

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: 4/8/2019

Below are the results of samples submitted to this laboratory on: 3/20/2019

Laboratory ID	AE04058	Collection date and time	3/20/2019 10:35 AM
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	8.34		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	6.75		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	I J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B
Color	57.7		CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.84		mg/L	0.1		3/20/2019	10:35 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Enterolert®
E.coli Enumeration	20		MPN/100mL	10		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.027	I	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.006	I	mg/L as N	0.003	0.012	3/21/2019	10:06 AM	EPA 353.2
Nitrate	0.028	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.034	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	0.83		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.056		mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	4.25		SU	0.1		3/20/2019	10:35 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.75		meters	0.1		3/20/2019	10:35 AM	FDEP FT 1700
Silica, dissolved as SiO2	4.6		mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Depth of Water Body	1.9		Meters			3/20/2019	10:35 AM	FS2100
Nitrogen, Kjeldahl, Total	0.86		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	0.89		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	15		mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B

Laboratory ID	AE04058	Collection date and time	3/20/2019 10:35 AM
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	0.11		mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	13.5		mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	7.45		NTU	0.2	0.8	3/21/2019	7:30 AM	EPA 180.1

Laboratory ID	AE04060	Collection date and time	3/20/2019 9:30 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #389		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	0.96	I	mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	3.85		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	I J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B
Color	41.0		CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.42		mg/L	0.1		3/20/2019	9:30 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.045	I	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.006	I	mg/L as N	0.003	0.012	3/21/2019	10:06 AM	EPA 353.2
Nitrate	0.017	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.023	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	0.74		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.047		mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	10.28		SU	0.1		3/20/2019	9:30 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.1		meters	0.1		3/20/2019	9:30 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.3		mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Depth of Water Body	1.1		Meters			3/20/2019	9:30 AM	FS2100
Nitrogen, Kjeldahl, Total	0.78		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	0.80		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	12		mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B
Phosphorus, Total	0.078		mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	11.1		mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	3.38		NTU	0.2	0.8	3/21/2019	7:30 AM	EPA 180.1

Laboratory ID	AE04061	Collection date and time	3/20/2019 10:05 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #412		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	1.87	I	mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	9.82		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	I J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B
Color	55.8		CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.60		mg/L	0.1		3/20/2019	10:05 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.052	I	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.005	I	mg/L as N	0.003	0.012	3/21/2019	10:06 AM	EPA 353.2
Nitrate	0.023	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.028	I	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	0.87		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.059		mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	5.72		SU	0.1		3/20/2019	10:05 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.6		meters	0.1		3/20/2019	10:05 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.9		mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Depth of Water Body	1.9		Meters			3/20/2019	10:05 AM	FS2100
Nitrogen, Kjeldahl, Total	0.92		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	0.95		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B
Phosphorus, Total	0.12		mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	20.5		mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	8.81		NTU	0.2	0.8	3/21/2019	7:30 AM	EPA 180.1

Laboratory ID	AE04063	Collection date and time	3/20/2019 11:00 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #442		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	12.07		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	9.66		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	I J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B

Laboratory ID	AE04063	Collection date and time	3/20/2019 11:00 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #442		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Color	68.4		CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.87		mg/L	0.1		3/20/2019	11:00 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.018	I	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.008	I	mg/L as N	0.003	0.012	3/21/2019	10:06 AM	EPA 353.2
Nitrate	0.097		mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.105		mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	1.0		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.075		mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	1.75		SU	0.1		3/20/2019	11:00 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.55		meters	0.1		3/20/2019	11:00 AM	FDEP FT 1700
Silica, dissolved as SiO2	5.8		mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Depth of Water Body	2.2		Meters			3/20/2019	11:00 AM	FS2100
Nitrogen, Kjeldahl, Total	1.0		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	1.1		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	16		mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B
Phosphorus, Total	0.15		mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	18.4		mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	16.3		NTU	0.2	0.8	3/21/2019	7:30 AM	EPA 180.1

Laboratory ID	AE04064	Collection date and time	3/20/2019 11:40 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #454		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.46		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	4.88		mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	I J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B
Color	59.9		CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.18		mg/L	0.1		3/20/2019	11:40 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Enterolert®

Laboratory ID	AE04064	Collection date and time	3/20/2019 11:40 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #454		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	10	U	MPN/100mL	10		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.055	I	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.018		mg/L as N	0.003	0.012	3/21/2019	10:06 AM	EPA 353.2
Nitrate	0.206		mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.224		mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	0.95		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.080		mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	0.33		SU	0.1		3/20/2019	11:40 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.8		meters	0.1		3/20/2019	11:40 AM	FDEP FT 1700
Silica, dissolved as SiO2	7.4		mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Depth of Water Body	0.8		Meters			3/20/2019	11:40 AM	FS2100
Nitrogen, Kjeldahl, Total	1.0		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	1.2		mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	16		mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B
Phosphorus, Total	0.13		mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	28.0		mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	6.49		NTU	0.2	0.8	3/21/2019	7:30 AM	EPA 180.1

Laboratory ID	AE04065	Collection date and time	3/20/2019 11:55 AM
Location Code	CRNEP_EQ	Sample Collector	REISTADT/DUGAN
Sample Description	EB Site #454		

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	3/25/2019	10:45 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2	3/25/2019	10:45 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	U J3	mg/L	0.3	1.2	3/21/2019	10:55 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	3/21/2019	6:42 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.4		mg/L	0.1		3/20/2019	11:55 AM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		3/20/2019	2:59 PM	Enterolert®
E.coli Enumeration	2	U	MPN/100mL	2		3/20/2019	2:59 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	3/21/2019	1:18 PM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	3/22/2019	9:53 AM	EPA 353.2

Laboratory ID AE04065
Location Code CRNEP_EQ
Sample Description EB Site #454

Collection date and time 3/20/2019 11:55 AM
Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Nitrate	0.01	U	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	3/21/2019	10:06 AM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	3/21/2019	2:28 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		3/20/2019	11:55 AM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	3/21/2019	2:59 PM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	4/3/2019	9:22 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	4/3/2019	9:22 AM	TKN + NOX
Total Organic Carbon	1.000	U	mg/L	1	4	3/27/2019	1:45 PM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	4/3/2019	9:24 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	3/21/2019	8:05 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	3/22/2019	8:06 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.


Jacqueline Ramos
Chemist

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

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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): Nicole Reistad, Maryann Dugan				Sample Collector Signature: <i>Maryann Dugan</i>				Analyses Required \$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) <i>Nicole Reistad</i>		Date: 03/20/19		Time: 1433		Received By: (signature) <i>MD</i>					
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: 1.4°C				Preservatives (see codes) NP NPF S S NP ST							
Collection Date Time		Sample Description & Location		Matrix (see codes)		# of Sample Containers Submitted		Lab ID #			
03/20/19 1035		CRNEP_RS #429		SWE		1 1 1 1 2 1		AE04058			
		CRNEP_RSBOT #429 Bottom NOT TAKEN		SWE		1 1 1 1 2 1		AE04059			
03/20/19 0930		CRNEP_RS #389		SWE		1 1 1 1 2 1		AE04060			
03/20/19 1005		CRNEP_RS #412		SWE		1 1 1 1 2 1		AE04061			
		CRNEP_RSBOT #412 Bottom NOT TAKEN		SWE		1 1 1 1 2 1		AE04062			
03/20/19 1100		CRNEP_RS #442		SWE		1 1 1 1 2 1		AE04063			
03/20/19 1140		CRNEP_RS #454		SWE		1 1 1 1 2 1		AE04064			
03/20/19 1155		CRNEP_EQ # BLANK @ 454		SWE		1 1 1 1 2 1		AE04065			

**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.