



October 14, 2015

Mr. Matthew Preston, P.E.
Project Management Office
Southwest Florida Water Management District
7601 Highway 301 North, Building 1
Tampa, FL 33637

**Re: Review of 2nd Quarter Water Quality Sampling Results
September 2015 Sampling Event, Sawgrass Lake Site Restoration Project
Southwest Florida Water Management District
3200 Gandy Boulevard, St. Petersburg, FL 33702
FDEP Facility ID # COM_301769**

Dear Mr. Preston:

At the request of the Southwest Florida Water Management District (the District), Atkins is presenting this review of the results of the second quarterly sampling event (September 2015) for the facility referenced above. This document is designed to comply with the requirements of Sections 8.8 and 8.9 of the Remedial Action Plan (RAP), dated April 2007, and the letter from FDEP (Gary Millington, P.E.) to the District (Jennette Seachrist, P.E.), dated July 8, 2014, regarding water quality monitoring at the above-referenced site.

BACKGROUND

A full description of the site location, physical description of the site, and a more detailed discussion of the site history are provided in Section 2.0 of the RAP, dated April 2007. A full description of the lead shot remediation activities performed at this site is provided in the Remediation Completion Report, dated May 2014. What follows is a brief summary.

The Sawgrass Lake Site Restoration Project occupies a portion of the Sawgrass Lake Water Management Area (WMA), which is a largely wetland area owned by the District and located in Pinellas County, FL. From the 1930s until 2004, the Skyway Trap and Skeet Club (Skyway Gun Club), formerly the Lealman Rod and Gun Club, operated a trap and skeet shooting range, which included the use of lead shot. During that time, the western portion of the Sawgrass Lake WMA received lead shot because it was used as the shot drop zone.

Beginning in 1999, multiple studies of the soil, sediment, surface water, and groundwater of the Sawgrass Lake WMA were performed. These studies included sampling and laboratory analytical testing, which confirmed that the soil, sediment, surface water, and groundwater in the western

portion of the Sawgrass Lake site (down-range of the gun club) had been adversely impacted by the lead shot deposited in that area. By 2004, the contamination assessment investigations of the Sawgrass Lake site were largely completed. Elevated concentrations of lead (and some other metals, such as arsenic and antimony) were noted in the soil, sediments, and groundwater of the shot drop zone and areas immediately adjacent to the shot drop zone. In 2004, the Skyway Gun Club entered into an agreement with the District and FDEP, which prohibited the continued trespassing of lead-containing shot onto the District's property.

From 2005 to 2007, the District completed a RAP, which was submitted to FDEP in April 2007. The RAP recommended the excavation and treatment of the lead-impacted soils and sediments from the upland and wetland areas down-range of the Skyway Gun Club. The RAP was approved by the FDEP in December 2007. From 2007 through 2010, the District developed the plans for restoration of the site, including excavation and treatment of lead-impacted media. From 2011 through 2014, the remediation activities recommended in the RAP, as well as additional site restoration activities, were completed by Woodruff & Sons, Inc., the District's construction contractor. The District submitted a Remediation Completion Report to the FDEP in May 2014, which was approved by the FDEP on July 8, 2014. The Remediation Completion Report recommended water quality monitoring at the site, in accordance with Sections 8.8 and 8.9 of the RAP. In the July 8, 2014 letter, the FDEP agreed that remediation of the site was complete, but that water quality monitoring was required in accordance with the RAP.

Section 8.8 of the RAP indicated that four monitoring wells would be installed in the western portion of the District property and would be sampled quarterly (for one year) for certain metals and Total Dissolved Solids (TDS) parameters. The four monitoring wells were installed at the site in 2015. Similarly, Section 8.9 of the RAP indicated that samples of surface water would be collected on a quarterly basis. The surface water samples would be collected from three locations in the lake and one location in Channel 3 upstream of the project area. The surface water samples would be collected quarterly for one year and would be analyzed for lead, hardness, phosphorus, and nitrogen. After one year, the data from the groundwater and surface water sampling programs would be evaluated, and a decision would be made regarding continued monitoring.

The first quarterly sampling event at the Sawgrass Lake Site Restoration Project was conducted in June 2015, and the second quarterly sampling event was conducted in September 2015. This report presents the results of the second quarter of groundwater and surface water sampling at the Sawgrass Lake Site Restoration Project. The groundwater and surface water sampling locations are illustrated in **Figure 1**.

SECOND QUARTERLY SAMPLING EVENT (SEPTEMBER 2015)

The second quarterly sampling event was conducted on September 11, 2015. Groundwater and surface water samples were collected during this event. The groundwater and surface water samples were collected in general accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedure for Field Activities (SOP 001/01). Sample collection was performed by Atkins personnel, and analysis was performed by Pace Analytical Services, Inc. (Pace). Pace is a NELAC-certified laboratory.

At the time the RAP was prepared, there were five monitoring wells on the project site property (MW-1, MW-2, MW-3, MW-4, and MW-10). All were properly abandoned in 2011, at the beginning of the restoration project, since they would be destroyed by the remediation/restoration activities. After the remediation and restoration activities were completed in 2015, four of the wells were replaced with MW-1R, MW-2R, MW-3R, and MW-4R. Due to the location of the berm, the realignment of the site access road, and the creation of a wetland that encompassed a portion of the former site road, the new (replacement) wells are not located in the exact same locations as the corresponding original wells. The replacement wells are located north, west, or east of the original wells, based on changes to the alignment of the new site access road. MW-10 was not replaced, as that area is now an inaccessible wetland. Groundwater samples were collected from MW-1R, MW-2R, MW-3R, and MW-4R on September 11, 2015.

Groundwater Sample Collection Methodology

Prior to sampling the monitoring wells, each well was purged with a peristaltic pump using the “low-flow” method. A minimum equivalent of one to three well volumes was purged from each well prior to sample collection. Temperature, pH, conductivity, dissolved oxygen (DO), and turbidity measurements were monitored and recorded throughout the purging process to ensure that representative water samples were collected. The groundwater samples were given identifiers which corresponded to the well of origin. The samples were named using a naming convention that consisted of Sawgrass Lake (SL), the well identification number (for example, MW-1R), and the sampling month (0915, in this case). For example, the sample from MW-1R was labeled “SLMW-1R-0915”. Depth-to-groundwater measurements were made from the top-of-casing (TOC) at each monitoring well prior to initiating the purging process. The groundwater sampling logs and field equipment calibration logs are provided in **Attachment A**.

Each well was sampled for total arsenic, dissolved arsenic, total lead, dissolved lead, calcium hardness, magnesium hardness, total hardness, and TDS. A duplicate sample was collected from MW-1R. All of the samples were placed in laboratory-prepared containers, placed on ice, and carried to Pace for analysis of the analytes listed above.

Surface Water Sample Collection Methodology

Four sampling locations were selected based on compliance with the RAP and water depths within the lake. The first sample location was in the upland cut canal to the south and the remaining three samples were taken from the southwest area of the lake. The samples were named using a naming convention that consisted of Sawgrass Lake (SL) and the surface water location identification number (for example, SW-1) and the depth at which the sample was collected (for example, -2). The process consisted of collecting three water samples at the canal sampling locations and four samples at the three locations within the lake. Samples were collected based on water depth, including a surface, one-foot, mid-depth and bottom sample. Samples were collected using a Kemmerer water sampler (see photo below). The device is lowered into the water column to the desired depth, then a weight is dropped down the main line activating two latches which close the outside doors and seal the sample inside the tube without being contaminated by other water.

Each sample was tested for Arsenic, Calcium, Lead, Magnesium, Nitrogen (Kjeldahl, Total), Nitrogen (NO₂ plus NO₃), Phosphorous (Total as P), Total Hardness as CaCO₃, and Total Nitrogen. All of the samples were placed in laboratory-prepared containers, placed on ice, and delivered to Pace for analysis of the analytes listed previously. The surface water field sampling sheets and YSI calibration logs are provided in **Attachment B**.



Typical Kemmerer water sampling device.

SECOND QUARTERLY SAMPLING EVENT (SEPTEMBER 2015) RESULTS

Groundwater Flow Pattern

Depth to groundwater measurements were collected at the four monitoring wells. The depth to groundwater ranged from 2.31 feet below the TOC at MW-2R to 3.34 feet below the TOC at MW-3R. As the wells are flush-mounted, the TOC elevation is similar to the ground surface elevation. The layout of the monitoring wells parallel to the shoreline of the recently-created open-water wetland area did not lend itself to preparation of a credible groundwater contour map (based solely on the four monitoring wells). It is assumed that the groundwater flow direction is toward the open-water wetland area immediately east across the access road, and ultimately towards Sawgrass Lake. The groundwater flow direction can be assumed to be eastward, towards Sawgrass Lake, which is consistent with previous studies.

Sampling Results

A description of the detections in the groundwater and surface water is presented below.

Groundwater Analytical Results

A summary of the groundwater analytical results is presented in **Table 1**, and the laboratory analytical reports are provided in **Attachment C**. **Figure 2** illustrates the September 2015 concentrations of arsenic, dissolved arsenic, lead, dissolved lead, and TDS on a map of the project site. **Table 1** also provides the corresponding groundwater analytical results from the original monitoring wells for the period from 2000 to 2006, as well as the results from the prior quarterly sampling event.

The concentrations of all of the parameters analyzed in the groundwater were compared to their respective Maximum Contaminant Level (MCL) or Secondary Drinking Water Standard (SDWS) in accordance with the Florida statutes. The MCLs and SDWSs for Drinking Water Standards, Monitoring, and Reporting are promulgated by Chapters 62-550 and 62-777 of the Florida Administrative Code (FAC). Not every parameter has an MCL or SDWS. There were three analytes detected at concentrations that did not comply with their standards – pH, arsenic, and TDS. Note that lead was not detected in the groundwater during this sampling event. TDS and pH have SDWS criteria, while the criterion for arsenic is provided as an MCL in Chapter 62-550 FAC. A description of the detection patterns with these three analytes is described below.

- pH - The SDWS for pH is any value within the range of 6.5 to 8.5. The pH values at MW-3R and MW-4R (with readings of 6.40 and 6.30, respectively) were slightly less than the

standard range of 6.5 (see **Attachment B**). The pH readings at the other two wells were within the standard range.

- **Arsenic** –The standard (MCL) for arsenic is 0.01 milligrams per liter (mg/L). The total arsenic concentration in MW-3R (0.0313 mg/L) exceeded the standard. The dissolved arsenic concentration at this monitoring well was consistent with the total arsenic concentration, which suggested that groundwater turbidity was not affecting the arsenic concentration at that well. Arsenic was detected only in the unfiltered (total) sample at MW-1R (with a concentration of 0.0133 mg/L). Since the turbidity was slightly higher at MW-1R during September 2015 than in June 2015 (12.7 NTU verses 5.0 NTU), the turbidity may have influenced the arsenic concentration in the unfiltered sample from that well. As shown on **Table 1**, elevated arsenic concentrations had historically been detected at MW-3, which was located in the vicinity of existing well MW-3R.
- **TDS** - The SDWS for TDS is 500 mg/L. The TDS concentrations in the samples collected at all four monitoring wells exceeded the standard. The TDS concentrations ranged from 1,500 mg/L at MW-4R to 2,530 mg/L at MW-1R. As shown in **Table 1**, the TDS concentrations in the existing monitoring wells are considerably higher than in the corresponding former wells (sampled in 2006). There was a notable increase in the TDS concentration at MW-2R between June 2015 and September 2015 (increasing from 801 mg/L to 1,920 mg/L).

With the exception of the specific results discussed above, the groundwater quality results from the September 2015 sampling event were in the same general range as the results from the June 2015 sampling event. It was noted that conductivity values in the groundwater were on the order of five times higher than the surface water.

Surface Water Analytical Results

A summary of the surface water analytical results is presented in **Table 2**, and the Pace Laboratory analytical report is provided in **Attachment D**. **Table 3** presents a summary of the field measurements collected by Atkins staff with the YSI sonde including: temperature, specific conductivity, salinity, pH, dissolved oxygen (total and %), and turbidity. The data was collected on September 11, 2015 and 0.0 inches of rain was observed the previous day at the St. Pete – Clearwater Airport. The non-native plant, Hydrilla (*Hydrilla verticillata*) was also observed in the lake during the sampling. **Figure 3** illustrates the September 2015 mean concentrations of lead, hardness, total phosphorus and total nitrogen on a map of the project site. **Table 2** also provides the corresponding analytical results compared to the original surface water sampling on April 12, 2007.

There were several analytes tested for in the surface water samples. The concentration of every analyte that was detected in the surface water sample was compared to the FDEP surface water quality standards (if a standard existed for that analyte) found in Chapter 62-302, FAC and mean values recorded from pre-construction bench scale sampling.

- Arsenic – testing of this heavy metal was added to the surface water sampling for the second quarter sampling. All of the 17 samples were all undetected for arsenic.
- Lead – the surface water criteria for lead was identified as being $\leq 8.68 \mu\text{g/L}$. All of the surface water samples resulted in readings less than the Laboratory Method Detection Limit (MDL) resulting in no lead detection. The mean value was measured at $10 \mu\text{g/L}$ prior to construction.
- Total Phosphorus - one sample collected at SLSW-1-1 reported a reading of $130 \mu\text{g/L}$, therefore exceeding the mean value bench scale of $102 \mu\text{g/L}$.
- Total Nitrogen – sample values ranged from a low of $580 \mu\text{g/L}$ in the lake to a high of $1,300 \mu\text{g/L}$ in the canal portion of the project, which were all below the mean value bench scale reading of $8,188 \mu\text{g/L}$.
- Nitrogen, NO_2 plus NO_3 – the mean value bench scale was measured at an average of $32.1 \mu\text{g/L}$ in 2007. All five samples exceeded the average at station SLSW-1 (ranging from $150 \mu\text{g/L}$ to $350 \mu\text{g/L}$) and one sample at SLSW-3-0 ($35 \mu\text{g/L}$) exceeded the mean.
- Nitrogen, Kjeldahl, Total – all of the samples collected during September 2015 were below the pre-construction mean of $7,863 \mu\text{g/L}$. The collected samples ranged from $500 \mu\text{g/L}$ to $980 \mu\text{g/L}$.
- Hardness as CaCO_3 – collected values ranged from $111,000 \mu\text{g/L}$ to $179,000 \mu\text{g/L}$, which were all below the April 2007 mean value of $220,000 \mu\text{g/L}$.
- Calcium - collected values ranged from $39,500 \mu\text{g/L}$ to $63,400 \mu\text{g/L}$, which were all below the mean bench scale value of $75,500 \mu\text{g/L}$.
- Magnesium - collected values ranged from $2,910 \mu\text{g/L}$ to $5,010 \mu\text{g/L}$, which were all below the previous mean bench scale value of $7,813 \mu\text{g/L}$.
- pH – The SDWS for pH is any value within the range of 6.5 to 8.5. With the exception of 6.04 pH and 5.23 pH readings at SLSW-4-5 and SLSW-4-9, respectively, all of the other pH readings at each measured depth at every sampling location were within the accepted SDWS standard range.
- Dissolved Oxygen - concentrations ranged from 0.29 mg/L to 7.70 mg/L . The surface water criteria for dissolved oxygen is $\geq 5 \text{ mg/L}$. All of the readings in the North/South canal were below 5 mg/L . The lowest dissolved oxygen levels in the other samples were primarily recorded near the bottom of the respective water column.

- Salinity – values ranges from 0.15 ppt to 0.22 ppt with little variation between depth and location.
- Specific Conductivity – the field measurements collected with the YSI sonde ranged from a low of 300 $\mu\text{S}/\text{cm}$ to high of 989 $\mu\text{S}/\text{cm}$ at the deepest sample (SLSW-4-9) in the lake.
- Turbidity – values at each site were very consistent between sample locations with a small range from 6.9 NTU to 7.8 NTU. There were three outliers at SLSW-2-3 (22.2 NTU), SLSW-2-5 (29.3 NTU), and SLSW-4-9 (15.5 NTU) which may have been due to bottom disturbance during sampling.
- Temperature (water) – readings were between 26.52 °C at depth and 29.92 °C at the surface of the lake.

SUMMARY AND CONCLUSIONS

The results of the second quarterly sampling event at the Sawgrass Lake Site Restoration Project were generally consistent with the results of the prior quarterly sampling event (in June 2015) and with previous (2000 to 2007) sampling events, with some exceptions, as discussed below.

There were three analytes detected in the groundwater that did not comply with their regulatory standards: pH, arsenic, and TDS were detected in the groundwater at concentrations in excess of the regulatory criteria. Lead was not detected in the groundwater samples. The low pH findings occurred at MW-3R and MW-4R. The arsenic concentration at MW-3R was consistent with previous sampling events where elevated arsenic concentrations had been detected. Arsenic was detected in the unfiltered sample from MW-1R. The significantly elevated TDS concentrations detected in all four monitoring wells may be the result of the recent site remediation/restoration activities implemented beginning in 2011, as they have no historical precedent. For this sampling event, the TDS concentration increased significantly at MW-2R as compared to the June 2015 sampling event, but it was in the same general range as at the other wells.

There were two analytes measured in the Sawgrass Lake surface water that exceeded the mean bench scale readings from April 12, 2007 during the September 11, 2015 sampling event. The Nitrogen, NO_2 plus NO_3 was elevated at six sample locations (all five samples at station SLSW-1 and SLSW-3-0). Total Phosphorus had one sample (SLSW-1-1) with a reading above the bench scale data from 2007. This Phosphorus sample was also elevated during the June 2015 sampling as shown in **Table 2** and the exceedance was located in the canal portion of the lake. All of the samples were tested for arsenic and lead, with each sample returning results below the laboratory MDLs. As observed previously in June 2015, the total hardness and conductivity data collected in September 2015 revealed significantly lower readings in the surface water compared to the values determined from the groundwater sampling.

Atkins recommends that the analytical results in future sampling events be evaluated closely for any developing trends. After two more quarters of groundwater monitoring and surface water sampling, a decision will be made regarding continued monitoring. At that time, a decision will also be made to determine whether the site owner should pursue a Site Rehabilitation Completion Order *with Conditions* or *without Conditions*.

If you have any questions regarding the information presented in this report, please contact Atkins at (813) 477-7275 or bradley.bayne@atkinsglobal.com.



Bradley J. Bayne

Date: 10-14-15

Bradley J. Bayne
Professional Geologist
No. 1733
State of Florida

TABLES

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA
SAWGRASS LAKE SITE RESTORATION PROJECT

Analyte	SLMW-1	SLMW-1#	SLMW-1-R	SLMW-1R-0615	SLMW-1R-0915	SLMW-2	SLMW-2-R	SLMW-2R-0615	SLMW-2R-0915	Groundwater Criteria
Sampling Month	Aug. 2000	Nov. 2002	Mar. 2006	Jun. 2015	Sept. 2015	Aug. 2000	Mar. 2006	Jun. 2015	Sept. 2015	
Arsenic	290	230	2.6	5.3 U (5.3 U)	13.3 (15.2)	BDL	20	5.3 U	5.3 U	10
Dissolved Arsenic	N/A	N/A	BDL	5.3 U (5.3 U)	5.3 U (5.3 U)	N/A	19	5.3 U	5.3 U	10
Lead	28	34	3.5	8.5 U (8.5 U)	8.5 U (8.5 U)	BDL	4.8	8.5 U	8.5 U	15
Dissolved Lead	N/A	N/A	0.71 I	8.5 U (8.5 U)	8.5 U (8.5 U)	N/A	0.87 I	8.5 U	8.5 U	15
Calcium Hardness*	N/A	N/A	87.2	416 (405)	596 (590)	N/A	109	165	477	-
Magnesium Hardness*	N/A	N/A	9.56	130 (135)	78.1 (74.2)	N/A	19.3	19	17.5	-
Total Hardness*	N/A	N/A	96.76	1,570 (1,570)	1,810 (1,780)	N/A	128.3	490	1,260	-
Total Dissolved Solids	N/A	N/A	180,000	2,280,000 (2,250,000)	2,530,000 (2,630,000)	N/A	220,000	801,000	1,920,000	500,000

Analyte	SLMW-3	SLMW-3-R	SLMW-3R-0615	SLMW-3R-0915	SLMW-4	SLMW-4-R	SLMW-4R-0615	SLMW-4R-0915	Groundwater Criteria
Sampling Month	Aug. 2000	Mar. 2006	Jun. 2015	Sept. 2015	Aug. 2000	Mar. 2006	Jun. 2015	Sept. 2015	
Arsenic	110	29	32.4	31.3	18	11	5.3 U	5.3 U	10
Dissolved Arsenic	N/A	28	32.4	30.4	N/A	11	5.3 U	5.3 U	10
Lead	BDL	10	18.0	8.5 U	7.2	58	8.5 U	8.5 U	15
Dissolved Lead	N/A	2.3	13.7 I	8.5 U	N/A	54	8.5 U	8.5 U	15
Calcium Hardness*	N/A	272	360	400	N/A	76.2	207	313	-
Magnesium Hardness*	N/A	15.8	40.0	29.4	N/A	15.3	70.2	27.5	-
Total Hardness*	N/A	287.8	1,060	1,120	N/A	91.5	805	896	-
Total Dissolved Solids	N/A	430,000	1,720,000	1,900,000	N/A	300,000	1,130,000	1,500,000	500,000

Notes: All results in Micrograms per liter, except for hardness results, which are in mg/l
= Sample name for location SLMW-1 in 2002 was MW-04S as provided in the FDEP 2003 Site Inspection Report
U = After 2006: Less than Laboratory Method Detection Limits (MDL) - MDL is shown
BDL = 2006 or Before: Below Detection Limits, Below Method Detection Limit, or Below Reporting Limit (shown as "U" on laboratory sheets)
Bold = groundwater criteria exceedance
N/A = Not Applicable
* = hardness results given in Milligrams per liter
Groundwater Criteria = Chapter 62-777 FAC
Duplicate values shown in parenthesis
I = Result is between Method Detection Limit and Practical Quantitation Limit

TABLE 2
SUMMARY OF SURFACE WATER ANALYTICAL DATA
SAWGRASS LAKE SITE RESTORATION PROJECT

Parameter	SLSW-1-0		SLSW-1-1		SLSW-1-2		SLSW-1-3		SLSW-1-4		SLSW-2-0		SLSW-2-1		SLSW-2-3		SLSW-2-5		Mean Value Bench Scale	Class III Surface Water Standard
	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	April 2007	
Arsenic (µg/L)	*	5.0 U	*	5.0 U	*	5.0 U	Not Tested	5.0 U	Not Tested	5.0 U	*	5.0 U	*	5.0 U	*	5.0 U	*	5.0 U	13.3	≤ 50
Calcium (µg/L)	42,300	63,400	44,000	62,500	40,800	62,700		62,500		62,800	42,200	46,300	42,100	45,900	41,600	42,200	42,300	41,800	75,500	-
Lead (µg/L)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10	< 8.68
Magnesium (µg/L)	3,040	4960	3,270	5010	3,940	4990		4970		4990	4,150	3450	4,170	3430	4,070	3060	4,140	3030	7,813	-
Nitrogen, Kjeldahl, Total (µg/L)	550	620	990	980	1500	500		690		600	1100	620	810	640	880	580	840	610	7,863	-
Nitrogen, NO2 plus NO3 (µg/L)	46 I	150	44 I	350	30 I	170		170		170	28 I	25 U	25 U	25 U	25 U	25 U	25 U	25 U	32.1	-
Phosphorus, Total (as P) (µg/L)	62 I	69 I	140	130	190	53 I		84 I		71 I	61 I	50 U	65 I	50 U	71 I	50 U	66 I	59 I	102	-
Total Hardness asCaCO3 (µg/L)	118,000	179,000	123,000	177,000	118,000	177,000		177,000		177,000	123,000	130,000	122,000	129,000	121,000	118,000	123,000	117,000	220,000	-
Total Nitrogen (µg/L)	600	770	1,000	1300	1500	670		860		770	1100	630	830	640	890	590	860	620	8,188	-

Parameter	SLSW-3-0		SLSW-3-1		SLSW-3-3		SLSW-3-5		SLSW-4-0		SLSW-4-1		SLSW-4-3		SLSW-4-5		SLSW-4-9		Mean Value Bench Scale	Class III Surface Water Standard
	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	April 2007	
Arsenic (µg/L)	*	5.0 U	*	5.0 U	*	5.0 U	*	5.0 U	*	5.0 U	*	5.0 U	*	Not Tested	*	5.0 U	Not Tested	5.0 U	13.3	≤ 50
Calcium (µg/L)	42,400	41,800	42,200	41,200	42,200	42,700	41,900	42,600	42,400	41,400	42,100	42,000	40,400		69,700	39,500		43,300	75,500	-
Lead (µg/L)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U		5.0 U	10	<8.68
Magnesium (µg/L)	4,130	3050	4,100	3040	4,080	3120	4,000	3100	4,110	3020	4,060	3040	3,800		3,760	2910		3280	7,813	-
Nitrogen, Kjeldahl, Total (µg/L)	730	710	670	710	770	670	900	660	840	590	840	570	760		790	720		770	7,863	-
Nitrogen, NO2 plus NO3 (µg/L)	36 I	35 I	25 U	25 U	25 U	25 U	25 U	25 U	30 I	310	25 U	25 U	25 U		25 U	25 U		25 U	32.1	-
Phosphorus, Total (as P) (µg/L)	55 I	69 I	51 I	61 I	55 I	66 I	93 I	63 I	67 I	70 I	65 I	50 U	61 I		68 I	66 I		78 I	102	-
Total Hardness asCaCO3 (µg/L)	123,000	117,000	122,000	115,000	122,000	120,000	121,000	119,000	123,000	116,000	122,000	118,000	117,000		189,000	111,000		122,000	220,000	-
Total Nitrogen (µg/L)	770	750	690	720	780	670	910	660	870	900	860	580	770		800	720		770	8,188	-

Notes: All results are reported in micrograms per liter unless otherwise noted
U = Less than Laboratory Method Detection Limit (MDL) - MDL is shown
Bold = Mean Value Bench Scale Exceedance from April 12, 2007 pre-construction sampling
I = Result is between Method Detection Limit and Practical Quanitation Limit
* = Arsenic not tested for during June 2015 sampling

TABLE 3
SUMMARY OF YSI SONDE ANALYTICAL DATA
SAWGRASS LAKE SITE RESTORATION PROJECT

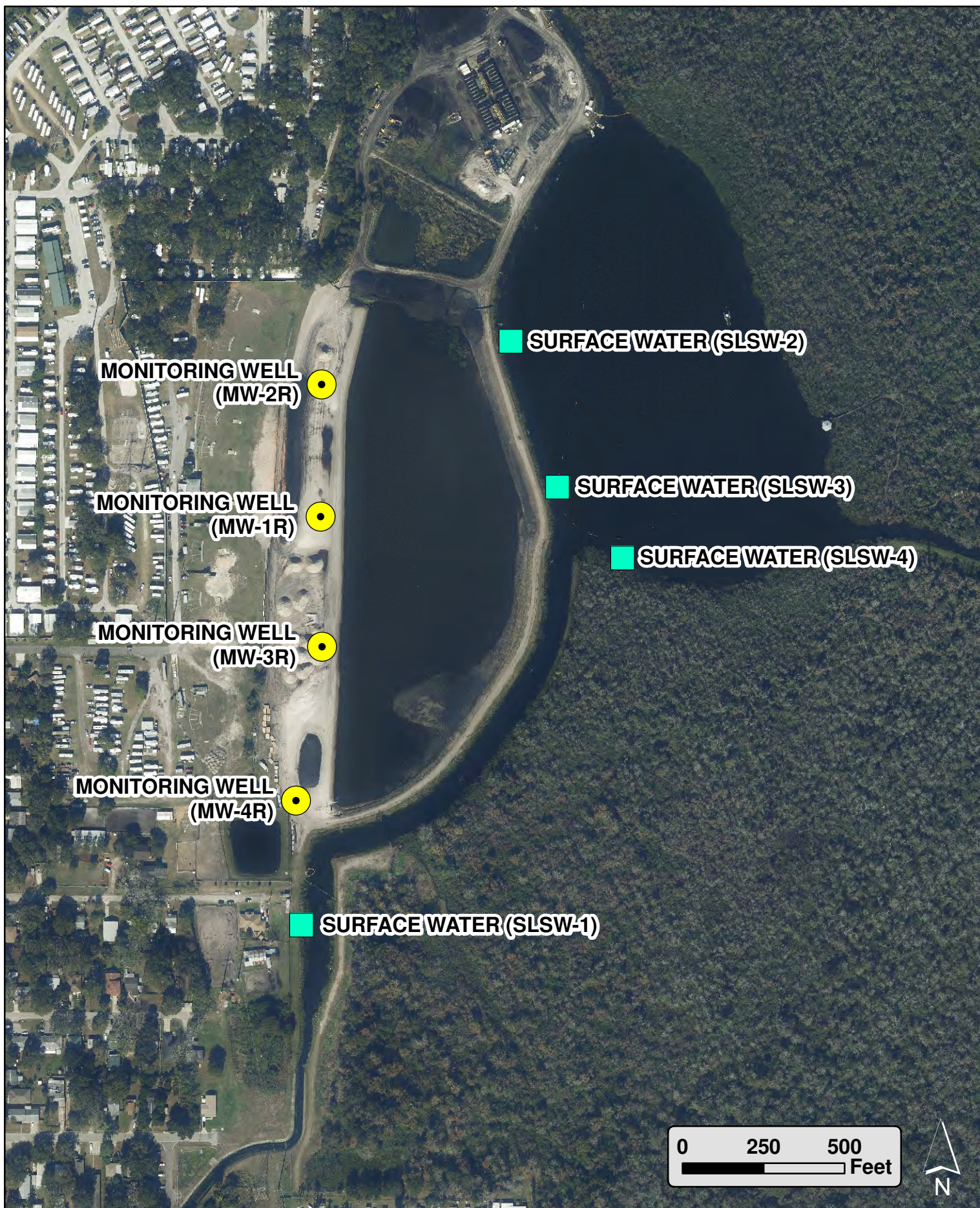
Parameter	SLSW-1-0		SLSW-1-1		SLSW-1-2		SLSW-1-3		SLSW-1-4		SLSW-2-0		SLSW-2-1		SLSW-2-3		SLSW-2-5	
	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015
Temperature (oC)	*	*	27.39	29.08	27.40	29.03	Not Tested	28.91	Not Tested	28.83	*	*	28.56	29.42	28.55	29.08	28.47	28.99
Specific Conductivity (µS/cm)	*	*	342	464	338	464		464		470	*	*	378	337	378	337	379	336
Salinity (ppt)	*	*	0.16	0.22	0.16	0.22		0.22		0.22	*	*	0.18	0.16	0.18	0.16	0.18	0.16
pH	*	*	6.49	7.10	6.62	7.14		7.14		7.04	*	*	7.66	7.05	7.71	6.90	7.67	6.84
Dissolved Oxygen (mg/L)	*	*	1.82	2.74	1.37	2.84		2.80		2.13	*	*	6.27	5.99	6.24	4.60	5.48	3.96
Dissolved Oxygen (%)	*	*	22.3	21.1	17.3	37		36.4		27.3	*	*	80.9	78.3	80.5	59.8	70.5	51.3
Turbidity (NTU)	*	*	7.3	7.4	8.5	7.2		7.1		7.8	*	*	8.2	7.0	8.1	22.2	7.8	29.3

Notes: * No surface water reading (YSI Sonde must be submerged 1' before reading can occur)

Parameter	SLSW-3-0		SLSW-3-1		SLSW-3-3		SLSW-3-5		SLSW-4-0		SLSW-4-1		SLSW-4-3		SLSW-4-5		SLSW-4-9	
	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015	June 2015	Sept. 2015
Temperature (oC)	*	*	29.40	29.35	29.34	29.10	29.36	28.47	*	*	29.45	29.60	28.86	29.21	28.86	28.11	Not Tested	26.52
Specific Conductivity (µS/cm)	*	*	381	331	381	336	381	329	*	*	378	328	382	329	364	317		989
Salinity (ppt)	*	*	0.18	0.16	0.18	0.16	0.18	0.16	*	*	0.18	0.15	0.18	0.15	0.17	0.15		0.49
pH	*	*	7.63	7.19	7.62	6.91	7.66	6.65	*	*	7.85	6.79	7.22	6.58	7.01	6.04		5.23
Dissolved Oxygen (mg/L)	*	*	7.86	6.46	7.57	1.50	7.55	0.52	*	*	7.73	7.70	5.55	5.36	3.11	1.58		0.29
Dissolved Oxygen (%)	*	*	103.0	84.5	99.2	19.4	98.8	6.7	*	*	101.3	101.0	71.6	69.4	40.0	20.1		3.6
Turbidity (NTU)	*	*	8.6	6.9	8.5	7.1	8.9	7.8	*	*	8.6	6.6	8.5	6.9	8.3	6.9		15.5

Notes: * No surface water reading (YSI Sonde must be submerged 1' before reading can occur)

FIGURES



**FIGURE 1. GROUNDWATER AND
SURFACE WATER SAMPLING LOCATIONS**

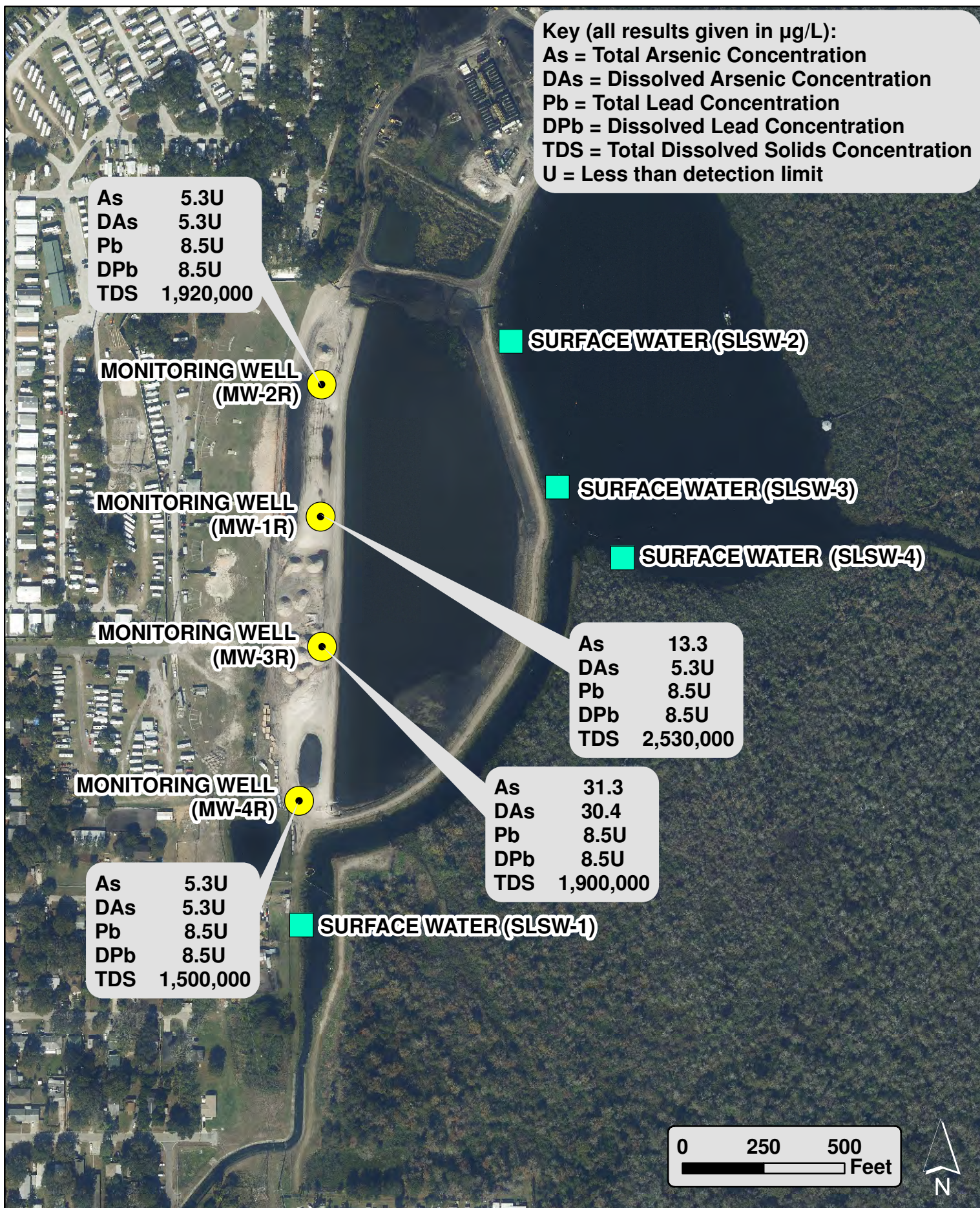


FIGURE 2. SEPTEMBER 2015 GROUNDWATER SAMPLING RESULTS

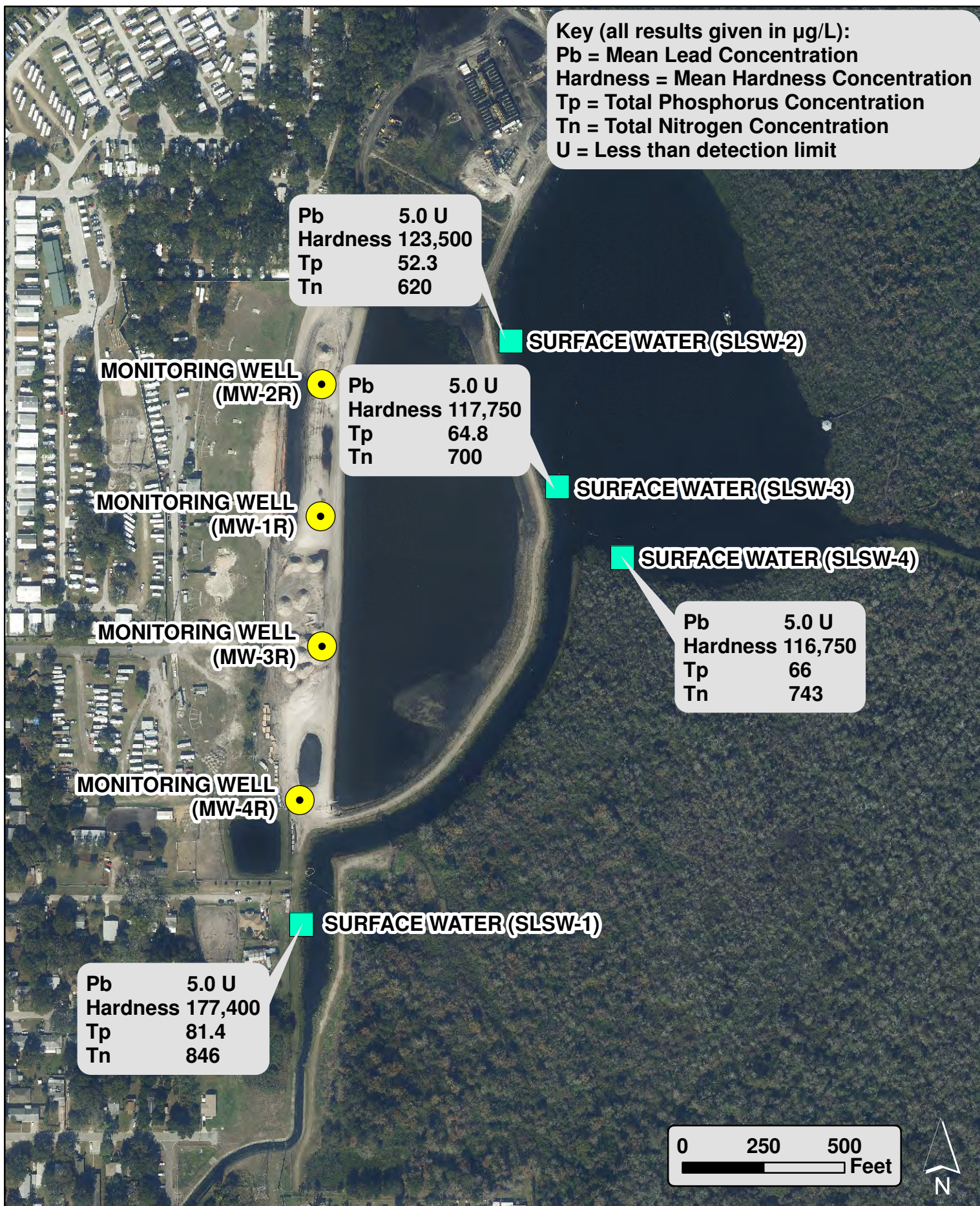


FIGURE 3. SEPTEMBER 2015 SURFACE WATER SAMPLING RESULTS

ATTACHMENT A

Groundwater Sampling Logs and Field Equipment Calibration Logs

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>Sawgrass Lake Site</u>	SITE LOCATION: <u>Pinellas Park</u>
WELL NO: <u>MW-1R</u>	SAMPLE ID: <u>SLMW-1R-0915</u> DATE: <u>9/11/15</u>

PURGING DATA

WELL DIAMETER (inches): <u>2</u>	TUBING DIAMETER (inches): <u>1/4</u>	WELL SCREEN INTERVAL DEPTH: <u>2.7</u> feet to <u>12.7</u> feet	STATIC DEPTH TO WATER (feet): <u>2.34</u>	PURGE PUMP TYPE OR BAILER: <u>Peristaltic</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (<u>12.7</u> feet - <u>2.34</u> feet) X <u>0.16</u> gallons/foot = _____ gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <u>0</u> gallons + (<u>0.0026</u> gallons/foot X <u>5</u> feet) + <u>0.2</u> gallons = <u>0.213</u> gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>	PURGING INITIATED AT: <u>10:10</u>	PURGING ENDED AT: <u>11:05</u>	TOTAL VOLUME PURGED (gallons): <u>5.5</u>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:40	3.0	3.0	0.1	2.52	6.70	27.29	2505	1.29	35.9	Black	None
10:45	0.5	3.5	0.1	2.51	6.59	27.22	2504	1.20	24.5	Lt. Blk	
10:50	0.5	4.0	0.1	2.52	6.55	27.17	2508	1.27	21.2		
10:55	0.5	4.5	0.1	2.51	6.55	27.15	2513	1.19	17.9		
11:00	0.5	5.0	0.1	2.51	6.55	27.12	2526	1.07	14.3	Clear	
11:05	0.5	5.5	0.1	2.51	6.55	27.12	2524	1.05	12.7		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Brad Bayne / Atkins</u>				SAMPLER(S) SIGNATURE(S): <u>Bradley D. Bayne</u>			SAMPLING INITIATED AT: <u>11:05</u>		SAMPLING ENDED AT: <u>11:15</u>		
PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>				TUBING MATERIAL CODE: <u>HDPE + S</u>		FIELD-FILTERED ☒ Y ☐ N Filtration Equipment Type: _____		FILTER SIZE: <u>1</u> μm			
FIELD DECONTAMINATION: PUMP ☒ Y ☐ N TUBING ☒ Y ☐ N (replaced)						DUPLICATE: ☒ Y ☐ N					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					

REMARKS:											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>Sawgrass Lake Site</u>	SITE LOCATION: <u>Pinellas Park</u>
WELL NO: <u>mw-2R</u>	SAMPLE ID: <u>SLmw-2R-0915</u> DATE: <u>9/11/15</u>

PURGING DATA

WELL DIAMETER (inches): <u>2</u>	TUBING DIAMETER (inches): <u>1/4</u>	WELL SCREEN INTERVAL DEPTH: <u>3.7</u> feet to <u>13.7</u> feet	STATIC DEPTH TO WATER (feet): <u>2.31</u>	PURGE PUMP TYPE OR BAILER: <u>Peristaltic</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (<u>13.7</u> feet - <u>2.31</u> feet) X <u>0.16</u> gallons/foot = <u>1.822</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <u>0</u> gallons + (<u>0.0026</u> gallons/foot X <u>5</u> feet) + <u>0.2</u> gallons = <u>0.213</u> gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>	PURGING INITIATED AT: <u>11:25</u>	PURGING ENDED AT: <u>12:25</u>	TOTAL VOLUME PURGED (gallons): <u>6.0</u>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:55	3.0	3.0	0.1	2.47	6.60	27.80	1912	1.73	23.4	Black	None
12:00	0.5	3.5	0.1	2.46	6.59	27.72	1909	1.53	18.3	Clear	
12:05	0.5	4.0	0.1	2.47	6.59	27.69	1911	1.42	17.6		
12:10	0.5	4.5	0.1	2.46	6.60	27.68	1909	1.33	19.6		
12:15	0.5	5.0	0.1	2.47	6.63	27.69	1897	1.20	12.9		
12:20	0.5	5.5	0.1	2.47	6.65	27.68	1899	1.19	14.1		
12:25	0.5	6.0	0.1	2.47	6.67	27.67	1900	1.18	11.9	✓	✓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Brad Bayne / Atkins</u>	SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>	SAMPLING INITIATED AT: <u>12:25</u>	SAMPLING ENDED AT: <u>12:30</u>
PUMP OR TUBING DEPTH IN WELL (feet): <u>5</u>	TUBING MATERIAL CODE: <u>HDPE #5</u>	FIELD-FILTERED: ☒ N Filtration Equipment Type:	FILTER SIZE: <u>1</u> μm
FIELD DECONTAMINATION: PUMP ☒ TUBING ☒ (replaced)	DUPLICATE: ☒ N		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

SITE NAME: Sawgrass Lake Site		SITE LOCATION: Pinellas Park	
WELL NO: MW-3B	SAMPLE ID: SLMW-3B-0915	DATE: 9/11/15	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 3.1 feet to 13.1 feet	STATIC DEPTH TO WATER (feet): 3.34	PURGE PUMP TYPE OR BAILER: Peristaltic
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (13.1 \text{ feet} - 3.34 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.56 \text{ gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0026 \text{ gallons/foot} \times 5.5 \text{ feet}) + 0.2 \text{ gallons} = 0.214 \text{ gallons}$				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5	PURGING INITIATED AT: 9:00	PURGING ENDED AT: 9:50	TOTAL VOLUME PURGED (gallons): 5.0

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)									

SAMPLED BY (PRINT) / AFFILIATION: Brad Bayne / Atkins		SAMPLER(S) SIGNATURE(S): Bradley J. Bayne		SAMPLING INITIATED AT: 9:50	SAMPLING ENDED AT: 9:55
PUMP OR TUBING DEPTH IN WELL (feet): 5.5		TUBING MATERIAL CODE: HDPE + S		FIELD-FILTERED: ☒ Y ☐ N Filtration Equipment Type:	FILTER SIZE: 1 µm
FIELD DECONTAMINATION: PUMP Y ☒ (N)		TUBING Y ☒ (N) (replaced)		DUPLICATE: Y ☒ (N)	

REMARKS:									
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)									
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)									

Revision Date: February 12, 2009

SITE NAME: Sawgrass Lake Site		SITE LOCATION: Pinellas Park	
WELL NO: MW-4R	SAMPLE ID: SLMW-4R-0915	DATE: 9/11/15	

WELL DIAMETER (inches): <u>2</u>	TUBING DIAMETER (inches): <u>1/4</u>	WELL SCREEN INTERVAL DEPTH: <u>4</u> feet to <u>14</u> feet	STATIC DEPTH TO WATER (feet): <u>3.10</u>	PURGE PUMP TYPE OR BAILER: <u>Peristaltic</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (\text{ 14 feet } - \text{ 3.10 feet }) \times \text{ 0.16 gallons/foot } = \text{ 1.76 gallons }$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= \text{ 0 gallons } + (\text{ 0.0026 gallons/foot } \times \text{ 5 feet }) + \text{ 0.2 gallons } = \text{ 0.213 gallons }$				

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Brad Bayne / Atkins				SAMPLER(S) SIGNATURE(S): <i>Bradley D. Bayne</i>			SAMPLING INITIATED AT: 8:40		SAMPLING ENDED AT: 8:45		
PUMP OR TUBING DEPTH IN WELL (feet): 5				TUBING MATERIAL CODE: HDPE + S			FIELD-FILTERED: ☒ Y ☐ N Filtration Equipment Type:		FILTER SIZE: 1 µm		
FIELD DECONTAMINATION: PUMP Y ☒ N				TUBING Y ☒ N (replaced)			DUPLICATE: Y ☒ N				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
See Chain of Custody											

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

Revision Date: February 12, 2009

ATTACHMENT B

Surface Water YSI Sampling Logs and Calibration Logs

Date: 09/11/2015 (yy/mm/dd)

Hydrolab/YSI Unit #: gdf/YSI/080100912

Calibration Book Number: 140919CL1

Calibration Book Page #: _____

Air Temperature: _____

Wind: 0

Tide Stage: ✓

Cloud Cover: 65%

Reporting Unit

Geo Stratum: Sawgrass Lake

Time On Station	Depth (m)	Temperature (C)	Specific Cond. (µS/cm)	Salinity (ppt)	pH	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Check If Bottom	
<u>0856</u>	0.2	<u>29.08</u>	<u>464</u>	<u>0.22</u>	<u>7.10</u>	<u>2.74</u>	<u>21.1</u>	☐	NTU+ used dth. sonde
24 hr. / EST	0.5	<u>29.03</u>	<u>464</u>	<u>0.22</u>	<u>7.14</u>	<u>2.84</u>	<u>37.0</u>	☐	
Stratum/ <u>✓</u>	1.0	<u>28.91</u>	<u>464</u>	<u>0.22</u>	<u>7.14</u>	<u>2.80</u>	<u>36.4</u>	☐	
	1.5	<u>28.83</u>	<u>470</u>	<u>0.22</u>	<u>7.04</u>	<u>2.13</u>	<u>27.3</u>	☒	
Station # <u>6LSW 1</u>	2.0						(0.2)	☐	7.4
	2.5						(0.5)	☐	7.2
Alt # <u>✓</u> Lateral Pos. <u>✓</u>	3.0						(1.0)	☐	7.1
	3.5						(1.5)	☐	7.8
Secchi depth <u>✓</u>	4.0							☐	
(meters)	4.5							☐	
Secchi @ bottom ☐ Yes	5.0							☐	
	5.5							☐	
Water depth <u>1.5</u>	6.0							☐	
(water column depth)	6.5							☐	

Latitude

Degrees

Decimal Minutes

Longitude

Degrees

Decimal Minutes

Projected: 27.83719 82.67543

Actual: 27.83720 82.67537

Samples: Check Container Numbers ☐ Check Custody Forms ☐

Sample Taken

Samples Processed

Samples Preserved

Sediment Sample Taken

(check):

☐
☐
☐
☐

Field Notes:

depth measured by survey rod 6.5'

Signed

Date

Signed

Date

Date: 09/11/2015 (yy/mm/dd)

Hydrolab/YSI Unit #: golf/jett/080100912

Calibration Book Number: 140919CL1

Calibration Book Page #: _____

Air Temperature: _____

Wind: 0-5 NE

Tide Stage: /

Cloud Cover: 55%

Reporting Unit
Geo Stratum: Saugrass Lake

Time On Station	Depth (m)	Temperature (C)	Specific Cond. (µS/cm)	Salinity (ppt)	pH	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Check If Bottom	NTU+
<u>1012</u> 24 hr. / EST	0.2	<u>29.61</u>	<u>336</u>	<u>0.16</u>	<u>7.13</u>	<u>6.60</u>	<u>86.7</u>	☐	<u>7</u>
	0.5	<u>29.42</u>	<u>337</u>	<u>0.16</u>	<u>7.05</u>	<u>5.99</u>	<u>78.3</u>	☐	<u>7.0</u>
Stratum/	1.0	<u>29.08</u>	<u>337</u>	<u>0.16</u>	<u>6.90</u>	<u>4.60</u>	<u>59.8</u>	☐	<u>22.2</u>
Station # <u>SLSW-2</u>	<u>1.1</u>	<u>28.99</u>	<u>336</u>	<u>0.16</u>	<u>6.84</u>	<u>3.96</u>	<u>51.3</u>	☒	<u>29.3</u>
	2.0							☐	
	2.5							☐	
Alt # <u>/</u> Lateral Pos. <u>/</u>	3.0							☐	
	3.5							☐	
Secchi depth <u>/</u> (meters)	4.0							☐	
	4.5							☐	
Secchi @ bottom ☐ Yes	5.0							☐	
	5.5							☐	
Water depth <u>1.1</u> (meters)	6.0							☐	
(water column depth)	6.5							☐	

Projected: Latitude Degrees 27.84149 Longitude Degrees 82.67397

Actual: Latitude Degrees 27.84156 Longitude Degrees 82.67371

Samples: Check Container Numbers ☐ Check Custody Forms ☐

Sample Taken Samples Processed Samples Preserved Sediment Sample Taken

(check): ☐ ☐ ☐ ☐

Field Notes: _____

depth measured by survey rod - 5.7'

soft bottom, may give higher NTU readings since when stirred up,

tried to wait few minutes for vegetation to settle before recording
but still high read levels substrate

Signed _____

Date _____

Signed _____

Date _____

Date: 09/11/2015 (yy/mm/dd)

Hydrolab/YSI Unit #: golf / jch / 030100912

Calibration Book Number: 14091961

Calibration Book Page #: _____

Air Temperature: _____

Wind: 0-5 NE

Tide Stage: 1

Cloud Cover: 55%

Reporting Unit Saugrass Lake
Geo Stratum: _____

Time On Station	Depth (m)	Temperature (C)	Specific Cond. (µS/cm)	Salinity (ppt)	pH	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Check If Bottom	NTU ⁺
<u>1030</u>	0.2	<u>29.41</u>	<u>330</u>	<u>0.16</u>	<u>7.23</u>	<u>6.84</u>	<u>89.7</u>	☐	<u>7.4</u>
24 hr. / EST	0.5	<u>29.35</u>	<u>331</u>	<u>0.16</u>	<u>7.19</u>	<u>6.46</u>	<u>84.5</u>	☐	<u>6.9</u>
Stratum/ <u>1</u>	1.0	<u>29.10</u>	<u>336</u>	<u>0.16</u>	<u>6.91</u>	<u>1.50</u>	<u>19.4</u>	☐	<u>7.1</u>
	1.5	<u>28.47</u>	<u>329</u>	<u>0.16</u>	<u>6.65</u>	<u>0.52</u>	<u>6.7</u>	☒	<u>7.8</u>
Station # <u>SLSW-3</u>	2.0							☐	
	2.5							☐	
Alt # <u>1</u> Lateral Pos. <u>1</u>	3.0							☐	
	3.5							☐	
Secchi depth <u>1</u> (meters)	4.0							☐	
	4.5							☐	
Secchi @ bottom ☐ Yes	5.0							☐	
	5.5							☐	
Water depth <u>1.2</u> (meters)	6.0							☐	
(water column depth)	6.5							☐	

Latitude
Degrees Decimal Minutes

Longitude
Degrees Decimal Minutes

Projected: 27. 84052 82. 67348

Actual: 27. 84054 82. 67337

Samples: Check Container Numbers ☐ Check Custody Forms ☐

Sample Taken Samples Processed Samples Preserved Sediment Sample Taken

(check): ☐ ☐ ☐ ☐

Field Notes: _____

depth measured by survey reel - 4.3' 5.5'

Signed

Date

Signed

Date

Date: 07/11/2015 (yy/mm/dd)

Hydrolab/YSI Unit #: gdt/rff 5 08D100912

Calibration Book Number: 14091961

Calibration Book Page #: _____

Air Temperature: _____

Wind: 0-5 ENE

Tide Stage: 1

Cloud Cover: 75%

Reporting Unit

Geo Stratum: Saugrass Lake

Time On Station	Depth (m)	Temperature (C)	Specific Cond. (µS/cm)	Salinity (ppt)	pH	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Check If Bottom	
<u>1103</u>	0.2	<u>29.92</u>	<u>330</u>	<u>0.15</u>	<u>6.61</u>	<u>8.04</u>	<u>106.2</u>	☐	<u>6.6</u>
24 hr. / EST	0.5	<u>29.60</u>	<u>328</u>	<u>0.15</u>	<u>6.79</u>	<u>7.70</u>	<u>101.0</u>	☐	<u>6.6</u>
Stratum/ <u>1</u>	1.0	<u>29.21</u>	<u>329</u>	<u>0.15</u>	<u>6.58</u>	<u>5.36</u>	<u>69.4</u>	☐	<u>6.9</u>
	1.5	<u>28.11</u>	<u>317</u>	<u>0.15</u>	<u>6.04</u>	<u>1.58</u>	<u>20.1</u>	☐	<u>6.9</u>
Station # <u>SLSW 4</u>	2.0	<u>27.65</u>	<u>309</u>	<u>0.15</u>	<u>5.88</u>	<u>0.58</u>	<u>7.3</u>	☐	<u>7.0</u>
	2.5	<u>27.064</u>	<u>300</u>	<u>0.14</u>	<u>5.70</u>	<u>0.36</u>	<u>4.5</u>	☐	<u>7.4</u>
Alt # <u>1</u> Lateral Pos. <u>1</u>	3.0	<u>26.52</u>	<u>289</u>	<u>0.49</u>	<u>5.23</u>	<u>0.29</u>	<u>3.6</u>	☒	<u>15.5</u>
	3.5							☐	
Secchi depth	4.0							☐	
(meters)	4.5							☐	
Secchi @ bottom ☐ Yes	5.0							☐	
	5.5							☐	
Water depth <u>3.0</u>	6.0							☐	
(water column depth)	6.5							☐	

Latitude Degrees Decimal Minutes Longitude Degrees Decimal Minutes

Projected: 27.83998 82.167254

Actual: 27.83995 82.167262

Samples: Check Container Numbers ☐ Check Custody Forms ☐

Sample Taken Samples Processed Samples Preserved Sediment Sample Taken

(check): ☐ ☐ ☐ ☐

Field Notes: _____

depth measured by survey rod - ~11.0'

survey rod ends at 10.8' ~~fixed~~ estimated the

remaining 2"

Signed

Date

Signed

Date

HYDROLAB/YSI CALIBRATION SHEET

Book # 140919CL1

Page #

131

Project Sungass Task Water Samples
 Display Model 650 MDS Sonde Model 6420V2
 Unit Serial# 601F/08D100912 Name of Calibrator JKW
 Date 15/09/11 Time 5:21

ICV represents the Initial Calibration Verification. This should be completed in run mode after the instrument has been calibrated with the standard solution still in the calibration cup.

NOTE: All optical sensors MUST be calibrated in the upright position.

1. SPECIFIC CONDUCTIVITY:

a. Rinse twice with Hi standard (standards must "bracket" observed field values)

b. Fill cup with conductivity standard (insure vent hole is covered)

	Standard μS/cm	Lot ID#	Standard Temp (°C)	Before μS/cm	After μS/cm	Cal. Constant	ICV μS/cm	Pass (Y/N) +/- 5%
Hi	53000	150504C	28.85	52839	53000	4.94822	53000	Y
Low	500	1502013	28.76				518	Y

c. Rinse twice with D.I. water

d. Perform check with Low standard

2a. pH

a. Rinse twice with pH 7 standard

b. Fill cup with pH 7 standard

Standard	Lot ID#	Standard Temp (°C)	Before	After	Pass (Y/N) +/- 0.2	mV
7.00	150504D	28.40	7.00	7.00	Y	22.0

c. Rinse twice with clean water

d. Rinse twice with pH 10 standard

e. Fill cup with pH 10 standard

Standard	Lot ID#	Standard Temp (°C)	Before	After	ICV	Pass (Y/N) +/- 0.2	mV
10.00	150504E	28.44	10.00	10.00	10.00	Y	-139.5

f. Rinse twice with clean water

g. Repeat steps a and b and check pH 7 again

Standard	Lot ID#	Standard Temp (°C)	ICV	Pass (Y/N) +/- 0.2	Cal. Constant
7.00	150504D	28.38	7.01	Y	-5.587

h. Rinse twice with D.I. water

j. Rinse twice with clean water

3. DISSOLVED OXYGEN:

a. Place in a bucket with oxygen saturated water (air stone min. 1 hour); allow to equilibrate.

Temp (°C)	Bar. Press	Before mg/L	Before %	Theoretical mg/L (from chart)	Pass (Y/N) +/- 0.3 mg/L	DO Charge
25.50	760.0	8.24	100.8	8.660	Y	-

After mg/L	After %	ICV Temp (°C)	ICV mg/L	ICV %	Theoretical mg/L (from chart)	Pass (Y/N) +/- 0.3 mg/L	Cal. Constant
8.13	100.0	25.50	8.18	100.1	8.660	Y	1.06135

b. Rinse twice with clean water

4. DEPTH (at surface): Depth before 0.018m Depth after 0.00m5. BATTERY CHECK: Surface Unit Voltage 12.0 Sonde Voltage n/a

Were batteries charged/replaced? _____

6. NOTES: _____

7.0 UNIT STATUS: Good Minor Repairs Major Repairs

1) Sonde ☒ ☐ ☐

2) Surface Unit ☒ ☐ ☐

3) Cables ☒ ☐ ☐

8.0 CALIBRATION VERIFICATION

	4-Hour				8-Hour				After Use			
Date					2015/09/15							
Time					12:16							
Name of Calibrator					4105501							
Parameter	4-Hour Solution	4-Hour Solution Temp.	4-Hour Check	Pass? (Y/N)	8-Hour Solution	8-Hour Solution Temp.	8-Hour Check	Pass? (Y/N)	After Use Solution	After Use Solution Temp.	After Use Check	Pass? (Y/N)
Conductivity (high)									53000	52929	29.74	Y
Conductivity (low)									500	29.65	509	
pH									7.00	29.64	7.00	
Dissolved Oxygen									4.0	101.5	28.07	Y
DO Charge												
Depth											-0.002	Y

Does Unit Pass Post Calibration Check?

Yes ☒ No ☐ *

- Note: If the unit does not pass post calibration check then data can not be entered into the data base without approval of QA/QC Office and/or Project Manager. Also, call Lab and put hold on chemistry parameters with long holding times.

16.1/15/09/15
Field Recorder - Signature and Date

[Signature] 2015/09/15
Field Reviewer - Signature and Date

Copied - Initial & Date

Entered - Initial & Date

ATTACHMENT C

Groundwater Laboratory Analytical Reports

September 21, 2015

Brad Bayne
ATKINS Global
4030 West Boy Scout Blvd.,
Suite 700
Tampa, FL 33607

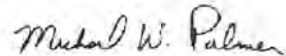
RE: Project: Sawgrass Lake GW
Pace Project No.: 35206815

Dear Brad Bayne:

Enclosed are the analytical results for sample(s) received by the laboratory on September 11, 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,



Mike Palmer for
Mike Valder
mike.valder@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Sawgrass Lake GW
Pace Project No.: 35206815

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
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 York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
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
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Tampa Certification IDs

5460 Beaumont Center Blvd, Ste 520, Tampa, FL 33634

Florida Certification #: E84809

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35206815001	SLMW-4R-0915	Water	09/11/15 08:45	09/11/15 14:50
35206815002	SLMW-3R-0915	Water	09/11/15 09:55	09/11/15 14:50
35206815003	SLMW-1R-0915	Water	09/11/15 11:15	09/11/15 14:50
35206815004	Dup B-0915	Water	09/11/15 11:15	09/11/15 14:50
35206815005	SLMW-2R-0915	Water	09/11/15 12:30	09/11/15 14:50

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SAMPLE ANALYTE COUNT

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35206815001	SLMW-4R-0915	EPA 6010	SAM	2	PASI-Tp
		EPA 6010	SAM	5	PASI-Tp
		SM 2540C	XDP	1	PASI-O
35206815002	SLMW-3R-0915	EPA 6010	SAM	2	PASI-Tp
		EPA 6010	SAM	5	PASI-Tp
		SM 2540C	XDP	1	PASI-O
35206815003	SLMW-1R-0915	EPA 6010	SAM	2	PASI-Tp
		EPA 6010	SAM	5	PASI-Tp
		SM 2540C	XDP	1	PASI-O
35206815004	Dup B-0915	EPA 6010	SAM	2	PASI-Tp
		EPA 6010	SAM	5	PASI-Tp
		SM 2540C	XDP	1	PASI-O
35206815005	SLMW-2R-0915	EPA 6010	SAM	2	PASI-Tp
		EPA 6010	SAM	5	PASI-Tp
		SM 2540C	XDP	1	PASI-O

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake GW

Pace Project No.: 35206815

Sample: SLMW-4R-0915		Lab ID: 35206815001		Collected: 09/11/15 08:45		Received: 09/11/15 14:50		Matrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic, Dissolved	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 17:38	7440-38-2	
Lead, Dissolved	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 17:38	7439-92-1	
6010 MET ICP, Tampa									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:17	7440-38-2	
Calcium	313000	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 10:59	7440-70-2	M6
Lead	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:17	7439-92-1	
Magnesium	27500	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 10:59	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B)	896000	ug/L	33000	16000	10	09/16/15 08:15	09/18/15 10:59		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Total Dissolved Solids	1500	mg/L	10.0	10.0	1		09/17/15 19:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake GW

Pace Project No.: 35206815

Sample: SLMW-3R-0915		Lab ID: 35206815002		Collected: 09/11/15 09:55		Received: 09/11/15 14:50		Matrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic, Dissolved	30.4	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:00	7440-38-2	
Lead, Dissolved	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:00	7439-92-1	
6010 MET ICP, Tampa		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	31.3	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:19	7440-38-2	
Calcium	400000	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:01	7440-70-2	
Lead	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:19	7439-92-1	
Magnesium	29400	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:01	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	1120000	ug/L	33000	16000	10	09/16/15 08:15	09/18/15 11:01		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	1900	mg/L	20.0	20.0	1		09/17/15 19:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Sample: SLMW-1R-0915		Lab ID: 35206815003		Collected: 09/11/15 11:15		Received: 09/11/15 14:50		Matrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic, Dissolved	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:02	7440-38-2	
Lead, Dissolved	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:02	7439-92-1	
6010 MET ICP, Tampa									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	13.3	ug/L	10.0	5.3	1	09/16/15 08:15	09/21/15 12:27	7440-38-2	
Calcium	596000	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:03	7440-70-2	
Lead	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:27	7439-92-1	
Magnesium	78100	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:03	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	1810000	ug/L	33000	16000	10	09/16/15 08:15	09/18/15 11:03		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Total Dissolved Solids	2530	mg/L	20.0	20.0	1		09/17/15 19:01		J(D6)

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Sample: Dup B-0915		Lab ID: 35206815004		Collected: 09/11/15 11:15		Received: 09/11/15 14:50		Matrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic, Dissolved	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:04	7440-38-2	
Lead, Dissolved	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:04	7439-92-1	
6010 MET ICP, Tampa		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	15.2	ug/L	10.0	5.3	1	09/16/15 08:15	09/21/15 12:29	7440-38-2	
Calcium	590000	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:05	7440-70-2	
Lead	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:29	7439-92-1	
Magnesium	74200	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:05	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	1780000	ug/L	33000	16000	10	09/16/15 08:15	09/18/15 11:05		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	2630	mg/L	20.0	20.0	1		09/17/15 19:02		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Sample: SLMW-2R-0915 Lab ID: 35206815005 Collected: 09/11/15 12:30 Received: 09/11/15 14:50 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic, Dissolved	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:07	7440-38-2	
Lead, Dissolved	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:07	7439-92-1	
6010 MET ICP, Tampa Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	5.3 U	ug/L	10.0	5.3	1	09/16/15 08:15	09/16/15 18:31	7440-38-2	
Calcium	477000	ug/L	5000	2500	10	09/16/15 08:15	09/18/15 11:06	7440-70-2	
Lead	8.5 U	ug/L	15.0	8.5	1	09/16/15 08:15	09/16/15 18:31	7439-92-1	
Magnesium	17500	ug/L	500	250	1	09/16/15 08:15	09/18/15 10:46	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	1260000	ug/L	33000	16000	10	09/16/15 08:15	09/18/15 11:06		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	1920	mg/L	10.0	10.0	1		09/17/15 19:02		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Sawgrass Lake GW
Pace Project No.: 35206815

QC Batch: TAMP/6840 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Filtered
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

METHOD BLANK: 1332551 Matrix: Water
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	5.3 U	10.0	09/16/15 17:02	
Lead, Dissolved	ug/L	8.5 U	15.0	09/16/15 17:02	

LABORATORY CONTROL SAMPLE: 1332552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	250	223	89	80-120	
Lead, Dissolved	ug/L	250	237	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332553 1332554

Parameter	Units	35206511001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Arsenic, Dissolved	ug/L	5.3 U	250	250	226	228	91	91	75-125	1	20
Lead, Dissolved	ug/L	8.5 U	250	250	250	249	100	100	75-125	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

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QUALITY CONTROL DATA

Project: Sawgrass Lake GW
Pace Project No.: 35206815

QC Batch: TAMP/6844 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Tampa
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

METHOD BLANK: 1332590 Matrix: Water
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	5.3 U	10.0	09/16/15 18:09	
Calcium	ug/L	250 U	500	09/18/15 10:30	
Lead	ug/L	8.5 U	15.0	09/16/15 18:09	
Magnesium	ug/L	250 U	500	09/18/15 10:30	
Tot Hardness asCaCO3 (SM 2340B	ug/L	1600 U	3300	09/18/15 10:30	

LABORATORY CONTROL SAMPLE: 1332591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	245	98	80-120	
Calcium	ug/L	12500	12500	100	80-120	
Lead	ug/L	250	256	102	80-120	
Magnesium	ug/L	12500	11800	95	80-120	
Tot Hardness asCaCO3 (SM 2340B	ug/L	82700	79800	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332592 1332593

Parameter	Units	35206815001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Arsenic	ug/L	5.3 U	250	250	249	248	100	99	75-125	1	20
Calcium	ug/L	313000	12500	12500	316000	323000	17	77	75-125	2	20 M6
Lead	ug/L	8.5 U	250	250	235	231	94	92	75-125	2	20
Magnesium	ug/L	27500	12500	12500	38600	38300	89	87	75-125	1	20
Tot Hardness asCaCO3 (SM 2340B	ug/L	896000	82700	82700	947000	965000	62	83	75-125	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Sawgrass Lake GW
Pace Project No.: 35206815

QC Batch: WET/33046 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

METHOD BLANK: 1334167 Matrix: Water
Associated Lab Samples: 35206815001, 35206815002, 35206815003, 35206815004, 35206815005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0 U	5.0	09/17/15 18:59	

LABORATORY CONTROL SAMPLE: 1334168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	289	96	90-110	

SAMPLE DUPLICATE: 1335222

Parameter	Units	35206815003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2530	2730	8	5	J(D6)

SAMPLE DUPLICATE: 1335223

Parameter	Units	35206815004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2720	3	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.

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QUALIFIERS

Project: Sawgrass Lake GW
Pace Project No.: 35206815

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
PASI-Tp Pace Analytical Services - Tampa

ANALYTE QUALIFIERS

U Compound was analyzed for but not detected.
J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sawgrass Lake GW
Pace Project No.: 35206815

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35206815001	SLMW-4R-0915	EPA 3010	TAMP/6840	EPA 6010	TAMP/6854
35206815002	SLMW-3R-0915	EPA 3010	TAMP/6840	EPA 6010	TAMP/6854
35206815003	SLMW-1R-0915	EPA 3010	TAMP/6840	EPA 6010	TAMP/6854
35206815004	Dup B-0915	EPA 3010	TAMP/6840	EPA 6010	TAMP/6854
35206815005	SLMW-2R-0915	EPA 3010	TAMP/6840	EPA 6010	TAMP/6854
35206815001	SLMW-4R-0915	EPA 3010	TAMP/6844	EPA 6010	TAMP/6856
35206815002	SLMW-3R-0915	EPA 3010	TAMP/6844	EPA 6010	TAMP/6856
35206815003	SLMW-1R-0915	EPA 3010	TAMP/6844	EPA 6010	TAMP/6856
35206815004	Dup B-0915	EPA 3010	TAMP/6844	EPA 6010	TAMP/6856
35206815005	SLMW-2R-0915	EPA 3010	TAMP/6844	EPA 6010	TAMP/6856
35206815001	SLMW-4R-0915	SM 2540C	WET/33046		
35206815002	SLMW-3R-0915	SM 2540C	WET/33046		
35206815003	SLMW-1R-0915	SM 2540C	WET/33046		
35206815004	Dup B-0915	SM 2540C	WET/33046		
35206815005	SLMW-2R-0915	SM 2540C	WET/33046		

REPORT OF LABORATORY ANALYSIS

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WO#: 35206815



35206815

Request Document

event fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:

Company: ATKINS Global	Report To: <u>Brad Bayne</u>	Attention: <u>Bryan King</u>
Address: 4030 West Boy Scout Blvd., Su	Copy To: <u>Bryan King</u>	Company Name: <u>Atkins</u>
Tampa, FL 33607	Purchase Order #:	Address:
Email: <u>matthew@atkinsglobal.com</u>	Project Name: <u>Sawgrass Lake GW</u>	Pace Project Manager: <u>mike valder@pacerlabs.com</u>
Phone: <u>727-409-4433</u>	Project #:	Pace Profile #: <u>6964 line 6</u>
Requested Due Date: <u>Standard</u>		

Section B Required Project Information:

Regulatory Agency	State / Location
	FL

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique	MATRIX Drinking Water Water Wastewater Industrial Sewage Dil. Wine Air Other Tissue	CODE DW W WW IND S DIL W A O T TS	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
				START	END				H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other			6010 As,Pb,Ca,Mg T-hardne	TDS	6010 As,Pb,Ca,Mg Dissolve																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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1	SLMW-4R-0915			9/11	8:40	9/11	8:45	3	1	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Empty Containers	<u>Brad Bayne</u>		<u>9/11/15</u>		<u>1325</u>		<u>Bryan King</u>		<u>9/18</u>		<u>12:50</u>			
Metals for total & dissolved: As, Pb, Cd, Hg, No filters needed	<u>Brad Bayne</u>		<u>9/11/15</u>		<u>1450</u>		<u>Chris Atkins</u>		<u>9/11/15</u>		<u>1450</u>			
See Note														

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	DATE Signed:
SIGNATURE of SAMPLER:	

ATTACHMENT D

Surface Water Laboratory Analytical Reports

September 18, 2015

Brad Bayne
ATKINS Global
4030 West Boy Scout Blvd.,
Suite 700
Tampa, FL 33607

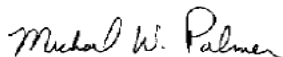
RE: Project: Sawgrass Lake SW
Pace Project No.: 35206804

Dear Brad Bayne:

Enclosed are the analytical results for sample(s) received by the laboratory on September 11, 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,



Mike Palmer for
Mike Valder
mike.valder@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

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
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 York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
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
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35206804001	SLSW-1-0	Water	09/11/15 09:11	09/11/15 14:50
35206804002	SLSW-1-1	Water	09/11/15 09:17	09/11/15 14:50
35206804003	SLSW-1-2	Water	09/11/15 09:19	09/11/15 14:50
35206804004	SLSW-1-3	Water	09/11/15 09:22	09/11/15 14:50
35206804005	SLSW-1-4	Water	09/11/15 09:25	09/11/15 14:50
35206804006	SLSW-2-0	Water	09/11/15 10:17	09/11/15 14:50
35206804007	SLSW-2-1	Water	09/11/15 10:21	09/11/15 14:50
35206804008	SLSW-2-3	Water	09/11/15 10:26	09/11/15 14:50
35206804009	SLSW-2-5	Water	09/11/15 10:31	09/11/15 14:50
35206804010	SLSW-3-0	Water	09/11/15 10:36	09/11/15 14:50
35206804011	SLSW-3-1	Water	09/11/15 10:39	09/11/15 14:50
35206804012	SLSW-3-3	Water	09/11/15 10:44	09/11/15 14:50
35206804013	SLSW-3-5	Water	09/11/15 10:50	09/11/15 14:50
35206804014	SLSW-4-0	Water	09/11/15 11:00	09/11/15 14:50
35206804015	SLSW-4-1	Water	09/11/15 11:08	09/11/15 14:50
35206804016	SLSW-4-5	Water	09/11/15 11:13	09/11/15 14:50
35206804017	SLSW-4-9	Water	09/11/15 11:20	09/11/15 14:50

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SAMPLE ANALYTE COUNT

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35206804001	SLSW-1-0	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804002	SLSW-1-1	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804003	SLSW-1-2	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804004	SLSW-1-3	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804005	SLSW-1-4	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804006	SLSW-2-0	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804007	SLSW-2-1	EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
35206804008	SLSW-2-3	EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O

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SAMPLE ANALYTE COUNT

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35206804009	SLSW-2-5	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804010	SLSW-3-0	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804011	SLSW-3-1	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804012	SLSW-3-3	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804013	SLSW-3-5	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804014	SLSW-4-0	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
35206804015	SLSW-4-1	EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O

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SAMPLE ANALYTE COUNT

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35206804016	SLSW-4-5	EPA 365.4	GPW	1	PASI-O
		EPA 200.7	TAP	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
35206804017	SLSW-4-9	EPA 365.4	GPW	1	PASI-O
		EPA 200.7	MEW	5	PASI-O
		TKN+NOx Calculation	KHC	1	PASI-O
		EPA 351.2	GPW	1	PASI-O
		EPA 353.2	BIP	1	PASI-O
		EPA 365.4	GPW	1	PASI-O

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-1-0 Lab ID: 35206804001 Collected: 09/11/15 09:11 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 09:55	7440-38-2	
Calcium	63400	ug/L	500	250	1	09/16/15 13:35	09/18/15 09:55	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 09:55	7439-92-1	
Magnesium	4960	ug/L	500	250	1	09/16/15 13:35	09/18/15 09:55	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	179000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 09:55		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.77	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:29	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	0.025	1		09/15/15 13:46		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.069 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:29	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-1-1 Lab ID: 35206804002 Collected: 09/11/15 09:17 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 09:59	7440-38-2	
Calcium	62500	ug/L	500	250	1	09/16/15 13:35	09/18/15 09:59	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 09:59	7439-92-1	
Magnesium	5010	ug/L	500	250	1	09/16/15 13:35	09/18/15 09:59	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	177000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 09:59		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	1.3	mg/L	0.50	0.086	1		09/18/15 14:53		
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	0.98	mg/L	0.50	0.086	1	09/15/15 13:36	09/17/15 11:31	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.35	mg/L	0.050	0.025	1		09/15/15 13:47		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.13	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:31	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-1-2 Lab ID: 35206804003 Collected: 09/11/15 09:19 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:15	7440-38-2	
Calcium	62700	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:15	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:15	7439-92-1	
Magnesium	4990	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:15	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	177000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:15		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.67	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:32	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.17	mg/L	0.050	0.025	1		09/15/15 13:48		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.053 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:32	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-1-3 Lab ID: 35206804004 Collected: 09/11/15 09:22 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:19	7440-38-2	
Calcium	62500	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:19	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:19	7439-92-1	
Magnesium	4970	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:19	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	177000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:19		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.86	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:33	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.17	mg/L	0.050	0.025	1		09/15/15 13:49		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.084 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:33	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-1-4 Lab ID: 35206804005 Collected: 09/11/15 09:25 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:23	7440-38-2	
Calcium	62800	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:23	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:23	7439-92-1	
Magnesium	4990	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:23	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	177000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:23		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.77	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:35	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.17	mg/L	0.050	0.025	1		09/15/15 13:53		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.071 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:35	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-2-0 Lab ID: 35206804006 Collected: 09/11/15 10:17 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:28	7440-38-2	
Calcium	46300	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:28	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:28	7439-92-1	
Magnesium	3450	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:28	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	130000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:28		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.63	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:36	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		09/15/15 13:55		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.050 U	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:36	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-2-1 Lab ID: 35206804007 Collected: 09/11/15 10:21 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:32	7440-38-2	
Calcium	45900	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:32	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:32	7439-92-1	
Magnesium	3430	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:32	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	129000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:32		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.64	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:37	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		09/15/15 13:56		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.050 U	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:37	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-2-3 Lab ID: 35206804008 Collected: 09/11/15 10:26 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:31	7440-38-2	
Calcium	42200	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:31	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:31	7439-92-1	
Magnesium	3060	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:31	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	118000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:31		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.59	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:39	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		09/15/15 14:00		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.050 U	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:39	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-2-5 Lab ID: 35206804009 Collected: 09/11/15 10:31 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:35	7440-38-2	
Calcium	41800	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:35	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:35	7439-92-1	
Magnesium	3030	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:35	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	117000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:35		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.62	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:40	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		09/15/15 14:04		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.059 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:40	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-3-0 Lab ID: 35206804010 Collected: 09/11/15 10:36 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:39	7440-38-2	
Calcium	41800	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:39	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:39	7439-92-1	
Magnesium	3050	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:39	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	117000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:39		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.75	mg/L	0.50	0.086	1		09/18/15 14:53		
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	0.71	mg/L	0.50	0.086	1	09/15/15 13:36	09/17/15 11:42	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres. Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.035 I	mg/L	0.050	0.025	1		09/15/15 14:05		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.069 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:42	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-3-1 Lab ID: 35206804011 Collected: 09/11/15 10:39 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:43	7440-38-2	
Calcium	41200	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:43	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:43	7439-92-1	
Magnesium	3040	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:43	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	115000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:43		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.72	mg/L	0.50	0.086	1		09/18/15 14:53		
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	0.71	mg/L	0.50	0.086	1	09/15/15 13:36	09/17/15 11:46	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		09/15/15 14:09		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.061 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:46	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-3-3 Lab ID: 35206804012 Collected: 09/11/15 10:44 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:47	7440-38-2	
Calcium	42700	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:47	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:47	7439-92-1	
Magnesium	3120	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:47	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	120000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:47		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.67	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:47	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		09/15/15 14:14		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.066 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:47	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-3-5 Lab ID: 35206804013 Collected: 09/11/15 10:50 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:51	7440-38-2	
Calcium	42600	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:51	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:51	7439-92-1	
Magnesium	3100	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:51	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	119000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:51		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.66	mg/L	0.50	0.086	1		09/18/15 14:53		
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	0.66	mg/L	0.50	0.086	1	09/15/15 13:36	09/17/15 11:48	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		09/15/15 14:15		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.063 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:48	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-4-0		Lab ID: 35206804014		Collected: 09/11/15 11:00		Received: 09/11/15 14:50		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							
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:55	7440-38-2	
Calcium	41400	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:55	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 01:55	7439-92-1	
Magnesium	3020	ug/L	500	250	1	09/16/15 13:35	09/18/15 01:55	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	116000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 01:55		
Total Nitrogen Calculation		Analytical Method: TKN+NOx Calculation							
Total Nitrogen	0.90	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:50	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	0.31	mg/L	0.050	0.025	1		09/15/15 14:13		
365.4 Phosphorus, Total		Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus, Total (as P)	0.070 I	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:50	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-4-1		Lab ID: 35206804015		Collected: 09/11/15 11:08		Received: 09/11/15 14:50		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							
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 02:00	7440-38-2	
Calcium	42000	ug/L	500	250	1	09/16/15 13:35	09/18/15 02:00	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 02:00	7439-92-1	
Magnesium	3040	ug/L	500	250	1	09/16/15 13:35	09/18/15 02:00	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	118000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 02:00		
Total Nitrogen Calculation		Analytical Method: TKN+NOx Calculation							
Total Nitrogen	0.58	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/15/15 13:36	09/17/15 11:51	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		09/15/15 14:16		
365.4 Phosphorus, Total		Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus, Total (as P)	0.050 U	mg/L	0.10	0.050	1	09/15/15 13:36	09/17/15 11:51	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-4-5 Lab ID: 35206804016 Collected: 09/11/15 11:13 Received: 09/11/15 14:50 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									
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 02:16	7440-38-2	
Calcium	39500	ug/L	500	250	1	09/16/15 13:35	09/18/15 02:16	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 02:16	7439-92-1	
Magnesium	2910	ug/L	500	250	1	09/16/15 13:35	09/18/15 02:16	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	111000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 02:16		
Total Nitrogen Calculation Analytical Method: TKN+NOx Calculation									
Total Nitrogen	0.72	mg/L	0.50	0.086	1		09/18/15 14:53		
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Nitrogen, Kjeldahl, Total	0.72	mg/L	0.50	0.086	1	09/16/15 12:36	09/17/15 12:10	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		09/15/15 14:18		
365.4 Phosphorus, Total Analytical Method: EPA 365.4 Preparation Method: EPA 365.4									
Phosphorus, Total (as P)	0.066 I	mg/L	0.10	0.050	1	09/16/15 12:36	09/17/15 12:10	7723-14-0	

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ANALYTICAL RESULTS

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Sample: SLSW-4-9		Lab ID: 35206804017		Collected: 09/11/15 11:20		Received: 09/11/15 14:50		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							
Arsenic	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:40	7440-38-2	
Calcium	43300	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:40	7440-70-2	
Lead	5.0 U	ug/L	10.0	5.0	1	09/16/15 13:35	09/18/15 10:40	7439-92-1	
Magnesium	3280	ug/L	500	250	1	09/16/15 13:35	09/18/15 10:40	7439-95-4	
Tot Hardness asCaCO3 (SM 2340B	122000	ug/L	3300	1600	1	09/16/15 13:35	09/18/15 10:40		
Total Nitrogen Calculation		Analytical Method: TKN+NOx Calculation							
Total Nitrogen	0.77	mg/L	0.50	0.086	1		09/18/15 14:53		
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	09/16/15 12:36	09/17/15 12:12	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		09/15/15 14:19		
365.4 Phosphorus, Total		Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus, Total (as P)	0.078 I	mg/L	0.10	0.050	1	09/16/15 12:36	09/17/15 12:12	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW
Pace Project No.: 35206804

QC Batch:	MPRP/26311	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015, 35206804016		

METHOD BLANK: 1332851 Matrix: Water

Associated Lab Samples: 35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015, 35206804016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	5.0 U	10.0	09/18/15 09:01	
Calcium	ug/L	250 U	500	09/18/15 09:01	
Lead	ug/L	5.0 U	10.0	09/18/15 09:01	
Magnesium	ug/L	250 U	500	09/18/15 09:01	
Tot Hardness asCaCO3 (SM 2340B	ug/L	1600 U	3300	09/18/15 09:01	

LABORATORY CONTROL SAMPLE: 1332852

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	243	97	85-115	
Calcium	ug/L	12500	12700	101	85-115	
Lead	ug/L	250	260	104	85-115	
Magnesium	ug/L	12500	12600	101	85-115	
Tot Hardness asCaCO3 (SM 2340B	ug/L	82700	83600	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332853 1332854

Parameter	Units	35206646001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	5.0 U	250	250	250	253	100	101	70-130	1	20	
Calcium	ug/L	169000	12500	12500	180000	178000	88	70	70-130	1	20	
Lead	ug/L	5.0 U	250	250	240	242	96	97	70-130	0	20	
Magnesium	ug/L	82500	12500	12500	94100	93600	93	89	70-130	1	20	
Tot Hardness asCaCO3 (SM 2340B	ug/L	761000	82700	82700	837000	829000	91	82	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332855 1332856

Parameter	Units	35206646002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	5.0 U	250	250	231	229	93	91	70-130	1	20	
Calcium	ug/L	290000	12500	12500	54000	54300	-1890	-1890	70-130	1	20 J(M1)	
Lead	ug/L	5.0 U	250	250	238	236	95	94	70-130	1	20	
Magnesium	ug/L	120000	12500	12500	14600	14400	-839	-841	70-130	1	20 J(M1)	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332855 1332856												
Parameter	Units	35206646002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Tot Hardness asCaCO3 (SM 2340B	ug/L	1220000	82700	82700	195000	195000	-1240	-1240	70-130	0	20	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW
Pace Project No.: 35206804

QC Batch: MPRP/26312 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 35206804017

METHOD BLANK: 1332857 Matrix: Water
Associated Lab Samples: 35206804017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	5.0 U	10.0	09/18/15 02:20	
Calcium	ug/L	250 U	500	09/18/15 02:20	
Lead	ug/L	5.0 U	10.0	09/18/15 02:20	
Magnesium	ug/L	250 U	500	09/18/15 02:20	
Tot Hardness asCaCO3 (SM 2340B	ug/L	1600 U	3300	09/18/15 02:20	

LABORATORY CONTROL SAMPLE: 1332858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	226	90	85-115	
Calcium	ug/L	12500	11700	93	85-115	
Lead	ug/L	250	237	95	85-115	
Magnesium	ug/L	12500	11200	90	85-115	
Tot Hardness asCaCO3 (SM 2340B	ug/L	82700	75200	91	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332859 1332860

Parameter	Units	35206652001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	250	250	227	236	89	93	70-130	4	20	
Calcium	ug/L	67.2 mg/L	12500	12500	78400	81400	89	113	70-130	4	20	
Lead	ug/L	ND	250	250	232	241	92	96	70-130	4	20	
Magnesium	ug/L	9.5 mg/L	12500	12500	20600	21300	88	94	70-130	4	20	
Tot Hardness asCaCO3 (SM 2340B	ug/L	207 mg/L	82700	82700	281000	291000	89	101	70-130	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1332861 1332862

Parameter	Units	35206946002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	5.0 U	250	250	246	246	98	98	70-130	0	20	
Calcium	ug/L	31000	12500	12500	43100	42500	97	92	70-130	1	20	
Lead	ug/L	5.0 U	250	250	254	254	102	101	70-130	0	20	
Magnesium	ug/L	2360	12500	12500	14700	14600	98	98	70-130	0	20	
Tot Hardness asCaCO3 (SM 2340B	ug/L	87000	82700	82700	168000	166000	98	96	70-130	1	20	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

QC Batch:	WETA/50213	Analysis Method:	EPA 351.2
QC Batch Method:	EPA 351.2	Analysis Description:	351.2 TKN
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015		

METHOD BLANK:	1331410	Matrix:	Water
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	09/17/15 11:14	

LABORATORY CONTROL SAMPLE: 1331411						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.6	98	90-110	

MATRIX SPIKE SAMPLE:	1331413						
		35206730001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	20	20.1	95	90-110	

SAMPLE DUPLICATE: 1331412						
Parameter	Units	35206730001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	1.1	3	20	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

QC Batch: WETA/50244 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 35206804016, 35206804017

METHOD BLANK: 1332968 Matrix: Water

Associated Lab Samples: 35206804016, 35206804017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	09/17/15 11:58	

LABORATORY CONTROL SAMPLE: 1332969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.6	98	90-110	

MATRIX SPIKE SAMPLE: 1332971

Parameter	Units	35206697001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.5	20	21.3	94	90-110	

SAMPLE DUPLICATE: 1332970

Parameter	Units	35206697001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.5	2.4	6	20	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

QC Batch:	WETA/50198	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, preserved
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007		

METHOD BLANK:	1331177	Matrix:	Water
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.050	09/16/15 09:28	

LABORATORY CONTROL SAMPLE: 1331178						
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:		1331180					
		35206677008	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.034 I	2	2.0	99	80-120	

MATRIX SPIKE SAMPLE:		1331182					
		35206730002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.15	2	2.0	93	80-120	

SAMPLE DUPLICATE: 1331179						
Parameter	Units	35206677008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.034 I	0.034 I		20	

SAMPLE DUPLICATE: 1331181						
Parameter	Units	35206730002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.15	0.15	0	20	

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW
Pace Project No.: 35206804

QC Batch:	WETA/50199	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, preserved
Associated Lab Samples:	35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015, 35206804016, 35206804017		

METHOD BLANK:	1331185	Matrix:	Water
Associated Lab Samples:	35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015, 35206804016, 35206804017		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.050	09/15/15 13:57	

LABORATORY CONTROL SAMPLE: 1331186

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: 1331188

Parameter	Units	35206804008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	2	1.9	94	80-120	

MATRIX SPIKE SAMPLE: 1331190

Parameter	Units	35206843001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	5.2	4	8.8	90	80-120	

SAMPLE DUPLICATE: 1331187

Parameter	Units	35206804008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.025 U	0.025 U		20	

SAMPLE DUPLICATE: 1331189

Parameter	Units	35206843001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	5.2	5.2	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

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

QC Batch:	WETA/50214	Analysis Method:	EPA 365.4
QC Batch Method:	EPA 365.4	Analysis Description:	365.4 Phosphorus
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015		

METHOD BLANK:	1331414	Matrix:	Water
Associated Lab Samples:	35206804001, 35206804002, 35206804003, 35206804004, 35206804005, 35206804006, 35206804007, 35206804008, 35206804009, 35206804010, 35206804011, 35206804012, 35206804013, 35206804014, 35206804015		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	09/17/15 11:52	

LABORATORY CONTROL SAMPLE: 1331415						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	4.0	99	90-110	

MATRIX SPIKE SAMPLE:	1331417						
		35206730001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	0.33	4	4.1	95	80-120	

SAMPLE DUPLICATE: 1331416						
Parameter	Units	35206730001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P)	mg/L	0.33	0.33	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Sawgrass Lake SW

Pace Project No.: 35206804

QC Batch: WETA/50245

Analysis Method: EPA 365.4

QC Batch Method: EPA 365.4

Analysis Description: 365.4 Phosphorus

Associated Lab Samples: 35206804016, 35206804017

METHOD BLANK: 1332975

Matrix: Water

Associated Lab Samples: 35206804016, 35206804017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	09/17/15 12:29	

LABORATORY CONTROL SAMPLE: 1332976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	4.0	99	90-110	

MATRIX SPIKE SAMPLE: 1332978

Parameter	Units	35206697001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	0.64	4	4.5	96	80-120	

SAMPLE DUPLICATE: 1332977

Parameter	Units	35206697001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P)	mg/L	0.64	0.63	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Sawgrass Lake SW
Pace Project No.: 35206804

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.
J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35206804001	SLSW-1-0	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804002	SLSW-1-1	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804003	SLSW-1-2	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804004	SLSW-1-3	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804005	SLSW-1-4	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804006	SLSW-2-0	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804007	SLSW-2-1	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804008	SLSW-2-3	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804009	SLSW-2-5	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804010	SLSW-3-0	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804011	SLSW-3-1	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804012	SLSW-3-3	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804013	SLSW-3-5	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804014	SLSW-4-0	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804015	SLSW-4-1	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804016	SLSW-4-5	EPA 200.7	MPRP/26311	EPA 200.7	ICP/15908
35206804017	SLSW-4-9	EPA 200.7	MPRP/26312	EPA 200.7	ICP/15909
35206804001	SLSW-1-0	TKN+NOx Calculation	WET/33074		
35206804002	SLSW-1-1	TKN+NOx Calculation	WET/33074		
35206804003	SLSW-1-2	TKN+NOx Calculation	WET/33074		
35206804004	SLSW-1-3	TKN+NOx Calculation	WET/33074		
35206804005	SLSW-1-4	TKN+NOx Calculation	WET/33074		
35206804006	SLSW-2-0	TKN+NOx Calculation	WET/33074		
35206804007	SLSW-2-1	TKN+NOx Calculation	WET/33074		
35206804008	SLSW-2-3	TKN+NOx Calculation	WET/33074		
35206804009	SLSW-2-5	TKN+NOx Calculation	WET/33074		
35206804010	SLSW-3-0	TKN+NOx Calculation	WET/33074		
35206804011	SLSW-3-1	TKN+NOx Calculation	WET/33074		
35206804012	SLSW-3-3	TKN+NOx Calculation	WET/33074		
35206804013	SLSW-3-5	TKN+NOx Calculation	WET/33074		
35206804014	SLSW-4-0	TKN+NOx Calculation	WET/33074		
35206804015	SLSW-4-1	TKN+NOx Calculation	WET/33074		
35206804016	SLSW-4-5	TKN+NOx Calculation	WET/33074		
35206804017	SLSW-4-9	TKN+NOx Calculation	WET/33074		
35206804001	SLSW-1-0	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804002	SLSW-1-1	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804003	SLSW-1-2	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804004	SLSW-1-3	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804005	SLSW-1-4	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804006	SLSW-2-0	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804007	SLSW-2-1	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804008	SLSW-2-3	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804009	SLSW-2-5	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804010	SLSW-3-0	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804011	SLSW-3-1	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804012	SLSW-3-3	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804013	SLSW-3-5	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sawgrass Lake SW

Pace Project No.: 35206804

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35206804014	SLSW-4-0	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804015	SLSW-4-1	EPA 351.2	WETA/50213	EPA 351.2	WETA/50222
35206804016	SLSW-4-5	EPA 351.2	WETA/50244	EPA 351.2	WETA/50273
35206804017	SLSW-4-9	EPA 351.2	WETA/50244	EPA 351.2	WETA/50273
35206804001	SLSW-1-0	EPA 353.2	WETA/50198		
35206804002	SLSW-1-1	EPA 353.2	WETA/50198		
35206804003	SLSW-1-2	EPA 353.2	WETA/50198		
35206804004	SLSW-1-3	EPA 353.2	WETA/50198		
35206804005	SLSW-1-4	EPA 353.2	WETA/50198		
35206804006	SLSW-2-0	EPA 353.2	WETA/50198		
35206804007	SLSW-2-1	EPA 353.2	WETA/50198		
35206804008	SLSW-2-3	EPA 353.2	WETA/50199		
35206804009	SLSW-2-5	EPA 353.2	WETA/50199		
35206804010	SLSW-3-0	EPA 353.2	WETA/50199		
35206804011	SLSW-3-1	EPA 353.2	WETA/50199		
35206804012	SLSW-3-3	EPA 353.2	WETA/50199		
35206804013	SLSW-3-5	EPA 353.2	WETA/50199		
35206804014	SLSW-4-0	EPA 353.2	WETA/50199		
35206804015	SLSW-4-1	EPA 353.2	WETA/50199		
35206804016	SLSW-4-5	EPA 353.2	WETA/50199		
35206804017	SLSW-4-9	EPA 353.2	WETA/50199		
35206804001	SLSW-1-0	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804002	SLSW-1-1	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804003	SLSW-1-2	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804004	SLSW-1-3	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804005	SLSW-1-4	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804006	SLSW-2-0	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804007	SLSW-2-1	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804008	SLSW-2-3	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804009	SLSW-2-5	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804010	SLSW-3-0	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804011	SLSW-3-1	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804012	SLSW-3-3	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804013	SLSW-3-5	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804014	SLSW-4-0	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804015	SLSW-4-1	EPA 365.4	WETA/50214	EPA 365.4	WETA/50223
35206804016	SLSW-4-5	EPA 365.4	WETA/50245	EPA 365.4	WETA/50274
35206804017	SLSW-4-9	EPA 365.4	WETA/50245	EPA 365.4	WETA/50274

REPORT OF LABORATORY ANALYSIS

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Pace Analytical
ANALYTICAL SERVICES



Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Invoice Information:

Attention:	
Company Name:	
Address:	
Page Quote:	
Peace Project Manager:	mike.valder@pacelabs.com,
Peace Profile #:	6964 line 5

FL

[illegible]

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: <i>Jessica Hudson</i> SIGNATURE of SAMPLER: <i>Jessica Hudson</i>					
DATE Signed: <i>09/11/2015</i>					

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	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: Atkins Project # 35206804

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 TPA-14 Type of Ice ☒ Wet ☐ Blue ☐ None

Cooler Temperature°C 4.6 (Visual) 0 (Correction Factor) 4.6 (Actual) 3.9

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

☐ Yes ☐ No

Date and Initials of person examining contents: 9/11/15 CLK

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: _____

Size & Qty of Bottles Received

Production Code: _____

_____ x 5 Gal

Date/Time Opened: _____

_____ x 2.5 Gal

_____ x 1 Gal

Number of Unopened Bottles Remaining: _____

_____ x 1 Liter

_____ x 500 mL

_____ x 250 mL

_____ x Other: _____

Extra Sample in Shed: Yes No