

Biological Analysis Report

NW-DIST-2010-02-23-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Overflow Analyses Performed By:
University of West Florida
11000 University Parkway
Pensacola, FL 32514
DOH Accreditation E71969

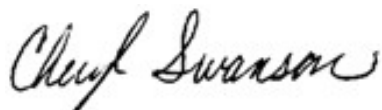
Event Description: **Project Greenshores**
Request ID: **RQ-2010-02-22-20**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
David D. Whiting - Administrator
Loretta E. Wolfe - Bench Biology
Elizabeth Miller - Algal Taxonomy
Cheryl Swanson - Invertebrate Taxonomy
J. Marshall Faircloth - Aquatic Toxicology
Daisys Tamayo - Microbiology
Andrew R. Tintle, QA Officer
Phone (850) 245-8177

Certified by: Cheryl A. Swanson, Environmental Supervisor II

Date Certified: 12-MAR-2010 16:47



Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.

LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.

MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.

RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.

CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

* - Item was outside the QC Limits.

** - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

A - Value reported is the mean of two or more determinations

B - Results based on colony counts outside the acceptable range.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J - Estimated value

K - Actual value is known to be less than value given

L - Actual value is known to be greater than value given

N - Presumptive evidence of presence of material.

O - Sampled, but analysis lost or not performed.

Q - Sample held beyond normal holding time.

T - Value reported is less than the criterion of detection.

U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.

V - Analyte was detected in both sample and method blank.

X - Too few individuals to calculate SCI value.

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Z - Colonies were too numerous to count (TNTC).

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

Job: TLH-2010-02-23-20

Job: TLH-2010-02-23-22

Job: TLH-2010-02-23-25

Group: Chlorophyll/Grain Size/BOD

Group: Chlorophyll/Grain Size/BOD

Group: Overflow

Sample Location: 1/2 MUSCOGEE AND HAWKSHAW

Collection Date/Time: 02/22/2010 12:20 PM

Field ID: 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251163	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.96	I		mg/L	E31780
1251182	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.7	A		ug/L	
		Phaeophytin-a	0.41	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7	A			
		Chlorophyll-a, Uncorrected	4.9	A		ug/L	
1251205	EPA 1600	Enterococci-Membrane Filter	280			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	5	B		#/100 mL	

Ref. Method and Comment:

SM 10200 H (mod.) Laboratory duplicate result is 0.41 U for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 02/22/2010 11:01 AM

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251159	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.44	I		mg/L	E31780
1251178	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.5	I		ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.8				
		Chlorophyll-a, Uncorrected	1.5			ug/L	
1251201	EPA 1600	Enterococci-Membrane Filter	280			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: 1/2 BRIDGE AND PORT

Collection Date/Time: 02/22/2010 11:23 AM

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251164	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.34	I		mg/L	E31780
1251183	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.7	I		ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	1.7			ug/L	
1251206	EPA 1600	Enterococci-Membrane Filter	112	J		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	B		#/100 mL	

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:
EPA 1600 J - Value is qualified by quality control blank > Limit of Detection.

Sample Location: 1/4 BETWEEN BRIDGE & PORT **Collection Date/Time:** 02/22/2010 11:28 AM

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251169	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.20	U		mg/L	E31780
1251188	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.3			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.8				
		Chlorophyll-a, Uncorrected	2.3			ug/L	
1251211	EPA 1600	Enterococci-Membrane Filter	16	BJ		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	5	B		#/100 mL	

Ref. Method and Comment:
EPA 1600 J - Value is qualified by quality control blank > Limit of Detection.

Sample Location: 100 FT. SOUTH OF STORM DRAIN **Collection Date/Time:** 02/22/2010 11:10 AM

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251161	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.71	I		mg/L	E31780
1251180	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.3			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.7			ug/L	
1251203	EPA 1600	Enterococci-Membrane Filter	236	J		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	107			#/100 mL	

Ref. Method and Comment:
EPA 1600 J - Value is qualified by quality control blank > Limit of Detection.

Sample Location: BETWEEN MARINA AND OUTFALL **Collection Date/Time:** 02/22/2010 11:40 AM

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251167	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I		mg/L	E31780
1251186	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.2			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	2.3			ug/L	
1251209	EPA 1600	Enterococci-Membrane Filter	310			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	251	B		#/100 mL	

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Sample Location: EAST OF PRIMULK STORM DRAIN

Collection Date/Time: 02/22/2010 11:06 AM

Field ID: 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251160	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.57	I		mg/L	E31780
1251179	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.8			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	1.9			ug/L	
1251202	EPA 1600	Enterococci-Membrane Filter	330			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	7	B		#/100 mL	

Sample Location: EAST OF STORMDRAIN INSIDE PGS2

Collection Date/Time: 02/22/2010 12:08 PM

Field ID: 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251171	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.5			mg/L	E31780
1251190	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.3	I		ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.6				
		Chlorophyll-a, Uncorrected	1.5			ug/L	
1251213	EPA 1600	Enterococci-Membrane Filter	500			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	720	B		#/100 mL	

Sample Location: END OF CHASE STREET

Collection Date/Time: 02/22/2010 11:19 AM

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251162	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.86	I		mg/L	E31780
1251181	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.0			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.2			ug/L	
1251204	EPA 1600	Enterococci-Membrane Filter	310			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	7	B		#/100 mL	

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Sample Location: ENTRANCE OF MARINA

Collection Date/Time: 02/22/2010 11:35 AM

Field ID: 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251168	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.2			mg/L	E31780
1251187	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.2	I		ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	1.2	I		ug/L	
1251210	EPA 1600	Enterococci-Membrane Filter	240			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	760	B		#/100 mL	

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 02/22/2010 12:00 PM

Field ID: 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251170	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.2			mg/L	E31780
1251189	SM 10200 H (mod.)	Chlorophyll-a, Corrected	8.9			ug/L	
		Phaeophytin-a	2.4			ug/L	
		Chlorophyll/Phaeophytin Ratio	1.6				
		Chlorophyll-a, Uncorrected	11			ug/L	
1251212	EPA 1600	Enterococci-Membrane Filter	174			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	61			#/100 mL	

Sample Location: RANGE MARKER E OF TEXAR

Collection Date/Time: 02/22/2010 10:50 AM

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251158	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.59	I		mg/L	E31780
1251177	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.9			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	3.1			ug/L	
1251200	EPA 1600	Enterococci-Membrane Filter	90	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	7	B		#/100 mL	

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Sample Location: WEST END OF HAWKSHAW

Collection Date/Time: 02/22/2010 11:48 AM

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251166	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.33	I		mg/L	E31780
1251185	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.9			ug/L	
		Phaeophytin-a	0.46	I		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.6				
		Chlorophyll-a, Uncorrected	6.4			ug/L	
1251208	EPA 1600	Enterococci-Membrane Filter	188	J		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	35	B		#/100 mL	

Ref. Method and Comment:
 EPA 1600 J - Value is qualified by quality control blank > Limit of Detection.

Sample Location: WEST OF STORM DRAIN INSIDE ROCKS

Collection Date/Time: 02/22/2010 11:15 AM

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251165	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.93	I		mg/L	E31780
1251184	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.1			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.4			ug/L	
1251207	EPA 1600	Enterococci-Membrane Filter	50			#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	21	B		#/100 mL	

Quality Control Report

Ref. Method	Analyte	LCS %Recovery	MS %Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected				2.69	
	Chlorophyll-a, Uncorrected				0.985	
	Chlorophyll/Phaeophytin Ratio				0.0	
	Chlorophyll-a, Corrected				9.76	
	Chlorophyll-a, Uncorrected				10.4	
	Chlorophyll/Phaeophytin Ratio				0.0	
	Phaeophytin-a				19.0	

Reference Method Descriptions

Ref. Method:

EPA 1600
SM 10200 H (mod.)
SM 5210 B
SM 9222 D

Description

Enterococci by membrane filter method by UWF Overflow Laboratory for NWD
Phytoplankton chlorophyll-a and phaeophytin and ratio by spectrophotometry
BOD, NOT nitrogen-inhibited
Fecal coliforms by membrane filter method by UWF Overflow Laboratory for NWD

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared by	Analysis Date/Time	Analyzed by	Associated Samples
EPA 1600	2/22/2010			02/22/2010 14:25	UWF Lab	1251200
EPA 1600	2/22/2010			02/22/2010 14:27	UWF Lab	1251201
EPA 1600	2/22/2010			02/22/2010 14:30	UWF Lab	1251202
EPA 1600	2/22/2010			02/22/2010 14:32	UWF Lab	1251203
EPA 1600	2/22/2010			02/22/2010 14:35	UWF Lab	1251204
EPA 1600	2/22/2010			02/22/2010 14:37	UWF Lab	1251205
EPA 1600	2/22/2010			02/22/2010 14:40	UWF Lab	1251206
EPA 1600	2/22/2010			02/22/2010 14:42	UWF Lab	1251207
EPA 1600	2/22/2010			02/22/2010 14:51	UWF Lab	1251208
EPA 1600	2/22/2010			02/22/2010 14:53	UWF Lab	1251209
EPA 1600	2/22/2010			02/22/2010 14:56	UWF Lab	1251210
EPA 1600	2/22/2010			02/22/2010 14:59	UWF Lab	1251211
EPA 1600	2/22/2010			02/22/2010 15:01	UWF Lab	1251212
EPA 1600	2/22/2010			02/22/2010 15:04	UWF Lab	1251213
SM 10200 H (mod.)	2/23/2010	02/23/2010 13:25	Jacqueline Shim	02/24/2010	Jacqueline Shim	1251177, 1251178, 1251179, 1251180, 1251181, 1251182, 1251183, 1251184, 1251185, 1251186, 1251187
SM 10200 H (mod.)	2/23/2010	02/23/2010 13:25	Jacqueline Shim	02/25/2010	Amelia G. Rankin	1251188, 1251189, 1251190
SM 5210 B	2/23/2010			02/24/2010 08:10	Jonathan M. Woods	1251158, 1251159, 1251160, 1251161, 1251162, 1251163, 1251164, 1251165, 1251166, 1251167, 1251168, 1251169, 1251170, 1251171
SM 9222 D	2/22/2010			02/22/2010 14:35	UWF Lab	1251200
SM 9222 D	2/22/2010			02/22/2010 14:37	UWF Lab	1251201
SM 9222 D	2/22/2010			02/22/2010 14:40	UWF Lab	1251202
SM 9222 D	2/22/2010			02/22/2010 14:42	UWF Lab	1251203
SM 9222 D	2/22/2010			02/22/2010 14:45	UWF Lab	1251204
SM 9222 D	2/22/2010			02/22/2010 14:47	UWF Lab	1251205

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared by	Analysis Date/Time	Analyzed by	Associated Samples
SM 9222 D	2/22/2010			02/22/2010 15:00	UWF Lab	1251206
SM 9222 D	2/22/2010			02/22/2010 15:05	UWF Lab	1251207
SM 9222 D	2/22/2010			02/22/2010 15:10	UWF Lab	1251208
SM 9222 D	2/22/2010			02/22/2010 15:12	UWF Lab	1251209
SM 9222 D	2/22/2010			02/22/2010 15:15	UWF Lab	1251210
SM 9222 D	2/22/2010			02/22/2010 15:17	UWF Lab	1251211
SM 9222 D	2/22/2010			02/22/2010 15:20	UWF Lab	1251212
SM 9222 D	2/22/2010			02/22/2010 15:22	UWF Lab	1251213