

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: 7/10/2018

Below are the results of samples submitted to this laboratory on 6/20/2018

Laboratory ID	AD78274	Collection date and time	6/20/2018 12:00 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	8.99		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	4.01		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	V1 I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B
Color	137		CU	3.2	12.8	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.57		mg/L	0.1		6/20/2018	12:00 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/20/2018	2:53 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.025	I	mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.007	I	mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2
Nitrate	0.233		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.240		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	0.82		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.158		mg/L as P	0.004	0.016	6/20/2018	3:20 PM	EPA 365.1
Salinity by meter by Client	0.23		SU	0.1		6/20/2018	12:00 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.75		meters	0.1		6/20/2018	12:00 PM	FDEP FT 1700
Silica, dissolved as SiO2	11		mg/L as SiO2	0.1	0.4	6/20/2018	2:44 PM	SM4500 C
Depth of Water Body	1.3		Meters			6/20/2018	12:00 PM	FS2100
Nitrogen, Kjeldahl, Total	0.84		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	1.1		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	18	Y	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B

Laboratory ID	AD78274	Collection date and time	6/20/2018 12:00 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
Phosphorus, Total	0.20		mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	3.10		mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	6.15		NTU	0.2	0.8	6/21/2018	8:06 AM	EPA 180.1

Laboratory ID	AD78275	Collection date and time	6/20/2018 10:45 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	2.04		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	5.54		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	V1 I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B
Color	81.8		CU	1.6	6.4	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	5.06		mg/L	0.1		6/20/2018	10:45 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/20/2018	2:53 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.069		mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.008	I	mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2
Nitrate	0.125		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.133		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	0.77		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.118		mg/L as P	0.004	0.016	6/20/2018	3:20 PM	EPA 365.1
Salinity by meter by Client	10.95		SU	0.1		6/20/2018	10:45 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.2		meters	0.1		6/20/2018	10:45 AM	FDEP FT 1700
Silica, dissolved as SiO2	7.7		mg/L as SiO2	0.1	0.4	6/20/2018	2:44 PM	SM4500 C
Depth of Water Body	2.1		Meters			6/20/2018	10:45 AM	FS2100
Nitrogen, Kjeldahl, Total	0.84		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	0.97		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	14	Y	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B
Phosphorus, Total	0.15		mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	2.78		mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	3.73		NTU	0.2	0.8	6/21/2018	8:06 AM	EPA 180.1

Laboratory ID	AD78276	Collection date and time	6/20/2018 10:10 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	2.86		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	3.55		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	V1 I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B
Color	30.5		CU	1.6	6.4	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	5.91		mg/L	0.1		6/20/2018	10:10 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/20/2018	2:53 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.032	I	mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2
Nitrate	0.014	I	mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.018	I	mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	0.62		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.042		mg/L as P	0.004	0.016	6/20/2018	3:20 PM	EPA 365.1
Salinity by meter by Client	23.45		SU	0.1		6/20/2018	10:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	2.1		meters	0.1		6/20/2018	10:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	3.5		mg/L as SiO2	0.1	0.4	6/20/2018	2:44 PM	SM4500 C
Depth of Water Body	4.1		Meters			6/20/2018	10:10 AM	FS2100
Nitrogen, Kjeldahl, Total	0.65		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	0.67		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	7.3	Y	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B
Phosphorus, Total	0.070		mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	3.40		mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	1.19		NTU	0.2	0.8	6/21/2018	8:06 AM	EPA 180.1

Laboratory ID	AD78277	Collection date and time	6/20/2018 11:30 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	11.03		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	6.28		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	1.0	V1 I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B

Laboratory ID	AD78277	Collection date and time	6/20/2018 11:30 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
Color	130		CU	3.2	12.8	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.76		mg/L	0.1		6/20/2018	11:30 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/20/2018	2:53 PM	Enterolert®
E.coli Enumeration	10	U	MPN/100mL	10		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.027	I	mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.008	I	mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2
Nitrate	0.237		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.245		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	1.1		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.165		mg/L as P	0.004	0.016	6/20/2018	3:20 PM	EPA 365.1
Salinity by meter by Client	0.24		SU	0.1		6/20/2018	11:30 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.65		meters	0.1		6/20/2018	11:30 AM	FDEP FT 1700
Silica, dissolved as SiO2	11		mg/L as SiO2	0.1	0.4	6/20/2018	2:44 PM	SM4500 C
Depth of Water Body	1.7		Meters			6/20/2018	11:30 AM	FS2100
Nitrogen, Kjeldahl, Total	1.1		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	1.3		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	18	Y	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B
Phosphorus, Total	0.19		mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	2.95		mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	5.47		NTU	0.2	0.8	6/21/2018	8:06 AM	EPA 180.1

Laboratory ID	AD78278	Collection date and time	6/20/2018 12:40 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #448		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	4.70		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	2.15		mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	1.0	V1 I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B
Color	155		CU	3.2	12.8	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	4.78		mg/L	0.1		6/20/2018	12:40 PM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		6/20/2018	2:53 PM	Enterolert®

Laboratory ID	AD78278	Collection date and time	6/20/2018 12:40 PM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #448		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	10	U	MPN/100mL	10		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.021	I	mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.013		mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2
Nitrate	0.322		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.335		mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	1.1		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.152		mg/L as P	0.004	0.016	6/20/2018	3:20 PM	EPA 365.1
Salinity by meter by Client	0.21		SU	0.1		6/20/2018	12:40 PM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.55		meters	0.1		6/20/2018	12:40 PM	FDEP FT 1700
Silica, dissolved as SiO2	11		mg/L as SiO2	0.1	0.4	6/20/2018	2:44 PM	SM4500 C
Depth of Water Body	1.8		Meters			6/20/2018	12:40 PM	FS2100
Nitrogen, Kjeldahl, Total	1.1		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	1.4		mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	20	Y	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B
Phosphorus, Total	0.19		mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	1.65	I	mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	5.48		NTU	0.2	0.8	6/21/2018	8:06 AM	EPA 180.1

Laboratory ID	AD78279	Collection date and time	6/20/2018 12:55 PM
Location Code	CRNEP_EQ	Sample Collector	REISTADT/DUGAN
Sample Description	EB Site #448		

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	6/21/2018	2:52 PM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	6/21/2018	2:52 PM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.4	I	mg/L	0.3	1.2	6/21/2018	9:25 AM	SM20 5210 B
Color	1.6	U	CU	1.6	6.4	6/20/2018	3:42 PM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.79		mg/L	0.1		6/20/2018	12:55 PM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		6/20/2018	2:53 PM	Enterolert®
E.coli Enumeration	2	U	MPN/100mL	2		6/20/2018	2:55 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	6/21/2018	10:42 AM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	6/21/2018	8:13 AM	EPA 353.2

Laboratory ID AD78279
Location Code CRNEP_EQ
Sample Description EB Site #448

Collection date and time 6/20/2018 12:55 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	6/21/2018	8:13 AM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	6/21/2018	8:13 AM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	6/21/2018	2:16 PM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		6/20/2018	12:55 PM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	6/21/2018	2:17 PM	SM4500 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	7/2/2018	8:49 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	7/2/2018	8:49 AM	TKN + NOX
Total Organic Carbon	1.000	Y U	mg/L	1	4	6/24/2018	11:45 AM	SM21 5310 B
Phosphorus, Total	0.006	U	mg/L as P	0.006	0.024	7/2/2018	9:01 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	6/21/2018	9:15 AM	SM21 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	6/21/2018	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).
U Indicates that the compound was analyzed for but not detected.
V1 I Analyte found in both sample & field blank @ <5X the blank value. The value is > the MDL and < or = to the PQL.
Y Improperly preserved sample: Temp may be too high or frozen, may not have been field filtered and/or preservative may have been added at lab; therefore data may not be accurate.
Y U Improper preservation. Preservative may have been added upon receipt by lab. Temp may have been too high or frozen. 'U' indicates compound was 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 & Chain of Custody Record

Lab Certification: E45049
LCEL_F_COC_20150828R1

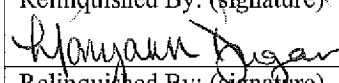
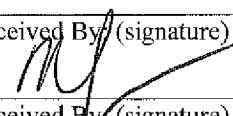
LCEL does not accept any samples used for evidentiary purposes

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): MaryAnn Dugan / Nicole Reistad		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	MugQT, Entero		
	06/20/18	1442									
Relinquished By: (signature)	Date	Time	Received By: (signature)								
	06/20/18	1443									
Relinquished By: (signature)	Date	Time	Received By: (signature)								

Sample(s) on ice ☒ Yes or ☐ No? Temperature °C: 3.2°C

Collection		Sample Description & Location			Matrix (see codes)	# of Sample Containers Submitted						Lab ID #
Date	Time											
06/20/18	1010	CRNEP_RS #419	12:00	7/10/18, RAA	SWE	1	1	1	1	2	1	AD78274
06/20/18	1045	CRNEP_RS #386			SWE	1	1	1	1	2	1	AD78275
06/20/18	1130	CRNEP_RS #326	10:10	7/10/18, RAA	SWE	1	1	1	1	2	1	AD78276
06/20/18	1200	CRNEP_RS #418	11:30	7/10/18, RAA	SWE	1	1	1	1	2	1	AD78277
06/20/18	1240	CRNEP_RS #448			SWE	1	1	1	1	2	1	AD78278
06/20/18	1255	CRNEP_EQ #			SWE	1	1	1	1	2	1	AD78279

**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.