

Laboratory Results

Lee County Environmental Laboratory

60-2 Danley Drive
Fort Myers, FL 33907
239-533-8600



To: Natural Resources Management
1500 Monroe St
Fort Myers FL 33901
RE: Tidal Caloosa

Report Date: 2/5/2019

Below are the results of samples submitted to this laboratory on 1/23/2019

Laboratory ID	AD97299	Collection date and time	1/23/2019 10:20 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #413		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	1.54	I	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	1.0	I	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B
For this BOD data set seed correction is at 1.0 mg/L, not within 0.6-1.0 mg/L range.								
Color	24.8		CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.55		mg/L	0.1		1/23/2019	10:20 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		1/23/2019	2:25 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.014	I	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.014	I	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.014	I	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	0.66	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN - NH3
Phosphorus, Ortho	0.036		mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	17.20		SU	0.1		1/23/2019	10:20 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.4		meters	0.1		1/23/2019	10:20 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.9		mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Depth of Water Body	1.4		Meters			1/23/2019	10:20 AM	FS2100
Nitrogen, Kjeldahl, Total	0.67	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	EPA 351.2
Nitrogen, Total	0.68	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN + NOX



Laboratory ID	AD97299	Collection date and time	1/23/2019 10:20 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #413		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Total Organic Carbon	9.6		mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.061		mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	13.6		mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Laboratory ID	AD97300	Collection date and time	1/23/2019 11:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #429		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.44		mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	3.15		mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	1.0	I	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B
Color	32.8		CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.96		mg/L	0.1		1/23/2019	11:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.016	I	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.016	I	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	0.83	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN - NH3
Phosphorus, Ortho	0.052		mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	11.41		SU	0.1		1/23/2019	11:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.95		meters	0.1		1/23/2019	11:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	5.8		mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Depth of Water Body	2.2		Meters			1/23/2019	11:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.83	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	EPA 351.2
Nitrogen, Total	0.85	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN + NOX
Total Organic Carbon	12		mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.12		mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	17.5		mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D

Laboratory ID	AD97300	Collection date and time	1/23/2019 11:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #429		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Turbidity (Nephelometric)	6.85		NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Laboratory ID	AD97301	Collection date and time	1/23/2019 10:55 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #417		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	1.96	I	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	6.64		mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.9	I	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B
Color	38.5		CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.59		mg/L	0.1		1/23/2019	10:55 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	0.78	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN - NH3
Phosphorus, Ortho	0.050		mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	12.31		SU	0.1		1/23/2019	10:55 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.9		meters	0.1		1/23/2019	10:55 AM	FDEP FT 1700
Silica, dissolved as SiO2	5.4		mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Depth of Water Body	1.4		Meters			1/23/2019	10:55 AM	FS2100
Nitrogen, Kjeldahl, Total	0.78	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	EPA 351.2
Nitrogen, Total	0.78	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN + NOX
Total Organic Carbon	11		mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.11		mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	19.1		mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D
Turbidity (Nephelometric)	6.93		NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Laboratory ID	AD97302	Collection date and time	1/23/2019 11:25 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #428		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.10		mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	8.39		mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	1.2	I	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B
Color	38.0		CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.48		mg/L	0.1		1/23/2019	11:25 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		1/23/2019	2:25 PM	Enterolert®
E.coli Enumeration	42		MPN/100mL	10		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.017	I	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	1.3		mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN - NH3
Phosphorus, Ortho	0.058		mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	9.63		SU	0.1		1/23/2019	11:25 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.45		meters	0.1		1/23/2019	11:25 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.2		mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Depth of Water Body	1.7		Meters			1/23/2019	11:25 AM	FS2100
Nitrogen, Kjeldahl, Total	1.3		mg/L as N	0.05	0.2	1/30/2019	8:37 AM	EPA 351.2
Nitrogen, Total	1.3		mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN + NOX
Total Organic Carbon	13		mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.23		mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	44.9		mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D
Turbidity (Nephelometric)	26.1		NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Laboratory ID	AD97303	Collection date and time	1/23/2019 9:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #403		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	1.47	I	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	0.66	I	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.5	I	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B

Laboratory ID	AD97303	Collection date and time	1/23/2019 9:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	Grid #403		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Color	26.3		CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.47		mg/L	0.1		1/23/2019	9:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.016	I	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	0.63	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN - NH3
Phosphorus, Ortho	0.035		mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	17.66		SU	0.1		1/23/2019	9:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	2.0		meters	0.1		1/23/2019	9:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.9		mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Depth of Water Body	2.0		Meters			1/23/2019	9:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.65	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	EPA 351.2
Nitrogen, Total	0.65	V1	mg/L as N	0.05	0.2	1/30/2019	8:37 AM	TKN + NOX
Total Organic Carbon	9.3		mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.062		mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	6.13		mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D
Turbidity (Nephelometric)	1.13		NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Laboratory ID	AD97305	Collection date and time	1/23/2019 12:25 PM
Location Code	CRNEP_EQ	Sample Collector	REISTADT/DUGAN/STIVERS
Sample Description	EB Site #429		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	0.50	U	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	1/25/2019	9:00 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	U	mg/L	0.3	1.2	1/24/2019	10:07 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	1/23/2019	3:00 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.99		mg/L	0.1		1/23/2019	12:25 PM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		1/23/2019	2:25 PM	Enterolert®

Laboratory ID AD97305
 Location Code CRNEP_EQ
 Sample Description EB Site #429

Collection date and time 1/23/2019 12:25 PM
 Sample Collector REISTADT/DUGAN/STIVERS

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	2	U	MPN/100mL	2		1/23/2019	2:25 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/25/2019	11:33 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/24/2019	1:23 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/24/2019	1:23 PM	EPA 353.2
Nitrogen, Organic	0.17	I	mg/L as N	0.05	0.2	2/1/2019	8:43 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	1/24/2019	2:40 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		1/23/2019	12:25 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	1/24/2019	2:36 PM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.17	I	mg/L as N	0.05	0.2	2/1/2019	8:43 AM	EPA 351.2
Nitrogen, Total	0.17	I	mg/L as N	0.05	0.2	2/1/2019	8:43 AM	TKN + NOX
Total Organic Carbon	1.000	U	mg/L	1	4	1/25/2019	3:55 PM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	1/30/2019	8:40 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	1/24/2019	6:15 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	1/24/2019	6:11 AM	EPA 180.1

Qualifiers:

- I The value is less than, or equal to, the laboratory's practical quantitation limit (PQL) and greater than the minimum detection limit (MDL).
 U Indicates that the compound was analyzed for but not detected.
 V1 Indicates that the analyte was detected in both the sample and associated field blank at a level of <5X the blank value.

Unless noted otherwise, these test results meet all the requirements of the 2003 NELAC Standards.
 The results provided herein relate only to the samples cited as they were received by the laboratory. All questions regarding this report should be directed to Rick Armstrong, Laboratory Manager.



Rick Armstrong
Lab Manager
Lee County Environmental Lab

LCEL

Lee County Environmental Laboratory
60-2 Danley Dr Ft Myers, FL 33907
Phone: (239) 533-8600

Analysis Request & Chain of Custody Record

Lab Certification: E45049
LCEL_F_COC_20150828R1

LCEL does not accept any samples used for evidentiary purposes

Report/Result Information

Billing/Invoice Information

Page 1 of 1

Name: FDEP - South		Name: DNRM		Matrix Codes: DW-Drinking water GW- Ground water WW-Waste water SW-Surface water WWS-Wastewater Sludge S-Sediment O-Other		Preservative Codes: NP-No Preservative N-Nitric Acid S-Sulfuric Acid H-Hydrochloric Acid SH-Sodium Hydroxide ST-Sodium Thiosulfate O-Other		
ATTN: Kirby Wolfe		RE: CCHMN-Tidal Caloosa						
Address: 2295 Victoria Ave, Suite 364 PO Box 2549 Ft Myers FL 33901		Address: 1500 Monroe St Ft Myers, FL 33901						
Phone: (239) 344-5719		Phone: (239) 533-8109						
Sample Collector(s) (please print): MaryAnn Dugan / Nicole Reistad / <i>Natalie Stivers</i>		Sample Collector Signature: <i>MaryAnn Dugan</i>		Analyses Required \$Chloro, _prep O-PO4, Color, NOX TOC NH3, TKN, TN, T-PO4, NO3, ONIT Turb, NO2, TSS, Silica, Bod, BOD Mug2QT, Enteroc				
Relinquished By: (signature) <i>Nicole Reistad</i>		Received By: (signature) <i>MaryAnn Dugan</i>						
Relinquished By: (signature) <i>MaryAnn Dugan</i>		Received By: (signature) <i>Natalie Stivers</i>		Preservatives (see codes) NP NPF S S NP ST				
Relinquished By: (signature) <i>Natalie Stivers</i>		Received By: (signature) <i>Natalie Stivers</i>						
Sample(s) on ice ☒ Yes or ☐ No? Temperature °C: 0.7°C								
Collection Date Time		Sample Description & Location		Matrix (see codes)		# of Sample Containers Submitted		Lab ID #
01/23/19 1020		CRNEP_RS #413		SWE		1 1 1 1 2 1		AD97299
01/23/19 1150		CRNEP_RS #429		SWE		1 1 1 1 2 1		AD97300
01/23/19 1055		CRNEP_RS #417		SWE		1 1 1 1 2 1		AD97301
01/23/19 1125		CRNEP_RS #428		SWE		1 1 1 1 2 1		AD97302
01/23/19 0950		CRNEP_RS #403		SWE		1 1 1 1 2 1		AD97303
		CRNEP_RSBOT #403 Bottom		SWE		1 1 1 1 2 1		AD97304
01/23/19 1225		CRNEP_EQ # BLANK		SWE		1 1 1 1 2 1		AD97305

**SAMPLES SHOULD BE IN WET ICE & LESS THAN 6° C (42.8°F)
OR THEY MAYBE QUALIFIED***

*Qualified = the data may not be accurate and regulatory agencies may not accept qualified data.