Municipal Separate Storm Sewer System
National Pollutant Discharge
Elimination System

Joint Annual Report

Cycle 4 - Year 5

October 1, 2020 Thru
September 30, 2021

Submitted by
Northern Palm Beach County
Improvement District
as Lead Permittee

prepared by
MOCK•ROOS

NPDES MS4
A Joint Program of Palm Beach County Permittees

Palm Beach County MS4
Permit No. FLS000018-004

MS4 NPDES

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*(see MS4 website pbco-npdes.org-Annual Reporting for Cycle 4, Year 5)

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3. Boca Raton, City of
4. Boynton Beach, City of
5. Cloud Lake, Town of
6. Delray Beach, City of
7. FDOT – District Four
8. FDOT, Turnpike Enterprise
9. Glen Ridge, Town of
10. Greenacres, City of
11. Gulf Stream, Town of
12. Haverhill, Town of
13. Highland Beach, Town of
14. Hypoluxo, Town of
15. Indian Trail Improvement District
16. Juno Beach, Town of
17. Jupiter, Town of
18. Jupiter Inlet Colony, Town of
19. Lake Clarke Shores, Town of
20. Lake Park, Town of
21. Lake Worth, City of
22. Lantana, Town of
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24. Mangonia Park, Town of
25. Northern Palm Beach County Improvement District
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30. Palm Beach Gardens, City of
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32. Palm Springs, Village of
33. Riviera Beach, City of
34. Royal Palm Beach, Village of
35. South Bay, City of
36. South Indian River Water Control District
37. South Palm Beach, Town of
38. Tequesta, Village of
39. Wellington, Village of
40. West Palm Beach, City of

Report Certification

Joint Report Certification

Northern Palm Beach County Improvement District (Northern) is the Lead Permittee for the Palm Beach County MS4 Permit. As the lead permittee, Northern entered into interlocal agreements with each of the other 39 permittees for, among other activities, the administration of joint program activities and the compilation of the Joint Annual Report. Northern's governing body (Board of Supervisors) and the Palm Beach County MS4 NPDES Steering Committee has authorized Mock•Roos to coordinate, on their behalf, the joint program activities and preparation and submittal of the Joint Annual Report.

Therefore, per Rule 62-620.305(4), Florida Administrative Code, "I certify under penalty of law that this document and all attachments, if any, (excluding Appendix A - Individual Permittee Annual Reports) were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Alan D. Wertepny, P.E.

Vice President Water Resources

3/29/2022

Date

Permittee Certifications

Certifications for the individual permittee annual reports are included in each individual annual report form, which are attached to this Joint Report as Appendix A.

1.0 Palm Beach County MS4 Program

1.1 Introduction

The Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) is a federal program designed to reduce stormwater pollutant discharges to receiving waters of the United States. In 1987, the United States Environmental Protection Agency (EPA) was required under Section 402 (p) of the Clean Water Act (N40CFR Part 112.26) to establish final regulations governing stormwater discharge permit application requirements. In 1990, the Federal Register indicated that Palm Beach County was to begin compliance with the program. In 1997, the first 5-year permit (No. FLS000018) was issued by EPA to Palm Beach County's permittees. In 2001, the Florida Department of Environmental Protection (Department) received delegation from EPA for the MS4 Programs. In November 2002, the Cycle 2 MS4 Permit was issued by the Department. The Cycle 3 permit was issued on March 2, 2011, and the Cycle 4 Permit was issued on September 8, 2016.

1.2 Permittees

There are 40 permittees identified in the Cycle 4 MS4 permit. *Table 1-1* is a list of the designated MS4 NPDES stormwater management program contacts for each of the permittees.

1.3 Steering Committee

To coordinate the joint activities in Palm Beach County's MS4 Program, the permittees established an MS4 Steering Committee in 1991. The seven-member Steering Committee is comprised of two representatives of large municipalities, two representatives of smaller municipalities, one representative from the lead permittee, one representative of special districts, and one representative from Palm Beach County. A list of the current MS4 Steering Committee and administrative personnel is provided in *Table 1-2*. Minutes of all meetings and descriptions of programs overseen by the Steering Committee may be viewed on the Palm Beach County MS4 NPDES website at http://www.pbco-npdes.org. Since 2014 we have had 18,326 visitors to the website.

During the reporting period, the Steering Committee met two times and the permittees held three virtual meeting. Permittee representation at the meetings averaged eighty-four percent. Major meeting agenda items included the following:

- Cycle 4, Year 4 Annual Reports
- Income and Disbursement Reports
- 2021-2022 Program Budget Estimates
- Refresher Training Session
- Sediment & Erosion Control Inspector Training
- Water Quality Monitoring Program
- Public Education Program
- FDEP Virtual Audits (1 Permittees)
- Status of Pine Lake and Lake Osborne Total Maximum Daily Load
- Status of Cycle 5 Permit
- 2020-2021 Biennial Watershed Assessment of Impaired Waters
- MS4 Websites – pbco-npdes.org and StormwaterAndMe.org

1.4 Interlocal Agreements

Northern Palm Beach County Improvement District (Northern) acts as lead permittee for the Palm Beach coalition of permittees. As the lead permittee, Northern re-entered into Interlocal Agreements with each of the other permittees in 2017 for the purposes of identifying duties and responsibilities of the parties and fulfilling the conditions of the Palm Beach County Cycle 4 MS4 permit. Through these Interlocal Agreements, cost sharing for joint activities is provided by each of the permittees.

This joint annual report was reviewed by the permittees and approved by the Steering Committee.

Table 1-1
Permittee Contacts

Appendix No.	Permittee, Address	Name, Title, Telephone
1	Atlantis, City of 260 Orange Tree Drive Atlantis, FL 33462	Steven Mazuk Utilities/Public Works Director (561) 965-1744
2	Belle Glade, City of 110 Dr. Martin Luther King, Jr. Blvd. Belle Glade, FL 33430	Johnny Gooden Asst. Director of Public Works (561) 992-2216
3	Boca Raton, City of 201 West Palmetto Park road Boca Raton, FL 33432	Zachary Bihr, P.E. Municipal Services Director (561) 416-3430
4	Boynton Beach, City of 124 East Woolbright Road Boynton Beach, FL 33435	Angela A. Prymas, P.E. Stormwater Supervisor (561) 742-6241
5	Cloud Lake, Town of 100 Lang Road Cloud Lake, FL 33406-3222	Dorothy Gravelin Town Clerk (561) 686-2815
6	Delray Beach, City of 434 S. Swinton Avenue Delray Beach, FL 32444-2698	Elsa Gonzales-Soto Project Manager (561) 243-7000, Ext. 7220
7	FDOT – District Four 3400 West Commercial Boulevard Ft. Lauderdale, FL 33309-3421	Ivette Leiva NPDES Coordinator (954) 777-4221
8	FDOT- Turnpike Enterprise P.O. Box 9828 Ft. Lauderdale, FL 33310-9828	Allison (Crow) Fetigan NPDES Coordinator (954) 934-1213
9	Glen Ridge, Town of 1501 Glen road West Palm Beach, FL 33406	John J. Deal Town Manager (561) 697-8868
10	Green Acres, City of 5750 Melaleuca Greenacres, FL 33463	Kara Ferris Planning & Engineering Director (561) 642-2040
11	Gulf Stream, Town of 100 Sea Road Gulf Stream, FL 33483-7427	Greg Dunham Town Manager (561) 276-5116
12	Haverhill, Town of 4585 Charlotte Street Haverhill, FL 33417-5911	Todd McLeod, P.E. Town Engineer (561) 689-9500
13	Highland Beach, Town of 3614 South Ocean Blvd. Highland Beach, FL 33487	Pat Roman Public Works Director (561) 243-2084

Appendix No.	Permittee, Address	Name, Title, Telephone
14	Hypoluxo, Town of 7580 S. Federal Highway Hypoluxo, FL 33462	Leonard G. Rubin, P.A. Town Attorney (561) 686-8700
15	Indian Trail Improvement District 13476 61st Street North West Palm Beach, FL 33412-1915	Greg Shafer Director of Stormwater (561) 793-0874
16	Juno Beach, Town of 340 Ocean Drive Juno Beach, FL 33408	Anthony R. Meriano Director of Public Works (561) 626-1122
17	Jupiter, Town of 210 Military Trail Jupiter, FL 33458	David J. Rotar Utility Services Manager (561) 748-2270
18	Jupiter Inlet Colony, Town of 1 Colony Road Jupiter Inlet Colony, FL 33469	Dr. Daniel J. Comerford III Mayor (561) 746-3787
19	Lake Clarke Shores, Town of 1701 Barbados Road West Palm Beach, FL 33406	Damon Gammons Utilities Superintendent (561) 642-7870
20	Lake Park, Town of 650 Old Dixie Highway Lake Park, FL 33403	John Wylie Storm Water Infrastructure Manager (561) 881-3345
21	Lake Worth Beach, City of 7 North Dixie Highway Lake Worth, FL 33461	Judy Love Water Sewer Storm Field Manager (561) 586-1719
22	Lantana, Town of 500 Greynolds Circle Lantana, FL 33462	Jerry Darr Assistant Utilities Director (561) 540-5758
23	Manalapan, Town of 600 S. Ocean Blvd. Manalapan, FL 33462-3398	Linda Stumpf Town Manager (561) 585-9477
24	Mangonia Park, Town of 1755 East Tiffany Drive Mangonia Park, FL 33407	Kenneth Metcalf Town Manager (561) 848-1235
25	Northern Palm Beach County Improvement District 359 Hiatt Drive Palm Beach Gardens, FL 33418	Jared Kneiss Program Administrator (561) 624-7830
26	North Palm Beach, Village of 501 U.S. Highway No. 1 North Palm Beach, FL 33408	Steven Hallock Director of Public Works (561) 691-3440

Appendix No.	Permittee, Address	Name, Title, Telephone
27	Ocean Ridge, Town of 6450 N. Ocean Blvd. Ocean Ridge, FL 33435	Tracey Stevens Town Manager/Finance Director (561) 732-2635
28	Palm Beach, Town of 260 S. County Road Palm Beach, FL 33480	Rob Weber Coastal Program Manager (561) 838-5440
29	Palm Beach County 2300 North Jog Road, 4th Floor West Palm Beach, FL 33411	Bonnie Finneran Environmental Director (561) 233-2400
30	Palm Beach Gardens, City of 10500 North Military Trail Palm Beach Gardens, FL 33410	Todd Engle, P.E. City Engineer (561) 804-7012
31	Palm Beach Shores, Town of 247 Edwards Lane Palm Beach Shores, FL 33404	Alan Welch Public Services Director (561) 844-3457
32	Palm Springs, Village of 226 Cypress Lane Palm Springs, FL 33461	Angela Thul Stormwater Program Coordinator (561) 434-5122
33	Riviera Beach, City of 2391 Avenue L Riviera Beach, FL 33404	Sedrick Clarke Stormwater Coordinator (561) 814-6492
34	Royal Palm Beach, Village of 10996 Okeechobee Blvd. Royal Palm Beach, FL 33411	Paul L. Webster, P.E. Director of Public Works (561) 790-5122
35	South Bay, City of 335 S.W. Second Avenue South Bay, FL 33493	Edgar Kerr Director of Public Works (561) 996-6751
36	South Indian River WCD 15600 Jupiter Farms Road Jupiter, FL 33478	Michael Dillon Manager of Operations (561) 747-0550
37	South Palm Beach, Town of 3577 S. Ocean Blvd. South Palm Beach, FL 33480	Robert Kellogg Town Manager (561) 588-8889
38	Tequesta, Village of 345 Tequesta Drive Tequesta, FL 33469	Matthew Hammond Utility Director (561) 768-0459
39	Wellington, Village of 12300 Forest Hill Boulevard Wellington, FL 33414	Jonathan Reinsvold Village Engineer (561) 791-4052
40	West Palm Beach, City of P. O. Box 3368 West Palm Beach, FL 33402	Stephon Harris Director of Public Utilities (561) 822-2168

Table 1-2

Palm Beach County MS4 Steering Committee

Laurent Van Cott, P.E. Steering Committee Chair For Town of Mangonia Park Southern Design Group, Inc. Phone (561) 758-5285	**Karen Brandon, P.E.** Steering Committee Member For South Indian River Water Control District AECOM Phone (561) 684-3375
Jay Foy, P.E. Steering Committee Vice-Chair For City of Atlantis Stormwater J. Engineering, Inc. Phone (561) 242-0028	**Bonnie Finneran** Steering Committee Member Palm Beach County Phone (561) 233-2400
Elsa Gonzales-Soto Steering Committee Secretary City of Delray Beach Phone (561) 243-7000	**Zach Bihr** Steering Committee Member City of Boca Raton Phone (561) 416-3430
Dan Beatty, P.E. Steering Committee Member Northern Palm Beach County Improvement District Phone (561) 624-7830	

Administration – Northern Palm Beach County Improvement District as Lead Permittee	
Alan Wertepny, P.E. Mock, Roos & Associates, Inc. Program Manager Phone (561) 683-3113, x-231	**Betsy S. Burden, Esq**. Caldwell Pacetti Edwards Schoech & Viator LLP Legal Counsel Phone (561) 655-0620
Anne Capelli Mock, Roos & Associates, Inc. Public Education Coordinator Phone (561) 683-3113, x-287	**Laura Ham, CPA** Northern Palm Beach County Improvement District Budget Manager Phone (561) 624-7830
Brian Einkauf Mock, Roos & Associates, Inc. Webmaster Phone (561) 683-3113, x-250	**Tabbatha Marcus** Mock, Roos & Associates, Inc. Administrative Assistant Phone (561) 683-3113, x-264

2.0 Training Program

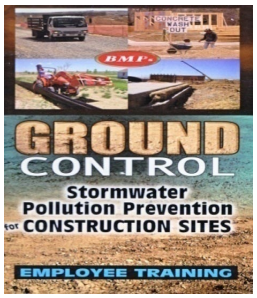
The Palm Beach County MS4 permit requires that permittees provide training on three topics. Annual follow-up (or "refresher") training is required for those that have received the initial training. The three topics are:

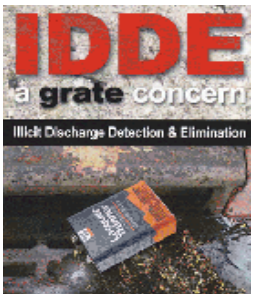
1. Identification & reporting procedures for a suspected illicit discharge or dumping in the MS4 for all appropriate permittee personnel (including field crews, fleet maintenance staff, and inspectors) and contractors. (Part III.A.7.c)
2. Spill prevention, containment & response procedures (including techniques for mitigating pollution from spills) for all appropriate permittee personnel (including field crews, firefighters, fleet maintenance staff, and inspectors). (Part III.A.7.d)
3. Stormwater management and erosion and sedimentation control BMPs for construction sites for site plan reviewers, site operators, and site inspectors. Construction site inspectors must be certified through the Florida Stormwater, Erosion, and Sedimentation Control Inspector Training programs, or equivalent. (Part III.A.9.c)

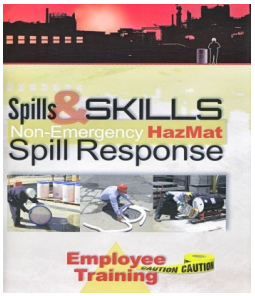
The Palm Beach County MS4 permittees carry out a joint training program that is available to all permittee personnel, as well as contractors and private individuals. Typically, this training is in March using EXCAL Visual Training videos: The illicit discharge, spill prevention, and construction site BMP. Attendance logs are maintained for each training session. In addition, the group maintains a lending library of videos for the permittees to borrow anytime for use at in-house training sessions.

EXCAL Visual videos may not be reproduced, but additional copies may be purchased from the vendor to assist in meeting training requirements (www.excalvisual.com).

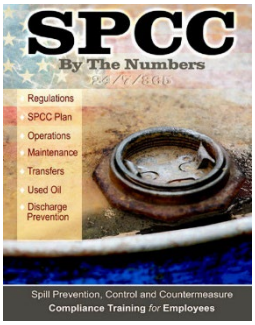
Videos currently in our library at www.pbco-npdes.org (group/joint activities) include:

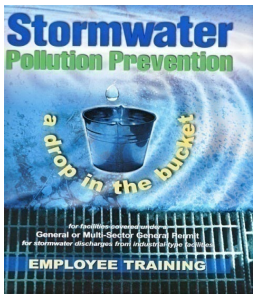


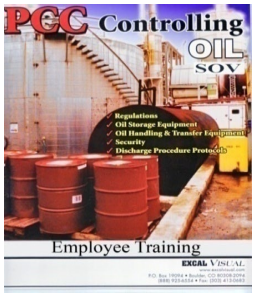




Stormwater Training







Due to COVID-19 restrictions, the Palm Beach County Group training sessions for 2019/2020 were conducted remotely by Cheryl Moore (Cheryl L. Moore Consulting, LLC) and included:

1. A ZOOM presentation slides covering the three required annual refresher training topics (spill prevention and response, illicit discharge detection and elimination, and sedimentation and erosion controls for construction sites). Participants for the training included 154 representatives from 33 of the 40 Palm Beach County MS4 permittees.
2. Florida Stormwater, Erosion and Sedimentation Control Inspector Training Program was conducted on May 12 and 13, 2021. The breakdown of participants included 40 inspectors, 19 site plan reviewers, 11 operators, and 18 from private sector. Staff from eighteen permittees were in attendance.

3.0 Public Education Program

The Palm Beach County MS4 permittees have undertaken a jointly funded program to meet the public education requirements of the MS4 permit. In so doing, all permittees participate in conducting the program. The premise of a joint program is that a unified message, repeated throughout the County will have more of an impact than 40 separate messages. The Stormwater and Me (SAM) program, as it is called, kicked off in 2009 and the website has had over 8,090 visitors.

Objective:

The objective of the public education program is to put relevant information in the hands of the residents of and visitors to the Palm Beach County geographic area, so they can make better decisions with respect to pesticides, herbicides, fertilizers, illicit discharges, illegal dumping, and the disposal of household hazardous waste. The intent is that this will result in less of these items ending up in our stormwater systems and, in turn, our water bodies.

Topics:

As prescribed by the MS4 permit, the following topics are covered by the public education program:

- Encourage citizens to reduce their use of pesticides, herbicides, and fertilizers. [Part III.A.6.]
- Promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposal of materials into the MS4. [Part III.A.7.e.]
- Encourage the proper use and disposal of used motor vehicles fluids, leftover hazardous household products, and lead acid batteries. [Part III.A.7.f.]

Target Audience:

The target audience of the program is residents (children and adults) of and visitors to Palm Beach County, Florida.

Activities and Materials:

This reporting period, the SAM public outreach program included three 30-second Public Service Announcements (PSAs) dealing with pet waste pickup, keeping grass clippings off the streets, and reducing the usage of pesticides, herbicides and fertilizers. The PSAs were aired on eight commercial television channels (Animal Planet, CNN, Discovery, Food, Golf, MNBC, NGC, TWC), broadcast by a local cable television provider (Comcast) from 6 a.m. to midnight during the months of January 2021 through March 2021 to all broadcast zones within Palm Beach County. A total of 5,465 PSAs were aired. In addition, the spots appeared on Comcast's Digital TV streaming service. The PSA program is estimated to have reached 355,370 Comcast households and 33,057 AT&T U-Verse households in Palm Beach County. The PSAs were also aired by local/municipal TV stations throughout the year and many permittees play the videos on their website. Copies of the PSAs can be found on the SAM website: StormwaterAndMe.org.

During the 2020-2021 reporting period, the Palm Beach County Extension Service conducted outreach on the Florida Yards and Neighborhoods program and reported that it distributed 9,649

brochures, conducted 2 neighborhood presentations reaching 3 participants, conducted 78 workshops reaching 4,685 participants, published 51 articles, and produced 11 public displays. UF/IFAS also provided Green Industry BMP training to 3 participants. The County Extension Service has estimated that its outreach program reached about 5.4% of the population in Palm Beach County. Costs for these programs total about $1,837.96. The reduced spending on the program was a result of COVID-19 related impact.

The Palm Beach County Solid Waste Authority (SWA) continued to carry out a public education/outreach program to educate Palm Beach County residents and visitors about proper disposal of household hazardous waste (HHW). Through the MS4 NPDES Interlocal Agreement between Palm Beach County and Northern Palm Beach County Improvement District, SWA continues its program, in part to fulfill the permit requirement that all permittees educate their residents on proper disposal of HHW. During the 2020-2021 reporting period, SWA reported that it distributed 105,250 brochures, collected/recycled/disposed of 2,130 tons of HHW, conducted 406 neighborhood presentations reaching 3,364 participants, distributed seven newsletters, produced 112 displays, aired 4,000 PSAs, conducted 290 school presentations reaching 6,824 participants, conducted 3 workshops reaching 50 participants, and conducted 17 special events reaching 10,100 participants. SWA also hosts a public outreach website at http://www.swa.org/site/hhw/haz_waste_home/hazardous_waste_portal.htm. SWA has estimated that its outreach program reached 80% of the population in Palm Beach County. Costs for

these programs total just under $4.6 million of which approximately $500,000 is for public education activities.

Methods for Distribution:

The television PSAs allow the greatest opportunity for the distribution of information. In addition, the website, brochures, and meetings allow for the presentation of more in-depth information.

Annual Schedule:

The television PSA campaign effort is run during the months of January through March, when residential population in the County is at its highest. School presentations are in sync with the school calendar. Other outreach activities occur throughout the year.

Documentation:

The Group's Public Education Coordinator, SWA and PBC Extension Services, respectively, maintain record information for all materials distributed.

Responsible Entities:

The program is coordinated by the Palm Beach County MS4 Steering Committee administrative staff. HHW outreach is carried out by the Palm Beach County Solid Waste Authority (SWA) for all permittees under the inter-local agreement with Palm Beach County.

Resources Allocated:

The 2020-2021 allocation for the public education program (not including Palm Beach County Programs) was $35,000.

Assessment Method:

The bottom line on the effectiveness of public education is if the receiving waters experience improved water quality. Therefore, the water quality monitoring is offered as a measure of the collective effectiveness of this and other MS4 permit programs.

Public Reporting of Illicit Discharge:

The StormwaterAndMe.org website contains information on stormwater pollution and illicit discharges. Included is a list of contacts for each of the 40 permittees to report an illicit discharge or spill.

4.0 Total Maximum Daily Load (TMDL) Program

4.1 Description

The PBC MS4 permit includes requirements for conducting activities associated with TMDLs that were adopted when the current cycle permit was issued. Activities include the submittal of a schedule for developing an implementation plan to reduce the discharge of pollutants from each TMDL stakeholder permittee's MS4 to the maximum extent practicable. No TMDLs were in place for the Palm Beach County Cycle 1 or Cycle 2 permits. For Cycle 3, there were seven EPA TMDLs that were evaluated and addressed by the applicable MS4s. As of the issuance date of the Cycle 4 permit, there were three additional TMDLs for water bodies within Palm Beach County and these included both the Department and EPA issued TMDLs.

4.2 Established and Adopted TMDLs – Cycle 4

TMDLs established by EPA and verified by the Department or adopted by the Department as of the issuance date of the Cycle 4 permit (September 8, 2016), along with the respective potentially affected permittees, are listed in *Table 4-1*.

Table 4-1

Cycle 4 TMDLs in Palm Beach County

Agency	WBID	Segment Name	Basin	Constituent	TMDL	Percent Reduction	Date	MS4 Stakeholder
EPA	3226C	SW Fork Loxahatchee River	St. Lucie/ Loxahatchee	Fecal Coliform	<43 (counts/100 ml)	93	05/16/12	Jupiter, FDOT, PBC, SIRWCD, Turnpike, NPBCID
EPA	3262A	Lake Ida	Lake Worth Lagoon	Nutrients	TN=0.857 mg/l TP=0.062 mg/l	20 45	11/09/12	Delray, Boynton, FDOT, PBC
FDEP	3364A	E-1 Canal	Lake Worth Lagoon	Fecal Coliform	<400 (counts/100 ml)	94 0	08/31/11	FDOT, PBC

During Year 1 of this permit cycle the eight permittees identified as TMDL stakeholders submitted Prioritization Plans which were approved by the Department. The schedules for implementation activities are identified in *Table 4-2*.

Table 4-2

Cycle 4 Prioritized TMDLs

MS4 Stakeholder	WBID-Waterbody-TMDL	Monitoring Summary Due	BPCP Due	Supplemental SWMP Due
Boynton Beach	3262A- Lake IDA – Nutrients (EPA)	03/31/20	N/A	03/31/21
Delray Beach	3262A- Lake IDA – Nutrients (EPA)	03/31/20	N/A	03/31/21
FDOT District 4	3264A – E-1 Canal – Bacteria	03/31/20	03/31/20	N/A
	Loxahatchee River Pollutant Reduction Plan (3226C)	N/A	N/A	N/A
FDOT Turnpike Enterprise	3226C – SW Loxahatchee River – Pollutant Reduction Plan	N/A	03/31/20	N/A
Jupiter	Loxahatchee River Pollutant Reduction Plan (3226C)	N/A	N/A	N/A
NPBCID	Loxahatchee River Pollutant Reduction Plan (3226C)	03/31/21	03/31/21	N/A
Palm Beach County	3264A – E-1 Canal Bacteria	N/A	03/31/20	N/A
	Loxahatchee River Pollutant Reduction Plan (3226C)	N/A	N/A	N/A
SIRWCD	Loxahatchee River Pollutant Reduction Plan (3226C)	N/A	N/A	N/A

Beginning in 2019 and continuing through 2021, FDEP Division of Environmental Assessment and Restoration (DEAR) carried out activities for the development of a nutrient TMDL report to address the identified water quality impairments in Pine Lake and Lake Osborne. Draft TMDL reports were released, several public workshops were held, and coordination with the Palm Beach County MS4 stakeholders was done. Seven Palm Beach County permittees/stakeholders provided comments and participated in the workshops and coordination. Primarily items of discussion and resolution included refining the delineation of the contributing watershed area for the impaired waterbodies, accessing all readily available water quality data to improve the water quality model calibration, reviewing/revising model input assumptions, and identifying additional stakeholders (MS4s, NPDES Industrial Permittees and non-MS4 owners).

Both Pine Lake and Lake Osborne were reassessed by DEAR as part of its 2020-2022 Biennial Water Quality Watershed Assessment Program. As a result of this assessment, Pine Lake was confirmed to be impaired for nutrients, however, Lake Osborne is no longer identified as impaired. Lake Osborne has been placed on the draft "Delist List" and no TMDL will be developed at this time. (If water quality deteriorates, future Biennial Assessments could place the waterbody back on the Study or Verified Impaired lists.) DEP is moving forward with a revised draft nutrient TMDL for Pine Lake. Rulemaking and adoption of a Pine Lake TMDL is expected in 2022. Two MS4 permittees are stakeholders: the City of West Palm Beach and Palm Beach County.

4.3 TMDL Activities

During Year 5, of the Cycle 4 Permit, there were no additional TMDL activities to be addressed by the Palm Beach County MS4s. Progress and programs to address TMDLs for the Loxahatchee River, E-1 Canal (Hillsboro Watershed) and Lake Ida were addressed in previous individual annual reports (Florida Department of Transportation District IV, Florida Turnpike Enterprise, Town of Jupiter, Palm Beach County, Northern Palm Beach County Improvement District, South Indian River Water Control District, Village of Tequesta, Boynton Beach, Delray Beach and Palm Beach County) and summarized in previous Joint annual reports.

4.4 FDEP Planning List

Although no action is required under the MS4 permit for TMDLs in the planning stage, this information is still tracked by the MS4 group. FDEP has a planning list for future development of TMDLs through 2022. As of January 2020, six water bodies in Palm Beach County were on the FDEP Site Specific Planning List. The Loxahatchee River Pollutant Reduction Plan (PRP) addresses three of the water bodies on the planning list (Loxahatchee River WBID 3226D, NW Fork 3226A and SW Fork 3226C) for nutrients. The existence of a PRP effectively places these three future TMDLs on hold for the next five years, leaving three Palm Beach County water bodies remaining – *See Table 4-3.*

Table 4-3

2020 FDEP Planning List for TMDLs in Palm Beach County

WBID	Segment Name	Basin	Parameter	MS4 Stakeholders
3262A	Lake Ida	Lake Worth Lagoon	TP and Chlorophyll-a	Palm Beach County, Delray Beach, Boynton Beach, FDOT-District IV
3245C4	Pine Lake	Lake Worth Lagoon	Chlorophyll-a	Palm Beach County, FDOT – District IV, West Palm Beach
3256A	Lake Osborne	Lake Worth Lagoon	TP and Chlorophyll-a	Palm Beach County, Atlantis, FDOT District IV, Greenacres, Lake Worth Beach, Lantana, FDOT Turnpike

5.0 Water Quality Monitoring Program

5.1 Description

To provide water quality monitoring data to permittees, and to assist them with their required program assessments, the group made the decision to continue the +20-year joint ambient water quality monitoring program. The monitoring program includes the following components:

- ambient water quality sampling
- water quality data analyses
- trend analyses
- annual pollutant loading estimates in Year 3 of each permit cycle
- program modifications as needed

The Palm Beach County MS4 NPDES water quality monitoring program now includes 44 ambient water quality monitoring sites which were selected after coordination among the South Florida Water Management District (SFWMD), Palm Beach County Environmental Resource Management (ERM), the Loxahatchee River District (LRD), Broward County (BC), and City of West Palm Beach (CWPB).

5.2 Monitoring Sites

Table 5-1 identifies each monitoring site location and provides the site designation, watershed name, the entity conducting the sampling, and the site location northing and easting coordinates. Note that site designations are unique within an individual agency but may be duplicated across agencies. Data for these sites are assigned a unique agency code and station identification in the State's database (dBHydro or WIN/STORET).

Figure 5-1 (two pages) depicts the water quality monitoring site locations and shows the boundaries of the associated watersheds. Sites monitored by ERM are shown as circles, those monitored by the LRD are shown as squares, those monitored by SFWMD are shown as triangles, those monitored by BC are shown as stars and those monitored by CWPB are shown as suns. White symbols signify marine or tidal sites and yellow symbols designate freshwater sites.

The LRD monitors four marine sites and three freshwater sites. ERM monitors 10 marine sites and 15 freshwater sites. The SFWMD monitors five freshwater sites, BC monitors one freshwater and two marine water sites and four CWPB freshwater sites were selected. All of Palm Beach County BC, ERM, LRD and WPB sampling results are in WIN/STORET and SFWMD data is in dBHydro.

The 25 sites monitored by ERM are sampled and initially analyzed in-situ by ERM staff using a multi-parameter water quality monitoring instrument. Water samples are collected, preserved, and stored according to the Department Standard Operating Procedures. Quality assurance/quality control measures include pre-cleaned equipment blanks, field cleaned equipment blanks, field spikes, and the collection of duplicate samples.

Further analysis of samples of ERM's 10 Lake Worth Lagoon marine sites is handled by SFWMD. Analysis of the remaining 15 ERM sites is conducted by an independent laboratory under contract with ERM. The water quality parameters and frequency being monitored by ERM, LRD, SFWMD, BC, and CWPB are listed in Table 5-2. For this reporting period some monitoring events were missed. The Lake Worth Lagoon monitoring routinely experiences missed monitoring events due to the monitoring protocol that requires tidal sites to be sampled "immediately at or prior to slack low tide." This allows only +/- 2 times per month when low tide is between 11:00 a.m. and 2:30 p.m., which may occur on weekends. The time on either side of this time frame is necessary for initial calibration, equipment decontamination, mobilization, travel, boat launch, boat recovery, travel,

continuing calibration verification, and paper/tablet documentation work. Monitoring protocol prohibits monitoring during rain. Boating safety requirements prohibit monitoring during lightning events and winds exceeding 20 knots. Mechanical problems such as trailer lights malfunction, and engine problems also result in missed monitoring events.

Table 5-3 (8 pages) provides a list of the parameters and the Florida Surface Water Quality Standards (WQ Standards) as promulgated in Florida Administrative Code (F.A.C.) 62-302.530, 62-302.532, and 62-302.530 (47)(b).

The water quality sampling program in Palm Beach County is a cooperative effort designed to incorporate desirable elements of existing monitoring programs being administered by various agencies throughout the County. Attempts to coordinate sampling frequencies, parameters, and methodologies are ongoing, but not all sampling programs produce results that are compatible for a combined analysis. Data for a given parameter, location, and event may be unavailable due to the specific goals of that agency's monitoring program or procedural variations, including event frequency, sample depth, methodology, and instrumentation.

5.3 Water Quality Monitoring Results and Exceedances

Standards

State water quality standards have become increasingly complicated in recent years, with differing types of water bodies having different established criteria, such as chlorophyll-a (corrected for pheophytin). Therefore, *Table 5-3* has been prepared to provide a quick reference for determining exceedances in the water bodies being monitored in Palm Beach County. Furthermore, in Class I and Class III freshwater systems, the numeric limits for heavy metals are based on a logarithmic function of the water's total hardness measured at the time of the sampling. Thus, the last page of *Table 5*-3 provides the relationship of hardness to the calculated limit for cadmium, copper, lead, and zinc.

Monitoring Results

The results of the monitoring conducted from October 2019 through September 2020 are provided in *Table 5-4* (44 pages). Analysis result values that were below the limits of detection ("BDL" or "non-detect") have been replaced in *Table 5-4* whenever possible with ½ of the respective minimum detection limit (MDL) value for more reasonable calculated statistics. MDLs were provided by Palm Beach County ERM for results that were reported as BDL within the data set. MDLs are determined by

instrumentation and method of analysis. These substitutions in *Table 5-4* have been highlighted in blue. MDL values more than the WQ Standard were not counted as exceedances.

Exceedances of the WQ Standards are highlighted in yellow in *Table 5-4*.

For samples where a total hardness was not measured, an exceedance limit for metals could not be calculated, and therefore, no exceedance could be identified.

For those results which require an annual geometric mean (to compare to the standard), the annual geometric mean was calculated for the reporting period (October – September).

Table 5-5 provides a summary of the number of exceedances at each site. Each cell where there was an exceedance provides the number of exceedances and the total number of samples taken at that site during the reporting period. For example, at Site 31E within the C-15 watershed, one dissolved oxygen samples out of six taken were in exceedance of the WQ Standard.

Another summary of exceedances is provided below:

Parameter	Exceedance Location(s)
DO	C-15, C-16, C-18, Lox River, Hillsboro, L-8, S-2-6-7
Fecal coliform	Loxahatchee River
Turbidity	C-17, L-8, S-2-6-7, WPBWS
pH	C-17, WPBWS
Chl-a	Lox River, LWL-N, LWL-C
Specific Conductivity	C-16, C51, S-2-6-7
Copper	ICWW-S, LWL-N, LWL-C

Comments

The criterion for fecal coliform in the NW and SW Forks of the Loxahatchee River (a natural Class II water body) is extremely low (< 43 cfu/100 ml) compared to all other water body classifications (< 400 cfu/ 100 ml). Potential sources of bacteria are being investigated by the Town of Jupiter and the Loxahatchee River District.

Exceedances of the turbidity in the L-8, S-2-6-7, and WPBWS Canals is very likely linked to discharges from Lake Okeechobee.

Exceedances for Specific Conductivity may be attributed to operational water supply releases from Lake Okeechobee and the L-8 Flow Equalization Basin.

Tabular Summaries

A statistical summary of each monitoring site, grouped by watershed, is presented in *Table 5-6* (25 pages). The table includes approximately 22 water quality parameters (21 measured parameters plus calculated TN) and all sampling events for each site's period of record. The periods of record range from four years to 21 years.

Table 5-7 re-lists the geometric mean values for TN, TP, and Chl-a, at each site for the period of record. Historically, based on Chl-a, TN and/or TP, exceedances of the nutrient criteria have occurred in the Loxahatchee River, the Lake Worth Lagoon (North and Central), and Intracoastal Waterway South. This table highlights the individual monitoring sites where exceedances of water quality standards have occurred.

5.4 Short Terms Trends

To provide the Palm Beach County MS4 permittees with site specific, as well as basin-wide, water quality trend (last ten years) information, historical data charts were developed using a "traffic light" symbology – red for exceedance of the water quality criteria, green for no exceedance, and yellow where there is no numeric standard). Since nutrient impairment is a major concern in Palm Beach County water bodies, Chl-a, TP, and TN were selected for this summary. FDEP has established a state-wide Chl-a numeric standard for all water bodies. However, for TP and TN, there is no numeric criteria for the South Florida Region Canals, resulting in 20 of the 44 monitoring sites without numeric criteria.

Tables 5-8 through *5-10* provide the historic period (2011-2020) of annual geometric mean exceedance for each site for these three nutrient-based water quality parameters. The annual geometric mean calculation for each site is based on a calendar year, while the basin annual geometric mean is calculated using all the sample sites and data within the basin watershed.

The total nitrogen numeric standards (basin averaging of sites) are being met in all 14 watersheds. Individual sites not meeting standards include Site 13 in the Lake Worth Lagoon North and Sites LWL-8, 18C and 18D in the Lake Worth Lagoon Central.

The total phosphorus numeric standards (basin averaging of sites) are being met for 13 of the 14 watersheds. Only Lake Worth Lagoon Central is not meeting the standard. Individual sites not meeting the standards include Site 22 (C-16 - Lake Osborne), Sites 11 and 13 (Lake Worth Lagoon North) and Sites LWL-8, 18C, 18D and LWL- 11 (Lake Worth Lagoon Central), and site LWL-18 in Intercoastal Waterway South.

The Chl-a criterion (basin averaging of sites) is not being met in four watersheds: the C-15, Loxahatchee River (marine/tidal areas of the North, Northwest, and Southwest Forks), and the watersheds of the Lake Worth Lagoon (North and Central) and ICWW-S. Individual sites not meeting the criteria include Sites 31E and 31C (C-15); Sites 22 and 27B (C-16); Sites 51, 62 and 72 (Loxahatchee River); Sites 11, 13, LW-1 and LW-4 (LWL-N); Sites 8, 18C, 18D, LWL-8 and LWL-11 (LWL-C); and Site LWL-18 (ICWW-S).

5.5 Long Term Trends

Surface water quality values can have variability driven by seasonal fluctuation, flow variation, changes in watershed, precipitation variation, and other independent variables. Statistical analysis can be used to determine if changes in water quality are part of this variability or if the changes represent a significant water quality trend. The Mann-Kendall Test has been accepted by many governmental agencies as a robust method to evaluate water quality data statistically for trends over time. In this report, the Mann-Kendall Test (M-K) is used to identify surface water quality trends in the nutrient data for each water quality monitoring site. The M-K works well with data that has seasonal variations, violates assumptions of normality required for other regressions, and is resistant to outliers. The M-K can detect monotonic trends that do not double back on themselves. The analysis provides a Kendell Tau that is resistant to power-transforms. This is to say the Kendell Tau for a raw data set, or the same data set transformed would result in the same value. The M-K Test uses a ranked method of analysis. The M-K results contain a Kendell Tau value that is a measurement of the monotonic relationship between X and Y, in this analysis time and concentration. Kendell Tau is a ranked-based correlation measure, therefore, the scale it is evaluated on differs from non-ranked-based correlation measures such as R. Tau will have lower values than other correlation measures such as R. A strong correlation

similar to R = 0.9, would be equivalent to Tau = 0.7. Kendell Tau can be calculated by the following Formula:

$$\tau = \frac{S}{\frac{n(n-1)}{2}}$$

In the formula above, the Kendell (S) value is calculated by subtracting the number of "discordant pairs" M, or the pairs that have y (concentration) decreasing as x (time) increases (this is called "M"), from the number of "concordant pairs" where y increases with x (these are called "P"). Kendell S can be written in the form S = P - M. It should be noted that due to the possible number of comparisons available to compare P and M if all comparisons are increasing Tau would equal one and if all comparisons are decreasing Tau would equal -1.

Sen's Slope (also called Theil slope) estimator "$\hat{b}_1$" is closely related to Kendall's S and Tau. Sen's Slope can be calculated by the following formula for x and y values:

$$\hat{b}_1 = \text{median}\,\frac{(Yj - Yi)}{(Xj - Xi)} \quad \text{for all } i < j \text{ and } i=1,2,\ldots(n-1)\ j=2,3,\ldots n.$$

Thus, Kendell Tau, Kendell S, and Sen's Slope all indicate the direction of the trend. To determine if a trend is significant a p-value must be tested against the null hypothesis "H_o" that Tau = 0. For small sample sized or data pairs, these values can be pulled from a table of p-values based on Kendell S, Kendell Tau, and the number of data pairs "n". When the n is greater than 10 it is more appropriate that the p-value be approximated by a normal distribution Z_s test statistic.

$$\sigma_s = \sqrt{\left(\frac{n}{18}\right) * (n-1) * (2n+5)} \quad , \quad Z_s = \begin{cases} S - 1 \,/\, \sigma_s & if\ S > 0 \\ 0 & if\ S = 0 \\ S + 1 \,/\, \sigma_s & if\ S < 0 \end{cases}$$

S was defined previously as the Kendell S value. Z_{crit} is the value of α/2, where α is the selected significance level. The H_o is rejected when $|Z_s| > Z_{crit}$. M-K analysis can be used to see the slope and direction of a trend regardless of significances. Though it may be useful to see this trend as a potential indicator of the direction of data. It must be emphasized that rejection of the H_o means there is not enough evidence available to conclude that there is a trend or no trend. An alternative statement of this would be there is not enough evidence to say that the trend is any different than the null hypothesis.

For additional information on Kendell Tau, the USGS "Statistical Methods in Water Resources" By D.R. Helsel and R.M. Hirsch, provides examples and narrative on the topic.

Table 5-11 (14 pages) summarizes the results for TN, TP and Chl-a for the period of historical record. Note that while the trends maybe statistically significant, they may not be ecologically significant. Out of the 44 sites, 29 showed statistically significant decreasing trends for TN concentration; 10 showed a significant decreasing trend for TP, four showed a statistically significant increasing trend for TP; and 14 showed a statistically significant deceasing trend for Chl-a. Figures 5-2, 5-3 and 5-4 show the statistical trends, for TN, TP and Chlorophyll-a. Figures 5-5 shows a general example of a decreasing and not significant result while, Figures 5-6 shows an example of decreasing and significant result.

5.6 Pollutant Loading Analyses

The Cycle 4 permit requires each permittee to provide estimates of the average annual pollutant loading for six water quality parameters for each major outfall or major watershed into which they discharge. Each permittee is required to compare the current cycle pollutant loading estimates with the previous cycle pollutant loading estimates. Palm Beach County permittees have elected to provide the pollutant loading estimates on a watershed basis. For consistency, this permit requirement is one of the activities performed by the Group. Permittees provide the needed data and are given the opportunity to review the model inputs and results. Some 13 major watersheds are included in this analysis. The Lake Worth Lagoon (North and Central) and the northern portion of the Intracoastal Waterway South (ICWWS) were combined as one watershed and identified as the Lake Worth Lagoon (LWL). The 2018 MS4 annual pollutant load estimates were lower than the 2013 estimates for all six water quality parameters, in all 13 watersheds. Information on this analysis was provided in the Year 3, Cycle 4 Joint Annual Report. All 40 permittees reported in their Individual Year 3 reports reductions in nutrient loadings.

5.7 Program Modifications

Generally, the water quality monitoring data and assessments (annual exceedances, historical statistical data, more recent data, trends) show an improvement in the water quality of the receiving water bodies. Consequently, the stormwater management programs implemented by the permittees, as required by the MS4 permit, appear to be effective. No water quality monitoring program modifications are proposed with this year's report.

Table 5-1
Water Quality Monitoring Site Locations

Watershed	Surface Water Classification	Site Designation	Agency	Marine/ Freshwater	Northing	Easting
C-15	III (Fresh)	31E	ERM	Freshwater	760549.91	916736.89
		31C	ERM	Freshwater	760879.83	943443.02
		31B	ERM	Freshwater	802772.09	964368.10
C-16	III (Fresh)	22	ERM	Freshwater	828280.34	957602.68
		24	ERM	Freshwater	820399.97	957270.70
		27B	ERM	Freshwater	802276.58	916052.08
		27A	ERM	Freshwater	802545.25	942880.04
		28	ERM	Freshwater	760234.13	959303.11
C-17	III (Fresh)	12A	ERM	Freshwater	882520.57	953672.56
		C17S44	SFWMD	Freshwater	903830.19	955552.70
C-18	I (Fresh)	16	ERM	Freshwater	923477.26	902076.42
		15	ERM	Freshwater	901986.07	931378.31
		92	LRD	Freshwater	924685.07	937805.48
		81	LRD	Freshwater	946081.68	935811.57
C-51	III (Fresh)	38B	ERM	Freshwater	854963.27	867962.99
		37B	ERM	Freshwater	853637.29	916592.84
		C51S155	SFWMD	Freshwater	841132.85	964349.43
Lox	III (Fresh)	69	LRD	Freshwater	947071.77	924822.40
	II (Marine)	51	LRD	Marine	954939.97	948224.55
		62	LRD	Marine	938898.36	961525.58
		72	LRD	Marine	946223.78	954573.37
ICWW-N	III (Marine)	30	LRD	Freshwater	961625.76	961625.76
LWL-N	III (Marine)	LWL-1	ERM	Marine	913398.12	964095.22
		11	ERM	Marine	908969.28	962655.71
		13	ERM	Marine	900706.79	964049.58
		LWL-4	ERM	Marine	898346.67	970040.36
LWL-C	III (Marine)	LWL-8	ERM	Marine	856238.64	968284.93
		18C	ERM	Marine	839740.15	969747.03
		18D	ERM	Marine	835593.23	967942.19
		LWL-11	ERM	Marine	830580.53	967926.64
ICWW-S	III (Marine)	LWL-13	ERM	Marine	819086.28	968516.09
		LWL-18	ERM	Marine	798402.11	965585.04
Hillsboro	III (Marine)	1	BC	Marine	724863.71	953909.23
		2	BC	Marine	725864.04	940799.29
	III (Fresh)	3	BC	Freshwater	725348.47	917217.65
		S39	SFWMD	Freshwater	734632.99	888668.58
L-8	III (Fresh)	Culv10	SFWMD	Freshwater	938859.59	778727.09
S-2-6-7	III (Fresh)	S-2	SFWMD	Freshwater	860426.94	748850.27
		39	ERM	Freshwater	855232.20	764581.68
		43	ERM	Freshwater	847294.87	750036.29
WPBWS	I (Fresh)	M-Canal	CWPB	Freshwater	884890.58	908925.59
		Control 4	CWPB	Freshwater	879672.31	943612.31
		Lake Mangonia	CWPB	Freshwater	875721.42	957872.24
		Clear Lake	CWPB	Freshwater	866387.08	959660.53

Table 5-2 Parameter Collection Schedule

Parameter	ERM		SFWMD	LRD	BC
	Freshwater	Marine			
Alkalinity*	--	--	--	M	
Arsenic	BM	Q	--	--	
Cadmium	BM	Q	--	--	
Chlorophyll-a (corrected)	BM	M	--	M	Q
Copper	BM	Q	--	--	
Dissolved Oxygen	BM	M	M	M	Q
Fecal Coliform	--	--	--	M	
Lead	BM	Q	--	--	
Nitrogen, Ammonia	BM	M	M	M	Q
Nitrogen, Nitrate-Nitrite	BM	M	M	M	Q
Nitrogen, Total Kjeldahl	BM	M	M	M	Q
Nitrogen, Total	BM	M	M	M	Q
pH	BM	M	M	M	Q
Phosphorus, Orthophosphate	BM	M	M	M	
Phosphorus, Total	BM	M	M	M	
Salinity†	--	M	--	M	Q
Specific Conductivity	BM	M	M	M	Q
Temperature	BM	M	M	M	Q
Total Hardness (as CaCO3)*	BM	--	--	--	
Total Suspended Solids*	BM	M	M	M	
Turbidity	BM	M	M	M	Q
Zinc*	BM	Q	--	--	

Notes: 1. Not all parameters are collected for every site.
2. LRD - Loxahatchee River District Sites 62, 69, and 72, are sampled monthly. Sites 30, 51, 81, and 92 bi-monthly.
3. ERM – Palm Beach County Environmental Resource Management
4. SFWMD – South Florida Water Management District
5. BC – Broward County

BM (Bi-Monthly)
M (Monthly)
Q (Quarterly)
-- (Not Sampled)

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class I - Freshwater Canal Peninsula Region Water Quality Criteria		
Site(s):	**C-18** (16, 15, 92, 81)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.01
Cadmium	mg/L	≤ $[e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	≤ $[e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	≤ $[e^{(1.273\ (lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Total	mg/L	≤ 1.54 AGM
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	≤ 0.12 mg/l AGM
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ $[e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Applicable Class III - Freshwater Lakes Water Quality Criteria		
Site(s):	**C-16** (22 and 24 in Lake Osborne)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ $[e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	≤ $[e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	≤ $[e^{(1.273\ (lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Total	mg/L	1.27 to 2.23 AGM
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	0.05 to 0.16 AGM
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ $[e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Notes:

(1) InH means the natural logarithm of total hardness expressed as milligrams/L of $CaCo_3$.

(2) For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Value applies if Chlorophyll-a is > 20 ug/l, Maximum Value also applies if Chlorophyll-a is ≤20 ug/l.

(3) AMG - Annual Geometric Mean

(4) Per Palm Beach County Chain-of-Lakes December 2015 Water Quality Report, Lake Osborne Color >40 Platinum Colbat Units

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class I - Freshwater Canal Peninsula Region Water Quality Criteria		
Site(s):	**C-15** (31E, 31C, 31B), **C-16** (27B, 27A, 28), **C-17** (12A, C17S44) **C-51** (38B, 37B, C51S155), **Lox** (69), **Hillsboro** (3, S39) **L-8** (Culv10), **S-2-6-7** (S-2, 39, 43)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ [lnH]\ -4.705)}]\ 10^{-3}$
Nitrogen, Total	mg/L	Narrative
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	Narrative
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Applicable Class III - Freshwater Lakes Water Quality Criteria		
Site(s):	**Loxahatchee River (51)**	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 4.0 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	0.80 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	0.030 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:

(1) InH means the natural logarithm of total hardness expressed as milligrams/L of $CaCo_3$.

(2) For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Value applies if Chlorophyll-a is > 20 ug/l, Maximum Value also applies of Chlorophyll-a is ≤20 ug/l.

(3) AMG - Annual Geometric Mean

(4) Per Palm Beach County Chain-of-Lakes December 2015 Water Quality Report, Lake Osborne Color >40 Platinum Colbat Units

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class II - Marine Northwest Fork Water Quality Criteria		
Site(s):	**Loxahatchee River** (62)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.5 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	< 1.26 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	< 0.075 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class II - Marine Southwest Fork Water Quality Criteria		
Site(s):	**Loxahatchee River** (72)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.5 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Fecal	cfu/100 ml	≤ 43
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 1.26 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.075 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Water Quality Criteria		
Sites:	**Hillsboro** (1 and 2)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 11 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	Narrative
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	Narrative
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class III - Marine Water Quality Criteria		
Site(s):	**ICWW-N** (30)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 4.7 AGM
Copper	mg/L	<0.0037
Dissolved Oxygen	% Saturation	> 42
Enterococci Bacteria	cfu/100mL	≤ 130 Count TPTV
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.66 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.035 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean
(2) TPTV - Ten Percent Threshold Value shall not be exceeded in more than 10% of the measurement
(3) Narrative - Shall not cause an imbalance in flora and fauna

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Water Quality Criteria		
Site(s):	**Lake Worth Lagoon North** (LWL-1, 11, 13, LWL-4)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 2.9 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.54 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.044 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class III - Marine Water Quality Criteria		
Site(s):	**Lake Worth Lagoon Central** (LWL-8, 18C, 18D, LWL-11)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 10.2 TPTV
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.66 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.049 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Notes:
(1) AGM - Annual Geometric Mean
(2) TPTV - Ten Percent Threshold Value shall not be exceeded in more than 10% of the measurement

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class III - Marine Water Quality Criteria		
Site(s):	**ICWW-S** (LWL-13 and LWL-18)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.05
Cadmium	mg/L	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	≤ 5.7 AGM
Copper	mg/L	≤ 0.0037
Dissolved Oxygen	% Saturation	> 42
Lead	mg/L	≤ 0.0085
Nitrogen, Total	mg/L	≤ 0.59 AGM
pH	None	6.5 to 8.5
Phosphorus, Total	mg/L	≤ 0.050 AGM
Specific Conductivity	umho/cm	None
Turbidity	NTU	≤ 29
Zinc	mg/L	≤ 0.086

Applicable Class I - Freshwater Canal South Florida Region Water Quality Criteria		
Site(s):	**City of West Palm Beach Water Supply Canals** (M-Canal, Control 4)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.01
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ [lnH]\ -4.705)}]\ 10^{-3}$
Nitrogen, Total	mg/L	Narrative
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	Narrative
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Notes:
(1) AGM - Annual Geometric Mean
(2) Narrative - Shall not cause an imbalance in flora and fauna

Table 5-3

Numeric Surface Water Quality Standards by Waterbody

Applicable Class I - Freshwater Lakes Water Quality Criteria		
Site(s):	**City of West Palm Beach Water Supply Canals** (Lake Mangonia and Clear Lake)	
Parameter	Units	Criteria
Arsenic	mg/L	≤ 0.01
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	≤ 20 AGM
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	> 38
Lead	mg/L	$\leq [e^{(1.273\ (lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Total	mg/L	1.05 to 1.91 AGM
pH	None	6.0 to 8.5
Phosphorus, Total	mg/L	0.03 to 0.09 AGM
Specific Conductivity	umho/cm	≤ 1275
Turbidity	NTU	≤ 29
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

Notes:
(1) AGM - Annual Geometric Mean

(2) For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Value applies if Chlorphyll-a is >20ug/l, Maximum Value applies if Chlorophyll-a is ≤20ug/l.

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-15 Watershed Monitoring Events

SITE 31E	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	7/26/21	9/23/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0011	0.0002								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	0.5	8.1	0.5	0.5	0.5	0.5							0.8	≤ 20 AGM
Copper	mg/L	0.0046	0.0032	0.0028	0.0013	0.0013	0.003								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	52.1	77.8	81.0	107.8	71.1	27.6								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.320	0.018	0.018	0.018	0.018	0.150								
Nitrogen, nitrate + nitrite	mg/L	0.150	0.017	0.017	0.054	0.036	0.039								
Nitrogen, Total	mg/L	1.55	1.12	0.92	0.93	1.14	0.91							1.07	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.4	1.1	0.9	0.88	1.1	0.87								
pH	None	7.74	7.55	7.75	8.11	7.61	7.33								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.4700	0.230	0.066	0.037	0.120	0.069								
Phosphorus, Total	mg/L	0.5200	0.3000	0.1300	0.073	0.2200	0.14							0.189	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	382	651	671	554	532	439.2								≤ 1275
Temperature	deg C	23.6	23.4	25.2	28.0	31.4	28.6								
Total Hardness	mg/L	149	229	219	175	169	161								
Total Suspended Solids	mg/L	2.5	2.5	2.5	1.5	4.2	3.2								
Turbidity	NTU	5.4	2.8	2.9	1.6	3.5	0.3								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 2

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

•AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
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C-15 Watershed Monitoring Events

SITE 31C	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	7/26/21	9/23/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0009	0.0002								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	0.5	13.5	0.5	0.5	60.6	0.5							1.9	≤ 20 AGM
Copper	mg/L	0.0055	0.0031	0.0013	0.0013	0.0013	0.0045								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	61.9	96.5	97.2	123.1	128.6	72.3								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.200	0.018	0.018	0.018	0.018	0.051								
Nitrogen, nitrate + nitrite	mg/L	0.190	0.017	0.017	0.0165	0.017	0.089								
Nitrogen, Total	mg/L	1.29	0.83	0.66	0.95	0.97	1.09							0.94	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.1	0.81	0.64	0.93	0.95	1								
pH	None	7.67	7.72	7.80	8.39	7.50	7.28								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.1200	0.100	0.078	0.0097	0.023	0.1								
Phosphorus, Total	mg/L	0.1900	0.1600	0.1300	0.088	0.1000	0.21							0.139	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	455.1	529	523	552	530	462.7								≤ 1275
Temperature	deg C	24.1	24.0	26.4	27.2	32.4	28.7								
Total Hardness	mg/L	174	204	206	172	182	161								
Total Suspended Solids	mg/L	2.5	5.3	2.5	7.7	5.2	5.2								
Turbidity	NTU	2.1	2.0	2.0	4.6	2.5	0.1								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0111	0.0055	0.0055	0.0055								See Table 5-3, page 2

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

•AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-15 Watershed Monitoring Events

SITE 31B	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	7/26/21	9/23/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0009	0.0002								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	0.5	0.5	0.5	0.5	0.5	1.6							0.6	≤ 20 AGM
Copper	mg/L	0.0033	0.0045	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	68.9	100.9	105.6	108.2	127.2	107.0								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.130	0.018	0.018	0.018	0.018	0.018								
Nitrogen, nitrate + nitrite	mg/L	0.290	0.017	0.017	0.0165	0.017	0.07								
Nitrogen, Total	mg/L	1.18	0.66	0.93	1.02	0.92	1.07							0.95	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.89	0.64	0.91	1	0.9	1								
pH	None	7.64	8.30	8.28	8.53	8.31	7.64								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.1200	0.063	0.057	0.0019	0.006	0.1								
Phosphorus, Total	mg/L	0.1600	0.1000	0.0950	0.062	0.0680	0.21							0.105	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	417.1	505	504	563	504	492.2								≤ 1275
Temperature	deg C	24.0	23.4	25.0	27.0	31.7	29.8								
Total Hardness	mg/L	161	201	196	175	169	177								
Total Suspended Solids	mg/L	2.5	2.5	2.5	6.9	3.3	5.2								
Turbidity	NTU	1.9	1.7	1.8	7	0.5	0.1								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 2

• Metal exceedences are based on hardness

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•AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-16 Watershed Monitoring Events

SITE 22	SAMPLE DATE	11/18/20	1/26/21	3/16/21	5/18/21	7/27/21	9/22/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.5	2.2	0.5	0.65	0.5	0.5							0.7	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 8
Dissolved Oxygen	% Saturation	97.7	124.0	107.1	108.0	107.0	68.0								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.018		0.110								
Nitrogen, nitrate + nitrite	mg/L	0.160	0.017	0.017	0.0165	0.037	0.04								
Nitrogen, Total	mg/L	1.07	0.71	1.12	1.00	0.91	0.82							0.92	≤ 2.23 AGM
Nitrogen, Total Kjeldahl	mg/L	0.91	0.69	1.1	0.98	0.87	0.78								
pH	None	7.94	8.33	8.39	8.33	8.00	7.58								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0220	0.005	0.010	0.045	0.009	0.015								
Phosphorus, Total	mg/L	0.0890	0.0630	0.0610	0.1	0.0620	0.065							0.072	≤ 0.16 AGM
Salinity	ppth														
Specific Conductivity	umho/cm	382.1	529	829	565	457	399.8								≤ 1275
Temperature	deg C	25.2	22.8	23.9	27.5	32.7	29.9								
Total Hardness	mg/L	162	198	239	179	147	139								
Total Suspended Solids	mg/L	6.5	2.5	2.5	6.4	3.5	3.6								
Turbidity	NTU	3.9	2.8	3.3	0.35	2.8	1.7								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

• Metal exceedences are based on hardness
• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-16 Watershed Monitoring Events

SITE 24	SAMPLE DATE	11/18/20	1/26/21	3/16/21	5/18/21	7/27/21	9/22/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.5	2.9	0.5	0.65	5.2	3.3							1.4	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 1
Dissolved Oxygen	% Saturation	98.8	72.7	96.9	118.5	131.9	83.1								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.018		0.018								
Nitrogen, nitrate + nitrite	mg/L	0.034	0.017	0.017	0.0165	0.017	0.0075								
Nitrogen, Total	mg/L	0.08	0.73	1.02	0.06	0.06	0.05							0.15	≤ 2.23 AGM
Nitrogen, Total Kjeldahl	mg/L	0.043	0.71	1	0.043	0.043	0.043								
pH	None	7.86	7.83	8.21	8.53	8.47	7.74								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.007	0.010	0.0019	0.002	0.0019								
Phosphorus, Total	mg/L	0.0014	0.0670	0.0640	0.0014	0.0014	0.0029							0.006	≤ 0.16 AGM
Salinity	ppth														
Specific Conductivity	umho/cm	399.2	534	725	628	462	406.3								≤ 1275
Temperature	deg C	25.0	22.3	25.0	27.2	31.4	29.5								
Total Hardness	mg/L	171	195	228	195	153	148								
Total Suspended Solids	mg/L	7.5	9.6	7.6	7.6	6.5	6.5								
Turbidity	NTU	4.3	4.3	4.9	0.4	7.6	2.6								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

• Metal exceedences are based on hardness

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• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-16 Watershed Monitoring Events

SITE 27B	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	9/23/21								Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0017									≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002									See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.5	1.8	0.5	0.5	6.1								1.1	≤ 20 AGM
Copper	mg/L	0.0041	0.0029	0.0013	0.0013	0.0013									See Table 5-3, page 1
Dissolved Oxygen	% Saturation	68.1	68.3	117.4	124.0	22.9									> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023									See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.082	0.061	0.018	0.018	0.440									
Nitrogen, nitrate + nitrite	mg/L	0.180	0.170	0.017	0.0165	0.038									
Nitrogen, Total	mg/L	1.16	0.81	1.00	0.99	1.14								1.01	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.98	0.64	0.98	0.97	1.1									
pH	None	7.73	7.69	8.46	8.32	7.22									6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.1600	0.015	0.005	0.0098	0.170									
Phosphorus, Total	mg/L	0.2200	0.0420	0.0730	0.089	0.2500								0.108	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	498.4	612	881	873	534									≤ 1275
Temperature	deg C	23.5	23.3	25.9	27.4	27.9									
Total Hardness	mg/L	198	242	259	243	202									
Total Suspended Solids	mg/L	2.5	5.6	9.8	10.9	3.5									
Turbidity	NTU	2.6	2.0	8.7	9.2	0.3									≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055									See Table 5-3, page 1

• Metal exceedences are based on hardness
• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-16 Watershed Monitoring Events

SITE 27A	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	7/26/21	9/23/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0012	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.7	0.7	0.5	0.5	0.5	0.5							0.5	≤ 20 AGM
Copper	mg/L	0.0053	0.0013	0.0013	0.0013	0.0032	0.0035								See Table 5-3, page 1
Dissolved Oxygen	% Saturation	72.9	81.8	107.0	105.5	40.6	21.9								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.044	0.018	0.018	0.018	0.067	0.230								
Nitrogen, nitrate + nitrite	mg/L	0.230	0.017	0.017	0.0165	0.120	0.077								
Nitrogen, Total	mg/L	1.08	0.83	0.97	1.02	1.08	1.07							1.00	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.85	0.81	0.95	1	0.96	0.99								
pH	None	8.00	7.78	8.39	8.34	7.39	7.30								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.2300	0.007	0.002	0.0019	0.140	0.21								
Phosphorus, Total	mg/L	0.2600	0.0310	0.0280	0.053	0.2200	0.31							0.097	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	376.9	613	832	634	543	499.6								≤ 1275
Temperature	deg C	24.2	22.4	24.7	26.3	29.8	27.9								
Total Hardness	mg/L	150	193	238	200	180	182								
Total Suspended Solids	mg/L	2.5	2.5	2.5	4.5	0.5	4.8								
Turbidity	NTU	1.7	1.2	1.5	3.8	0.5	0.25								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

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• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2019 - September 2020

C-16 Watershed Monitoring Events

SITE 28	SAMPLE DATE	11/19/20	1/28/21	3/17/21	5/19/21	7/26/21	9/23/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0005	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.5	7.2	0.7	0.5	0.7	5.5							1.3	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 1
Dissolved Oxygen	% Saturation	78.4	113.4	102.7	93.6	111.1	70.7								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.045	0.018	0.018								
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.017	0.0165	0.017	0.0075								
Nitrogen, Total	mg/L	0.06	0.06	0.06	0.06	0.06	0.05							0.06	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.043	0.043	0.043	0.043	0.043	0.043								
pH	None	7.73	8.14	8.14	8.33	7.97	7.45								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.002	0.002	0.0019	0.002	0.0019								
Phosphorus, Total	mg/L	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014							0.001	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	381.7	499	565	564	482	461.5								≤ 1275
Temperature	deg C	24.1	23.4	24.9	26.4	31.4	28.9								
Total Hardness	mg/L	149	191	201	175	157	166								
Total Suspended Solids	mg/L	6.5	2.5	2.5	6.8	3.2	3.6								
Turbidity	NTU	2.4	2.4	1.5	4.7	4.0	0.25								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

• Metal exceedences are based on hardness

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-17 Watershed Monitoring Events

SITE 12A	SAMPLE DATE	11/18/20	1/26/21	3/16/21	5/18/21	7/27/21	9/22/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	0.5	10.6	0.5	1.8	0.7	0.5							1.1	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	73.5	77.2	92.1	65.8	90.7	71.3								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.270	0.018	0.018	0.018		0.140								
Nitrogen, nitrate + nitrite	mg/L	0.340	0.017	0.017	0.0165	0.017	0.081								
Nitrogen, Total	mg/L	1.44	0.06	0.06	1.02	0.73	0.82							0.38	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.1	0.043	0.043	1	0.71	0.74								
pH	None	7.67	7.74	7.84	7.74	7.82	7.49								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0160	0.002	0.002	0.0045	0.002	0.01								
Phosphorus, Total	mg/L	0.0730	0.0110	0.0014	0.088	0.0490	0.06							0.026	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	403.9	513	508	503	395	390.9								≤ 1275
Temperature	deg C	24.4	23.4	25.6	26.3	31.2	29.5								
Total Hardness	mg/L	165	0.255	0.255	188	132	139								
Total Suspended Solids	mg/L	2.5	4.0	2.5	6	3.1	3								
Turbidity	NTU	4.0	3.9	5.6	0.35	50.0	1.8								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055							0.0055	See Table 5-3, page 2

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• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-17 Watershed Monitoring Events

SITE C17S44	SAMPLE DATE	10/15/20	11/13/20	1/14/21	2/18/21	3/4/21	4/8/21	5/13/21	6/17/21	7/29/21	8/19/21	9/23/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L														≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation	42.8	58.2	74.9	78.4	80.6	109.0	86.3	47.9	46.9	105.0	39.4			> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.125	0.146	0.048	0.017	0.025	0.020	0.012	0.049	0.048	0.011	0.101			
Nitrogen, nitrate + nitrite	mg/L	0.119	0.114	0.111	0.012	0.010	0.0025	0.010	0.042	0.054	0.011	0.076			
Nitrogen, Total	mg/L	0.89	1.12	0.77	0.61	0.64	0.65	0.63	0.58	0.73	0.85	0.81		0.74	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.70	7.90	7.80	7.80	7.30	8.00	7.90	7.70	7.30	7.70	7.60			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0380	0.042	0.013	0.007	0.007	0.002	0.001	0.01	0.023	0.014	0.032			
Phosphorus, Total	mg/L	0.0650	0.0780	0.0340	0.027	0.0280	0.019	0.0230	0.03	0.0710	0.066	0.0650		0.041	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	420	401	488	436	451	436	380	300	358	434	410			≤ 1275
Temperature	deg C	28.4	26.2	19.0	25.0	24.7	22.7	29.7	27.8	29.0	31.1	28.7			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	2.0	3.0	1.5	3	1.5	2	1.5	3	3.0	1.5	1.5			
Turbidity	NTU	1.2	2.3	2.7	0.9	0.6	0.6	0.9	1.1	2.6	1.6	1.8			≤ 29
Zinc	mg/L														See Table 5-3, page 2

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• TPTV - Ten Percent Threshold Value

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-18 Watershed Monitoring Events

SITE 16	SAMPLE DATE	11/18/20	1/26/21	3/16/21	5/18/21	7/27/21	9/22/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0073	0.0036	0.0017								≤ 0.01
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.9	2.3	0.5	0.5	0.5	1.7							0.9	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 1
Dissolved Oxygen	% Saturation	58.9	42.3	88.5	95.4	25.8	33.2								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.018	0.220	0.210	0.018		0.110								
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.047	0.0165	0.017	0.0075								
Nitrogen, Total	mg/L	0.79	0.78	1.05	1.02	1.22	0.96							0.95	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.77	0.76	1	1	1.2	0.95								
pH	None	7.91	7.22	7.68	8.21	7.04	7.07								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.002	0.004	0.0019	0.005	0.012								
Phosphorus, Total	mg/L	0.0350	0.0300	0.0260	0.044	0.0320	0.061							0.036	≤ 0.12 mg/l AGM
Salinity	ppth														
Specific Conductivity	umho/cm	169	410	553	550	288	294.5								≤ 1275
Temperature	deg C	24.4	21.0	23.6	26.3	30.4	27.9								
Total Hardness	mg/L	68	165	230	228	114	121								
Total Suspended Solids	mg/L	2.5	2.5	2.5	6.6	1.5	3.6								
Turbidity	NTU	3.0	2.3	2.6	0.4	6.1	3								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

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• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-18 Watershed Monitoring Events

SITE 15	SAMPLE DATE	11/18/20	1/26/21	3/16/21	5/18/21	7/27/21	9/22/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.01
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	0.7	0.7	0.5	0.5	0.5	0.5							0.5	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 1
Dissolved Oxygen	% Saturation	35.6	21.2	53.5	47.3	8.2	35.9								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.018	0.041	0.018	0.018		0.018								
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.017	0.0165	0.017	0.0075								
Nitrogen, Total	mg/L	0.65	0.57	0.92	1.00	0.95	0.62							0.76	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.63	0.55	0.9	0.98	0.93	0.61								
pH	None	8.06	6.92	7.13	7.15	7.12	6.98								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.002	0.002	0.0019	0.004	0.0019								
Phosphorus, Total	mg/L	0.0110	0.0130	0.0190	0.021	0.0290	0.0093							0.016	≤ 0.12 mg/l AGM
Salinity	ppth														
Specific Conductivity	umho/cm	106.7	252	270.7	320	452	214.2								≤ 1275
Temperature	deg C	23.8	20.9	24.0	26.1	28.4	26.5								
Total Hardness	mg/L	33.3	90.6	82.8	93	180	80.6								
Total Suspended Solids	mg/L	2.5	2.5	2.5	2.5	2.2	0.5								
Turbidity	NTU	0.7	0.9	1.5	0.1	1.9	0.55								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 1

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• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-18 Watershed Monitoring Events

SITE 92	SAMPLE DATE	11/16/20	2/9/21	5/10/21										Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	75	205	120											
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	2.5	5.5	9.1										5.0	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 1
Dissolved Oxygen	% Saturation	38.8	82.7	85.2											> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.110	0.040	0.030											
Nitrogen, nitrate + nitrite	mg/L	0.027	0.132	0.004											
Nitrogen, Total	mg/L	0.90	1.00	1.10										1.00	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.52	7.64	7.64											6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0140	0.030	0.024											
Phosphorus, Total	mg/L	0.0310	0.0350	0.0310										0.032	≤ 0.12 mg/l AGM
Salinity	ppth	0.1	0.5	0.2											
Specific Conductivity	umho/cm	254	1038	472											≤ 1275
Temperature	deg C	26.7	21.6	29.5											
Total Hardness	mg/L														
Total Suspended Solids	mg/L	2.5	3.0	2.8											
Turbidity	NTU	1.3	4.4	2.7											≤ 29
Zinc	mg/L														See Table 5-3, page 1

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• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-18 Watershed Monitoring Events

Site 81	SAMPLE DATE	12/14/20	3/16/21	6/15/21										Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	90	157	132											
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														See Table 5-3, page 1
Chlorophyll-a (corrected)	ug/L	11.2	1.9	1.5										3.2	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 1
Dissolved Oxygen	% Saturation	99.6	96.7	64.2											> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 1
Nitrogen, Ammonia	mg/L	0.060	0.030	0.030											
Nitrogen, nitrate + nitrite	mg/L	0.037	0.038	0.003											
Nitrogen, Total	mg/L	0.90	0.70	1.00										0.86	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.9	0.7	1											
pH	None	7.27	8.03	8.01											6.0 to 8.5
Phosphorus, orthophosphate	mg/L		0.009	0.021											
Phosphorus, Total	mg/L	0.0260	0.0110	0.0140										0.016	≤ 0.12 mg/l AGM
Salinity	ppth	0.2	0.3	0.2											
Specific Conductivity	umho/cm	385	673	492											≤ 1275
Temperature	deg C	21.5	23.1	30.2											
Total Hardness	mg/L														
Total Suspended Solids	mg/L	1.5	0.5	0.8											
Turbidity	NTU	1.2	0.6	1.1											≤ 29
Zinc	mg/L														See Table 5-3, page 1

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• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
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Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-51 Watershed Monitoring Events

SITE 38B	SAMPLE DATE	11/30/20	1/27/21	3/18/21	5/21/21	7/28/21	9/28/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0048								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0010								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L		0.5	0.7	0.5	0.5	7.5							0.9	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	66.5	141.0	91.8	76.5	132.7	46.9								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.370	0.018	0.950								
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.160	0.086	0.020	0.82								
Nitrogen, Total	mg/L	0.06	1.02	1.56	1.69	1.92	3.92							1.0	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.043	1	1.4	1.6	1.9	3.1								
pH	None	7.42	8.35	8.45	7.91	8.34	7.44								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.005	0.016	0.063	0.011	0.13								
Phosphorus, Total	mg/L	0.0032	0.0430	0.0790	0.15	0.1000	0.19							0.056	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	346	866	899	1038	1441	1464								≤ 1275
Temperature	deg C	24.9	23.8	23.0	25.8	32.6	29.4								
Total Hardness	mg/L	92.8	219	247	272	382	522								
Total Suspended Solids	mg/L	2.5	2.5	5.6	17.1	10.0	8								
Turbidity	NTU	2.8	3.3	5.6	25	3.4	8.8								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								

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- Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
- AGM - Annual Geometric Mean
- TPTV - Ten Percent Threshold Value
- Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-51 Watershed Monitoring Events

SITE 37B	SAMPLE DATE	11/30/20	1/27/21	3/18/21	5/21/21	7/28/21	9/28/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0017								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L		0.5	0.7	0.65		0.65							0.6	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	49.0	71.4	118.5	78.3		97.5								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.110	0.018	0.018	0.018	0.018	0.018								
Nitrogen, nitrate + nitrite	mg/L	0.160	0.017	0.017	0.0165	0.008	0.0075								
Nitrogen, Total	mg/L	1.26	0.06	0.06	0.06	0.05	0.05							0.1	Narrative
Nitrogen, Total Kjeldahl	mg/L	1.1	0.043	0.043	0.043	0.043	0.043								
pH	None	7.41	7.64	8.44	7.97		7.62								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0300	0.015	0.002	0.0019	0.019	0.0019								
Phosphorus, Total	mg/L	0.0560	0.0057	0.0014	0.0035	0.0038	0.0014							0.005	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	428	715	924	1072		479.2								≤ 1275
Temperature	deg C	24.8	23.4	26.2	25.4		29.3								
Total Hardness	mg/L	148	251	249	271	0.255	206								
Total Suspended Solids	mg/L	2.5	2.5	2.5	6.2		4								
Turbidity	NTU	2.2	1.4	7.7	11		0.1								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 2

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• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

C-51 Watershed Monitoring Events

SITE C51S155	SAMPLE DATE	10/15/20	11/12/20	1/7/21	2/4/21	3/26/21	4/1/21	5/13/21	6/8/21	7/7/21	8/3/21	9/28/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	11.3	4.5	3.2	9.12	9.6	8.24	20.2	20.4	0.0	18			5.2	≤ 20 AGM
Copper	mg/L	0.001		0.001		0.001			0.001	0.001				0.0010	See Table 5-3, page 2
Dissolved Oxygen	% Saturation	54.8	57.2	72.4	91.0	78.2	75.2	83.5	66.0	55.8	61.4				> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.104	0.173	0.052	0.017	0.019	0.027	0.010	0.013	0.086	0.039				
Nitrogen, nitrate + nitrite	mg/L	0.191	0.271	0.302	0.086	0.403	0.341	0.033	0.0025	0.016	0.017				
Nitrogen, Total	mg/L	1.26	1.34	0.82	0.70	1.40	0.80	0.97	0.03	0.95	0.74	0.84		0.7	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.60	7.40	7.60	7.90	9.80	7.80	8.00	8.20	7.60	7.50				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0200	0.040	0.023	0.004	0.002	0.06	0.048	0.052	0.062	0.014				
Phosphorus, Total	mg/L	0.0970	0.0670	0.0450	0.03	0.0730	0.096	0.0820	0.08	0.0740	0.054	0.0540		0.065	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	588	402	545	547	870	533	561	698	577	482				≤ 1275
Temperature	deg C	28.8	26.3	20.3	18.1	23.7	26.9	25.4	27.3	29.7	30.9				
Total Hardness	mg/L	0.5		0.5		0.5	0.5		0.5	0.5					
Total Suspended Solids	mg/L														
Turbidity	NTU	2.1	3.2	1.3	1.6	14.2	13.9	3.9	2.5	2.0	2.9				≤ 29
Zinc	mg/L														See Table 5-3, page 2

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• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Loxahatchee River Watershed Monitoring Events

SITE 69 (Lox)	SAMPLE DATE	10/12/20	11/16/20	1/12/21	2/9/21	3/16/21	4/13/21	5/10/21	6/15/21					Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	127	117	151	212	151	150	136	153						
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	5.4	1.8	1.2	3.5	1.3	1.2	1.2	2.3					1.9	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation	44.6	34.2	66.9	57.2	67.7	54.8	59.8	53.7						> 38
E. Coli	cfu/100mL	20	63	41	20	52	97	20	63					0%	≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.070		0.050	0.030	0.040	0.030	0.040	0.050						
Nitrogen, nitrate + nitrite	mg/L	0.114	0.112	0.113	0.142	0.044	0.044	0.028	0.052						
Nitrogen, Total	mg/L	1.00	1.00	1.00	0.90	0.80	0.80	1.00	1.10					0.9	≤ 1.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.9	0.9	0.9	0.8	0.8	0.8	1	1						
pH	None	7.14	6.64	7.12	7.58	7.59	7.62	7.61	7.59						6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0400	0.051	0.021	0.032	0.020	0.023	0.032	0.433						
Phosphorus, Total	mg/L	0.0430	0.0730	0.0200	0.03	0.0220	0.023	0.0260	0.036					0.031	≤ 0.12 mg/l AGM
Salinity	ppth	0.2	0.2	0.2	0.5	0.3	0.3	0.2	0.3						
Specific Conductivity	umho/cm	409	403	454	1028	557	565	493	565						≤ 1275
Temperature	deg C	28.6	26.1	19.5	21.8	23.5	23.4	28.6	28.8						
Total Hardness	mg/L														
Total Suspended Solids	mg/L	1.5	2.4	0.5	0.9	0.5	0.8	0.5	0.8						
Turbidity	NTU	1.9	1.4	1.2	1.6	1.2	1.2	1.0	1.2						≤ 29
Zinc	mg/L														See Table 5-3, page 2

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Loxahatchee River Watershed Monitoring Events

SITE 51 (Lox)	SAMPLE DATE	10/28/20	11/24/20	1/28/21	2/25/21	3/30/21	4/27/21	5/26/21	6/30/21					Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	71		132			125								
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	4.3		1.4			4.6							3.0	≤ 4 AGM
Copper	mg/L														≤ 0.0037
Dissolved Oxygen	% Saturation	81.3	79.0	102.7	93.7	100.2	95.6	98.4	87.1						> 42
E. Coli	cfu/100mL														≤ 43 cfu/100ml
Enterococci	cfu/100mL	75	31	87	31	20	10	10	10					0%	≤ 130 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.050		0.020			0.030								
Nitrogen, nitrate + nitrite	mg/L	0.035		0.004			0.003								
Nitrogen, Total	mg/L	0.70		0.20			0.20							0.30	≤ .8 AGM
Nitrogen, Total Kjeldahl	mg/L	0.7		0.2			0.2								
pH	None	7.68	7.61	7.99	7.91	7.94	7.98	7.84	8.19						6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0650		0.010			0.012								
Phosphorus, Total	mg/L	0.0630		0.0150			0.014							0.024	≤ .03 AGM
Salinity	ppth	4.9	15	34.4	31.1	35.1	37.2	36.3	32.6						
Specific Conductivity	umho/cm	8832	24687	52234.3	47789	53277	56080	52617	49709						None
Temperature	deg C	28.3	23.5	23.1	24.6	27.1	26.3	27.9	29.6						
Total Hardness	mg/L														
Total Suspended Solids	mg/L	2.3		3.9			5.4								
Turbidity	NTU	1.6		2.5			2.8								≤ 29
Zinc	mg/L														See Table 5-3, page 2

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Loxahatchee River Watershed Monitoring Events (Marine)

SITE 62 (Lox)	SAMPLE DATE	10/28/20	11/24/20	1/28/21	2/25/21	3/30/21	4/27/21	5/26/21	6/30/21					Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	87	82	139	166	151	140	142	147						
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	2.0	1.5	3.8	6.1	9.1	4.6	8.9	7.4					4.6	≤ 5.5 AGM
Copper	mg/L														<0.0037
Dissolved Oxygen	% Saturation	52.8	57.9	82.1	91.2	87.5	92.3	82.4	72.7						> 42
E. Coli	cfu/100mL	275													≤ 43 cfu/100ml
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L														≤ 0.0085
Nitrogen, Ammonia	mg/L	0.080		0.020	0.030	0.030	0.030	0.030	0.030						
Nitrogen, nitrate + nitrite	mg/L	0.091	0.062	0.053	0.027	0.016	0.043	0.005	0.006						
Nitrogen, Total	mg/L	0.90	0.70	0.40	0.50	0.30	0.60	0.50	0.60					0.54	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	0.8	0.6	0.3	0.5	0.3	0.6	0.5	0.6						
pH	None	7.48	7.70	7.74	7.75	7.75	7.85	7.50	7.92						6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0520	0.058	0.031	0.027	0.021	0.03	0.027	0.039						
Phosphorus, Total	mg/L	0.0730	0.0730	0.0310	0.03	0.0290	0.041	0.0390	0.045					0.042	≤ 0.075 AGM
Salinity	ppth	0.1	1.4	19.5	16.2	25.9	28.6	33.9	12.7						
Specific Conductivity	umho/cm	250	2702	31380	26457	40655	44373	34149	21215						None
Temperature	deg C	27.2	23.4	23.1	24.8	27.4	27.0	27.4	30.5						
Total Hardness	mg/L														
Total Suspended Solids	mg/L	2.5	2.2	3.6	4.1	4.8	3.8	7.4	5						
Turbidity	NTU	2.6	1.3	3.1	3.1	2.9	2.8	3.9	2.7						≤ 29
Zinc	mg/L														≤ 0.086

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• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Loxahatchee River Watershed Monitoring Events (Marine)

SITE 72	SAMPLE DATE	10/13/20	11/16/20	1/13/21	2/9/21	3/16/21	4/14/21	5/10/21	6/15/21					Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	105	68	138	139	133	128	130	124						
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	4.0	3.0	3.0	3.8	9.5	9.6	12.8	23.3					6.6	≤ 5.5 AGM
Copper	mg/L														<0.0037
Dissolved Oxygen	% Saturation	69.4	86.2	80.8	85.3	96.4	130.9	97.8	76.9						> 42
E. Coli	cfu/100mL														≤ 43 cfu/100ml
Enterococci	cfu/100mL	31	52		63	52	132	10	30					14%	≤ 130 cfu/100ml TPTV
Lead	mg/L														≤ 0.0085
Nitrogen, Ammonia	mg/L	0.150	0.150	0.100	0.030	0.130	0.030	0.030	0.080						
Nitrogen, nitrate + nitrite	mg/L	0.039	0.032	0.028	0.039	0.054	0.003	0.035	0.018						
Nitrogen, Total	mg/L	0.80	0.90	0.50	0.50	0.50	0.30	0.60	0.60					0.56	≤ 1.26 AGM
Nitrogen, Total Kjeldahl	mg/L	0.8	0.9	0.5	0.5	0.4	0.3	0.6	0.6						
pH	None	8.01	7.55	8.03	7.93	7.84	8.19	7.85	7.81						6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0410	0.016	0.021	0.049	0.026	0.021	0.067	0.018						
Phosphorus, Total	mg/L	0.0280	0.0270	0.0280	0.032	0.0240	0.02	0.0280	0.036					0.028	≤ 0.075 AGM
Salinity	ppth	27.9	12.4	34.7	23.9	30.9	30.4	34.1	35.5						
Specific Conductivity	umho/cm	43551	20776	52599	51335	47492	46750	51945	53610						None
Temperature	deg C	29.5	27.0	22.1	23.9	24.4	25.6	28.2	28.5						
Total Hardness	mg/L														
Total Suspended Solids	mg/L	2.1	1.4	3.8	4.2	6.7	13.1	17.0	31.8						
Turbidity	NTU	1.4	1.3	2.2	2.4	3.8	5.1	5.6	5.5						≤ 29
Zinc	mg/L														≤ 0.086

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• AGM - Annual Geometric Mean • Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

ICWW-N Watershed Monitoring Events

SITE 30 (Lox)	SAMPLE DATE	10/28/20	11/24/20	1/28/21	2/25/21	3/30/21	4/27/21	5/26/21	6/30/21					Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	126		140			131								
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	6.8		2.6			4.5							4.3	≤ 4.7 AGM
Copper	mg/L														<0.0037
Dissolved Oxygen	% Saturation	84.5	83.2	88.7	85.5	91.8	88.0	90.8	65.7						> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L														≤ 0.0085
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L	0.024		0.031			0.003								
Nitrogen, Total	mg/L	0.40		0.20			0.20							0.25	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.4		0.2			0.2								
pH	None	7.47	7.68	7.81	7.76	7.88	7.88	7.62	7.80						6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0190		0.016			0.013								
Phosphorus, Total	mg/L	0.0340		0.0330			0.021							0.029	≤ 0.035 AGM
Salinity	ppth	16.1	20.3	35.2	33.8	35.4	37	35.9	34						
Specific Conductivity	umho/cm	26378	32540	53230.6	51361	53607	55821	52183	51578						None
Temperature	deg C	27.9	23.2	23.1	23.9	26.5	26.1	28.5	29.0						
Total Hardness	mg/L														
Total Suspended Solids	mg/L	4.2		18.5			6.7								
Turbidity	NTU	1.9		4.7			4.1								≤ 29
Zinc	mg/L														≤ 0.086

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• TPTV - Ten Percent Threshold Value

• AGM - Annual Geometric Mean • Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Lake Worth Lagoon North Watershed Monitoring Events (Marine)

SITE LWL-1	SAMPLE DATE	10/28/20	11/25/20	1/13/21	2/1/21	3/25/21	4/29/21	5/26/21	6/10/21	7/22/21	8/19/21	9/16/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036				0.0036	≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0008				0.0002	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	12.0	5.2	8.7	4.36	3.2	6.35	2.2	3.26	3.5	3.1	3.5		4.4	≤ 2.9 AGM
Copper	mg/L	0.0057			0.0013		0.0013			0.0013					≤ 0.0037
Dissolved Oxygen	% Saturation	107.9	80.7	99.2	108.5	90.1	97.6	103.1	111.2	100.1	108.9	107.5			> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115					≤ 0.0085
Nitrogen, Ammonia	mg/L	0.005	0.130	0.007	0.006	0.005	0.003	0.010	0.003	0.007	0.003	0.003			
Nitrogen, nitrate + nitrite	mg/L	0.003	0.077	0.003	0.0025	0.003	0.0025	0.005	0.0025	0.003	0.0025	0.003			
Nitrogen, Total	mg/L	0.35	0.56	0.22	0.27	0.20	0.22	0.23	0.25	0.27	0.34	0.20		0.27	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.90	7.70	7.80	7.90	7.90	7.90	7.90	7.90	7.90	8.00	7.90			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0100	0.045	0.005	0.005	0.007	0.006	0.002	0.007	0.002	0.006	0.008			
Phosphorus, Total	mg/L	0.0440	0.0660	0.0230	0.031	0.0270	0.029	0.0250	0.002	0.0300	0.036	0.0310		0.025	≤ 0.044 AGM
Salinity	ppth	25.6	25.9	32.4	32.4	29.2	32.2	34.6	34.9	32.4	26.3	31.5			
Specific Conductivity	umho/cm	40237	40446	49398	49525	45188	49266	52571	53167	49882	41408	48616			None
Temperature	deg C	30.2	23.6	21.2	25.1	24.1	25.9	27.7	31.2	31.9	32.1	31.4			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	6.0	1.5	8.0	4	7.0	6	1.5	6	4.0	6	1.5			
Turbidity	NTU	1.3	0.8	1.6	1	1.1	1	1.2	1.3	0.7	0.7	1.0			≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055				0.0055	≤ 0.086

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Lake Worth Lagoon North Watershed Monitoring Events (Marine)

SITE 11	SAMPLE DATE	10/15/20	11/25/20	2/1/21	3/10/21	4/29/21	6/3/21	7/22/21	8/19/21	9/16/21				Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L		0.0036	0.0036		0.0036		0.0071							≤ 0.05
Cadmium	mg/L		0.0004	0.0003		0.0002		0.0002							≤ 0.0088
Chlorophyll-a (corrected)	ug/L	0.5	0.7	0.5	0.5	0.5	0.5	0.5	1.5	0.5				0.582	≤ 2.9 AGM
Copper	mg/L		0.0013	0.0026		0.0013		0.0013							≤ 0.0037
Dissolved Oxygen	% Saturation	94.6	85.2	99.2	97.9	105.7	89.2	102.0	103.2	103.7					> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L		0.0023	0.0023		0.0023									≤ 0.0085
Nitrogen, Ammonia	mg/L	0.018	0.047	0.018	0.018	0.018	0.018	0.018	0.018	0.018					
Nitrogen, nitrate + nitrite	mg/L	0.017	0.110	0.017	0.0165	0.017	0.0165	0.017	0.037	0.008					
Nitrogen, Total	mg/L	0.27	0.47	0.30	0.06	0.26	0.45	0.26	0.38	0.05				0.22	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.25	0.36	0.28	0.043	0.24	0.43	0.24	0.343	0.043					
pH	None	7.79	7.67	7.92	7.87	7.95	7.85		7.99	7.89					6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.041	0.031	0.0019	0.023	0.023	0.022	0.024	0.002					
Phosphorus, Total	mg/L	0.0450	0.0540	0.0510	0.0014	0.0380	0.036	0.0370	0.03	0.0014				0.019	≤ 0.044 AGM
Salinity	ppth	26.09	23.89	33.78	33.72	34.82	35.46	0	28.93	32					
Specific Conductivity	umho/cm	40966	36895	51333	51253	52930	53820	50327	44258	48291					None
Temperature	deg C	29.8	23.7	21.4	21.3	27.8	28.6	31.0	31.4	31.3					
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	1.7	1.3	2.9	2.5	2.3	1.2	1.4	0.7	0.9					≤ 29
Zinc	mg/L		0.0055	0.0055		0.0055		0.0055							≤ 0.086

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Lake Worth Lagoon North Watershed Monitoring Events (Marine)

SITE 13	SAMPLE DATE	10/15/20	11/25/20	2/1/21	3/10/21	4/29/21	6/3/21	7/22/21	8/19/21	9/16/21				Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L		0.0036	0.0036		0.0036		0.0036							≤ 0.05
Cadmium	mg/L		0.0002	0.0002		0.0002		0.0002							≤ 0.0088
Chlorophyll-a (corrected)	ug/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	11.4	0.5				0.7	≤ 2.9 AGM
Copper	mg/L		0.0013	0.0013		0.0013		0.0013							≤ 0.0037
Dissolved Oxygen	% Saturation	95.0	82.8	95.7	99.9	107.8	85.0	103.4	112.3	104.1					> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L		0.0023	0.0023		0.0023		0.0023							≤ 0.0085
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018					
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.017	0.0165	0.017	0.0165	0.065	0.016	0.008					
Nitrogen, Total	mg/L	0.46	0.06	0.06	0.21	0.29	0.27	0.11	0.09	0.26				0.16	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L	0.44	0.043	0.043	0.19	0.27	0.25	0.043	0.07	0.25					
pH	None	7.72	7.75	7.92	7.87	7.90	7.83	7.96	7.51	7.87					6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0019	0.002	0.002	0.04	0.022	0.025	0.002	0.0019	0.006					
Phosphorus, Total	mg/L	0.0036	0.0014	0.0014	0.038	0.0400	0.039	0.0014	0.0014	0.0160				0.006	≤ 0.044 AGM
Salinity	ppth	14.29	12.75	32.5	33.82	34.4	34.8	32.8	17.78	33.3					
Specific Conductivity	umho/cm	23751	21261	48601	51390	52479	52941	47986	29057	51002					None
Temperature	deg C	30.0	23.6	21.5	21.4	28.1	28.7	31.2	31.8	30.0					
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	2.5	1.5	3.3	2.1	2.7	1.3	1.5	2	0.1					≤ 29
Zinc	mg/L		0.0055	0.0055		0.0055		0.0055							≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
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Lake Worth Lagoon North Watershed Monitoring Events (Marine)

SITE LWL-4	SAMPLE DATE	10/28/20	11/25/20	1/13/21	2/1/21	3/25/21	4/29/21	5/26/21	6/10/21	7/22/21	8/19/21	9/16/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036				0.0036	≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0008				0.0002	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	6.1	3.3	3.4	2.5	1.0	1.43	1.2	0.978	1.0	0.955	1.4		1.7	≤ 2.9 AGM
Copper	mg/L	0.0036			0.0026		0.0013			0.0013				0.0020	≤ 0.0037
Dissolved Oxygen	% Saturation	99.0	92.9	98.5	100.4	99.5	96.5	99.2	105.9	115.5	106.0	96.9		100.8	> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115				0.0034	≤ 0.0085
Nitrogen, Ammonia	mg/L	0.005	0.030	0.005	0.007	0.007	0.005	0.007	0.005	0.005	0.005	0.005		0.006	
Nitrogen, nitrate + nitrite	mg/L	0.005	0.037	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005		0.006	
Nitrogen, Total	mg/L	0.23	0.32	0.16	0.24	0.12	0.16	0.15	0.15	0.16	0.21	0.21		0.18	≤ 0.54 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.90	7.80	7.80	7.90	8.00	8.00	7.80	8.00	8.00	8.00	7.90		7.92	6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0020	0.011	0.003	0.002	0.002	0.002	0.004	0.002	0.002	0.002	0.002		0.003	
Phosphorus, Total	mg/L	0.0220	0.0270	0.0210	0.021	0.0140	0.014	0.0150	0.017	0.0100	0.015	0.0150		0.017	≤ 0.044 AGM
Salinity	ppth	31.3	30.6	34.2	34.4	35.4	35.1	36.3	36.5	34.5	31.4	33.3		33.85	
Specific Conductivity	umho/cm	48219	46433	51918	52249	53607	53149	54935	55318	52676	48415	51038		51559	None
Temperature	deg C	29.5	23.6	21.6	24.8	24.6	25.1	27.4	30.0	31.1	31.3	30.4		27.0	
Total Hardness	mg/L														
Total Suspended Solids	mg/L	6.0	3.0	6.0	5	5.0	4	6.0	4	3.0	3	11.0		4.7	
Turbidity	NTU	1.7	2.3	1.9	3.4	1.0	1.2	1.3	1.1	1.0	0.4	0.7		1.3	≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055				0.0055	≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
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Lake Worth Lagoon Central Watershed Monitoring Events (Marine)

SITE LWL-8	SAMPLE DATE	10/28/20	11/24/20	1/12/21	2/1/21	3/24/21	4/29/21	5/25/21	6/9/21	7/21/21	8/18/21	9/15/21		AGM or %>TPTV	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036					≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0008					≤ 0.0088
Chlorophyll-a (corrected)	ug/L	11.0	3.1	5.0	6.79	3.3	4.91	3.1	3.33	7.9	6.8	11.2		18%	≤ 10.2 TPTV
Copper	mg/L	0.0044			0.0013		0.0013			0.0013					≤ 0.0037
Dissolved Oxygen	% Saturation	82.1	89.5	95.5	95.8	96.5	86.3	103.0	115.0	95.5	108.2	98.4			> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115					≤ 0.0085
Nitrogen, Ammonia	mg/L	0.049	0.084	0.007	0.013	0.006	0.024	0.011	0.005	0.008	0.005	0.005			
Nitrogen, nitrate + nitrite	mg/L	0.044	0.173	0.005	0.052	0.005	0.017	0.005	0.005	0.005	0.005	0.005			
Nitrogen, Total	mg/L	0.60	0.66	0.22	0.36	0.30	0.24	0.31	0.30	0.38	0.27	0.25		0.33	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.80	7.80	8.60	7.80	8.00	7.90	7.90	7.90	7.80	8.00	7.90			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0210	0.033	0.008	0.009	0.007	0.009	0.012	0.009	0.010	0.006	0.002			
Phosphorus, Total	mg/L	0.0650	0.0550	0.0350	0.049	0.0260	0.047	0.0470	0.039	0.0440	0.034	0.0360		0.042	≤ 0.049 AGM
Salinity	ppth	18.6	21.5	31.7	33.7	30.2	31.4	35.7	35.4	28.8	24.3	26.8			
Specific Conductivity	umho/cm	30150	34232	48448	51238	46466	48215	54146	53927	44836	38450	42010			None
Temperature	deg C	29.9	21.3	20.4	23.5	24.6	26.2	27.5	31.1	32.0	30.8	30.9			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	13.0	9.0	11.0	16	5.0	11	12.0	8	12.0	3	8.0			
Turbidity	NTU	6.7	4.3	4.6	8.5	2.8	6.3	6.3	4.5	6.1	1.2	4.9			≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055				0.0055	≤ 0.086

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• TPTV - Ten Percent Threshold Value
• AGM - Annual Geometric Mean • Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
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Lake Worth Lagoon Central Watershed Monitoring Events (Marine)

SITE 18C	SAMPLE DATE	10/28/20	11/24/20	2/1/21	3/10/21	4/29/21	6/3/21	7/21/21	8/18/21	9/15/21				AGM or %>TPTV	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036		0.0036		0.0036							≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0003		0.0002		0.0002							≤ 0.0088
Chlorophyll-a (corrected)	ug/L		0.5	0.5	0.65	0.5	0.5	0.6	4.2	7.5				0%	≤ 10.2 TPTV
Copper	mg/L	0.0013	0.0013	0.0026		0.0013		0.0013							≤ 0.0037
Dissolved Oxygen	% Saturation	82.2	82.9	93.9	101.5	104.3	104.9	86.8	89.7						> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023		0.0023		0.0023							≤ 0.0085
Nitrogen, Ammonia	mg/L	0.018	0.018	0.037	0.038	0.018	0.018	0.018	0.018	0.044					
Nitrogen, nitrate + nitrite	mg/L	0.017	0.017	0.017	0.081	0.017	0.0165	0.017	0.0075	0.008					
Nitrogen, Total	mg/L	0.06	0.06	0.47	0.46	0.06	0.22	0.06	0.08	0.05				0.110	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.043	0.043	0.45	0.38	0.043	0.2	0.043	0.07	0.043					
pH	None	7.56	7.60	7.74	7.81	7.82	7.87	7.78	7.89	7.83					6.5 to 8.5
Phosphorus, orthophosphate	mg/L		0.002	0.041	0.048	0.002		0.002	0.0019	0.005					
Phosphorus, Total	mg/L	0.0030	0.0080	0.0910	0.34	0.0049	0.067	0.0014	0.0014	0.0032				0.010	≤ 0.049 AGM
Salinity	ppth	8.8	12.15	31.97	26.88	33.24	35.56	30.45	26.17	22.84					
Specific Conductivity	umho/cm	15178	20370	48878	41846	50818	53960	47168	41137	35882					None
Temperature	deg C	28.1	23.6	21.4	22.3	28.6	29.3	32.9	31.2	31.5					
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU		3.3	15.0	150	27.0	8.8	16.0	0.7	16.0					≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055		0.0055		0.0055							≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• TPTV - Ten Percent Threshold Value

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)

SITE 18D	SAMPLE DATE	10/28/20	11/24/20	2/1/21	3/10/21	4/29/21	6/3/21	7/21/21	8/18/21	9/15/21				AGM or %>TPTV	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036		0.0036		0.0178							≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0003		0.0002		0.0008							≤ 0.0088
Chlorophyll-a (corrected)	ug/L		0.5	0.5	0.65	0.5	0.65	0.5	2.8	0.5				0%	≤ 10.2 TPTV
Copper	mg/L	0.0041	0.0013	0.0026		0.0013		0.0013							≤ 0.0037
Dissolved Oxygen	% Saturation	99.1	83.8	96.0	102.3	105.1	103.9	88.8	98.8	93.5					> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023		0.0023		0.0115							≤ 0.0085
Nitrogen, Ammonia	mg/L	0.081	0.120	0.018	0.018	0.018	0.018	0.018	0.018	0.051					
Nitrogen, nitrate + nitrite	mg/L	0.220	0.230	0.017	0.099	0.017	0.0165	0.017	0.088	0.008					
Nitrogen, Total	mg/L	0.81	0.76	0.49	0.50	0.36	0.06	0.39	0.16	0.42				0.351	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L	0.59	0.53	0.47	0.4	0.34	0.043	0.37	0.07	0.41					
pH	None	7.64	7.64	7.76	7.86	7.84	7.87	7.82	7.87	7.83					6.5 to 8.5
Phosphorus, orthophosphate	mg/L		0.051	0.037	0.042	0.024	0.0019	0.029	0.025	0.007					
Phosphorus, Total	mg/L	0.0970	0.0740	0.0800	0.061	0.0530	0.0014	0.0600	0.036	0.0310				0.038	≤ 0.049 AGM
Salinity	ppth	8.33	15.82	32.1	26.43	33.31	35	32	25.58	28.37					
Specific Conductivity	umho/cm	14434	25891	48054	41193	50887	53242	48260	40300	44203					None
Temperature	deg C	28.2	23.2	21.3	20.9	28.1	29.4	31.5	31.1	30.8					
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU		4.3	11.0	9.8	8.3	5.2	6.9	2.7	3.9					≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055		0.0055		0.0055							≤ 0.086

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• TPTV - Ten Percent Threshold Value

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)

SITE LWL-11	SAMPLE DATE	10/28/20	11/24/20	1/12/21	2/1/21	3/24/21	4/29/21	5/25/21	6/9/21	7/21/21	8/18/21	9/15/21		AGM or %>TPTV	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036					≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0018					≤ 0.0088
Chlorophyll-a (corrected)	ug/L	10.20	4.3	5.0	8.94	4.8	7.93	6.4	4.03	7.0	0.016	6.5		9%	≤ 10.2 TPTV
Copper	mg/L	0.0046			0.0013		0.0013			0.0013					≤ 0.0037
Dissolved Oxygen	% Saturation	48.7	53.3	63.1	59.7	43.2	52.8	57.5	59.1	51.0	50.6	55.2			> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115					≤ 0.0085
Nitrogen, Ammonia	mg/L	0.010	0.112	0.010	0.016	0.006	0.011	0.011	0.003	0.013	0.003	0.011			
Nitrogen, nitrate + nitrite	mg/L	0.025	0.194	0.005	0.045	0.003	0.005	0.003	0.0025	0.003	0.0025	0.003			
Nitrogen, Total	mg/L	0.51	0.86	0.20	0.42	0.37	0.15	0.36	0.28	0.38	0.23	0.31		0.33	≤ 0.66 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.80	7.70	8.60	7.90	7.90	8.00	7.90	8.00	7.90	7.90	8.00			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0120	0.033	0.010	0.002	0.005	0.003	0.009	0.001	0.006	0.005	0.002			
Phosphorus, Total	mg/L	0.0020	0.0670	0.0250	0.051	0.0320	0.037	0.0510	0.037	0.0440	0.038	0.0330		0.030	≤ 0.049 AGM
Salinity	ppth	19.7	17.6	30.9	33.9	30.9	34.6	36	36.1	32.9	28.4	29.1			
Specific Conductivity	umho/cm	31778	28566	47407	51590	47452	52568	54487	54806	50559	44344	45235			None
Temperature	deg C	29.9	23.6	20.2	23.5	23.8	26.3	27.3	30.7	31.8	31.7	31.5			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	6.0	7.0	7.0	20	8.0	17	19	13	16.0	10	8.0			
Turbidity	NTU	0.1	4.2	1.7	9.2	4.1	6.6	8.5	6.7	0.1	5.7	3.9			≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055					≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

ICWW-S Watershed Monitoring Events (Marine)

SITE LWL-13	SAMPLE DATE	10/28/20	11/23/20	1/11/21	2/1/21	3/23/21	4/29/21	5/24/21	6/8/21	7/20/21	8/17/21	9/14/21		AGM	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036					≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0008					≤ 0.0088
Chlorophyll-a (corrected)	ug/L	8.7	7.0	2.7	6.09	3.7	3.47		2.02	2.9	2.42	3.8		3.8	≤ 5.7 AGM
Copper	mg/L	0.0050			0.0013		0.0013			0.0013				0.0018	≤ 0.0037
Dissolved Oxygen	% Saturation	61.5	56.2	63.7	60.8	55.5	53.7		57.9	53.7	55.4	52.3			> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115					≤ 0.0085
Nitrogen, Ammonia	mg/L	0.007	0.065	0.005	0.015	0.007	0.005		0.005	0.018	0.006	0.016			
Nitrogen, nitrate + nitrite	mg/L	0.005	0.153	0.008	0.015	0.005	0.005		0.005	0.005	0.0025	0.005			
Nitrogen, Total	mg/L	0.38	0.66	1.72	0.28	0.31	0.24		0.18	0.20	0.28	0.27		0.35	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	8.0	7.9	8.9	7.9	8.0	8.0		8.0	8.0	8.1	8.0			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0040	0.026	0.009	0.004	0.007	0.002		0.002	0.002	0.003	0.003			
Phosphorus, Total	mg/L	0.0440	0.0480	0.0200	0.032	0.0260	0.019		0.019	0.0220	0.026	0.0250		0.027	≤ 0.050 AGM
Salinity	ppth	21.4	22.5	32	34.6	36.6	34.9		35.7	34.7	28.6	28.9			
Specific Conductivity	umho/cm	34325	35749	48828	52432	47061	52957		54231	52038	44561	45017			None
Temperature	deg C	30.0	24.5	19.8	23.4	23.4	26.0		29.6	30.7	30.3	31.4			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	9.0	4.0	4.0	10	7.0	9		7	9.0	5	8.0			
Turbidity	NTU	2.8	2.5	1.0	5.4	2.8	2.9		1.6	1.8	1.4	2.2			≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055					≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

ICWW-S Watershed Monitoring Events (Marine)

SITE LWL-18	SAMPLE DATE	10/28/20	11/23/20	1/11/21	2/1/21	3/23/21	4/29/21	5/24/21	6/8/21	7/20/21	8/17/21	9/14/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036			0.0036		0.0036			0.0036				0.0036	≤ 0.05
Cadmium	mg/L	0.0002			0.0002		0.0002			0.0008				0.0002	≤ 0.0088
Chlorophyll-a (corrected)	ug/L	16.1	4.4	2.7	8.43	4.4	0.03		10.9	9.4	15	8.2		4.4	≤ 5.7 AGM
Copper	mg/L	0.0066			0.0013		0.0026			0.0013					≤ 0.0037
Dissolved Oxygen	% Saturation	60.6	47.8	57.4	56.6	56.4	46.1		57.6	44.7	68.0	55.7			> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L	0.0023			0.0023		0.0023			0.0115					≤ 0.0085
Nitrogen, Ammonia	mg/L	0.010	0.090	0.019	0.019	0.003	0.030		0.014	0.028	0.006	0.008			
Nitrogen, nitrate + nitrite	mg/L	0.003	0.136	0.037	0.022	0.003	0.028		0.0025	0.005	0.0025	0.003			
Nitrogen, Total	mg/L	0.51	0.61	0.32	0.32	0.20	0.34		0.50	0.40	0.56	0.37		0.39	≤ 0.59 AGM
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.8	7.6	8.6	7.8	8.0	7.7		7.8	7.7	8.0	8.0			6.5 to 8.5
Phosphorus, orthophosphate	mg/L	0.0170	0.047	0.017	0.012	0.005	0.01		0.005	0.006	0.022	0.005			
Phosphorus, Total	mg/L	0.0660	0.0020	0.0310	0.042	0.0220	0.037		0.046	0.0410	0.072	0.0370		0.031	≤ 0.050 AGM
Salinity	ppth	21.3	20	31.8	33.8	34	33.6		34.8	29.4	21.1	32			
Specific Conductivity	umho/cm	34142	32019	48620	51391	50673	51239		53067	45759	33945	49206			None
Temperature	deg C	30.2	24.8	21.9	24.1	24.0	26.9		31.4	31.8	31.6	31.1			
Total Hardness	mg/L														
Total Suspended Solids	mg/L	11.0	4.0	5.0	8	8.0	7		22	12.0	7	6.0			
Turbidity	NTU	4.4	2.8	1.5	4	2.5	3.2		8.4	4.0	2.7	1.9			≤ 29
Zinc	mg/L	0.0055			0.0055		0.0055			0.0055				0.0055	≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Hillsboro Watershed Monitoring Events

SITE S39	SAMPLE DATE	10/6/20	11/18/20	1/12/21	2/9/21	3/9/21	4/20/21	5/18/21	6/29/21	7/27/21	8/10/21	9/8/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	129	184	151	134	115	106	78	108	146					
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L														≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation	35.2	67.9	91.4	83.2	90.3	72.6	78.8	71.8	65.1	74.2	69.9			> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.028	0.023	0.029	0.012	0.009	0.020	0.018	0.036	0.017					
Nitrogen, nitrate + nitrite	mg/L	0.013	0.101	0.009	0.005	0.005	0.007	0.005	0.036	0.008	0.011	0.005			
Nitrogen, Total	mg/L	1.10	1.57	1.13	0.99	0.91	0.92	1.05	1.14	1.19	1.54	1.42		1.2	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.20	7.70	7.80	7.70	8.10	7.70	7.80	7.60	7.60	7.60	7.50			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0040	0.006	0.001	0.002	0.003	0.002	0.002	0.001	0.002	0.002	0.002			
Phosphorus, Total	mg/L	0.0170	0.0260	0.0130	0.011	0.0110	0.014	0.0130	0.016	0.0190	0.015	0.0200		0.015	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	573	761	630	567	484	480	370	582	765	983	834			≤ 1275
Temperature	deg C	28.2	25.2	19.4	21.7	20.4	26.9	27.0	28.5	31.1	30.2	30.0			
Total Hardness	mg/L	163.2	254.2	195.3	161.6	133.3	121.3	91.8	134.3	189					
Total Suspended Solids	mg/L	4.0	2.0	1.5	1.5	2.0	2	1.5	1.5	1.5					
Turbidity	NTU	2.1	1.0	0.5	0.4	0.5	0.7	0.7	0.7	0.5					≤ 29
Zinc	mg/L														See Table 5-3, page 2

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Hillsboro Watershed Monitoring Events

SITE 1	SAMPLE DATE	12/15/20	2/22/21	5/27/21	9/1/21									Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	1.5	2.9	7.0	8.27									4.0	≤ 11 AGM
Copper	mg/L														≤ 0.0037
Dissolved Oxygen	% Saturation														> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L														≤ 0.0085
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L														
Nitrogen, Total	mg/L	0.94	0.57	0.35	0.76									0.6	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None														6.5 to 8.5
Phosphorus, orthophosphate	mg/L														
Phosphorus, Total	mg/L	0.1020	0.1340	0.1810	0.11									0.128	Narrative
Salinity	ppth	4.06	21.1												
Specific Conductivity	umho/cm	7920	33600												None
Temperature	deg C														
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	1.8	1.6	2.0	1.2										≤ 29
Zinc	mg/L														≤ 0.086

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• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Hillsboro Watershed Monitoring Events

SITE 2	SAMPLE DATE	12/15/20	2/24/21	5/25/21	8/25/21									Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														≤ 0.0088
Chlorophyll-a (corrected)	ug/L	2.5	4.3	3.0	9.83									4.2	≤ 11 AGM
Copper	mg/L														≤ 0.0037
Dissolved Oxygen	% Saturation														> 42
Enterococci	cfu/100mL														≤ 130 cfu/100ml TPTV
Lead	mg/L														≤ 0.0085
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L														
Nitrogen, Total	mg/L	1.13	0.86	0.96	1.14									1.0	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None														6.5 to 8.5
Phosphorus, orthophosphate	mg/L														
Phosphorus, Total	mg/L	0.0930	0.0410	0.0280	0.191									0.067	Narrative
Salinity	ppth	0.27	0.32		0.32									0.30	
Specific Conductivity	umho/cm	549	657		664									621	None
Temperature	deg C														
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	1.5	0.5	0.7	0.6									0.7	≤ 29
Zinc	mg/L														≤ 0.086

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

Hillsboro Watershed Monitoring Events

SITE 3	SAMPLE DATE	12/8/20	2/24/21	5/25/21	8/25/21									Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L	3.3	12.7	3.7	12.5									6.6	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation														> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L														
Nitrogen, Total	mg/L	1.20	1.15	1.08	1.27									1.2	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None														6.0 to 8.5
Phosphorus, orthophosphate	mg/L														
Phosphorus, Total	mg/L	0.1230	0.1260	0.0380	0.12									0.092	Narrative
Salinity	ppth	0.27	0.33		0.34										
Specific Conductivity	umho/cm	561	680		715										≤ 1275
Temperature	deg C														
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	2.0	1.0	0.5	1.1										≤ 29
Zinc	mg/L														See Table 5-3, page 2

• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

L-8 Watershed Monitoring Events

Culv10	SAMPLE DATE	10/5/20	11/30/20	1/6/21	2/22/21	3/22/21	4/19/21	5/17/21	6/28/21	7/26/21	8/23/21	9/20/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	157		375		101	118	106	107	143	95	145			
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L														≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation	37.9		35.1		95.2	77.6	41.6	82.1	52.9	51.6	20.7			> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.459		0.072		0.014	0.009	0.402	0.021	0.139	0.027	0.284			
Nitrogen, nitrate + nitrite	mg/L	0.441		1.309		0.432	0.118	0.170	0.335	0.094	0.038	0.232			
Nitrogen, Total	mg/L	2.65		3.86		2.80	3.28	2.08	1.58	1.65	1.43	2.35		2.3	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.50		8.30		8.20	8.40	7.40	8.10	7.80	8.10	7.20			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0360		0.078		0.088	0.064	0.064	0.071	0.028	0.051	0.024			
Phosphorus, Total	mg/L	0.0740		0.1090		0.4150	0.414	0.2090	0.177	0.1260	0.16	0.0740		0.162	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	862		2033		371	381	400	411	679	384	687			≤ 1275
Temperature	deg C	27.0		18.4		20.7	20.4	25.7	27.4	30.9	31.3	28.9			
Total Hardness	mg/L			474.4			122.2			131.4					
Total Suspended Solids	mg/L	4.0		1.5		132.0	112	26.0	26	14.0	3	12.0			
Turbidity	NTU	4.0		4.9		187.0	127	46.7	37.1	14.3	26.8	8.5			≤ 29
Zinc	mg/L														See Table 5-3, page 2

• Metal exceedences are based on hardness
• Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
• AGM - Annual Geometric Mean
• TPTV - Ten Percent Threshold Value
• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

S-2-6-7 Watershed Monitoring Events

SITE S2	SAMPLE DATE	10/19/20	11/16/20	1/11/21	2/8/21	3/8/21	4/19/21	5/3/21	6/28/21	7/26/21	8/23/21	9/20/21		Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L	114	104	115	111	111	98	104	326	280	362	425			
Arsenic	mg/L														≤ 0.05
Cadmium	mg/L														See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L														≤ 20 AGM
Copper	mg/L														See Table 5-3, page 2
Dissolved Oxygen	% Saturation	63.5	77.9	81.0	93.6	85.1	95.4	90.6	23.9	58.3	84.7	23.3			> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.155	0.026	0.038	0.031	0.058	0.030	0.052	1.522	0.062	0.261	1.254			
Nitrogen, nitrate + nitrite	mg/L	0.227	0.196	0.082	0.11	0.210	0.135	0.166	0.912	0.607	0.156	1.581			
Nitrogen, Total	mg/L	1.34	1.13	1.15	1.04	1.28	1.30	1.19	4.45	2.60	3.54	5.54		1.8	Narrative
Nitrogen, Total Kjeldahl	mg/L														
pH	None	7.70	7.80	7.70	8.00	7.90	8.50	8.20	7.40	7.80	8.10	7.20			6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0740	0.084	0.044	0.037	0.059	0.068	0.076	0.227	0.105	0.081	0.152			
Phosphorus, Total	mg/L	0.1170	0.1310	0.0880	0.054	0.1120	0.145	0.1130	0.263	0.1420	0.197	0.2210		0.132	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	426	536	407	406	413	386	374	1397	987	1501	1979			≤ 1275
Temperature	deg C	27.0	25.6	17.2	20.2	20.2	27.1	27.4	28.0	31.4	33.1	29.4			
Total Hardness	mg/L		129.7	142			124.7			551.5					
Total Suspended Solids	mg/L	9.0	9.0	13.0	3	16.0	8	8.0	6	3.0	3	4.0			
Turbidity	NTU	10.7	10.9	10.3	5.3	15.4	18.8	16.0	2.6	3.0	3.1	3.6			≤ 29
Zinc	mg/L														See Table 5-3, page 2

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

S-2-6-7 Watershed Monitoring Events

SITE 39	SAMPLE DATE	11/30/20	1/27/21	3/18/21	5/21/21	7/28/21	9/28/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0053								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0006								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L		3.5	1.3	0.65	0.7	0.5							1.0	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	79.8	76.7	83.2	75.2	28.2	13.8								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.018	0.018	0.018	0.054	0.074	1.500								
Nitrogen, nitrate + nitrite	mg/L	0.310	0.017	0.340	0.11	0.640	0.2								
Nitrogen, Total	mg/L	1.09	0.69	1.44	1.71	2.54	3.80							1.6	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.78	0.67	1.1	1.6	1.9	3.6								
pH	None	8.02	7.58	7.80	7.83	7.73	7.34								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0750	0.037	0.074	0.082	0.130	0.2								
Phosphorus, Total	mg/L	0.1100	0.0710	0.0410	0.19	0.1900	0.23							0.118	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	437	416	384.6	414.5	1132	2640								≤ 1275
Temperature	deg C	23.6	20.7	23.7	24.5	31.3	29.2								
Total Hardness	mg/L	148	145	133	154	387	781								
Total Suspended Solids	mg/L	2.5	5.2	8.6	28.3	10.3	3.2								
Turbidity	NTU	8.0	5.8	16.0	45	1.1	2								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 2

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

S-2-6-7 Watershed Monitoring Events

SITE 43	SAMPLE DATE	11/30/20	1/27/21	3/18/21	5/21/21	7/28/21	9/28/21							Geometric Mean	Numeric Surface Water Quality Standard Criteria
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L	0.0036	0.0036	0.0036	0.0036	0.0036	0.0051								≤ 0.05
Cadmium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0007								See Table 5-3, page 2
Chlorophyll-a (corrected)	ug/L		0.5	1.2	0.65	1.1	12.9							1.4	≤ 20 AGM
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013								See Table 5-3, page 2
Dissolved Oxygen	% Saturation	77.0	76.0	82.7	75.8	60.0	36.2								> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023								See Table 5-3, page 2
Nitrogen, Ammonia	mg/L	0.018	0.044	0.053	0.055	0.063	1.700								
Nitrogen, nitrate + nitrite	mg/L	0.440	0.017	0.300	0.098	0.110	0.24								
Nitrogen, Total	mg/L	1.39	0.75	1.40	1.60	1.21	3.84							1.5	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.95	0.73	1.1	1.5	1.1	3.6								
pH	None	7.96	7.59	7.76	7.87	7.80	7.32								6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.0730	0.047	0.067	0.035	0.062	0.19								
Phosphorus, Total	mg/L	0.1100	0.0780	0.0950	0.16	0.1100	0.24							0.123	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	508	430	403.8	414.5	535	2272								≤ 1275
Temperature	deg C	23.3	21.0	23.4	24.6	31.1	29.3								
Total Hardness	mg/L	169	148	138	148	181	630								
Total Suspended Solids	mg/L	5.5	2.5	6.0	35.3	3.3	0.8								
Turbidity	NTU	8.4	5.9	15.0	34	0.5	2.5								≤ 29
Zinc	mg/L	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055								See Table 5-3, page 2

• Metal exceedences are based on hardness

Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.

Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

WPBWS Watershed Monitoring Events

M Canal	SAMPLE DATE	11/10/20	1/12/21	2/9/21	3/23/21	4/6/21	5/11/21	6/8/21	7/27/21	8/10/21	9/22/21			Geometric Mean	
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														See Table 5-3, page 6
Chlorophyll-a (corrected)	ug/L	1.0	5.4	27.6	1.1	1.25	0.5	0.5	0.5	7.2	5			2.0	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 6
Dissolved Oxygen	% Saturation	93.1	89.0	155.7	90.5	95.4	88.6	121.7	106.5	83.5	79.1				> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 6
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L	0.083	0.0165	0.45	0.47	0.430	0.061	0.0165	0.0165	0.01	0.04				
Nitrogen, Total	mg/L	0.81	0.63	1.8	1.8	2.3	1.3	1.3	1.80	1.7	0.9			1.3	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.73	0.63	1.4	1.4	1.9	1.3	1.3	1.8	1.7	0.86				
pH	None	7.8	8.2	8.7	7.7	7.8	8.2	8.8	8.20	8.1	7.7				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.013	0.0054	0.049	0.076	0.082	0.031	0.021	0.038	0.038	0.018				
Phosphorus, Total	mg/L	0.044	0.036		0.25	0.34	0.089		0.12		0.08			0.102	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	206	642	376	395	408	804	555	1102	1047	503				≤ 1275
Temperature	deg C	27.5	19.7	28.4	24.8	24	30	30.6	34.1	31.2	29.4				
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	9	6.7	42	110	160	15	32	120	14	7.6				≤ 29
Zinc	mg/L														See Table 5-3, page 6

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

WPBWS Watershed Monitoring Events

Control 4	SAMPLE DATE	11/10/20	1/12/21	2/9/21	3/23/21	4/6/21	5/11/21	6/8/21	7/27/21	8/10/21	9/22/21			Geometric Mean	
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														See Table 5-3, page 6
Chlorophyll-a (corrected)	ug/L	0.5	1.8	0.6	0.8	0.5	0.5	0.5	0.6	0.50	0.55			0.6	≤ 20 AGM
Copper	mg/L														See Table 5-3, page 6
Dissolved Oxygen	% Saturation	87.3	68.0	95.4	90.6	95.0	74.8	64.4	77.0	59.9	74.6				> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														See Table 5-3, page 6
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L	0.0165	0.0165	0.35	0.36	0.330	0.0165	0.046	0.037	0.02	0.03				
Nitrogen, Total	mg/L	0.7	0.67	1.3	1.4	1.2	0.95	1.2	0.04	0.79	0.84			0.7	Narrative
Nitrogen, Total Kjeldahl	mg/L	0.67	0.66	0.9	1	0.87	0.95	1.2	0.043	0.77	0.81				
pH	None	7.6	7.5	7.7	7.7	7.9	7.6	7.6	7.60	7.4	7.3				6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.011	0.0042	0.035	0.056	0.05	0.0079	0.0057	0.007	0.012	0.01				
Phosphorus, Total	mg/L	0.046	0.022		0.13	0.1000	0.037		0.048		0.04			0.052	Narrative
Salinity	ppth														
Specific Conductivity	umho/cm	196	592	356	377	425	384	357	369	262	388				≤ 1275
Temperature	deg C	27.1	18.6	25.4	24.6	23	28.7	30.4	32.2	30.2	28.7				
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	2.8	1.3	16	35	14	5.7	8.6	5	2.2	1.8				≤ 29
Zinc	mg/L														See Table 5-3, page 6

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• Narrative - Shall not cause an imbalance in flora and fauna

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

WPBWS Watershed Monitoring Events

Lake Mangonia	SAMPLE DATE	2/9/21	3/23/21	4/6/21	5/11/21	6/8/21	7/27/21	8/10/21	9/22/21					Geometric Mean	
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	0.50	0.65	0.50	0.50	0.50	0.50	5.8	0.65					0.7	≤ 20 AGM
Copper	mg/L														$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	101.3	97.7	93.6	89.6	96.9	101.9	112.0	87.0						> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														$\leq [e^{(1.273\ (lnH)\ -4.705}]\ 10^{-3}$
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.008	0.0075						
Nitrogen, Total	mg/L	0.62	0.75	0.86	0.88	0.71	0.80	0.73	0.68					0.75	≤ 1.05 to 1.91 AGM
Nitrogen, Total Kjeldahl	mg/L	0.60	0.74	0.86	0.86	0.71	0.80	0.72	0.68						
pH	None	8.3	8.0	8.5	7.8	8.0	8.1	8.20	8.20						6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.002	0.002	0.180	0.002	0.002	0.002	0.006	0.0046						
Phosphorus, Total	mg/L		0.031	0.033	0.03		0.03		0.035					0.033	≤ 0.03 to 0.09 AGM
Salinity	ppth														
Specific Conductivity	umho/cm	327.00	426.00	376.00	450.00	519.00	526.00	587	705						≤ 1275
Temperature	deg C	20.90	22.20	22.50	28.00	28.10	30.10	30.3	29.5						
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	2.10	3.80	2.50	4.40	2.60	3.40	3.7	5.1						≤ 29
Zinc	mg/L														$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

• Metal exceedences are based on hardness

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• Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.

• AGM - Annual Geometric Mean

• TPTV - Ten Percent Threshold Value

• For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Values applies if Chlorophyll-a is >20 ug/l, Maximum Values applies if Chlorophyll-a is≤20 ug/l.

Table 5-4
Monitoring Data
Reporting Period October 2020 - September 2021

WPBWS Watershed Monitoring Events

Clear Lake	SAMPLE DATE	2/9/21	3/23/21	4/6/21	5/11/21	6/8/21	7/27/21	8/10/21	9/22/21					Geometric Mean	
PARAMETER	UNITS														
Alkalinity	mg/L														
Arsenic	mg/L														≤ 0.01
Cadmium	mg/L														$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$
Chlorophyll-a (corrected)	ug/L	1.70	0.65	0.50	0.50	0.50	0.50	0.6	6.5					0.8	≤ 20 AGM
Copper	mg/L														$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$
Dissolved Oxygen	% Saturation	99.9	97.7	104.8	100.5	65.5	108.6	114.0	84.4						> 38
E. Coli	cfu/100mL														≤ 400 cfu/100ml TPTV
Lead	mg/L														$\leq [e^{(1.273\ [lnH]\ -4.705}]\ 10^{-3}$
Nitrogen, Ammonia	mg/L														
Nitrogen, nitrate + nitrite	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.008	0.0075						
Nitrogen, Total	mg/L	0.52	0.61	0.80	0.89	0.68	0.79	0.72	0.68					0.70	1.05 to 1.91 AGM
Nitrogen, Total Kjeldahl	mg/L	0.52	0.61	0.80	0.88	0.68	0.78	0.71	0.67						
pH	None	8.4	7.8	8.6	8.4	8.1	8.6	8.5	8.10						6.0 to 8.5
Phosphorus, orthophosphate	mg/L	0.004	0.002	0.002	0.002	0.002	0.004	0.010	0.0039						
Phosphorus, Total	mg/L		0.016	0.018	0.020		0.020		0.022					0.019	0.03 to 0.09 AGM
Salinity	ppth														
Specific Conductivity	umho/cm	320.00	343.00	346.00	387.00	392.00	458.00	625	457						≤ 1275
Temperature	deg C	20.90	22.70	22.90	28.20	28.90	30.60	30.8	30.3						
Total Hardness	mg/L														
Total Suspended Solids	mg/L														
Turbidity	NTU	1.70	2.40	2.70	3.40	7.50	3.10	2.9	3.5						≤ 29
Zinc	mg/L														$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$

- Metal exceedences are based on hardness
- Highlighted in "blue" are substituted values that were below the limits of detection. The value shown is the method detection limit provided with the data.
- Highlighted in "yellow" are sample values that exceed either the State Water Quality Standards for a specific parameter or Florida'a Impaired Waters Rule criteria for chlorophyll-a.
- AGM - Annual Geometric Mean
- TPTV - Ten Percent Threshold Value
- For Freshwater Lakes the Total Nitrogen and Total Phosphorus Minimum Values applies if Chlorophyll-a is >20 ug/l, Maximum Values applies if Chlorophyll-a is≤20 ug/l.

Table 5-5

Summary of Exceedences per Site by Parameter

October 1, 2020 - September 30, 2021

Watershed	Site	Dissolved Oxygen	Turbidity	Fecal Coliform	pH	Specific Conductivity	Chlor-a* (AGM or %TPTV)	Copper
C-15	31E	1/6						
	31C							
	31B				1/6			
C-16	22							
	24				1/6			
	27B	1/5						
	27A	1/6						
	28							
C-17	12A		1/6					
	C17S44							
C-18	16	2/6						
	15	4/6						
	92							
	81							
C-51	38B							
	37B							
	C51S155				1/10			
Lox	69	1/8		1/1				
	51							
	62							
	72						6.6	
ICWW-N	30							
LWL-N	LWL-1						4.4	1/3
	11							
	13							
	LWL-4							
LWL-C	LWL-8				1/11		18%	1/4
	18C							
	18D							1/5
	LWL-11				1/11			1/4
ICWW-S	LWL-13				1/10			
	LWL-18							1/4
Hillsboro	1							
	2							
	3							
	S39	1/11						
L-8	Culv10a	2/9	4/9			1/9		
S-2-6-7	S-2	2/11				3/11		
	39	2/6	1/6			1/6		
	43	1/6	1/6			1/6		
WPBWS	M Canal		5/10		2/10			
	Control 4		1/10					
	Lake Mangonia							
	Clear Lake				2/8			

•AGM - Annual Geometric Mean

• Narrative - Shall not cause an imbalance in flora and fauna

• TPTV- Ten Percent Threshold Value

Table 5-6 Monitoring Data Summary
C-15 Watershed

SITE 31E		Date Range: 03/24/99 - 09/23/21 Samples: 116					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	26	165	164	210	123	22
Arsenic	mg/L	99	0.0027	0.0025	0.0098	0.0005	0.0014
Cadmium	mg/L	113	0.0004	0.0003	0.0050	0.0001	0.0015
Chlorophyll-a (corrected)	ug/L	104	16.3	21.2	120.0	0.5	22.3
Copper	mg/L	112	0.0042	0.0044	0.0200	0.0010	0.0034
Dissolved Oxygen	% Saturation	42	53.1	65.0	127.8	7.7	26.4
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	102	0.0021	0.0023	0.0050	0.0005	0.0012
Nitrogen, Ammonia	mg/L	109	0.053	0.052	0.820	0.003	0.126
Nitrogen, nitrate + nitrite	mg/L	103	0.042	0.034	0.785	0.001	0.163
Nitrogen, Total	mg/L	102	1.44	1.40	3.87	0.39	0.62
Nitrogen, Total Kjeldahl	mg/L	107	1.37	1.30	3.84	0.37	0.61
pH	None	112	7.6	7.6	8.9	6.3	0.4
osphorus, orthophosphate	mg/L	108	0.132	0.133	1.330	0.003	0.205
Phosphorus, Total	mg/L	105	0.243	0.233	1.490	0.020	0.241
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	114	548	553	833	227	105
Temperature	deg C	114	25.6	26.5	32.0	16.7	3.8
Total Hardness	mg/L	109	198	202	390	99	35
Total Suspended Solids	mg/L	111	5.4	6.1	18.0	1.0	3.6
Turbidity	NTU	112	3.9	4.3	15.9	0.2	2.7
Zinc	mg/L	113	0.0056	0.0055	0.0140	0.0018	0.0027

SITE 31C		Date Range: 01/28/99 - 09/23/21 Samples: 117					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	23	151	152	188	123	16
Arsenic	mg/L	97	0.0030	0.0025	2.2350	0.0005	0.2266
Cadmium	mg/L	114	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	102	13.4	16.5	93.0	0.1	17.3
Copper	mg/L	114	0.0036	0.0042	0.0295	0.0003	0.0039
Dissolved Oxygen	% Saturation	42	73.0	72.4	137.5	33.1	29.2
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	102	0.0021	0.0023	0.0070	0.0005	0.0013
Nitrogen, Ammonia	mg/L	111	0.046	0.041	0.456	0.001	0.077
Nitrogen, nitrate + nitrite	mg/L	103	0.062	0.064	1.300	0.006	0.168
Nitrogen, Total	mg/L	104	1.17	1.09	3.09	0.62	0.53
Nitrogen, Total Kjeldahl	mg/L	114	1.05	1.00	3.07	0.11	0.49
pH	None	114	7.5	7.5	8.5	6.3	0.4
osphorus, orthophosphate	mg/L	111	0.048	0.060	0.440	0.003	0.070
Phosphorus, Total	mg/L	107	0.125	0.120	0.560	0.020	0.085
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	116	528	506	11188	391	994
Temperature	deg C	114	26.2	26.9	32.4	19.2	3.2
Total Hardness	mg/L	111	182	186	260	16	24
Total Suspended Solids	mg/L	106	3.9	4.0	15.7	1.0	3.0
Turbidity	NTU	112	2.4	2.5	13.3	0.1	1.9
Zinc	mg/L	114	0.0057	0.0055	0.1030	0.0016	0.0097

Table 5-6 Monitoring Data Summary
C-15 Watershed

SITE 31B		Date Range: 06/15/00 - 09/23/21 Samples: 151					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	91	149	152	207	32	19
Arsenic	mg/L	62	0.0027	0.0026	0.0070	0.0005	0.0011
Cadmium	mg/L	74	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	68	9.7	13.1	52.0	0.5	12.7
Copper	mg/L	74	0.0037	0.0038	0.0200	0.0013	0.0033
Dissolved Oxygen	% Saturation	39	95.4	100.9	141.5	50.7	23.5
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	74	0.0022	0.0023	0.0260	0.0003	0.0030
Nitrogen, Ammonia	mg/L	140	0.020	0.018	0.305	0.003	0.052
Nitrogen, nitrate + nitrite	mg/L	145	0.021	0.017	0.470	0.001	0.098
Nitrogen, Total	mg/L	145	0.98	0.98	4.23	0.06	0.38
Nitrogen, Total Kjeldahl	mg/L	149	0.91	0.91	4.18	0.04	0.35
pH	None	148	7.8	7.8	9.1	6.7	0.4
osphorus, orthophosphate	mg/L	145	0.049	0.068	0.344	0.001	0.067
Phosphorus, Total	mg/L	133	0.104	0.105	0.702	0.003	0.086
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	151	491	494	787	392	49
Temperature	deg C	151	25.3	26.5	32.5	15.0	4.0
Total Hardness	mg/L	79	178	178	230	138	17
Total Suspended Solids	mg/L	147	2.9	2.5	43.7	1.0	4.1
Turbidity	NTU	151	2.3	2.6	17.8	0.1	2.1
Zinc	mg/L	74	0.0059	0.0055	0.0492	0.0027	0.0054

Table 5-6 Monitoring Data Summary

C-16 Watershed

SITE 22		Date Range: 01/29/04 - 09/22/21 Samples: 92					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	25	142	141	185	110	16
Arsenic	mg/L	89	0.0027	0.0025	0.0300	0.0005	0.0031
Cadmium	mg/L	89	0.0003	0.0003	0.0026	0.0002	0.0005
Chlorophyll-a (corrected)	ug/L	89	10.4	15.2	62.7	0.5	13.5
Copper	mg/L	89	0.0026	0.0026	0.0180	0.0010	0.0035
Dissolved Oxygen	% Saturation	34	79.4	102.5	149.5	9.4	37.0
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	77	0.0018	0.0023	0.0050	0.0005	0.0008
Nitrogen, Ammonia	mg/L	84	0.025	0.030	1.010	0.002	0.110
Nitrogen, nitrate + nitrite	mg/L	84	0.045	0.029	1.990	0.003	0.252
Nitrogen, Total	mg/L	84	1.00	0.99	3.07	0.53	0.36
Nitrogen, Total Kjeldahl	mg/L	90	0.88	0.88	2.19	0.27	0.26
pH	None	85	8.0	8.1	8.9	6.5	0.4
Phosphorus, orthophosphate	mg/L	85	0.011	0.015	0.086	0.001	0.020
Phosphorus, Total	mg/L	90	0.056	0.061	0.840	0.003	0.093
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	88	493	493	1008	7	135
Temperature	deg C	90	25.8	26.2	36.3	17.1	4.2
Total Hardness	mg/L	88	178	179	239	139	23
Total Suspended Solids	mg/L	89	4.0	4.3	33.8	1.0	3.9
Turbidity	NTU	89	2.5	2.7	6.6	0.1	1.3
Zinc	mg/L	89	0.0053	0.0050	0.0600	0.0013	0.0081

SITE 24		Date Range: 01/25/99 - 09/22/21 Samples: 107					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	19	113	150	177	3	38
Arsenic	mg/L	84	0.0028	0.0025	0.0071	0.0005	0.0012
CFdmium	mg/L	99	0.0004	0.0003	0.0050	0.0002	0.0015
Chlorophyll-a (corrected)	ug/L	95	10.7	13.8	49.0	0.5	11.2
Copper	mg/L	99	0.0028	0.0026	0.0113	0.0007	0.0029
Dissolved Oxygen	% Saturation	34	105.2	102.5	145.6	72.3	21.7
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	92	0.0022	0.0023	0.0050	0.0007	0.0012
Nitrogen, Ammonia	mg/L	97	0.025	0.030	0.105	0.007	0.023
Nitrogen, nitrate + nitrite	mg/L	97	0.034	0.025	0.940	0.001	0.142
Nitrogen, Total	mg/L	97	0.67	0.94	2.67	0.05	0.51
Nitrogen, Total Kjeldahl	mg/L	98	0.60	0.85	2.61	0.04	0.48
pH	None	101	8.0	8.0	8.8	7.1	0.4
Phosphorus, orthophosphate	mg/L	100	0.009	0.010	0.230	0.001	0.030
Phosphorus, Total	mg/L	101	0.037	0.055	0.323	0.001	0.049
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	105	511	479	4220	348	381
Temperature	deg C	104	25.2	26.3	33.1	2.8	4.7
Total Hardness	mg/L	96	175	177	233	111	25
Total Suspended Solids	mg/L	101	4.4	5.0	16.5	1.0	3.2
Turbidity	NTU	104	3.1	3.3	11.4	0.4	1.9
Zinc	mg/L	99	0.0057	0.0050	0.0360	0.0013	0.0051

Table 5-6 Monitoring Data Summary

C-16 Watershed

SITE 27B		Date Range: 01/28/99 - 09/23/21 Samples: 97					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	22	178	178	222	121	28
Arsenic	mg/L	78	0.0028	0.0025	0.0120	0.0005	0.0016
Cadmium	mg/L	95	0.0004	0.0003	0.0050	0.0001	0.0017
Chlorophyll-a (corrected)	ug/L	83	11.9	15.0	76.4	0.5	15.8
Copper	mg/L	95	0.0040	0.0041	0.0975	0.0007	0.0102
Dissolved Oxygen	% Saturation	30	55.0	67.6	139.7	12.1	35.1
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	89	0.0022	0.0023	0.0067	0.0005	0.0014
Nitrogen, Ammonia	mg/L	91	0.049	0.048	0.740	0.007	0.103
Nitrogen, nitrate + nitrite	mg/L	88	0.068	0.050	0.785	0.006	0.166
Nitrogen, Total	mg/L	87	1.39	1.43	3.42	0.06	0.50
Nitrogen, Total Kjeldahl	mg/L	93	1.26	1.30	3.37	0.04	0.49
pH	None	94	7.6	7.6	8.7	6.7	0.4
Phosphorus, orthophosphate	mg/L	90	0.064	0.067	0.680	0.001	0.155
Phosphorus, Total	mg/L	93	0.157	0.155	0.770	0.004	0.175
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	96	566	565	10481	8	1022
Temperature	deg C	96	25.3	26.7	32.4	16.5	3.8
Total Hardness	mg/L	94	200	205	308	113	37
Total Suspended Solids	mg/L	93	5.4	5.6	20.0	1.0	3.8
Turbidity	NTU	95	3.7	3.9	14.9	0.3	2.8
Zinc	mg/L	94	0.0060	0.0055	0.0350	0.0016	0.0051

SITE 27A		Date Range: 01/28/99 - 09/23/21 Samples: 110					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	25	152	150	191	128	15
Arsenic	mg/L	91	0.0027	0.0025	0.0078	0.0005	0.0013
Cadmium	mg/L	108	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (correEDed)	ug/L	94	10.4	13.9	66.0	0.5	14.7
Copper	mg/L	108	0.0040	0.0043	0.0200	0.0013	0.0031
Dissolved Oxygen	% Saturation	0	None	None	None	None	None
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	102	0.0022	0.0023	0.0150	0.0005	0.0019
Nitrogen, Ammonia	mg/L	105	0.035	None	2.060	0.002	0.203
Nitrogen, nitrate + nitrite	mg/L	101	0.044	0.040	0.750	0.006	0.125
Nitrogen, Total	mg/L	101	1.04	None	4.32	0.02	0.57
Nitrogen, Total Kjeldahl	mg/L	106	1.01	1.10	3.96	0.04	0.52
pH	None	106	7.9	7.9	9.0	6.5	0.4
Phosphorus, orthophosphate	mg/L	98	0.031	0.038	0.440	0.001	0.092
Phosphorus, Total	mg/L	104	0.103	0.109	1.580	0.001	0.191
Salinity	ppth	1	7.9200	7.9200	7.9200	7.9200	None
Specific Conductivity	umho/cm	108	518	511	939	219	114
Temperature	deg C	106	25.6	26.4	32.6	18.5	3.9
Total Hardness	mg/L	107	181	180	258	117	25
Total Suspended Solids	mg/L	99	3.7	4.3	38.0	0.5	4.5
Turbidity	NTU	107	2.6	2.9	71.5	0.1	7.3
Zinc	mg/L	106	0.0057	0.0053	0.0690	0.0013	0.0082

Table 5-6 Monitoring Data Summary

C-16 Watershed

SITE 28		Date Range: 01/28/99 - 09/23/21 Samples: 149					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	90	147	147	210	119	15
Arsenic	mg/L	55	0.0025	0.0025	0.0071	0.0003	0.0013
Cadmium	mg/L	72	0.0005	0.0003	0.0050	0.0002	0.0019
Chlorophyll-a (corrected)	ug/L	61	7.4	9.4	50.0	0.5	10.1
Copper	mg/L	72	0.0029	0.0029	0.0200	0.0007	0.0036
Dissolved Oxygen	% Saturation	33	75.1	93.6	147.0	12.1	31.6
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	72	0.0023	0.0023	0.0261	0.0003	0.0031
Nitrogen, Ammonia	mg/L	142	0.026	0.031	2.760	0.001	0.231
Nitrogen, nitrate + nitrite	mg/L	144	0.035	0.041	13.000	0.001	1.083
Nitrogen, Total	mg/L	143	0.84	0.97	13.71	0.05	1.21
Nitrogen, Total Kjeldahl	mg/L	147	0.74	0.86	5.81	0.04	0.53
pH	None	146	7.7	7.8	8.6	6.2	0.4
Phosphorus, orthophosphate	mg/L	146	0.018	0.027	0.250	0.001	0.050
Phosphorus, Total	mg/L	135	0.058	0.062	0.877	0.001	0.094
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	149	454	475	946	5	121
Temperature	deg C	149	25.3	26.0	56.8	13.1	4.8
Total Hardness	mg/L	78	177	176	308	120	27
Total Suspended Solids	mg/L	144	3.1	2.8	24.9	1.0	3.2
Turbidity	NTU	149	2.4	2.5	13.0	0.1	2.0
Zinc	mg/L	72	0.0061	0.0055	0.1180	0.0024	0.0134

Table 5-6 Monitoring Data Summary
C-17 Watershed

SITE 12A		Date Range: 01/19/99 - 09/22/21 Samples: 114					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	29	147	148	186	87	20
Arsenic	mg/L	95	0.0028	0.0025	0.0071	0.0005	0.0014
Cadmium	mg/L	112	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	100	10.7	14.7	74.8	0.5	11.5
Copper	mg/L	112	0.0031	0.0028	0.0500	0.0010	0.0054
Dissolved Oxygen	% Saturation	36	71.0	74.1	108.9	27.9	18.4
E. Coli	CKu/100mL	0	None	None	None	None	None
Lead	mg/L	106	0.0020	0.0023	0.0076	0.0004	0.0014
Nitrogen, Ammonia	mg/L	108	0.062	0.055	2.260	0.008	0.242
Nitrogen, nitrate + nitrite	mg/L	104	0.071	0.079	1.590	0.006	0.174
Nitrogen, Total	mg/L	106	1.22	1.12	9.08	0.03	2.14
Nitrogen, Total Kjeldahl	mg/L	111	0.96	1.00	3.10	0.04	0.43
pH	None	109	7.6	7.7	9.4	6.2	0.5
Phosphorus, orthophosphate	mg/L	102	0.008	0.008	0.058	0.001	0.013
Phosphorus, Total	mg/L	108	0.050	0.065	0.340	0.001	0.039
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	112	451	464	831	231	70
Temperature	deg C	112	25.3	26.0	31.7	16.3	3.8
Total Hardness	mg/L	106	144	170	216	0	33
Total Suspended Solids	mg/L	109	4.3	4.8	15.5	1.0	2.9
Turbidity	NTU	110	3.5	3.9	50.0	0.3	4.6
Zinc	mg/L	112	0.0065	0.0055	0.0614	0.0013	0.0076

SITE C17S44		Date Range: 01/19/99 - 09/23/21 Samples: 193					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	78	158	163	192	112	19
Arsenic	mg/L	14	0.0017	0.0019	0.0049	0.0005	0.0011
Cadmium	mg/L	31	0.0014	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	23	9.2	9.1	40.0	1.7	9.7
Copper	mg/L	31	0.0042	0.0050	0.0500	0.0007	0.0089
Dissolved Oxygen	% Saturation	43	69.4	73.0	109.0	39.4	18.3
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	31	0.0021	0.0019	0.0250	0.0003	0.0045
Nitrogen, Ammonia	mg/L	189	0.033	0.038	1.500	0.003	0.120
Nitrogen, nitrate + nitrite	mg/L	190	0.032	0.038	0.374	0.001	0.089
Nitrogen, Total	mg/L	187	0.85	0.88	1.51	0.02	0.22
Nitrogen, Total Kjeldahl	mg/L	117	0.87	0.87	1.33	0.20	0.16
pH	None	191	7.7	7.7	8.3	6.6	0.3
Phosphorus, orthophosphate	mg/L	189	0.007	0.007	0.095	0.001	0.016
Phosphorus, Total	mg/L	182	0.042	0.047	0.126	0.002	0.021
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	193	456	463	728	300	49
Temperature	deg C	193	25.6	26.4	90.0	15.7	6.0
Total Hardness	mg/L	40	174	185	233	90	30
Total Suspended Solids	mg/L	189	2.6	3.0	26.0	0.1	3.2
Turbidity	NTU	192	2.3	2.3	18.1	0.6	1.7
Zinc	mg/L	31	0.0080	0.0100	0.0954	0.0032	0.0161

Table 5-6 Monitoring Data Summary
C-18 Watershed

SITE 16		Date Range: 01/19/99 - 09/22/21 Samples: 112					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	30	120	139	216	31	51
Arsenic	mg/L	93	0.0023	0.0025	0.0073	0.0005	0.0013
Cadmium	mg/L	110	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	96	3.7	3.6	43.0	0.5	6.6
Copper	mg/L	108	0.0019	0.0013	0.0100	0.0003	0.0031
Dissolved Oxygen	% Saturation	36	48.2	46.8	147.1	22.8	28.5
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	108	0.0021	0.0023	0.0125	0.0005	0.0017
Nitrogen, Ammonia	mg/L	104	0.041	0.040	0.498	0.008	0.074
Nitrogen, nitrate + nitrite	mg/L	103	0.035	0.030	1.210	0.006	0.149
Nitrogen, Total	mg/L	103	0.96	0.99	2.35	0.06	0.40
Nitrogen, Total Kjeldahl	mg/L	110	0.91	0.94	2.30	0.04	0.39
pH	None	101	7.4	7.4	9.7	6.0	0.5
Phosphorus, orthophosphate	mg/L	104	0.006	0.006	0.560	0.001	0.055
Phosphorus, Total	mg/L	105	0.032	0.034	1.500	0.001	0.148
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	92	346	385	980	105	151
Temperature	deg C	104	24.6	25.5	33.4	15.8	3.8
Total Hardness	mg/L	100	132	149	734	30	82
Total Suspended Solids	mg/L	106	2.4	2.5	29.7	1.0	3.8
Turbidity	NTU	108	1.8	1.7	10.2	0.4	1.4
Zinc	mg/L	109	0.0060	0.0055	0.0500	0.0012	0.0105

SITE 15		Date Range: 01/19/99 - 09/22/21 Samples: 109					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	26	110	99	244	41	65
Arsenic	mg/L	90	0.0024	0.0025	0.0071	0.0005	0.0013
Cadmium	mg/L	107	0.0005	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	94	2.0	2.1	19.0	0.1	2.4
Copper	mg/L	106	0.0024	0.0013	49.5000	0.0003	6.5449
Dissolved Oxygen	% Saturation	33	34.2	35.9	62.8	8.2	12.6
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	107	0.0021	0.0023	0.0060	0.0005	0.0013
Nitrogen, Ammonia	mg/L	104	0.040	0.040	8.167	0.007	0.798
Nitrogen, nitrate + nitrite	mg/L	100	0.024	0.020	0.480	0.006	0.080
Nitrogen, Total	mg/L	92	0.86	0.87	4.51	0.01	0.52
Nitrogen, Total Kjeldahl	mg/L	100	0.85	0.81	4.50	0.29	0.49
pH	None	98	7.3	7.3	9.4	2.8	0.6
Phosphorus, orthophosphate	mg/L	100	0.005	0.003	0.071	0.001	0.013
Phosphorus, Total	mg/L	101	0.019	0.016	1.500	0.001	0.255
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	101	305	324	632	91	124
Temperature	deg C	101	23.7	24.1	30.9	15.8	3.9
Total Hardness	mg/L	93	103	102	260	33	53
Total Suspended Solids	mg/L	103	1.8	1.8	15.0	0.5	2.0
Turbidity	NTU	105	0.8	0.7	18.3	0.1	1.8
Zinc	mg/L	107	0.0054	0.0053	0.0300	0.0012	0.0039

Table 5-6 Monitoring Data Summary
C-18 Watershed

SITE 92		Date Range: 01/19/99 - 05/10/21 Samples: 169					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	113	142	139	278	61	53
Arsenic	mg/L	16	0.0011	0.0009	0.0024	0.0005	0.0007
Cadmium	mg/L	33	0.0013	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	48	3.7	3.6	15.3	1.0	2.9
Copper	mg/L	33	0.0033	0.0027	0.0100	0.0003	0.0042
Dissolved Oxygen	% Saturation	18	49.0	56.9	85.2	5.7	21.6
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	165	0.031	0.036	1.500	0.003	0.119
Nitrogen, nitrate + nitrite	mg/L	164	0.023	0.032	0.520	0.001	0.063
Nitrogen, Total	mg/L	167	0.82	0.90	1.65	0.00	0.21
Nitrogen, Total Kjeldahl	mg/L	142	0.86	0.87	1.40	0.22	0.16
pH	None	167	7.4	7.5	8.2	6.2	0.3
Phosphorus, orthophosphate	mg/L	168	0.004	0.003	0.500	0.001	0.041
Phosphorus, Total	mg/L	156	0.024	0.023	23.000	0.002	1.839
Salinity	ppth	25	0.2494	0.2000	0.5000	0.1000	0.1015
Specific Conductivity	umho/cm	169	420	415	1038	148	174
Temperature	deg C	167	26.4	26.5	3001.0	15.8	230.3
Total Hardness	mg/L	40	158	172	298	60	61
Total Suspended Solids	mg/L	158	1.3	1.5	153.0	0.0	12.1
Turbidity	NTU	168	1.7	1.6	8.6	0.4	1.2
Zinc	mg/L	33	0.0075	0.0100	0.1580	0.0027	0.0270

SITE 81		Date Range: 01/19/99 - 06/15/21 Samples: 168					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	111	132	135	247	59	45
Arsenic	mg/L	16	0.0012	0.0011	0.0024	0.0005	0.0007
Cadmium	mg/L	33	0.0013	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (correEDed)	ug/L	46	4.8	4.8	15.8	1.0	4.4
Copper	mg/L	33	0.0033	0.0033	0.0100	0.0003	0.0042
Dissolved Oxygen	% Saturation	18	73.5	73.3	109.1	25.0	18.9
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	33	0.0020	0.0013	0.0236	0.0003	0.0042
Nitrogen, Ammonia	mg/L	161	0.026	None	0.140	0.003	0.029
Nitrogen, nitrate + nitrite	mg/L	165	0.017	0.021	0.244	0.002	0.038
Nitrogen, Total	mg/L	166	0.77	None	1.32	0.00	0.19
Nitrogen, Total Kjeldahl	mg/L	144	0.82	0.82	1.30	0.26	0.15
pH	None	154	7.6	7.7	8.3	6.5	0.4
Phosphorus, orthophosphate	mg/L	164	0.004	0.003	0.082	0.001	0.012
Phosphorus, Total	mg/L	154	0.021	0.021	0.210	0.002	0.021
Salinity	ppth	19	0.1999	0.2000	1.0000	0.1000	0.1976
Specific Conductivity	umho/cm	164	404	408	1588	151	217
Temperature	deg C	165	25.3	26.2	33.2	15.8	4.0
Total Hardness	mg/L	42	156	173	311	60	60
Total Suspended Solids	mg/L	145	1.6	1.5	6.0	0.3	1.0
Turbidity	NTU	168	1.4	1.4	8.7	0.3	0.9
Zinc	mg/L	33	0.0070	0.0080	0.0429	0.0018	0.0075

• Sites C18G92 and C18S46 were substitued by Sites 81 and 92 for the September 2015- October 2016 permit cycle

Table 5-6 Monitoring Data Summary

C-51 Watershed

SITE 38B		Date Range: 01/21/99 - 09/28/21 Samples: 113					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	28	138	135	291	62	55
Arsenic	mg/L	93	0.0027	0.0025	0.0160	0.0005	0.0023
Cadmium	mg/L	110	0.0004	0.0003	0.0050	0.0001	0.0016
Chlorophyll-a (corrected)	ug/L	99	5.9	6.9	70.7	0.5	12.4
Copper	mg/L	108	0.0024	0.0018	0.0100	0.0005	0.0029
Dissolved Oxygen	% Saturation	30	74.0	82.0	141.0	31.6	28.8
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	110	0.0021	0.0023	0.0152	0.0003	0.0018
Nitrogen, Ammonia	mg/L	109	0.064	0.058	0.950	0.008	0.182
Nitrogen, nitrate + nitrite	mg/L	103	0.159	0.210	1.400	0.006	0.247
Nitrogen, Total	mg/L	99	1.49	1.55	4.05	0.06	0.78
Nitrogen, Total Kjeldahl	mg/L	111	1.28	1.31	4.00	0.04	0.77
pH	None	104	7.7	7.7	14.0	6.6	0.8
Phosphorus, orthophosphate	mg/L	105	0.033	0.047	0.540	0.002	0.064
Phosphorus, Total	mg/L	101	0.093	0.108	0.891	0.003	0.129
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	103	719	759	1837	2	413
Temperature	deg C	106	24.9	25.5	33.4	16.7	4.1
Total Hardness	mg/L	105	215	217	522	59	90
Total Suspended Solids	mg/L	107	9.5	10.0	60.0	1.0	11.3
Turbidity	NTU	109	10.1	10.8	69.9	0.6	13.7
Zinc	mg/L	108	0.0062	0.0055	0.0894	0.0013	0.0107

SITE 37B		Date Range: 01/21/99 - 09/28/21 Samples: 110					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	30	159	167	238	103	36
Arsenic	mg/L	91	0.0024	0.0025	0.0071	0.0002	0.0012
Cadmium	mg/L	107	0.0004	0.0003	0.0050	0.0001	0.0015
Chlorophyll-a (corrected)	ug/L	95	3.9	4.3	22.3	0.4	4.5
Copper	mg/L	107	0.0024	0.0018	0.0100	0.0005	0.0028
Dissolved Oxygen	% Saturation	28	69.4	71.6	118.5	31.0	20.4
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	107	0.0021	0.0023	0.0155	0.0005	0.0018
Nitrogen, Ammonia	mg/L	109	0.055	0.060	0.332	0.008	0.062
Nitrogen, nitrate + nitrite	mg/L	98	0.126	0.167	1.320	0.008	0.213
Nitrogen, Total	mg/L	99	0.83	1.09	6.89	0.05	0.88
Nitrogen, Total Kjeldahl	mg/L	108	0.72	0.92	6.70	0.04	0.80
pH	None	100	7.5	7.6	9.6	2.8	0.6
Phosphorus, orthophosphate	mg/L	104	0.020	0.030	0.193	0.001	0.036
Phosphorus, Total	mg/L	97	0.049	0.070	1.540	0.001	0.175
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	102	666	684	1198	163	177
Temperature	deg C	102	25.3	26.1	32.2	16.8	3.8
Total Hardness	mg/L	103	201	221	305	0	47
Total Suspended Solids	mg/L	105	4.7	5.0	43.3	1.0	7.5
Turbidity	NTU	106	4.7	5.1	87.0	0.1	12.9
Zinc	mg/L	106	0.0061	0.0055	0.1100	0.0013	0.0122

Table 5-6 Monitoring Data Summary

C-51 Watershed

SITE C51S155		Date Range: 01/21/99 - 09/28/21 Samples: 201					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	86	161	163	216	100	24
Arsenic	mg/L	14	0.0014	0.0016	0.0029	0.0005	0.0008
Cadmium	mg/L	30	0.0015	0.0008	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	52	1.7	4.7	45.0	0.0	8.9
Copper	mg/L	34	0.0040	0.0038	0.0230	0.0010	0.0048
Dissolved Oxygen	% Saturation	42	69.3	73.6	111.6	30.2	19.1
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	30	0.0022	0.0039	0.0152	0.0005	0.0030
Nitrogen, Ammonia	mg/L	195	0.046	0.055	0.520	0.003	0.066
Nitrogen, nitrate + nitrite	mg/L	193	0.098	0.184	20.900	0.003	1.501
Nitrogen, Total	mg/L	195	1.08	1.11	21.79	0.03	1.54
Nitrogen, Total Kjeldahl	mg/L	127	0.96	0.94	3.87	0.41	0.37
pH	None	197	7.6	7.6	9.8	6.2	0.4
Phosphorus, orthophosphate	mg/L	198	0.021	0.031	0.279	0.001	0.039
Phosphorus, Total	mg/L	188	0.065	0.068	0.200	0.003	0.032
Salinity	ppth	1	0.3300	0.3300	0.3300	0.3300	None
Specific Conductivity	umho/cm	199	582	595	1681	6	181
Temperature	ECg C	199	25.3	26.1	56.3	15.3	4.5
Total Hardness	mg/L	56	36	184	337	1	101
Total SuspenECd Solids	mg/L	186	3.6	4.0	47.0	1.0	5.7
Turbidity	NTU	200	4.4	4.0	59.4	1.1	7.9
Zinc	mg/L	30	0.0079	0.0100	0.0310	0.0032	0.0056

Table 5-6 Monitoring Data Summary

Loxahatchee River Watershed

SITE 69		Date Range: 11/20/03 - 06/15/21 Samples: 179					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	169	151	151	245	74	36
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	167	2.9	3.0	19.5	0.1	3.5
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	% Saturation	86	45.8	48.7	69.6	12.0	12.6
E. Coli	cfu/100mL	8	40	47	97	20	27
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	164	0.082	0.090	0.471	0.025	0.059
Nitrogen, nitrate + nitrite	mg/L	169	0.061	0.059	0.262	0.007	0.046
Nitrogen, Total	mg/L	169	0.98	0.95	38.00	0.52	2.86
Nitrogen, Total Kjeldahl	mg/L	152	0.87	0.90	2.52	0.50	0.27
pH	None	175	7.3	7.3	8.1	6.3	0.3
Phosphorus, orthophosphate	mg/L	169	0.012	0.012	0.433	0.001	0.035
Phosphorus, Total	mg/L	169	0.037	0.034	0.246	0.003	0.029
Salinity	ppth	141	0.2894	0.3000	11.4000	0.1000	1.5324
Specific Conductivity	umho/cm	139	582	491	19200	218	2640
Temperature	deg C	170	25.0	25.2	31.3	17.0	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	169	2.0	2.0	21.8	0.5	2.2
Turbidity	NTU	89	3.2	3.2	7.2	1.5	1.1
Zinc	mg/L	8	0.0080	0.0100	0.0100	0.0050	0.0024

SITE 51		Date Range: 05/11/00 - 06/30/21 Samples: 110					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	81	119	123	163	62	16
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0033	0.0050	0.0440	0.0008	0.0146
Chlorophyll-a (corrected)	ug/L	79	4.0	4.0	62.0	0.5	7.4
Copper	mg/L	7	0.0088	0.0050	0.0700	0.0014	0.0296
Dissolved Oxygen	% Saturation	27	83.2	86.8	98.5	41.3	13.2
E. Coli	cfu/100mL	0	None	None	None	None	None
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	7	0.0034	0.0050	0.0340	0.0011	0.0119
Nitrogen, Ammonia	mg/L	57	0.031	0.030	0.140	0.002	0.028
Nitrogen, nitrate + nitrite	mg/L	89	0.008	0.006	0.068	0.002	0.016
Nitrogen, Total	mg/L	86	0.35	0.30	2.29	0.10	0.45
Nitrogen, Total Kjeldahl	mg/L	78	0.35	0.30	2.23	0.10	0.46
pH	None	90	7.8	7.9	8.4	6.7	0.3
Phosphorus, orthophosphate	mg/L	86	0.006	0.006	0.177	0.001	0.020
Phosphorus, Total	mg/L	89	0.025	0.025	0.222	0.006	0.025
Salinity	ppth	71	23.9211	31.1000	37.5000	0.6000	9.2724
Specific Conductivity	umho/cm	72	37460	47750	56271	1118	13459
Temperature	deg C	88	24.7	25.2	31.1	15.9	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	89	5.5	5.3	43.5	0.8	6.4
Turbidity	NTU	89	3.2	3.2	7.2	1.5	1.1
Zinc	mg/L	8	0.0080	0.0100	0.0100	0.0050	0.0024

Table 5-6 Monitoring Data Summary
Loxahatchee River Watershed

SITE 62		Date Range: 05/31/00 - 06/30/21 Samples: 180					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	172	133	138	226	64	27
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0027	0.0050	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	163	5.3	5.6	61.9	0.5	5.6
Copper	mg/L	7	0.0071	0.0100	0.0500	0.0017	0.0184
Dissolved Oxygen	% Saturation	76	68.1	70.7	93.9	37.3	13.2
E. Coli	cfu/100mL	1	275	275	275	275	None
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	7	0.0030	0.0050	0.0130	0.0011	0.0042
Nitrogen, Ammonia	mg/L	169	0.052	0.050	0.650	0.010	0.074
Nitrogen, nitrate + nitrite	mg/L	180	0.032	0.047	0.182	0.002	0.039
Nitrogen, Total	mg/L	180	0.76	0.76	3.93	0.23	0.54
Nitrogen, Total Kjeldahl	mg/L	169	0.70	0.70	3.93	0.20	0.55
pH	None	180	7.6	7.6	73.8	7.0	4.9
Phosphorus, orthophosphate	mg/L	178	0.022	0.025	0.121	0.002	0.017
Phosphorus, Total	mg/L	168	0.046	0.046	0.480	0.006	0.040
Salinity	ppth	165	6.9676	11.1000	35.7000	0.1000	9.6651
Specific Conductivity	umho/cm	150	12649	19549	53860	250	15066
Temperature	deg C	175	25.1	25.7	32.8	16.1	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	168	4.2	4.0	23.2	1.0	2.9
Turbidity	NTU	180	2.9	2.8	22.0	1.2	2.0
Zinc	mg/L	8	0.0124	0.0100	0.0480	0.0050	0.0185

SITE 72		Date Range: 05/11/00 - 06/15/21 Samples: 187					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	178	123	129	178	28	20
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0035	0.0050	0.0720	0.0008	0.0244
Chlorophyll-a (corrected)	ug/L	181	8.3	9.0	97.9	0.5	11.2
Copper	mg/L	7	0.0076	0.0100	0.0600	0.0010	0.0246
Dissolved Oxygen	% Saturation	88	78.5	82.2	130.9	27.2	16.8
E. Coli	cfu/100mL	0	None	None	None	None	None
Enterococci	cfu/100mL	7	41	52	132	10	39
Lead	mg/L	7	0.0044	0.0050	0.0640	0.0011	0.0229
Nitrogen, Ammonia	mg/L	175	0.090	0.100	3.000	0.015	0.235
Nitrogen, nitrate + nitrite	mg/L	186	0.020	0.026	0.172	0.000	0.028
Nitrogen, Total	mg/L	185	0.61	0.63	2.88	0.10	0.36
Nitrogen, Total Kjeldahl	mg/L	168	0.58	0.60	2.85	0.10	0.36
pH	None	187	7.7	7.8	8.2	6.8	0.2
Phosphorus, orthophosphate	mg/L	184	0.009	0.010	0.100	0.001	0.013
Phosphorus, Total	mg/L	186	0.036	0.035	0.640	0.006	0.046
Salinity	ppth	166	18.7718	27.9050	37.9800	0.0400	10.0421
Specific Conductivity	umho/cm	151	28981	42971	63745	500	15512
Temperature	deg C	182	25.9	27.0	32.5	16.0	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	185	4.9	4.7	31.8	0.5	4.8
Turbidity	NTU	186	3.0	3.1	8.7	0.3	1.3
Zinc	mg/L	8	0.0164	0.0100	0.2780	0.0050	0.0941

Table 5-6 Monitoring Data Summary

ICWW-N River Watershed

SITE 30		Date Range: 05/10/00 - 06/30/21 Samples: 111					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	93	123	125	140	79	9
Arsenic	mg/L	6	0.0035	0.0042	0.0047	0.0021	0.0011
Cadmium	mg/L	8	0.0027	0.0050	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	90	4.0	4.4	36.3	0.5	4.2
Copper	mg/L	7	0.0116	0.0100	0.0900	0.0017	0.0319
Dissolved Oxygen	% Saturation	47	79.4	83.5	92.9	15.6	11.9
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	7	0.0040	0.0050	0.1020	0.0011	0.0375
Nitrogen, Ammonia	mg/L	59	0.049	0.040	0.300	0.010	0.088
Nitrogen, nitrate + nitrite	mg/L	101	0.011	0.010	0.146	0.003	0.026
Nitrogen, Total	mg/L	100	0.29	0.31	2.04	0.02	0.39
Nitrogen, Total Kjeldahl	mg/L	90	0.34	0.30	2.02	0.10	0.38
pH	None	110	7.8	7.8	8.3	7.1	0.2
Phosphorus, orthophosphate	mg/L	93	0.006	0.006	0.100	0.001	0.012
Phosphorus, Total	mg/L	101	0.026	0.024	0.130	0.010	0.016
Salinity	ppth	87	30.0004	32.0000	37.9000	15.6000	5.4014
Specific Conductivity	umho/cm	98	37793	48600	56789	281	11752
Temperature	deg C	108	25.7	26.2	32.3	17.7	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	101	5.6	5.5	18.5	2.0	3.3
Turbidity	NTU	101	2.9	2.9	7.6	1.1	1.3
Zinc	mg/L	8	0.0182	0.0100	0.1210	0.0016	0.0470

Table 5-6 Monitoring Data Summary
Lake Worth Lagoon North Watershed

SITE LWL-1		Date Range: 01/26/99 - 09/16/21 Samples: 156					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0038	0.0036	0.0089	0.0023	0.0023
Cadmium	mg/L	11	0.0006	0.0006	0.0025	0.0002	0.0010
Chlorophyll-a (corrected)	ug/L	128	4.8	5.0	19.7	0.0	3.4
Copper	mg/L	35	0.0027	0.0029	0.0057	0.0013	0.0010
Dissolved Oxygen	mg/L	33	99.7	100.3	119.0	80.7	8.2
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	11	0.0032	0.0024	0.0246	0.0013	0.0070
Nitrogen, Ammonia	mg/L	144	0.009	0.010	0.260	0.001	0.029
Nitrogen, nitrate + nitrite	mg/L	126	0.005	0.003	0.120	0.003	0.020
Nitrogen, Total	mg/L	123	0.34	0.35	0.96	0.00	0.17
Nitrogen, Total Kjeldahl	mg/L	96	0.36	0.35	0.92	0.09	0.17
pH	None	151	7.9	7.9	8.9	7.2	0.2
Phosphorus, orthophosphate	mg/L	139	0.007	0.008	0.104	0.001	0.012
Phosphorus, Total	mg/L	137	0.031	0.032	0.120	0.002	0.017
Salinity	ppth	115	30.5922	31.4000	36.1000	21.1000	3.1255
Specific Conductivity	umho/cm	154	45900	47812	67154	4184	6391
Temperature	deg C	154	26.1	26.8	32.8	14.6	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	121	4.3	5.0	33.0	1.5	5.5
Turbidity	NTU	152	1.6	1.9	6.0	0.1	0.8
Zinc	mg/L	10	0.0046	0.0050	0.0055	0.0034	0.0010

SITE 11		Date Range: 01/26/99 - 09/16/21 Samples: 179					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	130	130	130	130	None
Arsenic	mg/L	30	0.0100	0.0036	2.5000	0.0028	0.7599
Cadmium	mg/L	43	0.0009	0.0004	0.2500	0.0001	0.0640
Chlorophyll-a (corrected)	ug/L	160	2.8	2.7	29.9	0.1	4.4
Copper	mg/L	41	0.0064	0.0038	6.2500	0.0013	1.1228
Dissolved Oxygen	mg/L	42	93.9	94.4	111.0	73.0	7.9
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	41	0.0061	0.0026	2.5000	0.0002	0.6566
Nitrogen, Ammonia	mg/L	170	0.035	0.030	0.250	0.007	0.043
Nitrogen, nitrate + nitrite	mg/L	150	0.042	0.032	1.200	0.007	0.161
Nitrogen, Total	mg/L	150	0.38	0.41	1.87	0.04	0.33
Nitrogen, Total Kjeldahl	mg/L	170	0.33	0.36	1.86	0.04	0.29
pH	None	168	7.8	7.9	8.7	6.6	0.3
Phosphorus, orthophosphate	mg/L	165	0.014	0.025	0.650	0.001	0.054
Phosphorus, Total	mg/L	168	0.034	0.041	1.110	0.001	0.093
Salinity	ppth	145	#NUM!	31.8100	35.9700	0.0000	4.7969
Specific Conductivity	umho/cm	170	43675	48731	54441	425	8464
Temperature	deg C	158	25.9	26.4	32.4	16.5	3.8
Total Hardness	mg/L	5	5433	5570	6120	4680	555
Total Suspended Solids	mg/L	18	15.6	21.5	59.0	1.0	16.0
Turbidity	NTU	174	1.6	1.9	12.4	0.1	1.4
Zinc	mg/L	38	0.0158	0.0100	5.0000	0.0034	1.3617

Table 5-6 Monitoring Data Summary
Lake Worth Lagoon North Watershed

SITE 13		Date Range: 05/11/00 - 09/16/21 Samples: 173					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	32	0.0081	0.0036	2.5000	0.0026	0.7387
Cadmium	mg/L	39	0.0006	0.0003	0.2500	0.0001	0.0672
Chlorophyll-a (corrected)	ug/L	159	3.5	3.8	24.1	0.1	4.3
Copper	mg/L	37	0.0053	0.0026	12.9000	0.0013	2.2758
Dissolved Oxygen	mg/L	42	91.8	92.7	112.3	59.9	10.9
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	38	0.0051	0.0026	2.5000	0.0002	0.6821
Nitrogen, Ammonia	mg/L	168	0.041	0.039	13.000	0.007	1.000
Nitrogen, nitrate + nitrite	mg/L	154	0.045	0.041	1.517	0.003	0.208
Nitrogen, Total	mg/L	157	0.43	0.46	2.14	0.06	0.38
Nitrogen, Total Kjeldahl	mg/L	170	0.38	0.43	1.83	0.04	0.32
pH	None	163	7.8	7.8	8.4	6.4	0.2
Phosphorus, orthophosphate	mg/L	162	0.015	0.024	0.650	0.001	0.057
Phosphorus, Total	mg/L	163	0.035	0.041	1.400	0.001	0.124
Salinity	ppth	144	25.5654	30.2250	38.3000	0.6300	7.4642
Specific Conductivity	umho/cm	162	38217	46757	59740	531	11572
Temperature	deg C	162	26.0	26.6	32.8	16.0	3.8
Total Hardness	mg/L	6	976	4940	5840	0	2122
Total Suspended Solids	mg/L	15	20.4	28.8	56.0	2.5	16.8
Turbidity	NTU	166	1.9	2.2	13.0	0.1	1.4
Zinc	mg/L	33	0.0150	0.0055	5.0000	0.0034	1.4559

SITE LWL-4		Date Range: 04/05/04 - 09/16/21 Samples: 154					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0039	0.0036	0.0090	0.0023	0.0026
Cadmium	mg/L	11	0.0003	0.0003	0.0017	0.0002	0.0005
Chlorophyll-a (corrected)	ug/L	130	2.4	2.1	14.7	0.1	2.6
Copper	mg/L	34	0.0019	0.0018	0.0036	0.0009	0.0007
Dissolved Oxygen	mg/L	35	101.0	100.4	132.3	72.5	9.8
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	11	0.0028	0.0024	0.0157	0.0005	0.0047
Nitrogen, Ammonia	mg/L	146	0.008	0.008	0.390	0.003	0.033
Nitrogen, nitrate + nitrite	mg/L	135	0.004	0.004	0.050	0.003	0.007
Nitrogen, Total	mg/L	134	0.27	0.26	0.74	0.00	0.14
Nitrogen, Total Kjeldahl	mg/L	94	0.29	0.27	0.73	0.13	0.15
pH	None	150	8.0	8.0	9.0	7.5	0.2
Phosphorus, orthophosphate	mg/L	136	0.003	0.003	0.183	0.001	0.016
Phosphorus, Total	mg/L	134	0.022	0.021	0.064	0.010	0.010
Salinity	ppth	118	32.6977	33.3000	36.6000	24.7000	2.6946
Specific Conductivity	umho/cm	153	48882	50540	68870	4594	5845
Temperature	deg C	153	25.6	26.6	32.2	15.2	4.2
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	123	6.4	6.0	52.0	1.5	7.2
Turbidity	NTU	152	2.3	2.4	10.3	0.4	1.7
Zinc	mg/L	10	0.0053	0.0053	0.0197	0.0034	0.0048

Table 5-6 Monitoring Data Summary
Lake Worth Lagoon Central Watershed

SITE LWL-8		Date Range: 01/26/99 - 09/15/21 Samples: 189					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	4	120	124	141	95	19
Arsenic	mg/L	10	0.0040	0.0036	0.0098	0.0023	0.0025
Cadmium	mg/L	22	0.0012	0.0008	0.0060	0.0002	0.0023
Chlorophyll-a (corrected)	ug/L	154	5.7	5.4	41.2	0.5	7.0
Copper	mg/L	42	0.0027	0.0017	0.0500	0.0012	0.0105
Dissolved Oxygen	mg/L	55	94.9	96.6	135.8	61.2	10.9
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	21	0.0039	0.0025	0.0530	0.0011	0.0110
Nitrogen, Ammonia	mg/L	176	0.023	0.024	3.046	0.001	0.242
Nitrogen, nitrate + nitrite	mg/L	168	0.023	0.030	0.430	0.003	0.058
Nitrogen, Total	mg/L	157	0.49	0.48	1.67	0.02	0.30
Nitrogen, Total Kjeldahl	mg/L	102	0.45	0.47	1.50	0.13	0.31
pH	None	185	7.8	7.9	10.6	1.9	0.5
Phosphorus, orthophosphate	mg/L	170	0.014	0.014	0.130	0.001	0.016
Phosphorus, Total	mg/L	168	0.047	0.045	0.270	0.012	0.030
Salinity	ppth	137	25.7886	28.9000	36.4000	9.3200	6.9016
Specific Conductivity	umho/cm	189	38462	43270	63187	2762	10832
Temperature	deg C	188	25.7	26.7	34.1	12.1	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	156	9.1	9.0	82.0	1.0	11.1
Turbidity	NTU	188	4.9	5.4	14.7	1.2	2.6
Zinc	mg/L	22	0.0081	0.0078	0.1200	0.0034	0.0247

SITE 18C		Date Range: 01/30/04 - 09/15/21 Samples: 157					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	32	0.0082	0.0036	2.5000	0.0023	0.7387
Cadmium	mg/L	31	0.0004	0.0002	0.2500	0.0001	0.0751
Chlorophyll-a (corrected)	ug/L	146	4.8	5.6	32.0	0.1	5.6
Copper	mg/L	31	0.0040	0.0017	4.8000	0.0013	0.9979
Dissolved Oxygen	mg/L	40	90.5	92.0	156.6	62.4	15.7
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	31	0.0060	0.0024	2.5000	0.0009	0.7501
Nitrogen, Ammonia	mg/L	143	0.045	0.046	0.310	0.009	0.054
Nitrogen, nitrate + nitrite	mg/L	142	0.076	0.086	1.677	0.006	0.253
Nitrogen, Total	mg/L	138	0.65	0.78	20.80	0.03	1.79
Nitrogen, Total Kjeldahl	mg/L	145	0.55	0.59	20.70	0.04	1.73
pH	None	139	7.8	7.8	9.4	7.1	0.2
Phosphorus, orthophosphate	mg/L	145	0.023	0.036	0.156	0.001	0.024
Phosphorus, Total	mg/L	140	0.059	0.072	1.280	0.001	0.116
Salinity	ppth	111	22.9680	28.6900	3388.0000	4.7400	319.3965
Specific Conductivity	umho/cm	128	33622	44749	55098	537	14410
Temperature	deg C	138	26.7	27.9	33.9	14.1	4.4
Total Hardness	mg/L	5	5171	5320	5800	4590	491
Total Suspended Solids	mg/L	5	35.5	39.8	42.0	20.2	9.3
Turbidity	NTU	150	9.0	11.2	222.0	0.1	21.9
Zinc	mg/L	27	0.0147	0.0055	5.0000	0.0034	1.5987

Table 5-6 Monitoring Data Summary
Lake Worth Lagoon Central Watershed

SITE 18D		Date Range: 07/28/05 - 09/15/21 Samples: 143					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	31	0.0088	0.0036	2.5000	0.0023	0.7494
Cadmium	mg/L	31	0.0005	0.0002	0.2500	0.0001	0.0750
Chlorophyll-a (corrected)	ug/L	133	4.6	5.4	41.1	0.1	8.0
Copper	mg/L	31	0.0041	0.0021	3.0000	0.0013	0.6089
Dissolved Oxygen	mg/L	41	97.3	98.8	132.8	74.5	12.7
Enterococci	CRu/100mL	0	None	None	None	None	None
Lead	mg/L	31	0.0061	0.0026	2.5000	0.0002	0.7500
Nitrogen, Ammonia	mg/L	137	0.041	0.040	0.400	0.007	0.058
Nitrogen, nitrate + nitrite	mg/L	123	0.056	0.064	1.477	0.006	0.229
Nitrogen, Total	mg/L	115	0.53	0.55	3.87	0.03	0.48
Nitrogen, Total Kjeldahl	mg/L	133	0.45	0.49	3.86	0.04	0.41
pH	mg/L	113	7.9	7.9	9.3	7.3	0.2
Phosphorus, orthophosphate	mg/L	132	0.016	0.027	0.500	0.000	0.050
Phosphorus, Total	mg/L	135	0.059	0.062	1.620	0.001	0.163
Salinity	mg/L	104	26.6078	30.2700	352.2000	8.3300	32.7414
SpeCRfic Conductivity	mg/L	111	39542	46300	54782	3311	11427
Temperature	mg/L	126	26.9	27.4	263.7	16.6	21.5
Total Hardness	mg/L	5	5380	5440	5960	4340	648
Total Suspended Solids	mg/L	3	48.0	35.5	126.0	24.8	55.6
Turbidity	mg/L	139	5.0	6.5	72.2	0.1	7.0
Zinc	mg/L	26	0.0124	0.0055	5.0000	0.0034	1.6272

SITE LWL-11		Date Range: 01/26/99 - 09/15/21 Samples: 167					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	10	0.0038	0.0036	0.0173	0.0023	0.0046
Cadmium	mg/L	10	0.0003	0.0003	0.0018	0.0002	0.0005
Chlorophyll-a (corrected)	ug/L	135	5.5	6.1	59.2	0.0	7.1
Copper	mg/L	33	0.0019	0.0017	0.0160	0.0008	0.0033
Dissolved Oxygen	mg/L	37	81.3	93.7	123.8	43.2	22.7
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	10	0.0035	0.0024	0.0198	0.0023	0.0059
Nitrogen, Ammonia	mg/L	153	0.016	0.012	0.410	0.001	0.047
Nitrogen, nitrate + nitrite	mg/L	147	0.013	0.014	0.194	0.003	0.046
Nitrogen, Total	mg/L	141	0.45	0.48	1.54	0.00	0.27
Nitrogen, Total Kjeldahl	mg/L	92	0.47	0.49	1.40	0.05	0.27
pH	None	165	7.9	8.0	10.7	1.8	0.6
Phosphorus, orthophosphate	mg/L	151	0.009	0.010	0.086	0.001	0.013
Phosphorus, Total	mg/L	147	0.043	0.044	0.180	0.002	0.023
Salinity	ppth	125	27.5583	29.8000	36.4000	11.3000	6.0432
Specific Conductivity	umho/cm	167	41035	45300	65170	3117	9826
Temperature	deg C	167	26.0	26.8	233.0	13.0	16.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	133	9.0	8.0	65.0	1.0	8.1
Turbidity	NTU	167	4.4	4.8	29.5	0.1	3.5

Table 5-6 Monitoring Data Summary
ICWW-S Watershed

SITE LWL-13		Date Range: 04/05/04 - 09/14/21 Samples: 160					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0039	0.0036	0.0095	0.0023	0.0026
Cadmium	mg/L	11	0.0003	0.0003	0.0008	0.0002	0.0002
Chlorophyll-a (corrected)	ug/L	136	4.9	4.2	39.5	1.6	5.6
Copper	mg/L	35	0.0017	0.0017	0.0050	0.0009	0.0008
Dissolved Oxygen	mg/L	34	81.7	93.0	134.7	52.3	21.2
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	11	0.0030	0.0025	0.0229	0.0005	0.0066
Nitrogen, Ammonia	mg/L	154	0.013	0.011	0.500	0.002	0.055
Nitrogen, nitrate + nitrite	mg/L	143	0.010	0.005	0.200	0.003	0.044
Nitrogen, Total	mg/L	135	0.38	0.38	1.72	0.00	0.28
Nitrogen, Total Kjeldahl	mg/L	95	0.39	0.35	1.40	0.16	0.26
pH	None	157	8.0	8.0	9.2	7.0	0.2
Phosphorus, orthophosphate	mg/L	149	0.006	0.007	0.067	0.001	0.012
Phosphorus, Total	mg/L	141	0.033	0.031	0.170	0.013	0.021
Salinity	ppth	121	29.1912	31.6000	37.2000	14.4000	5.5883
Specific Conductivity	umho/cm	159	44287	48233	385822	3532	28475
Temperature	deg C	159	25.7	26.7	33.3	11.7	4.2
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	126	6.3	6.0	28.0	1.0	5.1
Turbidity	NTU	149	2.8	2.8	12.0	0.7	1.8
Zinc	mg/L	10	0.0046	0.0050	0.0055	0.0034	0.0010

SITE LWL-18		Date Range: 05/11/00 - 09/14/21 Samples: 166					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0034	0.0025	0.0087	0.0023	0.0018
Cadmium	mg/L	19	0.0017	0.0008	0.0050	0.0002	0.0021
Chlorophyll-a (corrected)	ug/L	137	8.2	5.2	58.1	0.0	8.3
Copper	mg/L	41	0.0051	0.0032	0.0500	0.0013	0.0076
Dissolved Oxygen	mg/L	39	80.1	83.0	131.9	0.0	25.6
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	18	0.0054	0.0025	0.0250	0.0008	0.0064
Nitrogen, Ammonia	mg/L	157	0.034	0.019	0.410	0.003	0.045
Nitrogen, nitrate + nitrite	mg/L	149	0.033	0.018	0.210	-0.005	0.041
Nitrogen, Total	mg/L	140	0.49	0.43	1.51	0.00	0.26
Nitrogen, Total Kjeldahl	mg/L	106	0.86	0.44	39.00	0.07	3.75
pH	None	162	7.9	7.9	9.1	6.5	0.3
Phosphorus, orthophosphate	mg/L	155	0.022	0.015	0.160	0.001	0.024
Phosphorus, Total	mg/L	149	0.051	0.043	0.230	0.001	0.032
Salinity	ppth	120	28.5714	30.3000	36.7000	9.3700	6.1275
Specific Conductivity	umho/cm	164	43431	45994	64472	3790	9607
Temperature	deg C	163	26.8	27.0	33.6	16.3	4.0
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	133	10.4	8.0	56.0	1.0	8.2
Turbidity	NTU	154	4.0	3.6	17.0	0.7	2.1
Zinc	mg/L	18	0.0171	0.0076	0.1160	0.0019	0.0268

Table 5-6 Monitoring Data Summary
Hillsboro Watershed

SITE 1		Date Range: 02/22/06 - 09/01/21 Samples: 60					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	49	5.5	6.2	27.1	1.2	4.4
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	14	65.4	68.8	83.9	41.0	13.2
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	9	0.068	0.071	0.143	0.036	0.033
Nitrogen, nitrate + nitrite	mg/L	11	0.042	0.057	0.488	0.001	0.136
Nitrogen, Total	mg/L	46	0.76	0.77	1.75	0.25	0.38
Nitrogen, Total Kjeldahl	mg/L	11	0.82	1.02	1.65	0.28	0.46
pH	None	10	7.5	7.6	7.7	7.4	0.1
Phosphorus, orthophosphate	mg/L	3	0.058	0.059	0.061	0.054	0.004
Phosphorus, Total	mg/L	42	0.101	0.102	0.542	0.045	0.075
Salinity	ppth	57	11.0827	18.0000	33.7000	0.1810	9.2917
Specific Conductivity	umho/cm	55	19083	28600	49200	659	14239
Temperature	deg C	13	26.9	28.4	31.6	20.1	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	20	1.8	1.8	4.4	1.0	0.9
Zinc	mg/L	0	None	None	None	None	None

SITE 2		Date Range: 02/22/06 - 08/25/21 Samples: 60					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	55	6.5	6.5	37.2	0.8	8.2
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	14	69.7	79.2	95.8	40.3	19.7
Enterococci	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	9	0.044	0.051	0.102	0.004	0.029
Nitrogen, nitrate + nitrite	mg/L	11	0.053	0.042	0.315	0.004	0.096
Nitrogen, Total	mg/L	47	1.21	1.23	1.68	0.67	0.22
Nitrogen, Total Kjeldahl	mg/L	11	1.09	1.07	1.53	0.59	0.29
pH	None	10	7.6	7.6	7.9	7.3	0.2
Phosphorus, orthophosphate	mg/L	3	0.082	0.105	0.110	0.047	0.035
Phosphorus, Total	mg/L	40	0.083	0.095	0.270	0.025	0.051
Salinity	ppth	30	0.3234	0.3100	3.2500	0.2100	0.5399
Specific Conductivity	umho/cm	56	590	631	806	66	116
Temperature	deg C	13	26.7	27.8	31.7	20.6	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	19	1.1	1.2	3.1	0.5	0.6
Zinc	mg/L	0	None	None	None	None	None

Table 5-6 Monitoring Data Summary

Hillsboro Watershed

SITE 3		Date Range: 02/22/06 - 08/25/21 Samples: 61					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	40	7.1	10.4	33.2	0.8	8.6
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	4	61.7	66.3	83.3	39.6	18.1
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	4	0.087	0.083	0.210	0.042	0.075
Nitrogen, nitrate + nitrite	mg/L	4	0.039	0.027	0.156	0.022	0.066
Nitrogen, Total	mg/L	31	1.42	1.42	1.68	1.04	0.15
Nitrogen, Total Kjeldahl	mg/L	3	1.30	1.37	1.53	1.06	0.24
pH	None	4	7.6	7.6	7.8	7.5	0.1
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	27	0.098	0.103	0.257	0.039	0.055
Salinity	ppth	16	0.3509	0.3200	2.0000	0.2100	0.4238
Specific Conductivity	umho/cm	44	647	668	834	413	100
Temperature	deg C	4	26.1	27.0	31.6	20.4	4.9
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	4	0.8	0.9	1.2	0.5	0.3
Zinc	mg/L	0	None	None	None	None	None

SITE S39		Date Range: 01/03/00 - 09/08/21 Samples: 257					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	226	74	120	347	1	61
Arsenic	mg/L	2	2.9626	3.1535	4.2340	2.0730	1.5281
Cadmium	mg/L	2	0.1500	0.1500	0.1500	0.1500	0.0000
Chlorophyll-a (corrected)	ug/L	0	None	None	None	None	None
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	45	72.7	74.2	93.8	29.2	14.0
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	2	0.4000	0.4000	0.4000	0.4000	0.0000
Nitrogen, Ammonia	mg/L	231	0.016	0.017	0.167	0.003	0.020
Nitrogen, nitrate + nitrite	mg/L	256	0.010	0.009	0.875	0.002	0.083
Nitrogen, Total	mg/L	46	0.25	1.02	1.62	0.01	0.61
Nitrogen, Total Kjeldahl	mg/L	224	1.14	1.32	2.71	0.03	0.44
pH	None	257	7.7	7.7	8.5	6.8	0.3
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	257	0.017	0.017	0.169	0.001	0.019
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	0	None	None	None	None	None
Temperature	deg C	257	25.3	26.5	31.5	13.7	4.0
Total Hardness	mg/L	162	102	141	354	0	64
Total Suspended Solids	mg/L	114	1.9	1.5	11.0	0.5	1.6
Turbidity	NTU	246	1.1	1.1	11.3	0.1	1.5
Zinc	mg/L	2	2.0000	2.0000	2.0000	2.0000	0.0000

Table 5-6 Monitoring Data Summary
L-8 Watershed

SITE Culv10a		Date Range: 01/10/00 - 09/20/21 Samples: 251					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	249	116	114	375	1	51
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	12	2.3	3.1	10.3	0.5	3.5
Copper	mg/L	5	2.3733	3.0270	4.5710	0.6000	1.4254
Dissolved Oxygen	mg/L	241	8.6	7.5	99.8	0.5	25.7
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	5	0.8600	0.4000	4.7300	0.4000	1.8752
Nitrogen, Ammonia	mg/L	249	0.041	0.034	3.074	0.005	0.308
Nitrogen, nitrate + nitrite	mg/L	249	0.198	0.291	6.557	0.002	0.484
Nitrogen, Total	mg/L	42	2.09	1.83	4.95	1.43	0.82
Nitrogen, Total Kjeldahl	mg/L	209	1.52	1.48	4.78	0.03	0.70
pH	None	248	7.8	7.9	9.2	6.4	0.4
Phosphorus, orthophosphate	mg/L	249	0.048	0.053	0.177	0.002	0.026
Phosphorus, Total	mg/L	249	0.145	0.148	0.669	0.002	0.097
Salinity	ppth	3	0.1598	0.1600	0.1700	0.1500	0.0100
Specific Conductivity	umho/cm	248	507	465	3390	83	362
Temperature	deg C	248	24.2	25.8	31.7	9.0	4.6
Total Hardness	mg/L	83	159	144	774	46	101
Total Suspended Solids	mg/L	249	24.5	25.0	360.0	0.5	54.5
Turbidity	NTU	249	27.5	28.6	284.0	0.1	47.4
Zinc	mg/L	5	3.1486	2.0000	8.2950	2.0000	2.7690

Table 5-6 Monitoring Data Summary
S-2-6-7 Watershed

SITE S-2		Date Range: 01/25/99 - 07/26/21 Samples: 268					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	40	159	121	391	94	98
Arsenic	mg/L	13	0.0027	0.0040	0.0076	0.0008	0.0023
Cadmium	mg/L	12	0.0002	0.0002	0.0005	0.0002	0.0001
Chlorophyll-a (corrected)	ug/L	7	2.6	3.1	52.1	0.5	18.8
Copper	mg/L	13	0.0012	0.0012	0.0030	0.0006	0.0010
Dissolved Oxygen	% Saturation	29	65.1	77.9	96.0	2.2	20.9
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	13	0.0004	0.0004	0.0004	0.0004	0.0000
Nitrogen, Ammonia	mg/L	261	0.103	0.104	2.057	0.003	0.376
Nitrogen, nitrate + nitrite	mg/L	261	0.180	0.227	2.726	0.002	0.497
Nitrogen, Total	mg/L	38	1.79	1.44	5.11	1.04	1.06
Nitrogen, Total Kjeldahl	mg/L	218	1.62	1.60	12.81	0.03	1.65
pH	None	259	7.7	7.7	8.7	6.8	0.3
Phosphorus, orthophosphate	mg/L	261	0.034	0.044	0.232	0.001	0.048
Phosphorus, Total	mg/L	262	0.092	0.104	1.653	0.001	0.151
Salinity	ppth	2	0.7200	0.7500	0.9600	0.5400	0.2970
Specific Conductivity	umho/cm	259	728	624	2079	145	423
Temperature	deg C	259	24.7	25.6	32.2	13.0	4.3
Total Hardness	mg/L	14	189	145	496	125	111
Total Suspended Solids	mg/L	261	6.6	6.3	131.2	0.5	13.0
Turbidity	NTU	261	6.3	6.6	70.4	0.1	10.3
Zinc	mg/L	13	0.0022	0.0020	0.0066	0.0020	0.0013

SITE 39		Date Range: 04/18/17 - 09/28/21 Samples: 25					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	1	151	151	151	151	None
Arsenic	mg/L	23	0.0064	0.0036	2.2350	0.0007	0.6428
Cadmium	mg/L	23	0.0003	0.0002	0.1950	0.0001	0.0561
Chlorophyll-a (corrected)	ug/L	24	3.4	4.1	14.0	0.5	4.1
Copper	mg/L	23	0.0025	0.0013	0.9750	0.0003	0.2805
Dissolved Oxygen	% Saturation	25	48.5	65.6	84.6	2.2	24.8
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	23	0.0043	0.0023	2.1000	0.0007	0.6043
Nitrogen, Ammonia	mg/L	25	0.090	0.074	2.600	0.018	0.586
Nitrogen, nitrate + nitrite	mg/L	22	0.157	0.235	1.400	0.017	0.310
Nitrogen, Total	mg/L	22	1.30	1.51	4.82	0.06	1.17
Nitrogen, Total Kjeldahl	mg/L	25	0.79	1.10	4.80	0.03	1.11
pH	None	23	7.9	7.9	9.2	7.3	0.4
Phosphorus, orthophosphate	mg/L	24	0.053	0.075	0.340	0.002	0.078
Phosphorus, Total	mg/L	25	0.081	0.110	0.450	0.003	0.099
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	25	635	511	2640	374	515
Temperature	deg C	25	25.0	25.8	34.1	17.3	4.6
Total Hardness	mg/L	22	227	203	781	129	160
Total Suspended Solids	mg/L	23	6.8	5.2	43.6	2.5	11.8
Turbidity	NTU	25	7.7	6.3	45.0	1.1	11.7
Zinc	mg/L	23	0.0060	0.0055	0.0202	0.0015	0.0036

Table 5-6 Monitoring Data Summary
S-2-6-7 Watershed

SITE 43		Date Range: 04/18/17 - 09/28/21 Samples: 25					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	23	0.0048	0.0036	2.2350	0.0007	0.4652
Cadmium	mg/L	23	0.0003	0.0002	0.1950	0.0001	0.0406
Chlorophyll-a (corrected)	ug/L	24	5.3	7.2	61.2	0.5	12.3
Copper	mg/L	23	0.0018	0.0013	0.9750	0.0003	0.2030
Dissolved Oxygen	% Saturation	25	59.7	69.4	160.0	19.0	28.4
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	23	0.0043	0.0023	2.1000	0.0007	0.6043
Nitrogen, Ammonia	mg/L	25	0.086	0.063	1.700	0.018	0.457
Nitrogen, nitrate + nitrite	mg/L	25	0.174	0.240	1.400	0.013	0.333
Nitrogen, Total	mg/L	25	1.67	1.46	4.10	0.75	1.00
Nitrogen, Total Kjeldahl	mg/L	25	1.43	1.22	3.60	0.73	0.80
pH	None	23	7.9	7.9	9.1	7.1	0.5
Phosphorus, orthophosphate	mg/L	24	0.049	0.049	0.200	0.003	0.058
Phosphorus, Total	mg/L	25	0.115	0.110	0.250	0.036	0.057
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	25	599	501	2272	395	451
Temperature	ECg C	25	25.1	25.5	32.6	17.6	4.4
Total Hardness	mg/L	22	226	186	630	138	139
Total SuspenECd Solids	mg/L	23	4.8	5.0	35.3	0.8	7.2
Turbidity	NTU	25	7.7	7.1	35.0	0.5	9.7
Zinc	mg/L	23	0.0059	0.0055	0.0200	0.0015	0.0040

Table 5-6 Monitoring Data Summary
WPBWS Watershed

SITE M Canal		Date Range: 03/15/11 - 09/22/21 Samples: 90					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	58	3.5	4.4	24.3	0.5	4.8
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	5	96.6	96.6	118.5	78.0	14.7
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	0	None	None	None	None	None
Nitrogen, nitrate + nitrite	mg/L	65	0.115	0.170	3.600	0.005	0.582
Nitrogen, Total	mg/L	68	1.32	1.25	5.20	0.66	0.84
Nitrogen, Total Kjeldahl	mg/L	64	1.09	1.10	3.00	0.30	0.47
pH	None	69	7.8	7.8	8.6	6.8	0.3
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	66	0.092	0.093	0.600	0.018	0.094
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	0	None	None	None	None	None
Temperature	deg C	69	26.7	27.6	33.2	18.4	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	69	13.5	12.0	152.0	2.5	26.8
Zinc	mg/L	0	None	None	None	None	None

SITE Control 4		Date Range: 04/15/11 - 09/22/21 Samples: 121					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	56	2.2	1.5	18.7	0.5	4.4
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	120	9.6	5.6	106.1	0.1	32.7
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	0	None	None	None	None	None
Nitrogen, nitrate + nitrite	mg/L	66	0.058	0.036	0.530	0.013	0.163
Nitrogen, Total	mg/L	66	1.04	1.03	1.90	0.04	0.32
Nitrogen, Total Kjeldahl	mg/L	56	0.90	0.97	1.70	0.04	0.22
pH	None	121	7.5	7.5	8.7	6.2	0.4
Phosphorus, orthophosphate	mg/L	42	0.015	0.013	0.082	0.002	0.024
Phosphorus, Total	mg/L	63	0.055	0.051	0.160	0.017	0.036
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	76	377	398	1697	0	266
Temperature	deg C	121	25.9	26.4	34.1	18.3	3.5
Total Hardness	mg/L	67	141	142	252	76	40
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	119	5.7	5.3	48.4	0.9	9.0
Zinc	mg/L	0	None	None	None	None	None

Table 5-6 Monitoring Data Summary

WPBWS Watershed

SITE Lake Mangonia		Date Range: 03/15/11 - 09/22/21 Samples: 64					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	54	3.7	5.6	34.6	0.5	7.2
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	64	12.5	7.7	112.0	5.1	37.0
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	0	None	None	None	None	None
Nitrogen, nitrate + nitrite	mg/L	61	0.024	0.017	1.300	0.005	0.191
Nitrogen, Total	mg/L	64	0.84	0.80	2.40	0.60	0.28
Nitrogen, Total Kjeldahl	mg/L	56	0.80	0.79	1.20	0.56	0.14
pH	None	64	8.2	8.2	8.7	7.2	0.3
Phosphorus, orthophosphate	mg/L	24	0.006	0.005	0.180	0.002	0.036
Phosphorus, Total	mg/L	58	0.025	0.025	0.200	0.003	0.024
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	64	476	453	970	274	152
Temperature	deg C	64	26.0	27.0	31.8	19.3	3.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	64	2.7	2.6	8.9	0.6	1.6
Zinc	mg/L	0	None	None	None	None	None

SITE Clear Lake		Date Range: 03/15/11 - 09/22/21 Samples: 64					
		Count	Geometric Mean	Median	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	11	1.9	1.4	8.8	0.5	3.4
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	mg/L	21	7.9	7.8	10.0	6.6	0.8
E. Coli	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	0	None	None	None	None	None
Nitrogen, nitrate + nitrite	mg/L	18	0.053	0.061	1.800	0.013	0.439
Nitrogen, Total	mg/L	21	0.80	0.74	2.30	0.21	0.47
Nitrogen, Total Kjeldahl	mg/L	18	0.66	0.66	1.50	0.18	0.29
pH	None	21	8.3	8.3	8.7	7.9	0.2
Phosphorus, orthophosphate	mg/L	0	None	None	None	None	None
Phosphorus, Total	mg/L	21	0.012	0.012	0.025	0.001	0.009
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	21	495	496	850	304	152
Temperature	deg C	21	25.9	27.3	30.8	21.0	3.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	21	1.3	1.3	2.5	0.6	0.5
Zinc	mg/L	0	None	None	None	None	None

TABLE 5-7

Summary of Geometric Mean Values for TN, TP, Chl-a

January 1999 - September 2021

Watershed	Site	Total Nitrogen mg/L	Total Phosphorus mg/L	Chlorophyll-a ug/L
C-15	31E	1.44	0.24	16.31
	31C	1.17	0.13	13.40
	31B	0.98	0.10	9.66
C-16	22	1.00	0.06	10.35
	24	0.67	0.04	10.68
	27B	1.39	0.16	11.85
	27A	1.04	0.10	10.36
	28	0.84	0.06	7.35
C-17	12A	1.22	0.05	10.74
	C17S44	0.85	0.04	9.16
C-18	16	0.96	0.03	3.68
	15	0.86	0.02	1.96
	92	0.82	0.02	3.73
	81	0.77	0.02	4.78
C-51	38B	1.49	0.09	5.90
	37B	0.83	0.05	3.90
	C51S155	1.08	0.06	1.74
Lox	69	0.98	0.04	2.93
	51	0.01	0.01	4.00
	62	0.03	0.02	5.26
	72	0.02	0.01	8.31
ICWW-N	30	0.29	0.03	4.01
LWL-N	LWL-1	0.34	0.03	4.75
	11	0.38	0.03	2.80
	13	0.43	0.04	3.50
	LWL-4	0.27	0.02	2.39
LWL-C	LWL-8	0.49	0.05	5.67
	18C	0.65	0.06	4.85
	18D	0.53	0.06	4.59
	LWL-11	0.45	0.04	5.51
ICWW-S	LWL-13	0.38	0.03	4.88
	LWL-18	0.41	0.04	5.72
Hillsboro	1	0.76	0.10	5.47
	2	1.21	0.08	6.53
	3	1.39	0.09	6.99
	S39	0.15	0.02	
L-8	Culv10a	1.97	0.14	1.53
S-2-6-7	S-2		0.09	2.65
	39	1.30	0.08	3.42
	43	1.67	0.11	5.32
WPBWS	M Canal	1.32	0.09	3.37
	Control 4	1.04	0.05	2.17
	Lake Mangonia	0.84	0.02	3.73
	Clear Lake	0.80	0.02	2.62

- C-15, a Class III Freshwater has a minimum level of chlorophyll-a (corrected) AGM of 20 µg/L
- Northern Lake Worth Lagoon has a minimum level of chlorophyll-a (corrected) AGM of 2.9 µg/L
- Northern Lake Worth Lagoon has a minimum level of Total Nitrogen AGM of .54 mg/L
- Northern Lake Worth Lagoon has a minimum level of Total Phosphorus AGM of .044 mg/L
- Central Lake Worth Lagoon has a minimum level of Total Nitrogen AGM of .66 mg/L
- Central Lake Worth Lagoon has a minimum level of Total Phosphorus AGM of .049 mg/L

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 1 of 4)

	C-15				C-16						C-17		
	31E	31C	31B	Basin	22	24	27B	27A	28	Basin	12A	C17S44	Basin
2012	○	○	○	○	●	●	○	○	○	○	○	○	○
2013	○	○	○	○	●	●	○	○	○	○	○	○	○
2014	○	○	○	○	●	●	○	○	○	○	○	○	○
2015	○	○	○	○	●	●	○	○	○	○	○	○	○
2016	○	○	○	○	●	●	○	○	○	○	○	○	○
2017	○	○	○	○	●	●	○	○	○	○	○	○	○
2018	○	○	○	○	●	●	○	○	○	○	○	○	○
2019	○	○	○	○	●	○	○	○	○	○	○	○	○
2020	○	○	○	○	●	○	○	○	○	○	○	○	○
2021	○	○	○	○	●	○	○	○	○	○	○	○	○
FDEP Criteria	No Criteria	No Criteria	No Criteria	No Criteria	Varies	Varies	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria

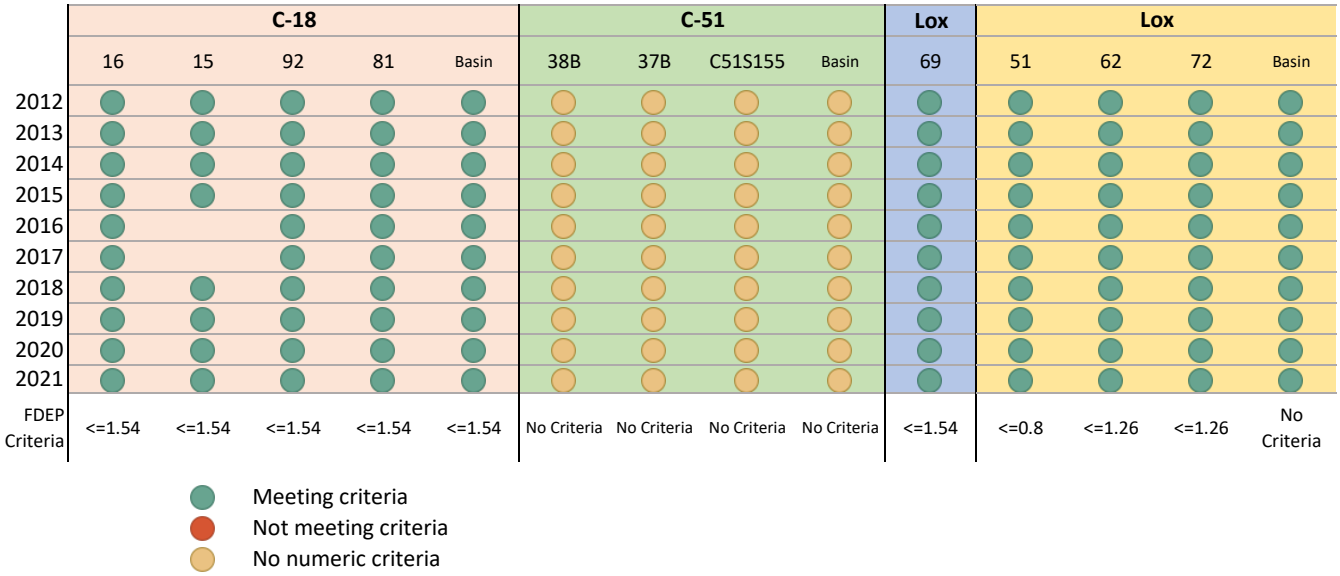
● Meeting criteria
● Not meeting criteria
○ No numeric criteria

Values Used (mg/l)

2012	1.30	1.08	0.97	1.11	1.01	1.00	1.44	1.16	1.01	1.11	1.16	0.91	1.02
2013	1.20	1.00	0.97	1.05	0.80	0.76	1.18	0.92	1.01	0.92	0.92	0.89	0.91
2014	1.30	0.84	0.76	0.94	0.82	0.72	1.14	0.86	0.74	0.85	0.93	0.39	0.60
2015	1.21	0.76	0.88	0.93	0.91	0.83	1.31	0.80	1.46	1.03	1.07	0.77	0.91
2016	1.61	1.09	1.02	1.21	0.96	0.85	1.33	1.22	0.82	1.02	0.98	0.88	0.93
2017	1.19	1.09	1.07	1.12	0.84	1.05	1.43	1.22	0.57	0.97	1.03	0.69	0.84
2018	1.19	1.00	0.92	1.03	1.13	0.90	1.29	0.39	0.80	0.84	0.39	0.86	0.58
2019	1.33	0.99	0.56	0.90	0.92	0.09	1.34	0.51	0.31	0.44	0.98	0.78	0.88
2020	1.07	0.96	0.89	0.97	0.93	0.15	0.84	0.62	0.14	0.40	0.68	0.78	0.73
2021	1.07	0.94	0.95	0.99	0.92	0.15	1.01	1.00	0.06	0.38	0.38	0.74	0.53

Varies for sites 22 and 24 TN ≤ 1.27 AGM when Chlorophyll-a >20 mg/l
TN ≤ 2.23 AGM when Chlorophyll-a ≤20 mg/l

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 2 of 4)



Values Used (mg/l)

2012	1.08	0.93	0.95	0.90	0.96	1.40	0.76	0.95	1.00	1.30	0.22	0.57	0.51	0.40
2013	0.87	0.64	0.88	0.82	0.79	1.15	1.26	1.96	1.42	0.81	0.15	0.62	0.41	0.33
2014	0.66	0.66	0.23	0.25	0.39	1.39	1.16	0.73	1.06	0.91	0.35	0.79	0.57	0.54
2015	0.77	0.76	0.80	0.74	0.77	1.19	1.09	0.97	1.08	0.85	0.20	0.58	0.52	0.39
2016	0.94		0.97	0.91	0.94	1.37	1.02	1.14	1.17	0.91	0.25	0.72	0.70	0.50
2017	0.88		0.87	0.97	0.91	1.14	0.80	0.79	0.90	1.01	0.22	0.57	0.69	0.44
2018	1.08	0.27	1.13	0.83	0.72	2.22	1.65	1.34	1.70	0.95	0.52	0.71	0.79	0.66
2019	0.96	0.74	0.84	0.87	0.85	0.48	0.14	0.96	0.40	0.87	0.27	0.69	0.58	0.47
2020	0.62	0.70	0.81	0.87	0.74	1.75	0.17	0.88	0.64	0.84	0.43	0.69	0.63	0.57
2021	0.95	0.76	1.00	0.86	0.89	1.03	0.09	0.68	0.40	0.94	0.30	0.54	0.56	0.45

Table 5-8
Total Nitrogen (Annual Geometric Mean)
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	ICWW-N	LWL-N					LWL-C					ICWW-S		
	30	LWL-1	11	13	LWL-4	Basin	LWL-8	18C	18D	LWL-11	Basin	LWL-13	LWL-18	Basin
2012	●	●	●	●		●	●	●	●	●	●	●	●	●
2013	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2014	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2015	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2016	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2017	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2020	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FDEP Criteria	<=0.66	<=0.54	<=0.54	<=0.54	<=0.54	<=0.54	<=0.66	<=0.66	<=0.66	<=0.66	<=0.66	<=0.59	<=0.59	<=0.59

● Meeting criteria
● Not meeting criteria
● No numeric criteria

Values Used (mg/l)

2012	0.21	0.33	0.72	0.81		0.58	0.42	0.94	0.84	0.42	0.61	0.35	0.42	0.3854
2013	0.15	0.28	0.53	0.59	0.23	0.38	0.54	0.93	0.90	0.48	0.68	0.41	0.44	0.4217
2014	0.24	0.19	0.25	0.33	0.14	0.22	0.32	0.65	0.52	0.16	0.37	0.14	0.15	0.1442
2015	0.20	0.32	0.22	0.25	0.21	0.25	0.39	0.62	0.30	0.39	0.41	0.30	0.46	0.3718
2016	0.25	0.33	0.23	0.37	0.31	0.31	0.55	0.45	0.30	0.53	0.45	0.32	0.46	0.3882
2017	0.25	0.34	0.13	0.14	0.25	0.20	0.67	0.21	0.15	0.66	0.35	0.99	0.56	0.7437
2018	0.37	0.41	0.20	0.40	0.31	0.32	0.74		0.70	0.47	0.62	0.44	0.27	0.34
2019	0.28	0.33	0.29	0.31	0.24	0.29	0.42	0.43	0.42	0.43	0.42	0.34	0.36	0.35
2020	0.36	0.31	0.18	0.22	0.25	0.23	0.35	0.48	0.37	0.38	0.39	0.33	0.34	0.34
2021	0.25	0.27	0.22	0.16	0.18	0.20	0.33	0.11	0.35	0.33	0.26	0.35	0.39	0.37

Table 5-8
Total Nitrogen (Annual Geometric Mean)
(Page 4 of 4)

	Hillsboro					L-8	S-2-6-7				WPBWS				
	1	2	3	S39	Basin	Culv10A	S-2	39	43	Basin	M Canal	Control 4	Lake Mangonia	Clear Lake	Basin
2012	●	●	●		●						●		●	●	●
2013	●	●	●		●						●		●	●	●
2014											●	●	●	●	●
2015											●	●	●	●	●
2016	●	●	●		●						●	●	●	●	●
2017	●	●	●		●			●	●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2019	●	●	●		●	●	●	●	●	●	●	●	●	●	●
2020	●	●	●		●		●	●	●	●	●	●	●	●	●
2021	●	●	●		●		●	●	●	●	●	●	●	●	●
FDEP Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	1.05 to 1.91	1.05 to 1.91	1.05 to 1.91

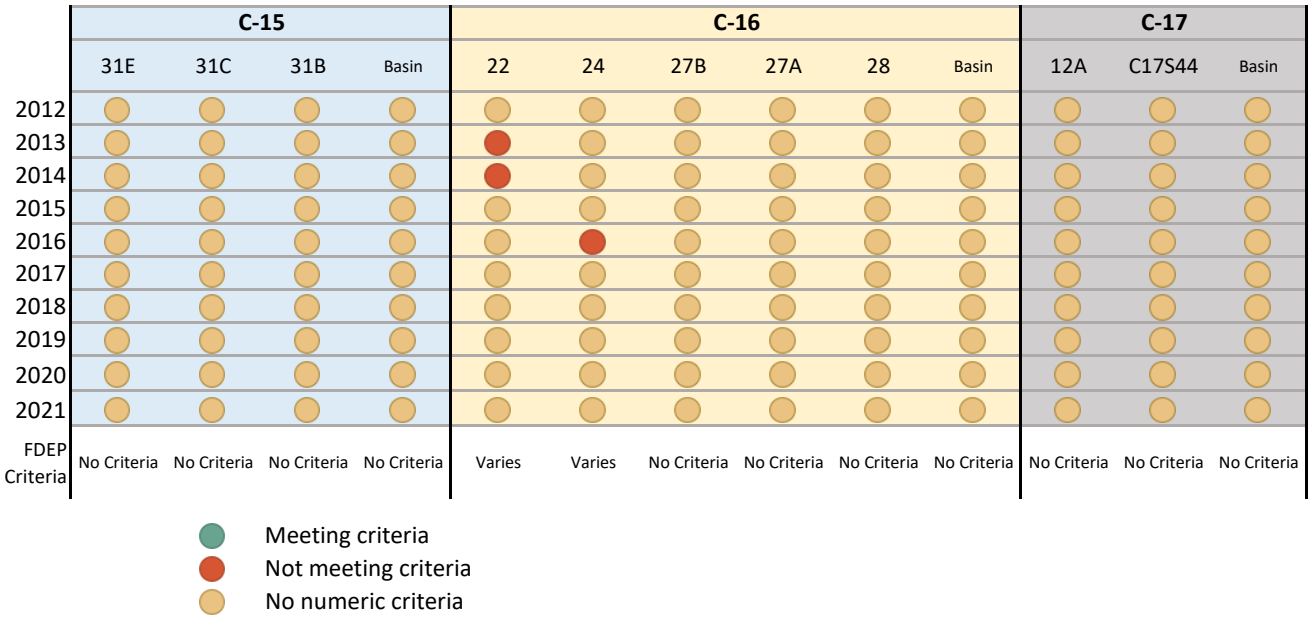
● No numeric criteria

Values Used (mg/l)

2012	0.75	1.36	1.42		1.13						1.14		0.88	0.75	0.91
2013	0.67	1.30	1.38		1.06						1.30		0.79	0.67	0.88
2014											1.40	1.12	0.89	1.00	1.09
2015											1.25	0.94	0.95	0.91	1.00
2016	1.19	1.25	1.42		1.28						1.34	1.11	0.84	0.89	1.03
2017	0.59	1.38	1.38		1.04			4.23	5.22	4.70	1.61	1.19	0.95	0.82	1.11
2018	1.41	1.47	1.52	0.03	0.56	2.23	1.77	1.62	1.57	1.65	1.24	1.08	0.85	0.80	0.98
2019	0.60	1.13	1.45		0.99	2.21	1.79	2.00	1.93	1.90	1.38	1.12	0.80	0.75	0.98
2020	0.68	1.02	1.22	0.33	0.73	1.78	2.15	0.49	1.79	1.23	1.20	1.10	0.74	0.71	0.91
2021	0.61	1.02	1.17	1.16	0.96	2.29	1.84	1.62	1.49	1.64	1.3	0.70	0.75	0.70	0.83

Varies for Lake Magnonia and Clear Lake TN ≤ 1.27 AGM when Chlorophyll-a >20 mg/l
TN ≤ 2.23 AGM when Chlorophyll-a ≤20 mg/l

Table 5-9
Total Phosphorus (Annual Geometric Mean)

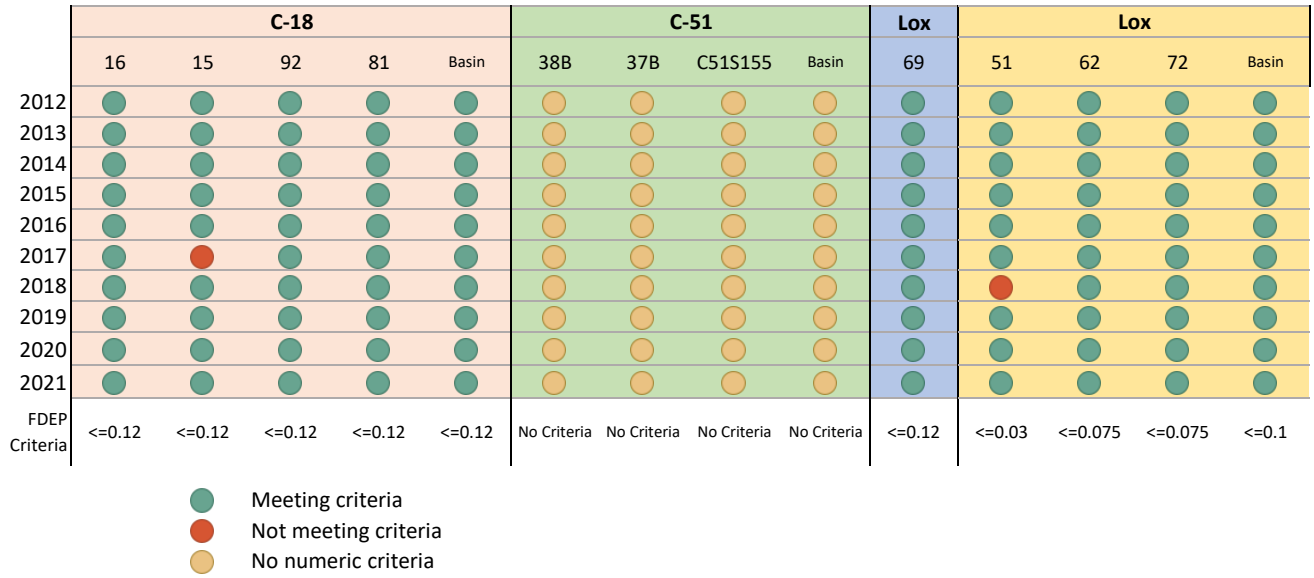


Values Used (mg/l)

2012	0.24	0.12	0.09	0.14	0.05	0.05	0.14	0.12	0.06	0.08	0.06	0.05	0.05
2013	0.25	0.15	0.09	0.15	0.06	0.07	0.07	0.10	0.06	0.07	0.06	0.05	0.05
2014	0.28	0.12	0.10	0.15	0.12	0.06	0.18	0.11	0.07	0.10	0.05	0.04	0.05
2015	0.16	0.07	0.05	0.08	0.05	0.07	0.16	0.05	0.05	0.07	0.04	0.04	0.04
2016	0.30	0.16	0.13	0.19	0.06	0.05	0.33	0.14	0.14	0.11	0.06	0.04	0.05
2017	0.18	0.12	0.02	0.08	0.01	0.02	0.11	0.07	0.03	0.03	0.05	0.03	0.04
2018	0.16	0.12		0.13	0.07	0.06	0.14	0.03	0.08	0.07	0.06	0.05	0.06
2019	0.32	0.13	0.07	0.15	0.07	0.00	0.17	0.03	0.02		0.07	0.05	
2020	0.25	0.12	0.10	0.14	0.06	0.01	0.11	0.07	0.01	0.03	0.05	0.05	0.05
2021	0.19	0.14	0.11	0.14	0.07	0.01	0.11	0.10	0.00	0.02	0.03	0.04	0.03

Varies for sites 22 and 24 TP ≤ 0.050 AGM when Chlorophyll-a >20 mg/l
TP ≤ 0.16 AGM when Chlorophyll-a ≤20 mg/l

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 2 of 4)



Values Used (mg/l)

2012	0.03	0.01	0.02	0.02	0.02	0.13	0.04	0.03	0.06	0.04	0.03	0.04	0.04	0.03
2013	0.03	0.00	0.02	0.02	0.02	0.09	0.08	0.06	0.08	0.03	0.03	0.06	0.04	0.04
2014	0.01	0.01	0.04	0.02	0.02	0.11	0.14	0.06	0.10	0.04	0.03	0.06	0.04	0.04
2015	0.02	0.01	0.02	0.02	0.02	0.11	0.08	0.08	0.09	0.03	0.02	0.05	0.04	0.03
2016	0.02	0.01	0.03	0.03	0.02	0.08	0.09	0.06	0.08	0.03	0.02	0.05	0.05	0.04
2017	0.03	0.15	0.04	0.02	0.04	0.18	0.05	0.06	0.08	0.04	0.02	0.04	0.03	0.03
2018	0.02	0.01	0.06	0.03	0.02	0.16	0.11	0.09	0.11	0.06	0.03		0.04	0.03
2019	0.03	0.01	0.03	0.02		0.04	0.01	0.07		0.03	0.02	0.05	0.04	0.03
2020	0.03	0.01	0.03	0.02	0.02	0.08	0.01	0.05	0.04	0.03	0.02	0.04	0.04	0.03
2021	0.04	0.02	0.03	0.02	0.02	0.06	0.00	0.06	0.03	0.03	0.02	0.04	0.03	0.03

Table 5-9
Total Phosphorus (Annual Geometric Mean)
(Page 3 of 4)

	ICWW-N	LWL-N					LWL-C					ICWW-S		
	30	LWL-1	11	13	LWL-4	Basin	LWL-8	18C	18D	LWL-11	Basin	LWL-13	LWL-18	Basin
2012	●	●	●	●		●	●	●	●	●	●	●	●	●
2013	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2014	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2015	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2016	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2017	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2020	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FDEP Criteria	<=0.035	<=0.044	<=0.044	<=0.044	<=0.044	<=0.044	<=0.049	<=0.049	<=0.049	<=0.049	<=0.049	<=0.05	<=0.05	<=0.05

● Meeting criteria
● Not meeting criteria
● No numeric criteria

Values Used (mg/l)

2012	0.03	0.04	0.03	0.04		0.04	0.04	0.01	0.04	0.04	0.03	0.03	0.04	0.037
2013	0.02	0.03	0.07	0.06	0.02	0.04	0.05	0.08	0.08	0.06	0.07	0.04	0.05	0.0436
2014	0.02	0.03	0.06	0.04	0.02	0.03	0.05	0.07	0.06	0.05	0.06	0.03	0.04	0.0368
2015	0.02	0.03	0.06	0.06	0.02	0.04	0.04	0.08	0.07	0.04	0.05	0.02	0.05	0.034
2016	0.02	0.03	0.04	0.04	0.02	0.03	0.05	0.08	0.06	0.04	0.06	0.03	0.05	0.0369
2017	0.02	0.03	0.01	0.01	0.02	0.01	0.06	0.05	0.02	0.06	0.04	0.07	0.07	0.0725
2018	0.03	0.04	0.03	0.04	0.02	0.03	0.07	0.07	0.06	0.03	0.06	0.03	0.03	0.03
2019	0.02	0.03	0.05	0.05	0.02	0.03	0.04	0.09	0.06	0.04	0.06	0.03	0.05	0.04
2020	0.03	0.04	0.04	0.03	0.02	0.03	0.04	0.08	0.06	0.03	0.05	0.03	0.04	0.03
2021	0.03	0.03	0.02	0.01	0.02	0.01	0.04	0.01	0.04	0.03	0.03	0.03	0.03	0.03

Table 5-9
Total Phosphorus (Annual Geometric Mean)

	Hillsboro					L-8	S-2-6-7				WPBWS				
	1	2	3	S39	Basin	Culv10a	S-2	39	43	Basin	M Canal	Control 4	Lake Mangonia	Clear Lake	Basin
2012	●	●	●	●	●	●					●		●	●	●
2013	●	●	●	●	●	●					●	●	●	●	●
2014	●	●	●	●	●	●					●	●	●	●	●
2015				●	●	●					●	●	●	●	●
2016	●	●	●	●	●	●					●	●	●	●	●
2017	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2020	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FDEP Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	0.03 to 0.09	0.03 to 0.10	0.03 to 0.11

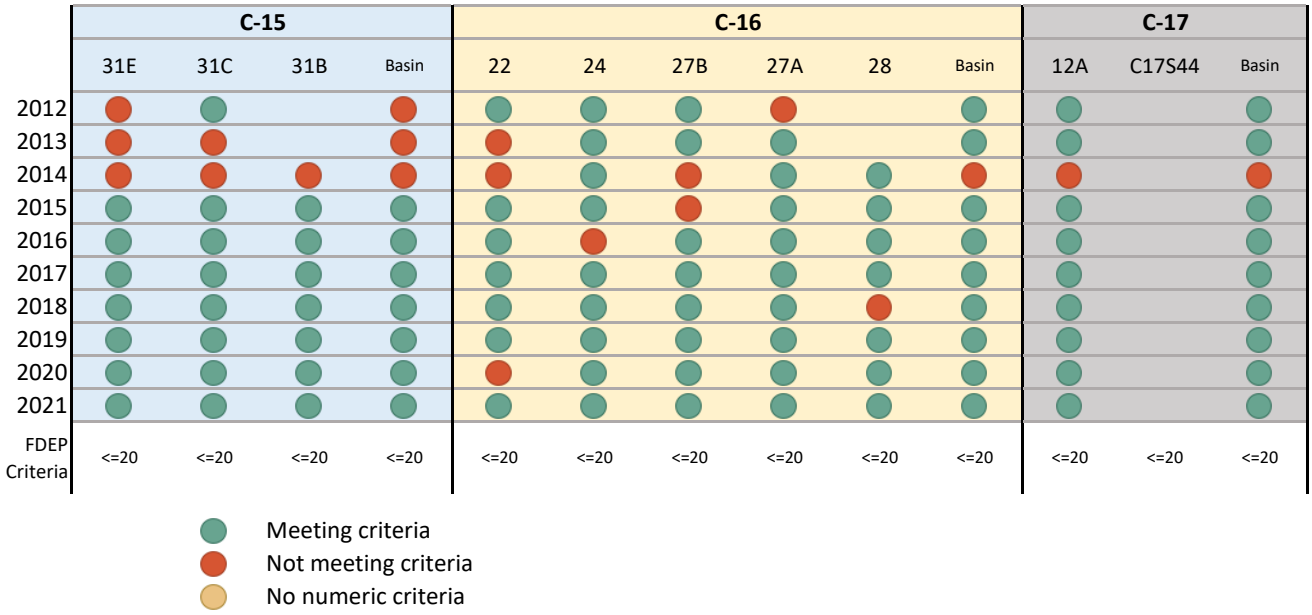
● No numeric criteria

Values Used (mg/l)

2012	0.10	0.09	0.14	0.02	0.07	0.10					0.05		0.03	0.02	0.03
2013	0.08	0.08	0.07	0.02	0.05	0.14					0.10	0.07	0.02	0.01	0.03
2014	0.11	0.10	0.07	0.01	0.06	0.16					0.09	0.08	0.02	0.01	0.03
2015				0.01	0.01	0.15					0.12	0.06	0.04	0.02	0.05
2016	0.18	0.10	0.13	0.01	0.08	0.15					0.11	0.04	0.03	0.02	0.04
2017	0.11	0.05	0.06	0.01	0.04	0.19	0.11	0.12	0.09	0.11	0.12	0.05	0.03	0.02	0.04
2018	0.07	0.06	0.06	0.02	0.04	0.17	0.13	0.13	0.13	0.13	0.10	0.06	0.02	0.01	0.03
2019	0.13	0.10	0.10	0.01	0.07	0.16	0.10	0.11	0.10	0.10	0.11	0.07	0.02	0.02	0.04
2020				0.01	0.01	0.17	0.13	0.02	0.13	0.07	0.08	0.05	0.03	0.02	0.04
2021	0.13	0.07	0.09	0.02	0.06	0.16	0.13	0.12	0.12	0.12	0.102	0.05	0.03	0.02	0.04

Varies for sites Lake and Clear Lake TP ≤ 0.03 AGM when Chlorophyll-a >20 mg/l
TP ≤ 0.09 AGM when Chlorophyll-a ≤20 mg/l

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 1 of 4)



Values Used (ug/l)

2012	24.95	16.18		20.09	17.67	18.51	18.54	20.44		18.76	17.74		17.74
2013	43.87	24.19		32.57	28.64	15.83	7.38	17.32		15.51	12.50		12.50
2014	39.23	28.66	27.53	31.39	22.70	17.75	35.79	18.36	15.53	21.03	20.44		20.44
2015	16.28	9.10	18.72	14.05	9.86	13.62	26.83	8.03	8.27	11.91	12.94		12.94
2016	9.72	8.42	17.18	11.20	12.73	20.70	7.45	8.11	5.56	9.76	11.78		11.78
2017	16.15	15.39	19.16	16.82	18.04	6.14	9.60	8.04	4.57	8.29	8.10		8.10
2018	14.58	9.63	16.84	13.32	9.52	4.58	3.39	10.83	20.68	8.02	5.98		5.98
2019	8.11	13.38	8.39	9.69	11.97	5.77	11.96	3.86	5.83	7.14	7.61		7.61
2020	17.54	12.22	11.39	13.47	21.37	19.80	18.01	10.93	13.99	16.34	14.67		14.67
2021	0.80	1.93	0.61	0.98	0.67	1.42	1.07	0.55	1.27	0.93	1.08		1.08

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 2 of 4)

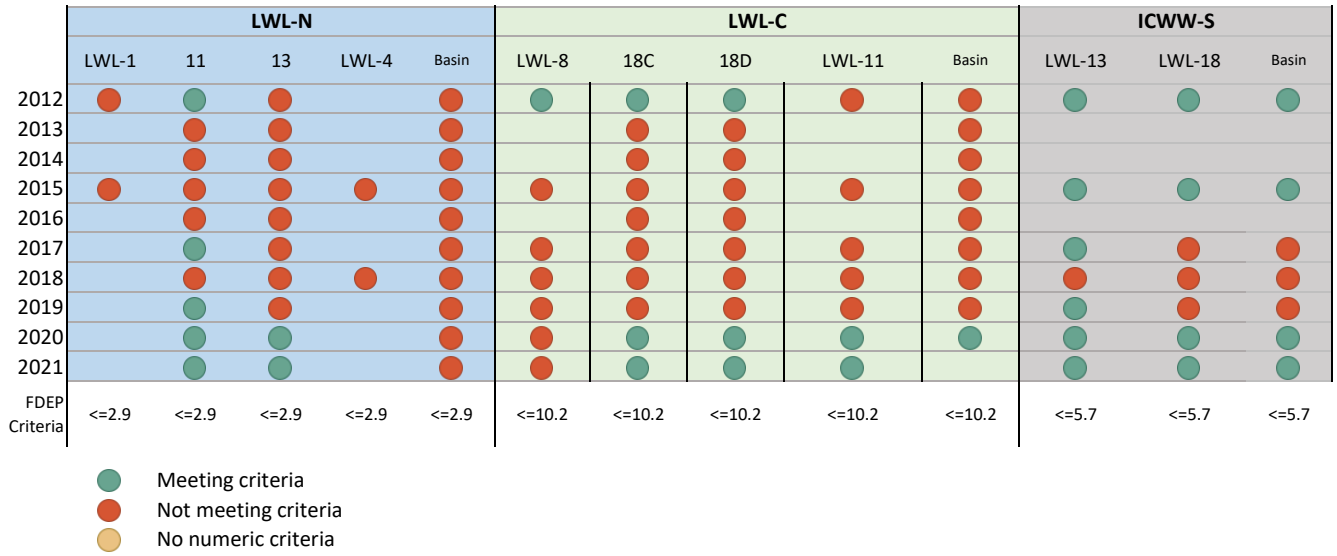
	C-18					C-51				Lox	Lox				ICWW-N
	16	15	92	81	Basin	38B	37B	C51S155	Basin	69	51	62	72	Basin	30
2012	●	●			●	●	●		●	●	●	●	●	●	●
2013	●	●			●	●	●		●	●	●	●	●	●	●
2014	●	●			●	●	●	●	●	●	●	●	●	●	●
2015	●	●			●	●	●		●	●	●	●	●	●	●
2016	●	●	●	●	●	●	●		●	●	●	●	●	●	●
2017	●	●	●	●	●	●	●		●	●	●	●	●	●	●
2018	●	●	●	●	●	●	●		●	●	●	●	●	●	●
2019	●	●	●	●	●	●	●		●	●	●	●	●	●	●
2020	●	●	●	●	●	●	●		●	●	●	●	●	●	●
2021	●	●	●	●	●	●	●		●	●	●	●	●	●	●
FDEP Criteria	<=20	<=20	<=20	<=20	<=20	<=20	<=20	<=20	<=20	<=20	<=4	<=5.5	<=5.5	<=4.9	<=4.7

● Meeting criteria
● Not meeting criteria
● No numeric criteria

Values Used (ug/l)

2012	6.17	1.52			3.06	8.64	4.21		6.03	2.01	4.17	4.64	9.86	5.04	
2013	5.65	2.09			3.44	5.16	4.36		4.75	2.36	4.28	6.10	8.66	5.30	
2014	2.14	2.14			2.14	4.07	2.79	0.03	0.66	3.00	4.49	5.50	11.23	5.82	
2015	2.54	1.26			1.79	5.64	2.06		3.41	1.92	4.07	5.94	10.83	5.70	
2016	5.63	2.34	6.51	8.05	5.13	10.17	3.93		6.32	2.47	2.95	4.76	7.07	4.33	
2017	4.80	2.02	3.44	6.71	3.87	3.16	3.98		3.55	2.09	2.29	5.33	7.71	4.29	
2018	2.57	2.58	3.09	5.52	3.26	4.22	4.99		4.59	3.30	5.96	4.83	4.90	4.63	
2019	2.71	2.02	5.04	7.80	3.83	3.90	2.35		3.03	3.70	3.72	5.91	9.45	5.92	3.75
2020	6.83	1.12	3.35	6.76	3.63	19.55	8.26	0.72	4.88	3.75	5.17	3.79	8.30	5.46	4.51
2021	0.86	0.55	5.00	3.17	1.65	0.91	0.61	5.24	1.42	1.91	3.03	4.57	6.63	4.51	4.30

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 3 of 4)

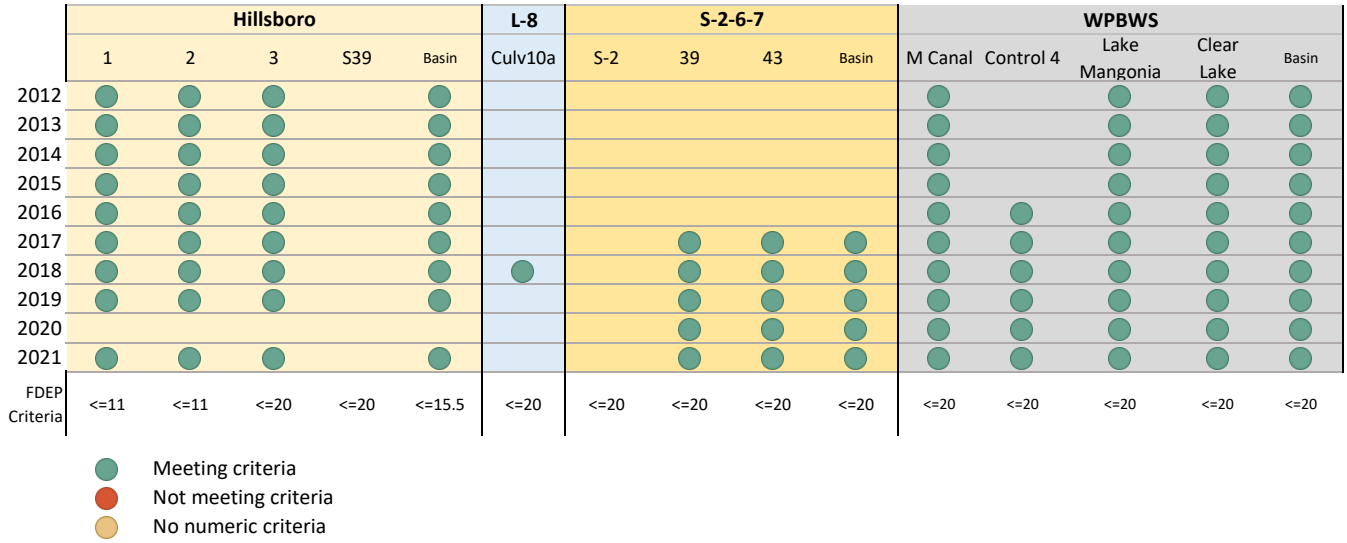


Values Used (ug/l)

2012	4.73	2.85	4.12		3.81	1/11	1/12	1/12	1/10	5/47	4.3	5.5	4.9
2013		3.90	4.55		4.22		4/12	5/12		9/12			
2014		5.23	7.51		6.26		6/9	8/9		14/18			
2015	5.10	3.28	3.41	1.81	3.19	1/10	2/7	1/7	2/10	6/44	4.08	5.11	4.6
2016		7.06	3.82		5.19		1/5	1/5		2/5			
2017		2.81	3.92		3.32	1/7	1/6	1/6	2/7	5/26	5.4	7.9	6.7
2018	6.92	3.12	4.26	5.79	4.81	9/10	5/6	5/6	9/10	28/32	11.11	5.73	7.98
2019	4.37	1.73	2.94	1.81	2.52	2/9	1/9	1/9	1/9	5/36	4.60	7.72	5.96
2020	2.40	2.17	2.79	2.47	2.45	3/10	0/10	0/10	1/11	4/42	4.59	4.94	4.76
2021	4.44	0.58	0.71	1.71	1.33	0.18182	0	0	0.090909091		3.85	4.40	4.11

Note: Chlorophyll-a criteria for LWL-C shall not be exceeded in more than 10 percent of the measurements

Table 5-10
Chlorophyll-A (Annual Geometric Mean)
(Page 4 of 4)



2012	3.71	10.50	8.86		7.01						1.48		3.92	1.22	1.92
2013	7.00	5.27	4.58		5.52						3.97		1.48	0.82	1.69
2014	6.85	4.62	7.26		6.13						3.31		10.84	3.98	5.23
2015	4.33	4.61	3.61		4.16						5.33		7.78	3.69	5.35
2016	3.55	2.76	3.10		3.12						4.54	3.39	9.04	8.40	5.85
2017	3.13	2.22	0.85		1.81			4.23	5.22	4.70	4.49	5.45	6.61	4.63	5.23
2018	6.14	4.34	5.17		5.16	2.23		7.17	8.20	7.67	2.13	1.90	3.37	3.17	2.56
2019	7.56	9.13	12.05		9.41			4.03	8.16	5.73	4.70	2.80	3.69	3.05	3.49
2020								4.10	7.97	5.72	3.73	2.36	2.38	1.89	2.51
2021	3.95	4.20	6.63		4.79			0.98	1.40	1.17	2	0.60	0.70	0.80	0.91

Table 5-11 Water Quality Trends
C-15 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
31C	1999 - 2021	-0.357604	-0.000097	0.000000	Significant Decreasing Trend
31E	1999 - 2021	-0.375778	-0.000107	0.000000	Significant Decreasing Trend
31B	2000 - 2021	-0.219687	-0.000037	0.000090	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
31C	1999 - 2021	-0.068876	-0.000002	0.298406	Decreasing Trend
31E	1999 - 2021	-0.064374	-0.000007	0.333757	Decreasing Trend
31B	2000 - 2021	-0.159242	-0.000006	0.006733	Significant Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
31C	1999 - 2021	-0.195137	-0.001992	0.003762	Significant Decreasing Trend
31E	1999 - 2021	-0.168382	-0.001816	0.011558	Significant Decreasing Trend
31B	2000 - 2021	-0.201942	-0.001618	0.015521	Significant Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
C-16 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
22	2004 - 2021	-0.226881	-0.000047	0.002302	Significant Decreasing Trend
24	1999 - 2021	-0.393883	-0.000099	0.000000	Significant Decreasing Trend
27B	1999 - 2021	-0.261207	-0.000073	0.000351	Significant Decreasing Trend
27A	1999 - 2021	-0.388344	-0.000095	0.000000	Significant Decreasing Trend
28	1999 - 2021	-0.288268	-0.000075	0.000000	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
22	2004 - 2021	0.044105	0.000001	0.541830	Increasing Trend
24	1999 - 2021	-0.242743	-0.000006	0.000364	Significant Decreasing Trend
27B	1999 - 2021	-0.066331	-0.000004	0.349251	Decreasing Trend
27A	1999 - 2021	-0.254866	-0.000013	0.000132	Significant Decreasing Trend
28	1999 - 2021	-0.237403	-0.000008	0.000049	Significant Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
22	2004 - 2021	0.064219	0.000772	0.375584	Increasing Trend
24	1999 - 2021	-0.033849	-0.000271	0.629605	Decreasing Trend
27B	1999 - 2021	-0.084180	-0.000629	0.262313	Decreasing Trend
27A	1999 - 2021	-0.279982	-0.002120	0.000067	Significant Decreasing Trend
28	1999 - 2021	0.022460	0.000104	0.803389	Increasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
C-17 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
12A	1999 - 2021	-0.301008	-0.000076	0.000005	Significant Decreasing Trend
C17S44	1999 - 2021	-0.388986	-0.000048	0.000000	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
12A	1999 - 2021	-0.057821	-0.000001	0.379353	Decreasing Trend
C17S44	1999 - 2021	-0.010216	0.0000000	0.839867	Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
12A	1999 - 2021	-0.145621	-0.000997	0.032469	Significant Decreasing Trend
C17S44	1999 - 2021	-0.019921	-0.000200	0.915730	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
C-18 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
16	1999 - 2021	-0.090693	-0.000020	0.175867	Decreasing Trend
15	1999 - 2021	-0.292275	-0.000055	0.000038	Significant Decreasing Trend
92	1999 - 2021	-0.053939	-0.000007	0.301856	Decreasing Trend
81	1999 - 2021	-0.047833	-0.000006	0.361806	Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
16	1999 - 2021	-0.112598	-0.000002	0.091093	Decreasing Trend
15	1999 - 2021	-0.221786	-0.000002	0.001118	Significant Decreasing Trend
92	1999 - 2021	0.172869	0.000002	0.001580	Significant Increasing Trend
81	1999 - 2021	-0.014659	0.000000	0.791554	Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
16	1999 - 2021	-0.042291	-0.000077	0.545340	Decreasing Trend
15	1999 - 2021	-0.302247	-0.000256	0.000018	Significant Decreasing Trend
92	1999 - 2021	0.106205	0.000121	0.293913	Increasing Trend
81	1999 - 2021	0.160619	0.000322	0.118181	Increasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
C-51 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
38B	1999 - 2021	-0.249123	-0.000100	0.000266	Significant Decreasing Trend
37B	1999 - 2021	-0.378709	-0.000138	0.000000	Significant Decreasing Trend
C51S155	1999 - 2021	-0.242618	-0.000057	0.000000	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
38B	1999 - 2021	0.041764	0.000001	0.541317	Increasing Trend
37B	1999 - 2021	-0.134545	-0.000004	0.052472	Decreasing Trend
C51S155	1999 - 2021	0.000572	0.000000	0.991674	Increasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
38B	1999 - 2021	-0.060525	-0.000212	0.377317	Decreasing Trend
37B	1999 - 2021	-0.086205	-0.000199	0.218125	Decreasing Trend
C51S155	1999 - 2021	-0.002275	0.000000	0.987401	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
Loxahatchee Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
69	2003 - 2021	-0.195187	-0.000040	0.000175	Significant Decreasing Trend
51	2000 - 2021	-0.165507	0.000000	0.018864	Significant Decreasing Trend
62	2000 - 2021	0.030286	0.000001	0.549196	Increasing Trend
72	2000 - 2021	0.045349	0.000001	0.363499	Increasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
69	2003 - 2021	-0.033579	0.000000	0.521742	Decreasing Trend
51	2000 - 2021	-0.070206	0.000000	0.309145	Decreasing Trend
62	2000 - 2021	0.219433	0.000002	0.000017	Significant Increasing Trend
72	2000 - 2021	0.161332	0.0000011	0.001390	Significant Increasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
69	2003 - 2021	-0.086905	-0.000173	0.098039	Decreasing Trend
51	2000 - 2021	-0.082780	-0.000152	0.251394	Decreasing Trend
62	2000 - 2021	-0.057753	-0.000151	0.276005	Decreasing Trend
72	2000 - 2021	-0.073386	-0.000357	0.143572	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
ICWW-N Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
30	2000 - 2021	-0.222995	-0.000056	0.001225	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
30	2000 - 2021	-0.075424	0.000000	0.271899	Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
30	2000 - 2021	-0.106099	-0.000230	0.142120	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
Lake Worth Lagoon North Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-1	1999 - 2021	-0.312834	-0.000035	0.000000	Significant Decreasing Trend
11	1999 - 2021	-0.366545	-0.000081	0.000000	Significant Decreasing Trend
13	2000 - 2021	-0.364417	-0.000086	0.000000	Significant Decreasing Trend
LWL-4	2004 - 2021	-0.302040	-0.000027	0.000000	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-1	1999 - 2021	-0.126019	-0.000001	0.030777	Significant Decreasing Trend
11	1999 - 2021	0.127531	0.000002	0.015086	Significant Increasing Trend
13	2000 - 2021	0.016360	0.000000	0.759659	Increasing Trend
LWL-4	2004 - 2021	-0.283714	-0.000001	0.000002	Significant Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-1	1999 - 2021	-0.158121	-0.000286	0.008598	Significant Decreasing Trend
11	1999 - 2021	-0.091750	-0.000161	0.086622	Decreasing Trend
13	2000 - 2021	-0.050403	-0.000116	0.348706	Decreasing Trend
LWL-4	2004 - 2021	-0.130389	-0.000129	0.029606	Significant Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
Lake Worth Lagoon Center Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-8	1999 - 2021	-0.153595	-0.000027	0.004363	Significant Decreasing Trend
18C	2004 - 2021	-0.407478	-0.000129	0.000000	Significant Decreasing Trend
18D	2005 - 2021	-0.366608	-0.000105	0.000000	Significant Decreasing Trend
LWL-11	1999 - 2021	-0.232832	-0.000047	0.000043	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-8	1999 - 2021	-0.077116	-0.0000011	0.141297	Decreasing Trend
18C	2004 - 2021	-0.051494	-0.000002	0.369543	Decreasing Trend
18D	2005 - 2021	-0.019770	0.000000	0.736290	Decreasing Trend
LWL-11	1999 - 2021	-0.157475	-0.000002	0.005034	Significant Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-8	1999 - 2021	0.152949	0.000367	0.005144	Significant Increasing Trend
18C	2004 - 2021	-0.060196	-0.000209	0.282605	Decreasing Trend
18D	2005 - 2021	-0.035741	-0.000123	0.543892	Decreasing Trend
LWL-11	1999 - 2021	-0.002333	0.000000	0.969641	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
ICWW-S Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-13	2004 - 2021	-0.247386	-0.000036	0.000021	Significant Decreasing Trend
LWL-18	2000 - 2021	-0.226062	-0.000036	0.000076	Significant Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-13	2004 - 2021	-0.243340	-0.000002	0.000023	Significant Decreasing Trend
LWL-18	2000 - 2021	-0.067128	-0.000001	0.228164	Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
LWL-13	2004 - 2021	-0.090069	-0.000153	0.122648	Decreasing Trend
LWL-18	2000 - 2021	0.084502	0.000187	0.145016	Increasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
Hillsboro Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
1	2006 - 2021	-0.143064	-0.000037	0.163959	Decreasing Trend
2	2006 - 2021	-0.207890	-0.000033	0.040783	Significant Decreasing Trend
3	2006 - 2021	-0.264843	-0.000043	0.010941	Significant Decreasing Trend
S39	2000 - 2021	0.056475	0.000000	0.597960	Increasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
1	2006 - 2021	0.053645	0.000002	0.625619	Increasing Trend
2	2006 - 2021	-0.124759	-0.000004	0.263192	Decreasing Trend
3	2006 - 2021	-0.056555	-0.000003	0.616263	Decreasing Trend
S39	2000 - 2021	-0.371338	-0.000002	0.000000	Significant Decreasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
1	2006 - 2021	-0.102935	-0.000332	0.300940	Decreasing Trend
2	2006 - 2021	-0.317952	-0.001662	0.000628	Significant Decreasing Trend
3	2006 - 2021	-0.228671	-0.001553	0.015006	Significant Decreasing Trend
S39	No Data	No Data	No Data	No Data	

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
L-8 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
Culv10a	2000 - 2021	0.003497	0.000000	0.982701	Increasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
Culv10a	2000 - 2021	0.014214	0.0000008	0.739375	Increasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
Culv10a	2000 - 2021	0.496780	0.001145	0.035240	Significant Increasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends

S-2-6-7 Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
S-2	1999 - 2021	0.013439	0.000028	0.910553	Increasing Trend
39	2017 - 2021	0.030435	0.000064	0.865543	Increasing Trend
43	2017 - 2021	0.016695	0.000029	0.925550	Increasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
S-2	1999 - 2021	0.067265	0.000002	0.103879	Increasing Trend
39	2017 - 2021	-0.057735	-0.000010	0.707294	Decreasing Trend
43	2017 - 2021	0.117651	0.000014	0.426524	Increasing Trend

Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
S-2	1999 - 2021	0.000000	0.000000	1.000000	Increasing Trend
39	2017 - 2021	-0.303486	-0.003222	0.041640	Significant Decreasing Trend
43	2017 - 2021	-0.163340	-0.002226	0.274952	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.

Table 5-11 Water Quality Trends
WPBWS Watershed

Total Nitrogen

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
M Canal	2011 - 2021	0.015908	0.000000	0.831499	Increasing Trend
Control 4	2011 - 2021	-0.120541	-0.000059	0.160599	Decreasing Trend
Lake Mangonia	2011 - 2021	-0.164754	-0.000026	0.057842	Decreasing Trend
Clear Lake	2011 - 2021	-0.122004	-0.000021	0.158900	Decreasing Trend

Total Phosphorus

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
M Canal	2011 - 2021	0.102748	0.000007	0.182025	Increasing Trend
Control 4	2011 - 2021	-0.065307	-0.000004	0.457903	Decreasing Trend
Lake Mangonia	2011 - 2021	0.293111	0.000002	0.001701	Significant Increasing Trend
Clear Lake	2011 - 2021	0.061750	0.000000	0.508740	Increasing Trend

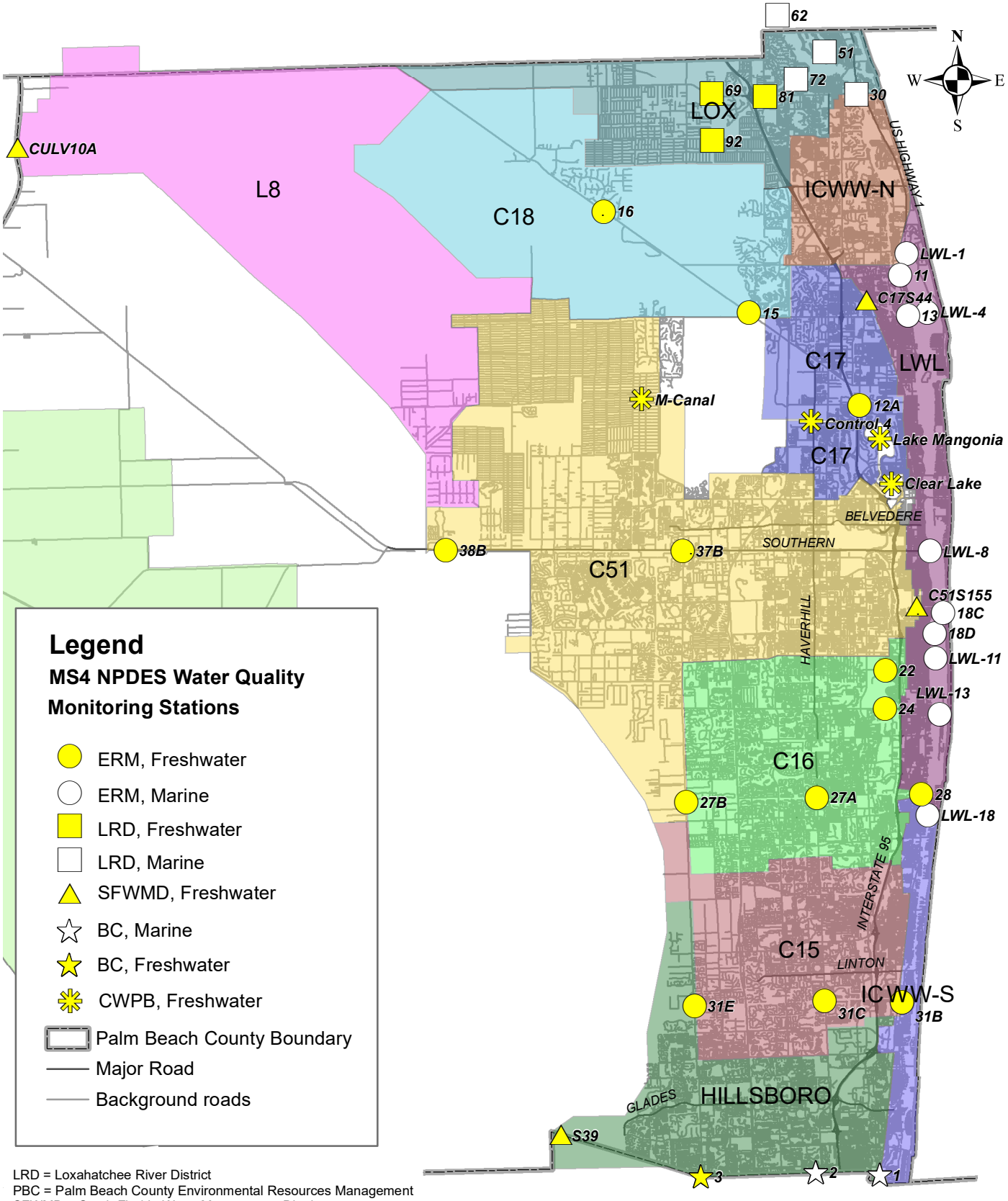
Total Chlorophyll-a (corrected)

Site	Date Range	Tau	Slope[1]	Selected P-Value[2]	Statistical Trend Interpretation[3]
M Canal	2011 - 2021	-0.073107	-0.000356	0.356608	Decreasing Trend
Control 4	2011 - 2021	-0.323000	-0.000874	0.000622	Significant Decreasing Trend
Lake Mangonia	2011 - 2021	-0.276505	-0.001891	0.003752	Significant Decreasing Trend
Clear Lake	2011 - 2021	-0.138241	-0.000367	0.151681	Decreasing Trend

[1] Even if the p-value is determined to be statistically significant, the result may not be ecologically significant. For example, if a trend is statistically significantly declining (negative trend) and the concentration is low in the water, then it may not be realistic to assume that an improvement in water quality by reductions in TN or TP may positively impact the ecological system in a measurable way. A negative slope is an indication of a decreasing trend, while a positive slope is an indication of an increasing trend.

[2] Results contain serial correlation (as per autocorrelation analysis results) used the p-value adjusted for serial correlation.

[3] If the p-value is less than 0.05, then a decreasing trend may suggest an improvement in water quality, and an increasing trend may suggest a decline in water quality.



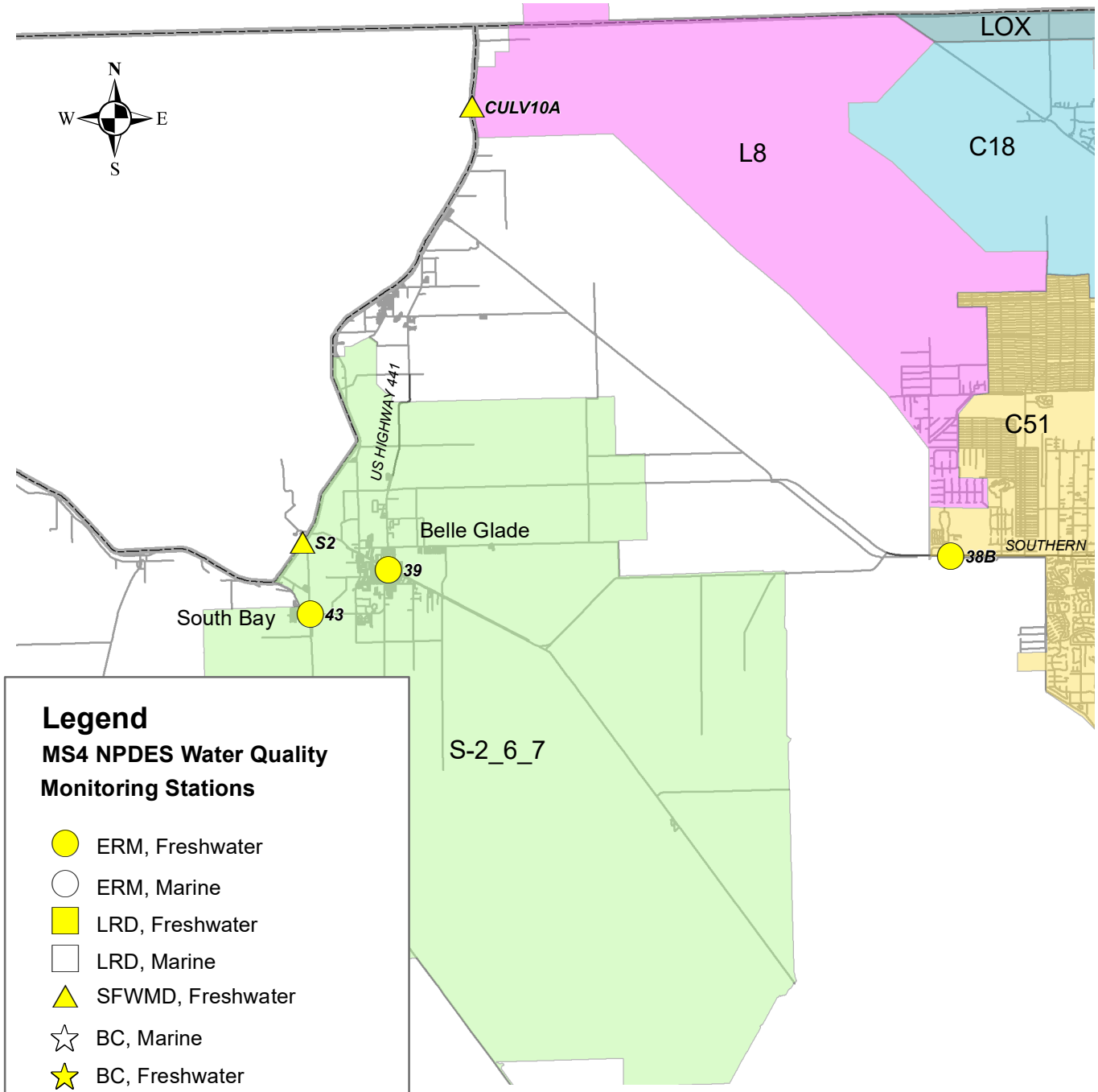
LRD = Loxahatchee River District
PBC = Palm Beach County Environmental Resources Management
SFWMD = South Florida Water Management District
BC = Broward County
LWL = Lake Worth Lagoon
CWPB = City of West Palm Beach

F:\npbc\npbcnpds\WQmonitoring\2018-2019\WQ_Stations.mxd

P.A. No.: B6050.90

Palm Beach County (Eastern Area) Watershed Boundaries and Water Quality Monitoring Stations

Figure 5-1



LRD = Loxahatchee River District
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F:\npbc\npbcnpds\WQmonitoring\2018-2019\WQ_Stations.mxd

P.A. No.: B6050.90

Palm Beach County (Western Area) Watershed Boundaries and Water Quality Monitoring Stations

Figure 5-1

Figure 5-2 Total Phosphorous Trend

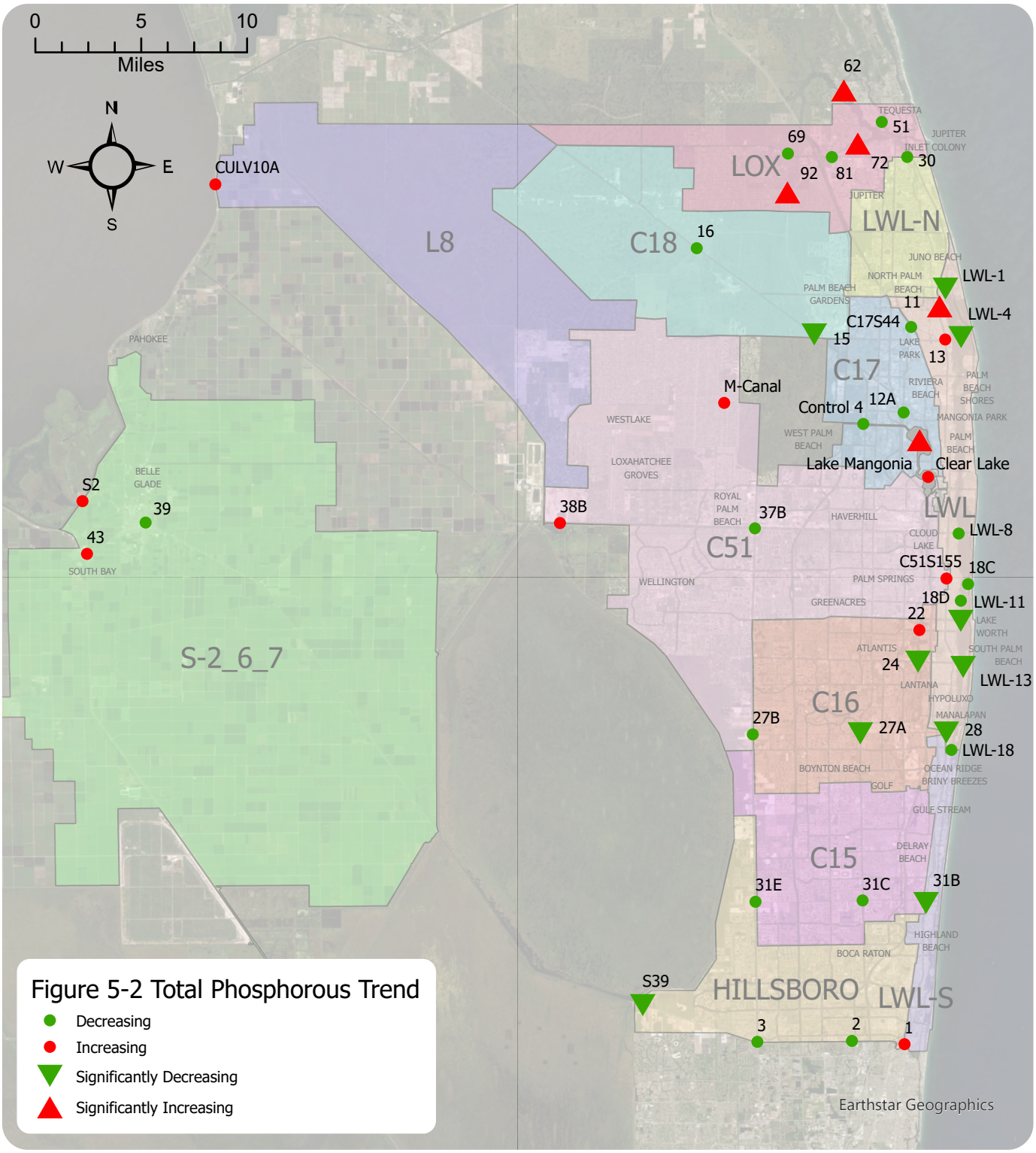

Figure 5-3 Total Nitrogen Trend

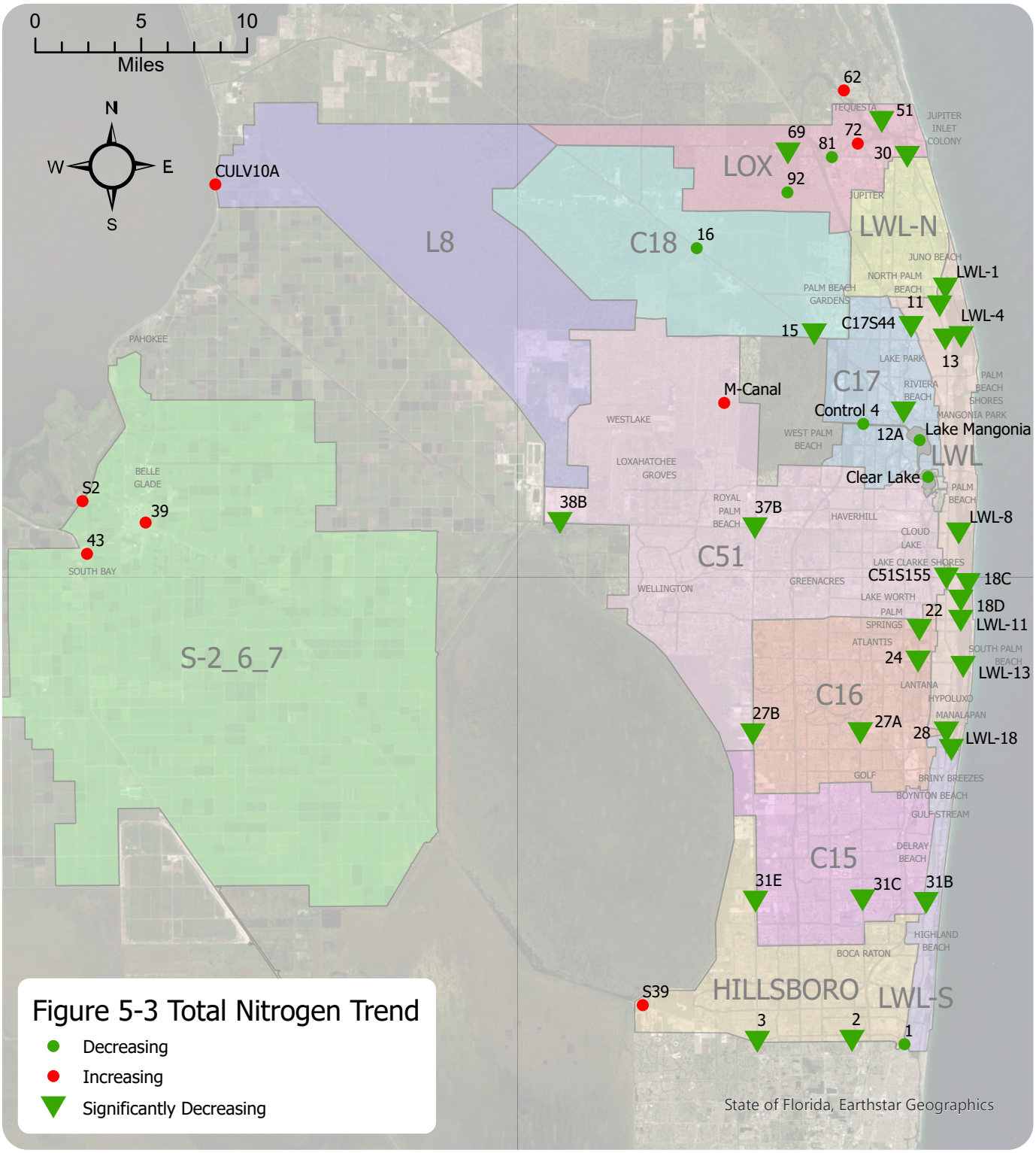

Figure 5-4 Chlorophyll-a (corrected) Trend

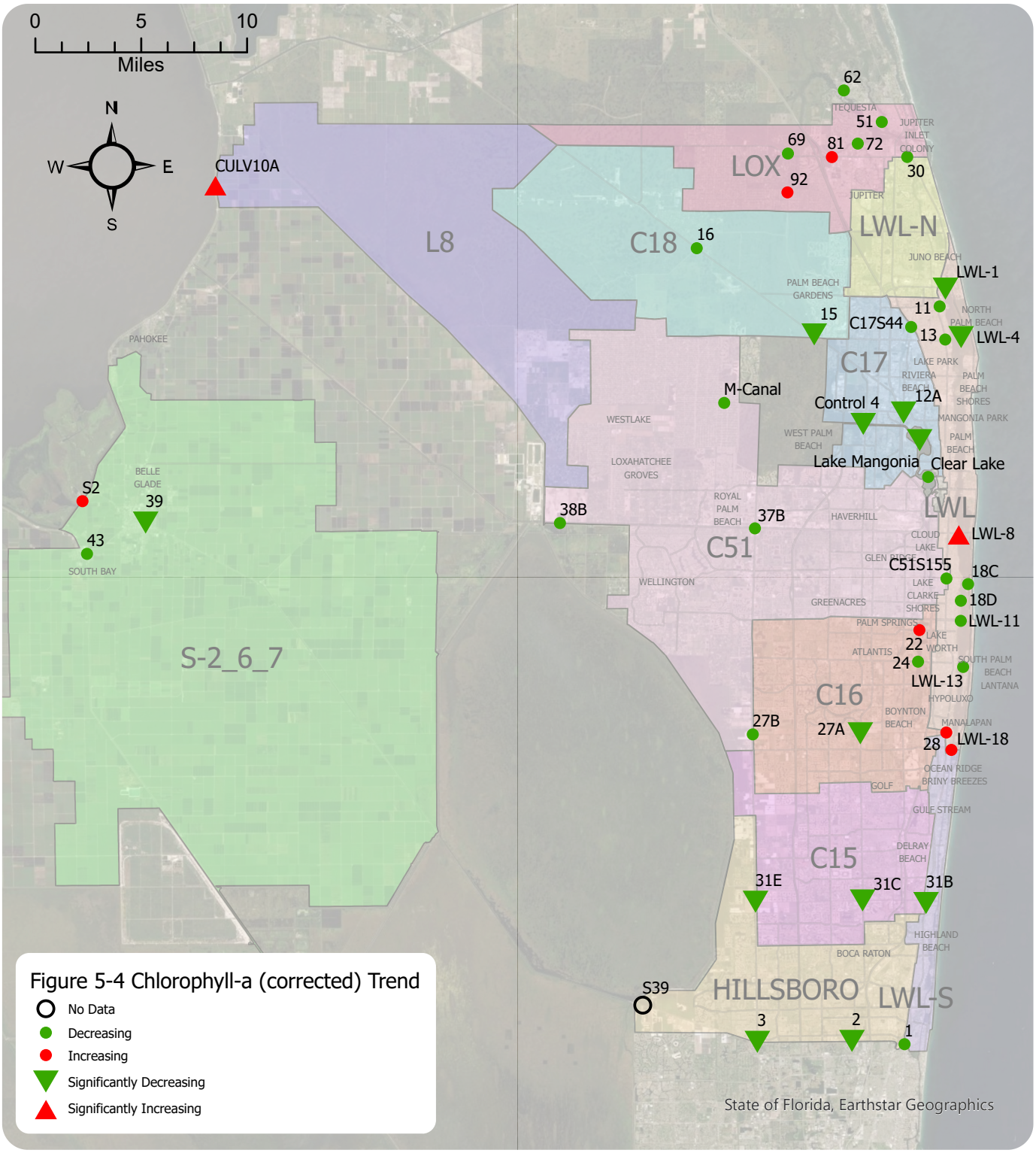

Figure 5-5
Decreasing Trend Not Significant Example

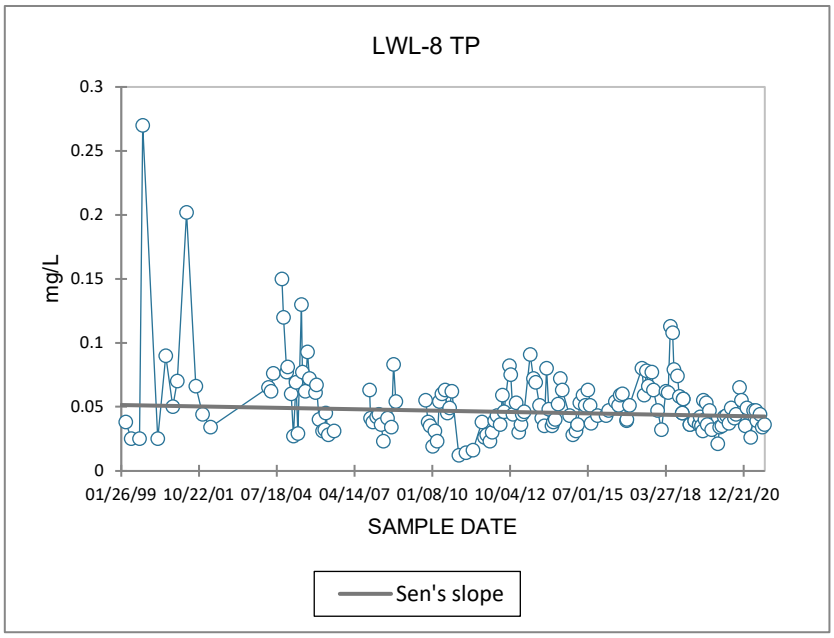

Figure 5-6
Decreasing Trend Significant Example