

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: 12/20/2018

Below are the results of samples submitted to this laboratory on 12/11/2018

Laboratory ID	AD94069	Collection date and time	12/11/2018 10:10 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #387		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.62		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	2.75		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.9	I J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B
For this BOD data set seed correction is at 1.2 mg/L, not within 0.6-1.0 mg/L range.								
Color	32.4		CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.00		mg/L	0.1		12/11/2018	10:10 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		12/11/2018	3:15 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.010	I	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.013	I	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.71		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.048		mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	18.8		SU	0.1		12/11/2018	10:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.7		meters	0.1		12/11/2018	10:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.9		mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Depth of Water Body	0.7		Meters			12/11/2018	10:10 AM	FS2100
Nitrogen, Kjeldahl, Total	0.71		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	0.72		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX

Laboratory ID	AD94069	Collection date and time	12/11/2018 10:10 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #387		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Total Organic Carbon	9.4		mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.077		mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	5.65		mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D
Turbidity (Nephelometric)	1.92		NTU	0.2	0.8	12/12/2018	8:15 AM	EPA 180.1

Laboratory ID	AD94070	Collection date and time	12/11/2018 12:45 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #453		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.59		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	1.93	I	mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.5	I J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B
Color	50.9		CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.20		mg/L	0.1		12/11/2018	12:45 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		12/11/2018	3:15 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.042	I	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.008	I	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.314		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.322		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.78		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.077		mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	2.90		SU	0.1		12/11/2018	12:45 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.0		meters	0.1		12/11/2018	12:45 PM	FDEP FT 1700
Silica, dissolved as SiO2	9.7		mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Depth of Water Body	1.1		Meters			12/11/2018	12:45 PM	FS2100
Nitrogen, Kjeldahl, Total	0.82		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	1.1		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.12		mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	3.02		mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D

Laboratory ID	AD94070	Collection date and time	12/11/2018 12:45 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #453		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Turbidity (Nephelometric)	3.94		NTU	0.2	0.8	12/12/2018	8:15 AM	EPA 180.1

Laboratory ID	AD94071	Collection date and time	12/11/2018 11:45 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #418		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.17		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	4.48		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.6	I J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B
Color	46.3		CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.65		mg/L	0.1		12/11/2018	11:45 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		12/11/2018	3:15 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.019	I	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.005	I	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.075		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.080		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.73		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.066		mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	10.43		SU	0.1		12/11/2018	11:45 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.1		meters	0.1		12/11/2018	11:45 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.4		mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Depth of Water Body	1.1		Meters			12/11/2018	11:45 AM	FS2100
Nitrogen, Kjeldahl, Total	0.75		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	0.83		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX
Total Organic Carbon	12		mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.097		mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	3.30		mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D
Turbidity (Nephelometric)	1.12		NTU	0.2	0.8	12/12/2018	8:15 AM	EPA 180.1

Laboratory ID	AD94072	Collection date and time	12/11/2018 11:20 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #417		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.16		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	2.21		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	I J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B
Color	44.9		CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.42		mg/L	0.1		12/11/2018	11:20 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		12/11/2018	3:15 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.016	I	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.078		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.082		mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.78		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.067		mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	10.33		SU	0.1		12/11/2018	11:20 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.35		meters	0.1		12/11/2018	11:20 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.4		mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Depth of Water Body	1.35		Meters			12/11/2018	11:20 AM	FS2100
Nitrogen, Kjeldahl, Total	0.80		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	0.88		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX
Total Organic Carbon	12		mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.098		mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	0.925	I	mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	12/12/2018	8:15 AM	EPA 180.1

Laboratory ID	AD94073	Collection date and time	12/11/2018 10:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #404		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.33		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	3.33		mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	I J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B

Laboratory ID	AD94073	Collection date and time	12/11/2018 10:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #404		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Color	37.2		CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.14		mg/L	0.1		12/11/2018	10:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		12/11/2018	3:15 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.018	I	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.011	I	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.014	I	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.75		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.053		mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	14.61		SU	0.1		12/11/2018	10:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.2		meters	0.1		12/11/2018	10:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	4.9		mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Depth of Water Body	1.2		Meters			12/11/2018	10:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.77		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	0.78		mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX
Total Organic Carbon	11		mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.081		mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	5.00		mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	12/12/2018	8:15 AM	EPA 180.1

Laboratory ID	AD94074	Collection date and time	12/11/2018 1:05 PM
Location Code	CRNEP_EQ	Sample Collector	REISTADT/DUGAN
Sample Description	EB Site #453		

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	12/13/2018	7:54 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	12/13/2018	7:54 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	U J3	mg/L	0.3	1.2	12/12/2018	8:37 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	12/12/2018	3:18 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.87		mg/L	0.1		12/11/2018	1:05 PM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		12/11/2018	3:15 PM	Enterolert®

Laboratory ID AD94074
Location Code CRNEP_EQ
Sample Description EB Site #453

Collection date and time 12/11/2018 1:05 PM
Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	2	U	MPN/100mL	2		12/11/2018	3:44 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	12/13/2018	11:07 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	12/12/2018	8:37 AM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	12/12/2018	8:37 AM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	12/13/2018	8:16 AM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		12/11/2018	1:05 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	12/12/2018	1:56 PM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	12/18/2018	12:17 PM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	12/18/2018	12:17 PM	TKN + NOX
Total Organic Carbon	1.000	U	mg/L	1	4	12/13/2018	4:14 PM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	12/18/2018	9:11 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	12/12/2018	7:45 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	12/12/2018	8:15 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).
I J3 The value is < or = to the PQL and > the MDL. The reported value failed to meet the established quality control criteria for either precision or accuracy.
U Indicates that the compound was analyzed for but not detected.
U J3 Indicates that the compound was analyzed for but not detected. Value failed to meet QC criteria for precision or accuracy.

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

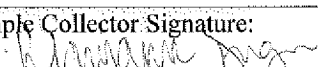
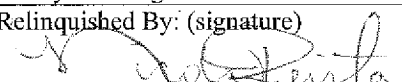
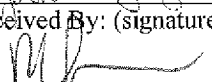
Lee County Environmental Laboratory
60-2 Danley Dr Ft Myers, FL 33907
Phone: (239) 533-8600

Analysis Request & Chain of Custody Record

Lab Certification: E45049
LCEL F COC 20150828R1

LCEL does not accept any samples used for evidentiary purposes

Page 1 of 1

Report/Result Information				Billing/Invoice Information				Analyses Required													
Name: FDEP - South		Name: DNRM		Matrix Codes:		Preservative Codes:															
ATTN: Kirby Wolfe		RE: CCHMN-Tidal Caloosa		DW-Drinking water		NP-No Preservative															
Address: 2295 Victoria Ave, Suite 364		Address: 1500 Monroe St		GW- Ground water		N-Nitric Acid															
PO Box 2549				WW-Waste water		S-Sulfuric Acid															
Ft Myers FL 33901		Ft Myers, FL 33901		SW-Surface water		H-Hydrochloric Acid															
Phone: (239) 344-5719		Phone: (239) 533-8109		WWS-Wastewater Sludge		SH-Sodium Hydroxide															
				S-Sediment		ST-Sodium Thiosulfate															
				O-Other		O-Other															
Sample Collector(s) (please print): MaryAnn Dugan / Nicole Reistad				Sample Collector Signature: 																	
Relinquished By: (signature) 		Date 12/11/2018		Time 1450		Received By: (signature) 		\$Chloroa, _prep		O-PO4, Color, NOX		TOC		NH3, TKN, TN, T-PO4, NO3, ONIT		Turb, NO2, TSS, Silica, Bod, Bodi		Mug2QT, Entero			
Relinquished By: (signature)		Date		Time		Received By: (signature)															
Relinquished By: (signature)		Date		Time		Received By: (signature)															
Sample(s) on ice ☒ Yes or ☐ No? Temperature °C: 0.32																					
Collection		Sample Description & Location		Matrix (see codes)																	
Date		Time																		Lab ID #	
12/11/18		1010		CRNEP_RS #387		SWE		1		1		1		1		2		1		AD94069	
12/11/18		1245		CRNEP_RS #453		SWE		1		1		1		1		2		1		AD94070	
12/11/18		1145		CRNEP_RS #418		SWE		1		1		1		1		2		1		AD94071	
12/11/18		1120		CRNEP_RS #417		SWE		1		1		1		1		2		1		AD94072	
12/11/18		1050		CRNEP_RS #404		SWE		1		1		1		1		2		1		AD94073	
12/11/18		1305		CRNEP_EQ # BLANK		SWE		1		1		1		1		2		1		AD94074	

**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.