

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: 11/28/2018

Below are the results of samples submitted to this laboratory on 11/15/2018

Laboratory ID	AD91632	Collection date and time	11/15/2018 9:35 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #435		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.46		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	4.48		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	V1 I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B
Color	54.9		CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.09		mg/L	0.1		11/15/2018	9:35 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		11/15/2018	2:24 PM	Enterolert®
E.coli Enumeration	20		MPN/100mL	10		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.77		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.061		mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	8.49		SU	0.1		11/15/2018	9:35 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.25		meters	0.1		11/15/2018	9:35 AM	FDEP FT 1700
Silica, dissolved as SiO2	5.2		mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Depth of Water Body	2.4		Meters			11/15/2018	9:35 AM	FS2100
Nitrogen, Kjeldahl, Total	0.77		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.77		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Total Organic Carbon	13		mg/L	1	4	11/21/2018	11:01 AM	SM 5310 B

Laboratory ID	AD91632	Collection date and time	11/15/2018 9:35 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #435		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Phosphorus, Total	0.092		mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	1.50	I	mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	0.580	I	NTU	0.2	0.8	11/16/2018	8:32 AM	EPA 180.1

Laboratory ID	AD91634	Collection date and time	11/15/2018 10:35 AM
Location Code	CRNEP_RS	Sample Collector	REISTADT/DUGAN
Sample Description	Grid #449		

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
Chlorophyll a - corrected for Pheophytin	3.70		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	5.32		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	V1 I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B
Color	59.4		CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.48		mg/L	0.1		11/15/2018	10:35 AM	FDEP FT1500
Enterococci	10		MPN/100mL	10		11/15/2018	2:24 PM	Enterolert®
E.coli Enumeration	53		MPN/100mL	10		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.020	I	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2
Nitrate	0.024	I	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.028	I	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.80		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.066		mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	4.95		SU	0.1		11/15/2018	10:35 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.25		meters	0.1		11/15/2018	10:35 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.7		mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Depth of Water Body	1.5		Meters			11/15/2018	10:35 AM	FS2100
Nitrogen, Kjeldahl, Total	0.82		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.85		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Total Organic Carbon	15		mg/L	1	4	11/21/2018	11:01 AM	SM 5310 B
Phosphorus, Total	0.10		mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	2.85		mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	1.28		NTU	0.2	0.8	11/16/2018	8:32 AM	EPA 180.1

Laboratory ID	AD91635	Collection date and time	11/15/2018 9:15 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	3.12		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	2.51		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.6	V1 I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B
Color	56.7		CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.15		mg/L	0.1		11/15/2018	9:15 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		11/15/2018	2:24 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.012	I	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.62		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.058		mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	8.97		SU	0.1		11/15/2018	9:15 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.3		meters	0.1		11/15/2018	9:15 AM	FDEP FT 1700
Silica, dissolved as SiO2	4.9		mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Depth of Water Body	1.6		Meters			11/15/2018	9:15 AM	FS2100
Nitrogen, Kjeldahl, Total	0.62		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.63		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Total Organic Carbon	13		mg/L	1	4	11/21/2018	11:01 AM	SM 5310 B
Phosphorus, Total	0.091		mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	0.210	I	NTU	0.2	0.8	11/16/2018	8:32 AM	EPA 180.1

Laboratory ID	AD91636	Collection date and time	11/15/2018 10:10 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	4.85		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	2.71		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.8	V1 I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B

Laboratory ID	AD91636	Collection date and time	11/15/2018 10:10 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	62.8		CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	7.13		mg/L	0.1		11/15/2018	10:10 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		11/15/2018	2:24 PM	Enterolert®
E.coli Enumeration	10		MPN/100mL	10		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.003	I	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2
Nitrate	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.67		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.063		mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	6.30		SU	0.1		11/15/2018	10:10 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	1.35		meters	0.1		11/15/2018	10:10 AM	FDEP FT 1700
Silica, dissolved as SiO2	6.0		mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Depth of Water Body	1.7		Meters			11/15/2018	10:10 AM	FS2100
Nitrogen, Kjeldahl, Total	0.67		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.67		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Total Organic Carbon	14		mg/L	1	4	11/21/2018	11:01 AM	SM 5310 B
Phosphorus, Total	0.10		mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	2.65		mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	0.700	I	NTU	0.2	0.8	11/16/2018	8:32 AM	EPA 180.1

Laboratory ID	AD91638	Collection date and time	11/15/2018 10:50 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	7.61		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	7.04		mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.7	V1 I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B
Color	58.9		CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	6.02		mg/L	0.1		11/15/2018	10:50 AM	FDEP FT1500
Enterococci	10	U	MPN/100mL	10		11/15/2018	2:24 PM	Enterolert®

Laboratory ID AD91638
 Location Code CRNEP_RS
 Sample Description Grid #454

Collection date and time 11/15/2018 10:50 AM
 Sample Collector REISTADT/DUGAN

Analyte Name	Result	Qualifier	Units	MDL	PQL	Analysis Date	Analysis Time	Analysis Method
E.coli Enumeration	20		MPN/100mL	10		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.020	I	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.004	I	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2
Nitrate	0.036	I	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.040		mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.79		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.059		mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	3.44		SU	0.1		11/15/2018	10:50 AM	FDEP FT 1300
Water Clarity Secchi Disk, by Client	0.9	S	meters	0.1		11/15/2018	10:50 AM	FDEP FT 1700
Silica, dissolved as SiO2	7.3		mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Depth of Water Body	0.9		Meters			11/15/2018	10:50 AM	FS2100
Nitrogen, Kjeldahl, Total	0.81		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.85		mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Total Organic Carbon	15		mg/L	1	4	11/21/2018	11:01 AM	SM 5310 B
Phosphorus, Total	0.11		mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	3.70		mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	2.30		NTU	0.2	0.8	11/16/2018	8:32 AM	EPA 180.1

Laboratory ID AD91639
 Location Code CRNEP_EQ
 Sample Description EB Site #454

Collection date and time 11/15/2018 11:00 AM
 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	11/21/2018	7:56 AM	SM21 10200 H
Pheophytin	0.50	U	mg/M3	0.5	2.0	11/21/2018	7:56 AM	SM21 10200 H
Biochemical Oxygen Demand 5 day	0.5	I J3	mg/L	0.3	1.2	11/16/2018	8:15 AM	SM 5210 B
Color	1.6	U	CU	1.6	6.4	11/16/2018	11:35 AM	SM21 2120 C
Oxygen, Dissolved, Electrode, by Client	8.62		mg/L	0.1		11/15/2018	11:00 AM	FDEP FT1500
Enterococci	2	U	MPN/100mL	2		11/15/2018	2:24 PM	Enterolert®
E.coli Enumeration	2	U	MPN/100mL	2		11/15/2018	2:24 PM	Colilert-18®
Ammonia	0.014	U	mg/L as N	0.014	0.056	11/16/2018	12:42 PM	EPA 350.1
Nitrite	0.003	U	mg/L as N	0.003	0.012	11/15/2018	2:01 PM	EPA 353.2

Laboratory ID AD91639
 Location Code CRNEP_EQ
 Sample Description EB Site #454

Collection date and time 11/15/2018 11:00 AM
 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	11/15/2018	2:01 PM	EPA 353.2
Nitrate + Nitrite	0.010	U	mg/L as N	0.01	0.04	11/15/2018	2:01 PM	EPA 353.2
Nitrogen, Organic	0.050	U	mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN - NH3
Phosphorus, Ortho	0.004	U	mg/L as P	0.004	0.016	11/16/2018	8:11 AM	EPA 365.1
Salinity by meter by Client	0.1	U	SU	0.1		11/15/2018	11:00 AM	FDEP FT 1300
Silica, dissolved as SiO2	0.1	U	mg/L as SiO2	0.1	0.4	11/16/2018	8:11 AM	SM4500-SiO2 C
Nitrogen, Kjeldahl, Total	0.05	U	mg/L as N	0.05	0.2	11/26/2018	9:14 AM	EPA 351.2
Nitrogen, Total	0.050	U	mg/L as N	0.05	0.2	11/26/2018	9:14 AM	TKN + NOX
Phosphorus, Total	0.013	I	mg/L as P	0.006	0.024	11/26/2018	9:17 AM	EPA 365.1
Total Suspended Solids	0.6	U	mg/L	0.6	2.4	11/16/2018	7:55 AM	SM 2540 D
Turbidity (Nephelometric)	0.20	U	NTU	0.2	0.8	11/16/2018	8:32 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.
- 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.
- V1 I J3 Analyte found in both sample & field blank @ <5X the blank value. The value is < or = to the PQL and > the MDL. Value failed to meet quality control criteria for either 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.



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 ATTN: Kirby Wolfe Address: 2295 Victoria Ave, Suite 364 PO Box 2549 Ft Myers FL 33901 Phone: (239) 344-5719	Name: DNR RE: CCHMN-Tidal Caloosa Address: 1500 Monroe St Ft Myers, FL 33901 Phone: (239) 533-8109	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
---	--	---	--

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	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: 0.9 °C

NP NPF S S NP ST

Preservatives (see codes)

Collection Date Time	Sample Description & Location	Matrix (see codes)	# of Sample Containers Submitted						Lab ID #
11/15/18 0935	CRNEP_RS #435	SWE	1	1	1	1	2	1	AD91632
11/15/18 0935	CRNEP_RSBOT #435 Bottom	SWE	1	1	1	1	2	1	AD91633
11/15/18 1035	CRNEP_RS #449	SWE	1	1	1	1	2	1	AD91634
11/15/18 0915	CRNEP_RS #428	SWE	1	1	1	1	2	1	AD91635
11/15/18 1010	CRNEP_RS #442	SWE	1	1	1	1	2	1	AD91636
11/15/18 1010	CRNEP_RSBOT #442 Bottom	SWE	1	1	1	1	2	1	AD91637
11/15/18 1050	CRNEP_RS #454	SWE	1	1	1	1	2	1	AD91638
11/15/18 1100	CRNEP_EQ #BLANK	SWE	1	1	1	1	2	1	AD91639

**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.