

# **AGENDA**

## **Pollution Control Board**

*February 15, 2024, 9:30 A.M., CFTOD Environmental  
Sciences, Conference Room, 2191 South Service Ln., Lake  
Buena Vista, Florida 32830*

- **CALL TO ORDER**
- **APPROVAL OF MEETING MINUTES**
- **ORGANIZATIONAL UPDATE**
- **RCES UPDATES**
- **ENVIRONMENTAL SCIENCES UPDATES**
- **DISCUSSION**
- **SET MEETING SCHEDULE**
- **ADJOURN**

# Orlando Sentinel

MEDIA GROUP

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Orlando, FL 32830-0170

**State Of Florida  
County Of Orange**

Before the undersigned authority personally appeared  
Rose Williams, who on oath says that he or she is a duly authorized  
representative of the ORLANDO SENTINEL, a DAILY newspaper  
published in ORANGE County, Florida; that the attached copy of  
advertisement, being a Legal Notice in:

The matter of 11150-Public Hearing Notice  
Was published in said newspaper by print in the issues of, or by publication  
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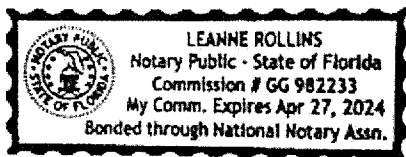
Rose Williams

Name of Affiant

Sworn to and subscribed before me on this 1 day of February, 2024,  
by above Affiant, who is personally known to me (X) or who has produced identification ( ).



Signature of Notary Public



Name of Notary, Typed, Printed, or Stamped

7575282

**MEETING NOTICE**

**YOU WILL PLEASE TAKE NOTICE** that on Thursday, February 15, 2024 at 9:30 a.m., the Pollution Control Board of the Central Florida Tourism Oversight District will meet in regular session at the Environmental Sciences Building, 2191 South Service Lane, Lake Buena Vista, Florida 32830. At that time, the Board will discuss such business as may properly come before them.

By: **Doreen Johnson**  
1/31/2024 7575282

7575282

# Central Florida Tourism Oversight District

1900 Hotel Plaza Boulevard  
Lake Buena Vista, Florida 32830

[www.rcid.org](http://www.rcid.org)



## Pollution Control Board

Grace Pierce, Chairman  
Sam Ackley, Member  
Kermit Prime, Member  
Andrea Jernigan-Gwinn, Member  
Jay Exum, Member  
Michael Crikis, Pollution Control Officer

## REGULAR MEETING

The Pollution Control Board (PCB) of the Central Florida Tourism Oversight District (CFTOD) ,fka Reedy Creek Improvement District, held their regularly scheduled Board meeting on Monday, 07 August 2023, at the CFTOD Administration Building, 1900 Hotel Plaza Boulevard, Lake Buena Vista, Florida 32830. The following attendees were present:

- Board Chair Grace Pierce
- Board Members Sam Ackley, Jay Exum, Andrea Jernigan-Gwinn, Kermit Prime
- Reedy Creek Energy Services (RCES) Manager Jason Herrick
- Env. Sciences Director & Pollution Control Officer Mike Crikis
- Env. Sciences Managers Wendy Duncan & Jeff Holland
- Env. Sciences Pollution Control Program Manager Kimberly Lawrence
- Env. Sciences Pollution Control Specialist III Sean Dallas

## CALL TO ORDER

Chair Pierce called the meeting to order at 09:36 am, recognized the public notice was properly published in the Orlando Sentinel newspaper (22 July 2023 issue), and noted a quorum was present.



## **APPROVAL OF MEETING MINUTES**

Chair Pierce called for a review and discussion of the meeting minutes from 02 December 2021. With no changes presented, Board member Jernigan-Gwinn made a motion to approve the minutes and member Ackley seconded the motion. By unanimous vote, the minutes were approved as written.

## **RCES UPDATES**

Jason Herrick, RCES Manager of Gas, Water & Water Resources, reviewed the operational activities of RCES (summary “Reedy Creek Energy Services Report to CFTOD Pollution Control Board, 07 August 2023”). Highlights of the Wastewater Treatment Facility (WWTF) operations over the past year were discussed.

The wastewater system successfully operated below the permitted flow capacity (20MGD) and average effluent nutrient concentrations were below permitted limits. All annual monitoring reports were submitted successfully and on time. Manager Herrick provided the Board an overview of additional partnership activities with Orange County in sharing wastewater contributions and distributions.

The wastewater collection system experienced five reportable overflow events over the past 12 months. All events were properly reported to the State Warning Point and/or Florida Department of Environmental Protection (FDEP) Central District, as required. Industrial pretreatment monitoring showed all permitted users remained in compliance and the program successfully passed an FDEP inspection in April 2023.

Reclaimed water system demands averaged 5.67MGD (July 2022-June 2023), which accounted for 45% of total effluent usage, with the remainder being utilized in the RCES Rapid Infiltration Basins (RIBS) for groundwater recharge. Water system consumption in the same timeframe averaged 16.7MGD and accounted for 75% of the Water Use Permit allocation. All required permits to FDEP and South Florida Water Management District (SFWMD) were submitted on time.

As part of the STOPR group (St. Cloud, Toho Water Authority, Orange County, Polk County, Reedy Creek Improvement District), CFTOD elected to withdraw from the Cypress Lake alternative water supply project due to its cost-feasibility being outside budget limits.

The solid waste program was found to be in full compliance from a FDEP Central District inspection conducted August 2022, and all reports were properly submitted. Air emissions were monitored and all reports were properly submitted.

Following board member discussions on various topics presented, the RCES update concluded.

## **ENVIRONMENTAL SCIENCES UPDATE**

Pollution Control Officer Crikis updated the Board on the status of water quality since the last 2021 Board meeting. He summarized how the District's surface waters continued to maintain a "good" water quality rating and has not required FDEP to assign a Total Maximum Daily Load (TMDL). Officer Crikis announced Environmental Sciences has added Pollution Control Specialist III Sean Dallas to the department and promoted coordinator Kimberly Lawrence to Pollution Control Program Manager. Officer Crikis introduced Manager Lawrence to provide the Environmental Sciences updates.

Manager Lawrence began her presentation highlighting results from the 2023 First Quarter Report. Overall, of the 13,496 tests conducted in the quarter on surface water monitoring sites, 99% of the results met the applicable Florida Administrative Code (FAC) 62-302 Surface Water Standards and Numeric Nutrient Criteria (NNC) guidelines. The few, < 1%, exceptions were discussed with the Board in more detail. In addition, the results of macroinvertebrate monitoring during the quarter ranged from "good" to "exceptional".

Second Quarter 2023 results were similar, with 12,975 tests from surface waters passing applicable FAC and NNC guidelines by 99%. Likewise, despite lower surface water levels in the second quarter, macroinvertebrate monitoring results ranged from "normal" to "exceptional".

Environmental Sciences annual proficiency evaluations remained exceptional with 98% successful completion.

Manager Lawrence announced to the Board the conclusion of Impaired Waters Rule (IWR) listings Cycle 4 and the fact that no additional impairments were assigned to District surface waters. However, a change was noted in the IWR cycle frequency, moving from 1 in 5 years to 1 in 2 year cycles. Board member Ackley requested an overview of the IWR process and potential implications. Manager Lawrence highlighted the process being, first, the State assessment of the quality of each Waterbody ID (WBID) against FAC 62-302 and NNC guidelines. Secondly, the State's crafting of draft lists of impaired waters guided by FAC 62-303, Identification of Impaired Surface Waters. Lastly, the State typically drives the regulatory TMDL process to set limits which aim to improve the impaired waters back to within the guidelines. It was noted this improvement process could have substantial financial implications for associated properties impacted under a TMDL. Ideally, other state approved stakeholder-driven alternatives to achieve water quality restoration would be preferred. After some further discussion, this concluded the Environmental Sciences update.

## **DISCUSSION**

Chair Pierce opened the floor to general discussion. Member Exum inquired about the recent organizational change at CFTOD and its effects on staff. Officer Crikis highlighted the tours he provided the new CFTOD and Administration and the future for environmental monitoring and stewardship. Member Prime requested the positive work of the District to be more publically communicated, after which Officer Crikis provided

details with the Board his recent WESH 2 News interview and corresponding articles fulfilling Member Prime's request. Member Ackley expressed concern over any potential lowering of the District's high monitoring frequency and the historic precedent this monitoring program set for maintaining good long-term water quality. Officer Crikis informed the Pollution Control Board of CFTOD being very receptive of Environmental Sciences' mission and its involvement with local and State agencies.

#### **NEXT MEETINGS**

Chair Pierce requested a review of the bylaws to ensure the recommended semi-annual meeting dates of 2/15/2024 and 8/15/2024 met any required minimums. Officer Crikis confirmed the bylaws did not contain any meeting minimums and the schedule could stand as is.

#### **ADJOURNMENT**

With no further business, Chair Pierce called for a motion to adjourn. Member Ackley made the motion to adjourn and Member Exum seconded. By unanimous vote, the meeting ended at 11:34 a.m.

JH

# Reedy Creek Energy Services Report to CFTOD Pollution Control Board

## February 15, 2023

### WASTEWATER SYSTEM

- **Water Resource Recovery Facility (WRRF) Performance**
  - Average Daily Flow for the time period between January 1, 2023 and December 31, 2023 was 12.1 MGD
    - The permitted capacity of the plant is 20 MGD.
  - Average effluent Total Nitrogen was **1.69 mg/L** and average effluent Total Phosphorous was **0.17mg/L** for this period, both well below permitted limits (See Attachment 1).
  - In compliance with all other permit limits.
  - All monthly, quarterly, and annual monitoring reports have been submitted as required.
  - In October 2022, the wastewater contribution from Orange County was diverted to their new Hamlin Water Reclamation Facility. Due to mechanical problems at the Hamlin facility, 2.41 MG were received from Orange County from May 29-31, 2023.
- **Wastewater Collection System**
  - Two (2) reportable overflows of wastewater and reclaimed water during the prior six months (July 1, 2023 through December 31, 2023).
    - August 30, 2023. Approximately 1,400 of untreated sewage overflowed from a sanitary manhole upstream of Lift Station 50 located at 245 Showbiz Blvd. Excessive debris accumulated in the lift station wet well and prevented the automatic floats from activating resulting in an overflow into an adjacent stormwater inlet. An attempt to recover material from the discharge was unsuccessful. All hard surfaces were cleaned and disinfected. No personnel nor the environment was adversely impacted. The incident was reported to the State Watch Office (#2023-7208) on August 31, 2023.
    - September 26, 2023. Approximately 60,000 gallons of reclaimed water overflowed from the WRRF effluent transfer station due to mechanical failure of a vertical turbine pump. Clean-up actions were not warranted as the discharged reclaimed water occurred downstream of the chlorination treatment process. Neither personnel nor environment was adversely impacted. The incident was reported to the State Watch Office (#2023-7977) on September 27, 2023.
- **Industrial Pretreatment**
  - Permitted users include the four (4) laundry facilities and the co-gen facility in the North Service Area.
  - FDEP conducted an inspection conducted on April 12, 2023. The exit interview indicated all permitted users are in compliance. The final report from FDEP was received on October 25, 2023.
  - FDEP conducted a subsequent inspection on January 24, 2024. The final report is pending.
- **Reclaimed Water System**

# **Reedy Creek Energy Services Report to CFTOD Pollution Control Board**

## **February 15, 2023**

- Demand within the public access reuse system averaged 5.85 MGD for the time period between July 1, 2023 and December 31, 2023. This accounts for 47.1% of the total effluent with the balance going to the RIBs for groundwater recharge.

### **WATER SYSTEM**

- **System Performance**
  - Consumption for the time period between July 1, 2023 and December 31, 2023 averaged 16.90 MGD.
    - WUP allocation is 22.2 MGD
    - This average flow represents 76.1% of the WUP allocation (See Attachment 2).
  - RCES is in the process of performing condition assessments on the eight (8) potable wells in the system. Wells 6 and 9 were included in the first phase.
    - Well 6 was taken offline in early July 2022 to perform the condition assessment inspection. The pump was found to need replacement. A new pump was installed, and the well was placed back into service on August 2, 2023.
    - Well 9 is now offline for its condition assessment. Like Well 6, a new pump is required and has been ordered. This well should be placed back into service in late Spring 2024.
  - FDEP Central District did not inspect CFTOD Water Department in 2023.
  - All required reports to FDEP and SFWMD have been submitted on time.
- **Water Use Permit**
  - No issues to report.
  - The current WUP expires in July 2027.
- **STOPR Group, Alternative Water Supply, and CFWI rulemaking**
  - Effective March 2023, CFTOD withdrew from the Cypress Lake Wellfield project.
  - CFTOD is actively investigating the potential of other alternative water supply options.
  - RCES continues to participate in the STOPR meetings on behalf of the District.
  - Updates on population and demand projections were submitted for the 2025 CFWI Regional Water Supply Plan (RWSP).
  - The SFWMD developed a draft groundwater flow model simulation for the 2025 RWSP, which was reviewed by STOPR.
  - At the CFWI Minimum Flows and Levels (MFLs) Priority meeting in September, SFWMD presented no new MFLs or reservations planned for CFWI.
  - Updates on Water Supply Options were submitted for the 2025 RWSP.

### **SOLID WASTE**

- **Permitting**
  - FDEP Central District conducted an inspection of CFTOD solid waste transfer station on June 6, 2023. On July 21, 2023, a report summarizing the results of the inspection was received deeming the facility to be in-compliance with all applicable

# **Reedy Creek Energy Services Report to CFTOD Pollution Control Board**

## **February 15, 2023**

- permit conditions and rule requirements.
  - A permit application for the food waste/manure processing facility at the old Harvest Power facility was submitted on March 21, 2023. Permit 0432922-001-SO-30 was issued on December 14, 2023.
  - FDACS Weighing and Measuring Device Permit WM21321 for the CFTOD Solid Waste Transfer Station (SWTS) was renewed on August 18, 2023.
  - A Notice of Intent for a Multi-Sector Generic Permit for Stormwater Discharge Associate with Industrial Activities for the CFTOD SWTS was submitted on 12/26/23. Generic Permit was issued on January 26, 2024.
  - All required reports submitted to agencies.
- **Contracts**
    - The following contracts were renewed between July 1, 2023 and December 31, 2023
      - Class I and III Hauling (\$8M)
      - Class I and III Disposal (\$10M)
      - Compactor and Baler Maintenance (\$1.1M)
      - Fueling (\$3.6M)
      - Tire Maintenance (\$2.0M)
    - The following contracts are out to bid (or will soon be out to bid)
      - Composting
      - Recycling
      - Fleet Maintenance

### **AIR EMISSIONS**

- Since the combustion turbine (CT) has not operated during this reporting period, the Relative Accuracy Test Audit and Annual CO Compliance Emission Test were not conducted in 2023 due to infrequent operation. Testing will be conducted within the next 720 operating hours.
- All quarterly, semi-annual, and annual air permit reports were filed in a timely manner.
- On June 7, 2023, FDEP issued an air construction permit (0950111-069-AC), which authorized the installation of two new reciprocating internal combustion engine (RICE)-driven emergency generators or pumps that are managed independently by WDW (757 Hp emergency generator W190 located at the Polynesian Village Resort Tower) and RCES (74 Hp emergency pump R0714 located at Lift Station 59). This permit also allows the installation of a new fume hood at the DHS Prop Central Paint Shed.
- On August 15, 2023, FDEP issued Title V Permit revision (0950111-070-AV) to incorporate all the changes from 0950111-069-AC plus the removal of two emergency diesel generators DG1 (R036) and DG-2 (R037) located at ECEP that have been permanently shut down; the replacement of failing engine W134 with new engine W189 (“like-for-like” replacement) located at Epcot China Draw Bridge; clarification of annual testing requirements for CEP Cogen (EU 088); and for minor language changes updates to emission sources added/removed since the last construction permit was issued.
- FDEP Central District did not conduct an inspection of Air Emission Sources in 2023.

### **STORAGE TANKS**

**Reedy Creek Energy Services Report to CFTOD Pollution Control Board**  
**February 15, 2023**

- Registration for all CFTOD above ground storage tanks was submitted on May 30, 2023.
- Orange County Environmental Protection Department did not conduct an inspection of the CFTOD Registered storage tanks in 2023.

## Attachment 1

Month	Effluent (MGD)	HP TWAS (Dry Tons)	Reuse (MGD)	RIBs (MGD)	Inf. CBODf (mg/l)	Eff. CBOD5 (mg/l)	% Rem.	Inf. TSS (mg/l)	Eff. TSS (mg/l)	% Rem.	Inf. T.N. (mg/l)	Eff. T.N. (mg/l)	% Rem.	Inf. T.P. (mg/l)	Eff. T.P. (mg/l)	% Rem.	Inf. pH	Eff. pH
Jan-23	11.577	0	4.928	6.683	282	1.1	99.60%	261	1	99.60%	52.16	1.63	96.90%	5.87	0.18	96.90%	6.95	7.69
Feb-23	11.584	0	6.24	5.343	300	1.2	99.60%	271	1	99.60%	53.13	1.66	96.90%	6.07	0.09	98.60%	6.92	7.7
Mar-23	11.639	0	8.178	3.389	312	1.3	99.60%	279	1	99.60%	45.33	1.58	96.50%	5.59	0.1	98.30%	6.96	7.83
Apr-23	11.885	0	6.846	4.942	315	1.2	99.60%	251	1	99.60%	50.93	1.72	96.60%	6.03	0.11	98.20%	6.91	7.82
May-23	11.644	0	8.02	3.601	277	1.3	99.50%	225	1	99.60%	50.74	1.68	96.70%	5.54	0.11	98.00%	6.54	7.73
Jun-23	12.54	0	6.179	6.361	279	1.1	99.60%	230	1	99.60%	47.33	1.74	96.30%	5.38	0.13	97.60%	6.78	7.88
Jul-23	12.615	0	5.744	6.895	256	0.7	99.70%	187	1	99.50%	44.9	1.58	96.50%	5.04	0.12	97.70%	6.9	7.91
Aug-23	12.459	0	7.548	4.875	243	1	99.60%	203	1	99.50%	44.88	1.66	96.30%	4.93	0.27	94.50%	6.92	7.87
Sep-23	12.423	0	5.468	7.039	233	1	99.60%	181	1	99.40%	44.8	1.57	96.50%	4.83	0.27	94.50%	6.86	7.77
Oct-23	12.206	0	6.428	5.795	260	1	99.60%	174	1	99.40%	47.82	1.63	96.60%	5.27	0.36	93.10%	6.78	7.77
Nov-23	12.341	0	5.829	6.449	259	1	99.60%	217	1	99.50%	51.48	1.84	96.40%	5.54	0.19	96.70%	6.63	7.76
Dec-23	12.464	0	4.073	8.307	269	0.9	99.70%	237	1	99.60%	47.75	1.98	95.90%	5.29	0.13	97.60%	6.7	7.81
Annual Avg.	12.115	0 (Ann. Total)	6.29	5.807	274	1.1	99.60%	226	1	99.60%	48.44	1.69	96.50%	5.45	0.17	96.80%	6.82	7.8
Permit Lim.	20		10	12.5		5			5			6			1		6.00 to	8.5



## Attachment 2

Water Usage Report Data Jul - Dec 2023													Total MG	MGD AADF
Potable Wells	#####	Feb-23	#####	####	#####	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23		
2, 2A, 17 (Pumping Station "B")							161.050	157.361	147.490	145.890	135.240	138.440	885.471	
5							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
6 and 16 (Pumping Station "C")							109.172	112.105	103.430	109.792	88.335	89.789	612.623	
9, 10 (Pumping Station "A")							154.340	154.557	142.360	145.508	139.541	142.113	878.419	
18, 19 (Pumping Station "D")							127.530	126.096	115.335	123.425	118.325	122.370	733.081	
<b>Subtotal Potable Water</b>							552.092	550.119	508.615	524.615	481.441	492.712	3109.594	16.90
Irrigation Wells														
LBV Golf Course Well #1 (9 <sup>th</sup> hole)							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LBV Golf Course Well #3 (12 <sup>th</sup> hole)							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Well #20 - Tree Farm Irrigation							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Well #13 - Reclaim Backup System							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Well #14 - Reclaim Backup System							0.000	0.000	0.714	0.000	0.000	0.000	0.714	
<b>Subtotal Ground Water</b>							552.092	550.119	509.329	524.615	481.441	492.712	3110.308	16.90
Surface Water														
Palm/Magnolia Surface Water							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LBV Surface Water							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
<b>Subtotal Surface Water</b>							0.000	0.000	0.000	0.000	0.000	0.000	0.000	
<b>Total</b>							552.092	550.119	509.329	524.615	481.441	492.712	2,560.189	<b>16.90</b>
Average Day Consumptive Use (MGD)	0.000	0.000	0.000	0.000	0.000	0.000	17.809	17.746	16.978	16.923	16.048	15.894	<b>2,560.189</b>	Annualized Value
<b>CUP Limit</b>			<b>22.2</b>	MGD	<b>% utilization is:</b>		<b>76.1%</b>							



**REEDY CREEK  
IMPROVEMENT DISTRICT**

P.O. BOX 10170, LAKE BUENA VISTA, FLORIDA 32830-0170, TELEPHONE (407) 824-7301

## **MEMORANDUM**

**DATE: August 17, 2023**

**TO: Glen Gilzean**

**FROM: C. Michael Crikis**

**SUBJECT: Monthly Report for July 2023**

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The following is a summary of the activities completed by Environmental Sciences in the month of July 2023:

### **Regulatory Activities – sampling and testing**

- 339 sites were visited
- 1,346 samples were collected or delivered
- 3,276 tests were assigned
- Evaluation results for the Non-Potable Water Proficiency Testing analyses for General Chemistry and Metals, and DMR QA-43 for the NPDES permit were received with a 97% successful completion
- Non-Potable Water Proficiency Testing samples for Microbiology and were received and analyzed, and results were submitted for evaluation

### **Mosquitoes Monitoring**

- 188 traps were set up in 48 locations per week
- 10,750 mosquitoes were collected and identified
- 188 blood sera samples were submitted for testing
- Mosquito populations increased slightly even as rainfall continued to be intermittent

### **Meetings and Educational Sessions Participation**

- Hosted Boat Tour and Intro to Environmental Sciences to High School Students from NeoCity Summer Intern Program

- All lab staff hosted a two week, on site, hands on training to High School Students from NeoCity Summer Intern Program
- Hosted a Meet and Greet with management from Orange County Environmental Protection Department
- Hosted Textile Services ROADS program participants for an educational program and tour of the lab facilities
- Attended Florida Society of Environmental Analysts (FSEA) Region 3 Back to Basics Workshop, Tavares, FL

CC: Pollution Control Board



**REEDY CREEK  
IMPROVEMENT DISTRICT**

P.O. BOX 10170, LAKE BUENA VISTA, FLORIDA 32830-0170, TELEPHONE (407) 824-7301

## **MEMORANDUM**

**DATE: September 19, 2023**

**TO: Glen Gilzean**

**FROM: C. Michael Crikis**

**SUBJECT: Monthly Report for August 2023**

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The following is a summary of the activities completed by Environmental Sciences in the month of August 2023:

### **Regulatory Activities – sampling and testing**

- 396 sites were visited
- 1,652 samples were collected or delivered
- 3,777 tests were assigned
- Non-Potable Water Proficiency Testing samples for Chemistry for the analyte Color were received and analyzed, and results were submitted for evaluation

### **Mosquitoes Monitoring**

- 191 traps were set up in 48 locations per week
- 6,503 mosquitoes were collected and identified
- 188 blood sera samples were submitted for testing
- Mosquito populations declined due to dry conditions

### **Meetings and Educational Sessions Participation**

- All lab staff hosted an onsite, hands on training to High School Students from NeoCity Summer Intern Program
- Attended Pollution Control Board meeting at CFTOD Administration

CC: Pollution Control Board



**REEDY CREEK  
IMPROVEMENT DISTRICT**

P.O. BOX 10170, LAKE BUENA VISTA, FLORIDA 32830-0170, TELEPHONE (407) 824-7301

## **MEMORANDUM**

**DATE: October 13, 2023**

**TO: Glen Gilzean**

**FROM: C. Michael Crikis**

**SUBJECT: Monthly Report for September 2023**

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The following is a summary of the activities completed by Environmental Sciences in the month of September 2023:

### **Regulatory Activities – sampling and testing**

- 394 sites were visited
- 1,370 samples were collected or delivered
- 3,610 tests were assigned
- Results for the Non-Potable Water Proficiency Testing samples for Chemistry for the analyte Color were received with a 100% successful completion
- Samples for Potable Water Proficiency Testing for Microbiology were received, analyzed and results were submitted for evaluation

### **Mosquitoes Monitoring**

- 202 traps were set up in 51 locations per week
- 11,917 mosquitoes were collected and identified
- 190 blood sera samples were submitted for testing
- Mosquito populations increased due to very wet conditions throughout the month

### **Meetings and Educational Sessions Participation**

- Attended UF IFAS Florida First Detector webinar “Invasive Species in Florida & Pathways to Introduction”
- Attended Florida Stormwater Association Fall Seminar, Kissimmee, FL
- Attended Central Florida GIS Workshop, Daytona Beach, FL

- Attended FDEP webinar “Identifying and Optimizing Projects in Basin Management Action Plan Areas”

#### Anniversaries

- Jeffrey Holland, Manager of Watershed Management – 35 years

CC: Pollution Control Board



1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830

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## MEMORANDUM

**To: Glen Gilzean**  
**From: C. Michael Crikis**  
**Date: November 6, 2023**  
**Subject: Monthly Report**

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The following is a summary of the activities completed by Environmental Sciences in the month of October 2023:

### Regulatory Activities – sampling and testing

- 463 sites were visited
- 1,484 samples were collected or delivered
- 3,429 tests were assigned
- Results for the Potable Water Microbiology Proficiency Testing study were received with a 100% successful completion.
- Samples for the Solid and Chemical Materials Proficiency Testing in the categories of Metals and Inorganic Chemistry were received.

### Mosquitoes Monitoring

- 233 traps were set up in 47 locations per week
- 41,266 mosquitoes were collected and identified

- 238 blood sera samples were submitted for testing
- Mosquito populations spiked sharply early in the month due to very wet conditions; however, the latter half of October has seen zero measurable rainfall, thus mosquito numbers have steadily declined

#### Meetings and Educational Sessions Participation

- Attended Florida Department of Environmental Protection Biennial Assessment Draft Assessment Lists webinar
- Presented to Kindergarten Students from Stevenson Elementary School – Insect life cycles & interactive bug stations for "Mad Scientist Day" Merritt Island, FL

CC: Pollution Control Board





1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830

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## MEMORANDUM

**To: Glen Gilzean**

**From: Wendy R. Duncan**

**Date: December 8, 2023**

**Subject: Monthly Report**

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The following is a summary of the activities completed by Environmental Sciences in the month of November 2023:

### Regulatory Activities – sampling and testing

- 399 sites were visited
- 1,321 samples were collected or delivered
- 3,557 tests were assigned
- Non-Potable Water Proficiency Testing samples were ordered for the General Chemistry and Metals analyses

### Mosquitoes Monitoring

- 92 traps were set up in 23 locations per week
- 6,764 mosquitoes were collected and identified
- 144 blood sera samples were submitted for testing
- Drier and cooler weather have kept mosquito counts to a minimum and despite several days of rain mid-month, mosquito populations remain low

### Meetings and Educational Sessions Participation

Confidential

Page 2

12/8/2023

- Attended 37<sup>th</sup> Annual Florida Association of Aquatic Biologists Meeting – Tampa, FL
- Attended South Florida Management District Governing Board Meeting – Osceola County Courthouse, Kissimmee, FL
- Attended Florida Department of Environmental Protection WIN Upload Training

#### Anniversaries

- Bryan Demurat, Field Biologist III - 25 years
- Jarrett Backus, Field Biologist II - new hire

CC: Pollution Control Board



1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830

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## MEMORANDUM

**To: Glen Gilzean**

**From: Wendy R. Duncan**

**Date: January 16, 2024**

**Subject: Monthly Report for December 2023**

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The following is a summary of the activities completed by Environmental Sciences in the month of December 2023:

### Regulatory Activities – sampling and testing

- 383 sites were visited
- 1,084 samples were collected or delivered
- 2,987 tests were assigned
- The Solid and Chemical Materials Proficiency Testing results for Metals and Inorganic Chemistry were submitted for evaluation. The evaluation results were received with a 96% successful completion
- Non-Potable Water Proficiency Testing samples for the General Chemistry and Metals analyses were received
- Non-Potable Water Proficiency Testing samples for Microbiology analyses were ordered

### Mosquitoes Monitoring

- 92 traps were set up in 23 locations per week
- 17,715 mosquitoes were collected and identified

Confidential

Page 2

1/16/2024

- 131 blood sera samples were submitted for testing
- Mosquito populations spiked due to heavy rain mid-month

CC: Pollution Control Board

# Pollution Control Quarterly Report

## Third Quarter 2023 (July-September)

### General Information

During the third quarter of 2023, 3,429 samples were collected or delivered from 692 sample sites. A total of 23,421 tests were performed, of which 13,215 or 56.4% of the total tests were from surface waters.

### Water Quality

Surface water quality within RCID is measured according to criteria in Chapter 62-302 of the Florida Administrative Code (FAC) and Numeric Nutrient Criteria specifically for Class III recreational waters. The Reedy Creek watershed includes a large wetland system, which typically has low alkalinity, dissolved oxygen and pH. These parameters may fall outside Chapter 62 FAC water quality criteria, but are not indicative of impairment or pollution.

### Routine Monitoring

Environmental Sciences monitored a number of sample locations for permit compliance as well as routine monitoring of surface water, stormwater outfalls and inflows to property.

- Swimming beaches and areas open to the public met FAC guidelines for bathing places for all locations tested.
- Out of the 13,215 surface water tests performed, 99% of tests analyzed met the FAC 62-302 and Numeric Nutrient Criteria guidelines with the following few exceptions (see maps for additional information):
  - **Nitrogen** results were elevated at two locations:
    - 1 location east of the S-401 structure; and
    - 1 location along the L-401 Canal near the discharge point of the S-401 structure.
  - Elevated **phosphorus** results were present at the following three locations:
    - 1 location in the lower Reedy Creek system at the SR 17/92 crossing in Osceola County;
    - 1 location in the Davenport Creek basin; and
    - 1 Celebration Village outfall.
  - **E.coli** exceedances based on a single sample occurred at ten sites (nineteen exceedances) during the third quarter. Staff recently met with FDOT about the exceedances occurring in the ditch near SR 535. The District expanded sampling along the ditch to rule out possible sources, but has yet to find the origin. FDOT has proposed cleaning out the ditch, but no start date has been announced.
    - 1 exceedance at an off property inflow near I-4;
    - 1 exceedance at an off property inflow off of Vineland Blvd;
    - 1 exceedance at a property inflow near the Perimeter Canal upstream of S-411;
    - 1 exceedance in the upper portion of Reedy Creek (likely wildlife influenced);
    - 2 exceedances in the lower portion of Reedy Creek (likely wildlife influenced); and
    - 4 locations (13 exceedances) within a drainage ditch running under SR 535 and Hotel Plaza Blvd. Staff has been actively source tracking in this area and continues to work with both FDOT and the property owner.
  - Twelve exceedances for **Chlorophyll-a** were recorded within four waterbodies as follows:
    - 1 outfall into the Pilot Canal;
    - 1 outfall near World Drive;
    - 3 locations along the L-405 canal system (5 exceedances); and
    - The Seven Seas Lagoon system (3 locations and 5 exceedances).
  - **pH** readings at numerous locations across property fell outside the specified criteria. All samples collected within the District jurisdiction remained consistent with historical limits. Three newer sample locations along the northern perimeter of the District, where historic data do not exist, fell outside limits. Staff will continue to closely monitor the area.



# Pollution Control Quarterly Report

## Third Quarter 2023 (July-September)

### Routine Monitoring Continued

- **Total alkalinity** results were outside of regulatory limits for eighteen percent of all sites collected and tested across property. The exceedance rates decreased slightly from the previous quarter and were below the numbers from the third quarter of 2022. More than half of the exceedances occurred at sampling points flowing into District property.
- The number of criteria exceptions for **dissolved oxygen** measurements (for single site/event) increased slightly from the previous quarter potentially due to drought and low flow conditions that were still present for the first half of the quarter. According to preliminary USGS data, record low gauge height levels continued to be documented in several areas across the District.
- **Copper** results were elevated at the following 4 sample sites (7 total exceedances):
  - 3 locations in the L-105 canal; and
  - 1 Celebration Village location.



WH-4, 09/19/23  
*Alkalinity, pH, and dissolved oxygen exceedances*  
*The sample site is located at Whittenhorse Creek and Western Way.*



STW-4M, 07/18/23  
*July~ Exceptional Stream Condition Index Score*  
*September~ Normal MHD Results.*

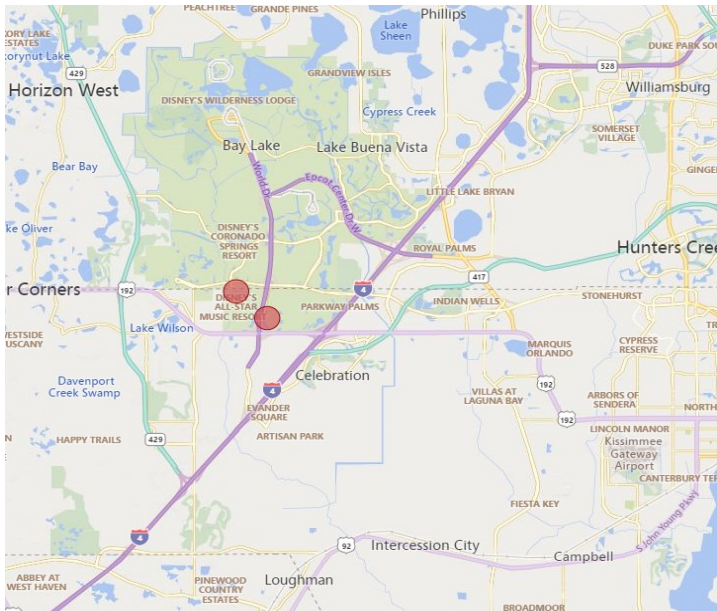


# Pollution Control Quarterly Report

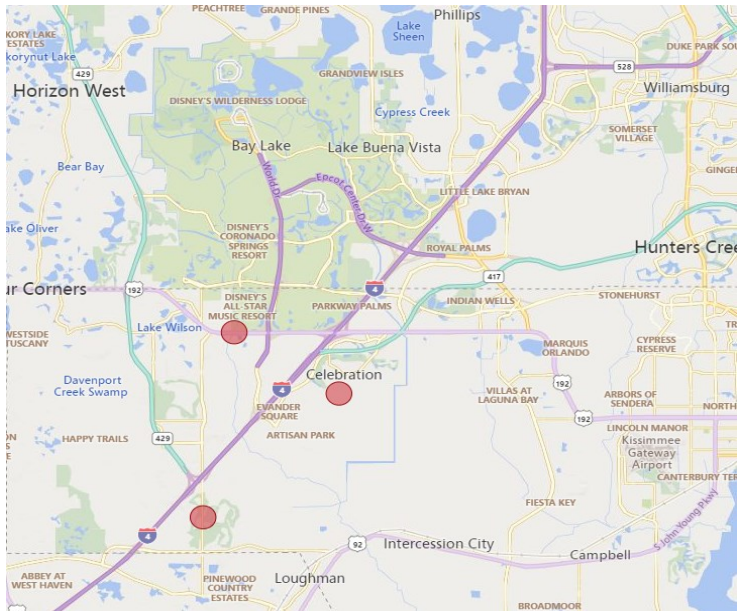
## Third Quarter 2023 (July-September)

### Water Quality Outside of Guideline Limits

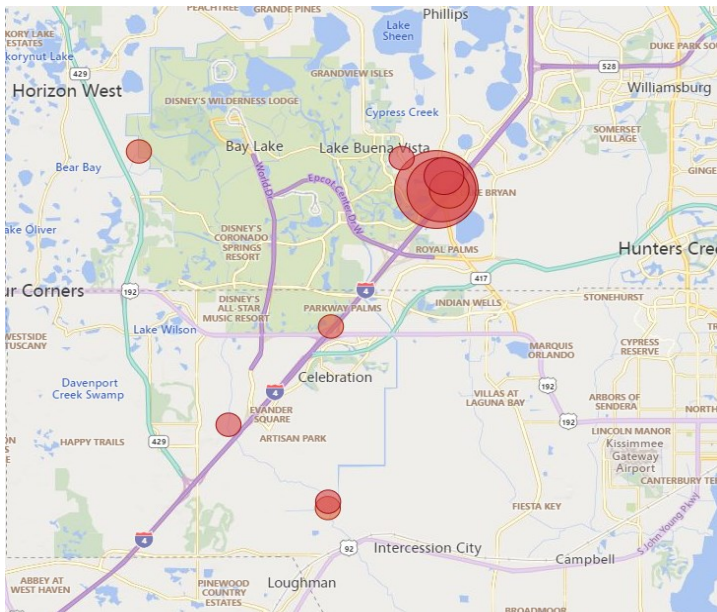
Color Gradient Scale



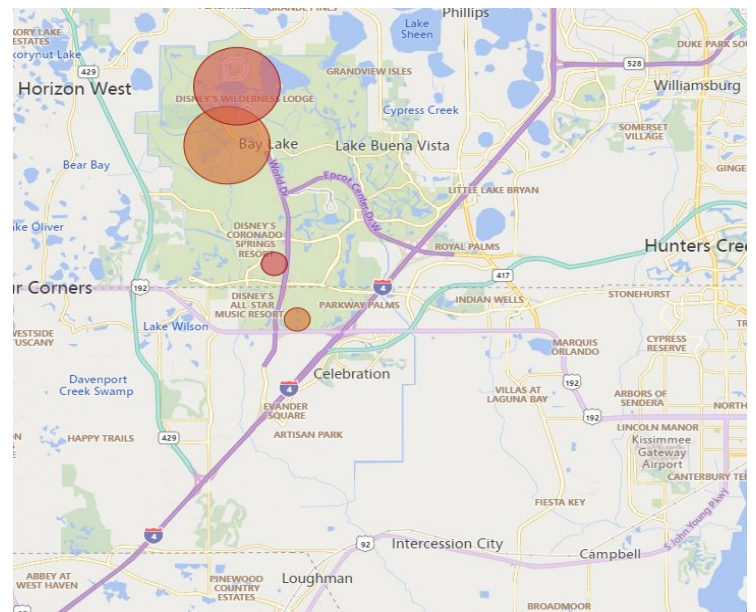
Total Nitrogen (n=2 out of 113, 1.8%)  
2 Sample Sites



Total Phosphorus (n=3 out of 144, 2.1%)  
3 Sample Sites



*E.coli* (n=19 out of 159, 11.9%)  
10 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Chlorophyll-a (n=12 out of 130, 9.2%)  
4 Waterbody Locations  
Larger dot size = multiple exceedances at the same sample site

RCID monitors hundreds of water quality sample sites on a daily, weekly, monthly & quarterly basis. These maps only display those sites that are not within the 62-302 FAC or Numeric Nutrient criteria for a single event during the indicated time period. Not all sites displayed are ambient or subject to the water quality criterion noted.

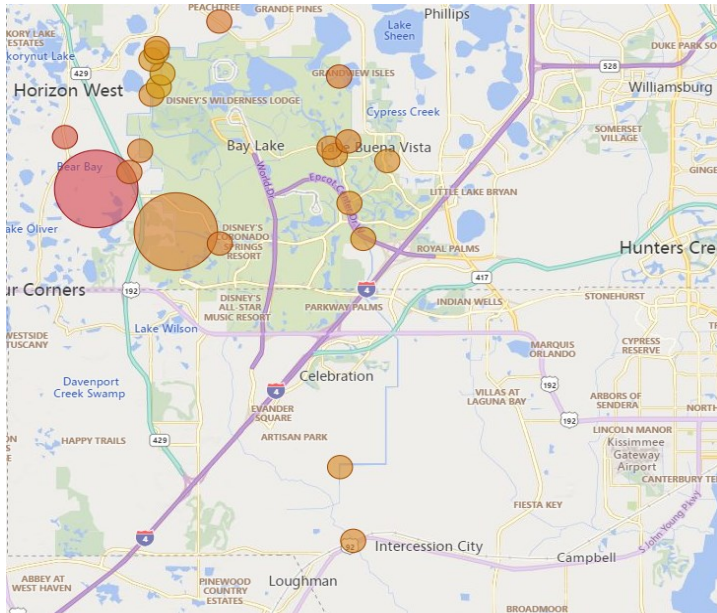


# Pollution Control Quarterly Report

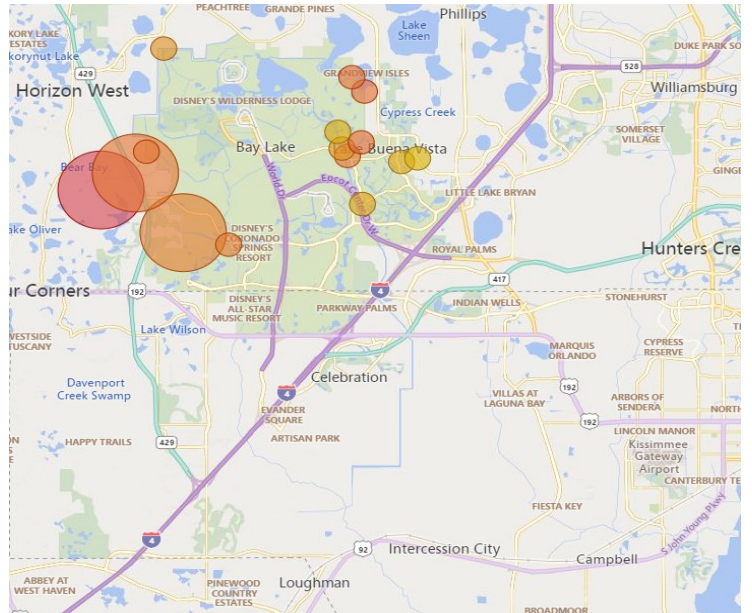
## Third Quarter 2023 (July-September)

### Water Quality Outside of Guideline Limits

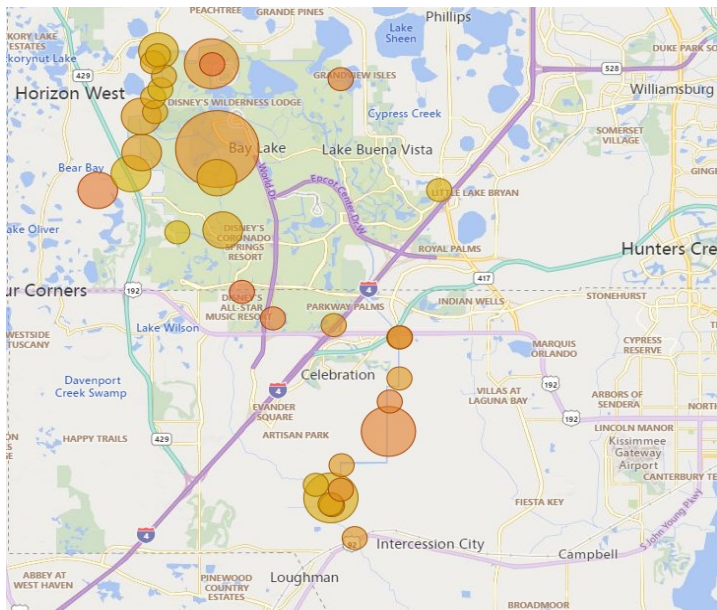
Color Gradient Scale



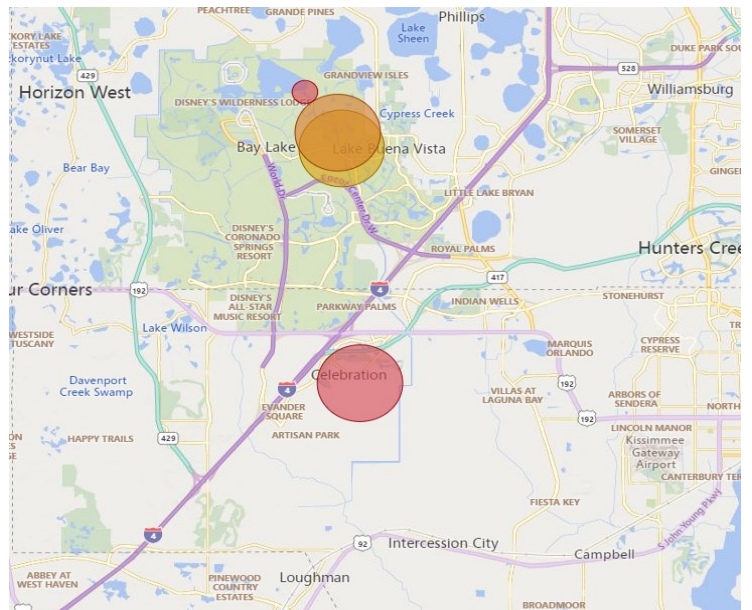
pH (n=24 out of 170, 13.4%)  
22 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Alkalinity (n=18 out of 100, 18%)  
15 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Percent Dissolved Oxygen Saturation (n=51 out of 168, 30.3%)  
34 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Copper (n=7 out of 86, 8.1%)  
4 Sample Sites  
Larger dot size = multiple exceedances at the same sample site

RCID monitors hundreds of water quality sample sites on a daily, weekly, monthly & quarterly basis. These maps only display those sites that are not within the 62-302 FAC or Numeric Nutrient criteria for a single event during the indicated time period. Not all sites displayed are ambient or subject to the water quality criterion noted.

\*The Reedy Creek Watershed includes a large wetland system which naturally has low alkalinity, dissolved oxygen, & pH. These parameters may fall outside of 62-302 water quality criteria, but are not indicative of impairment or pollution.



# Pollution Control Quarterly Report

## Third Quarter 2023 (July-September)

### Macroinvertebrate Monitoring

During the third quarter of 2023, the Macroinvertebrate Biology Department completed twenty macroinvertebrate assessments, including one Stream Condition Index (SCI), four Lake Condition Index (LCI) samples, and fifteen Modified Hester-Dendy Multiplate (MHD) Sampler collections. The results of the completed bioassessments within district or jurisdictional waters are shown in the following table.

As indicated below, most results from the third quarter were normal, or better than normal, suggesting stable environmental conditions at these sites. At a site located in the L-405 Extension, results were poor, but not historically low. The LCI sample at Bay Lake showed results below normal, but these results were likewise not below historic values. In both of these cases, it is expected that these results are a reflection of stresses due to seasonal fluctuations in temperature and dissolved oxygen levels. These results are most likely due to abnormally low rainfall conditions at the time of sampling, rather than being indicative of overall declining water quality trends. Future sampling should clarify this.

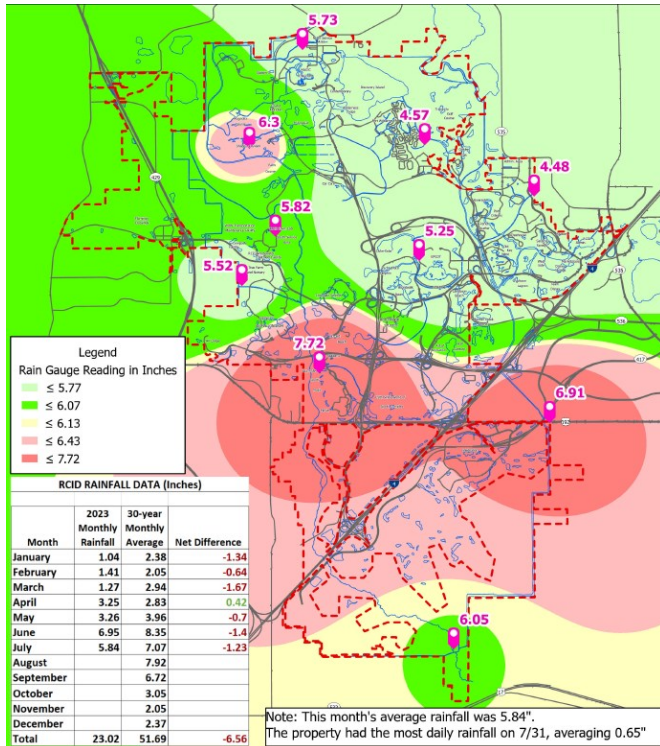
The Biotic Index (BI) and Hulbert Index (HI) are taxa sensitivity indices for streams and lakes, respectively. Higher scores are indicative of better water quality and habitat availability.

SITE	DESCRIPTION	DATE	TYPE	RESULTS
STW-4M	Reedy Creek above US 192	7/18/23	SCI	Exceptional results; SCI=76, BI=29
RC-1	Reedy Creek at NW corner of property	7/24/23	MHD	Results better than normal
RC-6	Perimeter canal west of C-4 Canal	7/24/23	MHD	Results better than normal
RC-13B	Reedy Creek upstream of I-4	8/8/23	MHD	Normal results
RC-6B	Whittenhorse Creek at wooden bridge	8/14/23	MHD	Normal results
RC-7	L-405 Ext. downstream of Bear Island Road	8/14/23	MHD	Poor results
STW-1M	Cypress Creek above Vista Blvd.	8/22/23	MHD	Normal results
C-5M (MS4)	Cypress Creek Canal	8/22/23	MHD	Normal results
RC-19A	L-405 Ext. at the force main	8/28/23	MHD	Normal results
RC-13B	Reedy Creek upstream of I-4	8/8/23	MHD	Normal results
L-BCOMP	Bay Lake	9/5/23	LCI	Below normal results; LCI=53, HI=13
C-12A	C-1 Canal just south of US 192	9/12/23	MHD	Normal results
RC-14M	Reedy Creek near S-40 structure	9/12/23	MHD	Normal results
RC-21B	Reedy Creek below Osceola Parkway - east branch	9/18/23	MHD	Normal results
STW-4M	Reedy Creek above US 192	9/18/23	MHD	Normal results
RC-13D	Reedy Creek at powerline south of Celebration	9/26/23	MHD	Normal results
RC-16A	Davenport Creek just NE of powerline vehicle path	9/26/23	MHD	Normal results

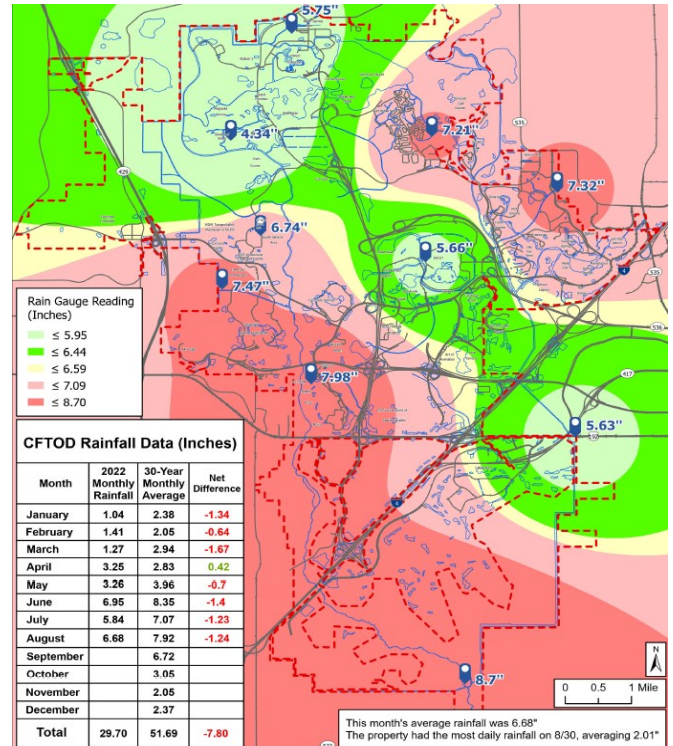
# Pollution Control Quarterly Report

## Third Quarter 2023 (July-September)

### District Rainfall Summary



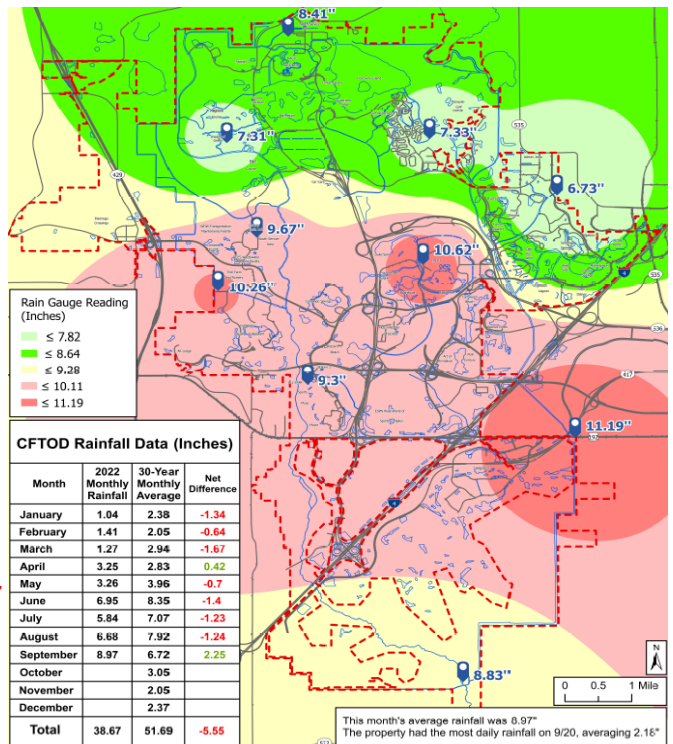
July 2023



August 2023

### CFTOD Rainfall Data (Inches)

Month	2022 Monthly Rainfall	30-Year Monthly Average	Net Difference
January	1.04	2.38	-1.34
February	1.41	2.05	-0.64
March	1.27	2.94	-1.67
April	3.25	2.83	0.42
May	3.26	3.96	-0.7
June	6.95	8.35	-1.4
July	5.84	7.07	-1.23
August	6.68	7.92	-1.24
September	8.97	6.72	2.25
October		3.05	
November		2.05	
December		2.37	
<b>Total</b>	<b>38.67</b>	<b>51.69</b>	<b>-5.55</b>



September 2023



# Pollution Control Quarterly Report

## Fourth Quarter 2023 (October-December)

### General Information

During the fourth quarter of 2023, 3,479 samples were collected or delivered from 804 sample sites. A total of 19,169 tests were performed, of which 12,622 or 65.8% of the total tests were from surface waters.

### Water Quality

Surface water quality within CFTOD is measured according to criteria in Chapter 62-302 of the Florida Administrative Code (FAC) and Numeric Nutrient Criteria specifically for Class III recreational waters. The Reedy Creek watershed includes a large wetland system, which typically has low alkalinity, dissolved oxygen and pH. These parameters may fall outside Chapter 62 FAC water quality criteria, but are not indicative of impairment or pollution.

### Routine Monitoring

Environmental Sciences monitored a number of sample locations for permit compliance as well as routine monitoring of surface water, stormwater outfalls and inflows to property.

- Swimming beaches and areas open to the public met FAC guidelines for bathing places for all locations tested.
- Out of the 12,622 surface water tests performed, 98.9% of tests analyzed met the FAC 62-302 and Numeric Nutrient Criteria guidelines with the following few exceptions (see maps for additional information):
  - **Nitrogen** results were elevated at one location:
    - 1 location along the L-401 Canal near the discharge point of the S-401 structure.
  - Elevated **phosphorus** results were present at the following five locations:
    - 1 location on the southeast side of I-4; and
    - 4 Celebration Village outfalls.
  - **E.coli** exceedances based on a single sample occurred at seven sites (eleven exceedances) during the third quarter. FDOT and staff have communicated numerous times during the quarter. FDOT has recently come up with a plan to clean the ditch near SR 535 in Q1 of 2024. The District has continued with expanded sampling along the ditch to help monitor progress.
    - 1 exceedance at a property inflow near the Perimeter Canal upstream of S-410;
    - 1 exceedance in the upper portion of Reedy Creek (likely wildlife influenced);
    - 1 exceedance in the lower portion of Reedy Creek (likely wildlife influenced); and
    - 4 locations (8 exceedances) within a drainage ditch running under SR 535 and Hotel Plaza Blvd. Staff has been actively source tracking in this area and continues to work with both FDOT and the property owner.
  - Five exceedances for **Chlorophyll-a** were recorded within two waterbodies as follows:
    - The Seven Seas Lagoon system (3 locations and 4 exceedances); and
    - The Black Lake system (1 location and 1 exceedance).
  - **pH** readings at numerous locations across property fell outside the specified criteria. All samples collected within the District jurisdiction remained consistent with historical limits. Staff continues to monitor the system for trends or anomalies.





# Pollution Control Quarterly Report

## Fourth Quarter 2023 (October-December)

### Routine Monitoring Continued

- **Total alkalinity** results were outside of regulatory limits for twelve percent of all sites collected and tested across property. The exceedance rates decreased from the previous quarter and were well below the numbers from the fourth quarter of 2022 (due to the impacts from the hurricane season). More than half of the exceedances occurred at sampling points flowing into District property.
- The number of criteria exceptions for **dissolved oxygen** measurements (for single site/event) decreased from the previous quarter potentially due to a return to normal precipitation patterns.
- **Copper** results were elevated at the following 6 sample sites:
  - 1 location at the L-407 Canal near the S-407 structure;
  - 2 locations in the L-105 Canal; and
  - 3 Celebration Village locations.



RC-6B, 12/4/23  
*Alkalinity and pH exceedances*  
*The sample site is located at Whittenhorse Creek and north of Western Way.*



RC-13B, 11/13/23  
*October~ Exceptional Stream Condition Index Score*  
*November~ Normal MHD Results.*

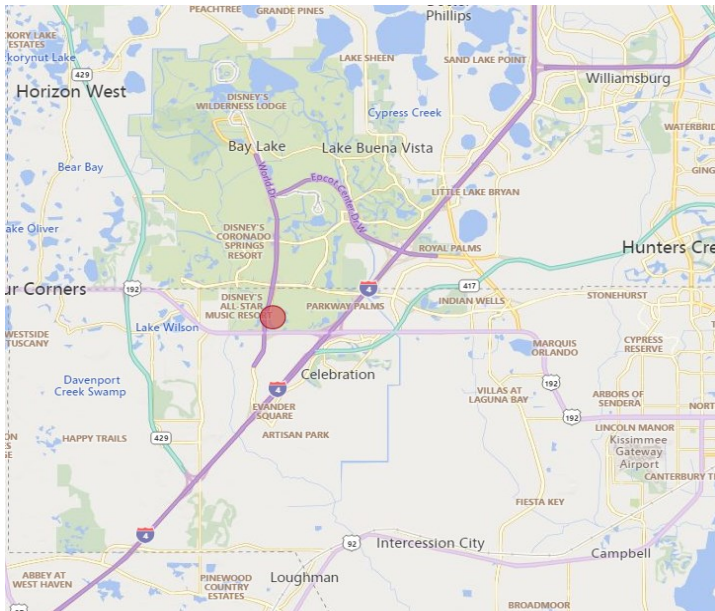




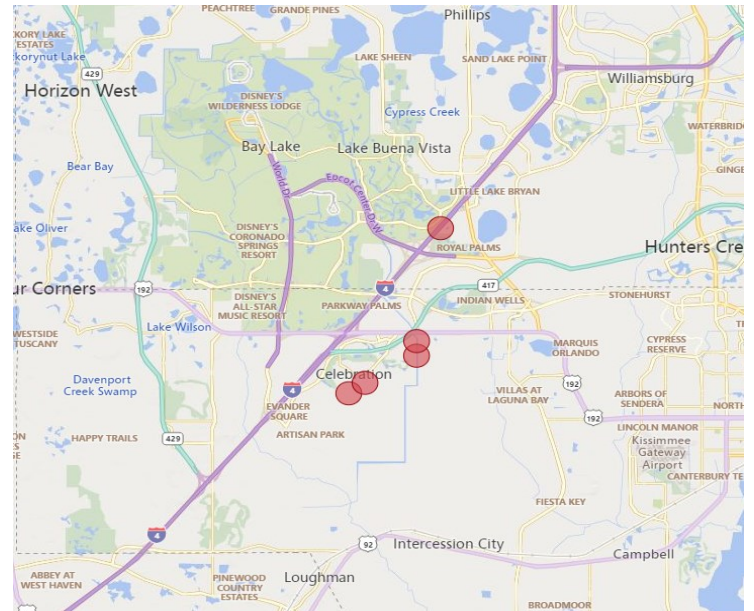
# Pollution Control Quarterly Report Fourth Quarter 2023 (October-December)

## Water Quality Outside of Guideline Limits

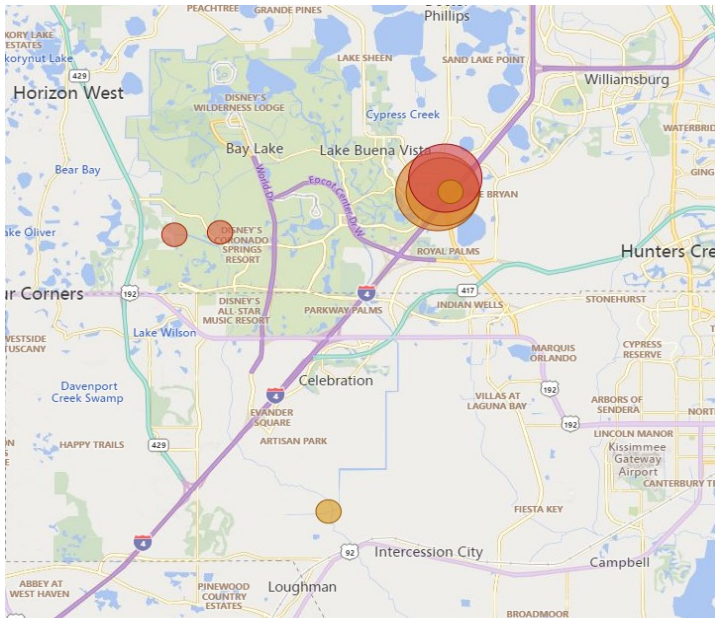
Color Gradient Scale



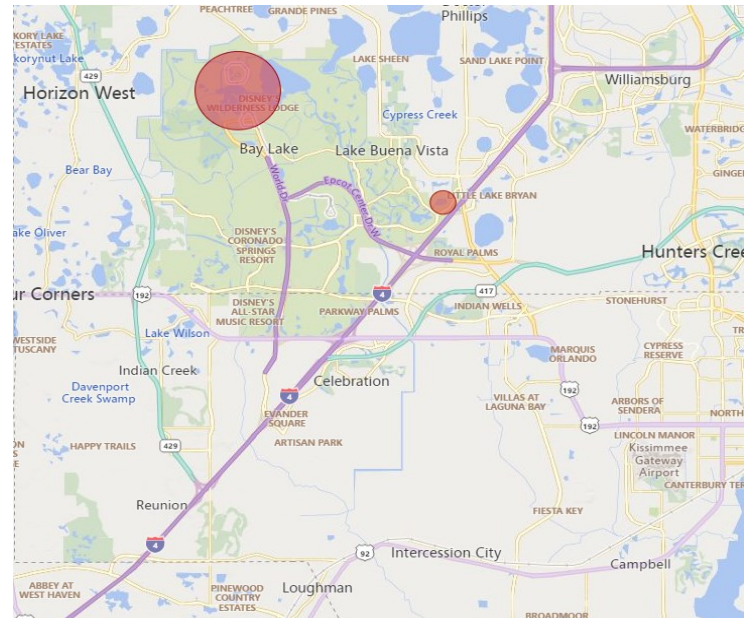
Total Nitrogen (n=1 out of 124, 0.8%)  
1 Sample Site



Total Phosphorus (n=5 out of 151, 3.3%)  
5 Sample Sites



*E. coli* (n=11 out of 138, 8.0%)  
7 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Chlorophyll-a (n=5 out of 119, 4.2%)  
2 Waterbody Locations

CFTOD monitors hundreds of water quality sample sites on a daily, weekly, monthly & quarterly basis. These maps only display those sites that are not within the 62-302 FAC or Numeric Nutrient criteria for a single event during the indicated time period. Not all sites displayed are ambient or subject to the water quality criterion noted.

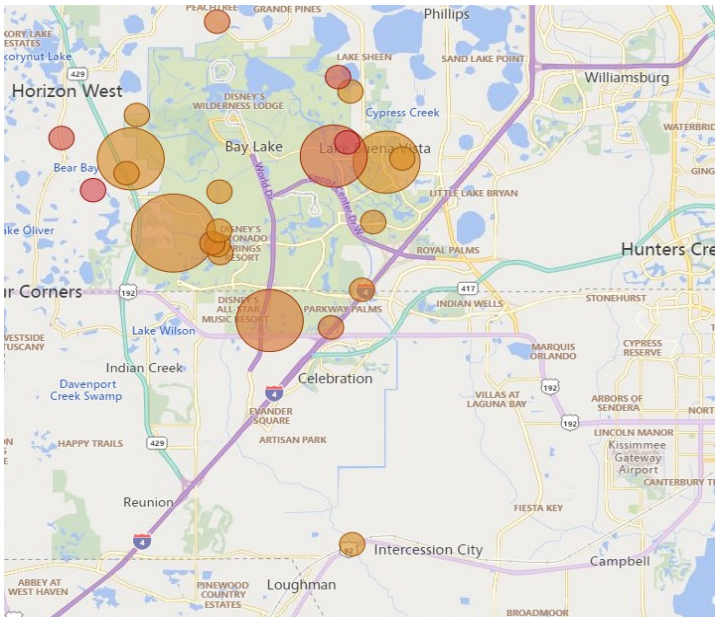




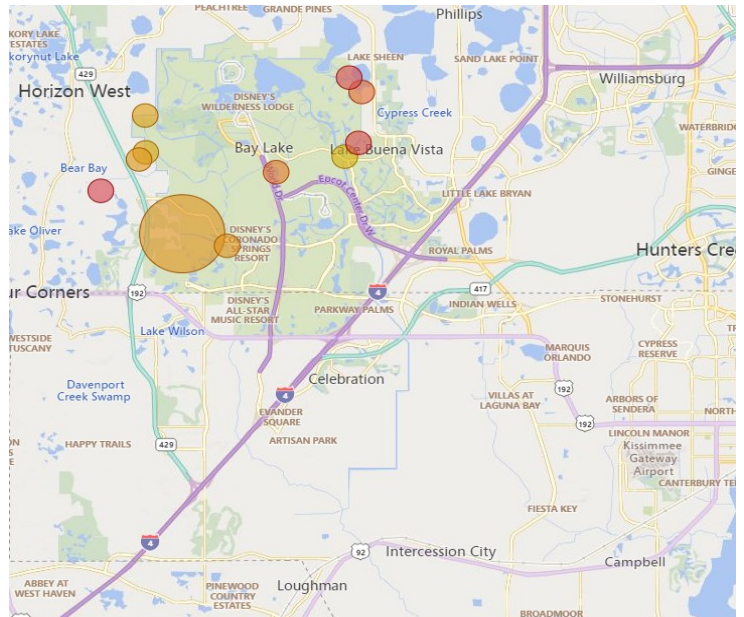
# Pollution Control Quarterly Report Fourth Quarter 2023 (October-December)

## Water Quality Outside of Guideline Limits

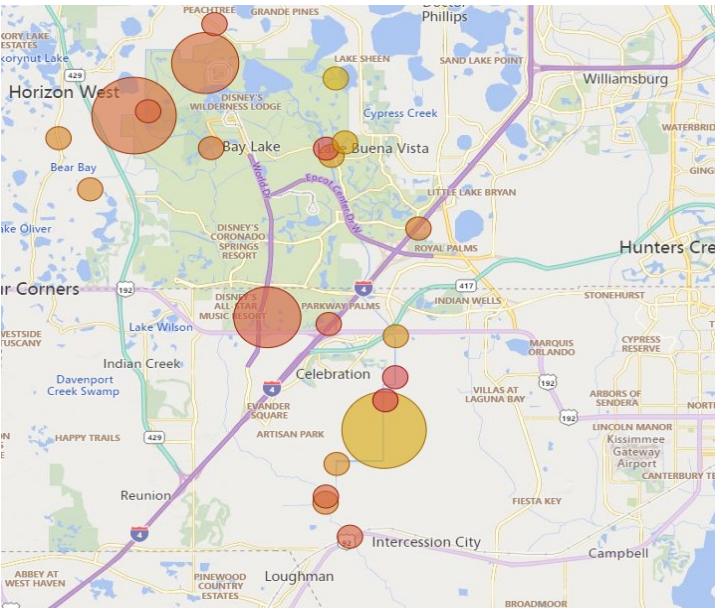
Color Gradient Scale



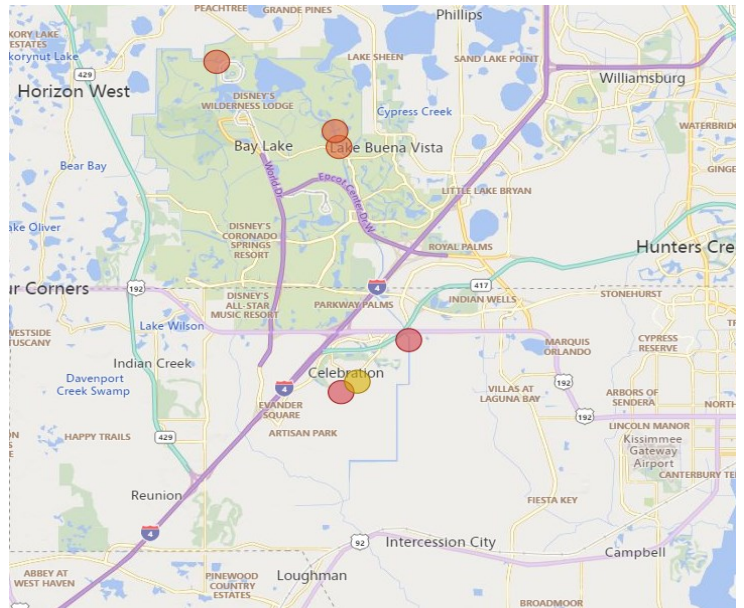
pH (n=29 out of 178, 16.3%)  
23 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Alkalinity (n=13 out of 109, 11.9%)  
11 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Percent Dissolved Oxygen Saturation (n=28 out of 170, 16.5%)  
22 Sample Sites  
Larger dot size = multiple exceedances at the same sample site



Copper (n=6 out of 91, 6.6%)  
6 sample Sites

CFTOD monitors hundreds of water quality sample sites on a daily, weekly, monthly & quarterly basis. These maps only display those sites that are not within the 62-302 FAC or Numeric Nutrient criteria for a single event during the indicated time period. Not all sites displayed are ambient or subject to the water quality criterion noted.

\*The Reedy Creek Watershed includes a large wetland system which naturally has low alkalinity, dissolved oxygen, & pH. These parameters may fall outside of 62-302 water quality criteria, but are not indicative of impairment or pollution.



# Pollution Control Quarterly Report

## Fourth Quarter 2023 (October-December)

### Macroinvertebrate Monitoring

During the fourth quarter of 2023, the Macroinvertebrate Biology Department completed eighteen macroinvertebrate assessments, including one Stream Condition Index (SCI) collection, five Lake Condition Index (LCI) samples and twelve MHD (Modified Hester-Dendy Multiplate Sampler) collections. The results of the completed bioassessments within district or jurisdictional waters are shown in the following table.

As indicated below, most results from the fourth quarter were normal or better than normal suggesting stable environmental conditions at these sites. The SCI conducted within a natural segment of Reedy Creek scored exceptionally well.

The Biotic Index (BI) and Hulbert Index (HI) are taxa sensitivity indices for streams and lakes, respectively. Higher scores are indicative of better water quality and habitat availability.

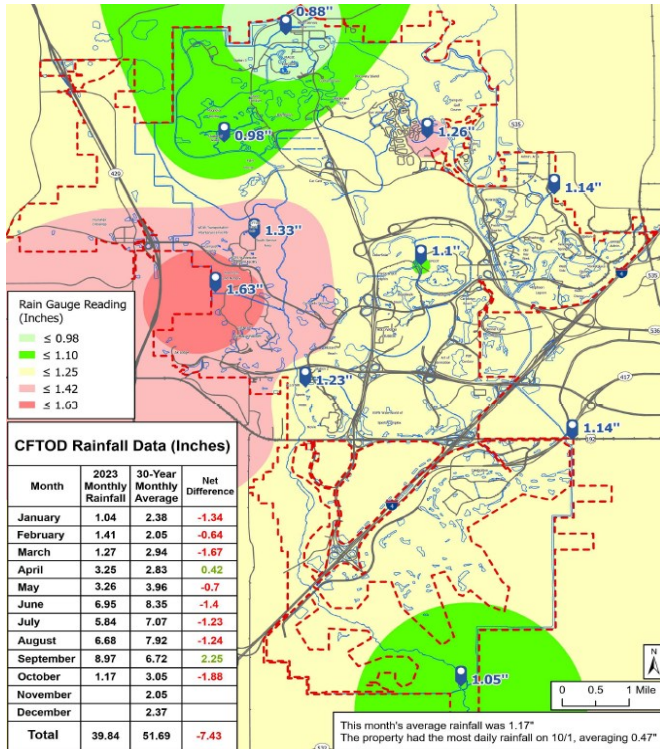
SITE	DESCRIPTION	DATE	TYPE	RESULTS
RC-6B	Whittenhorse Creek at wooden bridge	10/11/23	MHD	Normal very good results
RC-7	L-405 Ext. downstream of Bear Island Road	10/11/23	MHD	Normal results
RC-13B	Reedy Creek upstream of I-4	10/26/23	SCI	Exceptional results; SCI score=85, BI=18
C-3B	C-1 Canal at Vista Blvd.	10/30/23	MHD	Results somewhat below normal
L-BCOMP	Bay Lake	11/8	LCI	Normal results; LCI score=65, HI=13
RC-13B	Reedy Creek upstream of I-4	11/13	MHD	Normal results
RC-11	Reedy Creek below L-410 canal	11/21	MHD	Better than normal results
RC-19A	Reedy Creek Canal at the force main	11/21	MHD	Normal results
RC-13D	Reedy Creek at powerline crossing south of Celebration	11/29	MHD	Normal results
RC-16A	Davenport Creek just NE of powerline vehicle path	11/29	MHD	Normal results
C-10B	C-1 Canal above I-4	12/12	MHD	Normal results
STW-4M	Reedy Creek just north of US 192	12/12	MHD	Normal results
STW-1M	Cypress Creek above Vista Blvd.	12/18	MHD	Normal results
C-5M	Cypress Creek Canal	12/18	MHD	Normal results



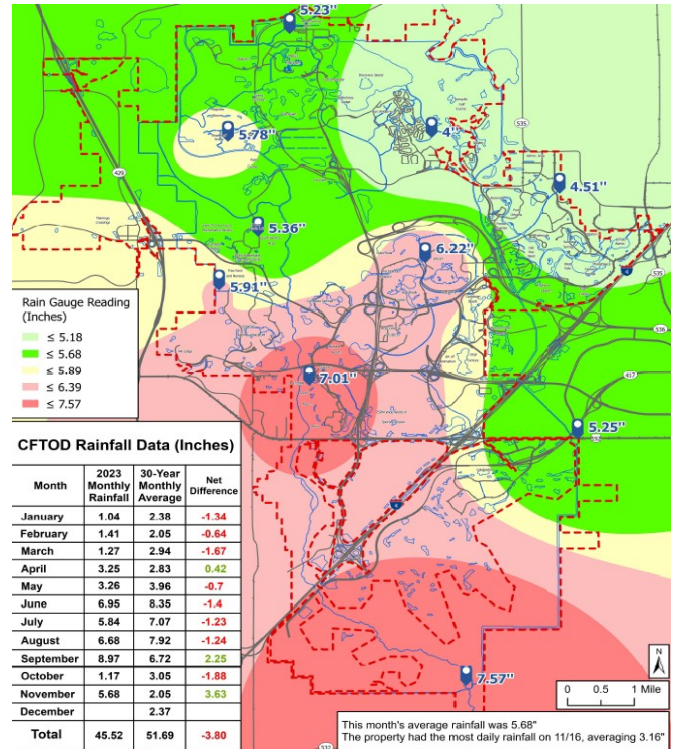


# Pollution Control Quarterly Report Fourth Quarter 2023 (October-December)

## District Rainfall Summary

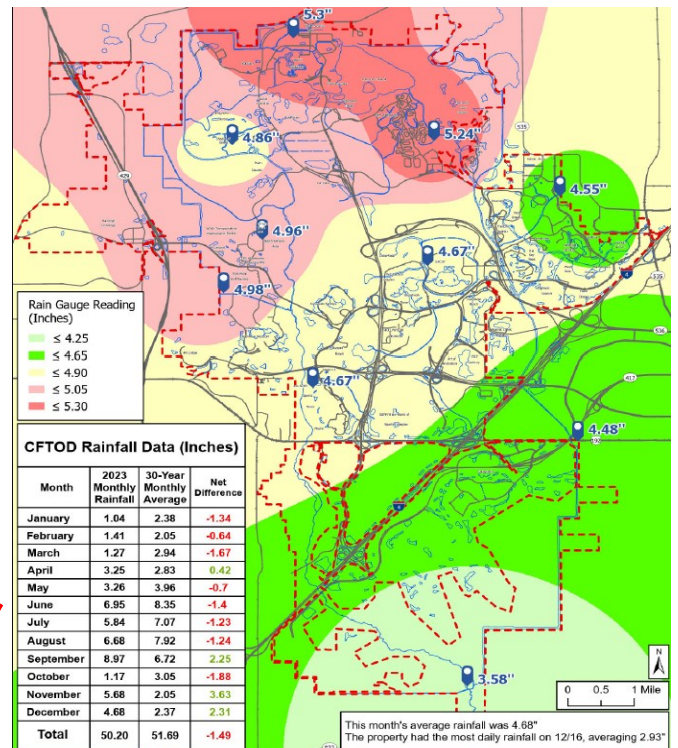


October 2023



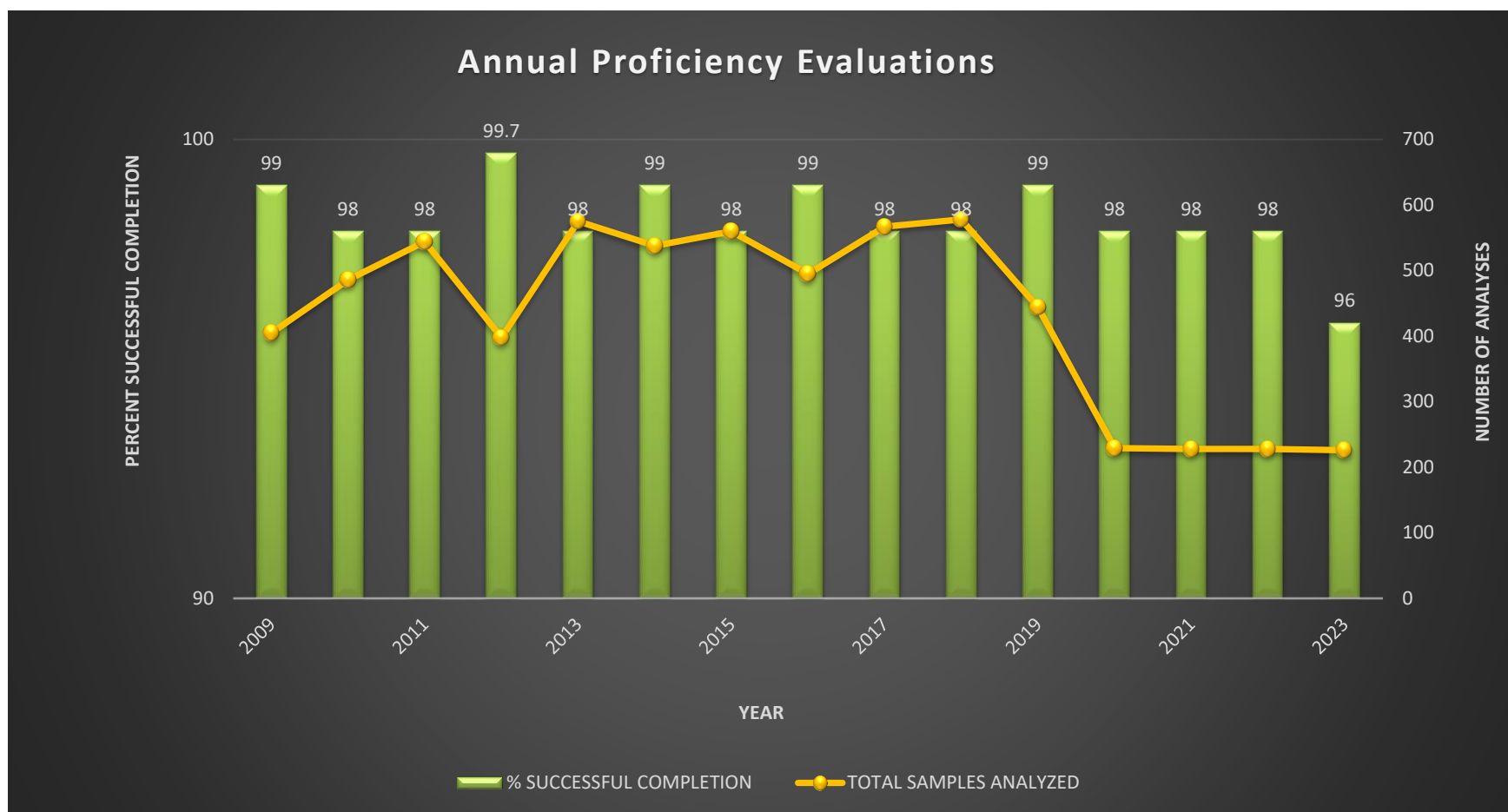
November 2023

CFTOD Rainfall Data (Inches)			
Month	2023 Monthly Rainfall	30-Year Monthly Average	Net Difference
January	1.04	2.38	-1.34
February	1.41	2.05	-0.64
March	1.27	2.94	-1.67
April	3.25	2.83	0.42
May	3.26	3.96	-0.7
June	6.95	8.35	-1.4
July	5.84	7.07	-1.23
August	6.68	7.92	-1.24
September	8.97	6.72	2.25
October	1.17	3.05	-1.88
November	5.68	2.05	3.63
December	4.68	2.37	2.31
Total	50.2	51.69	-1.49



December 2023





Environmental Sciences Proficiency Evaluations 2009-2023.

*Note: The number of analysis decrease in 2020 corresponds with the reduction of the organic chemistry section.*