

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: 7/5/2019

Below are the results of samples submitted to this laboratory on 6/19/2019

Laboratory ID	AE14397	Collection date and time	6/19/2019 1:20 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #429		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.58		mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	1.83	I	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.6	I	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B
Color	50.1		CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.42		mg/L	0.1		6/19/2019	1:20 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/19/2019	3:07 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.038	I	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.007	I	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.037	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrate + Nitrite	0.044		mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.80		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN - NH3
Phosphorus, Ortho	0.155		mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	4.24		SU	0.1		6/19/2019	1:20 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.65		meters	0.1		6/19/2019	1:20 PM	FDEP FT 1700
Silica, dissolved as SiO2	5.8		mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Depth of Water Body	4.4		Meters			6/19/2019	1:20 PM	FS2100
Nitrogen, Kjeldahl, Total	0.84		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	EPA 351.2
Nitrogen, Total	0.88		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN + NOX
Total Organic Carbon	13		mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B

Laboratory ID	AE14397	Collection date and time	6/19/2019 1:20 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #429		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Phosphorus, Total	0.18		mg/L as P	0.006	0.024	6/26/2019	9:17 AM	EPA 365.1
Total Suspended Solids	1.45	I	mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	1.20		NTU	0.2	0.8	6/20/2019	10:08 AM	EPA 180.1

Laboratory ID	AE14398	Collection date and time	6/19/2019 11:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #386		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	4.40		mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	1.52	I	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	I	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B
Color	27.8		CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.44		mg/L	0.1		6/19/2019	11:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/19/2019	3:07 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.60		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN - NH3
Phosphorus, Ortho	0.092		mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	18.25		SU	0.1		6/19/2019	11:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.7		meters	0.1		6/19/2019	11:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	1.6		mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Depth of Water Body	1.7		Meters			6/19/2019	11:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.60		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	EPA 351.2
Nitrogen, Total	0.60		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN + NOX
Total Organic Carbon	8.9		mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B
Phosphorus, Total	0.12		mg/L as P	0.006	0.024	6/26/2019	9:17 AM	EPA 365.1
Total Suspended Solids	0.650	I	mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	6/20/2019	10:08 AM	EPA 180.1

Laboratory ID	AE14400	Collection date and time	6/19/2019 11:10 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #326X		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.75		mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	0.72	I	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.6	I	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B
Color	23.0		CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	5.79		mg/L	0.1		6/19/2019	11:10 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/19/2019	3:07 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.014	I	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrate + Nitrite	0.013	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.55		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN - NH3
Phosphorus, Ortho	0.080		mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	19.78		SU	0.1		6/19/2019	11:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	2.9		meters	0.1		6/19/2019	11:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	1.5		mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Depth of Water Body	2.9		Meters			6/19/2019	11:10 AM	FS2100
Nitrogen, Kjeldahl, Total	0.56		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	EPA 351.2
Nitrogen, Total	0.57		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN + NOX
Total Organic Carbon	8.0		mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B
Phosphorus, Total	0.098		mg/L as P	0.006	0.024	6/26/2019	9:17 AM	EPA 365.1
Total Suspended Solids	2.45		mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	6/20/2019	10:08 AM	EPA 180.1

Laboratory ID	AE14401	Collection date and time	6/19/2019 12:35 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #419		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.22		mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	1.37	I	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	I	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B

Laboratory ID	AE14401	Collection date and time	6/19/2019 12:35 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #419		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Color	44.1		CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.02		mg/L	0.1		6/19/2019	12:35 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/19/2019	3:07 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.033	I	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.020	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrate + Nitrite	0.024	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.71		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN - NH3
Phosphorus, Ortho	0.150		mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	6.62		SU	0.1		6/19/2019	12:35 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	2.15		meters	0.1		6/19/2019	12:35 PM	FDEP FT 1700
Silica, dissolved as SiO2	4.4		mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Depth of Water Body	3.05		Meters			6/19/2019	12:35 PM	FS2100
Nitrogen, Kjeldahl, Total	0.74		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	EPA 351.2
Nitrogen, Total	0.76		mg/L as N	0.05	0.2	6/26/2019	9:15 AM	TKN + NOX
Total Organic Carbon	12		mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B
Phosphorus, Total	0.17		mg/L as P	0.006	0.024	6/26/2019	9:17 AM	EPA 365.1
Total Suspended Solids	1.15	I	mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	6/20/2019	10:08 AM	EPA 180.1

Laboratory ID	AE14402	Collection date and time	6/19/2019 12:45 PM
Location Code	CRNEP_RSBOT	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #419 Bottom		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.11		mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	1.32	I	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.5	I	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B
Color	35.7		CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	5.61		mg/L	0.1		6/19/2019	12:45 PM	FDEP FT1500
Enterococci	10		MPN/100mL	10		6/19/2019	3:07 PM	Enterolert®

Laboratory ID AE14402
 Location Code CRNEP_RSBOT
 Sample Description Grid #419 Bottom

Collection date and time 6/19/2019 12:45 PM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	20		MPN/100mL	10		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.036	I	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.010	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrate + Nitrite	0.013	I	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.81		mg/L as N	0.05	0.2	6/27/2019	9:41 AM	TKN - NH3
Phosphorus, Ortho	0.134		mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	9.69		SU	0.1		6/19/2019	12:45 PM	FDEP FT 1300
Silica, dissolved as SiO2	3.0		mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Depth of Water Body	3.05		Meters			6/19/2019	12:45 PM	FS2100
Nitrogen, Kjeldahl, Total	0.85		mg/L as N	0.05	0.2	6/27/2019	9:41 AM	EPA 351.2
Nitrogen, Total	0.86		mg/L as N	0.05	0.2	6/27/2019	9:41 AM	TKN + NOX
Total Organic Carbon	11		mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B
Phosphorus, Total	0.15		mg/L as P	0.006	0.024	6/27/2019	9:43 AM	EPA 365.1
Total Suspended Solids	1.60	I	mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	0.740	I	NTU	0.2	0.8	6/20/2019	10:08 AM	EPA 180.1

Laboratory ID AE14403
 Location Code CRNEP_EQ
 Sample Description EB Site #

Collection date and time 6/19/2019 1:40 PM
 Sample Collector REISTADT/DUGAN

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	6/21/2019	7:35 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	6/21/2019	7:35 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	U	mg/L	0.3	1.2	6/20/2019	10:53 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	6/19/2019	3:19 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.15		mg/L	0.1		6/19/2019	1:40 PM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		6/19/2019	3:07 PM	Enterolert®
E.coli Enumeration	2	U	MPN/100mL	2		6/19/2019	3:11 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	6/21/2019	10:47 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	6/20/2019	1:09 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2

Laboratory ID AE14403
Location Code CRNEP_EQ
Sample Description EB Site #

Collection date and time 6/19/2019 1:40 PM
Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	6/20/2019	1:09 PM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	7/2/2019	8:17 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	6/20/2019	2:21 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		6/19/2019	1:40 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	6/20/2019	2:20 PM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	7/2/2019	8:17 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	7/2/2019	8:17 AM	TKN + NOX
Total Organic Carbon	1.000	U	mg/L	1	4	6/24/2019	3:19 PM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	6/26/2019	9:17 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	6/20/2019	8:29 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	6/20/2019	10:08 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.

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

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Chain of Custody Record

LCEL does not accept any samples used for evidentiary purposes

Lab Certification: E45049

LCEL F COC 20150828R1

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Report/Result Information

Billing/Invoice Information

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): Gary Snarek MaryAnn Dugan/Nicole Reistadt Miranda Carroll		Sample Collector Signature:		Analyses Required						
Relinquished By: (signature)	Date	Time	Received By: (signature)	\$Chloro, _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: 1.2°C

Collection		Sample Description & Location	Matrix (see codes)	Preservatives (see codes)						Lab ID #
Date	Time			NP	NPF	S	S	NP	ST	
06/19/19	1320	CRNEP_RS #429	SWE	1	1	1	1	2	1	AE14397
06/19/19	1150	CRNEP_RS #386	SWE	1	1	1	1	2	1	AE14398
06/19/19		CRNEP_RS #449 DID NOT SAMPLE	SWE	1	1	1	1	2	1	AE14399
06/19/19	1110	CRNEP_RS #326x	SWE	1	1	1	1	2	1	AE14400
06/19/19	1235	CRNEP_RS #419	SWE	1	1	1	1	2	1	AE14401
06/19/19	1245	CRNEP_RSBOT #419 Bottom	SWE	1	1	1	1	2	1	AE14402
06/19/19	1340	CRNEP_EQ #429	SWE	1	1	1	1	2	1	AE14403

**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.