

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: 1/29/2020

Below are the results of samples submitted to this laboratory on 1/15/2020

Laboratory ID	AE35754	Collection date and time	1/15/2020 10:10 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/CARROLL
Sample Description	Grid #423		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.26		mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	0.52	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.9	I	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	43.8		CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.52		mg/L	0.1		1/15/2020	10:10 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	1.1		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.048		mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	11.03		SU	0.1		1/15/2020	10:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.7	S	meters	0.1		1/15/2020	10:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.1		mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C
Depth of Water Body	1.7		Meters			1/15/2020	10:10 AM	FS2100
Nitrogen, Kjeldahl, Total	1.1		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	1.1		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	13		mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.079		mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1

Report Format: NELAC

DOH #E45049



Laboratory ID	AE35754	Collection date and time	1/15/2020 10:10 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/CARROLL
Sample Description	Grid #423		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Total Suspended Solids	1.40	I	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	2.19		NTU	0.2	0.8	1/16/2020	7:34 AM	EPA 180.1

Laboratory ID	AE35755	Collection date and time	1/15/2020 11:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/CARROLL
Sample Description	Grid #454		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	5.15		mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	1.09	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	I	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	54.2		CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.71		mg/L	0.1		1/15/2020	11:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	42		MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.016	I	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrate + Nitrite	0.010	I	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	0.90		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.051		mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	6.16		SU	0.1		1/15/2020	11:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.9	S	meters	0.1		1/15/2020	11:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.7		mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C
Depth of Water Body	0.9		Meters			1/15/2020	11:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.92		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	0.93		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	15		mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.093		mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1
Total Suspended Solids	0.900	I	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	1.55		NTU	0.2	0.8	1/16/2020	7:34 AM	EPA 180.1



Laboratory ID	AE35757	Collection date and time	1/15/2020 11:00 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/CARROLL
Sample Description	Grid #435		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	2.99		mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	1.30	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	I	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	48.0		CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.00		mg/L	0.1		1/15/2020	11:00 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	0.89		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.048		mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	9.53		SU	0.1		1/15/2020	11:00 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.55		meters	0.1		1/15/2020	11:00 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.4		mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C
Depth of Water Body	1.9		Meters			1/15/2020	11:00 AM	FS2100
Nitrogen, Kjeldahl, Total	0.89		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	0.89		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.078		mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1
Total Suspended Solids	0.950	I	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	0.630	I	NTU	0.2	0.8	1/16/2020	7:34 AM	EPA 180.1

Laboratory ID	AE35758	Collection date and time	1/15/2020 9:20 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/CARROLL
Sample Description	Grid #394		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	1.19	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	I	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	29.5		CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.15		mg/L	0.1		1/15/2020	9:20 AM	FDEP FT1500

Report Format: NELAC

DOH #E45049



Laboratory ID AE35758
 Location Code CRNEP_RS
 Sample Description Grid #394

Collection date and time 1/15/2020 9:20 AM
 Sample Collector REISTADT/CARROLL

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Enterococci	10	U	MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.013	I	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrate + Nitrite	0.016	I	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	0.86		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.039		mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	23.44		SU	0.1		1/15/2020	9:20 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	2.55		meters	0.1		1/15/2020	9:20 AM	FDEP FT 1700
Silica, dissolved as SiO2	4.2		mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C
Depth of Water Body	2.6		Meters			1/15/2020	9:20 AM	FS2100
Nitrogen, Kjeldahl, Total	0.86		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	0.88		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	9.4		mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.061		mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	0.220	I	NTU	0.2	0.8	1/16/2020	7:34 AM	EPA 180.1

Laboratory ID AE35760
 Location Code CRNEP_RS
 Sample Description Grid #428

Collection date and time 1/15/2020 10:35 AM
 Sample Collector REISTADT/CARROLL

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	4.20		mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	0.52	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.6	I	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	48.7		CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.26		mg/L	0.1		1/15/2020	10:35 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2

Report Format: NELAC

DOH #E45049



Laboratory ID AE35760
 Location Code CRNEP_RS
 Sample Description Grid #428

Collection date and time 1/15/2020 10:35 AM
 Sample Collector REISTADT/CARROLL

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	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	0.88		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.050		mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	9.44		SU	0.1		1/15/2020	10:35 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.6	S	meters	0.1		1/15/2020	10:35 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.2		mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C
Depth of Water Body	1.6		Meters			1/15/2020	10:35 AM	FS2100
Nitrogen, Kjeldahl, Total	0.88		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	0.88		mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.081		mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1
Total Suspended Solids	0.900	I	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	0.280	I	NTU	0.2	0.8	1/16/2020	7:34 AM	EPA 180.1

Laboratory ID AE35761
 Location Code CRNEP_EQ
 Sample Description EB Site #454

Collection date and time 1/15/2020 12:05 PM
 Sample Collector REISTADT/CARROLL

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	1/16/2020	7:41 AM	SM21 10200 H
Pheophytin	0.70	I	mg/M3	0.5	2.0	1/16/2020	7:41 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	U	mg/L	0.3	1.2	1/16/2020	11:00 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	1/15/2020	3:10 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.08		mg/L	0.1		1/15/2020	12:05 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		1/15/2020	2:55 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		1/15/2020	3:08 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	1/16/2020	11:20 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	1/16/2020	1:44 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	1/16/2020	1:44 PM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	1/16/2020	2:18 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		1/15/2020	12:05 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	1/16/2020	2:18 PM	SM4500-SiO2 C

Report Format: NELAC

DOH #E45049



Laboratory ID AE35761
Location Code CRNEP_EQ
Sample Description EB Site #454

Collection date and time 1/15/2020 12:05 PM
Sample Collector REISTADT/CARROLL

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	1/17/2020	9:10 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	1/17/2020	9:10 AM	TKN + NOX
Total Organic Carbon	1.000	U	mg/L	1	4	1/24/2020	2:19 PM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	1/17/2020	9:12 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	1/16/2020	8:34 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	1/16/2020	7:34 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).
S Secchi disk visible to bottom of waterbody. Value reported is the depth of the waterbody at the location of Secchi disk measurement.
U Indicates that the compound was analyzed for but not detected.

Unless noted otherwise, these test results meet all the requirements of the 2016 NELAC/ TNI 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 S Danley Dr Unit 2
Fort 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): Nicole Reistad/Miranda Carroll		Sample Collector Signature:		Analyses Required							
Relinquished By: (signature)	Date	Time	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		
<i>Nicole Reistad</i>	01/15/20	1440	<i>Paula Ch...</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: 2.7°C

Collection		Sample Description & Location	Matrix (see codes)	# of Sample Containers Submitted						Lab ID #
Date	Time			NP	NPF	S	S	NP	ST	
01/15/20	1010	CRNEP_RS #423	SWE	1	1	1	1	2	1	AE35754
01/15/20	1150	CRNEP_RS #454	SWE	1	1	1	1	2	1	AE35755
		CRNEP_RSBOT #454 Bottom <i>DID NOT SAMPLE</i>	SWE	1	1	1	1	2	1	AE35756
01/15/20	1100	CRNEP_RS #435	SWE	1	1	1	1	2	1	AE35757
01/15/20	0920	CRNEP_RS #394	SWE	1	1	1	1	2	1	AE35758
		CRNEP_RSBOT #394 Bottom <i>DID NOT SAMPLE</i>	SWE	1	1	1	1	2	1	AE35759
01/15/20	1035	CRNEP_RS #428	SWE	1	1	1	1	2	1	AE35760
01/15/20	1205	CRNEP_EQ # 454	SWE	1	1	1	1	2	1	AE35761

**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.