Municipal Separate Storm Sewer Systems
National Pollutant Discharge
Elimination System

Joint Annual Report

Cycle 3 - Year 4

October 1, 2013 Thru September 30, 2014

Submitted by
Northern Palm Beach County
Improvement District
as Lead Permittee

prepared by
MOCK•ROOS

NPDES

MS4 NPDES
A Palm Beach County Joint Program

Palm Beach County MS4
Permit No. FLS000018-003

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Report Certification

Engineer's Certification

I hereby certify, as a Professional Engineer in the State of Florida, that this Cycle 3, 4th Year, Joint Annual Report for the Florida Department of Environmental Protection National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit for Palm Beach County (Permit No. FLS000018-003) was assembled under my direct responsible charge. This certification is provided in accordance with Florida Board of Professional Engineers Rule of Certification under Chapter 61G15-23.003.

Alan D. Wertepny, P.E.
Project Manager, Mock•Roos
FL P.E. No. 32350

3/10/15
Date

Mock•Roos
5720 Corporate Way
West Palm Beach, FL 33407
Florida E.B. No. 48

(Reproductions are not valid unless signed, dated and embossed with an Engineer's Seal)

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 Appendices 1 through 41.

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 water 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 has an expiration date of March 1, 2016.

Northern Palm Beach County Improvement District (Northern) acts as lead permittee for the Palm Beach County coalition of permittees. As the lead permittee, Northern has entered into Interlocal Agreements with each of the other permittees for the purposes of identifying duties and responsibilities of the parties and fulfilling the conditions of the Palm Beach County 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.

1.2 Permittees

There are 41 permittees identified in the Cycle 3 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 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.

During the reporting period, the Steering Committee met six times. Permittee representation at the meetings averaged seventy-eight percent. Major meeting agenda items included the following:

- 4th Year Program Schedule
- Budget Reports
- FDEP Interview/Presentation
- EXCAL Video Training Session
- Sediment & Erosion Control Training
- Pollutant Loading Analyses
- Monitoring Program
- Website Improvements
- Public Education
- Florida Numeric Nutrient Criteria
- Proposed Waters of the U.S. Rule

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	Marcos Montes de Oca Director of Public Services (561) 992-2216
3	Boca Raton, City of 201 West Palmetto Park Road Boca Raton, FL 33433	Daniel W. Grippo, P.E., CEM Municipal Services Director (561) 416-3385
4	Boynton Beach, City of 124 East Woolbright Road Boynton Beach, FL 33435	Christopher J. Roschek, P.E. Engineering Division Manager (561) 742-6413
5	Cloud Lake, Town of 100 Lang Road Cloud Lake FL 33406-3222	Dorothy C. Gravelin Town Clerk (561) 686-2815
6	Delray Beach, City of 434 S. Swinton Avenue Delray Beach, FL 33444-2698	Isaac Kovner, P.E. City Engineer (561) 243-7322
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 Fort Lauderdale, FL 33310-9828	Mr. Jeremiah Marek NPDES Coordinator (954) 934-1213
9	Glen Ridge, Town of 1501 Glen Road West Palm Beach, FL 33406	Michelle Suiter Town Manager (561) 697-8868

10	Greenacres, City of 5750 Melaleuca Greenacres, FL 33463	Carlos Cedeno Public Works Director (561) 642-2074
11	Gulf Stream, Town of 100 Sea Road Gulf Stream, FL 33483-7427	William Thrasher Town Manager (561) 276-5116
12	Haverhill, Town of 4585 Charlotte Street Haverhill, FL 33417-5911	Joseph Roche Director of Public Works (561) 689-0370
13	Highland Beach, Town of 3614 South Ocean Blvd. Highland Beach, FL 33487	Edward J. Soper Public Works Director (561) 243-2084
14	Hypoluxo, Town of 7580 S. Federal Highway Hypoluxo, FL 33462	Kenneth M. Schultz Mayor (561) 582-0155
15	Indian Trail Improvement District 13476 61st Street North West Palm Beach, FL 33412-1915	James Shallman District Manager (561) 721-4826
16	Juno Beach, Town of 340 Ocean Drive Juno Beach, FL 33408	Joseph F. Lo Bello Town Manager (561) 626-1122
17	Jupiter, Town of 210 Military Trail Jupiter, FL 33458	David J. Rotar Utility Services Manager (561) 748-2705
18	Jupiter Inlet Colony, Town of 1 Colony Road Jupiter Inlet Colony, FL 33469	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	David Hunt Public Works Director (561) 881-3345
21	Lake Worth, City of 7 North Dixie Highway Lake Worth, FL 33461	Jamie Brown Public Services Director (561) 586-1720
22	Lantana, Town of 500 Greynolds Circle Lantana, FL 33462	Deborah Manzo Town Manager (561) 540-5000
23	Manalapan, Town of 600 S. Ocean Blvd. Manalapan, FL 33462-3398	Linda Stumpf Town Manager (561) 383-2540
24	Mangonia Park, Town of 1755 East Tiffany Drive Mangonia Park, FL 33407	Lee Leffingwell Town Manager (561) 848-1235
25	Northern Palm Beach County Improvement District 359 Hiatt Drive Palm Beach Gardens, FL 33418	Jared Kneiss Operations/NPDES Manager (561) 624-7830
26	North Palm Beach, Village of 501 U.S. Highway No. 1 North Palm Beach, FL 33408	Brian Moree Public Works Director (561) 691-3440
27	Ocean Ridge, Town of 6450 N. Ocean Blvd. Ocean Ridge, FL 33435	Kenneth Schenck Town Manager (561) 732-2635
28	Pahokee, City of 207 Begonia Drive Pahokee, FL 33476	Arthur Ivester City Manager (Interim) (561) 924-5534
29	Palm Beach, Town of 360 S. County Road, P.O. Box 2029 Palm Beach, FL 33480	Martin Gauthier Project Engineer (561) 838-5440
30	Palm Beach County 2300 North Jog Road, 4th Floor West Palm Beach, FL 33411	Bonnie Finneran Environmental Director (561) 233-2400

31	Palm Beach Gardens, City of 10500 North Military Trail Palm Beach Gardens, FL 33410	Todd Engle, P.E. City Engineer (561) 804-7012
32	Palm Beach Shores, Town of 247 Edwards Lane Palm Beach Shores, FL 33404-5718	Alan Welch Public Services Director (561) 844-3457
33	Palm Springs, Village of 226 Cypress Lane Palm Springs, FL 33461	Bevin Beaudet, P.E. Interim Public Services Director (561) 434-5100
34	Riviera Beach, City of 2391 Avenue L Riviera Beach, FL 33404	Joe Prussing Stormwater Coordinator (561) 845-4080
35	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
36	South Bay, City of 335 S.W. Second Avenue South Bay, FL 33493	Edgar Kerr Director of Public Works (561) 996-6751
37	South Indian River WCD 15600 Jupiter Farms Road Jupiter, FL 33478	Michael Dillon General Manager (561) 747-0550
38	South Palm Beach, Town of 3577 S. Ocean Blvd. South Palm Beach, FL 33480	Rex Taylor Town Manager (561) 588-8889
39	Tequesta, Village of 136 Bridge Road Tequesta, FL 33469	Michael Couzzo, Jr. Village Manager (561) 768-0483
40	Wellington, Village of 12300 Forest Hill Boulevard Wellington, FL 33414	Jim Barnes Director of Operations (561) 791-4720
41	West Palm Beach, City of P. O. Box 3366 West Palm Beach, FL 33402	Mr. Sam Heady Assistant Director of Public Utilities (561) 822-2200

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) 743-0501	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
Isaac Kovner Steering Committee Secretary City of Delray Beach Phone (561) 243-7322	Maurice Morel, P.E. Steering Committee Member City of Boca Raton Phone (561) 416-3402
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	Jane Hayes 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 develop and implement a written plan for the training of all appropriate permittee personnel (including field crews, fleet maintenance staff, and inspectors) and contractors on three topics with annual follow-up training. The topics are:

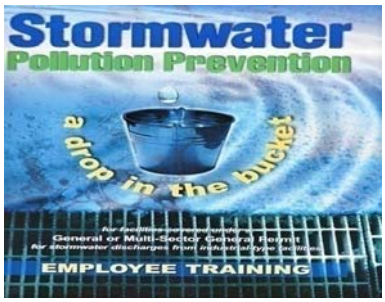
- Identification & reporting procedures for a suspected illicit discharge (Part III.A.7.c)
- Spill prevention & response procedures (including techniques for mitigating pollution from spills) (Part III.A.7.d)
- Proper building & construction stormwater management and erosion and sedimentation control BMPs for construction sites (Part III.A.9.c)

The permittees have purchased eight training videos from EXCAL Visual (www.man.excalvisual.com) to assist in meeting these training requirements. Selected videos are shown once a year during regularly scheduled Steering Committee meeting(s) and are available on loan to all permittees for use "in-house." These videos may not be reproduced, but additional copies may be purchased from the vendor.

The videos include the following:

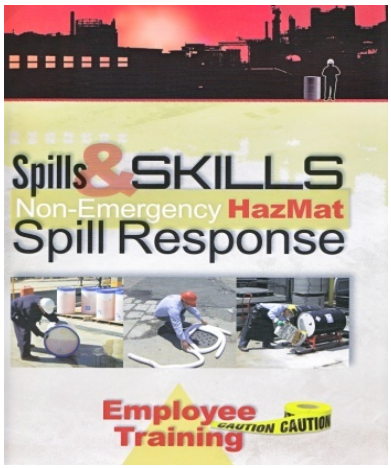
1. Rain Check: This video provides instruction on good housekeeping, spill response, materials management, vehicle fueling and washing and other BMPs outlined in EPA's "National Menu of BMPs."

2. A Drop in the Bucket: The video focuses on employee training that describes concepts and practices of stormwater pollution prevention. The video describes stormwater pollution and its negative effects on



people, wildlife, and the environment. It includes good housekeeping, spill prevention, exposure minimization, maintenance, and spill-clean up. It also provides an overview of the work practices that can be effective for stormwater pollution prevention.

3. Spills & Skills: The video is designed to help train non-HAZWOPER employees on dealing with a hazardous material (or hazardous waste) spill, leak or release. What to do if you discover a hazmat release? How to determine if the release requires HAZWOPER-trained responders or not? If it is a hazmat emergency release (HAZWOPER event), what to do then? If it is non-HAZWOPER event (an "incidental release"), the discreet steps involved to clean it up. The "step-across" test. The clean-up supplies and equipment you should expect to find in the spill locker. Different styles of absorbent (loose, pads, pillows, socks) and how to use each. How to use all the equipment and supplies safely and effectively. How to manage the clean-up wastes. Post clean-up measures.



4. Storm Warnings: Storm Water Pollution Prevention - Describes Best Management Practices that are crucial for compliance with facility Stormwater Pollution Prevention Plans including: good housekeeping, exposure minimization, and soil-cleanup.

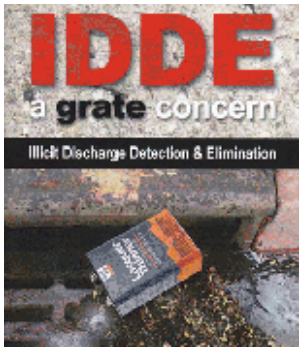
5. Ground Control: Stormwater Pollution Prevention for Construction Sites - The video focuses on BMPs that are widely used at most construction sites including: silt fences, stabilized entrances/exits, drop inlet protectors and others. The program illustrates how these BMPs work and how they can fail. Employees are encouraged to promptly report any failing BMPs. By making all employees "look-

outs" for BMP problems, this training program is an important part of the required BMP maintenance program.

6. Controlling Oil: Spill Prevention, Control & Countermeasure (SPCC) - This 20 minute video instructs employees on SPCC Plans, oil pollution regulations, effective oil storage and oil transfer procedures. It also instructs employees on "discharge procedure protocols" first response measures to take when a discharge is discovered. The video also addresses site security measures to take to protect oil handling facilities against vandalism and terrorism.

7. Storm Watch: Municipal Stormwater Pollution Prevention - The video focuses on municipal BMPs such as good housekeeping, spill response, materials storage and handling, landscape maintenance, and street maintenance. Employees working in maintenance and other departments can benefit from this training video. The video shows employees how to spot potential "illicit discharges."

8. Illicit Discharge Detection & Elimination: Shows viewers how to spot a possible illicit discharge or signs of past discharges. It discusses direct and indirect discharges and shows viewers what to look for at curb inlets, drop inlets and outfalls. It shows examples of the tell-tale signs often left by past illicit discharges. It encourages employees to be vigilant in watching for signs of illicit discharges and to report their suspicions to the storm drainage staff, Public Works Department or Environmental staff who can then initiate the process of tracking the source of the discharge and eliminating it.



The MS4 NPDES permit also requires that permittees conduct annual training on stormwater, erosion, and sedimentation control for construction site plan reviewers, inspectors and/or operators (Part III.A.9.c). The permittees currently meet this requirement by sponsoring a minimum of one annual FDEP Stormwater, Erosion, and Sedimentation Control Inspector Training and Certification course.

Training conducted in 2012/2013 included:

1. "Storm Watch" and "Rain Check" videos and training - March 19, 2014. Attendees for the training video included 92 representatives from the Palm Beach County MS4 permittees.

2. Florida Stormwater, Erosion and Sedimentation Control Inspector Training Program – one on December 16 & 17, 2013 and another on May 27 & 28, 2014. Palm Beach County MS4 permittees sponsored the class that was held at the City of West Palm Beach Mary V. McDonald-Wilson Center – Gaines Park and the other at the Town of Jupiter Community Center. Cheryl Moore was the state certified instructor. Between the two training sessions 123 individuals were in attendance, 41 representing private individuals, 32 municipal construction site inspectors, 24 municipal site plan reviewers, and 15 municipal construction site operators.

3.0 Public Education Program

The Palm Beach County 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 41 separate messages. The Stormwater And Me (SAM) program, as it is called, kicked off in 2009.

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 hope 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 vehicle fluids, leftover hazardous household products, and lead acid batteries. *[Part III.A.7.f.]*

Target Audience:

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

Activities and Materials:

Public Service Announcements (PSAs), brochures, exhibits, and websites (www.stormwaterandme.org and http://www.swa.org/site/hhw/haz_waste_home/hazardous_waste_portal.htm) have been created. Additional resources include public education materials already created or created outside the direction of the MS4 program, such as IFAS/County Extension Office's Florida Friendly Yards program/website and the Palm Beach County Solid Waste Authority's Household Hazardous Waste program/webpage. Two, 30-second Public Service Announcements (PSAs) dealing with stormwater pollution prevention were aired on four commercial television networks (Discovery, Animal Planet, Weather Channel, HGTV), broadcast by a local cable television provider (Comcast) from December 30, 2013 – March 30, 2014 to broadcast zones within Palm Beach County. A total of 1,345 PSAs were aired via Comcast. The PSAs were also aired by local/municipal TV stations throughout the year. Two of the City of Tallahassee's PSAs were edited (with their permission) to include our contact information and website address for more information. The "Rubber Duckie" PSA addresses the idea that everything that does in the storm drain ends up in our receiving water and the "Pick up after your pet" PSA addresses just that.

As part of the Comcast PSA contract, an additional feature called a "taggable" was included. A 30-second promotional spot about not littering was "sponsored" by our SAM program, which simply means that at the end of the spot, our logo appeared, with a 10-second closing voice-over that told viewers: "Pollution Hurts go to www.stormwaterandme.org for more ideas on how you can help with water quality in your neighborhood." These taggables appeared in the same Palm Beach County Comcast zones as our PSAs. 100 taggables were aired during the 3 month period.

Finally, visitors to the Comcast.com website home page in select Palm Beach County zones, were exposed to a StormwaterAndMe.org spot with a hot link that clicked directly through to our website. Our ad repeatedly got exposure on Xfinity.com (Comcast's portal). The Comcast Xfinity zone was different each month, with January for the Delray zone, February for the Central Palm Beach zone, and March for the Palm Beach Gardens zone. Over the three months 560 minutes of SAM video was viewed this way.

We also provided outreach materials to several municipalities for local events. Distribution of the SAM outreach materials during this program period included: 200 Illicit Discharge brochures, 200 Pesticide, Herbicide and Fertilizer brochures, 160 notepads, 100 pens, and 100 thumb drives.

The second year of distribution of the County Extension brochure on Florida Friendly Yards took place in May – July 2014 when the brochure was mailed out to each customer of Seacoast Utility Authority (+/- 32,000 households) and Town of Jupiter Utilities (+/- 28,000 households). The Palm Beach County permittees arranged and paid for the printing of the brochure and delivered the materials to billing facilities. Future phases will include the brochure's distribution to other Palm Beach County residents.

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 (HHHW). 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 HHHW. During the 2013-2014 reporting period, SWA reports that it distributed 111,200 brochures, conducted 1,866 events, collected 1,516 tons of HHHW, conducted 157 neighborhood presentations reaching 4,885 participants, produced 131 displays, aired 3,991 PSAs, conducted 570 school presentations reaching 19,085 participants, conducted 12 workshops reaching 5,435 participants, conducted 54 special events reaching 104,206 participants. SWA has estimated that its outreach program reached 80% of the population in Palm Beach County. Costs for these programs totaled $1,904,473.

In September 2014 the MS4 Steering Committee approved the purchase ($5,000) and license agreement with Excal Visual for five public outreach videos covering Illicit Discharge Detection & Elimination. The videos are in both English and Spanish and are designed to educate and motivate the community to participate in eliminating illicit discharges. The 30 second spot is primarily for public service announcements on Community TV stations. The 60 second spot can be used to reach a broad community audience for public service announcements and local community TV stations. The 2 minute version is for short presentation for booths or tables at fairs and public events. The 5 1/2 minute presentation is for short speaker presentations at elementary schools and groups. The 10 1/2 minute presentation is focused on full understanding of the problem of illicit discharge and what can be done within the community to reduce it.

It is well suited for secondary schools, high schools, school assemblies, and business organizations. These videos will used in the future programs.

Methods for Distribution:

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

Annual Schedule:

Public education efforts are emphasized during the months of January through March, when residential population in the County is at its highest.

Documentation:

The Public Education Sub-committee maintains record information for all materials purchased or produced and its distribution.

Responsible Entities:

The program is coordinated by a Public Education Sub-committee of the Palm Beach County MS4 permittee group, on behalf of all permittees. 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. The group supports the Fertilizer and Pesticide education carried out by the IFAS/County Extension office.

Resources Allocated:

The 2013-2014 budget for the public education program was $35,000.

Assessment Method:

We have identified that active hits on our SAM website were up noticeably during and after the months when the PSAs were aired on TV.

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 program requirements.

4.0 Total Maximum Daily Load (TMDL) Program

4.1 Description

The PBC MS4 Cycle 3 permit includes TMDL requirements and a schedule for developing an implementation plan to reduce the discharge of pollutants from each affected permittee's MS4 to the maximum extent practicable. Both the Department and EPA have identified impaired waterbody segments within Palm Beach County. However, as of the issuance date of this permit, only EPA established TMDLs that required action.

4.2 Established and Adopted TMDLs

When the Cycle 3 MS4 permit was issued, EPA had established seven TMDLs in Palm Beach County. These TMDLs and associated information such as the Constituent (water quality parameter of concern) and Percent Reduction Goal are identified in Table 4-1. The potentially affected permittees are Belle Glade, FDOT, Indian Trail Improvement District, Pahokee, Palm Beach County, and South Bay. It should be noted that WBIDs 3212 D, E & G are entirely within Lake Okeechobee and include no area in any of the MS4 permittees' jurisdictions. WBIDs 3247, 3248, and 3251 have no discharge reduction targets. Consequently, none of these three WBIDs require additional stormwater management programs by the MS4s.

TMDLs established by EPA or adopted by FDEP after the 3rd cycle permit was issued on March 2, 2011, will have to be addressed in the next permit cycle. These TMDLs and potentially affected permittees are identified in Table 4-2.

Table 4-1
EPA's TMDLs in Palm Beach County as of March 2, 2011

WBID	Segment Name	Basin	Constituent	TMDL	Percent Reduction	Date
3212 D, E, G	Lake Okeechobee	Lake Okeechobee	Iron	0.3 (MG/l)	51	02/23/2005
3233	L-8 Canal	Lake Okeechobee	Turbidity	32 (NTU)	52	03/29/2007
3238	West Palm Beach Canal	Lake Okeechobee	Turbidity & TSS	32 (NTU) 33 (MG/l)	66 0	03/29/2007
3244	East Beach	Lake Okeechobee	Turbidity & TSS	32 (NTU) 33 (MG/l)	12 0	03/29/2007
3247	715 Farms	Lake Okeechobee	Turbidity & TSS	32 (NTU) 33 (MG/l)	0 0	03/29/2007
3248	N. New River Canal	Lake Okeechobee	Turbidity & TSS	32 (NTU) 33 (MG/l)	0 0	03/29/2007
3251	S-3	Lake Okeechobee	Turbidity	32 (NTU)	0	03/29/2007

Table 4-2
TMDLs in Palm Beach County after March 2, 2011

WBID	Segment Name	Basin	Constituent	TMDL	Percent Reduction	Date	Agency
3226	SW Fork Loxahatchee River	St. Lucie/ Loxahatchee	Fecal Coliform	<43 (counts/100 ml)	93	05/16/12	Jupiter, FDOT, PBC SIRWCD
3262A	Lake Ida	Lake Worth Lagoon	Nutrients	TN=0.857 mg/l TP=0.062 mg/l	20 45	11/09/12	Delray, FDOT, PBC
33264A	E-1 Canal	Lake Worth Lagoon	Fecal Coliform	<400 (counts/100 ml)	94 0	08/31/2011	FDOT, PBC
3264D	E-4	Lake Worth Lagoon	Fecal Coliform	<400 (counts/100 ml)	59	03/29/2007	Boca, FDOT, PBC

4.3 Prioritization Plan and Schedule

During Year 1 of this permit cycle the six permittees affected by Table 4-1 TMDLs met to discuss an approach. As a result, a Prioritization Plan was submitted and approved by the Department in Year 2. The L-8 WBID 3233 was identified as the top priority WBID. During Year 2, additional information on the three WBIDs in the Prioritization Plan was obtained from the affected permittees. This additional information included the MS4 outfalls/drainage systems and local agricultural drainage districts' canal systems, control structures and contributing drainage areas. Review of the MS4s stormwater systems

indicated that the MS4s within two of the WBIDs (3238 and 3244) discharge only into private canals, owned and operated by Special Districts, that in turn discharge into the State impaired waters. The majority of the drainage contribution into these impaired waters is from agricultural landowners. Because these MS4s do not have any direct discharge into an impaired waterbody or indirectly through another MS4, the TMDLs for these two WBIDs are not relevant to the permittee MS4s. At the Palm Beach County June 20, 2012 Steering Committee meeting, the Department's representative, Eric Livingston, agreed. Consequently, the only WBID in this permit cycle that required further action was the L-8 Canal WBID 3233.

4.4 Monitoring and Assessment Plan

For WBID 3233, there is only one MS4 outfall discharging directly into the L-8 Canal. This outfall and monitoring is the responsibility of Indian Trail Improvement District (Indian Trail). In an email dated December 28, 2011, Eric Livingston (Department) approved the Monitoring Plan for this outfall. It consisted of the following:

- Monitoring at the discharge of the Indian Trail reservoir following or during a storm event, with a minimum of seven storms sampled

- Sampling conducted for a one hour time frame with a grab sample taken every 10 minutes; a stage recorder read at the time of sample collection and noted on the log sheet; rainfall records kept based on the rainfall station; turbidity reading from a portable turbidity meter

- All sampling followed the Department's Standard Operating Procedures for surface water sampling and equipment calibration

4.5 Monitoring Results

Indian Trail Improvement District conducted the storm event monitoring of its outfall into the L-8 Canal. Results of the monitoring were included in Indian Trail's Year 2 Annual Report. Sampled turbidity ranged from 1.5 to 4 NTUs, well below the TMDL value of 32 NTUs. Since the TMDL is being met by the MS4's discharge, the existing stormwater management program being implemented by the MS4 for this WBID more than adequately addresses this EPA TMDL.

4.6 Basin Management Action Plan

In February 2013 (Year 3, Cycle 3) the Department held its first stakeholder meeting for the development of a Basin Management Action Plan (BMAP) for Lake Okeechobee and its tributaries. The goal of this BMAP is to reduce nutrient discharge (Total Phosphorus) into Lake Okeechobee and eventually meet the TMDL (40 ppb for TP). Palm Beach County permittees potentially impacted by this BMAP include Belle Glade, Florida Department of Transportation (District Four), Indian Trail Improvement District, Pahokee, Palm Beach County, and South Bay. Within Palm Beach County, discharge into Lake Okeechobee is either via South Florida Water Management District canals (the L-8 Canal, the West Palm Beach Canal, the Hillsboro Canal, and the North New River Canal) or from agricultural water control districts. None of the MS4 permittees have any direct discharges into Lake Okeechobee. As part of the Everglades Restoration Program, the SFWMD and the water control districts have initiated programs to reduce nutrient discharges into Lake Okeechobee. SFWMD has estimated that ninety percent of the runoff in Palm Beach County has been diverted away from Lake Okeechobee and into regional storage treatment areas. Through Works of the District permits issued to Palm Beach County water control districts in the Lake Okeechobee Basin, SFWMD continues to monitor their progress in meeting the phosphorus reduction goal. Since most of the nutrient loading (89%) into Lake Okeechobee is from the northern sub-watersheds and SFWMD's Everglades Regulatory Source Control Program covers the southern sub-watershed, Lake Okeechobee Basin Management Action Plan is being developed for the northern sub-watersheds. A draft report was issued in September 2014. The only Palm Beach County MS4 that is not covered by SFWMD's Everglades Regulatory Source Control Program and works of the District permit is Indian Trail Water Control District. Water quality sampling (TP) by ITID indicate that its discharges are well below the TP goal of 40 ppb. ITID's discharges are in the range of 25 ppb. Therefore no additional supplemental stormwater management programs are required for ITID.

5.0 Water Quality Monitoring Program

5.1 Description

The water quality monitoring requirement in the MS4 NPDES permit is met through a joint program. The monitoring program includes the following components:

- ambient water quality sampling
- water quality data analysis
- trend analyses
- annual pollutant loading calculations in Year 3
- program modifications

The Palm Beach County MS4 NPDES permit monitoring program includes 32 *core* ambient water quality monitoring sites which were selected after coordination among the South Florida Water Management District (District), Palm Beach County Environmental Management (ERM), the Loxahatchee River District (LRD), and the Palm Beach County permittees. Palm Beach County also provides ambient water quality monitoring for 11 sites in five lakes commonly referred to as the Chain-of-Lakes. Since the information on these sites is readily available from ERM, and the sites are within a Palm Beach County MS4 watershed, the monitoring data is included and evaluated in this report.

5.2 Monitoring Sites

Table 5-1 identifies each monitoring site location and provides the watershed name, site designation, 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 STORET). The Chain-of-Lakes sites are located within their respective watersheds. These sites include the Stub Canal, Pine Lake, Lake Clarke, Lake Osborne, Lake Eden, and Lake Ida.

Figure 5-1 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 and those monitored by the District are shown as triangles. White symbols signify marine or tidal sites and yellow symbols designate freshwater sites.

The LRD monitors four marine sites and one freshwater site. Palm Beach County ERM monitors ten marine sites, and twenty-two freshwater sites. The District monitors six freshwater sites. All of Palm Beach County's water quality ambient monitoring data is in STORET.

The thirty-two 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 from all ERM sites is conducted by an independent laboratory under contract with ERM.

The water quality parameters and frequency being monitored by ERM (freshwater, marine and Chain-of-Lakes), LRD, and District are listed in ***Table 5-2***.

Table 5-3 (Pages 1-3) 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). Numeric Nutrient Criteria for Palm Beach County estuaries/marine water bodies and freshwater lakes is shown on Page 2 and 3, respectively in ***Table 5-3***.

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

The results of the monitoring conducted from October 2013 through September 2014 are provided in ***Table 5-4*** (43 pages). Sample values that were below the limits of detection (BDL or Non-detect) have been replaced whenever possible with ½ of the appropriate minimum detection limit (MDL) value for a more complete analysis. MDLs are determined by instrumentation and method of analysis. These substitutions have been highlighted in blue in the data tables. Exceedances of the WQ Standards are highlighted in yellow.

For Class I and Class III freshwater, exceedance limits for heavy metals (cadmium, copper, lead, and zinc) are based on a logarithmic function of the total hardness. In cases where a total hardness was not measured, an exceedance limit was not calculated. For marine waters, the limits for heavy metals are constant and do not depend on the total hardness. In marine waters, cadmium, copper, lead, and zinc exceed the surface WQ standards at values above 0.0088 mg/L, 0.0037 mg/L, 0.0085 mg/L, and 0.086 mg/L, respectively.

Exceedance limits for chlorophyll-a (corrected for pheophytin) are determined by the annual mean of the samples taken at a given site. In freshwater systems (canals), the water quality standard is exceeded if the mean is greater than 20 ug/L. In marine systems (estuaries) and lakes, exceedance occurs when the geometric mean is greater than the values shown on ***Table 5-3*** for the specific segment of the waterbody. Individual values for chlorophyll-a are not highlighted in ***Table 5-4*** since the exceedance limit is based on an annual mean or geometric mean value.

Table 5-5 summarizes the occurrence of exceedances (as described above) at each site. Each cell shows the number of exceedances and the total number of samples taken at each site during the reporting period. For example, two dissolved oxygen readings out of twelve total readings taken at Site 69 within the Loxahatchee watershed were in exceedance of the WQ Standard.

Exceedances for new **dissolved oxygen % saturation standard** occurred in the Loxahatchee River. All the other watersheds have not converted to the new criterion and still sampling for dissolved oxygen in mg/l.

Exceedances for **fecal coliform** occurred in Stub Canal and Loxahatchee River.

Exceedances for **pH** occurred in Lake Osborne.

The **chlorophyll-a** column of ***Table 5-5*** exceedances occurred in the C-15, C-16, C-17, Stub Canal, Lake Eden, Lake Ida, Lake Osborne, Pine Lake, Loxahatchee River, Lake Worth Lagoon North, and Lake Worth Lagoon Central.

Nutrient criteria exceedances occurred in Lake Eden, Lake Ida, Pine Lake, Lake Worth Lagoon North, Lake Worth Lagoon Central, and Loxahatchee River.

5.4 Trend Analyses

The Palm Beach County MS4 permit monitoring plan indicates that trend analyses are to be completed during the third permit year using the monitoring data that was collected in previous years. The Palm Beach County MS4 Steering Committee has chosen to perform the trend analyses as an annual activity.

Tabular Data

The data set for the trend analyses includes approximately 22 water quality parameters (21 sampled parameters plus calculated TN) and all MS4 sampling events from January 1, 1999 through September 2014 and Chain-of-Lakes sampling from January 2007 through September 2014.

Minimum detection limits were provided by Palm Beach County ERM for values that were reported BDL within the data set. MDL values for sampling events from September 2004 to December 2004 were obtained directly from STORET where available, and substituted for sample readings that were BDL. MDL values for data after December 2004 have been provided directly by the data supplier. MDL values in excess of the WQ Standard were not counted as exceedances.

A statistical summary of each sampling site by watershed is presented in ***Table 5-6*** (24 pages). The statistical summary provides the following information:

*Start***:** The earliest sample event date for the given site.

End: The latest sample event date for the given site.

*Samples***:** The total number of sample events for the given site.

Count: The number of usable, numerical results for the given parameter.

Exceedances: The number of measured values exceeding the criterion of the WQ Standard or IWR as previously described.

Geometric Mean: Sample values are multiplied together then the nth root of the product is taken, where n is the number of samples..

Mean: Average of the usable samples.

Max: The maximum value of the usable samples or "None" if no sample values were obtained.

Min: The minimum value of the usable samples or "None" if no sample values were obtained.

Standard Deviation: The standard deviation is based on the assumption that the data represents a sample of the population. This function uses an "n-1" denominator and will return "None" if there were less than two usable samples.

$$\sqrt{\frac{n\cdot\sum x^2-\left(\sum x\right)^2}{n\cdot(n-1)}}$$

n = number of samples
x = value
Σx^2 = The sum of the squares of the values
$(\Sigma x)^2$ = The square of the sum of the values

Graphical Data

Based on the water quality sampling results and the potential adoption of TMDLs in Palm Beach County, the following parameters have been analyzed in greater detail:

Total Nitrogen (TN)
Total Phosphorus (TP)
Chlorophyll-a (Chl-a)

Table 5-7 summarizes the geometric mean values at each site for the period of record for TN, TP, and Chl-a. Historically, based on Chl-a exceedances, elevated TN and/or TP is occurring in Lake Eden, Lake Ida, Lake Osborne, and Lake Worth Lagoon North and Central, and the Loxahatchee River.

Water quality trend graphs are presented for TN, TP, and Chl-a for the period of record in ***Figures 5-2, 5-3, and 5-4,*** respectively. The trend analyses are based on the annual geometric mean of the geometric mean of all the monitoring site values within each watershed for the period of record. The freshwater sites include data back to 1999, the marine sites use data from ERM that dates back to 2004, and the Chain-of-Lakes data dates back to 2007.

Review of the trend graphs indicates the following:

Total Nitrogen trend graphs (Figures 5-2) indicate the concentrations are improving (decreasing) or stabilized for all ten watersheds.

Total Phosphorus trend graphs (Figures 5-3) indicate a general improvement (decrease) in values within the watersheds, except for C-16 and C-51 (East and West).

Chlorophyll-a trend graphs (Figures 5-4) indicate that only the Loxahatchee River watershed is showing improvement.

5.5 Pollutant Loading Analyses

Refer to the 3rd Year Joint Annual Report for the latest pollutant loading analyses.

5.6 Program Modifications

Overall, the water quality monitoring data shows 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.

Until the State implements numeric nutrient standards or more TMDLs are adopted or established by either the Department or EPA, there are no substantial changes proposed to the Palm Beach County permittees' water quality monitoring program.

6.0 Permit Renewal

Palm Beach County permittees are required to submit an application to renew the permit by August 31, 2015 or within 4th Year Annual Report. Palm Beach County application for renewal was submitted on February 27, 2015 as a separate document.

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
		64 (Lake Eden)	ERM	Freshwater	784471.8	958205.48
		63 (Lake Ida)	ERM	Freshwater	780408.32	955816.19
		C15S40	ERM	Freshwater	760236	959269.79
C-16	III (Fresh)	22	ERM	Freshwater	828280.34	957602.68
		24	ERM	Freshwater	820399.97	957270.7
		27B	ERM	Freshwater	802276.58	916052.08
		27A	ERM	Freshwater	802545.25	942880.04
		68 (Lake Osborne)	ERM	Freshwater	829815.1	959241.37
		66 (Lake Osborne)	ERM	Freshwater	825364.28	958879.56
		65 (Lake Osborne)	ERM	Freshwater	817642.36	957294.06
		C16S41	ERM	Freshwater	802739.87	964316.28
C-17	III (Fresh)	12A	ERM	Freshwater	882520.57	953672.56
		C17S44	SFWMD	Freshwater	903830.19	955552.7
C-18	I (Fresh)	16	ERM	Freshwater	923477.26	902076.42
		15	ERM	Freshwater	901986.07	931378.31
C-51 W	III (Fresh)	38B	ERM	Freshwater	854963.27	867962.99
C-51 E	III (Fresh)	37B	ERM	Freshwater	853637.29	916592.84
		57 (Stub Canal)	ERM	Freshwater	857791.27	959379.72
		70 (Pine Lake)	ERM	Freshwater	854633.78	959084.73
		52 (Stub Canal)	ERM	Freshwater	852487.66	959528.86
		62 (Lake Clarke)	ERM	Freshwater	844522.12	959176.55
		69 (Lake Clarke)	ERM	Freshwater	843444.9	958301.48
		61 (Lake Clarke)	ERM	Freshwater	836624.16	958301.41
		C51S155	SFWMD	Freshwater	841132.85	964349.43
Lox	III (Fresh)	69	LRD	Freshwater	947071.77	924822.4
	III (Marine)	30	LRD	Marine	961625.76	961625.76
		51	LRD	Marine	954939.97	948224.55
		62	LRD	Marine	949558.67	942243.82
	II	72	LRD	Marine	946223.78	954573.37
	I (Fresh)	C18G92	SFWMD	Freshwater	937389.78	924697.78
		C18S46	SFWMD	Freshwater	946198.14	935782.17
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	898346.674	970040.357
LWL-C	III (Marine)	LWL-8	ERM	Marine	856238.635	968284.926
		18C	ERM	Marine	839740.15	969747.03
		18D	ERM	Marine	835593.23	967942.19
		LWL-11	ERM	Marine	830580.53	967926.64
		LWL-13	ERM	Marine	819086.28	968516.09
LWL-S	III (Marine)	LWL-18	ERM	Marine	798402.11	965585.04

Table 5-2
Parameter Collection Schedule

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

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

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

Table 5-3

(Page 1 of 3)

State of Florida Numerical Surface Water Quality Standards per Rule 62-302.530					
Parameter	**Units**	**Class I – Freshwater**	**Class II - Marine**	**Class III - Freshwater**	**Class III Marine - (Tidal)**
PH		6.0 to 8.5	6.5 to 8.5	6.0 to 8.5	6.5 to 8.5
Dissolved Oxygen (saturation value)	%	$\geq$ 38	$\geq$ 38	$\geq$ 38	$\geq$ 42
Turbidity	NTU	$\leq$ 29 above background	$\leq$ 29 above background	$\leq$ 29 above background	$\leq$ 29 above background
Chlorophyll-a (corrected)*	ug/L	Annual geometric mean $\leq$ 20	Annual geometric mean $\leq$ 11	Annual geometric mean $\leq$ 20	Annual geometric mean $\leq$ 11
Fecal Coliform*	#/100mL	$\leq$ 400 counts	$\leq$ 43 counts	$\leq$ 400 counts	$\leq$ 400 counts
Arsenic	mg/L	$\leq$ 0.01	$\leq$ 0.05	$\leq$ 0.05	$\leq$ 0.05
Cadmium	mg/L	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$	$\leq$ 0.0088	$\leq [e^{(0.7409\ [lnH]\ -4.719)}]\ 10^{-3}$	$\leq$ 0.0088
Copper	mg/L	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$	$\leq$ 0.0037	$\leq [e^{(0.8545\ [lnH]\ -1.702)}]\ 10^{-3}$	$\leq$ 0.0037
Lead	mg/L	$\leq [e^{(0.1273\ [lnH]\ -4.705)}]\ 10^{-3}$	$\leq$ 0.0085	$\leq [e^{(0.1273\ [lnH]\ -4.705)}]\ 10^{-3}$	$\leq$ 0.0085
Specific Conductance	umho/cm	$\leq$ 1275		$\leq$ 1275	
Zinc	mg/L	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$	$\leq$ 0.086	$\leq [e^{(0.8473\ [lnH]\ +\ 0.884)}]\ 10^{-3}$	$\leq$ 0.086

Notes:

(1) InH means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is < 25 mg/L and set at 400 mg/L if actual hardness is > 400 mg/L.

(2) This criterion is protective of human health not of aquatic life.

(3) DO saturation shall not be below the criteria in more than 10% of the measurements.

Table 5-3
(Page 2 of 3)

State of Florida Numeric Interpretation of the Estuary Specific Narrative Nutrient Criterion per Rule 62-302.532				
Estuary	**Total Phosphorus**	**Total Nitrogen**	**Chlorophyll-a**	**Applicable to Monitoring Sites**
Lower Loxahatchee River	0.032 mg/L as AGM	0.63 mg/L as AGM	1.8 ug/L as AGM	
Middle Loxahatchee River	0.030 mg/L as AGM	0.80 mg/L as AGM	4.0 ug/L as AGM	51
Upper Loxahatchee River	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 ug/L as AGM	
Loxahatchee River Southwest Fork	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 ug/L as AGM	72
ICWW North of Loxahatchee River	0.022 mg/L as AGM	0.58 mg/L as AGM	2.7 ug/L as AGM	62
ICWW South of Loxahatchee River	0.035 mg/L as AGM	0.66 mg/L as AGM	4.7 ug/L as AGM	30
Northern Lake Worth Lagoon	0.044 mg/L as AGM	0.54 mg/L as AGM	2.9 ug/L as AGM	LWL-1, LWL-4, 11, 13
Central Lake Worth Lagoon	0.049 mg/L as AGM	0.66 mg/L as AGM	10.2 ug/L	LWL-8, LWL-11, LWL-13, 18C, 18D
ICWW Palm Beach County (Southern Lake Worth Lagoon)	0.146 mg/L as AGM	1.17 mg/L as AGM	13.4 ug/L as AGM	LWL-18
Notes: For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.				

Table 5-3

(Page 3 of 3)

State of Florida Numeric Interpretation of the Narrative Nutrient Lake and Stream Criteria per Rule 62-302.531					
Long Term Geometric Mean Lake Color and Alkalinity	**Annual Geometric Mean Chlorophyll-a**	**Minimum calculated numeric Interpretation**		**Maximum calculated numeric interpretation**	
		Annual Geometric Mean Total Phosphorus	**Annual Geometric Mean Total Nitrogen**	**Annual Geometric Mean Total Phosphorus**	**Annual Geometric Mean Total Nitrogen**
≤40 Platinum Cobalt units and > 20 mg/L $CaCO_3$	≤ 20 ug/L	0.03 mg/l	1.05 mg/l	0.09 mg/l	1.91 mg/l

Notes: For lakes, FDEP allows for an acceptable range of annual geometric means of TN and TP, up to the values shown in the "maximum calculated numeric interpretation" column, as long as the applicable chlorophyll-a criterion is achieved in that same year. These numeric interpretations for TN, TP, and chlorophyll-a cannot be exceeded more than once in any consecutive calendar three year period. This is applicable to monitoring sites 61, 62, 65, 66, 68, 69 & 70.

State of Florida – Nutrient Criterion for South Florida Canals per Rule 62-302.530(47)(b) and 62-303.351
In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural population of aquatic flora or fauna. Annual mean chlorophyll-a value less than or equal to 20 ug/l or if the annual mean chlorophyll-a values have increased by more than 50% over historical values for at least two consecutive years. This is applicable to sites 31E, 31C, C15S40, 22, 24, 27b, 27a, C16S41, 12A, C1744, 16, 15, 38b, 37b 57, 52, C51S155, 69, C18G92 and C18S46.

State of Florida has established nutrient threshold (expressed as annual geometric means) for the Peninsula Region of 0.12 mg/l for TP and 1.54 mg/l for TN. These values cannot be exceeded more than once in a three year period. This is applicable to the C-18 Basin and freshwater portions of the Loxahatchee River Sites 15, 16, C-18, G-92, C18S46, and 69.

EPA has established nutrient TMDL's for Lake Ida (TN ≤ 0.857 mg/l, TP ≤ 0.062 mg/l, and chlorophyll-a ≤ 20 ug/l. This TMDL criteria is applicable to Sites 63 and 64.

Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014
(Page 1 of 43)

C-15 Watershed Monitoring Events								
SITE 31E	**SAMPLE DATE**	**11/21/13**	**02/06/14**	**03/20/14**	**05/29/14**	**07/17/14**		Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025		0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003		0.00
Chlorophyll-a (corrected)	ug/L	96.8	70.9	13.2	22.3	46		49.84
Copper	mg/L	0.0067	0.0110	0.0053	0.003	0.0032		0.01
Dissolved Oxygen	mg/L	8.2	10.5	5.7	4.9	4.8		6.83
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.050	0.040	0.062	0.055	0.037		0.05
Nitrogen, nitrate + nitrite	mg/L	0.013	0.013	0.013	0.0125	0.0125		0.01
Nitrogen, Total	mg/L	1.61	1.21	1.11	1.51	1.11		1.31
Nitrogen, Total Kjeldahl	mg/L	1.6	1.2	1.1	1.5	1.1		1.30
pH	None	8.0	8.0	7.7	7.7	7.9		7.84
Phosphorus, orthophosphate	mg/L	0.2000	0.410	0.120	0.017	0.35		0.22
Phosphorus, Total	mg/L	0.3300	0.5200	0.2200	0.1	0.46		0.33
Salinity	ppth							
Specific Conductivity	umho/cm	727	493	675	833	594		664.40
Temperature	deg C	26.0	25.8	24.6	28.1	28.2		26.53
Total Hardness	mg/L	257	200	259	186	215		223.40
Total Suspended Solids	mg/L	8.9	2.4	5.8	9.4	9.3		7.16
Turbidity	NTU	8.8	4.0	0.2	5.1	4.9		4.60
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050		0.01

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 2013 - September 2014
(Page 2 of 43)

C-15 Watershed Monitoring Events								
SITE 31C	**SAMPLE DATE**	**10/9/13**	**11/21/13**	**2/6/14**	**3/20/14**	**5/29/14**	**7/17/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0051	0.0025	0.0025	0.0250	0.01
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	36.9	18.9	29.9	16.2	36.5	44.9	30.55
Copper	mg/L	0.0013	0.0059	0.0092	0.0045	0.0013	0.0013	0.00
Dissolved Oxygen	mg/L	3.2	6.6	7.9	8.6	7.09	5.4	6.46
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.170	0.120	0.090	0.044	0.010	0.110	0.09
Nitrogen, nitrate + nitrite	mg/L	0.053	0.160	0.120	0.0125	0.013	0.031	0.06
Nitrogen, Total	mg/L	0.92	0.87	0.98	0.72	0.67	0.92	0.85
Nitrogen, Total Kjeldahl	mg/L	0.87	0.71	0.86	0.71	0.66	0.89	0.78
pH	None	7.3	7.9	7.6	7.8	7.77	7.5	7.64
Phosphorus, orthophosphate	mg/L	0.0880	0.071	0.150	0.041	0.022	0.0560	0.07
Phosphorus, Total	mg/L	0.1200	0.1000	0.2000	0.13	0.0770	0.1100	0.12
Salinity	ppth							
Specific Conductivity	umho/cm	503	468	455	508	512	508	492.33
Temperature	deg C	27.5	24.8	25.1	24.5	28.32	27.6	26.30
Total Hardness	mg/L	190	167	178	204	185	201	187.50
Total Suspended Solids	mg/L	1.0	2.9	1.0	4.7	2.7	2.8	2.52
Turbidity	NTU	1.5	2.4	2.6	0.14	5.7	2.9	2.54
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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
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Chain of Lakes - C-15 Watershed								
64 (Lake Eden)	**SAMPLE DATE**	**10/31/13**	**02/20/14**	**04/30/14**	**06/05/14**			Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	43.1	32.1	25.5	32.7			32.77
Copper	mg/L							
Dissolved Oxygen	% Saturation							
Fecal Coliform	cfu/100mL	40	4	24	12			14.65
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.044	0.044	0.036	0.010			0.03
Nitrogen, nitrate + nitrite	mg/L	0.013	0.027	0.013	0.013			0.02
Nitrogen, Total	mg/L	1.41	0.84	0.78	0.83			0.94
Nitrogen, Total Kjeldahl	mg/L	1.40	0.81	0.77	0.82			0.92
pH	None	8.3	8.2	8.5	8.4			8.35
Phosphorus, orthophosphate	mg/L	0.002	0.034	0.002	0.002			0.00
Phosphorus, Total	mg/L	0.048	0.090	0.060	0.058			0.062
Salinity	ppth							
Specific Conductivity	umho/cm	476	472	488	587			503.68
Temperature	deg C	25.7	23.6	29.3	28.7			26.73
Total Hardness	mg/L							
Total Suspended Solids	mg/L	4.6	2.9	3.4	5.4			3.96
Turbidity	NTU	3.1	3.1	4.0	3.8			3.48
Zinc	mg/L							

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Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Chain of Lakes (C-15 Watershed)								
63 (Lake Ida)	**SAMPLE DATE**	**10/31/13**	**02/20/14**	**04/30/14**	**06/05/14**			Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	53.3	29.2	28.6	32.4			34.65
Copper	mg/L							
Dissolved Oxygen	% Saturation							
Fecal Coliform	cfu/100mL	56	56	17	9			26.32
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.035	0.058	0.042	0.010			0.03
Nitrogen, nitrate + nitrite	mg/L	0.013	0.026	0.013	0.013			0.02
Nitrogen, Total	mg/L	0.87	0.71	0.78	0.84			0.80
Nitrogen, Total Kjeldahl	mg/L	0.86	0.68	0.77	0.83			0.78
pH	None	8.5	8.5	8.5	8.5			8.48
Phosphorus, orthophosphate	mg/L	0.002	0.062	0.005	0.002			0.01
Phosphorus, Total	mg/L	0.045	0.120	0.061	0.059			0.07
Salinity	ppth							
Specific Conductivity	umho/cm	469	458	461	558			484.83
Temperature	deg C	25.9	23.9	28.9	28.9			26.81
Total Hardness	mg/L							
Total Suspended Solids	mg/L	6.5	2.7	3.8	4.7			4.21
Turbidity	NTU	4.3	2.2	5.3	4.2			3.81
Zinc	mg/L							

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Table 5-4
Monitoring Data
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C-15 Watershed Monitoring Events								
SITE C15S40	SAMPLE DATE	10/09/13	11/21/13	02/06/14	03/20/14	05/29/14	07/17/14	09/11/14
PARAMETER	UNITS							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cadmium	mg/L	0.00025	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Chlorophyll-a (corrected)	ug/L	15.4	39.5	50.9	7.1	23.8	35.7	20.3
Copper	mg/L	0.0037	0.0031	0.0065	0.0051	0.0034	0.0028	0.0049
Dissolved Oxygen	mg/L	6.0	8.52	9.1	8.9	8.8	8.23	8.12
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Nitrogen, Ammonia	mg/L	0.006	0.040	0.066	0.037	0.010	0.010	0.010
Nitrogen, nitrate + nitrite	mg/L	0.030	0.013	0.170	0.013	0.013	0.013	0.013
Nitrogen, Total	mg/L	0.73	0.72	1.00	0.59	0.60	0.81	0.83
Nitrogen, Total Kjeldahl	mg/L	0.7	0.71	0.83	0.58	0.59	0.8	0.82
pH	None	7.8	8.2	7.7	8.1	8.2	8.0	7.9
Phosphorus, orthophosphate	mg/L	0.084	0.026	0.150	0.036	0.002	0.034	0.052
Phosphorus, Total	mg/L	0.1200	0.0690	0.2200	0.0870	0.0410	0.0840	0.1100
Salinity	ppth							
Specific Conductivity	umho/cm	496	473	482	482	447	489	540
Temperature	deg C	28.5	24.6	25.6	23.9	28.2	29.3	29.0
Total Hardness	mg/L	180	174	187	193	151	173	196.0
Total Suspended Solids	mg/L	1.0	4.3	1.0	1.0	2.5	3.4	3.6
Turbidity	NTU	1.9	6.2	3.6	0.11	2.1	2	2.6
Zinc	mg/L	0.005	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050

SITE C15S40	SAMPLE DATE						Mean
PARAMETER	UNITS						
Alkalinity	mg/L						
Arsenic	mg/L						0.00
Cadmium	mg/L						0.00
Chlorophyll-a (corrected)	ug/L						27.53
Copper	mg/L						0.00
Dissolved Oxygen	mg/L						8.22
Lead	mg/L						0.00
Nitrogen, Ammonia	mg/L						0.03
Nitrogen, nitrate + nitrite	mg/L						0.04
Nitrogen, Total	mg/L						0.76
Nitrogen, Total Kjeldahl	mg/L						0.72
pH	None						7.99
Phosphorus, orthophosphate	mg/L						0.05
Phosphorus, Total	mg/L						0.10
Salinity	ppth						
Specific Conductivity	umho/cm						487.00
Temperature	deg C						27.02
Total Hardness	mg/L						179.14
Total Suspended Solids	mg/L						2.40
Turbidity	NTU						2.64
Zinc	mg/L						0.01

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Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

C-16 Watershed Monitoring Events								
SITE 22	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**3/19/2014**	**05/28/14**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	13.5	41.4	10.8	21.8	40.1	25.9	25.58
Copper	mg/L	0.0013	0.0040	0.0035	0.00125	0.0048	0.0025	0.00
Dissolved Oxygen	mg/L	7.9	9.6	9.6	10.0	10.26	9.9	9.55
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.063	0.043	0.033	0.010	0.010	0.010	0.03
Nitrogen, nitrate + nitrite	mg/L	0.340	0.072	0.0125	0.013	0.013	0.026	0.08
Nitrogen, Total	mg/L	1.11	0.80	0.57	0.82	0.89		0.84
Nitrogen, Total Kjeldahl	mg/L	0.77	0.73	0.56	0.81	0.88	0.64	0.73
pH	None	7.9	7.9	8.0	8.21	7.97	7.99	8.01
Phosphorus, orthophosphate	mg/L	0.0350	0.042	0.026	0.002	0.006	0.0160	0.02
Phosphorus, Total	mg/L	0.080	0.073	0.84	0.090	0.083	0.0680	0.21
Salinity	ppth							
Specific Conductivity	umho/cm	861	464	588	592	439	494	573.00
Temperature	deg C	24.4	24.5	24.2	29.7	29.04	29.8	26.94
Total Hardness	mg/L	203	201	197	191	173	173	189.67
Total Suspended Solids	mg/L	3.7	3.0	10	3.7	8.4	8.7	6.25
Turbidity	NTU	3.4	2.7	2.3	2.7	4.4	3.8	3.22
Zinc	mg/L	0.0050	0.0600	0.0050	0.0050	0.0050	0.0050	0.01

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Monitoring Data
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C-16 Watershed Monitoring Events								
SITE 24	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**3/19/2014**	**05/28/14**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	35.1	13.6	8.05	13.8	27.8	21.2	19.93
Copper	mg/L	0.0013	0.0034	0.0033	0.00125	0.0039	0.0026	0.00
Dissolved Oxygen	mg/L	8.87	9.5	9.1	9.6	11.39	10.6	9.85
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.052	0.045	0.035	0.037	0.010	0.01	0.03
Nitrogen, nitrate + nitrite	mg/L	0.18	0.074	0.0125	0.0125	0.0125	0.0125	0.05
Nitrogen, Total	mg/L	1.07	0.60	0.56	0.75	0.79	0.65	0.74
Nitrogen, Total Kjeldahl	mg/L	0.89	0.53	0.55	0.74	0.78	0.64	0.69
pH	None	8.1	8.0	8.3	8.21	8.25	8.3	8.19
Phosphorus, orthophosphate	mg/L	0.0017	0.047	0.021	0.020	0.002	0.0098	0.02
Phosphorus, Total	mg/L	0.071	0.057	0.068	0.068	0.061	0.0590	0.06
Salinity	ppth							
Specific Conductivity	umho/cm	913	445	477	617	429	473	559.00
Temperature	deg C	24.6	25.2	24.1	30.0	30.2	30.6	27.43
Total Hardness	mg/L	202	188	183	186	171	175	184.17
Total Suspended Solids	mg/L	4.3	1.0	8	3.0	7.2	5.5	4.83
Turbidity	NTU	2.5	1.5	3.1	1.9	4.2	4.6	2.97
Zinc	mg/L	0.0050	0.005	0.0050	0.0050	0.0050	0.0050	0.01

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Monitoring Data
Reporting Period October 2013 - September 2014

C-16 Watershed Monitoring Events								
SITE 27B	**SAMPLE DATE**	**10/09/13**	**11/21/13**	**05/29/14**	**7/17/2014**			Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025			0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003			0.00
Chlorophyll-a (corrected)	ug/L	76.4	22.0	30.3	32.2			40.23
Copper	mg/L	0.0044	0.0032	0.0028	0.0035			0.00
Dissolved Oxygen	mg/L	6.5	6.38	5.8	10.4			7.28
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025			0.00
Nitrogen, Ammonia	mg/L	0.048	0.078	0.024	0.041			0.05
Nitrogen, nitrate + nitrite	mg/L	0.140	0.200	0.013	0.12			0.12
Nitrogen, Total	mg/L	1.24	1.02	0.95	1.42			1.16
Nitrogen, Total Kjeldahl	mg/L	1.1	0.82	0.94	1.3			1.04
pH	None	7.5	7.9	7.9	7.9			7.79
Phosphorus, orthophosphate	mg/L	0.1100	0.0510	0.0640	0.28			0.13
Phosphorus, Total	mg/L	0.190	0.093	0.130	0.41			0.21
Salinity	ppth							
Specific Conductivity	umho/cm	553	990	711	666			730.00
Temperature	deg C	27.4	25.6	29.1	30.4			28.13
Total Hardness	mg/L	231	226	182	234			218.25
Total Suspended Solids	mg/L	7.2	4.4	4.1	8.9			6.15
Turbidity	NTU	7.1	5.2	3.3	5			5.15
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050			0.01

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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.

Table 5-4
Monitoring Data
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C-16 Watershed Monitoring Events								
SITE 27A	**SAMPLE DATE**	**11/21/13**	**02/06/14**	**03/20/14**	**5/29/2014**	**07/17/14**	**09/11/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	20.7	54.6	4.3	26.9	39.2	7.6	25.54
Copper	mg/L	0.0060	0.0084	0.0046	0.0039	0.0035	0.0042	0.01
Dissolved Oxygen	mg/L	7.4	8.5	6.7	7.1	5.4	6.6	6.95
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.057	0.170	0.090	0.01	0.010	0.010	0.06
Nitrogen, nitrate + nitrite	mg/L	0.080	0.180	0.046	0.0125	0.037	0.013	0.06
Nitrogen, Total	mg/L	1.08	1.07	0.63	0.69	1.03	0.80	0.88
Nitrogen, Total Kjeldahl	mg/L	1.00	0.89	0.58	0.68	0.99	0.79	0.82
pH	None	8.0	8.1	7.7	8.2	7.8	7.8	7.94
Phosphorus, orthophosphate	mg/L	0.0140	0.1100	0.0380	0.0053	0.2100	0.0860	0.08
Phosphorus, Total	mg/L	0.040	0.210	0.082	0.069	0.300	0.1400	0.14
Salinity	ppth							
Specific Conductivity	umho/cm	766	514	469	575	533	510	561.17
Temperature	deg C	24.22	24.6	24.0	28.6	28.7	29.6	26.64
Total Hardness	mg/L	221	191	169	173	191	174	186.50
Total Suspended Solids	mg/L	2.2	2.1	1.0	4.3	5.1	3.3	3.00
Turbidity	NTU	7.3	3.5	0.1	3.2	3.6	2.6	3.38
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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Table 5-4
Monitoring Data
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Chain of Lakes - C-16 Watershed								
68 (Lake Osborne)	**SAMPLE DATE**	**10/31/13**	**02/20/14**	**04/30/14**	**06/05/14**	**08/14/14**		Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	54.1	25.6	32.4	19.5	61.5		35.17
Copper	mg/L							
Dissolved Oxygen	mg/L	8.6	10.3	12.1	9.5	10.2		10.05
Fecal Coliform	cfu/100mL	260	9	5	20	40		24.79
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.045	0.049	0.037	0.001	0.001		0.01
Nitrogen, nitrate + nitrite	mg/L	0.040	0.026	0.013	0.013	0.013		0.02
Nitrogen, Total	mg/L	0.86	0.75	0.83	0.79	1.01		0.84
Nitrogen, Total Kjeldahl	mg/L	0.82	0.72	0.82	0.78	1		0.82
pH	None	8.2	8.4	8.6	8.5	8.44		8.41
Phosphorus, orthophosphate	mg/L	0.016	0.019	0.010	0.015	0.002		0.01
Phosphorus, Total	mg/L	0.058	0.073	0.073	0.082	0.068		0.07
Salinity	ppth							
Specific Conductivity	umho/cm	791	466	648	593	431		571.65
Temperature	deg C	25.1	22.7	28.5	27.5	31.2		26.84
Total Hardness	mg/L							
Total Suspended Solids	mg/L	6.5	1.0	4.0	3.3	4.7		3.32
Turbidity	NTU	1.5	2.6		3.2	3.9		2.64
Zinc	mg/L							

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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.

Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Chain of Lakes - C-16 Watershed								
66 (Lake Osborne)	**SAMPLE DATE**	**10/31/13**	**02/20/14**	**04/30/14**	**06/05/14**	**08/14/14**		Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	25.1	41.4	32.9	28.7	33.0		31.77
Copper	mg/L							
Dissolved Oxygen	mg/L	9.2	11.0	11.5	10.5	9.6		10.31
Fecal Coliform	cfu/100mL	20	1	2	5	15		4.96
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.040	0.040	0.044	0.010	0.010		0.02
Nitrogen, nitrate + nitrite	mg/L	0.013	0.028	0.013	0.013	0.013		0.01
Nitrogen, Total	mg/L	0.86	0.81	0.99	1.01	0.93		0.92
Nitrogen, Total Kjeldahl	mg/L	0.85	0.78	0.98	1	0.92		0.90
pH	None	8.3	8.2	8.6	4.5	7.86		7.28
Phosphorus, orthophosphate	mg/L	0.006	0.014	0.007	0.004	0.014		0.01
Phosphorus, Total	mg/L	0.068	0.073	0.085	0.078	0.076		0.08
Salinity	ppth							
Specific Conductivity	umho/cm	736	476	624	621	453		572.50
Temperature	deg C	25.1	23.1	28.9	27.7	31.5		27.10
Total Hardness	mg/L							
Total Suspended Solids	mg/L	9.3	2.1	6.9	5.2	2.5		4.45
Turbidity	NTU	2.0	4.7	9.3	4.9	2.6		4.07
Zinc	mg/L							

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.

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Monitoring Data
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Chain of Lakes (C-16 Watershed)								
65 (Lake Osborne)	**SAMPLE DATE**	**10/31/13**	**02/20/14**	**04/30/14**	**06/05/14**	**08/14/14**		Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	38.4	5.4	4.9	17.6	25.6		13.55
Copper	mg/L							
Dissolved Oxygen	mg/L	8.2	12.7	14.2	9.8	9.3		10.62
Fecal Coliform	cfu/100mL	379	5	1	4	22		11.08
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.040	0.050	0.040	0.010	0.010		0.02
Nitrogen, nitrate + nitrite	mg/L	0.013	0.032	0.013	0.013	0.013		0.02
Nitrogen, Total	mg/L	0.853	0.592	0.623	0.703	0.863		0.72
Nitrogen, Total Kjeldahl	mg/L	0.84	0.56	0.61	0.69	0.85		0.70
pH	None	8.3	8.2	8.5	8.2	7.9		8.21
Phosphorus, orthophosphate	mg/L	0.0060	0.0160	0.0049	0.0017	0.0083		0.01
Phosphorus, Total	mg/L	0.056	0.042	0.026	0.050	0.064		0.05
Salinity	ppth							
Specific Conductivity	umho/cm	646	419	526	620	455		525.74
Temperature	deg C	25.3	24.0	29.6	28.5	31.5		27.64
Total Hardness	mg/L							
Total Suspended Solids	mg/L	5.4	1.0	1.0	1.0	2.5		1.68
Turbidity	NTU	3.8	1.2	1.2	5.4	2.5		2.36
Zinc	mg/L							

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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.

Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

C-16 Watershed Monitoring Events								
SITE C16S41	**SAMPLE DATE**	**10/09/13**	**11/21/13**	**02/06/14**	**03/20/14**	**05/29/14**	**07/17/14**	**09/11/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cadmium	mg/L	0.00025	0.0003	0.0003	0.0003	0.0003	0.0003	0.00025
Chlorophyll-a (corrected)	ug/L	14.8	6.8	32.7	9.5	19.0	18.0	20.6
Copper	mg/L	0.0033	0.0049	0.0056	0.0043	0.0028	0.0044	0.0031
Dissolved Oxygen	mg/L	5.43	5.7	8.6	8.2	8.1	5.44	7.53
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Nitrogen, Ammonia	mg/L	0.080	0.130	0.072	0.035	0.001	0.066	0.001
Nitrogen, nitrate + nitrite	mg/L	0.090	0.170	0.160	0.013	0.013	0.072	0.013
Nitrogen, Total	mg/L	0.75	0.87	0.82	0.53	0.60	0.90	0.76
Nitrogen, Total Kjeldahl	mg/L	0.66	0.70	0.66	0.52	0.59	0.83	0.75
pH	None	7.6	8.1	7.9	7.9	8.3	7.7	7.9
Phosphorus, orthophosphate	mg/L	0.038	0.040	0.080	0.010	0.002	0.110	0.006
Phosphorus, Total	mg/L	0.0660	0.0570	0.1200	0.0530	0.0520	0.1700	0.0590
Salinity	ppth							
Specific Conductivity	umho/cm	426	759	455	428	511	517	493
Temperature	deg C	28.3	23.8	24.9	23.7	27.9	28.8	29.5
Total Hardness	mg/L	165	190	179	170	167	178	175
Total Suspended Solids	mg/L	2.7	2.7	1.0	1.0	2.8	4.1	3.9
Turbidity	NTU	2.2	2.0	2.1	0.1	2.3	3.2	2.9
Zinc	mg/L	0.005	0.0050	0.0050	0.0050	0.0050	0.0050	0.005

SITE C16S41	**SAMPLE DATE**						Mean	
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L						0.00	
Cadmium	mg/L						0.00	
Chlorophyll-a (corrected)	ug/L						17.33	
Copper	mg/L						0.00	
Dissolved Oxygen	mg/L						7.01	
Fecal Coliform	cfu/100mL							
Lead	mg/L						0.00	
Nitrogen, Ammonia	mg/L						0.06	
Nitrogen, nitrate + nitrite	mg/L						0.08	
Nitrogen, Total	mg/L						0.75	
Nitrogen, Total Kjeldahl	mg/L						0.67	
pH	None						7.90	
Phosphorus, orthophosphate	mg/L						0.04	
Phosphorus, Total	mg/L						0.08	
Salinity	ppth							
Specific Conductivity	umho/cm						512.71	
Temperature	deg C						26.68	
Total Hardness	mg/L						174.86	
Total Suspended Solids	mg/L						2.60	
Turbidity	NTU						2.11	
Zinc	mg/L						0.01	

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.

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Monitoring Data
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C-17 Watershed Monitoring Events								
SITE 12A	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**03/19/14**	**5/28/2014**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0057	0.0056	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	74.8	25.5	5.8	26	11.5	22.1	27.62
Copper	mg/L	0.0013	0.0041	0.0027	0.00125	0.0013	0.0044	0.00
Dissolved Oxygen	mg/L	8.0	7.2	5.9	8.1	7.3	6.3	7.11
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.100	0.230	0.120	0.01	0.061	0.066	0.10
Nitrogen, nitrate + nitrite	mg/L	0.140	0.250	0.037	0.0125	0.120	0.140	0.12
Nitrogen, Total	mg/L	1.14	1.09	0.91	0.81	0.90	0.81	0.94
Nitrogen, Total Kjeldahl	mg/L	1.00	0.84	0.87	0.8	0.78	0.67	0.83
pH	None	7.9	7.9	7.7	8.0	7.8	8.2	7.91
Phosphorus, orthophosphate	mg/L	0.0017	0.034	0.016	0.017	0.029	0.020	0.02
Phosphorus, Total	mg/L	0.003	0.069	0.077	0.079	0.079	0.093	0.07
Salinity	ppth							
Specific Conductivity	umho/cm	613	413	480	543	455	455	493.17
Temperature	deg C	24.3	24.4	23.6	29.2	29.3	29.3	26.70
Total Hardness	mg/L	195	174	186	172	164	157	174.67
Total Suspended Solids	mg/L	8.2	2.9	10.0	3.5	1.0	4.8	5.07
Turbidity	NTU	4.3	3.4	3.1	2.6	1.6	2.8	2.97
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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Monitoring Data
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C-17 Watershed Monitoring Events								
SITE C17S44	**SAMPLE DATE**	**10/10/13**	**11/07/13**	**12/05/13**	**01/09/14**	**02/06/14**	**03/06/14**	**04/03/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L							
Copper	mg/L							
Dissolved Oxygen	mg/L	3.8	6.3	6.3	7.1	6.0	6.4	8.3
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.080	0.064	0.047	0.173	0.133	0.028	0.011
Nitrogen, nitrate + nitrite	mg/L	0.087	0.089	0.212	0.214	0.186	0.019	0.003
Nitrogen, Total	mg/L	0.86	0.76	1.00	0.95	1.04	0.81	
Nitrogen, Total Kjeldahl	mg/L	0.77	0.67	0.79	0.74	0.85	0.79	0.75
pH	None	7.6	7.7	7.7	7.5	7.6	7.8	7.9
Phosphorus, orthophosphate	mg/L	0.021	0.014	0.008	0.018	0.016	0.004	0.002
Phosphorus, Total	mg/L	0.0540	0.0330	0.0480	0.0510	0.0680	0.0410	0.0300
Salinity	ppth							
Specific Conductivity	umho/cm	435	728	462	430	444	485	463
Temperature	deg C	27.4	24.0	22.1	19.3	24.4	24.8	24.2
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.5	1.5	1.5	1.5	4.0	1.5	1.5
Turbidity	NTU	2.2	1.3	2.8	3.0	3.5	1.8	1.8
Zinc	mg/L							

SITE C17S44	**SAMPLE DATE**	**05/15/14**	**06/05/14**	**07/17/14**	**08/14/14**	**09/11/14**	Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L						
Copper	mg/L						
Dissolved Oxygen	mg/L	6.7	5.7	3.9	4.7	4.1	5.77
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.006	0.012	0.109	0.019	0.085	0.06
Nitrogen, nitrate + nitrite	mg/L	0.003	0.005	0.073	0.021	0.068	0.08
Nitrogen, Total	mg/L	0.70	0.74	0.07	0.02	0.07	0.64
Nitrogen, Total Kjeldahl	mg/L	0.70	0.73				0.75
pH	None	7.7	7.5	7.4	7.5	7.6	7.63
Phosphorus, orthophosphate	mg/L	0.001	0.004	0.015	0.014	0.006	0.01
Phosphorus, Total	mg/L	0.0290	0.0270	0.0730	0.0660	0.0490	0.05
Salinity	ppth	-	-	-	-	-	
Specific Conductivity	umho/cm	394	434	467	459	428	469.08
Temperature	deg C	27.6	27.0	28.8	30.7	29.4	25.81
Total Hardness	mg/L						
Total Suspended Solids	mg/L	1.5	1.5	3.0	1.5	1.5	1.83
Turbidity	NTU	1.8	1.4	2.3	4.0	2.0	2.33
Zinc	mg/L						

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C-18 Watershed Monitoring Events								
SITE 16	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**03/19/14**	**5/28/2014**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	3.5	2.1	0.9	4.07	2.6	1.3	2.43
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.00
Dissolved Oxygen	mg/L	4.2	4.7	6.1	8.3	4.3	4.3	5.32
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.059	0.038	0.041	0.042	0.01	0.04	0.04
Nitrogen, nitrate + nitrite	mg/L	0.013	0.013	0.013	0.0125	0.013	0.013	0.01
Nitrogen, Total	mg/L	0.66	0.50	0.61	0.87	0.82	0.56	0.67
Nitrogen, Total Kjeldahl	mg/L	0.65	0.49	0.60	0.86	0.81	0.55	0.66
pH	None	7.4	7.5	7.4	7.7	7.2	7.7	7.49
Phosphorus, orthophosphate	mg/L	0.0017	0.002	0.0017	0.0078	0.002	0.041	0.01
Phosphorus, Total	mg/L	0.009	0.001	0.016	0.022	0.0077	0.012	0.01
Salinity	ppth							
Specific Conductivity	umho/cm	367	298	350	489	279	311	349.00
Temperature	deg C	24.0	24.2	23.1	28.3	28.9	28.6	26.18
Total Hardness	mg/L	54.8	60.1	81.2	147	98.9	94.6	89.43
Total Suspended Solids	mg/L	1.0	1.0	2.5	1	1	1.0	1.25
Turbidity	NTU	1.2	0.6	0.6	0.62	0.53	1.1	0.78
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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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Monitoring Data
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C-18 Watershed Monitoring Events								
SITE 15	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**03/19/14**	**5/28/2014**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	3.5	2.1	0.9	4.07	2.6	1.3	2.43
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.00
Dissolved Oxygen	mg/L	3.7	5.7	3.2	3.2	3.8	3.2	3.80
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.059	0.038	0.041	0.042	0.010	0.04	0.04
Nitrogen, nitrate + nitrite	mg/L	0.01	0.01	0.01	0.0125	0.01	0.01	0.01
Nitrogen, Total	mg/L	0.66	0.50	0.61	0.87	0.82	0.56	0.67
Nitrogen, Total Kjeldahl	mg/L	0.65	0.49	0.6	0.86	0.81	0.55	0.66
pH	None	7.6	7.8	7.5	7.8	7.7	7.9	7.70
Phosphorus, orthophosphate	mg/L	0.002	0.002	0.002	0.008	0.002	0.041	0.01
Phosphorus, Total	mg/L	0.009	0.001	0.016	0.022	0.008	0.012	0.01
Salinity	ppth							
Specific Conductivity	umho/cm	202	181	236	387	304	356	277.67
Temperature	deg C	23.4	24.5	21.8	28.2	27.5	27.6	25.49
Total Hardness	mg/L	54.8	60.1	81.2	147	99	95	89.43
Total Suspended Solids	mg/L	1.0	1.0	2.5	1.0	1.0	1.0	1.25
Turbidity	NTU	1.2	0.6	0.6	0.62	0.5	1.1	0.78
Zinc	mg/L	0.0050	0.0050	0.0050	0.005	0.0050	0.0050	0.01

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 2013 - September 2014

C-51 W Watershed Monitoring Events								
SITE 38B	**SAMPLE DATE**	**11/20/13**	**02/05/13**	**03/19/14**	**05/28/14**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	6.0	3.3	1.7	9.6	3.3	4.4	4.70
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.00125	0.00
Dissolved Oxygen	mg/L	6.9	5.9	7.9	6.5	5.7	5.2	6.34
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0003	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.090	0.400	0.082	0.077	0.170	0.130	0.16
Nitrogen, nitrate + nitrite	mg/L	0.260	0.620	0.280	0.170	0.240	0.300	0.31
Nitrogen, Total	mg/L	1.18	2.12	1.03	1.09	1.94	1.30	1.44
Nitrogen, Total Kjeldahl	mg/L	0.92	1.50	0.75	0.92	1.7	1.00	1.13
pH	None	7.9	7.5	7.7	7.8	7.5	7.7	7.66
Phosphorus, orthophosphate	mg/L	0.049	0.110	0.064	0.110	0.028	0.045	0.07
Phosphorus, Total	mg/L	0.0850	0.1200	0.1000	0.1400	0.0960	0.1200	0.11
Salinity	ppth							
Specific Conductivity	umho/cm	711	974	1119	516	1073	1520	985.50
Temperature	deg C	25.2	24.1	24.4	27.7	28.5	28.7	26.42
Total Hardness	mg/L	178	263	226	169	217	313	227.67
Total Suspended Solids	mg/L	11.4	10.6	12.5	14.0	16.9	53.4	19.80
Turbidity	NTU	20.0	20.0	15.0	25.7	15.2	36.0	21.98
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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.

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Monitoring Data
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C-51 E Watershed Monitoring Events								
SITE 37B	**SAMPLE DATE**	**11/20/13**	**02/05/14**	**03/19/14**	**05/28/14**	**07/16/14**	**09/10/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.00
Chlorophyll-a (corrected)	ug/L	2.5	3.9	0.7	4.04	5.7	2.9	3.30
Copper	mg/L	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.00
Dissolved Oxygen	mg/L	5.8	6.1	5.6	5.5	4.2	5.3	5.40
Fecal Coliform	cfu/100mL							
Lead	mg/L	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00
Nitrogen, Ammonia	mg/L	0.130	0.170	0.130	0.063	0.200	0.110	0.13
Nitrogen, nitrate + nitrite	mg/L	0.360	0.580	0.230	0.21	0.190	0.300	0.31
Nitrogen, Total	mg/L	1.18	1.50	0.94	0.92	1.39	1.14	1.18
Nitrogen, Total Kjeldahl	mg/L	0.82	0.92	0.71	0.71	1.20	0.84	0.87
pH	None	7.71	7.5	7.6	7.8	7.6	7.5	7.61
Phosphorus, orthophosphate	mg/L	0.0530	0.086	0.052	0.069	0.059	0.049	0.06
Phosphorus, Total	mg/L	0.0840	0.0940	0.8100	0.11	0.1100	0.0870	0.22
Salinity	ppth							
Specific Conductivity	umho/cm	1004	934	861	573	837	1019	871.33
Temperature	deg C	24.3	23.8	23.9	28.5	29.0	29.5	26.51
Total Hardness	mg/L	208	261	222	179	215	256	223.50
Total Suspended Solids	mg/L	34.2	1.3	7.0	2.0	7.9	15.7	11.35
Turbidity	NTU	9.7	3.8	5.5	5	7.9	9.6	6.92
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.01

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 2013 - September 2014

Chain of Lakes - C-51 E Watershed								
57 (Sub Canal)	**SAMPLE DATE**	**10/30/13**	**01/07/14**	**02/19/14**	**04/29/14**	**06/04/14**	**08/12/14**	Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	25.3	22.2	16.6	24.5	26.8	27.1	23.75
Copper	mg/L							
Dissolved Oxygen	mg/L	6.1	5.9	8.4	8.9	6.3	6.4	6.97
Fecal Coliform	cfu/100mL	22	131	52	430	44	190	144.83
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.049	0.130	0.046	0.045	0.010	0.024	0.05
Nitrogen, nitrate + nitrite	mg/L	0.032	0.150	0.054	0.013	0.013	0.030	0.05
Nitrogen, Total	mg/L	0.77	0.79	0.70	0.62	0.59	0.63	0.69
Nitrogen, Total Kjeldahl	mg/L	0.74	0.64	0.65	0.61	0.58	0.6	0.64
pH	None	7.8	7.9	7.9	7.9	7.9	7.5	7.82
Phosphorus, orthophosphate	mg/L	0.002	0.010	0.002	0.009	0.007	0.010	0.01
Phosphorus, Total	mg/L	0.039	0.078	0.049	0.085	0.083	0.067	0.07
Salinity	ppth							
Specific Conductivity	umho/cm	435	414	451	451	449	422	437.00
Temperature	deg C	24.7	19.4	22.7	28.8	26.3	30.0	25.30
Total Hardness	mg/L							
Total Suspended Solids	mg/L	3.9	5.1	3.1	7.4	5.8	3.4	4.78
Turbidity	NTU	3.0	4.9	3.5	3.7	4.3	2.2	3.60
Zinc	mg/L							

* Non-detect

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 2013 - September 2014

Chain of Lakes - C-51 E Watershed								
70 (Pine Lake)	**SAMPLE DATE**	**10/30/13**	**01/07/14**	**02/19/14**	**04/29/14**	**06/04/14**	**08/12/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	35.7	29.7	33.1	23.6	32.7	27.2	30.05
Copper	mg/L							
Dissolved Oxygen	mg/L	8.2	7.8	9.0	10.1	8.5	10.9	9.02
Fecal Coliform	cfu/100mL	40	77	7	48	62	320	52.33
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.036	0.086	0.036	0.043	0.010	0.010	0.03
Nitrogen, nitrate + nitrite	mg/L	0.013	0.100	0.025	0.013	0.013	0.013	0.02
Nitrogen, Total	mg/L	0.78	0.77	0.75	0.51	0.59	0.71	0.68
Nitrogen, Total Kjeldahl	mg/L	0.77	0.67	0.72	0.5	0.58	0.7	0.65
pH	None	8.0	7.9	7.9	8.1	8.1	7.9	7.98
Phosphorus, orthophosphate	mg/L	0.0052	0.0017	0.0017	0.0017	0.0017	0.0017	0.00
Phosphorus, Total	mg/L	0.043	0.073	0.055	0.057	0.074	0.067	0.06
Salinity	ppth							
Specific Conductivity	umho/cm	385	376	445	441	441	363	407.04
Temperature	deg C	25.2	19.7	22.4	28.2	27.4	30.8	25.34
Total Hardness	mg/L							
Total Suspended Solids	mg/L	8.6	4.5	6.3	7.2	8.9	6.7	6.87
Turbidity	NTU	5.9	6.1	4.7	4.5	4.8	3.8	4.90
Zinc	mg/L							

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 2013 - September 2014

Chain of Lakes - C-51 E Watershed								
52 (Stub Canal)	SAMPLE DATE	10/30/13	01/07/14	02/19/14	04/29/14	06/04/14	08/12/14	Mean
PARAMETER	UNITS							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	33.1	25.5	28.0	22.9	24.6	37.2	28.55
Copper	mg/L							
Dissolved Oxygen	mg/L	6.6	8.6	8.0	8.1	7.8	8.4	7.93
Fecal Coliform	cfu/100mL	58	84	25	160	84	90	83.50
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.032	0.076	0.054	0.048	0.010	0.010	0.04
Nitrogen, nitrate + nitrite	mg/L	0.013	0.089	0.013	0.013	0.013	0.013	0.03
Nitrogen, Total	mg/L	0.82	0.76	0.73	0.60	0.83	0.68	0.74
Nitrogen, Total Kjeldahl	mg/L	0.81	0.67	0.72	0.59	0.82	0.67	0.71
pH	None	7.8	7.7	7.6	7.9	8.1	7.6	7.78
Phosphorus, orthophosphate	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00
Phosphorus, Total	mg/L	0.041	0.065	0.067	0.062	0.071	0.054	0.06
Salinity	ppth							
Specific Conductivity	umho/cm	466	388	407	445	418	374	416.33
Temperature	deg C	25.5	18.7	22.1	27.9	27.4	30.0	25.28
Total Hardness	mg/L							
Total Suspended Solids	mg/L	4.5	4.6	6.5	8.5	7.7	7.1	6.48
Turbidity	NTU	3.4	4.9	5.6	5.5	5.3	2.3	4.50
Zinc	mg/L							

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 2013 - September 2014

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Chain of Lakes - C-51 E Watershed								
62 (Lake Clarke)	**SAMPLE DATE**	**10/30/13**	**01/07/14**	**02/19/14**	**04/29/14**	**06/04/14**	**08/12/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	8.5	2.6	21.0	13.0	28.5	47.4	14.22
Copper	mg/L							
Dissolved Oxygen	mg/L	6.2	6.6	10.5	11.1	7.9	13.4	8.91
Fecal Coliform	cfu/100mL	80	123	17	29	19	2	23.86
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.080	0.096	0.045	0.037	0.010	0.010	0.03
Nitrogen, nitrate + nitrite	mg/L	0.260	0.350	0.079	0.013	0.013	0.013	0.05
Nitrogen, Total	mg/L	1.10	0.92	0.75	0.64	0.61	1.01	0.82
Nitrogen, Total Kjeldahl	mg/L	0.84	0.57	0.67	0.63	0.60	1	0.70
pH	None	7.7	7.8	8.0	8.2	8.1	8.2	7.99
Phosphorus, orthophosphate	mg/L	0.043	0.047	0.022	0.023	0.068	0.001	0.02
Phosphorus, Total	mg/L	0.068	0.080	0.069	0.071	0.120	0.082	0.08
Salinity	ppth							
Specific Conductivity	umho/cm	1170	745	506	610	561	438	635.88
Temperature	deg C	25.7	20.1	23.1	29.9	28.3	31.7	26.15
Total Hardness	mg/L							
Total Suspended Solids	mg/L	3.1	1.0	2.2	3.7	9.6	7.0	3.45
Turbidity	NTU	3.8	5.1	2.6	2.7	3.2	4.1	3.48
Zinc	mg/L							

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 2013 - September 2014

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Chain of Lakes - C-51E Watershed								
69 (Lake Clarke)	**SAMPLE DATE**	**10/30/13**	**01/07/14**	**02/19/14**	**04/29/14**	**06/04/14**	**08/12/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	7.6	7.2	20.2	13.5	9.8	40.5	13.43
Copper	mg/L							
Dissolved Oxygen	mg/L	6.2	7.3	11.0	10.2	8.6	13.8	9.18
Fecal Coliform	cfu/100mL	29	141	22	25	5	17	24.00
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.092	0.085	0.054	0.045	0.010	0.010	0.04
Nitrogen, nitrate + nitrite	mg/L	0.230	0.330	0.058	0.013	0.013	0.013	0.05
Nitrogen, Total	mg/L	1.04	0.97	0.78	0.55	0.59	0.88	0.78
Nitrogen, Total Kjeldahl	mg/L	0.81	0.64	0.72	0.54	0.58	0.87	0.68
pH	None	7.7	7.8	8.0	8.2	8.1	8.1	7.99
Phosphorus, orthophosphate	mg/L	0.046	0.058	0.020	0.029	0.065	0.002	0.02
Phosphorus, Total	mg/L	0.064	0.085	0.090	0.079	0.012	0.064	0.06
Salinity	ppth							
Specific Conductivity	umho/cm	856	641	483	620	561	430	583.92
Temperature	deg C	25.8	20.0	23.2	29.1	28.7	31.3	26.04
Total Hardness	mg/L							
Total Suspended Solids	mg/L	3.1	2.3	1.0	3.8	3.1	7.2	2.91
Turbidity	NTU	4.1	4.8	2.0	2.8	2.2	2.3	2.87
Zinc	mg/L							

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 2013 - September 2014

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Chain of Lakes (C-51 E Watershed)								
61 (Lake Clarke)	**SAMPLE DATE**	**10/30/13**	**01/07/14**	**02/19/14**	**04/29/14**	**06/04/14**	**08/12/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	61.7	4.0	28.2	12.6	20.9	30.5	19.55
Copper	mg/L							
Dissolved Oxygen	mg/L	7.8	6.9	10.0	11.5	13.5	8.7	9.48
Fecal Coliform	cfu/100mL	22	118	62	56	4	62	36.16
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.051	0.096	0.053	0.043	0.010	0.010	0.03
Nitrogen, nitrate + nitrite	mg/L	0.190	0.360	0.073	0.013	0.013	0.140	0.07
Nitrogen, Total	mg/L	2.09	0.95	0.85	0.52	0.60	1.13	0.92
Nitrogen, Total Kjeldahl	mg/L	1.90	0.59	0.78	0.51	0.59	0.99	0.80
pH	None	7.9	7.8	7.9	8.3	8.4	7.3	7.90
Phosphorus, orthophosphate	mg/L	0.039	0.058	0.024	0.040	0.065	0.017	0.04
Phosphorus, Total	mg/L	0.0780	0.0950	0.0880	0.0920	0.1200	0.0850	0.09
Salinity	ppth							
Specific Conductivity	umho/cm	804	592	459	638	546	452	570.28
Temperature	deg C	26.4	20.2	23.3	29.8	28.8	31.2	26.32
Total Hardness	mg/L							
Total Suspended Solids	mg/L	2.5	2.0	2.6	2.0	3.0	4.6	2.67
Turbidity	NTU	3.6	6.0	0.5	2.8	2.3	2.2	2.31
Zinc	mg/L							

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 2013 - September 2014

C-51 E Watershed Monitoring Events								
SITE C51S155	**SAMPLE DATE**	**10/10/13**	**11/07/13**	**12/05/13**	**01/09/14**	**02/06/14**	**03/06/14**	**04/03/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L			0.02		0.05	0.02	
Copper	mg/L							
Dissolved Oxygen	mg/L	4.2	6.9	5.4	7.1	5.7	7.3	4.5
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.009	0.055	0.094	0.095	0.116	0.039	0.101
Nitrogen, nitrate + nitrite	mg/L	0.174	0.255	0.339	0.392	0.374	0.154	0.214
Nitrogen, Total	mg/L	1.09	1.14	1.15	1.15	1.31	1.07	1.02
Nitrogen, Total Kjeldahl	mg/L	0.92	0.88	0.81	0.76	0.94	0.92	0.81
pH	None	7.4	7.8	7.8	8.0	8.0	7.6	7.7
Phosphorus, orthophosphate	mg/L	0.043	0.048	0.048	0.052	0.046	0.031	0.047
Phosphorus, Total	mg/L	0.0740	0.0780	0.0720	0.0760	0.0830	0.0770	0.0690
Salinity	ppth							
Specific Conductivity	umho/cm	691	1023	742	909	799	694	759
Temperature	deg C	27.4	24.6	21.5	19.8	23.8	24.9	22.9
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Turbidity	NTU	4.7	5.3	4.8	4.4	6.2	4.3	3.0
Zinc	mg/L							

SITE C51S155	**SAMPLE DATE**	**05/15/14**	**06/05/14**	**07/17/14**	**08/14/14**	**09/11/14**	Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	0.016		0.016	0.036		0.03
Copper	mg/L						
Dissolved Oxygen	mg/L	5.9	6.5	5.9	3.7	4.5	5.63
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.054	0.006	0.100	0.010	0.113	0.07
Nitrogen, nitrate + nitrite	mg/L	0.142	0.003	0.153	0.167	0.399	0.23
Nitrogen, Total	mg/L	1.14	0.88	0.15	0.17	0.40	0.89
Nitrogen, Total Kjeldahl	mg/L	1.00	0.88				0.88
pH	None	7.6	7.4	7.3	7.4	7.6	7.63
Phosphorus, orthophosphate	mg/L	0.066	0.056	0.031	0.002	0.030	0.04
Phosphorus, Total	mg/L	0.1050	0.0900	0.0720	0.0030	0.0710	0.07
Salinity	ppth	-	-	-	-	-	
Specific Conductivity	umho/cm	701	554	356	690	1067	748.75
Temperature	deg C	27.6	26.8	28.9	31.1	29.8	25.76
Total Hardness	mg/L						
Total Suspended Solids	mg/L	3.0	1.5	5.0	4.0	6.0	2.50
Turbidity	NTU	3.6	1.9	4.4	7.4	7.5	4.79
Zinc	mg/L						

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 "gray" are values taken from the first date where two events within the same month occurred on separate dates.

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 2013 - September 2014

Loxahatchee River Watershed Monitoring Events								
SITE 69 (Lox)	**SAMPLE DATE**	**10/21/13**	**11/12/13**	**12/11/13**	**01/14/14**	**02/12/14**	**03/10/14**	**04/15/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L	133	150	162	95	118	136	154
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	4.7	1.3	1.7	3.7	1.7	4.5	1.7
Copper	mg/L							
Dissolved Oxygen	% Saturation	39.7	44.1	41.6	54.1	48.7	56.1	53.10
Fecal Coliform	cfu/100mL	6	18	6	34	16	27	37
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.100	0.100	0.110	0.040	0.064	0.050	0.070
Nitrogen, nitrate + nitrite	mg/L	0.083	0.112	0.113	0.041	0.074	0.030	0.031
Nitrogen, Total	mg/L	1.07	0.89	0.89	0.58	0.85	0.70	0.85
Nitrogen, Total Kjeldahl	mg/L	0.99	0.78	0.78	0.54	0.78	0.67	0.82
pH	None	7.0	7.3	7.2	6.8	7.3	7.3	7.6
Phosphorus, orthophosphate	mg/L	0.012	0.017	0.007	0.007	0.005	0.012	0.008
Phosphorus, Total	mg/L	0.043	0.030	0.039	0.022	0.028	0.031	0.028
Salinity	ppth	0.20	0.20	0.20	0.16	0.17	0.20	0.21
Specific Conductivity	umho/cm	402	460	492	327	354	444	438
Temperature	deg C	27.0	24.0	22.8	22.1	22.4	21.9	24.7
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.3	0.6	2.7	1.7	0.9	1.3	1.6
Turbidity	NTU	1.5	1.5	2.6	1.5	1.5	1.8	3.9
Zinc	mg/L							

SITE 69 (Lox)	**SAMPLE DATE**	**05/13/14**	**06/18/14**	**07/23/14**	**08/14/14**	**09/22/14**	Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L	146	190	112	115	100	134.25
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	1.2	7.7		5.3	7.3	3.71
Copper	mg/L						
Dissolved Oxygen	% Saturation	40.5	44.2	23.4	22.5	39.3	42.28
Fecal Coliform	cfu/100mL	11	13	1216	360	40	148.67
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.070	0.100	0.070	0.160	0.090	0.09
Nitrogen, nitrate + nitrite	mg/L	0.027	0.045	0.067	0.070	0.050	0.06
Nitrogen, Total	mg/L	0.95	0.91	1.12	1.04	1.30	0.93
Nitrogen, Total Kjeldahl	mg/L	0.92	0.86	1.05	0.97	1.20	0.86
pH	None	7.3	7.1	7.1	7.33	7.0	7.18
Phosphorus, orthophosphate	mg/L	0.007	0.010	0.024	0.019	0.005	0.01
Phosphorus, Total	mg/L	0.025	0.037	0.085	0.050	0.038	0.04
Salinity	ppth	-	-	-	-	-	0.20
Specific Conductivity	umho/cm	491	694	366	373	322	430.25
Temperature	deg C	26.3	28.3	28.7	30.3	27.5	25.50
Total Hardness	mg/L						
Total Suspended Solids	mg/L	1.0	2.8	2.5	2.9	2.4	1.81
Turbidity	NTU	0.8	2.3	2.3	2.1	1.5	1.94
Zinc	mg/L						

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 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Marine)								
SITE 30	**SAMPLE DATE**	**11/20/13**	**01/08/14**	**03/19/14**	**05/19/14**	**07/09/14**	**09/15/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L	124	121	126	132	123	131	126.10
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	3.2	4.4	2.8	2.2	7.6	7.6	4.14
Copper	mg/L							
Dissolved Oxygen	% Saturation	91.1	91.3	88.1	84.1	70.3	85.1	84.68
Fecal Coliform	cfu/100mL	7	18	2		54	30	13.25
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.060	0.030	0.030	0.030	0.030	0.030	0.03
Nitrogen, nitrate + nitrite	mg/L	0.024	0.007	0.005	0.005	0.018	0.011	0.01
Nitrogen, Total	mg/L	0.20	0.20	0.20	0.28	0.24	0.40	0.24
Nitrogen, Total Kjeldahl	mg/L	0.20	0.20	0.20	0.28	0.22	0.35	0.24
pH	None	8.02	7.9	8.1	7.9	7.7	7.9	7.92
Phosphorus, orthophosphate	mg/L	0.005	0.005	0.005	0.005	0.005	0.0070	0.01
Phosphorus, Total	mg/L	0.018	0.020	0.015	0.021	0.027	0.026	0.02
Salinity	ppth	37.90	34.50	37.60	33.10	29.70	33.90	34.34
Specific Conductivity	umho/cm	56789	52226	56426	50382	44866	51418	51858.87
Temperature	deg C	26.3	18.9	23.3	25.0	29.3	28.9	25.02
Total Hardness	mg/L							
Total Suspended Solids	mg/L	10.2	9.8	3.1	4.4	3.2	2.5	4.71
Turbidity	NTU	1.8	4.4	3.7	2.5	2.6	1.8	2.65
Zinc	mg/L							

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 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Marine)								
SITE 51	**SAMPLE DATE**	**11/21/13**	**01/09/14**	**03/20/14**	**05/07/14**	**07/10/14**	**09/16/14**	Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L	116	126	125	116	105	101	114.45
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	3.6	4.8	2.3	1.7	12.1	10.0	4.49
Copper	mg/L							
Dissolved Oxygen	% Saturation	88.8	85.0	97.0	92.6	82.0	84.4	88.15
Fecal Coliform	cfu/100mL	63	18	5	4	162	58	24.44
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.030	0.030	0.030	0.040	0.030	0.070	0.04
Nitrogen, nitrate + nitrite	mg/L	0.009	0.005	0.005	0.005	0.005	0.005	0.01
Nitrogen, Total	mg/L	0.20	0.40	0.20	0.50	0.43	0.50	0.35
Nitrogen, Total Kjeldahl	mg/L	0.20	0.40	0.20	0.50	0.43	0.50	0.35
pH	None	8.0	7.9	8.0	7.9	7.9	8.0	7.95
Phosphorus, orthophosphate	mg/L	0.008	0.005	0.005	0.005	0.007	0.008	0.01
Phosphorus, Total	mg/L	0.018	0.089	0.018	0.020	0.028	0.028	0.03
Salinity	ppth	37.50	34.50	36.60	33.24	32.40	34.70	34.78
Specific Conductivity	umho/cm	56271	52267	55139	50565	49431	52588	52656.40
Temperature	deg C	25.9	19.9	23.2	26.9	27.9	28.9	25.25
Total Hardness	mg/L							
Total Suspended Solids	mg/L	9.9	22.8	4.4	3.3	5.3	2.5	5.93
Turbidity	NTU	2.1	4.1	2.7	2.0	3.4	1.9	2.59
Zinc	mg/L							

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 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Marine)								
SITE 62 (Lox)	**SAMPLE DATE**	**10/21/13**	**11/12/13**	**12/11/13**	**01/14/14**	**02/12/14**	**03/10/14**	**04/15/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L	123	154	154	102	123	132	171
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	10.8	5.5	5.7	3.9	2.7	2.6	5.9
Copper	mg/L							
Dissolved Oxygen	% Saturation	67.0	61.9	51.5	60.1	62.8	79.4	76.6
Fecal Coliform	cfu/100mL	32	46	80	110	88	64	28
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.050	0.050	0.040	0.060	0.052	0.030	0.030
Nitrogen, nitrate + nitrite	mg/L	0.051	0.133	0.125	0.097	0.096	0.044	0.005
Nitrogen, Total	mg/L	0.68	0.76	0.78	0.76	0.98	0.65	0.57
Nitrogen, Total Kjeldahl	mg/L	0.63	0.63	0.65	0.66	0.88	0.61	0.57
pH	None	7.7	7.5	7.7	7.7	7.7	7.8	7.8
Phosphorus, orthophosphate	mg/L	0.021	0.032	0.030	0.033	0.014	0.016	0.015
Phosphorus, Total	mg/L	0.480	0.051	0.054	0.062	0.047	0.040	0.038
Salinity	ppth	27.30	19.00	23.10	25.70	27.00	28.30	20.30
Specific Conductivity	umho/cm	42386	30614	36489	40136	42015	43776	32479
Temperature	deg C	28.4	25.0	24.9	23.7	24.1	23.9	26.3
Total Hardness	mg/L							
Total Suspended Solids	mg/L	3.0	4.8	1.6	4.5	4.3	2.2	3.5
Turbidity	NTU	1.9	1.8	2	3.6	2.8	2.1	2.4
Zinc	mg/L							

SITE 62 (Lox)	**SAMPLE DATE**	**05/13/14**	**06/18/14**	**07/23/14**	**08/14/14**	**09/10/13**		Geometric Mean
PARAMETER	**UNITS**							
Alkalinity	mg/L	161	125	94	97	112		126.62
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	6.9	5.9	4.1	8.5	9.9		5.50
Copper	mg/L							
Dissolved Oxygen	% Saturation	67.5	71.0	45.1	37.3	54.6		59.96
Fecal Coliform	cfu/100mL	35	74	296	263	132		78.45
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.040	0.050	0.040	0.050	0.070		0.05
Nitrogen, nitrate + nitrite	mg/L	0.005	0.023	0.094	0.065	0.069		0.05
Nitrogen, Total	mg/L	0.74	0.79	1.05	0.92	0.90		0.79
Nitrogen, Total Kjeldahl	mg/L	0.74	0.77	0.96	0.85	0.80		0.72
pH	None	7.62	7.47	7.27	7.36	7.47		7.58
Phosphorus, orthophosphate	mg/L	0.020	0.025	0.034	0.039	0.034		0.02
Phosphorus, Total	mg/L	0.045	0.051	0.073	0.075	0.063		0.06
Salinity	ppth	-	-	-	-	-	-	15.71
Specific Conductivity	umho/cm	23540	27039	588.8	22257	41510		24147.50
Temperature	deg C	27.4	28.7	28.9	29.8	29.0		26.58
Total Hardness	mg/L							
Total Suspended Solids	mg/L	3.0	2.8	4.8	3.9	3.6		3.34
Turbidity	NTU	2.8	2.1	3.8	3.7	2.4		2.53
Zinc	mg/L							

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Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Marine)								
SITE 72	SAMPLE DATE	10/21/13	11/12/13	12/11/13	01/14/14	02/12/14	03/10/14	04/15/14
PARAMETER	UNITS							
Alkalinity	mg/L	124	106	138	130	138	138	135
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	6.7	13.5	14.1	4.7	11.9	5.6	15.0
Copper	mg/L							
Dissolved Oxygen	% Saturation	65.6	27.2	71.3	78.2	65.8	65.9	97.3
Fecal Coliform	cfu/100mL	54	1120	82	156	40	16	100
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.040	0.180	0.100	0.120	0.097	0.030	0.050
Nitrogen, nitrate + nitrite	mg/L	0.017	0.089	0.080	0.048	0.062	0.005	0.014
Nitrogen, Total	mg/L	0.66	0.66	0.57	0.38	0.79	0.20	0.47
Nitrogen, Total Kjeldahl	mg/L	0.64	0.57	0.49	0.33	0.73	0.2	0.46
pH	None	7.9	7.7	8.0	7.8	7.9	8.0	7.9
Phosphorus, orthophosphate	mg/L	0.008	0.008	0.012	0.020	0.013	0.005	0.007
Phosphorus, Total	mg/L	0.034	0.060	0.050	0.037	0.039	0.023	0.034
Salinity	ppth	27.00	35.50	35.10	30.00	34.90	37.10	30.10
Specific Conductivity	umho/cm	41966	53609	53095	46105	52813	55828	46300
Temperature	deg C	28.5	26.3	25.8	19.4	24.5	24.0	27.1
Total Hardness	mg/L							
Total Suspended Solids	mg/L	9.3	12.2	8.4	12.1	8.1	10.6	5.3
Turbidity	NTU	2.2	6.6	2.6	3.6	2.4	2.5	1.9
Zinc	mg/L							

SITE 72	SAMPLE DATE	05/13/14	06/18/14	07/23/14	08/14/13	09/22/14	Geometric Mean
PARAMETER	UNITS						
Alkalinity	mg/L	138	130	136	127	165	133.13
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	9	8.2	6.1	17.2	87.1	11.23
Copper	mg/L						
Dissolved Oxygen	% Saturation	35.3	70.6	57.2	86.3	94.4	64.17
Fecal Coliform	cfu/100mL	58	8	350	100	114	81.94
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.030	0.030	0.110	0.150	0.200	0.08
Nitrogen, nitrate + nitrite	mg/L	0.005	0.005	0.033	0.026	0.026	0.02
Nitrogen, Total	mg/L	0.6	0.31	0.74	0.87	1.3	0.57
Nitrogen, Total Kjeldahl	mg/L	0.6	0.31	0.71	0.84	1.23	0.53
pH	None	7.4	7.8	7.8	7.8	7.8	7.81
Phosphorus, orthophosphate	mg/L	0.006	0.006	0.012	0.018	0.025	0.01
Phosphorus, Total	mg/L	0.035	0.026	0.027	0.05	0.097	0.04
Salinity	ppth	35.00	36.10	34.90	35.00	22.20	32.42
Specific Conductivity	umho/cm	52925	54457	52878	52981	35244	49452.94
Temperature	deg C	27.4	28.2	28	29.4	30.1	26.40
Total Hardness	mg/L						
Total Suspended Solids	mg/L	5.8	3.8	1.3	4.5	2.7	5.91
Turbidity	NTU	3.6	3.1	2.2	2.6	2.0	2.76
Zinc	mg/L						

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Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Fresh)								
SITE C18G92	**SAMPLE DATE**	**10/10/13**	**11/07/13**	**12/05/13**	**01/09/14**	**02/06/14**	**03/06/14**	**04/03/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L							
Copper	mg/L							
Dissolved Oxygen	mg/L	4.1	7.2	6.1	7.5	5.4	6.1	8.8
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.051	0.052	0.042	0.035	0.034	0.019	0.010
Nitrogen, nitrate + nitrite	mg/L	0.034	0.037	0.042	0.032	0.024	0.013	0.003
Nitrogen, Total	mg/L	0.82	0.87	0.78	0.68	0.70	0.74	0.77
Nitrogen, Total Kjeldahl	mg/L	0.79	0.83	0.74	0.65	0.68	0.73	0.77
pH	None	7.3	7.5	7.6	7.6	7.5	7.6	7.8
Phosphorus, orthophosphate	mg/L	0.003	0.002	0.002	0.002	0.001	0.002	0.001
Phosphorus, Total	mg/L	0.0260	0.0280	0.0180	0.0160	0.0180	0.0220	0.0200
Salinity	ppth							
Specific Conductivity	umho/cm	220	379	361	398	286	297	403
Temperature	deg C	27.9	25.1	21.5	19.6	24.3	24.6	23.4
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Turbidity	NTU	1.3	1.6	1.8	2.1	1.0	1.9	1.1
Zinc	mg/L							

SITE C18G92	**SAMPLE DATE**	**05/15/14**	**06/05/14**	**07/17/14**	**08/14/14**		Mean	
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L							
Copper	mg/L							
Dissolved Oxygen	mg/L	6.4	6.7	5.8	3.0	5.1	6.01	
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.006	0.007	0.027	0.038	0.009	0.03	
Nitrogen, nitrate + nitrite	mg/L	0.003	0.003	0.003	0.028	0.003	0.02	
Nitrogen, Total	mg/L	0.81	0.83	0.00	0.03	0.00	0.59	
Nitrogen, Total Kjeldahl	mg/L	0.81	0.83				0.76	
pH	None	7.4	7.3	7.5	7.2	7.5	7.48	
Phosphorus, orthophosphate	mg/L	0.001	0.001	0.002	0.002	0.001	0.00	
Phosphorus, Total	mg/L	0.0230	0.0230	0.0370	0.0280	0.0230	0.02	
Salinity	ppth	-	-	-	-	-		
Specific Conductivity	umho/cm	450	603	334	260	344	361.25	
Temperature	deg C	28.6	28.5	29.1	31.3	30.4	26.19	
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.5	1.5	3.0	1.5	1.5	1.63	
Turbidity	NTU	1.6	1.6	2.1	1.6	2.5	1.68	
Zinc	mg/L							

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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.

Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Loxahatchee River Watershed Monitoring Events (Fresh)								
SITE C18S46	**SAMPLE DATE**	**10/10/13**	**11/07/13**	**12/05/13**	**01/09/14**	**02/06/14**	**03/06/14**	**04/03/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L							
Copper	mg/L							
Dissolved Oxygen	mg/L	3.8	6.66	7.5	8.8	8.2	7.3	6.5
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.030	0.077	0.030	0.020	0.023	0.012	0.021
Nitrogen, nitrate + nitrite	mg/L	0.010	0.083	0.095	0.003	0.003	0.005	0.003
Nitrogen, Total	mg/L	0.73	0.80	0.77	0.79	0.84	0.68	0.75
Nitrogen, Total Kjeldahl	mg/L	0.72	0.72	0.67	0.79	0.84	0.67	0.75
pH	None	7.5	7.7	7.9	7.8	7.9	7.8	7.6
Phosphorus, orthophosphate	mg/L	0.001	0.004	0.002	0.001	0.001	0.001	0.001
Phosphorus, Total	mg/L	0.0220	0.0180	0.0170	0.0210	0.0480	0.0190	0.0200
Salinity	ppth							
Specific Conductivity	umho/cm	221	287	348	416	341	326	367
Temperature	deg C	28.0	24.1	22.3	20.1	24.3	24.1	22.8
Total Hardness	mg/L							
Total Suspended Solids	mg/L	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Turbidity	NTU	1.4	1.0	1.4	4.8	2.8	2.1	1.2
Zinc	mg/L							

SITE C18S46	**SAMPLE DATE**	**05/15/14**	**06/05/14**	**07/17/14**	**08/14/14**	**09/11/14**	Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L						
Copper	mg/L						
Dissolved Oxygen	mg/L	6.8	7.5	3.9	4.9	2.4	6.17
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.022	0.005	0.049	0.021	0.034	0.03
Nitrogen, nitrate + nitrite	mg/L	0.003	0.003	0.040	0.005	0.003	0.02
Nitrogen, Total	mg/L	0.72	0.89	0.04	0.01	0.00	0.59
Nitrogen, Total Kjeldahl	mg/L	0.72	0.89				0.75
pH	None	7.7	7.7	7.2	7.6	7.4	7.65
Phosphorus, orthophosphate	mg/L	0.002	0.001	0.001	0.002	0.001	0.00
Phosphorus, Total	mg/L	0.0180	0.0240	0.0220	0.0340	0.0220	0.02
Salinity	ppth	-	-	-	-		
Specific Conductivity	umho/cm	415	152	317	286	419	324.58
Temperature	deg C	27.2	27.6	28.8	32.0	29.2	25.88
Total Hardness	mg/L						
Total Suspended Solids	mg/L	1.5	1.5	1.5	1.5	1.5	1.50
Turbidity	NTU	1.1	2.2	1.0	3.4	2.1	2.04
Zinc	mg/L						

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 2013 - September 2014

Lake Worth Lagoon North Watershed Monitoring Events (Marine)								
SITE LWL-1	**SAMPLE DATE**	**10/16/13**	**11/14/13**	**12/19/13**	**01/15/14**	**02/13/14**	**04/10/14**	**05/08/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	8.6	11.6	8.1	11.2	6.5	4.2	1.3
Copper	mg/L							
Dissolved Oxygen	mg/L	6.68	6.98	7.2	8.6	7.9	6.4	6.9
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.003	0.038	0.022	0.021	0.006	0.016	0.010
Nitrogen, nitrate + nitrite	mg/L	0.003	0.014	0.020	0.060	0.003	0.003	0.003
Nitrogen, Total	mg/L	0.32	0.35	0.29	0.44	0.26	0.50	0.23
Nitrogen, Total Kjeldahl	mg/L	0.32	0.34	0.27	0.38	0.26	0.50	0.23
pH	None	8	7.9	8	8	8	8	7.9
Phosphorus, orthophosphate	mg/L	0.009	0.014	0.014	0.005	0.007	0.005	0.002
Phosphorus, Total	mg/L	0.045	0.043	0.032	0.032	0.028	0.023	0.023
Salinity	ppth	30.10	32.80	31.20	21.60	27.50	33.30	34.10
Specific Conductivity	umho/cm	46450	50050	47775	34338	42757	50802	51952
Temperature	deg C	28.7	23.1	22.6	22.4	23.3	24.7	28.2
Total Hardness	mg/L							
Total Suspended Solids	mg/L	4.0	1.5	1.5	1.5	6.0	1.5	1.5
Turbidity	NTU	2.1	1.4	2.1	2.0	1.8	1.6	2.6
Zinc	mg/L							

SITE LWL-1	**SAMPLE DATE**	**06/12/14**	**08/07/14**	**01/00/00**			Geometric Mean	
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	7.1	4.3				5.95	
Copper	mg/L							
Dissolved Oxygen	mg/L	9.0	7.28				7.39	
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.015	0.005	0.0025			0.01	
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025				0.01	
Nitrogen, Total	mg/L	0.2725	0.0025				0.19	
Nitrogen, Total Kjeldahl	mg/L	0.27					0.31	
pH	None	7.9	8.0				7.97	
Phosphorus, orthophosphate	mg/L	0.005	0.007				0.01	
Phosphorus, Total	mg/L	0.038	0.03				0.03	
Salinity	ppth	32.50	25.60				29.57	
Specific Conductivity	umho/cm	49882	40276				45671.95	
Temperature	deg C	30.1	31.3				25.84	
Total Hardness	mg/L							
Total Suspended Solids	mg/L	6.0	4.0				2.54	
Turbidity	NTU	1.7	1.3				1.81	
Zinc	mg/L							

Table 5-4
Monitoring Data
Reporting Period October 2013 - September 2014

Lake Worth Lagoon North Watershed Monitoring Events (Marine)								
SITE 11	**SAMPLE DATE**	**10/03/13**	**12/03/13**	**02/07/14**	**02/26/14**	**04/25/14**	**05/22/14**	**06/25/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	6.6	20.7	6.5	2.1	2.0	2.3	5.0
Copper	mg/L							
Dissolved Oxygen	mg/L	5.3	7.0	7.5	6.9	5.7	7.0	7.2
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.064	0.096	0.048	0.079	0.043	0.034	0.010
Nitrogen, nitrate + nitrite	mg/L	0.029	0.091	0.036	0.041	0.013	0.046	0.013
Nitrogen, Total	mg/L	0.28	0.50	0.26	0.08	0.16	0.27	0.28
Nitrogen, Total Kjeldahl	mg/L	0.25	0.41	0.22	0.04	0.15	0.22	0.27
pH	None	7.8	7.8	7.7	8.0	7.7	7.9	7.9
Phosphorus, orthophosphate	mg/L	0.010	0.022	0.051	0.007	0.052	0.067	0.057
Phosphorus, Total	mg/L	0.059	0.061	0.034	0.058	0.067	0.052	0.072
Salinity	ppth	27.80	30.48	28.77	31.38	33.24	34.61	30.25
Specific Conductivity	umho/cm	43326	46848	44573	48163	50728	52585	46825
Temperature	deg C							
Total Hardness	mg/L							
Total Suspended Solids	mg/L							
Turbidity	NTU	3.4	1.1	1.5	3.4	2.2	1.4	1.5
Zinc	mg/L							

SITE 11	**SAMPLE DATE**	**07/22/14**	**08/20/14**	**09/04/14**			Geometric Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	10.0	11.3	3.3			5.23
Copper	mg/L						
Dissolved Oxygen	mg/L	6.42	7.8	5.3			6.55
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.010	0.010	0.010			0.03
Nitrogen, nitrate + nitrite	mg/L	0.032	0.013				0.03
Nitrogen, Total	mg/L	0.272	0.4125				0.25
Nitrogen, Total Kjeldahl	mg/L	0.24	0.40				0.21
pH	None	7.8	7.8	7.8			7.83
Phosphorus, orthophosphate	mg/L	0.043	0.002				0.02
Phosphorus, Total	mg/L	0.043	0.063				0.06
Salinity	ppth	26.44	22.85	27.98			29.20
Specific Conductivity	umho/cm	41505	36400	43649			45237.53
Temperature	deg C						
Total Hardness	mg/L						
Total Suspended Solids	mg/L						
Turbidity	NTU	1.4	1.5	1.1			1.70
Zinc	mg/L						

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
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Lake Worth Lagoon North Watershed Monitoring Events (Marine)								
SITE 13	**SAMPLE DATE**	**10/03/13**	**12/03/13**	**02/07/14**	**02/26/14**	**04/25/14**	**05/22/14**	**06/25/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	16.4	22.0	5.5	4.5	3.2	1.8	7.9
Copper	mg/L							
Dissolved Oxygen	mg/L	5.4	6.8	7.8	6.9	5.6	7.0	8.2
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.060	0.130	0.069	0.048	0.042	0.035	0.010
Nitrogen, nitrate + nitrite	mg/L	0.013	0.130	0.068	0.041	0.048	0.045	0.013
Nitrogen, Total	mg/L	0.43	0.58	0.38	0.13	0.22	0.18	0.40
Nitrogen, Total Kjeldahl	mg/L	0.42	0.45	0.31	0.09	0.17	0.13	0.39
pH	None	7.7	7.7	7.5	7.8	7.6	7.6	7.8
Phosphorus, orthophosphate	mg/L	0.011	0.025	0.035	0.004	0.048	0.066	0.027
Phosphorus, Total	mg/L	0.045	0.042	0.032	0.024	0.064	0.048	0.049
Salinity	ppth	21.08	21.37	22.19	32.34	33.01	34.87	22.20
Specific Conductivity	umho/cm	33751	34101	35373	49484	50426	52954	35476
Temperature	deg C	29.0	22.6	25.0	25.4	26.8	26.5	31.1
Total Hardness	mg/L							
Total Suspended Solids	mg/L							
Turbidity	NTU	2.7	1.8	1.8	2.4	2.4	2.0	2.2
Zinc	mg/L							

SITE 13	**SAMPLE DATE**	**07/22/14**	**08/20/14**	**09/04/14**	**01/00/00**	**01/00/00**	Geometric Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	11.6	10.1	11.9			7.51
Copper	mg/L						
Dissolved Oxygen	mg/L	6.67	8.03	5.59			6.73
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.01	0.01	0.01			0.03
Nitrogen, nitrate + nitrite	mg/L	0.041	0.048	0.0125			0.04
Nitrogen, Total	mg/L	0.481	0.578	0.3025			0.33
Nitrogen, Total Kjeldahl	mg/L	0.44	0.53	0.29			0.28
pH	None	7.66	7.52	7.68			7.65
Phosphorus, orthophosphate	mg/L	0.021		0.037			0.02
Phosphorus, Total	mg/L	0.039	0.038	0.054			0.04
Salinity	ppth	20.3	9.11	21.98			22.52
Specific Conductivity	umho/cm	32536	15542	35167			35732.92
Temperature	deg C	30.68	30.73	30.62			27.69
Total Hardness	mg/L						
Total Suspended Solids	mg/L						
Turbidity	NTU	1.7	1.9	2.2			2.09
Zinc	mg/L						

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
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Lake Worth Lagoon North Watershed Monitoring Events (Marine)								
SITE LWL-4	**SAMPLE DATE**	**10/16/13**	**11/14/13**	**12/19/13**	**01/15/14**	**02/13/14**	**04/10/14**	**05/08/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	3.3	2.6	1.9	11.3	3.5	1.4	1.2
Copper	mg/L							
Dissolved Oxygen	mg/L	6.45	6.88	7.6	8.5		6.5	6.4
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.020	0.040	0.008	0.005	0.003	0.008	0.010
Nitrogen, nitrate + nitrite	mg/L	0.003	0.012	0.003	0.003	0.003	0.003	0.003
Nitrogen, Total	mg/L	0.27	0.22	0.19	0.31	0.23	0.22	0.18
Nitrogen, Total Kjeldahl	mg/L	0.27	0.21	0.19	0.31	0.23	0.22	0.18
pH	None	8	8	8.1	8.1	8	8.1	7.9
Phosphorus, orthophosphate	mg/L	0.002	0.008	0.005	0.001	0.003	0.002	0.002
Phosphorus, Total	mg/L	0.025	0.024	0.017	0.021	0.018	0.021	0.015
Salinity	ppth	32.60	35.20	33.80	26.10	31.10	35.20	35.90
Specific Conductivity	umho/cm	49867	53252	51424	40775	47679	53222	54308
Temperature	deg C	28	21.9	22.4	22.4	23	22.8	26.3
Total Hardness	mg/L							
Total Suspended Solids	mg/L	4.0	8.0	3.0	5.0	4.0	30.0	5.0
Turbidity	NTU	2.6	5.9	2.4	2.7	2.6	2.4	2.3
Zinc	mg/L							

SITE LWL-4	**SAMPLE DATE**	**06/12/14**	**08/07/14**	**01/00/00**		Geometric Mean	
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	2.3	5.0			2.85	
Copper	mg/L						
Dissolved Oxygen	mg/L	7.0	7.82			7.12	
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.023	0.02			0.01	
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025			0.00	
Nitrogen, Total	mg/L	0.2325	0.0025			0.14	
Nitrogen, Total Kjeldahl	mg/L	0.23				0.23	
pH	None	8.0	8.0			8.02	
Phosphorus, orthophosphate	mg/L	0.002	0.001			0.00	
Phosphorus, Total	mg/L	0.019	0.02			0.02	
Salinity	ppth	34.70	26.40			32.13	
Specific Conductivity	umho/cm	52827	40917			49100.22	
Temperature	deg C	28.6	30.7			24.93	
Total Hardness	mg/L						
Total Suspended Solids	mg/L	5.0	6.0			5.90	
Turbidity	NTU	2.8	2.2			2.74	
Zinc	mg/L						

Table 5-4
Monitoring Data
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Lake Worth Lagoon Central Watershed Monitoring Events (Marine)								
SITE LWL-8	**SAMPLE DATE**	**10/17/2013**	**11/14/2013**	**12/18/2013**	**1/16/2014**	**2/12/2014**	**3/27/2014**	**4/9/2014**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	6.1	3.5	2.7	5.9	12.1	4.8	5.7
Copper	mg/L							
Dissolved Oxygen	mg/L	6.8	7.2	7.3	7.8	7.9	7.3	7.0
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.018	0.038	0.025	0.090	0.012	0.003	0.008
Nitrogen, nitrate + nitrite	mg/L	0.077	0.038	0.03	0.204	0.032	0.0025	0.0025
Nitrogen, Total	mg/L	0.60	0.31	0.37	0.77	0.64	0.33	0.35
Nitrogen, Total Kjeldahl	mg/L	0.52	0.27	0.34	0.57	0.61	0.33	0.35
pH	None	7.9	8.0	8.0	8.2	7.9	8.0	8.0
Phosphorus, orthophosphate	mg/L	0.020	0.019	0.016	0.041	0.006	0.004	0.005
Phosphorus, Total	mg/L	0.0510	0.0410	0.0350	0.0800	0.0480	0.0350	0.0380
Salinity	ppth	22.20	32.40	28.90	14.30	19.50	32.10	33.50
Specific Conductivity	umho/cm	33414	49403	44644	23634	31353	49030	51070
Temperature	deg C	28.6	21.9	21.9	21.1	24.3	21.6	24.8
Total Hardness	mg/L							
Total Suspended Solids	mg/L	5.0	8.0	6.0	8.0	8.0	16.0	14.0
Turbidity	NTU	5.4	5.1	3.4	6.4	6.0	7.1	5.7
Zinc	mg/L							

SITE LWL-8	**SAMPLE DATE**	**05/07/14**	**06/11/14**	**07/10/14**	**08/06/14**	Geometric Mean
PARAMETER	**UNITS**					
Alkalinity	mg/L					
Arsenic	mg/L					
Cadmium	mg/L					
Chlorophyll-a (corrected)	ug/L	2.5	4.9	29.2	6.3	5.74
Copper	mg/L					
Dissolved Oxygen	mg/L	6.0	7.5	7.3	5.7	7.17
Fecal Coliform	cfu/100mL					
Lead	mg/L					
Nitrogen, Ammonia	mg/L	0.009	0.005	0.015	0.085	0.01
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025	0.023	0.078	0.01
Nitrogen, Total	mg/L	0.3525	0.4025	0.023		0.32
Nitrogen, Total Kjeldahl	mg/L	0.35	0.4			0.40
pH	None	7.8	7.9	7.9	7.6	7.96
Phosphorus, orthophosphate	mg/L	0.008	0.012	0.01	0.028	0.01
Phosphorus, Total	mg/L	0.04	0.052	0.072	0.063	0.05
Salinity	ppth	33.70	34.60	17.60	13.90	25.75
Specific Conductivity	umho/cm	51297	52758	28603	23171	40037.60
Temperature	deg C	26.7	30.4	23.9	29.5	24.34
Total Hardness	mg/L					
Total Suspended Solids	mg/L	5.0	15.0	24.0	6.0	9.53
Turbidity	NTU	5.5	6.7	9.1	5.1	5.87
Zinc	mg/L					

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
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Lake Worth Lagoon Central Watershed Monitoring Events (Marine)								
SITE 18C	**SAMPLE DATE**	**10/03/13**	**12/03/13**	**02/07/14**	**02/26/14**	**04/25/14**	**05/22/14**	**06/25/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	17.7	6.8	11.2	20.0	10.4	10.0	9.5
Copper	mg/L							
Dissolved Oxygen	mg/L	9.4	7.7	11.4	8.0	5.8	7.5	68.0
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.092	0.086	0.065	0.078	0.051	0.039	0.010
Nitrogen, nitrate + nitrite	mg/L	0.190	0.170	0.170	0.100	0.046	0.045	0.013
Nitrogen, Total	mg/L	0.87	0.64	0.71	0.61	0.41	0.38	0.74
Nitrogen, Total Kjeldahl	mg/L	0.68	0.47	0.54	0.51	0.36	0.33	0.73
pH	None	7.6	7.9	8.0	7.8	7.6	7.9	7.9
Phosphorus, orthophosphate	mg/L	0.024	0.039	0.120	0.018	0.046	0.058	0.046
Phosphorus, Total	mg/L	0.054	0.068	0.056	0.081	0.072	0.064	0.085
Salinity	ppth	8.13	23.33	15.00	16.54	31.60	33.30	19.92
Specific Conductivity	umho/cm	14474	36855	24698	27018	48567	50893	32467
Temperature	deg C	29.5	22.5	25.2	26.1	28.3	28.6	31.6
Total Hardness	mg/L							
Total Suspended Solids	mg/L							
Turbidity	NTU	6.3	9.6	7.8	17.0	19.3	9.9	18.8
Zinc	mg/L							

SITE 18C	**SAMPLE DATE**	**07/22/14**	**08/20/14**			Geometric Mean	
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	11.8	14.2			11.80	
Copper	mg/L						
Dissolved Oxygen	mg/L	5.42	8.64			9.88	
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.062	0.034			0.05	
Nitrogen, nitrate + nitrite	mg/L	0.13	0.11			0.08	
Nitrogen, Total	mg/L	0.89	0.84			0.65	
Nitrogen, Total Kjeldahl	mg/L	0.76	0.73			0.54	
pH	None	7.64	7.73			7.78	
Phosphorus, orthophosphate	mg/L	0.032	0.06			0.04	
Phosphorus, Total	mg/L	0.083	0.061			0.07	
Salinity	ppth	9.46	7.01			15.91	
Specific Conductivity	umho/cm	16237	12376			26161.26	
Temperature	deg C	31.04	32.2			28.16	
Total Hardness	mg/L						
Total Suspended Solids	mg/L						
Turbidity	NTU	10.7	11			11.45	
Zinc	mg/L						

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 2013 - September 2014

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)								
SITE 18D	**SAMPLE DATE**	**10/03/13**	**12/03/13**	**02/07/14**	**02/26/14**	**04/25/14**	**05/22/14**	**06/25/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	19.8	39.5	25.6	23.3	11.7	9.3	12.3
Copper	mg/L							
Dissolved Oxygen	mg/L	6.9	7.2	9.6	8.0	5.6	6.9	8.3
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.076	0.081	0.061	0.050	0.056	0.037	0.010
Nitrogen, nitrate + nitrite	mg/L	0.130	0.160	0.160	0.037	0.046	0.044	0.013
Nitrogen, Total	mg/L	0.76	0.63	0.74	0.30	0.37	0.39	0.49
Nitrogen, Total Kjeldahl	mg/L	0.63	0.47	0.58	0.26	0.32	0.35	0.48
pH	None	7.8	8.0	7.9	7.9	7.8	7.9	8.0
Phosphorus, orthophosphate	mg/L	0.019	0.033	0.025	0.005	0.042	0.059	0.032
Phosphorus, Total	mg/L	0.049	0.057	0.059	0.074	0.071	0.063	0.067
Salinity	ppth	14.97	24.31	14.58	25.71	31.90	33.06	19.78
Specific Conductivity	umho/cm	24949	38245	24112	40293	48932	50496	32025
Temperature	deg C	29.5	22.5	25.4	26.1	27.1	26.6	33.0
Total Hardness	mg/L							
Total Suspended Solids	mg/L							
Turbidity	NTU	7.3	6.8	6.2	8.0	12.7	7.9	8.7
Zinc	mg/L							

SITE 18D	**SAMPLE DATE**	**07/22/14**	**08/20/14**	**01/00/00**	**01/00/00**	Geometric Mean
PARAMETER	**UNITS**					
Alkalinity	mg/L	-	-	-	-	
Arsenic	mg/L					
Cadmium	mg/L					
Chlorophyll-a (corrected)	ug/L	30.6	21.9			19.54
Copper	mg/L					
Dissolved Oxygen	mg/L	8.05	11.55			7.86
Fecal Coliform	cfu/100mL					
Lead	mg/L					
Nitrogen, Ammonia	mg/L	0.01	0.01			0.03
Nitrogen, nitrate + nitrite	mg/L	0.0125	0.0125			0.04
Nitrogen, Total	mg/L	0.5725	0.6825			0.52
Nitrogen, Total Kjeldahl	mg/L	0.56	0.67			0.46
pH	None	7.89	8.06			7.91
Phosphorus, orthophosphate	mg/L	0.029	0.0017			0.02
Phosphorus, Total	mg/L	0.048	0.049			0.06
Salinity	ppth	18.05	11.46			20.31
Specific Conductivity	umho/cm	29265	19426			32610.04
Temperature	deg C	30.9	33.21			28.04
Total Hardness	mg/L					
Total Suspended Solids	mg/L					
Turbidity	NTU	7.5	7			7.85
Zinc	mg/L					

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 2013 - September 2014

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)								
SITE LWL-11	**SAMPLE DATE**	**10/17/13**	**11/14/13**	**12/18/13**	**01/16/14**	**02/12/14**	**03/27/14**	**05/07/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	13.5	3.5	2.6	10.4	8.7	10.2	3.1
Copper	mg/L							
Dissolved Oxygen	mg/L	5.7	7.1	6.8	8.3	9.3	7.0	6.4
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.011	0.069	0.059	0.034	0.007	0.003	0.013
Nitrogen, nitrate + nitrite	mg/L	0.084	0.085	0.039	0.178	0.003	0.003	0.003
Nitrogen, Total	mg/L	0.63	0.57	0.54	0.70	0.50	0.58	0.34
Nitrogen, Total Kjeldahl	mg/L	0.55	0.48	0.50	0.52	0.50	0.58	0.34
pH	None	7.9	8.0	8.0	8.3	8.1	8.0	7.9
Phosphorus, orthophosphate	mg/L	0.019	0.030	0.020	0.030	0.001	0.002	0.002
Phosphorus, Total	mg/L	0.0490	0.0690	0.0390	0.0690	0.0330	0.0640	0.0440
Salinity	ppth	23.80	27.90	27.20	17.10	21.70	28.00	34.80
Specific Conductivity	umho/cm	37778	43207	42314	27708	34613	43382	52814
Temperature	deg C	27.3	21.8	22.0	21.0	24.9	21.8	27.6
Total Hardness	mg/L							
Total Suspended Solids	mg/L	5.0	17.0	10.0	6.0	8.0	25.0	10.0
Turbidity	NTU	4.8	9.3	3.6	6.2	4.7	12.2	7.0
Zinc	mg/L							

SITE LWL-11	**SAMPLE DATE**	**07/10/14**	**08/06/14**			Geometric Mean
PARAMETER	**UNITS**					
Alkalinity	mg/L					
Arsenic	mg/L					
Cadmium	mg/L					
Chlorophyll-a (corrected)	ug/L	20.9	16.7			7.92
Copper	mg/L					
Dissolved Oxygen	mg/L	8.1	6.8			7.21
Fecal Coliform	cfu/100mL					
Lead	mg/L					
Nitrogen, Ammonia	mg/L	0.008	0.008			0.01
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025			0.01
Nitrogen, Total	mg/L	0.0025	0.0025			0.16
Nitrogen, Total Kjeldahl	mg/L					0.49
pH	None	8.0	7.9			8.01
Phosphorus, orthophosphate	mg/L	0.002	0.002			0.01
Phosphorus, Total	mg/L	0.044	0.053			0.05
Salinity	ppth	22.50	19.60			24.23
Specific Conductivity	umho/cm	35770	31640			38164.49
Temperature	deg C	28.7	29.8			24.78
Total Hardness	mg/L					
Total Suspended Solids	mg/L	10.0	8.0			9.78
Turbidity	NTU	4.6	4.2			5.83
Zinc	mg/L					

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 2013 - September 2014

Lake Worth Lagoon Central Watershed Monitoring Events (Marine)								
SITE LWL-13	**SAMPLE DATE**	**10/15/13**	**11/12/13**	**12/17/13**	**01/14/14**	**02/11/14**	**03/25/14**	**05/06/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	11.7	6.9	3.6	11.8	8.3	5.2	1.5
Copper	mg/L							
Dissolved Oxygen	mg/L	6.3	6.4	7.0	9.0	9.5	6.6	6.7
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.023	0.027	0.020	0.052	0.006	0.008	0.007
Nitrogen, nitrate + nitrite	mg/L	0.090	0.059	0.019	0.188	0.003	0.003	0.003
Nitrogen, Total	mg/L	0.61	0.41	0.30	0.72	0.53	0.34	0.28
Nitrogen, Total Kjeldahl	mg/L	0.52	0.35	0.28	0.53	0.53	0.34	0.28
pH	None	8.0	8.0	8.0	8.0	8.1	7.9	8.0
Phosphorus, orthophosphate	mg/L	0.015	0.018	0.013	0.047	0.001	0.002	0.002
Phosphorus, Total	mg/L	0.0470	0.0340	0.0300	0.0840	0.0360	0.0260	0.0280
Salinity	ppth	26.30	30.60	29.60	15.60	23.50	31.50	35.20
Specific Conductivity	umho/cm	41510	47003	45653	25566	36936	48260	53341
Temperature	deg C	27.3	25.4	22.2	23.7	24.3	23.6	26.3
Total Hardness	mg/L							
Total Suspended Solids	mg/L	5.0	5.0	6.0	3.0	4.0	4.0	6.0
Turbidity	NTU	2.9	2.4	3.7	3.0	4.2	4.0	3.7
Zinc	mg/L							

SITE LWL-13	**SAMPLE DATE**	**06/10/14**	**07/08/14**	**08/06/14**		Geometric Mean
PARAMETER	**UNITS**					
Alkalinity	mg/L					
Arsenic	mg/L					
Cadmium	mg/L					
Chlorophyll-a (corrected)	mg/m3	1.5	5.9	8.0		5.24
Copper	mg/L					
Dissolved Oxygen	mg/L	6.5	9.3	8.6		7.46
Fecal Coliform	cfu/100mL					
Lead	mg/L					
Nitrogen, Ammonia	mg/L	0.0023	0.014	0.01		0.01
Nitrogen, nitrate + nitrite	mg/L	0.0025	0.0025	0.0025		0.01
Nitrogen, Total	mg/L	0.1625	0.0025	0.0025		0.14
Nitrogen, Total Kjeldahl	mg/L	0.16				0.35
pH	None	8.1	8.2	8.0		8.03
Phosphorus, orthophosphate	mg/L	0.001	0.001	0.002		0.00
Phosphorus, Total	mg/L	0.018	0.023	0.046		0.03
Salinity	ppth	35.60	26.30	19.20		26.55
Specific Conductivity	umho/cm	54068	41295	31057		41462.03
Temperature	deg C	29.5	30.2	30.0		26.11
Total Hardness	mg/L					
Total Suspended Solids	mg/L	7.0	28.0	3.0		5.50
Turbidity	NTU	4.2	2.5	2.2		3.20
Zinc	mg/L					

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 2013 - September 2014
(Page 43 of 43)

Lake Worth Lagoon South Watershed Monitoring Events (Marine)								
SITE LWL-18	**SAMPLE DATE**	**10/15/13**	**11/12/13**	**12/17/13**	**01/14/14**	**02/11/14**	**03/25/14**	**05/06/14**
PARAMETER	**UNITS**							
Alkalinity	mg/L							
Arsenic	mg/L							
Cadmium	mg/L							
Chlorophyll-a (corrected)	ug/L	15.0	5.4	4.7	5.7	4.5	4.1	3.4
Copper	mg/L							
Dissolved Oxygen	mg/L	7.3	5.9	6.8	8.1	8.4	6.1	7.2
Fecal Coliform	cfu/100mL							
Lead	mg/L							
Nitrogen, Ammonia	mg/L	0.006	0.036	0.011	0.163	0.009	0.048	0.009
Nitrogen, nitrate + nitrite	mg/L	0.007	0.044	0.016	0.179	0.003	0.028	0.003
Nitrogen, Total	mg/L	0.457	0.354	0.206	0.849	0.383	0.348	0.263
Nitrogen, Total Kjeldahl	mg/L	0.45	0.31	0.19	0.67	0.38	0.32	0.26
pH	None	8.0	8.0	8.0	7.8	8.1	7.8	8.0
Phosphorus, orthophosphate	mg/L	0.007	0.015	0.009	0.070	0.001	0.018	0.006
Phosphorus, Total	mg/L	0.0380	0.0320	0.0220	0.0990	0.0270	0.0340	0.0300
Salinity	ppth	24.40	30.80	34.20	14.40	25.50	32.90	34.90
Specific Conductivity	umho/cm	38493	47441	51945	23562	40210	50206	52968
Temperature	deg C	27.5	25.5	23.7	23.9	24.7	24.6	26.5
Total Hardness	mg/L							
Total Suspended Solids	mg/L	6.0	3.0	4.0	4.0	6.0	5.0	8.0
Turbidity	NTU	2.7	2.5	2.5	3.3	3.3	3.2	4.6
Zinc	mg/L							

SITE LWL-18	**SAMPLE DATE**	**06/10/14**	**07/08/14**	**08/06/14**			Geometric Mean
PARAMETER	**UNITS**						
Alkalinity	mg/L						
Arsenic	mg/L						
Cadmium	mg/L						
Chlorophyll-a (corrected)	ug/L	7.7	32.4	12.2			7.26
Copper	mg/L						
Dissolved Oxygen	mg/L	6.1	8.91	7.5			7.15
Fecal Coliform	cfu/100mL						
Lead	mg/L						
Nitrogen, Ammonia	mg/L	0.008	0.017	0.015			0.02
Nitrogen, nitrate + nitrite	mg/L	0.003	0.003	0.006			0.01
Nitrogen, Total	mg/L	0.34	0.00	0.01			0.15
Nitrogen, Total Kjeldahl	mg/L	0.34					0.34
pH	None	7.9	8	7.8			7.94
Phosphorus, orthophosphate	mg/L	0.006	0.002	0.030			0.01
Phosphorus, Total	mg/L	0.0450	0.0450	0.0700			0.04
Salinity	ppth	33.80	27.90	12.00			25.64
Specific Conductivity	umho/cm	51671	43509	20353			40168.44
Temperature	deg C	30.3	30	32.1			26.74
Total Hardness	mg/L						
Total Suspended Solids	mg/L	13	14	11			6.52
Turbidity	NTU	7.2	5.1	2.8			3.50
Zinc	mg/L						

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 5-5
Summary of Exceedences per Site by Parameter
October 1, 2013 - September 30, 2014

Watershed	Site	Dissolved Oxygen	Fecal Coliform	pH	Total Nitrogen mg/l	Total Phosphorus mg/l	Chlorophyll-a* ug/l
C-15	31E						49.8
	31C						30.6
	64				0.94		32.8
	63					0.07	34.7
	C15S40						27.5
C-16	22						25.6
	24						
	27B						40.2
	27A						25.5
	68					0.07	35.2
	66			1/5		0.08	31.8
	65						27.9
	C16S41						
C-17	12A						27.6
	C17S44						
C-18	16						
	15						
C-51 W	38B						
C-51 E	37B						
	57		1/6				23.8
	70					0.06	30.0
	52						28.6
	62						
	69						
	61						
	C51S155						
Loxahatchee River	69	2/12	1/5				
	62		9/12		0.79	0.06	5.5
	51		1/6				4.5
	72	1/12	9/12				11.2
	30		1/6				
	C18G92						
	C18S46						
Lake Worth Lagoon North	LWL-1						6.0
	11					0.06	5.2
	13						7.5
	LWL-4						
Lake Worth Lagoon Central	LWL-8						
	18C					0.07	11.8
	18D					0.06	19.5
	LWL-11						
	LWL-13						
Lake Worth Lagoon South Watershed	LWL-18						

Table 5-6

Monitoring Data Summary - C-15 Watershed

January 1999 - September 2014

SITE 31E		03/24/99 - 07/17/14			Samples 73		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	22	165	167	210	123	23
Arsenic	mg/L	56	0.0024	0.0026	0.0069	0.0005	0.0012
Cadmium	mg/L	70	0.0006	0.0013	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	61	24.4	32.1	120.0	2.5	24.7
Copper	mg/L	69	0.0053	0.0062	0.0200	0.0015	0.0036
Dissolved Oxygen	mg/L	71	5.7	6.1	11.5	1.7	2.2
Fecal Coliform	cfu/100mL	33	67	309	5000	1	875
Lead	mg/L	59	0.0020	0.0024	0.0050	0.0005	0.0015
Nitrogen, Ammonia	mg/L	68	0.056	0.100	0.820	0.007	0.135
Nitrogen, nitrate + nitrite	mg/L	63	0.056	0.138	0.785	0.006	0.188
Nitrogen, Total	mg/L	63	1.65	1.75	3.87	0.83	0.66
Nitrogen, Total Kjeldahl	mg/L	66	1.54	1.65	3.84	0.65	0.66
pH	None	70	7.5	7.5	8.3	6.3	0.4
Phosphorus, orthophosphate	mg/L	66	0.128	0.217	1.330	0.003	0.231
Phosphorus, Total	mg/L	64	0.260	0.341	1.490	0.060	0.273
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	71	540	553	833	227	111
Temperature	deg C	71	25.3	25.6	31.9	16.7	3.9
Total Hardness	mg/L	68	199	202	390	118	38
Total Suspended Solids	mg/L	68	6.5	7.5	18.0	1.0	3.7
Turbidity	NTU	69	4.4	5.2	15.9	0.2	2.7
Zinc	mg/L	70	0.0057	0.0064	0.0140	0.0025	0.0029

SITE 31C		01/28/99 - 07/17/14			Samples 74		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	19	148	148	169	123	13
Arsenic	mg/L	54	0.0026	0.0032	0.0250	0.0005	0.0033
Cadmium	mg/L	71	0.0006	0.0014	0.0050	0.0002	0.0019
Chlorophyll-a (corrected)	ug/L	60	17.9	25.3	93.0	0.1	18.2
Copper	mg/L	71	0.0047	0.0057	0.0140	0.0013	0.0032
Dissolved Oxygen	mg/L	72	6.7	7.0	12.3	3.1	2.1
Fecal Coliform	cfu/100mL	33	69	307	5000	3	886
Lead	mg/L	59	0.0020	0.0025	0.0070	0.0005	0.0016
Nitrogen, Ammonia	mg/L	68	0.045	0.073	0.456	0.001	0.081
Nitrogen, nitrate + nitrite	mg/L	61	0.076	0.152	1.300	0.006	0.206
Nitrogen, Total	mg/L	61	1.34	1.45	3.09	0.62	0.58
Nitrogen, Total Kjeldahl	mg/L	71	1.16	1.28	3.07	0.11	0.55
pH	None	72	7.5	7.5	8.1	6.3	0.4
Phosphorus, orthophosphate	mg/L	69	0.042	0.076	0.440	0.003	0.085
Phosphorus, Total	mg/L	64	0.129	0.154	0.560	0.020	0.102
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	73	538	669	11188	391	1252
Temperature	deg C	71	25.9	26.1	31.4	19.2	3.2
Total Hardness	mg/L	71	180	185	260	16	27
Total Suspended Solids	mg/L	67	4.4	5.3	15.7	1.0	3.4
Turbidity	NTU	69	2.8	3.4	13.3	0.1	2.1
Zinc	mg/L	71	0.0056	0.0065	0.0297	0.0025	0.0040

Table 5-6

Monitoring Data Summary - C-15 Watershed
January 2007 - September 2014

64 (Lake Eden)		05/22/07 - 06/05/14			Samples 38		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	4	157	158	183	137	19.5448
Arsenic	mg/L	2	0.0044	0.0044	0.0050	0.0038	0.0008
CANmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	33	25.9	30.1	76.1	5.9	16.1595
Copper	mg/L	1	0.0012	0.0012	0.0012	0.0012	None
Dissolved Oxygen	mg/L	37	9.4	9.5	13.5	5.8	1.5507
Fecal Coliform	cfu/100mL	35	12	51	810	1	136.4382
Lead	mg/L	2	0.0021	0.0022	0.0023	0.0020	0.0002
Nitrogen, Ammonia	mg/L	33	0.029	0.035	0.124	0.009	0.0227
Nitrogen, nitrate + nitrite	mg/L	33	0.029	0.064	0.225	0.003	0.0747
Nitrogen, Total	mg/L	33	1.06	1.10	2.10	0.72	0.3317
Nitrogen, Total Kjeldahl	mg/L	36	1.01	1.05	2.07	0.65	0.3291
pH	None	37	8.2	8.2	8.7	7.2	0.3082
Phosphorus, orthophosphate	mg/L	35	0.010	0.025	0.094	0.001	0.0283
Phosphorus, Total	mg/L	35	0.071	0.086	0.210	0.006	0.0429
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	37	498	505	963	329	98.1539
Temperature	deg C	37	26.0	26.3	32.8	16.9	3.9107
Total Hardness	mg/L	4	173	174	183	164	8.5829
Total Suspended Solids	mg/L	35	4.5	5.1	11.0	1.8	2.4523
Turbidity	NTU	35	2.9	3.4	7.8	0.5	1.7468
Zinc	mg/L	2	0.0046	0.0049	0.0065	0.0033	0.0023

63 (Lake Ida)		05/22/07 - 06/05/14			Samples 38		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	5	153	154	186	122	25
Arsenic	mg/L	2	0.0044	0.0044	0.0050	0.0038	0.0008
CANmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	33	27.8	31.2	76.2	10.2	15.0
Copper	mg/L	1	0.0012	0.0012	0.0012	0.0012	None
Dissolved Oxygen	mg/L	37	9.4	9.6	14.5	6.3	1.8
Fecal Coliform	cfu/100mL	35	23.40	79.66	1060.00	0.50	179.38
Lead	mg/L	2	0.0030	0.0032	0.0040	0.0023	0.0012
Nitrogen, Ammonia	mg/L	33	0.027	0.033	0.085	0.009	0.020
Nitrogen, nitrate + nitrite	mg/L	33	0.026	0.054	0.203	0.006	0.065
Nitrogen, Total	mg/L	33	1.054	1.101	2.280	0.608	0.364
Nitrogen, Total Kjeldahl	mg/L	36	1.008	1.055	2.270	0.590	0.358
pH	None	37	8.2	8.2	8.7	7.1	0.3
Phosphorus, orthophosphate	mg/L	36	0.011	0.024	0.100	0.001	0.027
Phosphorus, Total	mg/L	29	0.078	0.085	0.210	0.045	0.039
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	37	503	509	895	352	89
Temperature	deg C	36	26.6	27.2	57.3	16.9	6.6
Total Hardness	mg/L	4	176	177	186	161	11
Total Suspended Solids	mg/L	36	5.0	10.7	205.0	1.0	33.4
Turbidity	NTU	35	3.0	3.6	7.9	0.3	1.8
Zinc	mg/L	2	0.0060	0.0072	0.0111	0.0033	0.0056

Table 5-6

Monitoring Data Summary - C-15 Watershed
January 1999 - September 2014

SITE C15S40		06/15/00 - 09/11/14			Samples 46		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	90	148	150	207	32	19
Arsenic	mg/L	21	0.0021	0.0023	0.0046	0.0005	0.0010
Cadmium	mg/L	33	0.0009	0.0017	0.0050	0.0002	0.0020
Chlorophyll-a (corrected)	ug/L	27	11.7	18.6	50.9	1.7	14.6
Copper	mg/L	33	0.0054	0.0064	0.0200	0.0018	0.0040
Dissolved Oxygen	mg/L	103	6.5	6.8	10.7	2.0	1.7
Fecal Coliform	DHu/100mL	25	85	132	420	1	100
Lead	mg/L	33	0.0019	0.0031	0.0260	0.0003	0.0045
Nitrogen, Ammonia	mg/L	99	0.018	0.037	0.305	0.003	0.055
Nitrogen, nitrate + nitrite	mg/L	105	0.019	0.072	0.470	0.001	0.107
Nitrogen, Total	mg/L	104	1.03	1.08	4.23	0.59	0.41
Nitrogen, Total KjelDHhl	mg/L	108	0.95	0.99	4.18	0.58	0.38
pH	None	108	7.7	7.7	8.4	6.7	0.4
Phosphorus, orthophosphate	mg/L	108	0.058	0.091	0.344	0.001	0.070
Phosphorus, Total	mg/L	95	0.115	0.136	0.702	0.039	0.094
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	110	490	492	787	392	48
Temperature	deg C	110	25.0	25.4	31.9	15.0	4.0
Total Hardness	mg/L	41	179	180	230	138	18
Total Suspended Solids	mg/L	106	2.8	3.9	43.7	1.0	4.8
Turbidity	NTU	110	2.4	2.9	17.8	0.1	2.4
Zinc	mg/L	33	0.0067	0.0080	0.0492	0.0038	0.0078

Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)

Count = Number of times a particular parameter was sampled

Exceedances = Number of times a sample of a particular parameter exceeded the State of Florida Surface Water Quality Standards or Impaired Waters Rule

Table 5-6
Monitoring Data Summary - C-16 Watershed
January 1999 - September 2014

SITE 22		01/29/04 - 09/10/14			Samples 56		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	22	143	144	185	110	16
Arsenic	mg/L	55	0.0024	0.0030	0.0300	0.0005	0.0038
Cadmium	mg/L	55	0.0004	0.0006	0.0026	0.0002	0.0006
Chlorophyll-a (corrected)	ug/L	54	12.1	18.2	62.7	0.8	13.7
Copper	mg/L	55	0.0035	0.0046	0.0180	0.0010	0.0041
Dissolved Oxygen	mg/L	54	8.0	8.2	13.0	4.4	1.8
Fecal Coliform	cfu/100mL	16	42	152	600	2	210
Lead	mg/L	43	0.0014	0.0016	0.0029	0.0005	0.0007
Nitrogen, Ammonia	mg/L	53	0.028	0.054	1.010	0.002	0.136
Nitrogen, nitrate + nitrite	mg/L	49	0.063	0.178	1.990	0.006	0.315
Nitrogen, Total	mg/L	48	1.06	1.13	3.07	0.53	0.45
Nitrogen, Total Kjeldahl	mg/L	55	0.89	0.93	2.19	0.27	0.32
pH	None	53	7.9	7.9	8.7	6.5	0.4
Phosphorus, orthophosphate	mg/L	54	0.013	0.023	0.073	0.001	0.020
Phosphorus, Total	mg/L	55	0.062	0.083	0.840	0.018	0.116
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	53	488	530	1008	7	140
Temperature	deg C	54	25.1	25.5	36.3	17.1	4.4
Total Hardness	mg/L	55	182	183	239	147	21
Total Suspended Solids	mg/L	54	3.7	4.4	10.3	1.0	2.5
Turbidity	NTU	53	2.3	2.7	5.7	0.3	1.2
Zinc	mg/L	55	0.0049	0.0065	0.0600	0.0013	0.0083

SITE 24		01/25/99 - 09/10/14			Samples 72		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	16	113	137	177	3	39
Arsenic	mg/L	50	0.0025	0.0027	0.0063	0.0005	0.0011
Cadmium	mg/L	65	0.0006	0.0013	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	60	13.1	16.6	43.0	2.0	10.5
Copper	mg/L	65	0.0038	0.0047	0.0113	0.0007	0.0031
Dissolved Oxygen	mg/L	70	8.3	8.4	11.4	4.7	1.5
Fecal Coliform	cfu/100mL	30	67	253	2300	1	491
Lead	mg/L	58	0.0021	0.0025	0.0050	0.0007	0.0014
Nitrogen, Ammonia	mg/L	66	0.027	0.034	0.096	0.007	0.020
Nitrogen, nitrate + nitrite	mg/L	62	0.044	0.104	0.940	0.001	0.158
Nitrogen, Total	mg/L	62	1.02	1.11	2.67	0.11	0.45
Nitrogen, Total Kjeldahl	mg/L	63	0.91	1.00	2.61	0.09	0.44
pH	None	69	7.9	7.9	8.8	7.1	0.4
Phosphorus, orthophosphate	mg/L	65	0.013	0.026	0.230	0.001	0.035
Phosphorus, Total	mg/L	67	0.064	0.115	3.053	0.020	0.368
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	70	523	571	4220	348	457
Temperature	deg C	69	24.5	25.4	32.7	2.8	5.0
Total Hardness	mg/L	63	179	181	233	140	23
Total Suspended Solids	mg/L	67	4.5	5.5	16.5	1.0	3.4
Turbidity	NTU	69	3.2	3.7	11.4	0.6	2.0
Zinc	mg/L	65	0.0058	0.0072	0.0360	0.0013	0.0056

Table 5-6
Monitoring Data Summary - C-16 Watershed
January 1999 - September 2014

SITE 27B		01/28/99 - 07/17/14			Samples 66		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	19	174	176	222	121	28
Arsenic	mg/L	47	0.0025	0.0028	0.0120	0.0005	0.0017
Cadmium	mg/L	64	0.0006	0.0014	0.0050	0.0002	0.0019
Chlorophyll-a (corrected)	ug/L	52	15.1	21.0	76.4	2.8	15.8
Copper	mg/L	64	0.0046	0.0057	0.0214	0.0007	0.0040
Dissolved Oxygen	mg/L	65	5.2	5.8	10.8	1.4	2.5
Fecal Coliform	cfu/100mL	29	139	707	6000	7	1526
Lead	mg/L	58	0.0022	0.0027	0.0067	0.0005	0.0016
Nitrogen, Ammonia	mg/L	62	0.051	0.078	0.740	0.007	0.098
Nitrogen, nitrate + nitrite	mg/L	57	0.079	0.156	0.785	0.006	0.168
Nitrogen, Total	mg/L	56	1.53	1.61	3.42	0.75	0.52
Nitrogen, Total Kjeldahl	mg/L	62	1.37	1.46	3.37	0.68	0.53
pH	None	64	7.5	7.5	8.4	6.7	0.3
Phosphorus, orthophosphate	mg/L	60	0.062	0.121	0.680	0.001	0.151
Phosphorus, Total	mg/L	62	0.162	0.216	0.770	0.030	0.170
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	65	579	723	10481	319	1238
Temperature	deg C	65	25.3	25.6	32.4	16.5	3.9
Total Hardness	mg/L	64	195	198	288	113	37
Total Suspended Solids	mg/L	62	5.5	6.8	20.0	1.0	4.0
Turbidity	NTU	64	3.3	3.8	11.4	0.6	2.0
Zinc	mg/L	63	0.0059	0.0074	0.0360	0.0013	0.0058

SITE 27A		01/28/99 - 09/11/14			Samples 73		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	21	151	152	180	128	12
Arsenic	mg/L	54	0.0024	0.0026	0.0060	0.0005	0.0011
Cadmium	mg/L	71	0.0007	0.0014	0.0050	0.0002	0.0019
Chlorophyll-a (corrected)	ug/L	58	16.5	22.3	66.0	1.9	15.7
Copper	mg/L	71	0.0053	0.0060	0.0200	0.0013	0.0031
Dissolved Oxygen	mg/L	70	7.1	7.3	11.5	2.6	1.7
Fecal Coliform	cfu/100mL	32	52	147	1200	4	255
Lead	mg/L	65	0.0022	0.0028	0.0150	0.0005	0.0023
Nitrogen, Ammonia	mg/L	68	0.039	0.083	2.060	0.002	0.249
Nitrogen, nitrate + nitrite	mg/L	64	0.050	0.111	0.750	0.006	0.145
Nitrogen, Total	mg/L	64	1.24	1.36	4.32	0.15	0.59
Nitrogen, Total Kjeldahl	mg/L	70	1.15	1.26	3.96	0.08	0.55
pH	None	70	7.7	7.8	8.6	6.5	0.4
Phosphorus, orthophosphate	mg/L	62	0.039	0.090	0.440	0.001	0.101
Phosphorus, Total	mg/L	67	0.139	0.196	1.580	0.037	0.222
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	71	515	527	939	219	118
Temperature	deg C	69	25.4	25.7	32.6	18.5	3.9
Total Hardness	mg/L	71	183	185	258	117	25
Total Suspended Solids	mg/L	62	4.4	5.8	38.0	1.0	5.2
TurBWdity	NTU	70	3.5	5.1	71.5	0.1	8.8
Zinc	mg/L	69	0.0060	0.0081	0.0690	0.0013	0.0099

Table 5-6
Monitoring Data Summary - C-16 Watershed
January 2007 - September 2014

68 (Lake Osborne)		05/22/07 - 08/14/14			Samples 39		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	5	177	178	216	146	26
Arsenic	mg/L	2	0.0044	0.0044	0.0050	0.0038	0.0008
Cadmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	33	23.3	28.7	75.5	5.7	18.5
Copper	mg/L	1	0.0012	0.0012	0.0012	0.0012	None
Dissolved Oxygen	mg/L	38	8.8	9.0	12.1	5.7	1.4
Fecal Coliform	cfu/100mL	34	30	246	2500	1	585
Lead	mg/L	2	0.0026	0.0027	0.0030	0.0023	0.0005
Nitrogen, Ammonia	mg/L	34	0.030	0.042	0.158	0.001	0.029
Nitrogen, nitrate + nitrite	mg/L	35	0.038	0.091	0.483	0.006	0.112
Nitrogen, Total	mg/L	35	1.05	1.09	2.11	0.56	0.31
Nitrogen, Total Kjeldahl	mg/L	38	0.97	1.00	2.10	0.55	0.30
pH	None	38	8.2	8.2	8.9	7.3	0.3
Phosphorus, orthophosphate	mg/L	36	0.008	0.019	0.210	0.001	0.037
Phosphorus, Total	mg/L	30	0.065	0.071	0.183	0.024	0.034
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	38	532	543	798	317	115
Temperature	deg C	38	27.0	30.6	203.8	16.3	29.1
Total Hardness	mg/L	4	174	174	196	160	18
Total Suspended Solids	mg/L	37	4.7	5.4	12.0	1.0	2.6
Turbidity	NTU	35	2.8	3.4	11.1	0.2	2.0
Zinc	mg/L	2	0.0076	0.0105	0.0177	0.0033	0.0102

66 (Lake Osborne)		05/22/07 - 08/14/14			Samples 39		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	5	173	175	231	146	33
Arsenic	mg/L	1	0.0038	0.0038	0.0038	0.0038	None
Cadmium	mg/L	2	0.0034	0.0040	0.0060	0.0019	0.0029
Chlorophyll-a (corrected)	mg/m^3	34	21.3	24.0	42.3	4.0	10.7
Copper	mg/L	1	0.0050	0.0050	0.0050	0.0050	None
Dissolved Oxygen	mg/L	38	8.6	8.7	11.5	5.1	1.4
Fecal Coliform	cfu/100mL	34	23	266	2430	1	604
Lead	mg/L	2	0.0026	0.0027	0.0030	0.0023	0.0005
Nitrogen, Ammonia	mg/L	34	0.032	0.045	0.166	0.009	0.041
Nitrogen, nitrate + nitrite	mg/L	34	0.033	0.085	0.413	0.006	0.107
Nitrogen, Total	mg/L	34	1.07	1.11	2.25	0.68	0.33
Nitrogen, Total Kjeldahl	mg/L	38	1.00	1.03	2.24	0.67	0.33
pH	None	38	8.0	8.0	9.0	4.5	0.7
Phosphorus, orthophosphate	mg/L	37	0.011	0.019	0.081	0.001	0.019
Phosphorus, Total	mg/L	36	0.070	0.075	0.156	0.024	0.030
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	38	527	538	843	378	113
Temperature	deg C	38	25.5	25.8	32.0	16.0	3.9
Total Hardness	mg/L	4	172	173	193	154	21
Total Suspended Solids	mg/L	38	4.8	5.9	17.7	0.4	3.6
Turbidity	NTU	30	3.8	4.6	18.0	0.6	3.4
Zinc	mg/L	2		0.0049	0.0065	0.0033	0.0023

Table 5-6
Monitoring Data Summary - C-16 Watershed
January 1999 - September 2014

65 (Lake Osborne) *		05/22/07 - 08/14/14			Samples 39		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	5	172	176	247	133	43
Arsenic	mg/L	2	0.0039	0.0039	0.0040	0.0038	0.0001
Cadmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	34	14.8	21.4	73.6	0.1	15.5
Copper	mg/L	1	0.0012	0.0012	0.0012	0.0012	None
Dissolved Oxygen	mg/L	38	8.9	9.0	14.2	5.8	1.5
Fecal Coliform	cfu/100mL	35	26	184	2310	1	444
Lead	mg/L	2	0.0016	0.0017	0.0023	0.0012	0.0008
Nitrogen, Ammonia	mg/L	35	0.034	0.071	0.960	0.009	0.161
Nitrogen, nitrate + nitrite	mg/L	35	0.036	0.080	0.530	0.006	0.105
Nitrogen, Total	mg/L	35	1.05	1.11	2.61	0.59	0.43
Nitrogen, Total Kjeldahl	mg/L	38	0.98	1.04	2.60	0.56	0.43
pH	None	38	8.1	8.1	9.0	7.4	0.3
Phosphorus, orthophosphate	mg/L	32	0.006	0.013	0.075	0.001	0.017
Phosphorus, Total	mg/L	33	0.059	0.074	0.380	0.017	0.066
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	38	510	520	890	356	113
Temperature	deg C	38	25.6	26.0	32.4	15.3	4.2
Total Hardness	mg/L	4	160	163	194	116	38
Total Suspended Solids	mg/L	37	5.0	6.9	23.5	0.5	5.2
Turbidity	NTU	36	3.0	4.3	19.8	0.3	4.1
Zinc	mg/L	2	0.0046	0.0049	0.0065	0.0033	0.0023

SITE C16S41		01/28/99 - 09/11/14			Samples 115		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	90	147	148	210	119	15
Arsenic	mg/L	21	0.0019	0.0021	0.0036	0.0005	0.0007
Cadmium	mg/L	38	0.0010	0.0022	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	27	8.2	11.8	50.0	2.0	10.8
Copper	mg/L	38	0.0044	0.0058	0.0200	0.0007	None
Dissolved Oxygen	mg/L	108	6.5	6.7	10.9	2.7	1.7
Fecal Coliform	cfu/100mL	28	104	318	2600	10	663
Lead	mg/L	38	0.0022	0.0034	0.0261	0.0003	0.0042
Nitrogen, Ammonia	mg/L	108	0.025	0.066	2.760	0.001	0.265
Nitrogen, nitrate + nitrite	mg/L	110	0.037	0.108	0.940	0.001	0.135
Nitrogen, Total	mg/L	109	1.04	1.10	6.09	0.53	0.56
Nitrogen, Total Kjeldahl	mg/L	113	0.93	0.99	5.81	0.40	0.52
pH	None	113	7.7	7.7	8.5	6.2	0.4
Phosphorus, orthophosphate	mg/L	113	0.020	0.046	0.209	0.001	0.048
Phosphorus, Total	mg/L	101	0.074	0.086	0.318	0.025	0.057
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	115	439	488	946	5	124
Temperature	deg C	115	25.1	25.6	56.8	13.1	5.0
Total Hardness	mg/L	45	177	179	224	137	21
Total Suspended Solids	mg/L	110	3.1	4.1	24.9	1.0	3.5
Turbidity	NTU	115	2.4	2.9	10.7	0.1	1.7
Zinc	mg/L	38	0.0067	0.0096	0.1180	0.0032	0.0182

*Period of Record for Site 65 is Jauary 2007 - September 2014

Table 5-6
Monitoring Data Summary - C-17 Watershed
January 1999 - September 2014

SITE 12A		01/19/99 - 09/10/14			Samples 77		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	25	145	147	185	87	20
Arsenic	mg/L	59	0.0027	0.0030	0.0068	0.0005	0.0015
Cadmium	mg/L	76	0.0006	0.0013	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	63	13.9	17.8	74.8	1.2	12.0
Copper	mg/L	76	0.0042	0.0056	0.0500	0.0013	0.0062
Dissolved Oxygen	mg/L	73	6.2	14.8	641.0	0.8	74.3
Fecal Coliform	cfu/100mL	35	138	281	4000	23	660
Lead	mg/L	70	0.0019	0.0024	0.0076	0.0004	0.0017
Nitrogen, Ammonia	mg/L	75	0.070	0.139	2.260	0.008	0.272
Nitrogen, nitrate + nitrite	mg/L	68	0.088	0.148	1.590	0.006	0.204
Nitrogen, Total	mg/L	69	1.61	2.32	9.08	0.43	2.51
Nitrogen, Total Kjeldahl	mg/L	75	1.10	1.17	3.10	0.38	0.45
pH	None	75	7.4	7.4	8.2	6.2	0.5
Phosphorus, orthophosphate	mg/L	65	0.009	0.016	0.058	0.001	0.014
Phosphorus, Total	mg/L	71	0.051	0.067	0.340	0.003	0.045
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	75	443	448	613	231	67
Temperature	deg C	75	25.0	25.2	31.7	16.3	3.6
Total Hardness	mg/L	71	161	164	211	86	27
Total Suspended Solids	mg/L	73	4.5	5.6	15.5	1.0	3.2
Turbidity	NTU	73	3.4	3.7	6.3	0.3	1.4
Zinc	mg/L	76	0.0067	0.0084	0.0614	0.0013	0.0080

SITE C17S44		01/19/99 - 09/11/14			Samples 135		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	78	158	159	192	112	19
Arsenic	mg/L	14	0.0017	0.0020	0.0049	0.0005	0.0011
Cadmium	mg/L	31	0.0014	0.0026	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	23	9.2	12.2	40.0	1.7	9.7
Copper	mg/L	31	0.0042	0.0069	0.0500	0.0007	0.0089
Dissolved Oxygen	mg/L	129	6.2	6.5	12.9	0.7	1.9
Fecal Coliform	cfu/100mL	31	96	195	730	5	215
Lead	mg/L	31	0.0021	0.0035	0.0250	0.0003	0.0045
Nitrogen, Ammonia	mg/L	131	0.034	0.069	1.500	0.003	0.141
Nitrogen, nitrate + nitrite	mg/L	132	0.037	0.089	0.374	0.001	0.096
Nitrogen, Total	mg/L	128	0.83	0.93	1.51	0.02	0.27
Nitrogen, Total Kjeldahl	mg/L	126	0.86	0.88	1.33	0.20	0.16
pH	None	133	7.6	7.7	8.3	6.6	0.3
Phosphorus, orthophosphate	mg/L	131	0.007	0.014	0.095	0.001	0.018
Phosphorus, Total	mg/L	124	0.041	0.048	0.126	0.002	0.022
Salinity	ppth	0	None	None	None	None	None
Specific ConEGctivity	umho/cm	135	458	461	728	313	53
Temperature	deg C	135	25.4	26.0	90.0	15.7	6.8
Total Hardness	mg/L	40	174	177	233	90	30
Total Suspended Solids	mg/L	131	2.9	3.9	26.0	0.1	3.4
Turbidity	NTU	134	2.8	3.1	18.1	1.1	1.7
Zinc	mg/L	31	0.0080	0.0110	0.0954	0.0032	0.0161

Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)

Count = Number of times a particular parameter was sampled

Exceedances = Number of times a sample of a particular parameter exceeded the State of Florida Surface Water Quality Standards or Impaired Waters Rule

Table 5-6
Monitoring Data Summary - C-18 Watershed
January 1999 - September 2014

SITE 16		01/19/99 - 09/10/14			Samples 75		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	26	121	135	216	31	53
Arsenic	mg/L	57	0.0019	0.0022	0.0050	0.0005	0.0009
Cadmium	mg/L	74	0.0006	0.0013	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	60	4.1	6.4	43.0	0.6	7.5
Copper	mg/L	72	0.0024	0.0037	0.0100	0.0005	0.0035
Dissolved Oxygen	mg/L	65	3.5	4.3	10.6	0.3	2.5
Fecal Coliform	cfu/100mL	34	33	106	1400	2	249
Lead	mg/L	72	0.0020	0.0026	0.0125	0.0005	0.0020
Nitrogen, Ammonia	mg/L	71	0.042	0.062	0.264	0.008	0.056
Nitrogen, nitrate + nitrite	mg/L	66	0.044	0.095	1.210	0.006	0.182
Nitrogen, Total	mg/L	66	1.02	1.11	2.35	0.21	0.46
Nitrogen, Total Kjeldahl	mg/L	73	0.95	1.05	2.30	0.16	0.45
pH	None	67	7.2	7.2	9.7	6.0	0.5
Phosphorus, orthophosphate	mg/L	67	0.009	0.023	0.560	0.001	0.068
Phosphorus, Total	mg/L	68	0.037	0.052	0.283	0.001	0.049
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	67	344	373	737	105	136
Temperature	deg C	67	24.3	24.6	31.1	15.8	3.6
Total Hardness	mg/L	65	127	141	270	30	58
Total Suspended Solids	mg/L	70	2.3	3.3	29.7	1.0	4.3
Turbidity	NTU	71	1.7	2.0	10.2	0.5	1.4
Zinc	mg/L	73	0.0052	0.0061	0.0180	0.0012	0.0035

SITE 15		01/19/99 - 09/10/14			Samples 75		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	25	111	127	244	41	66
Arsenic	mg/L	57	0.0020	0.0023	0.0068	0.0005	0.0012
Cadmium	mg/L	74	0.0007	0.0014	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	61	2.4	3.0	19.0	0.1	2.7
Copper	mg/L	73	0.0024	0.0038	0.0110	0.0005	0.0035
Dissolved Oxygen	mg/L	65	2.6	3.2	8.4	0.5	1.9
Fecal Coliform	cfu/100mL	34	48	144	1100	1	230
Lead	mg/L	74	0.0020	0.0024	0.0060	0.0005	0.0015
Nitrogen, Ammonia	mg/L	71	0.050	0.181	8.167	0.007	0.964
Nitrogen, nitrate + nitrite	mg/L	66	0.029	0.056	0.480	0.006	0.096
Nitrogen, Total	mg/L	65	0.98	1.08	4.51	0.34	0.58
Nitrogen, Total Kjeldahl	mg/L	67	0.92	1.02	4.50	0.29	0.57
pH	None	67	7.1	7.1	7.9	2.8	0.6
Phosphorus, orthophosphate	mg/L	66	0.006	0.013	0.071	0.001	0.015
Phosphorus, Total	mg/L	67	0.020	0.037	0.337	0.001	0.052
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	67	310	339	632	91	133
Temperature	deg C	67	23.4	23.7	30.3	15.8	3.8
Total Hardness	mg/L	62	108	122	260	38	60
Total Suspended Solids	mg/L	70	1.7	2.2	15.0	0.5	2.2
Turbidity	NTU	71	0.8	1.2	18.3	0.1	2.1
Zinc	mg/L	74	0.0056	0.0066	0.0300	0.0013	0.0045

Table 5-6

Monitoring Data Summary - C-51 W and C-51 E Watershed
January 1999 - September 2014

SITE 38B		01/21/99 - 09/10/14			Samples 77		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	24	136	146	291	62	59
Arsenic	mg/L	59	0.0024	0.0030	0.0160	0.0005	0.0027
Cadmium	mg/L	76	0.0006	0.0013	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	64	6.6	10.0	70.7	1.0	11.0
Copper	mg/L	74	0.0030	0.0041	0.0100	0.0005	0.0032
Dissolved Oxygen	mg/L	73	5.8	6.3	11.2	0.4	2.1
Fecal Coliform	cfu/100mL	34	66	142	1090	2	211
Lead	mg/L	76	0.0020	0.0026	0.0152	0.0003	0.0021
Nitrogen, Ammonia	mg/L	75	0.071	0.130	0.830	0.008	0.173
Nitrogen, nitrate + nitrite	mg/L	67	0.178	0.279	0.907	0.006	0.238
Nitrogen, Total	mg/L	67	1.74	1.88	4.05	0.72	0.77
Nitrogen, Total Kjeldahl	mg/L	75	1.48	1.63	4.00	0.53	0.78
pH	None	75	7.6	7.6	14.0	6.6	0.8
Phosphorus, orthophosphate	mg/L	70	0.034	0.052	0.184	0.002	0.040
Phosphorus, Total	mg/L	65	0.098	0.123	0.880	0.021	0.120
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	75	691	836	1834	2	425
Temperature	deg C	75	24.7	25.1	33.4	16.7	4.1
Total Hardness	mg/L	72	210	228	412	70	89
Total Suspended Solids	mg/L	73	8.7	12.2	53.4	1.0	10.8
Turbidity	NTU	73	8.8	13.5	69.9	0.6	13.2
Zinc	mg/L	74	0.0060	0.0076	0.0372	0.0013	0.0064

SITE 37B		01/21/99 - 09/10/14			Samples 75		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	26	156	160	238	103	37
Arsenic	mg/L	58	0.0022	0.0024	0.0070	0.0002	0.0011
Cadmium	mg/L	74	0.0006	0.0012	0.0050	0.0002	0.0018
Chlorophyll-a (corrected)	ug/L	62	4.5	6.0	22.3	0.7	4.6
Copper	mg/L	74	0.0030	0.0040	0.0100	0.0005	0.0031
Dissolved Oxygen	mg/L	71	5.3	5.5	8.4	1.9	1.5
Fecal Coliform	cfu/100mL	32	48	83	300	10	88
Lead	mg/L	74	0.0020	0.0026	0.0155	0.0005	0.0021
Nitrogen, Ammonia	mg/L	74	0.064	0.086	0.332	0.008	0.061
Nitrogen, nitrate + nitrite	mg/L	67	0.172	0.251	1.320	0.010	0.230
Nitrogen, Total	mg/L	67	1.28	1.46	6.89	0.20	0.90
Nitrogen, Total Kjeldahl	mg/L	73	1.08	1.25	6.70	0.13	0.85
pH	None	73	7.4	7.4	8.0	2.8	0.6
Phosphorus, orthophosphate	mg/L	70	0.025	0.040	0.175	0.001	0.034
Phosphorus, Total	mg/L	63	0.073	0.117	1.540	0.016	0.211
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	73	680	699	1198	422	168
Temperature	deg C	73	25.2	25.5	32.2	16.8	3.8
Total Hardness	mg/L	71	213	217	305	124	41
Total Suspended Solids	mg/L	73	4.8	7.6	43.3	1.0	7.9
Turbidity	NTU	72	5.0	8.9	52.7	0.4	11.5
Zinc	mg/L	73	0.0060	0.0083	0.1100	0.0013	0.0131

Table 5-6

Monitoring Data Summary - C-51 W and C-51 E Watershed
January 2007 - September 2014

57 (Stub Canal)		05/22/07	-	08/12/14	Samples	42		
		Count	Exceedances	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	6	-	146	149	180	93	31
Arsenic	mg/L	2	0	0.0027	0.0029	0.0038	0.0019	0.0013
Cadmium	mg/L	2	0	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	36	0	18.0	22.4	66.1	2.5	14.2
Copper	mg/L	2	0	0.0026	0.0034	0.0055	0.0012	0.0030
Dissolved Oxygen	mg/L	41	16	5.4	5.8	10.8	2.4	2.1
Fecal Coliform	cfu/100mL	38	10	146	493	3400	1	858
Lead	mg/L	2	0	0.0021	0.0022	0.0023	0.0020	0.0002
Nitrogen, Ammonia	mg/L	36	-	0.054	0.084	0.390	0.010	0.082
Nitrogen, nitrate + nitrite	mg/L	30	-	0.051	0.090	0.388	0.006	0.093
Nitrogen, Total	mg/L	30	-	0.89	0.92	1.58	0.59	0.27
Nitrogen, Total Kjeldahl	mg/L	40	-	0.88	0.93	2.18	0.54	0.34
pH	None	40	0	7.6	7.6	8.0	7.2	0.2
Phosphorus, orthophosphate	mg/L	38	-	0.014	0.019	0.060	0.001	0.013
Phosphorus, Total	mg/L	35	-	0.080	0.086	0.177	0.023	0.033
Salinity	ppth	0	-	None	None	None	None	None
Specific Conductivity	umho/cm	41	0	418	421	505	253	50
Temperature	deg C	41	-	25.4	25.7	32.2	15.6	3.8
Total Hardness	mg/L	5	-	155	159	190	98	36
Total Suspended Solids	mg/L	38	-	4.3	4.8	12.0	1.0	2.3
Turbidity	NTU	39	0	2.9	3.4	13.6	0.3	2.1
Zinc	mg/L	2	0		0.0093	0.0120	0.0065	0.0039

70 (Pine Lake)		05/22/07	-	08/12/14	Samples	42		
		Count	Exceedances	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	6	-	131	134	155	81	27
Arsenic	mg/L	2	0	0.0034	0.0034	0.0038	0.0030	0.0006
Cadmium	mg/L	2	0	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	37	1	26.1	28.8	56.6	7.0	11.7
Copper	mg/L	2	0	0.0017	0.0018	0.0024	0.0012	0.0008
Dissolved Oxygen	mg/L	41	0	8.7	8.8	12.3	6.1	1.4
Fecal Coliform	cfu/100mL	38	9	55	437	8000	1	1316
Lead	mg/L	2	0	0.0026	0.0027	0.0030	0.0023	0.0005
Nitrogen, Ammonia	mg/L	36	-	0.027	0.040	0.250	0.006	0.043
Nitrogen, nitrate + nitrite	mg/L	34	-	0.025	0.054	0.283	0.006	0.073
Nitrogen, Total	mg/L	35	-	0.91	0.95	1.61	0.51	0.27
Nitrogen, Total Kjeldahl	mg/L	41	-	0.91	0.97	2.49	0.50	0.39
pH	None	41	0	7.9	7.9	8.5	7.1	0.3
Phosphorus, orthophosphate	mg/L	35	-	0.003	0.005	0.025	0.001	0.006
Phosphorus, Total	mg/L	40	-	0.059	0.064	0.211	0.025	0.031
Salinity	ppth	0	-	None	None	None	None	None
Specific Conductivity	umho/cm	41	0	392	397	504	222	60
Temperature	deg C	41	-	25.7	26.0	32.6	16.4	3.9
Total Hardness	mg/L	6	-	145	149	176	86	33
Total Suspended Solids	mg/L	40	-	7.6	8.2	16.3	2.5	3.1
Turbidity	NTU	40	0	4.0	4.6	9.0	0.1	1.7
Zinc	mg/L	2	0	0.0057	0.0058	0.0065	0.0050	0.0011

Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)

Count = Number of times a particular parameter was sampled

Exceedances = Number of times a sample of a particular parameter exceeded the State of Florida Surface Water Quality Standards or Impaired Waters Rule

Table 5-6

Monitoring Data Summary - C-51 W and C-51 E Watershed
January 2007 - September 2014

52 (Stub Canal)		05/22/07 - 08/12/14			Samples 42		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	6	133	137	169	81	30
Arsenic	mg/L	2	0.0027	0.0029	0.0038	0.0019	0.0013
Cadmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	37	23.0	26.1	61.1	3.9	12.2
Copper	mg/L	2	0.0017	0.0018	0.0024	0.0012	0.0008
Dissolved Oxygen	mg/L	41	7.5	7.7	11.4	3.7	1.5
Fecal Coliform	cfu/100mL	39	79	483	5200	1	1061
Lead	mg/L	2	0.0030	0.0032	0.0040	0.0023	0.0012
Nitrogen, Ammonia	mg/L	37	0.033	0.075	1.300	0.006	0.211
Nitrogen, nitrate + nitrite	mg/L	30	0.031	0.080	0.363	0.006	0.107
Nitrogen, Total	mg/L	30	1.01	1.16	6.02	0.53	0.97
Nitrogen, Total Kjeldahl	mg/L	40	1.01	1.15	5.96	0.53	0.87
pH	None	41	7.8	7.8	8.6	7.1	0.3
Phosphorus, orthophosphate	mg/L	39	0.004	0.010	0.110	0.001	0.019
Phosphorus, Total	mg/L	40	0.059	0.066	0.230	0.023	0.039
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	41	420	428	675	228	82
Temperature	deg C	41	25.5	25.8	32.6	16.0	4.0
Total Hardness	mg/L	6	149	153	184	88	35
Total Suspended Solids	mg/L	40	7.2	7.8	14.7	1.8	3.0
Turbidity	NTU	40	3.7	4.4	10.1	0.1	1.9
Zinc	mg/L	2	0.0067	0.0068	0.0070	0.0065	0.0004

62 (Lake Clarke)		05/22/07 - 08/12/14			Samples 42		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	6	153	157	223	108	40
Arsenic	mg/L	2	0.0048	0.0049	0.0060	0.0038	0.0016
Cadmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	37	17.2	22.9	110.0	2.6	19.5
Copper	mg/L	2	0.0020	0.0023	0.0034	0.0012	0.0016
Dissolved Oxygen	mg/L	41	7.9	8.1	13.4	4.6	1.9
Fecal Coliform	cfu/100mL	39	52	345	4500	1	877
Lead	mg/L	2	0.0016	0.0017	0.0023	0.0012	0.0008
Nitrogen, Ammonia	mg/L	37	0.037	0.055	0.240	0.006	0.051
Nitrogen, nitrate + nitrite	mg/L	30	0.075	0.143	0.550	0.006	0.133
Nitrogen, Total	mg/L	30	1.08	1.12	1.87	0.61	0.30
Nitrogen, Total Kjeldahl	mg/L	40	0.95	1.03	2.06	0.10	0.36
pH	None	41	7.8	7.8	8.5	7.1	0.3
Phosphorus, orthophosphate	mg/L	39	0.013	0.023	0.068	0.001	0.020
Phosphorus, Total	mg/L	40	0.063	0.071	0.216	0.017	0.035
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	41	574	594	1170	326	163
Temperature	deg C	41	26.1	26.4	32.3	17.9	3.9
Total Hardness	mg/L	6	173	176	214	119	35
Total Suspended Solids	mg/L	40	4.2	4.7	9.6	1.0	2.2
Turbidity	NTU	39	3.1	3.5	9.3	0.3	1.5
Zinc	mg/L	2		0.0063	0.0065	0.0060	0.0004

Table 5-6

Monitoring Data Summary - C-51 W and C-51 E Watershed
January 2007 - September 2014

69 (Lake Clarke)		05/22/07 - 08/12/14			Samples 42		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	7	159	161	181	120	22
Arsenic	mg/L	2	0.0047	0.0048	0.0057	0.0038	0.0013
Cadmium	mg/L	2	0.0013	0.0014	0.0019	0.0010	0.0007
Chlorophyll-a (corrected)	mg/m^3	37	16.7	20.5	64.0	5.6	14.1
Copper	mg/L	2	0.0017	0.0018	0.0024	0.0012	0.0008
Dissolved Oxygen	mg/L	41	8.6	8.7	13.8	5.5	1.7
Fecal Coliform	cfu/100mL	38	36	312	3800	1	842
Lead	mg/L	2	0.0030	0.0032	0.0040	0.0023	0.0012
Nitrogen, Ammonia	mg/L	38	0.040	0.057	0.220	0.009	0.047
Nitrogen, nitrate + nitrite	mg/L	35	0.053	0.120	0.540	0.006	0.129
Nitrogen, Total	mg/L	35	1.03	1.07	1.93	0.55	0.31
Nitrogen, Total Kjeldahl	mg/L	40	0.91	0.97	1.92	0.44	0.33
pH	None	41	7.9	7.9	8.6	7.0	0.3
Phosphorus, orthophosphate	mg/L	40	0.014	0.022	0.070	0.002	0.020
Phosphorus, Total	mg/L	40	0.062	0.075	0.247	0.012	0.050
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	41	550	564	856	339	126
Temperature	deg C	41	26.2	26.5	33.2	17.4	4.0
Total Hardness	mg/L	6	173	175	202	141	24
Total Suspended Solids	mg/L	40	4.2	5.0	26.7	1.0	4.0
Turbidity	NTU	40	2.8	3.3	16.2	0.2	2.4
Zinc	mg/L	2	0.0085	0.0088	0.0110	0.0065	0.0032

61 (Lake Clarke)		05/22/07 - 08/12/14			Samples 42		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	7	154	156	197	121	26
Arsenic	mg/L	2	0.0062	0.0069	0.0100	0.0038	0.0044
Cadmium	mg/L	2	0.0039	0.0050	0.0080	0.0019	0.0043
Chlorophyll-a (corrected)	mg/m^3	37	15.4	19.5	66.0	4.0	14.2
Copper	mg/L	2	0.0081	0.0099	0.0155	0.0042	0.0080
Dissolved Oxygen	mg/L	41	8.1	8.4	13.5	3.9	2.1
Fecal Coliform	cfu/100mL	39	49	309	3200	1	681
Lead	mg/L	2	0.0045	0.0057	0.0090	0.0023	0.0047
Nitrogen, Ammonia	mg/L	37	0.045	0.070	0.341	0.009	0.071
Nitrogen, nitrate + nitrite	mg/L	29	0.068	0.137	0.443	0.006	0.126
Nitrogen, Total	mg/L	30	1.11	1.15	2.09	0.52	0.34
Nitrogen, Total Kjeldahl	mg/L	40	1.07	1.12	1.90	0.51	0.35
pH	None	41	7.9	7.9	8.5	7.2	0.3
Phosphorus, orthophosphate	mg/L	39	0.017	0.025	0.076	0.003	0.021
Phosphorus, Total	mg/L	30	0.0687	0.0764	0.2096	0.0236	0.0379
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	41	531	543	804	345	116
Temperature	deg C	41	26.2	26.5	32.5	17.9	3.8
Total Hardness	mg/L	6	173	175	201	137	24
Total Suspended Solids	mg/L	39	3.8	5.0	23.7	1.0	4.8
Turbidity	NTU	40	2.6	3.2	11.5	0.3	2.3
Zinc	mg/L	2	0.0144	0.0148	0.0182	0.0114	0.0048

Start =
End =
Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)
Count =
Exceedances =

Table 5-6

Monitoring Data Summary - C-51 W and C-51 E Watershed
January 1999 - September 2014

SITE C51S155		01/21/99 - 09/11/14			Samples 131		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	86	161	162	216	100	24
Arsenic	mg/L	14	0.0014	0.0016	0.0029	0.0005	0.0008
Cadmium	mg/L	30	0.0015	0.0027	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	31	1.7	5.9	45.0	0.0	8.6
Copper	mg/L	29	0.0051	0.0066	0.0230	0.0017	0.0047
Dissolved Oxygen	mg/L	122	5.6	5.9	14.0	2.1	1.8
Fecal Coliform	cfu/100mL	29	148	286	2000	2	388
Lead	mg/L	30	0.0022	0.0033	0.0152	0.0005	0.0030
Nitrogen, Ammonia	mg/L	126	0.047	0.075	0.520	0.005	0.071
Nitrogen, nitrate + nitrite	mg/L	124	0.112	0.383	20.900	0.003	1.868
Nitrogen, Total	mg/L	125	1.15	1.36	21.79	0.15	1.90
Nitrogen, Total Kjeldahl	mg/L	127	0.96	1.00	3.87	0.41	0.37
pH	None	128	7.6	7.6	8.5	6.2	0.4
Phosphorus, orthophosphate	mg/L	129	0.022	0.041	0.279	0.001	0.045
Phosphorus, Total	mg/L	118	0.062	0.071	0.200	0.003	0.035
Salinity	ppth	1	0.3300	0.3300	0.3300	0.3300	None
Specific Conductivity	umho/cm	130	560	609	1681	6	183
Temperature	ECg C	130	25.1	25.5	56.3	15.3	4.8
Total Hardness	mg/L	40	172	199	337	1	53
Total SuspenECd Solids	mg/L	127	3.7	5.4	47.0	1.0	6.7
Turbidity	NTU	131	4.9	7.2	59.4	1.1	9.4
Zinc	mg/L	30	0.0079	0.0091	0.0310	0.0032	0.0056

Table 5-6
Monitoring Data Summary - Loxahatchee River Watershed
January 1999 - September 2014

SITE 69 (Lox)		11/20/03 - 09/22/14			Samples 103		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	93	152	157	245	74	39
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	0	None	None	None	None	None
Chlorophyll-a (corrected)	ug/L	91	3.2	4.9	19.5	0.1	4.3
Copper	mg/L	0	None	None	None	None	None
Dissolved Oxygen	% Saturation	12	40.8	42.3	56.1	22.5	10.7
Fecal Coliform	cfu/100mL	93	36	215	13800	4	1431
Lead	mg/L	0	None	None	None	None	None
Nitrogen, Ammonia	mg/L	89	0.089	0.104	0.471	0.025	0.064
Nitrogen, nitrate + nitrite	mg/L	93	0.057	0.071	0.216	0.007	0.045
Nitrogen, Total	mg/L	93	1.04	1.44	38.00	0.58	3.85
Nitrogen, Total Kjeldahl	mg/L	81	0.90	0.94	2.52	0.54	0.32
pH	None	99	7.3	7.3	8.1	6.4	0.3
Phosphorus, orthophosphate	mg/L	93	0.009	0.012	0.062	0.001	0.011
Phosphorus, Total	mg/L	93	0.037	0.042	0.147	0.003	0.024
Salinity	ppth	65	0.35	0.95	11.40	0.10	2.21
Specific Conductivity	umho/cm	75	654	1533	19200	218	3536
Temperature	deg C	99	24.6	24.9	31.2	17.0	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	93	2.5	2.9	10.0	0.6	1.6
Turbidity	NTU	68	3.2	3.4	7.2	1.5	1.2
Zinc	mg/L	8	0.0080	0.0083	0.0100	0.0050	0.0024

SITE 30		05/10/00 - 09/15/14			Samples 69		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	61	122	123	137	79	10
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0027	0.0038	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	57	4.1	5.6	36.3	0.5	5.1
Copper	mg/L	7	0.0116	0.0257	0.0900	0.0017	0.0319
Dissolved Oxygen	% Saturation	6	84.7	85.0	91.3	70.3	7.8
Fecal Coliform	cfu/100mL	67	15	46	616	1	107
Lead	mg/L	7	0.0040	0.0172	0.1020	0.0011	0.0375
Nitrogen, Ammonia	mg/L	47	0.053	0.089	0.300	0.010	0.096
Nitrogen, nitrate + nitrite	mg/L	69	0.011	0.021	0.146	0.003	0.030
Nitrogen, Total	mg/L	68	0.30	0.52	2.04	0.02	0.45
Nitrogen, Total Kjeldahl	mg/L	60	0.38	0.54	2.02	0.10	0.43
pH	None	69	7.8	7.8	8.3	7.1	0.2
Phosphorus, orthophosphate	mg/L	61	0.005	0.008	0.035	0.001	0.008
Phosphorus, Total	mg/L	69	0.027	0.030	0.130	0.010	0.019
Salinity	ppth	46	29.55	30.14	37.90	15.60	5.45
Specific Conductivity	umho/cm	57	32238	42734	56789	281	13721
Temperature	deg C	69	25.5	25.7	31.1	17.7	3.6
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	69	5.2	5.9	14.0	2.0	3.0
Turbidity	NTU	69	2.8	3.1	7.6	1.1	1.4
Zinc	mg/L	8	0.0182	0.0405	0.1210	0.0016	0.0470

Table 5-6

Monitoring Data Summary - Loxahatchee River Watershed
January 1999 - September 2014

SITE 51		05/11/00 - 09/16/14			Samples 69		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	60	121	121	163	83	15
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0033	0.0083	0.0440	0.0008	0.0146
Chlorophyll-a (corrected)	ug/L	58	4.2	6.2	62.0	0.5	8.4
Copper	mg/L	7	0.0088	0.0244	0.0700	0.0014	0.0296
Dissolved Oxygen	% Saturation	6	88.2	88.3	97.0	82.0	5.7
Fecal Coliform	cfu/100mL	67	15	38	420	1	68
Lead	mg/L	7	0.0034	0.0075	0.0340	0.0011	0.0119
Nitrogen, Ammonia	mg/L	36	0.026	0.037	0.140	0.002	0.030
Nitrogen, nitrate + nitrite	mg/L	68	0.008	0.014	0.068	0.002	0.017
Nitrogen, Total	mg/L	65	0.38	0.56	2.29	0.10	0.49
Nitrogen, Total Kjeldahl	mg/L	59	0.39	0.57	2.23	0.10	0.49
pH	None	69	7.9	7.9	8.4	6.7	0.2
Phosphorus, orthophosphate	mg/L	65	0.006	0.011	0.177	0.001	0.023
Phosphorus, Total	mg/L	68	0.026	0.031	0.222	0.006	0.028
Salinity	ppth	50	22.88	26.88	37.50	0.60	9.51
Specific Conductivity	umho/cm	57	36575	41695	56271	1118	13580
Temperature	deg C	69	24.4	24.7	31.1	15.9	3.8
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	68	5.4	7.4	43.5	0.8	7.2
Turbidity	NTU	68	3.2	3.4	7.2	1.5	1.2
Zinc	mg/L	8	0.0080	0.0083	0.0100	0.0050	0.0024

SITE 62 (Lox)		05/31/00 - 09/22/14			Samples 104		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	96	134	137	226	64	28
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0027	0.0038	0.0080	0.0008	0.0027
Chlorophyll-a (corrected)	ug/L	87	5.5	7.2	61.9	0.5	7.1
Copper	mg/L	7	0.0071	0.0151	0.0500	0.0017	0.0184
Dissolved Oxygen	% Saturation	12	60.0	61.2	79.4	37.3	12.5
Fecal Coliform	cfu/100mL	104	59	135	2300	1	271
Lead	mg/L	7	0.0030	0.0045	0.0130	0.0011	0.0042
Nitrogen, Ammonia	mg/L	94	0.057	0.080	0.650	0.010	0.095
Nitrogen, nitrate + nitrite	mg/L	104	0.032	0.049	0.156	0.003	0.038
Nitrogen, Total	mg/L	104	0.86	1.01	3.93	0.24	0.65
Nitrogen, Total Kjeldahl	mg/L	98	0.79	0.94	3.93	0.23	0.66
pH	None	104	7.7	8.2	73.8	7.0	6.5
Phosphorus, orthophosphate	mg/L	102	0.018	0.024	0.121	0.002	0.016
Phosphorus, Total	mg/L	104	0.045	0.054	0.480	0.006	0.049
Salinity	ppth	89	6.63	12.33	35.70	0.20	10.30
Specific Conductivity	umho/cm	86	13554	22582	53860	439	16340
Temperature	deg C	104	24.4	24.7	31.8	16.1	3.9
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	92	4.2	5.1	23.2	1.0	3.7
Turbidity	NTU	104	2.8	3.2	22.0	1.2	2.4
Zinc	mg/L	8	0.0124	0.0183	0.0480	0.0050	0.0185

Table 5-6
Monitoring Data Summary - Loxahatchee River Watershed
January 1999 - September 2014

SITE 72		05/11/00 - 09/22/14			Samples 111		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	102	124	126	178	28	21
Arsenic	mg/L	0	None	None	None	None	None
Cadmium	mg/L	8	0.0035	0.0118	0.0720	0.0008	0.0244
Chlorophyll-a (corrected)	ug/L	105	8.8	12.2	97.9	0.5	13.4
Copper	mg/L	7	0.0076	0.0206	0.0600	0.0010	0.0246
Dissolved Oxygen	% Saturation	12	64.2	67.9	97.3	27.2	21.1
Fecal Coliform	cfu/100mL	109	73	149	1280	1	213
Lead	mg/L	7	0.0044	0.0132	0.0640	0.0011	0.0229
Nitrogen, Ammonia	mg/L	100	0.083	0.136	3.000	0.015	0.301
Nitrogen, nitrate + nitrite	mg/L	110	0.017	0.030	0.172	0.000	0.031
Nitrogen, Total	mg/L	110	0.59	0.70	2.88	0.10	0.43
Nitrogen, Total Kjeldahl	mg/L	98	0.55	0.68	2.85	0.10	0.44
pH	None	111	7.8	7.8	8.2	7.3	0.2
Phosphorus, orthophosphate	mg/L	108	0.007	0.011	0.042	0.001	0.009
Phosphorus, Total	mg/L	110	0.036	0.039	0.097	0.006	0.016
Salinity	ppth	90	17.86	24.10	37.10	0.04	10.29
Specific Conductivity	umho/cm	87	27542	36630	55828	500	15760
Temperature	deg C	111	25.6	25.9	31.8	16.0	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	109	4.8	6.0	22.4	0.5	4.2
Turbidity	NTU	110	3.0	3.2	8.7	0.3	1.3
Zinc	mg/L	8	0.0164	0.0464	0.2780	0.0050	0.0941

SITE C18G92		01/19/99 - 09/11/14			Samples 132		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	88	139	148	268	61	52
Arsenic	mg/L	16	0.0011	0.0013	0.0024	0.0005	0.0007
Cadmium	mg/L	33	0.0013	0.0024	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	23	3.3	4.0	15.3	1.0	3.0
Copper	mg/L	33	0.0033	0.0052	0.0100	0.0003	0.0042
Dissolved Oxygen	mg/L	125	5.9	6.1	10.0	2.7	1.7
Fecal Coliform	cfu/100mL	31	14	81	730	1	162
Lead	mg/L	32	0.0020	0.0033	0.0236	0.0003	0.0042
Nitrogen, Ammonia	mg/L	128	0.028	0.050	1.500	0.003	0.133
Nitrogen, nitrate + nitrite	mg/L	127	0.023	0.041	0.520	0.001	0.057
Nitrogen, Total	mg/L	130	0.80	0.89	1.65	0.00	0.21
Nitrogen, Total Kjeldahl	mg/L	129	0.86	0.88	1.33	0.22	0.16
pH	None	130	7.5	7.5	8.2	6.2	0.3
Phosphorus, orthophosphate	mg/L	131	0.004	0.012	0.500	0.001	0.044
Phosphorus, Total	mg/L	119	0.022	0.217	23.000	0.002	2.106
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	132	409	440	905	148	168
Temperature	deg C	132	26.5	48.4	3001.0	15.8	259.0
Total Hardness	mg/L	40	158	171	298	60	61
Total Suspended Solids	mg/L	128	1.2	3.0	153.0	0.0	13.4
Turbidity	NTU	131	1.6	1.7	4.9	0.4	0.8
Zinc	mg/L	33	0.0075	0.0128	0.1580	0.0027	0.0270

Table 5-6
Monitoring Data Summary - Loxahatchee River Watershed
January 1999 - September 2014

SITE C18S46		01/19/99 - 09/11/14			Samples 132		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	87	137	145	247	59	46
Arsenic	mg/L	16	0.0012	0.0014	0.0024	0.0005	0.0007
Cadmium	mg/L	33	0.0013	0.0024	0.0050	0.0002	0.0022
Chlorophyll-a (correEDed)	ug/L	22	3.6	4.5	10.9	1.0	2.8
Copper	mg/L	33	0.0033	0.0053	0.0100	0.0003	0.0042
Dissolved Oxygen	mg/L	125	5.9	6.3	10.7	2.3	1.9
Fecal Coliform	cfu/100mL	32	94	273	1600	5	397
Lead	mg/L	33	0.0020	0.0033	0.0236	0.0003	0.0042
Nitrogen, Ammonia	mg/L	126	0.024	0.034	0.120	0.003	0.026
Nitrogen, nitrate + nitrite	mg/L	129	0.018	0.036	0.244	0.002	0.040
Nitrogen, Total	mg/L	130	0.76	0.84	1.27	0.00	0.20
Nitrogen, Total Kjeldahl	mg/L	128	0.81	0.82	1.22	0.26	0.15
pH	None	118	7.6	7.6	8.3	6.5	0.4
Phosphorus, orthophosphate	mg/L	129	0.003	0.009	0.082	0.001	0.013
Phosphorus, Total	mg/L	118	0.021	0.026	0.210	0.002	0.024
Salinity	ppth	0	None	None	None	None	None
Specific Conductivity	umho/cm	132	403	448	1588	151	233
Temperature	deg C	132	25.2	25.5	33.2	15.8	4.0
Total Hardness	mg/L	42	156	168	311	60	60
Total Suspended Solids	mg/L	115	1.6	1.8	6.0	1.0	1.0
Turbidity	NTU	47	1.3	1.6	8.7	0.3	1.4
Zinc	mg/L	33	0.0070	0.0087	0.0429	0.0018	0.0075

Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)

Count = Number of times a particular parameter was sampled

Exceedances = Number of times a sample of a particular parameter exceeded the State of Florida Surface Water Quality Standards or Impaired Waters Rule

Table 5-6
Monitoring Data Summary - Lake Worth Lagoon North Watershed
January 1999 - September 2014

LWL-1		01/26/99 - 08/07/14			Samples 103		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0039	0.0046	0.0089	0.0023	0.0029
Cadmium	mg/L	7	0.0009	0.0013	0.0025	0.0002	0
DAlorophyll-a (corrected)	ug/L	85	5.4	6.3	19.7	1.3	3.6
Copper	mg/L	31	0.0029	0.0030	0.0048	0.0017	0.0008
Dissolved Oxygen	mg/L	99	6.9	6.9	10.1	4.1	1.1
Fecal Coliform	cfu/100mL	2	14	26	47	4	30
Lead	mg/L	7	0.0031	0.0054	0.0246	0.0013	0.0085
Nitrogen, Ammonia	mg/L	94	0.011	0.020	0.260	0.001	0.033
Nitrogen, nitrate + nitrite	mg/L	74	0.006	0.012	0.093	0.003	0.018
Nitrogen, Total	mg/L	71	0.37	0.42	0.96	0.00	0.19
Nitrogen, Total Kjeldahl	mg/L	96	0.36	0.39	0.92	0.09	0.17
pH	None	102	7.9	7.9	8.9	7.2	0.2
Phosphorus, orthophosphate	mg/L	87	0.007	0.011	0.066	0.001	0.010
Phosphorus, Total	mg/L	85	0.034	0.038	0.120	0.004	0.018
Salinity	ppth	67	30.47	30.67	36.10	21.10	3.41
Specific Conductivity	umho/cm	102	45222.76	46338	67154	4184	7402
Temperature	deg C	102	25.5	25.8	32.8	14.6	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	69	4.4	6.4	33.0	1.5	6.7
Turbidity	NTU	100	1.9	2.0	6.0	0.5	0.8
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

SITE 11		01/26/99 - 09/04/14			Samples 128		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	1	130	130	130	130	None
Arsenic	mg/L	11	0.0281	0.6864	2.5000	0.0028	1.1648
Cadmium	mg/L	24	0.0025	0.0338	0.2500	0.0001	0.0835
Chlorophyll-a (corrected)	ug/L	111	3.2	4.2	21.0	0.1	3.6
Copper	mg/L	22	0.0162	0.5154	6.2500	0.0017	1.5079
Dissolved Oxygen	mg/L	125	6.2	6.3	9.5	3.4	1.1
Fecal Coliform	DZu/100mL	39	16	28	170	2	38
Lead	mg/L	23	0.0090	0.3370	2.5000	0.0002	0.8568
Nitrogen, Ammonia	mg/L	122	0.048	0.062	0.250	0.009	0.044
Nitrogen, nitrate + nitrite	mg/L	101	0.057	0.123	1.200	0.007	0.185
Nitrogen, Total	mg/L	99	0.52	0.62	1.87	0.06	0.32
Nitrogen, Total Kjeldahl	mg/L	119	0.43	0.52	1.86	0.04	0.30
pH	None	126	7.8	7.8	8.2	6.6	0.3
Phosphorus, orthophosphate	mg/L	116	0.011	0.023	0.150	0.001	0.023
Phosphorus, Total	mg/L	122	0.036	0.057	1.110	0.003	0.108
Salinity	ppth	110	30.22	30.61	35.92	9.54	4.29
Specific Conductivity	umho/cm	126	42353.22	45855	54441	425	9238
Temperature	deg C	114	25.6	25.8	31.8	16.5	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	15	16.7	24.3	59.0	1.0	16.3
Turbidity	NTU	123	1.7	2.2	12.4	0.1	1.6
Zinc	mg/L	19	0.0319	0.8061	5.0000	0.0034	1.8660

Table 5-6
Monitoring Data Summary - Lake Worth Lagoon North Watershed
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SITE 13		05/11/00 - 09/04/14			Samples 122		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	13	0.0174	0.5804	2.5000	0.0026	1.0943
Cadmium	mg/L	20	0.0020	0.0390	0.2500	0.0001	0.0909
Chlorophyll-a (corrected)	ug/L	111	4.1	5.6	22.0	0.1	4.4
Copper	mg/L	18	0.0154	1.1669	12.9000	0.0017	3.1986
Dissolved Oxygen	mg/L	120	6.1	6.2	9.9	3.1	1.2
Fecal Coliform	cfu/100mL	36	53	173	3200	6	533
Lead	mg/L	19	0.0080	0.3980	2.5000	0.0002	0.9351
Nitrogen, Ammonia	mg/L	117	0.056	0.181	13.000	0.009	1.196
Nitrogen, nitrate + nitrite	mg/L	105	0.062	0.143	1.517	0.003	0.241
Nitrogen, Total	mg/L	106	0.58	0.69	2.14	0.06	0.38
Nitrogen, Total Kjeldahl	mg/L	119	0.50	0.59	1.83	0.04	0.32
pH	None	120	7.8	7.8	8.3	6.4	0.2
Phosphorus, orthophosphate	mg/L	113	0.014	0.025	0.244	0.001	0.030
Phosphorus, Total	mg/L	114	0.042	0.071	1.400	0.003	0.147
Salinity	ppth	109	24.60	26.60	38.30	0.63	7.77
Specific Conductivity	umho/cm	118	36330.41	41242	59740	531	12515
Temperature	deg C	118	25.7	26.0	31.9	16.0	3.7
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	11	24.9	31.2	56.0	4.0	17.1
Turbidity	NTU	115	1.9	2.3	13.0	0.1	1.5
Zinc	mg/L	14	0.0478	1.0912	5.0000	0.0034	2.1186

LWL-4		04/05/04 - 08/07/14			Samples 100		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0041	0.0050	0.0090	0.0023	0.0033
Cadmium	mg/L	7	0.0004	0.0005	0.0017	0.0003	0
Chlorophyll-a (corrected)	ug/L	86	2.5	3.4	14.7	0.1	2.9
Copper	mg/L	30	0.0019	0.0020	0.0031	0.0009	0.0006
Dissolved Oxygen	mg/L	97	6.8	6.9	9.1	4.7	0.9
Fecal Coliform	cfu/100mL	0	None	None	None	None	None
Lead	mg/L	7	0.0025	0.0041	0.0157	0.0005	0.0052
Nitrogen, Ammonia	mg/L	92	0.009	0.016	0.390	0.003	0.041
Nitrogen, nitrate + nitrite	mg/L	81	0.004	0.006	0.050	0.003	0.008
Nitrogen, Total	mg/L	80	0.29	0.33	0.74	0.00	0.16
Nitrogen, Total Kjeldahl	mg/L	94	0.29	0.32	0.73	0.13	0.15
pH	None	99	8.0	8.0	8.9	7.7	0.2
Phosphorus, orthophosphate	mg/L	82	0.004	0.007	0.028	0.001	0.007
Phosphorus, Total	mg/L	80	0.024	0.025	0.064	0.012	0.011
Salinity	ppth	68	32.39	32.53	36.40	24.70	2.96
Specific Conductivity	umho/cm	99	48013.16	49013	68870	4594	6895
Temperature	deg C	99	25.1	25.5	32.2	15.2	4.2
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	69	6.7	9.3	52.0	1.5	8.8
Turbidity	NTU	98	2.6	2.9	8.9	0.9	1.5
Zinc	mg/L	6	0.0051	0.0066	0.0197	0.0034	0.0065

Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)

Count = Number of times a particular parameter was sampled

Exceedances = Number of times a sample of a particular parameter exceeded the State of Florida Surface Water Quality Standards or Impaired Waters Rule

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Monitoring Data Summary - Lake Worth Lagoon Central Watershed
January 1999 - September 2014

LWL-8		01/26/99 - 08/06/14			Samples 115		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	6	0.0043	0.0052	0.0098	0.0023	0.0032
Cadmium	mg/L	18	0.0016	0.0029	0.0060	0.0003	0.0023
Chlorophyll-a (corrected)	ug/L	93	4.7	7.0	41.2	0.5	7.4
Copper	mg/L	38	0.0029	0.0058	0.0500	0.0012	0.0110
Dissolved Oxygen	mg/L	111	6.6	6.8	15.6	2.7	1.7
Fecal Coliform	cfu/100mL	12	21	83	700	2	196
Lead	mg/L	17	0.0041	0.0071	0.0530	0.0011	0.0121
Nitrogen, Ammonia	mg/L	102	0.028	0.083	3.046	0.001	0.315
Nitrogen, nitrate + nitrite	mg/L	94	0.028	0.057	0.430	0.003	0.064
Nitrogen, Total	mg/L	83	0.51	0.61	1.67	0.02	0.35
Nitrogen, Total Kjeldahl	mg/L	102	0.45	0.53	1.50	0.13	0.31
pH	None	113	7.7	7.8	8.3	1.9	0.6
Phosphorus, orthophosphate	mg/L	97	0.016	0.022	0.130	0.001	0.018
Phosphorus, Total	mg/L	94	0.047	0.055	0.270	0.012	0.037
Salinity	ppth	71	25.45	26.77	36.40	9.32	7.59
Specific Conductivity	umho/cm	115	37444.78	39863	63187	2762	11814
Temperature	deg C	114	24.9	25.3	34.1	12.1	4.3
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	83	8.1	12.0	82.0	1.0	14.1
Turbidity	NTU	114	4.7	5.3	14.0	1.2	2.6
Zinc	mg/L	18	0.0088	0.0154	0.1200	0.0034	0.0271

SITE 18C		01/30/04 - 09/12/13			Samples 99		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	1	140	140	140	140	None
Arsenic	mg/L	12	0.0183	0.6281	2.5000	0.0023	1.1288
Cadmium	mg/L	11	0.0020	0.0685	0.2500	0.0001	0.1166
Chlorophyll-a (corrected)	ug/L	91	5.3	7.1	32.0	0.1	5.6
Copper	mg/L	11	0.0167	0.8066	4.8000	0.0017	1.5902
Dissolved Oxygen	mg/L	96	6.7	6.9	11.4	2.5	1.6
Fecal Coliform	cfu/100mL	25	26	57	300	2	75
Lead	mg/L	11	0.0179	0.6854	2.5000	0.0009	1.1655
Nitrogen, Ammonia	mg/L	85	0.064	0.084	0.310	0.009	0.059
Nitrogen, nitrate + nitrite	mg/L	84	0.109	0.214	1.677	0.006	0.270
Nitrogen, Total	mg/L	85	0.93	1.25	20.80	0.10	2.23
Nitrogen, Total Kjeldahl	mg/L	88	0.74	1.05	20.70	0.04	2.19
pH	None	97	7.8	7.8	8.4	7.1	0.2
Phosphorus, orthophosphate	mg/L	89	0.021	0.034	0.156	0.001	0.025
Phosphorus, Total	mg/L	84	0.064	0.100	1.280	0.001	0.144
Salinity	ppth	76	22.37	67.95	3388.00	4.74	386.05
Specific Conductivity	umho/cm	84	32059	37387	55098	537	15125
Temperature	deg C	95	26.4	26.8	33.9	14.1	4.5
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	2	42.0	42.0	42.0	42.0	0.0
Turbidity	NTU	93	8.3	15.2	222.0	0.1	23.3
Zinc	mg/L	7	0.1302	2.1487	5.0000	0.0034	2.6672

Table 5-6

Monitoring Data Summary - Lake Worth Lagoon Central Watershed
January 1999 - September 2014

SITE 18D		07/28/05 - 08/20/14			Samples 94		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	11	0.0210	0.6845	2.5000	0.0023	1.1660
Cadmium	mg/L	11	0.0025	0.0686	0.2500	0.0001	0.1165
Chlorophyll-a (corrected)	ug/L	87	5.5	8.9	41.1	0.1	9.1
Copper	mg/L	11	0.0147	0.5024	3.0000	0.0017	0.9669
Dissolved Oxygen	mg/L	82	7.4	7.5	11.3	4.9	1.3
Fecal Coliform	CRu/100mL	15	18	52	400	1	101
Lead	mg/L	11	0.0159	0.6852	2.5000	0.0002	1.1656
Nitrogen, Ammonia	mg/L	88	0.057	0.077	0.400	0.009	0.064
Nitrogen, nitrate + nitrite	mg/L	81	0.077	0.178	1.477	0.006	0.269
Nitrogen, Total	mg/L	71	0.73	0.85	3.87	0.14	0.52
Nitrogen, Total Kjeldahl	mg/L	85	0.55	0.67	3.86	0.04	0.47
pH	None	71	7.9	7.9	8.3	7.3	0.2
Phosphorus, orthophosphate	mg/L	84	0.013	0.028	0.168	0.001	0.032
Phosphorus, Total	mg/L	88	0.065	0.101	1.620	0.016	0.200
Salinity	ppth	69	25.45	26.94	36.12	9.36	7.96
Specific Conductivity	umho/cm	68	38858	41575	54782	3311	11993
Temperature	deg C	83	27.0	29.4	263.7	16.6	26.3
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	0	None	None	None	None	None
Turbidity	NTU	91	4.3	7.0	72.2	0.1	7.8
Zinc	mg/L	6	0.1472	2.5023	5.0000	0.0034	2.7361

LWL-11		01/26/99 - 08/06/14			Samples 102		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	6	0.0040	0.0056	0.0173	0.0023	0.0060
Cadmium	mg/L	6	0.0004	0.0004	0.0006	0.0003	0
Chlorophyll-a (corrected)	ug/L	87	6.1	8.4	59.2	1.0	8.0
Copper	mg/L	29	0.0019	0.0026	0.0160	0.0008	0.0035
Dissolved Oxygen	mg/L	98	6.8	7.0	13.2	2.0	1.7
Fecal Coliform	cfu/100mL	3	12	28	63	1	32
Lead	mg/L	6	0.0035	0.0053	0.0198	0.0024	0.0071
Nitrogen, Ammonia	mg/L	92	0.019	0.039	0.410	0.001	0.057
Nitrogen, nitrate + nitrite	mg/L	82	0.016	0.041	0.190	0.003	0.047
Nitrogen, Total	mg/L	76	0.47	0.60	1.54	0.00	0.31
Nitrogen, Total Kjeldahl	mg/L	92	0.47	0.54	1.40	0.05	0.27
pH	None	101	7.8	7.9	8.8	1.8	0.6
Phosphorus, orthophosphate	mg/L	86	0.011	0.016	0.086	0.001	0.014
Phosphorus, Total	mg/L	82	0.048	0.052	0.180	0.018	0.025
Salinity	ppth	68	27.51	28.31	36.40	12.50	6.17
Specific Conductivity	umho/cm	102	39716.63	41802	65170	3117	10816
Temperature	deg C	102	25.4	27.3	233.0	13.0	21.0
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	68	8.4	10.2	37.0	1.5	7.2
Turbidity	NTU	102	4.9	5.6	16.0	0.8	3.0
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

Table 5-6

Monitoring Data Summary - Lake Worth Lagoon Central Watershed
January 1999 - September 2014

LWL-13		04/05/04 - 08/06/14			Samples 102		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0041	0.0050	0.0095	0.0023	0.0033
Cadmium	mg/L	7	0.0004	0.0004	0.0006	0.0003	0
Chlorophyll-a (corrected)	ug/L	90	5.0	6.5	39.5	1.5	5.8
Copper	mg/L	31	0.0017	0.0018	0.0039	0.0009	0.0007
Dissolved Oxygen	mg/L	100	7.0	7.2	17.0	4.0	1.9
Fecal Coliform	CZu/100mL	3	100	100	100	100	0
Lead	mg/L	7	0.0028	0.0052	0.0229	0.0005	0.0078
Nitrogen, Ammonia	mg/L	97	0.015	0.034	0.500	0.002	0.067
Nitrogen, nitrate + nitrite	mg/L	86	0.011	0.034	0.200	0.003	0.048
Nitrogen, Total	mg/L	78	0.40	0.51	1.42	0.00	0.30
Nitrogen, Total Kjeldahl	mg/L	95	0.39	0.45	1.40	0.16	0.26
pH	None	101	8.0	8.0	8.6	7.0	0.2
Phosphorus, orthophosphate	mg/L	93	0.008	0.013	0.067	0.001	0.013
Phosphorus, Total	mg/L	84	0.037	0.041	0.170	0.018	0.024
Salinity	ppth	70	29.03	29.73	37.20	14.40	5.91
Specific Conductivity	umho/cm	102	43466.15	47642	385822	3532	35258
Temperature	deg C	102	25.1	25.5	33.3	11.7	4.4
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	69	6.2	7.9	28.0	1.5	6.2
Turbidity	NTU	92	3.0	3.4	12.0	0.7	1.9
Zinc	mg/L	6	0.0041	0.0042	0.0050	0.0034	0.0009

Start =
End =
Samples = Total number of times samples were taken at a Site (may differ from the number of times a particular parameter was sampled)
Count =
Exceedances =

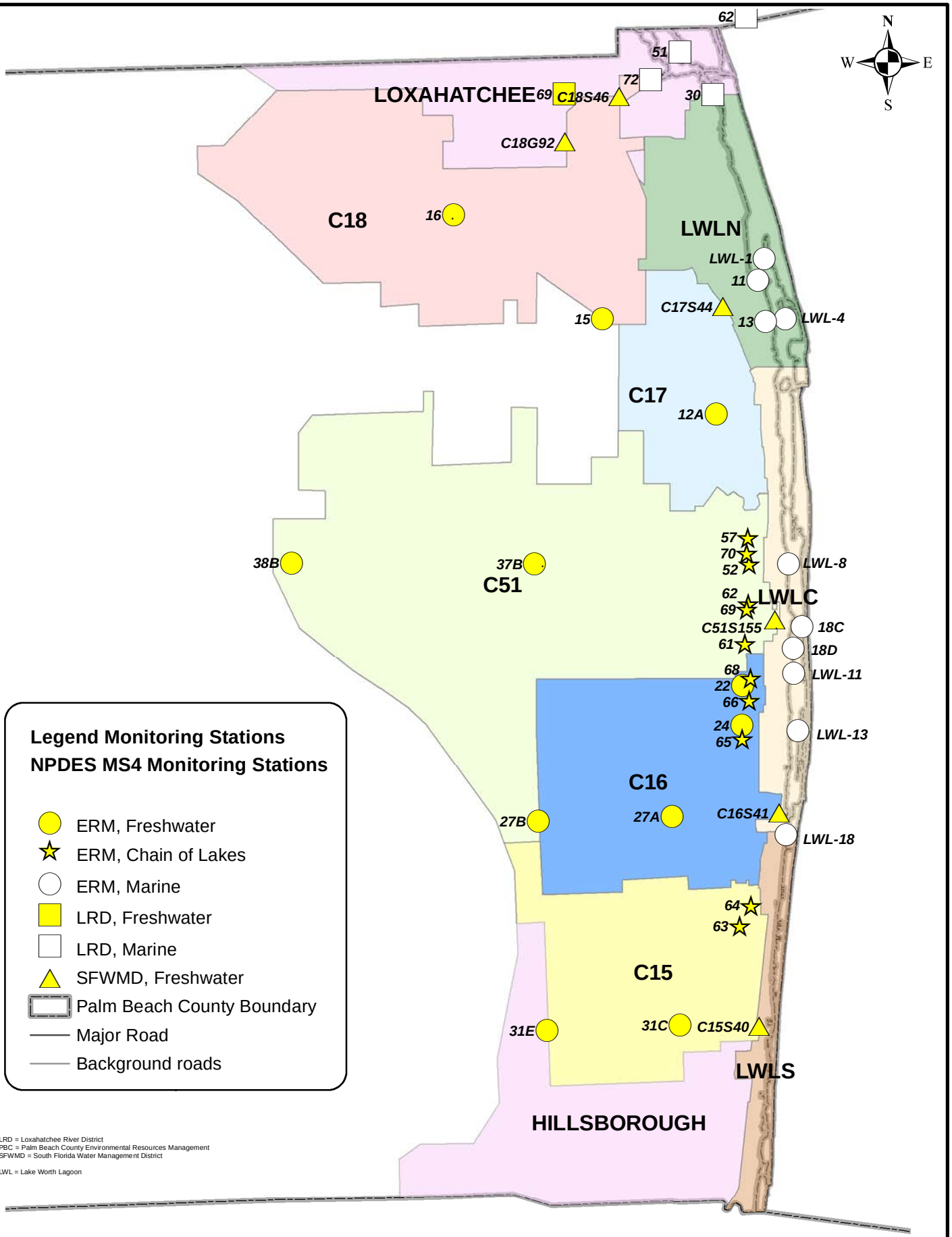
Table 5-6

Monitoring Data Summary - Lake Worth Lagoon South Watershed
January 1999 - September 2014

LWL-18		05/11/00 - 08/06/14			Samples 109		
		Count	Geometric Mean	Mean	Max	Min	Standard Deviation
Alkalinity	mg/L	0	None	None	None	None	None
Arsenic	mg/L	7	0.0033	0.0033	0.0087	0.0023	0.0024
Cadmium	mg/L	15	0.0020	0.0020	0.0050	0.0002	0.0022
Chlorophyll-a (corrected)	ug/L	92	8.4	8.4	58.1	1.8	9.5
Copper	mg/L	37	0.0053	0.0053	0.0500	0.0017	0.0080
Dissolved Oxygen	mg/L	107	6.6	6.6	15.4	0.8	1.9
Fecal Coliform	cfu/100mL	8	40	40	180	4	59
Lead	mg/L	14	0.0056	0.0056	0.0250	0.0008	0.0070
Nitrogen, Ammonia	mg/L	101	0.038	0.038	0.410	0.003	0.052
Nitrogen, nitrate + nitrite	mg/L	93	0.038	0.038	0.210	-0.005	0.046
Nitrogen, Total	mg/L	84	0.55	0.55	1.51	0.00	0.30
Nitrogen, Total Kjeldahl	mg/L	101	0.88	0.88	39.00	0.07	3.84
pH	None	108	7.8	7.8	8.5	6.5	0.2
Phosphorus, orthophosphate	mg/L	99	0.026	0.026	0.160	0.001	0.028
Phosphorus, Total	mg/L	93	0.054	0.054	0.230	0.013	0.037
Salinity	ppth	70	28.30	28.30	36.70	9.37	6.95
Specific Conductivity	umho/cm	109	42673.31	42673	64472	3790	10753
Temperature	deg C	108	26.2	26.2	33.6	16.3	4.0
Total Hardness	mg/L	0	None	None	None	None	None
Total Suspended Solids	mg/L	77	11.6	11.6	56.0	1.5	9.9
Turbidity	NTU	98	4.2	4.2	17.0	0.7	2.3
Zinc	mg/L	14	0.0204	0.0204	0.1160	0.0019	0.0297

TABLE 5-7
Summary of Geometric Mean Values
January 1999 - September 2014

Watershed	Site	Total Nitrogen mg/L	Total Phosphorus mg/L	Chlorophyll-a ug/L
C-15	31E	1.65	0.260	24.4
	31C	1.34	0.129	17.9
	64	1.06	0.071	25.9
	63	1.05	0.078	27.8
	C15S40	1.03	0.115	11.7
C-16	22	1.06	0.062	12.1
	24	1.02	0.064	13.1
	27B	1.53	0.162	15.1
	27A	1.24	0.139	16.5
	68	1.05	0.07	23.3
	66	1.07	0.07	21.3
	65	1.05	0.06	14.8
	C16S41	1.04	0.074	8.2
C-17	12A	1.61	0.051	13.9
	C17S44	0.83	0.041	9.2
C-18	16	1.02	0.037	4.1
	15	0.98	0.020	2.4
C-51 W	38B	1.74	0.098	6.6
C-51 E	37B	1.28	0.073	4.5
	57	0.89	0.08	18.0
	70	0.91	0.06	26.1
	52	1.01	0.06	23.0
	62	1.08	0.06	17.2
	69	1.03	0.06	16.7
	61	1.11	0.07	15.4
	C51S155	1.15	0.062	1.7
Loxahatchee River	69	1.04	0.037	3.2
	62	0.86	0.045	5.5
	51	0.38	0.026	4.2
	72	0.59	0.036	8.8
	30	0.59	0.027	4.1
	C18G92	0.80	0.021	3.3
	C18S46	0.76	0.021	3.6
Lake Worth Lagoon North	LWL-1	0.37	0.034	5.4
	11	0.52	0.036	3.2
	13	0.58	0.042	4.1
	LWL-4	0.29	0.024	2.5
Lake Worth Lagoon Central Watershed	LWL-8	0.51	0.047	4.7
	18C	0.93	0.064	5.3
	18D	0.73	0.065	5.5
	LWL-11	0.47	0.048	6.1
	LWL-13	0.40	0.037	5.0
Lagoon South	LWL-18	0.55	0.054	8.4



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P.A. No.: A6046.06

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Palm Beach County MS4 Watershed Boundaries and Water Quality Monitoring Stations

Figure 5-1

Figure 5-2
Total Nitrogen
C-15 Watershed

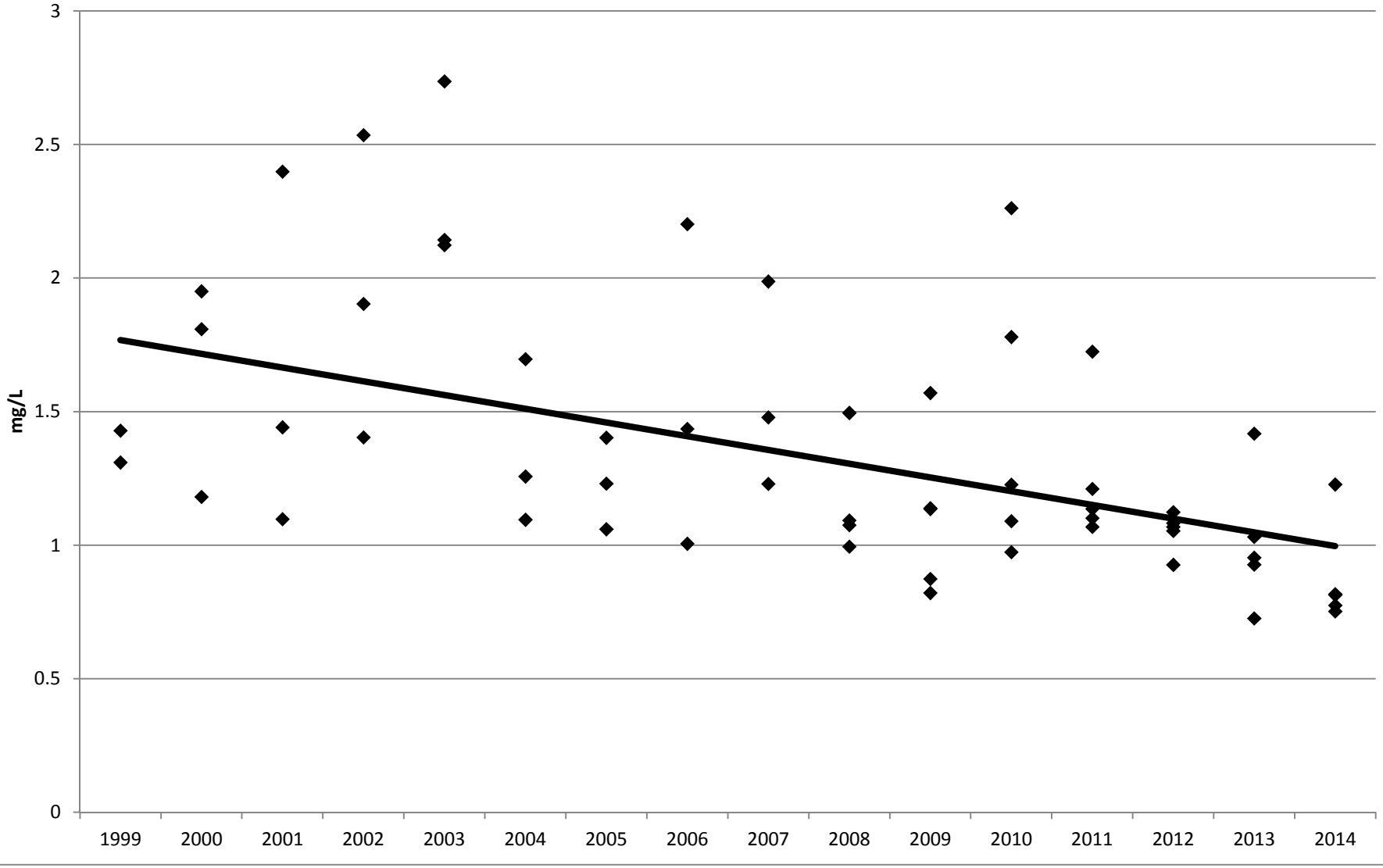

Figure 5-2
Total Nitrogen
C-16 Watershed

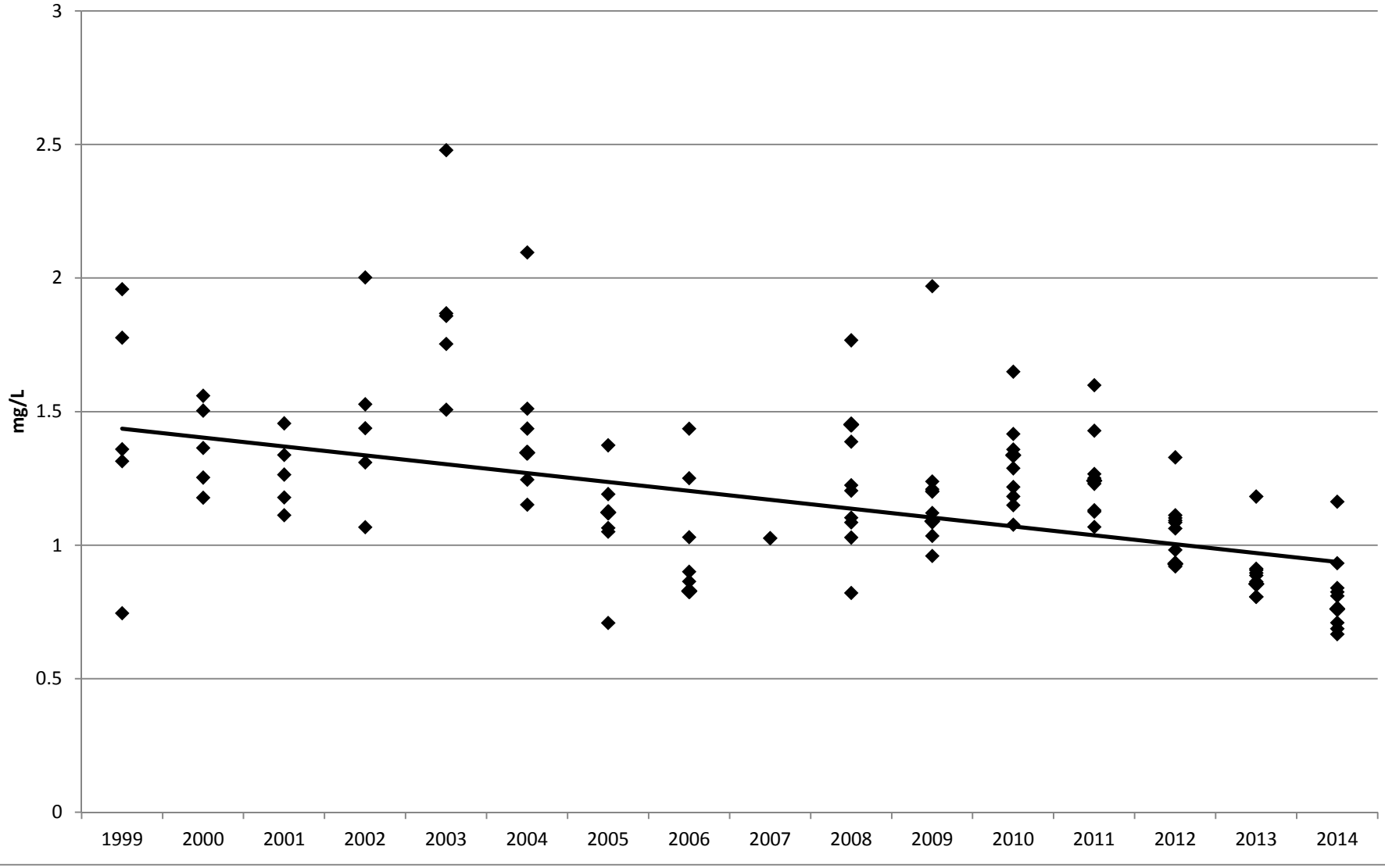

Figure 5-2
Total Nitrogen
C-17 Watershed

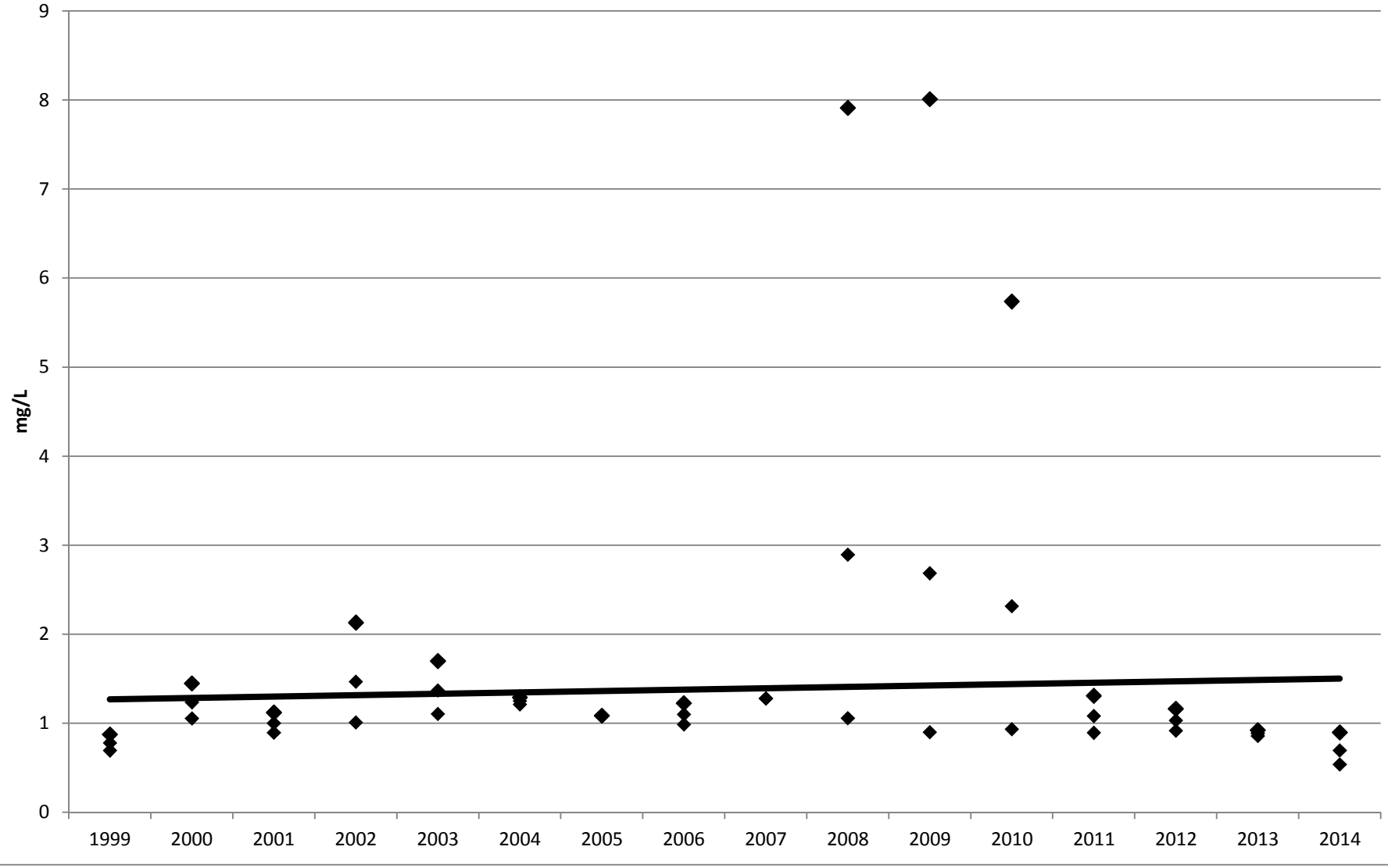

Figure 5-2
Total Nitrogen
C-18 Watershed

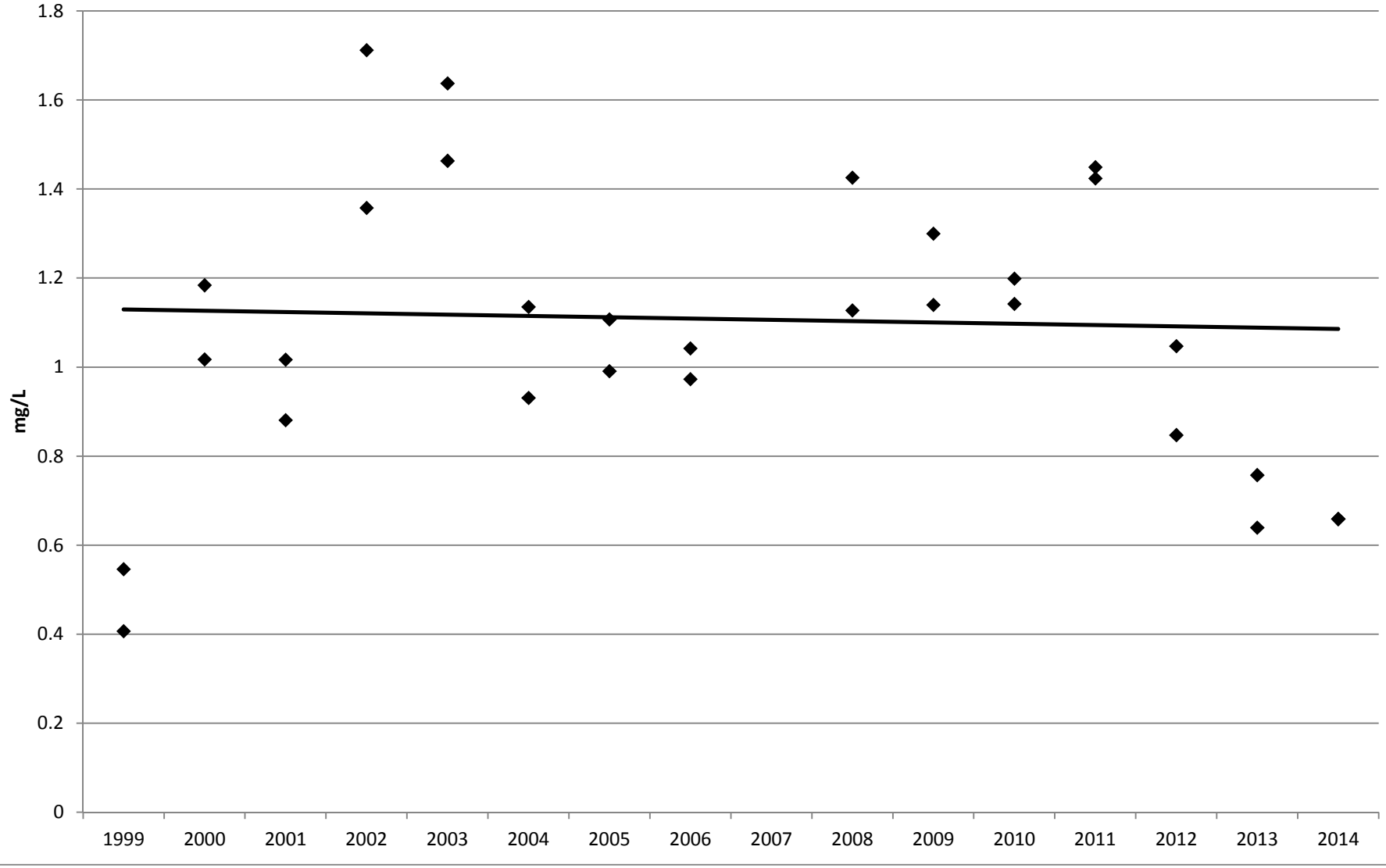

Figure 5-2
Total Nitrogen
C-51 W Watershed

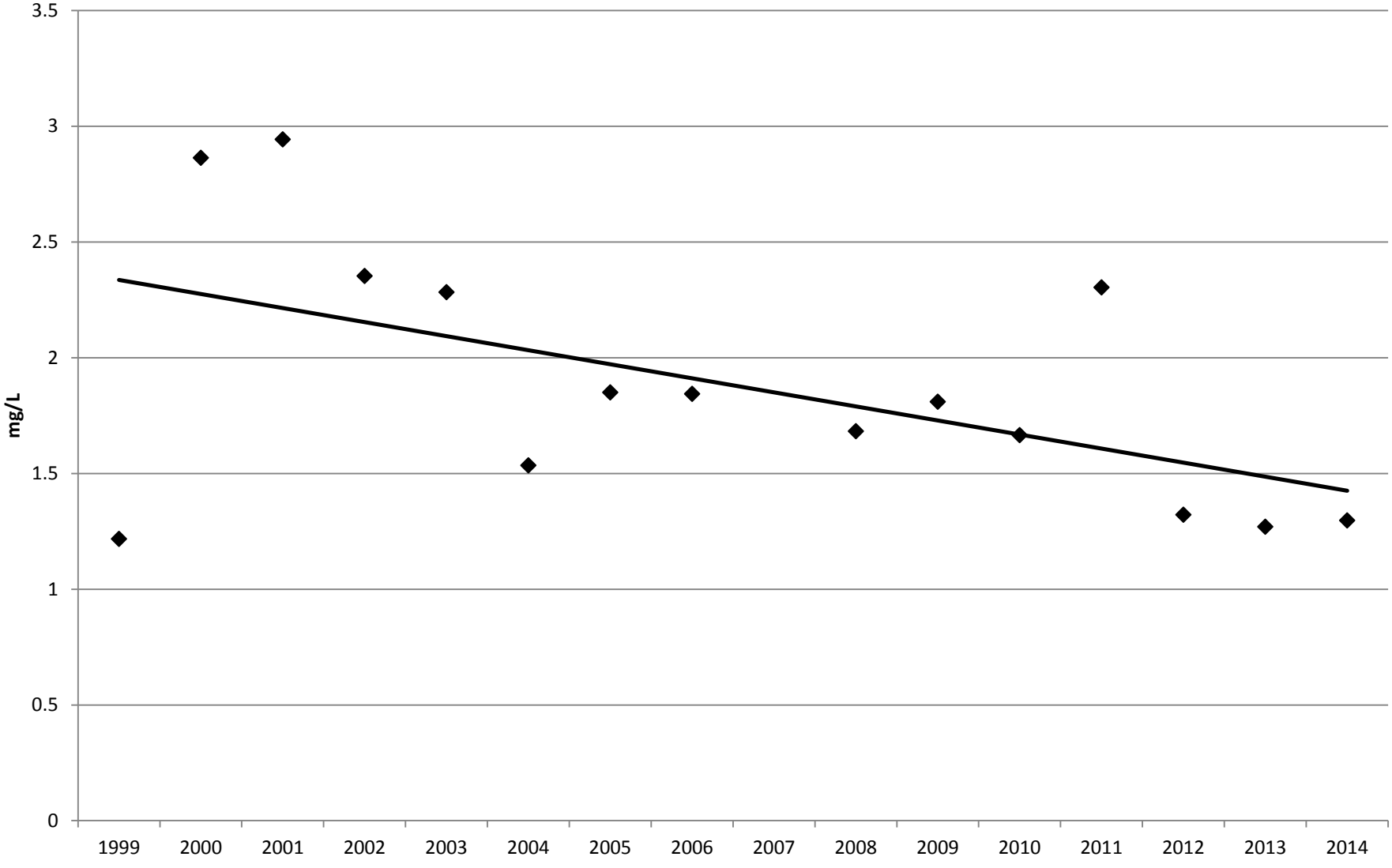

Figure 5-2
Total Nitrogen
C-51 E Watershed

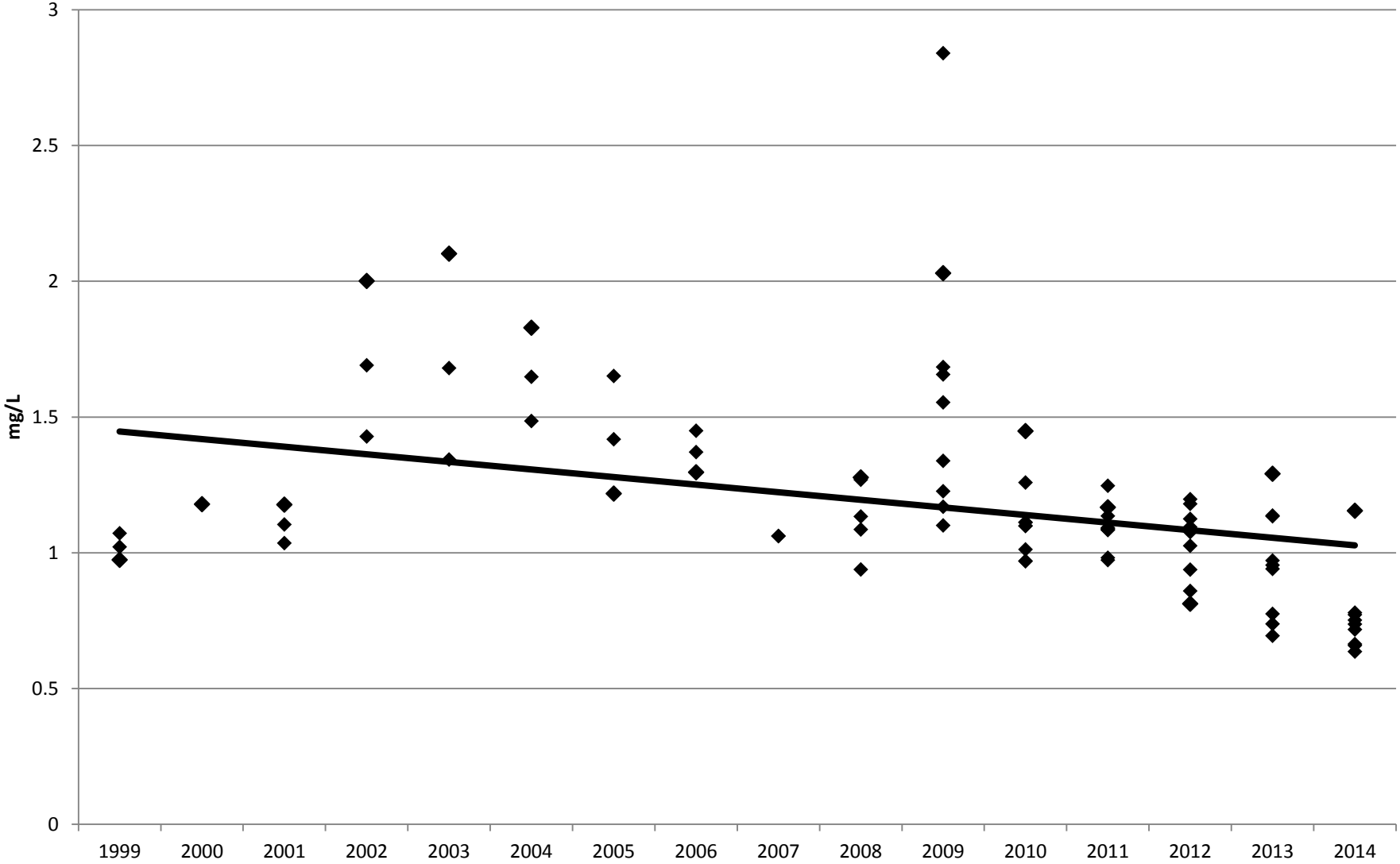

Figure 5-2
Total Nitrogen
Loxahatchee

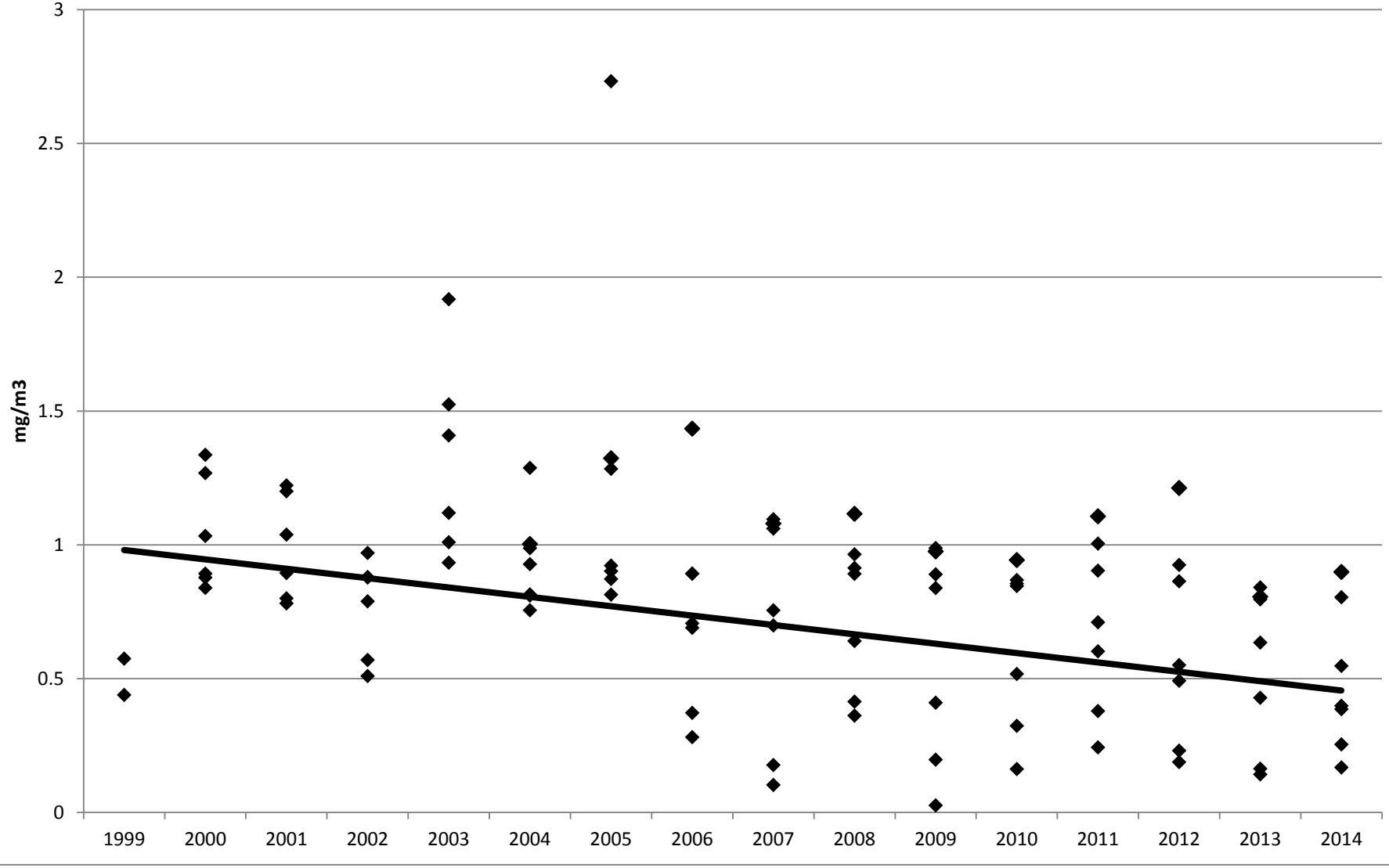

Figure 5-2
Total Nitrogen
Lake Worth Lagoon-N

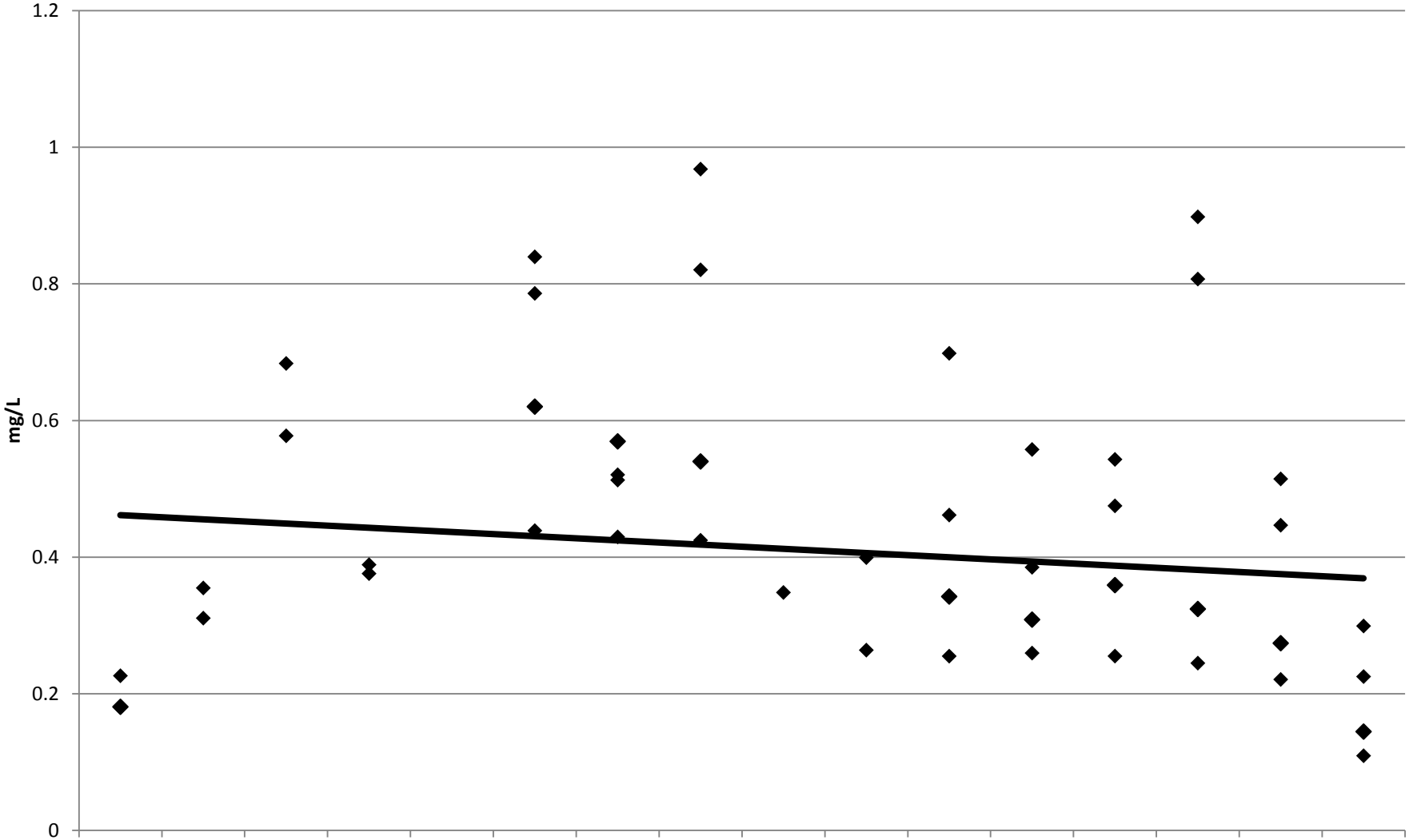

Figure 5-2
Total Nitrogen
Lake Worth Lagoon-C

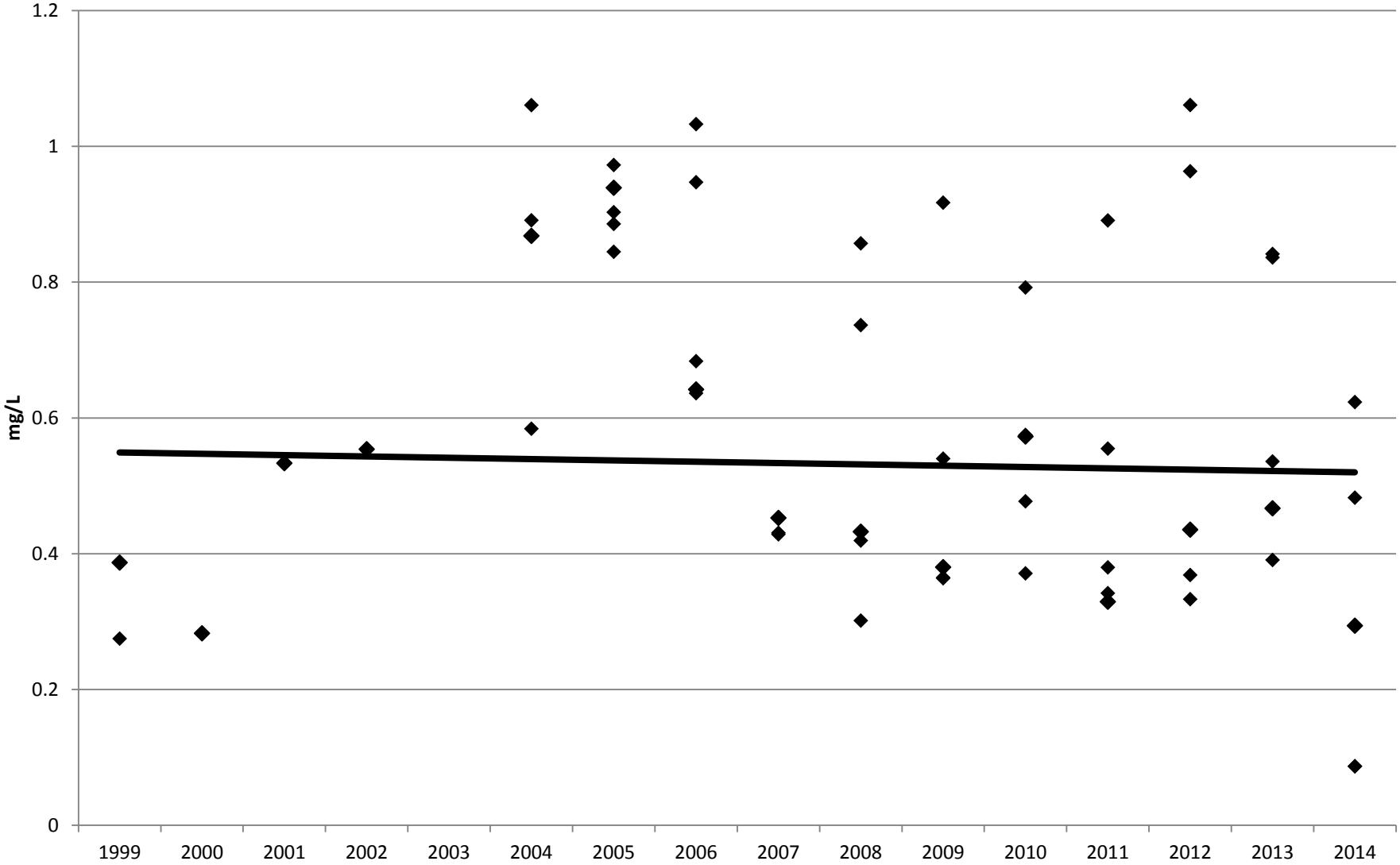

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Figure 5-2
Total Nitrogen
Lake Worth Lagoon-S

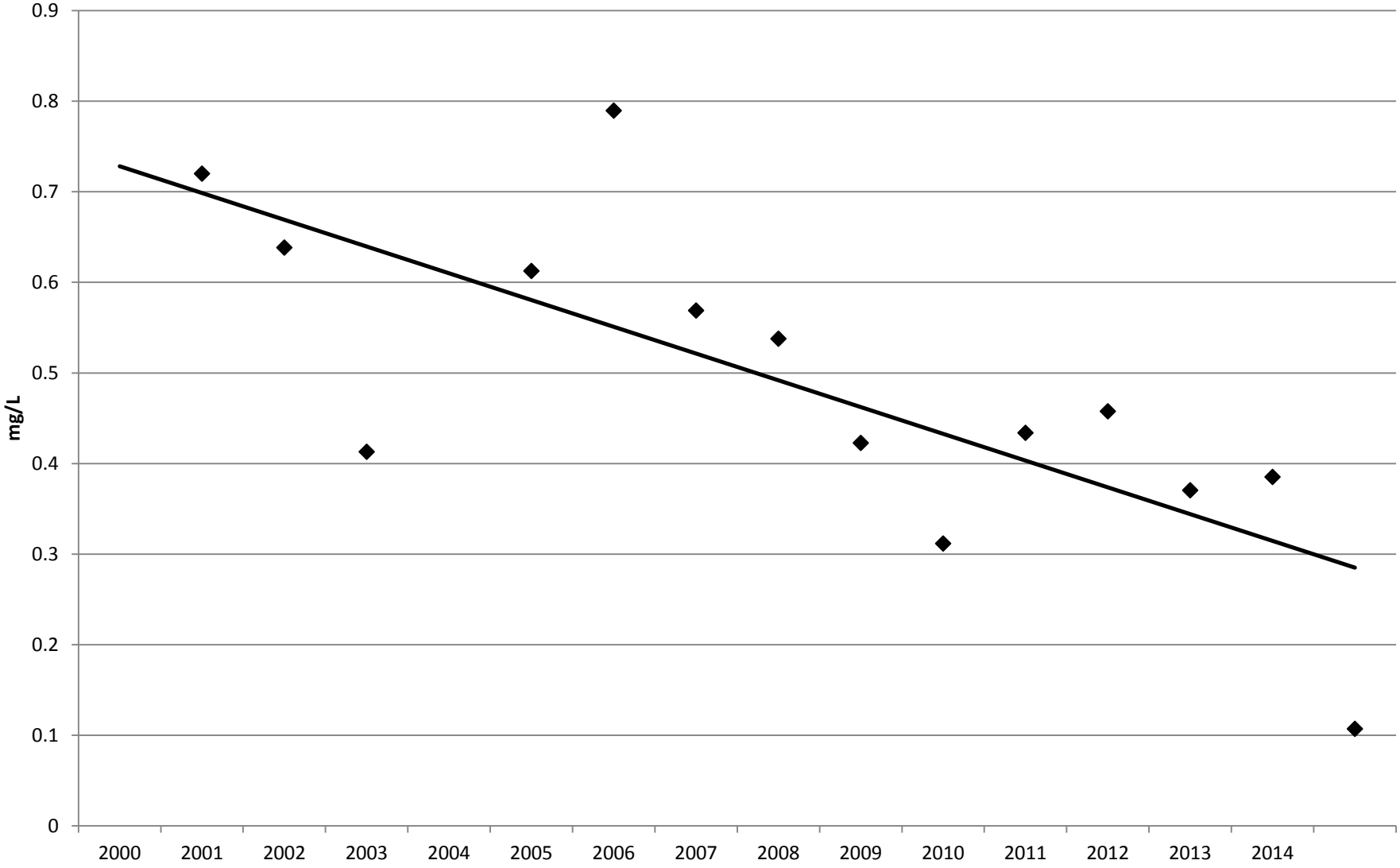

Figure 5-3
Total Phosphorus
C-15 Watershed

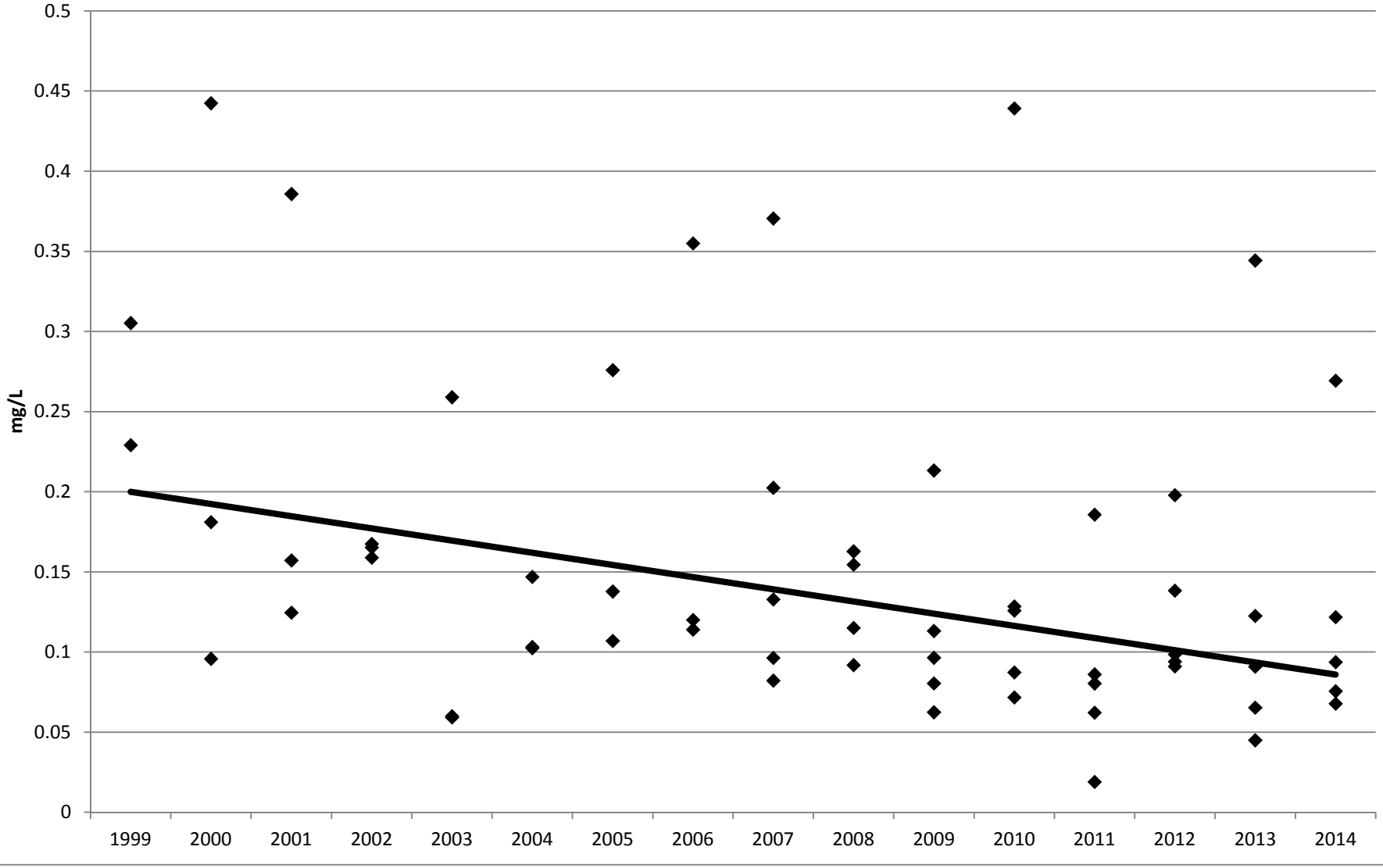

Figure 5-3
Total Phosphorous
C-16 Watershed

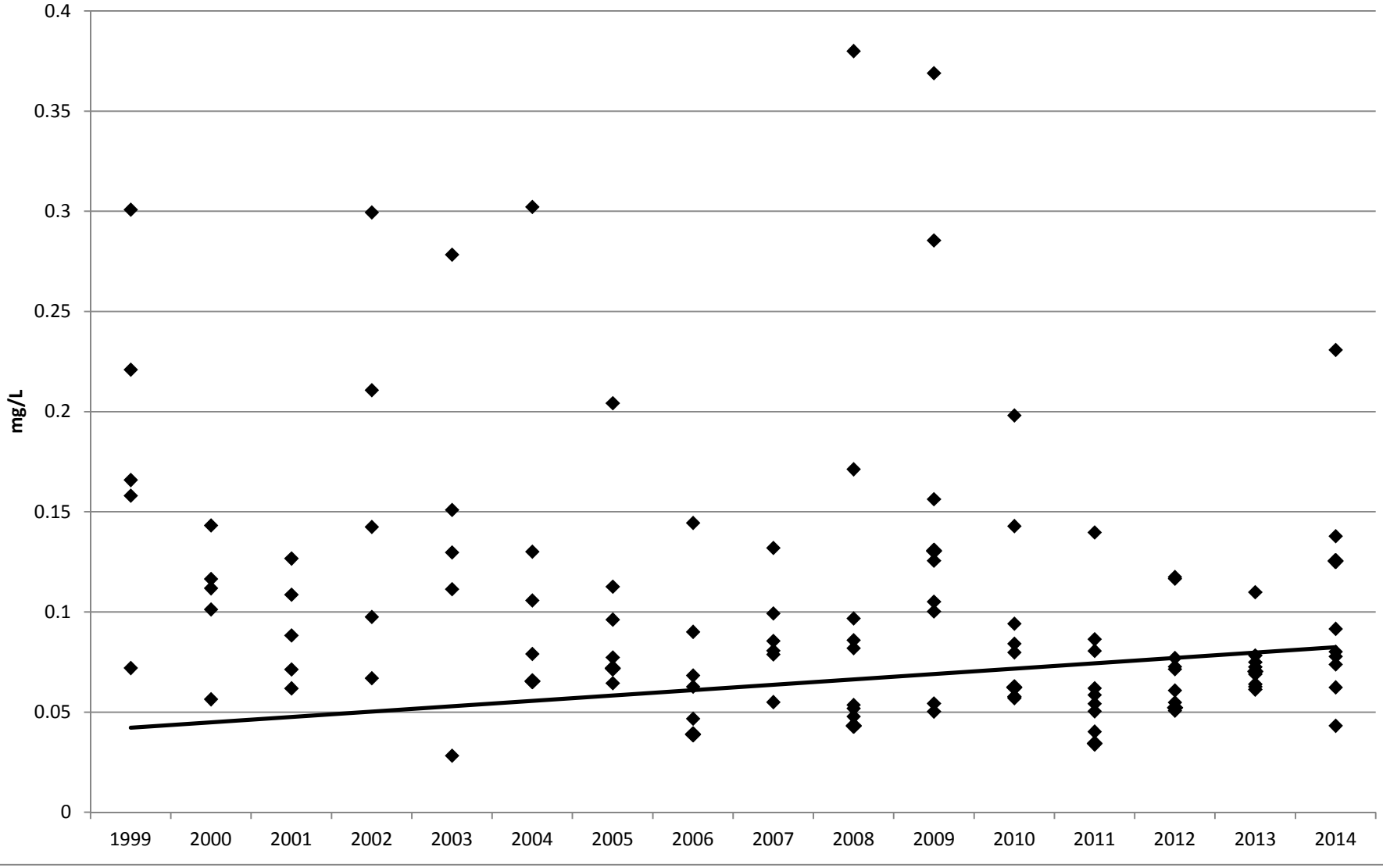

Figure 5-3
Total Phosphorus
C-17 Watershed

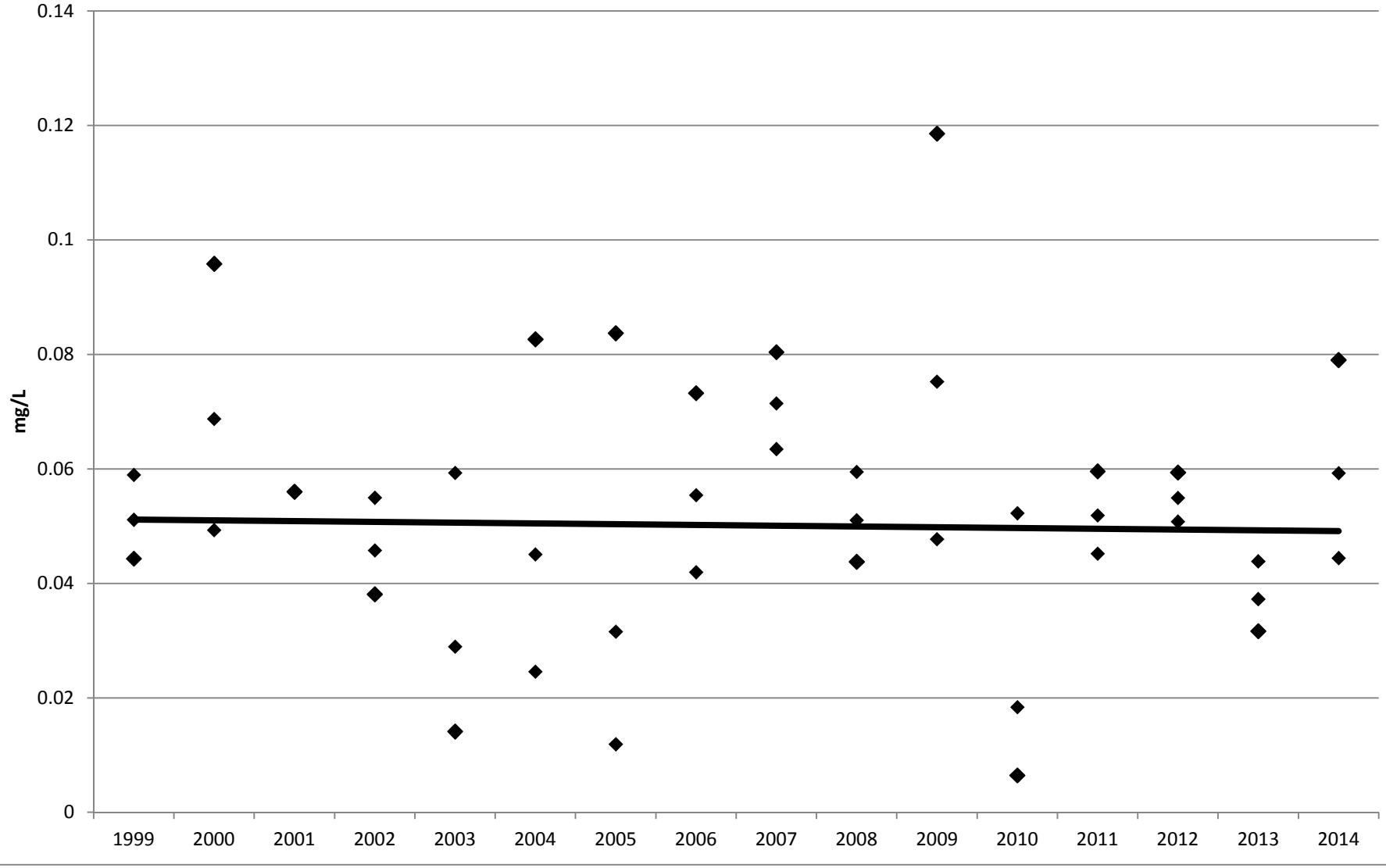

Figure 5-3
Total Phosphorus
C-18 Watershed

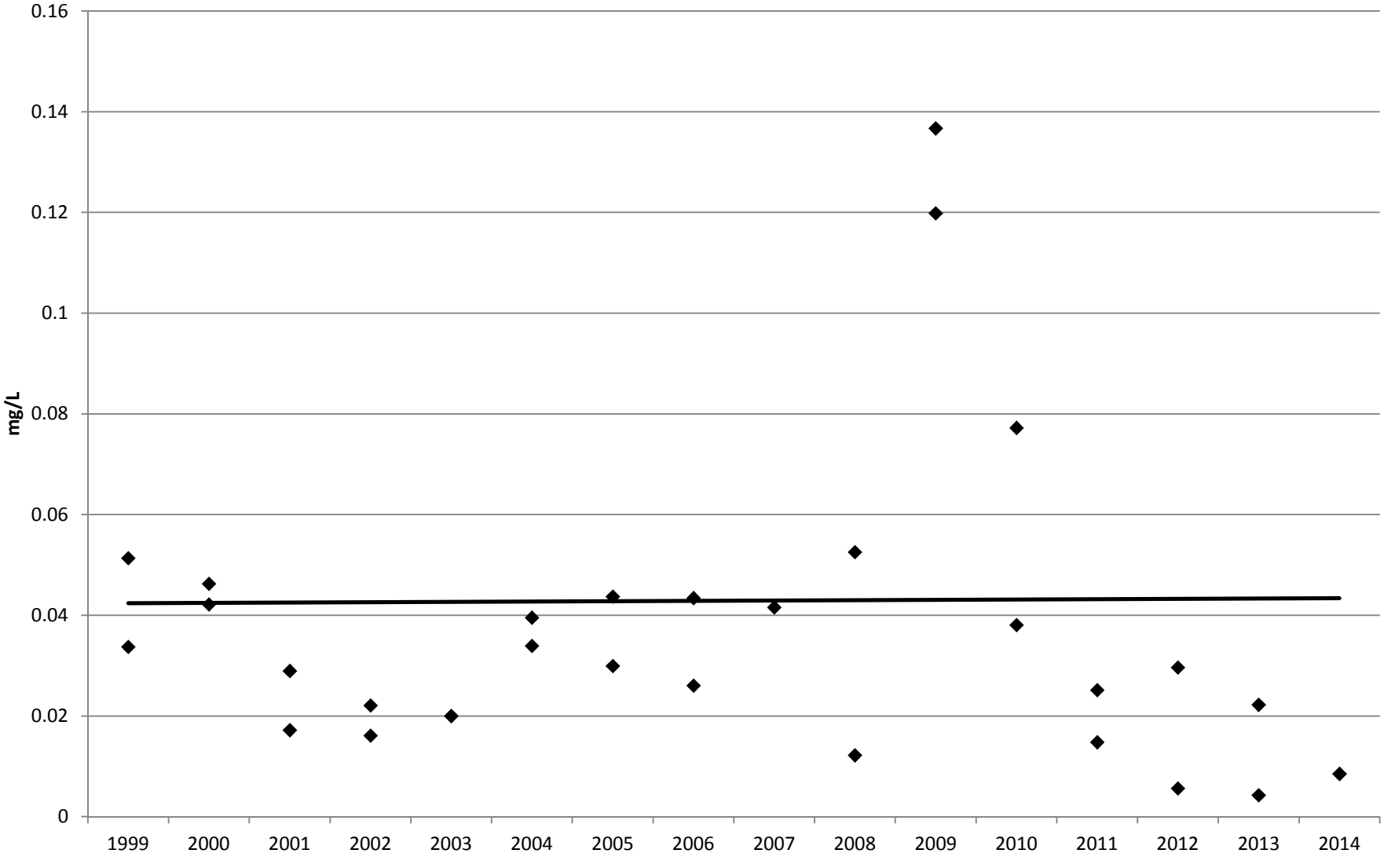

Figure 5-3
Total Phosphorus
C-51 W Watershed

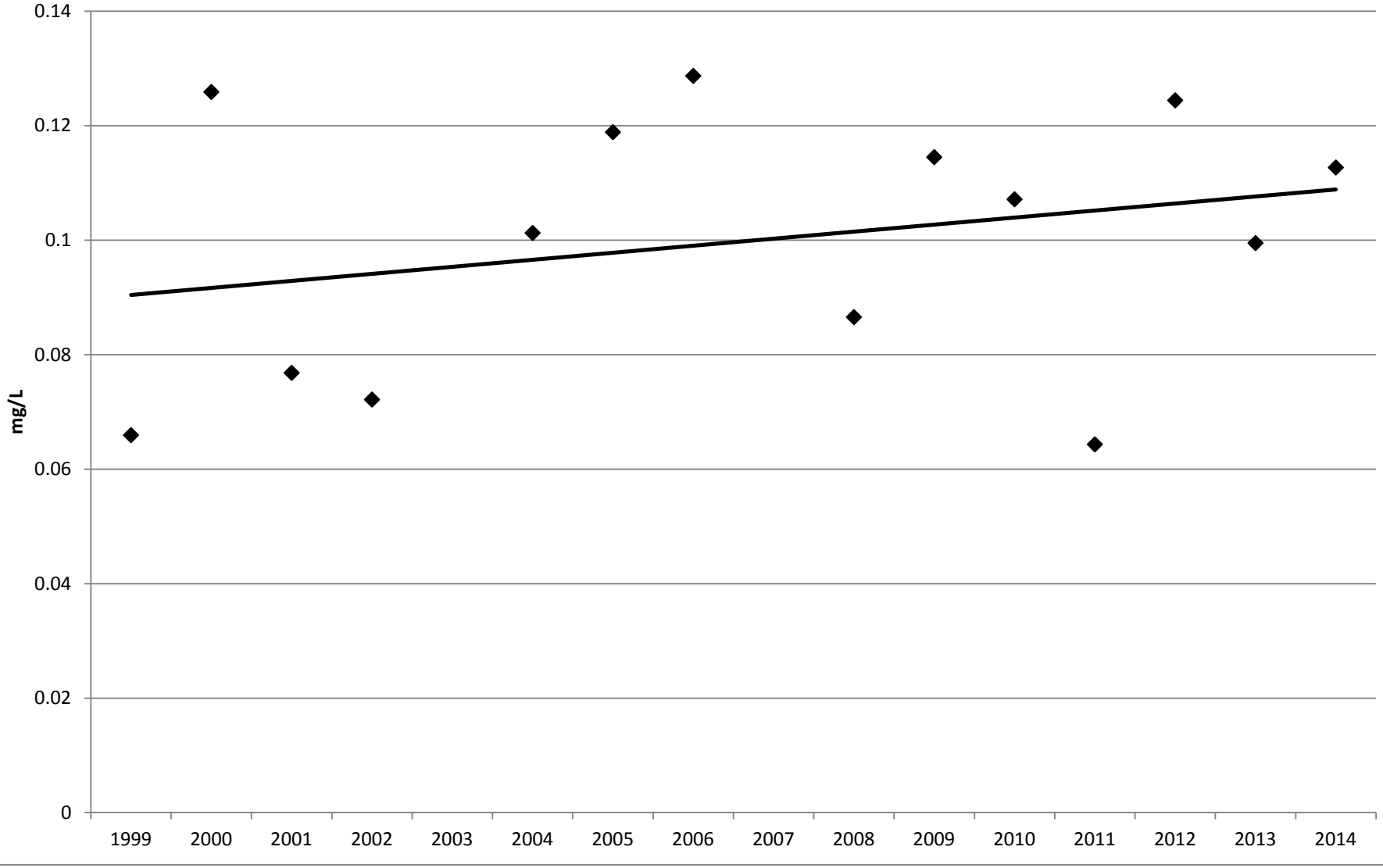

Figure 5-3
Total Phosphorus
C-51 E Watershed

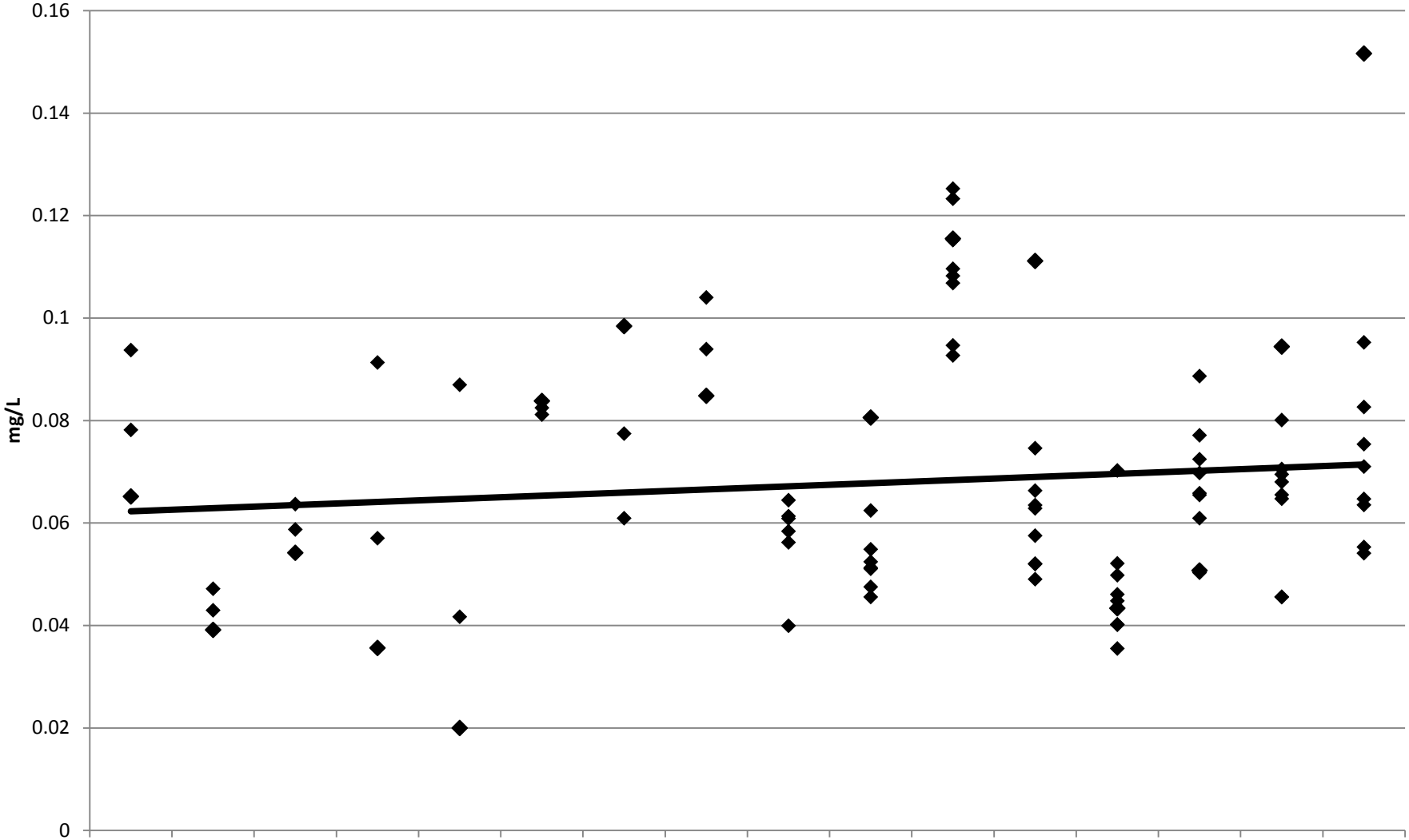

Figure 5-3
Total Phosphorus
Loxahatchee

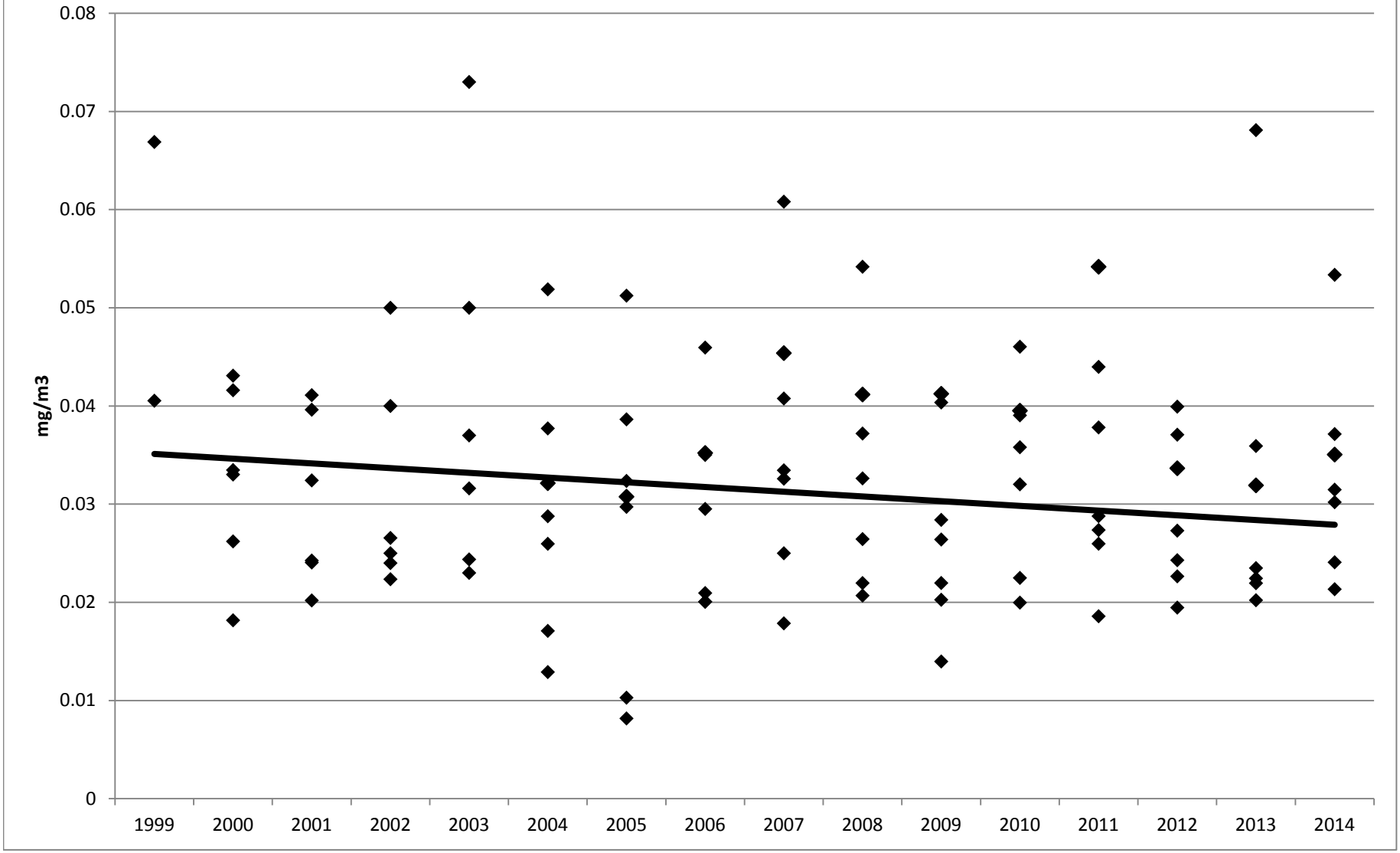

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-N

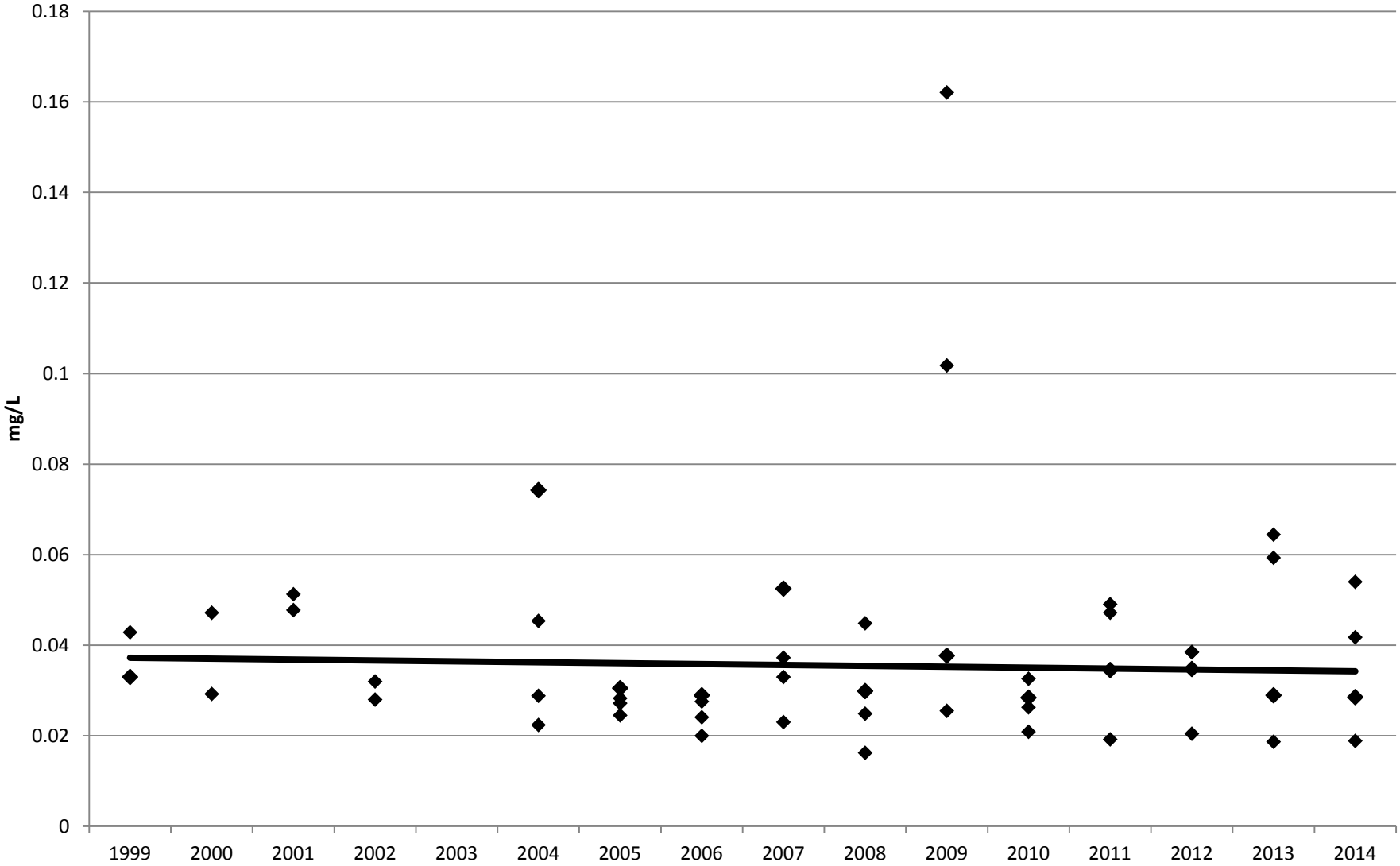

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-C

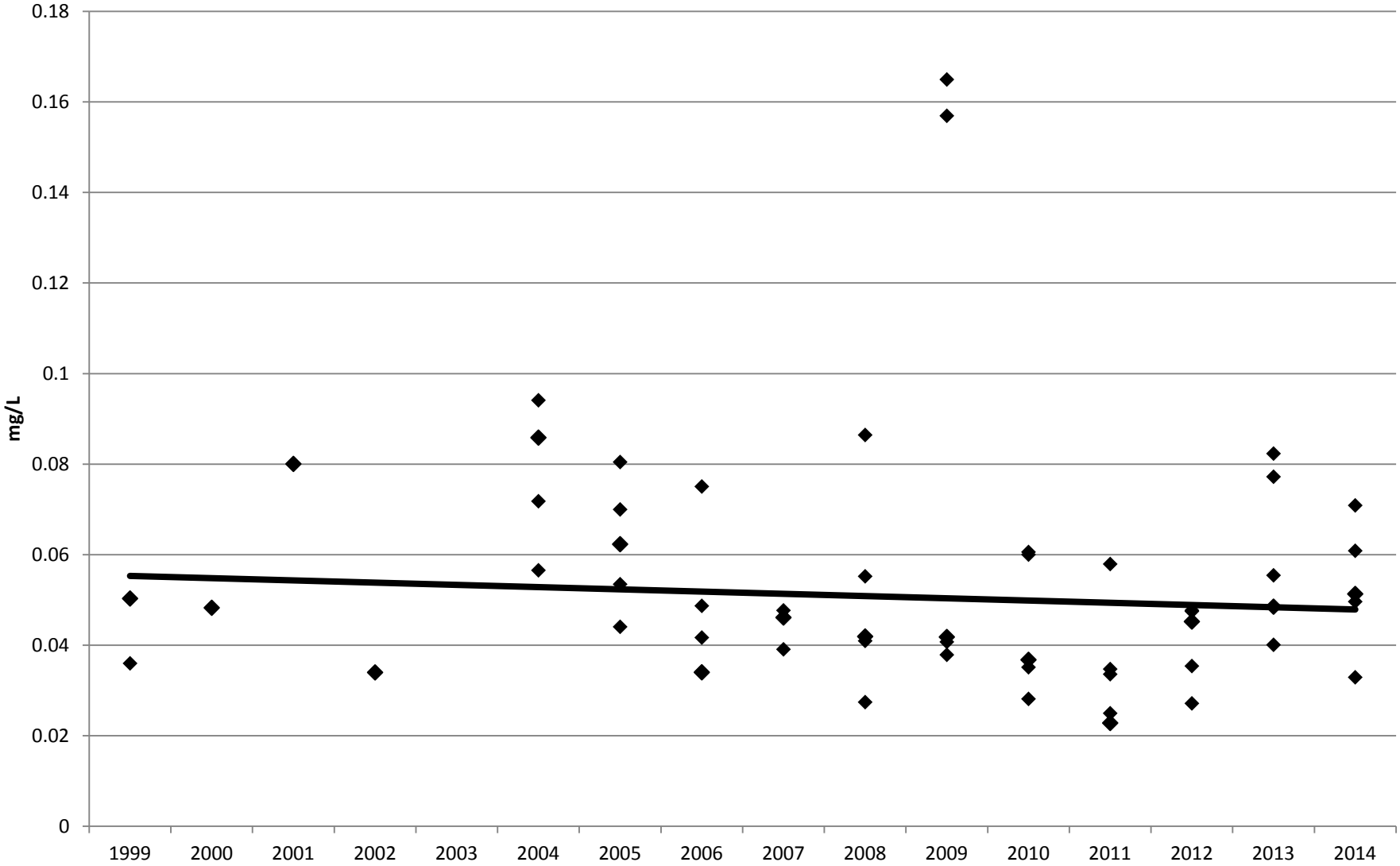

Figure 5-3
Total Phosphorus
Lake Worth Lagoon-S

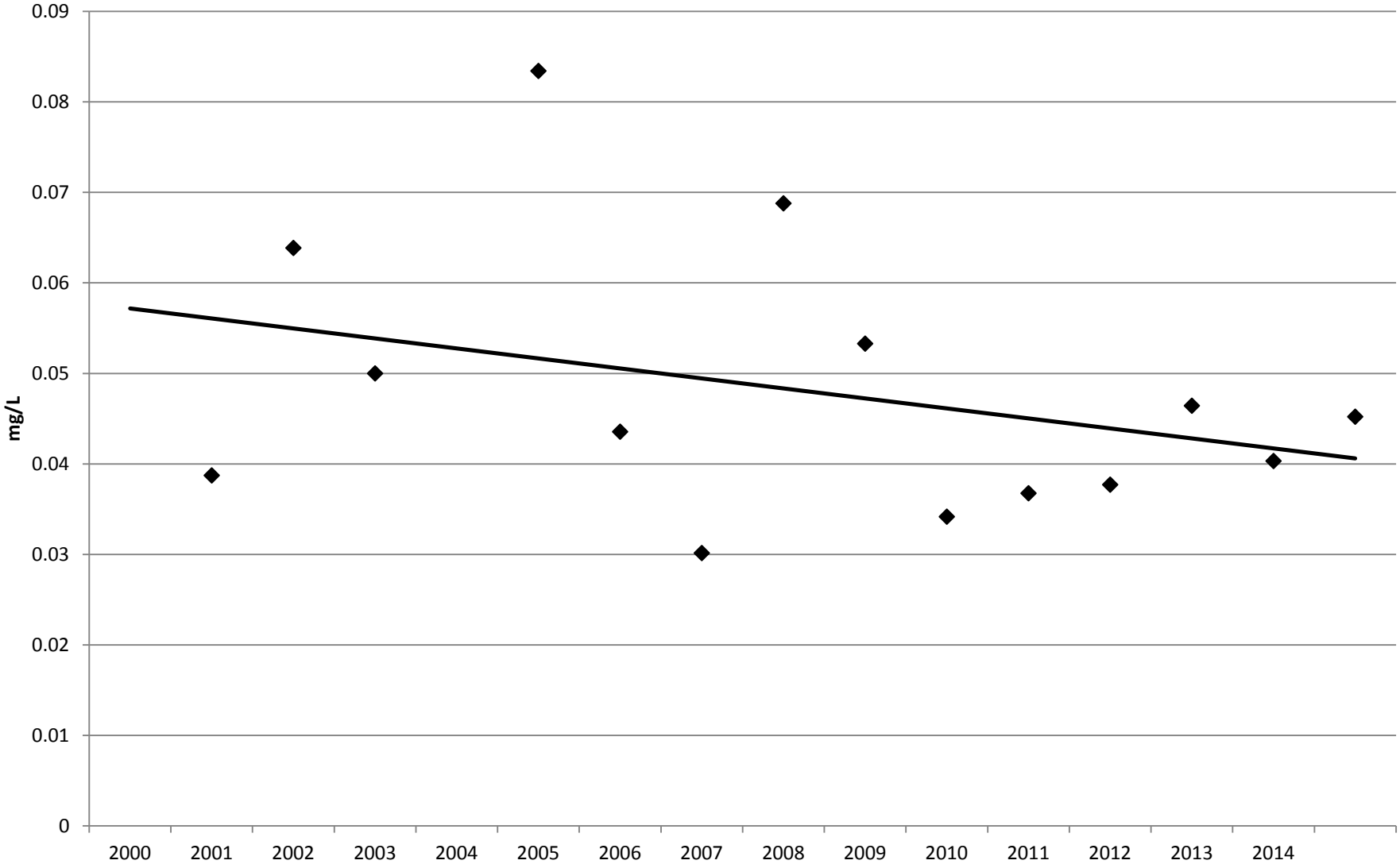

Figure 5-4
Chlorophyll-A
C-15 Watershed

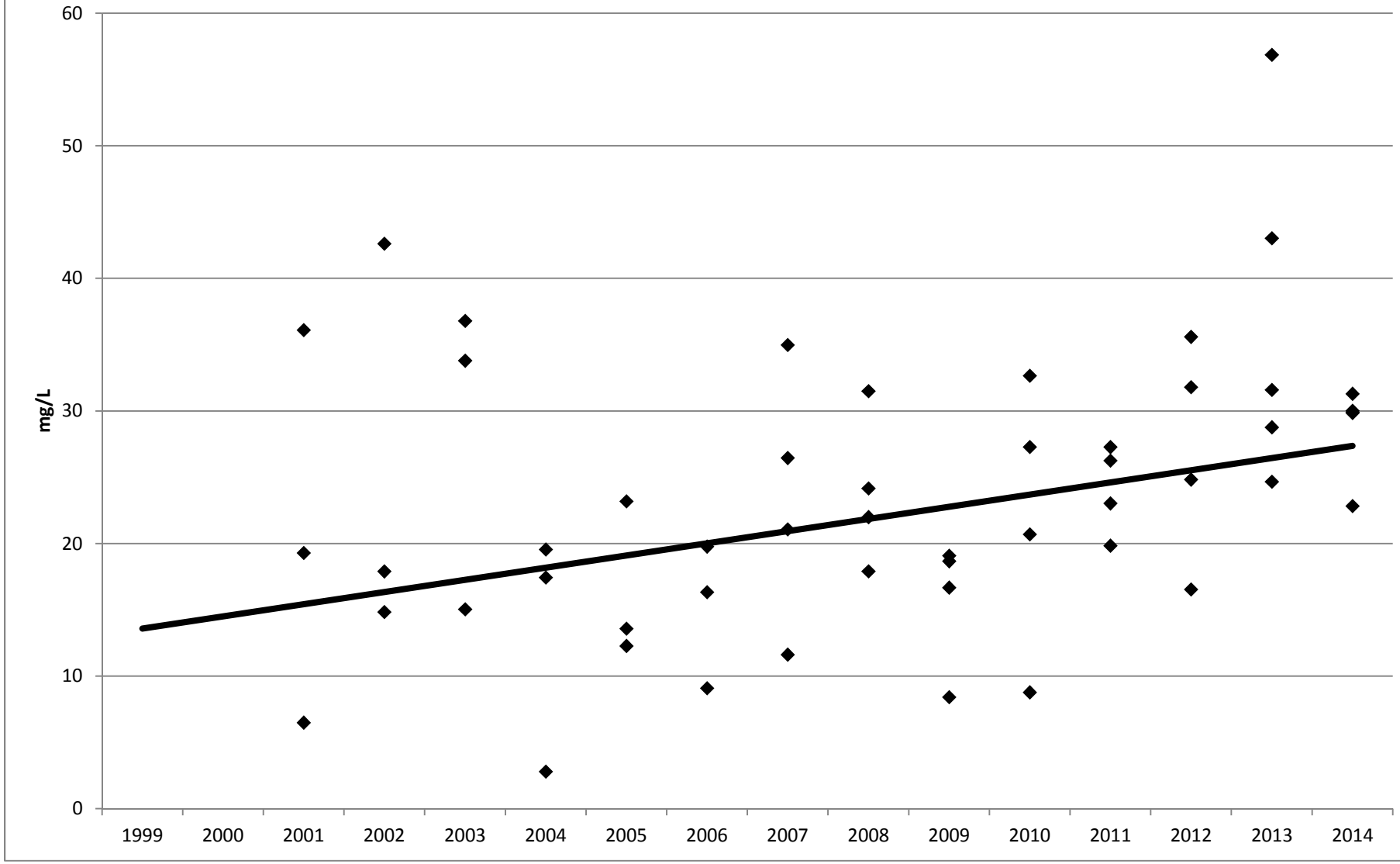

Figure 5-4
Chlorophyll-A
C-16 Watershed

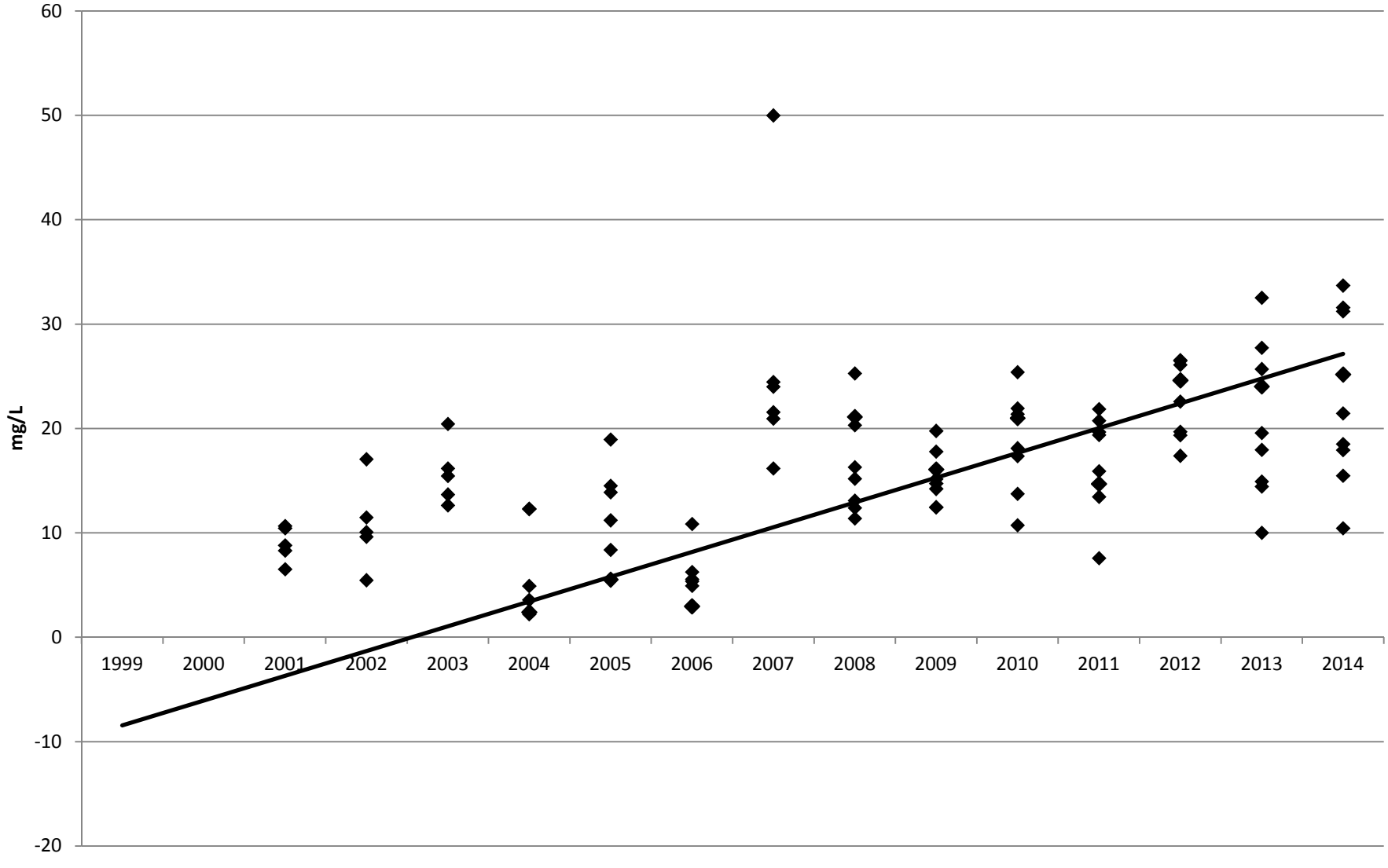

Figure 5-4
Chlorophyll-A
C-17 Watershed

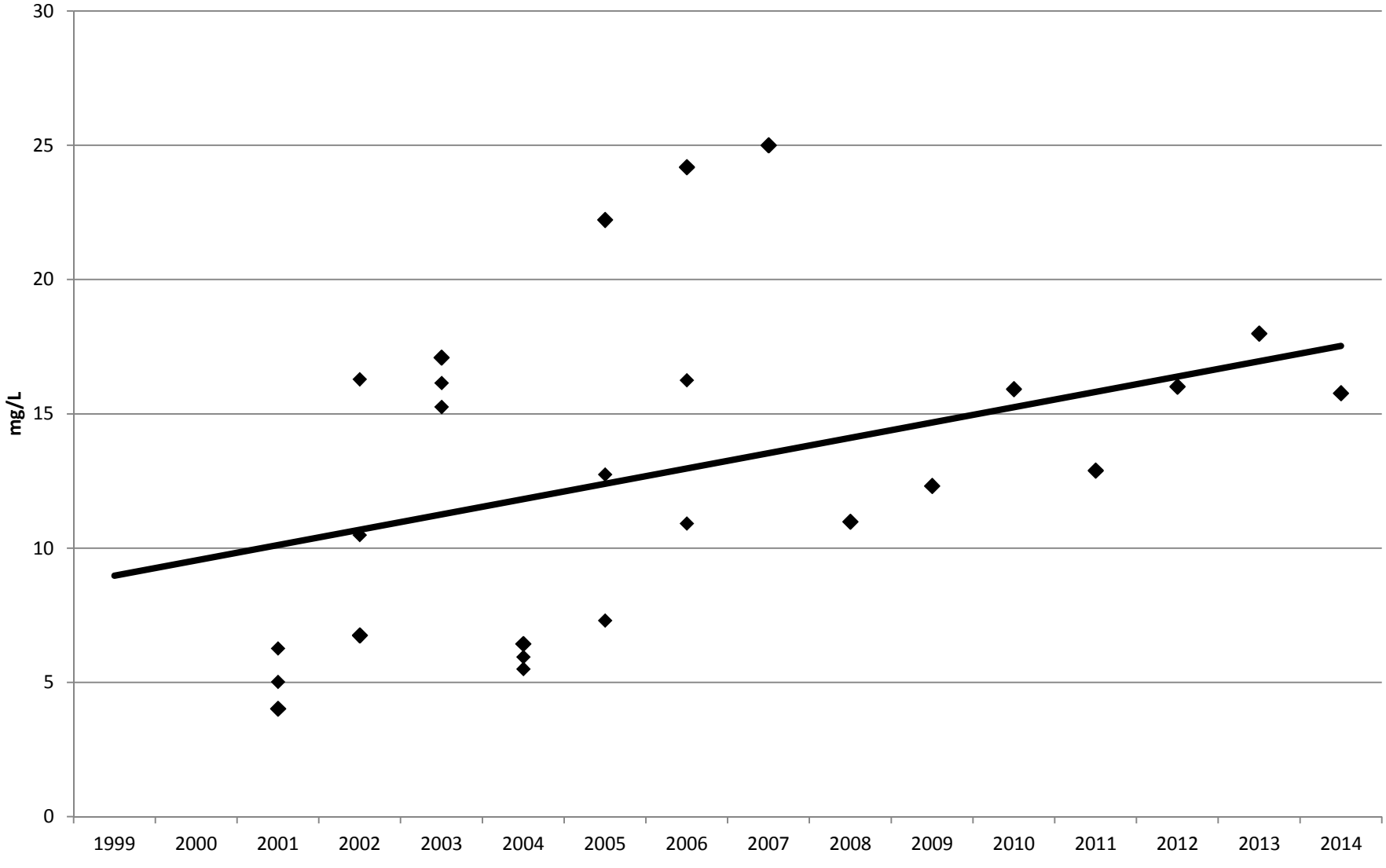

Figure 5-4
Chlorophyll-A
C-18 Watershed

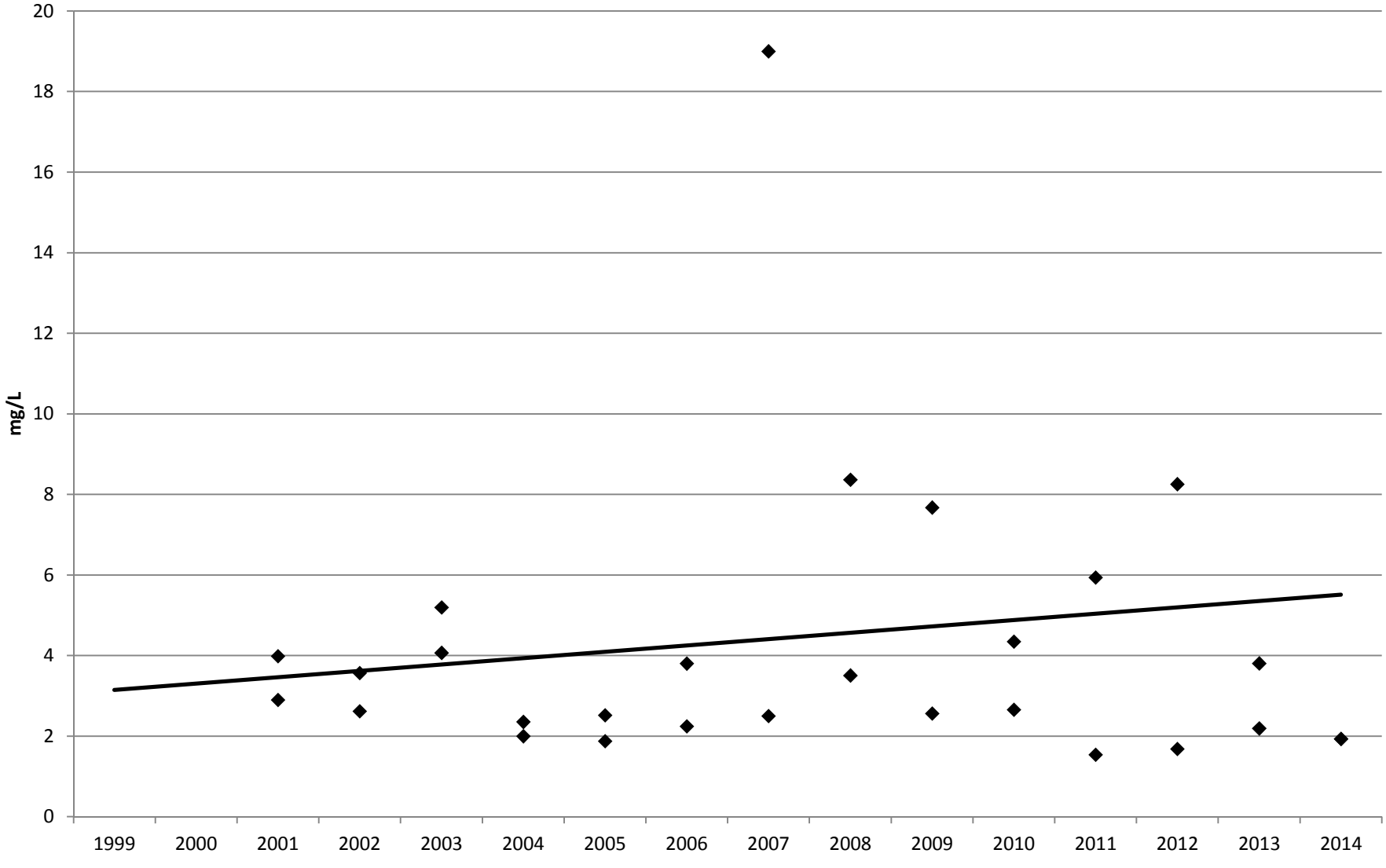

Figure 5-4
Chlorophyll-A
C-51 W Watershed

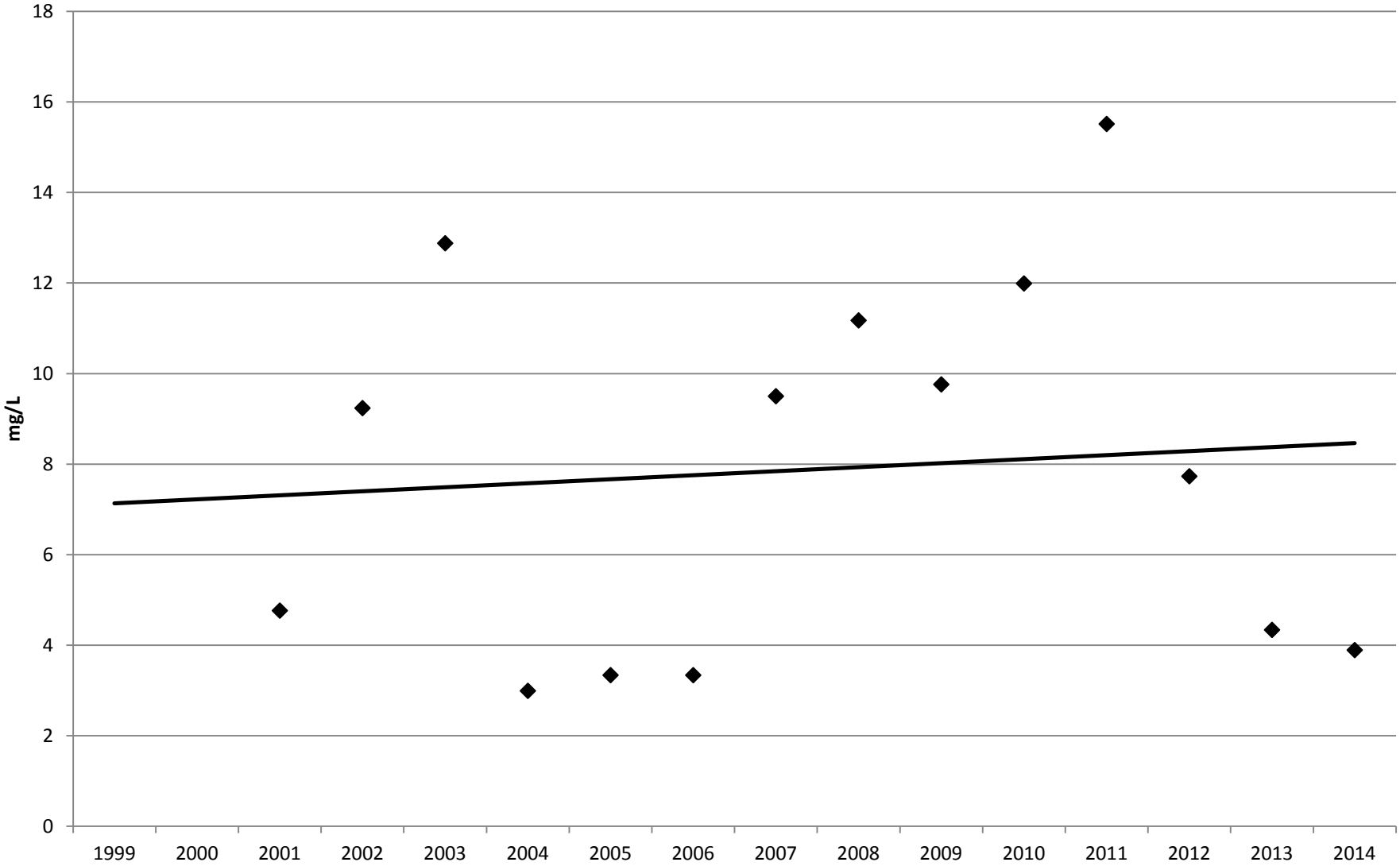

Figure 5-4
Chlorophyll-A
C-51 E Watershed

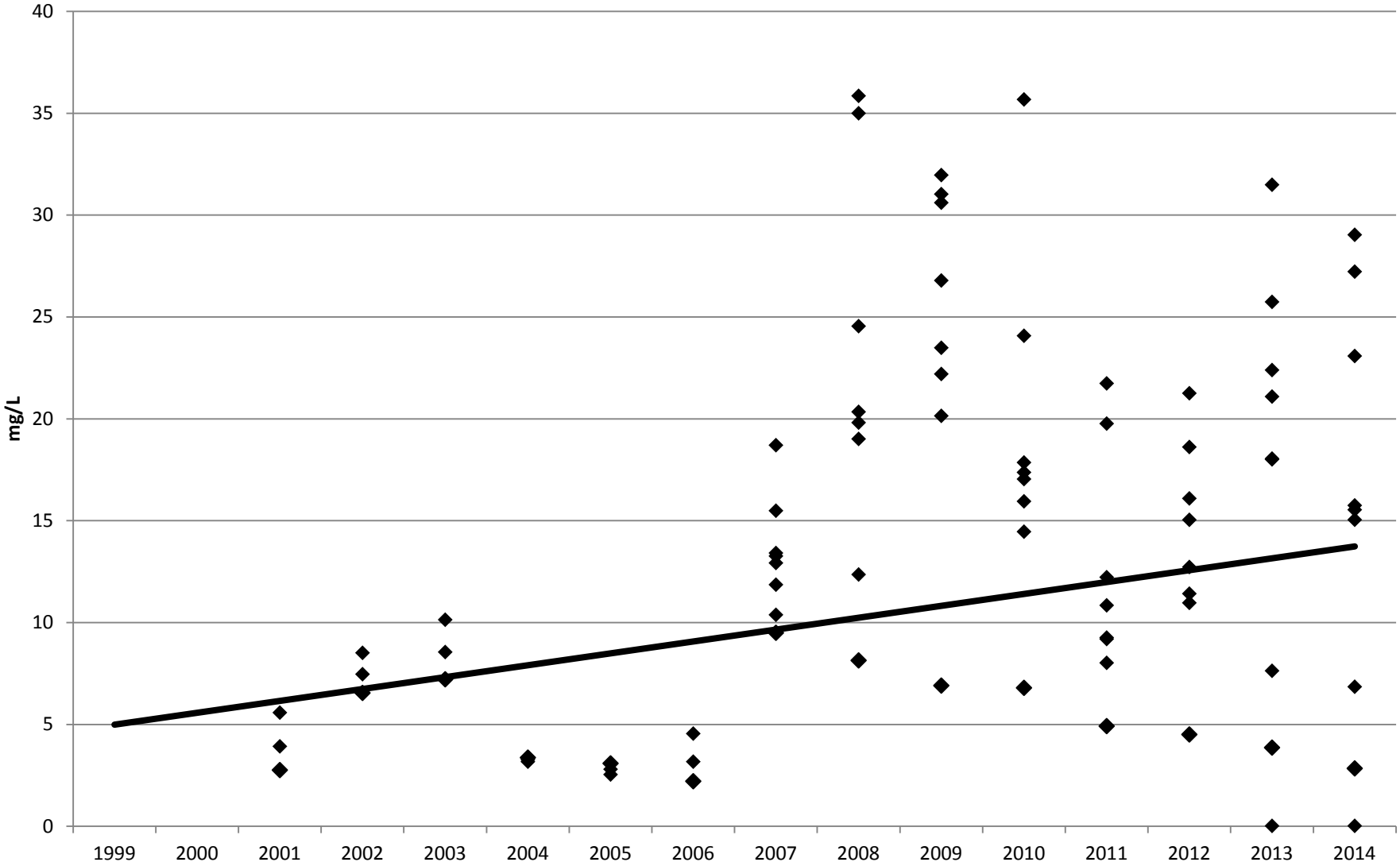

Figure 5-4
Chlorophyll-A
Loxahatchee

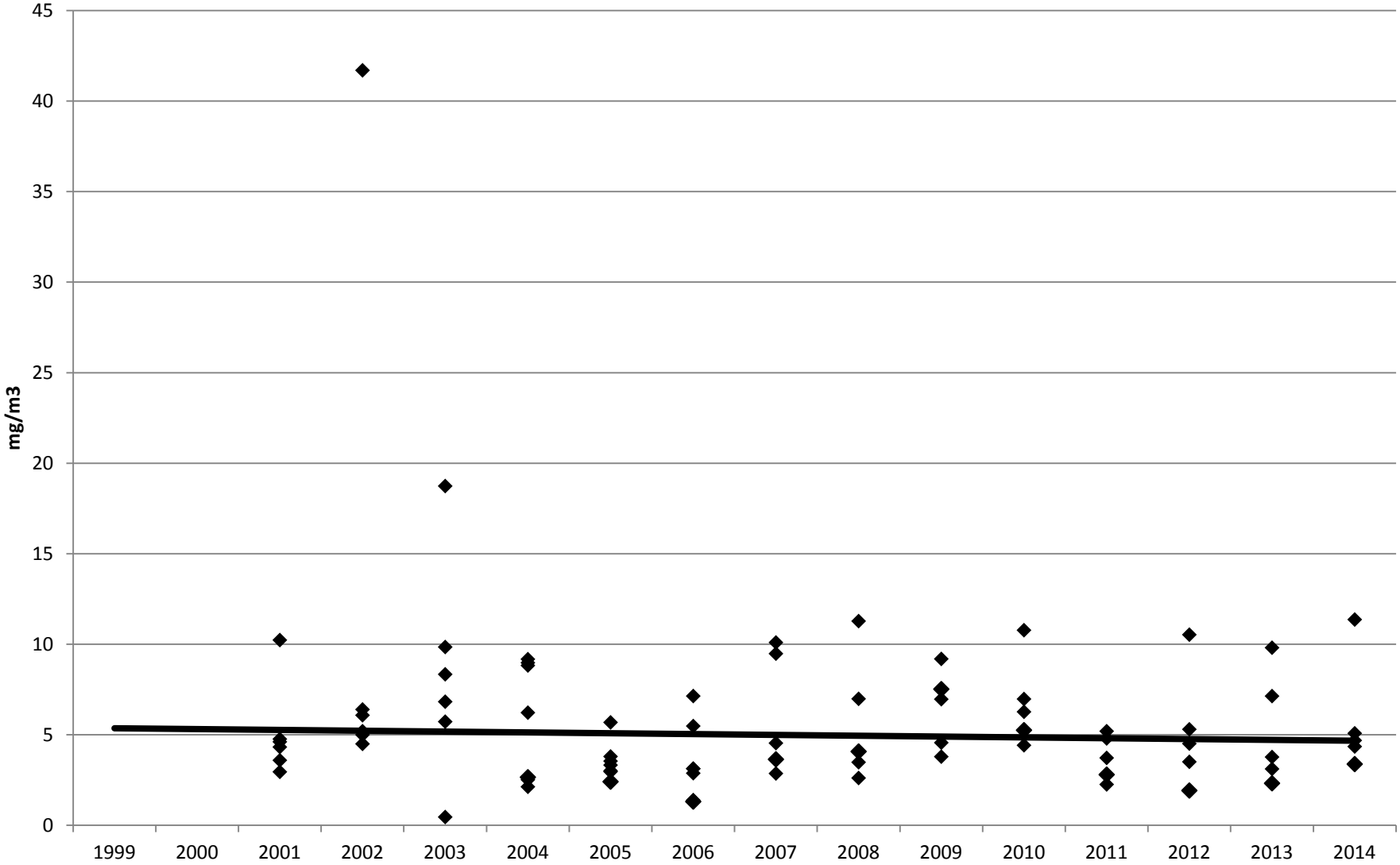

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-N

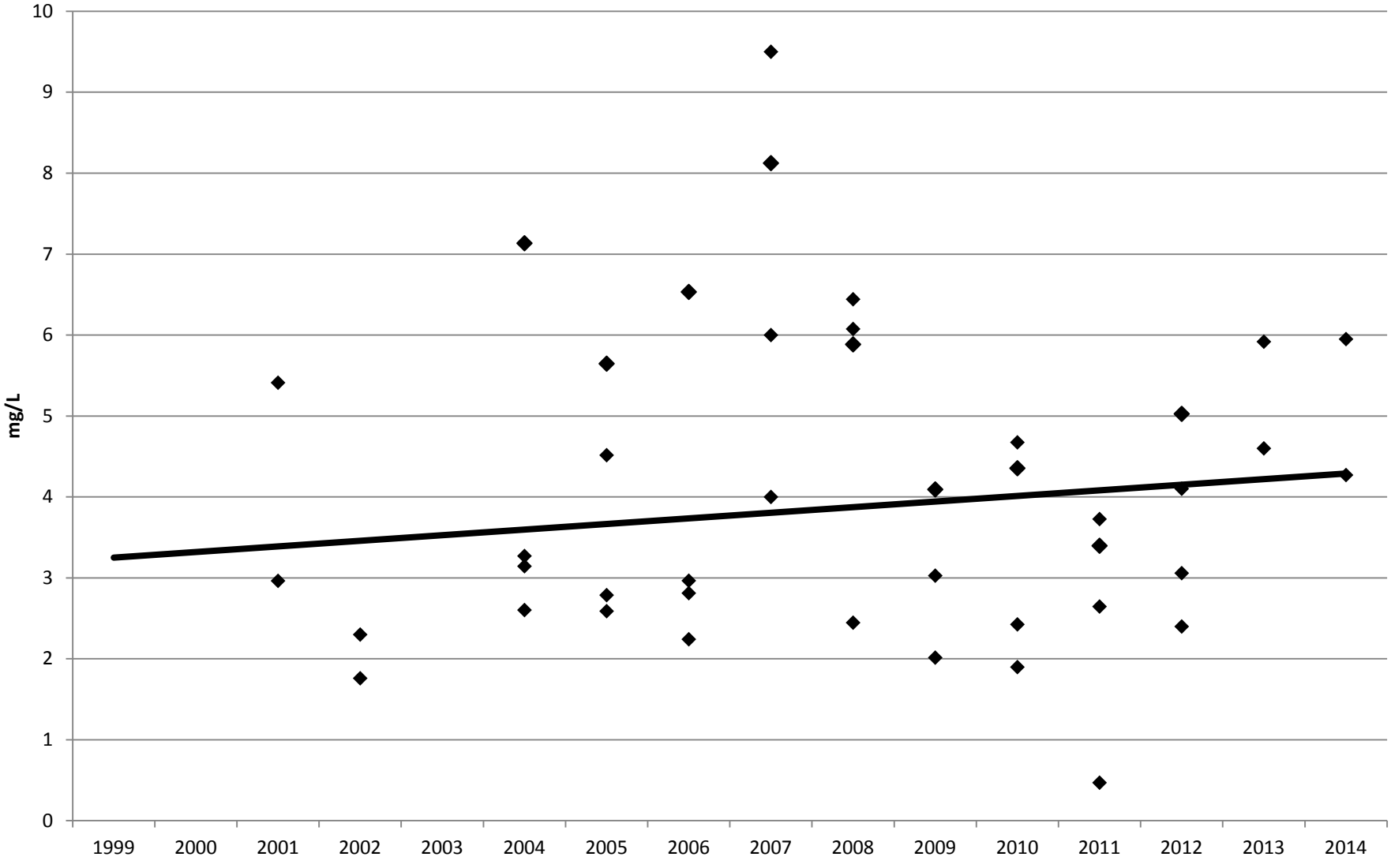

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-C

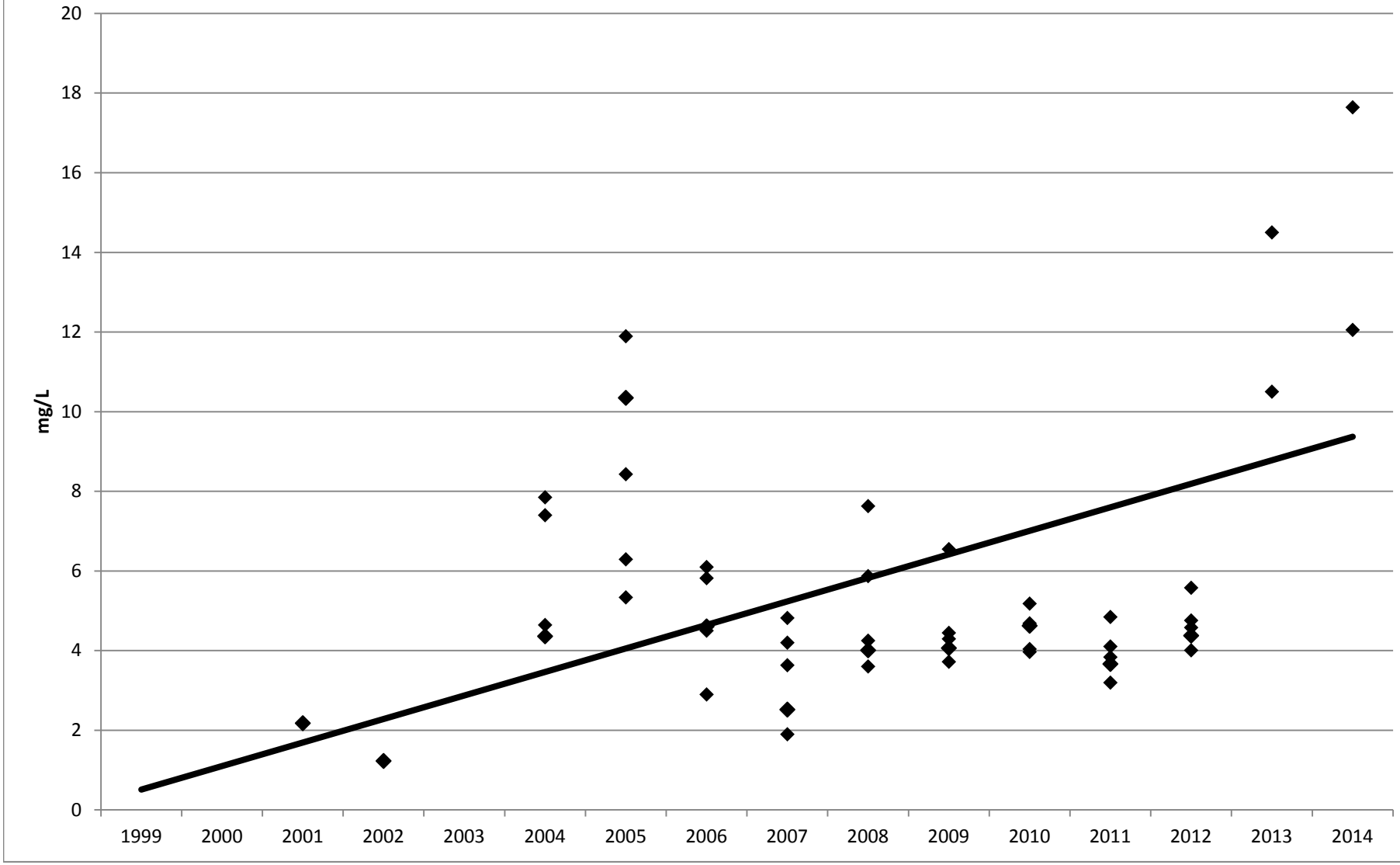

Figure 5-4
Chlorophyll-A
Lake Worth Lagoon-S