdrawals from the Alafia River on any ecologic changes that may occur in the river and its estuary

- Determine if these withdrawals cause or significantly contribute to any unacceptable environmental impacts that the river and its estuary exhibit as a result of changes in freshwater flows

- Coordinate with appropriate agencies that have or are currently collecting data that can be incorporated into the HBMP to avoid duplication of effort and to facilitate the most efficient use of resources.

4.4. Sampling Site Selection

All but one of the monthly sample sites (stations) for water quality, fish, benthos, and plankton are randomly selected. There is a fixed water quality sampling station at the mouth of the Alafia River. This station corresponds to EPCHC water quality Station 8. Sampling stations for water quality, fish, and benthos are randomly selected each month. Sampling stations for plankton and for fixed-station vegetation monitoring were randomly selected at the beginning of the HBMP and remain fixed.

Sampling stations for the Alafia River are identified by stratum and location relative to the mouth of the river. Thus, the station in Alafia River Stratum 1, 1000 meters from the mouth of the river, is identified as “AR101000”. The prefix “AR1” designates the river and stratum and the suffix “01000” identifies the distance from the mouth of the river. All potential stations and their corresponding latitude and longitude have been determined and are listed in the project database. Stations are chosen in each stratum by randomly selecting from the list of potential stations.

In addition to the station location along the river’s length, the location relative to the river’s width (left, middle or right) is also randomly selected for water quality, fish and benthos sampling. Finally, the starting point of a day’s sample collection (e.g., river mouth or upstream boundary) is randomly selected each month for water quality. The week in which sampling is conducted for each month is randomly selected for water quality and fish. Plankton sampling dates are chosen based upon the appropriate correspondence of tide stage with time of day.

4.5. Hydrology / Water Quality

Current data collection activities for the hydrology/water quality element of the Alafia River HBMP are described briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

River flow and rainfall measurements are obtained from Tampa Bay Water maintained equipment or equipment maintained and operated by the USGS. Salinity data are obtained from the HBMP continuous water quality recording station installed on the Alafia River downstream of Buckhorn Creek; this station was installed in the early part of Water Year 2001.

Water quality samples and measurements are taken once a month. Water quality sampling consists of a water column profile and an associated grab sample. The water column profiles measure temperature, specific conductance, pH, salinity (calculated from specific conductance), and dissolved oxygen. These measurements are typically made at the water column surface, at the bottom, and at 0.5 meter increments from the surface. The grab samples are analyzed by a subcontracted laboratory for the parameters listed in Table 4.6.1. Sampling is typically conducted over a two-day period.

Table 4.5.1. Hydrologic and water quality parameters measured in the Alafia River.

Lower Alafia River
stream flow
surface water elevation
salinity
specific conductance
temperature
pH
dissolved oxygen
chlorophyll *a*
color
total suspended solids
orthophosphorus*
total phosphorus*
ammonia/ammonium*
nitrate+nitrite*
total Kjeldahl nitrogen*
total nitrogen*

*Sampling for these parameters is not specified or required in the original or the current HBMP design. These parameters have been collected during certain water years for other Tampa Bay Water projects.

4.6. Biota

Current data collection activities for the biota element of the Alafia River HBMP (benthic macroinvertebrates, ichthyoplankton and other zooplankton, and fish) are described briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

4.6.1. Benthic Macroinvertebrates

Benthic macroinvertebrate samples are also taken once monthly in the Alafia River reporting unit. Sampling is typically conducted over a three- to four-day period. A greater number of samples are taken during the summer wet-season in an index stratum in the middle of the Alafia River. Early modeling efforts and subsequent analyses suggested that were salinity changes to occur as a result of Tampa Bay Water operations, they would most likely occur in this stratum.

Water column casts or profiles and Secchi-depth measurements are performed at each station. Sediment samples are also taken at each station to be analyzed for percent fines and organic matter content. Benthic macroinvertebrate samples are sieved and stored for later sorting and analyses by the subcontract invertebrate taxonomy laboratory.

4.6.2. Ichthyoplankton and other Zooplankton

Plankton collections are made monthly in the reporting unit by University of South Florida (USF) staff. The sampled locations within the reporting unit were selected using a one-time stratified-random approach as described above. Dates of sampling are chosen to correspond with the occurrence of night-time flood tides. Night-time zooplankton catches are known to be generally larger than daytime catches. This phenomenon was confirmed during preliminary sampling of the lower Alafia River. Similarly, existing data indicate that, during flood tides, the estuarine water column tends to contain more organisms that are moving upstream or are trying to maintain position within the estuary, whereas ebb tidal waters tend to contain more organisms that are in the process of leaving the estuary. Night-time flood tides were therefore chosen as the standard conditions for zooplankton sampling. A water column profile is performed at the end of each tow.

4.6.3. Fish

Fish sampling is conducted once monthly by Fish and Wildlife Research Institute (FWRI) staff. The sampling effort in each stratum typically consists of utilizing two 21-m seines and one 6.1-m otter trawl. The upper and lower-most strata of the Alafia River are not sampled using trawls. Additional Alafia River associated fish sampling occurs in Hillsborough Bay at the mouth of the Alafia River. This additional sampling effort was initiated in Water Year 2005 to assess fish populations that leave the Alafia River during periods of high flow (see Appendix A). Most of the animals traditionally sampled by the FWRI Fisheries Independent Monitoring Program are included in this effort. These include all fishes, blue crabs, stone crabs, horseshoe crabs, grass shrimp and penaeid shrimp. A water column profile and Secchi depth measurements are performed at each station.

4.7. Habitat / Vegetation

Current data collection activities for the habitat/vegetation element of the Alafia River HBMP are described briefly below. Specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

Riverine vegetation is mapped once every three years during the Fall index period (September through December). The boundaries of floodplain vegetation associations delineated during previous HBMP mapping events are plotted on false-color infrared aerial photographs provided by Tampa Bay Water. Paper and/or electronic versions of the photographs and boundaries are used in the field to map changes in floodplain vegetation. These photographs are supplemented with other aerial photographs if necessary. Vegetation is usually mapped by field staff in boats. The observed vegetation-association boundaries are compared with the previous event's boundary to determine shifts. Changes in vegetation boundaries are made by creating a copy of the previous event's coverage and editing only those polygons with changed boundaries or shapes. This procedure is designed to minimize observer bias.

If changes are made on paper maps, the resulting polygons are digitized to create a GIS coverage for each reporting unit. Inter-annual changes in the area and extent of major vegetation associations in the reporting units are calculated by comparing the association boundaries and areas over time. These vegetation association polygons are also used to calculate linear estimates of vegetation shoreline extents. Estimation of the first and last occurrence of vegetation community indicator species (e.g., black needlerush (*Juncus roemerianus*)) for each monitoring event is based on the population occurrence of each species rather than the occurrence of individual plants of each species.

Submerged aquatic vegetation (SAV) is surveyed once every five years. Sampling is conducted once during the SAV growing season. SAV is surveyed in two reporting units defined as the marine/brackish transitional area, and the brackish/fresh transitional area. These reporting units were identified by documenting the existing first and last occurrence of black needlerush (*Juncus roemerianus*). The mid-points of the marine/brackish and the brackish/fresh reporting units are defined as the observed downstream and upstream last occurrence of *Juncus*, respectively. The respective reporting units extend 2 km upstream and 2 km downstream from these two mid-points, therefore, both the marine/brackish and the brackish/fresh reporting units are 4 river km in length. Each reporting is divided into four spatial strata, each 1 km in length.

Under the original SAV sampling protocol, SAV was assessed at randomly-selected sampling locations in each stratum, on both the left and right sides of the river channel centerline. A revised sampling protocol has been implemented using underwater cameras. Under the revised protocol, a two transects (one on each side of the river) are surveyed for SAV along the entire 8-kilometer combined extent of the marine/brackish and brackish/fresh reporting units. The transects are surveyed by towing an underwater camera transmitting to a surface video screen. The transects are defined as the area between the side of the river channel and the water depth of two meters or less. Staff performing the survey documents the latitude and longitude of each SAV occurrence. These latitude and longitudes are converted to decimal river kilometers for reporting purposes.

In the event the video camera protocol cannot be implemented, SAV is sampling according to the original protocol. Under the original sampling protocol, a total of 36 randomly selected samples per reporting unit are collected using divers. These consist of eight samples per stratum (four samples on each side of the river). The relative percent cover of SAV plant species within a 1 m^2 quadrat is assessed at each sample location. The SAV sample locations are randomly selected for each event.

Table 4.1.1
Sampling Program Summary for the Lower Alafia River Reporting Unit

Element	Spatial Strata	Month												Total
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
Water Quality	6 estuarine strata	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	144
	1 fixed bay station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	1 station	12
	1 freshwater stratum (AR7)	2/stratum	3/stratum	2/stratum	3/stratum	2/stratum	3/stratum	2/stratum	3/stratum	2/stratum	3/stratum	2/stratum	3/stratum	30
Benthos	6 estuarine strata	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	2/stratum	144
	1 inset stratum						7/stratum	6/stratum	7/stratum					20
	1 freshwater stratum (AR7)	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	3/stratum	36
Fish	6 longitudinal, estuarine strata (AR1 – AR6) with shallow samples	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	2 seines/ stratum	144 seines
	3 longitudinal, estuarine strata (AR1 – AR3) with deep samples	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	2 trawl/ stratum	72 trawls
	1 freshwater stratum (AR7) with shoreline seines										10 seines/ stratum			10 seines
	1 bay stratum (AR0) outside river mouth	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	2 shoreline seines 2 offshore seines 3 trawls	24 shoreline seines 24 offshore seines 36 trawls
Ichthyoplankton and other Zooplankton	6 estuarine (AR1 – AR6)	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	2 hauls/ stratum	144 hauls
Hydrology/ Water Quality	Temperature, conductivity and salinity (bottom and surface) at a site to near Buckhorn Creek.													
Vegetation/Habitat	Entire reporting unit										Polygon mapping & shoreline survey[1]			1
	One 8-km stratum										SAV survey[2]			1

[1] Conducted once every three years (Fall 2011 (WY 2012), Fall 2014 (WY 2015), etc.).

[2] Conducted once every five years (WY 2011, WY2016, etc.).

5.0 HBMP Data Quality and Management

Data quality and effective data management are critical components of all monitoring programs. Given the complexity of the HBMP, meeting data quality and management objectives is crucial for effective and accurate data collection and interpretation. HBMP data management activities including data collection, handling, evaluation, verification, validation, and reporting are described briefly in this section. The HBMP organizational chart is shown in Figure 5.1.1.

Additional information and specific procedures for sample collection and analysis are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

5.1. Data Quality Objectives

An important goal of the HBMP is the development of data quality objectives (DQOs) that are integrated with environmental data collection activities. Data quality objectives are statements that describe in precise quantitative terms the level of uncertainty that can be associated with collected environmental data, and as such provide insight into the level of certainty that can be applied without compromising the intended use of the data. Use of data quality objectives also provides statistical criteria that can aid the design of sampling strategy elements, balancing costs, and/or resource constraints.

Typically, DQOs are best developed by those identified as potential users of the data. In the absence of specific decision criteria, and the wide variety of potential uses to which the HMBP data may eventually be applied, the initial set of target DQOs are based on professional judgment, and are intended only to provide a starting point for a long-term, iterative DQO process. Consequently, these preliminary DQOs do not necessarily constitute definitive rules for accepting or rejecting results, but rather provide guidelines for continued improvement. Several iterations of the DQO process may be required as potential HBMP data users further define their specific needs.

During the collection of data under the HBMP, it is extremely important to both control and determine measurement error to the greatest extent possible. Measurement quality objectives (MQOs) are established for each sampling field method and laboratory analysis procedure. MQOs essentially represent data quality objectives based on internal and external controls (variability) associated with each type of data measurement. As such, they can be used to establish criteria for data acceptability until reliable error bounds are established for each measured response variable. As data are accumulated during the HBMP, error rates associated with each measurement are established and refinement of the initial target DQOs can be accomplished to determine the need for modifications to the sampling design and/or quality assurance/quality control (QA/QC) plan.

Initial measurements of data quality objectives for each of the various parameters can be expressed in terms of goals for accuracy, precision and completeness. These preliminary MQOs are based on estimates of the anticipated data quality, including the instrument manufacturer's specifications, sampler experience, and/or data collected during other similar studies. In general,

DQOs or MQOs are used to establish five aspects of data quality: representativeness, completeness, comparability, accuracy and precision. The MQOs are used along with both field and laboratory measurements to develop quality control criteria and to set the bounds of acceptable measurement error.

5.1.1. Representativeness

Representativeness is defined as "the degree to which the data accurately and precisely represent a characteristic of a population parameter, variation of a property, a process characteristic, or an operational condition" (Stanley and Verner, 1985). The concept of representativeness within the context of the biological monitoring program refers to the ability of the sampling effort to accurately and precisely characterize the selected environmental indicators effectively both temporally and spatially.

The design of the sampling program and the location of sampling sites provide the primary focus for defining the "representativeness" of population estimates for each reporting unit and strata. The HBMP employs a probability sampling approach that samples resources in proportion to their abundance and distribution to obtain unbiased estimates of resource characteristics and variability. The probability sampling approach applies systematic sampling to facilitate characterizations of spatial patterns and to encourage geographic coverage.

Once unbiased quantitative information on the kinds, extent, condition and distribution of resources and associated estimates of uncertainty are known, a baseline of the status of existing conditions is established. This baseline information is used to develop criteria for identifying "representativeness", the processes and magnitude of change associated with natural variation, and changes observed over time.

The data quality attribute of "representativeness" applies not only to the overall sampling design, but also to individual measurements and samples obtained during all temporal and spatial aspects of the monitoring effort. Holding time requirements for different types of samples ensure that analytical results are representative of conditions at the time of sampling; these requirements are specified for individual indicators. In addition, the use of QA/QC samples, which are similar in composition to samples being measured, provides estimates of precision and bias that are representative of sample measurements. Therefore, as a general program objective, the types of QA samples (i.e., performance evaluation material) used to assess the quality of analytical data will be as representative as possible of the natural samples collected during the project with respect to both composition and concentration.

5.1.2. Completeness

Completeness is defined as "a measure of the amount of data collected from a measurement process compared to the amount that was expected to be obtained under the conditions of measurement" (Stanley and Verner, 1985). All study elements within the HBMP have established completeness goals of 100% for each of the various indicators being measured. However, given the probability-based sampling design being employed, failure to achieve this

goal will not preclude the within-year or between-year assessment of ecosystem condition. The major consequence of having less than 100% complete data from all expected stations is a relatively minor loss of statistical power in the areal estimate of condition. The 100% completeness goal is established in an attempt to derive the maximum statistical power from the present sampling design. Based on the experience of other monitoring programs, failure to achieve this goal usually results from the field staff's inability to sample at some stations due to logistical barriers such as insufficient depth, impenetrable substrate, or adverse weather conditions. In the limited number of instances where these conditions may be encountered, extensive efforts will be made to re-locate the station or re-sample the station at a later date. In this way, the field personnel must always strive to achieve the 100% completeness goal. In addition, established protocols for tracking samples during shipment and laboratory processing will be followed to minimize data loss following successful sample collection.

5.1.3. Comparability

Comparability is defined as "the confidence with which one data set can be compared to another" (Stanley and Verner, 1985). Comparability of reporting units and calculations, database management processes, and interpretative procedures must be assured if the overall goals of the HBMP monitoring program are to be realized. A goal of the HBMP program is to generate extensive documentation to ensure that all future efforts can be made comparable. All field and laboratory methods are described in detail and available to all field personnel and analytical laboratory staff. In addition, the comparability of laboratory measurements will be established and monitored through duplicates and/or the use of field split and duplicate performance evaluation samples. The sampling design for each of the HBMP study elements has been made flexible enough to allow for analytical adjustments, if necessary, to ensure data comparability.

5.1.4. Accuracy and Precision

The term "accuracy", is used synonymously with the term bias within this QA/QC plan, and is defined as the difference between a measured value and the true or expected value.

Precision, by comparison, is defined as the degree of mutual agreement among individual repeated measurements. Collectively, accuracy and precision can provide an estimate of the total error or uncertainty associated with any individual measured value (Kirchner, 1983; Hunt and Wilson, 1986; Taylor, 1987). Measurement quality objectives for the various indicators are expressed separately as goals for both accuracy and precision. Accuracy and precision goals may not be definable for all parameters due to the nature of the measurement type. In order to evaluate the MQOs for accuracy and precision, various QA/QC samples will be collected and analyzed for most data collection activities.

5.2. Data Precision and Accuracy

General considerations for ensuring the precision and accuracy of field measurements and analytical laboratory results are described briefly below. Specific procedures are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

5.2.1. Field Measurements

Duplicate sets of field measurements are to be taken once per reporting unit per sampling day. These values (i.e., temperature, pH, DO, conductivity) will be documented as duplicates in the field notebooks and specifically used for determinations of instrument/sampling precision.

Measurements of accuracy will be based on QA/QC checks of standards at the end of each sampling event.

The precision of field measurements will be determined using the statistic "Relative Percent Difference" (RPD).

$$RPD = \{(|R1-R2|)/[(R1+R2)/2]\} \times 100$$

Where:

R1 = value of sample

R2 = value of sample duplicate

The RPD will be calculated for each duplicated pair of observations. The average or mean RPD is calculated by the formula:

$$Mean_{RPD} = Sum\ (RPDs) / n$$

where n = number of duplicate pairs

The standard deviation of the mean will be used to quantify precision measurements. The standard deviation of the mean is calculated by:

$$s^2_{RPD} = [Sum(X_i^2) - (Sum(X_i)^2/n)] / (n-1)$$

Where:

X_i = each calculated RPD

n = number of duplicate pairs

Hence:

$$s_{RPD} = (S^2_{RPD})^{½}$$

The s_{RPD} will be calculated for the previous 20 duplicates for each *in situ* field parameter. Based on such duplicate pairs, control and warning limits for precision will be calculated. Standard protocol is to define the "Control Limit" as 2 times the $s_{RPD,}$ with the "Warning Limit" as 3 times the s_{RPD}. Using these procedures, control and warning charts can be generated to flag observations that exceed either Warning and/or Control Limits.

5.2.2. Method Detection Limits

For Method Detection Limits (MDLs), reagent-grade water is used to prepare a laboratory standard in a concentration range 1 to 5 times the estimated MDL of the specific compound of interest. If the estimated MDL is found to be correct, then seven aliquots of the standard are analyzed using the complete analytical method. The following calculations are then used to determine the MDL, and the Practical Quantification Limit (PQL).

In accordance with EPA procedures listed in 40 CFR 136 Appendix B, the MDL and PQL are determined by the following:

where: SD = standard deviation of 7 replicate measurements
MDL = 3.14 times the SD
PQL = 12 times the SD

MDLs are required to be recalculated when there are substantial changes in either the instrumentation or technique used.

5.3. HBMP Data Management

General considerations for HBMP data management (data sources, database management, and data verification) are described briefly below. Specific procedures are provided in the HBMP Quality Assurance and Quality Control Plan-Version 2.1 (PBS&J, 2008).

5.3.1. Data Sources

The HBMP is comprised of a number of separate and unique sampling efforts being conducted by each of the various members of the Project Team (see Figure 5.1.1). Certain members of the Project Team have ongoing, standardized data handling processes and verification and data storage methodologies (Florida Fish and Wildlife Research Institute, Terra Environmental, and the University of South Florida). For this reason, the initial steps: 1) logging of field and laboratory records, 2) data checking steps, 3) data review; and 4) internal QA/QC documentation, will follow the existing established protocols and will address the particularly unique criteria of each of these study elements. Raw hard copy data will be permanently maintained, and after being visually form checked for errors, will be entered into electronic format using appropriate protocols and multiple levels (both visual and automated) of checks to assure that all data quality goals are satisfied.

Some of the data used by the HBMP are provided by external sources. Examples include daily river flows, withdrawal rates, rainfall, other meteorological data, aerial photos and GIS data that are obtained on a relatively routine basis. In addition, the majority of the data to be used in assessing the status of Hillsborough Bay will come from external sources, such as EPCHC, FWRI, and SWFWMD. The schedule for retrieval of data from other sources varies based on data availability from the data provider.

Data transfer formats will be defined in consultation with the data providers. Care will be taken to ensure that all data received will be appropriately documented, to the greatest extent possible. This documentation will include definitions of variables and variable codes, units of measure, methods, and spatial definition of samples (e.g., latitude and longitude of sampling point). When possible, cross-comparisons of these data and the data collected by the HBMP will be made as an additional quality assurance check.

Historical data from other sources will also be used in the analysis of the HBMP data. The HBMP data management process will support data retrieval and documentation from all of these

other sources to ensure the data from these sources are correctly linked with the primary HBMP data sources.

5.3.2. Database Management

The HBMP data are housed within a relational Microsoft Access database. Data for each reporting element (water quality, fish, plankton, etc.) are stored in a series of tables that are relational to each other and separate from the other reporting elements. Export of data from Access to other software applications such as Excel (or other spreadsheets), SAS, and HTML for Internet applications will be facilitated through the use of this standardized data application. The use of a relational database ensures that many different data types can be effectively linked using common variable names and values.

Data from each HBMP study element, as well as other outside sources (SWFWMD, USGS, EPCHC, etc.), will have appropriately organized primary keys in order to properly link the data tables and retain the relational integrity of the data. Examples of primary key variables include, but are not be limited to: sampling group, date, time, reporting unit, stratum/substratum, and station location (such as river kilometer). Typically, the data for a given HBMP program element will be aggregated by year and month within the data set.

The "condition field" of all HBMP data which has been entered, checked through at least two steps for errors, and received the application of any necessary reduction methodologies (dilutions, calculations of species numbers, etc.) will remain designated as "raw" until undergoing further steps in the data validation protocol.

5.3.3. Data Verification

Following the entry, logging, and checking of all "raw" data, error and range checking procedures for data verification purposes will be performed. During the verification process, specific data conditions will be noted using appropriate "data qualifier" designations. Standard DEP/EPA data qualifier codes will be used, as needed, in the appropriately identified database field. Only after all such appropriate levels of data validation have been completed, will the "condition field" within each specific data record be changed from "raw" to "verified". Only the database manager and his/her designees will have read/write abilities at this level. All other database users will be provided with read-only access to data that has been listed as "raw" and is in the verification process. Any errors and/or other changes of data made between the "raw" and "verified" status must be fully explained in the appropriate "note field," and a permanent written record of any such changes will be maintained by the QA/QC Officer.

Cross comparison of "verified" data from the different HBMP elements allows further, subsequent, "validation" of each specific data entry. Final review of the data in this Verified Data Set will also include any other cross comparisons, for example, between field and laboratory data, or between taxonomic experts. Only after final QA/QC review of each specific subset of data (monthly for water quality, quarterly for most other project study elements) will the QA/QC Officer update the "verified" status of the data to "validated". Only under unusual circumstances will data not designated as "validated" be made available for general

dissemination. The QA/QC Officer, after final review with the appropriate specific project leaders, will be responsible for applying the final "data qualifier" and "data flags" within the database. These will be used to inform the end-users of the data of any problems that may have been found to exist in the data that could not be reconciled during the verification and validation checks of the data. In addition to the standard "data qualifiers", three levels of "data flags" will be used in a separate data field. These include:

- **accepted** - this type of designation will be used to designate data that has successfully met all established QA/QC protocols, procedures and standards. ***End users should encounter few, if any, difficulties utilizing data with this designation***.

- **rejected** - this designation will be used to indicate data that did not meet a significant element of the established QA/QC protocols, procedures or standards. Specific notes within the database will explain all such designations (i.e., chlorophyll *a* filters were not appropriately frozen and arrived at the Laboratory in an unacceptable condition). ***End users should never use any data with such a designation.***

- **provisional** - such data was collected, passed almost all of the required QA/QC protocols, but failed some minor QA/QC procedure or standard. Such problems will be noted in the database (i.e., the water chemistry sample for color was analyzed 1 hour outside its required hold time). ***Even though such values have a high probability of being representative of actual conditions, such data should probably be used with caution.***

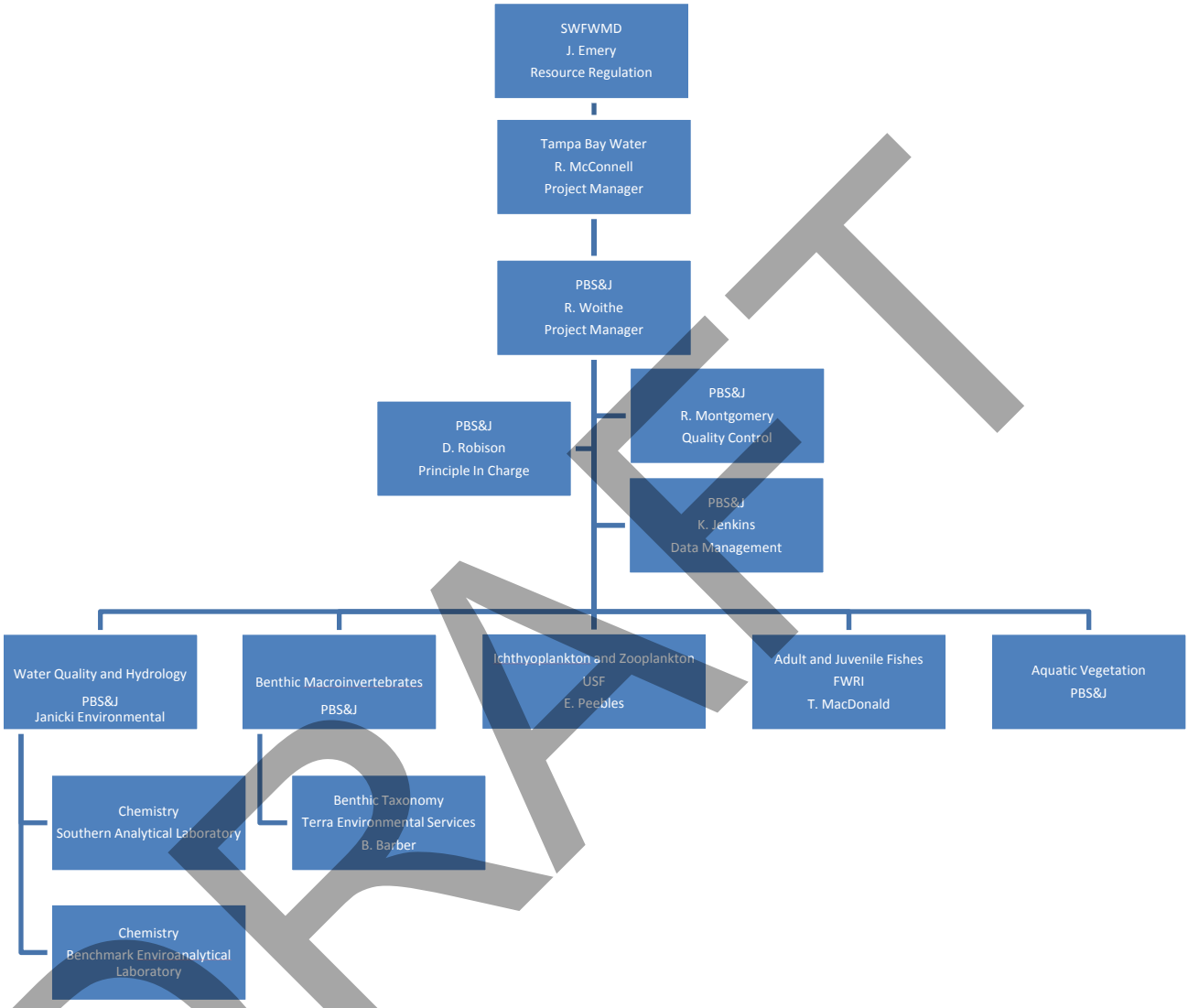


Figure 5.1.1. HBMP Organizational Chart

6.0 HBMP Reporting and Future Program Modifications

This section provides a brief summary of the HBMP reporting process and potential refinements to the program. The HBMP was intended to be routinely modified based on field conditions and the ongoing evaluation of HBMP data; recommendations are provided in HBMP reports and discussed at Annual Meetings. Previous modifications based on requests by the District and other stakeholders, logistical issues during implementation, and HBMP data evaluations are provided in Appendix A. All modifications approved by the District through July 2010 and incorporated into the program are provided in this section. It is anticipated that additional modifications will be made in the future to ensure cost-effective and appropriate monitoring relative to the objectives of the HBMP.

6.1. Reporting

The Southwest Florida Water Management District water use permits require that the HBMP results be submitted to SWFWMD in one of two report types: Annual Data Reports, and multi-year Interpretive Reports currently required once every five years for the TBC/Hillsborough River and once every three years for the Alafia River. General report requirements and methods used for data analysis are described briefly below.

6.1.1. TBC/Hillsborough River HBMP

Southwest Florida Water Management District (SWFWMD) Water Use Permit 2011796.002 for the Tampa Bypass Canal (TBC) and Hillsborough River requires that the HBMP results be submitted to SWFWMD annually in one of two types of reports. During most years, Tampa Bay Water is required to submit a HBMP Annual Report which includes all raw data collected by the HBMP for the preceding October 1st through September 30th water year. The permit requires an HBMP Annual Report in tabular form with text limited to an explanation of variable names and a description of any problems encountered or important observations made during the monitoring year. Once every five years (in July 2010, July 2015, July 2020, and July 2025), Tampa Bay Water is required submit a multi-year HBMP Interpretive Report.

The permit states the interpretive report will include comprehensive analyses of data collected by the HBMP and relevant data collected by other entities. These analyses are to be qualitative and/or quantitative and meant to evaluate the interactions of hydrologic conditions and withdrawals on streamflow, nutrient loading, salinity distributions, and the response of related water quality and biological variables in the lower Hillsborough River below the Tampa Dam, TBC, Palm River, and McKay Bay. The HBMP Interpretive Reports also include an appendix that provides tables of raw data collected by the HBMP during the previous water year thus fulfilling the requirement of the annual report for that year.

6.1.2. Alafia River HBMP

SWFWMD Water Use Permit 2011794.01 for the Alafia River states that HBMP reports will be submitted to the District according to the time frame established in the final approved HBMP plan. The periodic cycle for these reports will include yearly data reports and periodic

interpretive reports. The 1999 HBMP design (PBS&J, 2000) established a schedule for interpretive reports after Water Year 2003 and Water Year 2005 (July 2004 and 2006 respectively). A three year interval for interpretive reports (July 2009, July 2012, July 2015, etc.) was proposed during the Water Year 2006 annual meeting and subsequently approved by SWFWMD.

The Alafia River water use permit requires the submission of an annual data report of all raw data collected during the past water year. These reports are to be in tabular form with text limited to an explanation of variable names and a description of any problems encountered or important observations made during the monitoring year. The water use permit describes the required interpretive reports as including comprehensive analyses of all data collected to date that specifically address the objectives of the HBMP. It also states that qualitative and quantitative analyses shall be presented to evaluate the interactions of hydrologic conditions and withdrawals on streamflow, inundation of the river channel and its floodplain, nutrient loading, salinity distributions in the estuary, and the response of related water quality and biological variables. Like the Hillsborough/TBC interpretive reports, the Alafia River interpretive reports must also include an appendix that provides raw data collected by the HBMP during the previous water year in order to fulfill the requirement for the annual data report for that year.

6.2. Data Analysis

HBMP annual data reports and interpretive reports have used a number of methods to report and analyze data. Several of the most common are described briefly below.

6.2.1. Descriptive Statistics and Time Series

The HBMP has used descriptive statistics and descriptive time series to characterize all rainfall, hydrological, water quality and biological data. These data have also been compared to same day and lagged flow terms to ascertain relationships between these parameters and flow. Standard diversity measurements have been used to characterize and compare biological data. In addition, the first and last occurrences of organisms by distance up the river have been calculated and analyzed for particular groupings and other patterns.

6.2.2. HBMP Elements / Indicators

Since 2001, the HBMP has reviewed the characteristics and patterns of numerous physical, chemical, and biological parameters collected and/or analyzed by the HBMP, Minimum Flows Determination efforts, or similar programs in the HBMP study area. These programs have identified a subset of parameters/indicators that appear to be most useful in describing conditions and potential changes within the study area. These parameters shared certain characteristics. One of the most important characteristics was that the parameter/indicator was present and can be measured with sufficient frequency and/or in sufficient numbers to be statistically significant. The rivers and bays in the study area experience natural seasonal variations, so season absences of useful parameters are to be expected. However, parameters/indicators that are not present in sufficient frequency or numbers during at least part of the year have typically not been useful in

assessing status or trends within the rivers and bays of interest. HBMP parameters by monitoring element, potential effects of withdrawals, and SWFWMD MFL resources of concern are shown in Table 6.2.1.

Table 6.2.1 HBMP Elements/Indicators and SWFWMD MFL Resources of Concern

Element / Indicator	Potential Withdrawal Effects	MFL Resource of Concern/ Management Goals	Approved Design Modification[1]
Hydrology/Water Quality			
Salinity	↑ salinity	Maintain river bottom areas within appropriate salinity zones for the protection of benthic macro-invertebrate communities. Maintain suitable salinity regime for oysters	Added recorders/ fixed stations (2001)
Dissolved Oxygen	↑ or ↓ dissolved oxygen	Determine changes in low DO concentrations	Discontinued recorders (2004)
Chlorophyll-a	↑ or ↓ chlorophyll-a	Determine changes in distribution and probability of high chlorophyll-a	--
Specific Conductance	↑ specific conductance	--	--
Temperature	↑ or ↓ temperatures	--	--
pH	↑ pH values	--	--
Secchi Disk Depth	↑ or ↓ Secchi disk depth	--	--
Light Transmission	↑ or ↓ light transmission	--	--
Stream Flow	↓ streamflows	--	--
Water Level	↓ water elevations (upper river)	--	--
Color	↓ color	--	--
Total and Dissolved Organic Carbon	↓ TOC, ↓ DOC	--	Discontinued (2004)
Total Suspended Solids	↑ or ↓ TSS	--	--
Biotic Indicators			
Benthic Macroinvertebrates	Δ species composition, abundance, distribution; seasonal, archive, Alafia inset stratum	Maintain river bottom areas within appropriate salinity zones for the protection of benthic macroinvertebrate communities. Maintain suitable salinity regime for oysters	Redistributed sampling (2008)
Ichthyoplankton/ Zooplankton	Δ species composition, abundance, distribution	Protect nursery function by maintaining distribution and abundance of important fish and invertebrate taxa	Redistributed sampling (2008)
Adult/Juvenile Fishes	Δ species composition, abundance, distribution	Protect nursery function by maintaining distribution and abundance of important fish and invertebrate taxa	Added stratum Alafia River Delta (2005); redistributed sampling (2008)

Water-Dependent Birds	Δ species composition, abundance, distribution		Discontinued McKay Bay (2004); added Alafia Banks (2005-2008)
Habitat			
Emergent Vegetation	Δ species composition, abundance, distribution	Maintain surface isohaline locations within ranges that protect distribution of low-salinity shoreline vegetation communities	Eliminated Alafia fixed station (2008); reduced frequency (2004)
Submerged Vegetation	Δ species composition, abundance, distribution		Decreased frequency (2001)
Sediment Grain Size and Organic Matter			--
Note 1. Approved change from initial HBMP design (see Appendix A).			

6.2.3. HBMP Biotic Parameters of Interest

A large number of fish and invertebrate species in various life stages have been collected during the duration of the HBMP. Only a small number of these occur with sufficient frequency and abundance to allow for meaningful analyses. Even smaller subsets appear to have potential direct or indirect relationships to river flow. The species and groups that have been most informative in HBMP analyses to-date for the TBC/McKay Bay, the lower Hillsborough River and the lower Alafia River are listed in Tables 6.2.2-6.2.4.

Table 6.2.2 HBMP Key Biotic Indicators: TBC and McKay Bay

Fish
- Anchoa mitchilli (bay anchovy)
- Farfantepenaeus duorarum (pink shrimp)
- Floridicthys carpio (goldspotted killifish)
- Mugil cephalus (striped mullet).

Plankton
- Anchoa mitchilli juveniles (bay anchovy)
- Americamysis almyra (opossum shrimp)
- Mnemiopsis mccradyi (comb jelly)
- decapod zoeae (crab larvae).

Benthos
- Laonereis culveri
- Grandidierella bonnieroides
- Mytilopsis leucophaea
- Tagelus plebeius
- Edotea triloba.

Table 6.2.3 HBMP Key Biotic Indicators: Lower Hillsborough River

Fish
- Anchoa mitchilli (bay anchovy)
- Menidia spp. (silversides)
- Microgobius gulosus (clown goby)
- Trinectes maculatus (hogchocker)
- Psuedotaxon "freshwater obligates" (combined genera Notropis (shiners), Lepomis (sunfishes), Notemigonus (shiners), Ameirus (catfishes), and Labidesthes (silversides))
- Palaemonetes pugio (daggerblade grass shrimp).

Plankton
- Americamysis almyra (opossum shrimp)
- Clytia spp. (hydromedusa)
- decapod zoeae (crab larvae)
- Mnemiopsis mccradyi (comb jelly)
- Anchoa mitchilli juvenile stage (bay anchovy)
- Trinectes maculatus postflexion larvae (hogchoker).

Benthos
- Stenonineiris martini
- Laonereis culveri,
- Capitella capitata species complex
- Corbicula fluminea
- Grandidierella bonnieroides.

Table 6.2.4 HBMP Key Biotic Indicators: Lower Alafia River

Fish
- Anchoa mitchilli (bay anchovy)
- Callinectes sapidus (blue crab)
- Leiostomus xanthurus (spot)
- Menidia spp. (silversides)
- Sciaenops ocellatus (red drum).

Plankton
- Anchoa mitchilli
- Brevoortia smithi
- Cynoscion arenarius
- Gobiesox strumosus
- Trinectes maculatus
- Order Mysidacea (mysid shrimps)
- Americamysis almyra
- Acartia tonsa
- Edotea triloba
- Mnemiopsis mccrady
- Palaemonetes pugio.

Benthos
- Chironomus spp.
- Corbicula fluminea (Asian clam)
- Cyathura polita (Isopoda)
- Edotea triloba (Isopoda)
- Grandidierella bonnieroides
- Laeonereis culveri (Culver's sandworm)
- Mytilopsis leucophaeata (dark false mussel)
- Polymesoda carolinae (Carolina marsh clam)
- Polypedilum halterale group larvae (Diptera)
- Tagelus plebeius (stout razor clam).

Vegetation
- Mangrove Swamp
- Needlerush
- Needlerush/Leather Fern
- Wetland Hardwood Forest
- Mixed Herbaceous Wetland
- Cattail
- Brazilian Pepper
- Needlerush/Cattail
- Wetland Coniferous Forest
- Common Reed, Sawgrass, Cordgrass
- Popash/Willow
- Submerged Aquatic Vegetation (Ruppia maritima).

6.2.4. Center of Abundance

Center of abundance (COA) statistics describe the average position of occurrence for a given taxon over the sampling time period. For the linear riverine reporting units that are divided into spatial strata along a gradient, the COA can be described in terms of river kilometer (Rkm). Center of abundance was calculated by weighting the location of occurrence by the number of organisms of the given species collected at that location.

6.2.5. Abundance Weighted Salinity

Abundance weighted salinity (AWS) is a statistic that describes the salinity range in which a given taxon is found to be most abundant. Abundance weighted salinity weights the salinity at each sample collection site by the number or density of organisms of the given species collected at that location.

6.2.6. Dissolved Oxygen and Chlorophyll-a Thresholds and Exceedances

Water quality data collected by the HBMP to date have been used to develop logistic regression models to evaluate the potential effects of Tampa Bay Water withdrawals on water quality (dissolved oxygen and chlorophyll-a) within the HBMP reporting units. These models predict the probability of a sample being in exceedance of a threshold value. The exceedance thresholds used were obtained from independent scientific studies by the SWFWMD, the University of South Florida, and the Tampa Bay Estuary Program (TBEP). These studies were based on data from HBMP rivers and other tidal streams in southwest Florida. These models have been validated with additional data for successive interpretive reports.

6.2.7. Hydrodynamic Models

The HBMP has applied hydrodynamic models developed by the District for minimum flows analyses and other assessments of flow-related changes in estuarine systems. For HBMP analyses, these models have been applied to compare baseline and withdrawal scenarios. The first scenario uses actual, observed river flows that occurred downstream of the withdrawal locations to model daily conditions along the entire length of the reporting units during the periods in question. The second scenario adds the daily volumes of water diverted by Tampa Bay water to the observed river flows to “reconstruct” the flows that would have occurred in the absence of Tampa Bay Water operations. Modeled salinity conditions using observed flows have been compared to modeled salinity conditions using reconstructed flows to estimate the daily effect of Tampa Bay Water operations on water quality conditions and salinity regimes in the reporting units.

6.3. Potential Future Program Modifications

In an effort to improve the utility of information generated by the HBMP to detect potential effects of changes in flow on the five reporting units, several minor modifications to HBMP elements have been proposed. These were described in the Alafia River 2009 Year 10

Interpretive Report and the TBC/Hillsborough River 2010 Year 10 HBMP Interpretive Report, and discussed at the 2009 and 2010 HBMP Annual Meetings. The recommended modifications are summarized in the following sections.

6.3.1. Annual Reporting

As discussed at the 2010 HBMP Annual Meeting, current routine annual data reporting requires significant resources that may be better utilized. There was consensus that current HBMP reporting requirements be reviewed with the District and revised as appropriate.

6.3.2. Hydrology/Water Quality

The continuous salinity recording station below Buckhorn Springs on the Alafia River is located on a former speed zone sign piling that is becoming increasingly unstable. In Water Year 2008, the District gave approval to relocate this station just upstream or downstream of the current location. Suitable speed zone pilings are present just upstream of the Buckhorn Springs location. A long-term, EPCHC maintained continuous recorder location is also located just downstream of Buckhorn Springs. In the near future, this station may be relocated to the upstream location or data from the ECPHC station may be used for this HBMP data collection effort.

6.3.3. Benthic Macroinvertebrate Sampling (Special Studies)

Based on HBMP data collected to-date and numerous evaluations completed by Tampa Bay Water, the Southwest Florida Water Management District, the University of South Florida and others, the utility of the benthic program for detecting potential changes associated with Tampa Bay Water's permitted withdrawals has been limited. HBMP modifications that maintain or increase the ability of the benthic monitoring element to detect changes related to withdrawals for public supply while maintaining or reducing costs would be a valuable modification to the current program.

Suggested possible changes to the benthic invertebrate sampling element of the HBMP include:

- Concentrating benthic sampling effort in the Alafia River to improve statistical power
- Using seasonal index periods to characterize the benthos community as an alternative sampling strategy to the current design which requires year-round sampling
- Utilizing benthic taxa collected during sampling for the plankton element to characterize potential withdrawal-related changes in benthic indicators.

Each of these changes and supporting analyses are described briefly below. It is anticipated that the results of studies described below will be used in a re-evaluation of the entire benthos sampling program design that will be completed and presented at the 2011 or 2012 HBMP Annual Meeting.

6.3.3.1. Redirected Alafia River Sampling

As a result of statistical power analyses conducted in 2008, the Alafia River fish sampling program was modified after Water Year 2008. The power analyses concluded that the number of trawl samples in the upper river strata containing only one species or no individuals at all was making it difficult for the sampling program to detect statistically significant changes of a 15% magnitude. As a result, trawl sampling was concentrated in the mid to lower river strata where models predicted the most salinity fluctuations as a result of withdrawals. This was accomplished by discontinuing upstream trawl samples and increasing mid and lower strata trawl samples accordingly.

The power analyses also concluded that Alafia River samples with only a single species present or no benthic macroinvertebrates were reducing the benthic sampling program's ability to measure a statistically significant 15% change, suggesting that the Alafia River benthic program might be improved by concentrating sampling effort. Samples could be concentrated by shifting them out of the upper and lower strata into the middle strata where the greatest salinity changes are predicted. Samples could also be concentrated by shifting samples to certain "index period" months when withdrawals might have the greatest potential effect on benthic macroinvertebrates. The probability of collecting a benthic sample with just one species or with no organisms is greater in some months. This characteristic of the Alafia River will need to be taken into account if samples are concentrated in time and/or space.

6.3.3.2. Benthos Sampling Design Re-Evaluation

The results of preliminary analyses (Janicki Environmental, 2009) suggest that if the HBMP goal is to optimize the benthic element for statistical power to detect inter-annual differences in means for common community metrics, a sampling window incorporating months between December and May would yield the highest power in general. This time period tended to have higher CPUE, higher diversity and a lower frequency of null catches. This time period also coincides with recruitment windows for many estuarine dependent fish species of commercial and recreational value that prey on benthic taxa.

6.3.3.3. Compare Benthic and Zooplankton Samples

As discussed at the 2010 HBMP Annual Meeting, several macroinvertebrate groups collected in the plankton sampling effort are reported as grouped taxa and not identified to lower taxonomic levels. Many of these taxa also occur in the benthic samples.

It is possible that plankton sampling alone might be sufficient to provide information on that portion of the benthic community that is most susceptible to changes in flow and withdrawal. Alternatively, analyses may reveal that certain benthic taxa could be identified to a higher taxonomic level than currently utilized. These analyses could also determine if a coordinated plankton and benthic sampling program should be utilized.

For this special study, archived samples collected under the ichthyoplankton element would be selected, specific lumped taxa would be analyzed to lower taxonomic levels, and the occurrence

of macroinvertebrate taxa in the plankton and benthic samples would be evaluated relative to the objectives of the HBMP.

Field sampling of benthic populations would continue as specified under the current HBMP. However, these samples would be archived in alcohol for potential future sorting and taxonomic identification pending the results of additional analyses on archived plankton samples. It is anticipated that the results of these additional taxonomic analyses can be completed in time for presentation at the 2011 HBMP annual meeting.

6.3.4. Fish and Freshwater Inflows (SWFWMD Study)

The District has discussed re-evaluating existing fish versus river flow and salinity regressions using HBMP data collected since the original regressions were created five or more years ago. The District has recently initiated a new project to examine the applicability of using fish abundance and diversity to establish minimum flows and levels for southwest Florida coastal rivers. This study is meant to identify the strengths and weaknesses of the current approaches to establishing "fish-flow" relationships, identify confounding effects that may affect the relationships between fish and freshwater inflows, explore new techniques to identify effects of freshwater flows on fish populations, and identify new analytical tools.

This study will examine fish responses to changes in flow near the ranges typically observed during Tampa Bay Water operations. While the effects of changes in river flow on estuarine fish have been studied by a number of researchers, many of these efforts examined changes in flow much greater than those possible under the Tampa Bay Water operating regimes. Therefore, although not specifically performed for the HBMP, the results of this study may be important for re-evaluation of the HBMP fish and/or plankton sampling elements.

6.3.5. Habitat / Vegetation

Analysis of vegetation mapping data from Water Years 2003, 2006 and 2009 found very small changes in vegetation coverage. These changes could not be related to the relatively large natural changes in flow and salinity that occurred during this 6-year period. Changes in flow and salinity as a result of Tampa Bay Water operations are much smaller than those that occur as a result of natural variation in rainfall. If vegetation mapping cannot detect a change as a result of natural variations in flow, vegetation mapping is highly unlikely to be able to detect changes as a result of Tampa Bay Water operations. The next vegetation mapping event is not scheduled to occur until 2012, but the monitoring program may be better served by redirecting this effort towards additional direct measures of impact such as continuous water quality recorders. At a minimum, extending the vegetation mapping to a once per 6-year cycle is recommended.

7.0 HBMP Programmatic Criteria

As discussed in previous sections of this document, the overall purpose and scope of the HBMP extend beyond just data acquisition, analysis and reporting. The HBMP also incorporates programmatic criteria that have been included to ensure that the permitted withdrawals are consistent with District rules throughout the lifetime of the permits.

In the context of the HBMP, the term programmatic criteria refers to: 1) the criteria by which unacceptable environmental impacts are determined; and 2) the process by which appropriate management responses to detected conditions that constitute or could potentially lead to adverse environmental impact are determined and implemented. Important components of these criteria include established minimum flows and levels for lower Hillsborough River, Tampa Bypass Canal and Alafia River; specific HBMP objectives for each waterbody included as special conditions in WUPs for the Tampa Bypass Canal/Hillsborough River and Alafia River Water Supply Projects; and ongoing assessment of HBMP data to identify and evaluate any detected hydrobiological changes attributable to the permitted withdrawals, and appropriate management actions.

7.1. Background

In addition to other requirements, Water Use Permit (WUP) applicants must demonstrate that the proposed withdrawals meet the following Southwest Florida Water Management District (District or SWFWMD) conditions for issuance related to potential environmental impacts (40D-2.301, F.A.C.):

> *(b) Will not cause quantity or quality changes that adversely impact the water resources, including both surface and groundwater*
> *(c) Will not cause adverse environmental impacts to wetlands, lakes, streams, estuaries, fish and wildlife or other natural resources*
> *(g) Will not significantly induce saline water intrusion.*

The District's Basis of Review for WUPs for withdrawals from natural streams (Section 4.2.c) also requires that the following specific performance standards be met:

> *a. Flow rates shall not deviate from the normal rate and range of fluctuation to the extent that water quality, vegetation, and animal populations are adversely impacted in streams and estuaries.*
> *b. Flow rates shall not be reduced from the existing level of flow to the extent that salinity distributions in tidal streams and estuaries are significantly altered as a result of withdrawals.*
> *c. Flow rates shall not deviate from the normal rate and range of fluctuation to the extent that recreational use or aesthetic qualities of the water resource are adversely impacted.*

To provide ongoing reasonable assurance that District performance standards would be met, special conditions of the TBC/Hillsborough River and Alafia River project WUPs required the development and implementation of the HBMP as described in previous chapters of this document. General HBMP objectives are to collect data on the spatial and temporal

characteristics of environmental indicators including salinity regimes, water quality and biotic integrity (PBSJ, 2000).

Inherent in District rules is the recognition that surface water withdrawals are linked to potential changes in: 1) salinity patterns; 2) associated water quality constituents; and 3) biological communities. This potential linkage can be summarized conceptually as follows:

Freshwater Inflows
⇩
Salinity and Associated Water Quality Indicators
⇩
Biotic and Habitat Indicators

It should be noted, however, that while freshwater withdrawals may have a direct and instantaneous physical effect on salinity patterns, the effects of freshwater withdrawals on other water quality constituents and biological communities in particular, are typically indirect and complex. Such indirect impacts are mediated by physical and chemical changes or processes, and are typically manifested on longer time scales (e.g., days, months, seasons or years).

For example, a reduction in freshwater inflows may result in increased salinities within the geographic range of a population of a particular benthic organism; but if the changed salinity still remains within the salinity tolerance range of the organism, the abundance and distribution of the organism will likely not be affected. However, if that same change in salinity results in increased density stratification, which in turn leads to hypoxic conditions on the bottom, the abundance and distribution of the organism could be affected.

In addition to linkage between freshwater withdrawals and biological communities, the District performance standards also link adverse impact to:

- A significant deviation from natural or historic conditions
- A significant degradation of conditions necessary to support economically important activities such sport and commercial fishing, and water-dependent recreation and aesthetics.

7.2. Minimum Flows and Levels

At the time of initial HBMP development, limited standards or specific criteria were available for evaluating freshwater withdrawal-related changes to estuarine systems, or determining significant impacts to these systems. Since implementation of the HBMP in 2000, the District has developed and adopted Minimum Flows and Levels (MFLs) for the lower Hillsborough River, Tampa Bypass Canal and Alafia River as required by the Florida Legislature (SWFWMD 2004, 2006 and 2008). MFLs are based on technical evaluations that determine critical flows and the amount of water that can be withdrawn without causing unacceptable impacts to the ecology

of natural systems, recreational use or aesthetic qualities of these waterbodies (SWFWMD, 2008).

MFL documents prepared for each waterbody describe the purpose and background of the MFL, and provide descriptions of the physical and hydrologic characteristics of the waterbody and watershed, including river and spring flows, withdrawals, and river/channel morphology, sediments, and habitats. These documents also provide extensive analyses of freshwater inflows and relationships to important parameters and characteristics that were used to establish the MFLs, including:

- Tides and freshwater inflows and water levels and residence time, and results of hydrodynamic models developed for these estuarine systems
- Freshwater inflows and water quality constituents including salinity, dissolved oxygen, nutrients and chlorophyll-a
- Freshwater inflow and biological characteristics, including phytoplankton, benthic macroinvertebrates, mollusks, oysters, zooplankton and fishes.

MFL documents describe how these relationships were determined and used to examine the effects of reduced freshwater inflows on the hydrological and biological components of each system. For each system, baseline periods were identified and methods for evaluating flow reduction scenarios were selected. To determine minimum flow thresholds, resources of concern were identified along with appropriate identification of acceptable levels of change that do not result in unacceptable impacts to the ecology or other resources. Important considerations for the resources of concern included the following:

- Maintaining appropriate salinity zones for benthic macroinvertebrate communities, oysters, shoreline vegetation, and fish and invertebrates
- Minimizing the probability of hypoxia (dissolved oxygen concentrations <2.5 mg/L); specifically, examining the distribution and probability of low dissolved oxygen concentrations resulting from changes in flow
- Minimizing the probability of excessive chlorophyll-a concentrations, specifically examining the distribution and probability of high chlorophyll-a resulting from changes in flow.

Using the relationships between freshwater inflows and metrics for various resources of concern, the District identified water quality and biological resources of each waterbody that were particularly sensitive to flow reductions during periods of low flow. In addition to salinity changes during these periods, residence times typically increase in these waterbodies, potentially leading to large phytoplankton blooms, dissolved oxygen impacts and/or increases in abundance of non-desirable predators.

MFLs for the lower Hillsborough River, the Tampa Bypass Canal and the Alafia River were developed by the District based on the considerations described above over a multi-year process and have been adopted in District rules (40D-8, F.A.C.). Each of these is described briefly in the following sections.

7.2.1. TBC MFL

The Minimum Flow (MFL) for the Tampa Bypass Canal (TBC) was adopted in 2006. For the TBC, the District determined that establishment of an MFL was not appropriate due to designated flood control purpose and use of the TBC (SWFWMD, 2004), and an MFL of 0 cfs at Structure 160 was ultimately adopted. MFL analyses completed by the District evaluated relationships between flow and salinity, DO, and biota and concluded that no defensible technical basis exists for an MFL (SWFWMD, 2005). District technical analyses and conclusions for TBC MFL studies were confirmed by independent scientific per review (Powell et al., 2005).

In general, stratification is common in the TBC, but salinity was relatively insensitive to flow. Hypoxia was prevalent, but statistical analyses suggested that flow accounted for less than 50% of the variation in hypoxia. Overall, high flows in the TBC result in greater ecological effects than insufficient flows. High flows caused prolonged low salinity conditions, vertical stratification and hypoxia.

In addition to flood control and regional drinking water supply, the TBC is used to augment the Hillsborough River reservoir for the City of Tampa water supply and to meet requirements of the lower Hillsborough River MFL as discussed below.

7.2.2. Lower Hillsborough River MFL

The revised Minimum Flow (MFL) for the Lower Hillsborough River was established in November 2007. This MFL requires a 20 cfs (~13 mgd) flow at the base of the City of Tampa dam during the July 1 - March 31 time period and 24 cfs (~15.5 mgd) from April 1 - June 30, with an adjustment if there are lower than normal flows in the upper river.

In order to meet MFL requirements when water is not available to flow over the dam, a Recovery Strategy was adopted by the District along with the MFL identifying activities and milestones to be achieved in accordance with the time schedule specified (40D-80.073(8), F.A.C.). Sources of water to be used to meet the MFL include:

- Sulfur Springs discharge: 10 cfs (~6.46 mgd) to the base of the City of Tampa dam
- TBC pool: up to 7.1 mgd (~11 cfs) from the middle pool discharged to the Hillsborough River through S-161 and pumped to the base of the dam; up to 7.1 mgd from the middle pool to the dam through a pipeline to be constructed by 2013.
- Morris Bridge Sink Project: up to 3.9 mgd (~6.03 cfs) from Morris Bridge Sink to the TBC middle pool or 3.9 mgd from the TBC lower pool to the middle pool if available, then discharge to the Hillsborough River through S-161 and pumped to the base of the dam.

- The TBC middle pool and Morris Bridge Sink/TBC lower pool sources have specific operational and performance criteria identified as well as transmission pipeline construction components (40D-80.073(8), F.A.C.).

Additional potential MFL augmentation sources include Blue Sink based on cost/benefit and feasibility analyses to be completed, and other sources as identified in the future. Monitoring and evaluation for the MFL and Recovery Strategy are performed by the City of Tampa and the District with an annual implementation evaluation and report completed by the District.

The Lower Hillsborough River MFL was based on analyses presented in Lower Hillsborough River Low Flow Study Results and Minimum Flow Recommendation (SWFWMD, 2006). District technical analyses and conclusions for Lower Hillsborough River MFL studies were confirmed by independent scientific per review (Montagna, et al., 2007).

The primary water quality and ecological condition affected by freshwater inflows at the base of the dam is salinity, although tides and other factors (e.g., stormwater, winds, and salinity in Tampa Bay) complicate this relationship. In addition to analyses of existing data and modeling, Lower Hillsborough River and related Sulphur Springs MFL studies included a series of experimental water releases conducted to evaluate the effect of changes in flow on water quality parameters. These studies concluded that the effect of flow changes (in the low flow range) on salinity generally decrease as a function of increasing distance from the dam and depth in the water column.

Principal components analysis (PCA) performed on biological sampling results identified four salinity ranges utilized by invertebrates. The findings for benthic macroinvertebrate community structure showed that a distinct group of these organisms occur in river habitats with salinity in the range of <5 ppt. However, there was a high degree of species overlap among adjacent salinity zones and few estuarine species were identified as requiring a single salinity zone. Because some invertebrate species are restricted to the lower salinity range, maintaining an essentially permanent area of the lower river with a salinity of <5 psu would provide habitat for those predominantly oligohaline and fresh water species, assuming other habitat requirements are also present.

The creation of a < 5 psu salinity zone was chosen as the principal ecological criterion on which to establish minimum flows for the LHR. Juvenile stages of important estuarine dependent fish species concentrate in oligohaline waters. Benefits (in terms of provision of low salinity habitat) accruing from fresh (or nearly fresh) water inputs at the dam are most pronounced near the dam, with the magnitude of the effect diminishing downstream. For a given discharge rate, the strongest effects are realized nearest the dam and decrease incrementally downstream.

7.2.3. Lower Alafia River MFL

The minimum flow (MFL) rule for the lower Alafia River was established in 2009. This MFL was defined as not more than a 19% reduction of daily flows with a low-flow threshold of 120

cfs. Similar to other MFLs in southwest Florida, the District used the percent-of-flow method for the Lower Alafia River to determine the amount of water that can be withdrawn without causing unacceptable impacts to the ecology or other water resources (SWFWMD, 2008). District technical analyses and conclusions for Lower Alafia River MFL studies were confirmed by independent scientific per review (Powell et al., 2008).

The Alafia River MFL document provides extensive analyses of freshwater inflows and relationships to important parameters and characteristics that were used to establish the MFL, including:

- Tides and freshwater inflows and water levels and residence time, including results of a hydrodynamic model developed for the lower river
- Freshwater inflows and water quality constituents including salinity, dissolved oxygen, nutrients, and chlorophyll-a
- Freshwater inflow and biological characteristics, specifically phytoplankton, benthic macroinvertebrates, mollusks, oysters, zooplankton, and fishes.

The MFL document describes how these relationships were determined and used to examine the effects of reduced freshwater inflows on the hydrological and biological components of the Lower Alafia River. First, a baseline period was identified and a method for developing flow reduction scenarios was selected. Second, resources of concern were identified along with appropriate identification of acceptable levels of change that do not result in unacceptable ecological impacts to habitat metrics.

The important considerations for the resources of concern included the following:

- Maintaining appropriate salinity zones for benthic macroinvertebrate communities, oysters, shoreline vegetation, and fish and invertebrates
- Minimizing the probability of hypoxia (dissolved oxygen concentrations <2.5 mg/L); specifically, the distribution and probability of low dissolved oxygen concentrations resulting from changes in flow
- Minimizing the probability of excessive chlorophyll-a concentrations; specifically, the distribution and probability of high chlorophyll-a resulting from changes in flow.

Using the relationships between freshwater inflows and the habitat metrics of the various resources of concern, the District found that the water quality and biological resources of the lower river were particularly sensitive to flow reductions during periods of low flow. During these periods, residence times increase within the lower river, potentially leading to large phytoplankton blooms and increases in abundance of non-desirable predators.

The effects of the MFL on metrics identified for the resources of concern were examined using hydrodynamic modeling and regression relationships between freshwater inflows and biological metrics. Regression models were used to predict changes in abundances of different life stages and size classes of fish and invertebrate species due to reduced freshwater inflows to the lower river. The results of these analyses indicated that the 19% reduction and the low-flow threshold would not result in unacceptable reductions in abundance, and most notably would not reduce the median abundance of juvenile red drum more than the 15% threshold identified.

Hydrodynamic modeling was used to examine changes in bottom areas of salinity zones important to benthic macroinvertebrates. Regression models were used to examine changes in surface isohalines that would affect wetland shorelines, and to predict shifts in geographic centers of abundance for key fish and invertebrate species. The combined results indicated that the minimum flows based on the abundance of key fish and invertebrate species would also prevent significant harm to the other resource characteristics. Logistic regression analyses were performed to predict the increased probability of low dissolved oxygen and high chlorophyll-a concentrations in response to reduced flows, indicating that the recommended minimum flows would not result in significant harm to the lower river, with only very small changes in probability of the occurrence of undesirable conditions.

7.3. WUP Requirements

To provide ongoing reasonable assurance that District performance standards would be met, special conditions of the TBC/Hillsborough River and Alafia River project WUPs required the development and implementation of the HBMP as described in previous chapters of this document. The general objectives of the HBMP are to collect data on the spatial and temporal characteristics of environmental indicators including salinity regimes, water quality and biotic integrity (PBSJ, 2000). Specific HBMP objectives related to ongoing compliance with District performance criteria are also provided in each WUP as listed in the following sections.

7.3.1. Tampa Bypass Canal Water Supply Project

Water Use Permit 20011796.002 for the Tampa Bypass Canal (TBC)/Hillsborough River Water Supply Project authorizes Tampa Bay Water to divert water from the Hillsborough River and withdraw water from Tampa Bypass Canal according to the schedule provided in the permit. This permit requires that Tampa Bay Water continue to implement the approved TBC/Hillsborough River HBMP in order to address the following objectives:

- Use baseline conditions to compare the effects of the permitted water use upon streamflow rates, salinity distributions, and selected water quality and biologic variables within the lower Hillsborough River below the Tampa Dam, TBC, Palm River and McKay Bay.

- Monitor diversions from the Hillsborough River and withdrawals from the TBC at the withdrawal points and evaluate streamflow data for the lower Hillsborough River at the Tampa Dam, and the TBC at the District's flood control Structures 160 and 162.

- Evaluate the ecological relationships of the lower Hillsborough River below the Tampa Dam, TBC, Palm River and McKay Bay to freshwater flows.

- Monitor selected water quality and biologic variables related to freshwater flow in order to determine if the ecological characteristics of the lower Hillsborough River below the Tampa Dam, TBC, Palm River and McKay Bay change over time.

- Determine the relative effect of permitted diversions and withdrawals on any ecologic changes that may occur in the lower Hillsborough River below the Tampa Dam, TBC, Palm River and McKay Bay.

- Determine if these withdrawals cause or significantly contribute to any unacceptable adverse environmental impacts to the natural resources of the lower Hillsborough River below the Tampa Dam, TBC, Palm River and McKay Bay due to changes in freshwater flows. The HBMP shall identify criteria that will be used to determine unacceptable adverse environmental impacts to the resources.

- Coordinate with appropriate agencies that have or are currently collecting data that can be incorporated into the HBMP to avoid duplication of effort and to facilitate the most efficient use of resources.

HBMP data collection activities that meet these objectives are described in Section 3.

7.3.2. Alafia River Water Supply Project

Water Use Permit 2011794.01 for the Alafia River authorizes Tampa Bay Water to withdraw water from the Alafia River at Bell Shoals Road according to the schedule provided in the permit. The original water use permit (Permit 2011794.00) required Tampa Bay Water to develop and implement an HBMP for the Alafia River. The permit specified that the HBMP address the following objectives:

- Establish baseline conditions prior to permitted use for streamflow rates, salinity distributions, and selected water quality and biological variables within the Alafia River and its estuary.

- Monitor withdrawals from the Alafia River at the withdrawal point and evaluate streamflow data for the river at all applicable locations.

- Evaluate the ecological relationships of the Alafia River and its estuary to freshwater flows.

- Monitor selected water quality and biological variables related to freshwater flow in order to determine if the ecological characteristics of the river and its estuary change over time.

- Determine the relative effect of permitted withdrawals from the Alafia River on any ecologic changes that may occur in the river and its estuary.

- Determine if these withdrawals cause or significantly contribute to any unacceptable environmental impacts that the river and its estuary exhibit as a result of changes in freshwater flows.

- Coordinate with appropriate agencies that have or are currently collecting data that can be incorporated into the HBMP to avoid duplication of effort and to facilitate the most efficient use of resources.

HBMP data collection activities to meet these objectives are described in Section 4.

7.4. HBMP Programmatic Criteria

Participants in the original HBMP design reached consensus that the HBMP would provide adequate data to detect potentially adverse hydrobiological changes in the HBMP reporting units. Participants also noted that the HBMP would need to determine if any observed hydrobiological changes were the result of natural variation or the permitted freshwater withdrawals. To address this need, it was concluded that HBMP data could also be used to support the enhancement of various predictive models that could be used to determine the incremental effects of the permitted withdrawals on any changes in freshwater inflows.

As required by specific conditions of the Water Use Permits, one of the goals of the HBMP design process was to identify criteria that will be used to determine unacceptable environmental impacts to the resources of concern. Given the above described considerations, the HBMP design group attempted to identify these criteria, as they specifically relate to the Tampa Bypass Canal and Alafia River Water Supply Projects. These criteria were described as follows:

> *A detected change, supported by statistical inference or a preponderance of evidence, from the pre-operational abundance, distribution, species composition, or species richness of biological communities of concern in the Lower Hillsborough River, Lower Palm River/TBC, McKay Bay, or Lower Alafia River reporting units that can be attributed to reductions in freshwater inflows caused by the permitted surface water withdrawals.*

The above described criteria were recommended by the HBMP design group for use in determining what conditions might constitute an unacceptable environmental impact with respect to the permitted withdrawals. The HBMP design group noted that conditions meeting the above recommended criteria for unacceptable environmental impact could be detected, measured and described in many different ways. A few examples are discussed below:

- Significant dislocation of an ecologically significant species distribution - a "center of population" (either abundance or frequency) statistic has been used in the HBMP to

assess the distribution of adult and young fish, and benthos relative to river location. Other related measures of distribution dislocations may also be applicable for the HBMP.

- Elimination or reduced abundance of a "desirable" species - the elimination, or a significant reduction in the abundance, of a "desirable" (e.g., economically or ecologically important) species within a reporting unit would likely be considered an unacceptable environmental impact. Measures of species composition and abundance for critical biological indicators are included in the HBMP.

- Significant change in species richness or similar measure of community balance.

- Significantly increased abundance of an "undesirable" species that could consume or out-compete desirable species - the converse of the above described scenario. Measures of species composition and abundance for biological indicators are included in the HBMP. As introduced exotic or nuisance species often occur in ecosystems due to factors unrelated to stress caused by fresh water withdrawals, any significant increases in exotic or nuisance species would require additional evaluation.

Given the potentially infinite measures of unacceptable environmental impact, it was the general consensus of the HBMP design group that specific programmatic criteria or thresholds not be developed for every indicator. Rather, the HBMP design group recommended the application of a consensus-based process to evaluate whether unacceptable environmental impact has occurred, or is in the process of occurring (PBS&J, 2000).

The second HBMP interpretive analyses (PBS&J, 2006) summarized the assessment of unacceptable environmental impact as a series of ten progressive questions. These questions are:

1. What were the daily flows in each reporting unit during the study period, and how did these flows compare to the historical flow record?

2. What were the daily Tampa Bay Water withdrawals from each reporting unit during the study period, and how did these withdrawals affect daily flows?

3. What was the observed intra- and inter-annual variation in salinity in each reporting unit during the study period?

4. What portion of the observed intra- and inter-annual variation in salinity was attributable to Tampa Bay Water withdrawals?

5. How did observed changes in salinity attributable to changes in flow compare to the predicted salinity vs. flow relationships used during the WUP process?

6. What was the observed intra- and inter-annual variation in chlorophyll-a and dissolved oxygen in each reporting unit during the study period?

7. What portion of the observed intra- and inter-annual variation in chlorophyll-a and dissolved oxygen was attributable to Tampa Bay Water withdrawals?

8. What was the observed intra- and inter-annual variation in the species composition, abundance and spatial/temporal distribution of key biotic indicators in each reporting unit during the study period?

9. To what extent did variation in flow or flow-related variables (e.g., salinity) affect the intra- and inter-annual variation in the species composition, abundance and spatial/temporal distribution of key biotic indicators?

10. To what extent did the variation in flow or flow-related variables attributable to Tampa Bay Water withdrawals affect the intra- and inter-annual variation in the species composition, abundance and spatial/temporal distribution of key biotic indicators?

If observed changes in the intra- and inter-annual variation in the species composition, abundance and spatial/temporal distribution of key biotic indicators are identified as clearly attributable to Tampa Bay Water withdrawals, the next analytical step would be to determine if these changes constituted an unacceptable environmental impact.

7.5. HBMP Management Responses

The final step for reasonable assurance in meeting District standards involves the identification of appropriate management actions or remedial measures to be taken if adverse environmental impacts are detected, although no particular management actions are specifically identified. However, waiting until an adverse environmental impact has occurred to initiate appropriate management actions or remedial measures reduces the opportunity to adequately protect resources that may be at risk. Therefore, proactive resource management is needed to protect the resources of concern in the potentially affected water bodies.

The initial HBMP design included an appropriate sequence of management actions that should be initiated if conditions are observed that could potentially lead to, or are consistent with, the above described criteria for unacceptable environmental impact. The following management actions, listed sequentially in order of increasing intensity, are recommended for consideration under the HBMP:

- Data QA/QC Audit - This action would involve the performance of a concentrated QA/QC audit to determine if the detected change was the result of laboratory problems, data entry errors, violation of sampling protocols, etc.

- Data Comparison (Correlates) - This action would involve a review of data correlates (e.g., specific conductance is a correlate to salinity) to determine if there is more than one line of evidence reflecting the detected change.

- Determination of the magnitude and ecological importance of the detected change.

- Assessment of the degree of statistical certainty for an observed change to determine the likelihood that the observed change was due to chance alone (e.g., *alpha* error).

- Assessment based on combined results for magnitude of change and probability that the change is due to chance alone. If both the detected change and the degree of certainty are low, then a less intense management response would be appropriate including increased or directed sampling efforts. If the detected change is considered to be moderate or large and the degree of certainty is high (e.g., low alpha), then a more intense management response may be indicated. If the detected change is relatively large, but the degree of certainty is low (e.g., high alpha), then a less intense management response may be appropriate.

- HBMP Special Meeting - If the data review and comparison indicates that a detected change is not due to quality control problems and is reflected in multiple lines of evidence, the next step would involve convening a special HBMP meeting. The purpose of the meeting would be to discuss the data review and comparison findings with all HBMP participants to determine additional steps to refine the understanding of the magnitude and extent of the detected change. Additional data analyses or a redirected and focused sampling effort to better define the detected change would be recommended as appropriate.

- Redirected Sampling Effort - This action would involve conducting more focused supplemental sampling and/or additional studies (e.g., controlled withdrawal/flow experiments) in the affected reporting units with the objective of gaining a better understanding of the detected change. The additional data collected from this effort could then be subjected to previous steps as appropriate. This action would determine if detection of the change is repeatable under a more focused sampling program. Although this step could be valuable, it may not be necessary for a redirected sampling effort to be conducted for all hydrobiological changes detected by the HBMP.

- Modified Withdrawal Schedules - Modified freshwater withdrawal schedules could include provisional or temporary reductions in withdrawal rates, or modifications to the schedules such that greater withdrawals would occur during high flows, but lesser withdrawals would occur during low flows. Another alternative would be the development of an optimization schedule whereby the highest withdrawal rates would occur in the river source with the greatest harvestable flows at any given time. Given the regional need for additional water supplies, a permanent reduction in the total permitted withdrawal volumes would likely be viewed as the most intense response to detected adverse impact.

As noted, consideration and application of these recommended management actions would vary with the specific hydrobiological changes and statistical measures of certainty involved.

However, this approach meets the need for reasonable assurance as well as the overall objectives of the HBMP.

Appendices

APPENDIX A
Previously Authorized HBMP Design and Programmatic Modifications

Design of the Alafia River/Tampa Bypass Canal HBMP began in May 1999. The HBMP was designed in a series of workshops and subcommittee meetings attended by regulatory agency and local government representatives, and other stakeholders. A final HBMP design document was completed in late 1999 (PBS&J, 2000).

HBMP field sampling was initiated in April 2000, and continued implementation of the HBMP has been required under special conditions for the renewed and modified water use permits for these regional public water supply projects. The HBMP was intended to be routinely modified based on field conditions and the ongoing evaluation of HBMP data.

In the ten years since the acceptance of the final HBMP design by both the design group and the Tampa Bay Water Board, several minor modifications have been made to the HBMP. These modifications were in response to requests by the District and other stakeholders, logistical problems encountered during early implementation, and the sampling modifications identified based on evaluations of HBMP data.

Potential modifications to improve the monitoring program have been provided in HBMP annual and multi-year interpretative reports, and discussed at Annual HBMP Meetings. All modifications approved by the District through July 2010 and incorporated into the program are listed below.

1. Spatial Strata

Discontinued Sampling in Alafia River Stratum AR8

In 2000, Alafia River stratum AR8 was found to be inaccessible on nearly all tides. This portion of the river is also physically different than the lower river and would have required different benthic, fish, and plankton sampling methods than the lower river. As a result, stratum AR8 was deleted from the monitoring program with District approval after the first few months of program implementation. The sampling effort scheduled for AR8 was transferred to the other freshwater stratum (AR7), also with District approval.

2. Hydrology/Water Quality

Added Fixed-Location Water Quality Sample Stations

In Water Year 2001, three additional fixed-location water quality monitoring stations were added at the request of the District. One additional fixed-location water quality sampling station was added at the mouth of the Alafia River and one at the mouth of the Hillsborough River at existing EPCHC sampling sites. A third fixed station was added at the upstream side of the S160 dam. This station is only sampled when there is flow over S160. These stations were meant to describe upstream and downstream boundary inputs (by downstream flow or incoming tide) to the reporting units.

Discontinued Total Organic Carbon and Dissolved Organic Carbon

Total organic carbon and dissolved organic carbon sampling was discontinued in the Alafia River, TBC and McKay Bay at the end of Water Year 2004 (September 2004). There was consensus at the 2004 Annual Meeting to discontinue the sampling and analysis of TOC and DOC as part of the HBMP because the HBMP had generated a considerable amount of data for dissolved and total organic carbon in these systems and additional data was not necessary.

Discontinued Continuous Dissolved Oxygen Sensors

Dissolved oxygen (DO) probes on the Sligh Avenue and Columbus Avenue continuous recorder stations in the Hillsborough River reporting unit were deactivated during Water Year 2004. There was consensus at the 2004 Annual Meeting that DO measurements at these stations could be discontinued. This consensus was based on the belief that the data collected under long-term deployments of membrane-based, dissolved oxygen measurement equipment did not have the precision to detect the small changes predicted as a result of withdrawals.

3. Biota

Completed McKay Bay and TBC Oyster and Mollusk Surveys

Oyster and mollusk surveys were conducted in McKay Bay and the TBC as special studies completed in 2005 and 2008. These studies included a bathymetric and oyster bar survey (PBS&J, 2005), and mapped the distribution and assessed the health of oysters and other mollusks (Janicki Environmental, 2008).

Discontinued Avian Surveys near McKay, Added Avian Study near Alafia

There were significant variations in natural flow from 2000 to 2004 including some of the highest and lowest flow on record. However, there was no relationship between flow and bird observations collected during this period. Based on data collected from 2000 to 2004, HBMP annual meeting participants concluded that the ability to link changes in bird communities to flow and salinity changes associated with the surface water projects was tenuous at best. As a result, bird sampling in the ponds area was eliminated in Water Year 2005, and a redesigned Alafia area sampling was implemented.

Completed Avian Special Study at Alafia Banks

In Water Year 2005, surveys included quantification of foraging effort by select benthic feeding indicator species as part of an approved HBMP special study. No relationship between flow and bird populations were observed during this sampling, and all bird sampling in the Alafia Banks was discontinued at the end of Water Year 2008 with District approval. Since relationships between the large natural variations in Alafia River flow and bird populations could not be detected, it was determined that it would be difficult or impossible to detect variations in bird populations as a result of withdrawals.

Added Expanded Fish Sampling in Hillsborough Bay Adjacent to the Alafia River

The HBMP was designed to characterize baseline conditions, and detect hydrobiological changes, in the river estuaries of the Alafia, Hillsborough and Palm Rivers, and McKay Bay. Although Hillsborough Bay was a defined reporting unit in the HBMP, it was the consensus of the Focus Group that hydrobiological changes associated with the permitted withdrawals would first be detected in the rivers long before any potential cumulative impacts in Hillsborough Bay were realized. Therefore, the HBMP Focus Group did not recommend additional sampling of Hillsborough Bay. Rather, they concluded that data currently being routinely collected by others (e.g., EPCHC and FWRI) would likely be adequate to assess changes in water quality, benthos and fish communities in Hillsborough Bay.

At the 2004 Annual Meeting, FWRI staff pointed out that the FIM sampling effort was not intended to make annual inferences regarding fish population changes in Hillsborough Bay, and suggested that if it is desirable to make annual inferences regarding potential cumulative impacts on fish communities, the

sampling intensity of the FIM program would need to be increased. There was agreement among the meeting participants that the original assumptions regarding the initial detection of changes related to surface water withdrawals in the river estuaries still held true, but that the adequacy of sampling activities in Hillsborough Bay should be evaluated further. As a result of re-evaluating the adequacy of existing monitoring programs to address the issues of concern in Hillsborough Bay, additional fish sampling stations were added as a special study to the HBMP in Water Year 2005. The stations are located near the mouth of the Alafia River (referred to as the Alafia River Delta stratum).

After several years of data collection in the delta area, power analyses conducted by Janicki Environmental found that this sampling did not have sufficient power to detect a 25% change in community indices in the Alafia River Delta stratum. This sampling is divided into two spatial strata, an inner stratum at the mouth of the river, and an outer stratum more distant from the river. FWRI staff suggested that the power of this sampling could be improved by concentrating sampling in the inner stratum. This sampling program was redesigned to consist of seven samples per year, all of which are taken in the inner stratum. This recommendation was approved by the District and implemented at the beginning of Water Year 2009.

Redistributed Benthic and Fish Sampling Effort in the Alafia River, Hillsborough River, and Tampa Bypass Canal

Power analysis conducted by Janicki Environmental found that the relatively high number of catches with no organisms greatly reduced the analytical power of trawls in the upper Alafia River and Hillsborough River strata and the majority of the TBC. In order to address this issue, FWRI staff recommended that all fish trawl samples originally conducted in Alafia and Hillsborough Rivers strata 4 and 5 be shifted to downstream to strata 1, 2, and 3 (see Tables 3.7.1 and 4.7.1). FWRI staff believed shifting trawls to the downstream strata would improve the analytical power of sampling in the downstream strata. Seine sampling would remain unchanged and would still be conducted the upstream strata. This recommendation was approved by SWFWMD and implemented at the beginning of Water Year 2009.

The majority of the TBC is comprised of areas where large numbers of zero fish and benthic catches occur. As a result, fish sampling was stopped in the TBC beginning in Water Year 2009. Benthic sampling upstream of the US 41 bridge was stopped at the same time. The District believed that benthic habitat conditions in the short stretch of the TBC downstream of the US41 Bridge might be more indicative of McKay Bay than the TBC and requested that benthic sampling be continued below US41.

4. Habitat/Vegetation

Reduced Frequency of Alafia SAV Surveys

In October 2001, the District approved an additional program modification based on data collected during Water Year 2001. This modification changed the frequency of submerged aquatic vegetation surveys in the Alafia River from once per year to once every five years. This change was initiated after SAV was found in only one location (the mouth of a spring discharge) in the Alafia River during the first SAV sampling event. It was felt that annual monitoring was not warranted given the lack of SAV in baseline conditions.

Reduced Frequency of Vegetation Mapping

At the 2004 Annual Meeting, SWFWMD staff agreed that the required interval for vegetation polygon mapping could be lengthened and suggested that once every three years in concert with the submittal of

comprehensive interpretive reports would be appropriate. This change was initiated because no significant changes had been observed in the 2000, 2001, 2002, and 2003 mapping events even though there had been large natural variation in flow. The last mapping occurred in Water Year 2009. The next mapping is scheduled to occur in the Fall of Water Year 2012.

Discontinued Alafia Fixed-Station Vegetation Sampling

Fixed-station vegetation sampling on the Alafia River was discontinued at the end of Water Year 2008 with District approval. Analyses of data collected from 2001 to 2007 were unable to detect changes in vegetation as a result of the large variation of inter-annual flows during this period. As a result, it was unlikely that this monitoring could have detected changes as a result of Tampa Bay Water operations. This monitoring effort was confounded by the fact that vegetation in areas most likely to be influenced by salinity changes as a result of withdrawals consisted of narrow fringe marshes adjoining residential properties. These areas contained large amounts of invasive exotic and nuisance vegetation and were subject to many forms of disturbance aside from those that might be caused by Tampa Bay Water operations.

5. Reporting

Modified Interpretive Report Schedule/Frequency

The frequency of interpretive report submittals was discussed at the May 2003 HBMP Annual Meeting. Interpretive reports were originally required to be submitted every five years. This 5-year interval included a mid-term, interpretive report submitted in year 3 of each five-year evaluation period, and a comprehensive interpretive report submitted in year 5 of each five-year evaluation period. At the May 2003 Annual Meeting, Tampa Bay Water proposed that the interpretive report submittal schedule be modified such that comprehensive interpretive reports are submitted every three years. Each comprehensive interpretive report would summarize HBMP findings of the previous two years, as well as compare these findings to the HBMP and baseline periods of record. Representatives from the SWFWMD and other meeting participants agreed with this proposed schedule. The first HBMP Interpretive Report was submitted to the District on July 2003 and the second in July 2006. The HBMP reporting the Alafia River and other reporting units was split with the most recent TBC/Hillsborough water use permit. The TBC/Hillsborough interpretive reports are now submitted at five-year interval. The last report was submitted in 2010 and the next report is due in July 2015. The Alafia Interpretive Report remains on a three-year interval. The last report was submitted in 2009. Under the current schedule, the fourth Alafia Interpretive Report will be submitted in July 2012.

APPENDIX B
HBMP and HBMP-Related Documents

HBMP Program Documents

PBS&J, 2008. TBC/Alafia River HBMP Quality Assurance Project Plan v2.1. Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2002. TBC/Alafia River HBMP Quality Assurance Project Plan v1.1. Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2000. TBC/Alafia River Water Supply Projects HBMP (Design Document) (September). Prepared for Tampa Bay Water, Clearwater, Florida.

SWFWMD Minimum Flows and Levels and Related Documents

Janicki Environmental, Inc., 2005. Alafia River EPCHC Salinity Regression Review. Prepared by Janicki Environmental for the Southwest Florida Water .Management District

Janicki Environmental, Inc., 2005. Alafia River Isohaline Regression Models. Prepared by Janicki Environmental for the Southwest Florida Water Management District.

Janicki Environmental, Inc., 2005. Technical Memorandum: Tampa Bypass Canal/McKay Bay Regression Results. Prepared by Janicki Environmental for the Southwest Florida Water Management District.

Janicki Environmental, Inc., 2007. Development of Analytical Tools for Quantifying Minimum Flows in Southwest Florida Tidal Rivers Based Upon Benthic Macroinvertebrate Communities. Report prepared for the Southwest Florida Water Management District. Brooksville, Florida.

MacDonald, T.C., Peebles, E.B., M.F.D. Greenwood, R.D. Matheson, and R.H. McMichael, 2005. Freshwater inflow effects on fishes and invertebrates in the Hillsborough River estuary. Joint report of the Florida Fish and Wildlife Conservation Commission and the University of South Florida College of Marine Science submitted to the Southwest Florida Water Management District. Brooksville, Florida.

MacDonald, T.C., 2007. Written communication - Letter from the Florida Fish and Wildlife Conservation Commission to the Southwest Florida Water Management District regarding identification of hatchery-reared and wild juvenile red drum in the Lower Alafia River and revision of regressions to predict the abundance of juvenile red drum as a function of freshwater inflow.

Matheson, R.E., M.F.D. Greenwood, T.C. MacDonald, R.H. McMichael, 2005. Assessment of Relationships Between Freshwater Inflow and Populations of Fish and Selected Macroinvertebrates in the Lower Alafia River, Florida. Report prepared by the Florida Fish and Wildlife Research Institute for the Southwest Florida Water Management District. Brooksville, Florida.

Montagna, P., G.L. Powell and J.N. Boyer, 2007. Scientific Peer Review of the Lower Hillsborough River Low Flow Study Results and Minimum Flow Recommendation. Prepared for the Southwest Florida Water Management District, Brooksville, Florida.

Mote Marine Laboratory, 2003. An investigation of relationships between freshwater inflows and benthic macroinvertebrates in the Alafia River estuary. Report prepared by Mote Marine Laboratory for the Southwest Florida Water Management District, Brooksville, Florida.

Peebles, E.B., 2002. An Assessment of the Effects of Freshwater Inflows on Fish and Invertebrate Habitat Use in the Alafia River Estuary. Report prepared by the University of South Florida College of Marine Science for the Southwest Florida Water Management District. Brooksville, Florida.

Peebles, E.B., 2005. An Analysis of Freshwater Inflow Effects on the Early Stages of Fish and Their Invertebrate Prey in the Alafia River Estuary. Report prepared by the University of South Florida College of Marine Science for the Southwest Florida Water Management District. Brooksville, Florida.

Peebles, E.B., 2005. Review of Feeding Habits of Juvenile Estuarine-Dependent Fishes and Blue Crabs: Identification of Important Prey. Report prepared by the University of South Florida College of Marine Science for the Southwest Florida Water Management District. Brooksville, Florida

Powell, G.L., P.A. Montagna and R. Walton, 2005. Minimum Flows for the Tampa Bypass Canal, Tampa, Florida: Scientific Peer Review Report. Prepared for the Southwest Florida Water Management District, Brooksville, Florida.

Powell, G.L., M. Alber and B.H. Johnson, 2008. Review of Minimum Flows and Levels for the Lower Alafia River, Florida: Scientific Peer Review Report. Prepared for the Southwest Florida Water Management District, Brooksville, Florida.

Southwest Florida Water Management District, 2005. Minimum Flows for the Tampa Bypass Canal, Tampa, Fl. Prepared by the Southwest Florida Water Management District Ecologic Evaluation Section, Brooksville, Florida.

Southwest Florida Water Management District, 2006. Lower Hillsborough River Low Flow Study Results and Minimum Flow Recommendation. Prepared by the Southwest Florida Water Management District, Brooksville, Florida.

Southwest Florida Water Management District, 2008. The Determination of Minimum Flows for the Lower Alafia River Estuary. Prepared by the Southwest Florida Water Management District Ecologic Evaluation Section, Brooksville, Florida.

HBMP Interpretive and Related Reports

PBS&J, 2010. Summary of Existing Literature for the Lower Alafia River (draft in preparation). Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2010. TBC/Hillsborough River HBMP Water Year 2010 Year 10 Interpretive Report (July). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2009. Environmental Analysis and Assessment in Support of Tampa Bay Water's Water Use Permit Application for the Alafia River (September). Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2009. Responses to SWFWMD Comments on Alafia River HBMP Water Year 2008 Year 9 Interpretive Report (August). Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2009. Alafia River HBMP Water Year 2008 Year 9 Interpretive Report (July). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2006. Tampa Bypass Canal Water Supply Project (Including Hillsborough River Water Source) Water Use Permit Modification: Volume II - Environmental Analysis Report (October). Prepared for Montgomery Watson Harza, Tampa, Florida.

PBS&J, 2006. TBC/Alafia River HBMP Water Year 2005 Year 6 Interpretive Report (July). Prepared for Tampa Bay Water, Clearwater, Florida. Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2003. TBC/Alafia River Water Year 2002 Year 3 Interpretive Report (August) (includes Lithia and Buckhorn Springs interpolation). Prepared for Tampa Bay Water, Clearwater, Florida.

HBMP Hydrology/Water Quality

English, D.C., R.W. Kitsmiller, and E.B. Peebles, 2007. Bio-Optical Properties of the Tidal Alafia River; Comparisons with Bay Anchovy Distribution. Report prepared by the USF College of Marine Science for Tampa Bay Water (draft in preparation, March 2007).

Janicki Environmental, Inc., 2005. Empirical Analysis and Evaluation of the Potential Effects of Surface Water Withdrawals on Surface Water Elevations in the Alafia River. Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Examining the Relationship between Freshwater Flows, Nutrient Loads, Chlorophyll a Concentrations and the Distribution of Benthic Macroinvertebrates in the Lower Alafia River. Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2009. Examining the Relationship between Freshwater Flows, Nutrient Loads, Chlorophyll a Concentrations and the Spatial and Temporal Distribution of Zooplankton in the Lower Alafia River (October). Prepared for Tampa Bay Water, Clearwater, Florida.

Pribble, R., et al., 2008. Temporal and Spatial Variability in Salinity in Three Tampa Bay Tributaries (draft). Prepared for Tampa Bay Water, Clearwater, Florida.

Wessel, M., et al., 2008. Relationships between Freshwater Flows, Nutrient Loading, Chlorophyll-a and benthic macroinvertebrates in the Alafia River (draft). Prepared for Tampa Bay Water, Clearwater, Florida.

HBMP Benthic Invertebrates

Grabe, S. et al., 2008. Benthos of the Alafia River Estuary (Tampa Bay, Florida, USA) During and After a Prolonged Period of Low Freshwater Inflow (manuscript submitted to Marine Environmental Research).

Janicki Environmental Inc., 2004. Development of a Benthic Salinity Index for Tampa Bay and Its Tributaries (February). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental Inc., 2009. Benthic Salinity Index for the Major Estuarine Tributaries of Hillsborough Bay (October, draft). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Comparison of taxonomic nomenclature used in analysis of Tampa Bay Water's HBMP benthic samples (August). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Examination of the Power of the HBMP Sampling Design to Detect Changes in Fish and Benthos Populations in the Alafia River, Lower Hillsborough River, McKay Bay and the Tampa Bypass Canal (September). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Review of laboratory protocols used in analysis of Tampa Bay Water's HBMP benthic samples (July). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Survey of Oysters and other Mollusks in McKay Bay & the Tampa Bypass Canal (September). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Technical Memorandum: Comparison of Hillsborough River Archived Benthos Sample Collection Dates to Corresponding River Flows (draft). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2009. Technical Memorandum: HBMP Benthos Sampling Design Re-evaluation- May 2009 Workshop (September). Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2005. McKay Bay Bathymetric and Oyster Bar Survey (March). Prepared for Tampa Bay Water, Clearwater, Florida.

HBMP Fish (Adult/Juvenile), Ichthyoplankton/Zooplankton, Birds

Janicki Environmental Inc., 2004. Extending the Tampa Bay Water HBMP Fish Sampling Effort into Hillsborough Bay, Tech Memorandum: Evaluation of Potential Monitoring Program Design Additions (December). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental Inc., 2004. Relationships between Freshwater Inflow and Fish Communities in the Lower Alafia River (May). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Examination of the Power of the HBMP Sampling Design to Detect Changes in Fish and Benthos Populations in the Alafia River, Lower Hillsborough River, McKay Bay and the Tampa Bypass Canal (September). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2008. Examination of the Power of the HBMP Sampling Design to Detect Changes in Ichthyo- and Zooplankton Populations in the Alafia River, Lower Hillsborough River, McKay Bay and the Tampa Bypass Canal (October). Prepared for Tampa Bay Water, Clearwater, Florida.

Janicki Environmental, Inc., 2009. Examining the Relationship between Freshwater Flows, Nutrient Loads, Chlorophyll a Concentrations and the Spatial and Temporal Distribution of Zooplankton in the Lower Alafia River (October). Prepared for Tampa Bay Water, Clearwater, Florida.

PBS&J, 2008. Technical Memorandum: HBMP Special Study Bird Foraging and Benthic Prey (draft TM). Prepared for Tampa Bay Water, Clearwater, Florida.

Peebles, E.B., 2004. An Analysis of Fish and Invertebrate Data Related to the Establishment of Minimum Flows for the Tampa Bypass Canal. Report prepared by the University of South Florida College of Marine Science for the Southwest Florida Water Management District. Brooksville, Florida.

Wessel, M., 2008. Fish Community Response to Inflow Variations in Two Impounded and One Unimpounded Tidal Tributary to Tampa Bay, Florida (manuscript submitted to Environmental Indicators).

Exhibit D
Tampa Bay Water Alafia
Hydrologic Monitoring Sites

TBW ALAFIA HYDROLOGIC MONITORING SITES

PERMITTEE ID	LAT/LONG	WATER BODY	PARAMETER	FREQUENCY
AR-BS	275129/821614	Alafia at Bell Shoals	Stage	Continuous
AR-L	275209/821225	Alafia at Lithia	Stage/Streamflow	Continuous
BS	275329/821810	Buckhorn Springs	Spring Discharge	Weekly
LS	275150/821349	Lithia Springs	Spring Discharge	Weekly
LSM	275158/821351	Lithia Springs Major	Spring Discharge	Weekly

CONSENT AGENDA

July 22, 2025

Regulation Committee: Initiation and Approval of Rulemaking to Amend Rules 40D-2.321 and 40D-2.331, Florida Administrative Code, to Promote the Use of Reclaimed Water and Encourage Quantifiable Potable Water Offsets, in Accordance with Section 373.250(9), Florida Statutes

Purpose

To request the Board initiate and approve rulemaking to amend Rules 40D-2.321 and 40D-2.331, Florida Administrative Code (F.A.C.), to adopt rule language as required by the Legislature in Section 373.250(9), Florida Statutes.

Background/History

In 2024, the Florida Legislature amended Section 373.250, Florida Statutes, to instruct the water management districts, in coordination with the Florida Department of Environmental Protection, to develop rules to promote the use of reclaimed water and encourage potable quantifiable water offsets that produce significant water savings beyond those required in a water use permit.

The rules must provide that if an applicant proposes a water supply development or water resource development project using reclaimed water that meets the advanced wastewater treatment standards for total nitrogen and total phosphorous as part of an application for a water use permit, the applicant is eligible for a permit duration of up to 30 years if there is sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration of the permit. The rules developed must include:

- A requirement that the permittee demonstrates how quantifiable groundwater or surface water savings associated with the new water supply development or water resource development project helps meet water demands beyond a 20-year permit duration or is completed for the purpose of meeting the requirements of an adopted recovery or prevention strategy; and
- Guidelines for a district to follow in determining the permit duration based on the project's implementation.

The bill also requires that the rules must provide authorization for permit extensions of up to 10 years if a permittee proposes a water supply development or water resource development project using reclaimed water that meets the advanced wastewater treatment standards for total nitrogen and total phosphorous during the term of its permit which results in the reduction of groundwater or surface water withdrawals or is completed to benefit a waterbody with a minimum flow or minimum water level with a recovery or prevention strategy. The rules must include:

- A requirement that the permittee be in compliance with the permittee's consumptive use permit;
- A requirement that the permittee demonstrate how the quantifiable groundwater or surface water savings associated with the new water supply development or water resource development project helps meet water demands beyond the issued permit duration or benefits a waterbody with a minimum flow or minimum water level with a recovery or prevention strategy;
- A requirement that the permittee demonstrate a water demand for the permit's allocation through the term of the extension; and
- Guidelines for a district to follow in determining the number of years extended, including a minimum year requirement, based on the project implementation.

Rule Development

As directed by the Legislature, the water management districts and DEP developed the proposed rule language cooperatively and have produced a set of draft rule language that each district will need to adopt into its own rules. The proposed rule language is identical across all of the water management districts, and as it was drafted with DEP's participation, it meets with DEP's approval.

Upon Governing Board approval of the proposed rule language, staff will proceed with formal rulemaking without further Governing Board action. If substantive changes are necessary as the result of comments received from the public or from reviewing entities such as the Governor's Office of Fiscal Accountability and Regulatory Reform or the Joint Administrative Procedures Committee, this matter will be brought back to the Governing Board for consideration.

Staff Recommendation:

See Exhibit

Initiate rulemaking and approve the proposed rule language to amend Rules 40D-2.321 and 40D-2.331, F.A.C., to add the proposed language shown in Exhibit A, in accordance with s. 373.250(9), F.S.

Presenters:

April D. Breton, Bureau Chief, Water Use Permit Bureau
Michael R. Bray, Assistant General Counsel, Office of General Counsel

Exhibit A

40D-2.321 Duration of Permits.

(1) through (7), No change.

(8) An applicant is eligible for a permit duration of up to thirty years if the applicant proposes a new water supply development or water resource development project using reclaimed water that meets the advanced waste treatment standards for total nitrogen and total phosphorous as defined in section 403.086(4)(a), F.S. (2024), as part of an application for consumptive use, provided the following conditions are met:

(a) The applicant submits sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration of the permit; and

(b) The applicant demonstrates how the quantifiable savings of the source utilized by the applicant associated with the new water supply development of water resource development project either meets water demands beyond a 20-year permit duration or is completed for the purpose of meeting the requirements of a prevention or recovery strategy established pursuant to Section 373.0421, F.S.; and

(c) The applicant demonstrates a reasonable-beneficial water demand for the permit's allocation through the permit duration; and

(d) The specific permit duration shall be calculated based on the quantity of potable water offsets that produce significant water savings, the project implementation timeframe, and the demonstration of water demand based on projected growth, as calculated at the time of the application; and

(e) The new water supply or water resource development project will be completed and operational within the first 20-years of the issued permit duration; and

(f) The applicant provides documentation of the quantification of the amount of potable resources saved through the use of reclaimed water for new water supply development projects, or the offset provided to the source of water utilized by the applicant for new water resource development projects; and

(g) The use of the reclaimed water must be in the ownership or control of the entity receiving the extended duration; and

(h) A project shall be considered new when completed and operational during the term of the permit and after the effective date of this rule.

Rulemaking Authority 373.044, 373.103, 373.113, 373.171 FS. Law Implemented 373.103, 373.171, 373.219, 373.223, 373.227, 373.236, 373.250 FS. History–New 10-5-74, Amended 12-31-74, 10-24-76, 1-6-82, 3-11-82, Formerly 16J-2.13, Amended 10-1-89, 7-28-98, 1-1-03, 1-1-07, 2-13-08, 12-30-08, 6-30-10, 1-1-13, 5-19-14, 9-29-15,_____.

40D-2.331 Modification of Permits.

(1) A permittee may seek modification of any of the terms and conditions of an unexpired permit except when the sole purpose is to modify the expiration date. Notwithstanding, a permittee may seek modification for the sole purpose of modifying the expiration date if it is pursuant to subsection 40D-2.321(5), F.A.C, 40D-2.331(3), F.A.C., or when a public water supply permittee achieves demonstrable savings attributable to implementation of a water conservation plan pursuant to Sections 2.4.8.6 and 2.4.8.7 of the Applicant's Handbook. A permit expiration date may also be modified upon request and documentation by the permittee, if the modification application is deemed by the District to be substantial, as described in the WUP Applicant's Handbook Part B Section 1.4.11, (rev. 10/15), resulting in the modification application to (https://www.flrules.org/Gateway/reference.asp?No=Ref-05856), be processed as a renewal application with modification. A request for modification shall be reviewed in accordance with the rules in effect at the time the modification is filed.

(2) through (3) No change.

(4) A permittee may apply to extend the permit's duration through a letter modification request for up to ten years if the permittee proposes a new water supply development or new water resource development project using reclaimed water that meets the advanced waste treatment standards for total nitrogen and total phosphorous as defined in section 403.086(4)(a), F.S. (2024), during the term of its permit which results in the reduction of groundwater or surface water withdrawals or is completed to benefit a waterbody with a minimum flow or minimum water level (MFL) with an

adopted recovery or prevention strategy provided the following conditions are met:

(a) The permittee is in compliance with the permittee's consumptive use permit; and

(b) The permittee demonstrates how the quantifiable savings of the source utilized by the permittee associated with the new water supply development or water resource development project either meets water demands beyond the issued permit duration or is completed for the purpose of meeting the requirements of a prevention or recovery strategy established pursuant to Section 373.0421, F.S.; and

(c) The permittee demonstrates a reasonable-beneficial water demand for the permit's allocation through the term of the extension; and

(d) The permittee submits a compliance report that contains sufficient data to maintain reasonable assurance that the initial conditions for permit issuance are met at the time of application for the modification; and

(e) For water supply development projects, the permit extension shall provide only for the modification of the duration of the permit and shall not be used to change the source of the allocation or increase the quantity; and

(f) For water resource development projects, the permit extension shall provide for the modication of the duration of the permit and shall not be used to change the source of the allocation, but may be used to increase the quantity to no more than the new water resource development project offset. Nothing in this paragraph shall be construed to authorize the use of groundwater where otherwise restricted by rule or law; and

(g) Multiple permit extensions may be requested to reflect quantifiable potable water offsets that produce significant water savings over the term of the permit. However, in no case shall the cumulative duration of all extensions exceed ten years from the original permit expiration date; and

(h) The specific duration of the extension, with a minimum of one year, shall be calculated based on the quantity of potable water offsets that produce significant water savings, the project implementation timeframe, and the demonstration of water demand based on projected growth, as calculated at the time of the extension request, and

(i) The new water supply or water resource development project has been completed and is operational prior to the extension being granted or will be completed and operational during the term of the original permit; and

(j) The permittee provides documentation of the quantification of the amount of potable resources saved through the use of reclaimed water for new water supply development projects, or the offset provided to the source of water utilized by the permittee for new water resource development projects; and

(k) The use of the reclaimed water must be in the ownership or control of the entity receiving the extended duration; and

(l) A project shall be considered new when implemented during the term of the original permit and after the effective date of this rule.

Rulemaking Authority 373.044, 373.113, 373.149, 373.171, 373.216, 373.249 FS. Law Implemented 373.079(4)(a), 373.083(5), 373.171, 373.219, 373.236, 373.239 FS. History–New 10-5-74, Formerly 16J-2.14(1), Amended 10-1-89, 2-10-93, 7-29-93, 1-1-07, 8-23-07, 7-1-09, 11-2-09, 7-10-13, 5-19-14, 9-29-15, _____.

CONSENT AGENDA

July 22, 2025

General Counsel's Report: Approval of Consent Order – Environmental Resource Violations; Unauthorized Activities – Joseph A. Brown (Pasco County)

Joseph A. Brown (Mr. Brown) owns real property located at 6133 Boyette Road, Wesley Chapel, Florida 33545 (Boyette Property). In 2023, the prior owner of Boyette Property submitted an Application for Formal Determination of the Landward Extent of Wetlands and Other Surface Waters to the District. During a site visit on June 8, 2023, District staff observed wetland impacts, indicating that clearing and placement of fill in the wetlands and the 100-year floodplain occurred.

District staff communicated with the prior owner several times between June 2023 and May 2024 regarding the wetland and floodplain impacts. In April 2024, Mr. Brown's real estate representative communicated with District staff regarding Boyette Property. District staff informed Mr. Brown's representative of the outstanding compliance issues with Boyette Road and the status of the pending Application for Formal Determination of the Landward Extent of Wetlands and Other Surface Waters.

Subsequently, Mr. Brown purchased Boyette Property on May 10, 2024. District staff sent Mr. Brown a Final Notice of Unauthorized Activities Letter requiring him to submit an Environmental Resource Permit Application within sixty (60) days of the letter to address the clearing and placement of fill in the wetlands and the floodplain at Boyette Property. Although Mr. Brown and his consultant communicated briefly with District staff in 2024, communications stopped in June 2024, and an application was not submitted.

The District's Office of General Counsel ("OGC") sent a Notice of Violation letter on February 3, 2025, to Mr. Brown. After not receiving a response, OGC sent a Second Notice of Violation letter with a proposed consent order to Mr. Brown on March 6, 2025.

In resolution of this matter, Mr. Brown has agreed to the terms of the attached Consent Order, which includes a payment of $38,050.00 in penalties. Within forty-five (45) days, Mr. Brown shall submit an ERP Application to the District to address the forested wetland and floodplain impacts. Mr. Brown shall comply with and respond to any requests for additional information or clarification regarding the permit application within thirty (30) days of receiving such request. Within one-hundred twenty (120) days of submissions of the permit application, Mr. Brown will obtain District approval of the permit. Should Mr. Brown fail to meet the deadlines dictated in the Consent Order, an additional $38,050.00 in penalties shall become due immediately upon the District's demand for such.

Staff Recommendation:

1. Approve the Consent Order.
2. Authorize District staff to pursue additional enforcement measures to obtain compliance with the terms and conditions of the Consent Order, including filing any appropriate actions in circuit court against any necessary party, if necessary.

Presenter:
Taylor Greenan, Attorney, Office of General Counsel

BEFORE THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

ORDER NO. SWF 25 – ___

IN RE: JOSEPH A. BROWN
CT NO. 427513
PASCO, FLORIDA
_____/

CONSENT ORDER

Pursuant to Sections 120.57(4) and 373.083, Florida Statutes ("Fla. Stat."), this Consent Order is entered into by and between the Southwest Florida Water Management District ("District") and Joseph A. Brown ("Property Owner"), collectively referred to as "the Parties," to settle certain matters at issue between the Parties. The Parties hereby voluntarily agree to the following findings of fact, conclusions of law, and corrective actions.

FINDINGS OF FACT

1. The District is the administrative agency charged with the responsibility to conserve, protect, manage, and control the water resources within its geographic boundaries and to administer and enforce Chapter 373, Fla. Stat., and the rules promulgated thereunder as Chapter 62-330, Florida Administrative Code ("F.A.C.").

2. Property Owner owns the real property located at 6133 Boyette Road, Wesley Chapel, Pasco County, Florida 33545 ("Property"). The Property is further identified as Parcel ID No. 05-26-20-0000-01500-0000 by the Pasco County Property Appraiser.

3. The Property Owner took ownership of the Property on May 10, 2024, via Warranty Deed. MRLD LLC ("Prior Owner") previously owned the Property.

4. On February 23, 2023, Prior Owner submitted an Application for Formal Determination of the Landward Extent of Wetlands and Other Surface Waters to the District (Application No. 865711). In response to Application No. 865711, the District completed a site visit of the Property on June 8, 2023. During this site visit, District staff observed wetland impacts, indicating that clearing and placement of fill in the wetlands and the 100-year floodplain had occurred. Approximately 2.8 acres of forested wetlands were impacted which resulted in wetland impacts and historic basin storage impacts.

5. On June 28, 2023, the District sent the Prior Owner a Notice of Unauthorized Activities Compliance Letter. The Letter required the Prior Owner to submit an Environmental Resource Permit ("ERP") Application within sixty (60) days of the letter. Prior Owner did not submit an ERP Application, and the pending Petition for Formal Determination remained incomplete.

6. In April 2024, the Property Owner's real estate representative communicated with District staff regarding the Property. District staff provided the representative with information regarding the Property's outstanding compliance issues and the status of the pending Petition for Formal Determination. Then, on May 10, 2024, Property Owner took ownership of the Property via a Warranty Deed.

7. On May 29, 2024, District staff sent Property Owner a Final Notice of Unauthorized Activities Letter. The Letter informed Property Owner that clearing and placement of fill in the wetlands and the 100-year floodplain had occurred at the Property.

The Final Notice required Property Owner to submit an ERP Application within sixty (60) days of the letter.

8. As of the date of this Consent Order, the violations and activities described above have not been corrected and the Property remains in non-compliance. To date, no ERP Application has been submitted.

9. The Parties have agreed to resolve all disputed issues regarding the violations set forth above as described in this Consent Order.

CONCLUSIONS OF LAW

10. The District has jurisdiction over this matter pursuant to Chapter 373, Part IV, Fla. Stat., and Chapter 62-330, F.A.C.

11. Pursuant to Section 373.413, Fla. Stat., and Rule 62-330.020(2), F.A.C., a permit is required prior to the construction, alteration, operation, maintenance, removal, or abandonment of any regulated activity described in Chapter 373, Fla. Stat., or Rule 62-330, F.A.C., that is not otherwise exempt from permitting requirements. It is a violation of Section 373.430, Fla. Stat., to fail to obtain any permit required by Chapter 373, Part IV, Fla. Stat., or by any rule promulgated thereunder.

12. The activities described in Paragraphs 4 through 7 herein constitute the construction or alteration of a surface water management system and the filling of wetlands, as defined in the ERP Applicant's Handbook Volume I, Sections 2.0(a)(18) and (44), incorporated by reference in Rule 62-330.010(4), F.A.C.

13. The activities described in Paragraphs 4 through 7 herein are regulated activities that require an ERP pursuant to Rule 62-330.020(2), F.A.C., and are otherwise not exempt from permitting requirements.

14. The activities on the Property described herein constitute violations of Sections 373.413, Fla. Stat., 373.430(1)(b), Fla. Stat., and Rule 62-330.020(2), F.A.C.

15. Property Owner is not exempt by statute or by District rule from complying with the statutes and rules pertaining to the District's permitting process.

CORRECTIVE ACTIONS

16. Property Owner shall cease any and all activities at the Property that constitute the construction, alteration, operation, or abandonment of a surface water management system pursuant to Chapter 373, Fla. Stat., unless and until any necessary permits are obtained from the District.

17. Within forty-five (45) days of the District Governing Board's approval of this Consent Order, Property Owner shall submit an ERP Application to the District to address the forested wetland impacts and floodplain impacts at the Property.

18. Property Owner shall comply with and respond to any of the District's requests for additional information or clarification relating to the permit application within thirty (30) days of receiving such request.

19. Property Owner shall obtain District approval of a permit no later than one hundred twenty (120) days after the submittal of the permit application.

20. Property Owner shall abide by all conditions and requirements of the ERP obtained.

21. Property Owner shall owe the District a penalty of seventy-six thousand one hundred dollars ($76,100.00). Property Owner shall pay thirty-eight thousand fifty dollars ($38,050.00) of the incurred penalties by certified check or money order within thirty (30) days of this Consent Order's approval by the District's Governing Board. If mailed, the address for payment is:

Southwest Florida Water Management District
Finance Department
2379 Broad Street
Brooksville, FL 34604-6899

22. The remaining thirty-eight thousand fifty dollars ($38,050.00) shall be waived upon the timely completion of the Corrective Actions and compliance with the obligations under this Consent Order.

GENERAL PROVISIONS AND NOTICE OF RIGHTS

23. Property Owner may apply to the District for an extension of the time limits contained in this Consent Order. A request for an extension of time must be made in writing. It must be submitted to District staff and the Office of General Counsel simultaneously, no later than five (5) days before the expiration of such time limit. Only the Office of General Counsel may approve a request for an extension of time. Any purported approval of an extension of time that does not have the prior authorization of the Office of General Counsel will not constitute compliance with this provision of the Consent Order.

24. For each day of delay beyond any due date specified in this Consent Order, Property Owner shall pay to the District an additional sum of One Hundred Dollars ($100.00) per day. Property Owner shall pay this additional sum upon the District's

mailing of a demand letter to Property Owner for payment. This provision shall not be construed to preclude the District's right to undertake other administrative, civil, or criminal action as appropriate in the event any due date is not met.

25. Property Owner hereby waives any right to an administrative hearing or judicial review of the terms of this Consent Order.

26. For and in consideration of the complete and timely performance by Property Owner of the obligations under this Consent Order, the District waives its right to pursue civil or administrative action for any violation described herein. If Property Owner fails to entirely and timely perform the obligations under this Consent Order, the District retains its right to pursue civil or administrative action for any violations described herein.

27. The District hereby expressly reserves and retains the right to initiate appropriate legal action against Property Owner to prevent or prohibit the future violation of any applicable statutes, rules, or orders, except as specifically addressed in this Consent Order. Property Owner acknowledges by the execution of this Consent Order that any future violation of Chapter 373, Fla. Stat., District rules, or the terms of any permit (including such as may be modified) may subject Property Owner to criminal prosecution, administrative action, or a civil suit in which penalties of up to Fifteen Thousand Dollars ($15,000.00) per day per offense may be imposed, as provided in Section 373.129(5), Fla. Stat.

28. This Consent Order is not a license or a permit. Property Owner shall not undertake further construction without necessary District authorizations.

29. Entry of this Consent Order shall not relieve Property Owner of the duty to comply with all applicable federal, state, and local laws, regulations, and ordinances.

30. Property Owner shall allow authorized District representatives to access the properties at all reasonable times without prior notice to determine compliance with this Consent Order, Chapter 373, Fla. Stat., and District rules.

31. The terms and conditions outlined in this Consent Order may be enforced in a court of competent jurisdiction pursuant to Sections 120.69, 373.083(1), and 373.129, Fla. Stat.

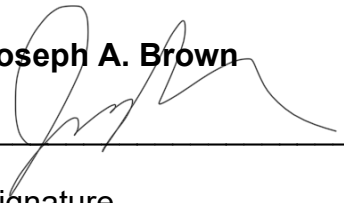
32. The effectiveness of this Consent Order is subject to review and approval by the District's Governing Board. In the event the District's Governing Board does not approve this Consent Order, this Consent Order shall be null, void, and of no legal effect.

33. No modifications of the terms of this Consent Order are effective unless reduced to writing and executed by the Parties.

34. Any person who is not a party to this Consent Order and whose substantial interests may be affected by the District's action in this Order has the right to request an administrative hearing in accordance with Sections 120.569 and 120.57(1), Fla. Stat., and to be represented by counsel or other qualified representative. Any request for a hearing must comply with the requirements set forth in Rules 28-106.104 and 28-106.201, F.A.C. Mediation under Section 120.573, Fla. Stat., is not available. A request for a hearing must be filed with (received by) the Agency Clerk at the District's Tampa Service Office, 7601 US Highway 301 North, Tampa, Florida 33637-6759, or by facsimile transmission to the Agency Clerk at (813) 367-9776, no later than twenty-one (21) days after receipt of this notice. A request for a hearing is deemed filed upon receipt of the complete request by

the Agency Clerk at the District's Service Office in Tampa, Florida. A request for a hearing received by the Agency Clerk after 5:00 p.m., or on a Saturday, Sunday, or legal holiday, shall be deemed filed as of 8:00 a.m. on the next regular District business day. These requirements are set forth in Chapter 28-106, F.A.C., and in the District's Statement of Agency Organization and Operation, which is available for viewing at www.swfwmd.state.fl.us/about/agency-statement-organization-and-operation. Failure to file a request for a hearing within the specified time period constitutes a waiver of the right to an administrative hearing.

Joseph A. Brown



Signature

06/04/2025

Date

Approved by the Governing Board of the Southwest Florida Water Management District this _____ day of _____, 2025.

By:_____
Michelle Williamson, Chair

Attest:_____
Print Name:_____

Approved as to Legal Form and Content

_____
Taylor Greenan, Esq.
Office of General Counsel

Filed this __ day of
_____, 2025.

_____
Deputy Agency Clerk

CONSENT ORDER
JOSEPH A. BROWN
CT NO. 427513
PASCO, FLORIDA

CONSENT AGENDA

July 22, 2025

Executive Director's Report: Approve Governing Board Minutes – June 24, 2025

Staff Recommendation:
Approve minutes as presented.

Presenter:
Brian J. Armstrong, P.G., Executive Director

GOVERNING BOARD MEETING
TUESDAY, JUNE 24, 2025 – 9:00 A.M.
2379 BROAD STREET BROOKSVILLE, FLORIDA 34604
(352) 796-7211

Board Members Present
John Mitten, Chair
Jack Bispham, Vice Chair
Ashley Bell Barnett, Secretary*
John Hall, Treasurer
Ed Armstrong, Member
Kelly Rice, Member
Michelle Williamson, Member
James Holton, Member
Robert Stern, Member
Nancy H. Watkins, Member*
Josh Gamblin, Member

*Attended via Electronic Media

Board Members Absent
Dustin Rowland, Member

Staff Members
Brian J. Armstrong, Executive Director
Amanda Rice, Assistant Executive Director
Chris Tumminia, General Counsel
Brian Werthmiller, Inspector General
Jennette Seachrist, Division Director
Michelle Hopkins, Division Director
Brian Starford, Division Director
Brandon Baldwin, Division Director
Michelle Weaver, Division Director

Board Administrative Support
Virginia Singer, Manager
Lori Manuel, Administrative Coordinator

1. Convene Public Meeting

The Governing Board of the Southwest Florida Water Management District (District) met for its regular meeting on June 24 at 9:00 a.m., in the Brooksville Office at 2379 Broad Street, Brooksville, Florida 34604. This meeting was available for live viewing through internet streaming. An attendance roster is archived in the District's permanent records. Approved minutes from meetings can be found on the District's website at WaterMatters.org.

1.1 Call to Order

Chair John Mitten called the meeting to order. He noted that the Board meeting was being recorded for broadcast on government access channels, and public input would be provided in person. Chair Mitten stated that anyone wishing to address the Governing Board concerning any item listed on the agenda or any item that does not appear on the agenda should complete and submit a "Request to Speak" card. He stated that comments would be limited to three minutes per speaker, and when appropriate, exceptions to the three-minute limit may be granted by the Chair. Chair Mitten also requested that several individuals wishing to speak on the same topic designate a spokesperson. He introduced each member of the Governing Board and staff present at the dais (this served as roll call). A quorum was confirmed.

1.2 Invocation and Pledge of Allegiance

Treasurer John Hall offered the invocation and the Pledge of Allegiance.

1.3 Employee Recognition
None were presented.

1.4 Additions/Deletions to Agenda
Mr. Brian Armstrong, Executive Director, stated there were no additions or deletions to the agenda.

1.5 Public Input for Issues Not Listed on the Published Agenda
Mr. David Ballard Geddis, Jr., spoke regarding the watershed boundaries.

Consent Agenda
Finance/Outreach and Planning Committee

2.1 Independent Auditing Services Contract
Staff recommended the Board:
1. Exercise the renewal option within the current contract and approve the fourth amendment to the agreement engaging JMCO to perform the FY 2024-25 auditing services; and
2. Authorize the Executive Director or designee to execute the fourth amendment to the current contract with JMCO to perform the FY2024-25 auditing services.

2.2 Adopt Resolutions to Identify New Slate of Officers for Financial Documents
Staff recommended the Board:
1. Authorize the new slate of officers to apply their signatures to the required financial documents and;
2. Adopt Resolution No. 25-05 authorizing the signatures of the newly elected officers of the Governing Board of the District and the use of facsimile or manual signatures on all warrants or checks of the District and;
3. Adopt the Truist Resolution for Deposit Account document to identify the new slate of officers as authorized signers on existing accounts and give the officers the authority to give direction or confirmation to the Bank on all matters regarding the District's deposit accounts and;
4. Adopt the Truist Corporate Resolution document to identify the new slate of officers as authorized

2.3 Resolution No. 25-01 Commending Joel Schleicher for His Service as a Member of the Southwest Florida Water Management District Governing Board
Staff recommended the Board approve Resolution No. 25-01, commending Joel Schleicher for his service as a member of the Southwest Florida Water Management District Governing Board.

2.4 Governing Board Travel – Annual Environmental Permitting Summer School
Staff recommended the Board approve Governing Board travel as presented.

Resource Management Committee

2.5 FARMS – T&T Environmental, LLC – DeSoto Groves – H832 (DeSoto County)
Staff recommended the Board:
1. Approve the T&T Environmental, LLC – DeSoto Groves project for a not-to-exceed project reimbursement of $652,782 provided by the Governing Board;
2. Authorize the transfer of $652,782 from fund 010 H017 Governing Board FARMS Fund to the T&T Environmental, LLC – DeSoto Groves project fund;
3. Authorize the Assistant Executive Director to sign the agreement.

2.6 FARMS – Jim Rash, Inc. – Zoffay Road – H834 (Polk County)

Staff recommended the Board:

1. Approve the Jim Rash Inc. – Zoffay Road project for a not-to-exceed project reimbursement of $64,214 provided by the Governing Board;
2. Authorize the transfer of $64,214 from fund 010 H017 Governing Board FARMS Fund to the H834 Jim Rash Inc. – Zoffay Road project fund;
3. Authorize the Division Director to sign the agreement.

Operations, Lands and Resource Monitoring Committee

2.7 Amendment to Easement – USGS Coastal Springs Monitor Well No. CSPR-4 – SWF Parcel No. 15-020-046 (Citrus County)

Staff recommended the Board:

- Approve the Amendment to Easement and authorize the Chair and Secretary to sign on behalf of the District.
- Authorize staff to execute any other documents necessary to complete the transaction inaccordance with the approved terms.

2.8 Easement Agreement – Inverness DOT Replacement Well Site – SWF Parcel No. 19-020-129 (Citrus County)

Staff recommended the Board:

- Approve the Amendment to Easement and authorize the Chair and Secretary to sign on behalf of the District.
- Authorize staff to execute any other documents necessary to complete the transaction in accordance with the approved terms.

2.9 Management Agreement with Camp-N-Paddle for Chassahowitzka Campground and Boat Ramp – SWF Parcel No. 15-347-129X (Citrus County)

Staff recommended the Board approve the Third Amendment to the Management Agreement Between the Southwest Florida Water Management District and Camp-N-Paddle LLC.

Executive Director's Report

2.10 Approve Governing Board Minutes – May 20, 2025

Staff recommended the Board approve the minutes as presented.

A motion was made and seconded to approve the Consent Agenda. The motion carried unanimously. (Audio –00:09:20)

Finance/Outreach & Planning Committee

Treasurer John Hall called the committee to order.

3.1 Consent Item(s) Moved to Discussion - None

3.2 Recommended Annual Service Budget for Fiscal Year 2026

Mr. Brandon Baldwin, Business and Information Technology Services Director, presented a timeline for the Fiscal Year (FY) 2026 Recommended Annual Service Budget (RASB) development cycle. He summarized budget development goals from FY2022 through FY2026 proposed budget. Mr. Baldwin presented information outlining sources of funding and expenditures by category for the current and proposed budget. He reminded the Board that this was the final year the Salary and Benefits metrics will be used for budget development. He stated that staff will continue to report salaries and benefits as related to ad valorem revenue. Mr. Baldwin provided an overview of the Districtwide budget of $256 million, explaining sources

of funds and expenditures by category.

Ms. Jennette Seachrist, Resource Management Division Director, provided an overview of the proposed FY2026 division budget. She stated the proposed budget is approximately $145.6 million dollars which is an increase of approximately $24 million from FY2025. Ms. Seachrist explained the increases and decreases in the budget. She specifically addressed grant funding that was indicated in the preliminary budget in the amount of $130,000 for the Coastal and Heartland National Estuary Program (CHNEP). Ms. Seachrist stated the District will take over the water quality monitoring at a cost of $74,000 and will provide $56,000 directly to CHNEP for implementation of their program. This will save the estuary program, Charlotte County, and the taxpayers in our District approximately $187,000 per year, which could be redirected to other efforts to support the recovery of Charlotte Harbor.

Board Member Josh Gamblin asked about the timeline associated with CHNEP applying for federal matching grant funding. Ms. Seachrist stated that CHNEP's budgeting process allows for changes to funding before and after it is adopted. Mr. Gamblin asked why CHNEP has a one-year agreement versus other estuary programs that have a five-year agreement. Ms. Seachrist responded that the Office of General Counsel is coordinating with CHNEP to develop a five-year agreement.

Mr. Brian Starford, Operations, Lands and Resource Monitoring Division Director, provided an overview of the proposed FY2026 division budget. He stated the proposed budget is approximately $47 million, which is a decrease of approximately $3.4 million from FY2025. Mr. Starford explained significant increases and decreases in the budget.

Ms. Michelle Weaver, Employee, Outreach and General Services Division Director, provided an overview of the proposed FY2026 division budget. She stated the proposed budget is approximately $19 million, which is an increase of approximately $1.6 million. Ms. Weaver explained the increases and decreases in the budget.

Mr. Baldwin provided an overview of the proposed FY2026 Business and IT Services Division. He stated the proposed budget is approximately $18.4 million, which is an increase of approximately $564,000. Mr. Baldwin explained the increases and decreases in the budget.

Mr. Baldwin provided a summary of District expenditures by programs and Areas of Responsibility (AOR).

Board Member Kelly Rice commended the District on their efforts related to the budget. He suggested that consideration be given to determine what contracted services can be accomplished by District staff.

Three Request to Speak Cards were received for this item.

Ms. Jennifer Hecker, CHNEP, spoke in opposition to the amount of proposed FY2026 funding associated with CHNEP.

Ms. Brooke Langston, Big Waters Land Trust, spoke in opposition to the amount of proposed FY2026 funding associated with CHNEP.

Ms. Abbey Tyrna, Suncoast Water Keeper, spoke in opposition to the amount of proposed FY2026 funding associated with CHNEP.

Mr. Brian Armstrong, Executive Director, provided a timeline with additional information regarding the discussion related to CHNEP and responded to questions.

Board Member Kelly Rice asked if CHNEP was in agreement with the District assuming the water quality monitoring associated with their agreement. Ms. Hecker responded as long as the programmatic funding remains unchanged. Board Member Rice asked if there was consideration to provide CHNEP with the preliminary funding amount and then request reimbursement for the District's water quality monitoring costs. Mr. Chris Tumminia, General Counsel, expressed concerns regarding this approach. Discussion ensued.

Staff recommended the Board to authorize staff to prepare the Tentative Budget Submission for FY2026 based on the proposed budget as presented, adjusted for any modifications made by the Governing Board on June 24, changes in estimated ad valorem revenue based on the July 1 certifications of taxable value, and any additional funding provided by the state.

A motion was made and seconded to approve staff's recommendation. (Audio – 01:32:40)

Board Member Josh Gamblin moved to amend staff's recommendation to include $130,000 for the total funding agreement with CHNEP. No second was made. The motion to amend failed. (Audio – 01:32:48)

The original motion to approve staff's recommendation passed with ten votes. (Audio - 01:33:54)

3.3 Knowledge Management: Advisory Committee Policies

Ms. Robyn Felix, Communications and Board Services Bureau Chief, provided background regarding the District's four Advisory Committees. She summarized the Advisory Committee policies that were reviewed and outlined the changes that were made. The final policies will be presented for Board approval at the July meeting.

This was for information only. No action was required.

3.4 Budget Transfer Report

This was for information only. No action was required.

Resource Management Committee

Chair John Mitten called the committee to order.

4.1 Consent Item(s) Moved to Discussion – None

Operations, Lands and Resource Monitoring Committee

Board Member Robert Stern called the committee to order.

5.1 Consent Item(s) Moved to Discussion – None

5.2 Hydrologic Conditions Report

Ms. Tamera McBride, P.G., Hydrologic Data Manager, presented the Hydrologic Conditions report. She stated that the wet season started June 1 along with hurricane season. Experts predict a chance of an above-average hurricane season. Ms. McBride stated provisional rainfall data through June 22 indicates a two-inch deficit from the historic June average. The 12-month rainfall total remains above average. Ms. McBride provided information regarding rainfall, streamflow, groundwater levels, lake levels, public supply reservoirs and climate forecasts. She stated that

water supply storage systems have been in use due to drier conditions but are starting to recover. Ms. McBride stated the near-term climate forecast indicates chances of above-normal temperatures and above-normal precipitation. However, the Climate Prediction Center indicates uncertainty for future predictions as a result of the El Niño-Southern Oscillation neutral conditions.

This item was presented for information only. No action was required.

5.3 2025 Hurricane Season Preparedness

Mr. Dave Dickens, General Services Bureau Chief, presented the District's 2025 hurricane season preparedness activities. He provided a recap of the 2024 storm season, and an overview of the 2025 Atlantic Basin Hurricane Forecast. Mr. Dickens outlined the primary responsibilities of the District during emergency operations. He stated that although the District is not a first responder, it is a member of the State Emergency Response Team (SERT). This authorizes the District to provide support to the missions of the State Emergency Operations Center. Mr. Dickens provided a video that showed emergency preparedness exercises performed by the District. He outlined additional preparedness and recovery exercises completed by staff.

This item was for information only. No action was required.

Regulation Committee

Board Member James Holton called the committee to order.

6.1 Consent Item(s) Moved to Discussion – None

6.2 Denials Referred to the Governing Board

None were presented.

General Counsel's Report

7.1 Consent Item(s) Moved to Discussion – None

7.2 Affirm Governing Board Committee Actions

Staff recommended the Board affirm the actions taken by the Governing Board Committees.

A motion was made and seconded to approve staff's recommendation. The motion carried unanimously. (Audio – 02:01:03)

Committee/Liaison Reports

8.1 Industrial Advisory Committee

A written summary of the May 6 meeting was provided.

8.2 Public Supply Advisory Committee

A written summary of the May 6 meeting was provided.

Executive Director's Report

9.1 Executive Director's Report

Mr. Brian Armstrong, Executive Director, thanked the Board for the thoughtful discussions and wished everyone a happy Fourth of July.

Chair's Report

10.1 Chair's Report

Chair Mitten recognized Board Member Michelle Williamson for her tenure as the previous Chair.

Vice Chair Jack Bispham encouraged the continuing cooperation between the District and CHNEP.

Chair Mitten stated the next scheduled Board meeting is on Tuesday, July 22 at 9:00 a.m., in the Tampa office.

10.2 Employee Milestones

A written summary was provided.

Adjournment

The meeting was adjourned at 11:05 a.m.

Governing Board Meeting

July 22, 2025

3. RECOGNITION OF FORMER GOVERNING BOARD MEMBER

RECOGNITION OF FORMER GOVERNING BOARD MEMBER

July 22, 2025

Recognition of Former Governing Board Member Joel Schleicher

To honor Mr. Joel Schleicher for his term as Governing Board member, District staff will present a resolution and plaque to commemorate his service. Mr. Schleicher was appointed by Governor Rick Scott in May 2017 and served until January 2025.

Presenter:
Virginia Singer, Manager, Communications & Board Services Bureau

Governing Board Meeting

July 22, 2025

4. FINANCE/OUTREACH & PLANNING COMMITTEE

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Discussion: Consent Item(s) Moved to Discussion

Presenters:
Brandon Baldwin, Division Director, Business and IT Services Division
Michelle Weaver, P.E., Division Director, Employee, Outreach and General Services Division

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Discussion: Action Item: Investment Strategy Quarterly Update

Purpose

Provide quarterly update of the investment portfolio, including the current spend down projection of the Large-Scale Cooperative Funding Initiative Projects.

Background

In accordance with Board Policy, *District Investment Policy*, a quarterly investment report shall include, but not be limited to, the following:

1. A listing of individual securities by class and type held at the end of the reporting period.
2. Percentage of available funds represented by each investment type.
3. Coupon, discount, or earning rate.
4. Average life or duration and final maturity of all investments.
5. Par value and market value.
6. In addition to the standard gross-of-fee-performance reporting that is presented, net-of-fee performance will be provided by the Investment Manager.
7. A summary of District's investment strategy.
8. The year-end quarterly report ended September 30th will show performance on both a book value and total rate of return basis and will compare the results to the portfolio's performance benchmarks. All investments shall be reported at fair value per GASB standards. Investment reports shall be available to the public.

Exhibit to be provided separately.

Staff Recommendation:

Accept and place on file the District's Quarterly Investment Reports for the quarter ended June 30, 2025.

Presenter:

John F. Grady III, Managing Director, Public Trust Advisors, LLC

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Discussion: Action Item: Proposed Millage Rate and Tentative Budget Update for Fiscal Year 2026

Purpose

1. Report the results of the July 1 certifications of taxable value from the District's 16 county property appraisers and recommend adoption of a proposed fiscal year (FY) 2026 millage rate.
2. Provide an update on budget changes that have been made since the FY2026 Recommended Annual Service Budget (RASB) and request approval to submit the District's *Tentative Budget Submission* to the Executive Office of the Governor (EOG), Department of Environmental Protection (DEP), Florida Legislature, and other parties for delivery by August 1, 2025, as required by statute.

Background

In June, staff submitted the FY2026 RASB to the Governing Board for consideration. The RASB document included underlying revenue and expenditure tables, variance analysis and detailed project descriptions for all District projects. On June 24, staff provided an overview of the RASB to the Governing Board including revenues by source and expenditures by category, program, and area of responsibility. Following discussion of the budget, the Governing Board authorized staff to prepare the *Tentative Budget Submission* for FY2026 based on the RASB as presented, adjust for Governing Board actions at the June meeting, reflect the final estimated ad valorem revenue based on the July 1 certifications of taxable value, and add any additional funding provided by the state.

On July 22, staff will provide a budget update to the Governing Board including the certifications of taxable value and the proposed FY2026 millage rate for adoption, which must be certified to the county property appraisers by August 4. The proposed millage rate is the rate that will be used for Truth in Millage (TRIM) *Notices of Proposed Property Taxes*. Prior to the July 22 Governing Board meeting, staff will provide Board members with a draft of the *Tentative Budget Submission* for FY2026 for consideration to approve for submission by August 1 pursuant to s. 373.536 Florida Statutes (F.S.).

The District's FY2026 budget will be adopted in September following two public TRIM hearings. The first hearing is scheduled for September 9, 2025 at 5:01 p.m. at the Tampa Office. Written disapproval of any portion of the budget must be received from the EOG or the Legislative Budget Commission at least five business days prior to the final budget adoption hearing. The second and final hearing is scheduled for September 23, 2025 at 5:01 p.m., also at the Tampa Office.

Discussion

1. **Proposed Millage Rate for FY2026**

Staff will present the certifications of taxable value and the proposed FY2026 District millage rate, in compliance with s. 373.503, F.S., and s. 200.065, F.S. Overall taxable property values in the District increased by 7.04 percent. Of the increase, 4.17 percent is related to existing property values and 2.87 percent is related to new construction. The rolled-back millage rate, based on s. 200.065, F.S., equates to 0.1831, which is 4.1 percent less than the rate of 0.1909 adopted for FY2025. Based on the July 1 certifications of taxable value and the rolled-back millage rate, staff has reduced ad valorem revenue by $186,807 to $133,299,444. Staff will recommend the Governing Board adopt Resolution No. 25-06, *Adoption of Proposed Millage Rate for Fiscal Year 2026.*

An exhibit of the draft Resolution No. 25-06 is attached to this Item.

2. **Tentative Budget Update for FY2026**

Staff will review the proposed budget changes outlined below that have occurred since June 24. Staff requests approval of these changes, which have been incorporated in the draft of the *Tentative Budget Submission* for FY2026, as well as authorization to submit the *Tentative Budget Submission* to the EOG, DEP, Florida Legislature, and other parties for delivery by August 1, 2025, as required by statute.

Revenue Budget

- Ad valorem tax revenue decreased by $186,807 based on July 1 certifications of taxable value from the 16 county property appraisers and a rolled-back rate of 0.1831 mill.
- Use of Project Reserves increased by $186,807 to balance the budget.

Although there are no proposed changes to the expenditure budget, there are proposed revisions to the evaluation of the District grant for W526 – Coastal and Heartland National Estuary Partnership – Comprehensive Management Plan Development and Implementation that was approved in the FY2026 RASB. The evaluation reflects the District's commitment to directly perform services and tasks in addition to the direct financial assistance provided by the District grant. An exhibit of the revised evaluation is attached to this item.

An exhibit of the draft *Tentative Budget Submission* for FY2026 will be provided separately.

Staff Recommendation:

See Exhibits

1. Approve Resolution No. 25-06, *Adoption of Proposed Millage Rate for Fiscal Year 2026.*
2. Approve the budget changes presented, adjusted for any modifications made by the Governing Board on July 22, and authorize staff to submit the *Tentative Budget Submission* for FY2026.

Presenter:

Brandon Baldwin, Division Director, Business and IT Services Division

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

RESOLUTION NO. 25-06

ADOPTION OF PROPOSED MILLAGE RATE FOR FISCAL YEAR 2026

WHEREAS, the Governing Board of the Southwest Florida Water Management District (District), by authority of Article VII, Section 9(b) of the Florida Constitution, and Chapters 200 and 373, Florida Statutes, is authorized to levy ad valorem taxes on taxable property within the District; and

WHEREAS, the Governing Board of the District must advise the county property appraisers of its proposed millage rate to be levied upon all taxable property in the District subject to county taxes to be applied on the tax rolls for the year 2025, for the purpose of preparing the notice of proposed property taxes; and

WHEREAS, the Governing Board of the District must provide the county property appraisers preliminary disclosure of the maximum millage levy calculation and certify the appropriate vote was taken by the Governing Board for the proposed millage rate adopted in compliance with Section 200.065, Florida Statutes.

THEREFORE, BE IT RESOLVED, by the Governing Board of the Southwest Florida Water Management District by a vote of _____ in favor, _____ against and _____ not present:

That there is adopted a proposed District millage rate, as provided for in Sections 373.503(3) and 373.536, Florida Statutes, and in compliance with the maximum millage rate established by Section 200.065, Florida Statutes, for fiscal year 2026, to be assessed on the tax rolls for the year 2025, for the purpose of levying a uniform ad valorem tax on all taxable property in the counties within the District as certified by the county property appraisers pursuant to Section 200.065, Florida Statutes, excluding lands held by the Trustees of the Internal Improvement Trust Fund to the extent specified in Section 373.543, Florida Statutes, as follows:

District	Rolled-back Rate	Proposed Millage Rate	Percent Over Rolled-back Rate	Counties Applied To
Districtwide	0.1831	0.1831	0.00%	Charlotte, Citrus, DeSoto, Hardee, Hernando, Highlands, Hillsborough, Lake, Levy, Manatee, Marion, Pasco, Pinellas, Polk, Sarasota, Sumter

APPROVED AND ADOPTED this twenty-second day of July 2025 by the Governing Board of the Southwest Florida Water Management District.

SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT

By: _____
John Mitten, Chair

Attest:

_____
Ashley Bell Barnett, Secretary

CERTIFICATE AS TO RESOLUTION NO. 25-06

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

We, the undersigned, hereby certify that we are, Chair and Secretary, respectively, of the Southwest Florida Water Management District, organized and existing under and by virtue of the Laws of the State of Florida, and having its office and place of business at 2379 Broad Street, Brooksville, Hernando County, Florida, and that, on the twenty-second day of July 2025, at a duly called and properly held meeting of the Governing Board of the Southwest Florida Water Management District, at 7601 US Hwy 301 North, Tampa, Hillsborough County, Florida, at which meeting a majority of the members of the Governing Board were present, the resolution, which is attached hereto and which this certificate is a part thereof, was adopted and incorporated in the minutes of that meeting.

Dated at Tampa, Florida, this twenty-second day of July 2025.

SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT

By: _____
John Mitten, Chair

Attest:

_____
Ashley Bell Barnett, Secretary

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me this twenty-second day of July 2025, by John Mitten and Ashley Bell Barnett, Chair and Secretary, respectively, of the Governing Board of the Southwest Florida Water Management District, a public corporation, on behalf of the corporation. They are personally known to me.

WITNESS my hand and official seal on this twenty-second day of July 2025.

_____
Notary Public
State of Florida at Large
My Commission Expires:

Project No: W526	Coastal and Heartland National Estuary Partnership - Comprehensive Management Plan Development and Implementation
Project Category:	Water Body Protection & Restoration Planning
Areas of Responsibility:	Water Supply: ☐ Water Quality: ☒ Natural Systems: ☒ Flood Protection: ☐

Description	
Description:	This project provides funding for the Coastal and Heartland National Estuary Partnership (CHNEP), formerly known as Charlotte Harbor National Estuary Program, Annual Work Plan. The District has contributed annual funding to CHNEP since 1997 to carry out the administration and implementation of projects identified in the CHNEP Comprehensive Conservation and Management Plan (CCMP). The District also provides staff to sit on the technical, management and policy committees (Governing Board Member) promoting consistency between the District and CHNEP program objectives. In FY2026, the District will enter into a five-year agreement with Charlotte County (the Host Agency for the CHNEP) to implement projects identified in the Annual Work Plan. Funding will be contingent upon approval by the Governing Board annually.
Benefit:	This project's support of the CHNEP creates an opportunity for a cohesive effort between the District, CHNEP and other state and local agencies to implement resource management decisions and restoration activities. Additionally, this project provides the opportunity to leverage funds between the partners.
Cost:	Total project cost: $650,000 District - Direct Financial Assistance: $280,000 with $56,000 requested in FY2026 and $224,000 anticipated to be requested in future years. District - Direct Performance of Services: $370,000. The District shall directly perform the services and tasks related to the Coastal Charlotte Harbor Monitoring Network (CCHMN) Upper Charlotte Harbor, which are valued at $74,000 annually for five years.

Evaluation	
Resource Benefit:	Projects contained within the CHNEP Annual Work Plan provide opportunities for hydrologic and natural systems restoration and water quality improvements within the Peace and Myakka River watersheds and the Charlotte Harbor estuary.
Cost Effectiveness:	Project is cost effective and funding will be leveraged with other partners to implement projects identified in the Annual Work Plan.
Project Readiness:	Project is ready to begin on October 1, 2025.

Strategic Goals	
Strategic Initiatives:	- Water Quality Assessment and Planning - Water Quality Maintenance and Improvement - Conservation, Restoration and Management
Regional Priorities:	- Southern: Improve Charlotte Harbor, Sarasota Bay, Shell/Prairie/Joshua creeks.

Additional Information	
Additional Information:	Charlotte Harbor is a SWIM priority water body and was identified by the United States Environmental Protection Agency (USEPA) in 1995 as an estuary of Federal Significance and subsequently included in the National Estuary Program. The CHNEP was established in 1997 (with the District as a founding partner) to assist the region in developing a comprehensive plan for the restoration and protection of Charlotte Harbor. In 2019, the CHNEP implemented a major revision and update to its CCMP and with this update changed its formal name to the Coastal and Heartland National Estuary Partnership, thus retaining its well-known acronym, CHNEP. Partners in the CHNEP include the District, South Florida Water Management District, USEPA, Florida Department of Environmental Protection, and other state, federal and local agencies from the watershed. The goals and strategies for the Harbor are identified in the CCMP for Charlotte Harbor which provides guidance to each entity on their role to protect and restore the Harbor.

Funding

Funding Source	Prior	FY2026 Requested	Future	Total
District - Direct Financial Assistance	$0	$56,000	$224,000	$280,000
District - Direct Performance of Services	$0	$74,000	$296,000	$370,000
Total	$0	$130,000	$520,000	$650,000

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Discussion: Information Item: Knowledge Management: Fund Balance Policy

Purpose

To provide the Board with recommended modifications to the District's Fund Balance Policy and to solicit input prior to August 5, 2025.

Background

The Board Policy requires a review of the District's Fund Balance Policy every five years and approval of any modifications made thereto. The previous review was completed on May 7, 2020, and no edits were suggested at that time. During the current review process, there were no substantive changes needed, however, staff would like to make some minor changes including updating the format, making editorial changes for language clarity, updating titles, and removing any duplicate language.

Benefits

By reviewing and updating the District's Fund Balance Policy in accordance with the five-year review period, the Governing Board and management will be following the Policy.

Staff Recommendation:

This item is for the Board's information only, and no action is required.

Presenter:

Melisa Lowe, Bureau Chief, Finance Bureau

DRAFT

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Fund Balance
Document Owner: Executive Director
Approved By: Board Chair
Effective Date: MM/DD/YYYY
Supersedes: 09/29/2015

CONTENTS

PURPOSE

The District will maintain Fund Balance, as defined herein, in accordance with Governmental Accounting Standards. Fund Balance shall be reported in classifications that comprise a hierarchy based primarily on the extent to which the District is bound to honor constraints on the specific purposes for which amounts in those funds can be spent. The fund balance classifications are non-spendable, restricted, committed, assigned and unassigned.

A Fund Balance policy is adopted in order to: 1) Provide sufficient cash flow for daily financial needs; 2) Offset significant economic downturns or revenue shortfalls; 3) Provide funds for unforeseen expenditures related to emergencies; and 4) Set aside funds for long- and short-term projects. Fund balance information is used to identify the available resources to reduce property taxes, add new governmental programs, expand existing programs, repay long-term debt (where applicable) or enhance the financial position of the District, in accordance with policies established by the District's Governing Board.

SCOPE

This Policy applies to the net position of the District's governmental funds.

AUTHORITY

Governmental Accounting Standards

DEFINITIONS
N/A

STANDARDS
Governmental Accounting Standards

POLICY

A. FUND BALANCE CLASSIFICATIONS

1. Non-Spendable Fund Balance

Non-spendable fund balance includes amounts that cannot be spent because they are either (a) not in spendable form such as inventory and prepaid items; or (b) legally or contractually required to be maintained intact such as a permanent endowment fund.

2. Restricted Fund Balance

Restricted fund balance includes amounts that are restricted to specific purposes. The restrictions placed on the use of resources that identify and describe circumstances under which a need for funds arise must either be (a) externally imposed by creditors, grantors, contributors, or laws or regulations of other governments; or (b) imposed by law through constitutional provisions or enabling legislation.

3. Committed Fund Balance

Committed fund balance includes amounts that can only be used for specific purposes pursuant to constraints imposed by formal action (i.e., by resolution) of the Governing Board. Those committed amounts and their constraints cannot be altered or lifted unless the Governing Board authorizes such by taking the same formal action it imposed to commit those funds. Fund balance may be committed for such purposes including but not limited to: (a) future major maintenance and repair projects; (b) meeting future obligations resulting from unanticipated events; (c) accumulating resources pursuant to stabilization arrangements; and d) setting aside amounts for specific projects.

4. Assigned Fund Balance

Assigned fund balance includes amounts that are constrained by the District's intent to use the amounts for specific purposes but are neither restricted nor committed. The determination of assignment is delegated by the Governing Board to the Division Director of Business and Information Technology Services or, in the Director's absence, the Finance Bureau Chief. Assignment of fund balance may be: (a) made for a specific purpose that is narrower than the general purposes of the District itself; or (b) used to reflect the appropriation of a portion of existing unassigned fund balance to eliminate a projected deficit in the subsequent year's budget in an amount no greater than the projected excess of expected expenditures over expected revenues.

Assigned fund balance shall reflect management's intended use of resources as set forth in the annual budget (and any amendments thereto). Assigned fund balance may or may not be

appropriated for expenditure in the subsequent year depending on the timing of the project/reserve for which it was assigned.

5. Unassigned Fund Balance

Unassigned fund balance is the residual classification for the general fund and represents fund balance that has not been restricted, committed or assigned to a specific purpose within the general fund.

B. RESERVATION OF FUND BALANCE

1. Committed Fund Balance

The Governing Board hereby establishes the following committed fund balance reserves:

a. Economic Stabilization Fund – Reservation of fund balance to address an unexpected non-routine circumstance, such as:

   i. When the President of the U.S. or the Governor of Florida declares an emergency by executive order and the District's funds are not sufficient to continue operations for a minimum of a two-month period; or

   ii. When the Governing Board determines through adoption of a resolution that damages and/or losses have directly impacted the citizens and/or the environment within District boundaries, including structural emergencies, for which remedial action cannot wait until the next fiscal year; or

   iii. When projected ad valorem tax collections are two percent less than 96 percent of the taxable property values as certified by the District's 16 counties multiplied by the Governing Board approved millage rate. Projections are based on historical collections (e.g., due to refunds of prior year tax collections resulting from successful challenges of property assessments, county unable to sell sufficient tax certificates for unpaid property taxes).

   The amount of the fund will be equal to two months (16.7 percent) of operating expenditures based on the subsequent year's approved budget, with the amount reset at the end of each fiscal year as part of the budget adoption process. Use of the fund will require a budget amendment and resolution approved by the Governing Board. Any amounts used from the fund will be replenished within a three-year period.

b. Long-term Projects Reserve – Reservation of fund balance for the purpose of funding future water supply and water resource development and other long-term District core mission projects. The reserve amount will be adopted by resolution based on future projects as approved by the Governing Board.

2. Assigned Fund Balance

The Governing Board authorizes its delegate to establish the following assigned fund balance reserve, including but not limited to:

Short-term Projects Reserve – Assignment of fund balance for the purpose of funding alternative water supply projects, water resource development projects including facilitating agricultural resource management systems (FARMS) projects, storm-water improvement projects (water quality and flood protection), and restoration projects.

C. SPENDING ORDER OF FUND BALANCES

The District reduces restricted fund balance amounts first when both restricted and unrestricted fund balances including committed, assigned, and unassigned are available, and when expenditures are incurred for the purposes for which amounts in the restricted fund balance could be used. Regarding unrestricted fund balance, committed amounts would be reduced first, followed by assigned fund balance and then unassigned fund balance when expenditures are incurred for purposes for which amounts in any of the unrestricted fund balance classifications could be used.

D. ANNUAL REVIEW AND DETERMINATION OF FUND BALANCE POLICY

Compliance with the provisions of this policy shall be reviewed as a part of the annual financial audit and preparation of the District's Annual Comprehensive Financial Report.

DISTRIBUTION
This Policy will be stored in the designated Governing Board Policy Repository. The Finance Bureau Chief will be notified if any changes to the Policy are necessary.

REFERENCES
N/A

REVIEW PERIOD
This Policy will be reviewed every five years.

DOCUMENT DETAILS

Document Name	Fund Balance
Formerly Known As	N/A
Document Type	Policy
Author(s)	Finance Bureau Chief, Accounting Manager
Reviewing Stakeholder(s)	Office of General Counsel, Senior staff, Executive staff, Budget Manager
Document Owner Name	Brian Armstrong
Document Owner Title	Executive Director
Review Period (in days)	1825
Span of Control	Governing Board
Supersedes Date	9/29/2015
Effective Date	MM/DD/YYYY

APPROVAL

_____ _____

John Mitten Date
Chair

DRAFT

GOVERNING BOARD POLICY

Southwest Florida Water Management District

Title: Fund Balance
Document Owner: Executive Director
Approved By: Board Chair
Effective Date: MM/DD/YYYY
Supersedes: 09/29/2015

CONTENTS

PURPOSE

The District will maintain Fund Balance, as defined herein, in accordance with Governmental Accounting Standards. ~~–~~Fund Balance shall be reported in classifications that comprise a hierarchy based primarily on the extent to which the District is bound to honor constraints on the specific purposes for which amounts in those funds can be spent. ~~–~~The fund balance classifications are non-spendable, restricted, committed, assigned and unassigned.

A Fund Balance policy is adopted in order to: 1) Provide sufficient cash flow for daily financial needs; 2) Offset significant economic downturns or revenue shortfalls; 3) Provide funds for unforeseen expenditures related to emergencies; and 4) Set aside funds for long- and short~~- and short~~-term projects. ~~-~~Fund balance information is used to identify the available resources to reduce property taxes, add new governmental programs, expand existing ~~ones~~programs, repay long-term debt (where applicable) or enhance the financial position of the District, in accordance with policies established by the District's Governing Board.

SCOPE

~~Insert Scope here. Who does this Policy apply to?~~This Policy applies to the net position of the District's governmental funds.

AUTHORITY

Governmental Accounting Standards

DEFINITIONS
~~Insert terms requiring definition here. If there are no required definitions enter N/A.~~N/A

STANDARDS
~~Insert Standards here. What rules will apply to the content of this Policy?~~Governmental Accounting Standards

POLICY

A. FUND BALANCE CLASSIFICATIONS

1. Non-Spendable Fund Balance

Non-spendable fund balance includes amounts that cannot be spent because they are either (a) not in spendable form such as inventory and prepaid items; or (b) legally or contractually required to be maintained intact such as a permanent endowment fund.

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3. ~~-~~Committed Fund Balance

Committed fund balance includes amounts that can only be used for specific purposes pursuant to constraints imposed by formal action (i.e., by resolution) of the Governing Board. ~~–~~Those committed amounts and their constraints cannot be altered or lifted ~~used for any other purpose~~ unless the Governing Board ~~removes or changes the specific use~~authorizes such by taking the same ~~type of~~formal action it ~~employed~~imposed to ~~previously~~ commit those ~~amounts~~funds. ~~–~~Fund balance may be committed for such purposes including, but not limited to: (a) future major maintenance and repair projects; (b) meeting future obligations resulting from ~~a disaster~~unanticipated events; (c) accumulating resources pursuant to stabilization arrangements; and~~/or~~ d) ~~for~~ setting aside amounts for specific projects.

~~Commitment of fund balance may be made from time-to-time by resolution of the Governing Board. Commitments may be changed or lifted only by the Governing Board taking the same formal action that imposed the constraint originally (i.e., by resolution).~~

4. Assigned Fund Balance

Assigned fund balance includes amounts that are constrained by the District's intent to use the amounts for specific purposes, but are neither restricted nor committed. ~~–~~The determination of assignment is delegated by the Governing Board to the Division Director of ~~Management~~Business and Information Technology Services or, in the Director's absence, the Finance Bureau Chief. Assignment of fund balance may be: (a) made for a specific purpose that is narrower than the

general purposes of the District itself; or (b) used to reflect the appropriation of a portion of existing unassigned fund balance to eliminate a projected deficit in the subsequent year's budget in an amount no greater than the projected excess of expected expenditures over expected revenues.

Assigned fund balance shall reflect management's intended use of resources as set forth in the annual budget (and any amendments thereto). ~~–~~Assigned fund balance may or may not be appropriated for expenditure in the subsequent year depending on the timing of the project/reserve for which it was assigned.

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   i. When the President of the U.S. or the Governor of Florida declares an emergency by executive order and the District's funds are not sufficient to continue operations for ~~no less than~~ a minimum of a two month period; or

   ii. When the Governing Board determines through adoption of a resolution that damages and/or losses have directly impacted the citizens and/or the environment within District boundaries, including structural emergencies, for which remedial action cannot wait until the next fiscal year; or

   iii. When projected ad valorem tax collections are two percent less than 96 percent of the taxable property values as certified by the District's 16 counties multiplied by the Governing Board approved millage rate. ~~–~~ Projections are based on historical collections (e.g., due to refunds of prior year tax collections resulting from successful challenges of property assessments, county unable to sell sufficient tax certificates for unpaid property taxes).

   The amount of the fund will be equal to two months (16.7 percent) of operating expenditures based on the subsequent year's approved budget, with the amount reset at the end of each fiscal year as part of the budget adoption process. ~~–~~ Use of the fund will require a budget amendment and resolution approved by the Governing Board. Any amounts used from the fund will be replenished within a three-year period.

b. Long-term Projects Reserve – Reservation of fund balance for the purpose of funding future water supply and water resource development and other long-term District core mission

projects. ~~–~~The reserve amount will be adopted by resolution based on future projects as approved by the Governing Board.

2. Assigned Fund Balance

The Governing Board authorizes its delegate to establish the following assigned fund balance reserve, including but not limited to:

Short-term Projects Reserve – Assignment of fund balance for the purpose of funding alternative water supply projects, water resource development projects including facilitating agricultural resource management systems (FARMS) projects, storm-water improvement projects (water quality and flood protection), and restoration projects.

C. SPENDING ORDER OF FUND BALANCES

The District reduces restricted fund balance amounts first when both restricted and unrestricted fund balances including committed, assigned, and unassigned are available, and when expenditures are incurred for the purposes for which amounts in the restricted fund balance could be used. ~~–~~Regarding unrestricted fund balance, committed amounts would be reduced first, followed by assigned fund balance and then unassigned fund balance when expenditures are incurred for purposes for which amounts in any of the unrestricted fund balance classifications could be used.

~~D. DISBURSEMENT OF FUND BALANCE RESERVES~~

~~Disbursement of funds within the committed fund balance reserves shall be authorized by a resolution of the Governing Board and may be approved by inclusion in the approved annual budget (and amendments thereto). Disbursement of funds within the assigned fund balance reserves shall be authorized pursuant to any formal actions of the Governing Board, or any official or staff member to which the governing body has delegated authority.~~

~~E.~~D. ANNUAL REVIEW AND DETERMINATION OF FUND BALANCE POLICY

Compliance with the provisions of this policy shall be reviewed as a part of the annual financial audit and preparation of the District's ~~Comprehensive~~ Annual Comprehensive Financial Report.

DISTRIBUTION
This Policy will be stored in the designated Governing Board Policy Repository. The Finance Bureau Chief will be notified if any changes to the Policy are necessary.

REFERENCES
~~Insert References here. If there are no references enter~~ N/A~~.~~

REVIEW PERIOD
This Policy will be reviewed every five years.

DOCUMENT DETAILS

Document Name	Fund Balance
Formerly Known As	N/A
Document Type	Policy
Author(s)	Finance Bureau Chief, Accounting Manager
Reviewing Stakeholder(s)	Office of General Counsel, Senior staff, ~~and~~ Executive staff, Budget Manager
Document Owner Name	Brian Armstrong
Document Owner Title	Executive Director
Review Period (in days)	1825
Span of Control	Governing Board
Supersedes Date	9/29/2015
Effective Date	MM/DD/YYYY

APPROVAL

~~Michelle Williamson~~John Mitten Date
Chair

Item 4.5

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Submit & File: Information Item: Budget Transfer Report

Purpose

Provide the Budget Transfer Report covering all budget transfers made during the month of June 2025.

Background

In accordance with Board Policy, *Budget Authority Transfer of Funds*, all transfers approved by the Executive Director and Finance Bureau Chief under delegated authority are presented to the Finance/Outreach & Planning Committee of the Governing Board as a Submit and File Report at the next regular scheduled meeting. The exhibit for this item reflects all such transfers executed during the month of June 2025.

Staff Recommendation:

This item is for the Board's information only, and no action is required.

Presenter:

Melisa J. Lowe, Bureau Chief, Finance Bureau

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
Budget Transfer Report
June 2025

Item No.	--- TRANSFERRED FROM --- Bureau / Expenditure Category	--- TRANSFERRED TO --- Bureau / Expenditure Category	Reason for Transfer	Transfer Amount
Consistent with Original Budget Intent				
1	Operations Contracted Construction	Engineering and Project Management Contracted Construction	Funds are needed for the original budgeted purpose for construction associated with the rehabilitation of Bryant Slough Water Conservation Structure. The funds are being transferred from the Structure Operations Section to the Design and Construction Management Section for project management and oversight.	$ 500,000.00
2	Operations Consultant Services	Information Technology Other Contractual Services Cloud Software Usage Fees	Funds are needed for the original budgeted purpose to assist in the development and maintenance of the District's Comprehensive Emergency Management Plan. Per 252.365(2) F.S., the District is required to maintain an emergency preparedness and post disaster response and recovery plan. The funds are being transferred from the Operations Bureau to the Information Technology Bureau for project management now that a software solution has been identified in place of a consultant.	65,000.00
			Total Consistent with Original Budget Intent	**565,000.00**
			Total Amount Transferred	**$ 565,000.00**

This report identifies transfers made during the month that did not require advance Governing Board approval. These transfers have been approved by either the Executive Director, or designee, or the Finance Bureau Chief consistent with Budget Authority Transfer of Funds Board Policy, and are presented to the Governing Board as a Submit and File Report. This Board Policy limits transfers made for a purpose other than the original budget intent to $75,000. However, transfers made for accounting reallocation purposes consistent with original budget intent are not limited.

FINANCE/OUTREACH AND PLANNING COMMITTEE

July 22, 2025

Submit & File: Information Item: Office of Inspector General Quarterly Update – April 1, 2025 to June 30, 2025

Background and Purpose:
In accordance with the Office of Inspector General Charter Governing Board Policy, the Inspector General is required, on a quarterly basis, to update the Committee regarding work and other matters.

Staff Recommendation:
This item is for the Board's information only, and no action is required.

Presenter:
Brian Werthmiller, Inspector General, Office of Inspector General

Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
WaterMatters.org

An Equal Opportunity Employer

Bartow Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Office
78 Sarasota Center Boulevard
Sarasota, Florida 34240-9770
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Office
7601 U.S. 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

July 22, 2025

MEMORANDUM

TO: Finance/Outreach & Planning Committee
Remaining Governing Board members

FROM: Brian Werthmiller, CPA, Inspector General

SUBJECT: Office of Inspector General Quarterly Update 4/1/25 – 6/30/25

The purpose of this memo is to satisfy the Office of Inspector General (OIG) Charter Governing Board Policy regarding updates with the Finance/Outreach and Planning Committee. I am pleased to provide you the most recent quarterly update. During the quarter ending June 30, 2025:

- The OIG quarterly update for the quarter ending March 31, 2025 was submitted to the Governing Board on April 22, 2025.
- Two complaints were closed. No investigation was considered necessary by the OIG.
- A whistle-blower complaint was received. The information provided was reviewed and it was determined that the complaint did not demonstrate reasonable cause to suspect that an employee or agent of an agency or independent contractor has violated any federal, state, or local law, rule or regulation thereby creating and presenting a substantial and specific danger to the public's health, safety, or welfare or has committed an act of gross mismanagement, malfeasance, misfeasance, gross waste of public funds, or gross neglect of duty as required under the Whistle-blower's Act.
- One investigation over Fleet was closed and the following recommendation was reported to the Governing Board on May 27, 2025:
    - The District should enhance processes and procedures over maintenance expenditures to ensure amounts are in accordance with contracts, and work orders are properly recorded and supported by invoices. In addition, the District should implement controls over tires kept on hand, ensure tire purchases are in accordance with procurement policies and procedures, and ensure warranties are used when applicable.
- The OIG initiated 24 reviews per the requests of management and external government entities. Currently, the District is being audited by the Office of Program Policy Analysis and Government Accountability (OPPAGA) over the District's permitting program processes. In addition, the District is working with the Government Accountability Office (GAO) to assist GAO with their follow-up efforts regarding a report issued to the U.S. Army Corps of Engineers in January 2024 titled, Climate Change Options to Enhance the Resilience of Federally Funded Flood Risk Management Infrastructure. The GAO is looking to enhance the climate resilience of existing federally funded flood risk management infrastructure operated and maintained by local sponsors, including the District.

- The OIG Charter is required to be reviewed annually. There are no proposed changes at this time.

Office of Inspector General Performance Measures		
Performance Measures – Non-Routine	***Goal***	***Status Through 6/30/2025***
Complete follow-up to the Auditor General audit recommendation over revenue collections.	Submit to the Board by September 2025.	In progress.
Complete follow-up to the water incentives supporting efficiency (WISE) investigation recommendation.	Submit to the Board by September 2025.	In progress.
Complete follow-up to the employee reimbursements audit recommendations.	Submit to the Board by September 2025.	In progress.
Complete health/dental insurance audit.	Submit to the Board by September 2025.	On hold for OGC review.
Monitor the Office of Program Policy Analysis and Government Accountability (OPPAGA) audit and update the Board on the status of corrective actions.	Submit to the Board by September 2025.	In progress.
Performance Measures - Routine	***Goal***	***Status Through 6/30/2025***
Risk assessment and audit plan.	Submit to the Board by January 2025.	Submitted 1/28/2025
Inspector General FY 2025 Annual Report.	Submit to the Board September 2025.	Open
Updates to the Finance/Outreach & Planning Committee including IG performance measures.	Submit to the Board the month following each quarter-end.	75%

Governing Board Meeting

July 22, 2025

5. OPERATIONS, LANDS, AND RESOURCE MONITORING COMMITTEE

Item 5.1

OPERATIONS, LANDS, AND RESOURCE MONITORING COMMITTEE

July 22, 2025

Discussion: Consent Item(s) Moved to Discussion

Presenter:
Brian S. Starford, P.G., Division Director, Operations, Lands and Resource Monitoring Division

OPERATIONS, LANDS, AND RESOURCE MONITORING COMMITTEE

July 22, 2025

Discussion: Action Item: Offer for Surplus Lands – Tampa Bypass Canal (TBC-32) – SWF Parcel No. 13-001-764S (Hillsborough County)

Purpose

Recommend the Governing Board approve the Contract for Sale and Purchase included as Exhibit 1, for surplus parcel identified as TBC-32. The District received an offer to purchase the TBC-32 parcel from Bihari Kalra for $110,000. The offer reflects a price of approximately $177,419.36 per acre for approximately 0.62 acres. A general location map and site map are attached as Exhibits 2 and 3, respectively.

Background

The Tampa Bypass Canal (TBC) system runs in a linear alignment along the eastern edge of the cities of Temple Terrace and Tampa in Hillsborough County, Florida. The TBC is a component of the Four River Basins, Florida Project, formulated by the U.S. Army Corps of Engineers (USACOE) in response to severe regional flooding which occurred in west-central Florida in 1960. The TBC is designed to route water from the Hillsborough River, around the cities of Temple Terrace and Tampa, and into Tampa Bay to help prevent flooding.

In 2023, TBC-32 and other parcels along the TBC were identified as no longer necessary for continued operation and maintenance of the canal. Pursuant to Florida Statutes, this parcel was advertised in a local newspaper on November 1, 2024, November 8, 2024, and November 15, 2024.

Appraisal and Price

The TBC-32 Parcel was appraised on May 6, 2025, for $110,000 by BBG Real Estate Services, Kyle Catlett, MAI. As part of the appraisal, District staff has discussed the contracts and market activity related to this property with the appraiser and the independently considered market conditions affecting the value of the property. The highest and best use for the property is for the assembly with the adjacent residential tract to be used for accessory residential uses including buffer, water access and accessory structures. A sales summary and adjustment grid from the appraisal is attached as Exhibit 4. The full appraisal is available upon request. The property value details are summarized below:

	Total	Per Acre
Offer Amount	$110,000	$177,419.36
Appraised Value	$110,000	$177,419.36

The Buyer has not proposed any changes to the District's standard Contract for Sale and Purchase. The District's title to the property includes the subsurface rights. Upon the request of a buyer and in accordance with Section 270.11(3), Florida Statutes the District may release its interest in all phosphate, minerals, metals, and petroleum that may be in, on or under the property.

The current offer being presented to the Governing Board is from the adjacent owner and meets the District's minimum price for sale of surplus property and if accepted will be accompanied by a five percent (5 percent) good faith deposit. The contract details are summarized below:

Sale Terms

- The District will deliver title to the Buyer by Quit Claim Deed.
- The Buyer will make a deposit of five percent (5 percent) of the contract price or $5,500 with a closing to occur no more than 60 days after the effective date of the Contract for Sale and Purchase.
- The Buyer will bear all expenses of the transaction except for the appraisal and advertising costs.

Benefits/Costs

The sale of surplus lands will allow the District to acquire lands that are more environmentally significant. Funds derived from the sale of surplus land may only be used for the purchase of other lands meeting the criteria in Section 373.139, Florida Statutes, resulting in more effectively meeting the District's core mission.

Staff Recommendation:

- Accept the offer of $110,000; and
- Approve the Contract for Sale and Purchase and authorize the Executive Director to sign on the behalf of the District; and
- Authorize the Chairman and Secretary of the Governing Board to execute the Quit Claim Deed; and
- Authorize the conveyance of the District's interest in all phosphate, minerals, metals, and petroleum in or on or under the land upon the request of the Buyer; and
- Authorize staff to execute any other documents necessary to complete the transaction in accordance with the approved terms.

Presenter:

Mike Singer, Real Estate Services Manager, Land Resources Bureau

Exhibit 1

CERTIFIED MAIL
9589 0710 5270 2005 4562 16

CONTRACT FOR SALE AND PURCHASE

THIS Contract for Sale and Purchase ("Contract") is made this 20th day of MAY, 2025, by and between the Southwest Florida Water Management District, a public corporation of the State of Florida, having an address of 2379 Broad Street, Brooksville, Florida 34604 ("District"), and Bihari Kalra, having an address of 85 Huron Avenue, Tampa, Florida 33606 ("Buyer"), as follows:

1. **AGREEMENT TO SELL**: The District hereby agrees to sell, and Buyer hereby agrees to buy, in accordance with this Contract, the real property that is more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference ("Property").

2. **TIME FOR ACCEPTANCE**: Upon execution of this Contract by Buyer, Buyer's offer shall be binding for Ninety (90) days after such execution by Buyer. If this Contract is not executed by the District on or before Ninety (90) days after execution of this Contract by Buyer, Buyer's offer contained in this Contract is withdrawn and this Contract shall terminate.

3. **EFFECTIVE DATE:** The effective date of this contract shall be the date of execution by the District.

4. **APPROVAL**: This Contract is subject to approval by the District's Governing Board. If the District's Governing Board does not approve this Contract and all the terms and conditions hereof, the District will notify the Buyer in writing and this Agreement shall terminate.

5. **PURCHASE PRICE**: The total purchase price for the Property shall be One Hundred Ten Thousand dollars ($110,000.00), which shall be paid in the following manner:

a. **Deposit**: Concurrent with the execution by Buyer of this Contract, Buyer shall deposit five percent (5%) of the purchase price in the form of a certified or cashier's check from a financial institution as defined in Section 655.005, Florida Statutes ("F.S."), made payable to the escrow agent for closing designated by the District, as earnest money ("Deposit"). In the event this Contract is terminated under Paragraphs 2, 4, or 11 of this Contract the District shall return the Deposit to the Buyer.

b. **Balance**: The balance of the purchase price shall be paid at the time of closing by wire transfer from a financial institution as defined in Section 655.005, F.S., to the closing agent designated by the District.

6. **CLOSING, EXPENSE AND POSSESSION**: This Contract shall be closed no later than Sixty (60) days from the effective date referenced in Paragraph 3, unless this Contract is terminated pursuant to Paragraphs 2 or 4. The following are additional details of closing:

a. **Time and Place**: The date, time and place of closing shall be set by the District.

b. **Conveyance**: At closing, the District will deliver to Buyer a fully executed quit claim deed, conveying the Property and improvements in "AS IS, WHERE IS CONDITION," without warranties or representations.

c. **Expenses**: Buyer shall be responsible for paying all closing costs associated with the Property including, but not limited to, Buyer's survey costs, documentary stamp tax on the deed, recording fees, abstract or title insurance fees, and Buyer's attorneys' fees. The District has designated Meridian Title Co., Inc., having an address of 37837 Meridian Ave., Suite 100, Dade City, FL 33525 as the escrow agent for closing. The Buyer shall pay any costs charged by such company or agent for this closing service. If Buyer obtains a survey of the Property, nothing contained therein shall affect the purchase price or terms of this Contract.

7. **REAL ESTATE TAXES, EASEMENTS, RESTRICTIONS, AND ENCUMBRANCES**: Buyer agrees to take title to the Property subject to any outstanding taxes, special liens or assessments including real estate taxes, if any; comprehensive land use plans, zoning, restrictions, prohibitions and other requirements imposed by governmental authority; restrictions, qualifications and matters appearing on the plat or otherwise common to the subdivision, restrictive covenants, public utility easements and all outstanding easements, reservations and other interests.

8. **CONDITION OF THE PROPERTY**: Buyer agrees to accept the Property in "AS IS, WHERE IS CONDITION." The District makes no warranties or representations whatsoever as to the condition of the Property or the improvements located thereon, or the fitness of either for any particular use or purpose.

9. **EVIDENCE OF TITLE:** Buyer may, at Buyer's expense, obtain evidence of title. Buyer understands that District may only convey title by Quit Claim Deed and Buyer agrees that this will not be an objection to title.

10. **SURVEY:** If the Buyer chooses to obtain a survey of the Property, the Buyer agrees to provide the District with a certified copy of the survey.

11. **DEFAULT**: If Buyer fails to close within Sixty (60) days from the effective date referenced in Paragraph 3, the District shall retain the Deposit, this Contract shall terminate, and the District and Buyer shall be relieved of all rights and obligations under this Contract. If the District fails to deliver the quit claim deed to Buyer within Sixty (60) days from the effective date referenced in Paragraph 3, the District shall return the Deposit to Buyer, this Contract shall terminate, and Buyer and the District shall be relieved of all rights and obligations under this Contract.

12. **ATTORNEYS' FEES AND COSTS**: In any claim or controversy arising out of or relating to this Contract, each party agrees to bear its own attorney fees and costs.

13. **NOTICES**: All notices will be in writing and may be delivered by mail, overnight courier, or personal delivery. The parties agree to send all notices to the addresses specified in the introductory clause; and as to the District, such notice will be sent to the attention of its Office of General Counsel. Notice is effective upon receipt.

14. **SUCCESSORS**: Upon execution of this Contract by Buyer, this Contract shall be binding upon and inure to the benefit of Buyer, Buyer's heirs, successors, or assigns.

15. **RECORDING**: Neither this Contract nor any notice of it may be recorded in any county by any person.

16. **ASSIGNMENT**: This Contract shall not be assigned by Buyer without the prior written consent of the District.

17. **TIME OF ESSENCE**: Time is of the essence in the performance of this Contract.

18. **AMENDMENTS**: This Contract contains the entire agreement and all representations of the parties. No amendment will be effective except when reduced to writing signed by all parties. Notwithstanding the foregoing, the parties acknowledge that the description of the Property is without the benefit of a current survey. The parties agree that if, in the opinion of the District, it becomes necessary to amend the description to correct errors, to more properly describe the Property, or to otherwise revise the description of the Property, the description to be used in the survey (if any) and in the closing instruments required by this Contract for the Property shall be revised by or at the direction of the District and shall be subject to the final approval of the District. Anything to the contrary hereinabove notwithstanding, such a revision of the description of the Property shall not require a written amendment to this Contract. In such event, the District's execution and delivery of the closing instruments containing the revised description and the Buyer's acceptance of said instruments and of the final survey (if any) containing the revised description shall constitute a full and complete ratification and acceptance of the revised description of the Property by the parties.

19. **SURVIVAL**: Paragraphs 6c, 7, and 13 of this Contract will survive delivery and recording of deed and possession of the Property.

20. **ELECTRONIC/FACIMILE SIGNATURE**: The District agrees that this Agreement may be executed by the Buyer by electronic signature in a manner that complies with Chapter 668, F.S. This Agreement and any documents relating to it may be executed and transmitted to any other party by facsimile, which facsimile shall be deemed to be, and utilized in all respects as, an original, manually executed document.

21. **MINERAL RIGHTS**: The Buyer, by signature of this Agreement, hereby requests that all mineral interests owned by the District in the Property be transferred to the Buyer as provided in Section 270.11(3), F.S.

22. **DOCUMENTS:** The following documents are attached and made a part of this Agreement. In the event of a conflict of contract terminology, priority will first be given to the language in the body of this Agreement.

Exhibit "A" Legal Description

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

IN WITNESS WHEREOF, the parties have caused the Contract to be executed on the day and year set forth below.

DISTRICT:

Southwest Florida Water Management District, a public corporation of the State of Florida

By: _____

Print Name: _____

Title: _____

Date: _____

BUYER:

By: Bhkalra
BIHARI KALRA
(Signature)

Print Name: _____

Title: OWNER

Date: 5-20-2025

By: _____
(Signature)

Print Name: _____

Title: _____

Date: _____

EXHIBIT A – LEGAL DESCRIPTION

Legal Description Parcel 13-001-764S

A parcel of land lying and being in Section 23, Township 29 South, Range 19 East, Hillsborough County, Florida, all the following described land lying above the Mean High-Water line, and above the shoreline as established by the Tampa Port Authority, being more particularly described as follows:

Commence at the Northeast corner of the Southwest 1/4 of the Northeast 1/4 of Section 23, Township 29 South, Range 19 East; Thence along and coincident with the east line of said Southwest 1/4 of the Northeast 1/4 of Section 23, South 00° 13' 00" West (being the basis of bearings for this description), a distance of 344.18 feet; Thence leaving said east line, South 89° 51' 20" West, a distance of 318.60 feet to the Southeast corner of that certain parcel of land as described in official records book 22563, page 1093, of the public records of Hillsborough County, Florida; Thence along and coincident with the south line of said parcel, South 89° 51' 20" West, a distance of 335.50 feet to the Southwest corner of said parcel; Thence along and coincident with the west line of said parcel, North 00° 45' 20" East, a distance of 219.44 feet to a point on the Tampa Bypass Canal Right of Way, said point also being the POINT OF BEGINNING; Thence leaving said Canal Right of Way, North 00° 45' 20" East along and coincident with the northerly extension of the west line of said certain parcel described in official records book 22563, page 1093, a distance of 120.00 feet more or less to the approximate Mean High Water line; Thence along and coincident with said Mean High Water line the following three (3) courses, 1) South 89° 52' 58" East, a distance of 50.00 feet, 2) South 84° 03' 39" East, a distance of 160.00 feet, 3) North 86° 10' 54" East, a distance of 31.69 feet to a point of intersection with the northerly extension of the east line of said certain parcel described in official records book 22563, page 1093; Thence along and coincident with the northerly extension of said east line, South 21° 35' 29" East, a distance of 93.73 feet to the northeast corner of said certain parcel described in official records book 22563, page 1093, said point being on the Tampa Bypass Canal Right of Way also being a non-tangent curve to the right; Thence 220.75 feet along the arc of said non-tangent curve to the right, having a radius of 1375.00 feet, a central angle of 09° 11' 55", chord bearing and distance of South 85° 16' 32" West, 220.51 feet; Thence South 89° 52' 29" West, a distance of 57.08 feet to the POINT OF BEGINNING.

Approved for use by the Survey Section 10-24-2024, W.O. 25-005

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Exhibit 2
Tampa Bypass Canal
SWF Parcel No. 13-001-746S, Surplus ID TBC-32 Location Map

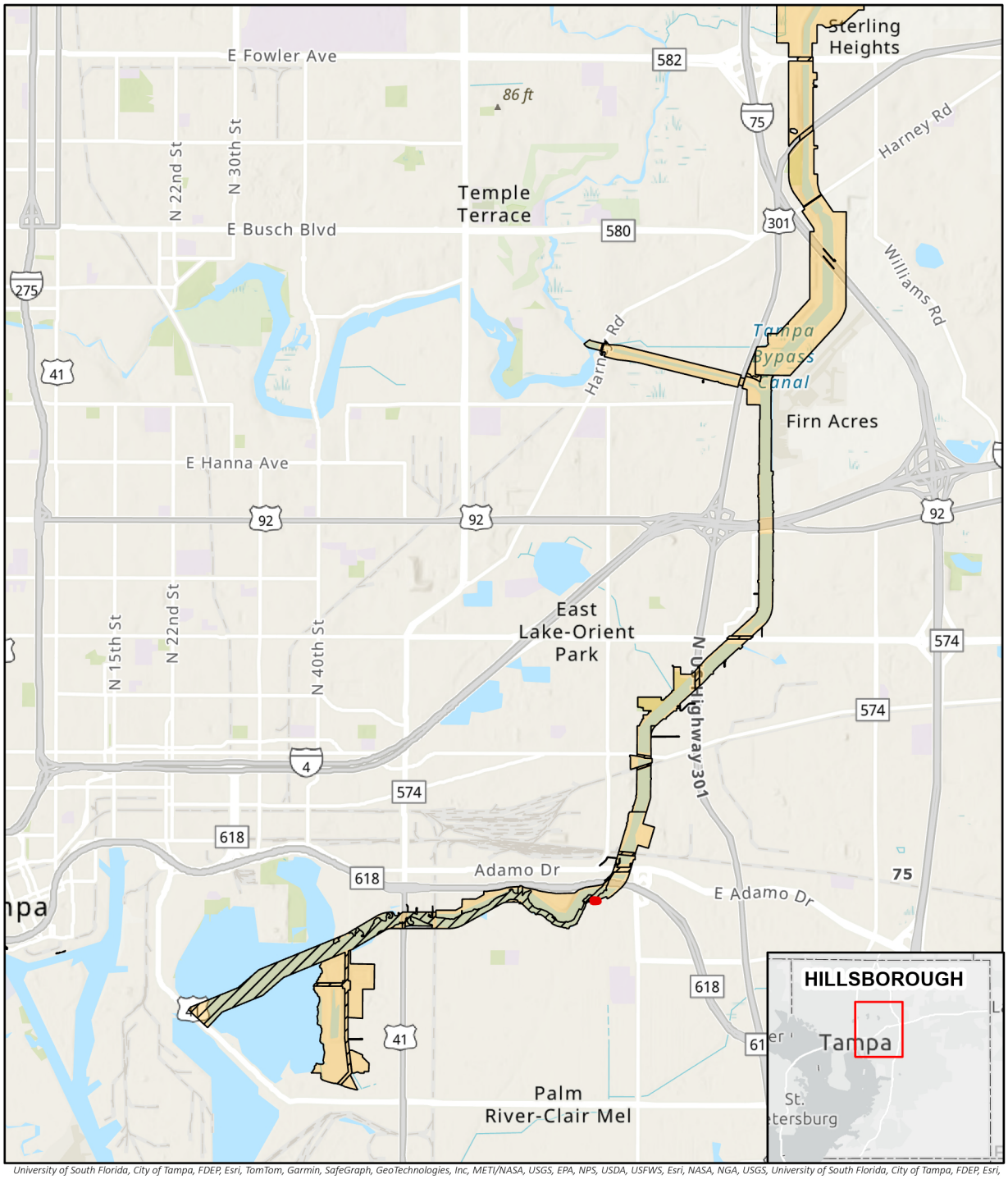
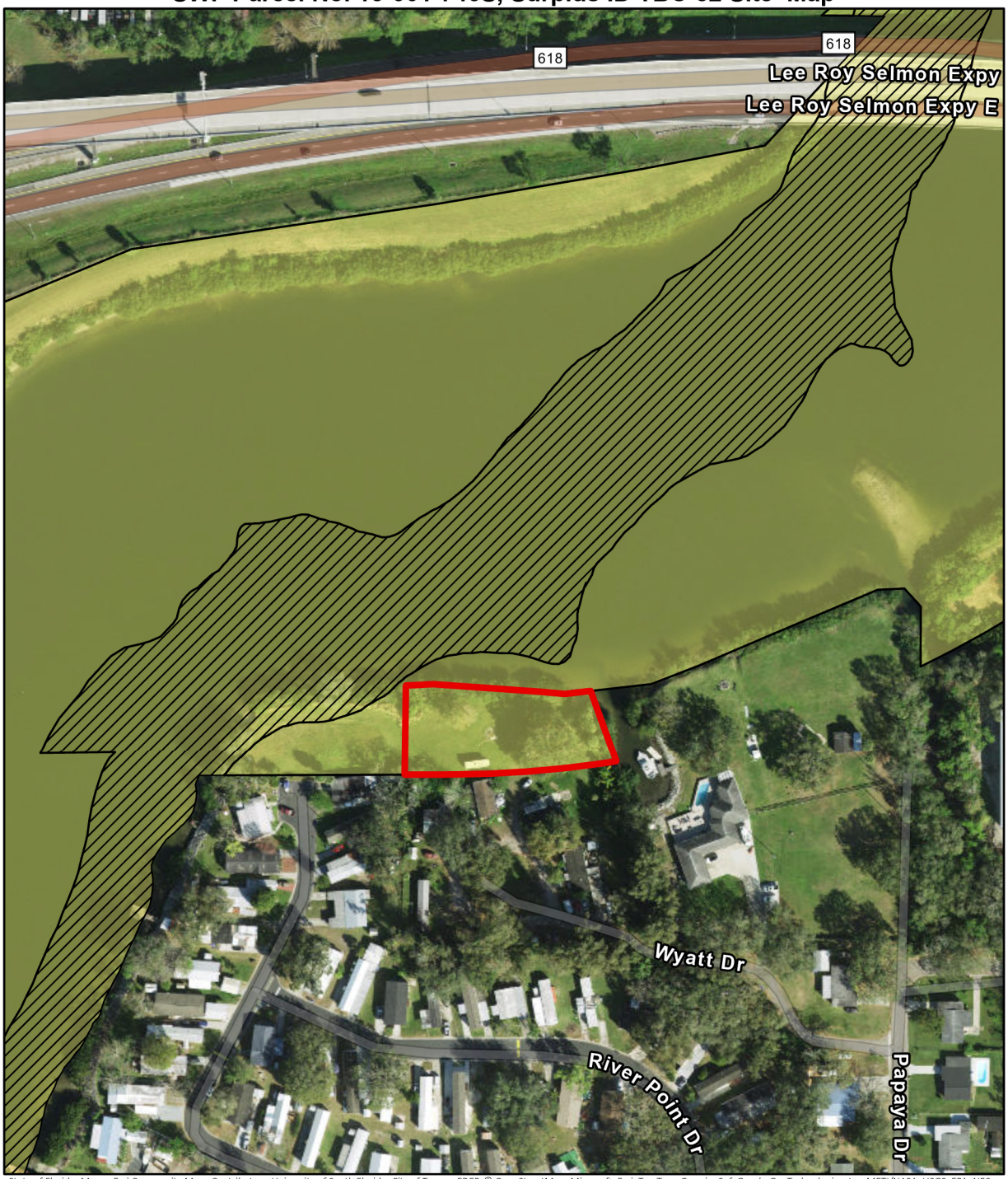


Exhibit 3
Tampa Bypass Canal
SWF Parcel No. 13-001-746S, Surplus ID TBC-32 Site Map



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SWF Parcel No. 13-001-746S
District Owned Lands Fee Simple
District Owned Land Easements

0 100 200
Feet

N

Southwest Florida Water Management District

COMPARABLE LAND SALES ADJUSTMENT GRID

COMPARABLE LAND SALE ADJUSTMENTS							
	Subject	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6
Property / Location	SWF Parcel No. 13-001-764S (TBG32) 300 River Bay Drive Tampa, Florida	Land Sale 11408 Jefferson Road Thonotosassa, FL	Land Sale 1117 West River Drive Temple Terrace, FL	Waterfront Lot 13304 Waterford Run Drive Riverview, FL	Land Sale 1115 West River Drive Temple Terrace, FL	Waterfront Lot 4703 Garden Lane Tampa, FL	Waterfront Lot 6106 River Nook Drive Tampa, FL
Transaction Status		Closed	Closed	Closed	Closed	Closed	Closed
Date of Sale		Apr-24	Jun-23	May-23	Jan-23	TBD	Apr-22
Site Size (SF)	27,007	10,019	26,136	36,590	9,148	43,996	35719
Sale Price		$62,000	$200,000	$125,000	$70,000	$201,300	$125,000
Less: Contributroy Value of Improv.		$10,000	$0	$0	$0	$0	$0
Residual to Land		$52,000	$200,000	$125,000	$70,000	$201,300	$125,000
Unadjusted Price per SF (Gross)		$6.19	$7.65	$3.42	$7.65	$4.58	$3.50
Transactional Adjustments							
Property Rights Conveyed	*Fee Simple*	*Fee Simple*	*Fee Simple*	*Fee Simple*	*Fee Simple*	*Fee Simple*	*Fee Simple*
Financing Terms	*Cash to Seller*	*Cash to Seller*	*Cash to Seller*	*Cash to Seller*	*Cash to Seller*	*Cash to Seller*	*Cash to Seller*
Conditions of Sale	*Arm's Length*	*Arm's Length*	*Arm's Length*	*Arm's Length*	*Arm's Length*	*Arm's Length*	*Arm's Length*
Market Conditions	*May-25*	*Apr-24*	*Jun-23*	*May-23*	*Jan-23*	*Oct-22*	*Apr22*
Adjustment		2%	4%	4%	5%	6%	6%
Adjusted Price per SF (Gross)		$6.31	$7.96	$3.55	$8.03	$4.85	$3.71
Property Adjustments							
Neighborhood	*Tampa*	*Similar* 0%	*Superior* -5%	*Superior* -5%	*Superior* -5%	*Similar* 0%	*Similar* 0%
Size (Gross SF)	*27,007*	*10,019* -7%	*26,136* 0%	*36,590* 3%	*9,148* -7%	*43,996* 3%	*35,719* 3%
Access / Visibility	*Papaya Dr*	*Jefferson Road* 0%	*W River Drive* 0%	*Waterford Run Dr* 0%	*Wilkins Road* 0%	*Garden Lane* 0%	*River Nook Drive* 0%
Topography	*The subject is relatively level and predominately cleared of natural vegetation with frontage on the Bypass Canal*	*100% uplands* 0%	*100% uplands* 0%	*38% uplands* 5%	*100% uplands* 0%	*100% uplands* 0%	*50% uplands* 3%
Flood Zone	*Zone AE*	*Zone X* -5%	*Zone AE* 0%	*AE* Zone AE	*Zone AE* 0%	*Zone X (Shaded)* -5%	*Zone X (Shaded)* -5%
Water Frontage	*210 ' on Bypass Canal*	*80' on Tampa Bypass Canal* 3%	*237' on Tampa River* 0%	*103' on Alafia River* 3%	*103' on Tampa River* 3%	*206' on Bypass Canal* 0%	*75' on Hillsborough River* 3%
Total Property Adjustments		-9%	-5%	6%	-9%	-2%	4%
Indication for Subject per SF		$5.74	$7.56	$3.77	$7.31	$4.75	$3.86

ADJUSTMENT PROCESS

The sales that we have utilized represent the best available information that could be compared to the subject property. The major elements of comparison for an analysis of this type include the property rights conveyed, the financial terms incorporated into a particular transaction, the conditions or motivations surrounding the sale, changes in market conditions since the sale, the location of the real estate, its physical traits and the economic characteristics of the property.

Governing Board Meeting

July 22, 2025

6. RESOURCE MANAGEMENT COMMITTEE

RESOURCE MANAGEMENT COMMITTEE

July 22, 2025

Discussion: Consent Item(s) Moved to Discussion

Presenter:
Jennette M. Seachrist, P.E., Division Director, Resource Management Division

Governing Board Meeting

July 22, 2025

7. REGULATION COMMITTEE

REGULATION COMMITTEE

July 22, 2025

Discussion: Consent Item(s) Moved to Discussion

Presenter:
Michelle Hopkins, P.E., Division Director, Regulation Division

Governing Board Meeting
July 22, 2025

8. GENERAL COUNSEL'S REPORT

Item 8.1

GENERAL COUNSEL'S REPORT

July 22, 2025

Discussion: Consent Item(s) Moved to Discussion

Presenter:
Christopher A. Tumminia, General Counsel, Office of General Counsel

Item 8.2

GENERAL COUNSEL'S REPORT

July 22, 2025

Discussion: Action Item: Affirm Governing Board Committee Actions

The Governing Board has established four committees for conducting District business: the Finance/Outreach & Planning Committee; the Operations, Land, & Resource Monitoring Committee; the Regulation Committee; and the Resource Management Committee. Each committee is a committee of the whole with all Governing Board members serving as committee members.

The Governing Board, sitting as a committee, considers and takes action on discussion agenda items during each Governing Board meeting. In order to clarify for the record that the Governing Board has taken action, the actions taken by the committees will be presented to the Board for affirmation

Staff Recommendation:
Affirm the actions taken by the Governing Board Committees.

Presenter:
Christopher A. Tumminia, General Counsel, Office of General Counsel

COMMITTEE/LIAISON REPORTS

July 22, 2025

Discussion: Information Item: Agricultural and Green Industry Advisory Committee

Staff Recommendation:
This item is for the Board's information only, and no action is required.

Presenter:
Dustin Rowland, Board Member

EXECUTIVE DIRECTOR'S REPORT

July 22, 2025

Discussion: Information Item: Executive Director's Report

Staff Recommendation:
This item is for the Board's information only, and no action is required.

Presenter:
Brian J. Armstrong, P.G., Executive Director

CHAIR'S REPORT

July 22, 2025

Discussion: Information Item: Chair's Report

Staff Recommendation:
This item is for the Board's information only, and no action is required.

Presenter:
John Mitten, Chair

CHAIR'S REPORT

July 22, 2025

Discussion: Information Item: Employee Milestones

Staff Recommendation:
This item is for the Board's information only, and no action is required.

Presenter:
John Mitten, Chair

Years of Service	Seniority Date	Preferred Full Name	Position Title	Office Location	Bureau	Anniversary Year	Next Milestone
5	07/06/2020	Joshua Valentine	Business Support Specialist	Brooksville	Natural Systems Restoration	2025	07/06/2025
15	07/06/2010	Cale Broom	Senior Vegetation Management Specialist	Bartow	Operations	2025	07/06/2025
15	07/06/2010	Shannon Maynard	Senior mChemist	Brooksville	Data Collection	2025	07/06/2025
15	07/06/2010	Stacy Joyner	Staff Field Technician	Tampa	Data Collection	2025	07/06/2025
15	07/12/2010	Mark Lapham	Land Survey Supervisor	Brooksville	Data Collection	2025	07/12/2025
15	07/30/2010	April Breton	Water Use Permit Bureau Chief	Tampa	Water Use Permit	2025	07/30/2025
35	07/09/1990	Joe Oros	Senior Professional Geologist/Engineer	Tampa	Water Use Permit	2025	07/09/2025
40	07/02/1985	Lori Manuel	Lead Administrative Coordinator	Brooksville	Communications and Board Services	2025	07/02/2025