SURFACE WATER QUALITY EVALUATION OF CASSELBERRY LAKES

ANNUAL REPORT
Summer 2014- Spring 2015

FEBRUARY 2016

CITY OF CASSELBERRY
INC. 1940

Geosyntec consultants

engineers | scientists | innovators

Geosyntec consultants

1511 E State Road 434 Suite 1005
Winter Springs, FL 32708
Phone: 407-321-7030
www.geosyntec.com

29 February 2016

City of Casselberry
Public Works
Attn: Marissa Williams
Natural Resources Officer
95 Triplet Lake Drive
Casselberry, FL 32707

Subject: **Surface Water Quality Evaluation of Casselberry Lakes – Annual Report**

Dear Ms. Williams:

Geosyntec Consultant is pleased to submit the enclosed Annual Report for the Surface Water Quality Evaluation of Casselberry Lakes (2014-2015). If you have any questions please do not hesitate to contact the undersigned below.

Geosyntec is pleased to provide our services to the City of Casselberry on this project. If you have any questions regarding the enclosed, please contact us at 407-321-7030.

Sincerely,
GEOSYNTEC CONSULTANTS

Lee G. Mullon, PE, CFM
Project Engineer
lmullon@geosyntec.com

Mark W. Ellard, PE, CFM, D.WRE
Project Manager
mellard@geosyntec.com

Enclosures: Surface Water Quality Evaluation of Casselberry Lakes – Annual Report

Cc: Kelly H. Brock, Ph.D., P.E., CFM, LEEP AP, ENV SP | Assistant Public Works Director/City Engineer

SURFACE WATER QUALITY EVALUATION OF CASSELBERRY LAKES

ANNUAL REPORT
Summer 2014 – Spring 2015

February 2016

Prepared For:

Public Works Division

95 Triplet Lake Drive

Casselberry, Florida 32707

Prepared By:

Geosyntec consultants

1511 East State Road 434, Suite 1005

Winter Springs, FL 32708

TABLE OF CONTENTS

1. INTRODUCTION AND BACKGROUND 1-1

1.1 INTRODUCTION 1-1
1.2 BACKGROUND AND MONITORING SITES 1-1

2. MONITORING METHODOLGY 2-1

2.1 FIELD MEASUREMENT AND SAMPLE COLLECTION PROCEDURES 2-1
2.2 QUALITY ASSURANCE PRACTICES 2-2
2.2.1 Sampling Process Design 2-3
2.2.2 Sampling Methods 2-3
2.2.3 Field Water Quality Control Samples 2-4

3. WATER QUALITY CHARACTERISTICS OF MONITORED LAKE SYSTEMS 3-1

3.1 VISUAL OBSERVATIONS 3-1
3.1.1 Summer 2014 Event Visual Observations: 3-1
3.1.2 Fall 2014 Event Visual Observations 3-2
3.1.3 December 2014 Event Visual Observations 3-2
3.1.4 Spring 2015 Event Visual Observations 3-2
3.2 FIELD MEASUREMENTS 3-2
3.2.1 Thermal Stratification 3-3
3.2.2 pH 3-3
3.2.3 Specific Conductivity 3-4
3.2.4 Dissolved Oxygen (DO) and Oxidation Reduction Potential (ORP) 3-4
3.2.5 Secchi Disk Depth 3-5
3.3 LABORATORY MEASUREMENTS 3-25
3.3.1 General Parameters 3-25
3.3.2 Nutrients 3-26
3.3.3 Biological Parameters 3-28
3.3.4 Heavy Metals 3-29
3.3.5 Trophic State Index 3-34
3.3.6 Water Quality Trends 3-35

4. HISTORICAL COMPARISON 4-1

5. SUMMARY AND CONCLUSIONS 5-1

LIST OF TABLES

Table 2-1: Analytical Methods and Detection Limits for Field & Laboratory Analyses 2-1

Table 3-1: Orlando Ridge (Region 75-21) Lakes Typical Water Quality 3-1

Table 3-2: Field Parameter Summary, Summer 2014 Event. 3-6

Table 3-3: Field Parameter Summary, Fall 2014 Event. 3-10

Table 3-4: Field Parameter Summary, Winter 2014 Event 3-15

Table 3-5: Field Parameter Summary, Spring 2015 Event 3-20

Table 3-6: Laboratory Sample Parameter Summary, Summer 2014 Event 3-30

Table 3-7: Laboratory Sample Parameter Summary, Fall 2014 Event 3-31

Table 3-8: Laboratory Sample Parameter Summary, Winter 2014 Event 3-32

Table 3-9: Laboratory Sample Parameter Summary, Spring 2015 Event 3-33

Table 3-10: TSI Values for the 2014-2015 Monitoring Period 3-34

LIST OF FIGURES

Figure 1-1: Monitoring Locations 1-3

Figure 2-1: QAPP Organization Chart 2-3

Figure 3-1: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Summer 2014 Event 3-8

Figure 3-2: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror, Summer 2014 Event 3-9

Figure 3-3: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Fall 2014 Event 3-13

Figure 3-4: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Fall 2014 Event 3-14

Figure 3-5: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Winter 2014 Event 3-18

Figure 3-6: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Winter 2014 Event 3-19

Figure 3-7: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Spring 2015 Event 3-23

Figure 3-8: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Spring 2015 Event 3-24

Figure 3-9: Comparative Trophic State Indices of Cass. Lakes, Summer 2014 Event 3-36

Figure 3-10: Comparative Trophic State Indices of Cass. Lakes, Fall 2014 Event 3-37

Figure 3-11: Comparative Trophic State Indices of Cass. Lakes, Winter 2014 Event 3-38

Figure 3-12: Comparative Trophic State Indices of Cass. Lakes, Spring 2015 Event 3-39

Figure 4-1: Box and Whisker Plots of Historical and Current Concentrations of Alkalinity, BOD, Color, and Fecal Coliform in the Casselberry Lakes. 4-2

Figure 4-2: Box and Whisker Plots of Historical and Current Concentrations of Nitrogen Species in the Casselberry Lakes 4-4

Figure 4-3: Box and Whisker Plots of Historical and Current Concentrations of Phosphorus Species, Chlorophyll a, and Turbidity of Casselberry Lakes 4-6

APPENDICES

Appendix A: Water Quality Trend Graphs

Appendix B: Quarterly Laboratory Reports

1. INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

This report represents the results of the annual Lake Water Quality Monitoring evaluation of the lakes within the City of Casselberry. Geosyntec Consultants was tasked by the City of Casselberry to perform this work. The work was performed under the City of Casselberry Stormwater, Lakes Management, and Water Quality Related Projects Contract, Supplemental Agreement #2 (PO#071285).

1.2 BACKGROUND AND MONITORING SITES

The City desires to provide quarterly monitoring of its lakes, to provide long-term water quality assessment and trend analysis of its surface water resources. The quarterly monitoring program began in 1993, and has continued to present with only minor data gaps in the overall record, thus providing over 20 years of quarterly water quality data. The following lakes are included in the quarterly monitoring assessment (Casselberry Lakes):

Lake Concord	*Lost Lake*	*Middle Lake Triplet*	*Grassy Lake*
Queens Mirror Lake	*Lake Griffin*	*South Lake Triplet*	*Trout Lake*
Lake Kathryn	*Secret Lake*	*North Lake Triplet*	*Lake Yvonne*

Refer to **Figure 1-1** – Lake Monitoring Locations for lake locations.

Water quality monitoring consists of a combination of measurements of field parameters and the collection of surface water samples for analysis at a National Environmental Laboratory Accreditation Conference (NELAC) accredited laboratory. Both field measurements and surface water sampling were conducted at the approximate geographical center of each lake, and were analyzed for general water quality parameters, nutrients, microbiological parameters, and heavy metals, consistent with the historic data collection efforts from 1993 for the Casselberry Lakes as described in the quarterly reports by Environment Research and Design, Inc. (ERD).

It should be noted that some changes to the quarterly ambient water quality sampling have occurred since the program began in 1993. The number of lakes sampled has decreased; the sampling for Lake Dewdrop ended in September 1997 (Third Quarter). Sample collection procedures used are consistent to those used during the historic data collection (FDEP "Standard Operating Procedures for Field Activities" DEP-SOP-001/01). However, these standards have changed over time, and the analytical methods used for the listed measurement parameters below reflect changes to the standards. These changes affected measurement parameters for the below analytes:

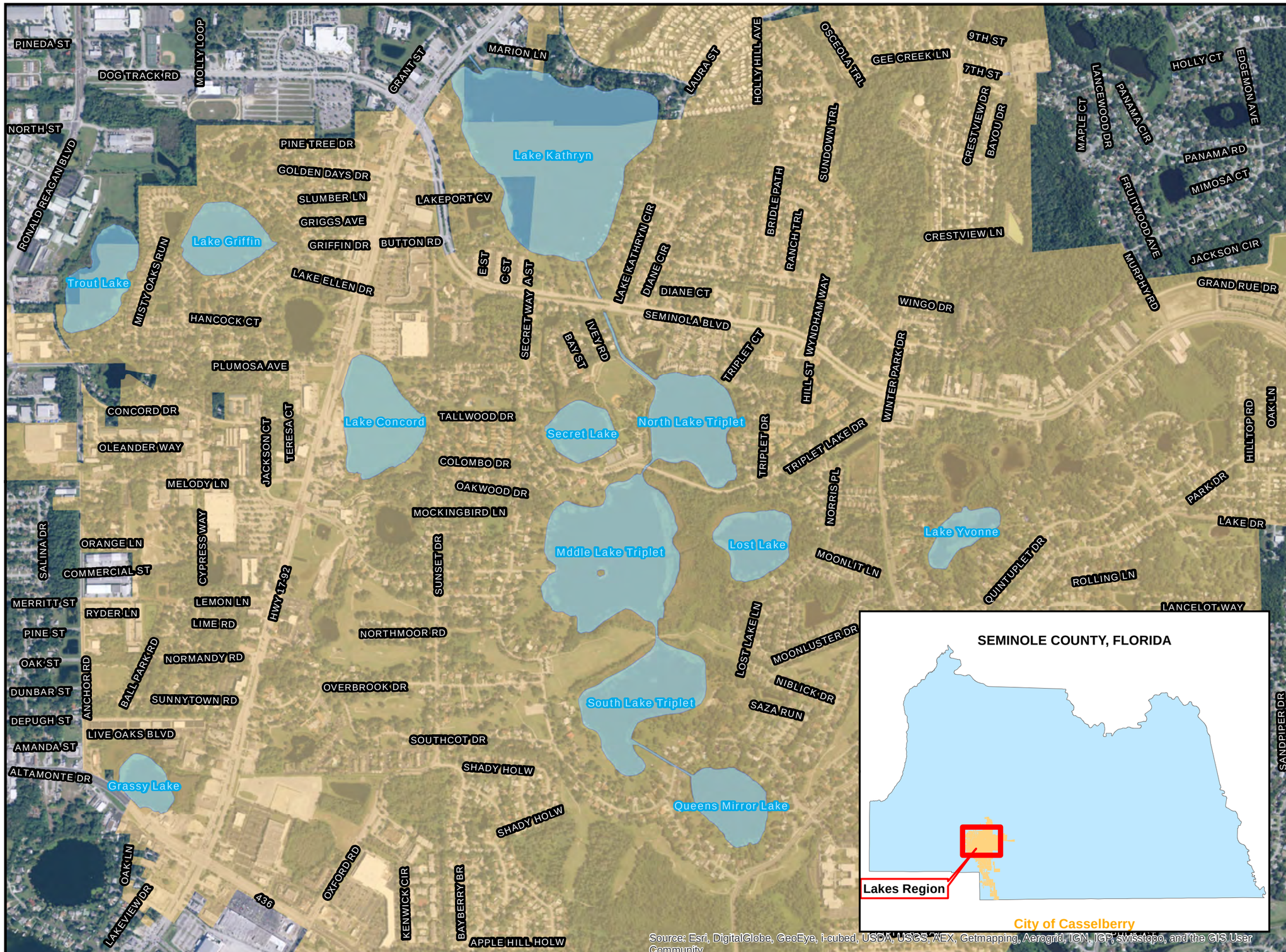
- Apparent Color
- Total Nitrogen
- Total Phosphorus
- Cadmium
- Chromium
- Copper
- Lead
- Total Phosphorus
- Zinc (MDL remained the same)

In addition to the changes in the historic standards, the precision in detecting analytes between ERD (the historic laboratory) and Pace Laboratory (the current laboratory) are different due to the different analytical methods used and/or equipment, which was displayed in the following measurement parameters:

- Ammonia
- Nitrate – Nitrite
- Orthophosphorus
- BOD_5

This report represents the summary of the four quarterly monitoring assessments conducted at the Casselberry Lakes ending in the Spring of 2015. Brief water quality memorandums for the summer and fall of 2014, as well as winter 2014 sampling events have been submitted to the City quarterly. The goal of this report is to provide an overview of the four quarterly sampling events, as well as to evaluate the historical water quality trends within the Casselberry Lakes. A discussion of the field collection and quality assurance / quality control (QA/QC), potential outliers, and statistical evaluation is also provided.

To help establish a seamless continuance of data collection and reporting efforts, the general procedures and methodologies previously adopted by the City's environmental consultant, Environmental Research and Design, Inc. (ERD) have been used throughout this project, with exception to the aforementioned methods and parameters.



CITY OF CASSELBERRY
INC. 1949

N

0 500 1,000
Feet

Legend

Casselberry City Limits

Monitored Lakes

Sources:
Aerial: ESRI, 2015
Lakes: Seminole County, 2014
CIty Limits: Seminole County, 2014
Roads: Seminole County, 2014

Figure
1-1

Monitoring Locations

Surface Water Quality Evaluation of Casselberry Lakes

Casselberry, Florida

Geosyntec consultants

2. MONITORING METHODOLGY

2.1 FIELD MEASUREMENT AND SAMPLE COLLECTION PROCEDURES

The lake monitoring program consists of a combination of field measurements and surface water samples. All measurements and samples were collected at the approximate geographic center of each lake. Field measurements were measured using a water quality sonde (e.g., YSI 556 multiparameter instrument) that was calibrated prior to data collection efforts. All sample collection was performed in accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedures for Field Activities DEP-SOP-001/01 manual, dated March 1, 2014. In addition to the field measurements and surface water samples, visual observations were made for current weather conditions, water clarity, and aquatic vegetation. Refer to **Table 2-1** for a listing of the field and surface water sample list.

Table 2-1: Analytical Methods and Detection Limits for Field & Laboratory Analyses

Measurement Parameter		Method (SOP)	Location	Frequency	Method Detection Limit (MDL)
Field[2]	Temperature	FDEP FS1400	Field[1]	Quarterly	NA
	pH	FDEP FT1100	Field[1]	Quarterly	NA
	Specific Conductance	FDEP FT1200	Field[1]	Quarterly	NA
	Dissolved Oxygen	FDEP FT1500	Field[1]	Quarterly	NA
	Oxidation Reduction Potential (ORP)	N/A	Field[1]	Quarterly	NA
General	Turbidity	EPA 180.1	Lab[2]	Quarterly	0.20 NTU
	Color	EPA SM 2120 B	Lab[2]	Quarterly	10.0 units
	Alkalinity	EPA SM2320 B	Lab[2]	Quarterly	5.0 mg/L
	BOD5	EPA SM 5210 B	Lab[2]	Quarterly	2.0 mg/L
Nutrients	Ammonia	EPA 350.1	Lab[2]	Quarterly	0.02 mg/L
	Organic Nitrogen	Calc. TKN – NH3	Lab[2]	Quarterly	0.25 mg/L
	Nitrate/Nitrite (NOX)	EPA 352.3	Lab[2]	Quarterly	0.025mg/L
	Total Nitrogen	TKN + NOX	Lab[2]	Quarterly	0.086 mg/L
	Ortho Phosphorus	EPA 365.1	Lab[2]	Quarterly	0.0034 mg/L
	Total Phosphorus	EPA 365.3	Lab[2]	Quarterly	0.0028 mg/L
Biological	Fecal Coliform	EPA SM 9222 D	Lab[2]	Quarterly	1 CFU/100mL
	Chlorophyll a	EPA 10200 H	Lab[2]	Quarterly	5.0 µg/L
Heavy Metals	Cadmium	EPA 200.7	Lab[2]	Annually	0.5 µg/L
	Chromium	EPA 200.7	Lab[2]	Annually	2.5 µg/L
	Copper	EPA 200.7	Lab[2]	Annually	2.5 µg/L
	Lead	EPA 200.7	Lab[2]	Annually	5.0 µg/L
	Zinc	EPA 200.7	Lab[2]	Annually	2.0 µg/L

1: Field parameter measurements performed by Geosyntec
2: Laboratory Samples Collected by Geosyntec and Analyzed by Pace Analytical Laboratories, Inc.

Field measurements were taken at a beginning depth of 0.25 meters and 0.5 meters below the water surface and then at intervals of 0.5 meters throughout the rest of the water column to the bottom of the lake at the monitoring location. Surface water samples were collected using a peristaltic pump (e.g., geopump) at a depth of ½ of the Secchi disk depth consistent with the historical collection efforts. All surface water samples were placed in a cooler on ice and delivered to Pace Analytical Laboratories, Inc. (Pace) in Ormond Beach, Florida for analysis.

The four quarterly sampling events (Current Quarterly Events) discussed herein were performed on the below dates:

- Summer 2014: June 30 and July 1, 2014
- Fall 2014: September 23 and 24, 2014
- Winter 2014: December 16 and 17, 2014
- Spring 2015: March 24, 2015

2.2 QUALITY ASSURANCE PRACTICES

In support of the assurance of quality, reliable data collection and reporting efforts, Geosyntec prepared a Quality Assurance Project Plan (QAPP) for this project. The QAPP was developed based on the guidelines obtained from the "EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5", (EPA/240B-01/003 March 2001). The QAPP describes the methodologies, procedures, and other requirements necessary for collecting field data adequate to support the quarterly assessment of ambient water quality at the Casselberry Lakes.

The QAPP implementation team consists of four primary team elements, including:

1. Project Manager Mark Ellard, PE, CFM, D.WRE. Mark is responsible for project scheduling, budgeting, and maintaining and approving the project QAPP. Mark also facilitates peer review of the project reports and submittal of all project deliverables with the City.
2. Quality Assurance Manager (QAM) Julia Caprio, MBA ASQ-CMQ/OE. Julia is responsible for assuring the integrity of the QAPP and coordinates all QA specific activities. The QAM coordinates with the field team with regard to field sampling QA procedures and assures appropriate analytical procedures are employed by the laboratory, and is responsible for data validation and advises the Project Manager with respect to data management.
3. Field Manager Lee Mullon, PE, CFM. Lee is responsible for organizing and coordinating the field sampling operations and ensuring that field activities adhere to the QAPP. Lee also develops the project reporting and ensures all documents are peer reviewed by the Project Manager and QAM.
4. Laboratory Pace Analytical Laboratory, Inc (Pace). Pace is the laboratory used for this project, and is a NELAC accredited laboratory.

Refer to **Figure 2-1** for an organizational chart.

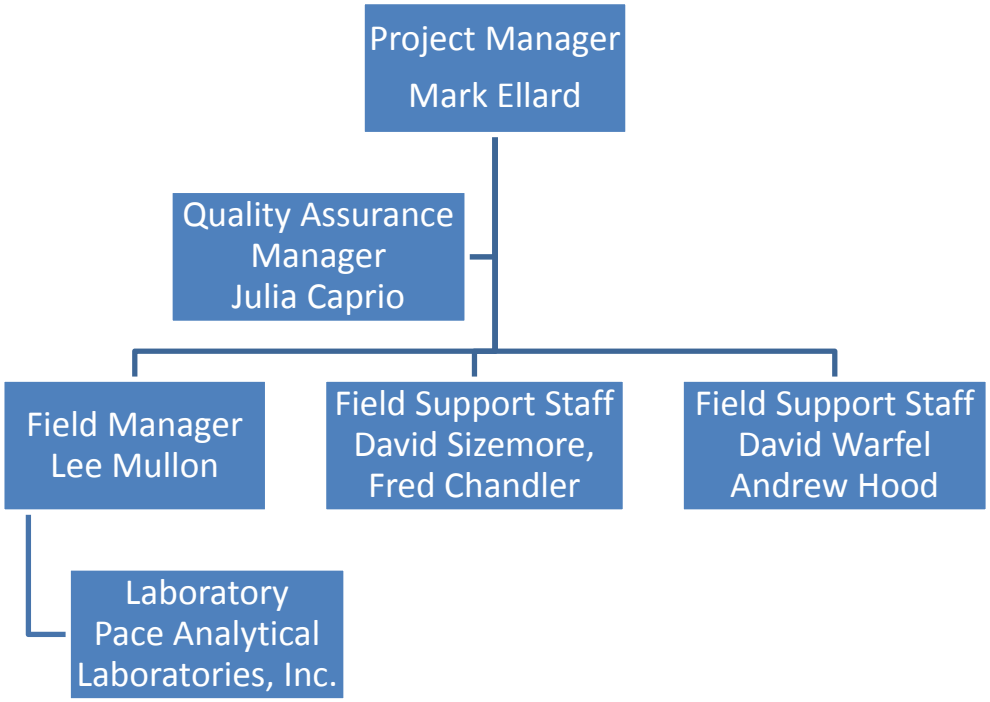


Figure 2-1: QAPP Organization Chart

2.2.1 Sampling Process Design

All surface water sampling performed is surface water grab samples, collected at the approximate geometric center of each lake. All surface water samples are collected with a peristaltic pump at a water depth equal to ½ of the Secchi disk depth and placed in sample containers provided by the analytical lab for the parameters to be analyzed. All sample containers provided by the lab include any necessary preservative additives (e.g., H_2SO_4) per the specific analytical FDEP SOP requirements. Collected samples are field-preserved with ice and transported to the analytical lab where each of the samples are analyzed for their associated parameters.

2.2.2 Sampling Methods

Grab samples are collected to establish ambient water quality of the Casselberry Lakes, and to assess seasonal water quality trends. Sampling implementation, including decontamination practices adhere to the applicable section of the *DEP SOPs for Field Activities (DEP-SOP-001/01)*, including the following:

- FC 1000 – Field Decontamination
- FD 1000 – Documentation
- FQ 1000 – Quality Control
- FS 1000 – General Sampling
- FS 2000 – General Aqueous Sampling
- FS 2100 – Surface Water Sampling

2.2.3 Field Water Quality Control Samples

Field QC samples are collected and analyzed to assess the consistency and performance of the surface water sampling activities. Collection and analysis of field equipment blanks are provided as QC checks on the integrity of equipment decontamination procedures. The equipment rinsate blanks are prepared by using deionized water and sample bottles randomly selected from the bottles prepared for environmental samples. One equipment rinsate blank is collected per quarterly monitoring sampling event. The equipment rinsate blank is analyzed for the same parameters as those analyzed for the collected environmental samples. The equipment rinsate blank is included in the laboratory sample reports for each quarterly sampling event.

One field duplicate is collected per quarterly monitoring sampling event. The field duplicate samples the same parameter matrix as one randomly chosen lake, at the same time and location, using the same sampling techniques. Field duplicate samples are used to evaluate the precision of the overall sample collection and analysis process. The field duplicate is provided and reported for each quarterly event. Quarterly laboratory reports are provided in **Appendix B**.

3. WATER QUALITY CHARACTERISTICS OF MONITORED LAKE SYSTEMS

The Casselberry Lakes are located within the Orlando Ridge region (75-21) of Florida, per the EPA "Lake Regions of Florida" report (EPA/R-97/127, August 1997)[1]. Per this report:

> *The Orlando Ridge is classified as an urbanized karst area of low relief, with elevations from 75-120 feet. The lakes in the Orlando Ridge are "characterized as clear, alkaline, hardwater lakes of moderate mineral content. The lakes are mesotrophic to eutrophic, but it is difficult to distinguish between effects of urbanization and natural phosphatic levels. Lakes are more phosphatic and green than the Crescent City/Deland Ridges (75-11), and only slightly more than the Apopka Upland (75-16)…*
>
> *The area around Casselberry could be included with the Geneva Chuluota Hills (Region)…, but, perhaps because of the urban influence, it appears to fit with the Orlando Ridge lakes.*

Average water quality values for the Orlando Ridge lakes regions is provided from the report in **Table 3-1** below.

Table 3-1: Orlando Ridge (Region 75-21) Lakes Typical Water Quality

75-21 Orlando Ridge Lake Values

Mean Value	pH (lab) n=40	Total Alkalinity (mg/l) n=40	Conductivity (µS/cm@25°C) n=40	Total phosphorus (µg/l) n=89	Total Nitrogen (µg/l) n=89	Chlorophyll_a (µg/l) n=89	Color (pcu) n=40	Secchi (m) n=85
minimum	5.7	1.6	13	6	118	0.5	0	0.4
25th %	7.7	29.8	169	21	650	14	10	1.0
median	**7.8**	**48.1**	**183**	**31**	**761**	**22**	**14**	**1.3**
75th %	8.1	56.6	205	47	940	35	17	1.9
maximum	9.3	88.7	267	179	2177	116	68	8.1

3.1 VISUAL OBSERVATIONS

Visual observation collected during the field activities include a combination of weather conditions, water color appearance, the presence of any observed inflow or outflow of the each lake, observed water quality issues, and observed aquatic vegetation. Additionally, staff gauge readings were taken for each of the lakes where staff gauges are present. See **Tables 3-2** through **3-5** for a listing of the visual observations for each quarterly monitoring event, as well as the below summaries:

3.1.1 Summer 2014 Event Visual Observations:

This monitoring period experienced generally warm to very warm temperatures, with overcast skies and moderate wind gusts throughout the day. Clear water was observed in Lakes Grassy, Trout, Griffin, North Triplet, Queens Mirror, South Triplet, Yvonne and Lost. Murky waters were observed in Lakes Kathryn, Secret, and Concord. No significant algal blooms were observed in any of the lakes, however some algal growth was observed at the

[1] Florida lake Regions Map: ftp://ftp.epa.gov/wed/ecoregions/fl/fl_lkreg_front.pdf

Lake Kathryn inflow canal. Most of the lakes were observed to have various levels of aquatic vegetation present, with water lily observed on the shorelines of most lakes.

3.1.2 Fall 2014 Event Visual Observations

This monitoring period experienced generally warm temperatures with cloudy conditions and no to moderate winds. Clear water was observed in Lakes Grassy, Trout, Griffin, Kathryn, North Triplet, Secret, Middle Triplet, Queens Mirror, South Triplet, Yvonne and Lost. The only lake to have murky water was Lake Concord. No algal blooms were observed in any of the lakes, however algae growth was observed at the boat launch location of Lake Griffin. Vegetation consisted of water lilies along the perimeters of most lakes, with dense cattails observed around Lake Yvonne. Hydrilla was noted in Lakes Griffin, Kathryn, North Triplet, Secret, Middle Triplet, Queens Mirror, South Triplet, Yvonne and Lost.

3.1.3 December 2014 Event Visual Observations

This monitoring period experienced generally cool to warm temperatures with clear, sunny skies and no to moderate wind speeds. Clear water was observed in lakes Grassy, Griffin, Kathryn, North Triplet, Middle Triplet, Queens Mirror, South Triplet, Yvonne and Lost. Lakes Trout, Secret and Concord had murky waters with Lake Concord waters appearing as a greenish tint. No significant algal blooms were observed in any of the lakes, however Lake Griffin had observed algal growth in small patches throughout the lake. Floating vegetation consisting primarily of water lily was observed in most lakes along the perimeter, with hydrilla observed in lakes Grassy, Griffin, Kathryn, North Triplet, Secret, Concord, Middle Triplet, Queens Mirror, South Triplet, Yvonne and Lost.

3.1.4 Spring 2015 Event Visual Observations

This monitoring period experienced generally cool to warm temperatures with overcast skies and little wind speed. Clear water was observed in lakes Grassy, Trout, Griffin, Kathryn, North Triplet, Secret, Middle Triplet, Queens Mirror, South Triplet, Yvonne and Lost. Only Lake Concord appeared to have turbid waters, with Lake Griffin exhibiting small organic or sediment particles that were visible in the water column yet were not sufficient to cause significant visibility constraints. No algal blooms were observed in any of the lakes. Floating vegetation consisting primarily of water lily was observed in most lakes along the perimeter, with hydrilla observed in lakes Kathryn, North Triplet, Middle Triplet, Middle Triplet and Yvonne.

3.2 FIELD MEASUREMENTS

Field measurements for each sampling event were conducted identically for each of the Casselberry Lakes at each quarterly sampling event. Lake measurement parameters included temperature, pH, specific conductivity, dissolved oxygen, and oxidation reduction potential. Measurements were taken at 0.25 meters and 0.50 meters from the lake surface, and then at 0.50 meter increments of the lake to the lake bottom. Secchi disk depths were also taken for each lake. Water depths were determined using a water depth meter that was attached to a water quality sondes and multiparameter instrument (YSI 556). All field measurements are included in **Tables 3-2** through **3-5**, with vertical field profiles for each lake and sampling event included in **Figures 3-1** through **3-8.**

3.2.1 Thermal Stratification

Thermal stratification of lakes is associated with pronounced temperature variations within distinct layers of the lake. Thermal stratification is typically associated with deeper lakes, where cooler denser water sinks, and warmer less dense water rises to the surface. When stratified, the top layer of the lake is known as the epilimnion, and is the warmest layer and typically the layer of greatest biologic productivity and dissolved oxygen. The middle layer, known as the metalimnion, is a region of temperature change which forms a physical barrier between the warm and cold layers, known as the thermocline. The thermocline can prevent dissolved oxygen from mixing between the oxygen rich upper layer and the oxygen poor lower layer. The bottom, cold layer, known as the hypolimnion, is an area typically of little light, dissolved oxygen and biologic productivity.

When stratification occurs, the hypolimnion can experience water quality impairments, such as low dissolved oxygen, which can have adverse consequences on bottom-dwelling organisms. Additionally, low dissolved oxygen layers can cause anoxic conditions and lead to the resuspension of sequestered nutrients in lake bottom sediments. These nutrients, such as phosphorus and ammonia-nitrogen, become soluble and can re-enter the epilimnion, increasing the potential for harmful algal blooms to occur.

As stated in previous Casselberry Lakes Water Quality Monitoring Reports[2], short-term thermal stratification can be seasonally driven, based on the prevailing temperature and meteorological conditions. However, stratification can also occur within eutrophic lakes with high algal growth. When this occurs, solar radiation can be absorbed within the epilimnion at higher rates with decreasing temperatures in the lower lake regions.

As shown in **Figures 3-1 through 3-8** below, significant stratification levels were not generally observed in the Casselberry Lakes during the Current Quarterly Events. Queens Mirror Lake is the only significant exception, where the Fall 2014 and Spring 2015 events showed stratification and corresponding dissolved oxygen reduction at approximately 1 meter depth. Lake Kathryn and Secret Lake in the Winter 2014 event also exhibited thermal stratification, but was not observed in other periods.

3.2.2 pH

As indicated in **Table 3-1**, the Orlando Ridge lakes are somewhat alkaline with a median value of 7.8, with upper levels of 9.3 and lower levels of 5.7, though the report does not note at what depth the pH measurements were taken from. From the water depth profile figures below, the pH measurements from the Current Quarterly Events seemed to vary seasonally, with spring and summer months ranging from neutral to alkaline, and fall to winter ranging from neutral to slightly acidic. As was measured in previous Casselberry Lakes Monitoring Reports, pH values typically decreased with increasing water depth, which is common in urban lakes, generally associated with reduced dissolved oxygen concentrations and increased amounts of carbon dioxide from sediment decomposition.

---

[2] Evaluation of Surface Water Quality Characteristics in Lakes Final Report, June 2013 Monitoring Event, prepared by Environmental Research and Design, Inc.

The maximum pH value was measured as 9.65 in Lake Kathryn in the Spring 2015 Event and the lowest pH value was measured as 4.42 in Middle Triplet Lake in the Winter 2014 Event. These maximum and minimum pH values appear to be outliers, with the majority of the pH measurements taken falling within the expected Orlando Ridge lakes pH values.

3.2.3 Specific Conductivity

The EPA defines specific conductivity as a measure of the ability of water to pass an electrical current. Conductivity is affected in lakes by the presence of inorganic dissolved solids such as chloride, nitrate, sulfate, and phosphate anions, which are ions that carry a negative charge, and sodium, magnesium, calcium, iron, and aluminum cations, which are ions that carry a positive charge[3].

Per the Orlando Ridge lake water quality index, lakes have typical specific conductivity values between 169 – 205 µS/cm. During the Spring and Summer 2014 Events, and the Winter 2015 Event, the Casselberry Lakes specific conductivity values were generally in this range. During the Fall 2014 Event, however, specific conductivity values for each lake was measured consistently below these values, indicating a uniform drop in specific conductivity for all lakes during this sampling event.

For most measurement periods, lakes Yvonne and Trout exhibited low specific conductivity values. Lake Yvonne also experienced elevated specific conductivity values at depths approaching the lake bottom, indicating that the low dissolved oxygen levels and low oxidation reduction potential may be causing the release of ions from the sediments into the overlying water column. This phenomenon was also observed in Lakes Grassy, Griffin and Secret, though to a lesser extent.

3.2.4 Dissolved Oxygen (DO) and Oxidation Reduction Potential (ORP)

Per chapter 62-302.530 F.A.C. Criteria for Surface Water Quality Classifications, Class III Recreational fresh water bodies are to maintain a minimum of 5.0 mg/L of DO, as measured in the upper two meters of the lake water column. For consistency with previously measured DO concentrations for Casselberry Lakes Monitoring Reports, this standard is measured against the one meter depth DO concentrations. Per the **Figures 3-1** through **3-8** below, Lake Yvonne was the only lake to consistently measure less than 5.0 mg/L of DO during all monitoring periods. In the Fall 2014 Event, several lakes were measured at less than 5.0 mg/L DO, including lakes Trout, Secret, Griffin, Yvonne, Queens Mirror, South Triplet and Lost. In the March 2015 Event Lake Lost also did not meet this standard.

Decreases in DO were observed with increasing water depth in most lakes and monitoring periods. Lakes with DO concentrations less than 1 mg/L near the lake bottom include lakes Grassy, Trout, Griffin, Kathryn, Secret, Yvonne and Queens Mirror during various monitoring periods. Low DO concentrations near the lake bottom increase the potential release of nutrients and ions from the bottom sediments into the overlying water column. However, this condition in relatively deep freshwater lakes is not uncommon.

---

[3] http://water.epa.gov/type/rsl/monitoring/vms59.cfm

Lake Concord has an aeration system that was installed by the City in 1996 to improve the low DO concentrations within the lake. For most monitoring periods, Lake Concord was measured to have the highest concentration of DO, which was relatively uniform throughout the water column. Because the Lake Concord aeration system is located near the center of the lake, which is also near the lake monitoring location where field measurements are taken, it is possible that these high DO concentrations are a function of the close vicinity of the aeration system, and may not be uniform across the entire lake. Future monitoring of Lake Concord at alternative locations may be considered to assess the lake water quality performance away from the aeration system.

Oxidation Reduction Potential (ORP) is the measurement of the ability of a solution to gain or lose electrons. As mentioned in the "Evaluation of Surface Water Quality Characteristics in Casselberry Lakes – June 2013" by ERD, lakes with higher ORP (greater than 200 mv) are considered healthier as they have the ability to oxidize an introduced chemical species or contaminant. Lakes with lower ORP (less than 200 mv) have the tendency to lose electrons by reducing a new species or contaminant, and are considered an indication of reduced lake health. For lakes with lower ORP, the decomposition of organic matter, contaminants or other harmful substances can occur less efficiently than at higher ORP. ORP values are also generally dependent on the amount of DO present, and therefore decrease with increased water depths. Where low DO and ORP occur near the lake bottom, there is an increased potential for the release of ions from sediments into the overlying water column.[4] Per **Tables 3-2** through **3-5** there was a generally lower ORP for all lakes during the Current Quarterly Events. These low ORP values are in contrast to historically higher ORP levels measured in the lakes. Future monitoring events will assess the ORP values to determine if the lower ORP will be a long-term trend in the Casselberry Lakes.

3.2.5 Secchi Disk Depth

Secchi disk depth is a measure of a water bodies' clarity, and is related to its turbidity, chlorophyll, and color. Generally, lake systems with a Secchi disk depth of less than 1 meter are considered lacking adequate water clarity and are less aesthetic[5,6]. The Casselberry Lakes Secchi disk depth measurements during the Current Quarterly Events were generally 1 meter or greater, with the exception to Lake Concord, which routinely measured less than 1 meter Secchi disk depth due to its high turbidity. In the Winter 2014 Event, Middle Triplet Lake and South Triplet Lake also had less than 1 meter depth.

Lakes with good water clarity typically have a Secchi disk depth range of 1-2 meters, and excellent water clarity are for lakes in excess of 2 meters. Most Casselberry Lakes exhibited good water clarity, with Lakes Grassy, Trout, Kathryn, Yvonne, and Secret periodically exhibiting excellent water clarity.

---

[4] Langmuir, D. *Aqueous Environmental Geochemistry*. New Jersey, Prentice-Hall, Inc. 1997

[5] Environmental Research and Design, Inc. (ERD). *Evaluation of Surface Water Quality Characteristics in Casselberry Lakes: Final Report - June 2013 Monitoring Event.* Orlando. 2013

[6] Lee, G. Fred, Anne Jones-Lee, and Walter Rast. *Secchi Depth as a Water Quality Parameter, Report of G. Fred Lee & Associates.* El Macero, CA. 1995. < http://www.gfredlee.com/secchi.html >

TABLE 3-2
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 2 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Grassy	6/30/14	7:50	0.25	29.66	8.00	179	N/S	7.35	96.1	39.1	2.25	6.40	78.00	5.5 / SE	Clear	None	None	Water Lilies	82.75	Normal	Partly Cloudy
			0.5	29.63	7.61	179	N/S	6.65	87.5	43.7											
			1.0	29.66	7.66	178	N/S	6.25	83.8	45.5											
			1.5	29.64	7.59	178	N/S	6.06	81.1	51.1											
			2.0	29.63	7.54	178	N/S	5.71	76.1	52.3											
			2.5	29.06	7.45	179	N/S	4.35	56.7	52.6											
			3.0	28.29	7.25	180	N/S	2.30	29.9	53.1											
			3.5	27.48	7.17	181	N/S	1.18	14.2	42.2											
			4.0	25.85	6.97	179	N/S	0.43	5.5	34.9											
			4.5	24.55	6.75	168	N/S	0.20	2.5	47.8											
			5.0	23.29	6.09	165	N/S	0.18	2.5	30.2											
			5.5	22.61	6.11	192	N/S	0.17	1.3	37.6											
			6.0	21.35	6.13	226	N/S	0.14	1.2	-40.0											
Trout	6/30/14	11:40	0.25	30.23	7.54	151	N/S	7.46	99.2	43.9	2.00	4.90	85.00	4.1 / E	Clear	None	None	Water Lillies @ Boat Ramp	- -	Normal	Very Cloudy
			0.5	30.20	7.44	151	N/S	6.93	91.6	46.8											
			1.0	30.19	7.35	151	N/S	6.69	88.8	50.0											
			1.5	30.16	7.34	151	N/S	6.32	83.6	50.0											
			2.0	30.14	7.30	151	N/S	6.30	83.6	51.9											
			2.5	29.60	7.20	152	N/S	4.48	59.6	51.8											
			3.0	28.97	7.09	152	N/S	2.89	37.5	48.5											
			3.5	27.39	6.94	151	N/S	0.68	8.6	39.0											
			4.0	26.28	6.83	144	N/S	0.64	8.0	36.8											
			4.5	25.40	6.62	140	N/S	1.16	14.0	48.7											
Griffin	6/30/14	9:48	0.25	30.36	7.97	198	N/S	8.01	108.4	25.3	1.75	4.30	82.00	4.9 / E	Clear	None	None	Water Lilies Around Perimeter	- -	Normal	Partly Cloudy
			0.5	30.37	8.03	198	N/S	7.62	101.3	25.9											
			1.0	30.34	8.08	198	N/S	7.20	98.2	25.7											
			1.5	30.32	8.10	198	N/S	7.27	97.8	27.2											
			2.0	30.27	8.10	199	N/S	7.22	95.1	27.7											
			2.5	30.25	8.10	199	N/S	6.94	92.4	29.5											
			3.0	29.58	7.79	200	N/S	4.37	59.4	36.8											
			3.5	29.10	7.53	201	N/S	2.81	36.6	37.7											
			4.0	27.69	7.32	203	N/S	0.52	7.6	16.4											
Kathryn	6/30/14	15:07	0.25	30.71	8.52	179	N/S	10.1	140	208	1.00	3.05	86.00	9.1 / SE	Murky	None	None	Algae Growth at Access Canal	- -	Normal	Partly Cloudy
			0.5	30.70	8.74	179	N/S	9.5	128	193											
			1.0	30.66	8.49	180	N/S	9.5	127	124											
			1.5	30.67	8.44	179	N/S	9.2	124	107											
			2.0	30.65	8.36	179	N/S	9.1	123	98											
			2.5	30.17	8.24	179	N/S	8.6	116	95											
			3.0	29.85	7.36	226	N/S	6.6	89	-44											
North Triplet	7/1/14	9:10	0.25	30.27	8.00	241	N/S	7.97	107.0	41.0	2.00	2.44	76.00	4.5 / SE		None	None	Significant at Shallow Water Elevations	- -	Normal	Partly Cloudy
			0.5	30.27	8.06	242	N/S	7.40	99.9	37.0											
			1.0	30.27	8.06	242	N/S	7.18	98.5	37.0											
			1.5	30.24	8.07	241	N/S	7.10	95.3	36.8											
			2.0	30.23	8.05	242	N/S	7.03	94.4	37.8											

TABLE 3-2
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 2 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Secret	7/1/14	10:04	0.25	30.18	7.64	152	N/S	7.92	105.1	54.0	1.75	5.27	83.00	7 / S	Murky	None	None	Water Lilies, some submerged vegetation	50.90	Normal	Sunny
			0.5	30.15	7.77	151	N/S	7.85	105.9	45.8											
			1.0	30.11	7.88	152	N/S	7.90	105.3	40.8											
			1.5	30.17	8.01	152	N/S	7.96	105.7	35.4											
			2.0	30.03	8.17	151	N/S	7.95	105.6	27.6											
			2.5	29.81	8.05	152	N/S	6.90	93.4	29.0											
			3.0	29.67	7.82	155	N/S	4.75	65.1	34.1											
			3.5	29.21	7.57	151	N/S	2.95	35.3	35.2											
			4.0	29.12	7.42	154	N/S	2.55	26.5	35.0											
			4.5	28.38	7.27	148	N/S	2.25	26.7	27.7											
			5.0	27.85	7.35	197	N/S	2.85	31.4	27.0											
Concord	6/30/14	12:40	0.25	30.59	8.19	169	N/S	8.2	111	8	0.75	4.12	87.00	4.3 / SE	Murky	None	None	Algal growth at Boat Ramp	- -	Normal	Partly Cloudy
			0.5	30.51	8.29	169	N/S	7.8	105	10											
			1.0	30.31	8.33	169	N/S	7.8	104	12											
			1.5	30.27	8.32	169	N/S	7.6	102	13											
			2.0	30.25	8.30	169	N/S	7.6	101	16											
			2.5	30.24	8.28	169	N/S	7.4	99	17											
			3.0	30.22	8.24	170	N/S	7.5	99	19											
			3.5	30.21	8.24	170	N/S	7.3	98	20											
			4.0	30.19	8.22	169	N/S	7.3	97	21											
Middle Triplet	7/1/14	7:47	0.25	29.65	8.60	241	N/S	7.15	94.6	21.8	1.50	1.52	77.00	5.2 / S	Clear	None	None	Water Lillies	49.69	Normal	Sunny
			0.5	59.65	8.57	241	N/S	7.26	96.3	24.1											
			1.0	29.65	8.56	241	N/S	7.30	96.6	24.0											
			1.5	29.68	8.52	242	N/S	7.27	96.2	22.0											
Queens	7/1/14	12:03	0.25	30.47	7.68	172	N/S	7.31	98.1	50.6	1.00	2.59	88.00	7.3 / SE	Clear	None	None	Vegetation in Entry Canal	N/A/	Normal	Partly Cloudy
			0.5	30.48	7.44	169	N/S	6.91	93.0	52.3											
			1.0	30.43	7.28	169	N/S	6.73	90.6	58.6											
			1.5	29.85	7.02	167	N/S	5.04	71.0	65.8											
			2.0	29.60	6.82	169	N/S	4.09	55.7	7.1											
			2.5	29.33	6.61	171	N/S	2.00	31.5	69.0											
South Triplet	7/1/14	8:30	0.25	29.91	7.93	192	N/S	6.44	86.0	41.8	1.50	1.59	78.00	5.3 / SW	Clear	None	None	Significant Vegetation Between Lakes	- -	Normal	Sunny
			0.5	29.92	7.73	191	N/S	6.31	83.8	48.8											
			1.0	29.92	7.64	192	N/S	6.29	83.3	53.4											
			1.5	29.91	7.64	192	N/S	6.07	81.0	50.8											
Yvonne	6/30/14	16:29	0.25	30.95	7.40	140	N/S	4.34	64.0	66.5	1.50	4.12	87.00	4 / SW	Clear	None	None	Significant Water Lily Growth Eastern Pond Sections	- -	Normal	Partly Cloudy
			0.5	30.28	7.06	140	N/S	3.44	46.7	82.3											
			1.0	29.69	6.80	139	N/S	2.57	37.2	88.1											
			1.5	29.42	6.60	139	N/S	1.61	19.9	88.0											
			2.0	28.78	6.45	135	N/S	1.06	14.2	85.1											
			2.5	27.39	6.19	118	N/S	1.46	17.3	97.2											
			3.0	24.27	6.11	237	N/S	0.47	5.8	-17.7											
			3.5	23.32	5.93	282	N/S	0.43	5.2	-42.3											
			4.0	22.64	5.78	279	N/S	0.44	5.1	-38.2											
Lost	7/1/14	11:13	0.25	30.29	7.27	186	N/S	6.26	84.3	63.9	1.50	1.83	86.00	9.1 / S	Clear	None	None	Significant shoreline and shallow Water Vegetation	- -	Normal	Partly Cloudy
			0.5	30.27	7.09	186	N/S	6.22	83.1	73.9											
			1.0	30.20	7.00	186	N/S	6.09	81.6	78.5											
			1.5	29.87	6.92	186	N/S	5.46	73.6	79.5											

m = Meters
°C = Degree Celicius
s.u. = Standard Units
µmho/cm = micromhos per centimeter
ug/l = micrograms per liter
mg/l = milligrams per liter
% Sat = Percent of Saturation
mv = millivolts
°F = Degree Fahrenheit
ft = Feet

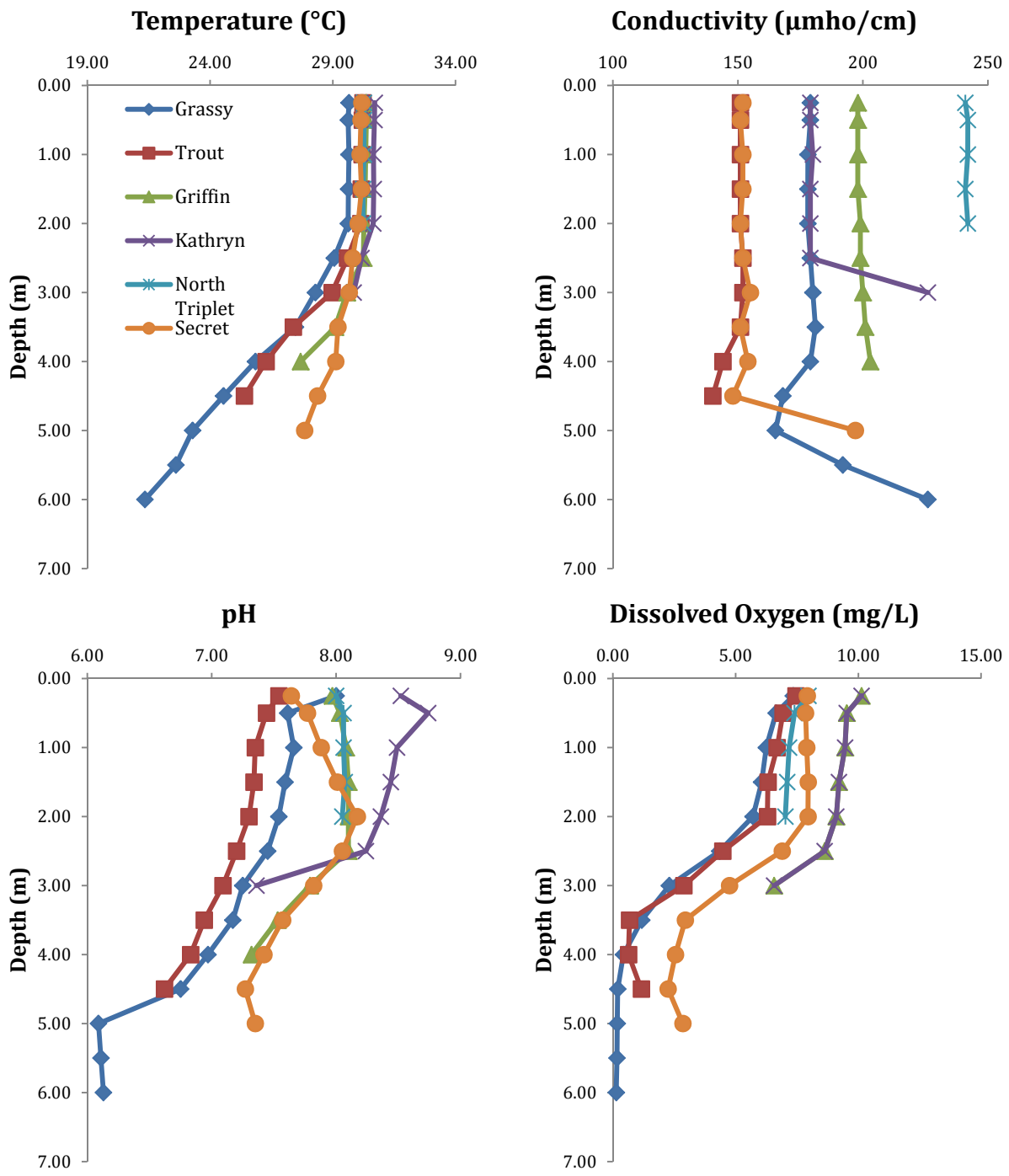


Figure 3-1: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Summer 2014 Event.

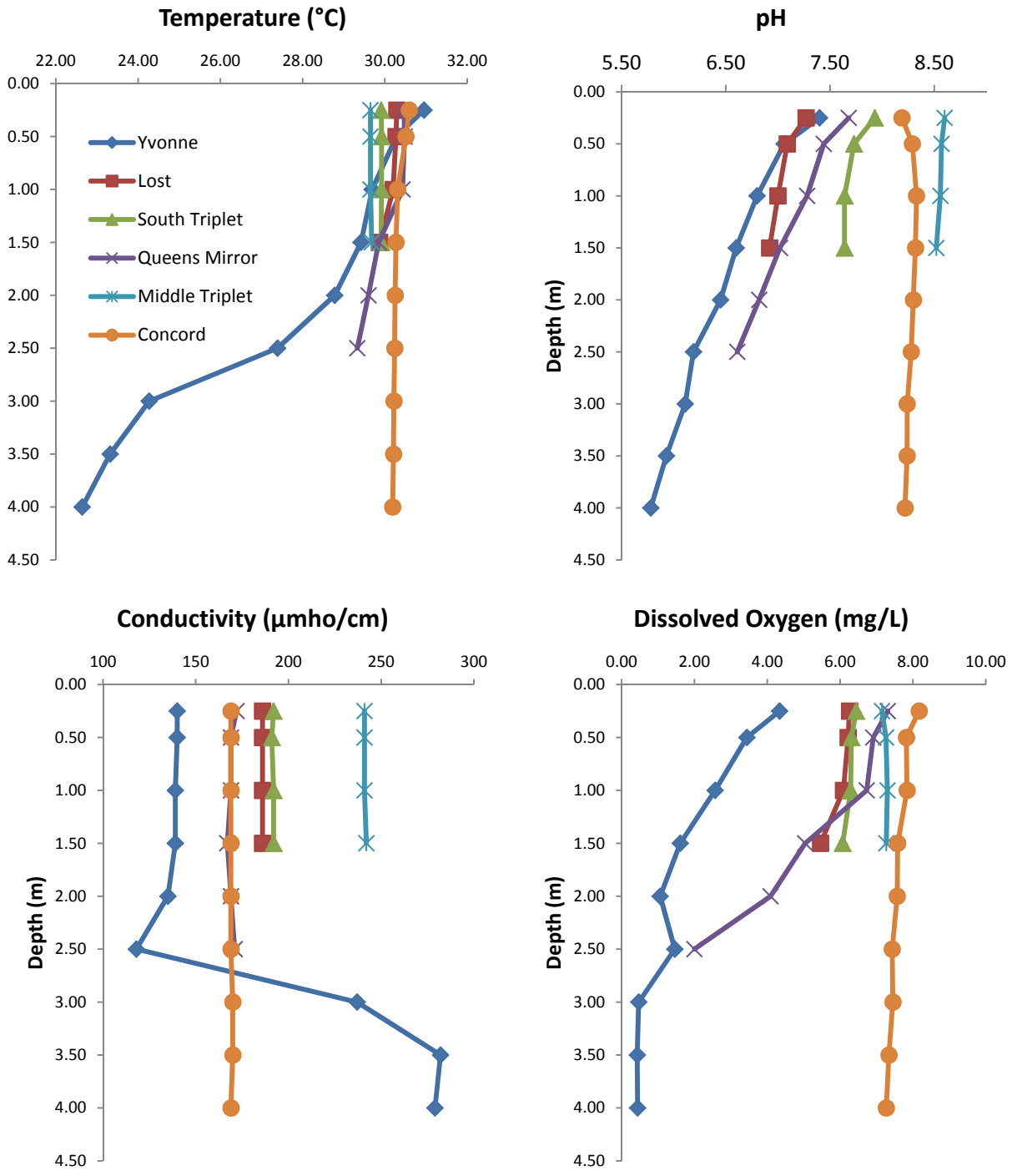


Figure 3-2: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror, Summer 2014 Event.

TABLE 3-3
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 3 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Grassy	9/24/14	8:00	0.25	27.14	7.01	130	N/S	3.28	41.6	84.0	2.00	7.01	72.32	3.0 / W	Cleaer	None	None	water lillies along perimeter	84.30	Normal	Partly Cloudy
			0.5	27.16	6.99	131	N/S	3.29	42.0	92.0											
			1.0	27.17	7.00	131	N/S	3.19	40.2	96.0											
			1.5	27.17	7.00	131	N/S	3.17	39.9	99.0											
			2.0	27.17	6.98	131	N/S	3.10	39.3	100.0											
			2.5	27.17	6.99	131	N/S	3.01	38.3	101.0											
			3.0	27.16	6.98	131	N/S	2.89	36.6	102.0											
			3.5	27.15	6.99	129	N/S	2.73	34.8	102.0											
			4.0	27.07	6.97	124	N/S	2.42	30.2	104.0											
			4.5	26.92	7.08	117	N/S	2.62	32.9	97.0											
			5.0	26.76	7.30	123	N/S	2.60	32.9	91.0											
			5.5	26.30	7.57	145	N/S	1.82	22.9	80.0											
			6.0	24.82	6.68	127	N/S	0.57	6.9	50.0											
			6.5	22.93	6.86	197	N/S	0.51	6.0	-87.0											
			7.0	21.47	6.69	211	N/S	0.49	5.5	-117.0											
Trout	9/24/14	9:05	0.25	27.68	6.58	104	N/S	2.74	34.2	128.0	1.50	4.57	77.74	5.0 / N	Clear	None	None	Perimeter Vegetation and water lillies	- -	Normal	Partly Cloudy
			0.5	27.69	6.63	103	N/S	2.71	34.2	136.0											
			1.0	27.69	6.69	102	N/S	2.68	34.4	133.0											
			1.5	27.68	6.79	101	N/S	2.68	33.9	98.0											
			2.0	27.68	6.81	100	N/S	2.63	33.3	127.0											
			2.5	27.66	6.84	101	N/S	2.58	32.9	125.0											
			3.0	27.65	6.84	100	N/S	2.58	32.6	126.0											
			3.5	27.64	6.84	102	N/S	2.59	32.9	127.0											
			4.0	27.63	6.83	102	N/S	2.58	33.0	125.0											
			4.5	27.63	6.84	126	N/S	2.64	33.6	127.0											
			5.0	27.60	6.83	100	N/S	2.64	33.6	125.0											
Griffin	9/24/14	9:40	0.25	27.61	7.02	131	N/S	3.55	45.3	120.0	1.00	5.79	76.91	5.0 / N	Clear	None	None	Hydrilla, significant algae growth at boat launch location	- -	Normal	Cloudy
			0.5	27.61	7.00	131	N/S	3.51	44.7	123.0											
			1.0	27.60	7.00	131	N/S	3.37	43.2	124.0											
			1.5	27.58	7.00	131	N/S	3.27	41.6	124.0											
			2.0	27.53	7.00	130	N/S	3.31	41.2	125.0											
			2.5	27.50	7.01	130	N/S	3.28	41.4	125.0											
			3.0	27.45	6.98	131	N/S	2.79	36.3	128.0											
			3.5	27.30	6.81	137	N/S	1.04	13.5	130.0											
			4.0	26.94	6.79	136	N/S	1.13	14.3	128.0											
			4.5	26.75	6.76	142	N/S	0.76	9.6	128.0											
			5.0	26.44	6.75	143	N/S	1.02	12.5	128.0											
			5.5	26.23	6.73	134	N/S	1.57	19.6	127.0											
			6.0	26.13	6.71	172	N/S	0.71	9.0	129.0											
Kathryn	9/23/14	11:25	0.25	28.66	9.23	123	N/S	8.88	115.0	28.0	1.00	3.35	78.30	4.0 / S	Clear	None	None	Hydrilla Along Perimeter and Throughout Lake	- -	Normal	Cloudy
			0.5	28.58	9.24	123	N/S	8.92	116.6	38.0											
			1.0	27.78	9.07	121	N/S	7.80	96.4	54.0											
			1.5	27.72	8.95	120	N/S	7.27	92.5	60.0											
			2.0	27.67	8.91	120	N/S	6.88	87.5	63.0											
			2.5	27.65	8.91	120	N/S	7.03	89.5	65.0											
			3.00	27.65	8.90	120	N/S	6.68	86.0	68.0											

TABLE 3-3
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 3 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
North Triplet	9/23/14	9:15	0.25	27.53	7.40	110	N/S	5.95	75.5	133.0	2.00	2.59	80.42	No Wind	Clear	None	None	Hydrilla Along Perimeter	- -	Normal	Mostly Sunny
			0.5	27.51	7.43	110	N/S	5.94	75.3	140.0											
			1.0	27.50	7.43	110	N/S	5.99	76.5	141.0											
			1.5	27.43	7.47	110	N/S	5.84	74.3	143.0											
			2.0	27.40	7.46	110	N/S	5.84	72.5	148.0											
			2.5	27.38	7.45	110	N/S	5.97	75.4	151.0											
Secret	9/23/14	10:30	0.25	28.23	6.94	125	N/S	3.82	49.0	54.0	2.00	3.96	80.13	2.0 / S	Clear	None	None	Perimeter Vegetation and Hydrilla	51.10	Normal	Cloudy
			0.5	28.20	6.93	125	N/S	3.65	46.9	45.8											
			1.0	28.10	6.93	125	N/S	3.62	46.6	40.8											
			1.5	27.96	6.92	125	N/S	3.30	42.2	35.4											
			2.0	27.90	6.91	125	N/S	3.22	41.2	27.6											
			2.5	27.89	6.91	125	N/S	3.12	40.0	29.0											
			3.0	27.88	6.90	125	N/S	3.16	40.4	34.1											
			3.5	27.87	6.87	125	N/S	3.89	36.0	35.2											
			4.0	27.85	6.92	126	N/S	3.01	38.2	35.0											
Concord	9/23/14	12:10	0.25	28.52	7.67	128	N/S	6.5	84	63	0.50	4.57	79.43	5.0 / S	Murky	None	None	No Significant Vegetation Observed	- -	Normal	Cloudy
			0.5	28.55	7.65	128	N/S	6.3	81	77											
			1.0	28.35	7.97	127	N/S	7.2	91	74											
			1.5	28.19	8.14	127	N/S	6.9	87	80											
			2.0	28.18	8.05	127	N/S	6.7	87	88											
			2.5	28.16	7.95	127	N/S	6.5	85	92											
			3.0	28.14	7.75	128	N/S	6.3	81	100											
			3.5	28.07	7.67	128	N/S	5.8	74	106											
			4.0	28.06	7.64	127	N/S	5.8	75	111											
			4.5	28.03	7.09	129	N/S	5.1	66	-50											
Middle Triplet	9/23/14	7:55	0.25	26.50	6.89	113	N/S	6.56	82.1	207.0	1.00	1.37	75.02	No Wind	Clear	None	None	Large Hydrilla Swaths in Lake	50.60	Normal	Partly Cloudy
			0.5	26.50	6.91	113	N/S	6.04	75.0	205.0											
			1.0	26.55	6.93	114	N/S	5.90	75.0	205.0											
			1.5	26.55	6.91	114	N/S	5.28	66.0	203.0											
Queens	9/23/14	16:20	0.25	28.87	6.71	119	N/S	6.56	86.5	50.0	1.00	3.35	76.10	3.0 S	Clear	None	None	Thick Hydrilla at Boat Launch Site	50.60	Normal	Very Cloudy
			0.5	28.45	6.66	119	N/S	6.32	81.5	65.0											
			1.0	26.53	6.45	119	N/S	3.44	43.1	81.0											
			1.5	26.33	6.35	119	N/S	2.27	27.1	87.0											
			2.0	25.92	6.20	120	N/S	0.93	11.6	53.0											
			2.5	25.84	6.19	120	N/S	0.86	10.7	44.0											
			3.0	25.76	6.06	123	N/S	0.75	9.5	-99.0											
South Triplet	9/23/14	8:20	0.25	27.30	6.76	118	N/S	4.26	53.7	115.0	1.00	1.83	75.74	2.0 / NE	Clear	None	None	Significant Hydrilla in Lake	- -	Normal	Partly Cloudy
			0.5	27.32	6.74	118	N/S	4.26	53.7	148.0											
			1.0	27.32	6.74	118	N/S	4.10	51.7	155.0											
			1.5	27.32	6.76	118	N/S	4.15	52.8	159.0											
			2.0	27.33	6.66	118	N/S	4.06	51.2	151.0											

TABLE 3-3
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 3 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Yvonne	9/23/14	15:15	0.25	28.82	6.52	117	N/S	3.30	42.3	25.0	1.00	4.88	79.88	4.0 / S	Clear	None	None	Hydrilla and Cattails. Vegetation Around Perimeter	51.00	Normal	Cloudy
			0.5	27.38	6.50	118	N/S	2.78	35.0	45.0											
			1.0	27.05	6.48	116	N/S	2.34	30.0	48.0											
			1.5	26.80	6.45	116	N/S	2.04	23.8	48.0											
			2.0	26.74	6.40	118	N/S	1.87	24.0	47.0											
			2.5	26.64	6.38	115	N/S	1.82	22.6	17.0											
			3.0	26.60	6.36	118	N/S	1.83	22.8	-6.0											
			3.5	26.48	6.35	127	N/S	1.86	23.0	-27.0											
			4.0	25.82	6.05	156	N/S	1.90	23.9	-88.0											
			4.5	25.81	6.03	156	N/S	1.34	16.7	-92.0											
			5.0	25.81	6.03	157	N/S	1.27	15.7	-93.0											
Lost	9/23/14	14:10	0.25	28.78	6.53	126	N/S	6.74	90.0	92.0	1.00	2.13	77.90	2.0 / S	Clear	None	None	Hydrilla and Lillies Along Perimeters	- -	Normal	Cloudy
			0.5	28.30	6.40	125	N/S	5.81	75.5	111.0											
			1.0	27.38	6.36	125	N/S	3.83	49.0	122.0											
			1.5	27.26	6.35	124	N/S	3.76	47.3	127.0											
			2.0	27.10	6.41	125	N/S	2.75	34.3	98.0											

m = Meters
°C = Degree Celicius
s.u. = Standard Units
µmho/cm = micromhos per centimeter
ug/l = micrograms per liter
mg/l = milligrams per liter
% Sat = Percent of Saturation
mv = millivolts
°F = Degree Fahrenheit
ft = Feet

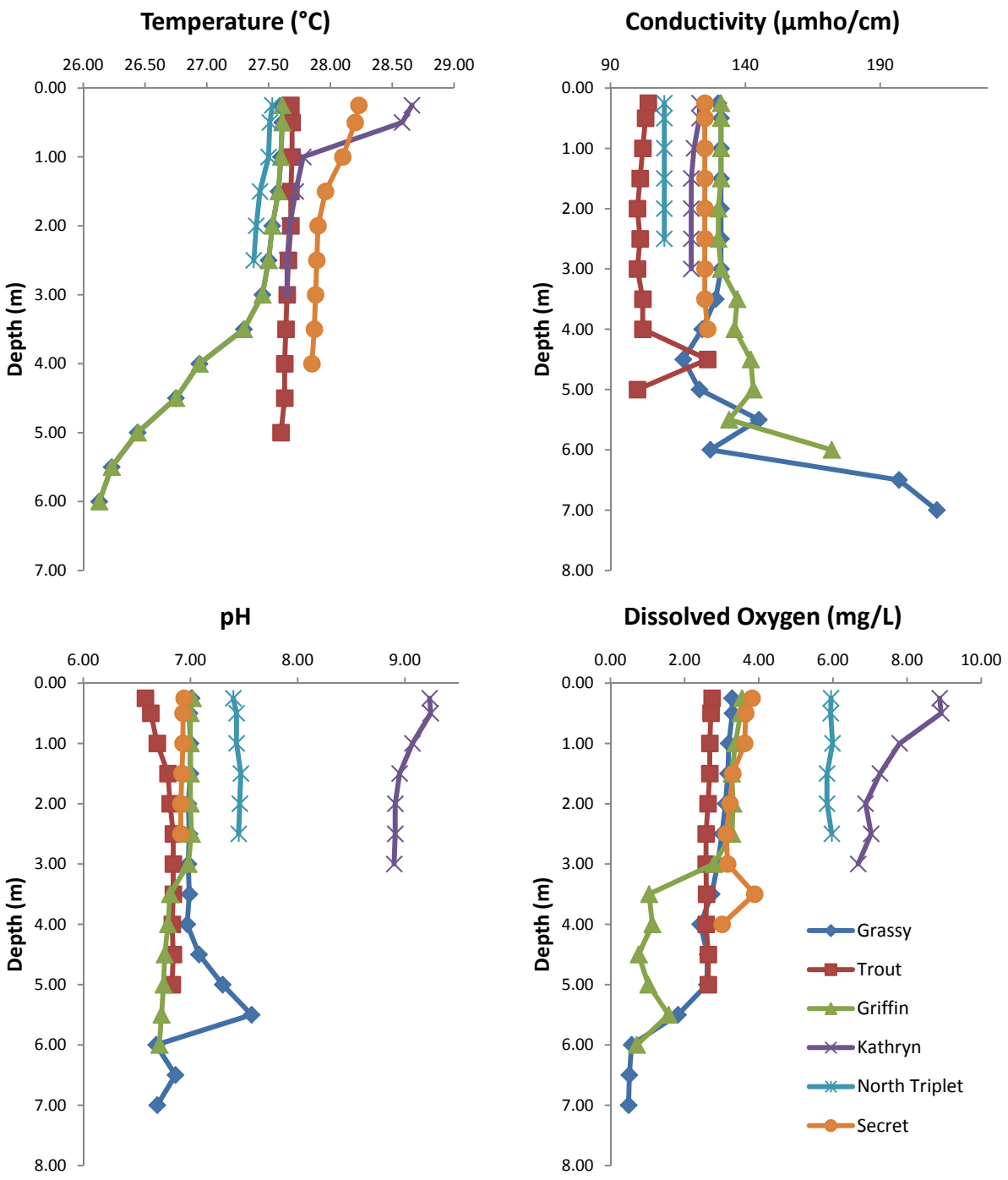


Figure 3-3: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Fall 2014 Event.

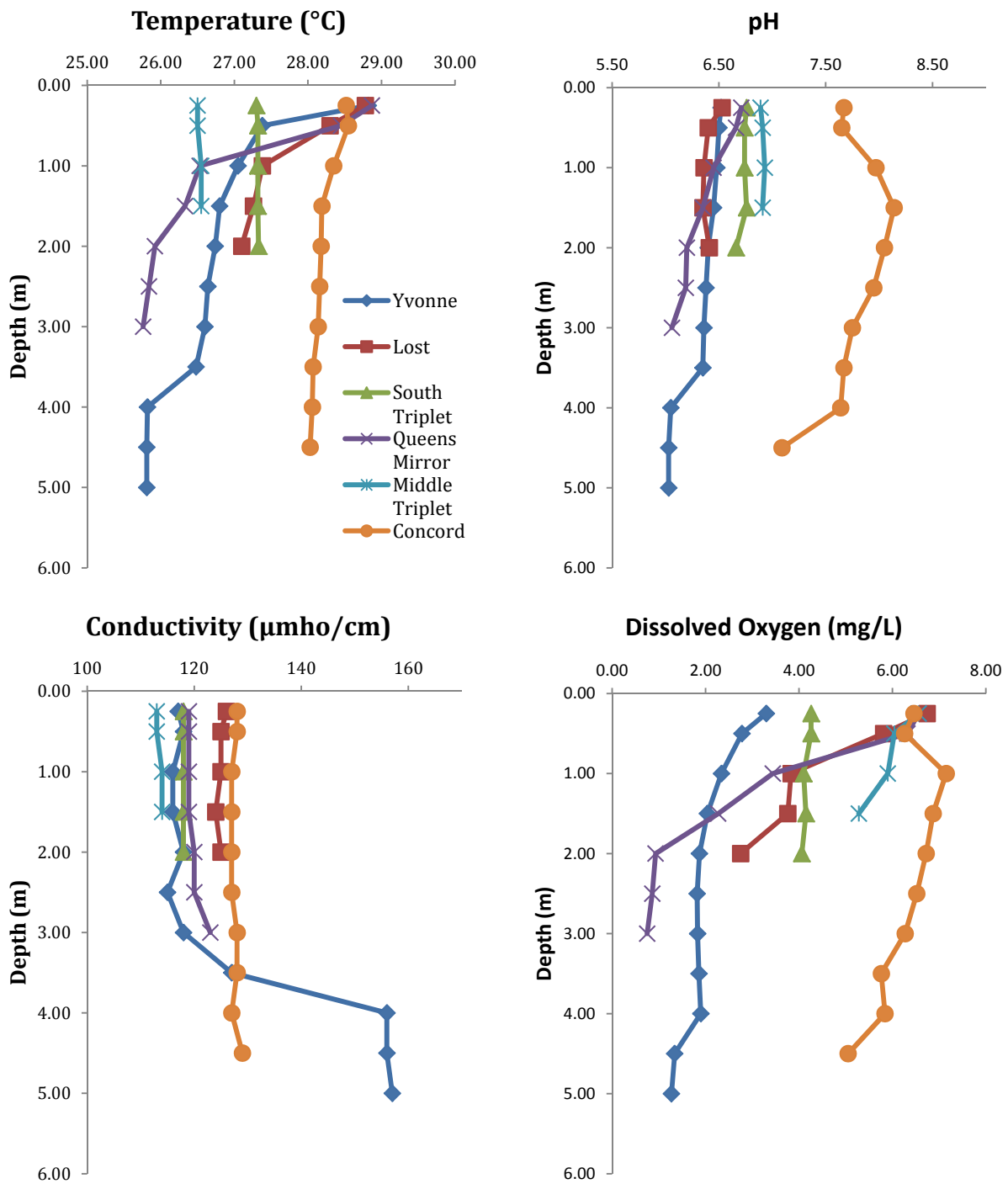


Figure 3-4: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Fall 2014 Event.

TABLE 3-4
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 4 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Grassy	12/17/14	8:10	0.25	16.24	5.60	170	N/S	7.09	71.7	211.0	3.00	8.13	62.00	no wind	Clear	None	None	floating vegetation on eastern shore. Minor hydrilla at boat launch	83.50	Normal	Clear
			0.5	16.24	5.63	170	N/S	7.16	72.7	210.0											
			1.0	16.26	5.73	182	N/S	6.63	67.0	208.0											
			1.5	16.14	5.79	170	N/S	5.61	56.8	204.4											
			2.0	16.00	5.82	170	N/S	5.06	51.0	205.4											
			2.5	15.92	5.84	170	N/S	4.66	47.1	204.6											
			3.0	15.88	5.87	170	N/S	4.58	46.4	204.3											
			3.5	15.84	5.90	170	N/S	4.40	44.3	203.6											
			4.0	15.91	5.82	170	N/S	4.27	43.1	201.5											
			4.5	15.80	5.96	170	N/S	4.22	42.5	202.5											
			5.0	15.84	6.04	173	N/S	5.72	57.9	196.5											
			5.5	16.25	6.32	170	N/S	5.64	57.8	179.7											
			6.0	16.30	6.36	170	N/S	5.33	54.7	176.3											
			6.5	16.18	6.37	170	N/S	5.10	52.4	174.6											
			7.0	16.16	6.36	170	N/S	5.10	52.1	173.0											
			7.5	16.08	6.31	171	N/S	5.17	52.5	174.8											
			8.0	16.02	6.30	171	N/S	5.18	52.6	173.9											
Trout	12/17/14	10:30	0.25	16.65	6.99	133	N/S	8.74	89.0	133.7	1.50	5.34	71.00	2 / NE	ightly Murl	None	None	Some floating vegetation	- -	Normal	Sunny
			0.5	16.63	6.76	133	N/S	8.46	86.8	138.4											
			1.0	16.56	6.71	133	N/S	8.43	86.3	138.8											
			1.5	16.51	6.74	133	N/S	7.92	80.9	136.0											
			2.0	16.40	6.70	133	N/S	7.50	76.9	137.0											
			2.5	16.30	6.71	133	N/S	6.96	70.9	138.7											
			3.0	16.17	6.72	133	N/S	6.60	66.8	137.0											
			3.5	16.12	6.72	133	N/S	5.99	60.8	135.6											
			4.0	16.07	6.68	133	N/S	5.62	56.8	140.5											
			4.5	16.05	6.71	133	N/S	5.30	53.8	140.5											
			5.0	16.52	7.01	133	N/S	6.94	71.1	118.4											
Griffin	12/17/14	8:50	0.25	16.69	6.28	165	N/S	9.05	93.5	170.0	1.75	6.28	69.70	4.5/E	Clear	None	None	Algal growth at on water surface throughout lake. Hydrilla near shore	- -	Normal	Sunny
			0.5	16.69	6.31	166	N/S	9.12	94.0	169.5											
			1.0	16.69	6.37	165	N/S	8.91	92.3	171.8											
			1.5	16.61	6.39	165	N/S	8.27	84.3	171.5											
			2.0	16.45	6.29	165	N/S	7.91	80.9	173.8											
			2.5	16.40	6.33	166	N/S	7.58	77.5	174.7											
			3.0	16.35	6.35	166	N/S	7.36	75.1	175.2											
			3.5	16.32	6.37	165	N/S	7.10	72.2	176.8											
			4.0	16.28	6.39	165	N/S	6.86	70.0	174.0											
			4.5	16.26	6.38	166	N/S	6.65	67.7	174.7											
			5.0	16.62	6.72	166	N/S	7.37	76.0	114.5											
			5.5	16.48	6.59	165	N/S	7.70	78.6	121.3											
			6.0	16.51	6.63	163	N/S	7.18	73.9	118.6											
Kathryn	12/16/14	14:49	0.25	18.37	6.30	157	N/S	9.0	96	130	1.75	2.13	75.00	5.0 / SSW	Clear	None	None	Hydrilla thoughout lake	- -	Normal	Sunny
			0.5	18.30	6.09	156	N/S	9.5	102	137											
			1.0	15.63	6.20	160	N/S	8.2	82	136											
			1.5	15.43	6.16	158	N/S	7.3	71	139											
			2.0	15.30	6.17	158	N/S	6.1	61	142											

TABLE 3-4
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 4 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
N Trip	12/16/14	9:30	0.25	14.90	5.09	146	N/S	6.71	65.9	232.5	1.75	1.86	60.00	No Wind	Clear	None	None	Hydrilla in shallow areas near bridge	- -	Normal	Sunny
			0.5	14.95	5.12	146	N/S	6.68	66.0	246.5											
			1.0	14.81	5.38	145	N/S	6.72	66.1	240.2											
			1.5	14.79	5.39	145	N/S	6.26	61.6	243.7											
Secret	12/16/14	15:58	0.25	17.75	6.50	161	N/S	6.84	71.9	159.7	2.25	3.70	73.00	6.0 / W	Slightly Murky	None	None	Some hydrilla in lake	51.00	Normal	Sunny
			0.5	17.61	6.33	161	N/S	6.98	71.9	159.0											
			1.0	16.08	6.25	161	N/S	5.50	56.0	159.2											
			1.5	15.91	6.26	160	N/S	4.59	46.3	159.5											
			2.0	15.74	6.21	160	N/S	4.09	41.1	160.0											
			2.5	15.64	6.19	160	N/S	4.12	41.2	159.0											
			3.0	15.60	6.22	161	N/S	3.91	39.4	158.0											
			3.5	15.55	6.21	160	N/S	3.74	37.6	159.0											
Concord	12/16/14	16:56	0.25	17.68	6.52	158	N/S	9.1	95	151	0.75	3.72	75.00	no wind	Murky water / greenish tint	None	None	Some hydrilla at boat launch	- -	Normal	Cloudy
			0.5	17.66	6.47	158	N/S	9.2	97	150											
			1.0	17.21	6.50	158	N/S	9.5	99	151											
			1.5	16.51	6.53	157	N/S	9.3	95	154											
			2.0	16.31	6.53	156	N/S	7.9	80	156											
			2.5	16.20	6.50	156	N/S	6.7	68	156											
			3.0	16.15	6.54	156	N/S	5.8	58	157											
			3.5	16.11	6.50	156	N/S	5.4	55	159											
M Trip	12/16/14	8:20	0.25	14.24	4.42	148	N/S	7.70	74.9	314.2	0.79	0.79	56.50	No Wind	Clear	None	None	Established hydrilla in lake	50.60	Normal	Sunny
			0.5	14.25	4.80	145	N/S	7.53	73.5	304.0											
Queens	12/17/14	12:00	0.25	16.26	7.30	156	N/S	12.04	122.9	118.3	1.00	3.35	76.10	3.0 S	Clear	None	None	Thick Hydrilla at Boat Launch Site and Along Perimeter of Lake	50.60	Normal	Very Cloudy
			0.5	16.22	7.14	156	N/S	12.19	123.1	125.2											
			1.0	15.56	7.04	157	N/S	11.84	119.0	131.5											
			1.5	14.70	7.00	156	N/S	10.55	113.4	130.5											
			2.0	14.46	6.95	156	N/S	9.44	92.3	133.7											
			2.5	14.32	6.93	156	N/S	8.58	83.2	133.6											
			3.0	14.33	6.91	156	N/S	7.55	74.3	132.5											
S Trip	12/17/14	8:20	0.25	16.16	7.25	148	N/S	11.50	119.3	132.4	0.75	2.35	78.00	no wind	Clear	None	None	Lilly and hydrilla along bank. Some floating vegetation in center of lake.	- -	Normal	Sunny
			0.5	15.69	7.02	148	N/S	11.90	119.0	137.4											
			1.0	15.34	7.03	148	N/S	11.46	114.7	136.0											
			1.5	14.67	7.02	150	N/S	8.42	82.6	132.9											
			2.0	14.61	6.94	150	N/S	8.05	71.2	135.4											

TABLE 3-4
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 4 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Yvonne	12/16/14	12:43	0.25	15.00	5.87	117	N/S	1.98	20.2	127.0	2.50	4.88	69.00	no wind	Clear	None	None	Established hydrilla in lake	51.60	Normal	Sunny
			0.5	14.90	5.85	118	N/S	1.80	18.0	129.0											
			1.0	14.35	5.82	116	N/S	1.70	16.9	127.7											
			1.5	14.26	5.82	116	N/S	1.69	16.4	128.5											
			2.0	14.18	5.81	118	N/S	1.55	15.3	128.4											
			2.5	14.14	5.79	115	N/S	1.48	14.4	127.5											
			3.0	14.09	5.83	118	N/S	1.32	12.9	126.8											
			3.5	14.06	5.82	127	N/S	1.27	12.4	124.0											
			4.0	14.00	5.84	156	N/S	1.28	12.5	123.1											
			4.5	14.00	5.85	156	N/S	1.21	11.8	123.0											
			5.0	15.10	6.09	157	N/S	2.27	22.6	116.4											
Lost	12/17/14	14:00	0.25	17.49	7.10	150	N/S	9.66	100.2	93.4	1.75	2.35	74.00	no wind	Clear	None	None	Hydrilla around shore	- -	Normal	Cloudy
			0.50	17.28	7.20	151	N/S	9.50	99.3	103.4											
			1.00	15.21	7.18	150	N/S	8.74	86.6	117.8											
			1.50	14.77	7.05	149	N/S	7.08	70.2	123.3											
			2.0	14.57	6.94	150	N/S	7.08	69.8	127.0											

m = Meters
°C = Degree Celicius
s.u. = Standard Units
µmho/cm = micromhos per centimeter
ug/l = micrograms per liter
mg/l = milligrams per liter
% Sat = Percent of Saturation
mv = millivolts
°F = Degree Fahrenheit
ft = Feet

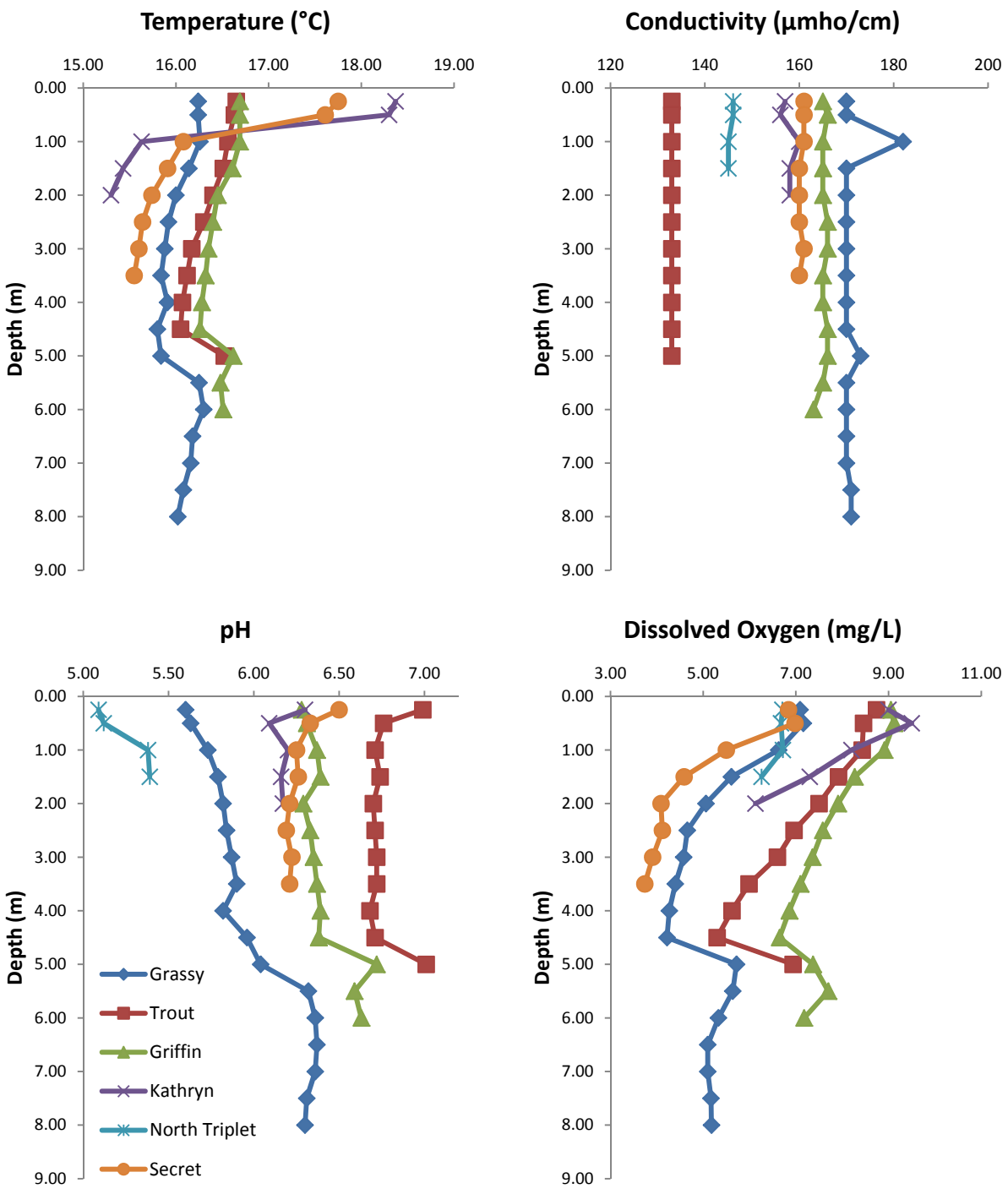


Figure 3-5: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Winter 2014 Event

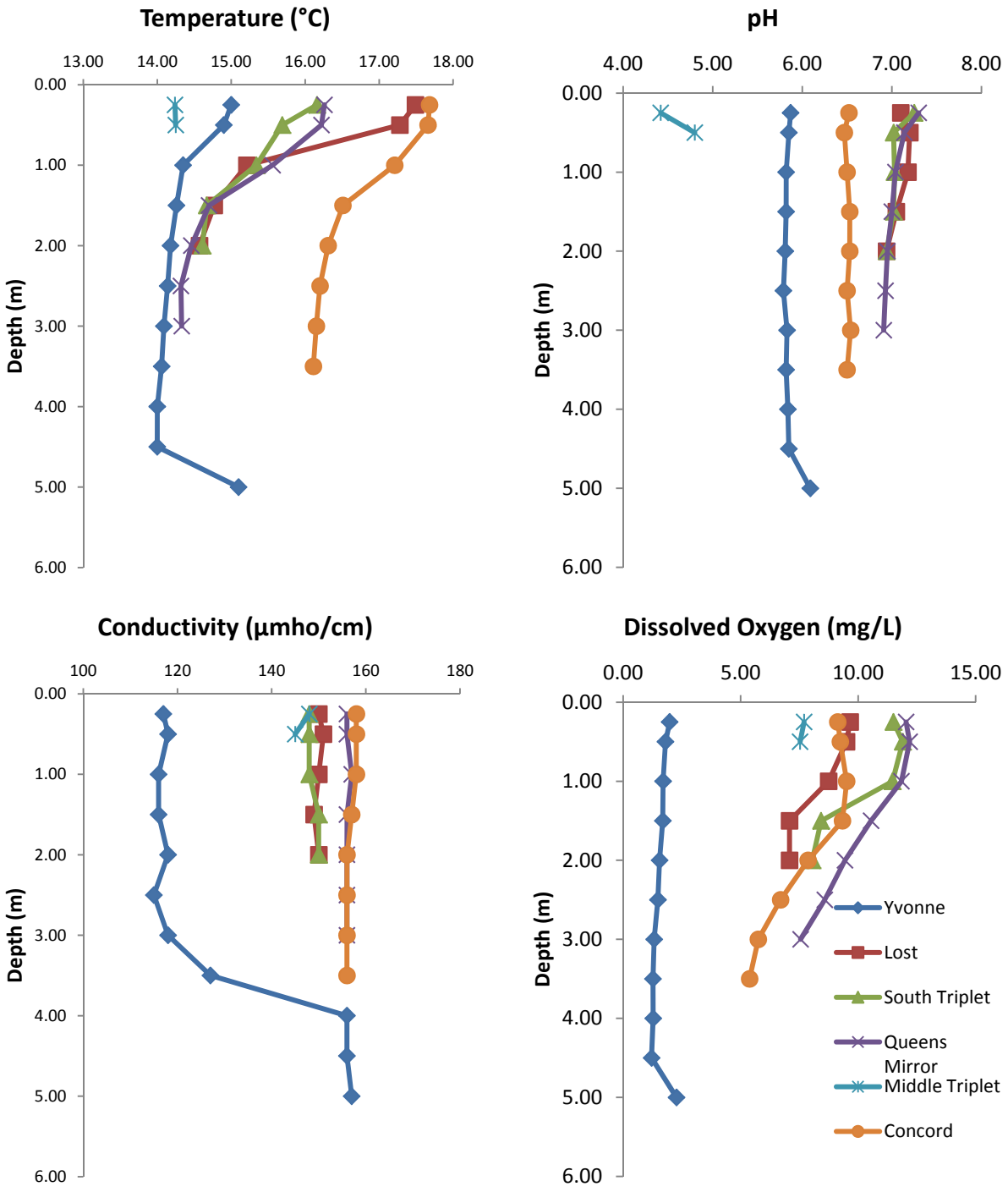


Figure 3-6: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Winter 2014 Event.

TABLE 3-5
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 1 2015
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Grassy	3/24/15	16:06	0.25	25.50	7.60	176	N/S	7.34	89.5	50.0	3.00	6.40	81.50	2.0 N	very clear	none	None	Lillies and other vegetation along the bank.	83.20	Normal	Partly cloudy
			0.50	25.45	7.49	175	N/S	7.38	90.0	59.9											
			1.00	25.01	7.48	174	N/S	7.72	94.3	70.0											
			1.50	24.67	7.45	173	N/S	7.74	93.0	74.5											
			2.00	24.36	7.31	171	N/S	6.30	75.2	78.2											
			2.50	21.89	7.17	158	N/S	4.07	46.8	82.0											
			3.00	20.25	6.79	151	N/S	1.52	20.9	87.7											
			3.50	18..69	6.75	145	N/S	0.16	1.6	83.5											
			4.00	17.59	6.68	140	N/S	0.08	0.9	82.7											
			4.50	16.59	6.59	137	N/S	0.04	0.4	31.0											
			5.00	16.03	6.53	137	N/S	0.02	0.2	-22.0											
			5.50	15.81	6.48	137	N/S	0.05	0.4	-49.9											
			6.00	15.66	6.48	137	N/S	0.03	0.2	-74.8											
			6.50	15.62	6.47	137	N/S	0.05	0.5	-89.5											
Trout	3/24/15	14:26	0.25	25.34	7.42	139	N/S	7.34	88.00	71.4	1.75	5.49	81.90	2 N	Clear	None	None	Large amount of lillies near the bank.	- -	Normal	Overcast
			0.50	25.28	7.18	139	N/S	7.29	88.80	73.5											
			1.00	25.17	7.14	138	N/S	7.08	86.02	80.1											
			1.50	24.71	7.08	137	N/S	6.70	80.40	87.6											
			2.00	23.51	7.19	131	N/S	9.11	107.10	91.6											
			2.50	21.07	7.39	123	N/S	10.24	114.60	95.7											
			3.00	19.41	7.31	119	N/S	4.58	50.80	102.0											
			3.50	18.03	6.73	114	N/S	1.17	12.00	98.3											
			4.00	17.26	6.68	112	N/S	0.13	1.30	78.2											
			4.50	16.70	6.60	113	N/S	0.06	0.60	23.0											
			5.00	16.49	6.49	115	N/S	0.05	0.40	-27.8											
			5.50	16.42	6.49	115	N/S	0.04	0.40	-49.8											
Griffin	3/24/15	15:17	0.25	25.94	7.53	185	N/S	7.20	88.7	51.1	1.75	5.63	85.30	5.1 E	clear but has visable suspende d solids	none	none	Floating vegetation near bank.	- -	normal	Mostly cloudy
			0.50	25.82	7.54	185	N/S	7.37	90.1	55.8											
			1.00	25.21	7.56	183	N/S	7.40	90.3	60.6											
			1.50	25.09	7.61	182	N/S	7.48	90.0	62.0											
			2.00	24.40	7.57	176	N/S	7.41	92.7	69.9											
			2.50	20.78	7.47	158	N/S	8.79	98.7	76.2											
			3.00	18.82	7.27	150	N/S	6.35	68.4	83.9											
			3.50	17.65	7.04	146	N/S	2.94	30.8	87.7											
			4.00	17.12	6.91	144	N/S	1.20	11.8	88.3											
			4.50	16.75	6.81	144	N/S	0.35	3.6	87.4											
			5.00	16.67	6.77	143	N/S	0.25	2.6	85.9											
			5.50	16.58	6.75	144	N/S	0.06	0.7	23.1											
Kathryn	3/24/15	17:40	0.25	25.70	9.52	154	N/S	10.4	128.0	20.0	2.25	3.05	78.30	4.6 NNE	Clear	Water flowing into the Lake via canal from Seminola Blvd.	none	Very dense hydrilla in middle of lake reaching close to the surface. Broad leaf aquatic grass in canal from Seminola Blvd.	- -	normal	Partly cloudy
			0.50	25.67	9.65	155	N/S	10.5	128.3	13.1											
			1.00	25.01	9.54	155	N/S	10.6	127.1	15.2											
			1.50	24.16	9.26	155	N/S	9.2	110.7	20.3											
			2.00	21.92	8.00	149	N/S	6.5	74.4	71.9											
			2.50	19.72	7.67	143	N/S	1.6	14.9	72.0											
			3.00	18.28	7.10	145	N/S	0.1	1.0	-66.9											

TABLE 3-5
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 1 2015
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
N Trip	3/24/15		0.25	24.64	7.55	158	N/S	6.68	80.0	106.0	2.00	2.74	67.00	2.8 NNW	Clear	none	none	Submerged hydrilla & other aquatic vegetation. Minimal floating vegetaton	- -	normal	Overcast & misty.
			0.50	24.64	7.54	157	N/S	6.65	80.0	109.6											
			1.00	24.64	7.53	157	N/S	6.55	79.0	112.0											
			1.50	24.59	7.35	157	N/S	6.51	78.3	59.8											
			2.00	22.23	7.33	146	N/S	5.11	58.2	75.9											
			2.50	20.13	7.08	139	N/S	2.15	23.4	78.7											
Secret	3/24/15	18:30	0.25	26.28	7.65	177	N/S	6.33	78.5	74.0	2.50	3.35	78.60	no wind	Clear	None	None	Lillies along some of the shore line.	51.70	normal	Partly cloudy
			0.50	26.26	7.63	177	N/S	6.25	77.5	75.0											
			1.00	25.53	7.65	174	N/S	6.89	82.5	74.2											
			1.50	25.14	7.60	173	N/S	6.11	74.2	75.5											
			2.00	24.83	7.49	172	N/S	5.38	64.2	77.5											
			2.50	23.74	7.34	166	N/S	3.27	39.0	77.4											
			3.00	21.75	7.12	157	N/S	0.24	2.6	74.0											
Concord	3/24/15	17:00	0.25	25.97	7.71	184.00	N/S	7.98	98.5	53.0	1.00	3.35	83.60	no wind	turbid	none	none	no entry	- -	normal	Partly Cloudy
			0.50	25.94	7.73	183.00	N/S	7.88	97.2	57.9											
			1.00	25.76	7.69	183.00	N/S	7.45	90.9	59.7											
			1.50	25.25	7.53	181.00	N/S	6.00	72.1	64.5											
			2.00	25.22	7.44	180.00	N/S	5.75	69.4	67.1											
			2.50	25.08	7.37	180.00	N/S	5.46	65.8	69.5											
			3.00	25.01	7.30	180.00	N/S	4.99	60.4	70.9											
M Trip	3/24/15	7:27	0.25	23.92	7.60	157	N/S	6.18	72.9	100.2	1.25	1.25	68.00	3 NNW	clear	none	none	Hydrilla in lake & floating vegettion at banks.	50.30	normal	Overcast & misty
			0.50	23.92	7.54	158	N/S	6.12	73.0	100.0											
			1.00	23.90	7.47	158	N/S	5.14	61.0	100.3											
Queens	3/24/15	9:15	0.25	24.11	7.08	154	N/S	6.73	80.2	90.0	0.75	2.80	64.40	1.5 NNW	Clear	none	none	Some floating vegetation along bank.	50.30	normal	Overcast
			0.50	24.11	7.13	154	N/S	6.81	81.0	93.2											
			1.00	24.10	7.14	154	N/S	6.80	80.9	96.1											
			1.50	23.21	6.90	144	N/S	0.45	4.8	90.0											
			2.00	20.19	6.73	148	N/S	0.11	1.2	11.0											
			2.50	18.22	6.63	147	N/S	0.06	0.7	-100.0											
S Trip	3/24/15	8:45	0.25	24.34	7.12	156	N/S	5.32	63.7	91.0	1.00	1.92	68.30	3.0 N	Clear	none	none	floating vegetation along bank & some in center of lake	- -	normal	Overcast & misty
			0.50	24.34	7.10	156	N/S	5.28	63.1	94.9											
			1.00	24.34	7.08	156	N/S	5.15	61.5	97.2											
			1.50	24.32	7.09	155	N/S	4.93	58.7	100.5											

TABLE 3-5
FIELD PARAMETER SUMMARY
LAKE MONITORING RESULTS - QUARTER 1 2015
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Time	Depth (m)	Temp (°C)	pH (s.u.)	SpCond (µmho/cm)	TDS (mg/l)	DO (mg/l)	DO (% Sat)	ORP (mv)	Secchi (m)	Bottom Depth (m)	Air Temp (°F)	Wind Speed/ Direction	Water Clarity/ Color	Observed Inflow/ Outfall	Observed Water Quality Issues	Vegetation	Staff Gauge Reading (ft)	Water Level	Weather
Yvonne	3/24/15	10:57	0.25	23.51	6.71	167	N/S	0.71	8.4	-60.0	1.25	5.33	77.00	2 - 4 E	Clear	None	none	Hydrilla & lilly pads in lake.	51.20	normal	overcast
			0.50	23.55	6.78	167	N/S	0.69	8.3	-30.0											
			1.00	23.50	6.76	167	N/S	0.76	8.8	-17.0											
			1.50	21.40	6.85	163	N/S	0.25	2.2	-38.0											
			2.00	19.20	6.82	148	N/S	0.10	1.1	-36.0											
			2.50	17.46	6.79	135	N/S	0.12	1.2	-30.6											
			3.00	16.54	6.75	127	N/S	0.11	1.2	-28.5											
			3.50	16.13	6.71	124	N/S	0.09	1.0	-28.4											
			4.00	15.96	6.63	124	N/S	0.14	1.4	-28.7											
			4.50	15.89	6.60	125	N/S	0.16	1.4	-31.0											
			5.00	15.92	6.44	171	N/S	0.20	2.0	-65.4											
Lost	3/24/15	11:53	0.25	24.78	6.95	167	N/S	4.44	53.6	35.0	1.50	1.74	81.50	2.0 SW	Clear	none	none	Floating vegetation around banks.	- -	normal	Overcast
			0.50	24.70	6.80	166	N/S	4.44	53.5	50.0											
			1.00	24.54	6.79	166	N/S	4.26	51.3	66.0											
			1.50	24.30	6.75	165	N/S	3.78	45.1	75.0											

m = Meters
°C = Degree Celicius
s.u. = Standard Units
µmho/cm = micromhos per centimeter
ug/l = micrograms per liter
mg/l = milligrams per liter
% Sat = Percent of Saturation
mv = millivolts
°F = Degree Fahrenheit
ft = Feet

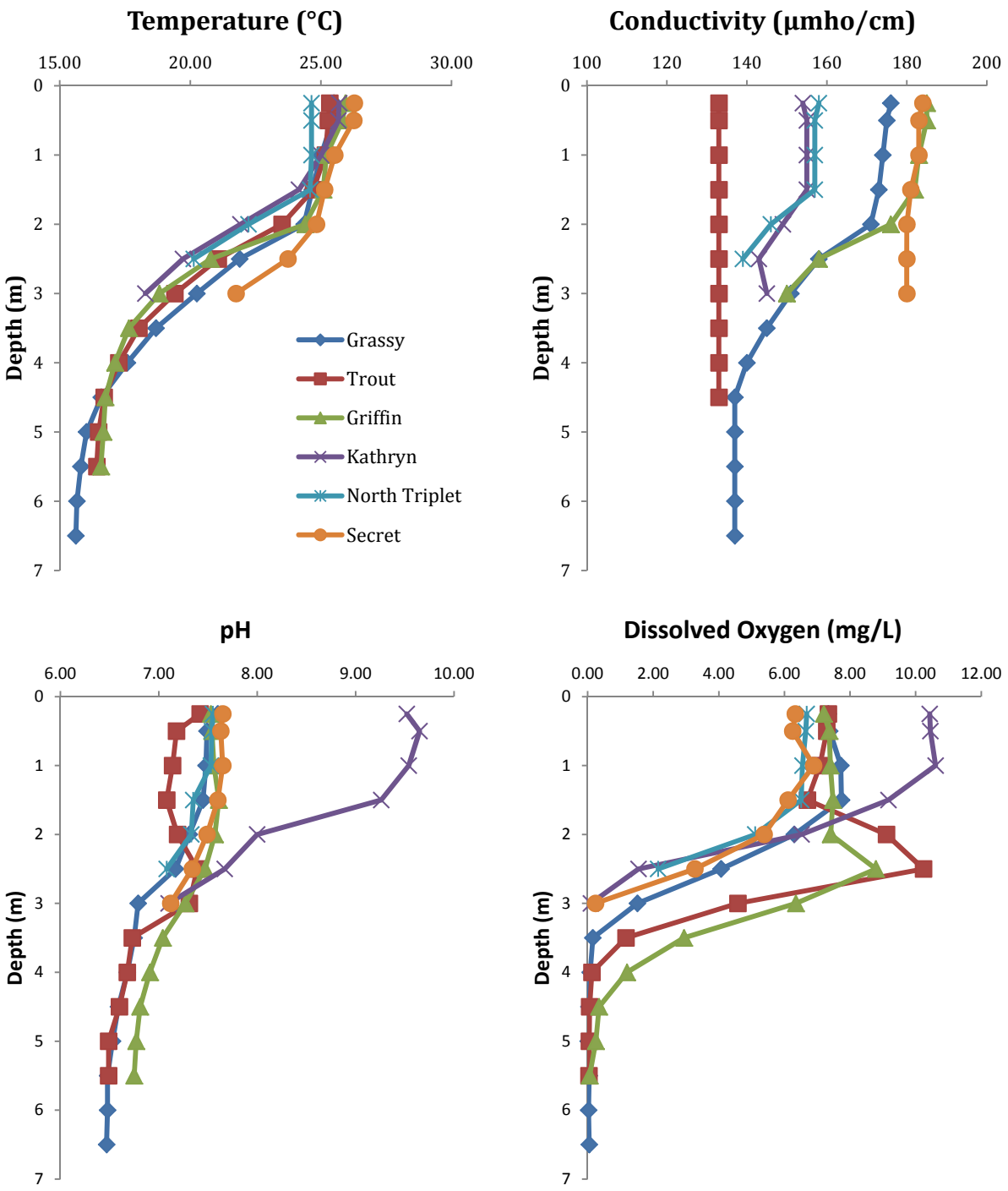


Figure 3-7: Vertical Field Profiles for Lakes Grassy, Trout, Griffin, Kathryn, North Triplet and Secret for Spring 2015 Event.

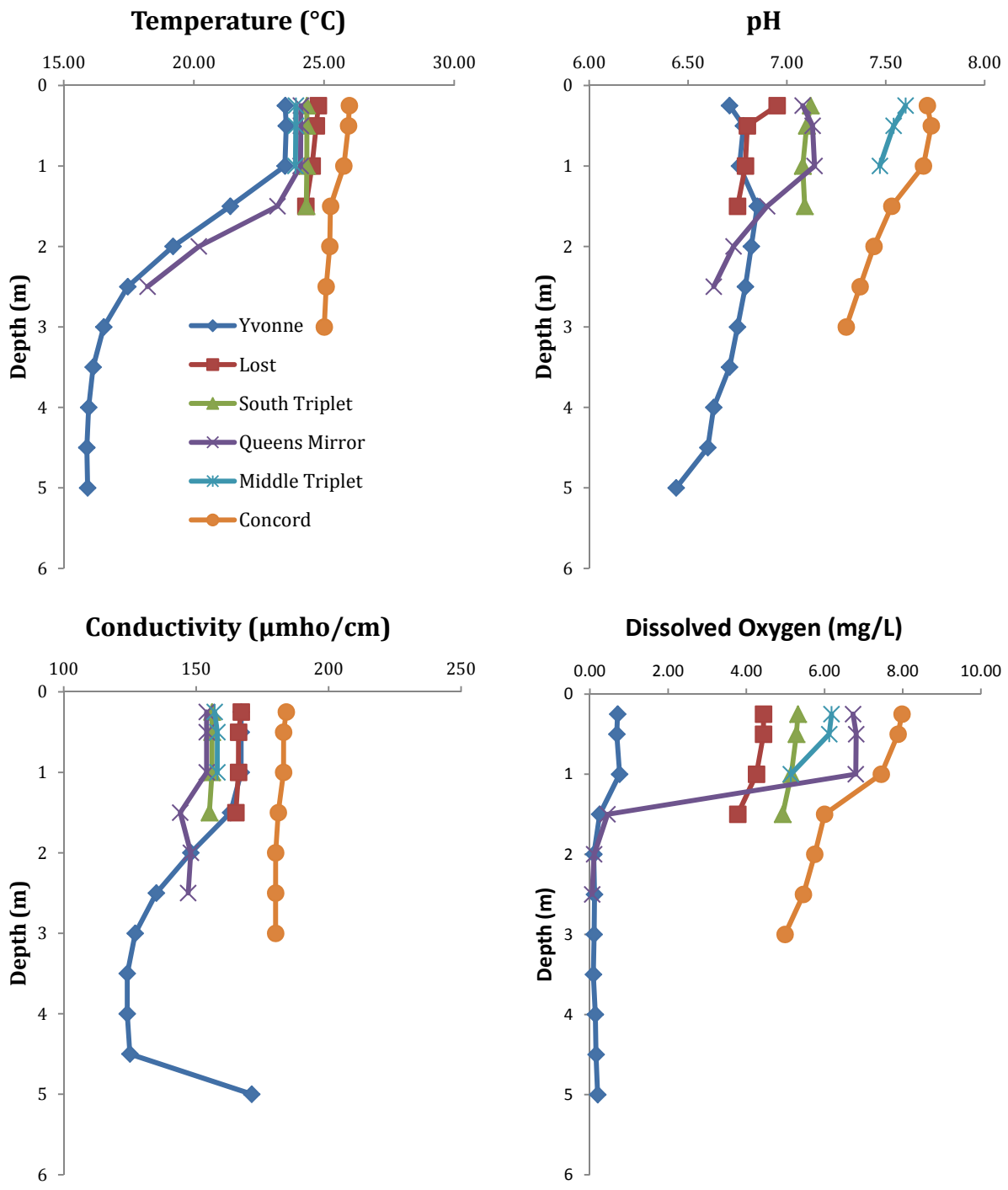


Figure 3-8: Vertical Field Profiles for Lakes Yvonne, Lost, South Triplet, Middle Triplet, Concord and Queens Mirror. Spring 2015 Event.

3.3 LABORATORY MEASUREMENTS

The lake water surface laboratory samples were collected for a combination of general parameters, biological parameters, and nutrients for each of the four monitoring periods. A discussion of each parameter is provided below. Refer to **Tables 3-6** through **3-9** for detailed information.

3.3.1 General Parameters

3.3.1.1 Alkalinity

EPA defines alkalinity as a measure of the capacity of water to neutralize acids, and is a measurement of the buffering capacity available within a waterbody to resist changes in pH. The Orlando Ridge lakes typical alkalinity values (i.e., between the 25th and 75th percentiles) range from 29.8 – 56.6 mg/L. Generally, during the Current Quarterly Event, the Casselberry Lakes were observed to fall within these typical values. Lake Lost, however, was consistently below these values in the 24-27 mg/L range, indicating that this lake is moderately less buffered against pH swings than other Casselberry Lakes. However, comparing Lake Lost's vertical pH profile measurements did not indicate that this lake has considerable pH fluctuations[7].

3.3.1.2 Color

As described in previous Casselberry Lakes Monitoring report, color is a general measure of dissolved organic molecules in the water column, typically derived from humic acids, tannins, and lignins. Typical Orlando Ridge lakes water color ranges from 10-17, with minimum and maximum values of 0 and 68, respectively. Excess Color may result in lowered pH values, and could be a contributing factor to thermal stratification.

Per **Tables 3-6** through **3-9** below, high color levels, often in excess of 100, were measured in Queens Mirror Lake, with South and Middle Triplet Lakes also measuring near or at 100. This indicates that Queens Mirror Lake may be the source of the Triplet Lakes higher color levels, as Queens Mirror Lake flows north through the Triplet chain. Lakes Kathryn and Lost were also measured as moderately higher than typical Orlando Ridge lakes, with color measurements in the 50-80 range.

3.3.1.3 Turbidity

EPA defines turbidity as a measure of water clarity, which can determine the level of suspended material in a water body which decreases the passage of light through the water. Suspended materials can include soil particles, algae, plankton, microbes, and other substances. Higher turbidity can increase water temperature because these suspended particles absorb more heat, which, in turn, decreases the DO concentrations in water because warm water hold less DO than colder waters. Higher turbidity can also have a detrimental impact on aquatic life, as suspended soils can clog fish gills and smother fish eggs and benthic macroinvertebrates when the particles settle to the lake bottom[8].

---

[7] http://water.epa.gov/type/rsl/monitoring/vms510.cfm

[8] http://water.epa.gov/type/rsl/monitoring/vms55.cfm

Consistent with previous Casselberry Lakes Monitoring Reports, the turbidity levels in Casselberry Lakes were low (NTUs less than 5) to moderate (NTUs between 5 and 10). All of the lake systems exhibited turbidity levels lower than the Class III criterion of 29 NTU above background concentrations, as defined in chapter 62-302.530 F.A.C.

3.3.1.4 Biochemical Oxygen Demand (BOD)

EPA defines BOD as the amount of oxygen consumed by microorganisms in breaking down organic matter. BOD also measures the chemical oxidation of inorganic matter (i.e., the extraction of oxygen from water via chemical reaction). BOD can directly impact the amount of DO in water bodies. The more BOD present, the more rapidly oxygen is consumed by microorganisms, resulting in depleted DO in a water body. Common sources of BOD include leaves, woody debris, dead plants and animals, animal manure, wastewater treatment effluent, septic systems, and urban stormwater runoff.

As previously demonstrated in Casselberry Lakes Monitoring Reports, typical values of BOD observed in urban lake systems are approximately 2-3 mg/L or less. While there is no specific BOD threshold for Class III water bodies, the amount of BOD present must not exceed values which would cause DO to be depressed below the limit established (i.e., 5.0 mg/L). The measured BOD in the Current Quarterly Events indicate that BOD is generally less than 3 mg/L, with slightly elevated ranges in several lakes during the Summer 2014 Event, with Lake Griffin experiencing the highest BOD concentration of 7.2 mg/L. Some other lakes had elevated BOD concentrations above 3 mg/L in various monitoring periods, but none other exceeded 5 mg/L.

3.3.2 Nutrients

3.3.2.1 Nitrogen Species

Consistent with previous Casselberry Lakes Monitoring Reports, monitored lake systems were found to have low levels of nitrate + nitrite (NO_x) and ammonia (NH_3). Measured values of NH_3 and NO_x less than 50-100 µg/L are typically considered to be relatively low levels in urban lake systems. Measured concentrations of NH_3 and NO_x in the Casselberry lakes were found to be consistently less than 100 µg/L for all lakes during all monitored periods, which is desirable, as elevated levels increase the risk of algal growth.

Typical total nitrogen (TN) values as measured in the Orlando Ridge lakes range from 650 to 950 µg/L. The Casselberry Lakes measured TN in the Current Quarterly Events generally exhibited TN values within this range, with exception to Queens Mirror Lake, which measured 1,200 µg/L of TN in the Spring 2015 Event. TN is the sum of the readily available inorganic species of nitrogen, such as ammonia and NO_x, plus dissolved organic and particulate nitrogen species. As stated in previous Casselberry Lakes Monitoring Report, TN concentrations less than 1,000 µg/L is considered good and TN from 1000-1,500 µg/L is considered fair, with TN greater than 1,500 µg/L considered poor. Based upon these criteria, all but the Spring 2015 Event Queens Mirror Lake TN measurement would be considered good levels of TN because TN values were less than 1,000 µg/L.

Overall, **Tables 3-6** through **3-9** demonstrate that organic nitrogen is the most abundant species of nitrogen within the Casselberry Lakes. Organic nitrogen is comprised of both particulate and dissolved organic species of nitrogen, with high levels of organic nitrogen

common in lakes with moderate to high levels of color and algae. Since organic nitrogen is not directly available for uptake by algae, it is generally considered unavailable for stimulation of algal growth within lake systems.

3.3.2.2 Phosphorus Species

As stated by the EPA, phosphorus is an essential nutrient for plant and algal production in lake systems. Since phosphorus is often the nutrient in short supply for fresh water systems, a small increase in phosphorus can accelerate plant and algal growth, leading to low DO concentrations and death to certain fish and other aquatic animals. Sources of phosphorus in lake systems can include soil and rocks, wastewater treatment effluent, runoff from fertilized lawns, septic tank systems, disturbed land areas, drained wetlands, commercial cleaning preparations and other sources. Phosphorus levels in a lake system are often used as an indicator of the trophic state and health of a lake system, with lower phosphorus levels more desirable[9].

As stated in previous Casselberry Lakes Monitoring Reports, phosphorus is comprised of three main components, including inorganic phosphorus, dissolved organic phosphorus, and particulate phosphorus. In the phosphorus cycle, aquatic plants consume dissolved inorganic phosphorus such as orthophosphorus, and convert this into the organic form of phosphorus to become part of the plant tissue. Animals can consume organic phosphorus by eating aquatic plants or other animals. As plants and animal produce waste or die, the organic phosphorus contained sinks to the water bottom, where bacterial decomposition converts this back into inorganic phosphorus as dissolved and particulate phosphorus, thus completing the cycle. In lakes, orthophosphorus is the main form of inorganic phosphorus utilized as a nutrient source by algae and is typically found in low concentrations within the water column.

Per **Table 3-1** total phosphorus (TP) concentrations in typical Orlando Ridge lakes is between 21 and 47 µg/L. Total phosphorus less than 20 µg/L are considered excellent in aquatic systems in Central Florida, concentrations between 20-40 µg/L considered average and concentrations over 40 µg/L are considered relatively poor. The measured TP in the Casselberry Lakes during the Current Quarterly Events ranged from 12 - 61 µg/L, with the highest TP levels observed in Queens Mirror Lake and Lake Concord in the Spring 2015 Event. Overall, the TP levels measured were within the range of typical Orlando Ridge lakes, generally within the "good" to "average" range. The highest levels of orthophosphorus was observed in Lake Kathryn in the Winter 2014 Event at a maximum concentration of 7.1 µg/L, with a majority of the lakes consistently less than 3.4 µg/L, which are low concentrations for freshwater lakes in this region.

3.3.2.3 TN/TP Ratio

The ratio of TN/TP is a numerical ratio of the measured concentration of total nitrogen to total phosphorus. The TN/TP ratio is often used in determining the significance of nitrogen to phosphorus species in a water body. Generally, when TN/TP ratios are less than 10, the water body is considered to be nitrogen-limited, where nitrogen is the critical element which

[9] http://water.epa.gov/type/rsl/monitoring/vms56.cfm

regulates the growth of algae and aquatic species within the system. TN/TP ratios between 10-30 suggest that the water body is nutrient balanced, where both nitrogen and phosphorus species control aquatic plant growth. TN/TP ratios greater than 30 indicate phosphorus-limited conditions. Once TN/TP ratios are established, inputs of phosphorus and/or nitrogen can be targeted for control in order to regulate the algal growth within water bodies.

The median TN/TP ratio for the Orlando Ridge lakes is approximately 25, indicating that a nutrient balanced lake system is typical for the region. As seen in **Figures 3-6** through **3-9**, the TN/TP ratios for the Casselberry Lakes during the Current Quarterly Events are predominantly nutrient-balanced, with TN/TP values between 10-30. North Triplet Lake was the only lake to be consistently phosphorus limited, with values in excess of 30. Middle Triplet Lake was phosphorus limited in the Summer 2014, Fall 2014 and Spring 2015 Event. Grassy Lake and Trout Lake were phosphorus limited in the Winter 2014 Event. Lake Lost was phosphorus limited in Summer, Fall and Winter 2014 Events. Lake Yvonne was phosphorus limited in the Winter 2014 Event. No lakes were measured to be nitrogen limited.

3.3.3 Biological Parameters

3.3.3.1 Chlorophyll-a

Per the previous Casselberry Lakes Monitoring Report, chlorophyll-a is an indirect measure of the amount of algal biomass in the water column of a lake and is one of the primary trophic state indicators used to evaluate the overall health of a lake system. In general, chlorophyll-a values less than 10 µg/L (mg/m^3) are considered good for urban lake systems, with values from 10-30 µg/L considered fair, and values in excess of 30 µg/L indicating poor water quality conditions. Per **Table 3-1**, typical Orlando Ridge lake concentrations range from 13-35 µg/L, indicating average to poor water quality conditions.

As shown in **Tables 3-6** through **3-9**, the measured chlorophyll-a values were typically in the "good" to "average" categories. South Triplet Lake and Lake Yvonne experienced high chlorophyll-a measurements of 69 and 79 µg/L, respectively, in the Fall 2014 Event, and Queens Mirror Lake measuring 61.2 in Spring 2015 Event, indicating "poor" conditions.

In the Fall 2014 Event, all chlorophyll-a values were measured as below method detection limit (MDL) by the laboratory, or less than 1 µg/L. This result is highly unusual for chlorophyll-a values, where chlorophyll-a concentrations less than 1 µg/L is rarely measured and is unprecedented in the historical record for all lakes to exhibit such low values during any one monitoring period. Geosyntec discussed this result at length with the laboratory (Pace) to determine if any laboratory error could have caused the results. The laboratory indicated that the low chlorophyll-a values were due to the high levels of interference due to the presence of pheophytin, a chemical compound that interferes with the detection of chlorophyll-a in certain laboratory tests. Typically, the chlorophyll-a value is adjusted downward based on the presence of pheophytin. In the case of the Fall 2014 Event analysis, the pheophytin adjustments made the adjusted chlorophyll-a values undetectable. It is unknown if the chlorophyll-a values reported are therefore accurate, and it is recommended that these chlorophyll-a values be treated as outliers.

3.3.3.2 Fecal Coliform

Per the previous Casselberry Lakes Monitoring Reports, fecal coliform represents a group of bacteria which are often associated with waterborne illnesses. The State of Florida water quality criterion for fecal coliform in Class III recreational surface waters is 200 organisms/100 ml of lake water on a monthly average. Surface waters with concentrations less than this amount are typically considered safe for recreational activities. However, surface water with concentrations exceeding 200 organisms/100 ml is often considered to have an increased risk of waterborne illness.

Per **Tables 3-6** through **3-9**, all lakes during the Current Quarterly Events measured fecal coliforms as less than 200 organisms/100 ml, indicating that the presence of disease causing pathogens from human and animal sources is low. Based on this, all Casselberry Lakes appear to meet the microbiological criteria for recreational surface waterbodies.

3.3.4 Heavy Metals

Heavy metals were sampled only during the Spring 2015 Event, and are summarized in **Table 3-9**. For all lakes, the analyzed heavy metal concentrations were below the laboratory MDL, meaning that no heavy metals were detected in any Casselberry Lake during the Spring 2015 Event. The criteria for Class III recreational surface waters for heavy metal concentrations per 62-302.530 F.A.C., are provided below:

- Cadmium: 0.3 µg/L
- Chromium: 86 µg/L
- Copper: 9.3 µg/L
- Lead: 3.2 µg/L
- Zinc: 120 µg/L

For each heavy metal, the hardness-based criterion was calculated using an assumed hardness of 100 mg/L as $CaCO_3$.

With exception to cadmium and lead, all MDLs were lower than the Class III surface water criteria. This means that, while no cadmium and lead were detected in the lakes, the detection limit of the laboratory test procedure used was not as low as the allowable concentration.

TABLE 3-6
LABORATORY ANALYTICAL DATA SUMMARY
LAKE MONITORING RESULTS - QUARTER 2 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Alkalinity (mg/l)	NH3-N (ug/l)	NOx-N (ug/l)	Organic N (ug/l)*	Total N (ug/l)	SRP (ug/l)	Total P (ug/l)	BOD (mg/l)	Color (units)	Chlorophyll-a (ug/l)	Fecal Coliform (CFU/100ml)	Turbidity (NTU)	TN/TP Ratio (ug/l)	Florida TSI**	Trophic State	Cadmium (mg/l)	Chromium (mg/l)	Copper (mg/l)	Iron (mg/l)	Lead (mg/l)	Zinc (mg/l)
Grassy	6/30/14	57.0	<20	<25	390	390	65	22	4.5	30	8.1	6	1.1	18	47	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Trout	6/30/14	52.7	<20	<25	490	490	<34	21	4.0	20	9.2	28	1.5	23	49	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Griffin	6/30/14	60.1	<20	<25	490	490	<34	28	7.2	35	7.4	17	1.5	18	46	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Kathryn	6/30/14	38.7	<20	<25	730	730	<34	28	3.5	25	14.2	1	3.0	26	55	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Concord	6/30/14	49.9	<20	<25	670	670	<34	46	4.2	30	35.6	8	4.9	15	68	Eutrophic	N/S	N/S	N/S	N/S	N/S	N/S
Secret	7/1/14	42.9	<20	<25	590	590	<34	19	2.2	25	12.5	17	2.2	31	53	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
North Triplet	7/1/14	26.9	<20	<25	490	490	<34	14	<2	20	<2	11	1.3	35	27	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Middle Triplet	7/1/14	31.0	<20	<25	570	570	<34	16	<2	30	4.5	19	1.4	36	38	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
South Triplet	7/1/14	24.2	<20	<25	540	540	<34	18	<2	40	5.6	18	1.5	30	42	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Yvonne	6/30/14	46.0	<20	<25	280	280	<34	23	3.0	30	9.6	14	0.68	12	49	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Yvonne (Duplicate)	6/30/14	45.7	<20	<25	290	290	<34	26	2.3	45	9.8	7	0.73	11	50	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Lost	7/1/14	26.0	<20	<25	680	680	<34	18	<2	50	6.9	15	1.4	38	45	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Queen's Mirror	7/1/14	30.1	<20	<25	690	690	<34	28	2.5	100	15.0	11	1.6	25	56	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Equipment Blank	6/30/14	<5	<20	<25	<250	<250	<34	4.9	<3	<5	<1	<1	<0.2	N/A	N/A	N/A	N/S	N/S	N/S	N/S	N/S	N/S

N/S = Not Sampled during this event
N/A = Not applicable
ug/l = micrograms per liter
mg/l = milligrams per liter
SRP = Soluble Reactive Phosphate or orthophosphate (ortho-P)
NTU = Nephelometric Turbidity Units
CFU = Colony Forming Units
TSI = Trophic State Index

* Organic N value valuated as Total N - NH3-N - NOx-N. Where NH3-N - NOx-N non-detect, Total N value used.
** Florida TSI calculated using Chlorophyll-a method only. Where Chlorophyll-a value non-detect, detection limit value used in calculation.
Samples collected at a depth of one-half the field measured secchi disk depth (refer to Table 1)
Laboratory analysis by Pace Analytical Laboratories, Ormond Beach, Florida.
See Laboratory Analytical Reports for specific result qualifiers associated with analytical data

TABLE -3-7
LABORATORY ANALYTICAL DATA SUMMARY
LAKE MONITORING RESULTS - QUARTER 3 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Alkalinity (mg/l)	NH3-N (ug/l)	NOx-N (ug/l)	Organic N (ug/l)*	Total N (ug/l)	SRP (ug/l)	Total P (ug/l)	BOD (mg/l)	Color (units)	Chlorophyll-a (ug/l)	Fecal Coliform (CFU/100ml)	Turbidity (NTU)	TN/TP Ratio (ug/l)	Florida TSI**	Trophic State	Cadmium (mg/l)	Chromium (mg/l)	Copper (mg/l)	Iron (mg/l)	Lead (mg/l)	Zinc (mg/l)
Grassy	9/24/14	46.4	<20	<25	330	330	<3.4	16	<2	15	<1.0	7	0.23	21	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Trout	9/24/14	45.5	<20	<25	430	430	6	22	<2	20	<1.0	<1	0.20	20	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Griffin	9/24/14	53.3	<20	<25	580	580	<3.4	17	<2	30	<1.0	11	<0.2	34	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Kathryn	9/23/14	35.8	<20	<25	480	480	<3.4	17	<2	30	<1.0	9	0.35	28	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Concord	9/23/14	55.8	<20	<25	890	890	<3.4	37	3.2	10	<1.0	36	0.74	24	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Secret	9/23/14	50.4	<20	<25	570	570	<3.4	21	<2	25	<1.0	32	0.45	27	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
North Triplet	9/23/14	30.6	<20	<25	620	620	<3.4	13	<2	70	<1.0	10	0.35	48	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
North Triplet (Duplicate)	9/23/14	30.9	<20	<25	610	610	<3.4	13	<2	80	<1.0	20	0.28	47	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Middle Triplet	9/23/14	35.7	<20	<25	690	690	<3.4	18	2.5	100	<1.0	16	0.26	38	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
South Triplet	9/23/14	39.7	<20	<25	690	690	<3.4	22	2.1	100	<1.0	69	0.43	31	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Yvonne	9/23/14	56.4	<20	<25	510	510	<3.4	28	3.7	45	<1.0	79	0.38	18	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Lost	9/23/14	27.7	21	<25	669	690	<3.4	21	2.2	60	<1.0	31	0.35	33	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Queen's Mirror	9/23/14	42.5	<20	<25	780	780	<3.4	45	2.8	160	<1.0	81	0.22	17	17	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Equipment Blank	9/23/14	<5	<20	<25	<250	<250	<3.4	<2.8	<2	<5	<1.0	<1	<0.2	N/A	N/A	N/A	N/S	N/S	N/S	N/S	N/S	N/S

N/S = Not Sampled during this event
N/A = Not applicable
ug/l = micrograms per liter
mg/l = milligrams per liter
SRP = Soluble Reactive Phosphate or orthophosphate (ortho-P)
NTU = Nephelometric Turbidity Units
CFU = Colony Forming Units
TSI = Trophic State Index

* Organic N value valuated as Total N - NH3-N - NOx-N. Where NH3-N - NOx-N non-detect, Total N value used.
** Florida TSI calculated using Chlorophyll-a method only. Where Chlorophyll-a value non-detect, detection limit value used in calculation.
Samples collected at a depth of one-half the field measured secchi disk depth (refer to Table 1)
Laboratory analysis by Pace Analytical Laboratories, Ormond Beach, Florida.
See Laboratory Analytical Reports for specific result qualifiers associated with analytical data

TABLE 3-8
LABORATORY ANALYTICAL DATA SUMMARY
LAKE MONITORING RESULTS - QUARTER 4 2014
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Alkalinity (mg/l)	NH3-N (ug/l)	NOx-N (ug/l)	Organic N (ug/l)*	Total N (ug/l)	SRP (ug/l)	Total P (ug/l)	BOD (mg/l)	Color (units)	Chlorophyll-a (ug/l)	Fecal Coliform (CFU/100ml)	Turbidity (NTU)	TN/TP Ratio (ug/l)	Florida TSI**	Trophic State	Cadmium (mg/l)	Chromium (mg/l)	Copper (mg/l)	Iron (mg/l)	Lead (mg/l)	Zinc (mg/l)
Grassy	12/17/14	48.7	49	<25	471	520	3.7	12[G]	<2	25	7.6	1	0.8	43	46	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Trout	12/17/14	50.0	<20	<25	540	540	3.6	14[G]	<2	25	9.0	5	1.3	39	48	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Griffin	12/17/14	55.8	52	54	578	630	<3.4	20[G]	<2	35	8.7	3	1.6	32	48	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Kathryn	12/16/14	43.0	<20	<25	650	650	7.1	27[G]	<2	70	17.1	6	2.8	24	58	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Kathryn (Duplicate)	12/16/14	42.7	54	<25	646	700	<3.4	33[G]	<2	60	3.2	11	1.8	21	34	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Concord	12/16/14	55.3	31	<25	759	790	3.7	33[G]	<2	15	19.4	6	5.1	24	59	Mesotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Secret	12/16/14	53.2	32	<25	608	640	<3.4	21[G]	<2	30	4.9	3	1.0	30	40	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
North Triplet	12/16/14	34.4	31	<25	679	710	6.7	18[G]	<2	100	3.8	1	0.9	39	36	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Middle Triplet	12/16/14	36.6	58	<25	802	860	<3.4	36[G]	3.6	120	25.7	13	2.4	24	64	Eutrophic	N/S	N/S	N/S	N/S	N/S	N/S
South Triplet	12/17/14	38.2	<20	<25	770	770	<3.4	36[G]	3.0	75	23.4	12	1.90	21	62	Eutrophic	N/S	N/S	N/S	N/S	N/S	N/S
Yvonne	12/16/14	54.2	44	<25	536	580	<3.4	16[G]	<2	40	9.8	4	0.62	36	50	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Lost	12/17/14	24.1	30	<25	510	540	<3.4	15[G]	<2	50	3.2	3	0.9	36	34	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Queen's Mirror	12/17/14	40.8	30	<25	750	780	<3.4	45[G]	3.5	120	26.2	32	2.3	17	64	Oligotrophic	N/S	N/S	N/S	N/S	N/S	N/S
Equip Blank	12/17/14	<5	<20	<25	<250	<250	<3.4	8	<2	<5	<1	<1	<0.2	N/A	N/A	N/A	N/S	N/S	N/S	N/S	N/S	N/S

N/S = Not Sampled during this event
N/A = Not applicable
ug/l = micrograms per liter
mg/l = milligrams per liter
SRP = Soluble Reactive Phosphate or orthophosphate (ortho-P)
NTU = Nephelometric Turbidity Units
CFU = Colony Forming Units
TSI = Trophic State Index

[G] Qualified sample value detected at or above the MDL in both sample and associated equipment blank, and the blank value was greater than 10% of the associated sample value (FDEP QA Rule 62-160.700: Table 1).
* Organic N value valuated as Total N - NH3-N - NOx-N. Where NH3-N - NOx-N non-detect, Total N value used.
** Florida TSI calculated using Chlorophyll-a method only. Where Chlorophyll-a value non-detect, detection limit value used in calculation.
Samples collected at a depth of one-half the field measured secchi disk depth (refer to Table 1)
Laboratory analysis by Pace Analytical Laboratories, Ormond Beach, Florida.
See Laboratory Analytical Reports for specific result qualifiers associated with analytical data

TABLE 3-9
LABORATORY ANALYTICAL DATA SUMMARY
LAKE MONITORING RESULTS - QUARTER 1 2015
CITY OF CASSELBERRY, FLORIDA

Geosyntec consultants

Lake	Date	Alkalinity (mg/l)	NH3-N (ug/l)	NOx-N (ug/l)	Organic N (ug/l)*	Total N (ug/l)	SRP (ug/l)	Total P (ug/l)	BOD, 5 day (mg/l)	Color (units)	Chlorophyll-a (ug/l)	Fecal Coliform (CFU/100ml)	Turbidity (NTU)	TN/TP Ratio (ug/l)	Florida TSI**	Trophic State	Cadmium (mg/l)	Chromium (mg/l)	Copper (mg/l)	Lead (mg/l)	Zinc (mg/l)
Grassy	3/24/15	57.5	<20	<25	590	590	<3.4	21	2.2	20	8.5	20	0.7	28	48	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Trout	3/24/15	35.9	<20	<25	480 I	480 I	<3.4	22	<2.0	20	7.6	11	1.8	22	46	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Griffin	3/24/15	49.2	<20	<25	600	600	4	23	<2.0	30	10.9	8	2.4	26	51	Mesotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Kathryn	3/24/15	62.0	<20	<25	560	560	<3.4	29	<2.0	35	7.5	<1.0	2.1	19	46	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Concord	3/24/15	47.6	<20	<25	860	860	<3.4	53	3.6	30	23.0	4	4.5	16	62	Eutrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Secret	3/24/15	55.5	47 I	<25	483	530	<3.4	20	<2.0	20	4.4 I	54	0.6	27	38	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
North Triplet	3/24/15	36.9	<20	<25	670	670	<3.4	16	<2.0	70	2.7 I	6	0.6	42	31	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Middle Triplet	3/24/15	37.6	<20	<25	620	620	<3.4	18	<2.0	80	2.4 I	22	0.6	34	29	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
South Triplet	3/24/15	38.6	<20	<25	780	780	<3.4	30	<2.0	90	13.4	4	1.50	26	54	Mesotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Yvonne	3/24/15	60.2	<20	<25	600	600	<3.4	22	<2.0	50	3.1 I	<1.0	0.73	27	33	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Lost	3/24/15	26.8	<20	<25	740	740	<3.4	26	<2.0	80	7.5	1	1.4	28	46	Oligotrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Queen's Mirror	3/24/15	38.3	<20	<25	1200	1200	<3.4	60	3.8	120	61.2	13	6.9	20	76	Hypereutrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Queen's Mirror (Duplicate)	3/24/15	38.4	<20	<25	1200	1200	<3.4	61	4.3	120	56.5	16	7.1	20	75	Hypereutrophic	<0.50	<2.5	<2.5	<5.0	<10.0
Equip Blank	3/24/15	<5.0	<20	<25	<250	<86	<3.4	<5.6	<2.0	<5.0	<2.2	<1.0	<0.20	N/A	N/A	N/A	<0.50	<2.5	<2.5	<5.0	<10.0

N/S = Not Sampled during this event
N/A = Not applicable
ug/l = micrograms per liter
mg/l = milligrams per liter
SRP = Soluble Reactive Phosphate or orthophosphate (ortho-P)
NTU = Nephelometric Turbidity Units
CFU = Colony Forming Units
TSI = Trophic State Index
I = The reported value is between laboratory method detection limit and the laboratory practical quantitation limit
[G] Qualified sample value detected at or above the MDL in both sample and associated equipment blank, and the blank value was greater than 10% of the associated sample value (FDEP QA Rule 62-160.700: Table 1).
* Organic N value valuated as Total N - NH3-N - NOx-N. Where NH3-N - NOx-N non-detect, Total N value used.
** Florida TSI calculated using Chlorophyll-a method only. Where Chlorophyll-a value non-detect, detection limit value used in calculation.
Samples collected at a depth of one-half the field measured secchi disk depth (refer to Table 1)
Laboratory analysis by Pace Analytical Laboratories, Ormond Beach, Florida.
See Laboratory Analytical Reports for specific result qualifiers associated with analytical data

3.3.5 Trophic State Index

Per previous Casselberry Monitoring Report, the trophic state index (TSI) is a summary statistic which incorporates measured concentrations of significant parameters in lake systems, including total phosphorus, total nitrogen, Secchi disk depth, and chlorophyll-a. This index summarizes information obtained from several separate measured parameters, and is often considered the best overall indicator of the health of a lake system. However, in December 2013, the City determined that the best method for calculating TSI was based solely on the chlorophyll-a test, which is the method used herein. The TSI calculation is based on the procedures outlined in the FDEP 1996 305(b) report as illustrated in Calculation 1, below. Calculated TSI values less than 50 indicate oligotrophic conditions, representing lakes with low nutrient loadings and good to excellent water quality characteristics. Calculated TSI values from 50-60 indicate mesotrophic or fair water quality characteristics. Calculated TSI values between 60-70 indicate eutrophic or poor water quality characteristics, with hypereutrophic conditions indicated by TSI values in excess of 70.

$$TSI_{chl\ a} = 16.8 + [14.4 \times \ln(chl\ a)] \quad (1)$$

A comparison of TSI values for Casselberry Lakes is given in **Figures 3-5** through **3-8** for the most recent monitoring periods. Calculated TSI values are provided for each Quarterly Event, as well as the previous year's value and historical seasonal average from 2003-present. A listing of the trophic states of the lakes during the Current Quarterly Events is provided below in **Table 3-10** below:

Table 3-10: TSI Values for the 2014-2015 Monitoring Period

	Summer 2014 Event				Fall 2014 Event				Winter 2014 Event				Spring 2015 Event			
	Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic	Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic	Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic	Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic
Concord			•		•					•					•	
Grassy	•				•				•				•			
Griffin	•				•				•					•		
Kathryn		•			•					•			•			
Lost	•				•				•				•			
Middle Triplet	•				•						•		•			
North Triplet	•				•				•				•			
Queens Mirror		•			•						•					•
Secret		•			•				•				•			
South Triplet		•			•						•			•		
Trout	•				•					•			•			
Yvonne	•				•					•			•			

As indicated in **Table 3-10**, most of the Casselberry Lakes are oligotrophic to mesotrophic lakes. Lakes Concord and Queens Mirror Lake were the only two lakes to be within the

eutrophication category more than once, with Queens Mirror Lake calculated as hypereutrophic in the Spring 2015 Event. Middle Triplet and South Triplet Lakes were calculated as eutrophic in the Winter 2014 Event. It is noted that in the Fall 2014 Event, all lakes were calculated to have a TSI value of oligotrophic, due to the unusually low chlorophyll-a values previously discussed.

Per **Table 3-1**, the median chlorophyll-a value within the Orlando Ridge region is 22. The TSI-based chlorophyll-a calculation calculates this as a TSI value of 61, meaning that the median lake within the Orlando Ridge would be considered eutrophic. Considering that the majority of the Casselberry Lakes are within the oligotrophic to mesotrophic range, this suggests that the Casselberry Lakes may exhibit less eutrophication than the typical Orlando Ridge lake.

3.3.6 Water Quality Trends

A graphical representation of historical water quality trends for total nitrogen, total phosphorus, chlorophyll-a and fecal coliform from 2003 to present is provided in **Appendix A**. The figures provided in Appendix A include all available data for monitored lakes within the City of Casselberry. In general, the majority of the monitored lake systems appear to exhibit a relatively steady trend line, with water quality fluctuations typical of urban lake systems. Water quality characteristics in most of the 12 lakes appear to have reached a relative equilibrium state, with minor upward or downward trends in water quality characteristics.

Figure 3-9
Comparative Trophic State Indices of Casselberry Lakes
Summer 2014 Event

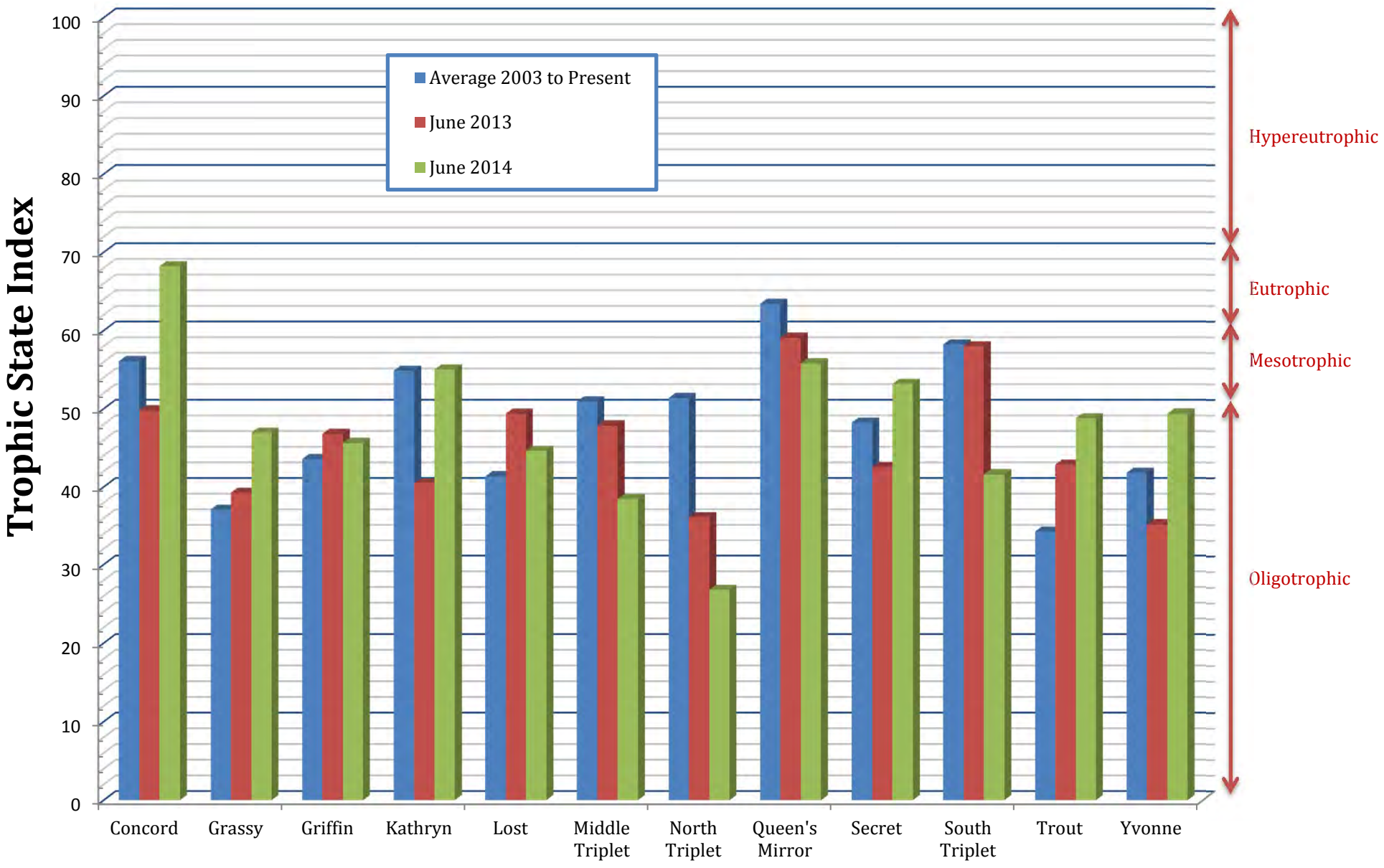


Figure 3-10
Comparative Trophic State Indices of Casselberry Lakes
Fall 2014 Event

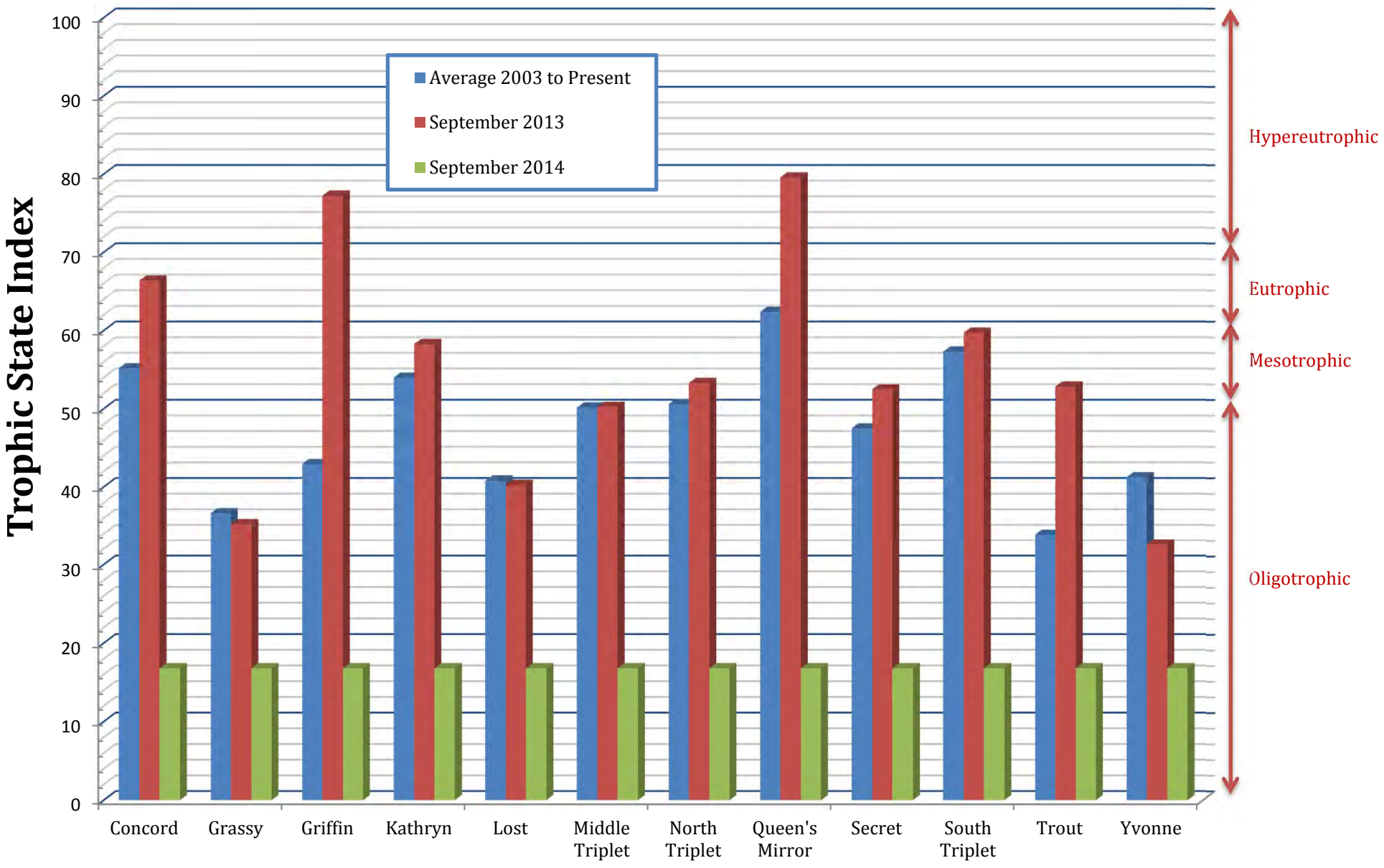


Figure 3-11
Comparative Trophic State Indices of Casselberry Lakes
Winter 2014 Event

Geosyntec consultants

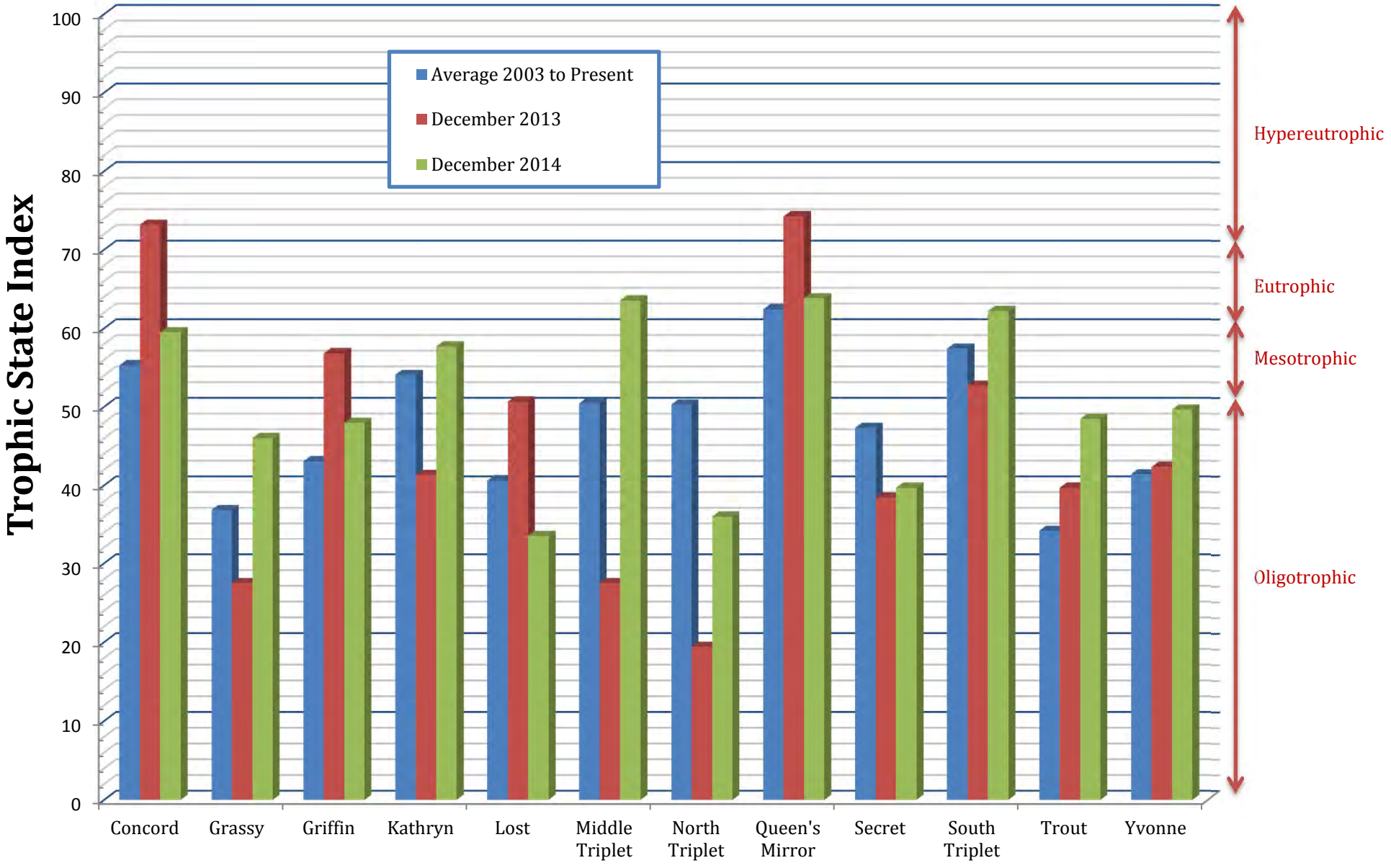
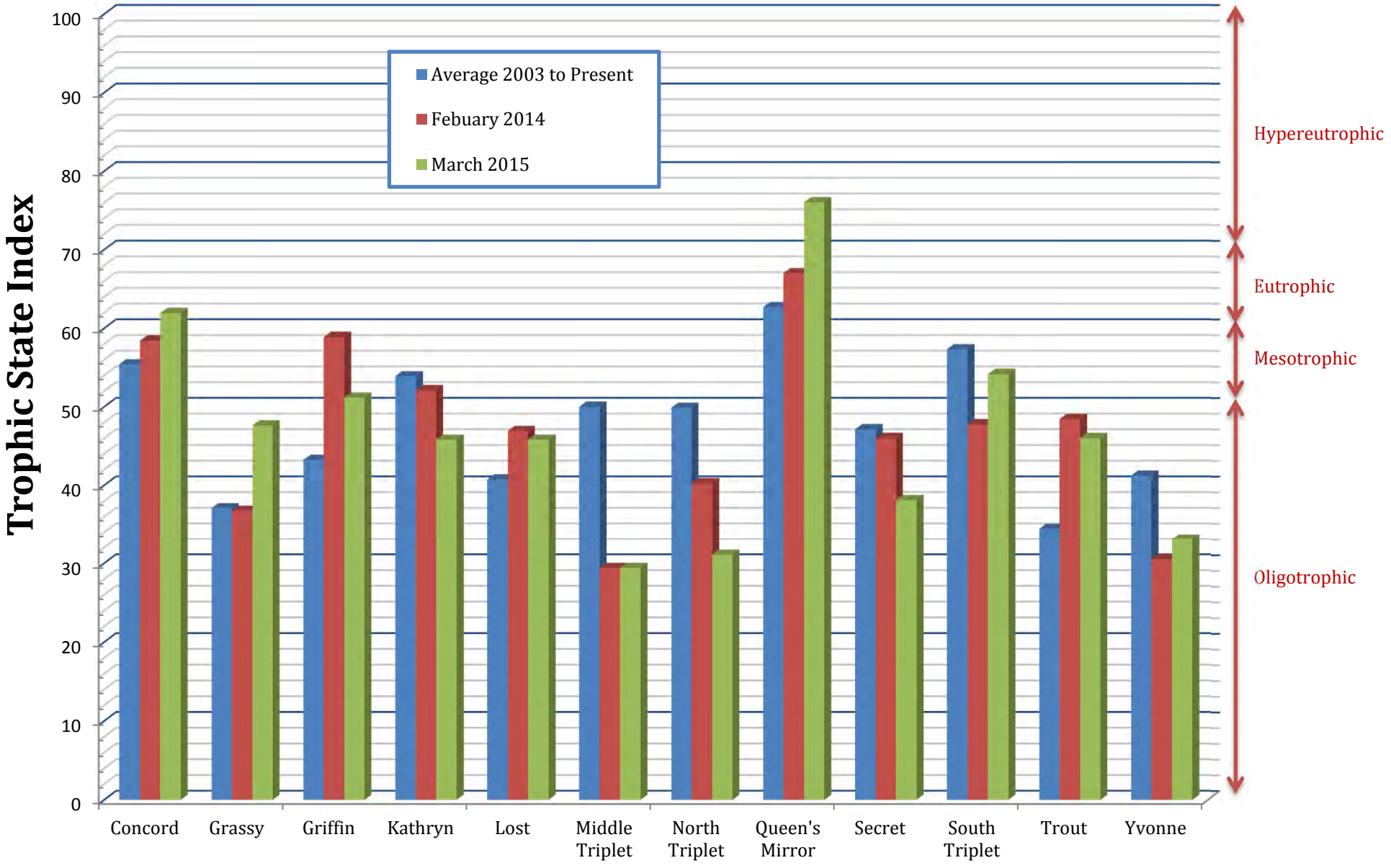


Figure 3-12
Comparative Trophic State Indices of Casselberry Lakes
Spring 2015 Event

Geosyntec consultants



4. HISTORICAL COMPARISON

A statistical evaluation was conducted to compare water quality characteristics measured during the Current Quarterly Events with historical water quality data collected within the Casselberry Lakes from 2003-present. A graphical summary of historical laboratory data was generated in the form of Box and Whisker plots. The bottom of the box portion of each plot (dark gray box) represents the lower quartile, with 25% of the data points falling below this value. The upper line of the top box (light gray box) represents the 75% upper quartile, with 25% of the data falling above this value. The horizontal line within the box represents the median value, with 50% of the data falling both above and below this value. The vertical lines, known as whiskers, represent the minimum and maximum data points for the data sets. Measured concentrations for each parameter during the Current Quarterly Events are superimposed on the box and whisker plots as a **blue "x"** to represent the Summer 2014 Event (Q2 2014), a **red square** to represent the Fall 2014 Event (Q3 2014), a **gold circle** to represent the Winter 2014 Event (Q4 2014) and a **green "+"** to represent the Spring 2015 Event (Q1 2015).

A graphical comparison of historic (2003-present) and Current Quarterly Event concentrations of alkalinity, BOD, Color, and fecal coliform bacteria in the Casselberry Lakes is located in given on **Figure 4-1**. Measured values of alkalinity in Lakes Trout, Griffin, Concord, and Lost were generally below average historic values, whereas Lakes Yvonne and Secret were generally above historic values. The remaining lakes approximated the long-term average for the monitoring periods. Generally, the Summer 2014 Event had lower than average alkalinity values, possibly due to rainwater at the beginning of the rainy season.

BOD concentrations measured were generally within the average ranges for all lakes, with exception to the Summer 2014 Event, which seem to exhibit record high BOD in lakes Grassy, Trout and Griffin. High BOD concentrations relative to the historic averages were also noted in Lake Kathryn and Lake Concord in Summer 2014 Event, as well as Middle Triplet in the Winter 2014 Event.

Measured color levels in Queens Mirror Lake and the Triplet Chain of Lakes have been highly variable in the historic timeline, possibly due to fluctuations in dissolved organic material. Elevated color values in the Winter 2014 Event were observed in several lakes, and diminished color values were measured in the Summer 2014 Event, most notably in the Triplet Chain.

Fecal coliforms measured were generally low and in the long term average range. Fecal coliforms have often exhibited extreme, single period outliers in the data record, as indicated by the high whiskers away from the 75th upper quartile. The highest measured fecal coliforms were generally measured in the Fall 2014 Event.

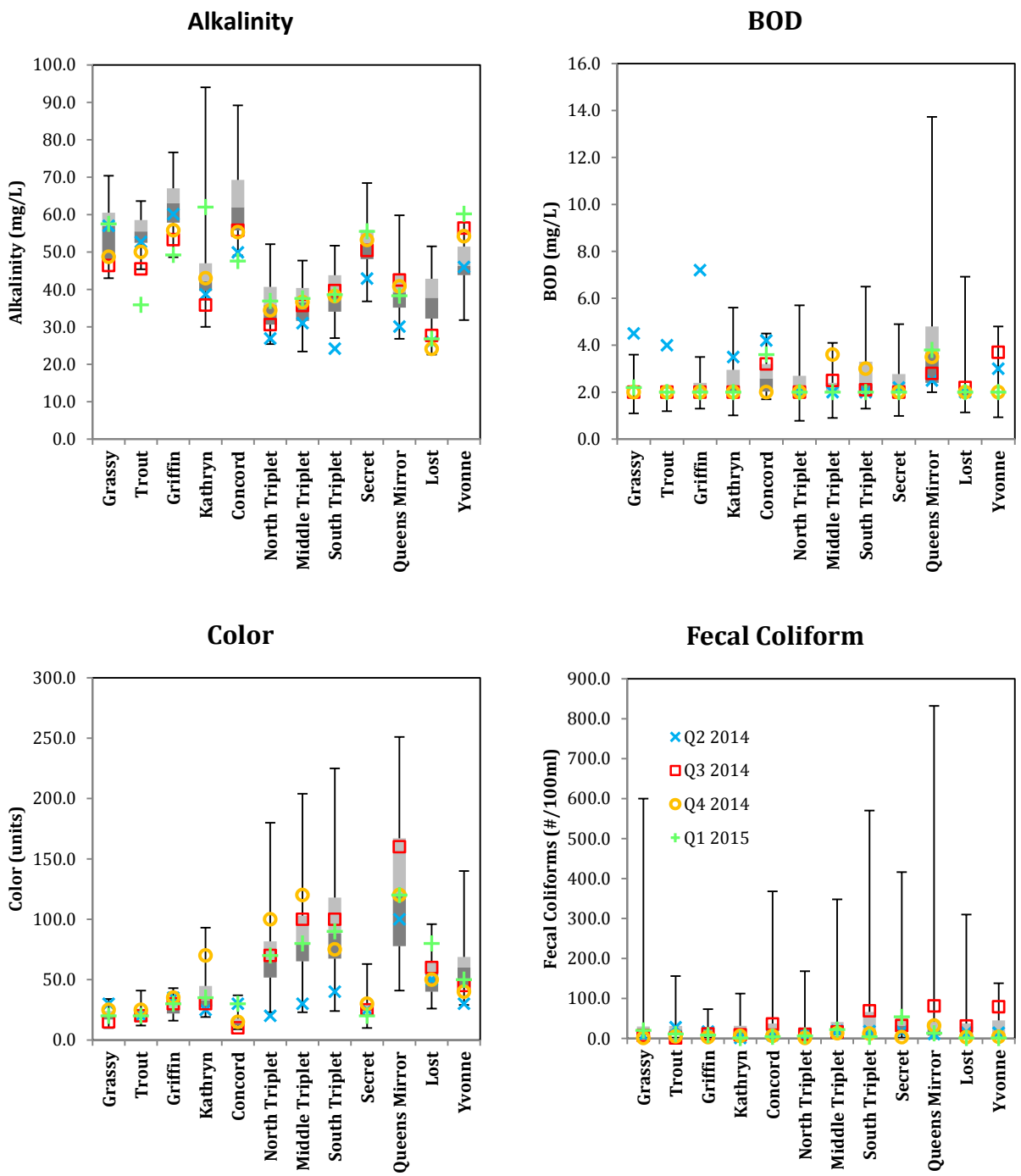


Figure 4-1: Box and Whisker Plots of Historical and Current Concentrations of Alkalinity, BOD, Color, and Fecal Coliform in the Casselberry Lakes.

A statistical comparison of historic (2003-present) and Current Quarterly Event concentrations of nitrogen species in the Casselberry Lakes is given in **Figure 4-2**. In general, measures of ammonia were within long-term historic averages. The highest measured ammonia levels were generally in the Winter 2014 Event, but all measured levels were still less than 100 µg/L.

Measured concentrations of NO_x appear as consistently higher than historical averages. The reason for this is that the current laboratory's NO_x MDL is 25 µg/L, whereas traditional laboratory levels allowed for lower detection limits. Given that the NO_x levels were historically less than 25 µg/L, it is difficult to assess the relative change in NO_x in a historical context. However, elevated levels were detected in the Winter 2014 Event in Lake Griffin and Lake Concord.

Measured concentrations of organic nitrogen in the Casselberry Lakes are highly variable, with Queens Mirror and the Triplet Chain of Lakes exhibiting the greatest variability. Measured concentrations during the Current Quarterly Events were generally within the average range of organic nitrogen values, with exception to Lake Concord, which demonstrated consistent above-average organic nitrogen values. These elevated organic nitrogen values within Lake Concord may be partially contributing towards the more eutrophic condition of the lake. The Spring 2015 Event for Queens Mirror Lake also was abnormally high, which may have contributed to its Spring 2015 Event hypereutrophic state.

Similar to organic nitrogen, total nitrogen has been highly variable in the Casselberry Lakes, with Queens Mirror and the Triplet Chain of Lakes exhibiting the greatest variability. Measured concentrations during the current monitoring periods were generally within the average range of TN values, again with the exception of Lake Concord, which demonstrated consistently above-average TN values. The elevated Lake Concord and very high Spring 2015 Event Queens Mirror Lake TN values may be contributing to the more consistent eutrophic/hypereutrophic state of these lakes.

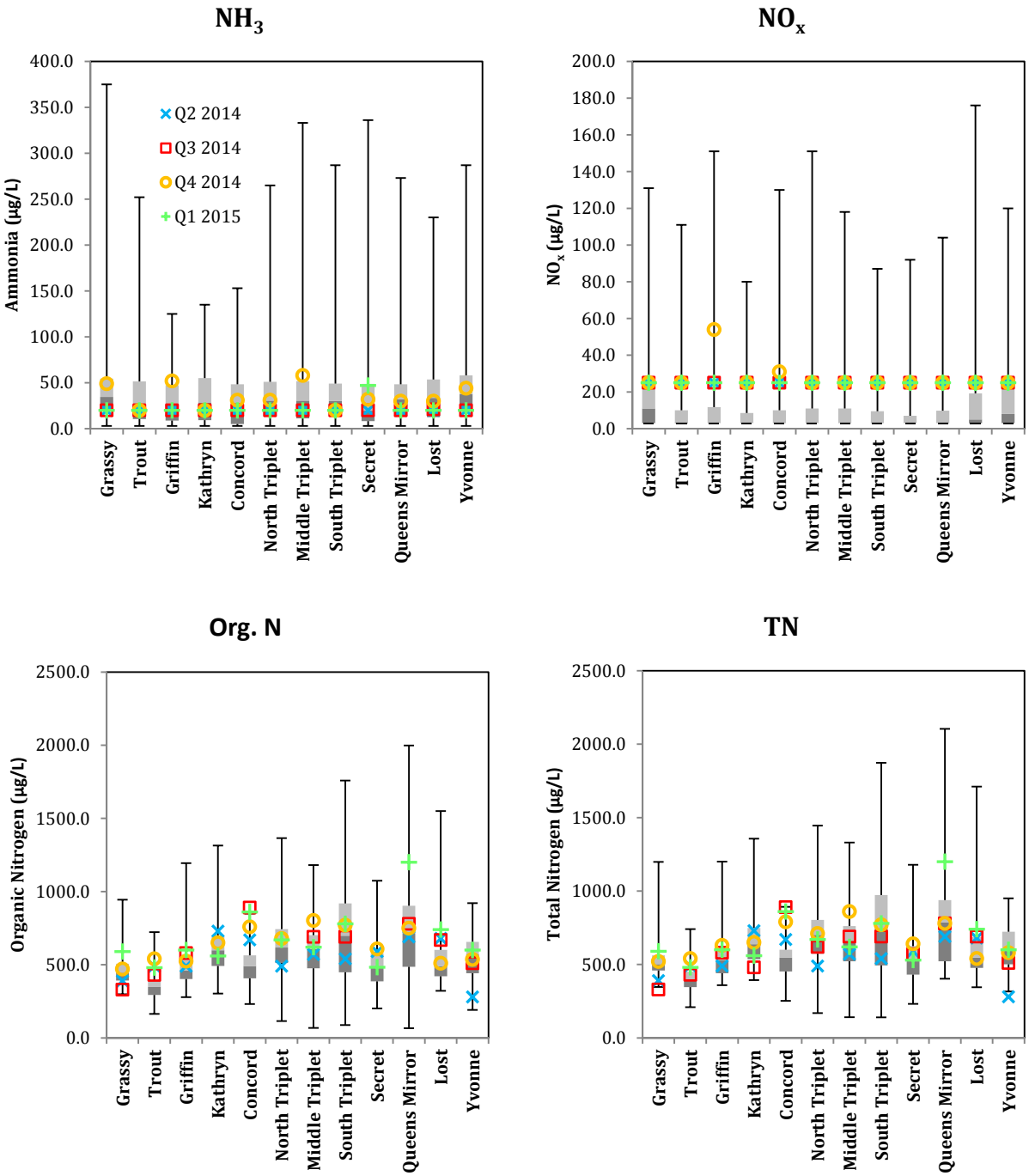


Figure 4-2: Box and Whisker Plots of Historical and Current Concentrations of Nitrogen Species in the Casselberry Lakes

A statistical comparison of historic (2003-present) and the Current Quarterly Event concentrations of phosphorus species, chlorophyll-a and turbidity in the Casselberry Lakes is provided in **Figure 4-3.** In the historic record, measured concentrations of ortho phosphorus have been low within the Casselberry Lakes. This trend has continued in the current monitoring periods where all orthophosphorus values were measured as less than 10 µg/L. Greater than average ortho phosphorus values were measured at Lake Kathryn and North Triplet Lake in the Winter 2014 Event and in Lake Trout in the Fall 2014 Event.

Similar to the nitrogen species, total phosphorus has been highly variable since 2003, with Queens Mirror Lake exhibiting the highest average phosphorus values and some of the highest variabilities. In general, Lakes Grassy, Trout, Concord, Griffin, Kathryn, Lost and Yvonne demonstrated elevated TP values above their historic averages. In contrast, North Triplet and South Triplet demonstrated somewhat lower than average TP values. On average, however, it appears that most lakes in Current Quarterly Events exhibited above average TP.

Historically measured chlorophyll-a values appear either highly consistent and low, in the case of Lakes Grassy, Trout, Griffin, Lost, Secret and Yvonne, or highly variable in the case of Lakes Kathryn, Concord, Triplet Lakes and Queens Mirror. Lower than average values of chlorophyll-a were measured at Queens Mirror Lake for all periods, except the Spring 2015 Event which indicated exceptionally high chlorophyll-a concentrations. Middle Triplet Lake had higher than average chlorophyll-a values in the Winter 2014 Event and Lake Concord had higher than average chlorophyll-a concentrations in Summer 2014 Event. The Fall 2014 Event concentrations of chlorophyll-a were all below MDL levels due to high laboratory interferences with the chemical compound pheophytin, as discussed previously.

Turbidity was measured for the current monitoring period and was found to be generally below average for Lakes Grassy, Griffin, North Triplet, Middle Triplet, South Triplet, Secret, Queens Mirror and Yvonne. Higher than average turbidity was measured in Lake Concord for all periods except the Fall 2014 Event. The Fall 2014 Event demonstrated consistently low turbidity levels across all lakes, often corresponding to the lowest observed turbidity levels on record. The reason for the consistently low turbidity is unknown. Very high levels of turbidity were observed in Queens Mirror Lake in the Spring 2015 Event.

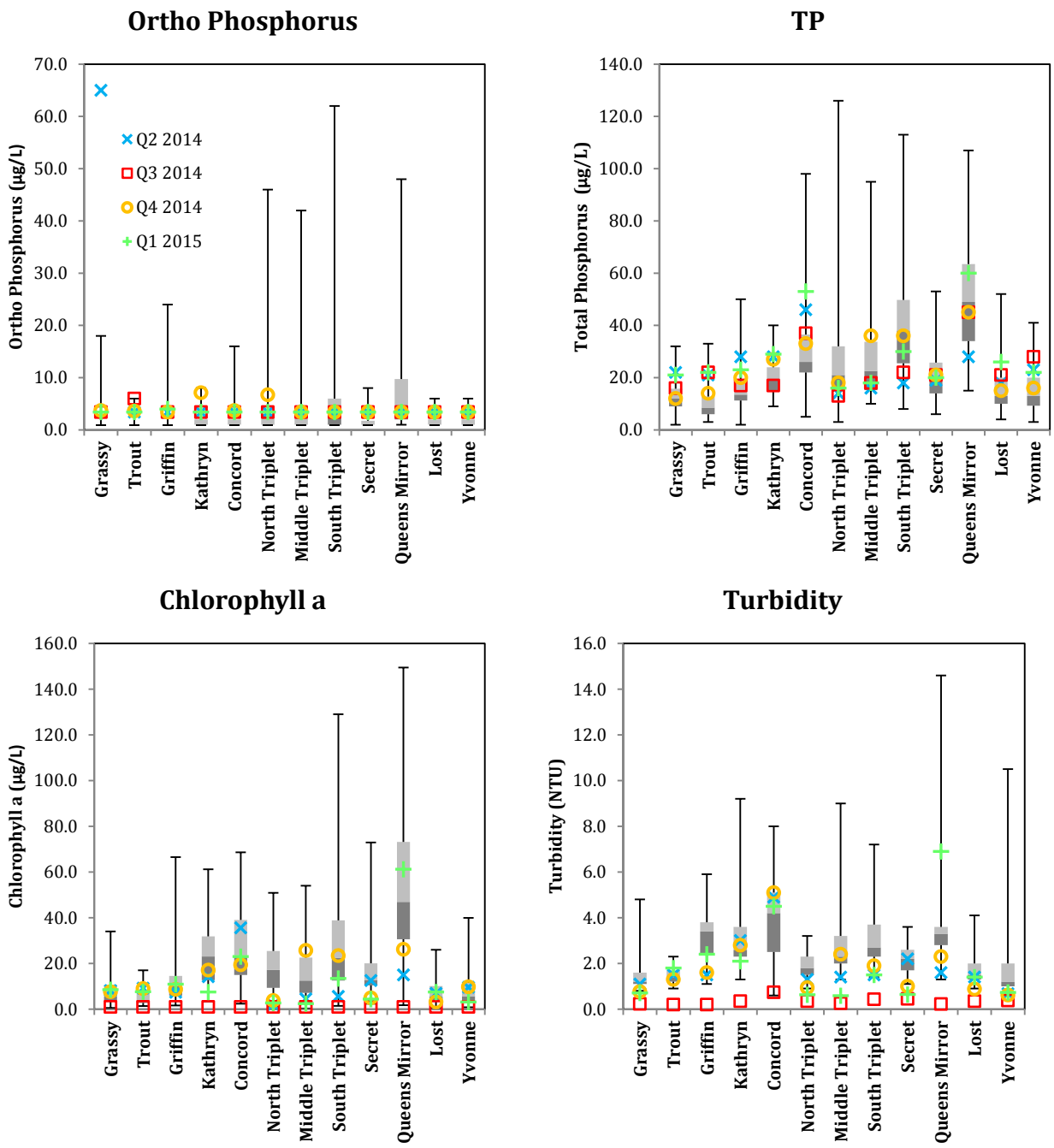


Figure 4-3: Box and Whisker Plots of Historical and Current Concentrations of Phosphorus Species, Chlorophyll a, and Turbidity of Casselberry Lakes

5. SUMMARY AND CONCLUSIONS

The purpose of this report was to present the results of the four quarterly water quality monitoring of the Casselberry Lakes, ending in the spring of 2015. This monitoring effort was performed to continue the City's efforts to provide defensible, long-term water quality data of the Casselberry Lakes, and to analyze the current state of the City's surface water resources as well as any observable trends in the data. This report also helps the City to determine if the Casselberry Lakes meet the Class III standard for recreational waterbodies.

Overall, **the current monitoring effort indicates that the Casselberry Lakes are generally suitable for recreational purposes**, with low levels of fecal coliform bacteria and heavy metals which were not detected during the 2014 – 2015 monitoring period[10,11]. However, some water quality deficiencies were observed and are described below:

- Lake Yvonne did not meet the standard 5.0 mg/L dissolved oxygen (DO) standard typical for supporting a health aquatic system. The long-term trend of Lake Yvonne consistently shows deficient dissolved oxygen present. In addition to Lake Yvonne, the following Casselberry Lakes did not meet the standard 5.0 mg/L DO standard in the associated sampling events: Grassy Lake (Fall 2014), Trout Lake (Fall 2014), Lake Griffin (Fall 2014), Secret Lake (Fall 2014), South Lake Triplet (Fall 2014), and Lost Lake (Spring 2015).
- The pH levels for five Casselberry Lakes were below 6.0 and did not meet the FDEP range standard of 6.0 to 8.5, which a majority of these incidences occurred during the Winter 2014 sampling event; these lakes included Lake Yvonne, Grassy Lake, North Lake Triplet, and Middle Lake Triplet. Lake Yvonne also displayed low pH levels (below 6.0) in Summer 2014, and Lake Kathryn displayed high pH levels (greater than 8.5) in Spring 2014 and Fall 2014.
- Middle and South Lake Triplet, and Lake Concord were classified as eutrophic in multiple quarters, with Queens Mirror measured as hypereutrophic in Spring 2015.
- A general reduction in the levels of Oxidation Reduction Potential (ORP) was observed in most lakes relative to historic values, indicating that the lakes have a lower potential to oxidize harmful substances within the lakes. Additionally, in lakes with low ORP and DO, nutrients in the bottom lake sediments (namely phosphorus) can become soluble and can re-enter the water column, increasing the potential for algal blooms to occur.

The water quality within the Casselberry Lakes appear to exhibit relatively stable trends with modest fluctuations in increased or decreased water quality. As a comparison of the Casselberry Lakes to the lakes within the Orlando Ridge lakes region, the Casselberry Lakes appear to have somewhat better water quality, particularly as it relates to the calculated TSI values. Future water quality monitoring of the Casselberry Lakes will help the City continue its baseline of water quality date, which will help identify positive or adverse water quality trends as they occur.

---

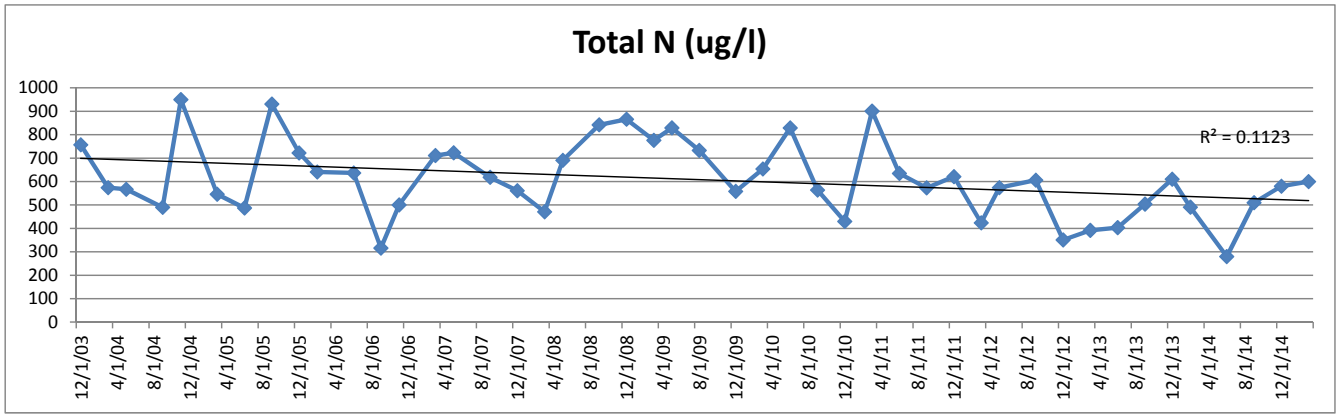
[10] *Recreational Water Quality Criteria (Office Water 820-F-12-058)*. Environmental Protection Agency. 2012. <http://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf>

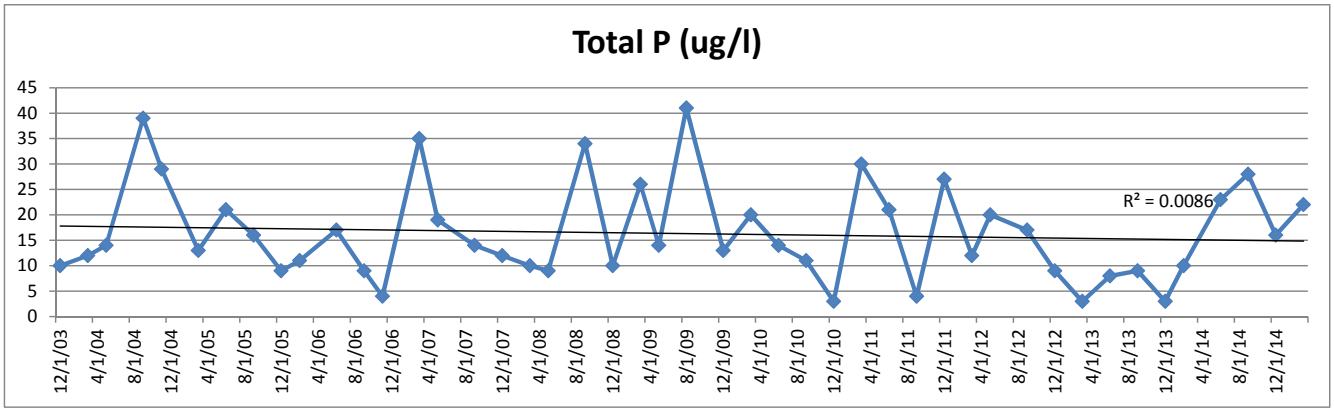
[11] *Table: Surface Water Quality Criteria (62-302.530 F.A.C.)*. FDEP August 1, 2013.

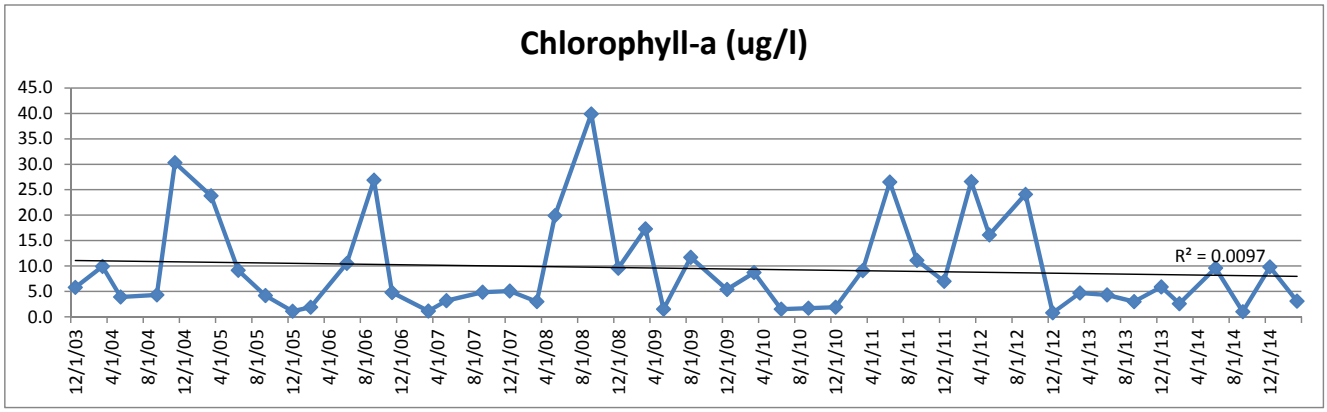
APPENDIX A

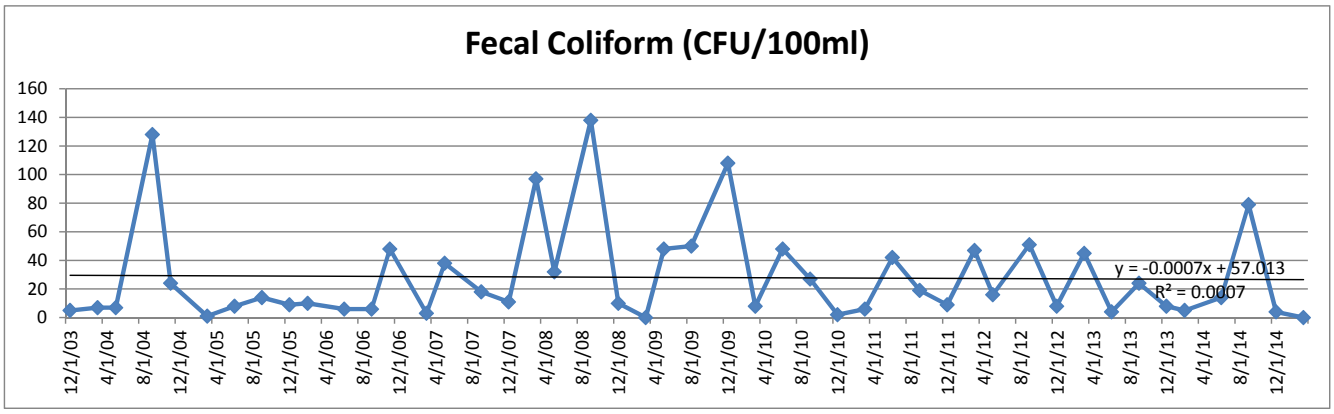
WATER QUALITY TRENDS FOR CASSELBERRY LAKES FROM 2003-2015

LAKE YVONNE TRENDS

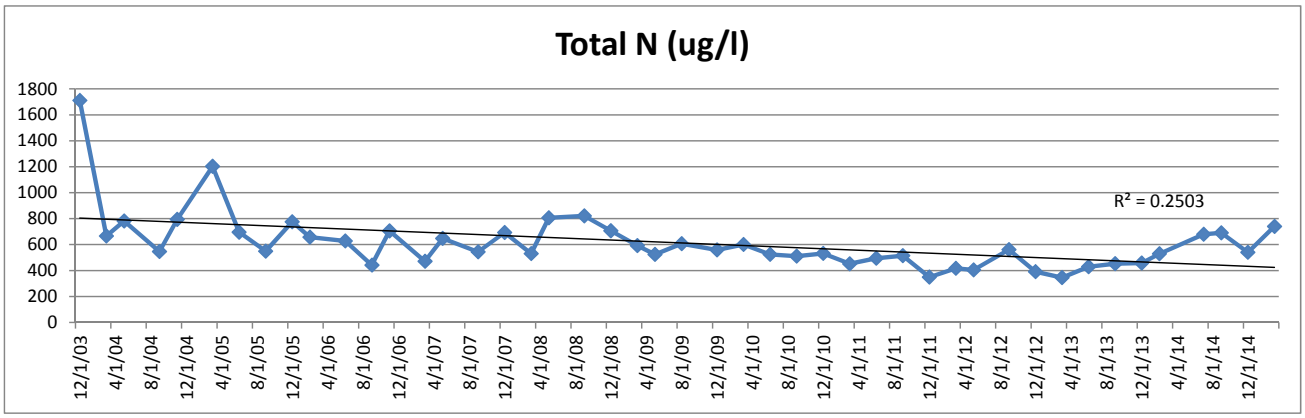


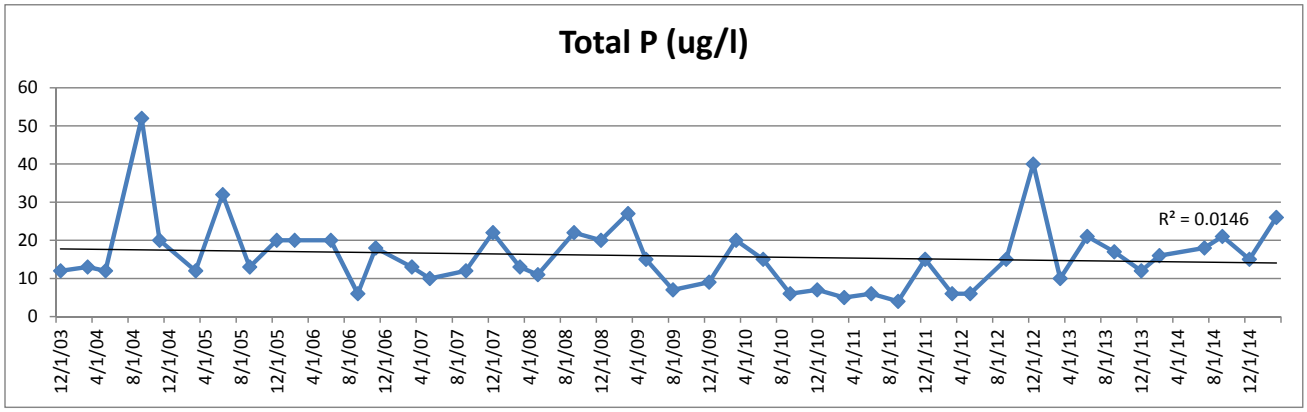


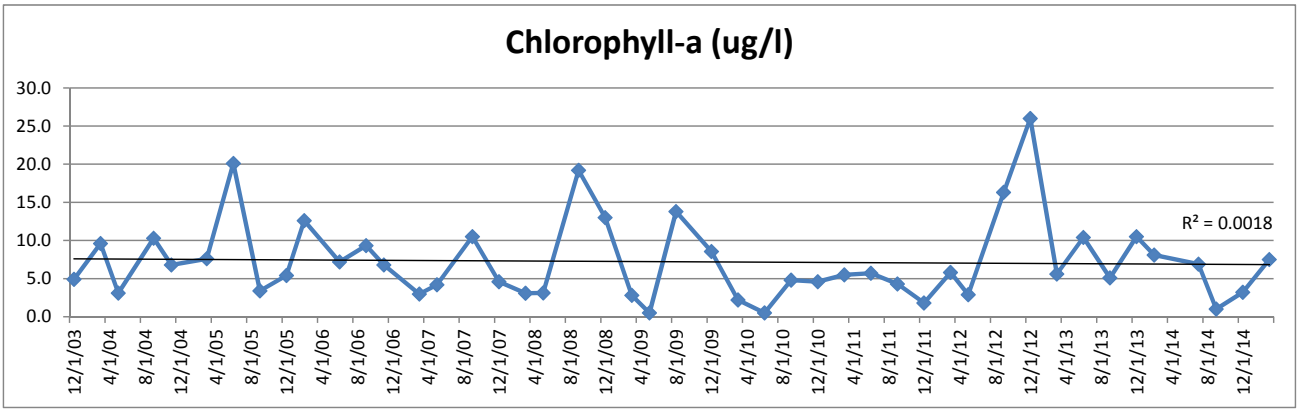


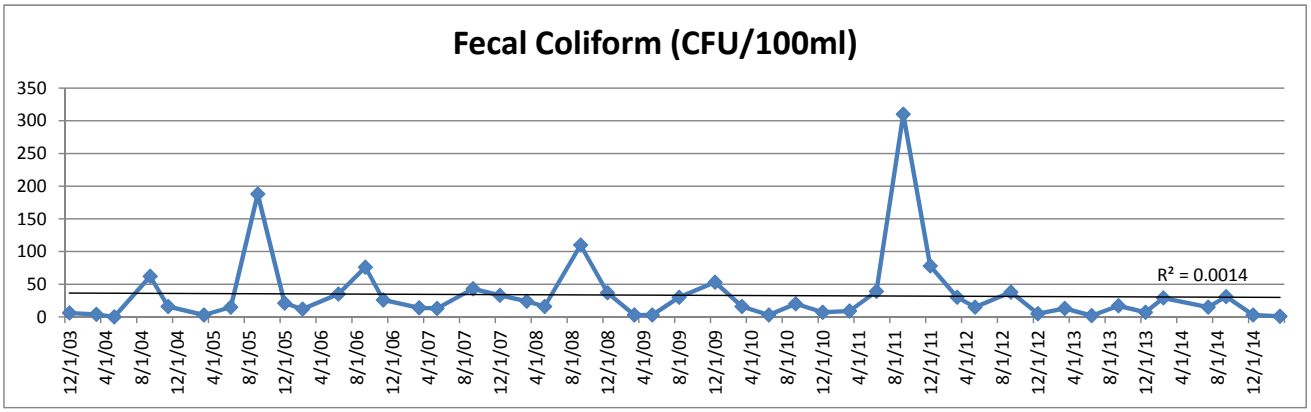


LOST LAKE TRENDS

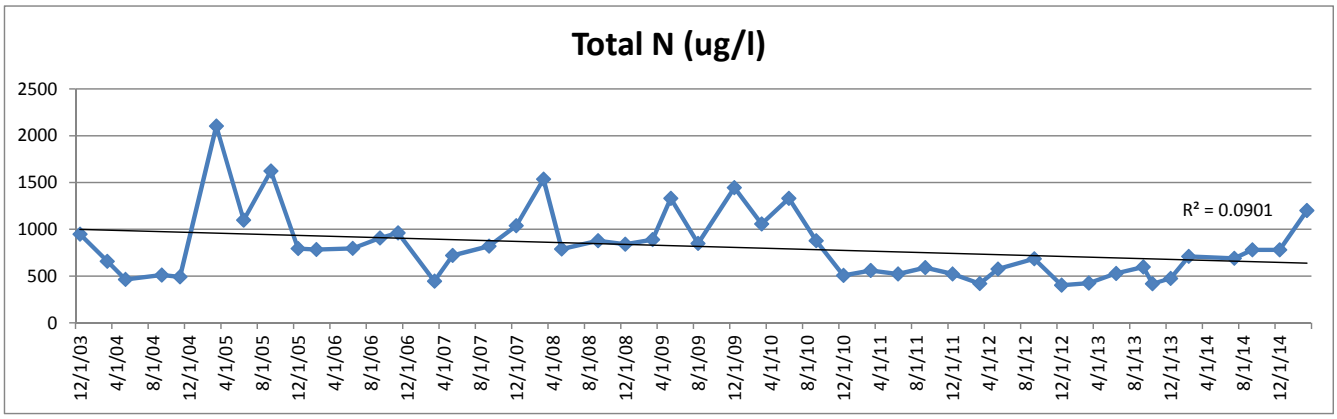


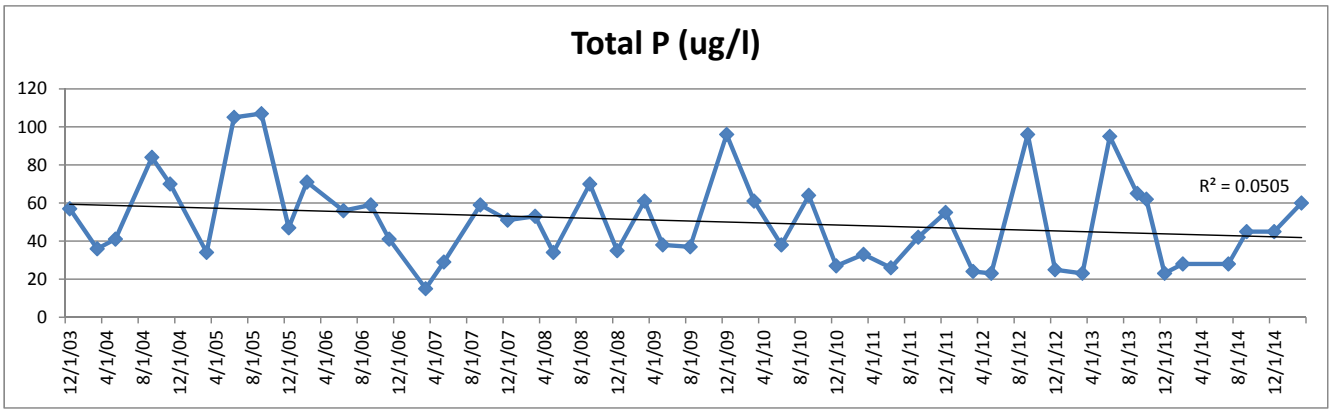


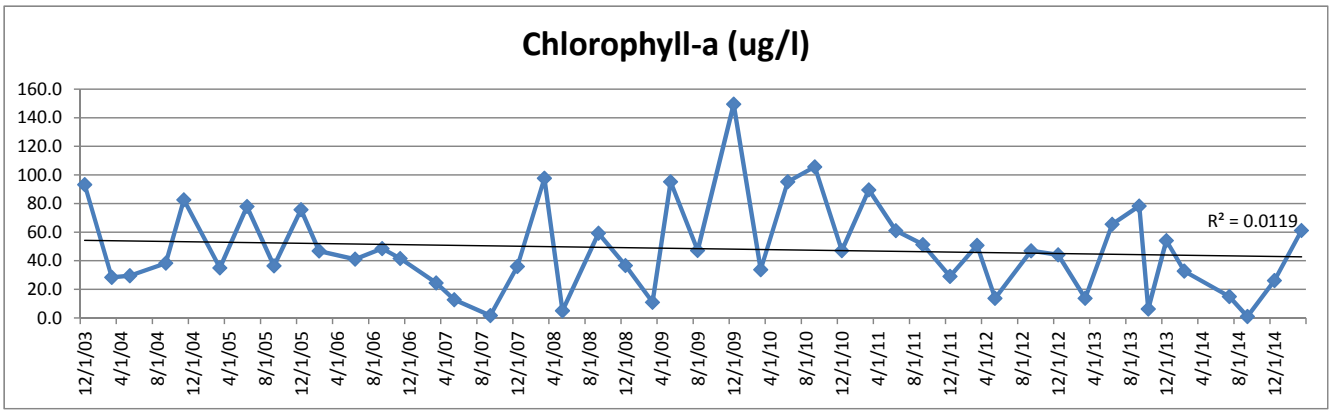


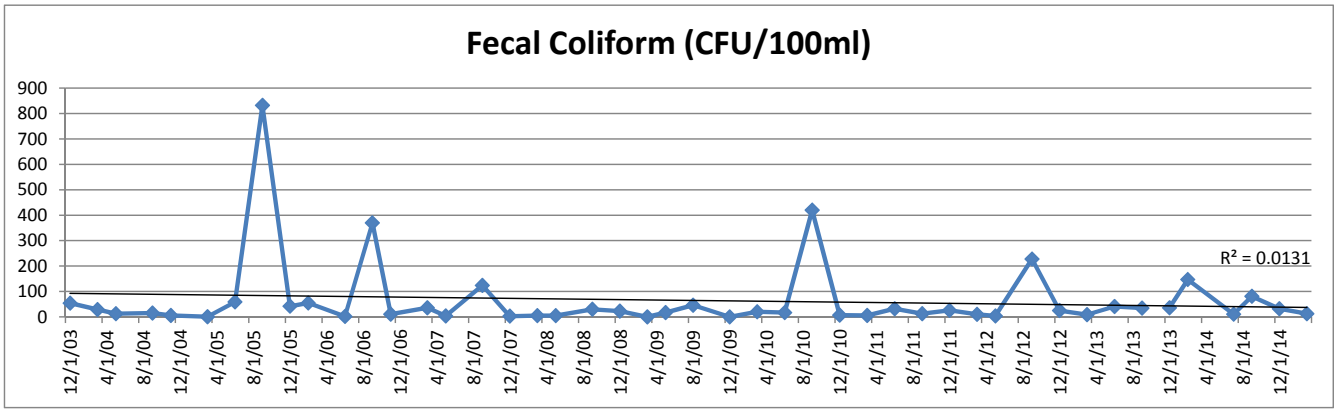


QUEEN'S MIRROR LAKE TRENDS

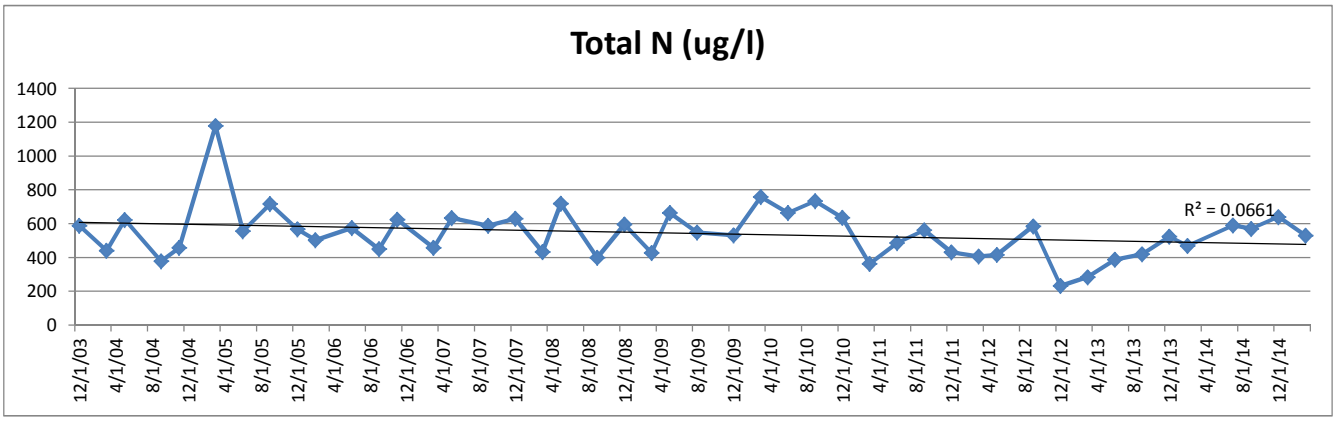


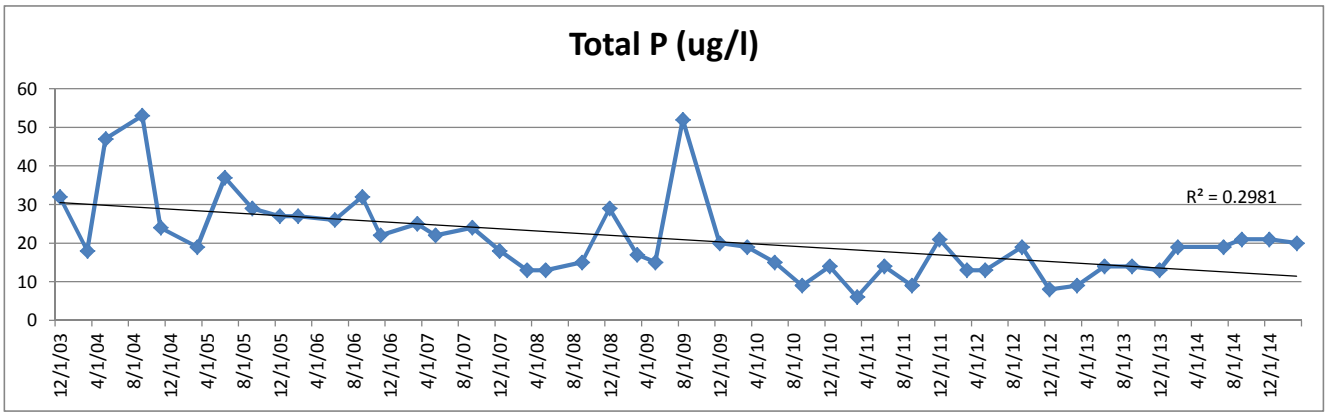


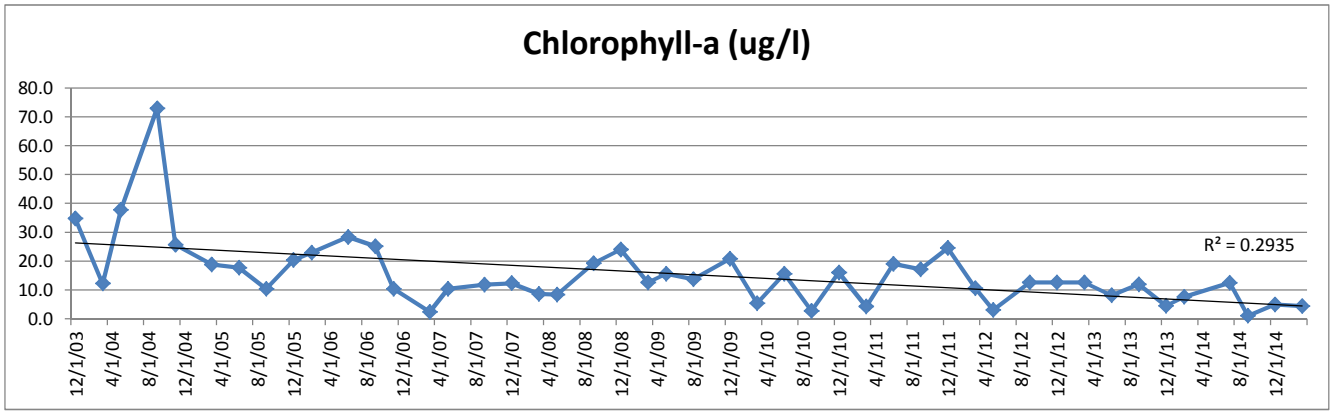


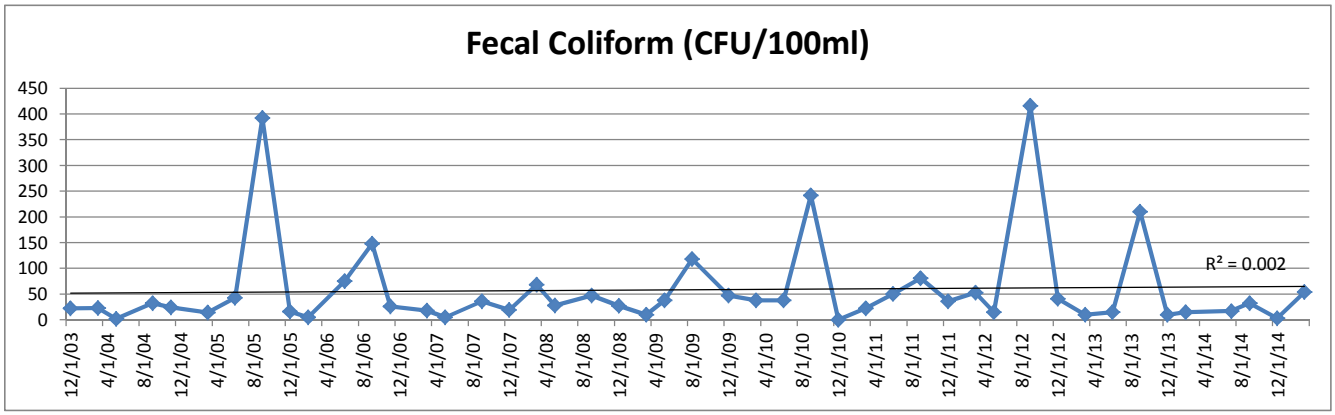


SECRET LAKE TRENDS

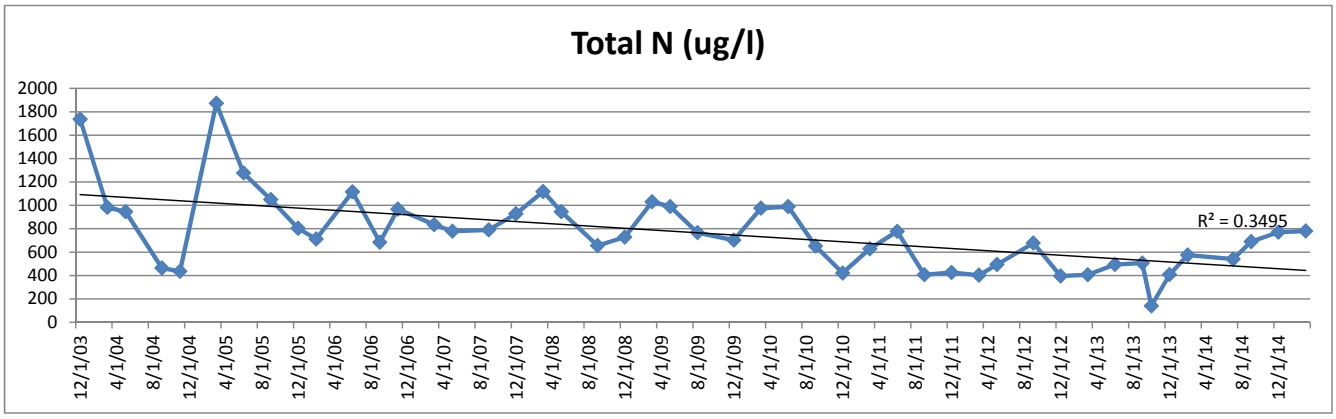


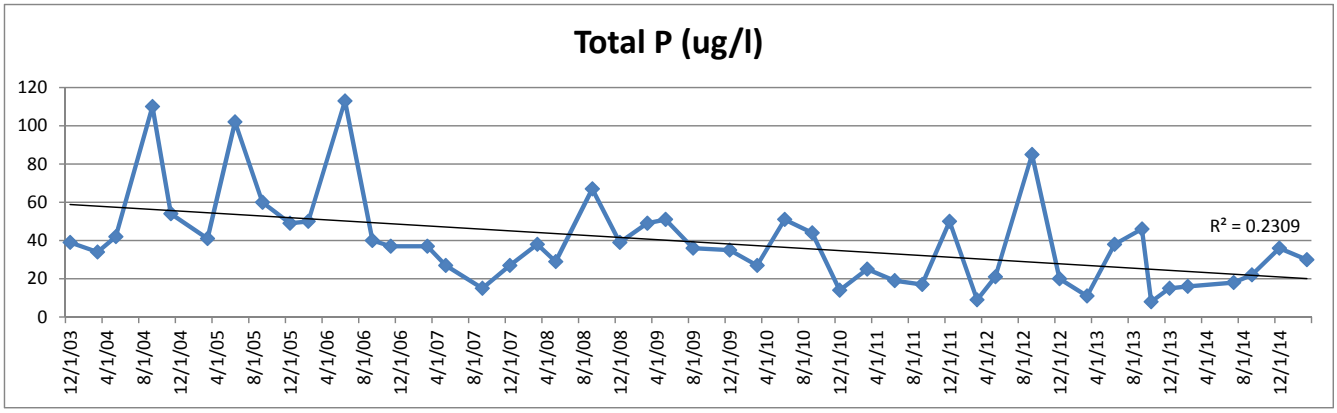


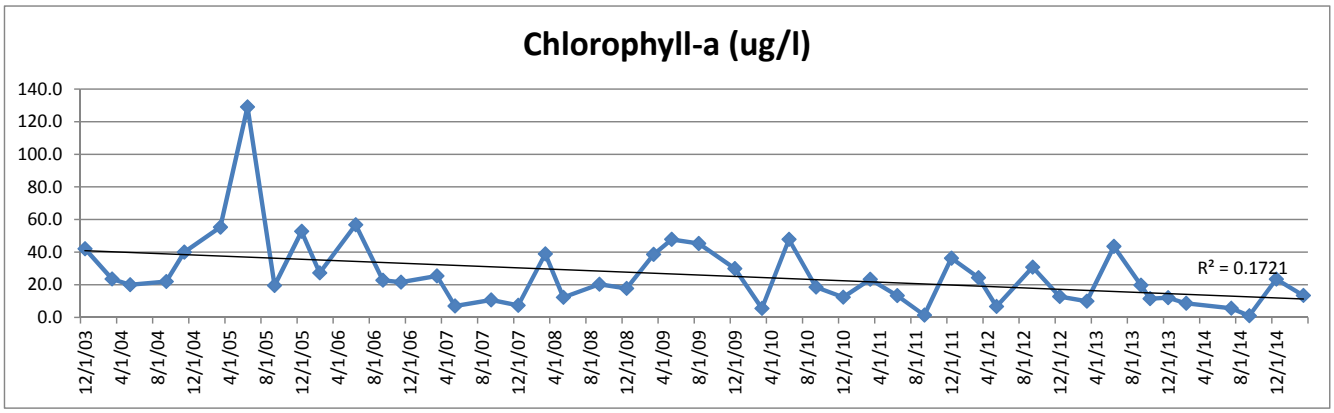


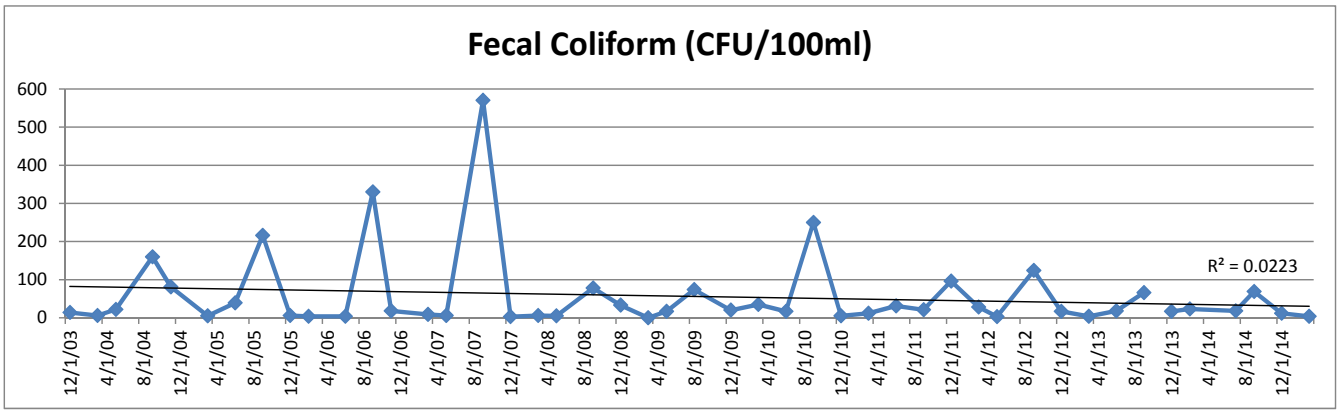


SOUTH TRIPLET LAKE TRENDS

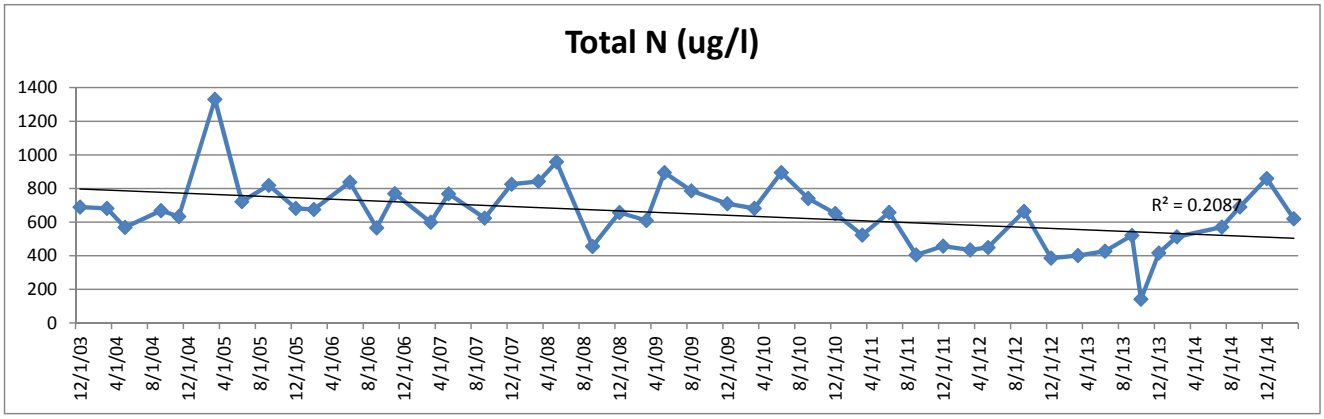


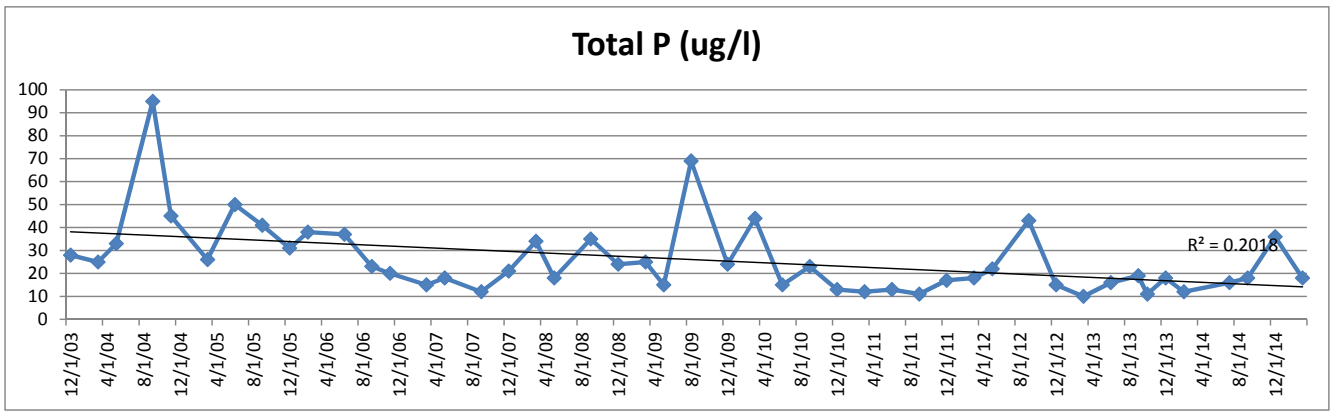


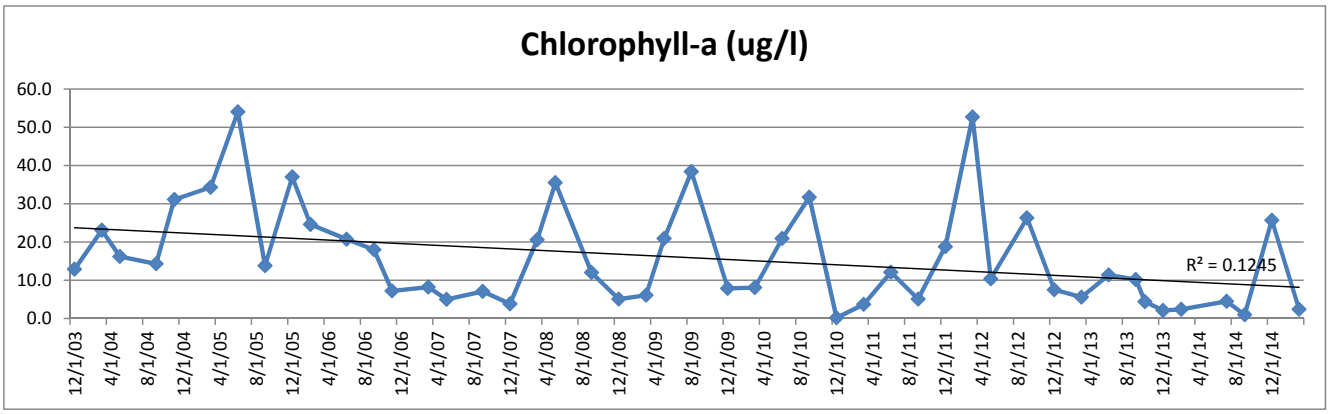


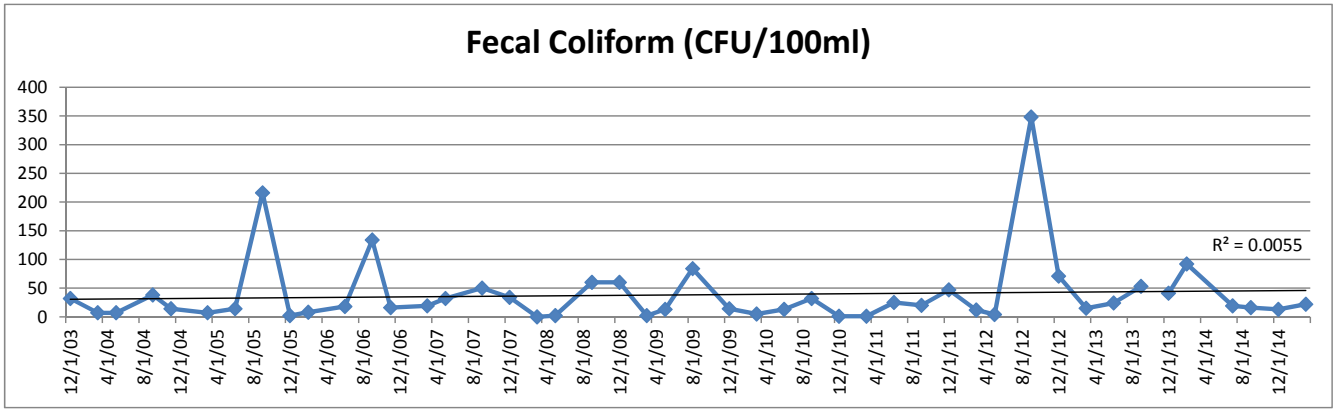


MIDDLE TRIPLET LAKE TRENDS

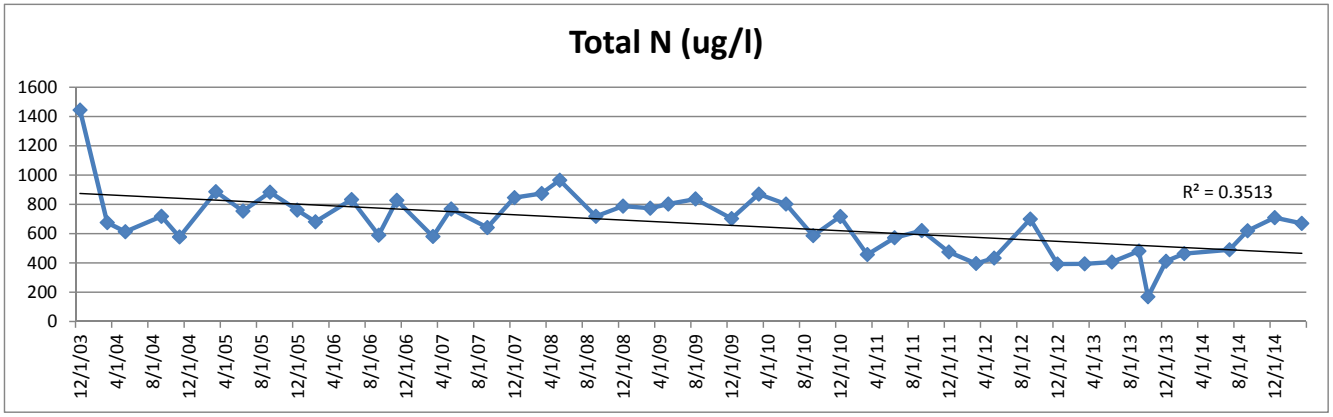


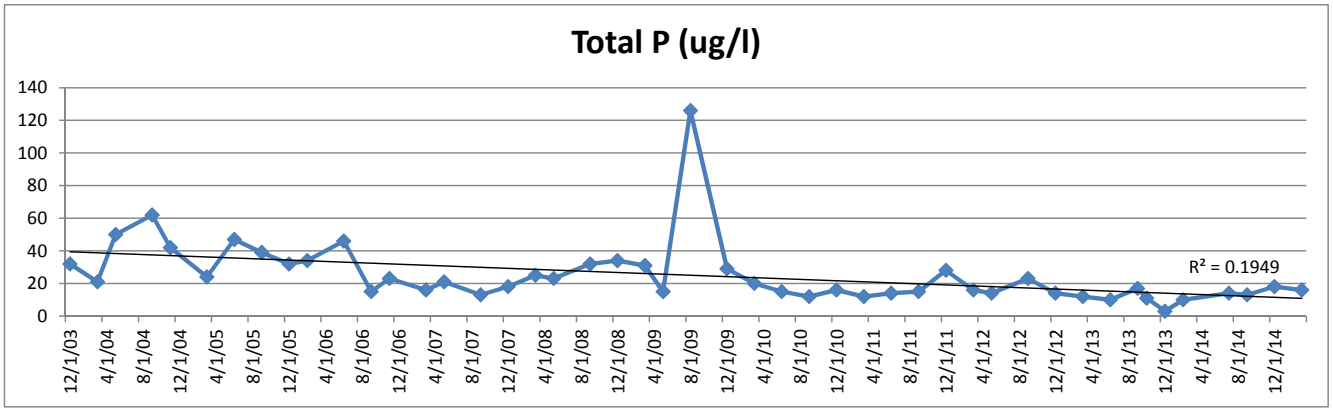


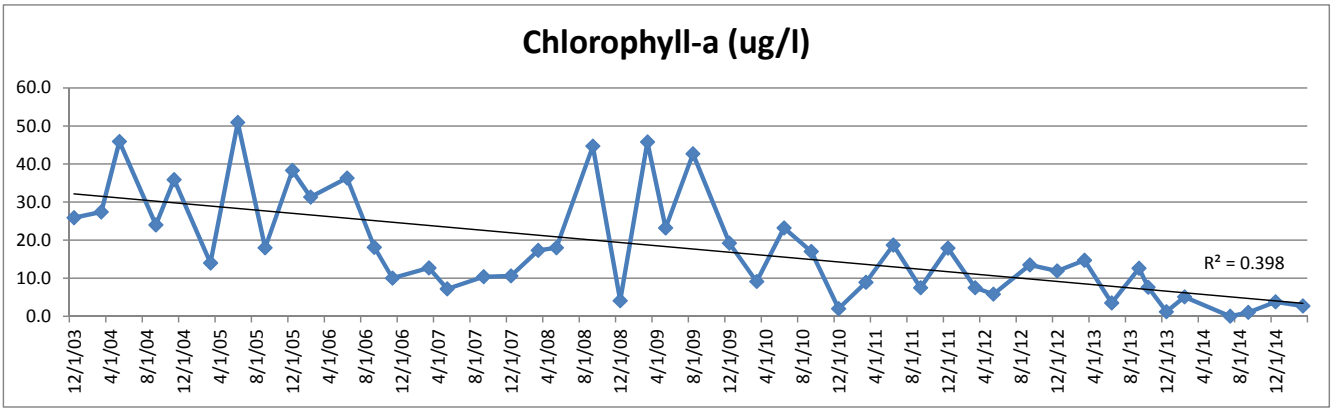


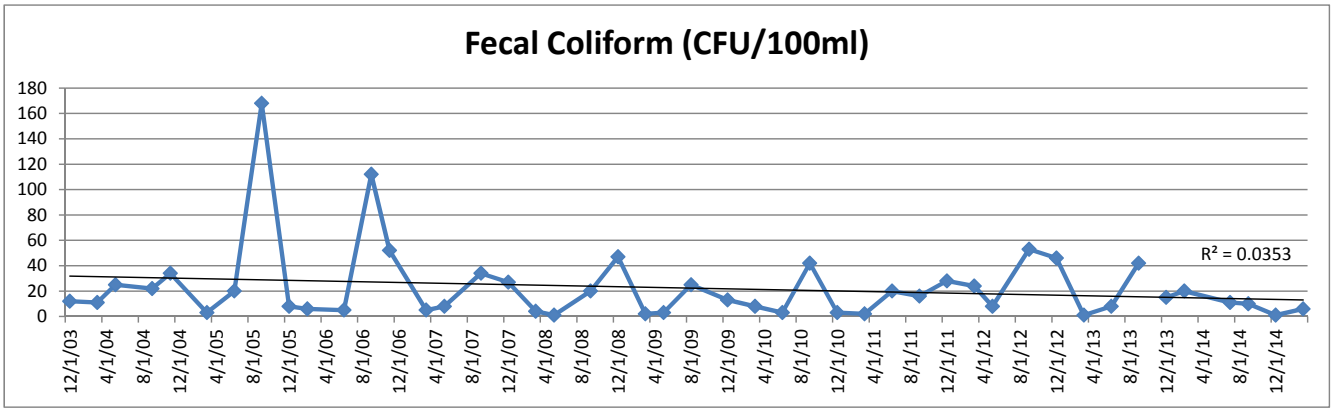


NORTH TRIPLET LAKE TRENDS

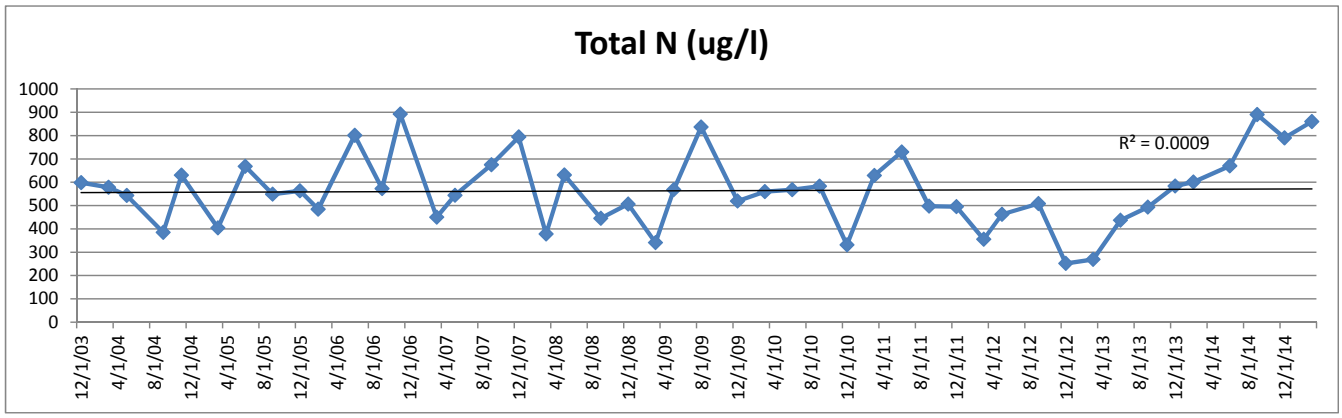


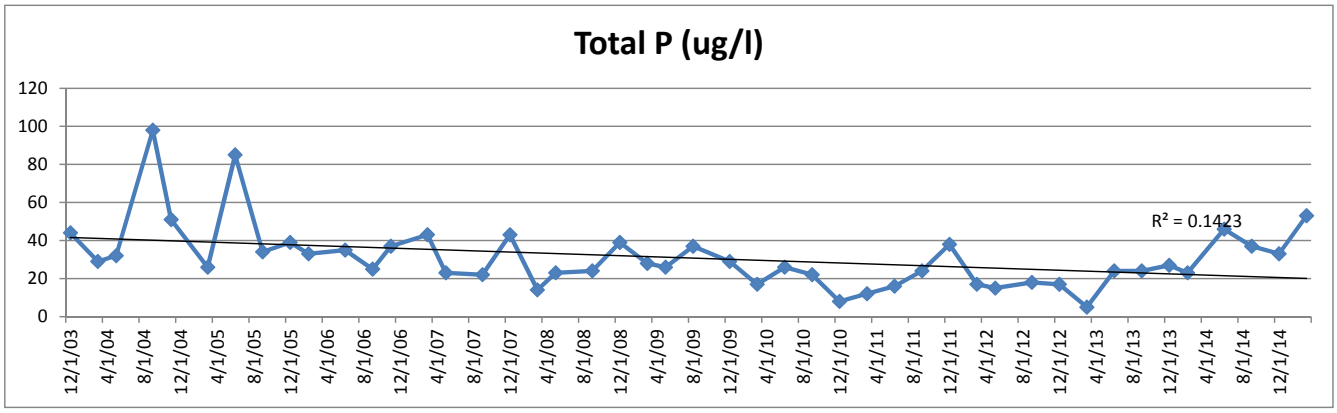


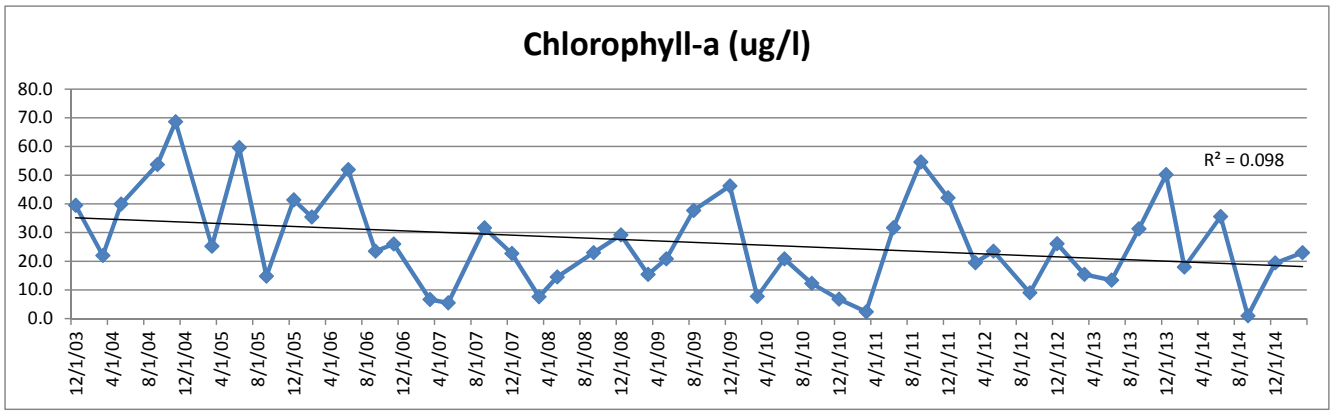


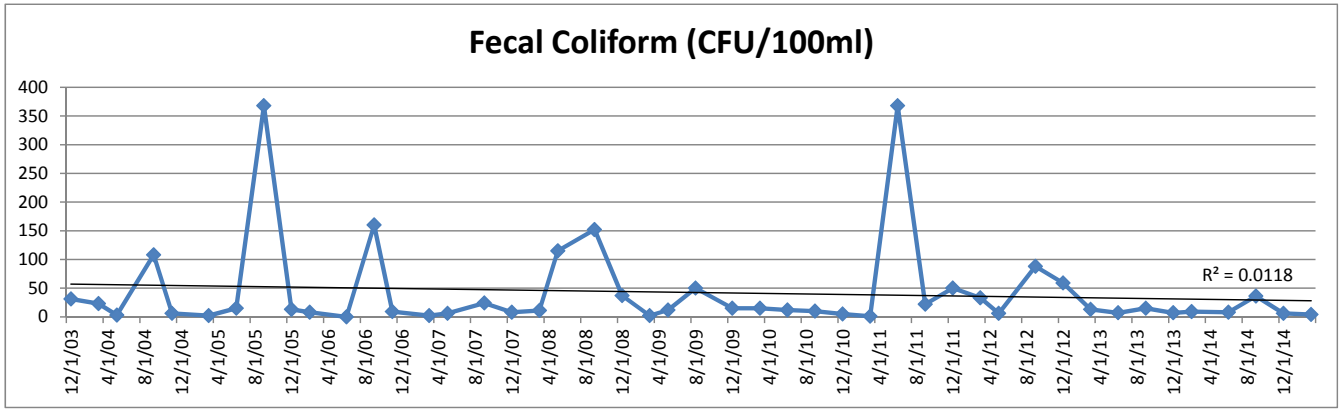


LAKE CONCORD TRENDS

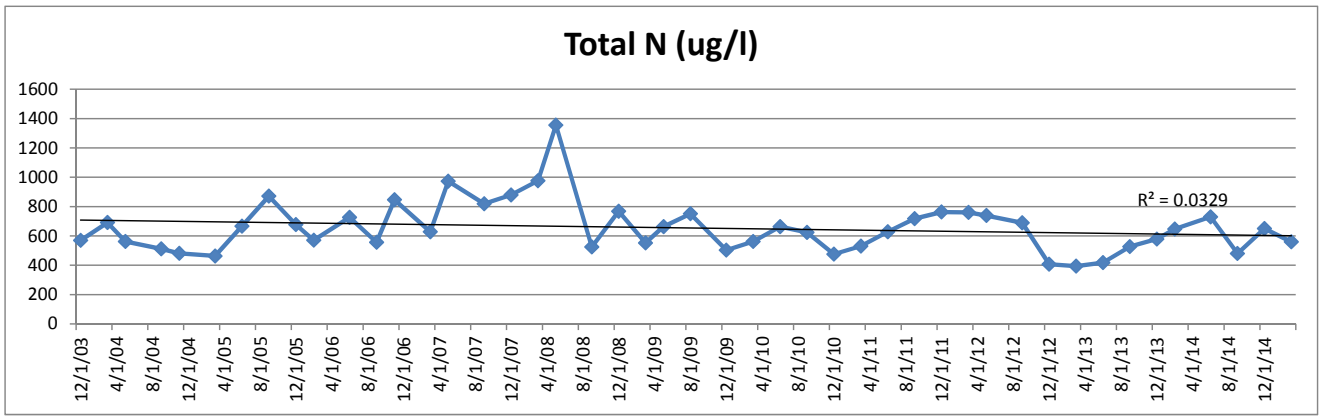


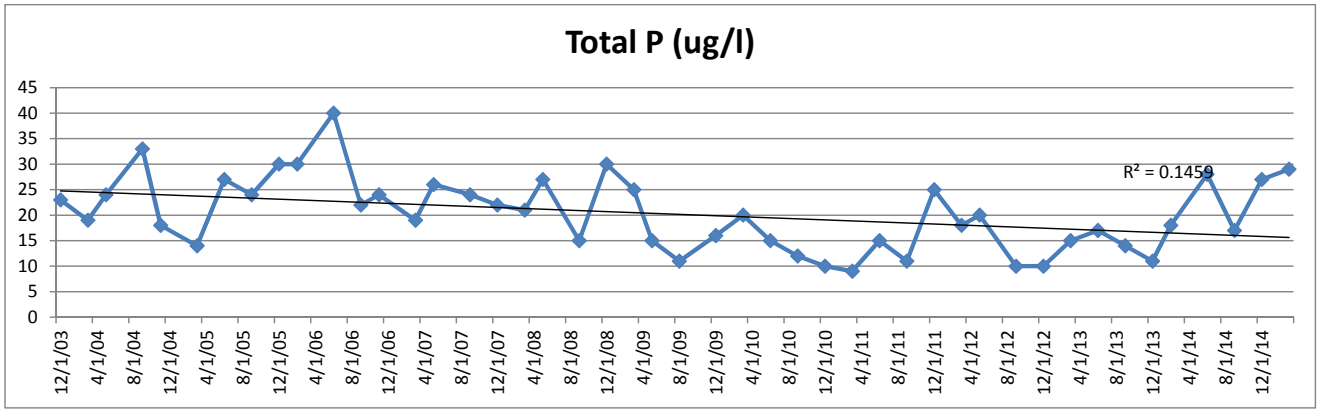


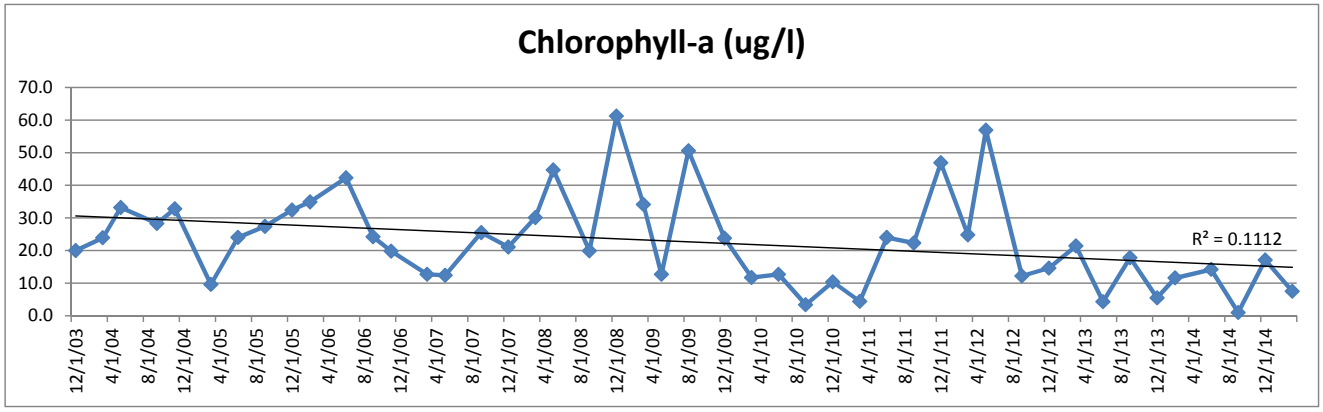


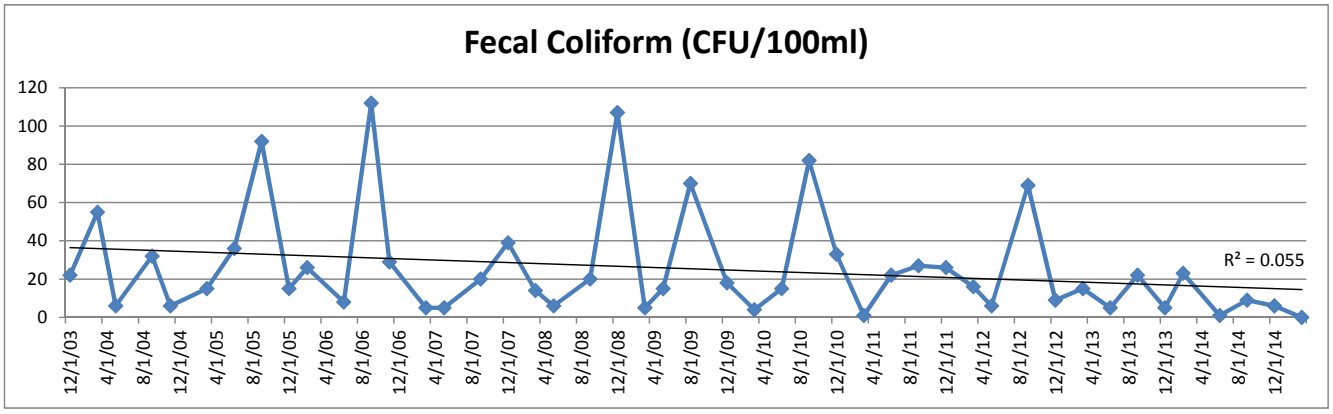


LAKE KATHRYN TRENDS

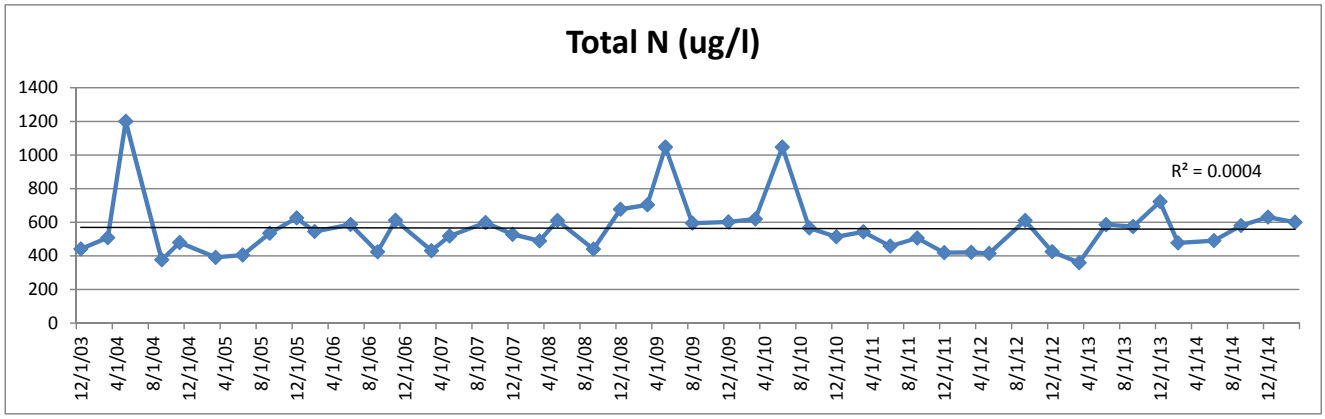


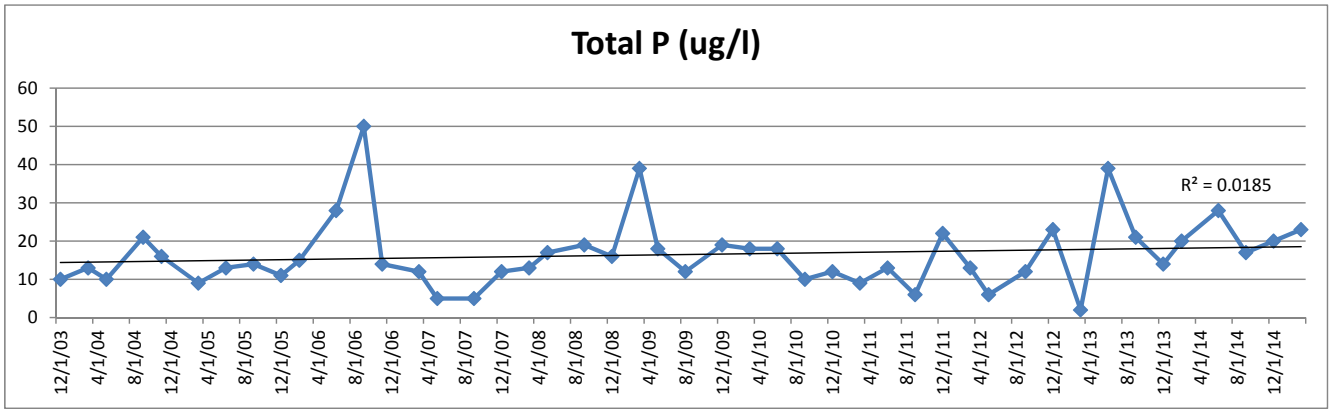


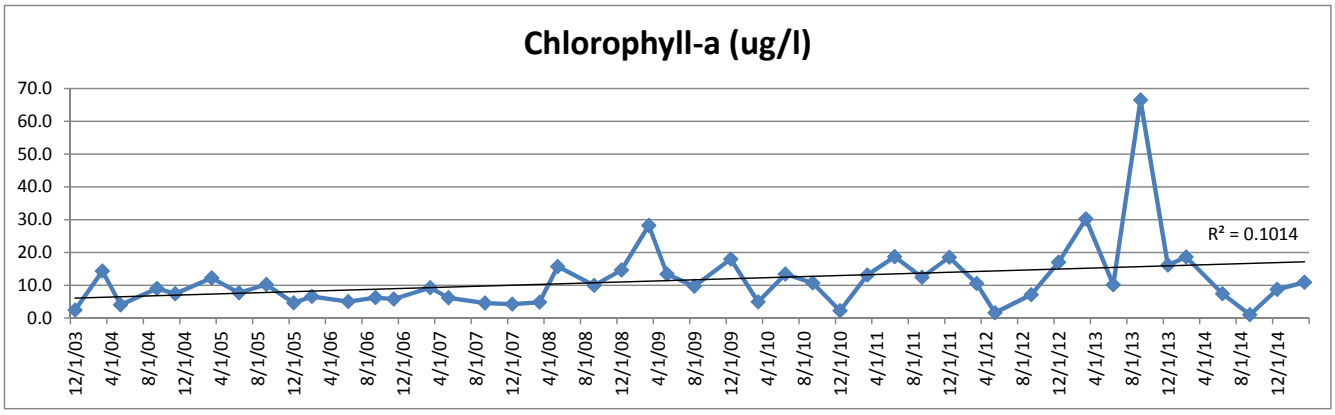


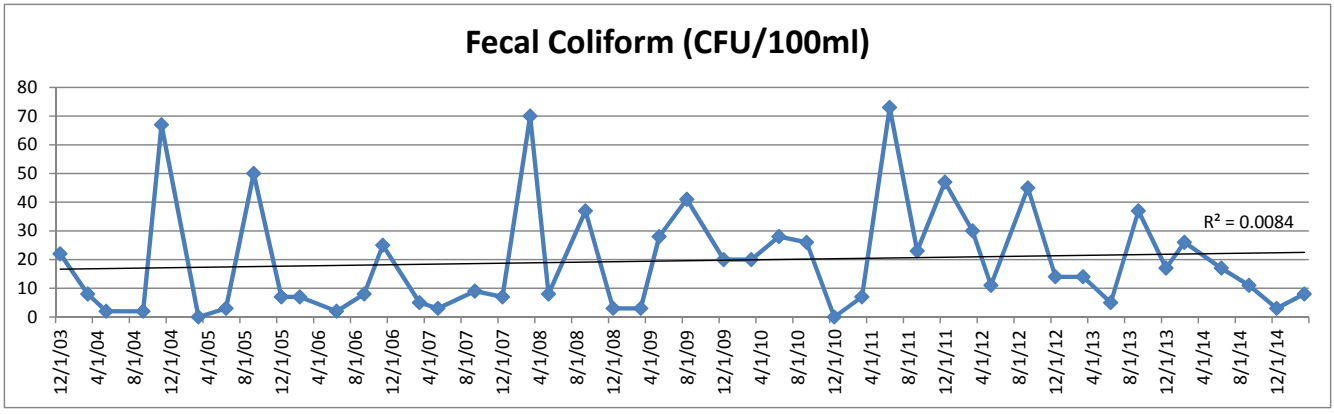


LAKE GRIFFIN TRENDS

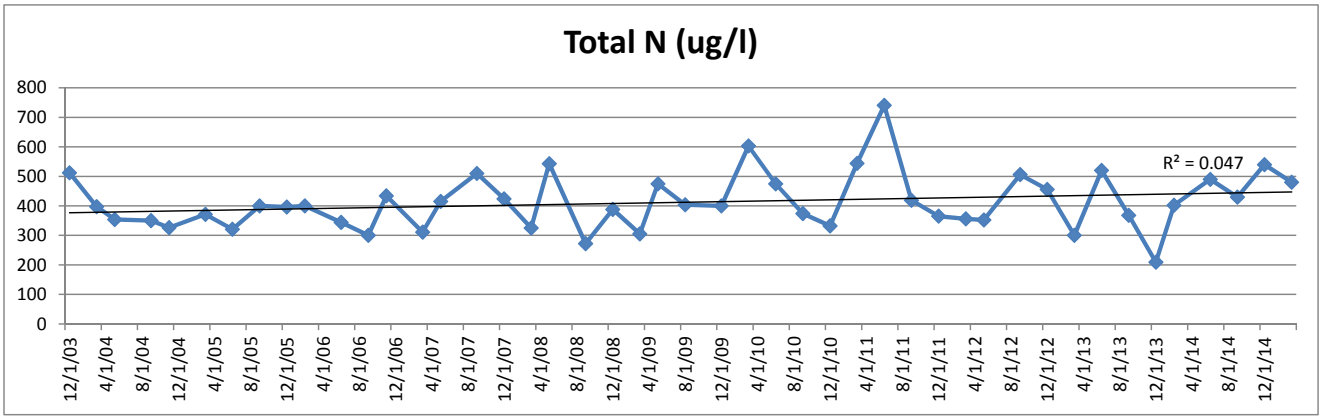


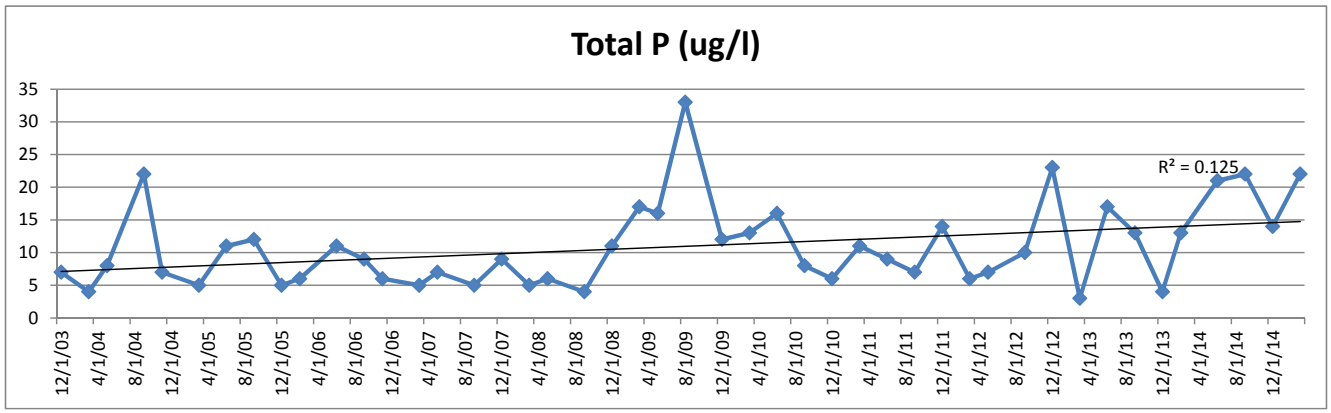


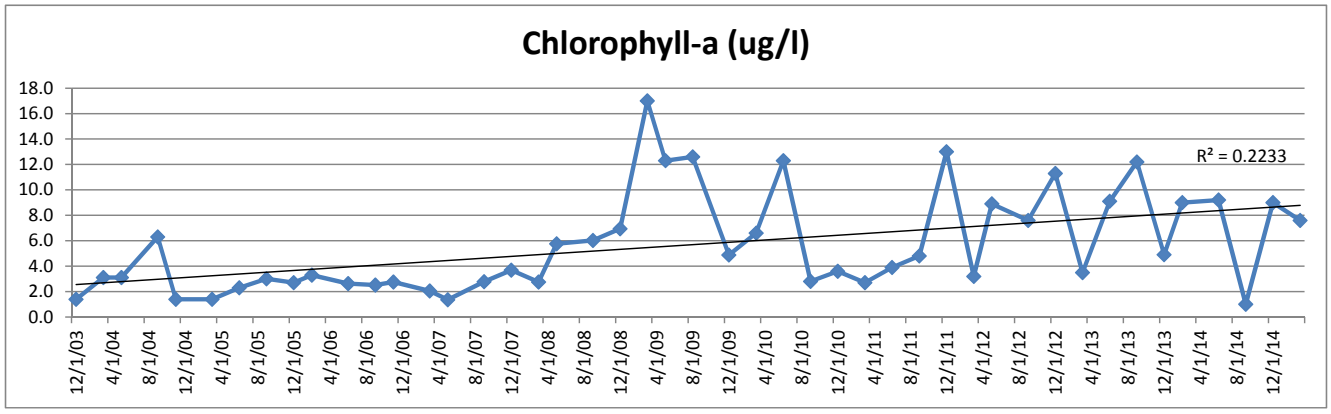


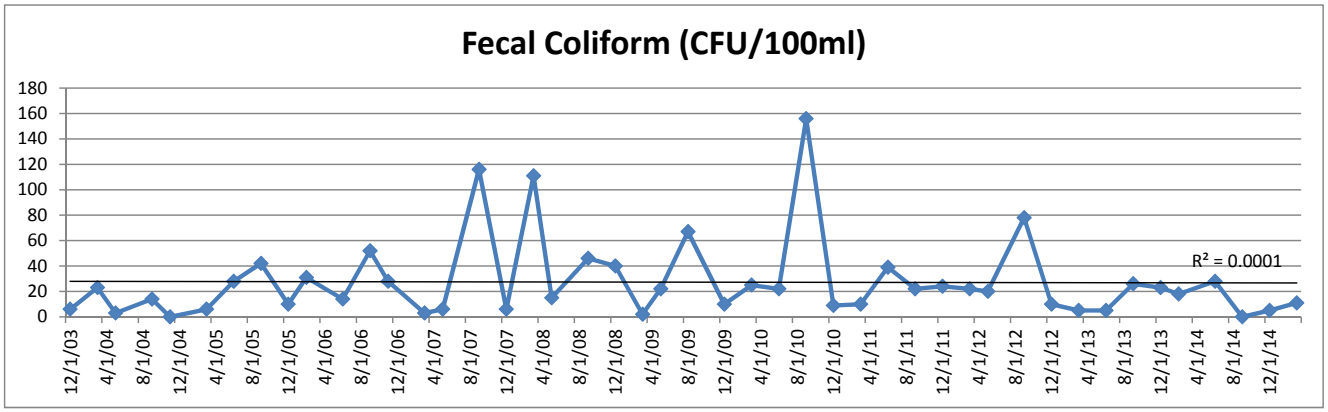


TROUT LAKE TRENDS

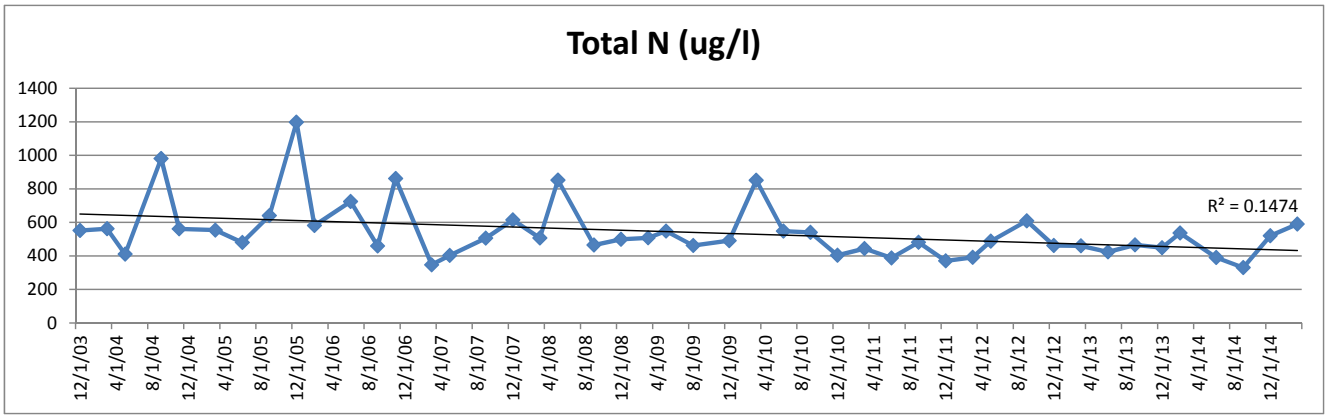


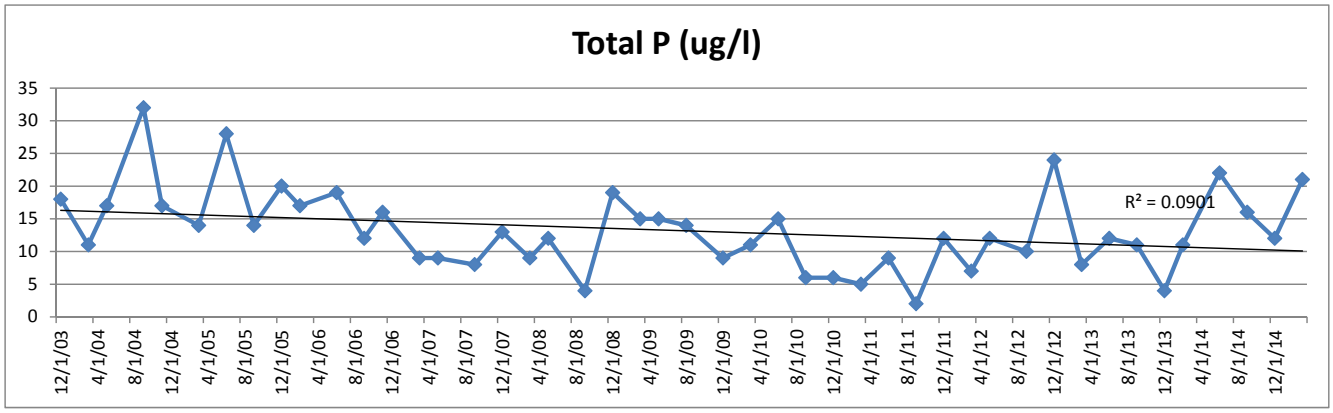


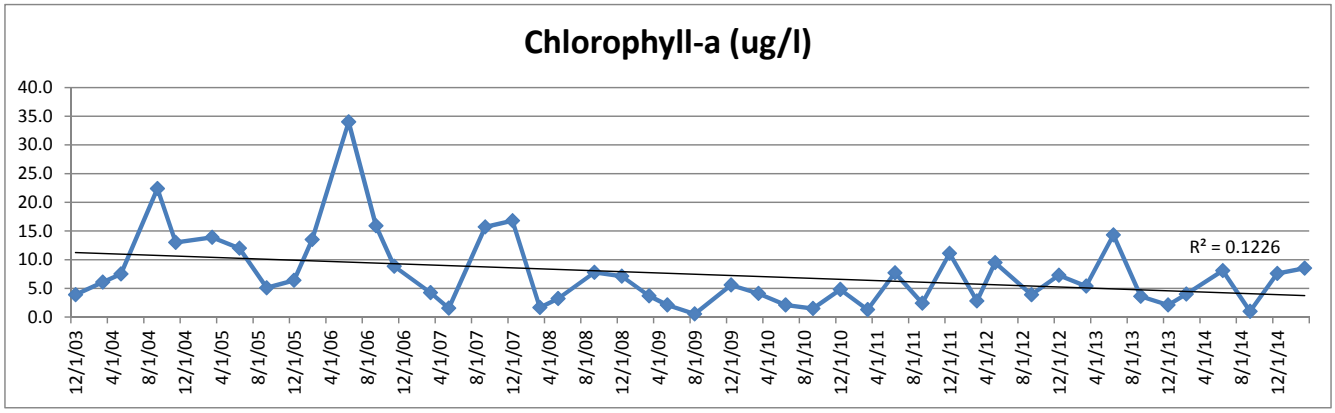


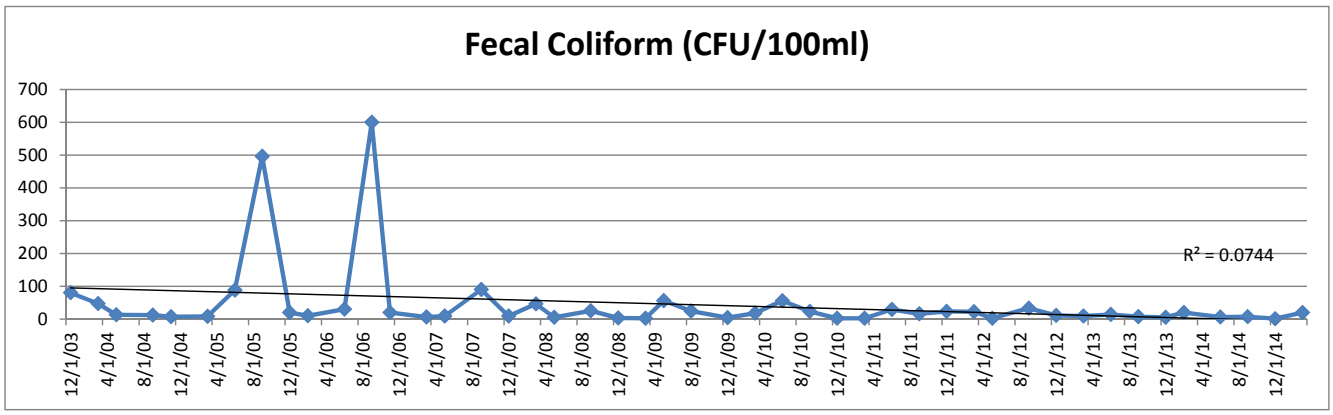


GRASSY LAKE TRENDS









Appendix B

PHYSICAL-CHEMICAL PROFILES COLLECTED IN CITY OF CASSELBERRY LAKES

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

July 21, 2014

Mark Ellard
Geosyntec Consultants, Inc.
355 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lake SW
Pace Project No.: 35143991

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on June 30, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report. Results originally not flagged to the MDL.

Revised report. Ortho Phosphorus result corrected for sample Griffin/2.87

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc. La

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lake SW
Pace Project No.: 35143991

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lake SW
Pace Project No.: 35143991

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35143991001	**Concord/0.38**	Water	06/30/14 12:46	06/30/14 14:55
35143991002	**Trout/1.00**	Water	06/30/14 11:54	06/30/14 14:55
35143991003	**Griffin/2.87**	Water	06/30/14 10:04	06/30/14 14:55
35143991004	**Grassy/1.13**	Water	06/30/14 08:49	06/30/14 14:55

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35143991

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35143991001	**Concord/0.38**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	LJJ	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35143991002	**Trout/1.00**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	LJJ	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35143991003	**Griffin/2.87**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	LJJ	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35143991

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35143991004	**Grassy/1.13**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	LJJ	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35143991

Sample: Concord/0.38 **Lab ID: 35143991001** Collected: 06/30/14 12:46 Received: 06/30/14 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**8.0**	CFU/100 mL	1.0	1.0	1	06/30/14 16:27	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**4.9**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**49.9**	mg/L	5.0	5.0	1		07/09/14 16:25		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**4.2**	mg/L	2.0	2.0	1	07/01/14 16:56	07/06/14 15:55		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**38.2**	ug/L	4.0	4.0	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**35.6**	ug/L	4.0	4.0	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.67**	mg/L	0.50	0.25	1		07/08/14 11:20		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.67**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:21	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.67**	mg/L	0.50	0.086	1	07/03/14 08:30	07/03/14 14:54	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 10:14		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:49		D3,M6
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.046**	mg/L	0.0040	0.0028	1		07/02/14 11:43	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35143991

Sample: Trout/1.00 **Lab ID: 35143991002** Collected: 06/30/14 11:54 Received: 06/30/14 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**28.0**	CFU/100 mL	1.0	1.0	1	06/30/14 16:27	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.5**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**52.7**	mg/L	5.0	5.0	1		07/09/14 16:41		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**4.0**	mg/L	2.0	2.0	1	07/01/14 16:59	07/06/14 15:58		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**10.0**	ug/L	1.8	1.8	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**9.2**	ug/L	1.8	1.8	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/08/14 11:20		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:22	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.49 I**	mg/L	0.50	0.086	1	07/03/14 08:30	07/03/14 14:56	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 10:15		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:52		D3,M6
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.021**	mg/L	0.0040	0.0028	1		07/02/14 11:44	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35143991

Sample: Griffin/2.87 **Lab ID: 35143991003** Collected: 06/30/14 10:04 Received: 06/30/14 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**17.0**	CFU/100 mL	1.0	1.0	1	06/30/14 16:27	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.5**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**35.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**60.1**	mg/L	5.0	5.0	1		07/09/14 17:05		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**7.2**	mg/L	2.0	2.0	1	07/01/14 17:35	07/06/14 15:59		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.9**	ug/L	1.6	1.6	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**7.4**	ug/L	1.6	1.6	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/08/14 11:20		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:24	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.49 I**	mg/L	0.50	0.086	1	07/03/14 08:30	07/03/14 14:57	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 10:16		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:32		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.028**	mg/L	0.0040	0.0028	1		07/02/14 11:45	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35143991

Sample: Grassy/1.13 **Lab ID: 35143991004** Collected: 06/30/14 08:49 Received: 06/30/14 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**6.0**	CFU/100 mL	1.0	1.0	1	06/30/14 16:27	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.1**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**57.0**	mg/L	5.0	5.0	1		07/09/14 17:10		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**4.5**	mg/L	2.0	2.0	1	07/01/14 17:38	07/06/14 16:01		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.2**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**8.1**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.39 I**	mg/L	0.50	0.25	1		07/08/14 11:20		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.39 I**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:26	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.39 I**	mg/L	0.50	0.086	1	07/03/14 08:30	07/03/14 14:58	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 10:18		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.065**	mg/L	0.040	0.034	10		07/02/14 09:56		D3,Q
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.022**	mg/L	0.0040	0.0028	1		07/02/14 11:46	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WET/25770 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 942775 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	07/01/14 14:45	

LABORATORY CONTROL SAMPLE: 942776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.2	16.3	101	90-110	

SAMPLE DUPLICATE: 942777

Parameter	Units	35143991004 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.1	1.1	.9	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WET/25768 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 942768 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	07/01/14 16:00	

LABORATORY CONTROL SAMPLE: 942769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 942770

Parameter	Units	35143991004 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

SAMPLE DUPLICATE: 942771

Parameter	Units	35144006002 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	5.0U	5.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WET/25899 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 949039 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	07/09/14 15:15	

LABORATORY CONTROL SAMPLE: 949040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	247	99	90-110	

SAMPLE DUPLICATE: 949041

Parameter	Units	35143885003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	209	221	5	20	

SAMPLE DUPLICATE: 949042

Parameter	Units	35143991002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	52.7	53.4	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WET/25764 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 942412 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	07/06/14 15:52	

LABORATORY CONTROL SAMPLE: 942413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	220	111	85-115	

SAMPLE DUPLICATE: 942414

Parameter	Units	35144022003 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.3	3.8	50	20	J(D6),J(R1)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WET/25763 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 942367 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	07/09/14 16:28	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	07/09/14 16:28	

SAMPLE DUPLICATE: 942368

Parameter	Units	35143991001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	38.2	38.2	0	40	
Chlorophyll a (Corrected)	ug/L	35.6	33.7	5		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WETA/37372 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 944866 | Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	07/03/14 12:45	

LABORATORY CONTROL SAMPLE: 944867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.91	91	90-110	

MATRIX SPIKE SAMPLE: 944869

Parameter	Units	35144268002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	<0.020	1	1.1	106	90-110	

SAMPLE DUPLICATE: 944868

Parameter	Units	35144268002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	<0.020	0.020U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WETA/37390 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 945189 Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	07/03/14 14:49	

LABORATORY CONTROL SAMPLE: 945190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.0	100	90-110	

MATRIX SPIKE SAMPLE: 945192

Parameter	Units	35144011001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.63	20	21.1	103	90-110	

SAMPLE DUPLICATE: 945191

Parameter	Units	35144011001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.63	0.80	24	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WETA/37389 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 945131 | Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	07/05/14 09:58	

LABORATORY CONTROL SAMPLE: 945132

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 945134

Parameter	Units	35144268001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.58	2	2.7	104	80-120	

MATRIX SPIKE SAMPLE: 945136

Parameter	Units	35144011001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.19	2	2.4	112	80-120	

SAMPLE DUPLICATE: 945133

Parameter	Units	35144268001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.58	0.57	.2	20	

SAMPLE DUPLICATE: 945135

Parameter	Units	35144011001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.19	0.19	.6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WETA/37316 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 943526 | Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	07/02/14 08:55	

LABORATORY CONTROL SAMPLE: 943527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 943529

Parameter	Units	35143991001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.75	74	90-110	M6

MATRIX SPIKE SAMPLE: 943531

Parameter	Units	35143991002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.90	88	90-110	M6

SAMPLE DUPLICATE: 943528

Parameter	Units	35143991001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

SAMPLE DUPLICATE: 943530

Parameter	Units	35143991002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35143991

QC Batch: WETA/37280 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

METHOD BLANK: 942369 | Matrix: Water
Associated Lab Samples: 35143991001, 35143991002, 35143991003, 35143991004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	07/01/14 20:03	

LABORATORY CONTROL SAMPLE: 942370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.091	91	90-110	

MATRIX SPIKE SAMPLE: 942372

Parameter	Units	35143642001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.085	.1	0.21	129	90-110	J(M1)

SAMPLE DUPLICATE: 942371

Parameter	Units	35143642001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.085	0.086	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lake SW
Pace Project No.: 35143991

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
J(D6)	Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
J(R1)	Estimated Value. RPD value was outside control limits.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
Q	Sample held beyond the accepted holding time. Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35143991

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35143991001	**Concord/0.38**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35143991002	**Trout/1.00**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35143991003	**Griffin/2.87**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35143991004	**Grassy/1.13**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35143991001	**Concord/0.38**	EPA 180.1	WET/25770		
35143991002	**Trout/1.00**	EPA 180.1	WET/25770		
35143991003	**Griffin/2.87**	EPA 180.1	WET/25770		
35143991004	**Grassy/1.13**	EPA 180.1	WET/25770		
35143991001	**Concord/0.38**	SM 2120B	WET/25768		
35143991002	**Trout/1.00**	SM 2120B	WET/25768		
35143991003	**Griffin/2.87**	SM 2120B	WET/25768		
35143991004	**Grassy/1.13**	SM 2120B	WET/25768		
35143991001	**Concord/0.38**	SM 2320B	WET/25899		
35143991002	**Trout/1.00**	SM 2320B	WET/25899		
35143991003	**Griffin/2.87**	SM 2320B	WET/25899		
35143991004	**Grassy/1.13**	SM 2320B	WET/25899		
35143991001	**Concord/0.38**	SM 5210B	WET/25764	SM 5210B	WET/25922
35143991002	**Trout/1.00**	SM 5210B	WET/25764	SM 5210B	WET/25922
35143991003	**Griffin/2.87**	SM 5210B	WET/25764	SM 5210B	WET/25922
35143991004	**Grassy/1.13**	SM 5210B	WET/25764	SM 5210B	WET/25922
35143991001	**Concord/0.38**	SM10200	WET/25763	SM10200	WET/25803
35143991002	**Trout/1.00**	SM10200	WET/25763	SM10200	WET/25803
35143991003	**Griffin/2.87**	SM10200	WET/25763	SM10200	WET/25803
35143991004	**Grassy/1.13**	SM10200	WET/25763	SM10200	WET/25803
35143991001	**Concord/0.38**	TKN+NOx Calculation	WET/25865		
35143991002	**Trout/1.00**	TKN+NOx Calculation	WET/25865		
35143991003	**Griffin/2.87**	TKN+NOx Calculation	WET/25865		
35143991004	**Grassy/1.13**	TKN+NOx Calculation	WET/25865		
35143991001	**Concord/0.38**	TKN-NH3 Calculation	WET/25895		
35143991002	**Trout/1.00**	TKN-NH3 Calculation	WET/25895		
35143991003	**Griffin/2.87**	TKN-NH3 Calculation	WET/25895		
35143991004	**Grassy/1.13**	TKN-NH3 Calculation	WET/25895		
35143991001	**Concord/0.38**	EPA 350.1	WETA/37372		
35143991002	**Trout/1.00**	EPA 350.1	WETA/37372		
35143991003	**Griffin/2.87**	EPA 350.1	WETA/37372		
35143991004	**Grassy/1.13**	EPA 350.1	WETA/37372		
35143991001	**Concord/0.38**	EPA 351.2	WETA/37390	EPA 351.2	WETA/37392
35143991002	**Trout/1.00**	EPA 351.2	WETA/37390	EPA 351.2	WETA/37392
35143991003	**Griffin/2.87**	EPA 351.2	WETA/37390	EPA 351.2	WETA/37392
35143991004	**Grassy/1.13**	EPA 351.2	WETA/37390	EPA 351.2	WETA/37392
35143991001	**Concord/0.38**	EPA 353.2	WETA/37389		
35143991002	**Trout/1.00**	EPA 353.2	WETA/37389		
35143991003	**Griffin/2.87**	EPA 353.2	WETA/37389		
35143991004	**Grassy/1.13**	EPA 353.2	WETA/37389		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35143991

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35143991001	**Concord/0.38**	EPA 365.1	WETA/37316		
35143991002	**Trout/1.00**	EPA 365.1	WETA/37316		
35143991003	**Griffin/2.87**	EPA 365.1	WETA/37316		
35143991004	**Grassy/1.13**	EPA 365.1	WETA/37316		
35143991001	**Concord/0.38**	EPA 365.3	WETA/37280		
35143991002	**Trout/1.00**	EPA 365.3	WETA/37280		
35143991003	**Griffin/2.87**	EPA 365.3	WETA/37280		
35143991004	**Grassy/1.13**	EPA 365.3	WETA/37280		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

WO# : 35143991

35143991

st Document
completed accurately.

Page: of
1765526

Section A
Required Client Information:

Section B
Required Project In

Company: Geosyntec Consultants	Report To: Mark Elland	Attention:
Address: 3525 W Lake Mary Blvd. Lake Mary, FL	Copy To: Lee Nelson	Company Name:
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: Casselberry Lake - SW	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	Pace Profile #: 6259

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location
STATE: _____

Section D
Required Client Information

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	SM2320B ALK	SM5210B BOD	SM2120B Color	180.1 Turb.	SM4500 Cl-A	SM9222D Fecal	350.1 Amm.	353.2 NOx	Tot. N. 1000.N.	365.1 Tot. P.	365.3 O.P.	351.2 TKN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CONCORD / 0.38			6/30	1246	6/30	1257		6	5	1								X	X	X	X	X	X	X	X	X	X	X			
2	FT						1246		6	5	1								X	X	X	X	X	X	X	X	X	X	X			
3	TROUT / 1.00						1154		6	5	1								X	X	X	X	X	X	X	X	X	X	X			
4	GRIFFIN / 2.87						1004		6	5	1								X	X	X	X	X	X	X	X	X	X	X			
5	GRASSY / 1.13						0849		6	5	1								X	X	X	X	X	X	X	X	X	X	X			
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KIT-EMPTY	Andrew Dempsey	6/18/14	4:00							
	Lee Nelson / Geo.	6/30/14	1334	[illegible] / PACE	6-30-14	1334				
	[illegible] / PACE	6-30-14	1455		6/30/14	1455	5.3	Y	N	Y
							T119			

ORIGINAL

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY):				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: October 9, 2013
	Document No.: F-FL-C-007 rev. 05	Issuing Authorities: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: GEOSYNTEC Project # 35143991

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other _____

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐yes ☐no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Date and Initials of person examining contents: 6/30/14

Thermometer Used T 119 Type of Ice: Wet Blue None

Cooler Temperature °C 5.8 (Visual) -0.5 (Correction Factor) 5.3 (Actual) 1455

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐Yes ☐No

Receipt of samples satisfactory: ☑Yes ☐No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

July 14, 2014

Mark Ellard
Geosyntec Consultants, Inc.
355 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lake SW
Pace Project No.: 35144022

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on June 30, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Samples Dup and EQUIP do not have collection time listed on COC. The earliest sample collection time of the other samples was entered for both samples to track the methods holding time.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc. La

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lake SW
Pace Project No.: 35144022

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lake SW
Pace Project No.: 35144022

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35144022001	**Yvonne/0.75**	Water	06/30/14 16:56	06/30/14 19:21
35144022002	**Kathryn/0.50**	Water	06/30/14 15:24	06/30/14 19:21
35144022003	**Dup**	Water	06/30/14 15:24	06/30/14 19:21
35144022004	**EQUIP**	Water	06/30/14 15:36	06/30/14 19:21

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35144022

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35144022001	**Yvonne/0.75**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	AIS	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144022002	**Kathryn/0.50**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	AIS	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144022003	**Dup**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	AIS	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35144022

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144022004	**EQUIP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	AGS	1	PASI-O
		SM 2320B	AIS	1	PASI-O
		SM 5210B	LJJ	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144022

Sample: Yvonne/0.75 **Lab ID: 35144022001** Collected: 06/30/14 16:56 Received: 06/30/14 19:21 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**14.0**	CFU/100 mL	1.0	1.0	1	06/30/14 19:40	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.68**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**46.0**	mg/L	5.0	5.0	1		07/10/14 16:24		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.0**	mg/L	2.0	2.0	1	07/01/14 17:01	07/06/14 16:02		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**11.2**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**9.6**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.28 I**	mg/L	0.50	0.25	1		07/07/14 10:12		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.28 I**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:28	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.28 I**	mg/L	0.50	0.086	1	07/02/14 10:30	07/03/14 13:27	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 12:24		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:57		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.023**	mg/L	0.0040	0.0028	1		07/02/14 11:47	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144022

Sample: Kathryn/0.50 **Lab ID: 35144022002** Collected: 06/30/14 15:24 Received: 06/30/14 19:21 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0**	CFU/100 mL	1.0	1.0	1	06/30/14 19:40	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**3.0**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**25.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**38.7**	mg/L	5.0	5.0	1		07/10/14 16:34		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.5**	mg/L	2.0	2.0	1	07/01/14 17:52	07/06/14 16:03		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**15.8**	ug/L	3.3	3.3	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**14.2**	ug/L	3.3	3.3	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.73**	mg/L	0.50	0.25	1		07/07/14 10:12		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.73**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:29	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.73**	mg/L	0.50	0.086	1	07/14/14 07:50	07/14/14 15:14	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 12:25		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:58		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.028**	mg/L	0.0040	0.0028	1		07/02/14 11:48	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144022

Sample: Dup **Lab ID: 35144022003** Collected: 06/30/14 15:24 Received: 06/30/14 19:21 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**7.0**	CFU/100 mL	1.0	1.0	1	06/30/14 19:40	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.73**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**45.0**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**45.7**	mg/L	5.0	5.0	1		07/10/14 16:38		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.3**	mg/L	2.0	2.0	1	07/01/14 17:42	07/06/14 16:04		J(D6)
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**11.6**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**9.8**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.29 I**	mg/L	0.50	0.25	1		07/07/14 10:12		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.29 I**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:31	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.29 I**	mg/L	0.50	0.086	1	07/02/14 10:30	07/03/14 13:30	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 12:27		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 09:59		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.026**	mg/L	0.0040	0.0028	1		07/02/14 11:49	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144022

Sample: EQUIP **Lab ID: 35144022004** Collected: 06/30/14 15:36 Received: 06/30/14 19:21 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0U**	CFU/100 mL	1.0	1.0	1	06/30/14 19:40	07/01/14 17:59		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20U**	NTU	0.20	0.20	1		07/01/14 14:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**5.0U**	units	5.0	5.0	1		07/01/14 16:00		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**5.0U**	mg/L	5.0	5.0	1		07/10/14 16:41		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.0U**	mg/L	3.0	3.0	1.5	07/01/14 17:54	07/06/14 16:06		J(B2)
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**1.0U**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	07/01/14 13:50	07/09/14 16:28		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.25U**	mg/L	0.50	0.25	1		07/07/14 10:12		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.25U**	mg/L	0.50	0.25	1		07/09/14 12:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/03/14 15:33	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.086U**	mg/L	0.50	0.086	1	07/02/14 10:30	07/03/14 13:31	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 12:28		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:00		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.0049**	mg/L	0.0040	0.0028	1		07/02/14 11:52	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WET/25770 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 942775 Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	07/01/14 14:45	

LABORATORY CONTROL SAMPLE: 942776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.2	16.3	101	90-110	

SAMPLE DUPLICATE: 942777

Parameter	Units	35143991004 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.1	1.1	.9	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WET/25768 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 942768 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	07/01/14 16:00	

LABORATORY CONTROL SAMPLE: 942769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 942770

Parameter	Units	35143991004 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

SAMPLE DUPLICATE: 942771

Parameter	Units	35144006002 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	5.0U	5.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WET/25928 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 950439 Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	07/10/14 16:12	

LABORATORY CONTROL SAMPLE: 950440

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	245	98	90-110	

SAMPLE DUPLICATE: 950441

Parameter	Units	35144022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	46.0	45.7	.6	20	

SAMPLE DUPLICATE: 950442

Parameter	Units	35144194005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	214	217	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WET/25764 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 942412 Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	07/06/14 15:52	

LABORATORY CONTROL SAMPLE: 942413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	220	111	85-115	

SAMPLE DUPLICATE: 942414

Parameter	Units	35144022003 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.3	3.8	50	20	J(D6),J(R1)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WET/25763 | Analysis Method: SM10200
QC Batch Method: SM10200 | Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 942367 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	07/09/14 16:28	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	07/09/14 16:28	

SAMPLE DUPLICATE: 942368

Parameter	Units	35143991001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	38.2	38.2	0	40	
Chlorophyll a (Corrected)	ug/L	35.6	33.7	5		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37372 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 944866 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	07/03/14 12:45	

LABORATORY CONTROL SAMPLE: 944867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.91	91	90-110	

MATRIX SPIKE SAMPLE: 944869

Parameter	Units	35144268002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	<0.020	1	1.1	106	90-110	

SAMPLE DUPLICATE: 944868

Parameter	Units	35144268002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	<0.020	0.020U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37351 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 943978 Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	07/03/14 13:22	

LABORATORY CONTROL SAMPLE: 943979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.1	96	90-110	

MATRIX SPIKE SAMPLE: 943981

Parameter	Units	35144027001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.84	20	19.3	93	90-110	

SAMPLE DUPLICATE: 943980

Parameter	Units	35144027001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.84	0.88	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37652 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35144022002

METHOD BLANK: 952798 | Matrix: Water
Associated Lab Samples: 35144022002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	07/14/14 16:59	

LABORATORY CONTROL SAMPLE: 952799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.3	102	90-110	

MATRIX SPIKE SAMPLE: 952801

Parameter	Units	35145419007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.19 I	20	20.9	103	90-110	

SAMPLE DUPLICATE: 952800

Parameter	Units	35145419007 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.19 I	0.18 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37389 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 945131 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	07/05/14 09:58	

LABORATORY CONTROL SAMPLE: 945132

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 945134

Parameter	Units	35144268001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.58	2	2.7	104	80-120	

MATRIX SPIKE SAMPLE: 945136

Parameter	Units	35144011001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.19	2	2.4	112	80-120	

SAMPLE DUPLICATE: 945133

Parameter	Units	35144268001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.58	0.57	.2	20	

SAMPLE DUPLICATE: 945135

Parameter	Units	35144011001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.19	0.19	.6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37316 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 943526 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	07/02/14 08:55	

LABORATORY CONTROL SAMPLE: 943527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 943529

Parameter	Units	35143991001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.75	74	90-110	M6

MATRIX SPIKE SAMPLE: 943531

Parameter	Units	35143991002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.90	88	90-110	M6

SAMPLE DUPLICATE: 943528

Parameter	Units	35143991001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

SAMPLE DUPLICATE: 943530

Parameter	Units	35143991002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144022

QC Batch: WETA/37280 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

METHOD BLANK: 942369 | Matrix: Water
Associated Lab Samples: 35144022001, 35144022002, 35144022003, 35144022004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	07/01/14 20:03	

LABORATORY CONTROL SAMPLE: 942370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.091	91	90-110	

MATRIX SPIKE SAMPLE: 942372

Parameter	Units	35143642001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.085	.1	0.21	129	90-110	J(M1)

SAMPLE DUPLICATE: 942371

Parameter	Units	35143642001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.085	0.086	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lake SW
Pace Project No.: 35144022

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
J(B2)	Estimated Value. Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
J(D6)	Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
J(R1)	Estimated Value. RPD value was outside control limits.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35144022

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35144022001	**Yvonne/0.75**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35144022002	**Kathryn/0.50**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35144022003	**Dup**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35144022004	**EQUIP**	SM 9222D	MBIO/14351	SM 9222D	MBIO/14352
35144022001	**Yvonne/0.75**	EPA 180.1	WET/25770		
35144022002	**Kathryn/0.50**	EPA 180.1	WET/25770		
35144022003	**Dup**	EPA 180.1	WET/25770		
35144022004	**EQUIP**	EPA 180.1	WET/25770		
35144022001	**Yvonne/0.75**	SM 2120B	WET/25768		
35144022002	**Kathryn/0.50**	SM 2120B	WET/25768		
35144022003	**Dup**	SM 2120B	WET/25768		
35144022004	**EQUIP**	SM 2120B	WET/25768		
35144022001	**Yvonne/0.75**	SM 2320B	WET/25928		
35144022002	**Kathryn/0.50**	SM 2320B	WET/25928		
35144022003	**Dup**	SM 2320B	WET/25928		
35144022004	**EQUIP**	SM 2320B	WET/25928		
35144022001	**Yvonne/0.75**	SM 5210B	WET/25764	SM 5210B	WET/25922
35144022002	**Kathryn/0.50**	SM 5210B	WET/25764	SM 5210B	WET/25922
35144022003	**Dup**	SM 5210B	WET/25764	SM 5210B	WET/25922
35144022004	**EQUIP**	SM 5210B	WET/25764	SM 5210B	WET/25922
35144022001	**Yvonne/0.75**	SM10200	WET/25763	SM10200	WET/25803
35144022002	**Kathryn/0.50**	SM10200	WET/25763	SM10200	WET/25803
35144022003	**Dup**	SM10200	WET/25763	SM10200	WET/25803
35144022004	**EQUIP**	SM10200	WET/25763	SM10200	WET/25803
35144022001	**Yvonne/0.75**	TKN+NOx Calculation	WET/25844		
35144022002	**Kathryn/0.50**	TKN+NOx Calculation	WET/25844		
35144022003	**Dup**	TKN+NOx Calculation	WET/25844		
35144022004	**EQUIP**	TKN+NOx Calculation	WET/25844		
35144022001	**Yvonne/0.75**	TKN-NH3 Calculation	WET/25895		
35144022002	**Kathryn/0.50**	TKN-NH3 Calculation	WET/25895		
35144022003	**Dup**	TKN-NH3 Calculation	WET/25895		
35144022004	**EQUIP**	TKN-NH3 Calculation	WET/25895		
35144022001	**Yvonne/0.75**	EPA 350.1	WETA/37372		
35144022002	**Kathryn/0.50**	EPA 350.1	WETA/37372		
35144022003	**Dup**	EPA 350.1	WETA/37372		
35144022004	**EQUIP**	EPA 350.1	WETA/37372		
35144022001	**Yvonne/0.75**	EPA 351.2	WETA/37351	EPA 351.2	WETA/37382
35144022002	**Kathryn/0.50**	EPA 351.2	WETA/37351	EPA 351.2	WETA/37382
35144022002	**Kathryn/0.50**	EPA 351.2	WETA/37652	EPA 351.2	WETA/37678
35144022003	**Dup**	EPA 351.2	WETA/37351	EPA 351.2	WETA/37382
35144022004	**EQUIP**	EPA 351.2	WETA/37351	EPA 351.2	WETA/37382
35144022001	**Yvonne/0.75**	EPA 353.2	WETA/37389		
35144022002	**Kathryn/0.50**	EPA 353.2	WETA/37389		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35144022

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35144022003	**Dup**	EPA 353.2	WETA/37389		
35144022004	**EQUIP**	EPA 353.2	WETA/37389		
35144022001	**Yvonne/0.75**	EPA 365.1	WETA/37316		
35144022002	**Kathryn/0.50**	EPA 365.1	WETA/37316		
35144022003	**Dup**	EPA 365.1	WETA/37316		
35144022004	**EQUIP**	EPA 365.1	WETA/37316		
35144022001	**Yvonne/0.75**	EPA 365.3	WETA/37280		
35144022002	**Kathryn/0.50**	EPA 365.3	WETA/37280		
35144022003	**Dup**	EPA 365.3	WETA/37280		
35144022004	**EQUIP**	EPA 365.3	WETA/37280		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

WO# : 35144022

35144022

alytical Request Document

All relevant fields must be completed accurately.

Page: 1 of 1

1678826

Section A
Required Client Information:

Company: Geosyntec Consultants	Report To: Mark Ellard	Attention:	
Address: 3525 West Lake Mary Blvd Lake Mary, FL	Copy To: Lee Mullon	Company Name:	REGULATORY AGENCY
		Address:	☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
Email To: lmullon@geosyntec.com	Purchase Order No.:	Pace Quote Reference:	☐ UST ☐ RCRA ☐ OTHER _____
Phone: 407-575-9038 Fax:	Project Name: Casselberry Lake SW	Pace Project Manager:	Site Location STATE: FL
Requested Due Date/TAT:	Project Number:	Pace Profile #: 6259	

Section D
Required Client Information

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	SM2320B Alk	SM5210B BOD	SM2120B Color	180.1 Turbid	SM10200H chla	SM9222D Fecal	350.1 Amm	351.2 TKN	352.3 NOX	TKN + OPP.N	365.1 OP	365.3 TP	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	YVONNE / 0.75					6/30	1656		6	5	1								X	X	X	X	X	X	X	X	X	X	X		
2	KATHRYN / 0.50					6/30	1524		6	5	1								X	X	X	X	X	X	X	X	X	X	X		
3	DUP					6/30	-		6	5	1								X	X	X	X	X	X	X	X	X	X	X		
4	EQUIP					6/30	1536		6	5	1								X	X	X	X	X	X	X	X	X	X	X		
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	LEE MULLON / GEO	6/30/14	1921	[signature] / Pace	6/30/14	1921	5.0	Y	N	Y

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY):				

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

T-168

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: October 9, 2013
	Document No.: F-FL-C-007 rev. 05	Issuing Authorities: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: GeoSyntec Project # 35144022

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐yes ☐no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used T168 Type of Ice: Wet Blue None

Cooler Temperature °C 5.1 (Visual) -0.1 (Correction Factor) 5.0 (Actual)

Date and Initials of person examining contents: 6/30/14 ML

1909 KSD

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐Yes ☐No

Receipt of samples satisfactory: ☑Yes ☐No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

July 11, 2014

Mark Ellard
Geosyntec Consultants, Inc.
355 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lake SW
Pace Project No.: 35144117

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc. La

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35144117001	**Queen/0.50**	Water	07/01/14 12:13	07/01/14 14:15
35144117002	**NTrip/1.00**	Water	07/01/14 09:18	07/01/14 14:15
35144117003	**STrip/0.75**	Water	07/01/14 08:38	07/01/14 14:15
35144117004	**MTrip/0.75**	Water	07/01/14 08:10	07/01/14 14:15
35144117005	**Lost/0.75**	Water	07/01/14 11:22	07/01/14 14:15
35144117006	**Secret/0.88**	Water	07/01/14 10:24	07/01/14 14:15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35144117001	**Queen/0.50**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144117002	**NTrip/1.00**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144117003	**STrip/0.75**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144117004	**MTrip/0.75**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144117005	**Lost/0.75**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35144117006	**Secret/0.88**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	AGS	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	DCI	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	CJF	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: Queen/0.50 **Lab ID: 35144117001** Collected: 07/01/14 12:13 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**11.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.6**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**100**	units	10.0	10.0	2		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**30.1**	mg/L	5.0	5.0	1		07/11/14 10:53		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.5**	mg/L	2.0	2.0	1	07/02/14 16:39	07/07/14 17:46		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**18.1**	ug/L	1.8	1.8	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**15.0**	ug/L	1.8	1.8	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.69**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.69**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 17:38	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.69**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:15	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:05		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:01		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.028**	mg/L	0.0040	0.0028	1		07/08/14 16:42	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: NTrip/1.00 **Lab ID: 35144117002** Collected: 07/01/14 09:18 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**11.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.3**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**26.9**	mg/L	5.0	5.0	1		07/11/14 10:57		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	07/02/14 16:42	07/07/14 17:47		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.9**	ug/L	2.0	2.0	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**2.0U**	ug/L	2.0	2.0	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.49 I**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 13:13	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.49 I**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:16	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:09		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:02		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.014**	mg/L	0.0040	0.0028	1		07/08/14 16:43	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: STrip/0.75 **Lab ID: 35144117003** Collected: 07/01/14 08:38 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**18.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.5**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**40.0**	units	5.0	5.0	1		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**24.2**	mg/L	5.0	5.0	1		07/11/14 11:14		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	07/02/14 16:47	07/07/14 17:48		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**7.0**	ug/L	1.2	1.2	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**5.6**	ug/L	1.2	1.2	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.54**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.54**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 13:18	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.54**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:18	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:10		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:03		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.018**	mg/L	0.0040	0.0028	1		07/08/14 16:44	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: MTrip/0.75 **Lab ID: 35144117004** Collected: 07/01/14 08:10 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**19.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.4**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**31.0**	mg/L	5.0	5.0	1		07/11/14 11:23		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	07/02/14 17:00	07/07/14 17:49		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**5.9**	ug/L	1.4	1.4	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**4.5**	ug/L	1.4	1.4	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.57**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.57**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 13:24	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.57**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:19	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:14		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:08		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.016**	mg/L	0.0040	0.0028	1		07/08/14 16:45	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: Lost/0.75 **Lab ID: 35144117005** Collected: 07/01/14 11:22 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**15.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.4**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**50.0**	units	5.0	5.0	1		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**26.0**	mg/L	5.0	5.0	1		07/11/14 11:28		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	07/02/14 17:02	07/07/14 17:50		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**8.6**	ug/L	1.7	1.7	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**6.9**	ug/L	1.7	1.7	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.68**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.68**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 13:29	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.68**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:20	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:15		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:09		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.018**	mg/L	0.0040	0.0028	1		07/08/14 16:46	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lake SW
Pace Project No.: 35144117

Sample: Secret/0.88 **Lab ID: 35144117006** Collected: 07/01/14 10:24 Received: 07/01/14 14:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**17.0**	CFU/100 mL	1.0	1.0	1	07/01/14 16:07	07/02/14 17:23		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.2**	NTU	0.20	0.20	1		07/02/14 17:40		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**25.0**	units	5.0	5.0	1		07/02/14 18:30		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**42.9**	mg/L	5.0	5.0	1		07/11/14 11:33		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.2**	mg/L	2.0	2.0	1	07/02/14 17:05	07/07/14 17:51		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**14.4**	ug/L	1.4	1.4	1	07/02/14 15:15	07/11/14 11:15		
Chlorophyll a (Corrected)	**12.5**	ug/L	1.4	1.4	1	07/02/14 15:15	07/11/14 11:15		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.59**	mg/L	0.50	0.25	1		07/09/14 12:02		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.59**	mg/L	0.50	0.25	1		07/09/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		07/05/14 13:31	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.59**	mg/L	0.50	0.086	1	07/03/14 08:30	07/08/14 10:22	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		07/05/14 15:16		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.034U**	mg/L	0.040	0.034	10		07/02/14 10:10		D3
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.019**	mg/L	0.0040	0.0028	1		07/08/14 16:47	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WET/25809 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 944397 Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	07/02/14 17:40	

LABORATORY CONTROL SAMPLE: 944398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.2	16.3	101	90-110	

SAMPLE DUPLICATE: 944399

Parameter	Units	35144116001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	0.20U	0.20U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WET/25800 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 943906 Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	07/02/14 18:30	

LABORATORY CONTROL SAMPLE: 943907

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 943908

Parameter	Units	35144003003 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	5.0U	5.0U		20	

SAMPLE DUPLICATE: 943909

Parameter	Units	35144178001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	5.0U	5.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WET/25936 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 951089 Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	07/11/14 09:50	

LABORATORY CONTROL SAMPLE: 951090

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	243	97	90-110	

SAMPLE DUPLICATE: 951091

Parameter	Units	35144194008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	215	217	.9	20	

SAMPLE DUPLICATE: 951092

Parameter	Units	35144117003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	24.2	24.4	.7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WET/25787 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 943603 Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	07/07/14 17:44	

LABORATORY CONTROL SAMPLE: 943604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	180	91	85-115	

SAMPLE DUPLICATE: 943605

Parameter	Units	35144125002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	311	296	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WET/25785 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 943578 Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	07/11/14 11:15	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	07/11/14 11:15	

SAMPLE DUPLICATE: 943579

Parameter	Units	35144117001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	18.1	17.6	3	40	
Chlorophyll a (Corrected)	ug/L	15.0	14.7	2		

SAMPLE DUPLICATE: 943580

Parameter	Units	35144160001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	0.024 mg/L	30.0	24	40	
Chlorophyll a (Corrected)	ug/L	17.4 mg/m3	23.2	29		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37421 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35144117001, 35144117002

METHOD BLANK: 946059 | Matrix: Water
Associated Lab Samples: 35144117001, 35144117002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	07/05/14 12:23	

LABORATORY CONTROL SAMPLE: 946060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 946062

Parameter	Units	35143915004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.067	1	1.1	104	90-110	

SAMPLE DUPLICATE: 946061

Parameter	Units	35143915004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.067	0.072	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37422 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 946063 | Matrix: Water
Associated Lab Samples: 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	07/05/14 13:15	

LABORATORY CONTROL SAMPLE: 946064

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 946066

Parameter	Units	35144117003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	1	1.1	105	90-110	

SAMPLE DUPLICATE: 946065

Parameter	Units	35144117003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.020U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37394 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 945204 | Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	07/08/14 09:57	

LABORATORY CONTROL SAMPLE: 945205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.8	104	90-110	

MATRIX SPIKE SAMPLE: 945207

Parameter	Units	35144452001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.48 I	20	19.9	97	90-110	

SAMPLE DUPLICATE: 945206

Parameter	Units	35144452001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.48 I	0.41 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37426 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 946130 | Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	07/05/14 17:25	

LABORATORY CONTROL SAMPLE: 946131

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.2	108	90-110	

MATRIX SPIKE SAMPLE: 946133

Parameter	Units	35144403001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.014 I	2	2.3	114	80-120	

MATRIX SPIKE SAMPLE: 946135

Parameter	Units	35144117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.3	113	80-120	

SAMPLE DUPLICATE: 946132

Parameter	Units	35144403001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.014 I	0.025U		20	

SAMPLE DUPLICATE: 946134

Parameter	Units	35144117001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37316 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 943526 | Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	07/02/14 08:55	

LABORATORY CONTROL SAMPLE: 943527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 943529

Parameter	Units	35143991001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.75	74	90-110	M6

MATRIX SPIKE SAMPLE: 943531

Parameter	Units	35143991002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.034U	1	0.90	88	90-110	M6

SAMPLE DUPLICATE: 943528

Parameter	Units	35143991001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

SAMPLE DUPLICATE: 943530

Parameter	Units	35143991002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.034U	0.034U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lake SW
Pace Project No.: 35144117

QC Batch: WETA/37477 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

METHOD BLANK: 947461 | Matrix: Water
Associated Lab Samples: 35144117001, 35144117002, 35144117003, 35144117004, 35144117005, 35144117006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	07/08/14 17:07	

LABORATORY CONTROL SAMPLE: 947462

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.096	96	90-110	

MATRIX SPIKE SAMPLE: 947464

Parameter	Units	35144403006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.034	.1	0.13	96	90-110	

SAMPLE DUPLICATE: 947463

Parameter	Units	35144403006 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.034	0.032	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lake SW
Pace Project No.: 35144117

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35144117001	**Queen/0.50**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117002	**NTrip/1.00**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117003	**STrip/0.75**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117004	**MTrip/0.75**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117005	**Lost/0.75**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117006	**Secret/0.88**	SM 9222D	MBIO/14357	SM 9222D	MBIO/14358
35144117001	**Queen/0.50**	EPA 180.1	WET/25809		
35144117002	**NTrip/1.00**	EPA 180.1	WET/25809		
35144117003	**STrip/0.75**	EPA 180.1	WET/25809		
35144117004	**MTrip/0.75**	EPA 180.1	WET/25809		
35144117005	**Lost/0.75**	EPA 180.1	WET/25809		
35144117006	**Secret/0.88**	EPA 180.1	WET/25809		
35144117001	**Queen/0.50**	SM 2120B	WET/25800		
35144117002	**NTrip/1.00**	SM 2120B	WET/25800		
35144117003	**STrip/0.75**	SM 2120B	WET/25800		
35144117004	**MTrip/0.75**	SM 2120B	WET/25800		
35144117005	**Lost/0.75**	SM 2120B	WET/25800		
35144117006	**Secret/0.88**	SM 2120B	WET/25800		
35144117001	**Queen/0.50**	SM 2320B	WET/25936		
35144117002	**NTrip/1.00**	SM 2320B	WET/25936		
35144117003	**STrip/0.75**	SM 2320B	WET/25936		
35144117004	**MTrip/0.75**	SM 2320B	WET/25936		
35144117005	**Lost/0.75**	SM 2320B	WET/25936		
35144117006	**Secret/0.88**	SM 2320B	WET/25936		
35144117001	**Queen/0.50**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117002	**NTrip/1.00**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117003	**STrip/0.75**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117004	**MTrip/0.75**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117005	**Lost/0.75**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117006	**Secret/0.88**	SM 5210B	WET/25787	SM 5210B	WET/25923
35144117001	**Queen/0.50**	SM10200	WET/25785	SM10200	WET/25904
35144117002	**NTrip/1.00**	SM10200	WET/25785	SM10200	WET/25904
35144117003	**STrip/0.75**	SM10200	WET/25785	SM10200	WET/25904
35144117004	**MTrip/0.75**	SM10200	WET/25785	SM10200	WET/25904
35144117005	**Lost/0.75**	SM10200	WET/25785	SM10200	WET/25904
35144117006	**Secret/0.88**	SM10200	WET/25785	SM10200	WET/25904
35144117001	**Queen/0.50**	TKN+NOx Calculation	WET/25894		
35144117002	**NTrip/1.00**	TKN+NOx Calculation	WET/25894		
35144117003	**STrip/0.75**	TKN+NOx Calculation	WET/25894		
35144117004	**MTrip/0.75**	TKN+NOx Calculation	WET/25894		
35144117005	**Lost/0.75**	TKN+NOx Calculation	WET/25894		
35144117006	**Secret/0.88**	TKN+NOx Calculation	WET/25894		
35144117001	**Queen/0.50**	TKN-NH3 Calculation	WET/25898		
35144117002	**NTrip/1.00**	TKN-NH3 Calculation	WET/25898		
35144117003	**STrip/0.75**	TKN-NH3 Calculation	WET/25898		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lake SW
Pace Project No.: 35144117

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35144117004	**MTrip/0.75**	TKN-NH3 Calculation	WET/25898		
35144117005	**Lost/0.75**	TKN-NH3 Calculation	WET/25898		
35144117006	**Secret/0.88**	TKN-NH3 Calculation	WET/25898		
35144117001	**Queen/0.50**	EPA 350.1	WETA/37421		
35144117002	**NTrip/1.00**	EPA 350.1	WETA/37421		
35144117003	**STrip/0.75**	EPA 350.1	WETA/37422		
35144117004	**MTrip/0.75**	EPA 350.1	WETA/37422		
35144117005	**Lost/0.75**	EPA 350.1	WETA/37422		
35144117006	**Secret/0.88**	EPA 350.1	WETA/37422		
35144117001	**Queen/0.50**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117002	**NTrip/1.00**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117003	**STrip/0.75**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117004	**MTrip/0.75**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117005	**Lost/0.75**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117006	**Secret/0.88**	EPA 351.2	WETA/37394	EPA 351.2	WETA/37452
35144117001	**Queen/0.50**	EPA 353.2	WETA/37426		
35144117002	**NTrip/1.00**	EPA 353.2	WETA/37426		
35144117003	**STrip/0.75**	EPA 353.2	WETA/37426		
35144117004	**MTrip/0.75**	EPA 353.2	WETA/37426		
35144117005	**Lost/0.75**	EPA 353.2	WETA/37426		
35144117006	**Secret/0.88**	EPA 353.2	WETA/37426		
35144117001	**Queen/0.50**	EPA 365.1	WETA/37316		
35144117002	**NTrip/1.00**	EPA 365.1	WETA/37316		
35144117003	**STrip/0.75**	EPA 365.1	WETA/37316		
35144117004	**MTrip/0.75**	EPA 365.1	WETA/37316		
35144117005	**Lost/0.75**	EPA 365.1	WETA/37316		
35144117006	**Secret/0.88**	EPA 365.1	WETA/37316		
35144117001	**Queen/0.50**	EPA 365.3	WETA/37477		
35144117002	**NTrip/1.00**	EPA 365.3	WETA/37477		
35144117003	**STrip/0.75**	EPA 365.3	WETA/37477		
35144117004	**MTrip/0.75**	EPA 365.3	WETA/37477		
35144117005	**Lost/0.75**	EPA 365.3	WETA/37477		
35144117006	**Secret/0.88**	EPA 365.3	WETA/37477		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

WO# : 35144117

35144117

quest Document

ust be completed accurately.

Page: of

1678863

Section A
Required Client Information:

Company:	Geosyntec Cons.
Address:	3525 W Lake Mary Blvd Lake Mary
Email To:	lemuller@geosyntec.com
Phone:	Fax:
Requested Due Date/TAT:	

Section B
Required Pro

Report To:	Mark Ellard
Copy To:	Lee Muller
Purchase Order No.:	
Project Name:	
Project Number:	

Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	6259

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location
STATE: FL

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): SM2320B Alk	SM5210B BOD	SM2130B Color	180.1 TURB	SM4500H+ Chl A	SM4500D FCC	350.1 Amm	351.2 TKN	351.3 NO2X	TNT + Nitr N	365.1 OP	365.3 TP	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Queen / 0.50					7-01	1213		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
2	NTRIP / 6.00					7-01	0908		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
3	STRIP / 0.75					7-01	0838		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
4	NTRIP / 0.75					7-01	0810		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
5	LOST / 0.75					7-01	1122		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
6	SECRET / 0.88					7-01	1024		6	5	1							X	X	X	X	X	X	X	X	X	X	X		
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature] / PACE	7/1/14	1000			
	Lee Muller / Geo	7/1/14	1305	[signature] PACE	7/1/14	1305
	[signature] Morrison / PACE	7/1/14	1415	[signature]	7/1/14	1415

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5.3	Y	N	Y
	TLEY		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: October 9, 2013
	Document No.: F-FL-C-007 rev. 05	Issuing Authorities: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Geosyntec Project # 35144117

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other _____

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Date and Initials of person examining contents: 7/11/14 1415

Thermometer Used T166 Type of Ice: (Wet) Blue None

Cooler Temperature°C 4.9 2.4 (Visual) +0.7 +0.4 (Correction Factor) 5.3 2.8 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Receipt of samples satisfactory: ☒ Yes ☐ No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample In Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

November 14, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lakes
Pace Project No.: 35156184

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on September 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Baylor

Jeff Baylor for
Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lakes
Pace Project No.: 35156184

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35156184001	**MTRIP**	Water	09/23/14 07:55	09/23/14 13:58
35156184002	**STRIP**	Water	09/23/14 08:20	09/23/14 13:58
35156184003	**NTRIP**	Water	09/23/14 09:15	09/23/14 13:58
35156184004	**DUP**	Water	09/23/14 09:15	09/23/14 13:58
35156184005	**EQUIP**	Water	09/23/14 10:00	09/23/14 13:58
35156184006	**SECRET**	Water	09/23/14 10:30	09/23/14 13:58
35156184007	**KATHRYN**	Water	09/23/14 11:25	09/23/14 13:58
35156184008	**CONCORD**	Water	09/23/14 12:10	09/23/14 13:58

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35156184001	**MTRIP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184002	**STRIP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184003	**NTRIP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184004	**DUP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184005	**EQUIP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184006	**SECRET**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184007	**KATHRYN**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156184008	**CONCORD**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	KEK	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

PROJECT NARRATIVE

Project: Casselberry Lakes
Pace Project No.: 35156184

Date: November 14, 2014

On 11/14/14, a revised report was generated for 35156184, Casselberry Lakes, due to a typographical error on the report for the time of receipt at the lab. The time was changed from 15:10 to 13:58.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: MTRIP **Lab ID: 35156184001** Collected: 09/23/14 07:55 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**16.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.26**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**100**	units	10.0	10.0	2		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**35.7**	mg/L	5.0	5.0	1		09/24/14 10:16		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.5**	mg/L	2.0	2.0	1	09/24/14 17:41	09/29/14 13:16		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**2.9**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.69**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.69**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:21	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.69**	mg/L	0.50	0.086	1	09/25/14 08:30	09/28/14 18:42	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:47		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 08:56		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.018**	mg/L	0.0040	0.0028	1		09/25/14 16:22	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: STRIP **Lab ID: 35156184002** Collected: 09/23/14 08:20 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**69.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.43**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**100**	units	10.0	10.0	2		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**39.7**	mg/L	5.0	5.0	1		09/24/14 10:26		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.1**	mg/L	2.0	2.0	1	09/24/14 17:45	09/29/14 13:17		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**17.5**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.69**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.68**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:23	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.69**	mg/L	0.50	0.086	1	09/25/14 08:30	09/28/14 18:43	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:48		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 08:59		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.022**	mg/L	0.0040	0.0028	1		09/25/14 16:23	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: NTRIP **Lab ID: 35156184003** Collected: 09/23/14 09:15 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**10.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.35**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**70.0**	units	10.0	10.0	2		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**30.6**	mg/L	5.0	5.0	1		09/24/14 10:30		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/24/14 17:51	09/29/14 13:21		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**5.3**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.62**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.62**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:25	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.62**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 18:55	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:50		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:00		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.013**	mg/L	0.0040	0.0028	1		09/25/14 16:24	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: DUP **Lab ID: 35156184004** Collected: 09/23/14 09:15 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**20.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.28**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**80.0**	units	10.0	10.0	2		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**30.9**	mg/L	5.0	5.0	1		09/24/14 10:35		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/24/14 17:57	09/29/14 13:23		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.9**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.61**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.61**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:27	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.61**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 18:57	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:51		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:01		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.013**	mg/L	0.0040	0.0028	1		09/25/14 16:25	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: EQUIP **Lab ID: 35156184005** Collected: 09/23/14 10:00 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0U**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20U**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**5.0U**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**5.0U**	mg/L	5.0	5.0	1		09/24/14 10:39		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/24/14 18:12	09/29/14 13:26		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.25U**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.25U**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:28	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.086U**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 18:58	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:52		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:02		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.0028U**	mg/L	0.0040	0.0028	1		09/25/14 16:26	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: SECRET **Lab ID: 35156184006** Collected: 09/23/14 10:30 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**32.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.45**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**25.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**50.4**	mg/L	5.0	5.0	1		09/24/14 10:43		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/24/14 18:21	09/29/14 13:28		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**13.2**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.57**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.54**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:30	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.56**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:00	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 15:53		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:03		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.021**	mg/L	0.0040	0.0028	1		09/25/14 16:27	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: KATHRYN **Lab ID: 35156184007** Collected: 09/23/14 11:25 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**9.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.35**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**35.8**	mg/L	5.0	5.0	1		09/24/14 10:49		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/24/14 18:28	09/29/14 13:31		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.5**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.48 I**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.48 I**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:32	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.48 I**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:01	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 16:00		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:26		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.017**	mg/L	0.0040	0.0028	1		09/25/14 16:30	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156184

Sample: CONCORD **Lab ID: 35156184008** Collected: 09/23/14 12:10 Received: 09/23/14 13:58 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**36.0**	CFU/100 mL	1.0	1.0	1	09/23/14 14:57	09/24/14 16:54		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.74**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**10.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**55.8**	mg/L	5.0	5.0	1		09/24/14 10:54		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.2**	mg/L	2.0	2.0	1	09/24/14 18:39	09/29/14 13:33		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**43.9**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.89**	mg/L	0.50	0.25	1		09/29/14 15:29		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.89**	mg/L	0.50	0.25	1		09/29/14 12:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/27/14 14:34	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.89**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:02	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 16:01		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:27		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.037**	mg/L	0.0040	0.0028	1		09/25/14 16:31	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WET/27041 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011429 Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	09/24/14 11:30	

LABORATORY CONTROL SAMPLE: 1011430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.5	16.4	99	90-110	

SAMPLE DUPLICATE: 1011431

Parameter	Units	209592001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	ND	0.20U		20	

SAMPLE DUPLICATE: 1011432

Parameter	Units	35156184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	0.35	0.35	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WET/27052 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011801 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	09/24/14 15:50	

LABORATORY CONTROL SAMPLE: 1011802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1011803

Parameter	Units	92218368008 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	ND	5.0U		20	

SAMPLE DUPLICATE: 1011804

Parameter	Units	35156184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WET/27043 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011454 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	09/24/14 10:05	

LABORATORY CONTROL SAMPLE: 1011455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	247	99	90-110	

SAMPLE DUPLICATE: 1011456

Parameter	Units	35156184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	35.7	36.0	.8	20	

SAMPLE DUPLICATE: 1011457

Parameter	Units	35156225001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	77.3	78.6	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WET/27058 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011970 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	09/29/14 13:02	

LABORATORY CONTROL SAMPLE: 1011971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	208	105	85-115	

SAMPLE DUPLICATE: 1011972

Parameter	Units	35156200001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.4	2.2	10	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WET/27057 | Analysis Method: SM10200
QC Batch Method: SM10200 | Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011956 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	10/01/14 15:30	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	10/01/14 15:30	

SAMPLE DUPLICATE: 1011957

Parameter	Units	35156184006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	13.2	12.3	7	40	
Chlorophyll a (Corrected)	ug/L	1.0U	3.3			

SAMPLE DUPLICATE: 1011958

Parameter	Units	35156256001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	13.0	11.8	10	40	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0U			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39787 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1014864 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	09/27/14 15:06	

LABORATORY CONTROL SAMPLE: 1014865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1014867

Parameter	Units	35156846002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	7.0	1	7.9	91	90-110	

SAMPLE DUPLICATE: 1014866

Parameter	Units	35156846002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	7.0	7.0	.7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39722 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35156184001, 35156184002

METHOD BLANK: 1012672 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	09/28/14 18:19	

LABORATORY CONTROL SAMPLE: 1012673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.2	101	90-110	

MATRIX SPIKE SAMPLE: 1012675

Parameter	Units	35156047005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.3	20	22.5	101	90-110	

SAMPLE DUPLICATE: 1012674

Parameter	Units	35156047005 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.3	2.2	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39724 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1012686 Matrix: Water
Associated Lab Samples: 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	09/28/14 18:53	

LABORATORY CONTROL SAMPLE: 1012687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.5	102	90-110	

MATRIX SPIKE SAMPLE: 1012689

Parameter	Units	35156185001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.6	20	18.8	86	90-110	J(M1)

SAMPLE DUPLICATE: 1012688

Parameter	Units	35156185001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.6	1.6	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39692 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011738 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	09/24/14 15:25	

LABORATORY CONTROL SAMPLE: 1011739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1011741

Parameter	Units	35156095003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.062	2	1.7	84	80-120	

MATRIX SPIKE SAMPLE: 1011743

Parameter	Units	35156184006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.0	100	80-120	

SAMPLE DUPLICATE: 1011740

Parameter	Units	35156095003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.062	0.077	22	20	J(D6)

SAMPLE DUPLICATE: 1011742

Parameter	Units	35156184006 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39673 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1011378 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	09/24/14 08:54	

LABORATORY CONTROL SAMPLE: 1011379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1011381

Parameter	Units	35156184001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 1011383

Parameter	Units	35156185003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0082	.1	0.11	101	90-110	

SAMPLE DUPLICATE: 1011380

Parameter	Units	35156184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

SAMPLE DUPLICATE: 1011382

Parameter	Units	35156185003 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0082	0.0088	8	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156184

QC Batch: WETA/39717 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

METHOD BLANK: 1012599 | Matrix: Water
Associated Lab Samples: 35156184001, 35156184002, 35156184003, 35156184004, 35156184005, 35156184006, 35156184007, 35156184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	09/25/14 16:10	

LABORATORY CONTROL SAMPLE: 1012600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1012602

Parameter	Units	35156389002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	.1	0.17	99	90-110	

SAMPLE DUPLICATE: 1012601

Parameter	Units	35156389002 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	0.077	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35156184

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.
J(D6)	Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35156184001	**MTRIP**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184002	**STRIP**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184003	**NTRIP**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184004	**DUP**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184005	**EQUIP**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184006	**SECRET**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184007	**KATHRYN**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184008	**CONCORD**	SM 9222D	MBIO/15066	SM 9222D	MBIO/15067
35156184001	**MTRIP**	EPA 180.1	WET/27041		
35156184002	**STRIP**	EPA 180.1	WET/27041		
35156184003	**NTRIP**	EPA 180.1	WET/27041		
35156184004	**DUP**	EPA 180.1	WET/27041		
35156184005	**EQUIP**	EPA 180.1	WET/27041		
35156184006	**SECRET**	EPA 180.1	WET/27041		
35156184007	**KATHRYN**	EPA 180.1	WET/27041		
35156184008	**CONCORD**	EPA 180.1	WET/27041		
35156184001	**MTRIP**	SM 2120B	WET/27052		
35156184002	**STRIP**	SM 2120B	WET/27052		
35156184003	**NTRIP**	SM 2120B	WET/27052		
35156184004	**DUP**	SM 2120B	WET/27052		
35156184005	**EQUIP**	SM 2120B	WET/27052		
35156184006	**SECRET**	SM 2120B	WET/27052		
35156184007	**KATHRYN**	SM 2120B	WET/27052		
35156184008	**CONCORD**	SM 2120B	WET/27052		
35156184001	**MTRIP**	SM 2320B	WET/27043		
35156184002	**STRIP**	SM 2320B	WET/27043		
35156184003	**NTRIP**	SM 2320B	WET/27043		
35156184004	**DUP**	SM 2320B	WET/27043		
35156184005	**EQUIP**	SM 2320B	WET/27043		
35156184006	**SECRET**	SM 2320B	WET/27043		
35156184007	**KATHRYN**	SM 2320B	WET/27043		
35156184008	**CONCORD**	SM 2320B	WET/27043		
35156184001	**MTRIP**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184002	**STRIP**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184003	**NTRIP**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184004	**DUP**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184005	**EQUIP**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184006	**SECRET**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184007	**KATHRYN**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184008	**CONCORD**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156184001	**MTRIP**	SM10200	WET/27057	SM10200	WET/27167
35156184002	**STRIP**	SM10200	WET/27057	SM10200	WET/27167
35156184003	**NTRIP**	SM10200	WET/27057	SM10200	WET/27167
35156184004	**DUP**	SM10200	WET/27057	SM10200	WET/27167
35156184005	**EQUIP**	SM10200	WET/27057	SM10200	WET/27167
35156184006	**SECRET**	SM10200	WET/27057	SM10200	WET/27167

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35156184007	**KATHRYN**	SM10200	WET/27057	SM10200	WET/27167
35156184008	**CONCORD**	SM10200	WET/27057	SM10200	WET/27167
35156184001	**MTRIP**	TKN+NOx Calculation	WET/27124		
35156184002	**STRIP**	TKN+NOx Calculation	WET/27124		
35156184003	**NTRIP**	TKN+NOx Calculation	WET/27124		
35156184004	**DUP**	TKN+NOx Calculation	WET/27124		
35156184005	**EQUIP**	TKN+NOx Calculation	WET/27124		
35156184006	**SECRET**	TKN+NOx Calculation	WET/27124		
35156184007	**KATHRYN**	TKN+NOx Calculation	WET/27124		
35156184008	**CONCORD**	TKN+NOx Calculation	WET/27124		
35156184001	**MTRIP**	TKN-NH3 Calculation	WET/27117		
35156184002	**STRIP**	TKN-NH3 Calculation	WET/27117		
35156184003	**NTRIP**	TKN-NH3 Calculation	WET/27117		
35156184004	**DUP**	TKN-NH3 Calculation	WET/27117		
35156184005	**EQUIP**	TKN-NH3 Calculation	WET/27117		
35156184006	**SECRET**	TKN-NH3 Calculation	WET/27117		
35156184007	**KATHRYN**	TKN-NH3 Calculation	WET/27117		
35156184008	**CONCORD**	TKN-NH3 Calculation	WET/27117		
35156184001	**MTRIP**	EPA 350.1	WETA/39787		
35156184002	**STRIP**	EPA 350.1	WETA/39787		
35156184003	**NTRIP**	EPA 350.1	WETA/39787		
35156184004	**DUP**	EPA 350.1	WETA/39787		
35156184005	**EQUIP**	EPA 350.1	WETA/39787		
35156184006	**SECRET**	EPA 350.1	WETA/39787		
35156184007	**KATHRYN**	EPA 350.1	WETA/39787		
35156184008	**CONCORD**	EPA 350.1	WETA/39787		
35156184001	**MTRIP**	EPA 351.2	WETA/39722	EPA 351.2	WETA/39798
35156184002	**STRIP**	EPA 351.2	WETA/39722	EPA 351.2	WETA/39798
35156184003	**NTRIP**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184004	**DUP**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184005	**EQUIP**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184006	**SECRET**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184007	**KATHRYN**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184008	**CONCORD**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156184001	**MTRIP**	EPA 353.2	WETA/39692		
35156184002	**STRIP**	EPA 353.2	WETA/39692		
35156184003	**NTRIP**	EPA 353.2	WETA/39692		
35156184004	**DUP**	EPA 353.2	WETA/39692		
35156184005	**EQUIP**	EPA 353.2	WETA/39692		
35156184006	**SECRET**	EPA 353.2	WETA/39692		
35156184007	**KATHRYN**	EPA 353.2	WETA/39692		
35156184008	**CONCORD**	EPA 353.2	WETA/39692		
35156184001	**MTRIP**	EPA 365.1	WETA/39673		
35156184002	**STRIP**	EPA 365.1	WETA/39673		
35156184003	**NTRIP**	EPA 365.1	WETA/39673		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35156184

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35156184004	**DUP**	EPA 365.1	WETA/39673		
35156184005	**EQUIP**	EPA 365.1	WETA/39673		
35156184006	**SECRET**	EPA 365.1	WETA/39673		
35156184007	**KATHRYN**	EPA 365.1	WETA/39673		
35156184008	**CONCORD**	EPA 365.1	WETA/39673		
35156184001	**MTRIP**	EPA 365.3	WETA/39717		
35156184002	**STRIP**	EPA 365.3	WETA/39717		
35156184003	**NTRIP**	EPA 365.3	WETA/39717		
35156184004	**DUP**	EPA 365.3	WETA/39717		
35156184005	**EQUIP**	EPA 365.3	WETA/39717		
35156184006	**SECRET**	EPA 365.3	WETA/39717		
35156184007	**KATHRYN**	EPA 365.3	WETA/39717		
35156184008	**CONCORD**	EPA 365.3	WETA/39717		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

CHAIN-OI
The Chain-of-Cus

WO# : 35156184

35156184

of 1669425

Section A Required Client Information:

Company: Geosyntec
Address: 3525 W Lake Mary Blvd Lake Mary FL 32746
Email To: Mellard@geosyntec.com
Phone: 321 249 9360 Fax:
Requested Due Date/TAT: 10D

Section B Required Project Information:

Report To: Mark Ellard
Copy To: Lee Mullon, Lmullon@geosyntec.com
Purchase Order No.:
Project Name: Casselberry Lakes
Project Number:

Attention:
Company Name:
Address:
Pace Quote Reference: 14-0112
Pace Project Manager: Martha Montero
Pace Profile #: 6259

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER
Site Location STATE: FL

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BOD 5	ALK	Color	CHLA	FECAL	AMMONIA	OP	TP	TURBIDITY	TKN	NOX	TN + ORG N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MTRIP	SW	G	9/23		9/23	0755		6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
2	STRIP	SW	G	9/23		9/23	0820		6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
3	NTRIP	SW	G	9/23		9/23	0915		6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
4	DUP	SW	G	9/23		9/23			6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
5	EQUIP	SW	G	9/23		9/23	1000		6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
6	SECLET	SW	G	9/23		9/23	1030		6	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X		
7	KATHLYN	SW	G	9/23		9/23	1125		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
8	CONCORD	SW	G	9/23		9/23	1210		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Lee Mullon / Geosyntec	9/23	1250	[illegible]	9/23/14	1250	
	[illegible] / Pace	9/23/14	1358	[illegible]	9/23/14	~~13:30~~ 13:58	

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Fred Chandler
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/23/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 06	Document Revised: August 11, 2014 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Geosyntec. Project # 35156184

Cofer: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Traing # N/A

Cuody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Paing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Date and Initials of person examining contents: 9-23-14 [illegible]

Thmometer Used 3 F168 Type of Ice: (Wet) Blue None

(Temp should be above freezing to 6°C) If below 0°C, indicate was sample frozen?

Coer Temperature °C 3.4 (Visual) 0.0 (Correction Factor) 3.4 (Actual) ☐ Yes ☐ No

Reipt of samples satisfactory: ☑ Yes ☐ No

Rush TAT requested on COC:

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Ch of Custody Present	☐
Ch of Custody Filled Out	☐
Requished Signature & Sampler Name COC	☐
Saples Arrived within Hold Time	☐
Sicient Volume	☐
Coect Containers Used	☐
Coainers Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allintainers needing preservation are found to be in coliance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

Da/Time Opened: _____

Nnbr of Unopened Bottles Remaining: _____

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Extra Sample In Shed: Yes No

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

October 02, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lakes
Pace Project No.: 35156256

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on September 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lakes
Pace Project No.: 35156256

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35156256

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35156256001	**LOST**	Water	09/23/14 14:15	09/23/14 18:26
35156256002	**QUEEN**	Water	09/23/14 16:20	09/23/14 18:26
35156256003	**YVONNE**	Water	09/23/14 15:15	09/23/14 18:26

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156256

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35156256001	**LOST**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156256002	**QUEEN**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156256003	**YVONNE**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156256

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156256

Sample: LOST **Lab ID: 35156256001** Collected: 09/23/14 14:15 Received: 09/23/14 18:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**31.0**	CFU/100 mL	1.0	1.0	1	09/23/14 18:50	09/24/14 16:56		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.35**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**60.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**27.7**	mg/L	5.0	5.0	1		09/24/14 11:27		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.2**	mg/L	2.0	2.0	1	09/24/14 18:54	09/29/14 13:42		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**13.0**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.69**	mg/L	0.50	0.25	1		09/29/14 15:37		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.67**	mg/L	0.50	0.25	1		09/30/14 12:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.021 I**	mg/L	0.050	0.020	1		09/29/14 11:31	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.69**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:27	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 17:13		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:40		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.021**	mg/L	0.0040	0.0028	1		09/25/14 16:32	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156256

Sample: QUEEN **Lab ID: 35156256002** Collected: 09/23/14 16:20 Received: 09/23/14 18:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**81.0**	CFU/100 mL	1.0	1.0	1	09/23/14 18:50	09/24/14 16:56		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.22**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**160**	units	20.0	20.0	4		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**42.5**	mg/L	5.0	5.0	1		09/24/14 11:31		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.8**	mg/L	2.0	2.0	1	09/24/14 19:00	09/29/14 13:46		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**31.0**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.78**	mg/L	0.50	0.25	1		09/29/14 15:37		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.78**	mg/L	0.50	0.25	1		09/30/14 12:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/29/14 11:33	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:28	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 17:17		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:41		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.045**	mg/L	0.0040	0.0028	1		09/25/14 16:33	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156256

Sample: YVONNE **Lab ID: 35156256003** Collected: 09/23/14 15:15 Received: 09/23/14 18:26 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**79.0**	CFU/100 mL	1.0	1.0	1	09/23/14 18:50	09/24/14 16:56		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.38**	NTU	0.20	0.20	1		09/24/14 11:30		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**45.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**56.4**	mg/L	5.0	5.0	1		09/24/14 11:35		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.7**	mg/L	2.0	2.0	1	09/24/14 18:57	09/29/14 13:44		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**13.2**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/24/14 11:00	10/01/14 15:30		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.51**	mg/L	0.50	0.25	1		09/29/14 15:37		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.51**	mg/L	0.50	0.25	1		09/30/14 12:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/29/14 11:38	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.51**	mg/L	0.50	0.086	1	09/25/14 09:00	09/28/14 19:29	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/24/14 17:18		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/24/14 09:42		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.028**	mg/L	0.0040	0.0028	1		09/25/14 16:34	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WET/27041 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011429 Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	09/24/14 11:30	

LABORATORY CONTROL SAMPLE: 1011430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.5	16.4	99	90-110	

SAMPLE DUPLICATE: 1011431

Parameter	Units	209592001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	ND	0.20U		20	

SAMPLE DUPLICATE: 1011432

Parameter	Units	35156184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	0.35	0.35	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WET/27052 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011801 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	09/24/14 15:50	

LABORATORY CONTROL SAMPLE: 1011802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1011803

Parameter	Units	92218368008 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	ND	5.0U		20	

SAMPLE DUPLICATE: 1011804

Parameter	Units	35156184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WET/27043 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011454 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	09/24/14 10:05	

LABORATORY CONTROL SAMPLE: 1011455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	247	99	90-110	

SAMPLE DUPLICATE: 1011456

Parameter	Units	35156184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	35.7	36.0	.8	20	

SAMPLE DUPLICATE: 1011457

Parameter	Units	35156225001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	77.3	78.6	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WET/27058 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011970 Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	09/29/14 13:02	

LABORATORY CONTROL SAMPLE: 1011971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	208	105	85-115	

SAMPLE DUPLICATE: 1011972

Parameter	Units	35156200001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.4	2.2	10	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WET/27057 | Analysis Method: SM10200
QC Batch Method: SM10200 | Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011956 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	10/01/14 15:30	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	10/01/14 15:30	

SAMPLE DUPLICATE: 1011957

Parameter	Units	35156184006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	13.2	12.3	7	40	
Chlorophyll a (Corrected)	ug/L	1.0U	3.3			

SAMPLE DUPLICATE: 1011958

Parameter	Units	35156256001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	13.0	11.8	10	40	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0U			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WETA/39816 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1015240 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	09/29/14 10:57	

LABORATORY CONTROL SAMPLE: 1015241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1015243

Parameter	Units	35156567003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.21	1	1.2	99	90-110	

SAMPLE DUPLICATE: 1015242

Parameter	Units	35156567003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.21	0.21	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WETA/39724 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1012686 Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	09/28/14 18:53	

LABORATORY CONTROL SAMPLE: 1012687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.5	102	90-110	

MATRIX SPIKE SAMPLE: 1012689

Parameter	Units	35156185001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.6	20	18.8	86	90-110	J(M1)

SAMPLE DUPLICATE: 1012688

Parameter	Units	35156185001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.6	1.6	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WETA/39694 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011750 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	09/24/14 16:54	

LABORATORY CONTROL SAMPLE: 1011751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1011753

Parameter	Units	35156243012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.84	2	2.8	97	80-120	

MATRIX SPIKE SAMPLE: 1011755

Parameter	Units	35156257002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.45	2	2.3	94	80-120	

SAMPLE DUPLICATE: 1011752

Parameter	Units	35156243012 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.84	0.82	3	20	

SAMPLE DUPLICATE: 1011754

Parameter	Units	35156257002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.45	0.44	.9	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WETA/39673 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1011378 Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	09/24/14 08:54	

LABORATORY CONTROL SAMPLE: 1011379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1011381

Parameter	Units	35156184001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 1011383

Parameter	Units	35156185003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0082	.1	0.11	101	90-110	

SAMPLE DUPLICATE: 1011380

Parameter	Units	35156184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

SAMPLE DUPLICATE: 1011382

Parameter	Units	35156185003 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0082	0.0088	8	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156256

QC Batch: WETA/39717 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35156256001, 35156256002, 35156256003

METHOD BLANK: 1012599 | Matrix: Water
Associated Lab Samples: 35156256001, 35156256002, 35156256003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	09/25/14 16:10	

LABORATORY CONTROL SAMPLE: 1012600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1012602

Parameter	Units	35156389002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	.1	0.17	99	90-110	

SAMPLE DUPLICATE: 1012601

Parameter	Units	35156389002 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	0.077	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35156256

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35156256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35156256001	**LOST**	SM 9222D	MBIO/15068	SM 9222D	MBIO/15069
35156256002	**QUEEN**	SM 9222D	MBIO/15068	SM 9222D	MBIO/15069
35156256003	**YVONNE**	SM 9222D	MBIO/15068	SM 9222D	MBIO/15069
35156256001	**LOST**	EPA 180.1	WET/27041		
35156256002	**QUEEN**	EPA 180.1	WET/27041		
35156256003	**YVONNE**	EPA 180.1	WET/27041		
35156256001	**LOST**	SM 2120B	WET/27052		
35156256002	**QUEEN**	SM 2120B	WET/27052		
35156256003	**YVONNE**	SM 2120B	WET/27052		
35156256001	**LOST**	SM 2320B	WET/27043		
35156256002	**QUEEN**	SM 2320B	WET/27043		
35156256003	**YVONNE**	SM 2320B	WET/27043		
35156256001	**LOST**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156256002	**QUEEN**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156256003	**YVONNE**	SM 5210B	WET/27058	SM 5210B	WET/27122
35156256001	**LOST**	SM10200	WET/27057	SM10200	WET/27167
35156256002	**QUEEN**	SM10200	WET/27057	SM10200	WET/27167
35156256003	**YVONNE**	SM10200	WET/27057	SM10200	WET/27167
35156256001	**LOST**	TKN+NOx Calculation	WET/27125		
35156256002	**QUEEN**	TKN+NOx Calculation	WET/27125		
35156256003	**YVONNE**	TKN+NOx Calculation	WET/27125		
35156256001	**LOST**	TKN-NH3 Calculation	WET/27141		
35156256002	**QUEEN**	TKN-NH3 Calculation	WET/27141		
35156256003	**YVONNE**	TKN-NH3 Calculation	WET/27141		
35156256001	**LOST**	EPA 350.1	WETA/39816		
35156256002	**QUEEN**	EPA 350.1	WETA/39816		
35156256003	**YVONNE**	EPA 350.1	WETA/39816		
35156256001	**LOST**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156256002	**QUEEN**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156256003	**YVONNE**	EPA 351.2	WETA/39724	EPA 351.2	WETA/39800
35156256001	**LOST**	EPA 353.2	WETA/39694		
35156256002	**QUEEN**	EPA 353.2	WETA/39694		
35156256003	**YVONNE**	EPA 353.2	WETA/39694		
35156256001	**LOST**	EPA 365.1	WETA/39673		
35156256002	**QUEEN**	EPA 365.1	WETA/39673		
35156256003	**YVONNE**	EPA 365.1	WETA/39673		
35156256001	**LOST**	EPA 365.3	WETA/39717		
35156256002	**QUEEN**	EPA 365.3	WETA/39717		
35156256003	**YVONNE**	EPA 365.3	WETA/39717		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

WO# : 35156256

35156256

CHAIN-OF-CUSTODY / Analytical Request Document

MENT. All relevant fields must be completed accurately.

Page: of

1669424

Section A
Required Client Information:

Company: Geosyntec
Address: 3525 W Lake Mary Blvd Lake Mary FL 32746
Email To: Mellardo@geosyntec.com
Phone: 321 249 9360 Fax:
Requested Due Date/TAT: 10D

Copy To: Mark Ellwood; Lee Mullon; Lmullon@geosyntec.com
Purchase Order No.:
Project Name: Casselberry Lakes
Project Number:

Company Name:
Address:
Pace Quote Reference: 14-0112
Pace Project Manager: Martha Montero
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BOD5	Alk	Color	CHL A	FECAL	Ammonia	OP	TP	Turbidity	TKN	NOx	TN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	LOST	SW	G	9/23		9/23	1415		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
2	QUEEN	SW	G	9/23		9/23	1620		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
3	YVONNE	SW	G	9/23		9/23	1515		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
4		SW	G						6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
5		SW	G						6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
6		SW	G						6	X	X				X			X	X	X	X	X	X	X	X	X	X	X			
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Lee Mullon / Geosyn	9/23	1700	[illegible]	9/23/14	17[illegible]				
	[illegible]	9/23/14	1826	[illegible]	9/23/14	1826	21.9	Y	N	Y
							T1168			

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Fred Chandler
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 09/23/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name Sample Condition Upon Receipt Form Document No. F-FL-C-007-rev. 06	Document Revised August 11, 2014 Issuing Authority Pace Florida Quality Office

Table Number: _____

Sample Condition Upon Receipt Form (SCUR)

Client Name: Geosyntec Project # 35856256

Color: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other _____

Tracking # _____

Cuody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact ☐ yes ☐ no

Date and Initials of person examining contents: 9/23/14

Paing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other _____

Thmometer Used T168 Type of Ice: Wet Blue None

(Temp should be above freezing to 6°C) If below 0°C, the was sample frozen? ☐ Yes ☐ No

Coer Temperature °C 21.9 (Visual) 0 (Correction Factor) 21.9 (Actual) 1826 ROI

Rush TAT requested on COC: ☐ Yes ☐ No

Reipt of samples satisfactory: ☒ Yes ☐ No

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Ch of Custody Present	☐
Ch of Custody Filed Out	☐
Requished Signature & Sampler Name COC	☐
Saples Arrived within Hold Time	☐
Sucient Volume	☐
Coect Containers Used	☐
Coainers Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allntainers needing preservation are found to be in conance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Coments/ Resolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

Del/Time Opened: _____

Nmbr of Unopened Bottles Remaining: _____

Extra Sample In Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 18, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lakes
Pace Project No.: 35156337

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report. Fecal coliforms for Trout, the sample was set up based on historical values. It presented confluent grow. No Fecal colonies were observed however the result may be biased low due to the abundant growth of non-fecal colonies.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lakes
Pace Project No.: 35156337

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35156337

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35156337001	**Grassy**	Water	09/24/14 08:00	09/24/14 11:15
35156337002	**Trout**	Water	09/24/14 09:05	09/24/14 11:15
35156337003	**Griffin**	Water	09/24/14 09:40	09/24/14 11:15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156337

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35156337001	**Grassy**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156337002	**Trout**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35156337003	**Griffin**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	KEK	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	JT1	1	PASI-O
		SM10200	JT1	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	AIS	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35156337

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156337

Sample: Grassy **Lab ID: 35156337001** Collected: 09/24/14 08:00 Received: 09/24/14 11:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**7.0**	CFU/100 mL	1.0	1.0	1	09/24/14 15:07	09/25/14 15:45		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.23**	NTU	0.20	0.20	1		09/24/14 14:35		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**15.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**46.4**	mg/L	5.0	5.0	1		09/25/14 10:36		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/25/14 16:44	09/30/14 12:43		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.7**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.33 I**	mg/L	0.50	0.25	1		10/02/14 10:16		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.31 I**	mg/L	0.50	0.25	1		10/03/14 09:53		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/30/14 11:05	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.33 I**	mg/L	0.50	0.086	1	09/30/14 09:10	10/01/14 17:09	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/25/14 15:59		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/25/14 08:54		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.016**	mg/L	0.0040	0.0028	1		09/25/14 16:35	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156337

Sample: Trout **Lab ID: 35156337002** Collected: 09/24/14 09:05 Received: 09/24/14 11:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0U**	CFU/100 mL	1.0	1.0	1	09/24/14 15:07	09/25/14 15:45		Z
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20**	NTU	0.20	0.20	1		09/24/14 14:35		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**45.5**	mg/L	5.0	5.0	1		09/25/14 10:44		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/25/14 16:47	09/30/14 12:44		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.8**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.43 I**	mg/L	0.50	0.25	1		10/02/14 10:16		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.42 I**	mg/L	0.50	0.25	1		10/03/14 09:53		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/30/14 11:07	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.42 I**	mg/L	0.50	0.086	1	09/30/14 09:10	10/01/14 17:10	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/25/14 16:00		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0060**	mg/L	0.0040	0.0034	1		09/25/14 08:55		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.022**	mg/L	0.0040	0.0028	1		09/25/14 16:36	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35156337

Sample: Griffin **Lab ID: 35156337003** Collected: 09/24/14 09:40 Received: 09/24/14 11:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**11.0**	CFU/100 mL	1.0	1.0	1	09/24/14 15:07	09/25/14 15:45		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20U**	NTU	0.20	0.20	1		09/24/14 14:35		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		09/24/14 15:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**53.3**	mg/L	5.0	5.0	1		09/25/14 10:49		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	09/25/14 16:49	09/30/14 12:48		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**15.8**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	09/25/14 17:13	10/01/14 18:02		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.58**	mg/L	0.50	0.25	1		10/02/14 10:16		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.57**	mg/L	0.50	0.25	1		10/03/14 12:22		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		09/30/14 11:14	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.58**	mg/L	0.50	0.086	1	09/30/14 09:10	10/01/14 17:12	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		09/25/14 16:01		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		09/25/14 08:56		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.017**	mg/L	0.0040	0.0028	1		09/25/14 16:37	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WET/27051 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1011787 Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	09/24/14 14:35	

LABORATORY CONTROL SAMPLE: 1011788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.5	16.4	99	90-110	

SAMPLE DUPLICATE: 1011789

Parameter	Units	92218368008 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	ND	0.20U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WET/27052 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1011801 | Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	09/24/14 15:50	

LABORATORY CONTROL SAMPLE: 1011802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1011803

Parameter	Units	92218368008 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	ND	5.0U		20	

SAMPLE DUPLICATE: 1011804

Parameter	Units	35156184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WET/27066 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1012658 Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	09/25/14 10:23	

LABORATORY CONTROL SAMPLE: 1012659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	251	100	90-110	

SAMPLE DUPLICATE: 1012660

Parameter	Units	35156337001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	46.4	44.8	3	20	

SAMPLE DUPLICATE: 1012661

Parameter	Units	35156451003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	7320	7590	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WET/27073 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1012958 | Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	09/30/14 12:35	

LABORATORY CONTROL SAMPLE: 1012959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	85-115	

SAMPLE DUPLICATE: 1012961

Parameter	Units	35156381001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	2.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WET/27077 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1013232 Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	10/01/14 18:02	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	10/01/14 18:02	

SAMPLE DUPLICATE: 1013233

Parameter	Units	35156337001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	4.7	5.0	6	40	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0U			

SAMPLE DUPLICATE: 1013234

Parameter	Units	35156389006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	11.0 mg/m3	11.2	2	40	
Chlorophyll a (Corrected)	ug/L	1.0U mg/m3	1.0U			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39834 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35156337001, 35156337002

METHOD BLANK: 1015442 | Matrix: Water
Associated Lab Samples: 35156337001, 35156337002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	09/30/14 10:10	

LABORATORY CONTROL SAMPLE: 1015443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.98	98	90-110	

MATRIX SPIKE SAMPLE: 1015445

Parameter	Units	35156663002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2.7	1	3.7	98	90-110	

SAMPLE DUPLICATE: 1015444

Parameter	Units	35156663002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	2.7	2.7	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39853 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35156337003

METHOD BLANK: 1016047 | Matrix: Water
Associated Lab Samples: 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	09/30/14 11:09	

LABORATORY CONTROL SAMPLE: 1016048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.97	97	90-110	

MATRIX SPIKE SAMPLE: 1016050

Parameter	Units	35156337003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	1	0.99	98	90-110	

SAMPLE DUPLICATE: 1016049

Parameter	Units	35156337003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.020 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39863 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1016305 Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	10/01/14 16:51	

LABORATORY CONTROL SAMPLE: 1016306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	20.3	101	90-110	

MATRIX SPIKE SAMPLE: 1016308

Parameter	Units	35156067004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.72	20	20.9	101	90-110	

SAMPLE DUPLICATE: 1016307

Parameter	Units	35156067004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.72	0.72	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39739 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1012912 | Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	09/25/14 15:48	

LABORATORY CONTROL SAMPLE: 1012913

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1012915

Parameter	Units	35156282003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.045 I	2	1.7	81	80-120	

MATRIX SPIKE SAMPLE: 1012917

Parameter	Units	35156455004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.0	100	80-120	

SAMPLE DUPLICATE: 1012914

Parameter	Units	35156282003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.045 I	0.038 I		20	

SAMPLE DUPLICATE: 1012916

Parameter	Units	35156455004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39715 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1012523 Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	09/25/14 08:47	

LABORATORY CONTROL SAMPLE: 1012524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1012526

Parameter	Units	35156329004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.020	.1	0.12	101	90-110	

MATRIX SPIKE SAMPLE: 1012528

Parameter	Units	35156469002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.17	.1	0.27	100	90-110	

SAMPLE DUPLICATE: 1012525

Parameter	Units	35156329004 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.020	0.020	3	20	

SAMPLE DUPLICATE: 1012527

Parameter	Units	35156469002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.17	0.17	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35156337

QC Batch: WETA/39717 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35156337001, 35156337002, 35156337003

METHOD BLANK: 1012599 | Matrix: Water
Associated Lab Samples: 35156337001, 35156337002, 35156337003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	09/25/14 16:10	

LABORATORY CONTROL SAMPLE: 1012600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.099	99	90-110	

MATRIX SPIKE SAMPLE: 1012602

Parameter	Units	35156389002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	.1	0.17	99	90-110	

SAMPLE DUPLICATE: 1012601

Parameter	Units	35156389002 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.073	0.077	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35156337

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.
Z	Too many colonies were present (TNTC); the numeric value represents the estimated colony counts from the highest dilution used in this test.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35156337

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35156337001	**Grassy**	SM 9222D	MBIO/15070	SM 9222D	MBIO/15071
35156337002	**Trout**	SM 9222D	MBIO/15070	SM 9222D	MBIO/15071
35156337003	**Griffin**	SM 9222D	MBIO/15070	SM 9222D	MBIO/15071
35156337001	**Grassy**	EPA 180.1	WET/27051		
35156337002	**Trout**	EPA 180.1	WET/27051		
35156337003	**Griffin**	EPA 180.1	WET/27051		
35156337001	**Grassy**	SM 2120B	WET/27052		
35156337002	**Trout**	SM 2120B	WET/27052		
35156337003	**Griffin**	SM 2120B	WET/27052		
35156337001	**Grassy**	SM 2320B	WET/27066		
35156337002	**Trout**	SM 2320B	WET/27066		
35156337003	**Griffin**	SM 2320B	WET/27066		
35156337001	**Grassy**	SM 5210B	WET/27073	SM 5210B	WET/27143
35156337002	**Trout**	SM 5210B	WET/27073	SM 5210B	WET/27143
35156337003	**Griffin**	SM 5210B	WET/27073	SM 5210B	WET/27143
35156337001	**Grassy**	SM10200	WET/27077	SM10200	WET/27168
35156337002	**Trout**	SM10200	WET/27077	SM10200	WET/27168
35156337003	**Griffin**	SM10200	WET/27077	SM10200	WET/27168
35156337001	**Grassy**	TKN+NOx Calculation	WET/27179		
35156337002	**Trout**	TKN+NOx Calculation	WET/27179		
35156337003	**Griffin**	TKN+NOx Calculation	WET/27179		
35156337001	**Grassy**	TKN-NH3 Calculation	WET/27202		
35156337002	**Trout**	TKN-NH3 Calculation	WET/27202		
35156337003	**Griffin**	TKN-NH3 Calculation	WET/27209		
35156337001	**Grassy**	EPA 350.1	WETA/39834		
35156337002	**Trout**	EPA 350.1	WETA/39834		
35156337003	**Griffin**	EPA 350.1	WETA/39853		
35156337001	**Grassy**	EPA 351.2	WETA/39863	EPA 351.2	WETA/39881
35156337002	**Trout**	EPA 351.2	WETA/39863	EPA 351.2	WETA/39881
35156337003	**Griffin**	EPA 351.2	WETA/39863	EPA 351.2	WETA/39881
35156337001	**Grassy**	EPA 353.2	WETA/39739		
35156337002	**Trout**	EPA 353.2	WETA/39739		
35156337003	**Griffin**	EPA 353.2	WETA/39739		
35156337001	**Grassy**	EPA 365.1	WETA/39715		
35156337002	**Trout**	EPA 365.1	WETA/39715		
35156337003	**Griffin**	EPA 365.1	WETA/39715		
35156337001	**Grassy**	EPA 365.3	WETA/39717		
35156337002	**Trout**	EPA 365.3	WETA/39717		
35156337003	**Griffin**	EPA 365.3	WETA/39717		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Anal
www.pac

WO# : 35156337

35156337

STODY / Analytical Request Document

LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of 1669419

Section A
Required Client Informatio

Company:	Geosyntec
Address:	3525 W. Lake Mary Blvd, Lake Mary, FL
Email To:	Mellard@geosyntec.com
Phone: 321-249-9360	Fax:
Requested Due Date/TAT:	10 D

Report To:	Mark Ellard
Copy To:	Lee Mullon Lmullon@geosyntec.com
Purchase Order No.:	
Project Name:	Casselberry Lakes
Project Number:	FWZ404

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	14-0112
Pace Project Manager:	Martha Montero
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BOD's	ALK	COLOR	CHL A	FECAL	AMMONIA	OP	TP	TURBIDITY	TKN	NOX	TN + ORG N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GRASSY	SW	G	9/24		9/24	0800		6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			Quote 14-0112
2	TROUT	SW	G	9/24		9/24	0905		6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			
3	GRIFFIN	SW	G	9/24		9/24	0940		6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			
4		SW	G	~~9/24~~		~~9/24~~	~~0940~~		6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			
5		SW	G						6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			
6		SW	G						6	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X			
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
	Lee Mullon/Geosyntec	9/24	1040	[illegible]	9/24/14	1040			
				[illegible]	9/24/14	1140			
						T-187	y	N	y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Fred [illegible]		
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	09/24/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name Sample Condition Upon Receipt Form Document No. F-FL-C-007 rev. 06	Document Revised August 11, 2014 Issuing Authority Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Geosyntec Project # 35156337

Cooler: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # N/A

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: 9-24-14 @ 1140

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used T-187 Type of Ice: (Wet) Blue None

(Temp should be above freezing to 6°C) If below 0°C, was sample frozen? ☐ Yes ☐ No

Cooler Temperature °C 4.1 (Visual) 0.0 (Correction Factor) 4.1 (Actual)

Receipt of samples satisfactory: ☑ Yes ☐ No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 31, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lakes
Pace Project No.: 35168050

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on December 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lakes
Pace Project No.: 35168050

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35168050

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35168050001	**Mtrip**	Water	12/16/14 09:10	12/16/14 14:57
35168050002	**Ntrip**	Water	12/16/14 09:40	12/16/14 14:57
35168050003	**Yvonne**	Water	12/16/14 13:20	12/16/14 14:57

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35168050

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35168050001	**Mtrip**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168050002	**Ntrip**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168050003	**Yvonne**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35168050

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168050

Sample: Mtrip **Lab ID: 35168050001** Collected: 12/16/14 09:10 Received: 12/16/14 14:57 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**13.0**	CFU/100 mL	1.0	1.0	1	12/16/14 16:02	12/17/14 14:33		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.4**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**120**	units	10.0	10.0	2		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**36.6**	mg/L	5.0	5.0	1		12/20/14 08:59		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.6**	mg/L	2.0	2.0	1	12/17/14 14:21	12/22/14 16:22		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**32.4**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Chlorophyll a (Corrected)	**25.7**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.86**	mg/L	0.50	0.25	1		12/22/14 22:41		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.80**	mg/L	0.50	0.25	1		12/23/14 12:57		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.058**	mg/L	0.050	0.020	1		12/22/14 14:00	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.85**	mg/L	0.50	0.086	1	12/17/14 09:00	12/22/14 01:57	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:07		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/17/14 07:38		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.036**	mg/L	0.0040	0.0028	1		12/18/14 18:10	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168050

Sample: Ntrip **Lab ID: 35168050002** Collected: 12/16/14 09:40 Received: 12/16/14 14:57 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0**	CFU/100 mL	1.0	1.0	1	12/16/14 16:02	12/17/14 14:33		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.94**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**100**	units	10.0	10.0	2		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**34.4**	mg/L	5.0	5.0	1		12/20/14 09:04		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:24	12/22/14 16:23		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**5.7**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Chlorophyll a (Corrected)	**3.8**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.71**	mg/L	0.50	0.25	1		12/22/14 22:41		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.67**	mg/L	0.50	0.25	1		12/23/14 12:57		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.031 I**	mg/L	0.050	0.020	1		12/22/14 14:06	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.70**	mg/L	0.50	0.086	1	12/17/14 09:00	12/22/14 01:58	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:08		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0067**	mg/L	0.0040	0.0034	1		12/17/14 07:39		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.018**	mg/L	0.0040	0.0028	1		12/18/14 18:11	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168050

Sample: Yvonne **Lab ID: 35168050003** Collected: 12/16/14 13:20 Received: 12/16/14 14:57 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**4.0**	CFU/100 mL	1.0	1.0	1	12/16/14 16:02	12/17/14 14:33		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.62**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**40.0**	units	5.0	5.0	1		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**54.2**	mg/L	5.0	5.0	1		12/20/14 09:08		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:25	12/22/14 16:25		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**11.8**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Chlorophyll a (Corrected)	**9.8**	ug/L	1.0	1.0	1	12/16/14 15:30	12/23/14 15:20		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.58**	mg/L	0.50	0.25	1		12/22/14 22:41		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.53**	mg/L	0.50	0.25	1		12/23/14 12:57		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.044 I**	mg/L	0.050	0.020	1		12/22/14 14:08	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.57**	mg/L	0.50	0.086	1	12/17/14 09:00	12/22/14 02:00	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:12		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/17/14 07:40		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.016**	mg/L	0.0040	0.0028	1		12/18/14 18:12	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: MBIO/15789 Analysis Method: SM 9222D
QC Batch Method: SM 9222D Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1090487 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0	12/17/14 14:33	

SAMPLE DUPLICATE: 1090488

Parameter	Units	35168080001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0	1.0U		20	

SAMPLE DUPLICATE: 1090489

Parameter	Units	35168083001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WET/28362 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1085038 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	12/17/14 16:36	

LABORATORY CONTROL SAMPLE: 1085039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.4	16.5	101	90-110	

SAMPLE DUPLICATE: 1085040

Parameter	Units	35168050001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	2.4	2.4	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WET/28356 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1084658 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/17/14 14:15	

LABORATORY CONTROL SAMPLE: 1084659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1084660

Parameter	Units	35168050001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	120	120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WET/28410 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1088754 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	12/20/14 08:16	

LABORATORY CONTROL SAMPLE: 1088755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	248	99	90-110	

SAMPLE DUPLICATE: 1088756

Parameter	Units	35167916001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	130	135	3	20	

SAMPLE DUPLICATE: 1088757

Parameter	Units	35168093001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	157	156	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WET/28352 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1084502 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	12/22/14 16:17	

LABORATORY CONTROL SAMPLE: 1084503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1084504

Parameter	Units	35168077002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	196	186	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WET/28338 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1083965 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	12/23/14 15:20	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	12/23/14 15:20	

SAMPLE DUPLICATE: 1083966

Parameter	Units	35167729006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	2.2 mg/m3	2.4	9	40	
Chlorophyll a (Corrected)	ug/L	1.4 mg/m3	1.8	25		

SAMPLE DUPLICATE: 1083967

Parameter	Units	35167929001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	1.9 mg/m3	1.8	5	40	
Chlorophyll a (Corrected)	ug/L	0.0010U mg/L	1.0			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WETA/42245 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1089169 | Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	12/22/14 13:31	

LABORATORY CONTROL SAMPLE: 1089170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	107	90-110	

MATRIX SPIKE SAMPLE: 1089172

Parameter	Units	35167440002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.030 I	1	1.1	110	90-110	

SAMPLE DUPLICATE: 1089171

Parameter	Units	35167440002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.030 I	0.025 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WETA/42120 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1084562 | Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	12/21/14 22:13	

LABORATORY CONTROL SAMPLE: 1084563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	21.0	105	90-110	

MATRIX SPIKE SAMPLE: 1084565

Parameter	Units	35167979001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.5	20	22.1	103	90-110	

SAMPLE DUPLICATE: 1084564

Parameter	Units	35167979001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.5	1.4	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WETA/42170 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1085964 Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	12/18/14 11:53	

LABORATORY CONTROL SAMPLE: 1085965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1085967

Parameter	Units	35167979001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.4	2	3.8	118	80-120	

MATRIX SPIKE SAMPLE: 1085969

Parameter	Units	35168050002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.2	109	80-120	

SAMPLE DUPLICATE: 1085966

Parameter	Units	35167979001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.4	1.4	4	20	

SAMPLE DUPLICATE: 1085968

Parameter	Units	35168050002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WETA/42107 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1084341 | Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	12/17/14 07:33	

LABORATORY CONTROL SAMPLE: 1084342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	103	90-110	

MATRIX SPIKE SAMPLE: 1084344

Parameter	Units	35168014001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.18	.1	0.29	109	90-110	

MATRIX SPIKE SAMPLE: 1084346

Parameter	Units	35168093007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.10	101	90-110	

SAMPLE DUPLICATE: 1084343

Parameter	Units	35168014001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.18	0.18	0	20	

SAMPLE DUPLICATE: 1084345

Parameter	Units	35168093007 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168050

QC Batch: WETA/42166 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35168050001, 35168050002, 35168050003

METHOD BLANK: 1085900 | Matrix: Water
Associated Lab Samples: 35168050001, 35168050002, 35168050003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	12/18/14 17:48	

LABORATORY CONTROL SAMPLE: 1085901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.094	94	90-110	

MATRIX SPIKE SAMPLE: 1085919

Parameter	Units	35167440001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.027	.1	0.12	97	90-110	

SAMPLE DUPLICATE: 1085918

Parameter	Units	35167440001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.027	0.029	9	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35168050

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35168050

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168050001	**Mtrip**	SM 9222D	MBIO/15789	SM 9222D	MBIO/15790
35168050002	**Ntrip**	SM 9222D	MBIO/15789	SM 9222D	MBIO/15790
35168050003	**Yvonne**	SM 9222D	MBIO/15789	SM 9222D	MBIO/15790
35168050001	**Mtrip**	EPA 180.1	WET/28362		
35168050002	**Ntrip**	EPA 180.1	WET/28362		
35168050003	**Yvonne**	EPA 180.1	WET/28362		
35168050001	**Mtrip**	SM 2120B	WET/28356		
35168050002	**Ntrip**	SM 2120B	WET/28356		
35168050003	**Yvonne**	SM 2120B	WET/28356		
35168050001	**Mtrip**	SM 2320B	WET/28410		
35168050002	**Ntrip**	SM 2320B	WET/28410		
35168050003	**Yvonne**	SM 2320B	WET/28410		
35168050001	**Mtrip**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168050002	**Ntrip**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168050003	**Yvonne**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168050001	**Mtrip**	SM10200	WET/28338	SM10200	WET/28339
35168050002	**Ntrip**	SM10200	WET/28338	SM10200	WET/28339
35168050003	**Yvonne**	SM10200	WET/28338	SM10200	WET/28339
35168050001	**Mtrip**	TKN+NOx Calculation	WET/28436		
35168050002	**Ntrip**	TKN+NOx Calculation	WET/28436		
35168050003	**Yvonne**	TKN+NOx Calculation	WET/28436		
35168050001	**Mtrip**	TKN-NH3 Calculation	WET/28456		
35168050002	**Ntrip**	TKN-NH3 Calculation	WET/28456		
35168050003	**Yvonne**	TKN-NH3 Calculation	WET/28456		
35168050001	**Mtrip**	EPA 350.1	WETA/42245		
35168050002	**Ntrip**	EPA 350.1	WETA/42245		
35168050003	**Yvonne**	EPA 350.1	WETA/42245		
35168050001	**Mtrip**	EPA 351.2	WETA/42120	EPA 351.2	WETA/42220
35168050002	**Ntrip**	EPA 351.2	WETA/42120	EPA 351.2	WETA/42220
35168050003	**Yvonne**	EPA 351.2	WETA/42120	EPA 351.2	WETA/42220
35168050001	**Mtrip**	EPA 353.2	WETA/42170		
35168050002	**Ntrip**	EPA 353.2	WETA/42170		
35168050003	**Yvonne**	EPA 353.2	WETA/42170		
35168050001	**Mtrip**	EPA 365.1	WETA/42107		
35168050002	**Ntrip**	EPA 365.1	WETA/42107		
35168050003	**Yvonne**	EPA 365.1	WETA/42107		
35168050001	**Mtrip**	EPA 365.3	WETA/42166		
35168050002	**Ntrip**	EPA 365.3	WETA/42166		
35168050003	**Yvonne**	EPA 365.3	WETA/42166		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUST

The Chain-of-Custody is a LEG

WO# : 35168050

35168050

of

1063200

Section A Required Client Information:	Section B Required Project Information:	Sec Invo	
Company: Geosyntec	Report To: Mark Ellard	Attention:	
Address: 1511 E SR 434 Ste 1005, Winter Springs	Copy To: Lee Mullon	Company Name:	REGULATORY AGENCY
		Address:	☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
Email To: 32708 mellard@geosyntec.com	Purchase Order No.:	Pace Quote Reference: 14-0112	☐ UST ☐ RCRA ☐ OTHER
Phone: 321 249 9360 Fax:	Project Name: Casselberry Lakes	Pace Project Manager: Martha Montero	Site Location STATE: FL
Requested Due Date/TAT: (OD)	Project Number:	Pace Profile #:	

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BOD5	ALK	COLOR	CHLA	FECAL	AMMONIA	OP TP	TURBID	TKN	NOX	TKN ORGN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MTRIP		SW	G	12/16/14	0854	12/16/14	0910		6	X	X				X			X	X	X	X	X	X	X	X	X	X			
2	NTRIP		SW	G	12/16/14	0917	12/16/14	0940		6	X	X				X			X	X	X	X	X	X	X	X	X	X			
3	YVONNE		SW	G	12/16/14	1350	12/16/14	1320		6	X	X				X			X	X	X	X	X	X	X	X	X	X			
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KITCHOTY	[illegible]	12.5.14	1400	Lee Mullon / Geo	12-5-14	1400				
	Lee Mullon / Geo	12/16/14	1345	Meg [illegible]	12-16-14	1345				
	[illegible]	12/16/14	1457	[illegible]	12/16/14	14:57	5.8	Y		

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Lee Mullon

SIGNATURE of SAMPLER: [illegible]

DATE Signed (MM/DD/YY): 12/16/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 06	August 11, 2014 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Geosyntec Project# 35168050

Cooler: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # _____

Cuody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: JP 12/16/14

Pading Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other _____

Thmometer Used T-185 Type of Ice: (Wet) Blue None

Coer Temperature °C 5.8 (Visual) 0.0 (Correction Factor) 5.8 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Reipt of samples satisfactory: ☑ Yes ☐ No

Rush TAT requested on COC:

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chn of Custody Present	☐
Chn of Custody Filled Out	☐
Requished Signature & Sampler Name COC	☐
Saples Arrived within Hold Time	☐
Sucient Volume	☐
Coect Containers Used	☐
Coainers Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allntainers needing preservation are found to be in conance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

De/Time Opened: _____

Nnber of Unopened Bottles Remaining: _____

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Extra Sample In Shed: Yes No

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 31, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Lakes
Pace Project No.: 35168098

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on December 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Fecal coliforms qualified with 'B" due to samples analyzed at 3 dilutions (50 mL, 10 mL, 1mL). No plate provided counts within the ideal range. All three were used to calculate the final result.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Lakes
Pace Project No.: 35168098

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35168098

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35168098001	**Kathryn**	Water	12/16/14 14:49	12/16/14 19:01
35168098002	**Secret**	Water	12/16/14 15:58	12/16/14 19:01
35168098003	**Concord**	Water	12/16/14 16:56	12/16/14 19:01
35168098004	**DUP**	Water	12/16/14 15:12	12/16/14 19:01

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35168098

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35168098001	**Kathryn**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168098002	**Secret**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168098003	**Concord**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35168098

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168098004	**DUP**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	KEK	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	KHC	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168098

Sample: Kathryn **Lab ID: 35168098001** Collected: 12/16/14 14:49 Received: 12/16/14 19:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**6.0**	CFU/100 mL	1.0	1.0	1	12/16/14 20:15	12/17/14 18:49		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.8**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**70.0**	units	5.0	5.0	1		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**43.0**	mg/L	5.0	5.0	1		12/20/14 11:49		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:39	12/22/14 16:39		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**22.9**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Chlorophyll a (Corrected)	**17.1**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.65**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.63**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		12/24/14 11:11	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.64**	mg/L	0.50	0.086	1	12/17/14 10:30	12/21/14 23:55	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:49		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0071**	mg/L	0.0040	0.0034	1		12/17/14 07:52		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.027**	mg/L	0.0040	0.0028	1		12/23/14 17:35	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168098

Sample: Secret **Lab ID: 35168098002** Collected: 12/16/14 15:58 Received: 12/16/14 19:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**3.0**	CFU/100 mL	1.0	1.0	1	12/16/14 20:15	12/17/14 18:49		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.0**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**53.2**	mg/L	5.0	5.0	1		12/20/14 11:53		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:50	12/22/14 16:41		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**5.4**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Chlorophyll a (Corrected)	**4.9**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.64**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.60**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.032 I**	mg/L	0.050	0.020	1		12/24/14 11:13	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.63**	mg/L	0.50	0.086	1	12/17/14 10:30	12/21/14 23:56	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:53		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/17/14 07:53		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.021**	mg/L	0.0040	0.0028	1		12/23/14 17:36	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168098

Sample: Concord **Lab ID: 35168098003** Collected: 12/16/14 16:56 Received: 12/16/14 19:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**6.0**	CFU/100 mL	1.0	1.0	1	12/16/14 20:15	12/17/14 18:49		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**5.1**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**15.0**	units	5.0	5.0	1		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**55.3**	mg/L	5.0	5.0	1		12/20/14 11:58		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:54	12/22/14 16:44		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**18.1**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Chlorophyll a (Corrected)	**19.4**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.79**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.75**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.031 I**	mg/L	0.050	0.020	1		12/24/14 11:15	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.50	0.086	1	12/17/14 10:30	12/21/14 23:58	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:54		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0037 I**	mg/L	0.0040	0.0034	1		12/17/14 07:54		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.033**	mg/L	0.0040	0.0028	1		12/23/14 17:39	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35168098

Sample: DUP **Lab ID: 35168098004** Collected: 12/16/14 15:12 Received: 12/16/14 19:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**11.0**	CFU/100 mL	1.0	1.0	1	12/16/14 20:15	12/17/14 18:49		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.8**	NTU	0.20	0.20	1		12/17/14 16:36		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**60.0**	units	5.0	5.0	1		12/17/14 14:15		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**42.7**	mg/L	5.0	5.0	1		12/20/14 12:03		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/17/14 14:58	12/22/14 16:45		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**3.5**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Chlorophyll a (Corrected)	**3.2**	ug/L	1.0	1.0	1	12/17/14 17:00	12/23/14 19:00		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.70**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.63**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.054**	mg/L	0.050	0.020	1		12/24/14 11:21	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.68**	mg/L	0.50	0.086	1	12/17/14 10:30	12/21/14 23:59	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/18/14 12:56		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/17/14 07:58		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.033**	mg/L	0.0040	0.0028	1		12/23/14 17:40	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: MBIO/15791 Analysis Method: SM 9222D
QC Batch Method: SM 9222D Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1090494 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0	12/17/14 18:06	

SAMPLE DUPLICATE: 1090495

Parameter	Units	35168088002 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	60.0	60.0	0	20	Z

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WET/28362 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1085038 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	12/17/14 16:36	

LABORATORY CONTROL SAMPLE: 1085039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.4	16.5	101	90-110	

SAMPLE DUPLICATE: 1085040

Parameter	Units	35168050001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	2.4	2.4	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WET/28356 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1084658 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/17/14 14:15	

LABORATORY CONTROL SAMPLE: 1084659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1084660

Parameter	Units	35168050001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	120	120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WET/28414 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1088835 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	12/20/14 11:06	

LABORATORY CONTROL SAMPLE: 1088836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 1088837

Parameter	Units	35168096001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	170	168	1	20	

SAMPLE DUPLICATE: 1088838

Parameter	Units	35168158004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	150	153	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WET/28352 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1084502 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	12/22/14 16:17	

LABORATORY CONTROL SAMPLE: 1084503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1084504

Parameter	Units	35168077002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	196	186	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WET/28363 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1085111 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	12/23/14 19:00	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	12/23/14 19:00	

SAMPLE DUPLICATE: 1085112

Parameter	Units	35168098001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	22.9	24.2	6	40	
Chlorophyll a (Corrected)	ug/L	17.1	21.1	21		

SAMPLE DUPLICATE: 1085113

Parameter	Units	35168114008 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	1.5 mg/m3	1.2	22	40	
Chlorophyll a (Corrected)	ug/L	1.3 mg/m3	1.0U			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WETA/42328 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1091405 | Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	12/24/14 10:32	

LABORATORY CONTROL SAMPLE: 1091406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	105	90-110	

MATRIX SPIKE SAMPLE: 1091408

Parameter	Units	35169024001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.2	1	2.2	106	90-110	

SAMPLE DUPLICATE: 1091407

Parameter	Units	35169024001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.2	1.1	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WETA/42122 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1084573 Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	12/21/14 23:22	

LABORATORY CONTROL SAMPLE: 1084574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	21.7	108	90-110	

MATRIX SPIKE SAMPLE: 1084576

Parameter	Units	35167982007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.55	20	24.1	118	90-110	J(M1)

SAMPLE DUPLICATE: 1084575

Parameter	Units	35167982007 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.55	0.64	16	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WETA/42171 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1085980 | Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	12/18/14 12:26	

LABORATORY CONTROL SAMPLE: 1085981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1085983

Parameter	Units	35168084001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	4.7	2	6.5	91	80-120	

MATRIX SPIKE SAMPLE: 1085985

Parameter	Units	35168098001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.2	108	80-120	

SAMPLE DUPLICATE: 1085982

Parameter	Units	35168084001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	4.7	4.7	0	20	

SAMPLE DUPLICATE: 1085984

Parameter	Units	35168098001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WETA/42107 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1084341 | Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	12/17/14 07:33	

LABORATORY CONTROL SAMPLE: 1084342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	103	90-110	

MATRIX SPIKE SAMPLE: 1084344

Parameter	Units	35168014001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.18	.1	0.29	109	90-110	

MATRIX SPIKE SAMPLE: 1084346

Parameter	Units	35168093007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.10	101	90-110	

SAMPLE DUPLICATE: 1084343

Parameter	Units	35168014001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.18	0.18	0	20	

SAMPLE DUPLICATE: 1084345

Parameter	Units	35168093007 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35168098

QC Batch: WETA/42304 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

METHOD BLANK: 1090395 | Matrix: Water
Associated Lab Samples: 35168098001, 35168098002, 35168098003, 35168098004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	12/23/14 17:23	

LABORATORY CONTROL SAMPLE: 1090396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.094	94	90-110	

MATRIX SPIKE SAMPLE: 1090398

Parameter	Units	35168093007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	.1	0.093	86	90-110	

SAMPLE DUPLICATE: 1090397

Parameter	Units	35168093007 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	0.0038 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35168098

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
Z	Too many colonies were present (TNTC); the numeric value represents the estimated colony counts from the highest dilution used in this test.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35168098

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168098001	**Kathryn**	SM 9222D	MBIO/15791	SM 9222D	MBIO/15792
35168098002	**Secret**	SM 9222D	MBIO/15791	SM 9222D	MBIO/15792
35168098003	**Concord**	SM 9222D	MBIO/15791	SM 9222D	MBIO/15792
35168098004	**DUP**	SM 9222D	MBIO/15791	SM 9222D	MBIO/15792
35168098001	**Kathryn**	EPA 180.1	WET/28362		
35168098002	**Secret**	EPA 180.1	WET/28362		
35168098003	**Concord**	EPA 180.1	WET/28362		
35168098004	**DUP**	EPA 180.1	WET/28362		
35168098001	**Kathryn**	SM 2120B	WET/28356		
35168098002	**Secret**	SM 2120B	WET/28356		
35168098003	**Concord**	SM 2120B	WET/28356		
35168098004	**DUP**	SM 2120B	WET/28356		
35168098001	**Kathryn**	SM 2320B	WET/28414		
35168098002	**Secret**	SM 2320B	WET/28414		
35168098003	**Concord**	SM 2320B	WET/28414		
35168098004	**DUP**	SM 2320B	WET/28414		
35168098001	**Kathryn**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168098002	**Secret**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168098003	**Concord**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168098004	**DUP**	SM 5210B	WET/28352	SM 5210B	WET/28520
35168098001	**Kathryn**	SM10200	WET/28363	SM10200	WET/28365
35168098002	**Secret**	SM10200	WET/28363	SM10200	WET/28365
35168098003	**Concord**	SM10200	WET/28363	SM10200	WET/28365
35168098004	**DUP**	SM10200	WET/28363	SM10200	WET/28365
35168098001	**Kathryn**	TKN+NOx Calculation	WET/28468		
35168098002	**Secret**	TKN+NOx Calculation	WET/28468		
35168098003	**Concord**	TKN+NOx Calculation	WET/28468		
35168098004	**DUP**	TKN+NOx Calculation	WET/28468		
35168098001	**Kathryn**	TKN-NH3 Calculation	WET/28518		
35168098002	**Secret**	TKN-NH3 Calculation	WET/28518		
35168098003	**Concord**	TKN-NH3 Calculation	WET/28518		
35168098004	**DUP**	TKN-NH3 Calculation	WET/28518		
35168098001	**Kathryn**	EPA 350.1	WETA/42328		
35168098002	**Secret**	EPA 350.1	WETA/42328		
35168098003	**Concord**	EPA 350.1	WETA/42328		
35168098004	**DUP**	EPA 350.1	WETA/42328		
35168098001	**Kathryn**	EPA 351.2	WETA/42122	EPA 351.2	WETA/42223
35168098002	**Secret**	EPA 351.2	WETA/42122	EPA 351.2	WETA/42223
35168098003	**Concord**	EPA 351.2	WETA/42122	EPA 351.2	WETA/42223
35168098004	**DUP**	EPA 351.2	WETA/42122	EPA 351.2	WETA/42223
35168098001	**Kathryn**	EPA 353.2	WETA/42171		
35168098002	**Secret**	EPA 353.2	WETA/42171		
35168098003	**Concord**	EPA 353.2	WETA/42171		
35168098004	**DUP**	EPA 353.2	WETA/42171		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35168098

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168098001	**Kathryn**	EPA 365.1	WETA/42107		
35168098002	**Secret**	EPA 365.1	WETA/42107		
35168098003	**Concord**	EPA 365.1	WETA/42107		
35168098004	**DUP**	EPA 365.1	WETA/42107		
35168098001	**Kathryn**	EPA 365.3	WETA/42304		
35168098002	**Secret**	EPA 365.3	WETA/42304		
35168098003	**Concord**	EPA 365.3	WETA/42304		
35168098004	**DUP**	EPA 365.3	WETA/42304		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

CH
The C

WO#: 35168098
35168098

Page: of
1863199

Section A
Required Client Information:

Company: Geosyntec
Address: 1511 E SR 434 Ste 1005
Winter Springs FL 32708
Email To: mellard@geosyntec.com
Phone: 321.249.9360 Fax:
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: Mark Ellard
Copy To: Lee Mullon
Purchase Order No.:
Project Name: Casselberry Lakes
Project Number: 6259

Attention:
Company Name:
Address:
Pace Quote Reference: 14-0112
Pace Project Manager: Martha Montero
Pace Profile #: 6259

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____
Site Location STATE: FL

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BOD5	ALK	COLOR	CHLA	FECAL	Ammonia	OP TP	TURBID	TKN	NOX	TN + ORG-N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	KATHLYN	SW	G	121614	1449	121614	1512		6	X	X				X				X	X	X	X	X	X	X	X	X	X			
2	SECRET	SW	G	121614	1558	121614	1620		6	X	X				X				X	X	X	X	X	X	X	X	X	X			
3	CONCORD	SW	G	121614	1656	121614	1706		6	X	X				X				X	X	X	X	X	X	X	X	X	X			
4	DUP	SW	G	121614		121614			6	X	X				X				X	X	X	X	X	X	X	X	X	X			
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KEY CHAIN	[illegible]	12-5-14	1400	LEE MULLON/GEO	12-5-14	1400				
	LEE MULLON/G	12-16-14	1808	[illegible]	12-16-14	1808				
	[illegible]	12-16-14	19:01	[illegible]	12/16/14	19:01	2.7	Y		

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: LEE MULLON
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 12/16/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: August 11, 2014
	Document No.: F-FL-C-007 rev. 06	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: GEOLMY Project # 351168098

Cooler: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # _____

Cuody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: JP 12/16/14 19:01

Pading Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other _____

Thmometer Used T-185 Type of Ice: (Wet) Blue None

Coer Temperature °C: 2.7 (Visual) 0.0 (Correction Factor) 2.7 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Reeipt of samples satisfactory: ☐ Yes ☑ No

Rush TAT requested on COC:

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chn of Custody Present	☐
Chn of Custody Filled Out	☐
Requished Signature & Sampler Name COC	☑ no time on containers or COC for DUP JP logged in 16:56 for time.
Saples Arrived within Hold Time	☐
Sufcient Volume	☐
Corect Containers Used	☐
Coalners Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allmtainers needing preservation are found to be in conance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Coments/ Reolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

De/Time Opened: _____

Nnber of Unopened Bottles Remaining: _____

Extra Sample In Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 31, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Seminole Co
Pace Project No.: 35168211

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Fecal coliforms qualified with 'B" due to samples analyzed at 3 dilutions (50 mL, 10 mL, 1mL). No plate provided counts within the ideal range. All three were used to calculate the final result.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project:	Casselberry Seminole Co
Pace Project No.:	35168211

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35168211001	**Queen**	Water	12/17/14 12:15	12/17/14 14:07
35168211002	**Strip**	Water	12/17/14 11:50	12/17/14 14:07
35168211003	**Grassy**	Water	12/17/14 08:10	12/17/14 14:07
35168211004	**Griffin**	Water	12/17/14 09:10	12/17/14 14:07
35168211005	**Trout**	Water	12/17/14 10:30	12/17/14 14:07

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35168211001	**Queen**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168211002	**Strip**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168211003	**Grassy**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168211004	**Griffin**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168211005	**Trout**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	AGS	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Sample: Queen **Lab ID: 35168211001** Collected: 12/17/14 12:15 Received: 12/17/14 14:07 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**32.0**	CFU/100 mL	1.0	1.0	1	12/17/14 16:04	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.3**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**120**	units	10.0	10.0	2		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**40.8**	mg/L	5.0	5.0	1		12/23/14 17:58		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.5**	mg/L	2.0	2.0	1	12/18/14 13:11	12/23/14 16:35		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**43.2**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**26.2**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.78**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.75**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.030 I**	mg/L	0.050	0.020	1		12/24/14 11:23	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:37	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 13:47		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/18/14 06:28		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.045**	mg/L	0.0040	0.0028	1		12/23/14 17:41	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Sample: Strip **Lab ID: 35168211002** Collected: 12/17/14 11:50 Received: 12/17/14 14:07 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**12.0**	CFU/100 mL	1.0	1.0	1	12/17/14 16:04	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.9**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**75.0**	units	25.0	25.0	5		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**38.2**	mg/L	5.0	5.0	1		12/23/14 18:08		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.0**	mg/L	2.0	2.0	1	12/18/14 13:14	12/23/14 16:36		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**35.5**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**23.4**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.77**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.76**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		12/24/14 11:25	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.77**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 13:51		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/18/14 06:29		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.036**	mg/L	0.0040	0.0028	1		12/23/14 17:42	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Sample: Grassy **Lab ID: 35168211003** Collected: 12/17/14 08:10 Received: 12/17/14 14:07 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0**	CFU/100 mL	1.0	1.0	1	12/17/14 16:04	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.77**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**25.0**	units	5.0	5.0	1		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**48.7**	mg/L	5.0	5.0	1		12/23/14 18:12		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/18/14 13:16	12/23/14 16:37		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.2**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**7.6**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.52**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.45 I**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.049 I**	mg/L	0.050	0.020	1		12/24/14 11:27	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.50**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:39	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 13:52		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0037 I**	mg/L	0.0040	0.0034	1		12/18/14 06:30		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.012**	mg/L	0.0040	0.0028	1		12/23/14 17:43	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Sample: Griffin **Lab ID: 35168211004** Collected: 12/17/14 09:10 Received: 12/17/14 14:07 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**3.0**	CFU/100 mL	1.0	1.0	1	12/17/14 16:04	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.6**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**35.0**	units	5.0	5.0	1		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**55.8**	mg/L	5.0	5.0	1		12/23/14 18:16		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/18/14 13:18	12/23/14 16:38		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**10.8**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**8.7**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.63**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.52**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.052**	mg/L	0.050	0.020	1		12/24/14 11:33	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.57**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:41	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.054**	mg/L	0.050	0.025	1		12/19/14 13:54		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/18/14 06:31		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.020**	mg/L	0.0040	0.0028	1		12/23/14 17:44	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Sample: Trout **Lab ID: 35168211005** Collected: 12/17/14 10:30 Received: 12/17/14 14:07 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**5.0**	CFU/100 mL	1.0	1.0	1	12/17/14 16:04	12/18/14 17:13		B
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.3**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**25.0**	units	5.0	5.0	1		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**50.0**	mg/L	5.0	5.0	1		12/23/14 18:21		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/18/14 13:20	12/23/14 16:39		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**10.7**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**9.0**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.54**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.51**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		12/24/14 11:39	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.53**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:42	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 13:55		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0036 I**	mg/L	0.0040	0.0034	1		12/18/14 06:34		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.014**	mg/L	0.0040	0.0028	1		12/23/14 17:45	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: MBIO/15793 Analysis Method: SM 9222D
QC Batch Method: SM 9222D Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1090510 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0	12/18/14 17:13	

SAMPLE DUPLICATE: 1090511

Parameter	Units	35168197002 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	42.0	46.0	9	20	

SAMPLE DUPLICATE: 1090516

Parameter	Units	35168302001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WET/28388 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1086458 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	12/18/14 15:45	

LABORATORY CONTROL SAMPLE: 1086459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.4	16.5	101	90-110	

SAMPLE DUPLICATE: 1086460

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	2.3	2.2	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WET/28389 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1086470 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/18/14 16:04	

LABORATORY CONTROL SAMPLE: 1086471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1086472

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	120	120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WET/28464 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1090911 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	12/23/14 17:45	

LABORATORY CONTROL SAMPLE: 1090912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	258	103	90-110	

SAMPLE DUPLICATE: 1090913

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40.8	41.9	3	20	

SAMPLE DUPLICATE: 1090914

Parameter	Units	35168312001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	1030	1070	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WET/28377 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1085870 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	12/23/14 16:12	

LABORATORY CONTROL SAMPLE: 1085871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	168	85	85-115	

SAMPLE DUPLICATE: 1085872

Parameter	Units	35168187001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	892	768	15	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WET/28391 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1086559 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	12/27/14 15:45	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	12/27/14 15:45	

SAMPLE DUPLICATE: 1086560

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	43.2	45.1	4	40	
Chlorophyll a (Corrected)	ug/L	26.2	39.2	40		

SAMPLE DUPLICATE: 1086561

Parameter	Units	35168308004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	95.8	98.5	3	40	
Chlorophyll a (Corrected)	ug/L	65.1	71.4	9		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42328 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35168211001, 35168211002, 35168211003

METHOD BLANK: 1091405 | Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	12/24/14 10:32	

LABORATORY CONTROL SAMPLE: 1091406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	105	90-110	

MATRIX SPIKE SAMPLE: 1091408

Parameter	Units	35169024001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.2	1	2.2	106	90-110	

SAMPLE DUPLICATE: 1091407

Parameter	Units	35169024001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.2	1.1	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42329 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35168211004, 35168211005

METHOD BLANK: 1091409 | Matrix: Water
Associated Lab Samples: 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	12/24/14 11:29	

LABORATORY CONTROL SAMPLE: 1091410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 1091412

Parameter	Units	35168211004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.052	1	1.1	109	90-110	

SAMPLE DUPLICATE: 1091411

Parameter	Units	35168211004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.052	0.054	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42160 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1085859 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	12/22/14 20:20	

LABORATORY CONTROL SAMPLE: 1085860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.0	95	90-110	

MATRIX SPIKE SAMPLE: 1085862

Parameter	Units	35168193001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.9	20	21.7	99	90-110	

SAMPLE DUPLICATE: 1085861

Parameter	Units	35168193001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.9	2.0	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42199 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1087649 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	12/19/14 13:36	

LABORATORY CONTROL SAMPLE: 1087650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1087652

Parameter	Units	35168160001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.5	2	3.5	101	80-120	

MATRIX SPIKE SAMPLE: 1087654

Parameter	Units	35168266001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.1	106	80-120	

SAMPLE DUPLICATE: 1087651

Parameter	Units	35168160001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.5	1.5	2	20	

SAMPLE DUPLICATE: 1087653

Parameter	Units	35168266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42144 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1085468 Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	12/18/14 06:22	

LABORATORY CONTROL SAMPLE: 1085469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.11	106	90-110	

MATRIX SPIKE SAMPLE: 1085471

Parameter	Units	35168171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.093	93	90-110	

MATRIX SPIKE SAMPLE: 1085473

Parameter	Units	35168290002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.060	.1	0.17	106	90-110	

SAMPLE DUPLICATE: 1085470

Parameter	Units	35168171001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

SAMPLE DUPLICATE: 1085472

Parameter	Units	35168290002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.060	0.061	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168211

QC Batch: WETA/42304 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

METHOD BLANK: 1090395 | Matrix: Water
Associated Lab Samples: 35168211001, 35168211002, 35168211003, 35168211004, 35168211005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	12/23/14 17:23	

LABORATORY CONTROL SAMPLE: 1090396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.094	94	90-110	

MATRIX SPIKE SAMPLE: 1090398

Parameter	Units	35168093007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	.1	0.093	86	90-110	

SAMPLE DUPLICATE: 1090397

Parameter	Units	35168093007 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	0.0038 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Seminole Co
Pace Project No.: 35168211

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony counts outside the acceptable range.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168211001	**Queen**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168211002	**Strip**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168211003	**Grassy**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168211004	**Griffin**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168211005	**Trout**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168211001	**Queen**	EPA 180.1	WET/28388		
35168211002	**Strip**	EPA 180.1	WET/28388		
35168211003	**Grassy**	EPA 180.1	WET/28388		
35168211004	**Griffin**	EPA 180.1	WET/28388		
35168211005	**Trout**	EPA 180.1	WET/28388		
35168211001	**Queen**	SM 2120B	WET/28389		
35168211002	**Strip**	SM 2120B	WET/28389		
35168211003	**Grassy**	SM 2120B	WET/28389		
35168211004	**Griffin**	SM 2120B	WET/28389		
35168211005	**Trout**	SM 2120B	WET/28389		
35168211001	**Queen**	SM 2320B	WET/28464		
35168211002	**Strip**	SM 2320B	WET/28464		
35168211003	**Grassy**	SM 2320B	WET/28464		
35168211004	**Griffin**	SM 2320B	WET/28464		
35168211005	**Trout**	SM 2320B	WET/28464		
35168211001	**Queen**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168211002	**Strip**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168211003	**Grassy**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168211004	**Griffin**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168211005	**Trout**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168211001	**Queen**	SM10200	WET/28391	SM10200	WET/28394
35168211002	**Strip**	SM10200	WET/28391	SM10200	WET/28394
35168211003	**Grassy**	SM10200	WET/28391	SM10200	WET/28394
35168211004	**Griffin**	SM10200	WET/28391	SM10200	WET/28394
35168211005	**Trout**	SM10200	WET/28391	SM10200	WET/28394
35168211001	**Queen**	TKN+NOx Calculation	WET/28468		
35168211002	**Strip**	TKN+NOx Calculation	WET/28468		
35168211003	**Grassy**	TKN+NOx Calculation	WET/28468		
35168211004	**Griffin**	TKN+NOx Calculation	WET/28468		
35168211005	**Trout**	TKN+NOx Calculation	WET/28468		
35168211001	**Queen**	TKN-NH3 Calculation	WET/28518		
35168211002	**Strip**	TKN-NH3 Calculation	WET/28518		
35168211003	**Grassy**	TKN-NH3 Calculation	WET/28518		
35168211004	**Griffin**	TKN-NH3 Calculation	WET/28518		
35168211005	**Trout**	TKN-NH3 Calculation	WET/28518		
35168211001	**Queen**	EPA 350.1	WETA/42328		
35168211002	**Strip**	EPA 350.1	WETA/42328		
35168211003	**Grassy**	EPA 350.1	WETA/42328		
35168211004	**Griffin**	EPA 350.1	WETA/42329		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Seminole Co
Pace Project No.: 35168211

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168211005	**Trout**	EPA 350.1	WETA/42329		
35168211001	**Queen**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168211002	**Strip**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168211003	**Grassy**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168211004	**Griffin**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168211005	**Trout**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168211001	**Queen**	EPA 353.2	WETA/42199		
35168211002	**Strip**	EPA 353.2	WETA/42199		
35168211003	**Grassy**	EPA 353.2	WETA/42199		
35168211004	**Griffin**	EPA 353.2	WETA/42199		
35168211005	**Trout**	EPA 353.2	WETA/42199		
35168211001	**Queen**	EPA 365.1	WETA/42144		
35168211002	**Strip**	EPA 365.1	WETA/42144		
35168211003	**Grassy**	EPA 365.1	WETA/42144		
35168211004	**Griffin**	EPA 365.1	WETA/42144		
35168211005	**Trout**	EPA 365.1	WETA/42144		
35168211001	**Queen**	EPA 365.3	WETA/42304		
35168211002	**Strip**	EPA 365.3	WETA/42304		
35168211003	**Grassy**	EPA 365.3	WETA/42304		
35168211004	**Griffin**	EPA 365.3	WETA/42304		
35168211005	**Trout**	EPA 365.3	WETA/42304		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

C
Th

WO# : 35168211

35168211

Page: of
1865001

Section A
Required Client Information:

Company:	Geosyntec
Address:	1511 East SR 434 Ste 1005, Winter Springs, FL 32708
Email To:	mellard@geosyntec.com
Phone:	321.249.9360
Fax:	
Requested Due Date/TAT:	

Section B
Required Project Information:

Report To:	Mark Ellard
Copy To:	Lee Mullon
Purchase Order No.:	
Project Name:	
Project Number:	

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	14-012
Pace Project Manager:	Martha Montero
Pace Profile #:	6259

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: FL

Section D
Required Client Information

Matrix Codes
MATRIX / CODE (see valid codes to left)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BOD5	Alk	Color	CHLA	FECAL	Ammonia	OPTP	TCLP	TKN	NOX	TNT ORGN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	QUEEN	SW	G	121714	1200	121714	1215		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
2	STRIP	SW	G	121714	1130	121714	1150		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
3	GRASSY	SW	G	121714	0730	121714	0780		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
4	GRIFFIN	SW	G	121714	0850	121714	0910		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
5	TROUT	SW	G	121714	1015	121714	1030		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
6																														
7							0810																							
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KIT-EMPTY	LLK	12-5-14	1400	Lee Mullon / Geo	12-5-14	1400				
	Lee Mullon / Geo	12-17-14	1248	[signature]	12-17-14	1248				
	[signature]	12-17-14	1407	[signature]	12-17-14	1407	14.4 F187	Y	N	

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Lee Mullon
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 12/17/14

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 06	August 11, 2014 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Geosyntec Project# 3S16B241

Cooler: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # N/A

Cuody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: 12-17-14 SD 1407

Paing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thmometer Used L187 Type of Ice: (Wet) Blue None

Coer Temperature °C 14.4 (Visual) 0.0 (Correction Factor) 14.4 (Actual) taken today

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Rush TAT requested on COC:

Reipt of samples satisfactory: ☐ Yes ☐ No

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chn of Custody Present	☐
Chn of Custody Filled Out	☐
Requished Signature & Sampler Name COC	☐
Saples Arrived within Hold Time	☐
Sucient Volume	☐
Coect Containers Used	☐
Coainers Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allntainers needing preservation are found to be in coollance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Coments/ Resolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

De/Time Opened: _____

Nnber of Unopened Bottles Remaining: _____

Extra Sample In Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 31, 2014

Mark Ellard
Geosyntec Consultants, Inc.
3525 West Lake Mary Blvd.
Suite 306
Lake Mary, FL 32746

RE: Project: Casselberry Seminole Co
Pace Project No.: 35168266

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35168266001	**Blank**	Water	12/17/14 15:12	12/17/14 16:37
35168266002	**Lost**	Water	12/17/14 14:20	12/17/14 16:37

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35168266001	**Blank**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O
35168266002	**Lost**	SM 9222D	NMT	1	PASI-O
		EPA 180.1	NMT	1	PASI-O
		SM 2120B	NMT	1	PASI-O
		SM 2320B	NMT	1	PASI-O
		SM 5210B	AIS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	CLS	1	PASI-O
		TKN-NH3 Calculation	AIS	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	TK1	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Sample: Blank **Lab ID: 35168266001** Collected: 12/17/14 15:12 Received: 12/17/14 16:37 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0U**	CFU/100 mL	1.0	1.0	1	12/17/14 18:05	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20U**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**5.0U**	units	5.0	5.0	1		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**5.0U**	mg/L	5.0	5.0	1		12/18/14 17:27		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/18/14 13:21	12/23/14 16:40		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**1.0U**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**1.0U**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.25U**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.25U**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		12/24/14 11:46	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.086U**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:43	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 13:56		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/18/14 06:35		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.0080**	mg/L	0.0040	0.0028	1		12/23/14 17:46	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Sample: Lost **Lab ID: 35168266002** Collected: 12/17/14 14:20 Received: 12/17/14 16:37 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**3.0**	CFU/100 mL	1.0	1.0	1	12/17/14 18:05	12/18/14 17:13		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.88**	NTU	0.20	0.20	1		12/18/14 15:45		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**50.0**	units	25.0	25.0	5		12/18/14 16:04		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**24.1**	mg/L	5.0	5.0	1		12/18/14 17:31		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0U**	mg/L	2.0	2.0	1	12/18/14 13:23	12/23/14 16:42		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.6**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Chlorophyll a (Corrected)	**3.2**	ug/L	1.0	1.0	1	12/18/14 16:15	12/27/14 15:45		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.54**	mg/L	0.50	0.25	1		12/23/14 18:50		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.50**	mg/L	0.50	0.25	1		12/29/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.030 I**	mg/L	0.050	0.020	1		12/24/14 11:48	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.53**	mg/L	0.50	0.086	1	12/18/14 09:10	12/22/14 20:45	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025U**	mg/L	0.050	0.025	1		12/19/14 14:00		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034U**	mg/L	0.0040	0.0034	1		12/18/14 06:36		
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.015**	mg/L	0.0040	0.0028	1		12/23/14 17:47	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: MBIO/15793 | Analysis Method: SM 9222D
QC Batch Method: SM 9222D | Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1090510 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0	12/18/14 17:13	

SAMPLE DUPLICATE: 1090511

Parameter	Units	35168197002 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	42.0	46.0	9	20	

SAMPLE DUPLICATE: 1090516

Parameter	Units	35168302001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0U	1.0U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WET/28388 | Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 | Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1086458 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20U	0.20	12/18/14 15:45	

LABORATORY CONTROL SAMPLE: 1086459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.4	16.5	101	90-110	

SAMPLE DUPLICATE: 1086460

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	2.3	2.2	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WET/28389 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1086470 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/18/14 16:04	

LABORATORY CONTROL SAMPLE: 1086471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1086472

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	120	120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WET/28387 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1086447 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0U	5.0	12/18/14 15:29	

LABORATORY CONTROL SAMPLE: 1086448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	245	98	90-110	

SAMPLE DUPLICATE: 1086449

Parameter	Units	35167513001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	329	332	1	20	

SAMPLE DUPLICATE: 1086450

Parameter	Units	92229379001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	32.6	33.1	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WET/28377 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1085870 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0U	2.0	12/23/14 16:12	

LABORATORY CONTROL SAMPLE: 1085871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	168	85	85-115	

SAMPLE DUPLICATE: 1085872

Parameter	Units	35168187001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	892	768	15	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WET/28391 | Analysis Method: SM10200
QC Batch Method: SM10200 | Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1086559 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	1.0U	1.0	12/27/14 15:45	
Chlorophyll a (Corrected)	ug/L	1.0U	1.0	12/27/14 15:45	

SAMPLE DUPLICATE: 1086560

Parameter	Units	35168211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	43.2	45.1	4	40	
Chlorophyll a (Corrected)	ug/L	26.2	39.2	40		

SAMPLE DUPLICATE: 1086561

Parameter	Units	35168308004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	95.8	98.5	3	40	
Chlorophyll a (Corrected)	ug/L	65.1	71.4	9		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WETA/42329 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1091409 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	12/24/14 11:29	

LABORATORY CONTROL SAMPLE: 1091410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 1091412

Parameter	Units	35168211004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.052	1	1.1	109	90-110	

SAMPLE DUPLICATE: 1091411

Parameter	Units	35168211004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.052	0.054	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WETA/42160 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1085859 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086U	0.50	12/22/14 20:20	

LABORATORY CONTROL SAMPLE: 1085860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.0	95	90-110	

MATRIX SPIKE SAMPLE: 1085862

Parameter	Units	35168193001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.9	20	21.7	99	90-110	

SAMPLE DUPLICATE: 1085861

Parameter	Units	35168193001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.9	2.0	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WETA/42199 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1087649 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.050	12/19/14 13:36	

LABORATORY CONTROL SAMPLE: 1087650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1087652

Parameter	Units	35168160001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.5	2	3.5	101	80-120	

MATRIX SPIKE SAMPLE: 1087654

Parameter	Units	35168266001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	2	2.1	106	80-120	

SAMPLE DUPLICATE: 1087651

Parameter	Units	35168160001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.5	1.5	2	20	

SAMPLE DUPLICATE: 1087653

Parameter	Units	35168266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025U	0.025U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WETA/42144 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1085468 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0040	12/18/14 06:22	

LABORATORY CONTROL SAMPLE: 1085469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.11	106	90-110	

MATRIX SPIKE SAMPLE: 1085471

Parameter	Units	35168171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034U	.1	0.093	93	90-110	

MATRIX SPIKE SAMPLE: 1085473

Parameter	Units	35168290002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.060	.1	0.17	106	90-110	

SAMPLE DUPLICATE: 1085470

Parameter	Units	35168171001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034U	0.0034U		20	

SAMPLE DUPLICATE: 1085472

Parameter	Units	35168290002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.060	0.061	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Seminole Co
Pace Project No.: 35168266

QC Batch: WETA/42304 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35168266001, 35168266002

METHOD BLANK: 1090395 | Matrix: Water
Associated Lab Samples: 35168266001, 35168266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028U	0.0040	12/23/14 17:23	

LABORATORY CONTROL SAMPLE: 1090396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.094	94	90-110	

MATRIX SPIKE SAMPLE: 1090398

Parameter	Units	35168093007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	.1	0.093	86	90-110	

SAMPLE DUPLICATE: 1090397

Parameter	Units	35168093007 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0070	0.0038 I		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Seminole Co
Pace Project No.: 35168266

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Seminole Co
Pace Project No.: 35168266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35168266001	**Blank**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168266002	**Lost**	SM 9222D	MBIO/15793	SM 9222D	MBIO/15794
35168266001	**Blank**	EPA 180.1	WET/28388		
35168266002	**Lost**	EPA 180.1	WET/28388		
35168266001	**Blank**	SM 2120B	WET/28389		
35168266002	**Lost**	SM 2120B	WET/28389		
35168266001	**Blank**	SM 2320B	WET/28387		
35168266002	**Lost**	SM 2320B	WET/28387		
35168266001	**Blank**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168266002	**Lost**	SM 5210B	WET/28377	SM 5210B	WET/28463
35168266001	**Blank**	SM10200	WET/28391	SM10200	WET/28394
35168266002	**Lost**	SM10200	WET/28391	SM10200	WET/28394
35168266001	**Blank**	TKN+NOx Calculation	WET/28468		
35168266002	**Lost**	TKN+NOx Calculation	WET/28468		
35168266001	**Blank**	TKN-NH3 Calculation	WET/28518		
35168266002	**Lost**	TKN-NH3 Calculation	WET/28518		
35168266001	**Blank**	EPA 350.1	WETA/42329		
35168266002	**Lost**	EPA 350.1	WETA/42329		
35168266001	**Blank**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168266002	**Lost**	EPA 351.2	WETA/42160	EPA 351.2	WETA/42231
35168266001	**Blank**	EPA 353.2	WETA/42199		
35168266002	**Lost**	EPA 353.2	WETA/42199		
35168266001	**Blank**	EPA 365.1	WETA/42144		
35168266002	**Lost**	EPA 365.1	WETA/42144		
35168266001	**Blank**	EPA 365.3	WETA/42304		
35168266002	**Lost**	EPA 365.3	WETA/42304		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

WO# : 35168266

35168266

...al Request Document
accurately.

Page: of
1865002

Section A
Required Client Information:

Company: Geosyntec
Address: 1511 SR 434 Ste 1005
Winter Springs, FL 32708
Email To: mellard@geosyntec.com
Phone: 321 239 9360 Fax:
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: Mark Ellard
Copy To: Lee Mullon
Purchase Order No.:
Project Name: Casselberry Lakes
Project Number: FW2404

Company Name:
Address:
Pace Quote Reference: 14-0112
Pace Project Manager: Martha Montero
Pace Profile #: 6259

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: FL

Section D
Required Client Information

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BOD5	ALK	COLOR	CHLA	FECAL	AMMONIA	TOT P	TOR/TSS	TKN	NOX	TN + OLGN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BLANK	SW	G	121714	1455	121714	1512		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
2	LOST	SW	G	121714	1400	121714	1420		6	X	X				X			X	X	X	X	X	X	X	X	X	X	X		
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KIT-EMPTY	[illegible]	12-5-14	1400	Lee Mullon / Geo	12-5-14	1400				
	Lee Mullon / Geo	12-17-14	1545	[illegible]	12-17-14	1545				
	[illegible]	12-17-14	16:37	[illegible]	12/17/14	16:37	4.1	Y		

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 06	August 11, 2014 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: GEO Project# 35168266

Cooler: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # _____

Cuody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: JP 12/17/14 16:37

Paing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other _____

Thmometer Used _____ Type of Ice: (Wet) Blue None

Coer Temperature °C _____ (Visual) _____ (Correction Factor) _____ (Actual) _____

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Rush TAT requested on COC:

Reipt of samples satisfactory: ☐ Yes ☐ No

If ys, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Ch of Custody Present	☐
Ch of Custody Filled Out	☐
Requished Signature & Sampler Name COC	☐
Saples Arrived within Hold Time	☐
Sucient Volume	☐
Coect Containers Used	☐
Coainers Intact	☐
Saple Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
Allntainers needing preservation are found to be in conance with EPA recommendation.	☐
Ndeadspace in VOA Vials (>6mm):	☐

Clnt Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

roject Manager Review: _____ Date: _____

Finished Product Information Only

F. Sample ID: _____

Pduction Code: _____

De/Time Opened: _____

Nmber of Unopened Bottles Remaining: _____

Extra Sample In Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

April 10, 2015

Mark Ellard
Geosyntec Consultants, Inc.
1511 East State Road 434
Suite 1005
Winter Springs, FL 32708

RE: Project: Casselberry Lakes
Pace Project No.: 35180691

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project:	Casselberry Lakes
Pace Project No.:	35180691

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35180691001	**MTRIP**	Water	03/24/15 07:27	03/24/15 13:35
35180691002	**NTRIP**	Water	03/24/15 07:56	03/24/15 13:35
35180691003	**STRIP**	Water	03/24/15 08:45	03/24/15 13:35
35180691004	**QUEEN**	Water	03/24/15 09:15	03/24/15 13:35
35180691005	**Yvonne**	Water	03/24/15 10:57	03/24/15 13:35
35180691006	**LOST**	Water	03/24/15 11:53	03/24/15 13:35
35180691007	**DUP**	Water	03/24/15 11:53	03/24/15 13:35
35180691008	**Equipment**	Water	03/24/15 10:10	03/24/15 13:35

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35180691001	**MTRIP**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691002	**NTRIP**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691003	**STRIP**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691004	**QUEEN**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691005	**Yvonne**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691006	**LOST**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691007	**DUP**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180691008	**Equipment**	EPA 200.7	CKJ	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 365.3	ADC	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: MTRIP **Lab ID: 35180691001** Collected: 03/24/15 07:27 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	03/28/15 14:20	03/29/15 19:17	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:17	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:17	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	03/28/15 14:20	03/29/15 19:17	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	03/28/15 14:20	03/29/15 19:17	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**22.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.59**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**80.0**	units	10.0	10.0	2		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**37.6**	mg/L	5.0	5.0	1		03/25/15 12:57		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:36	03/30/15 14:20		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**3.2 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**2.4 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.62**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.62**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:17	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.62**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 17:57	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:02		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:36		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: MTRIP **Lab ID: 35180691001** Collected: 03/24/15 07:27 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.018**	mg/L	0.0040	0.0028	1		03/26/15 15:56	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: NTRIP **Lab ID: 35180691002** Collected: 03/24/15 07:56 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	03/28/15 14:20	03/29/15 19:21	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:21	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:21	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	03/28/15 14:20	03/29/15 19:21	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	03/28/15 14:20	03/29/15 19:21	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**6.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.63**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**70.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**36.9**	mg/L	5.0	5.0	1		03/25/15 13:07		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:37	03/30/15 14:24		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**3.6 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**2.7 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.67**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.67**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:22	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.67**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:12	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:04		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:39		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: NTRIP **Lab ID: 35180691002** Collected: 03/24/15 07:56 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.016**	mg/L	0.0040	0.0028	1		03/26/15 15:57	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: STRIP **Lab ID: 35180691003** Collected: 03/24/15 08:45 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	03/28/15 14:20	03/29/15 19:26	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:26	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:26	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	03/28/15 14:20	03/29/15 19:26	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	03/28/15 14:20	03/29/15 19:26	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**4.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.5**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**90.0**	units	10.0	10.0	2		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**38.6**	mg/L	5.0	5.0	1		03/25/15 13:11		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:38	03/30/15 14:25		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**17.4**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**13.4**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.78**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.78**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:24	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:13	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:05		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:40		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: STRIP **Lab ID: 35180691003** Collected: 03/24/15 08:45 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.030**	mg/L	0.0040	0.0028	1		03/26/15 15:58	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: QUEEN **Lab ID: 35180691004** Collected: 03/24/15 09:15 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	03/28/15 14:20	03/29/15 19:30	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:30	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:30	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	03/28/15 14:20	03/29/15 19:30	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	03/28/15 14:20	03/29/15 19:30	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**13.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**6.9**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**120**	units	10.0	10.0	2		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**38.3**	mg/L	5.0	5.0	1		03/25/15 13:16		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.8**	mg/L	2.0	2.0	1	03/25/15 14:39	03/30/15 14:26		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**68.6**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**61.2**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**1.2**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**1.2**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:30	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**1.2**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:17	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:06		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:41		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: QUEEN **Lab ID: 35180691004** Collected: 03/24/15 09:15 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.060**	mg/L	0.0040	0.0028	1		03/26/15 15:59	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: Yvonne **Lab ID: 35180691005** Collected: 03/24/15 10:57 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	03/28/15 14:20	03/29/15 19:34	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:34	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	03/28/15 14:20	03/29/15 19:34	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	03/28/15 14:20	03/29/15 19:34	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	03/28/15 14:20	03/29/15 19:34	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0 U**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		1p,Z
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.73**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**50.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**60.2**	mg/L	5.0	5.0	1		03/25/15 13:20		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:41	03/30/15 14:28		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**4.0 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**3.1 I**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.60**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.60**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:32	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.60**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:19	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:10		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:42		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: Yvonne **Lab ID: 35180691005** Collected: 03/24/15 10:57 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.022**	mg/L	0.0040	0.0028	1		03/26/15 16:02	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: LOST **Lab ID: 35180691006** Collected: 03/24/15 11:53 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/01/15 16:34	04/02/15 15:22	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 15:22	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 15:22	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/01/15 16:34	04/02/15 15:22	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/01/15 16:34	04/02/15 15:22	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.4**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**80.0**	units	10.0	10.0	2		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**26.8**	mg/L	5.0	5.0	1		03/25/15 13:24		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:46	03/30/15 14:29		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.7**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**7.5**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.74**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.74**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:34	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.74**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:20	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:11		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:43		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: LOST **Lab ID: 35180691006** Collected: 03/24/15 11:53 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.026**	mg/L	0.0040	0.0028	1		03/26/15 16:03	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: DUP **Lab ID: 35180691007** Collected: 03/24/15 11:53 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/01/15 16:34	04/02/15 16:22	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 16:22	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 16:22	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/01/15 16:34	04/02/15 16:22	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/01/15 16:34	04/02/15 16:22	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**16.0**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**7.1**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**120**	units	10.0	10.0	2		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**38.4**	mg/L	5.0	5.0	1		03/25/15 13:29		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**4.3**	mg/L	2.0	2.0	1	03/25/15 14:50	03/30/15 14:31		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**66.2**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**56.5**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**1.2**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**1.2**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:35	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**1.2**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:21	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:13		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:46		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: DUP **Lab ID: 35180691007** Collected: 03/24/15 11:53 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.061**	mg/L	0.0040	0.0028	1		03/26/15 16:04	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: Equipment **Lab ID: 35180691008** Collected: 03/24/15 10:10 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/01/15 16:34	04/02/15 18:02	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 18:02	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/01/15 16:34	04/02/15 18:02	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/01/15 16:34	04/02/15 18:02	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/01/15 16:34	04/02/15 18:02	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0 U**	CFU/100 mL	1.0	1.0	1	03/24/15 16:26	03/25/15 16:58		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.20 U**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**5.0 U**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**5.0 U**	mg/L	5.0	5.0	1		03/25/15 13:33		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:54	03/30/15 14:32		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**2.2 U**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Chlorophyll a (Corrected)	**2.2 U**	ug/L	5.0	2.2	1	03/24/15 17:30	04/02/15 17:22		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.086 U**	mg/L	0.50	0.086	1		03/30/15 10:40		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.25 U**	mg/L	0.50	0.25	1		03/27/15 17:14		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:37	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.086 U**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:23	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/25/15 13:14		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 07:47		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180691

Sample: Equipment **Lab ID: 35180691008** Collected: 03/24/15 10:10 Received: 03/24/15 13:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.0056 U**	mg/L	0.0080	0.0056	2		03/26/15 16:19	7723-14-0	D3

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: MBIO/16590 | Analysis Method: SM 9222D
QC Batch Method: SM 9222D | Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1166951 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0 U	1.0	03/25/15 16:58	

SAMPLE DUPLICATE: 1166952

Parameter	Units	35180691008 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0 U	1.0 U		20	

SAMPLE DUPLICATE: 1166953

Parameter	Units	35180795001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0 U	1.0 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: MPRP/23312 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 MET
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005

METHOD BLANK: 1168871 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	0.50 U	1.0	03/29/15 17:34	
Chromium	ug/L	2.5 U	5.0	03/29/15 17:34	
Copper	ug/L	2.5 U	5.0	03/29/15 17:34	
Lead	ug/L	5.0 U	10.0	03/29/15 17:34	
Zinc	ug/L	10.0 U	20.0	03/29/15 17:34	

LABORATORY CONTROL SAMPLE: 1168872

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	25	25.5	102	85-115	
Chromium	ug/L	250	248	99	85-115	
Copper	ug/L	250	240	96	85-115	
Lead	ug/L	250	260	104	85-115	
Zinc	ug/L	1250	1260	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1168873 1168874

Parameter	Units	35179954001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	25.0	25.3	100	101	70-130	1	20	
Chromium	ug/L	2.5 U	250	250	246	249	98	99	70-130	1	20	
Copper	ug/L	2.5 U	250	250	245	244	98	97	70-130	0	20	
Lead	ug/L	5.0 U	250	250	256	260	101	103	70-130	2	20	
Zinc	ug/L	10.0 U	1250	1250	1250	1270	100	101	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1168875 1168876

Parameter	Units	35180691005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	25.1	25.0	100	100	70-130	0	20	
Chromium	ug/L	2.5 U	250	250	248	255	99	102	70-130	3	20	
Copper	ug/L	2.5 U	250	250	247	252	99	101	70-130	2	20	
Lead	ug/L	5.0 U	250	250	257	265	103	106	70-130	3	20	
Zinc	ug/L	10.0 U	1250	1250	1240	1320	99	105	70-130	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: MPRP/23366 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 MET
Associated Lab Samples: 35180691006, 35180691007, 35180691008

METHOD BLANK: 1171113 | Matrix: Water
Associated Lab Samples: 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	0.50 U	1.0	04/02/15 16:40	
Chromium	ug/L	2.5 U	5.0	04/02/15 16:40	
Copper	ug/L	2.5 U	5.0	04/02/15 16:40	
Lead	ug/L	5.0 U	10.0	04/02/15 16:40	
Zinc	ug/L	10.0 U	20.0	04/02/15 16:40	

LABORATORY CONTROL SAMPLE: 1171114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	25	25.0	100	85-115	
Chromium	ug/L	250	250	100	85-115	
Copper	ug/L	250	247	99	85-115	
Lead	ug/L	250	254	102	85-115	
Zinc	ug/L	1250	1250	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171115 1171116

Parameter	Units	35180691006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	25.1	24.9	100	99	70-130	1	20	
Chromium	ug/L	2.5 U	250	250	253	252	101	101	70-130	0	20	
Copper	ug/L	2.5 U	250	250	258	254	102	101	70-130	1	20	
Lead	ug/L	5.0 U	250	250	255	249	102	99	70-130	2	20	
Zinc	ug/L	10.0 U	1250	1250	1270	1250	101	99	70-130	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171117 1171118

Parameter	Units	35181363001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	24.7	25.2	98	100	70-130	2	20	
Chromium	ug/L	8.6	250	250	253	258	98	100	70-130	2	20	
Copper	ug/L	12.0	250	250	263	269	100	103	70-130	2	20	
Lead	ug/L	5.3 I	250	250	256	261	100	102	70-130	2	20	
Zinc	ug/L	288	1250	1250	1530	1550	99	101	70-130	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WET/29925 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165172 Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20 U	0.20	03/25/15 08:55	

LABORATORY CONTROL SAMPLE: 1165173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.2	16.2	100	90-110	

SAMPLE DUPLICATE: 1165174

Parameter	Units	35180679001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	6.6	6.6	0	20	

SAMPLE DUPLICATE: 1165374

Parameter	Units	35180691006 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.4	1.4	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WET/29926 | Analysis Method: SM 2120B
QC Batch Method: SM 2120B | Analysis Description: 2120B Color
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165179 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0 U	5.0	03/25/15 08:50	

LABORATORY CONTROL SAMPLE: 1165180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1165181

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	80.0	80.0	0	20	

SAMPLE DUPLICATE: 1165419

Parameter	Units	35180799002 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WET/29927 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165187 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0 U	5.0	03/25/15 12:45	

LABORATORY CONTROL SAMPLE: 1165188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	249	100	90-110	

SAMPLE DUPLICATE: 1165189

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	37.6	37.8	1	20	

SAMPLE DUPLICATE: 1165190

Parameter	Units	35180731004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	143	144	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WET/29931 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165278 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0 U	2.0	03/30/15 14:16	

LABORATORY CONTROL SAMPLE: 1165279

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	183	93	85-115	

SAMPLE DUPLICATE: 1165280

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.0 U	2.0 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WET/29917 | Analysis Method: SM10200
QC Batch Method: SM10200 | Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1164744 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	2250 U	5000	04/02/15 17:22	
Chlorophyll a (Corrected)	ug/L	2250 U	5000	04/02/15 17:22	

LABORATORY CONTROL SAMPLE: 1164745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorophyll a	ug/L	50000	50200	100	85-115	

SAMPLE DUPLICATE: 1164746

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	3.2 I	3400 I		40	
Chlorophyll a (Corrected)	ug/L	2.4 I	2500 I			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44815 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165248 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	0.050	03/25/15 15:13	

LABORATORY CONTROL SAMPLE: 1165249

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	107	90-110	

MATRIX SPIKE SAMPLE: 1165251

Parameter	Units	35180691001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	1	1.1	107	90-110	

SAMPLE DUPLICATE: 1165250

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	0.020 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44821 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35180691001

METHOD BLANK: 1165379 | Matrix: Water
Associated Lab Samples: 35180691001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	03/25/15 17:23	

LABORATORY CONTROL SAMPLE: 1165380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	21.2	106	90-110	

MATRIX SPIKE SAMPLE: 1165382

Parameter	Units	35180808001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.87	20	22.1	106	90-110	

SAMPLE DUPLICATE: 1165381

Parameter	Units	35180808001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.87	0.96	10	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44823 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165389 | Matrix: Water
Associated Lab Samples: 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	03/25/15 18:09	

LABORATORY CONTROL SAMPLE: 1165390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	21.3	106	90-110	

MATRIX SPIKE SAMPLE: 1165392

Parameter	Units	35180796001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.4	20	24.1	103	90-110	

SAMPLE DUPLICATE: 1165391

Parameter	Units	35180796001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.4	3.5	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44826 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165450 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.050	03/25/15 12:55	

LABORATORY CONTROL SAMPLE: 1165451

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 1165453

Parameter	Units	35180679001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	2	2.1	104	80-120	

MATRIX SPIKE SAMPLE: 1165516

Parameter	Units	35180769001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.18	2	2.1	98	80-120	

SAMPLE DUPLICATE: 1165452

Parameter	Units	35180679001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.025 U		20	

SAMPLE DUPLICATE: 1165515

Parameter	Units	35180769001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.18	0.18	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44803 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1165136 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0040	03/25/15 07:34	

LABORATORY CONTROL SAMPLE: 1165137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	101	90-110	

MATRIX SPIKE SAMPLE: 1165139

Parameter	Units	35180691001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	.1	0.11	107	90-110	

MATRIX SPIKE SAMPLE: 1165141

Parameter	Units	35180787003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.43	.1	0.53	96	90-110	

SAMPLE DUPLICATE: 1165138

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0034 U		20	

SAMPLE DUPLICATE: 1165140

Parameter	Units	35180787003 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.43	0.43	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180691

QC Batch: WETA/44851 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

METHOD BLANK: 1166578 | Matrix: Water
Associated Lab Samples: 35180691001, 35180691002, 35180691003, 35180691004, 35180691005, 35180691006, 35180691007, 35180691008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028 U	0.0040	03/26/15 15:39	

LABORATORY CONTROL SAMPLE: 1166579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.11	109	90-110	

MATRIX SPIKE SAMPLE: 1166581

Parameter	Units	35180131001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.016	.1	0.12	102	90-110	

SAMPLE DUPLICATE: 1166580

Parameter	Units	35180131001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.016	0.014	11	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35180691

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
1p	Confluent growth and possible matrix interference. Result is estimated.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
Z	Too many colonies were present (TNTC); the numeric value represents the estimated colony counts from the highest dilution used in this test.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35180691001	**MTRIP**	EPA 200.7	MPRP/23312	EPA 200.7	ICP/14260
35180691002	**NTRIP**	EPA 200.7	MPRP/23312	EPA 200.7	ICP/14260
35180691003	**STRIP**	EPA 200.7	MPRP/23312	EPA 200.7	ICP/14260
35180691004	**QUEEN**	EPA 200.7	MPRP/23312	EPA 200.7	ICP/14260
35180691005	**Yvonne**	EPA 200.7	MPRP/23312	EPA 200.7	ICP/14260
35180691006	**LOST**	EPA 200.7	MPRP/23366	EPA 200.7	ICP/14294
35180691007	**DUP**	EPA 200.7	MPRP/23366	EPA 200.7	ICP/14294
35180691008	**Equipment**	EPA 200.7	MPRP/23366	EPA 200.7	ICP/14294
35180691001	**MTRIP**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691002	**NTRIP**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691003	**STRIP**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691004	**QUEEN**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691005	**Yvonne**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691006	**LOST**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691007	**DUP**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691008	**Equipment**	SM 9222D	MBIO/16590	SM 9222D	MBIO/16591
35180691001	**MTRIP**	EPA 180.1	WET/29925		
35180691002	**NTRIP**	EPA 180.1	WET/29925		
35180691003	**STRIP**	EPA 180.1	WET/29925		
35180691004	**QUEEN**	EPA 180.1	WET/29925		
35180691005	**Yvonne**	EPA 180.1	WET/29925		
35180691006	**LOST**	EPA 180.1	WET/29925		
35180691007	**DUP**	EPA 180.1	WET/29925		
35180691008	**Equipment**	EPA 180.1	WET/29925		
35180691001	**MTRIP**	SM 2120B	WET/29926		
35180691002	**NTRIP**	SM 2120B	WET/29926		
35180691003	**STRIP**	SM 2120B	WET/29926		
35180691004	**QUEEN**	SM 2120B	WET/29926		
35180691005	**Yvonne**	SM 2120B	WET/29926		
35180691006	**LOST**	SM 2120B	WET/29926		
35180691007	**DUP**	SM 2120B	WET/29926		
35180691008	**Equipment**	SM 2120B	WET/29926		
35180691001	**MTRIP**	SM 2320B	WET/29927		
35180691002	**NTRIP**	SM 2320B	WET/29927		
35180691003	**STRIP**	SM 2320B	WET/29927		
35180691004	**QUEEN**	SM 2320B	WET/29927		
35180691005	**Yvonne**	SM 2320B	WET/29927		
35180691006	**LOST**	SM 2320B	WET/29927		
35180691007	**DUP**	SM 2320B	WET/29927		
35180691008	**Equipment**	SM 2320B	WET/29927		
35180691001	**MTRIP**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691002	**NTRIP**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691003	**STRIP**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691004	**QUEEN**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691005	**Yvonne**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691006	**LOST**	SM 5210B	WET/29931	SM 5210B	WET/30076

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35180691007	**DUP**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691008	**Equipment**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180691001	**MTRIP**	SM10200	WET/29917	SM10200	WET/29918
35180691002	**NTRIP**	SM10200	WET/29917	SM10200	WET/29918
35180691003	**STRIP**	SM10200	WET/29917	SM10200	WET/29918
35180691004	**QUEEN**	SM10200	WET/29917	SM10200	WET/29918
35180691005	**Yvonne**	SM10200	WET/29917	SM10200	WET/29918
35180691006	**LOST**	SM10200	WET/29917	SM10200	WET/29918
35180691007	**DUP**	SM10200	WET/29917	SM10200	WET/29918
35180691008	**Equipment**	SM10200	WET/29917	SM10200	WET/29918
35180691001	**MTRIP**	TKN+NOx Calculation	WET/30007		
35180691002	**NTRIP**	TKN+NOx Calculation	WET/30007		
35180691003	**STRIP**	TKN+NOx Calculation	WET/30007		
35180691004	**QUEEN**	TKN+NOx Calculation	WET/30007		
35180691005	**Yvonne**	TKN+NOx Calculation	WET/30007		
35180691006	**LOST**	TKN+NOx Calculation	WET/30007		
35180691007	**DUP**	TKN+NOx Calculation	WET/30007		
35180691008	**Equipment**	TKN+NOx Calculation	WET/30007		
35180691001	**MTRIP**	TKN-NH3 Calculation	WET/29989		
35180691002	**NTRIP**	TKN-NH3 Calculation	WET/29989		
35180691003	**STRIP**	TKN-NH3 Calculation	WET/29989		
35180691004	**QUEEN**	TKN-NH3 Calculation	WET/29989		
35180691005	**Yvonne**	TKN-NH3 Calculation	WET/29989		
35180691006	**LOST**	TKN-NH3 Calculation	WET/29989		
35180691007	**DUP**	TKN-NH3 Calculation	WET/29989		
35180691008	**Equipment**	TKN-NH3 Calculation	WET/29989		
35180691001	**MTRIP**	EPA 350.1	WETA/44815		
35180691002	**NTRIP**	EPA 350.1	WETA/44815		
35180691003	**STRIP**	EPA 350.1	WETA/44815		
35180691004	**QUEEN**	EPA 350.1	WETA/44815		
35180691005	**Yvonne**	EPA 350.1	WETA/44815		
35180691006	**LOST**	EPA 350.1	WETA/44815		
35180691007	**DUP**	EPA 350.1	WETA/44815		
35180691008	**Equipment**	EPA 350.1	WETA/44815		
35180691001	**MTRIP**	EPA 351.2	WETA/44821	EPA 351.2	WETA/44834
35180691002	**NTRIP**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691003	**STRIP**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691004	**QUEEN**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691005	**Yvonne**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691006	**LOST**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691007	**DUP**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691008	**Equipment**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180691001	**MTRIP**	EPA 353.2	WETA/44826		
35180691002	**NTRIP**	EPA 353.2	WETA/44826		
35180691003	**STRIP**	EPA 353.2	WETA/44826		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35180691

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35180691004	**QUEEN**	EPA 353.2	WETA/44826		
35180691005	**Yvonne**	EPA 353.2	WETA/44826		
35180691006	**LOST**	EPA 353.2	WETA/44826		
35180691007	**DUP**	EPA 353.2	WETA/44826		
35180691008	**Equipment**	EPA 353.2	WETA/44826		
35180691001	**MTRIP**	EPA 365.1	WETA/44803		
35180691002	**NTRIP**	EPA 365.1	WETA/44803		
35180691003	**STRIP**	EPA 365.1	WETA/44803		
35180691004	**QUEEN**	EPA 365.1	WETA/44803		
35180691005	**Yvonne**	EPA 365.1	WETA/44803		
35180691006	**LOST**	EPA 365.1	WETA/44803		
35180691007	**DUP**	EPA 365.1	WETA/44803		
35180691008	**Equipment**	EPA 365.1	WETA/44803		
35180691001	**MTRIP**	EPA 365.3	WETA/44851		
35180691002	**NTRIP**	EPA 365.3	WETA/44851		
35180691003	**STRIP**	EPA 365.3	WETA/44851		
35180691004	**QUEEN**	EPA 365.3	WETA/44851		
35180691005	**Yvonne**	EPA 365.3	WETA/44851		
35180691006	**LOST**	EPA 365.3	WETA/44851		
35180691007	**DUP**	EPA 365.3	WETA/44851		
35180691008	**Equipment**	EPA 365.3	WETA/44851		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

CH
The

WO#: 35180691
35180691

Page: of
1869359

Section A
Required Client Information:

Company:	Geosyntec
Address:	1511 E SR 434 Ste 1005 Winter Springs FL 32708
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B
Required Project Information:

Report To:	Mark Ellard
Copy To:	Lee Mullon LMullon@geosyntec.com
Purchase Order No.:	
Project Name:	Casselberry Lakes
Project Number:	

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	14-0112
Pace Project Manager:	Martha Montero
Pace Profile #:	

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: FL

Section D
Required Client Information

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BOD 5	ALK	Color	CHLA	FECAL	AMMONIA	OP	TURBIDITY	TKN	NOX	TN + OPO4 N	Cd Cr Cu Pb Zn	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MTRIP	SW	G	3/24/15	0727	3-24-15			8	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X		
2	NTRIP	SW	G	3-24-15	0756				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
3	STRIP	SW	G	3-24-15	0845				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
4	QUEEN	SW	G	3-24-15	0915				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
5	YVONNE	SW	G	3-24-15	1057				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
6	LOST	SW	G	3-24-15	1153				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
7	DUP	SW	G	3-24-15	—				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
8	EQUIP	SW	G	3-24-15	1010				8	X	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING	[illegible]	3-24-15	1400	Lee Mullon / Geosyn	3-20-15	1400				
	Lee Mullon / Geosyntec	3-24-15	12:28	[illegible] Yates / Pace	3-24	12:28				
	[illegible] Yates / Pace	3-24-15	13:35		3-24-15	1335	9.8	Y	N	

ORIGINAL

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: August 11, 2014
	Document No.: F-FL-C-007 rev. 06	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: _____ Project # 35180691

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Tampa ☐ Other _____

Tracking # N/A

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Date and Initials of person examining contents: 3-24-15 SD 1335

Thermometer Used T-185 Type of Ice: (Wet) Blue None

Cooler Temperature °C 9.8 (Visual) 0.0 (Correction Factor) 9.8 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Receipt of samples satisfactory: ☑ Yes ☐ No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

April 10, 2015

Mark Ellard
Geosyntec Consultants, Inc.
1511 East State Road 434
Suite 1005
Winter Springs, FL 32708

RE: Project: Casselberry Lakes
Pace Project No.: 35180799

Dear Mark Ellard:
Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero
martha.montero@pacelabs.com
Project Manager

Enclosures

cc: Lee Mullon, Geosyntec Consultants, Inc.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project:	Casselberry Lakes
Pace Project No.:	35180799

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35180799001	**TROUT**	Water	03/24/15 14:46	03/24/15 19:52
35180799002	**GRIFFIN**	Water	03/24/15 15:40	03/24/15 19:52
35180799003	**GRASSY**	Water	03/24/15 16:26	03/24/15 19:52
35180799004	**CONCORD**	Water	03/24/15 17:10	03/24/15 19:52
35180799005	**KATHRYN**	Water	03/24/15 17:57	03/24/15 19:52
35180799006	**SECRET**	Water	03/24/15 18:42	03/24/15 19:52

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35180799001	**TROUT**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180799002	**GRIFFIN**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180799003	**GRASSY**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180799004	**CONCORD**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180799005	**KATHRYN**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O
35180799006	**SECRET**	EPA 200.7	TAP	5	PASI-O
		SM 9222D	NMT	1	PASI-O
		EPA 180.1	KAM	1	PASI-O
		SM 2120B	KAM	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	KAM	1	PASI-O
		SM 5210B	AGS	1	PASI-O
		SM10200	ADC	2	PASI-O
		TKN+NOx Calculation	TLK	1	PASI-O
		TKN-NH3 Calculation	TLK	1	PASI-O
		EPA 350.1	BIP	1	PASI-O
		EPA 351.2	CLS	1	PASI-O
		EPA 353.2	KEK	1	PASI-O
		EPA 365.1	KEK	1	PASI-O
		EPA 365.3	ADC	1	PASI-O

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: TROUT **Lab ID: 35180799001** Collected: 03/24/15 14:46 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 11:39	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:39	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:39	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 11:39	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 11:39	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**11.0**	CFU/100 mL	1.0	1.0	1	03/24/15 20:32	03/25/15 19:05		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**1.8**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**35.9**	mg/L	5.0	5.0	1		03/25/15 15:44		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:56	03/30/15 14:34		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.5**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**7.6**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.48 I**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.48 I**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:43	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.48 I**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:35	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 13:57		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 08:01		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: TROUT **Lab ID: 35180799001** Collected: 03/24/15 14:46 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.022**	mg/L	0.0040	0.0028	1		04/01/15 15:46	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: GRIFFIN **Lab ID: 35180799002** Collected: 03/24/15 15:40 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 11:52	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:52	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:52	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 11:52	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 11:52	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**8.0**	CFU/100 mL	2.0	2.0	2	03/24/15 20:32	03/25/15 19:05		B,D3
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.4**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**49.2**	mg/L	5.0	5.0	1		03/25/15 15:48		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 14:59	03/30/15 14:34		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**12.8**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**10.9**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.60**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.59**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:45	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.60**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:36	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 13:58		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0040**	mg/L	0.0040	0.0034	1		03/25/15 08:02		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: GRIFFIN **Lab ID: 35180799002** Collected: 03/24/15 15:40 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.023**	mg/L	0.0040	0.0028	1		04/01/15 15:47	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: GRASSY **Lab ID: 35180799003** Collected: 03/24/15 16:26 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 11:56	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:56	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 11:56	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 11:56	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 11:56	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**20.0**	CFU/100 mL	2.0	2.0	2	03/24/15 20:32	03/25/15 19:05		B,D3
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.71**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**57.5**	mg/L	5.0	5.0	1		03/25/15 15:52		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.2**	mg/L	2.0	2.0	1	03/25/15 15:04	03/30/15 14:36		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.9**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**8.5**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.59**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.59**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:47	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.59**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 14:00		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 08:03		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: GRASSY **Lab ID: 35180799003** Collected: 03/24/15 16:26 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.021**	mg/L	0.0040	0.0028	1		04/01/15 15:50	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: CONCORD **Lab ID: 35180799004** Collected: 03/24/15 17:10 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 12:00	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 12:00	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 12:00	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 12:00	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 12:00	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**4.0**	CFU/100 mL	2.0	2.0	2	03/24/15 20:32	03/25/15 19:05		Z
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**4.5**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**30.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**47.6**	mg/L	5.0	5.0	1		03/25/15 15:57		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**3.6**	mg/L	2.0	2.0	1	03/25/15 15:09	03/30/15 14:37		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**29.5**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**23.0**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.86**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.85**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:56	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.85**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:39	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 14:29		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 08:06		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: CONCORD **Lab ID: 35180799004** Collected: 03/24/15 17:10 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.053**	mg/L	0.0040	0.0028	1		04/01/15 15:51	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: KATHRYN **Lab ID: 35180799005** Collected: 03/24/15 17:57 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 15:23	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 15:23	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 15:23	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 15:23	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 15:23	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**1.0 U**	CFU/100 mL	1.0	1.0	1	03/24/15 20:32	03/25/15 19:05		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**2.1**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**35.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**62.0**	mg/L	5.0	5.0	1		03/25/15 16:02		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 15:11	03/30/15 14:39		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**9.1**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**7.5**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.56**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.55**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020 U**	mg/L	0.050	0.020	1		03/25/15 15:58	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.56**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:41	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 14:35		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 08:11		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: KATHRYN **Lab ID: 35180799005** Collected: 03/24/15 17:57 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.029**	mg/L	0.0040	0.0028	1		04/01/15 15:52	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: SECRET **Lab ID: 35180799006** Collected: 03/24/15 18:42 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	**0.50 U**	ug/L	1.0	0.50	1	04/02/15 12:12	04/03/15 15:49	7440-43-9	
Chromium	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 15:49	7440-47-3	
Copper	**2.5 U**	ug/L	5.0	2.5	1	04/02/15 12:12	04/03/15 15:49	7440-50-8	
Lead	**5.0 U**	ug/L	10.0	5.0	1	04/02/15 12:12	04/03/15 15:49	7439-92-1	
Zinc	**10.0 U**	ug/L	20.0	10.0	1	04/02/15 12:12	04/03/15 15:49	7440-66-6	
9222D Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**54.0**	CFU/100 mL	1.0	1.0	1	03/24/15 20:32	03/25/15 19:05		
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**0.64**	NTU	0.20	0.20	1		03/25/15 08:55		
2120B Apparent Color	Analytical Method: SM 2120B								
Apparent Color	**20.0**	units	5.0	5.0	1		03/25/15 08:50		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**55.5**	mg/L	5.0	5.0	1		03/25/15 16:07		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2.0 U**	mg/L	2.0	2.0	1	03/25/15 15:19	03/30/15 14:39		
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200								
Chlorophyll a	**5.5**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Chlorophyll a (Corrected)	**4.4 I**	ug/L	5.0	2.2	1	03/25/15 10:45	03/31/15 15:19		
Total Nitrogen Calculation	Analytical Method: TKN+NOx Calculation								
Total Nitrogen	**0.53**	mg/L	0.50	0.086	1		03/30/15 14:34		
Total Organic Nitrogen Calc.	Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	**0.48 I**	mg/L	0.50	0.25	1		03/30/15 14:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.047 I**	mg/L	0.050	0.020	1		03/25/15 16:00	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**0.53**	mg/L	0.50	0.086	1	03/25/15 11:20	03/25/15 18:42	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.025 U**	mg/L	0.050	0.025	1		03/27/15 14:37		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.0034 U**	mg/L	0.0040	0.0034	1		03/25/15 08:12		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Casselberry Lakes
Pace Project No.: 35180799

Sample: SECRET **Lab ID: 35180799006** Collected: 03/24/15 18:42 Received: 03/24/15 19:52 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.3 Phosph. Total Low Level	Analytical Method: EPA 365.3								
Phosphorus, Total (as P) LL	**0.020**	mg/L	0.0040	0.0028	1		04/01/15 15:53	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: MBIO/16592 Analysis Method: SM 9222D
QC Batch Method: SM 9222D Analysis Description: 9222D MBIO Fecal Coliform
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1167027 Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0 U	1.0	03/25/15 16:58	

SAMPLE DUPLICATE: 1167028

Parameter	Units	35180777001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	1.0 U	1.0 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: MPRP/23387 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 MET
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1172340 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	0.50 U	1.0	04/03/15 11:18	
Chromium	ug/L	2.5 U	5.0	04/03/15 11:18	
Copper	ug/L	2.5 U	5.0	04/03/15 11:18	
Lead	ug/L	5.0 U	10.0	04/03/15 11:18	
Zinc	ug/L	10.0 U	20.0	04/03/15 11:18	

LABORATORY CONTROL SAMPLE: 1172341

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	25	25.1	100	85-115	
Chromium	ug/L	250	250	100	85-115	
Copper	ug/L	250	250	100	85-115	
Lead	ug/L	250	253	101	85-115	
Zinc	ug/L	1250	1250	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172342 1172343

Parameter	Units	35180799001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	24.8	24.6	99	98	70-130	1	20	
Chromium	ug/L	2.5 U	250	250	250	249	100	99	70-130	1	20	
Copper	ug/L	2.5 U	250	250	248	248	98	99	70-130	0	20	
Lead	ug/L	5.0 U	250	250	253	251	101	100	70-130	1	20	
Zinc	ug/L	10.0 U	1250	1250	1240	1230	99	98	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172344 1172345

Parameter	Units	35181367001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	0.50 U	25	25	22.1	22.3	88	89	70-130	1	20	
Chromium	ug/L	2.5 U	250	250	243	244	97	97	70-130	0	20	
Copper	ug/L	125 U	250	250	258	260	100	101	70-130	1	20	
Lead	ug/L	5.0 U	250	250	227	229	90	91	70-130	1	20	
Zinc	ug/L	10.0 U	1250	1250	1430	1440	114	115	70-130	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WET/29925 | Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 | Analysis Description: 180.1 Turbidity
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165172 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	0.20 U	0.20	03/25/15 08:55	

LABORATORY CONTROL SAMPLE: 1165173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	16.2	16.2	100	90-110	

SAMPLE DUPLICATE: 1165174

Parameter	Units	35180679001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	6.6	6.6	0	20	

SAMPLE DUPLICATE: 1165374

Parameter	Units	35180691006 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.4	1.4	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WET/29926 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165179 Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0 U	5.0	03/25/15 08:50	

LABORATORY CONTROL SAMPLE: 1165180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 1165181

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	80.0	80.0	0	20	

SAMPLE DUPLICATE: 1165419

Parameter	Units	35180799002 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	30.0	30.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WET/29936 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165360 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	5.0 U	5.0	03/25/15 15:07	

LABORATORY CONTROL SAMPLE: 1165361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	254	102	90-110	

SAMPLE DUPLICATE: 1165362

Parameter	Units	35180787003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	34.9	34.4	2	20	

SAMPLE DUPLICATE: 1165363

Parameter	Units	35180800002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	198	201	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WET/29931 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165278 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	2.0 U	2.0	03/30/15 14:16	

LABORATORY CONTROL SAMPLE: 1165279

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	183	93	85-115	

SAMPLE DUPLICATE: 1165280

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.0 U	2.0 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WET/29934 Analysis Method: SM10200
QC Batch Method: SM10200 Analysis Description: Chlorophyll & Pheophytin
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165326 Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorophyll a	ug/L	2250 U	5000	03/31/15 15:19	
Chlorophyll a (Corrected)	ug/L	2250 U	5000	03/31/15 15:19	

LABORATORY CONTROL SAMPLE: 1165327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorophyll a	ug/L	50000	46400	93	85-115	

SAMPLE DUPLICATE: 1165328

Parameter	Units	35180799001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a	ug/L	9.5	9500	200	40	
Chlorophyll a (Corrected)	ug/L	7.6	9300	200		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44815 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165248 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	0.050	03/25/15 15:13	

LABORATORY CONTROL SAMPLE: 1165249

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	107	90-110	

MATRIX SPIKE SAMPLE: 1165251

Parameter	Units	35180691001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	1	1.1	107	90-110	

SAMPLE DUPLICATE: 1165250

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.020 U	0.020 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44823 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165389 Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	03/25/15 18:09	

LABORATORY CONTROL SAMPLE: 1165390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	21.3	106	90-110	

MATRIX SPIKE SAMPLE: 1165392

Parameter	Units	35180796001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.4	20	24.1	103	90-110	

SAMPLE DUPLICATE: 1165391

Parameter	Units	35180796001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.4	3.5	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44888 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35180799001, 35180799002, 35180799003

METHOD BLANK: 1168005 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.050	03/27/15 13:48	

LABORATORY CONTROL SAMPLE: 1168006

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1168008

Parameter	Units	35180748001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.80	2	2.8	102	80-120	

MATRIX SPIKE SAMPLE: 1168010

Parameter	Units	35181067002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.2	2	3.1	98	80-120	

SAMPLE DUPLICATE: 1168007

Parameter	Units	35180748001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.80	0.80	0	20	

SAMPLE DUPLICATE: 1168009

Parameter	Units	35181067002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.2	1.2	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44889 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 35180799004, 35180799005, 35180799006

METHOD BLANK: 1168017 | Matrix: Water
Associated Lab Samples: 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.050	03/27/15 14:26	

LABORATORY CONTROL SAMPLE: 1168018

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 1168020

Parameter	Units	35180799004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	2	2.1	105	80-120	

MATRIX SPIKE SAMPLE: 1168022

Parameter	Units	35181078003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	2	1.4	67	80-120	J(M1)

SAMPLE DUPLICATE: 1168019

Parameter	Units	35180799004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.025 U		20	

SAMPLE DUPLICATE: 1168021

Parameter	Units	35181078003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.025 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44803 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35180799001, 35180799002, 35180799003

METHOD BLANK: 1165136 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0040	03/25/15 07:34	

LABORATORY CONTROL SAMPLE: 1165137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	101	90-110	

MATRIX SPIKE SAMPLE: 1165139

Parameter	Units	35180691001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	.1	0.11	107	90-110	

MATRIX SPIKE SAMPLE: 1165141

Parameter	Units	35180787003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.43	.1	0.53	96	90-110	

SAMPLE DUPLICATE: 1165138

Parameter	Units	35180691001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0034 U		20	

SAMPLE DUPLICATE: 1165140

Parameter	Units	35180787003 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.43	0.43	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/44804 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 35180799004, 35180799005, 35180799006

METHOD BLANK: 1165142 | Matrix: Water
Associated Lab Samples: 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0040	03/25/15 08:04	

LABORATORY CONTROL SAMPLE: 1165143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.1	0.10	101	90-110	

MATRIX SPIKE SAMPLE: 1165145

Parameter	Units	35180799004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	.1	0.097	96	90-110	

SAMPLE DUPLICATE: 1165144

Parameter	Units	35180799004 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.0034 U	0.0034 U		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Casselberry Lakes
Pace Project No.: 35180799

QC Batch: WETA/45021 | Analysis Method: EPA 365.3
QC Batch Method: EPA 365.3 | Analysis Description: 365.3 Low Level Total Phosphorus
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

METHOD BLANK: 1171153 | Matrix: Water
Associated Lab Samples: 35180799001, 35180799002, 35180799003, 35180799004, 35180799005, 35180799006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.0028 U	0.0040	04/01/15 16:40	

LABORATORY CONTROL SAMPLE: 1171154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE SAMPLE: 1171156

Parameter	Units	35179986001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.12	.1	0.22	100	90-110	

SAMPLE DUPLICATE: 1171155

Parameter	Units	35179986001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P) LL	mg/L	0.12	0.11	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Casselberry Lakes
Pace Project No.: 35180799

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
B	Results based upon colony counts outside the acceptable range.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
Z	Too many colonies were present (TNTC); the numeric value represents the estimated colony counts from the highest dilution used in this test.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35180799001	**TROUT**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799002	**GRIFFIN**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799003	**GRASSY**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799004	**CONCORD**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799005	**KATHRYN**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799006	**SECRET**	EPA 200.7	MPRP/23387	EPA 200.7	ICP/14307
35180799001	**TROUT**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799002	**GRIFFIN**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799003	**GRASSY**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799004	**CONCORD**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799005	**KATHRYN**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799006	**SECRET**	SM 9222D	MBIO/16592	SM 9222D	MBIO/16593
35180799001	**TROUT**	EPA 180.1	WET/29925		
35180799002	**GRIFFIN**	EPA 180.1	WET/29925		
35180799003	**GRASSY**	EPA 180.1	WET/29925		
35180799004	**CONCORD**	EPA 180.1	WET/29925		
35180799005	**KATHRYN**	EPA 180.1	WET/29925		
35180799006	**SECRET**	EPA 180.1	WET/29925		
35180799001	**TROUT**	SM 2120B	WET/29926		
35180799002	**GRIFFIN**	SM 2120B	WET/29926		
35180799003	**GRASSY**	SM 2120B	WET/29926		
35180799004	**CONCORD**	SM 2120B	WET/29926		
35180799005	**KATHRYN**	SM 2120B	WET/29926		
35180799006	**SECRET**	SM 2120B	WET/29926		
35180799001	**TROUT**	SM 2320B	WET/29936		
35180799002	**GRIFFIN**	SM 2320B	WET/29936		
35180799003	**GRASSY**	SM 2320B	WET/29936		
35180799004	**CONCORD**	SM 2320B	WET/29936		
35180799005	**KATHRYN**	SM 2320B	WET/29936		
35180799006	**SECRET**	SM 2320B	WET/29936		
35180799001	**TROUT**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799002	**GRIFFIN**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799003	**GRASSY**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799004	**CONCORD**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799005	**KATHRYN**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799006	**SECRET**	SM 5210B	WET/29931	SM 5210B	WET/30076
35180799001	**TROUT**	SM10200	WET/29934	SM10200	WET/29935
35180799002	**GRIFFIN**	SM10200	WET/29934	SM10200	WET/29935
35180799003	**GRASSY**	SM10200	WET/29934	SM10200	WET/29935
35180799004	**CONCORD**	SM10200	WET/29934	SM10200	WET/29935
35180799005	**KATHRYN**	SM10200	WET/29934	SM10200	WET/29935
35180799006	**SECRET**	SM10200	WET/29934	SM10200	WET/29935
35180799001	**TROUT**	TKN+NOx Calculation	WET/30018		
35180799002	**GRIFFIN**	TKN+NOx Calculation	WET/30018		
35180799003	**GRASSY**	TKN+NOx Calculation	WET/30018		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Casselberry Lakes
Pace Project No.: 35180799

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35180799004	**CONCORD**	TKN+NOx Calculation	WET/30018		
35180799005	**KATHRYN**	TKN+NOx Calculation	WET/30018		
35180799006	**SECRET**	TKN+NOx Calculation	WET/30018		
35180799001	**TROUT**	TKN-NH3 Calculation	WET/30015		
35180799002	**GRIFFIN**	TKN-NH3 Calculation	WET/30015		
35180799003	**GRASSY**	TKN-NH3 Calculation	WET/30015		
35180799004	**CONCORD**	TKN-NH3 Calculation	WET/30015		
35180799005	**KATHRYN**	TKN-NH3 Calculation	WET/30015		
35180799006	**SECRET**	TKN-NH3 Calculation	WET/30015		
35180799001	**TROUT**	EPA 350.1	WETA/44815		
35180799002	**GRIFFIN**	EPA 350.1	WETA/44815		
35180799003	**GRASSY**	EPA 350.1	WETA/44815		
35180799004	**CONCORD**	EPA 350.1	WETA/44815		
35180799005	**KATHRYN**	EPA 350.1	WETA/44815		
35180799006	**SECRET**	EPA 350.1	WETA/44815		
35180799001	**TROUT**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799002	**GRIFFIN**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799003	**GRASSY**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799004	**CONCORD**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799005	**KATHRYN**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799006	**SECRET**	EPA 351.2	WETA/44823	EPA 351.2	WETA/44836
35180799001	**TROUT**	EPA 353.2	WETA/44888		
35180799002	**GRIFFIN**	EPA 353.2	WETA/44888		
35180799003	**GRASSY**	EPA 353.2	WETA/44888		
35180799004	**CONCORD**	EPA 353.2	WETA/44889		
35180799005	**KATHRYN**	EPA 353.2	WETA/44889		
35180799006	**SECRET**	EPA 353.2	WETA/44889		
35180799001	**TROUT**	EPA 365.1	WETA/44803		
35180799002	**GRIFFIN**	EPA 365.1	WETA/44803		
35180799003	**GRASSY**	EPA 365.1	WETA/44803		
35180799004	**CONCORD**	EPA 365.1	WETA/44804		
35180799005	**KATHRYN**	EPA 365.1	WETA/44804		
35180799006	**SECRET**	EPA 365.1	WETA/44804		
35180799001	**TROUT**	EPA 365.3	WETA/45021		
35180799002	**GRIFFIN**	EPA 365.3	WETA/45021		
35180799003	**GRASSY**	EPA 365.3	WETA/45021		
35180799004	**CONCORD**	EPA 365.3	WETA/45021		
35180799005	**KATHRYN**	EPA 365.3	WETA/45021		
35180799006	**SECRET**	EPA 365.3	WETA/45021		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

WO#: 35180799

35180799

CUSTODY / Analytical Request Document

is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

1869360

Section A
Required Client Information:

Company: Geosyntec
Address: 1511 E SR 434
Ste 1005 Winter Springs
Email To:
Phone: Fax:
Requested Due Date/TAT:

Required Project Information:

Report To: Mark Ellard
Copy To: Lee Mullon
Lmullon@geosyntec.com
Purchase Order No.:
Project Name: Casselberry Lakes
Project Number: 60259

Section C
Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference: 14-0112
Pace Project Manager: Martha Montero
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: FL

Section D
Required Client Information

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BOD5	ALK	COLOR	CHLA	FECAL	AMMONIA	OP	TP	TURBIDITY	TKN	NOX	TN + ORG-N	Cd Cr Cu Pb Zn	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TROUT	SW	G	3-24-15	1426	3-24-15	1440		8	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X		
2	GRIFFIN	SW	G		1517		1540		8	4	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
3	GRASSY	SW	G		1606		1626		8	4	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
4	CONCORD	SW	G		1700		1710		8	4	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
5	KATHRYN	SW	G		1740		1757		8	4	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
6	SECRET	SW	G		1830		1842		8	4	1	1			2				X	X	X	X	X	X	X	X	X	X	X	X		
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[illegible]	3-19-15	1400	Lee Mullon / Geosyntec	3-20-15	1400				
	Lee Mullon / Geosyntec	3-24-15	1853	[illegible] / Pace	3-24-15	18:58				
	[illegible] / Pace	3-24-15	19:52	[illegible] / Pace	3/24/15	19:52	5.5	Y	N	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: August 11, 2014
	Document No.: F-FL-C-007 rev. 06	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: GEOLMY Project # 35180799

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Date and Initials of person examining contents: 3/24/15

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other _____

Thermometer Used 1-185 Type of Ice: (Wet) Blue None

Cooler Temperature °C 4.9 (Visual) 0.0 (Correction Factor) 4.9 (Actual)
5.8 5.8

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen? ☐ Yes ☐ No

Receipt of samples satisfactory: ☑ Yes ☐ No Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____