

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: 8/5/2019

Below are the results of samples submitted to this laboratory on 7/17/2019

Laboratory ID	AE17219	Collection date and time	7/17/2019 10:30 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	9.40		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	3.57		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.82	V1 I	mg/L	0.3	1.2	7/18/2019	11:20 AM	SM 5210 B
Color	48.3		CU	1.6	6.4	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.7		mg/L	0.1		7/17/2019	10:30 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		7/17/2019	3:18 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.73		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.071		mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	9.60		SU	0.1		7/17/2019	10:30 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.45		meters	0.1		7/17/2019	10:30 AM	FDEP FT 1700
Silica, dissolved as SiO2	4.3		mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Depth of Water Body	2.4		Meters			7/17/2019	10:30 AM	FS2100
Nitrogen, Kjeldahl, Total	0.73		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	0.73		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	11		mg/L	1	4	7/23/2019	10:07 AM	SM 5310 B

Laboratory ID	AE17219	Collection date and time	7/17/2019 10:30 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
Phosphorus, Total	0.10		mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	1.85	I	mg/L	0.6	2.4	7/18/2019	8:24 AM	SM 2540 D
Turbidity (Nephelometric)	1.45		NTU	0.2	0.8	7/18/2019	12:57 PM	EPA 180.1

Laboratory ID	AE17220	Collection date and time	7/17/2019 11:50 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #428		

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	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	6.05		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.62	V1 I	mg/L	0.3	1.2	7/18/2019	11:20 AM	SM 5210 B
Color	79.8		CU	1.6	6.4	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.3		mg/L	0.1		7/17/2019	11:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		7/17/2019	3:18 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.069		mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.018		mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2
Nitrate	0.127		mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.145		mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.87		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.112		mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	1.16		SU	0.1		7/17/2019	11:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.05		meters	0.1		7/17/2019	11:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	9.6		mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Depth of Water Body	1.3		Meters			7/17/2019	11:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.94		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	1.1		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	15		mg/L	1	4	7/25/2019	11:09 AM	SM 5310 B
Phosphorus, Total	0.15		mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	2.25	I	mg/L	0.6	2.4	7/18/2019	8:24 AM	SM 2540 D
Turbidity (Nephelometric)	2.46		NTU	0.2	0.8	7/18/2019	12:57 PM	EPA 180.1

Laboratory ID AE17221
 Location Code CRNEP_RS
 Sample Description Grid #403

Collection date and time 7/17/2019 11:10 AM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	20.00		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	6.13		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.88	V1 I	mg/L	0.3	1.2	7/18/2019	11:20 AM	SM 5210 B
Color	63.0		CU	1.6	6.4	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.35		mg/L	0.1		7/17/2019	11:10 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		7/17/2019	3:18 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.86		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.084		mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	4.66		SU	0.1		7/17/2019	11:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.15		meters	0.1		7/17/2019	11:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.5		mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Depth of Water Body	3.0		Meters			7/17/2019	11:10 AM	FS2100
Nitrogen, Kjeldahl, Total	0.86		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	0.86		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	7/23/2019	10:07 AM	SM 5310 B
Phosphorus, Total	0.12		mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	3.20		mg/L	0.6	2.4	7/18/2019	8:24 AM	SM 2540 D
Turbidity (Nephelometric)	1.87		NTU	0.2	0.8	7/18/2019	12:57 PM	EPA 180.1

Laboratory ID AE17222
 Location Code CRNEP_RS
 Sample Description Grid #454

Collection date and time 7/17/2019 12:35 PM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	4.51		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	1.84	I	mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.99	V1 I	mg/L	0.3	1.2	7/18/2019	11:20 AM	SM 5210 B

Laboratory ID	AE17222	Collection date and time	7/17/2019 12:35 PM
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
Color	109		CU	3.2	12.8	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	4.69		mg/L	0.1		7/17/2019	12:35 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		7/17/2019	3:18 PM	Enterolert®
E.coli Enumeration	20		MPN/100mL	10		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.069		mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.020		mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2
Nitrate	0.159		mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.179		mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.93		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.090		mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	0.27		SU	0.1		7/17/2019	12:35 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.05		meters	0.1		7/17/2019	12:35 PM	FDEP FT 1700
Silica, dissolved as SiO2	11		mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Depth of Water Body	1.6		Meters			7/17/2019	12:35 PM	FS2100
Nitrogen, Kjeldahl, Total	1.0		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	1.2		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	18		mg/L	1	4	7/23/2019	10:07 AM	SM 5310 B
Phosphorus, Total	0.11		mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	7/18/2019	8:24 AM	SM 2540 D
Turbidity (Nephelometric)	1.12		NTU	0.2	0.8	7/18/2019	12:57 PM	EPA 180.1

Laboratory ID	AE17224	Collection date and time	7/17/2019 9:45 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	3.96		mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	1.54	I	mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	VI	mg/L	0.3	1.2	7/18/2019	12:29 PM	SM 5210 B
Color	37.6		CU	1.6	6.4	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	5.97		mg/L	0.1		7/17/2019	9:45 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		7/17/2019	3:18 PM	Enterolert®

Laboratory ID AE17224
 Location Code CRNEP_RS
 Sample Description Grid #326X

Collection date and time 7/17/2019 9:45 AM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	10	U	MPN/100mL	10		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.022	I	mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.012	I	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.71		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.062		mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	13.47		SU	0.1		7/17/2019	9:45 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.8		meters	0.1		7/17/2019	9:45 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.4		mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Depth of Water Body	2.9		Meters			7/17/2019	9:45 AM	FS2100
Nitrogen, Kjeldahl, Total	0.73		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	0.74		mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	9.9	V	mg/L	1	4	7/23/2019	10:07 AM	SM 5310 B
Phosphorus, Total	0.083		mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	7/18/2019	10:05 AM	SM 2540 D
Turbidity (Nephelometric)	1.20		NTU	0.2	0.8	7/18/2019	12:57 PM	EPA 180.1

Laboratory ID AE17226
 Location Code CRNEP_EQ
 Sample Description EB Site #454

Collection date and time 7/17/2019 12:50 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	7/21/2019	10:30 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2	7/21/2019	10:30 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.3	I	mg/L	0.3	1.2	7/18/2019	12:29 PM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	7/18/2019	10:36 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.40		mg/L	0.1		7/17/2019	12:50 PM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		7/17/2019	3:18 PM	Enterolert®
E.coli Enumeration	2	U	MPN/100mL	2		7/17/2019	3:33 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	7/18/2019	10:10 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	7/18/2019	11:25 AM	EPA 353.2

Laboratory ID AE17226
 Location Code CRNEP_EQ
 Sample Description EB Site #454

Collection date and time 7/17/2019 12:50 PM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Nitrate	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	7/18/2019	11:25 AM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	7/17/2019	3:10 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		7/17/2019	12:50 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	7/17/2019	3:10 PM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	7/19/2019	10:03 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	7/19/2019	10:03 AM	TKN + NOX
Total Organic Carbon	1.0	I	mg/L	1	4	7/23/2019	10:07 AM	SM 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	7/19/2019	10:05 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	7/18/2019	10:05 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	7/18/2019	12:57 PM	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.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- V I Analyte was detected in both the sample and associated method blank. The value is < or = to the PQL and > the MDL.
- V1 I Analyte found in both sample & field blank @ <5X the blank value. The value is > the MDL and < or = to the PQL.

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 Reistadt		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)	Date	Time	Received By: (signature)						
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: 1-7°C				NP	NPF	S	S	NP	ST
Collection Date	Time	Sample Description & Location	Matrix (see codes)	# of Sample Containers Submitted					Lab ID #
07/17/19	1030	CRNEP_RS #387	SWE	1	1	1	1	2	1 AE17219
07/17/19	1150	CRNEP_RS #428	SWE	1	1	1	1	2	1 AE17220
07/17/19	1110	CRNEP_RS #403	SWE	1	1	1	1	2	1 AE17221
07/17/19	1235	CRNEP_RS #454	SWE	1	1	1	1	2	1 AE17222
		CRNEP_RSBOT #454 Bottom	SWE	1	1	1	1	2	1 AE17223
07/17/19	0945	CRNEP_RS #326x	SWE	1	1	1	1	2	1 AE17224
		CRNEP_RSBOT #326x Bottom	SWE	1	1	1	1	2	1 AE17225
07/17/19	1250	CRNEP_EQ #BLANK @454	SWE	1	1	1	1	2	1 AE17226

**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.