

5/19/2022

Matt Logan  
Public Works Department  
410 Taylor Street, Unit 104  
Punta Gorda, Florida 33950

Re: Technical Memorandum for 2022 First Quarterly Sampling Event at Sunshine Lake

Mr. Logan,

On March 28, 2022, GPI and ESA personnel mobilized to Sunshine Lake in Port Charlotte, Florida, to perform surface water sampling. Water quality data were recorded, and water samples were collected for laboratory analysis at eight locations along the lake. Sample locations were recorded as Sunrise 1, Sunrise 2, and Sunrise 3— locations south of Gertrude Ave. bridge; and Sunshine 1, Sunshine 2, Sunshine 3, Sunshine 4, and Sunshine 5—locations north of Gertrude Ave. bridge. At each location, water level and total water level depth were recorded using a Secchi disk. Water quality data including pH, temperature, conductivity, DO%, and DO concentration (mg/L) were recorded at various depths prior to collecting water samples. One additional water sample was collected at the opening of an active flowing outfall that was observed during the sampling effort. The outfall was confirmed to be part of an ongoing groundwater augmentation effort. Water samples were collected in accordance with F.A.C. Chapter 62-160 FS 2100 Surface Water Sampling standard operating procedure. Following collection, samples were placed on ice and taken to Benchmark EnviroAnalytical, Inc. for analysis (report attached).

Emily Keenan, from ESA, reviewed the data results. The relevant portion of ESA's report (attached) is below: *Overall, chlorophyll-a concentrations were below the 20 µg/L criteria indicating that the phytoplankton production is not a concern during this quarter. The average chlorophyll-a concentrations in Sunrise Waterway was 13.3 µg/L compared to 5.8 µg/L in Sunshine Lake. TN concentrations in the lake (1.06 mg/L) and waterway (1.26 mg/L) were below the appropriate criteria (1.91 mg/L). Similarly, TP concentrations were 0.032 and 0.06 mg/L in the lake and waterway, respectively were below the 0.09 mg/L criteria. These findings indicate that water quality is currently meeting the numeric nutrient criteria established for low-color, alkaline lakes. However, it is important to note that this sampling event was performed during the dry season when water quality has typically been "good" within the Sunshine Lake and Sunrise Waterway system. Increased phytoplankton production and nutrient loading has occurred during the wet season sampling efforts (i.e., July).*

*In addition to nutrients, E.coli bacteria concentrations were quantified to evaluate the potential for human-health risks. Based upon the sampling frequency, the applicable criterion for Class-III freshwater systems is the "10th percentile" value of 410 /100 ml. Concentrations remained below the criteria in both the lake (48 CFU/100mL) and waterway (114 CFU/100mL).*

We are in the process of scheduling the Second Quarter sampling. Please feel free to contact me with any questions.

Thank you,



Dan Schmutz, M.S.  
Chief Environmental Scientist

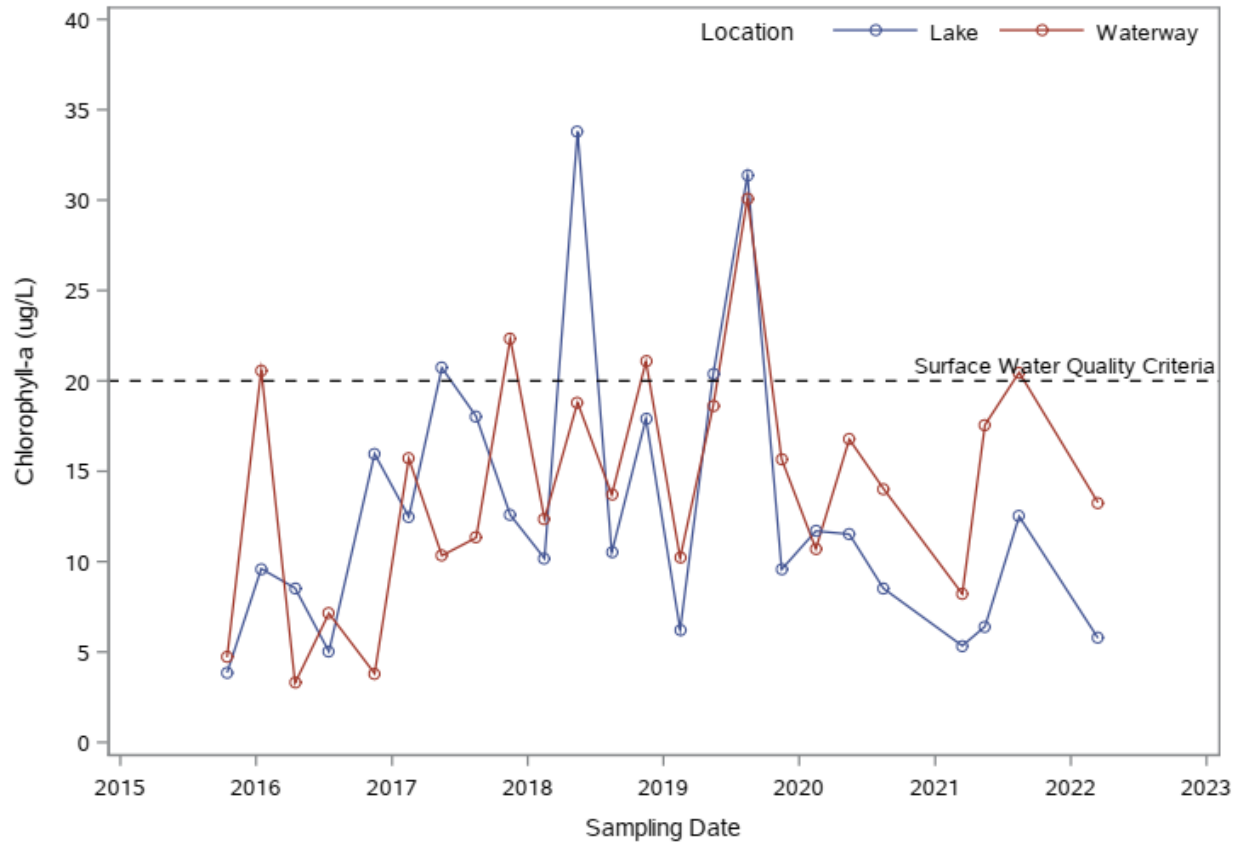
## Quarterly Water Quality Summary (March 2022)

Sunshine Lake and Sunrise Waterway have been examined both as a combined system (for regulatory purposes) and separated – for exploring potential differences that might be important to act upon. The lake and waterway are characterized as low-color and alkaline waterbodies, with a resultant chlorophyll-a criterion of 20 ug/L. As such, if the lake records a chlorophyll-a annual geometric mean below 20 ug/L, then the TN and TP targets would be at 1.91 and 0.09 mg/L, respectively. However, if chlorophyll-a values exceeded 20 ug/L, then the TN and TP standards drop more than 50%, as FDEP would conclude that the lake was impaired for algae, and nutrient load reductions would be warranted.

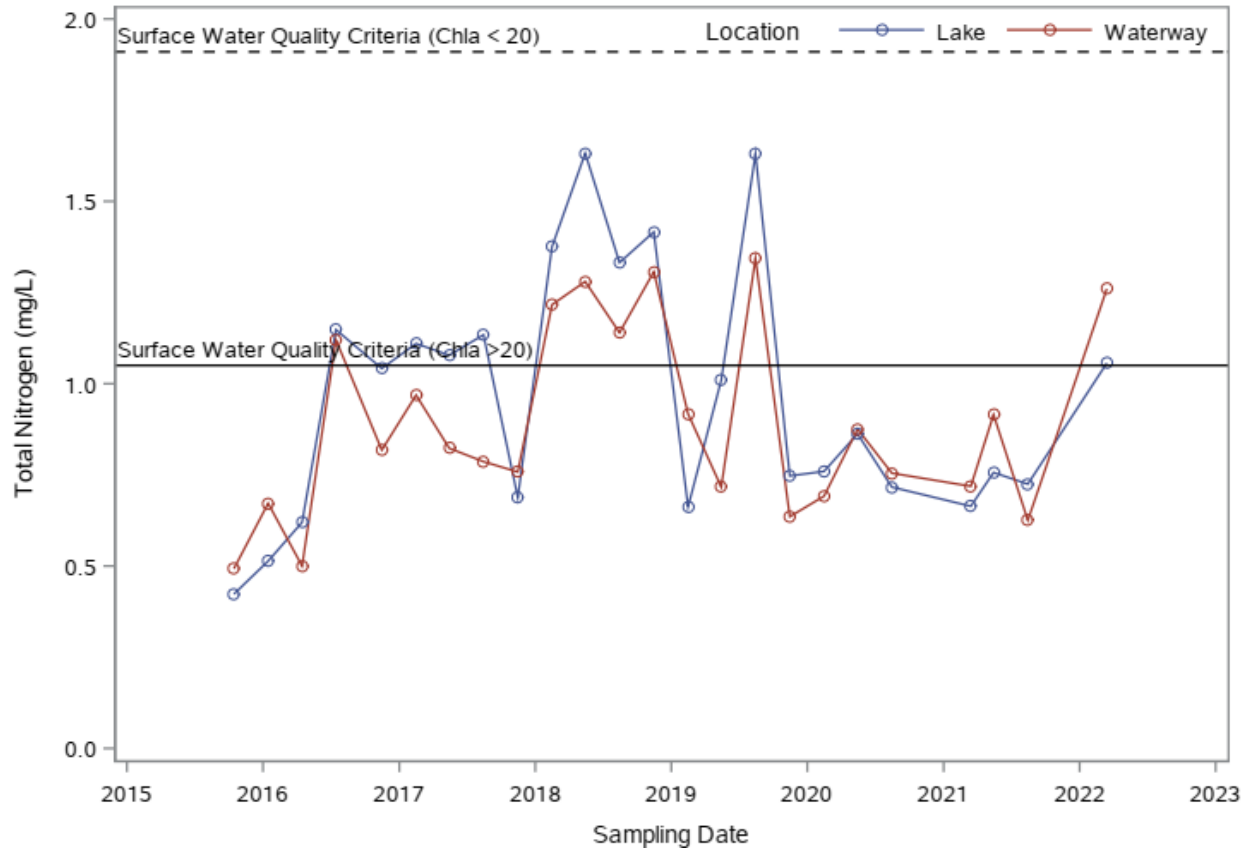
Results of the March 28, 2022 quarterly sampling effort are provided below. At the time of surface water collection, the lake-level groundwater augmentation wells were pumping water into the lake. As a result, the specific conductivity adjacent to Sunshine Lake sampling stations 1 and 2 had elevated specific conductivity consistent with typical groundwater characteristics. GPI and ESA have recommended collecting supplemental samples directly from the groundwater pump to allow for the water quality characterization of this external contribution to Sunshine Lake/Sunrise Waterway.

Overall, chlorophyll-a concentrations were below the 20 µg/L criteria indicating that the phytoplankton production is not a concern during this quarter (Figure 1). The average chlorophyll-a concentrations in Sunrise Waterway was 13.3 µg/L compared to 5.8 µg/L in Sunshine Lake. TN concentrations in the lake (1.06 mg/L) and waterway (1.26 mg/L) were below the appropriate criteria (1.91 mg/L; Figure 2). Similarly, TP concentrations were 0.032 and 0.06 mg/L in the lake and waterway, respectively were below the 0.09 mg/L criteria (Figure 3). These findings indicate that water quality is currently meeting the numeric nutrient criteria established for low-color, alkaline lakes. However, it is important to note that this sampling event was performed during the dry season when water quality has typically been “good” within the Sunshine Lake and Sunrise Waterway system. Increased phytoplankton production and nutrient loading has occurred during the wet season sampling efforts (i.e., July).

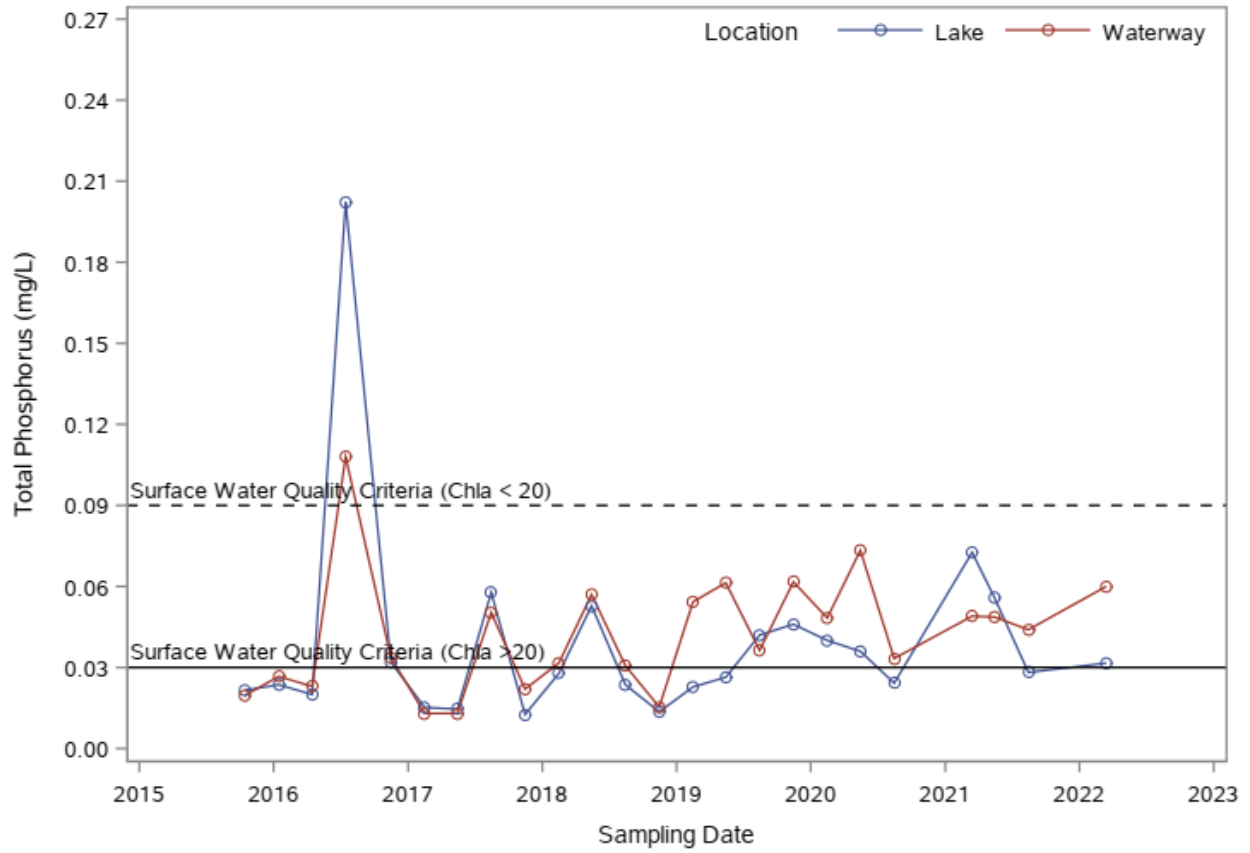
In addition to nutrients, E.coli bacteria concentrations were quantified to evaluate the potential for human-health risks. Based upon the sampling frequency, the applicable criterion for Class-III freshwater systems is the “10<sup>th</sup> percentile” value of 410 /100 ml. Concentrations remained below the criteria in both the lake (48 CFU/100mL) and waterway (114 CFU/100mL; Figure 4).



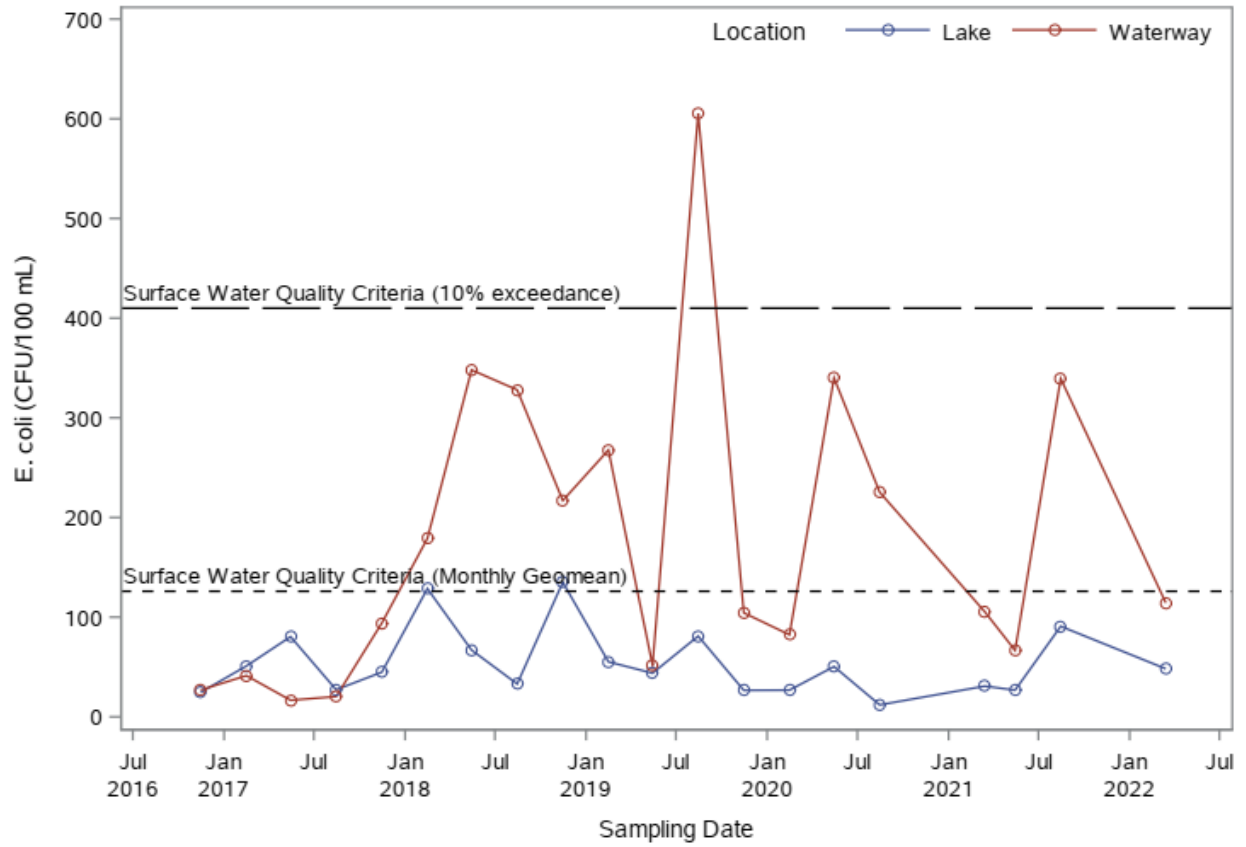
**Figure 1. Monthly average chlorophyll-a concentrations in Sunshine Lake and Sunrise Waterway.**



**Figure 2. Monthly average total nitrogen concentrations in Sunshine Lake and Sunrise Waterway.**



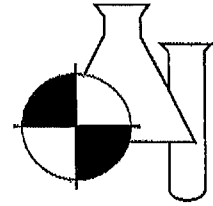
**Figure 3. Monthly average total phosphorus concentrations in Sunshine Lake and Sunrise Waterway.**



**Figure 4. Monthly average E.coli bacteria concentrations in Sunshine Lake and Sunrise Waterway.**

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*EnviroAnalytical Inc.*



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## ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

Submission Number : 22031801

Gpi - Greenman-Pedersen Inc  
1000 North Ashley Dr Suite 100  
Tampa, FL 33602

Project Name : SUNSHINE LAKE/SUNRISE WATERWAY Q

Date Received : 03/29/2022

Time Received : 1655

Scott Deitche

Submission Number: 22031801  
Sample Number: 001  
Sample Description: Sunshine 1

Sample Date: 03/28/2022  
Sample Time: 1000  
Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:28	CW
TOTAL KJELDAHL NITROGEN	0.817	MG/L	0.05	0.20	351.2	03/31/2022 17:33	HR
ORTHO PHOSPHORUS AS P	0.002 U	MG/L	0.002	0.008	365.3	03/29/2022 18:00	KA
TOTAL PHOSPHORUS AS P	0.043	MG/L	0.008	0.032	365.3	03/31/2022 16:04	KA
CHLOROPHYLL A, CORRECTED	7.53	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	41	#/100 ML	10	10	SM9223B	03/28/2022 14:54	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.008	0.024	SYSTEAS EASY	04/04/2022 13:57	CW
TOTAL NITROGEN	0.817	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 13:57	HR/CW

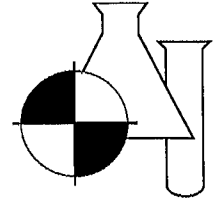
Submission Number: 22031801  
Sample Number: 002  
Sample Description: Sunshine 2

Sample Date: 03/28/2022  
Sample Time: 0950  
Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:30	CW
TOTAL KJELDAHL NITROGEN	0.951	MG/L	0.05	0.20	351.2	03/31/2022 17:34	HR
ORTHO PHOSPHORUS AS P	0.002 U	MG/L	0.002	0.008	365.3	03/29/2022 18:02	KA
TOTAL PHOSPHORUS AS P	0.017 I	MG/L	0.008	0.032	365.3	03/31/2022 15:08	KA
CHLOROPHYLL A, CORRECTED	5.97	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	75	#/100 ML	10	10	SM9223B	03/28/2022 14:54	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.008	0.024	SYSTEAS EASY	04/04/2022 13:58	CW
TOTAL NITROGEN	0.951	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 13:58	HR/CW

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**Submission Number:** 22031801  
**Sample Number:** 003  
**Sample Description:** Sunshine 3

**Sample Date:** 03/28/2022  
**Sample Time:** 0940  
**Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:32	CW
TOTAL KJELDAHL NITROGEN	0.934	MG/L	0.05	0.20	351.2	03/31/2022 17:36	HR
ORTHO PHOSPHORUS AS P	0.017	MG/L	0.002	0.008	365.3	03/29/2022 18:03	KA
TOTAL PHOSPHORUS AS P	0.035	MG/L	0.008	0.032	365.3	03/31/2022 16:06	KA
CHLOROPHYLL A, CORRECTED	5.28	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	10	#/100 ML	10	10	SM9223B	03/28/2022 14:54	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 13:59	CW
TOTAL NITROGEN	0.934	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 13:59	HR/CW

**Submission Number:** 22031801  
**Sample Number:** 004  
**Sample Description:** Sunshine 4

**Sample Date:** 03/28/2022  
**Sample Time:** 0928  
**Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:38	CW
TOTAL KJELDAHL NITROGEN	1.48	MG/L	0.05	0.20	351.2	03/31/2022 17:37	HR
ORTHO PHOSPHORUS AS P	0.022	MG/L	0.002	0.008	365.3	03/29/2022 18:05	KA
TOTAL PHOSPHORUS AS P	0.036	MG/L	0.008	0.032	365.3	03/31/2022 16:07	KA
CHLOROPHYLL A, CORRECTED	5.03	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	52	#/100 ML	10	10	SM9223B	03/28/2022 15:26	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 13:59	CW
TOTAL NITROGEN	1.48	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 13:59	HR/CW

**Submission Number:** 22031801  
**Sample Number:** 005  
**Sample Description:** Sunshine 5

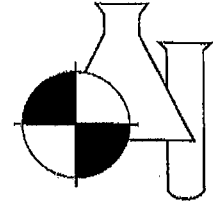
**Sample Date:** 03/28/2022  
**Sample Time:** 0913  
**Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:42	CW
TOTAL KJELDAHL NITROGEN	1.10	MG/L	0.05	0.20	351.2	03/31/2022 17:38	HR
ORTHO PHOSPHORUS AS P	0.018	MG/L	0.002	0.008	365.3	03/29/2022 18:07	KA
TOTAL PHOSPHORUS AS P	0.027 I	MG/L	0.008	0.032	365.3	03/31/2022 15:11	KA
CHLOROPHYLL A, CORRECTED	5.05	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	63	#/100 ML	10	10	SM9223B	03/28/2022 15:26	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 14:00	CW



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TOTAL NITROGEN	1.10	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:00	HR/CW
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Submission Number: 22031801	Sample Date: 03/28/2022
Sample Number: 006	Sample Time: 1103
Sample Description: Sunrise 1	Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:46	CW
TOTAL KJELDAHL NITROGEN	1.23	MG/L	0.05	0.20	351.2	03/31/2022 17:48	HR
ORTHO PHOSPHORUS AS P	0.002 I	MG/L	0.002	0.008	365.3	03/29/2022 18:08	KA
TOTAL PHOSPHORUS AS P	0.087	MG/L	0.008	0.032	365.3	03/31/2022 16:12	KA
CHLOROPHYLL A, CORRECTED	12.8	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	97	#/100 ML	10	10	SM9223B	03/28/2022 15:26	E85086
NITRATE+NITRITE AS N	0.008 U	MG/L	0.008	0.024	SYSTEAS EASY	04/04/2022 14:02	CW
TOTAL NITROGEN	1.23	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:02	HR/CW

Submission Number: 22031801	Sample Date: 03/28/2022
Sample Number: 007	Sample Time: 1050
Sample Description: Sunrise 2	Sample Method: Grab

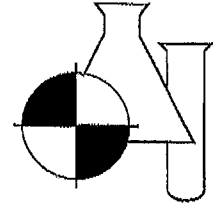
Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:48	CW
TOTAL KJELDAHL NITROGEN	1.32	MG/L	0.05	0.20	351.2	03/31/2022 17:50	HR
ORTHO PHOSPHORUS AS P	0.002 I	MG/L	0.002	0.008	365.3	03/29/2022 18:09	KA
TOTAL PHOSPHORUS AS P	0.056	MG/L	0.008	0.032	365.3	03/31/2022 16:13	KA
CHLOROPHYLL A, CORRECTED	14.4	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	226	#/100 ML	10	10	SM9223B	03/28/2022 15:26	E85086
NITRATE+NITRITE AS N	0.007 I	MG/L	0.008	0.024	SYSTEAS EASY	04/04/2022 14:04	CW
TOTAL NITROGEN	1.33	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:04	HR/CW

Submission Number: 22031801	Sample Date: 03/28/2022
Sample Number: 008	Sample Time: 1033
Sample Description: Sunrise 3	Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/07/2022 12:30	CW
TOTAL KJELDAHL NITROGEN	1.22	MG/L	0.05	0.20	351.2	03/31/2022 17:51	HR
ORTHO PHOSPHORUS AS P	0.002 U	MG/L	0.002	0.008	365.3	03/29/2022 18:11	KA
TOTAL PHOSPHORUS AS P	0.038	MG/L	0.008	0.032	365.3	03/31/2022 16:14	KA
CHLOROPHYLL A, CORRECTED	12.8	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP

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E- COLI BY IDEXX QUANTITRAY	20	#/100 ML	10	10	SM9223B	03/28/2022 16:28	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 14:05	CW
TOTAL NITROGEN	1.22	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:05	HR/CW

**Submission Number:** 22031801      **Sample Date:** 03/28/2022  
**Sample Number:** 009      **Sample Time:** 1020  
**Sample Description:** Duplicate -      **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/07/2022 12:31	CW
TOTAL KJELDAHL NITROGEN	1.28	MG/L	0.05	0.20	351.2	03/31/2022 17:52	HR
ORTHO PHOSPHORUS AS P	0.002 U	MG/L	0.002	0.008	365.3	03/29/2022 18:13	KA
TOTAL PHOSPHORUS AS P	0.038	MG/L	0.008	0.032	365.3	03/31/2022 15:16	KA
CHLOROPHYLL A, CORRECTED	12.0	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	63	#/100 ML	10	10	SM9223B	03/28/2022 16:28	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 14:06	CW
TOTAL NITROGEN	1.28	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:06	HR/CW

**Submission Number:** 22031801      **Sample Date:** 03/28/2022  
**Sample Number:** 010      **Sample Time:** 1120  
**Sample Description:** Blank      **Sample Method:** Grab

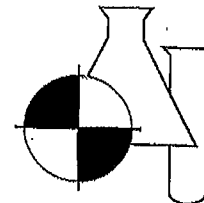
Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	04/01/2022 13:54	CW
TOTAL KJELDAHL NITROGEN	0.06 U	MG/L	0.05	0.20	351.2	04/01/2022 09:58	HR
ORTHO PHOSPHORUS AS P	0.002 U	MG/L	0.002	0.008	365.3	03/29/2022 18:14	KA
TOTAL PHOSPHORUS AS P	0.008 U	MG/L	0.008	0.032	365.3	03/31/2022 15:16	KA
CHLOROPHYLL A, CORRECTED	0.25 U	MG/M3	0.25	1.00	445.0	04/01/2022 12:00	PP
E- COLI BY IDEXX QUANTITRAY	10 U	#/100 ML	10	10	SM9223B	03/28/2022 15:28	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022 14:07	CW
TOTAL NITROGEN	0.06 U	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022 14:07	HR/CW

**Submission Number:** 22031801      **Sample Date:** 03/28/2022  
**Sample Number:** 011      **Sample Time:** 1300  
**Sample Description:** Outfall      **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.309	MG/L	0.008	0.032	350.1	04/01/2022 13:56	CW
TOTAL KJELDAHL NITROGEN	0.806	MG/L	0.05	0.20	351.2	03/31/2022 17:55	HR
ORTHO PHOSPHORUS AS P	0.051	MG/L	0.002	0.008	365.3	03/29/2022 18:18	KA

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TOTAL PHOSPHORUS AS P	0.061	MG/L	0.008	0.032	365.3	04/01/2022	11:46	KA
CHLOROPHYLL A, CORRECTED	3.34	MG/M3	0.25	1.00	445.0	04/01/2022	12:00	PP
E- COLI BY IDEXX QUANTITRAY	31	##/100 ML	10	10	SM9223B	03/29/2022	16:26	E85086
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEAS EASY	04/04/2022	14:07	CW
TOTAL NITROGEN	0.806	MG/L	0.05	0.20	SYSTEAS+351	04/04/2022	14:07	HR/CW

Dale D. Dixon / Laboratory Director

04/07/2022

Date

Tilay Tanrisever - Technical Director/QC Officer

Kara Peterson - QA Officer

### DATA QUALIFIERS THAT MAY APPLY:

- A = Value reported is an average of two or more determinations.
- B = Results based upon colony counts outside the ideal range.
- H = Value based on field kit determination. Results may not be accurate.
- I = Reported value is between the laboratory MDL and the PQL.
- J1 = Estimated value. Surrogate recovery limits exceeded.
- J2 = Estimated value. No quality control criteria exists for component.
- J3 = Estimated value. Quality control criteria for precision or accuracy not met.
- J4 = Estimated value. Sample matrix interference suspected.
- J5 = Estimated value. Data questionable due to improper lab or field protocols.
- K = Off-scale low. Value is known to be < the value reported.
- L = Off-scale high. Value is known to be > the value reported.
- N = Presumptive evidence of presence of material.
- O = Sampled, but analysis lost or not performed.
- Q = Sample held beyond accepted hold time.

- T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.
- U = Analyte analyzed but not detected at the value indicated.
- V = Analyte detected in sample and method blank. Results for this analyte in associated samples may be biased high. Standard, Duplicate and Spike values are within control limits. Reported data are usable.
- Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.
- Z = Too many colonies were present (TNTC). The numeric value represents the filtration volume.
- ! = Data deviate from historically established concentration ranges.
- ? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
- \* = Not reported due to interference.
- Oil & Grease - If client does not send sufficient sample quantity for spike evaluation surface water samples are supplied by the laboratory.

### NOTES:

- MBAS calculated as LAS; molecular weight = 340.
- PQL = 4xMDL.
- ND = Not detected at or above the adjusted reporting limit.
- G1 = Accuracy standard does not meet method control limits, but does meet lab control limits that are in agreement with USEPA generated data. USEPA letter available upon request.
- G2 = Accuracy standard exceeds acceptable control limits. Duplicate and spike values are within control limits. Reported data are usable.

### COMMENTS:

Chlorophyll A lab filtered at E85086 03/29/2022 at 0831.

For questions or comments regarding these results, please contact us at (941) 723-9986.

Results relate only to the samples.

**Benchmark EnviroAnalytical, Inc.**  
 1711 Twelfth Street East  
 Palmetto, FL 34221  
 (941) 723-9986  
 (941) 723-6061 fax

**BEAS Sample Receipt Temp. 5.0** Client:  
 Checked at Benchmark EA South E85086  
 with Temperature Gun ID #7

**GPI - Greenman-Pedersen, Inc.**  
 1000 North Ashley Dr., Suite 100  
 Tampa, FL 33602  
 Scott M. Deitche 813-830-7766 sdeitche@gpinc.com  
 Email report & invoice

Sample Temperature checked upon receipt at BEA with Temperature Gun ID #258  
 Chain of Custody Form: Sunshine Lake/Sunrise Waterway Quarterly Analysis  
 Matrix: SW Profile 858

Laboratory Submission #: 22031801

Station ID	Sample Type <sup>1</sup>	Parameters, Preservative <sup>2</sup> , Container Type <sup>3</sup>				Laboratory Sample #
		TKN (51.2) NO <sub>3</sub> -NO <sub>2</sub> (System) NH <sub>3</sub> (50.1) 1 x 1/2 Pint Plastic 1.1mL 1:4 H <sub>2</sub> SO <sub>4</sub> pH<2.0 Lot # 22-02	T-P (55.2) NO <sub>3</sub> -NO <sub>2</sub> (System) NH <sub>3</sub> (50.1) 1 x 1/2 Pint Plastic Plain	Ortho-Phos (56.3) (Lab. Filtered) 1 x 1/2 Pint Plastic Plain	E. coli (SM9223B/Quantaray) 522030835 1 x 100mL Sterile Plastic NaThio	
Sunshine 1	Grab	Date & Time: 3/28/22	10:00			1
Sunshine 2	Grab	Date & Time: 3/28/22	9:50			2
Sunshine 3	Grab	Date & Time: 3/28/22	9:40			3
Sunshine 4	Grab	Date & Time: 3/28/22	9:28			4
Sunshine 5	Grab	Date & Time: 3/28/22	9:13			5
Sunrise 1	Grab	Date & Time: 3/28/22	11:03			6
Sunrise 2	Grab	Date & Time: 3/28/22	10:50			7
Sunrise 3	Grab	Date & Time: 3/28/22	10:33			8
Duplicate	Grab	Date & Time: 3/28/22	10:20			9
Water / Brook	Grab	Date & Time: 3/28/22	11:20			10

**Instructions:**  
 1. "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).  
 2. "Sample Time" is used to indicate the time of collection.  
 3. "Sample Date" is used to indicate the date of collection.  
 4. "Sample Location" is used to indicate the location of collection.  
 5. "Sample ID" is used to indicate the sample identification number.  
 6. "Sample Volume" is used to indicate the volume of the sample.  
 7. "Sample Temperature" is used to indicate the temperature of the sample at the time of collection.  
 8. "Sample pH" is used to indicate the pH of the sample at the time of collection.  
 9. "Sample Conductivity" is used to indicate the conductivity of the sample at the time of collection.  
 10. "Sample Dissolved Oxygen" is used to indicate the dissolved oxygen of the sample at the time of collection.

Laboratory Sample Acceptability:  
 pH 2.0-12.0  
 BEA Temperature: 0-4°C  
 BEAS: 5.2-20°C

Collector & Affiliation: (Print & Sign)	Date:	Time:	Received By & Affiliation: (Print & Sign)	Date:	Time:
1 Daniel Gooding - GPI	3/28/22	12:33	Brooke Watermark BEAS	3/28/22	12:33
2 Relinquished By & Affiliation: (Print & Sign)	3/28/22	12:35	Brooke Watermark BEAS	3/28/22	12:35
3 Relinquished By & Affiliation: (Print & Sign)	3/28/22	10:55	UN - JN Beas	3/28/22	10:55
4 Relinquished By & Affiliation: (Print & Sign)					

**Benchmark EnviroAnalytical, Inc.**  
 1711 Twelfth Street East  
 Palmetto, FL 34221  
 (941) 723-9986  
 (941) 723-6061 fax  
 Sample Temperature checked upon receipt at BEA with Temperature Gun ID #158

**Client: GPI - Greenman-Pedersen, Inc.**  
 1000 North Ashley Dr., Suite 100  
 Tampa, FL 33602  
 Scott M. Deitche 813-830-7766 sdeitche@gpinet.com  
 Email report & invoice

**BEAS Sample Receipt Temp. 5.2 °C**  
**ADAPT checked at Benchmark EA South E85086**  
**With Temperature Gun ID #158**

Laboratory Submission #: 22031901

Chain of Custody Form: Sunshine Lake/Sunrise Waterway Quarterly Analysis  
 Matrix: SW Profile 858

Station ID	Sample Type	Parameters, Preservative*, Container Type				Laboratory Sample #
		TKN (51.2)	T-N (System+531)	T-P (365.2)	Ortho-Phos (365.3)	
Outfall	Grab	NO <sub>3</sub> -NO <sub>2</sub> (System) NH <sub>3</sub> (350.1)	1 x 1/2 Pint Plastic	1 x 1/2 Pint Plastic	Ortho-Phos (365.3) (Lab. Filtered)	Chlorophyll a (445.0) Filtered BEAS 3/28/12 0831 BK 1 x 500mL Opaque Plastic
		1.1mL 1:4 H <sub>2</sub> SO <sub>4</sub> pH<2 EP Lot # 22-02	Plain	Plain	NaThio	
	Grab	Date & Time: 3/28/12	13:00			11
	Grab	Date & Time:				
	Grab	Date & Time:				
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	Grab	Date & Time:				
	Grab	Date & Time:				

**Instructions:**

1. "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).
2. "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), fresh surface water (FSW), saline surface water (SSW), soil, sediment (SDMNT), or sludge (SLDG).
3. "Container Type" is used to indicate whether the container is plastic (P) or glass (G).
4. Sample must be refrigerated or stored in wet ice after collection. The temperature during storage should be less than or equal to 6°C (43°F).
5. Under "Preservative" list any preservatives that were added to the sample container. Lot Number or preservative test is specific to the bottles included in the kit. NaThio, H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub> do not have expiration dates per the manufacturer. Micro bottles are pre-preserved at manufacturing stage. 40mL vials are pre-preserved at manufacturing stage.
6. 2-Quart plastic bottles are not certified.

Each bottle has a label identifying sample ID, preservative, preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label after collection with consent blank the date and time of collection, sampler's name or initials, and any field number or ID. All bottles not containing preservative should be stored with wet ice. Do not open sample prior to collection. The date is responsible for the accuracy of the sampling event. Please note special sampling events on the sample custody form. Sample kit has been created by BEA using new, certified bottles unless otherwise noted.

Collector & Affiliation (Print & Sign)	Date	Time	Received By & Affiliation (Print & Sign)	Date	Time
Daniel Greenman GPI	3/28/12	13:05	Melinda Merchant - BEAS	3/28/12	13:05
	3/28/12	12:35	Melinda Merchant - BEAS	3/28/12	12:35
	3/28/12	16:55	Ken Nelson - BEA	3/28/12	16:55

Laboratory Sample Acceptability:  
 pH < 7 BEA Temperature: 5.2  
 BEAS Temp: 5.2