



WITHLACOOCHEE REGIONAL WATER SUPPLY AUTHORITY

Board Meeting Package

November 10, 2021
3:30 p.m.

Meeting Location:

Lecanto Government Building
Room 166
3600 W. Sovereign Path
Lecanto, Florida 34461

Withlacoochee Regional Water Supply Authority

Board of Directors

Effective March 2021

Office	Board Members
Acting Chair	The Honorable Kathy Bryant
Vice Chair	The Honorable Jeff Holcomb
Treasurer	The Honorable Jeff Kinnard

Jurisdiction	Board Members
Citrus County	The Honorable Holly Davis
	The Honorable Jeff Kinnard
Hernando County	The Honorable Jeff Holcomb
	The Honorable Eliza-BETH Narverud
Marion County	The Honorable Kathy Bryant
	The Honorable Michelle Stone
	The Honorable Craig Curry
Sumter County	The Honorable Oren Miller
	The Honorable Gary Search
City of Belleview	The Honorable Gary Ernst
City of Brooksville	The Honorable David Bailey
City of Bushnell	The Honorable Dale Swain
City of Crystal River	The Honorable Ken Brown

Meeting Dates

The schedule of meetings for the 2021-2022 fiscal year are as follows:

November 10, 2021
January 19, 2022
March 16, 2022

May 18, 2022
July 20, 2022
September 21, 2022



November 1, 2021

MEMORANDUM

To: Water Supply Authority Board of Directors and Interested Parties

From: Suzannah J. Folsom, Executive Director

Subject: Withlacoochee Regional Water Supply Authority Board of Directors Meeting

The Withlacoochee Regional Water Supply Authority will hold a regular business meeting on **Wednesday, November 10, 2021 3:30 p.m., at the Lecanto Government Center Building, Room 166, 3600 Sovereign Path, Lecanto, FL 34461.**

Enclosed for your review are the following items:

- Agenda
- Minutes of September 21, 2021
- Board Package*

Please note that if a party decides to appeal any decision made by the Board with respect to any matter considered at the above cited meeting, that party will need a record of the proceedings, and for such purpose, that party may need to ensure that a verbatim record of the proceedings is made, which record includes that testimony and evidence upon which the appeal is to be based.

Enclosures

- * Copies of the Board Package are available through the Internet. Log on to www.wrwsa.org.
- On the Authority's Home Page go to the left side of the page and click on "Meetings."
 - On the slide out menu is a button for the current Board Package.
 - Click on the Board Package to download and/or print.

Driving Directions to 3600 W. Sovereign Path, Lecanto Government Building

From Brooksville:

- Go North on N. Main St. toward S. Broad St./E. Jefferson St.
- Take the 1st Left onto S. Broad St./W. Jefferson St.
- Turn Right onto US 98/Ponce De Leon Blvd.
- Turn Right onto CR 491 toward Lecanto (about 13.5 miles)
- Turn Left on W. Educational Path (traffic signal)
- Turn right at the Park onto W. Sovereign Path; continue to the right to the Lecanto Government Building

From Ocala

- Go southwest on SR 200 into Citrus County
- Turn Right onto CR 491 (stay on 491 through Beverly Hills, crossing Hwy. 486 and SR 44)
- Turn Right on Saunders Way
- Turn Left onto W. Sovereign Path; follow to Lecanto Government Building

From Bushnell

- In Bushnell, Go West on FL-48W
- Turn Right onto US 41; continue to follow US 41 N
- Continue straight onto FL 44 W/W Main St.; continue straight on SR 44
- Turn Left onto CR 491
- Turn Right onto Saunders Way
- Turn Left onto W. Sovereign Path; follow to Lecanto Government Building

From Wildwood

- Go West on SR 44W; continue on SR 44 through Inverness
- Turn Left onto CR 491
- Turn Right onto Saunders Way
- Turn Left onto W. Sovereign Path; follow to Lecanto Government Building.

LGB



**WITHLACOOCHEE REGIONAL WATER SUPPLY AUTHORITY
BOARD OF DIRECTORS MEETING**

A G E N D A

**November 10, 2021 -- 3:30 p.m.
LECANTO GOVERNMENT BUILDING -- ROOM 166
3600 W. Sovereign Path, Lecanto, Florida 34461**

At the discretion of the Board, items may be taken out of order to accommodate the needs of the Board and the public.

PAGE

1. **Call to Order** . . . Kathy Bryant, Acting Chair
2. **Roll Call** . . . Suzy Folsom, WRWSA Executive Director
3. **Introductions and Announcements** . . . Suzy Folsom, WRWSA
4. **Pledge of Allegiance** . . . Led by the Board
5. **Public Comment**
6. **Consent Agenda** . . . Kathy Bryant, Acting Chair
 - a. **Approval of Minutes** [September 15, 2021] 9
 - b. **Bills to be Paid** [October bills included; November bills provided at the meeting] 15
7. **General Counsel Services** . . . Suzy Folsom, WRWSA 17
8. **Charles A. Black Wellfield Fiscal Year 2020-21 Revenues** . . . Suzy Folsom, WRWSA 27
9. **Minimum Flows and Levels – Priority Lists and Schedules** . . . Suzy Folsom, WRWSA 29
10. **Regional Irrigation System Evaluation Project Phase V – Draft Report** . . . Suzy Folsom, WRWSA 35
11. **Attorney’s Report** . . . Rob Batsel, WRWSA Attorney 95
12. **Executive Director’s Report** . . . Suzy Folsom, WRWSA
 - a. **Lead and Copper Rule Revision Presentation** 97
 - b. **Water Use Permit Demand Summary** 99
 - c. **Water Management Information System Water Use Permit Notifications** 103
 - d. **Correspondence** 105
 - e. **News Articles** 109
13. **Other Business**
14. **Next Meeting** . . . January 19, 2022; 3:30 p.m.; Lecanto Government Building, Room 166
15. **Adjournment**

Please note that if a party decides to appeal any decision made by the Board with respect to any matter considered at the above cited meeting, that party will need a record of the proceedings, and for such purpose, that party may need to ensure that a verbatim record of the proceedings is made, which record includes that testimony and evidence upon which the appeal is to be based.

Item 6.a.

Consent Agenda

Approval of Minutes

DRAFT

WITHLACOOCHEE REGIONAL WATER SUPPLY AUTHORITY BOARD OF DIRECTORS

Minutes of the Meeting September 15, 2021

TIME: 3:31 p.m.
PLACE: Lecanto Government Building
ADDRESS: 3600 W. Sovereign Path, Room 280, Lecanto, Florida 34461

The numbers preceding the items listed below correspond with the published agenda.

1. Call to Order

Treasurer Kinnard called the Withlacoochee Regional Water Supply Authority (WRWSA) Board of Directors meeting to order at 3:31 p.m. and requested a roll call.

2. Roll Call

Ms. Suzannah Folsom, WRWSA Executive Director, called the roll and a quorum was declared present.

BOARD MEMBER PRESENT

Kathy Bryant, *Chair*, Marion County
Commissioner
Jeff Kinnard, *Treasurer*, Citrus County
Commissioner
Ken Brown, Crystal River City Councilor
Holly Davis, Citrus County Commissioner
Craig Curry, Marion County Commissioner
Gary Ernst, Belleview City Commissioner
Oren Miller, Sumter County Commissioner
Gary Search, Sumter County Commissioner
Dale Swain, Bushnell City Councilor

BOARD MEMBER(S) ABSENT

Jeff Holcomb, *Vice Chair*, Hernando County
Commissioner
David Bailey, Brooksville City Councilor
Beth Narverud, Hernando County Commissioner
Michelle Stone, Marion County Commissioner

BOARD ALTERNATE(S) PRESENT

Gordon Onderdonk, Hernando County Utilities
Director

3. Introductions and Announcements

Ms. Folsom noted that Consent Agenda 6.e. will be discussed separately to consider date change.

WRWSA STAFF PRESENT

Suzannah J. Folsom, PE, PMP, Executive Dir
Robert W. Batsel, Jr., General Counsel
LuAnne Stout, Administrative Asst.

OTHERS PRESENT

Debra Burden, Citrus Co Water Conservation Mgr
Allen Dethloff, CHA Consulting Inc.
Jody Kirkman, Marion Co Environmental Svcs Mgr
Joseph Quinn, SWFWMD Water Supply Project Mgr

(Chair Bryant and Mr. Curry entered the meeting.)

4. Pledge of Allegiance – Chair Bryant led those present in reciting the Pledge of Allegiance.

5. Public Comment – There being no members of the audience requesting to address the Board, Chair Bryant closed public comment.

6. Consent Agenda

- a. **Approval of Minutes** – The July 21, 2021 draft minutes were provided in the Board's meeting materials and recommended for approval as presented.
- b. **Public Officials Liability Insurance Policy** – Staff recommended approval of the renewal policy in the amount of \$3,098.55, and ratification of the Executive Director signing the Surplus Lines Disclosure and Acknowledgment form.

- c. **Bills to be Paid** – Staff recommended ratification of bills for August (\$24,806.59) and approval of September (\$21,550.47).
- d. **Third Quarter Financial Report** – Staff recommended acceptance of the report as presented.

Ms. Davis moved, seconded by Mr. Kinnard, to approve Consent Agenda Items 6.a., 6.b., 6.c. and 6.d., as presented. Motion carried unanimously.

- e. **Fiscal Year 2021-22 Calendar of Board Meeting Dates** – Ms. Folsom noted the recommended one change in date to a week earlier in November due to the Florida Association of Counties Legislative Conference, November 17-19, 2021. Staff recommended approval as follows: November 10, 2021; January 19, 2022; March 16, 2022; May 18, 2022; July 20, 2022; and September 21, 2022.

Mr. Swain moved, seconded by Mr. Ernst, to approve Consent Agenda Items 6.e as noted above. Motion carried unanimously.

7. Charles A. Black Wellfield – Engineering Analysis and Recommended Renewal and Replacement Fund Contribution

Mrs. Suzannah Folsom, WRWSA Executive Director, introduced Mr. Allen Dethloff, representing CHA Consulting, to present this item. At the January 20, 2021 Board meeting, the Board approved issuance of a Work Order to Reiss Engineering (now CHA Consulting) to conduct an Engineering Evaluation of the Charles A. Black Water Supply Facilities. This evaluation is completed every five years to assess the current condition of the water treatment plant and wellfield assets, estimate future renewal and replacement activities, and recommend funding levels required to maintain the renewal and replacement fund balance between \$2 million and \$3 million as per the Water Supply Contract.

Mr. Dethloff presented a slide presentation noting that CHA Consulting worked closely with WRWSA and Citrus County staff to determine the condition of the existing assets, and project the required expenditures over the next five-year period. A site visit was conducted on March 5, 2021. The projected expenditures for the coming five years are estimated as approximately \$1,100,000. The recommended amount for Citrus County to deposit into the Renewal and Replacement Fund is recommended to increase from \$180,000 to \$270,000 per year.

Mr. Kinnard said that the Citrus County is in agreement with the increase in the Renewal and Replacement Fund.

Mr. Kinnard moved, seconded by Mr. Brown, to (1) accept the updated Engineering Analysis Report by CHA Consulting; and (2) approve the increase of Citrus County's annual contribution from \$180,000 to \$270,000 to the Renewal and Replacement Fund for the next five-year period. Motion carried unanimously.

8. As-Needed Technical and Engineering Services Agreements and Work Orders

Mrs. Suzannah Folsom, WRWSA Executive Director, presented this item. At its September 2017 meeting the Board authorized the award of contracts for General Professional Engineering/Technical Services to the following firms: INTERA Incorporated, Progressive Water Resources, Reiss Engineering, Weber & Associates, and WRA. The agreements with these firms do not authorize any work; work must be authorized through the issuance of subsequent Work Orders, which must be approved by the Board. The agreements took effect October 1, 2017 and are valid for a three-year period (through September 30, 2020) and may be extended for two (2) one (1) year periods upon mutual written agreement of both parties.

Staff recommends issuance of the following one-year extension of As-Needed General Engineering/Technical Services to the following firms:

Firms (listed alphabetically)	Location
INTERA Incorporated	Gainesville, Jacksonville, Tampa
Progressive Water Resources, a Division of RESPEC Company, LLC	Sarasota, Spring Hill
CHA Consulting, Inc (Reiss)	New York, Winter Springs
WRA, LLC	Tampa, Sarasota

The Board also authorized the issuance of work orders in September 2019 to two of these firms, Reiss Engineering and Weber and Associates (closed due to retirement). These work orders have subsequently expired. In order to provide technical and engineering support on an as-needed basis in the coming fiscal year, it is necessary for one or more new work orders to be issued.

Staff recommends issuance of work orders in the amount of \$10,000 to the following firms:

Firms (listed alphabetically)	Location
INTERA Incorporated	Gainesville, Jacksonville, Tampa
Progressive Water Resources, a Division of RESPEC Company, LLC	Sarasota, Spring Hill
WRA, LLC	Tampa, Sarasota, Ft. Myers

Mr. Kinnard moved, seconded by Ms. Davis, to (1) authorize the Executive Director to issue one-year extensions of As-Needed General Engineering/Technical Services agreements as shown above through September 30, 2022 to INTERA Incorporated; Progressive Water Resources, a Division of RESPEC Company, LLC; CHA Consulting, Inc (Reiss); and WRA, LLC. (2) The Board authorize the Executive Director to issue the three work orders shown above in the amount of \$10,000 each to INTERA, PWR/RESPEC and WRA through September 30, 2022. Motion carried unanimously.

9. SWFWMD Fiscal Year 2023-24 Cooperative Funding Requests

Mrs. Suzannah Folsom, WRWSA Executive Director, presented this item. The Southwest Florida Water Management District (SWFWMD) has opened the application period for the Fiscal Year (FY) 2022-23 Cooperative Funding Initiative and applications are due by October 1, 2021. The purpose of this item is to request Board authorization to submit two cooperative funding requests to the SWFWMD, including (1) the WRWSA's Regional Water Supply Plan (RWSP) update and (2) Phase 7 of the Regional Irrigation System Audit Program.

WRWSA Regional Water Supply Plan Update

The Authority last updated its Regional Water Supply Plan in 2019. The update was co-funded by the SWFWMD. The Authority updates its Plan every five years and it was originally proposed by staff that this update be initiated in FY 2022-23 and that the Authority again request 50% co-funding from the SWFWMD.

On August 12, 2021 Authority staff met with SWFWMD staff to discuss this potential funding request and various aspects of the plan update. In that discussion, the timing of the Authority's update in relationship to the SWFWMD's update to its own RWSP for the northern region of its jurisdiction was discussed. The SWFWMD would like to have the Authority's updated Plan largely complete for consideration in their next district wide Regional Water Supply Plan update in 2025. In order to accomplish this, it was suggested that the Authority initiate its update in fiscal year 2022-23.

The work effort will include updated population projections, water demand projections, evaluation of source options and potential water supply project options. The project as proposed includes development of enhanced future water conservation savings potential. The total project funding is proposed at \$350,000, and would be divided equally between the Authority and the SWFWMD.

Regional Irrigation System Audit Program Phase 7

The Authority has conducted a regional irrigation system audit program since 2011. Participating utilities have included Citrus, Hernando and Marion counties and The Villages. The program has been funded 50/50 between the Authority and SWFWMD. The Authority's share is then split 50/50 with each participating utility. Each utility identifies the level of funding at which it desires to participate. The program targets the highest use single family residential customers identified by each utility. Participation by customers is voluntary and the irrigation system audit is conducted at no cost to the customer. The program to-date has achieved significant water savings. Outdoor lawn watering continues to be the area of greatest potential savings and continued focus on water savings in outdoor use is the consensus of the local utility conservation experts.

The Phase 7 total project budget is recommended at \$102,000. Utilities potentially participating in the proposed Phase 5 program include Citrus County (\$3,500), Hernando County (\$6,400), Marion County (\$10,500) and The Villages North Sumter County Utility Dependent District (\$1,700) and the Village Center Community Development District (\$3,400), for a total local contribution of \$25,500. The Authority would need to demonstrate to the SWFWMD the full match of \$51,000, with \$25,500 to be reimbursed by the local utilities, and the SWFWMD requested to provide matching funds in the amount of \$51,000.

As part of the application submittals, the Authority must provide a commitment to include its 50% of each project's cost in its FY 2022-23 budget. This amounts to a total of \$226,000 (\$175,000 for the RWSP Update and \$51,000 for Phase 7 of the Irrigation Audit Program) in Authority project funding. There are currently more than adequate funds available in the Authority's Water Resource Development Reserves (projected to be \$1,019,301 at the end of FY 2020-21). Funding commitment letters are included as exhibits to this item. Finally, the SWFWMD requires applicants with more than one application to rank the applications. Staff recommends the RWSP update project be ranked number one and Phase 7 of the Regional Irrigation System Audit Program be ranked second. A ranking letter is included as an exhibit in the Board's meeting.

Mr. Kinnard moved, seconded by Ms. Davis, for (1) the Board approval of the FY 2022-23 Cooperative Funding Initiative applications, with the Regional Water Supply Plan update ranked as number one for a total amount of \$350,000 and Phase 7 of the Regional Irrigation System Audit Program ranked as second for the total amount of \$102,000. This includes a commitment to fund the Authority's portion of these projects. (2) Board approval of the RWSP update requiring the Authority's FY 2022-23 budget to include \$175,000 in matching funds. These funds would come from the Water Resource Development Reserves account. The Phase 7 Regional Irrigation System Audit project requires a commitment of \$51,000 in the FY2022-23 budget. Motion carried unanimously.

10. Legislative Report

Mrs. Suzannah Folsom, Executive Director, presented this item. The Florida 2021 Legislative Regular Session ended in mid-March. Staff has prepared this update for the status of the relevant bills that passed in the session related to conservation, water supply, public procurement, environmental topics and governmental special districts. As of this update, all relevant bills have been approved by the Governor. The next Florida Legislative session will start January 11, 2022 and end March 11, 2022.

Ms. Folsom said staff will try to attend legislative delegation meetings in the region such as in Sumter County on September 29. Chair Bryant noted that Marion County's is on October 7. Mr. Kinnard said Citrus County's may be in December.

This item was provided for information only and no Board action was required.

10. Attorney's Report

For clarification, Mr. Batsel noted merger of Reiss with CHA Consulting for Item 8. **As requested by Chair Bryant, the Board was in consensus to approve one-year extension of As-Needed General Engineering/Technical Services agreement with CHA Consulting.**

11. Executive Director's Report

- a. **Water Use Permit Demand Summary** – Mrs. Folsom said that a summary and two graphs were included in the Board's meeting materials regarding Charles A. Black Wellfield pumpage is below its permit limit.
- b. **Water Management Information System Water Use Permit Notifications** – Mrs. Folsom reviewed the list of WMIS WUP notifications which is increasing in length. She noted that Citrus County will be renewing the Charles A. Black Wellfield early in 2022. They are using Jones Edmunds and Associates to assist with the permit renewal. Executive Director Suzannah Folsom attended the kickoff meeting on August 9, 2021.
- c. **Correspondence** – Items provided in the meeting materials:
 - Because water is an issue that will require informed decision making in upcoming years, we are writing to invite you to attend the first Sumter County Water School - Challenges Facing Urban Communities to be held Thursday, October 21 and Friday, October 22, 2021, 8:30 a.m. - 4:30 p.m. at the Wildwood Community Center located at 6500 Powell Road in Wildwood. Sumter County Water School is conducted by the UF/IFAS Extension Sumter County. It will provide decision makers and community leaders with science-based information on current and future water issues in Sumter County and nearby areas. This is a policy-neutral and fact-based program. Registration cost is \$35.
 - WRWSA reviewed Hernando County's 2021 Water Master Plan Update, which includes higher water use projections than the Authority's Regional Water Supply Plan, and highlights conservation efforts.
- d. **News Article(s)** – Items provided in the meeting material:
 - Citrus Chronicle – Battle for the Withlacoochee River (report spotlights poor health of Lower Withlacoochee; stakeholders called to act);
 - Citrus Chronicle – Editorial: The water is under all of us (Issue: County mulls water rules; Our Opinion: Watering restriction exemption plea shortsighted); and
 - Citrus Chronicle – Letter to the Editor: Fresh water is a vital, scarce resource.

12. Other Business

- Mr. Brown noted that the City of Crystal River will be installing electronic water meters for more accurate reporting information.
- Ms. Folsom said there is federal legislation for the Lead and Copper Rule Revision requiring utilities to identify the type(s) of piping upstream and downstream of the billing meters. It would be a good idea for Crystal river to collect that data while they are installing the new meters. She will present information in the Lead and Copper Rule Revision at the November Board meeting.

13. Next Meeting Time and Location

- Next Regular Board Meeting – November 10, 2021 at 3:30 p.m. at the Lecanto Government Building, Room 166. Note change in date to a week earlier due to Florida Association of Counties Legislative Conference, November 17-19, 2021.

14. Adjournment – Chair Bryant adjourned the meeting at 4:01 p.m.

Kathy Bryant, Chair

Suzannah J. Folsom, Executive Director

Item 6.b.

Consent Agenda

Bills to be Paid

**October bills in the meeting materials;
November bills to be provided at meeting.**

Withlacoochee Regional Water Supply Authority
3600 W. Sovereign Path, Suite 228, Lecanto, Florida 34461

Bills For Payment
10/20/2021

<u>Administrative Invoices</u>	<u>Invoice Number(s)</u>	<u>Invoice Date</u>	<u>Amount</u>
Suzannah J. Folsom, PE, Executive Director	1137	9/30/2021	\$7,112.50
Rob Batsel, General Counsel			\$0.00
C. LuAnne Stout, Admin Asst (Services)	9-Sep-21	10/2/2021	\$3,125.00
FL Dept of Economic Opportunity (Special District Fee)	84674	10/1/2021	\$175.00
Kathy Bryant (Sept Board Travel)		9/15/2021	\$36.49
Gary Ernst (Sept Board Travel)		9/15/2021	\$36.49
Dale Swain (Sept Board Travel)		9/15/2021	\$27.59
Karen Allen (Web Maintenance)	140	10/3/2021	\$150.00
Citrus Co Chronicle (Mtg Cal)	12980508	9/26/2021	\$58.13
Citrus Co / Sumter Co Times (Mtg Cal)	12980221	9/23/2021	\$56.07
Times Publishing (Mtg Cal)	184143	9/26/2021	\$80.00
FL Dept of State FAR (Mtg Cal)	25022040	9/27/2021	\$39.62
Sun Trust Business Card Statement	10.2.2021	10/2/2021	\$837.16
Total Administrative Invoices			\$11,734.05

<u>Water Supply Studies and Facilities</u>	<u>Contract/ Budget</u>	<u>Balance Remaining</u>	<u>Current Invoice(s)</u>
2021 General Services Contract	\$75,000.00	\$75,000.00	
Work Order 2021-01 INTERA Incorporated	\$10,000.00	\$7,760.00	
Work Order 2021-02 WRA	\$10,000.00	\$10,000.00	
Work Order 2021-01 CHA (Reiss) - CAB Wellfield	\$29,870.00	\$0.00	\$4,071.00 (1)
2022 General Services Contract	\$50,000.00	\$50,000.00	
Work Order 2022-01 INTERA Incorporated	\$10,000.00	\$10,000.00	
Work Order 2022-02 PWR-RESPEC	\$10,000.00	\$10,000.00	
Work Order 2022-03 WRA	\$10,000.00	\$10,000.00	
FY20-21 Water Conservation Grants Program			
Citrus County	\$45,650.00	\$45,650.00	
Hernando County	\$48,350.00	\$48,350.00	
Marion County	\$25,847.00	\$25,847.00	
Crystal River	\$9,090.00	\$9,090.00	
FY21-22 Water Conservation Grants Program			
Citrus County	\$44,250.00	\$44,250.00	
Hernando County	\$48,750.00	\$48,750.00	
Marion County	\$21,847.00	\$21,847.00	
Sumter County	\$22,000.00	\$22,000.00	
Phase 5 Irrigation Program (Q040)	\$145,000.00	\$30,981.27	
Phase 6 Irrigation Program (Q138)	\$121,200.00	\$41,718.21	\$3,890.26 (2)
Total Project Invoices	\$736,854.00		\$7,961.26

Total Bills to be Paid	\$19,695.31
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State Board of Administration	Transfer from SBA2 to SBA1	\$7,961.26
State Board of Administration	Transfer from SBA1 to SunTrust Bank	\$19,695.31

Notes:

(1) CAB Wellfield and WTF Evaluations

CHA Consulting (Reiss) \$4,071.00 Invoice 192001-05

(2) Phase 6 (Q138) - Irrigation Audits

Jack Overdorff, ECO Land Design	\$3,340.26	Invoice 469
C. LuAnne Stout, Admin Services	\$550.00	Invoice 9-Sep-Q138-2021
	<u>\$3,890.26</u>	

General Counsel Services

Mrs. Suzannah Folsom, Executive Director, will present this item.

Staff received a letter dated October 12, 2021 (attached) notifying WRWSA that Mr. Robert W. Batsel Jr. would be leaving the law firm of Gilligan, Gooding, Batsel, Anderson & Phelan P.A. to join a new firm Gooding & Batsel, PLLC on December 31, 2021. In addition the firm of Gilligan, Gooding Batsel, Anderson & Phelan P.A. will continue to practice under the new name Gilligan, Anderson & Phelan, P.A.

The letter included instructions to select one of the following options:

- I wish my file and trust account balance to be transferred to Robert W. Batsel, Jr.
- I wish my file to stay with the current firm. Please contact me and advise me if the firm is willing to do so.
- I wish some of my files to stay with the current firm, and the other files to be transferred to Robert W. Batsel, Jr. Please provide me with a list of all open files so I can designate my preference for each file.
- I will retain new counsel and have them contact the current firm.
- I wish a member of the current firm to contact me to answer questions I have.

Mr. Batsel is interested in continuing to serve as Authority General Counsel for WRWSA, if the Board chooses that option. The new firm Gooding and Batsel, PLLC will also provide legal services to the City of Inverness and the City of Crystal River. Gilligan, Anderson & Phelan, PA will continue to represent the City of Ocala.

Background: On May 15, 2019 staff issued a Request for Qualifications for General Counsel services subsequent to the Authority General Counsel Larry Hagg submitting his resignation. Three firms submitted Statements of Qualifications. The submittals were ranked and a contract was negotiated with the top ranked firm Gilligan, Gooding, Franjola & Batsel, P.A. The contract, (attached) specifies that Robert W. Batsel, Jr. will serve as the Authority General Counsel. Gilligan, Gooding, Franjola & Batsel P.A. changed its firm name to Gilligan, Gooding, Batsel, Anderson & Phelan P.A. in 2020.

The following table lists the annual amounts that WRWSA has spent on legal services in the last six fiscal years:

Fiscal Year	Legal Services
2014-2015	\$8,385
2015-2015	\$12,386
2016-2017	\$4,684
2017-2018	\$10,874
2018-2019	\$18,985
2019-2020	\$7,382

See Exhibits:

- Letter from Gilligan, Gooding, Batsel, Anderson & Phelan, P.A. dated October 12, 2021.
- General Services Contract between WRWSA and Gilligan, Gooding, Franjola & Batsel, P.A.

Staff Recommendation:

The Board should discuss the options presented and decide which option to select.

GILLIGAN, GOODING, BATSEL, ANDERSON & PHELAN, P.A.

ATTORNEYS AT LAW
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OCALA, FLORIDA 34471

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October 12, 2021

By Email: lstout@wrwsa.org;
sfolsom@wrwsa.org
Withlacoochee Regional Water Supply Authority
3600 West Sovereign Path, Suite 228
Lecanto, FL 34461

RE: Withlacoochee Regional Water Supply Authority-Multiple Matters

Dear LuAnne and Suzy,

On December 31, 2021, I will be leaving the firm of Gilligan, Gooding, Batsel, Anderson & Phelan, P.A. ("GGBAP") to join the law firm of Gooding & Batsel, PLLC. GGBAP will continue to practice under the name of "Gilligan, Anderson & Phelan, P.A." ("GAP").

Inasmuch as I am the primarily-responsible lawyer on the above matter(s), we are required by the Rules Regulating The Florida Bar to inform you that you have the right to choose to: (a) have me continue in my new capacity to represent you in such matter(s); (b) have GAP continue to represent you, in which case the file will be handled by another attorney in GAP if GAP agrees to continue to represent you; or (c) retain an entirely new lawyer. Alternatively, you may choose to have me represent you in some matters while one or more remaining members of GAP represent you in other matters.

If you wish to have me or a new lawyer continue to represent you, arrangements to secure your outstanding account with GAP will have to be made before the file can be released to me or your new lawyer. You may be liable for fees and costs for services already provided by GAP. Any retained/unspent fees or costs currently held by GAP will be promptly returned to you, or transferred to me or the new lawyer, as you designate.

Please advise me, as quickly as possible, of your decision so that continuity in your representation is assured. You may do so by indicating your choice below, and (a) if this letter was sent to you by mail, returning a signed and dated copy in the enclosed stamped envelope, or (b) if this letter was sent to you by email, returning it to the undersigned by facsimile or scan/email. If you do not respond, we will assume you want your file to remain with GAP.

Please call me if you have any questions.

Sincerely,

/s/ Robert W. Batsel, Jr. /s/

Robert W. Batsel, Jr.

INSTRUCTIONS BY CLIENT

Instructions (select ONLY one):

- ___ I wish my file and trust account balance to be transferred to Robert W. Batsel, Jr.
- ___ I wish my file to stay with the current firm. Please contact me and advise me if the firm is willing to do so.
- ___ I wish some of my files to stay with the current firm, and other files to be transferred to Robert W. Batsel, Jr. Please provide me with a list of all open files so I can designate my preference for each file.
- ___ I will retain new counsel and have them contact the current firm.
- ___ I wish a member of the current firm to contact me to answer questions I have.

Withlacoochee Regional Water Supply Authority

By: _____

Print Name: _____

Print Title: _____

Date: _____

GENERAL COUNSEL SERVICES CONTRACT
BETWEEN
WITHLACOOCHEE REGIONAL WATER SUPPLY AUTHORITY
AND
GILLIGAN, GOODING, FRANJOLA & BATSEL, P.A.

The Withlacoochee Regional Water Supply Authority, 3600 W Sovereign Path, Suite 228, Lecanto, FL, 34461 (hereinafter "AUTHORITY"), and Gilligan, Gooding, Franjola & Batzel, P.A., 1531 S.E. 36th Avenue, Ocala, FL 34471, (hereinafter "GENERAL COUNSEL") mutually agree as follows:

1. Robert W. Batzel, Jr., of the law firm Gilligan, Gooding, Franjola & Batzel, P.A., shall be appointed as AUTHORITY GENERAL COUNSEL for a term commencing September 18, 2019. Unless otherwise terminated as provided below, the AUTHORITY and GENERAL COUNSEL shall consider this Contract as a continuing agreement for professional legal services unless otherwise amended, as provided below.
2. The GENERAL COUNSEL shall serve as Chief Legal Advisor to the AUTHORITY Board of Directors and the AUTHORITY Executive Director, represent the AUTHORITY in all legal proceedings, and perform any other duties as assigned or prescribed by the AUTHORITY. The GENERAL COUNSEL may assign legal work to partners or associates of his law firm as long as all work is accomplished in accordance with the Rules of Professional Responsibility of the Florida Bar. All such work shall be billed in accordance with the schedule and procedures set forth below. The duties of the GENERAL COUNSEL shall include, but are not limited to:
 - 2.1 Reviewing and analyzing AUTHORITY legal matters, data, documents and other materials concerning the AUTHORITY and advise on legal issues and recommended course of action.
 - 2.2 Attending and participating in all meetings and workshops of the AUTHORITY Board of Directors. Providing legal advice to the AUTHORITY Board of Directors and Executive Director on matters that come before the AUTHORITY.
 - 2.3 Reviewing or drafting contracts or agreements related to the business of the AUTHORITY.
 - 2.4 In matters not involving tort litigation defense or matters for which special counsel is retained pursuant to Paragraph 2.5., below, representing the AUTHORITY in any threatened or pending litigation, which shall include, but not be limited to preparing and filing pleadings, motions or briefs, initiating and conducting discovery, and representing the AUTHORITY at trial or on appeal.
 - 2.5 Special Counsel Services. On occasion, the AUTHORITY may, upon the recommendation of the GENERAL COUNSEL or upon its own volition, decide to retain special counsel to provide representation in circumstances requiring particular expertise or situations in which a defense is provided by an insurer. On such an occasion, the GENERAL COUNSEL shall recommend special counsel and, thereafter, remain generally informed regarding the special counsel's actions, providing assistance as may be reasonably necessary or requested by the special counsel.
3. Compensation. The AUTHORITY shall compensate the GENERAL COUNSEL as follows:

3.1 Fees.

- 3.1.1 Attached as Exhibit "A" is the Schedule of Fees and Costs for services rendered or costs incurred by the GENERAL COUNSEL and by other employees of Gilligan, Gooding, Franjola & Batsel, P.A.
- 3.1.2 Billable hours shall be measured in six (6) minute increments. Compensation of attorney hours will be for actual time spent providing attorney services to the AUTHORITY.
- 3.1.3 Premium rates will not be paid for overtime work.
- 3.1.4 Attorney time while traveling to and from the AUTHORITY for Board of Directors meetings will not be compensated. Other travel time, such as traveling during the course of representing the AUTHORITY or to or from hearings and court appearances, will be compensated pursuant to the hourly rate reflected in and other provisions of Exhibit "A."

3.2 Costs.

- 3.2.1 Reimbursement for costs for such items as exhibits, transcripts and witness fees requires prior oral authorization by the AUTHORITY and shall be reimbursed based upon documented third party vendor charges. The AUTHORITY shall not pay for any firm surcharges added to third party vendor charges.
- 3.2.2 Routine expenses, such as local phone calls, local facsimile transmissions, copy work, local travel expenses within the AUTHORITY four-county area, local courier services, and clerical or secretarial services are considered overhead and will not be separately compensated. (See Exhibit "A").
- 3.2.3 Non-routine office expenses, such as long distance phone calls, long distance facsimile transmissions, long distance courier services, bulk mailings, bulk third party copying, blueprints, x-rays, photographs, and electronic legal research services, must be justified to the AUTHORITY and shall be reimbursed based upon documented third party vendor charges. If such charges are anticipated exceed \$500.00 per month, prior written approval from the AUTHORITY should be obtained. In-house bulk mailings and bulk copying expenses must be supported by usage logs or other similar documentation. Firm surcharges are not reimbursable. (See Exhibit "A").
- 3.2.4 Reimbursable costs shall not exceed \$200.00 per month without prior AUTHORITY approval when such approval is reasonably practicable. The GENERAL COUNSEL shall notify the AUTHORITY when costs reach \$150.00. Said notification shall be made as soon as is practicable and prior to the next monthly invoice.

- 3.3 Format for Invoices. Within thirty (30) days of service provision, each statement for fees and costs shall be submitted in a format that includes, at a minimum, the following information:

- 3.3.1 Case name and number, if applicable, or other legal matter reference.
 - 3.3.2 Invoice number for the particular bill.
 - 3.3.3 GENERAL COUNSEL taxpayer identification number.
 - 3.3.4 GENERAL COUNSEL and AUTHORITY contract administrator names.
 - 3.3.5 Inclusive dates of the month covered by the invoice.
 - 3.3.6 Itemization of the date; hours billed (if hourly); a concise, meaningful description of the services rendered, with sufficient detail to enable the AUTHORITY to evaluate the services rendered and costs; the person(s) who performed the services; and the hourly rate (if hourly) as specified in Exhibit "A".
 - 3.3.7 A listing of all invoiced costs to be accompanied by copies of actual receipts.
 - 3.3.8 The total of only the current bill. Prior balances or payment history should be shown separately, if at all.
 - 3.3.9 A certification statement, signed by the GENERAL COUNSEL'S contract administrator, that reads, "I certify that all costs and fees claimed for payment are accurate and were performed in furtherance of the Contract between Gilligan, Gooding, Franjola & Batsel, P.A. and the WITHLACOOCHIEE REGIONAL WATER SUPPLY AUTHORITY."
 - 3.3.10 Any other information as may be requested by the AUTHORITY's contract administrator.
- 4. **Evaluation.** The AUTHORITY shall have the opportunity to evaluate the legal services provided by the GENERAL COUNSEL annually, if requested by the Board of Directors.
 - 5. **Travel.** Any travel outside of the AUHTORITY'S four-county area on AUTHORITY business for which the GENERAL COUNSEL will request reimbursement and/or compensation from the AUTHORITY, shall be approved in advance by the AUTHORITY.
 - 6. **Termination.** The AUTHORITY may terminate this contract for convenience and without cause with thirty (30) days written notice to the GENERAL COUNSEL at any time. The GENERAL COUNSEL may terminate this contract for convenience and without cause with one hundred and twenty (120) days written notice to the AUTHORITY at any time. The AUTHORITY or the GENERAL COUNSEL may terminate this contract for cause with thirty (30) days written notice to the other party at any time when (i) the other party fails to comply with the terms of this agreement and (ii) fails to cure the default within ten (10) days of receiving written notice of such default, provided such default can be reasonably cured within this period. Upon termination under this paragraph, the AUTHORITY shall compensate the GENERAL COUNSEL all fees and costs accrued at the effective date of termination.
 - 7. **Amendment.** This Agreement may be amended at any time with the mutual consent of AUTHORITY and GENERAL COUNSEL. Amendments to this agreement must be in writing, executed by each party.

8. **Entire Understanding.** This contract represents the entire understanding and agreement between the parties with respect to the subject matter hereof, and supersedes all other statements or representations (if any) made by and between the parties.
9. **Notices.** All notices, requests, consents and other communications required or permitted under this Agreement shall be in writing (including email communication) and shall be (as elected by the person giving such notice) hand delivered by messenger or courier service, faxed, emailed, or mailed by registered or certified mail (postage pre-paid), return receipt requested, addressed to:

Robert W. Batsel, Jr.
Gilligan, Gooding, Franjola, & Batsel, P.A.
1531 S.E. 36th Avenue
Ocala, Florida 34471
rbatsel@ocalalaw.com
Fax: (352) 867-0237

Richard S. Owen
Executive Director
Withlacoochee Regional Water Supply Authority
3600 W Sovereign Path, Suite 228
Lecanto, Florida 34461
richardowen@wrwsa.org
Fax: (352) 527-5797

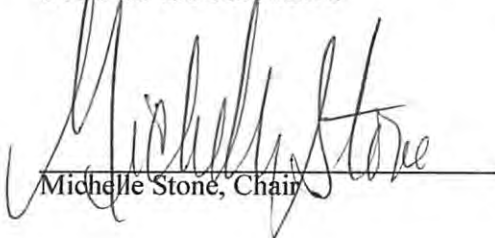
Or to such other addressees as any third party may designate by notice complying with the terms of this section. Each such notice shall be deemed delivered:

- (a) on the date delivered if by personal delivery,
 - (b) on the date faxed if by facsimile,
 - (c) on the date emailed if by email, and
 - (d) on the date upon which a return receipt is signed or delivery is refused or the notice is designated by the postal authorities as not delivered, as the case may be, if mailed.
10. **Administration of Agreement.** The AUTHORITY contract administrator shall be Richard S. Owen, Executive Director. The GENERAL COUNSEL contract administrator shall be Robert W. Batsel, Jr. All oral approvals must be obtained from a party's contract administrator or his/her designee. All notices must be given to a party's contract administrator.
11. **Severability.** Provisions contained in this Contract which are contrary to, prohibited by or invalid under applicable laws or regulations shall be deemed omitted from this Contract and shall not invalidate the remaining provisions thereof.
12. **Public Records.** Records created pursuant to this Contract may be subject to Florida's public records law with certain exceptions. Refusal of the GENERAL COUNSEL to allow public access to such records, as required by law, shall constitute grounds for unilateral cancellation of this Contract.
13. **Special Conditions.**
- 13.1 The GENERAL COUNSEL will make affirmative efforts to achieve cost effectiveness by consolidating court hearings, limiting travel, streamlining case processing, using forms, using the appropriate level of attorney or staff experience required by task, and taking other actions to improve efficiency.
 - 13.2 Multiple staff utilized at meetings, hearings, depositions, trials, etc., by the GENERAL COUNSEL will not be compensated without prior approval from the AUTHORITY.
 - 13.3 The GENERAL COUNSEL agrees that all documents shall be promptly returned at the termination of the GENERAL COUNSEL's involvement in the case or matter at hand.

- 13.4 AUTHORITY staff shall be used in each legal matter to the maximum extent possible.
- 13.5 GENERAL COUNSEL shall provide immediate notice regarding significant case developments which are likely to result in media inquiries.
- 13.6 The GENERAL COUNSEL shall provide immediate notice of any representation undertaken by the GENERAL COUNSEL in matters where the client is suing or being sued by the state or state entities in any civil or adversarial administrative action.
- 13.7 Each private attorney who is under contract to provide attorney services for the state or a state agency shall, from the inception of the contractual relationship until at least four (4) years after the contract expires or terminates, maintain detailed current records, including documentation of all expenses, disbursements, charges, credits, underlying receipts and invoices, and other financial transactions that concern the provision of such attorney invoices. The private attorney shall make all such records available for inspection and copying upon request in accordance with Chapter 119, Florida Statutes.
- 13.8 The AUTHORITY acknowledges that the GENERAL COUNSEL has advised the AUTHORITY that members of Gilligan, Gooding, Franjola & Batsel, P.A. serve as City Attorney and Assistant City Attorneys for the City of Ocala, a Florida municipal corporation ("City"). The GENERAL COUNSEL has advised the AUTHORITY that Gilligan, Gooding, Franjola & Batsel, P.A. is unable to represent AUTHORITY in any matters between the AUTHORITY and the City of Ocala. Further, the AUTHORITY has consented, in the event a conflict of interest arises between the AUTHORITY and the City of Ocala, to Gilligan, Gooding, Franjola & Batsel, P.A. withdrawing as counsel for the AUTHORITY and continuing to represent the City of Ocala in connection with that matter.
- 13.9 The AUTHORITY has been advised and understands that the hourly fee agreed upon in this Agreement is a discounted rate from the GENERAL COUNSEL's normal hourly rate, which is \$350.00 per hour for firm partners and \$250.00 per hour for associates. If the AUTHORITY is entitled to an award of attorney's fees from the opposing party and/or their attorneys during the term of this Agreement or any renewal term, GENERAL COUNSEL or the AUTHORITY shall be entitled to the greater of the GENERAL COUNSEL's standard hourly rates set forth in the section or a reasonable attorney's fee, even if such fee is greater than the amount of discounted fees paid by the AUTHORITY.

The AUTHORITY and GENERAL COUNSEL have executed this Agreement on this 18th day of September 2019.

**WITHLACOOCHEE REGIONAL WATER
SUPPLY AUTHORITY**



Michelle Stone, Chair

GENERAL COUNSEL



Robert W. Batsel, Jr.

EXHIBIT "A"

SCHEDULE OF FEES AND COSTS

1. Hourly rates for legal services:

Robert W. Batsel, Jr. or firm partners	\$235.00 per hour
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2. Other charges:

Secretarial Expenses	No charge
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Paralegal Services	No charge
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Library Resources	No charge
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Electronic Research Database	Actual per unit cost of electronic research established by service provider
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Copying	No charge for routine copying. \$.25 per page for non-routine copying. Efforts will be made to provide the AUTHORITY with the opportunity to undertake large volume copying.
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Postage	Actual charges
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Records Maintenance	No charge
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General Office Supplies	No charge
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Office Space	No charge
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Travel Expenses	Must be consistent with the provisions of Chapter 112, Part I, Florida Statutes
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Item 8

Charles A. Black Wellfield Fiscal Year 2020-21 Revenues

Mrs. Suzannah Folsom, WRWSA Executive Director, will present this item.

The end of Fiscal Year 2020-21 represented the fifth full year operating under the revised Water Supply Contract with Citrus County. The purpose of this agenda item is to report to the Board the status of water sales to Citrus County and corresponding revenues for the fiscal year. The FY 2021-22 budget included the minimum contract charge of \$224,000. The revenue received reflects a surplus revenue of \$11,262.

The following table summarizes quantities of water sold water and revenues for FY 2020-21.

Month	Pumpage Reported by Citrus Co.	Rate	Amount Billed	Payment	Payment Date
Oct	140,947,000	0.1401	\$19,746.67	\$19,746.67	11/3/2021
Nov	130,677,000	0.1401	\$18,307.85	\$18,307.85	12/4/2021
Dec	128,093,000	0.1401	\$17,945.83	\$17,945.83	1/5/2021
Jan	129,936,000	0.1401	\$18,204.03	\$18,204.03	2/2/2021
Feb	114,579,000	0.1401	\$16,052.52	\$16,052.52	3/5/2021
Mar	154,443,000	0.1401	\$21,637.46	\$21,637.46	4/5/2021
Apr	148,556,000	0.1401	\$20,812.70	\$20,812.70	5/3/2021
May	193,979,000	0.1401	\$27,176.46	\$27,176.46	6/3/2021
Jun	137,435,000	0.1401	\$19,254.64	\$19,254.64	7/1/2021
Jul	134,152,000	0.1401	\$18,794.70	\$18,794.70	8/3/2021
Aug	136,441,000	0.1401	\$19,115.38	\$19,115.38	9/3/2021
Sep	130,007,000	0.1401	\$18,213.98	\$18,213.98	10/4/2021
Total	1,679,245,000	0.1401	\$235,262.22	\$235,262.22	

Staff Recommendation:

This is an information item only and no Board action is required.

Minimum Flows and Levels – Priority Lists and Schedules

Mrs. Suzannah Folsom, WRWSA Executive Director, will present this item.

The purpose of this item is to provide a status report to the Board of the establishment of minimum flows and levels (MFLs) in the Authority's four-county area.

Chapter 373, Florida Statutes, requires each of the water management districts to have a Priority List and Schedule for the establishment of MFLs. The Priority List and Schedule identifies water bodies for which the District plans to establish minimum flows and levels and also identifies planned water reservations. Minimum flows and levels are limits set by the District Governing Board for surface waters and groundwater systems that are intended to prevent significant harm to the water resources or ecology of the area that may be caused by water withdrawals. Reservations set aside water from withdrawals for the protection of fish and wildlife or public health and safety.

The Districts are required to update this List and Schedule each year and provide the updated List to the Florida Department of Environmental Protection (DEP) by November 15th.

Included as exhibits to this item are the MFLs that have been established to-date, and the proposed Priority Lists and Schedules for waterbodies within the WRWSA four-county area that are to be approved by the District Governing Boards for submittal to the DEP in November. A GIS map of the MFL locations and the current status of the MFL are provided by the DEP Office of Water Policy at:

<https://fdep.maps.arcgis.com/apps/webappviewer/index.html?id=dff89179a4994477a70e6ed3dfc16647>

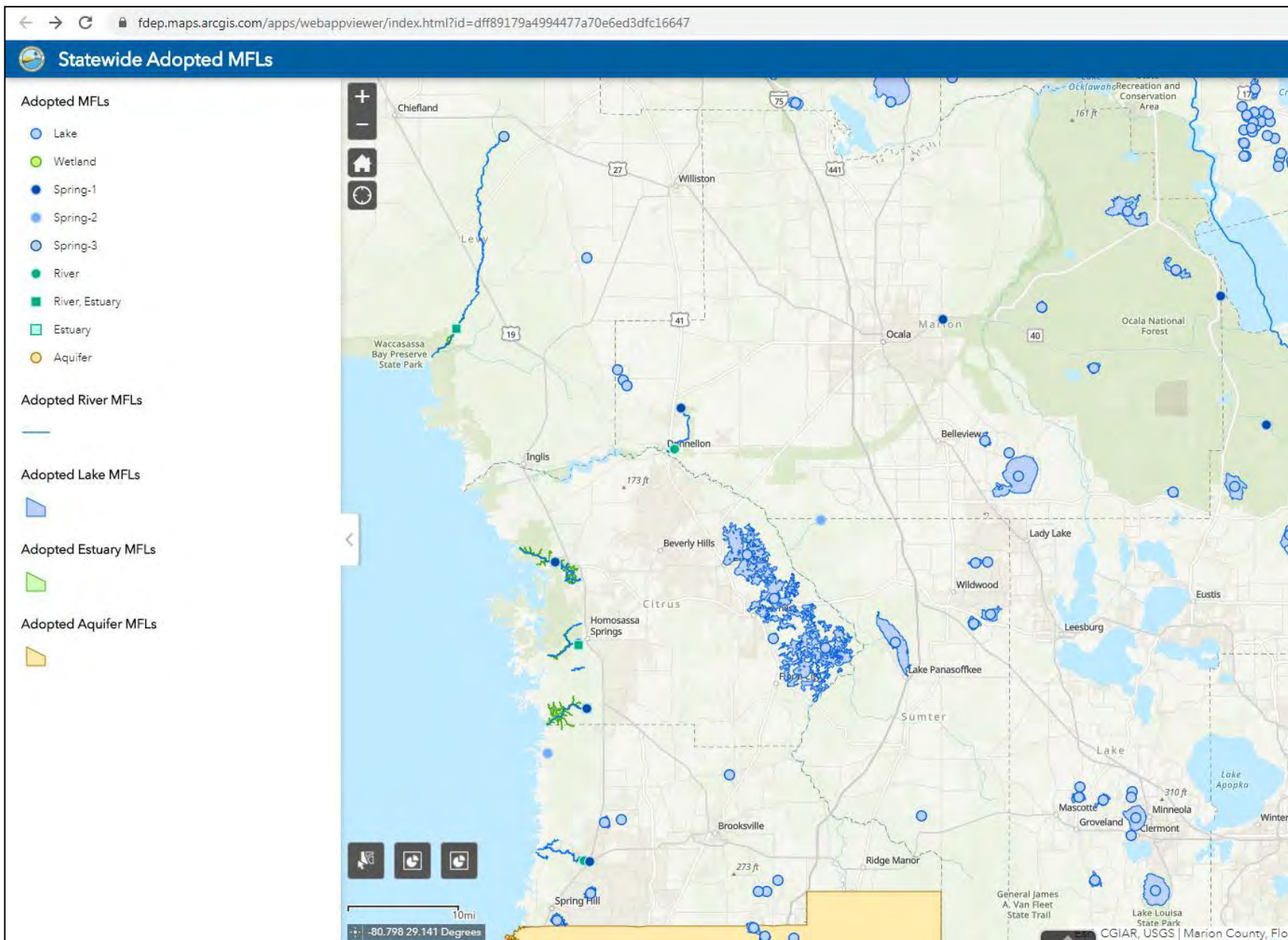
The Water Management Districts will use these MFLs to assess the health of the environment and will limit the issuance of future water supply permits based on monitoring these locations.

All MFLs are currently being met except for the Silver Spring MFL, which is listed as "Prevention" which means that the SJRWMD has a Prevention Strategy in place to bring it back to "Meeting" the MFL. This strategy includes conservation, aquifer recharge with the Ocala wetland aquifer recharge park, relocating supply to the lower Floridan aquifer, and increasing use of reclaimed for irrigation.

The most relevant upcoming MFLs to be set will be four locations along the Withlacoochee River to be set by 2024. The Withlacoochee River has been identified as a potential alternative water supply source for the region, but the potential quantities that could be available cannot be determined until the minimum flows are set. WRWSA will continue to monitor and report on efforts to set these MFLs.

Staff Recommendation:

This is an information item only and no Board action is required.



Withlacoochee Regional Water Supply Authority Minimum Flows and Levels Adopted To-date

As of October 2021

WMD	Waterbody Name	Waterbody Type	Year Adopted	Current Status
Marion County				
SJRWMD	Kerr	Lake	1996	Meeting
SJRWMD	Weir	Lake	2000 – scheduled for reevaluation	Meeting
SJRWMD	Charles	Lake	2003	Meeting
SJRWMD	Halfmoon	Lake	2003	Meeting
SJRWMD	Bowers	Lake	2004	Meeting
SJRWMD	Hopkins Prairie	Lake	2004	Meeting
SJRWMD	Nicotoon	Lake	2004	Meeting
SJRWMD	Smith	Lake	2004	Meeting
SWFWMD	Bonable	Lake	2013	Meeting
SWFWMD	Little Bonable	Lake	2013	Meeting
SWFWMD	Tiger	Lake	2013	Meeting
SJRWMD	Silver	Spring	2017	Prevention
SJRWMD	Silver Glen	Spring	2017	Meeting
SWFWMD	Rainbow River/Rainbow Spring Group (OFS)	River, Spring Group	2017 2019 reevaluation	Meeting Meeting
Citrus County				
SWFWMD	Ft. Cooper	Lake	2007	Meeting
SWFWMD	Tsala Apopka – Floral City, Inverness and Hernando Pools	Lake	2007	Meeting
SWFWMD	Chassahowitzka River/Chassahowitzka Spring Group (OFS) and Blind Springs	River/Spring Group	2013 2019 reevaluation	Meeting
SWFWMD	Homosassa River/Homosassa Spring Group (OFS)	River, Spring Group	2013 2019 reevaluation	Meeting
SWFWMD	Rainbow River/Rainbow Spring Group (OFS)	River, Spring Group	2017	Meeting
SWFWMD	Crystal River/Kings Bay Spring Group (OFS)	River, Spring Group	2018	Meeting

Hernando County				
SWFWMD	Mountain	Lake	2005	Meeting
SWFWMD	Neff	Lake	2005	Meeting
SWFWMD	Spring	Lake	2005	Meeting
SWFWMD	Weekiwachee Prairie	Lake	2005	Meeting
SWFWMD	Hunters	Lake	2005	Meeting
SWFWMD	Lindsey	Lake	2005	Meeting
SWFWMD	Weeki Wachee River/Weeki Wachee Spring Group (OFS)	River, Spring Group	2009	Meeting
SWFWMD	Chassahowitzka River/Chassahowitzka Spring Group (OFS) and Blind Spring	River/Spring Group	2013 2019 reevaluation	Meeting
SWFWMD	Tooke	Lake	2013	Meeting
SWFWMD	Whitehurst	Lake	2013	Meeting
Sumter County				
SWFWMD	Big Gant	Lake	2007	Meeting
SWFWMD	Black	Lake	2007	Meeting
SWFWMD	Deaton	Lake	2007	Meeting
SWFWMD	Miona	Lake	2007	Meeting
SWFWMD	Okahumpka	Lake	2007	Meeting
SWFWMD	Panasoffkee	Lake	2007	Meeting
SWFWMD	Gum Slough Spring Run	Spring	2016	Meeting

**Withlacoochee Regional Water Supply Authority
Minimum Flows and Levels Priority Lists and Schedules**

As of October 2021

WMD	Year	New or Re-Evaluation	Waterbody Name	Waterbody Type	County(s)	Cross-Boundary Impacts from Adjacent WMD?
SWFWMD	2024	New	Withlacoochee River (lower segment)	River, Estuary	Citrus, Levy	No
SWFWMD	2024	New	Withlacoochee River (upper segment, U.S. Geological Survey Holder gage to U.S. Geological Survey Wysong gage)	River	Citrus, Marion, Sumter	Yes
SWFWMD	2024	New	Withlacoochee River (upper segment, U.S. Geological Survey Wysong gage to U.S. Geological Survey Croom gage)	River	Citrus, Sumter, Hernando	Yes
SWFWMD	2024	New	Withlacoochee River (upper segment, upstream of U.S. Geological Survey Croom gage)	River	Hernando, Sumter	Yes
SWFWMD	2026	Reevaluation	Gum Slough Spring Group	Spring	Sumter	Yes
SWFWMD	2027	Reevaluation	Crystal River	River, Estuary	Citrus	Yes
SWFWMD	2027	Reevaluation	Kings Bay Spring Group (OFS)	Spring	Citrus	Yes
SWFWMD	2027	Reevaluation	Rainbow River	River	Marion	Yes
SWFWMD	2027	Reevaluation	Rainbow Spring Group (OFS)	Spring	Marion	Yes
SWFWMD	2029	Reevaluation (second)	Chassahowitzka River	River, Estuary	Citrus, Hernando	No
SWFWMD	2029	Reevaluation (second)	Chassahowitzka Spring Group (OFS)	Spring	Citrus, Hernando	No
SWFWMD	2029	Reevaluation (second)	Blind Spring	Spring	Citrus, Hernando	No
SWFWMD	2029	Reevaluation (second)	Homosassa River	River, Estuary	Citrus	No
SWFWMD	2029	Reevaluation (second)	Homosassa Spring Group (OFS)	Spring	Citrus	No

Regional Irrigation System Evaluation Project Phase IV - Draft Report

Mrs. Suzannah Folsom, WRWSA, will present this item.

Phase V of the Authority's Regional Irrigation System Evaluation Program began in September 2018 as part of the Authority's ongoing water conservation initiative. Phase IV of the Irrigation Audit Program was funded by and completed in cooperation with the Southwest Florida Water Management District (SWFWMD), Citrus, Hernando, and Marion counties and the North Sumter County Utility Dependent District (NSCUDD) and the Villages Community Center Development District (VCCDD). Phase V included an "enhanced" component when compared to the previous phases, whereby the WRWSA's contractor implemented various aspects of the irrigation audit recommendations, rather than relying on the homeowner for implementation. The report details the outcomes of this enhanced component. Phase V did experience some COVID-19 related delays, but was completed under budget. Final payment is being held by SWFWMD until the FINAL report is received. Staff will provide a summary of the major findings of the Phase V effort.

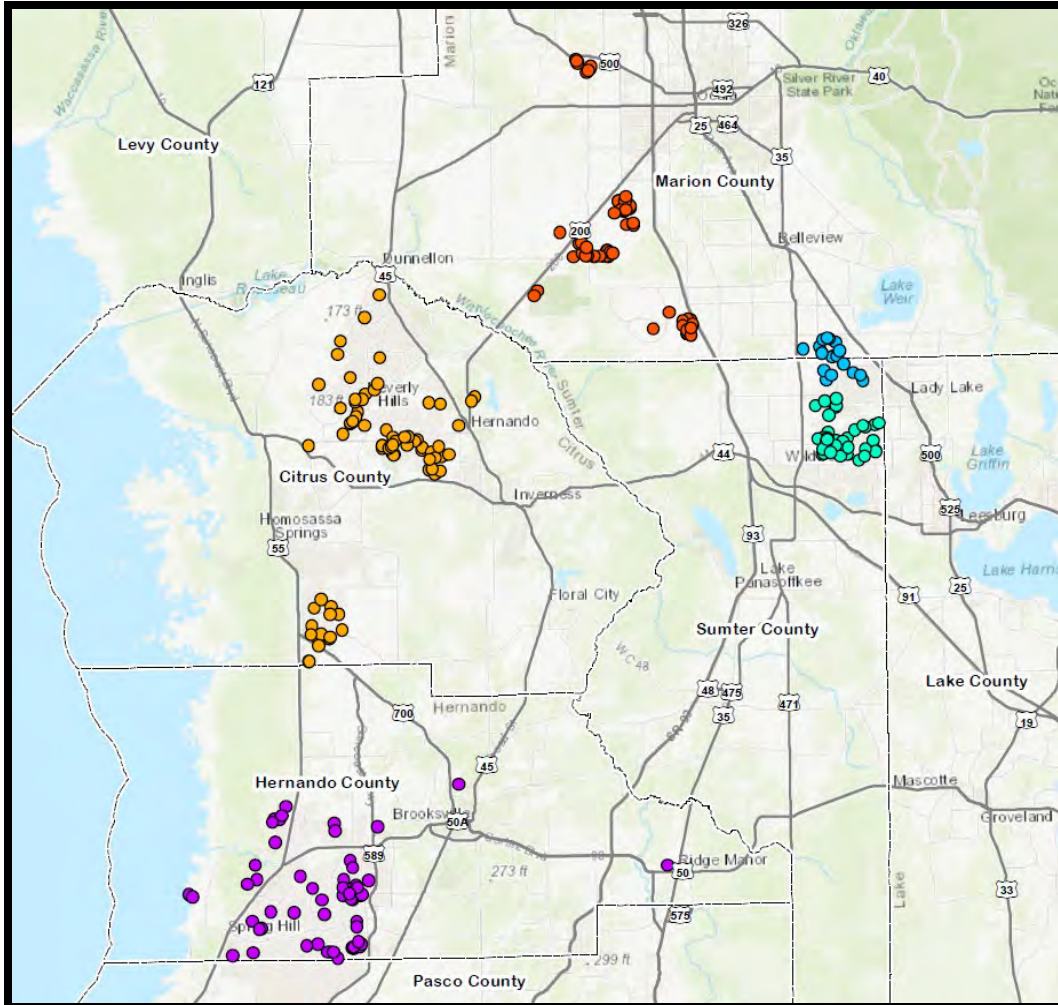
The Phase V draft report will be provided in the supplemental Board meeting materials. The DRAFT Report will be submitted to the SWFWMD in accordance with the Cooperative Funding Agreement. At the time of the preparation of this board package, pre- and post-evaluation billing data has not been received from Marion County. If received, that additional data will be included in the DRAFT submitted to SWFWMD in December.

See Exhibit – Draft Report

Staff Recommendation:

Request approval to submit the DRAFT report with amended Marion County data to SWFWMD in December.

PHASE V IRRIGATION SYSTEM AUDIT PROGRAM (Q040)



Cooperative Funding Initiative Q040

between the

Southwest Florida Water Management District

and the

Withlacoochee Regional Water Supply Authority

Acknowledgements Page

**Cooperative Funding Initiative Q040
between the**

**Southwest Florida Water Management District
and the**

Withlacoochee Regional Water Supply Authority

With funding by:



and

Citrus County Water Resources

Hernando County Utilities

Marion County Board of County Commissioners

North Sumter County Utility Dependent District

Villages Community Center Development District

Withlacoochee Regional Water Supply Authority

Irrigation System Audit and Education Phase V Project (Q-040)

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Appendices

- A. Marketing Materials
- B. Sample Evaluation Report
- C. List of Educational Material
- D. Customer Satisfaction Survey
- E. Water Use Data by Utility
- F. Summary of Follow-ups

**Withlacoochee Regional Water Supply Authority
Irrigation System Evaluation and Education Program Phase V (Q040)
A Cooperative Funding Initiative**

1. Introduction

The Withlacoochee Regional Water Supply Authority (Authority) and several local water utilities partnered with the Southwest Florida Water Management District (District or SWFWMD) to provide a water conservation program for single-family residential customers of the water utilities. Under the District's Cooperative Funding Initiative (Initiative), the Authority applied for matching funds to conduct the water conservation program. Single-family residential customers of the water utilities were eligible to apply for and receive a free irrigation system evaluation. Citrus, Hernando, and Marion county utilities, as well as the North Sumter County Utility Dependent District (NSCUDD) and the Villages Community Center Development District (VCCDD) participated in the program. The utilities identified those single-family residential customers with the highest water use for potential participation. The evaluations were designed to assess residential irrigation systems and to provide recommendations for conserving water. Recommendations included the use of Florida-friendly™ landscaping techniques, appropriate rainy season or dry season scheduling, efficient irrigation application systems, and improvements to the irrigation system. A professionally certified irrigation contractor developed these recommendations. In numerous cases the Authority's contractor, at the direction of the participating local utility, completed "Enhanced" evaluations.

2. Program Description

This project targeted existing high usage, fully operational single-family residential irrigation systems to increase water savings and water quality protection.

Participating utilities had the option of having “Core” or “Enhanced” evaluations performed. Core evaluations included an in-depth inspection of each participant’s irrigation system, by zone, followed by a written report to the resident that included efficiency measures per zone, recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping™ practices, and other efficient irrigation best management practices. The timing and run cycles for each zone were analyzed and changes recommended. A new rain sensor was installed or the existing one repaired if the existing sensor was non-functional. Each participant also received information and brochures on measures to conserve outdoor water use as part of the educational component designed to maintain the water savings over time (see Appendix C).

Enhanced evaluations involved not only the core services described above, but in some cases installation of an advanced Water Sense labeled evapotranspiration (ET) controller and/or ET sensor device (instead of a standard rain sensor) and performing some or all of the irrigation system modifications that were recommended. The Enhanced audits also included, where appropriate, performing catch-can audits by zone, adjusting the irrigation controller based on the catch-can test, replacing broken or mixed sprinkler heads, capping unnecessary heads, raising low irrigation heads, and straightening crooked irrigation.

Approximately one year after the initial evaluation, a sample of 25% of the participants were offered a follow-up inspection. For core evaluations, the reinspection determined how many changes were made by the homeowner. The contractor provided an estimate of changes made based on the original recommendations. For enhanced evaluations, the reinspection evaluated subsequent changes by the homeowner and recommendations not implemented by the contractor during the original evaluation. Each residential account was tracked by the utility to show the actual amount of water used one year prior to the evaluation and for one year following the evaluation. The utility water use data is the primary method used to measure the water savings. While the program was designed to measure water use for one year before and after the evaluation, the utilities have the ability to further track the water use over time. The Authority administered the program and prepared this report.

2.1 Objectives

The District’s *Regional Water Supply Plan* states that lawn and landscape irrigation can comprise 35 to 60 percent of the residential water used in the Public Supply sector in some of the larger utility services areas in the WRWSA area. This component of the public supply demand represents a significant opportunity for water savings. The water conservation specialists at each of the participating utilities also identify residential outdoor water use as an area with the greatest opportunity for water savings. The regional irrigation evaluation

program was initiated to assist participating utilities to reach, maintain and surpass the District's maximum compliance water use rate of 150 gallons of water per capita per day (gpcd), to allow existing sources of water to meet the needs of a growing customer base, and to reduce current and future water demands.

The Phase V Project Plan called for 170 core and 90 enhanced evaluations to be conducted, for a total of 260, with approximately 25% or 43 receiving a follow-up inspection. The actual results were 151 core evaluations, 132 enhanced evaluations, for a total of 283, with 43 follow-ups. These results are further explained below.

2.2 Methodology

The Phase V program consisted of four major components:

- a. Onsite investigations: 151 core irrigation evaluations and 132 enhanced evaluations.
- b. Follow-up evaluations for up to 25 percent of the core evaluation participants: 37 core follow-ups were completed for core evaluation sites, and 5 follow-ups at enhanced sites were also completed.
- c. Recommendations and educational materials provided to each participant to achieve more efficient irrigation; and
- d. Analysis of water use from the utilities' data for each participant for one year prior to the on-site evaluation and one year after the evaluation.

The program Agreement was signed on April 26, 2019. The following paragraphs describe the implementation of the Phase V Program.

Initiation. The Authority's Board selected Eco Land Design, Jack Overdorff, as the irrigation system contractor and entered into a contract with Eco Land Design on September 19, 2018 in anticipation of entering into the Cooperative Funding Agreement with the District. The contractor was responsible for conducting the onsite evaluations, preparing a written report for each homeowner that contained a summary of the evaluation, recommendations for improving irrigation efficiency and providing follow-up inspections to approximately 25 percent of the core evaluation participants. Phase V evaluations began in December 2018.

Process. Each participating utility, including Citrus, Hernando and Marion county utilities, the VCCDD and NSCUDD assigned a staff person to manage their participation in the project and coordinate with the Authority's staff. The local utility personnel directed their efforts to target the highest water users in each utility. In Marion County, only single-family residential customers located in the SWFWMD, or west of Interstate 75, were eligible to participate since the District was co-funding the program and required participants to be located within the District's boundaries. Directing the program toward the highest users was determined to be the most effective way to reduce overall water use and to achieve the highest return for the money spent. The local utility staff provided the Authority with a list of names and addresses for direct contact, as well as their average monthly water use and the water rates for that utility. The Authority created mail merge files specific to each utility, including potential savings in dollars

per month for each customer by participation in the program. Invitation letters, associated application forms, a program description and a postage paid return envelope were mailed by the Authority with assistance from SWFWMD (see Appendix A for sample materials). Table 2.1 summarizes the response rate for each utility:

Table 2.1 Response Rates by Utility

Utility	Response Rate
Citrus	12%
Hernando	10%
Marion	16%
VCCDD (LSSA)	26%
NSCUDD (VWCA)	25%

Response rates to these mailings ranged from a low of 10% in Hernando County to a high of 26% in the VCCDD.

As the program progressed, some account holders requested evaluations based on word of mouth from neighbors who had participated in the program and were satisfied with the results and from the signs used by the contractor. The District provided the Authority with signs to be used by the irrigation contractor. These signs were placed in the yard for the duration of the on-site evaluation and were useful in generating additional visibility and interest in the program.

Because of the decision to focus on the highest water users, the Phase V project was not generally advertised, and no press releases were issued.

3. Program Summary

3.1 Overall Summary of Irrigation System Evaluations

The first on-site evaluation was conducted on December 4, 2018. The on-site portion of the program extended through July 29, 2020 lasting a total of 20 months. A total of 283 irrigation system evaluations were completed within the five utilities out of a program goal of 260, or 109 percent. Table 3.1 summarizes the irrigation system evaluations completed by participating utility. Citrus, Hernando and Marion county utilities elected to have both core and enhanced audits conducted. As the project progressed, significantly more audits were performed as enhanced audits and fewer as core audits within these counties than was originally planned. In the VCCDD and NSCUDD only core audits were budgeted and performed.

Table 3.1 Irrigation System Evaluation Summary

Participating Utility	Core Audits		Enhanced Audits		Total Audits	
	Target Number of Evaluations	Completed Evaluations	Target Number of Evaluations	Completed Evaluations	Target Number of Evaluations	Completed Evaluations
Citrus	65	62	10	15	75	77
Hernando	20	11	30	46	50	57
Marion	25	12	50	71	75	83
VCCDD (LSSA)	20	19	0	0	20	19
NSCUDD (VWCA)	40	47	0	0	40	47
Total	170	151	90	132	260	283

3.2 Rain Sensors Installed

A total of 237 rain sensors were installed. Eighty-four percent of all on-site evaluations needed to have the rain sensor replaced. Table 3.2 shows the breakout of rain sensor installation by utility. Installation of a new rain sensor was counted if the sensor had to be replaced entirely or in part. If the sensor was re-set or moved to a new location, it was counted as an operational sensor.

Table 3.2 Rain Sensor Installation per Utility

Utility	Total Evaluations	Sensors Installed or Repaired		Functional Sensors	
		Number	Percent	Number	Percent
Citrus	77	64	83.1%	13	16.9%
Hernando	57	53	93.0%	4	7.0%
Marion	83	71	85.5%	12	14.5%
VCCDD (LSSA)	19	12	63.2%	7	36.8%
NSCUDD (VWCA)	47	37	78.7%	10	21.3%
Totals	283	269	83.7%	52	16.3%

3.3 Follow-up Evaluations

The Agreement between the Authority and the District, as amended, stated that follow-up evaluations be conducted on approximately 25 percent of the core irrigation evaluation sites. This 25% target was applied at the utility level, resulting in a total of 37 follow-up evaluations at core evaluation sites. An additional five follow-ups were completed at enhanced evaluation sites. The follow-up inspections were designed to occur approximately 12 months following the initial evaluation. Over the course of a year, customers had the opportunity to implement some or all of the recommendations and to establish more efficient irrigation practices. During the follow-up inspection, the contractor reviewed each of the sites based on the initial evaluation. He determined how many changes were made and provided a percentage of recommendations followed. These items were noted on the original inspection form and provided to the homeowner, to the Authority, and to each utility. The follow-up evaluations ended in October 2020.

Table 3.3 summarizes the total number of completed follow-up evaluations by utility.

Table 3.3 Follow-up Evaluations by Utility

Utility	Number of Core Evaluations Completed	Target Number of Follow-Ups Based on Core Evaluations Completed	Actual Follow-Ups
Citrus	62	15	13 core, 2 enhanced
Hernando	11	2	4 core, 2 enhanced
Marion	12	3	2 core, 1 enhanced
VCCDD	19	4	6 core
NSCUDD	47	11	12 core
Totals	151	35	37 core, 5 enhanced

3.4. Total Water Savings

For this Phase V program, 283 single-family residential irrigation systems were evaluated. For each of these participants, monthly water use data was collected by the utility for one year prior to the month in which the evaluation was performed and one year after the evaluation. This data is shown in Appendix E. These data show a number of participants had zero or near zero values for one or more months. These zero or near zero values were sometimes associated with a customer moving or having their water turned off while away. In addition, a few customers installed irrigation wells during the period that impacted five or more months during the study period. Since the purpose of the pre- and post-audit water use analysis is to evaluate the impact the audit and associated educational program have had on the customer's water use, the monthly water use of some customers was adjusted to reflect these other factors that would otherwise distort the analysis.

Accounts with 6 months or more of zero or near zero monthly water use values in either the pre- or post-evaluation period were excluded from the analysis. For those accounts with five months or less of missing, zero or near zero monthly values in either the pre- or post-evaluation period, the missing or low monthly values were adjusted. These data were adjusted by calculating the average of the remaining monthly values within the pre- or post-evaluation period and applying that average to the missing, zero or near zero monthly values. In addition, several customers had one or more months of abnormally high water use that was determined to be caused by the installation of new sod. These customers' water use was adjusted in a similar manner whereby the average monthly value of the remaining months in that period was applied to that month(s) of abnormal high use. The adjusted data is shown in Appendix E.

As of the completion of this draft report, billing data has not been received from the 83 locations in Marion County. Two customers were removed from the analysis due to 6 or months of zero water usage. The analysis of the remaining 198 evaluations is provided herein and will be updated for the final report when the Marion County Data is received.

Table 3.4 shows total amount of water used in the pre-evaluation and post-evaluation periods by these accounts and the water saved. The data is shown first for core audits and then enhanced audits, and finally for the total program.

All enhanced evaluations included replacing broken or mixed sprinkler heads, capping unnecessary heads, raising low irrigation heads, and straightening crooked irrigation heads where appropriate. Additionally, some enhanced evaluations further received a Water Sense labeled controller upgrade. When possible, the controller upgrade meant adding a Water Sense labeled component, such as weather station to an existing controller. In other cases, the entire controller was replaced with a Water Sense labeled fixture. In Citrus, Hernando and Marion counties, core and enhanced evaluations were performed.

In the VCCDD LSSA and NSCUDD VWCA only core evaluations were performed. Water savings for the 152 core evaluations was approximately 9.0 million gallons for the year, or 21%. This represents 24,565 gallons per day and 178 gallons per account per day. Water savings for the 123 enhanced evaluations was approximately 4.4 million gallons for the year, or 22%. This represents 12,075 gallons per day and 201 gallons per account per day. Total annual water savings for all 198 accounts was approximately 13.4 million gallons, or 36,640 gallons of water per day and 186 gallons per account per day, representing a 22% reduction in water use.

Table 3.4 Water Savings by Utility

Utility	Evaluations with Pre/Post Use	One Year Pre-Evaluation Water Use (in millions of gallons)	One Year Post-Evaluation Water Use (in millions of gallons)	Water Saved (in millions of gallons)	Percent Water Saved	Gallons Per Day Saved	Gallons Per Account Per Day Saved
Core Evaluations:							
Citrus	62	20.241	15.759	4.482	22%	12,279	198
Hernando	11	3.435	2.791	0.643	19%	1,762	160
Marion	0						
VCCDD	18	6.031	4.246	1.785	30%	5,633	272
NSCUDD	47	12.265	10.209	2.056	17%	4,890	120
Subtotal	138	41.971	33.005	8.966	21%	24,565	178
Enhanced Evaluations Subtotal:							
Citrus	15	5.835	3.868	1.967	34%	5,389	359
Hernando	45	14.366	11.926	2.440	17%	6,685	149
Marion	0						
Subtotal	60	20.201	15.794	4.407	22%	12,075	201
Core and Enhanced Evaluations Total:							
Citrus	77	26.076	19.627	6.499	25%	17,668	229
Hernando	56	17.801	14.718	3.084	17%	8,448	151
Marion	0						
VCCDD	18	6.031	4.246	1.785	30%	5,633	272
NSCUDD	47	12.265	10.209	2.056	17%	4,890	120
Total	198	62.193	48.752	13.441	22%	36,640	186

Comparing the core and enhanced evaluations average results, the enhanced evaluations saved 23 gallons more per account per day than the core evaluations (201 - 178). This represents an approximate 13% greater savings for the enhanced over the core evaluations. The increased savings of the enhanced evaluations over the core evaluations is likely attributable to the contractor implementing many of the system modifications that were developed as a part of the evaluation.

The District calculated cost effectiveness of the core audits is \$1.28 \$/Kgal, while enhanced audit calculations come in at \$1.72 \$/Kgal. Therefore, the enhanced audits appear to provide a lesser impact than core audits for each dollar spent.

Water Use Variables. The total amount of water used for irrigation will vary over time for a variety of reasons. While this program did not attempt to control for changes in pre- and post-water use caused by factors other than implementation of the audit recommendations, it is important to recognize some of the other possible causal factors. Other factors include when homeowners make seasonal time adjustments or periodically turn the irrigation system off.

Actual rainfall amounts varying over time and place is also a significant factor influencing water use. Rainfall amounts were examined for the pre and post periods for the four-county region (Marion County only within the SWFWMD) and are summarized in Table 3.5.

As can be seen, there is less rainfall in the post-audit period when compared to the pre-audit period. This would tend to cause outdoor water use to increase slightly for the post evaluation period. In addition, changes in watering restrictions within the local government may affect the amount and frequency of lawn irrigation, for example Citrus County implemented an ordinance for once a week watering in June 2020.

Table 3.5 Pre and Post Period Rainfall

Time Periods	Cumulative Rainfall
Pre: December 2017 – June 2020	142.45
Post: January 2019 – July 2019	138.28
Difference	4.17

Data obtained from the SWFWMD

3.5 Per Capita Water Savings

This water conservation program was initiated between the District and the Authority to assist utilities to meet, maintain, or surpass the SWFWMD's maximum compliance per capita rate of 150 gpcd required by the District. As shown in Table 3.6, the program resulted in savings range of 62 to 163 gallons per capita per day, and a range of 17% to 34% reduction in per capita water use.

Table 3.6 Water Saved Per Capita

Utilities	Number of Accounts	Persons Per Household ¹	Pre-Evaluation Per Capita Use	Post-Evaluation Per Capita Use	Water Saved Per Capita Per Day	Per Capita % Reduction
Core Evaluations						
Citrus County	62	2.2	407	317	90	22%
Hernando County	11	2.38	359	292	67	19%
Marion County	0	2.35				
VCCDD	18	1.9	483	340	143	30%
NSCUDD	47	1.9	376	313	63	17%
Total	138	2.07	402	316	86	21%
Enhanced Evaluations						
Citrus County	15	2.2	484	321	163	34%
Hernando County	45	2.38	368	305	62	17%
Marion County	0	2.35				
Total	60	2.34	395	309	86	22%

¹ For Citrus, Hernando and Marion counties, 2010 Census. American Fact Finder, "Community Facts." Table DP-1. Profile of General Population and Housing Characteristics: 2010: Average household size. Retrieved from www.factfinder2.census.gov on 1/22/2014. The average household size for Hernando and Marion counties is calculated for the entire county. The average household size for Citrus County is for the zip code area, retrieved from the zip code tabulation provided by the US Census Bureau. For VCCDD and NSCUDD provided by Arnett Environmental, 2019.

3.6 Program Costs

The total program costs were budgeted for \$145,000 pursuant to the Agreement. Total program expenditures were \$131,939 or 91 percent of the original budget. The on-site evaluation expenses averaged \$320 per core evaluation with a total cost of \$48,356.55 and \$486 per enhanced evaluation with a total cost of \$64,182.79, for a combined cost of \$112,539.34. The evaluation costs include costs associated with replacement of rain sensors when necessary. The project included an administrative fee at \$50 per evaluation, for a total cost of \$14,150. Marketing and outreach costs were \$0 because SWFWMD performed the mailings. The cost for the follow-up inspections was \$5,250. Pursuant to the District's methodology for estimating cost per thousand gallons saved, the project resulted in \$1.49 per 1,000 gallons of water saved.

Pursuant to the Agreement, the District provided 50 percent of the total funding, not to exceed \$72,500. The Authority and the participating utilities shared the other half. The Authority was responsible for 25 percent with each utility contributing 25 percent of the total cost for their respective portion of the program. In addition, the participating utilities provided critical support by identifying high water users as potential participants, contacting customers, assisting with analyzing the data.

Table 3.7 shows the cost of the program among the various funding entities for each major component of the program. Costs are shown for the District, the total amount for each utility (Authority and utility combined), and the total cost per component. The actual direct cost to each utility is shown on the last row of the table. This is the program cost to each utility after subtracting the funds provided by the Authority. The Authority's total final cost is \$32,985.

Table 3.7 Expenditures Per Utility

Irrigation Evaluation Program Costs								
Item	SWFWMD	WRWSA						Total
		Citrus	Hernando	Marion	VCCDD	NSCUDD	Subtotal	
Irrigation Evaluations	\$56,270	\$15,033	\$12,421	\$18,647	\$2,810	\$7,360	\$56,270	\$112,540
Administration	\$7,075	\$1,925	\$1,425	\$2,075	\$475	\$1,175	\$7,075	\$14,150
Marketing	\$0*	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Follow-up Inspections	\$2,625	\$938	\$375	\$188	\$375	\$750	\$2,625	\$5,250
Total	\$65,670	\$17,895	\$14,221	\$20,909	\$3,660	\$9,285	\$65,670	\$131,940
Final Utility Cost (50% WRWSA Cost)		\$8,948	\$7,110	\$10,455	\$1,830	\$4,642	\$32,985	

* Mailings completed by SWFWMD

Table 3.8 shows the total cost by utility summarized for enhanced and core audits. The average cost for a core audit was \$401, while the average cost for an enhanced audit was \$541. Enhanced audits cost on average \$140, or 35%, more than core audits.

Table 3.8 Costs for Enhanced and Core Audits

	Number of Audits	Total Cost	Audit Cost Only / Audit	Total Cost / Audit
Core Costs				
Citrus	62	\$25,262	\$331	\$407
Hernando	11	\$4,874	\$348	\$443
Marion	12	\$4,507	\$305	\$376
VCCDD (LSSA)	19	\$7,319	\$296	\$385
NSCUDD (VWCA)	47	\$18,570	\$313	\$395
Total	151	\$60,532	\$320	\$401
Enhanced Costs				
Citrus	15	\$10,528	\$635	\$702
Hernando	46	\$23,568	\$457	\$512
Marion	71	\$37,312	\$474	\$526
VCCDD (LSSA)	0			
NSCUDD (VWCA)	0			
Total	132	\$71,408	\$486	\$541
Combined Costs				
Citrus	77	\$35,790	\$390	\$465
Hernando	57	\$28,442	\$436	\$499
Marion	83	\$41,818	\$449	\$504
VCCDD (LSSA)	19	\$7,319	\$296	\$385
NSCUDD (VWCA)	47	\$18,570	\$313	\$395
Total	283	\$131,939	\$398	\$466

4. Customer Implementation

The program included the Authority's contractor revisiting approximately 25 percent of each utility's participating customers to inspect how recommendations have been implemented and other changes the homeowners may have made to their irrigation systems since the evaluation was performed. Each follow-up evaluation included an estimate of the changes made by the customer based on the original evaluation and recommendations provided. A sample of a complete evaluation is contained in Appendix B. The evaluation form was used to provide a written set of recommendations to each customer. On the follow-up inspection, the contractor used the last column of the form to note whether changes were implemented. The results of the follow-up inspections are included in this section.

4.1 Implementation Rates for Efficiency Recommendations

About a year after the first on-site evaluation, the irrigation contractor began scheduling follow-up appointments with customers. He reviewed the irrigation system on each site using the original written evaluation. Based on the changes made to the system relative to the written evaluation and its recommendations, an implementation rate was determined for completion of water conservation measures (Section 3.3 covers the number of follow-up evaluations). The implementation rate is not necessarily indicative of the potential or actual water savings. Some changes to system components may have a greater impact on one system than another depending on the severity of the particular issue and the corresponding changes to the systems. Table 4.1 summarizes the follow-up evaluations conducted for participants within each utility as well as the average for enhanced, core and all follow-ups. Appendix F summarizes the follow-up inspections.

Table 4.1 Summary of Follow-up Findings

Utility	Number of Follow-Up Inspections			Percent of Changes Implemented		
	Core	Enhanced	Total	Core	Enhanced	Total
Citrus	13	2	15	58%	63%	59%
Hernando	4	2	6	72%	75%	72%
Marion	2	1	3	65%	30%	55%
VCCDD (LSSA)	6	0	6	60%	-	60%
NSCUDD (VWCA)	12	0	12	46%	-	46%
Total	37	5	42	58%	61%	60%

Potential changes included relocation of heads, changes in types of heads, eliminating or removing items that block the spray pattern or coverage, repairing or replacing leaking or broken heads, reducing turf areas, reducing areas of overspray, and capping heads in areas where irrigation is not needed. All customers who participated in the follow-up evaluations made some changes to their irrigation systems, ranging from 17 to 86 percent. The overall program implementation rate was 60%.

The installation or repair of the rain sensor by the irrigation contractor and alterations to system run times were not included in the percent of changes implemented.

4.2 Customer Satisfaction Surveys

A customer satisfaction survey was prepared using Momentive (previously Survey Monkey). The complete survey and results are included in Appendix D. A total of 51 responses were received. Respondents to the survey included customers who received either a core or enhanced irrigation system evaluation.

Fifty-seven percent of respondents reported making at least some changes to their irrigation systems. Forty-nine percent reported adjusting, repairing or replacing irrigation heads, followed by adjustments to irrigation system run times (28%). Sixty-seven percent reported using less water after implementing the recommendations. Respondents were asked to rate the overall evaluation process by selecting "Pleased," "Very Pleased," "Dissatisfied," or no response. Of the respondents, 98 percent selected "Pleased" or "Very Pleased" with the irrigation system evaluation.

5. Recommendations

It is recommended that this Irrigation System Audit program be continued for additional phases. The Phase V results show a positive outcome for both core and enhanced audits. This was the second time enhanced audits have been offered in the program and the results were positive both times. Core audits saved on average 86 gallons per person per day, a 21% reduction. Enhanced audits saved on average 86 gallons per person per day, a 22% reduction. The District calculated cost effectiveness of the core audits is 1.28 \$/Kgal, while enhanced audit calculations come in at 1.72 \$/Kgal. Therefore, for Phase V, the enhanced audits appear to provide a lesser impact than core audits for each dollar spent. For Phase IV, the Enhanced Evaluations provided a greater impact per dollar sent, therefore we recommend that the enhanced audits should continue to be offered as an option in future phases of the program.

To potentially increase customer participation, consideration should be given to sending follow-up letters to customers who have been invited to participate but who have not responded.

In addition, ways by which more audits can be conducted during the limited “snow-bird” season, when more people are in state and available to be home for an audit to be conducted, should be investigated. Training of contractors so more qualified contractors are available to perform the work should be considered as well.

Appendices

- A. Marketing Materials**
- B. Sample Evaluation Report**
- C. List of Educational Material**
- D. Customer Satisfaction Survey**
- E. Water Use Data by Utility**
- F. Summary of Follow-ups**

Appendix A

Marketing Materials

(Municipality Logo)

(Date)

(Name)

(Address)

(City/State/Zip)

Subject: Potential Water Bill Savings

Dear (Name),

We noticed your water usage has averaged about __,000 **gallons per month** at your home located at (Address) in (Municipality), Florida. This usage is higher than the average user. The average residential customer of the _____ Utilities Department is between 8,000-10,000 gallons per month, which includes both indoor and outdoor water consumption. So, we are trying to find ways to help you reduce your water use.

Based on past performance, I believe our Irrigation Evaluation program could reduce your water use by 20% or more. Using Hernando County Utilities 2018 water rates that went into effect this October, I estimate participation in this program could save you an average of \$__ a month! There are other things Hernando County does to help customers save water, but I think the Irrigation Evaluation program will offer the greatest savings – and, it's **FREE** to you. See the enclosed brochure which further describes our program.

If you choose to participate, our contractor will run each of your irrigation system zones to identify ways to improve water efficiency, create a map of the irrigation system for you to keep, and provide written recommendations of improvements. With your permission, he can even do some minor fixes and adjustments at no cost to you. All you must do is complete the enclosed application and return it to:

LuAnne Stout, Administrative Assistant
Withlacoochee Regional Water Supply Authority
3600 W Sovereign Path, Suite 228
Lecanto, FL 34461

The contractor will contact you to schedule a convenient time to visit your home. This is a by 'invitation only' offer available on a first-come, first-served basis. Space is limited. I hope you will consider participating. If you have any questions, please give me a call. I look forward to working with you.

Sincerely,

(Municipality Coordinator)

Enclosures



Irrigation Evaluation Program (Q040) Application Form

Residential Water Customer Information:

Complete Name:	Account Number:	Day-Time Telephone Number: Best Time to Call:
Street Address with Zip Code:	Email Address:	
Does your water account serve more than one home? ___ No ___ Yes If Yes, how many? _____		
Is your irrigation system operational and without any known or major breaks, leaks or other damage? ___ Yes ___ No If the system is not functioning, the irrigation system must be repaired before an evaluation can be scheduled.	Do you have a rain sensor installed on your automatic in-ground sprinkler system? ___ Yes ___ No ___ Don't Know	
Please indicate the number of zones your sprinkler system contains: 1 - 4 zones ___ 5 - 8 zones ___ More than 8 zones ___ Don't know ___		

(Please Turn Page Over for Program Guidelines)

By signing below, I certify that I have read and will abide by the program guidelines as outlined. **IN ADDITION**, I certify that my entire irrigation system is in good operating condition. In the event my irrigation system or major parts of my irrigation system are inoperable when the System Evaluator arrives to conduct the irrigation system evaluation, I understand that I will be ineligible to receive the requested evaluation.

Signature

Name (Please Print)

Date



- **This program applies only to single-family residential users using public-supply, metered water for their operable in-ground irrigation or sprinkler system.**

How to Participate:

1. Complete and sign this application form.
2. Return the application in the stamped, self-addressed envelope that is included with this application; OR, if filling out the online form, return to: Istout@wrwsa.org
3. The Program's contractor will contact you to arrange an appointment to perform an evaluation of your irrigation system. You will need to provide access to your property and your sprinkler system's time clock.

What to Expect from the Irrigation Evaluation Program:

1. ***At no cost to you***, an irrigation system evaluation, including suggested changes to improve the operation and efficiency of your irrigation system.
2. Installation of a rain sensor where a rain sensor is not present or is inoperable. Acceptance of a functioning rain sensor is a requirement to participate in this program. ***There is no cost to you.***
3. Educational materials on water conservation, ***at no cost to you.***
4. Reduction in water use and lower water bills.
5. Possible improvement in the health and appearance of your lawn and landscape over time.

Program Terms and Conditions – What is expected of Participants:

1. The irrigation system must be fully functional without any major breaks, leaks or other damage, as far as you know.
2. The application form must be completed and signed.
3. The Irrigation System Evaluator will need access to the property, including the area where the time clock is installed. The participant or an adult representative will need to be available.
4. The Irrigation System Evaluator is on-site to evaluate the system and to recommend modifications. They are **not** authorized to make recommended modifications or repairs.
5. Any licensed irrigation professional can make the recommended modifications, if the participant chooses to hire someone.
6. Any costs incurred in making recommended modifications will be at the participant's expense.
7. The participant or adult representative agrees to participate in a follow-up evaluation regarding the suggested sprinkler system modifications. If the participant is chosen to participate in a Follow-up Evaluation, this visit will be scheduled approximately 10 to 12 months after the initial visit.
8. A customer satisfaction survey will be completed and returned at the end of the program.

If you have further questions related to this program, please call
LuAnne Stout at 352-527-5795 or email Istout@wrwsa.org

Residential Water Customer Information:

Printed Name:	Water Account Number:	Phone Number(s):
Street Address with Zip Code:		Email Address:
If the irrigation system is not functioning, it must be repaired before an evaluation can be scheduled. Is your irrigation system operational and without any major breaks or leaks? <input type="checkbox"/> Yes <input type="checkbox"/> No		
The Irrigation System water must be <u>purchased from Citrus County Utilities</u> to participate in this program. Those connected to a <u>private well</u> are NOT eligible .		
Do you have a rain sensor installed on your automatic in-ground sprinkler system? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	How many zones does your sprinkler system contain? <input type="checkbox"/> 1-4 zones <input type="checkbox"/> 5-8 zones <input type="checkbox"/> If more than 8, indicate how many.	
How old is your controller? <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years <input type="checkbox"/> 11-15 years <input type="checkbox"/> 16+ years <input type="checkbox"/> Don't Know		Does the controller have pins that are pushed or pulled to schedule the system? <input type="checkbox"/> Yes <input type="checkbox"/> No
Irrigation Controller: Brand:_____ Model:_____		
On a scale of 1-10, 10 being the most knowledgeable, how would you rate your understanding of your irrigation controller? _____		
On a scale of 1-10, 10 being the most capable, how would you rate your ability to modify the irrigation schedule (day of week, time of day) using the controller? _____		
Does a hired professional adjust your controller for you? <input type="checkbox"/> Yes <input type="checkbox"/> No	If you could upgrade your existing controller, which feature would you find most desirable? <input type="checkbox"/> Irrigation schedule able to be modified from anywhere in the world via Smart Phone <input type="checkbox"/> Irrigation schedule modified on the irrigation control panel <input type="checkbox"/> Both of the above are desired <input type="checkbox"/> I'm not interested in an updated controller	
Wireless internet connection (WiFi) is used for some smart controllers. Do you have WiFi at your home? <input type="checkbox"/> Yes <input type="checkbox"/> No		
On average, how many gallons of water do you think your household uses a day (while bathing/showering, cooking, washing clothes, watering the lawn, etc.)? <input type="checkbox"/> 0-50 gallons <input type="checkbox"/> 50-100 gallons <input type="checkbox"/> 100-150 gallons <input type="checkbox"/> 150-200 gallons <input type="checkbox"/> 200+ gallons		

(Please Turn Page Over for Program Guidelines)

By signing below, I certify that I have read and will abide by the program guidelines as outlined. In addition, I certify that my entire irrigation system is in good operating condition. In the event my irrigation system or major parts of my irrigation system are inoperable when the System Evaluator arrives to conduct the irrigation system evaluation, I understand that I will be ineligible to receive the requested evaluation.

Name (Please Print)

Signature

Date



**WITHLACOOCHEE
REGIONAL
WATER
SUPPLY
AUTHORITY**



**Southwest Florida
Water Management District**

WATERMATTERS.ORG • 1-800-423-1476

This program is cooperatively funded by the Withlacoochee Regional Water Supply Authority, Citrus County Utilities, and the Southwest Florida Water Management District.

FREE

IRRIGATION SYSTEM EVALUATION

This program is for Citrus County Utilities single-family residential customers that have an in-ground irrigation / sprinkler system connected to the utility's water supply.

How to Participate:

1. Complete and sign the application on the back of this page.
2. Return the application via mail, email, fax or hand deliver. We have provided a self-addressed, stamped envelope for your convenience. Other delivery options below:
 - Email to: lstout@wrwsa.org
 - Fax: 352-527-5797
 - Deliver to: WRWSA, 3600 W. Sovereign Path, Ste 228, Lecanto FL 34461
3. The Program's contractor, Jack Overdorff, will contact you to arrange an appointment to perform an evaluation of your irrigation system. You must be present at the time of the evaluation and will need to provide access to your property and sprinkler system's time clock.

What to Expect from the Irrigation Evaluation Program:

1. **At no cost to you**, an irrigation system evaluation, including suggested changes to improve the operation and efficiency of your irrigation system.
2. Installation of a rain sensor where a rain sensor is not present or is inoperable. Acceptance of a functioning rain sensor is a requirement to participate in this program. **There is no cost to you.**
3. Educational materials on water conservation, **at no cost to you.**
4. Likely, reduction in water use and lower water bills.
5. Possible improvement in the health and appearance of your lawn and landscape over time.

Program Terms and Conditions – What is expected of Participants:

1. The irrigation system must be fully functional without any major breaks, leaks or other damage.
2. The application form must be completed and signed.
3. The Irrigation System Evaluator will need access to the property, including the area where the time clock is installed. The participant or an adult representative will need to be available.
4. The Irrigation System Evaluator is on-site to evaluate the system and to recommend modifications. The evaluator is **only** authorized to make minor modifications or repairs necessary to improve system efficiency. The evaluator may also replace the irrigation controller under special circumstances.
5. Recommended modifications not carried out by the evaluator can be done by any licensed irrigation professional, should the participant choose to hire someone.
6. The irrigation system must be connected to Citrus County Utilities water supply. Systems connected to a private well do not qualify for this program.
7. Any costs incurred by hiring a licensed professional to make modifications are the participant's responsibility.
8. The participant or adult representative agrees to participate in a follow-up evaluation regarding the suggested sprinkler system modifications. If the participant is chosen to participate in a Follow-up Evaluation, this visit will be scheduled approximately 10 to 12 months after the initial visit.
9. Participant agrees to complete and return a customer satisfaction survey at the end of the program.

If you have further questions related to this program, please call LuAnne Stout
352-527-5795 or lstout@wrwsa.org





Would you like a **FREE** irrigation system evaluation? Want to **lower your water bill** by optimizing your outdoor water use? Water-efficient landscaping equipment and practices can reduce water bills and help protect Florida's precious water resources.

Some irrigation systems have damaged sprinkler heads, heads that are incorrectly angled and sized for the area, or heads programmed to overwater zones. You may not even know if a problem exists, but participating in this evaluation is a good way to find out.

Evaluations:

The Withlacoochee Regional Water Supply Authority and the Southwest Florida Water Management District are offering a limited number of free evaluations to qualified residents. Eco-Land Design, a certified irrigation auditor, will visit your home to:

- Perform an irrigation system evaluation
- Install a free rain sensor if you do not have an operable sensor
- Evaluate your time clock and sprinkler zones for water efficiency
- Provide a detailed report with suggestions that could improve the operation and effectiveness of your irrigation system
- Supply information on Florida-Friendly Landscaping™ principles and other landscape-related information

Qualifications:

You must be a single-family residence using 30,000 gallons of water or more per month; have a fully functional irrigation system with no leaks, breaks or repair needs; and you must be a customer of one of the following utilities:

- Citrus County Utilities
- Hernando County Utilities
- Marion County Utilities
- Village Center Community Development District
- North Sumter County Utility Dependent District

To participate, complete and return the attached application by

The number of free evaluations is limited.

For further information, call the program administrator at **(352) 527-5795**.

This irrigation system evaluation pilot program is funded by



North Sumter County
UTILITY
Dependent District



UTILITIES



WITHLACOOCHEE
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WATER
SUPPLY
AUTHORITY

Sponsored by a grant from the
Coastal Rivers and Withlacoochee River
basin boards of the

Southwest Florida
Water Management District

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Appendix B

Sample Evaluation Report



7615 Terrace River Drive
Tampa, FL 33637
Ph: (813) 466-8705
E-Mail: ecolandfl@gmail.com

Residential Landscape/Irrigation Evaluation Report

Evaluator: Jack Overdorff, RLA

Date:

Resident Name:

Address:

E-mail:

Report Overview:

On Monday, _____ 20__, a site inspection was conducted for the irrigation system at the above referenced residence. The irrigation system is connected to the potable (drinking) water supply.

A visual inspection as well as a more in-depth review of the irrigation system was conducted. The findings are outlined below as well as recommendation for addressing the system issues and setting of watering durations.

Turf Area

Irrigation-Report
Last printed on _____

Checklist:

Item	Location	Functioning?
Time clock	Garage wall of the residence	<p>Program A, Zones 1-8 Program Running Days:, Tuesday, Thursday & Saturday @ 1am Zones #1 thru #3, #7 & #8 running 40 minutes Zones #2 & #3 running 40 minutes Zone #4 running 30 minutes Zone #5 running 20 minutes Zone #6 running 55 minutes Program B, Zone 2 Program Running Days:, Mon., Wed., Fri. & Sat. @ 5:15am Zone #2 running 35 minutes</p> <p>Low Volume Zone (Hose bib battery valve) Program Running Days: Every 3 days #9 running 45 minutes</p>
Rain sensor	East Side	No, new wired sensor installed and functioning correctly
Backflow Preventer	Side yard	Yes

Evaluation:

Area	Observation	Action	Addressed by Homeowner
General	Spray Heads & Rotor Heads have irregular head spacing	Recommend moving heads and adding heads as noted below to achieve head to head coverage and improve the spray pattern coverage	

	The overall turf maintenance can be reduced as large turf areas are difficult to maintain	Recommend reducing the turf areas by installing Florida Friendly Landscape materials that are suited for the site conditions.	
	Zones are irrigating turf and landscape beds within the same zone	It is not recommended to irrigate turf and landscape beds within the same zone as each have different water requirements. Recommend separating the landscape beds and turf/lawn areas into separate zones	
	Spray Heads in the landscape beds are being blocked by plant material	Recommend making adjustments as noted below to improve the irrigation coverage	
	Several heads are of a different manufacture than other heads on the zones	It is not recommended to use different manufacturer's equipment within a zone as the spray nozzle precipitation rates vary between the different manufactures and can create uneven coverage. Recommend installing all of the same equipment fitted with matched precipitation rate nozzles on each zone.	

Zone #1 Rotor Zone Side Yard Turf Area (See attached site plan)	Water can be conserved as Rotor Head R1 is leaking	Recommend replacing the head with a similar large turf Rotor Head similar to other heads on the zone fitted with a matched precipitation rate spray nozzle	
	Water can be conserved as Rotor Head R4 is overspraying onto the street	Recommend adjusting the spray pattern to reduce overspray and to conserve water	
	Zone is operating at approximately 9 Gallons Per Minute (GPM)	No action	
Zone #2 Rotor Zone Side Yard Turf Area (See attached site plan)	Water can be conserved as Rotor Heads R5 thru R7 are irrigating a narrow turf area and overspraying mature plantings	Recommend replacing the heads with fixed Spray Heads fitted with strip spray nozzles to reduce overspray and to conserve water	
	Spray pattern coverage for the turf areas can be improved as Rotor Head R6 is set too low and blocked by the surrounding turf areas	Recommend raising the head and also recommend trimming the turf around the head to conserve water	

	Zone is operating at 10 Gallons Per Minute (GPM)	No Action	
Zone #3 Rotor Zone Front Yard Turf Area & Landscape Beds (See attached site plan)	Spray pattern coverage can be improved as rotating Spray Head #1 is located in a planting bed	Recommend moving the head to the turf area for better coverage	
	Water can be conserved as Rotor Head R8 is overspraying onto the street	Recommend adjusting the spray pattern to reduce overspray and to conserve water	
	Zone is operating at approximately 11 Gallons Per Minute (GPM)	No action	
Zone #4 Spray Zone Side Yard Turf Area (See attached site plan)	Spray pattern coverage can be improved as Spray Head #2 does not have head to head spray pattern coverage for the turf areas	Recommend adding a similar fixed Spray Head at the street fitted with a matched precipitation rate spray nozzle to improve the spray pattern coverage for the turf areas	
	Water can be conserved as Spray Head #8 is overspraying onto the air conditioning unit	Recommend adjusting the spray pattern to reduce overspray, conserve water and prevent water damage to the air conditioning unit	

	Water can be conserved as Spray Head #9 is overspraying onto the residence	Recommend adjusting the spray pattern to reduce overspray, conserve water and prevent water damage to the residence	
	Spray pattern coverage can be improved as Spray Head #10 is set too low and blocked by the surrounding turf	Recommend raising the head or replacing the 4" tall Spray Head with a 6" tall Spray Head to improve the spray pattern coverage for the turf area	
	Zone is operating at 6 Gallons Per Minute (GPM)	No action	
Zone #5 Spray Zone Front/Side Yard Planting Beds & Turf Areas (See attached site plan)	Spray pattern coverage can be improved for the turf areas as Spray Heads #17, #18 & #19 are blocked by the plantings	Recommend moving the heads to the turf area to improve the spray pattern coverage for the turf	
	Water can be conserved as Spray Heads #11 thru #15 are irrigating mature plantings	Recommend replacing the heads with low volume dripline or micro-irrigation on a separate low volume zone to conserve water	
	Water can be conserved as Spray Head #16 is irrigating an area covered by low volume dripline	Recommend capping the head to conserve water	
	Zone is operating at 12 Gallons Per Minute (GPM)	No action	

Zone #6 Spray Zone Side/Rear Yard Turf Area & Landscape Beds (See attached site plan)	The zone efficiency can be improved as Spray Heads #21 thru #25 are irrigating mature plantings on a turf zone	Recommend replacing the heads with low volume dripline or micro-irrigation on a separate zone to improve the zone efficiency and to conserve water	
	Water can be conserved as Spray Head #28 is overspraying onto the residence	Recommend adjusting the spray pattern to reduce overspray, conserve water and prevent water damage to the residence	
	Spray pattern coverage can be improved as Spray Heads #30 thru #32 have low pressure	Recommend capping heads irrigating mature plantings and/or moving heads to zone 2. Also, recommend further investigating the issue to determine the appropriate solution	
	Spray pattern coverage can be improved as Spray Head #32 is set too low and blocked by the surrounding turf	Recommend raising the head or replacing the 4" tall Spray Head with a 6" tall Spray Head to improve the spray pattern coverage for the turf area	
	Zone is operating at 13 Gallons Per Minute (GPM)	No action	

Zone #7 Rotor Zone Side Yard Turf Area (See attached site plan)	Water can be conserved and the spray pattern coverage improved as Rotor Head R13 is leaking and blocked by plantings	Recommend replacing the head with a similar large turf Rotor Head similar to other heads on the zone fitted with a matched precipitation rate spray nozzle. Also, recommend trimming plantings to improve the spray pattern coverage	
	Spray pattern coverage can be improved as Rotor Head R14 is leaning	Recommend straightening the head to improve the spray pattern coverage for the turf areas	
	Zone is operating at 8 Gallons Per Minute (GPM)	No action	
Zone #8 Rotor Zone Side Yard Turf Area (See attached site plan)	Water can be conserved as Rotor Head R15 is overspraying onto the street	Recommend adjusting the spray pattern to reduce overspray and to conserve water	
	Water can be conserved as Rotor Head R17 is located in a planting bed	Recommend capping the head and irrigating plantings with only dripline or micro-irrigation	
	Zone is operating at 10 Gallons Per Minute (GPM)	No action	
Zone #9 Low Volume Zone (See attached site plan)	Zone is operating at 4 Gallons Per Minute (GPM)	No action	

A catch can test was performed on Zones #4 & #7 to determine the system spray uniformity and also determine appropriate run times for the scheduled waterings in order to achieve a 1/2" to 3/4" application rate. .

Zone #4 is running at 6 gallons per minute and according to the catch can test, is operating at 45% spray uniformity for the Zone (above 70% is considered to be good). This zone is applying 1.38" of water per hour. The lawn has areas of distress. If the recommendations above are made to the system with the application rate increased to 1.40" per hour and the spray uniformity improved to 70%, it is recommended that the zone runtime be set at 30 minutes once per week to achieve a 1/2" application rate. Also, based on the existing soil profile (sandy clay) and root depth it is recommended that the runtime be completed in one application.

Zone #7 is running at 8 gallons per minute and according to the catch can test, is operating at 52% spray uniformity for the Zone (above 70% is considered to be good). This zone is applying .68" of water per hour. The lawn has areas of distress. If the recommendations above are made to the system with the application rate increased to .70" per hour and the spray uniformity improved to 70%, it is recommended that the zone runtime be set at 60 minutes once per week to achieve a 1/2" application rate. Also, based on the existing soil profile (sandy clay) and root depth it is recommended that the runtime be completed in one application.

Irrigation Schedules:

The Watering schedule below (Left Side) reflects the information recorded from the irrigation controller at the time of the inspection by the irrigation evaluator called (Pre-inspection zone runtimes and water usage). The water schedule below (Right Side) reflects recommended changes to the watering times and frequency based on the evaluation inspection called (Post-inspection zone runtimes and water usage). These modifications can create significant water savings in many cases.

The suggested runtimes reflect the fact that Spray Heads deliver more water than rotor sprinklers during a given time period and that turf grasses typically require more frequent irrigation than most plants and shrubs. Following the Post Inspection suggested runtimes will allow for deeper development of turf grass roots, greater soil moisture retention and help promote a more drought resistant turf. Over-watering allows water to travel beyond the root zone, while under-watering may cause shallow roots that will dry out quickly

Plant type	Pre-inspection zone runtimes And water usage	Plant type	Post-inspection suggested runtimes And water usage
	Program A (3 application times per week)		Program A (1 application time per week)
Turf	Zone 1 (Rotor) - 40 mins = 360 Gal	Turf	Zone 1 (Rotor) - 60 mins = 540 Gal
Turf	Zone 2 (Rotor) - 40 mins = 400 Gal	Turf	Zone 2 (Rotor) - 60 mins = 600 Gal
Mixed	Zone 3 (Rotor) - 40 mins = 440 Gal	Turf	Zone 3 (Rotor) - 60 mins = 660 Gal
Turf	Zone 4 (Spray) - 30 mins = 180 Gal	Turf	Zone 4 (Spray) - 30 mins = 180 Gal
Mixed	Zone 5 (Spray) - 20 mins = 240 Gal	Turf	Zone 5 (Spray) - 30 mins = 360 Gal
Mixed	Zone 6 (Spray) - 55 mins = 715 Gal	Turf	Zone 6 (Spray) - 30 mins = 390 Gal
Turf	Zone 7 (Rotor) - 40 mins = 320 Gal	Turf	Zone 7 (Rotor) - 60 mins = 480 Gal
Turf	Zone 8 (Rotor) - 40 mins = 400 Gal	Turf	Zone 8 (Rotor) - 60 mins = 600 Gal
	Program A - Current Total Water Usage (per application) = 3,055 Gallons per application x 3 applications per week = 9,165 Gallons per week		Program A - Total Water Usage (per application) after run time modifications = 3,810 Gallons per week
	Program C (4 application times per week)		Program C (0 application time per week)
Turf	Zone 2 (Rotor) - 35 mins = 350 Gal	Turf	Zone 2 (Rotor) - 0 mins = 0 Gal
	Program C - Current Total Water Usage (per application) = 350 Gallons per application x 4 applications per week = 1,400 Gallons per week		Program C- Total Water Usage (per application) after run time modifications = 0 Gallons per week

	Hose Bib Battery Valve (2.5 application times per week)		Hose Bib Battery Valve (2.5 application times per week)
Plants	Zone 9 (Low Vol.) - 45 mins = 180 Gal	Plants	Zone 9 (Low Vol.) - 45 mins = 180 Gal
	Hose Bib Valve -Current Total Water Usage (per application) = 180 Gallons per application x 2.5 applications per week = 450 Gallons per week		Hose Bib Valve -Current Total Water Usage (per application) = 180 Gallons per application x 2.5 applications per week = 450 Gallons per week
	Current Total Water Usage (per application) = 11,015 Gallons per week		Total Water Usage (per application) after run time modifications = 4,260 Gallons per week

*Plant type has three terms: Turf Only, Plants/Shrubs only and Mixed (combination of Both)

- Consider placing these charts next to your controller.
- Consider skipping your watering day when there is significant rainfall 1/2 half inch or more).

When watering your lawn and landscape **please observe the local water use restrictions.**

Please check for any changes to the current watering restrictions at: <http://swfwmd.state.fl.us/conservation/restrictions/swfwmd.php>

Additionally, seasonal adjustments may also be used to further reduce water use during the winter months (December, January and February) when root growth is minimal thus requiring much less water. By watering every other week during the winter months an additional 25,560 gallons could be saved. The controller also has a seasonal adjustment capability that can also be used to adjust runtimes of all zones by increasing or reducing the percentage of application time; during the rainy season or in winter months when plant materials are not in a growth cycle, the controller's seasonal adjustment can be set at 60% to 80% of the current application rate to conserve water.

Also note: additional water savings can occur by repairing leaks, removing heads, capping heads and changing nozzles on heads as noted above.

The chart below reflects how much water is currently used compared to the Post-evaluation water use with adhering to the recommendations noted above.

Estimate of existing water usage ¹	Post-evaluation water use ²	Projected annual gallons saved ²	Projected Annual Gallons Saved w/ Skip a Week ²
11,015 GAL/CYCLE/WEEK	4,260 GAL/CYCLE	6,755 GAL/CYCLE	4,260 GAL/CYCLE
572,780 GAL/YEAR	221,520 GAL/YEAR	351,260 GAL/YEAR	376,820 GAL/YEAR (66% Annual Savings)

¹ Based on watering days and applications as noted above

² Based on 1 day a week watering with 1 application per day

Not only is it important to follow these recommendations because it will help conserve the water supply in the Coastal Rivers and Withlacoochee river Basins, it may also help to lower your current utility bill.

For system repairs: Contact a licensed irrigation contractor for a professional installation, particularly if the system involved additional equipment or major modifications. For a listing of qualified contractors in your area, call the Florida Irrigation Society at 1-800-441-5341 or visit their website: <http://www.fisstate.org/>. or refer to the yellow pages of the phone directory. For do-it-yourselfers, irrigation supplies can be obtained from home improvement centers or irrigation supply facilities.

Approximately once per month inspect the irrigation system. Turn on each irrigation zone and visually examine all sprinkler heads. (Are they broken, spraying in the wrong direction or not rotating?) Take notes for later reference. Ten minutes of operation time is allowed for this inspection.

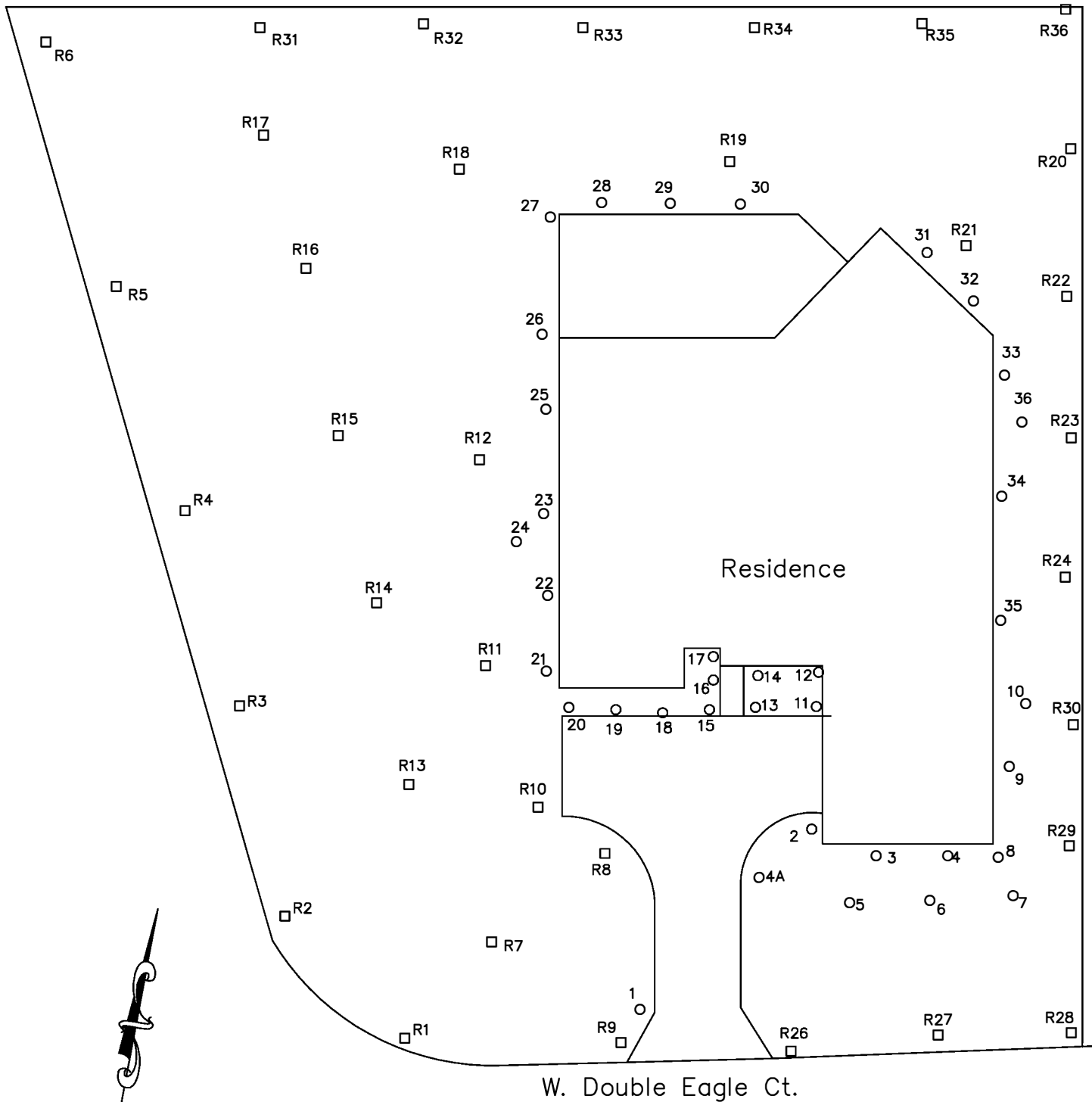
Thanks again for participating in the Withlacoochee Regional Water Supply Authority's Irrigation Evaluation program. We hope this information will benefit you. There are various recommendations and suggested changes made in this report.

Please contact WRWSA Contracted Administrator at 352-527-5795 if you have any questions or comments.

Urban runoff has been identified as the primary source of pollutant loading to surface waters in Florida and is regulated by local, state and federal regulations. Runoff in residential areas is contaminated with fertilizers, bacteria from pet waste, sediment, as well as oil and other automotive fluids from vehicles in driveways and streets. Your efforts in eliminating runoff from excessive irrigation helps reduce the amount of these pollutants which will be transported to local waters. By following the recommendations in this audit report not only will you be conserving water by irrigating more efficiently you will also be reducing your impact on the environment!

See attached Irrigation Layout Plan for irrigation equipment locations on the property.





Plan provided courtesy of the SWFWMD, Withlacoochee
Regional Water Supply Authority & Citrus County

LEGEND

- Location of Spray Heads
- Location of Rotor Head

ESD

ECO-Land Design
7615 Terrace River Drive
Tampa, FL 33637
Ph: (813) 466-8705
eco-landdesign.com

IRRIGATION LAYOUT PLAN

DATE:

January 2019

APPLICANT:

Appendix C

List of Educational Material

List of Educational Materials

- (1) A Guide to the Basics of Micro-Irrigation
- (2) Rain Barrels: A Homeowner's Guide
- (3) Watch the Weather, Wait to Water!
- (4) A Do-It-Yourself Guide to Florida Friendly Fertilizing
- (5) Saving Water Outdoors
- (6) Saving Water Indoors

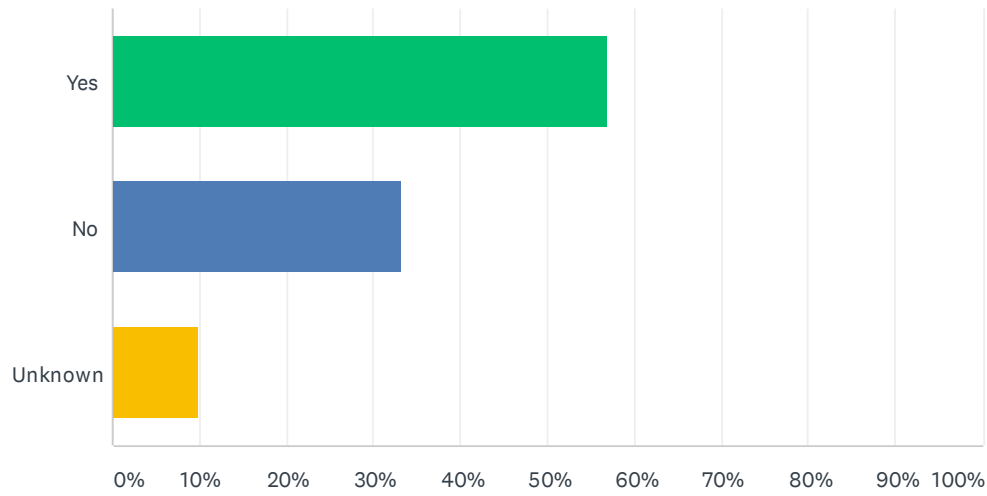
The educational materials were ordered by Jack Overdorff, the irrigation evaluation contractor, and distributed during the onsite irrigation system evaluation.

Appendix D

Customer Satisfaction Survey

Q1 Did the irrigation evaluation contractor make any changes to your system?

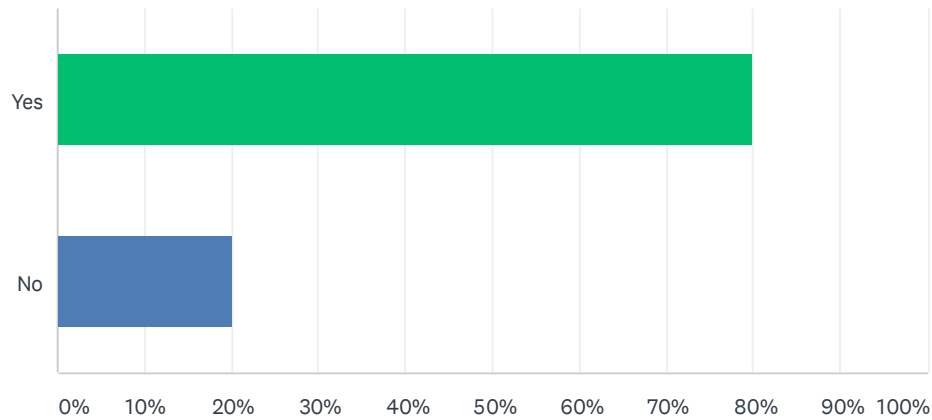
Answered: 51 Skipped: 0



ANSWER CHOICES		RESPONSES	
Yes		56.86%	29
No		33.33%	17
Unknown		9.80%	5
TOTAL			51

Q2 Did you make any changes to your irrigation system as a result of the system evaluation?

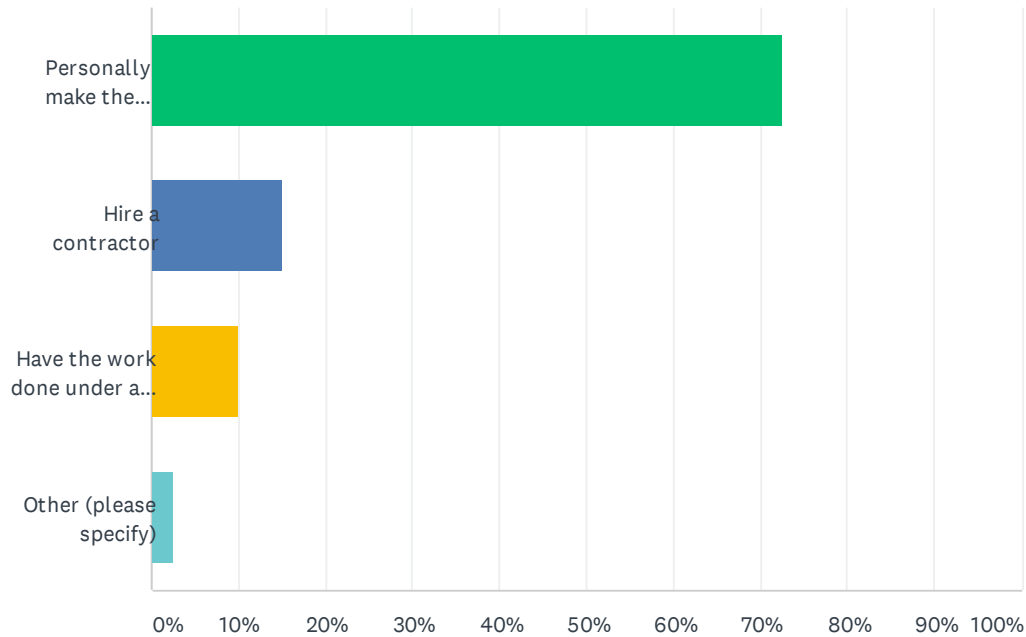
Answered: 50 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	80.00%	40
No	20.00%	10
TOTAL		50

Q3 If you made changes to your system, did you ...

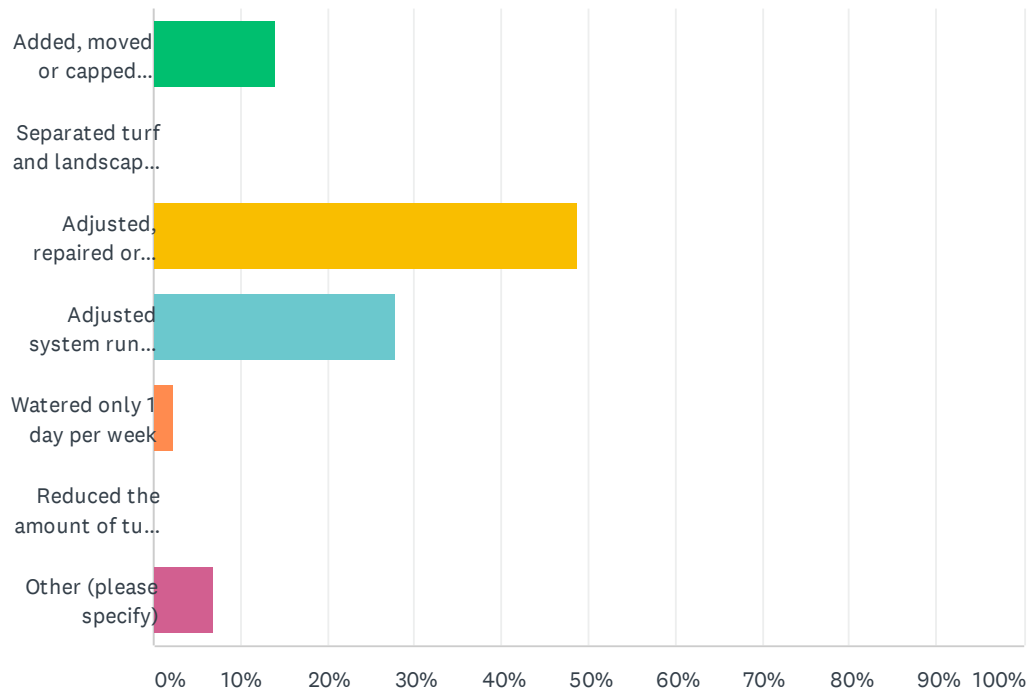
Answered: 40 Skipped: 11



ANSWER CHOICES	RESPONSES	
Personally make the changes	72.50%	29
Hire a contractor	15.00%	6
Have the work done under an existing maintenance contract	10.00%	4
Other (please specify)	2.50%	1
TOTAL		40

Q4 What changes did you make to your irrigation system? (Choose all that apply)

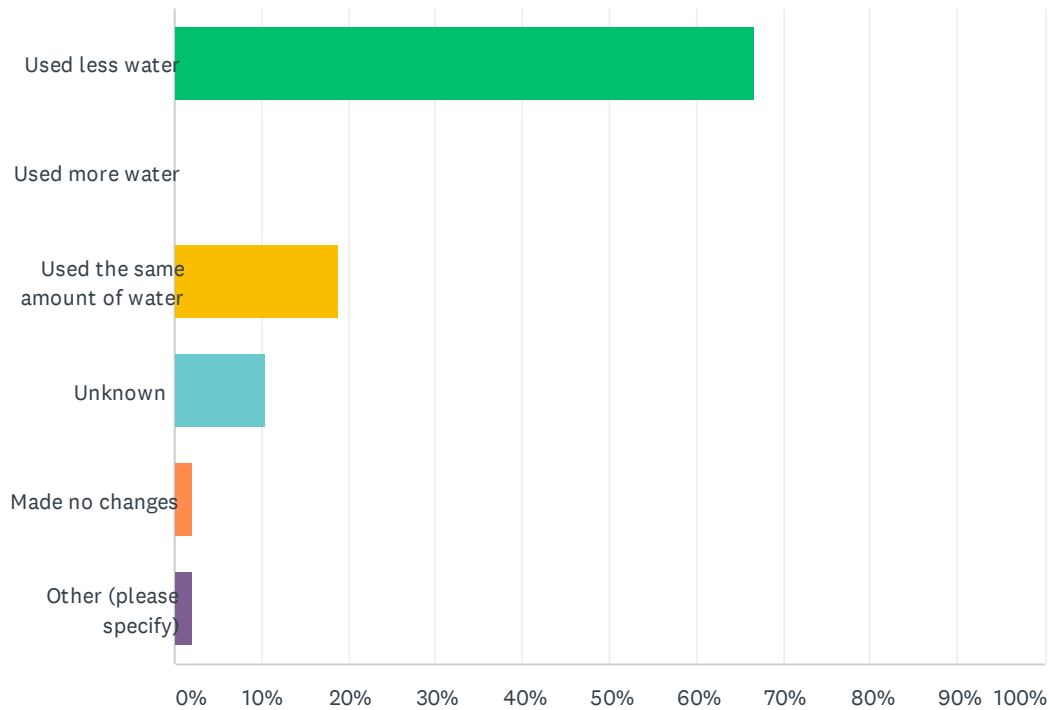
Answered: 43 Skipped: 8



ANSWER CHOICES	RESPONSES	
Added, moved or capped sprinkler heads	13.95%	6
Separated turf and landscape zones	0.00%	0
Adjusted, repaired or replaced sprinkler heads	48.84%	21
Adjusted system run times	27.91%	12
Watered only 1 day per week	2.33%	1
Reduced the amount of turf grass	0.00%	0
Other (please specify)	6.98%	3
TOTAL		43

Q5 Did you notice a change in your water usage as a result of any changes made?

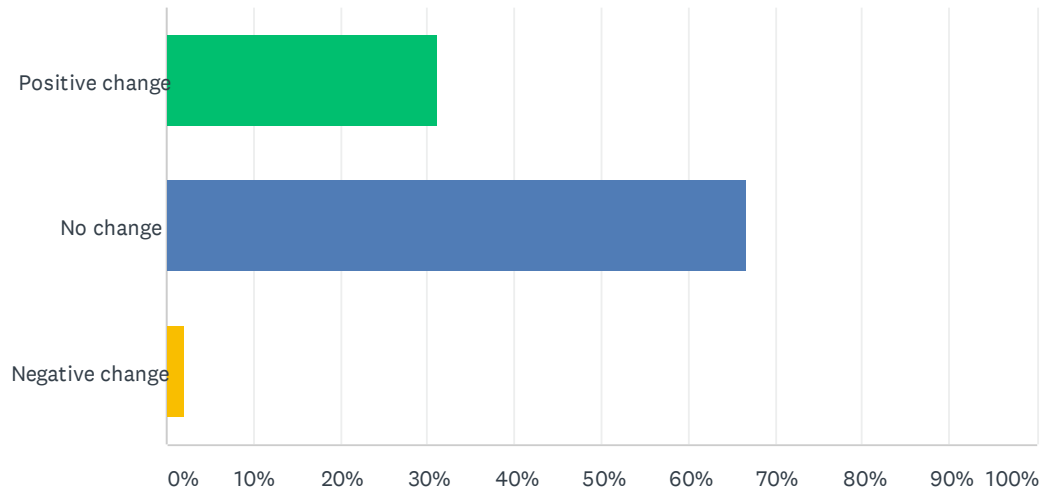
Answered: 48 Skipped: 3



ANSWER CHOICES	RESPONSES	
Used less water	66.67%	32
Used more water	0.00%	0
Used the same amount of water	18.75%	9
Unknown	10.42%	5
Made no changes	2.08%	1
Other (please specify)	2.08%	1
TOTAL		48

Q6 Did you notice any changes in your lawn/landscaping?

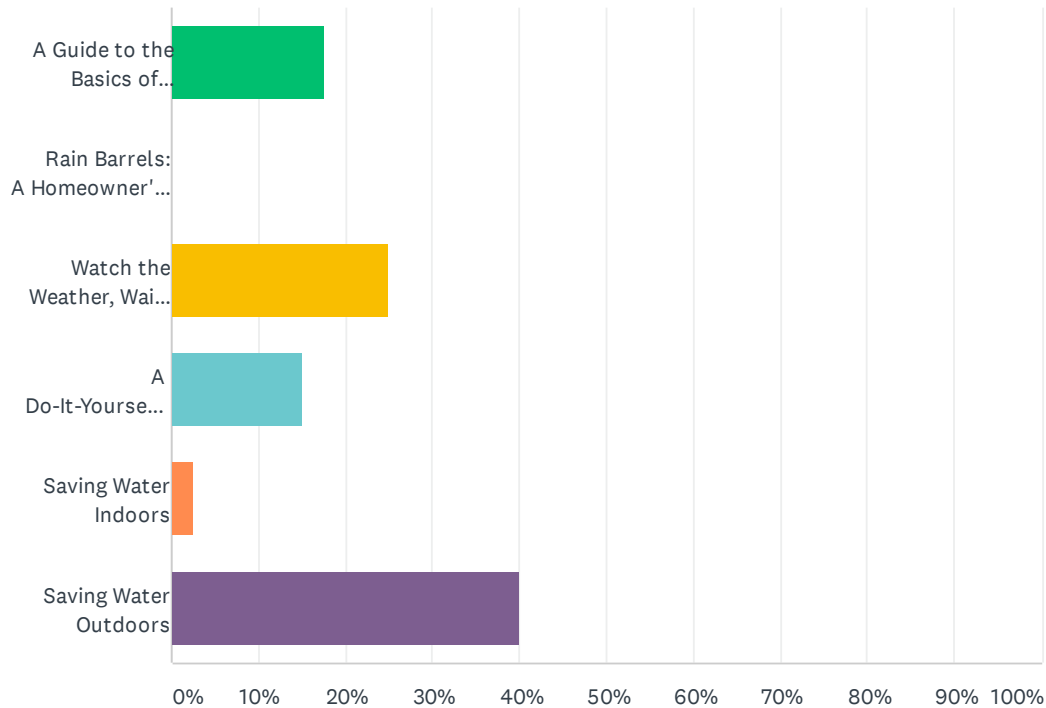
Answered: 48 Skipped: 3



ANSWER CHOICES	RESPONSES	
Positive change	31.25%	15
No change	66.67%	32
Negative change	2.08%	1
TOTAL		48

Q7 Which education information provided was most helpful?

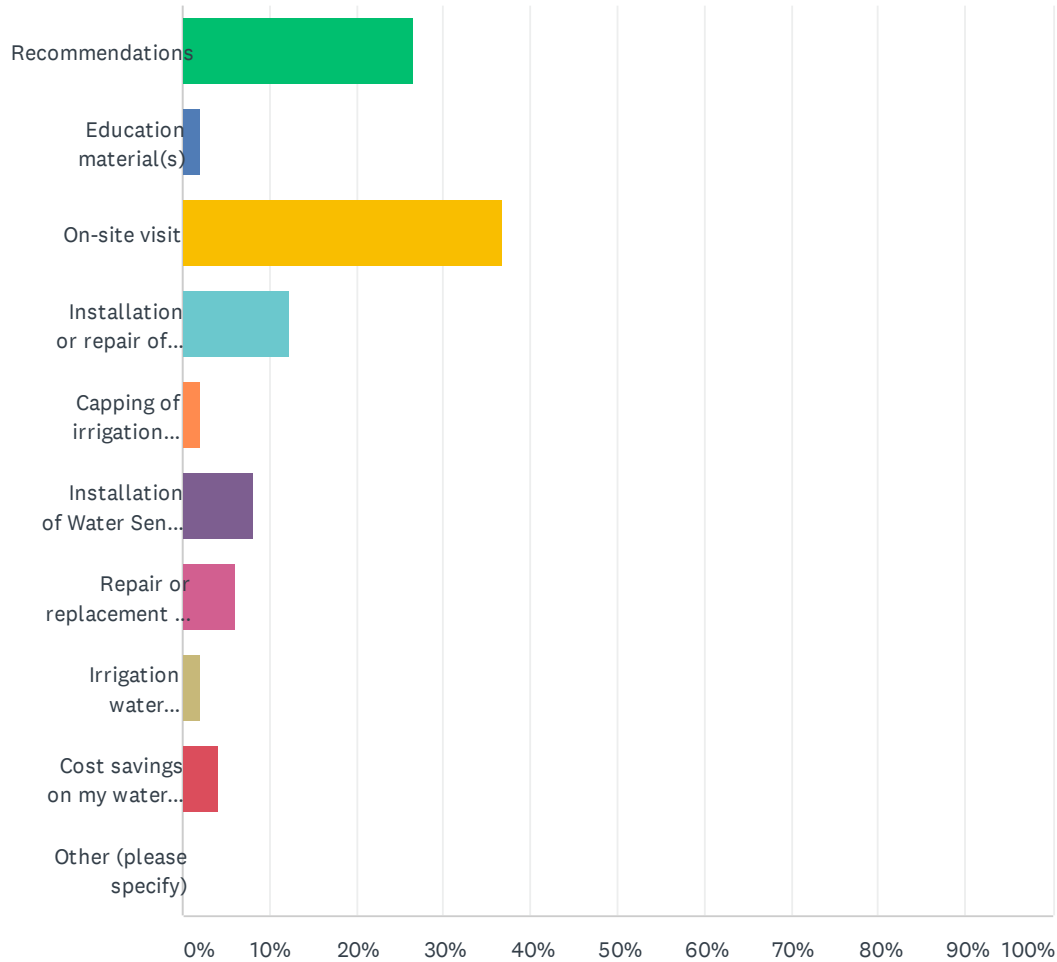
Answered: 40 Skipped: 11



ANSWER CHOICES	RESPONSES	
A Guide to the Basics of Micro-Irrigation	17.50%	7
Rain Barrels: A Homeowner's Guide	0.00%	0
Watch the Weather, Wait to Water!	25.00%	10
A Do-It-Yourself Guide to Florida Friendly Fertilizing	15.00%	6
Saving Water Indoors	2.50%	1
Saving Water Outdoors	40.00%	16
TOTAL		40

Q8 What was the most helpful part of the evaluation?

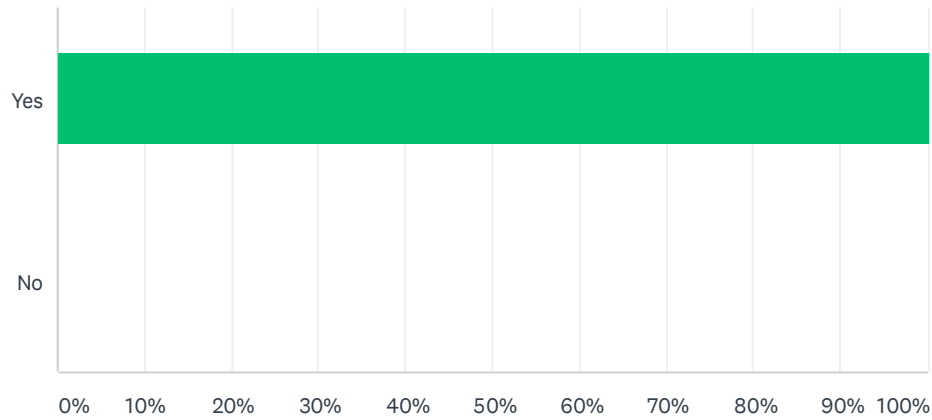
Answered: 49 Skipped: 2



ANSWER CHOICES	RESPONSES	
Recommendations	26.53%	13
Education material(s)	2.04%	1
On-site visit	36.73%	18
Installation or repair of rain sensor	12.24%	6
Capping of irrigation heads	2.04%	1
Installation of Water Sense Controller	8.16%	4
Repair or replacement of irrigation heads	6.12%	3
Irrigation water consumption/application calculations	2.04%	1
Cost savings on my water bill	4.08%	2
Other (please specify)	0.00%	0
TOTAL		49

Q9 Would you recommend this program to a neighbor?

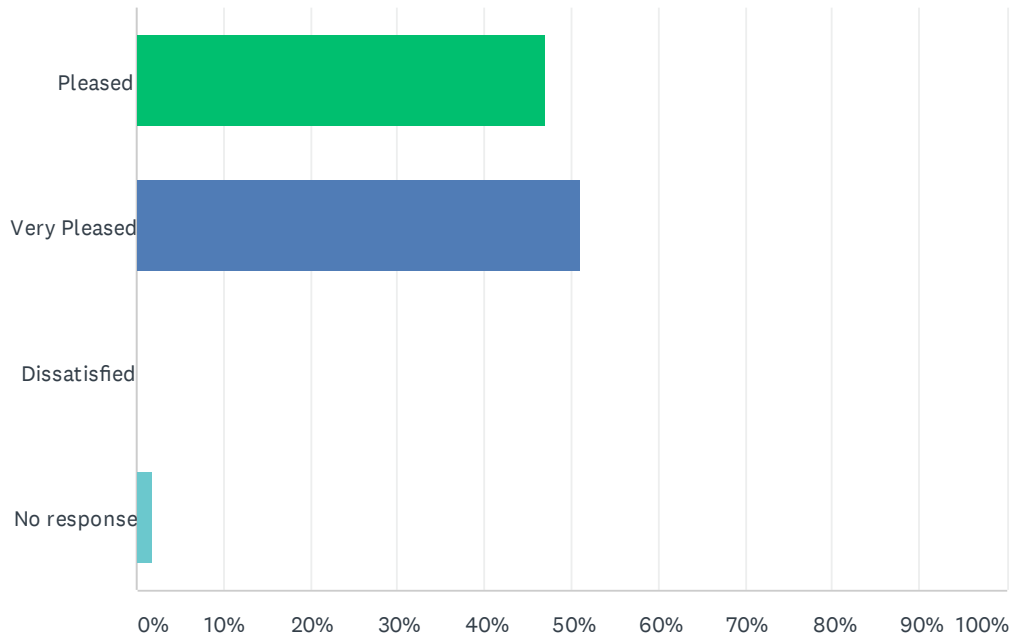
Answered: 50 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	100.00%	50
No	0.00%	0
TOTAL		50

Q10 Overall, how would you rate the irrigation system evaluation:

Answered: 51 Skipped: 0



ANSWER CHOICES	RESPONSES	
Pleased	47.06%	24
Very Pleased	50.98%	26
Dissatisfied	0.00%	0
No response	1.96%	1
TOTAL		51

Q11 Other comments:

Answered: 17 Skipped: 34

Appendix E

Water Use Data by Utility
(To be added after Marion County is available)

Appendix F

Summary of Follow-ups

Appendix F. Phase 5 Q040 Follow-Up Summary

Utility / Count	Evaluation Number	Core or Enhanced	Number of Recommendations	Number of Changes Implemented	Percent of Changes Implemented
Citrus					
1	10	Core	16	7	43.75%
2	11	Core	11	3	27.27%
3	14	Core	10	6	60.00%
4	15	Core	14	8	57.14%
5	17	Core	16	8	50.00%
6	18	Core	10	7	70.00%
7	19	Core	8	5	62.50%
8	39	Core	15	8	53.33%
9	45	Core	11	7	63.64%
10	46	Core	9	5	55.56%
11	48	Core	8	4	50.00%
12	69	Enhanced	16	7	43.75%
13	72	Core	11	8	72.73%
14	73	Core	18	15	83.33%
15	77	Enhanced	16	13	81.25%
Subtotal			189	111	58.73%
Hernando					
1	16	Core	9	7	77.78%
2	17	Core	27	18	66.67%
3	21	Enhanced	6	3	50.00%
4	22	Core	26	18	69.23%
5	23	Core	19	15	78.95%
6	40	Enhanced	14	12	85.71%
Subtotal			101	73	72.28%
Marion					
1	4	Enhanced	10	3	30.00%
2	15	Core	17	11	64.71%
3	20	Core	6	4	66.67%
Subtotal			33	18	54.55%
VCCDD					
1	2	Core	6	4	66.67%
2	3	Core	21	10	47.62%
3	8	Core	13	9	69.23%
4	9	Core	7	4	57.14%
5	12	Core	9	6	66.67%
6	20	Core	11	7	63.64%
Subtotal			67	40	59.70%

Utility / Count	Evaluation Number	Core or Enhanced	Number of Recommendations	Number of Changes Implemented	Percent of Changes Implemented
NSCUDD					
1	15	Core	3	1	33.33%
2	18	Core	6	3	50.00%
3	20	Core	12	8	66.67%
4	21	Core	9	4	44.44%
5	32	Core	9	2	22.22%
6	33	Core	9	4	44.44%
7	34	Core	7	5	71.43%
8	37	Core	14	8	57.14%
9	38	Core	12	4	33.33%
10	39	Core	6	1	16.67%
11	40	Core	12	6	50.00%
12	44	Core	5	2	40.00%
Subtotal			104	48	46.15%
Program Total			494	290	58.70%
Enhanced Evaluations		5	62	38	61.29%
Core Evaluations		37	432	252	58.33%

Item 11

Attorney's Report

To be provided at meeting

Item 12.a.

Executive Director's Report

Lead and Copper Rule Revision Presentation

Mrs. Suzannah Folsom, WRWSA, will present this item.

There is federal legislation revising the Lead and Copper Rule requiring:

- additional distribution system sampling
- identification of the type(s) of piping upstream and downstream of the billing meters
- additional orthophosphate treatment
- lead service line replacement
- sampling in schools and childcare facilities

Staff Recommendation:

This is an information item only and no Board action is required.

Item 12.b.

Executive Director's Report

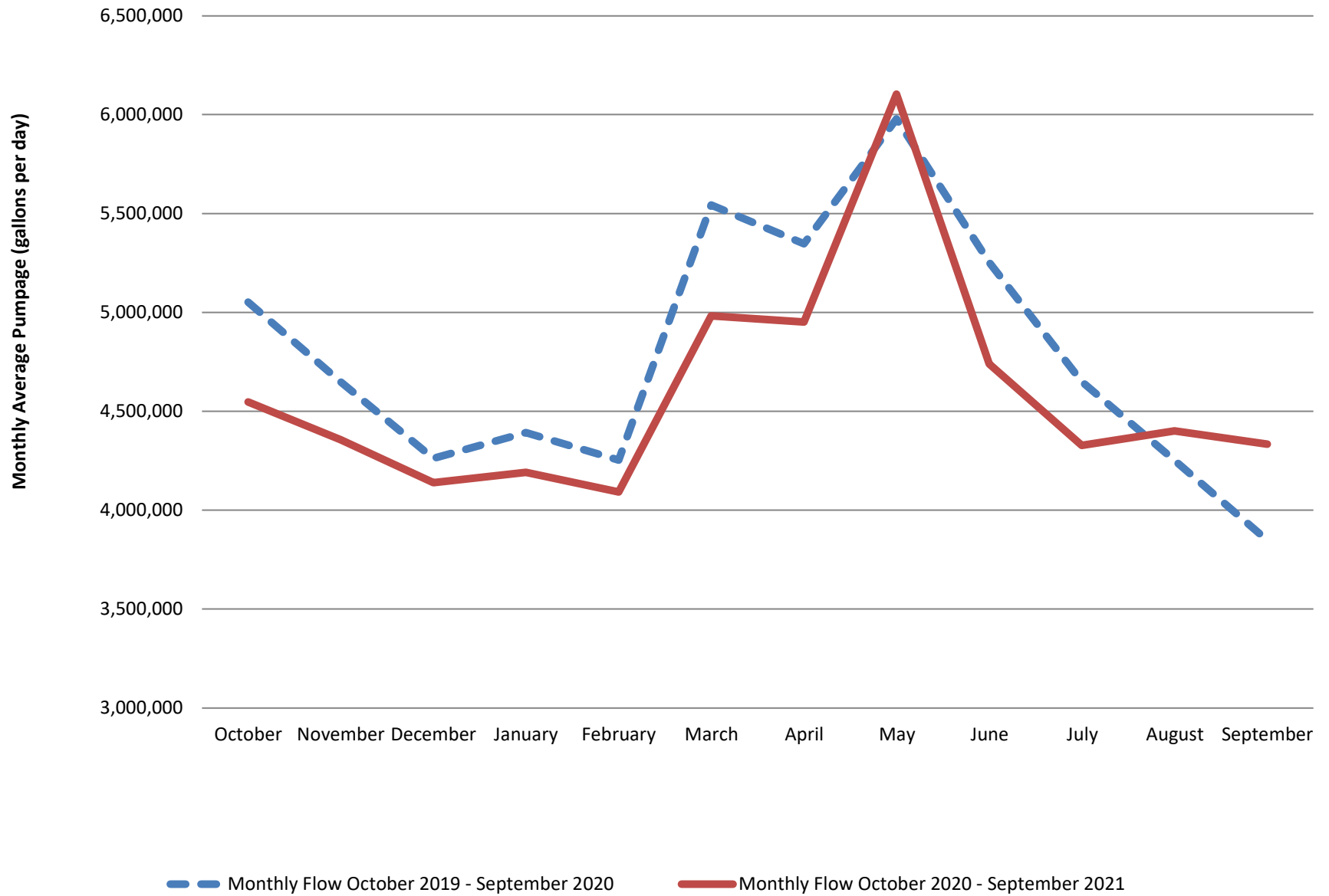
Water Use Permit Demand Summary

Summary of Major Water Use Permits in WRWSA Service Area

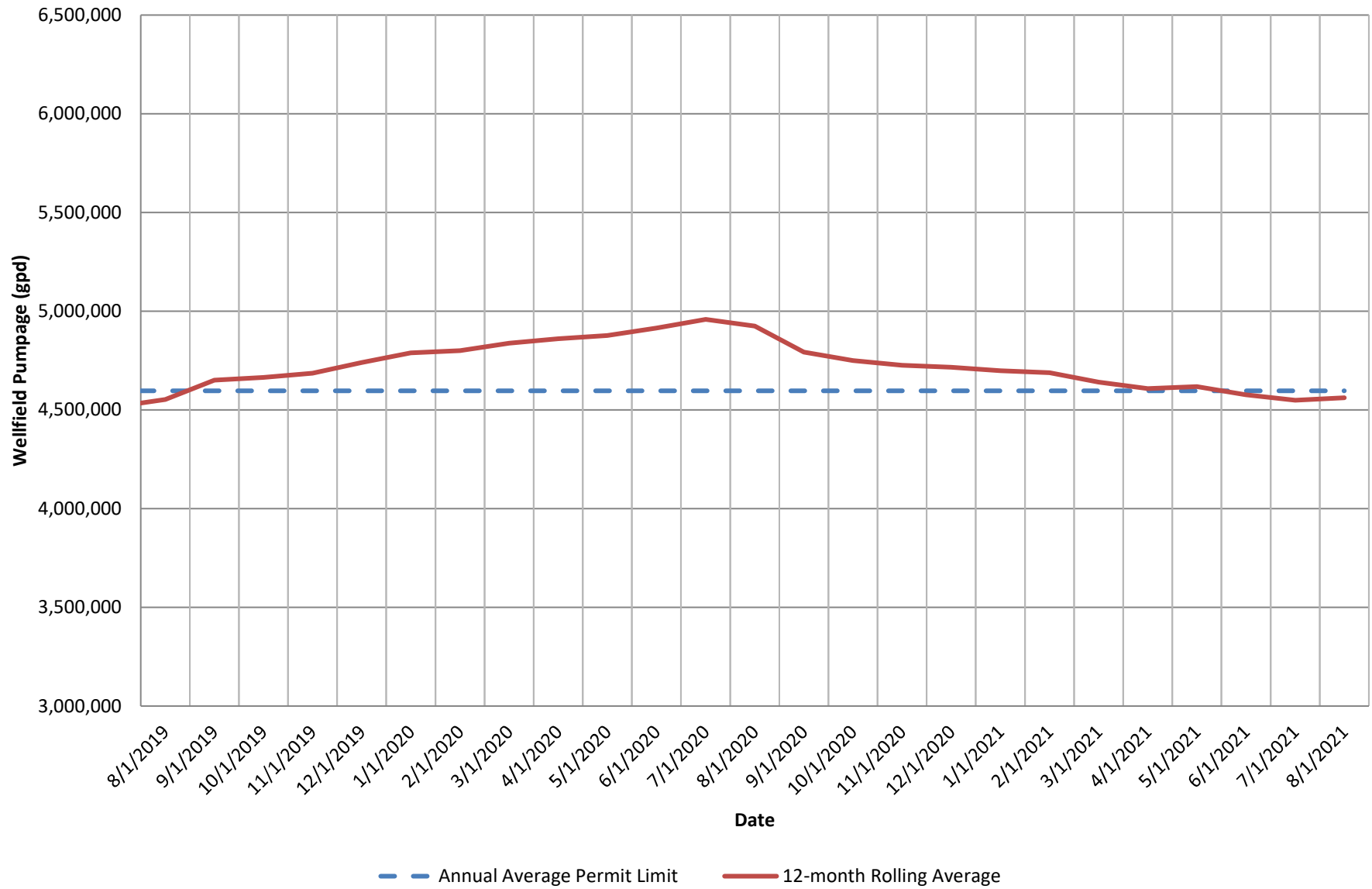
Updated 10/24/21

Water Use Permit #	Applicant/Permittee Name	Permit Expiration Date	Permitted Average GPD	Actual 12-Month Rolling Average GPD*	Actual 5-Year Rolling Average GPD**	Actual Use / Permit Capacity	WRWSA RWSP Projection for 2021 GPD	RWSP Accuracy for 2020 +/- %
Citrus County								
207.007	City of Crystal River	3/27/2032	919,000	675,273.97	767,438.25	73.5%	742,000	9.9%
419.013	City of Inverness	5/18/1931	1,535,000	1,147,614	1,056,298	74.8%	1,128,000	-1.7%
1118.008	Floral City Water Association, Inc.	2/28/2038	395,000	324,823	341,196	82.2%	302,000	-7.0%
2842.011	Citrus County	8/25/2035	4,780,000	2,533,196	2,530,805	53.0%	2,582,000	1.9%
4153.014	Rolling Oaks Utilities, Inc.	8/20/2038	1,573,000	1,588,901	1,581,124	101.0%	1,510,000	-5.0%
4406.008	Homosassa Special Water District	2/13/2022	960,000	854,178	813,797	89.0%	762,000	-10.8%
7121.006	Citrus County - Charles A Black	3/13/2022	4,597,000	4,601,271	4,643,886	100.1%	3,740,000	-18.7%
9791.011	Citrus County - Sugarmill Woods	11/17/2025	2,435,300	2,169,893	2,147,727	89.1%	2,318,000	6.8%
11839.008	GCP Walden Wds. One & Two, LLC, c/o Sun Communities, Inc.	4/23/2039	187,900	173,832	155,989	92.5%	140,000	-19.5%
20230.000	Ozello Water Association, Inc.	1/12/2022	509,000	N/A**	N/A	N/A	450,000	N/A
Hernando County								
	Hernando Co. BOCC, Wiscon Maintenance							
5789.013	Compound/Attn: Landis Legg	8/26/2035	23,299,000	19,829,907	18,083,890	85.1%	19,102,000	-3.7%
7627.005	City of Brooksville	2/25/2024	2,448,000	1,296,542	1,313,559	53.0%	1,128,000	-13.0%
Marion County - SWFWMD								
1156.013	Bay Laurel Community Development District	2/23/2041	7,560,900	3,487,600	3,306,643	46.1%	2,650,000	-24.0%
2999.005	Marion Utilities, Inc. Rainbow Lakes Estates	2/27/2035	126,000	97,411	98,215	77.3%	100,000	2.7%
5643.008	Utilities, Inc. of Florida - Golden Hills	2/23/2036	188,400	129,825	145,187	68.9%	160,000	23.2%
6151.013	Marion County Utilities Consolidated WUP	9/7/2021	6,661,000	5,524,951	4,650,685	82.9%	5,130,000	-7.1%
6151.014	in renewal, requested quantity		16,552,300					
7849.005	Marion Utilities, Inc.- Woods & Meadows	4/20/2037	149,000	124,367	124,251	83.5%	140,000	12.6%
8020.008	Association of Marion Landing Owners, Inc.	9/9/2040	179,400	145,930	133,896	81.3%	160,000	9.6%
8339.008	Florida Governmental Utility Authority- Dunellon	3/21/2035	1,117,100	1,574,247	1,133,255	140.9%	910,000	-42.2%
8481.006	Marion Utilities, Inc.- Spruce Creek	6/24/2039	834,400	869,740	726,235	104.2%	690,000	-20.7%
Marion County - SJRWMD								
	Sunshine Utilities of Central Fla Inc - South							
2993-10	Marion Regional Water System	12/17/2021	151,000	152,092	158,859	100.7%	238,000	56.5%
2995-6	Tradewinds Utilities Inc	2/27/2035	132,000	101,249	93,630	76.7%	100,000	-1.2%
3016-4	Ocala East Villas Inc	8/27/2031	107,000	83,830	93,428	78.3%	100,000	19.3%
3021-5	Rolling Greens Communities	9/13/2025	610,000	486,251	358,131	79.7%	350,000	-28.0%
	Florida Governmental Utility Authority - Ocala							
3043-7	Oaks	1/6/2040	194,000	157,230	128,387	81.0%	174,000	10.7%
3094-6	Marion Utilities Inc - Fore Acres	1/22/2041	111,000	103,328	102,628	93.1%	110,000	6.5%
3101-6	Marion Utilities Inc - Greenfields/Indian Pines	7/9/2041	142,000	128,057	127,325	90.2%	130,000	1.5%
3130-3	Sunshine Utilities - Sunray Estates	8/17/2040	215,000	130,937	138,101	60.9%	150,000	14.6%
3137-5	City of Belleview	10/11/2036	1,022,000	984,353	912,777	96.3%	868,000	-11.8%
4578-7	Marion County Utilities Consolidated CUP	9/10/2023	6,440,000	5,631,409	5,667,190	87.4%	6,674,000	18.5%
50324-9	City of Ocala	8/7/2027	15,260,000	11,764,312	11,578,873	77.1%	11,530,000	-2.0%
Sumter County								
1368.008	Lake Panasoffkee Water Assoc Inc	8/22/2024	410,000	279,074	269,744	68.1%	308,000	10.4%
6519.01	City of Bushnell	3/29/2031	1,366,800	433,197	462,742	31.7%	610,000	40.8%
7185.006	City of Webster	8/29/2022	102,900	95,578	84,373	92.9%	170,000	77.9%
8135.013	City of Wildwood	3/31/2035	4,344,800	2,177,825	2,163,025	50.1%	4,272,000	96.2%
8193.005	City of Center Hill	9/10/2022	170,500	69,156	69,090	40.6%	162,000	134.3%
13005.011	Village Center Community Development District	1/23/2038	19,345,900	12,628,045	13,443,845	65.3%	24,482,000	93.9%
20597.000	City of Wildwood-Continental Country Club	6/17/2026	238,400	136,277	135,722	57.2%	210,000	54.1%
*12-month Rolling Average for most recent available data								
** 5-year Rolling Average for most recent available data								
***No flow data was available for Ozello Water Association								

Total Charles A. Black Wellfield Pumpage



Charles A. Black Wellfield 12-Month Rolling Average Wellfield Pumpage



Item 12.c.

Executive Director's Report

WMIS WUP Notifications

Summary of Recent Water Use Permit Activity in WRWSA Service Area

Updated
10/28/21

Water Use Permit #	Applicant/Permittee Name	Activity Type	Date	Avg GPD	Peak GPD	Use Type	Status
Citrus County							
2226.004	M & B Products, Inc./Attn: Andrea McClellan	Renewal	5/13/2021	27,450	73,900	Agricultural	In Review
7662.004	Champs Software Inc./Attn: Charlotte Duval	Renewal	7/8/2021	30,600	93,800	Landscape/ Recreation/ Industrial/ Commercial	In Review
4368.004	Citrus County School Board/Attn: Eric Stokes	Renewal	8/2/2021	87,000	321,400	Landscape/ Recreation/ Agricultural	In Review
20230.001	Ozello Water Association, Inc./Attn: Gary Bibeau	Renewal	9/10/2021	1	1	Public Supply	Completed 10/14/2021
191.005	Big Wave LLC	New(Expired)	44,491	14,300	148,000	Agricultural	In Review
Hernando County							
5789.014	Hernando Co. BOCC, Wiscon Maintenance Compound/Attn: Landis Legg	Letter Modification	7/9/2021	23,299,000	28,657,800	Public Supply	Issued 9/2/2021
441.005	Hernando County School Board/ Attn: Sean Arnold	Renewal	10/8/2021	21,800	63,900	Landscape/ Recreation	Completed 10/8/2021
12841.004	Anthony J Murchio Life Estate, Trustee	Modification	9/13/2021	36,300	129,900	Agricultural	In Review
12917.004	Southern Hills Plantation CDD II / Attn: Eric Davidson	Letter Modification	9/7/2021	41,000	500,000	Landscape/ Recreation	Issued 10/1/2021
Marion County - SWFWMD							
20175.001	Circle Square Ranch Master Assoc., Inc./Attn: Gerald R. Colen	Renewal	5/19/2021	21,700	62,500	Landscape/ Recreation	Issued 9/29/2021
20152.001	HT Ranch, LLC	Renewal	5/24/2021	217,800	806,900	Agricultural	Issued 9/2/2021
20210.002	Roberts Quarter Horse Farm	Renewal	6/8/2021	426,380	1,340,630	Agricultural	In Review
10923.002	Spruce Creek Golf, LLC/Attn: Kenneth	Modification	7/26/2021	163,600	388,700	Landscape/	In Review
6151.014	Marion County Utilities / Jody Kirkman	Renewal	9/7/2021	16,552,300	24,693,400	Public Supply	In Review
Sumter County							
11856.003	Brassboys Enterprises (c/o Clark H Smith) Miona Lake Golf Course	Renewal	2/25/2021	22,900	257,900	Landscape/ Recreation	In Review
10385.003	Long Hammock Ranch III, LLC/ Attn: Chad Hughes	Renewal	3/25/2021	90,400	498,600	Agricultural	In Review
7746.004	Cal-Maine Foods, Inc./ Attn: Adolphus Baker	Renewal	5/11/2021	61,000	92,000	Agricultural	Issued 10/1/2021
12208.003	Div. of Forestry, Dept. of Ag. and Cons. Serv/Attn: Keith Mousel	Renewal	5/13/2021	40,600	157,700	Agricultural	In Review
8675.008	U.S. Dept. of Veterans Affairs / Attn: Bryan Bodner	Letter Modification	5/13/2021	817,400	2,336,100	Landscape/ Recreation	Issued 9/8/2021
2777.005	T.P. Caruthers Jr. and Betty G. Caruthers	Letter Modification	8/18/2021	41,500	130,500	Agricultural	In Review
8211.005	Flowerwood Nursery, Inc./Attn: Glenn Ponder	Renewal	8/24/2021	574,900	1,257,200	Agricultural	Issued 10/1/2021
10923.002	Spruce Creek Golf, LLC/Attn: Kenneth Kirkpatrick*	Modification	7/26/2021	163,600	388,700	Landscape/ Recreation	In Review
12301.002	Oxford Assembly of God Church, Inc.	Renewal	10/6/2021	1,000	2,000	Landscape/ Recreation	In Review
220222.005	Leonard and Mary Helen Northup	Letter Modification	10/8/2021	95,600	353,000	Agricultural	Issued 10/22/2021
6838.006	Florida Department of Corrections/ Attn: Andres Kra	Renewal	10/5/2021	457,500	789,500	Industrial/ Commercial/ Agricultural	In Review
8135.014	City of Wildwood	Letter Modification	9/24/2021	4,344,800	6,345,900	Public Supply	In Review
20991.000	Sorocaima J. Ascanio & Maria C. Hernandez	New	9/10/2021	100	100	Agricultural	In Review
20155.001	Skyline LLC	Renewal	9/8/2021	79,300	343,200	Agricultural	In Review
6151.014	Marion County Utilities / Jody Kirkman	Renewal	9/7/2021	16,552,300	24,693,400	Public Supply	In Review
11632.004	Sumter Villas	Modification	10/20/2021	30,000	96,000	Landscape/ Recreation	In Review
1926.004	Donald and Wilma Jones	New (Expired)	10/21/2021	71,700	310,200	Agricultural	In Review
20989.000	Dan & Peggy Sue Graham	Issued	9/2/2021	40,200	328,100	Agricultural	Issued 10/7/2021
*WUP #10923.002 is located within Marion and Sumter Counties							

Item 12.d.

Executive Director's Report

Correspondence



An Equal
Opportunity
Employer

Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

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

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

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

September 04, 2021

RECEIVED SEP 14 2021

Withlacoochee Regional Water Supply Auth./Attn: Suzannah Folsom
3600 W Sovereign Path, Suite 228
Lecanto, FL 34461

Subject: Renewal of Water Use Permit No: 20 007121.006

Dear Withlacoochee Regional Water Supply Auth./Attn: Suzannah Folsom:

Your Water Use Permit (WUP) will expire on March 13, 2022. This letter is being sent to you as a courtesy notification that it is in your interest to renew your permit prior to its expiration date. Many areas of the District are experiencing significant limitations regarding the availability of water supply. If this permit is not renewed there is a possibility that the quantities may not be re-permitted, or that substantial requirements may impact a new application. Therefore, it is important for you to renew your WUP in a timely manner if you plan to continue your water use.

We are pleased to announce that the District has launched an on-line permitting system for Water Use Permits. You can access our website at <http://watermatters.org/wuprenewal>, and then by either logging in or by creating a User Account you can renew your water use permit on-line. If you do not have access to a computer, please contact the District for the appropriate forms at the number listed in this letter.

If you wish to continue withdrawing water from your permitted facilities, please do not let your permit expire. If your permit does expire, you will not be authorized to withdraw water from the previously authorized withdrawal point(s) until a new permit is issued. Doing so is a violation of State Law and may result in a monetary penalty. If your permit expiration date is on a weekend or a holiday, the permit renewal application must be submitted by the last business day prior to the expiration date.

If you no longer wish to withdraw water from the withdrawal facilities on this permit, please inform us by return letter so we can schedule an inspection to check that the withdrawal facilities are properly capped or dismantled as required under law. If you have sold the property, please provide the name and mailing address of the new owner.

If you have any questions or wish to have assistance in completing the application, please contact the Water Use Permit Bureau at (813)985-7481 or 1-800-836-0797 (Florida only) and ask for the "Hydro of the Day".

Sincerely,

April Breton
Manager
Water Use Permit Bureau
Regulation Division



September 15, 2021

Mr. Ken Cheek, PE
Director, Department of Water Resources
Citrus County Board of County Commissioners
3600 W. Sovereign Path, Suite 291
Lecanto, Florida 34461

Subject: Cost of Living Increase for Fiscal Year 2022 rate per 1000 gallons

Dear Ken:

This letter serves as formal confirmation of the annual cost of living rate increase for fiscal year 2022 effective October 1, 2021 as required in Section 10.2 of the Water Supply Contract.

The rate in fiscal year 2021 was \$0.1401 per 1000 gallons. In an email on September 14, 2021 your staff confirmed that Citrus County is adjusting the rates applied to your customers by 1.17% in fiscal year 2022. The Master Water Contract allows for the same adjustment to be applied to the water rate that WRWSA charges Citrus County. The new calculated rate for fiscal year 2022 will be \$0.1417 per 1000 gallons.

Should you have any questions or wish to discuss this matter, please contact me.

Sincerely,

Suzannah Folsom, PE, PMP
Executive Director

cc: Gary Loggins, Operations Division Director

Item 12.e.

Executive Director's Report

News Articles

Residents need to see where funds will flow – Editorial

Citrus Chronicle

Sep 25, 2021

CASH FLOW

THE ISSUE: *County OKs controversial tax on stormwater runoff.*

OUR OPINION: *Right thing to do.*

Citrus County has been under a deluge from a record-setting summer of rainfall, which has led to flooding issues throughout parts of the county.

Those problems could be mitigated in the coming years with the implementation of a newly approved stormwater runoff fee.

Despite rambunctious public meeting to create a mostly flat stormwater assessment fee — Municipal Services Benefit Unit (MSBU) — for each county residents' property and do away with having the funding source embedded in the county's annual property taxes, commissioners held their ground. They deserve credit for withstanding the naysayers.

The county stands to collect upward of an additional \$3.5 million per year with the approved MSBU, because the assessment is not subject to homestead and other exemptions.

The majority of commissioners said they understood residents' frustration, but all would benefit when stormwater was better maintained to avoid flooding and treated before it went back into the aquifer.

According to the county, fees would go toward to build capital improvement projects, maintaining and repairing stormwater infrastructure. Those all make sense, but what projects would be ideal? What is the current state of existing stormwater infrastructure?

County commissioners can tell us it will benefit it, however, citizens are typically skeptical when government levies new taxes and fees at our benefit.

The county would make in-roads if it shows the public plans, such as priority projects, for the monies collected to deal with stormwater runoff.

Springs protection begins with each of us

Citrus Chronicle

Sep 17, 2021

By Kate Spratt

Many communities are built around their most distinctive feature.

The community of Homosassa Springs is not only built around, but also named after its most impressive natural wonder. For thousands of years, the Homosassa main spring has allured humans and wildlife alike. Florida's earliest people camped near the spring's banks while thousands of fish swirled through the steady flow of glistening fresh water. Today, visitors from around the world come to those very spring banks to view the dazzling water and wildlife found in and around this massive spring.

The water bubbling out of Homosassa's springs, including the main spring's 40-foot basin, arrives from the Floridan aquifer deep beneath our feet. This underground river flows with water that percolated down into the grounds of nearby farms, forests and residential communities. This area of land, called the Homosassa springshed, spans about 270 square miles across Citrus and Hernando counties and is the source for the water that emerges from Homosassa's springs. The above-ground activities in the springshed directly impact, either positively or negatively, the quality and quantity of water exiting the springs.

Does that mean that someone living on the other side of Citrus County can impact what comes out of the springs in Homosassa?

The answer is yes. "What goes on the ground must go down," says Ranger Kate! Heavy pesticide use, unauthorized landfills, leaking storage tanks and chemical spills can cause groundwater contamination with the effects felt far beyond the location of the offence.

Vulnerable springsheds are impacted by urban and agricultural stormwater runoff and inadequately treated wastewater, resulting in high nitrogen levels. Algal growth increases when nitrogen is elevated, which negatively impacts the entire springs system. Have you visited a spring where instead of flowing aquatic grasses in crystal clear water there are thick mats of algae strung through dingy water? If so, pollution is one reason why those springs aren't sparkling as brightly.

Our springs are experiencing another problem: a reduction in discharged water volume. What happened to the water, where did it go? The answer: out our faucets, down shower drains, flushed in toilets, irrigating crops, watering lawns and other means to support our needs. Most of our daily water comes from the same place as the water for our springs: the aquifer. When water is pumped out it leaves less to flow out of springs.

Imagine this: You have a garden hose with water steadily flowing out. One by one, leaks begin to happen on the hose. They don't cause a tremendous change in the water leaving the hose. Over time, leaks of all sizes erupt, so many that the water coming out of the garden hose is visibly less. Eventually the water leaking out of the holes is greater than the water leaving the hose. The flow from the end of the hose is now significantly less.

This is what is happening to our springs — too many people are taking too much water from the aquifer. According to the census bureau, Florida's population has increased 217% in the past 50 years. That's quite a few more holes in our water hose.

Despite the challenges our springs face, all hope is not lost. There are ways that we can reduce our impact on Homosassa's springs:

- Limit or eliminate use of fertilizer. Excessive fertilizer can seep into the aquifer, contributing to algae growth in springs and rivers.
- Nearly half of the water used in Florida goes to irrigating landscapes. Select native Florida plants that need little to no irrigation or fertilizer. Many native flowers also support pollinators, such as bees and butterflies.
- Maintain your septic tank or connect to a sewer utility. Improperly maintained septic tanks can pollute ground water.
- Turn the water off while brushing your teeth, shorten your shower and skip pre-washing your dishes to help save precious gallons of water daily.
- Stay informed and get involved with groups that advocate for springs locally and beyond.
- Visit Florida's springs with friends and family to develop a first-hand appreciation for their beauty and importance.

It doesn't matter if you live in Homosassa or on the other side of Citrus county; we are a community built around springs. It is up to us to make the conscious effort in our daily lives to do our part to protect and preserve the natural feature that glistens at the center of the Homosassa community.

Our springs are fragile, our water is finite, and we are the ones that can influence the future beginning today.

Kate Spratt is a park services specialist at the Ellie Schiller Homosassa Springs Wildlife State Park.

Attention all private well owners in Citrus County

WMNF

Sep 15, 2021

By Evan Greenfield

Due to the floods in Citrus County, well owners should take extra precautions against disease-causing organisms because well water may not be safe to consume.

According to a press release from the Florida Department of Health in Citrus County, there are three ways to disinfect the tap water in order to make it safe to drink again.

Boil tap water and hold it at a rolling boil for at least one minute. Then let the water cool down before you drink it, brush your teeth, use it for cooking, wash dishes, or wash your food.



Water: By Sadia Kinana/WMNF (2021).

Use commercially-available bottled water, especially for baby formula.

"Disinfect tap water by adding eight drops of plain, unscented household bleach (four to six percent strength), which is about one eighth teaspoon or a dime sized puddle, per gallon of water. Mix the solution and let it stand for 30 minutes. If the water is cloudy after 30 minutes, repeat the procedure one time."

Once the flooding is over, make sure to disinfect the well. You can use the procedures from the U.S. Environmental Protection Agency's website for instructions:
<https://www.epa.gov/privatewells>

If your well has been flooded, the county health department suggests you get your well water tested for coliform bacteria.

For those collecting their own water sample, the closest labs are located in Ocala and Tampa.

Advanced Environmental Labs (813) 630-9616

Marion County Water Test Lab (352) 694-6042

CDD 13 approves Phase III development adding 2,404 homes in The Villages

Villages-News

September 16, 2021

By Meta Minton

The Community Development District 13 Board of Supervisors on Thursday afternoon approved the Phase III development which will add 2,404 homes in The Villages.

Lee Clymer of the Clymer Farner Barley engineering firm said the estimate for District-eligible construction costs of Phase III is \$120.4 million of which \$71 million will be funded by bonds and \$49.4 million or the remainder not funded in the construction fund is anticipated to be funded by The Villages Land Company.

The Phase III development will cover 791 acres.

Permits to provide overall grading, stormwater treatment, flood protection, and drainage for CDD 13, including the Phase III development, have been issued by the Southwest Florida Water Management District. Subsequent design and permitting of certain Phase III components have been completed, with approvals received from the City of Wildwood, the Florida Department of Environment Protection and SWFWMD to allow construction to commence on the initial Phase III infrastructure. All other permits necessary to complete the remaining portion of Phase III infrastructure are anticipated to be obtained in the ordinary course of the development of Phase III Project, Clymer added.

CDD 13 already includes the Village of Chitty Chatty and the Village of Bradford. CDD 13 also owns the Brownwood, Chitty Chatty and Water Lily golf cart bridges.

There will be a total of 8,062 homes in CDD 13 after Phase III is completed.

Sumter County residents petition for cleanup of once-pristine Lake Panasoffkee

Villages-News

September 15, 2021

By Marv Balousek

Gail Bernard recalled the clear, spring-fed water of Lake Panasoffkee when she was a child.

"When I was growing up, Lake Panasoffkee to me was the elite part of Sumter County," she said. "I felt privileged to live there."

Today, the clear water is long gone and the lake and its connected canals are infested with weeds.

"I want it to be back like it was," said Bernard, who still lives on the canal where she grew up.

She was among several Lake Panasoffkee residents to plead with commissioners Tuesday night to clean up the lake and establish a regular maintenance schedule.

"Lake Panasoffkee is basically unusable with a boat or any type of recreational activity, said Commissioner Doug Gilpin, who represents the area and urged fellow commissioners to make lake cleanup a priority.

Brett Barkley told commissioners he collected 200 signatures on a petition calling for the county to take action.

"That lake is dangerous right now," he said. "It's the worst I've ever seen it."

Barkley said the county should use a mechanical harvester to clear the lake and canals of overgrown weeds. He also said the lake should be annually maintained through a program like in neighboring Citrus County.

Help could be on the way through about \$25 million in federal funds allocated to Sumter County through the America Rescue Plan Act. The county has received half of the funding and the rest is expected next summer.

The federal money is restricted to capital projects such as water, sewer and broadband.

Replacing septic tanks around Lake Panasoffkee with sewers would prevent leakage and the release of gray water from washing machines by some residents that feeds the weed growth.

County Administrator Bradley Arnold said installing sewers would be a crucial first step in the long-term health of the lake.

But he said cleaning up the lake won't be easy. Canal ownership and oversight by several state agencies complicates the cleanup process.

For some homeowners, their property runs to the center of the canal while other canals are under state ownership. Several state agencies have authority over waterways.

Arnold said dredging is restricted on some canals because digging too deep would endanger the fresh water aquifer.

County Chairman Garry Breeden recalled navigating a myriad of state agencies when he tried to repair or replace a bridge over a Lake Panasoffkee canal while he was Sumter County public works director more than a decade ago.

He warned residents that restoring the lake's health will be difficult.

"Resolving the issues you've brought before the board tonight will be a lengthy and expensive process," he said.

Here's why red tide could continue to affect Gulf Coast beaches for months

WUSF Public Media - WUSF 89.7 | By Steve Newborn

Published October 13, 2021 at 4:21 PM EDT

Red tide has persisted for months in what has been an unusually long season for the algae bloom. But we may not even be close to the end of the season.

This has been one of the worst outbreaks of red tide on the Gulf Coast in years.

Scientists say it's hard to pin down the reason, but onshore winds, tides and human activity such as runoff of nutrient-rich stormwater from fertilizers has made the problem worse.

Kate Hubbard, a research scientist at the state's Fish and Wildlife Research Institute in St. Petersburg, says that last fall, we didn't see major blooms until late November.

But red tide got an early start this summer, with dead fish being found throughout Tampa Bay and along the Gulf beaches.

"I think what's atypical this year is that we saw the bloom continue throughout the summer," Hubbard said. "So that doesn't typically happen. Usually, the blooms start in late summer and fall and then they wrap up in winter, spring."

Hubbard doesn't have a prediction on when this latest outbreak might end.

"Fingers crossed, this will follow our typical bloom cycle, that will start to wind down as we descend more into the winter months," she said. "But it's very hard to say with any degree of certainty whether or not that's going to happen and when that's going to happen."

The toxins are not only deadly for marine life, but can affect the respiratory systems of people who go to the beach or live near the water.

MOTE scientists say mobile wastewater treatment machine could be the answer in fighting red tide

By: Wendi Lane, ABC Action News

September 14, 2021

SARASOTA, Fla. — In the fight against red tide, Mote Marine scientists are testing a machine that uses ozone technology to clean water.



The OZONIX Mobile Water Treatment Unit has already been used to treat water used for fracking in oil mining and has proven successful in removing red tide cells from seawater.

Now the treated water is being tested on shrimp and clams to make sure the machine can rid water of harmful algae while keeping marine life safe. And scientists say the tests are promising.

"After the experiments, we had over the last couple of weeks out at our city island campus with concentrations of red tide in the millions of cells and here with the living organisms, I would say this is a very very high potential technology," said Michael Crosby, MOTE president and CEO.

This project is one of two dozen that MOTE is testing to help stop the spread of red tide. This approach is part of the Florida Red Tide Mitigation & Technology Development Initiative which involves not only testing a strategy's ability to control red tide, but also its impact on the environment.

Mote says with approval this machine could be used to fight red tide in the next year.