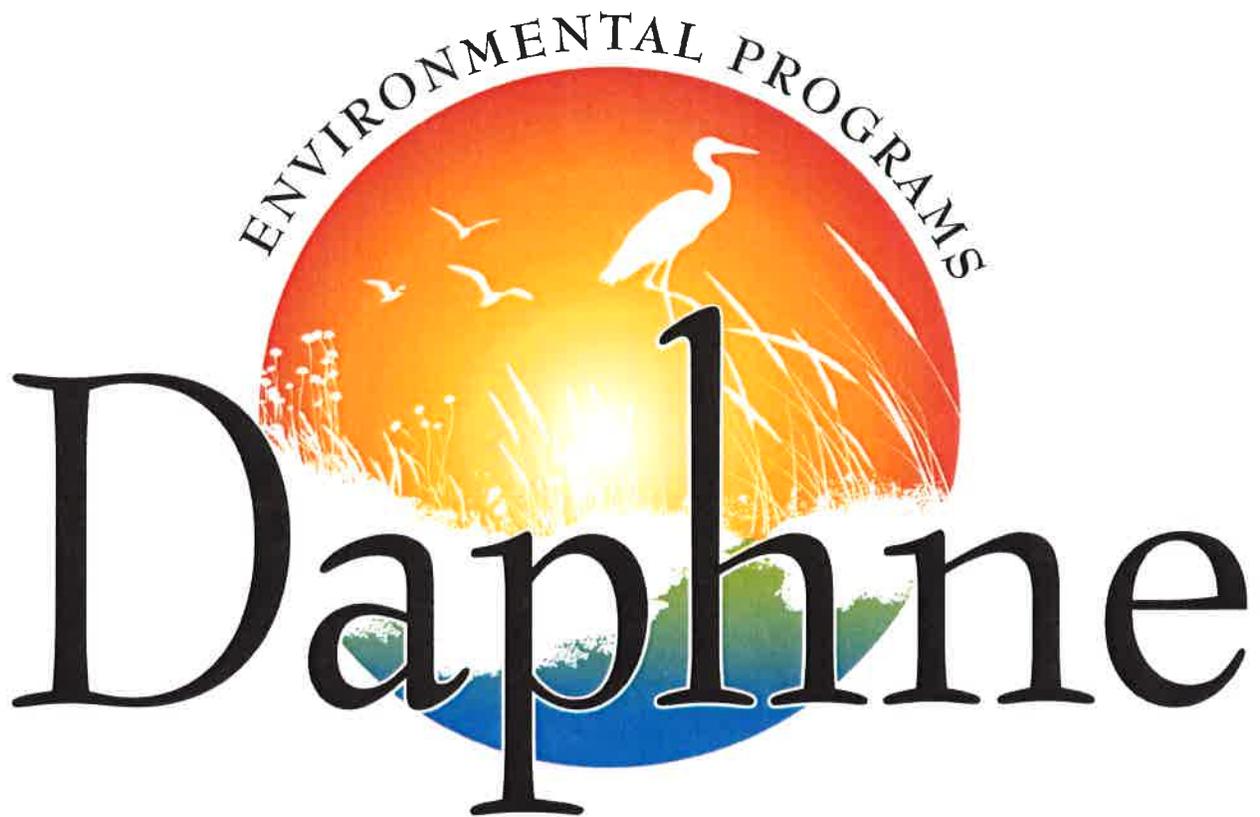


Chapter 4

Water Quality Monitoring



Chapter 4

Water Quality Monitoring

Section

4.B1-2

Water Quality Monitoring Data

ENVIRONMENTAL PROGRAMS

Daphne

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-98833-1

Client Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

For:

City of Daphne

PO BOX 2550

Daphne, Alabama 36526

Attn: Ms. Ashley Campbell



Authorized for release by:

12/31/2014 2:34:59 PM

Mike Nance, Service Center Manager

(251)666-6633

mike.nance@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: City of Daphne

Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-98833-10	Flow Proportional Composite TC(01-09	Water	11/23/14 15:10	11/24/14 09:24

Client Sample Results

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

Client Sample ID: Flow Proportional Composite TC(01-09)

Lab Sample ID: 400-98833-10

Date Collected: 11/23/14 15:10

Matrix: Water

Date Received: 11/24/14 09:24

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Total Suspended Solids	<5.0		5.0		mg/L			11/25/14 13:34	1
Turbidity	2.4		0.50		NTU			11/25/14 09:22	1



QC Sample Results

Client: City of Daphne
 Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 400-237959/1
 Matrix: Water
 Analysis Batch: 237959

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.0		5.0		mg/L			11/25/14 13:34	1

Lab Sample ID: LCS 400-237959/2
 Matrix: Water
 Analysis Batch: 237959

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 400-238859/1
 Matrix: Water
 Analysis Batch: 238859

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Turbidity	<0.50		0.50		NTU			11/25/14 09:22	1

Lab Sample ID: LCS 400-238859/3
 Matrix: Water
 Analysis Batch: 238859

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Lab Chronicle

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

Client Sample ID: Flow Proportional Composite TC(01-09)

Lab Sample ID: 400-98833-10

Date Collected: 11/23/14 15:10

Matrix: Water

Date Received: 11/24/14 09:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	160.2		1	237959	11/25/14 13:34	TET	TAL PEN
Total/NA	Analysis	180.1		1	238859	11/25/14 09:22	LSS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Method Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater-Tiawasee Creek

TestAmerica Job ID: 400-98833-1

Method	Method Description	Protocol	Laboratory
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL PEN
180.1	Turbidity, Nephelometric	MCAWW	TAL PEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Chain of Custody Record

Client Information Client Contact: <u>Sherry Allison</u> Ms. Ashley Campbell City of Daphne Address: <u>PO BOX 2550</u> City: <u>Daphne</u> State, Zip: <u>AL 36526</u> Phone: <u>(251) 621-3080</u> Email: <u>ashcampbell@daphneal.com</u> Project Name: <u>Daphne Trawasee Creek at Bayview</u> Site:		Lab PIV: _____ E-Mail: _____ Camer Tracking No(s): _____ Job #: _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: <u>1402001-00</u> W/O #: _____ Project #: <u>14134.01</u> SSON#: _____		Analysis Requested: _____ Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - EDA Z - other (specify) _____ Other: _____	
Sample Identification Sample ID: <u>TC-01</u> <u>TC-02</u> <u>TC-03</u> <u>TC-04</u> <u>TC-05</u> <u>TC-06</u> <u>TC-07</u> <u>TC-08</u> <u>TC-09</u>		Matrix (Inorganic, Organic, Combined, AAM) Water Water Water Water Water Water Water Water Water	
Sample Date 11/23/14 11/23/14 11/23/14 11/23/14 11/23/14 11/23/14 11/23/14 11/23/14		Sample Time 12:30 12:50 13:10 13:30 13:50 14:10 14:30 14:50 15:10	
Sample Type (C=Comp, G=grab) C C C C C C C C		Special Instructions/Note: pH Temp.C 6.55 17.1 0.14 6.50 17.0 0.06 6.87 17.0 0.04 6.90 17.1 0.01 6.84 17.3 0.005 6.60 17.3 0.005 6.70 17.4 0.00 6.45 17.8 0.00 6.75 17.7 0.00 400-98833 COC	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify) _____			
Empty Kit Requisitioned by: _____ Date: _____ Refrigerated by: <u>Sherry Allison</u> Date/Time: <u>11-24-14 05:24</u> Requisitioned by: _____ Date/Time: _____ Requisitioned by: _____ Date/Time: _____			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements: _____			
Received by: <u>Julian Thompson</u> Date/Time: <u>11/24/14 09:24</u> Received by: _____ Date/Time: _____ Received by: _____ Date/Time: _____			
Cooler Temperature(s) °C and Other Remarks: <u>3.9° C 5597</u> Custody Seal No.: <u>400-98833</u>			

STORM EVENT FIELD DATA AND LOADING ESTIMATES

FLOW WEIGHTED COMPOSITE SAMPLE COLLECTION

DATE SAMPLED: 11/23/2014 LAB NO: 400-98833
 LOCATION: Tiawasee Creek
at Bayview
Daphne, Alabama
 SAMPLER: Allen Engineering

STORM EVENT TOTAL RAINFALL (inches): 0.26

STORM BEGIN TIME (hrs): 1230
 STORM END TIME (hrs): 1510
 STORM DURATION (minutes): 160

DAYS WITHOUT RAIN: 5

DRAINAGE AREA OF SAMPLE LOCATION (acres): 3280

LAND USE/GROUND COVER WITH RUNOFF COEFFICIENT:

36% Developed	(Runoff Coefficient 0.70)	<u>5.83 MG</u>
64% Undeveloped	(Runoff Coefficient 0.20)	<u>2.96 MG</u>

TOTAL VOLUME OF DISCHARGE (MGD): 8.79

PARAMETER	ESTIMATED ANNUAL LOADINGS, lbs.	
	Mobile Data*	Fairhope Station Data*
Annual Discharge (MGY)	1,808	2,203
TOTAL SUSPENDED SOLIDS (TSS) Lbs/Y	<u><75000</u>	<u><92000</u>

NOTE: * ANNUAL LOADING CALCULATIONS BASED ON THE NATIONAL WEATHER SERVICE 30 YEAR ANNUAL RAIN FALL AVERAGE AT BATES FIELD OF 53.43 INCHES AND DATA FROM THE STROM EVENT REFERENCED. ALSO, ANNUAL LOADING IS CALCULATED BASED ON FAIRHOPE MONITORING STATION 30 YEAR AVERAGE OF 65.10 INCHES.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-98832-1
Client Project/Site: Daphne MS-4 D'Olive Creek Stormwater

For:
City of Daphne
PO BOX 2550
Daphne, Alabama 36526

Attn: Ms. Ashley Campbell



Authorized for release by:
12/31/2014 2:32:17 PM

Mike Nance, Service Center Manager
(251)666-6633
mike.nance@testamericainc.com

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Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: City of Daphne
Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: City of Daphne
Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-98832-10	Flow Proportional Composite DC (01-09)	Water	11/23/14 15:00	11/24/14 09:24

Client Sample Results

Client: City of Daphne
Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

Client Sample ID: Flow Proportional Composite DC (01-09)

Lab Sample ID: 400-98832-10

Date Collected: 11/23/14 15:00

Matrix: Water

Date Received: 11/24/14 09:24

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	10		5.0		mg/L			11/25/14 13:34	1
Turbidity	4.8		0.50		NTU			11/25/14 09:22	1



QC Sample Results

Client: City of Daphne
 Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 400-237959/1
Matrix: Water
Analysis Batch: 237959

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.0		5.0		mg/L			11/25/14 13:34	1

Lab Sample ID: LCS 400-237959/2
Matrix: Water
Analysis Batch: 237959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 400-238859/1
Matrix: Water
Analysis Batch: 238859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Turbidity	<0.50		0.50		NTU			11/25/14 09:22	1

Lab Sample ID: LCS 400-238859/3
Matrix: Water
Analysis Batch: 238859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Lab Sample ID: 400-98832-10 DU
Matrix: Water
Analysis Batch: 238859

Client Sample ID: Flow Proportional Composite DC (01-09)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit

Lab Chronicle

Client: City of Daphne
Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

Client Sample ID: Flow Proportional Composite DC (01-09)

Lab Sample ID: 400-98832-10

Date Collected: 11/23/14 15:00

Matrix: Water

Date Received: 11/24/14 09:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	160.2		1	237959	11/25/14 13:34	TET	TAL PEN
Total/NA	Analysis	180.1		1	238859	11/25/14 09:22	LSS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Method Summary

Client: City of Daphne
Project/Site: Daphne MS-4 D'Olive Creek Stormwater

TestAmerica Job ID: 400-98832-1

Method	Method Description	Protocol	Laboratory
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL PEN
180.1	Turbidity, Nephelometric	MCAWW	TAL PEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Chain of Custody Record

Client Information		Sampler: <u>S. A. W. S. P. D.</u>		Lab P/N#		Carrier Tracking No(s):		COC No: 700-32827-2926.1	
Client Contact: Ms. Ashley Campbell		Phone: 251 342-0070		E-Mail:		Page: 1 of 1		Job #:	
Company: City of Daphne		Address: PO BOX 2550		City: Daphne		State, Zip: AL, 36526		Preservation Codes: M - Hg/ene N - Nitrite O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NiCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
PO #: <u>621-3080</u>		WO #: <u>1402001-01</u>		Due Date Requested:		TAT Requested (days):		Other:	
Email: <u>spac@daphneal.com</u>		Project Name: <u>Daphne Creek at Bayview</u>		Project #: <u>14134.01</u>		SSOW#:		pH Temp - C Cumulative Residual	
Site: <u>Daphne Creek at Bayview</u>		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=organic, BT=Base, AA=Acid)	
Sample Identification		11/23/14		12:20		C		Water	
DC-01		11/23/14		12:40		C		Water	
DC-02		11/23/14		13:00		C		Water	
DC-03		11/23/14		13:20		C		Water	
DC-04		11/23/14		13:40		C		Water	
DC-05		11/23/14		14:00		C		Water	
DC-06		11/23/14		14:20		C		Water	
DC-07		11/23/14		14:40		C		Water	
DC-08		11/23/14		15:00		C		Water	
DC-09								Water	
								400-98832 COC	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Radiological	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/>		<input type="checkbox"/>	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:		Special Instructions/OC Requirements:	
Relinquished by: <u>Shawny Dean</u>		Date Time: 11-24-14 05:24		Company: <u>ALCOBES</u>		Received by: <u>Julia DePaula</u>		Date Time: 11/24/14 @ 9:24	
Relinquished by:		Date Time:		Company:		Received by:		Date Time:	
Relinquished by:		Date Time:		Company:		Received by:		Date Time:	
Custody Seals Intact: <u>400-98832</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>3.9C 5592</u>					

STORM EVENT FIELD DATA AND LOADING ESTIMATES

FLOW WEIGHTED COMPOSITE SAMPLE COLLECTION

DATE SAMPLED: 11/23/2014 LAB NO: 400-98832

LOCATION: D'Olive Creek
at Bayview drive
Daphne, AL

SAMPLER: Allen Engineering

STORM EVENT TOTAL RAINFALL (inches): 0.24

STORM BEGIN TIME (hrs): 1230

STORM END TIME (hrs): 1500

STORM DURATION (minutes): 160

DAYS WITHOUT RAIN: 5

DRAINAGE AREA OF SAMPLE LOCATION (acres): 3320

LAND USE/GROUND COVER WITH RUNOFF COEFFICIENT:

44% Developed (Runoff coefficient 0.7) 6.66 MG

56% Undeveloped (Runoff coefficient 0.2) 2.42 MG

TOTAL VOLUME OF DISCHARGE (MGD): 9.08

PARAMETER

ESTIMATED ANNUAL LOADINGS, lbs.

	Mobile Data*	Fairhope Station Data*
Annual DISCHARGE (MGY)	2023	2464
TOTAL SUSPENDED SOLIDS (TSS) Lbs/Y	<u>168,000</u>	<u>205,000</u>

NOTE: * ANNUAL LOADING CALCULATIONS BASED ON THE NATIONAL WEATHER SERVICE 30 YEAR ANNUAL RAIN FALL AVERAGE AT BATES FIELD OF 53.43 INCHES AND DATA FROM THE STROM EVENT REFERENCED. ALSO, ANNUAL LOADING IS CALCULATED BASED ON FAIRHOPE MONITORING STATION 30 YEAR AVERAGE OF 65.10 INCHES.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-101459-1

Client Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

For:

City of Daphne
PO BOX 2550
Daphne, Alabama 36526

Attn: Ms. Ashley Campbell



Authorized for release by:
3/26/2015 4:35:38 PM

Mike Nance, Service Center Manager
(251)666-6633
mike.nance@testamericainc.com

LINKS

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Definitions/Glossary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

TestAmerica Job ID: 400-101459-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

TestAmerica Job ID: 400-101459-1

Client Sample ID: TC (01-09) Flow Proportional Composite

Lab Sample ID: 400-101459-10

Date Collected: 02/02/15 08:30

Matrix: Water

Date Received: 02/02/15 08:30

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.0		5.0		mg/L			02/04/15 12:40	1
Turbidity	3.9		0.50		NTU			02/03/15 11:08	1

Lab Chronicle

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

TestAmerica Job ID: 400-101459-1

Client Sample ID: TC (01-09) Flow Proportional Composite

Lab Sample ID: 400-101459-10

Date Collected: 02/02/15 08:30

Matrix: Water

Date Received: 02/02/15 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	160.2		1	245457	02/04/15 12:40	TET	TAL PEN
Total/NA	Analysis	180.1		1	245714	02/03/15 11:08	LSS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Certification Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

TestAmerica Job ID: 400-101459-1

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-15
Arizona	State Program	9	AZ0710	01-11-16
Arkansas DEQ	State Program	6	88-0689	09-01-15
Florida	NELAP	4	E81010	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200041	10-09-15
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	03-31-15
Kentucky (UST)	State Program	4	53	06-30-15
Kentucky (WW)	State Program	4	98030	12-31-15
Louisiana	NELAP	6	30976	06-30-15
Maryland	State Program	3	233	09-30-15
Michigan	State Program	5	9912	06-30-15
New Jersey	NELAP	2	FL006	06-30-15
North Carolina (WW/SW)	State Program	4	314	12-31-15
Oklahoma	State Program	6	9810	08-31-15
Pennsylvania	NELAP	3	68-00467	01-31-16
Rhode Island	State Program	1	LAO00307	12-30-15
South Carolina	State Program	4	96026	06-30-15
Tennessee	State Program	4	TN02907	06-30-15
Texas	NELAP	6	T104704286-12-5	09-30-15
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-15
West Virginia DEP	State Program	3	136	06-30-15

Method Summary

TestAmerica Job ID: 400-101459-1

Client: City of Daphne

Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

Method	Method Description	Protocol	Laboratory
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL PEN
180.1	Turbidity, Nephelometric	MCAWW	TAL PEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Sample Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater Tiawasee Creek

TestAmerica Job ID: 400-101459-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-101459-10	TC (01-09) Flow Proportional Composite	Water	02/02/15 08:30	02/02/15 08:30



TestAmerica Mobile
 900 Lakeside Drive
 Mobile, AL 36683
 Phone (251) 666-6633 Fax (251) 666-6696

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING



400-101459 COC

Lab #:
 E-Mail:

Client Information
 Company: Ashley Campbell
 City of Daphne
 Address: PO BOX 2550
 City: Daphne
 State: AL, Zip: 36626
 Phone: (251) 621-3080
 Email: ashley@campbell.com
 Project Name: Daphne Trawasee Creek
 Site:

Sampler: Sherry Allison
 Phone: (251) 342-0000

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #: 14134.02
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Analysis Requested		Total Number of Containers	Special Instructions/Note:
						1664A-OR	1604-PH		
TC-01	02-01-15	12:50	C	Water					PH Temp Co Cumulative Rainfall
TC-02	02-01-15	13:10	C	Water					662 147 0.12
TC-03	02-01-15	13:30	C	Water					664 145 0.02
TC-04	02-01-15	13:50	C	Water					662 145 0.005
TC-05	02-01-15	14:10	C	Water					665 148 0.01
TC-06	02-01-15	14:30	C	Water					665 147 0.02
TC-07	02-01-15	14:50	C	Water					627 148 0.005
TC-08	02-01-15	15:10	C	Water					657 149 0.03
TC-09	02-01-15	15:30	C	Water					668 150 0.005
				Water					665 149 0.005

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Return To Client Disposal By Lab Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Relinquished by: Sherry Allison
 Relinquished by: Sherry Allison
 Relinquished by: _____
 Custody Seals Intact: Yes No
 Custody Seal No.: _____

Received by: Sherry Allison Date/Time: 2/2/15 8:00 Company: ATTENES
 Received by: _____ Date/Time: 2-2-15 8:30 Company: _____
 Received by: Sherry Allison Date/Time: 2-2-15 8:30 Company: ATTENES
 Cooler Temperature (C and Other): 4.6°C #5592

STORM EVENT FIELD DATA AND LOADING ESTIMATES

FLOW WEIGHTED COMPOSITE SAMPLE COLLECTION

DATE SAMPLED: 2/1/2015 LAB NO: 400-101459
 LOCATION: Tiawasee Creek
at Bayview
Daphne, Alabama
 SAMPLER: ECO Systems

STORM EVENT TOTAL RAINFALL (inches): 0.22

STORM BEGIN TIME (hrs): 1250
 STORM END TIME (hrs): 1530
 STORM DURATION (minutes): 160

DAYS WITHOUT RAIN: 8

DRAINAGE AREA OF SAMPLE LOCATION (acres): 3280

LAND USE/GROUND COVER WITH RUNOFF COEFFICIENT:

36% Developed	(Runoff Coefficient 0.70)	4.93
64% Undeveloped	(Runoff Coefficient 0.20)	2.51

TOTAL VOLUME OF DISCHARGE (MGD): 7.44

PARAMETER	ESTIMATED ANNUAL LOADINGS, lbs.	
	Mobile Data*	Fairhope Station Data*
TOTAL SUSPENDED SOLIDS (TSS)	<u>1,808</u> <u><75000</u>	<u>2,203</u> <u><92000</u>

NOTE: * ANNUAL LOADING CALCULATIONS BASED ON THE NATIONAL WEATHER SERVICE 30 YEAR ANNUAL RAIN FALL AVERAGE AT BATES FIELD OF 53.43 INCHES AND DATA FROM THE STORM EVENT REFERENCED. ALSO, ANNUAL LOADING IS CALCULATED BASED ON FAIRHOPE MONITORING STATION 30 YEAR AVERAGE OF 65.10 INCHES.



Login Sample Receipt Checklist

Client: City of Daphne

Job Number: 400-101459-1

Login Number: 101459

List Source: TestAmerica Pensacola

List Number: 1

Creator: Cai, Meiyun Y

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.6°C 5592
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-101460-1
Client Project/Site: Daphne MS-4 Stormwater D'Olive Creek

For:
City of Daphne
PO BOX 2550
Daphne, Alabama 36526

Attn: Ms. Ashley Campbell



Authorized for release by:
3/26/2015 4:40:38 PM

Mike Nance, Service Center Manager
(251)666-6633
mike.nance@testamericainc.com

LINKS

Review your project
results through
Total Access

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

4

5

6

7

8

9

10



Table of Contents

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Definitions/Glossary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Client Sample ID: DC (01-09) Flow Proportional Composite

Lab Sample ID: 400-101460-10

Date Collected: 02/02/15 08:30

Matrix: Water

Date Received: 02/02/15 08:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.0		5.0		mg/L			02/04/15 12:40	1
Turbidity	8.5		0.50		NTU			02/03/15 11:08	1

Lab Chronicle

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Client Sample ID: DC (01-09) Flow Proportional Composite

Lab Sample ID: 400-101460-10

Date Collected: 02/02/15 08:30

Matrix: Water

Date Received: 02/02/15 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	160.2		1	245457	02/04/15 12:40	TET	TAL PEN
Total/NA	Analysis	180.1		1	245714	02/03/15 11:08	LSS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Certification Summary

Client: City of Daphne
 Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-15
Arizona	State Program	9	AZ0710	01-11-16
Arkansas DEQ	State Program	6	88-0689	09-01-15
Florida	NELAP	4	E81010	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200041	10-09-15
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	03-31-15
Kentucky (UST)	State Program	4	53	06-30-15
Kentucky (WW)	State Program	4	98030	12-31-15
Louisiana	NELAP	6	30976	06-30-15
Maryland	State Program	3	233	09-30-15
Michigan	State Program	5	9912	06-30-15
New Jersey	NELAP	2	FL006	06-30-15
North Carolina (WW/SW)	State Program	4	314	12-31-15
Oklahoma	State Program	6	9810	08-31-15
Pennsylvania	NELAP	3	68-00467	01-31-16
Rhode Island	State Program	1	LAO00307	12-30-15
South Carolina	State Program	4	96026	06-30-15
Tennessee	State Program	4	TN02907	06-30-15
Texas	NELAP	6	T104704286-12-5	09-30-15
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-15
West Virginia DEP	State Program	3	136	06-30-15



Method Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Method	Method Description	Protocol	Laboratory
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL PEN
180.1	Turbidity, Nephelometric	MCAWW	TAL PEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Sample Summary

Client: City of Daphne
Project/Site: Daphne MS-4 Stormwater D'Olive Creek

TestAmerica Job ID: 400-101460-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-101460-10	DC (01-09) Flow Proportional Composite	Water	02/02/15 08:30	02/02/15 08:30



TestAmerica Mobile
 900 Lakeside Drive
 Mobile, AL 36693
 Phone (251) 666-6633 Fax (251) 666-6696

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING



Client Information: **Client Contact:** Ms. Ashley Campbell
City of Daphne
Address: PO BOX 2550
City: Daphne
State, Zip: AL, 36526
Phone: (251) 621-3080
Email: apcm@daphnacrem.com
Project Name: ARANBERUE DAPHALE AL.COM
Site: D'olive Creek of Bayview

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #: 14134.02
SSOW#:

Sampler: S. Ali Sow
Lab P/N:
Phone: (251) 342-0000
E-Mail:

COC No.: 700-33049-2826.1
Page: Page 1 of 1
Job #:

Analysis Requested:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Field MS/MSD (Yes or No)	160-1 pH	1664-066	A	N	Total Number of Containers	Special Instructions/Note:	
DC-01	02-01-15	12:40	C	Water							635	15.1	0.12
DC-02	02-01-15	13:20	C	Water							655	15.0	0.02
DC-03	02-01-15	13:20	C	Water							661	15.1	0.005
DC-04	02-01-15	13:40	C	Water							663	15.1	0.01
DC-05	02-01-15	14:00	C	Water							660	15.2	0.02
DC-06	02-01-15	14:20	C	Water							657	15.2	0.005
DC-07	02-01-15	14:40	C	Water							685	15.3	0.03
DC-08	02-01-15	15:00	C	Water							654	15.7	0.005
DC-09	02-01-15	15:20	C	Water							659	15.4	0.005

Preservation Codes:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecylhydrate
 U - Acetone
 V - MCAA
 W - ph 4-5
 Z - other (specify)
 Other:

Special Instructions/Note:
 pH Temp. C Cumulative Residual

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
Relinquished by: _____ Date/Time: 02-03-15
Relinquished by: _____ Date/Time: 2/2/15 8:30
Relinquished by: _____ Date/Time: 2-2-15 8:30

Company: Alienes
Company: Alienes
Company: Alienes
Company: T.A

Received by: _____
Received by: _____
Received by: _____
Received by: _____

Date/Time: 2/2/15 8:00
Date/Time: 2-2-15 8:30
Date/Time: 2-2-15 8:30

Method of Shipment:
Cooler Temperature (°C) and Other Remarks: 4.2°C #5592

Custody Seal No.: 1000-101460
Custody Seal Intact: A Yes Δ No

STORM EVENT FIELD DATA AND LOADING ESTIMATES

FLOW WEIGHTED COMPOSITE SAMPLE COLLECTION

DATE SAMPLED: 2/1/2015 LAB NO: 400-101460
 LOCATION: D'Olive Creek
at Bayview drive
Daphne, AL
 SAMPLER: ECO-Systems

STORM EVENT TOTAL RAINFALL (inches): 0.22

STORM BEGIN TIME (hrs): 1240
 STORM END TIME (hrs): 1520
 STORM DURATION (minutes): 160

DAYS WITHOUT RAIN: 8

DRAINAGE AREA OF SAMPLE LOCATION (acres): 3320

LAND USE/GROUND COVER WITH RUNOFF COEFFICIENT:

<u>44% Developed</u>	<u>(Runoff coefficient 0.7)</u>	<u>6.1</u>
<u>56% Undeveloped</u>	<u>(Runoff coefficient 0.2)</u>	<u>2.22</u>

TOTAL VOLUME OF DISCHARGE (MGD): 8.32

PARAMETER

ESTIMATED ANNUAL LOADINGS, lbs.

	Mobile Data* 2022	Fairhope Station Data*
Annual Discharge MGY		2463
TOTAL SUSPENDED SOLIDS (TSS)	<u>64,900</u>	<u>79,000</u>

NOTE: * ANNUAL LOADING CALCULATIONS BASED ON THE NATIONAL WEATHER SERVICE 30 YEAR ANNUAL RAIN FALL AVERAGE AT BATES FIELD OF 53.43 INCHES AND DATA FROM THE STROM EVENT REFERENCED. ALSO, ANNUAL LOADING IS CALCULATED BASED ON FAIRHOPE MONITORING STATION 30 YEAR AVERAGE OF 65.10 INCHES.



Login Sample Receipt Checklist

Client: City of Daphne

Job Number: 400-101460-1

Login Number: 101460

List Source: TestAmerica Pensacola

List Number: 1

Creator: Cai, Meiyun Y

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2°C 5592
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Chapter 4

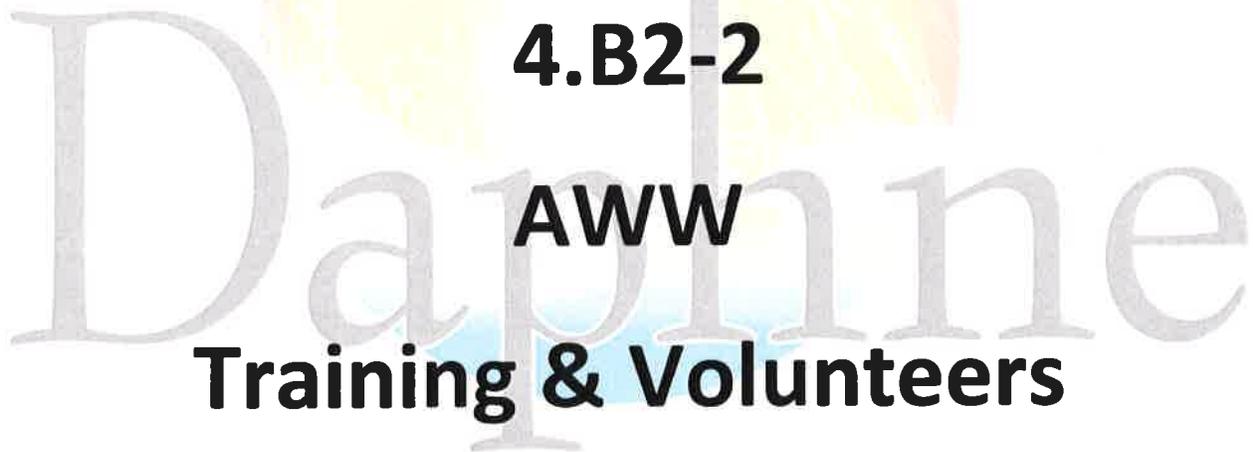
Water Quality Monitoring

Section

4.B2-2

AWW

Training & Volunteers



Alabama Water Watch Volunteer Monitoring Workshops

Becoming a volunteer water monitor is a great step to protecting and restoring local water quality.

Come get certified as an Alabama Water Watch Water Chemistry and/or Bacteriological Monitor in two workshops sponsored by the Mobile Bay National Estuary Program.

AWW Bacteriological Monitoring Workshop

Friday, Sept. 26th 5:30pm – 8:30pm

Detect levels of E. coli in water as an indicator of fecal contamination. Determine if water is safe for drinking, swimming, and aquatic life.

AWW Water Chemistry Monitoring Workshop

Saturday, Sept. 27th 9:00 am – 3:00 pm

Test physical and chemical characteristics of water to determine pollution sources and long-term trends in water quality.

Where: Daphne City Hall
1705 Main Street
Daphne, AL 36526

For more information or to register, go to the Workshop Registration section of www.alabamawaterwatch.org or call the AWW Office at 334-844-4785 (pre-registration required)

These workshops are offered free of charge and qualify for Continuing Education Units through Auburn University.

Alabama
Water
Watch



Chapter 4 Water Quality Monitoring
 4.B2-3 AWW Volunteers WQ Data

Site #	Site Name	Site Location	Site Lattitu	Site Longit	Site AWW Volunteer
1	Tiwasee Creek-1	Greenwood Drive	30.633	-87.8840	Del
1	Tiawasee Creek-1	Greenwood Drive	30.633	-87.8840	Del
2	Tiawasee Creek-2	Driving Range	30.6455	-87.8957	Del
3	Dolive Creek -3	Bayview Drive-Bridge	30.6522	-87.8931	Del
4	Dolive Creek -4	Gordon Circle	30.6544	-87.8865	Mason
5	Dolive Creek-5	Toms Cove	30.6538	-87.8976	Mason
6	Tiawasee Creek-6	North Lamhatty Lane	30.631	-87.8744	Jessica

Chapter 4
Water Quality Monitoring

Section

4.B2-3

AWW

Water Quality

Monitoring Data

Sites sampled by City of Daphne (No. of Sites: 6)

Select Site	Waterbody	Site Description	County	Latitude	Longitude	Last Date	No. Records	Map!	Google
<u>06015003</u>	D Olive Creek	Gordon Circle, Lake Forest	Baldwin	30.6540	-87.8869	23 Feb 2015	3		
<u>06015002</u>	D Olive Creek	Tom's Cove, Lake Forest	Baldwin	30.6534	-87.8949	19 Jan 2015	2		
<u>06015001</u>	D Olive Creek	155 Bay View Drive	Baldwin	30.6522	-87.8931	16 Feb 2015	4		
<u>06015006</u>	Tiawasee Creek	bridge at N Lamhatty Ln.	Baldwin	30.6311	-87.8741	18 Feb 2015	2		
<u>06015005</u>	Tiawasee Creek	Greenwood Drive in Lake Forest	Baldwin	30.6354	-87.8775	16 Mar 2015	3		
<u>06015004</u>	Tiawasee Creek	At golf course driving range	Baldwin	30.6496	-87.8956	10 Mar 2015	3		

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Site 06015001 is located in HUC12: 031602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on D Olive Creek. This site was first sampled on 11/17/2014 and last sampled on 2/16/2015. Total No. of Chemistry

records: 4, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 4

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
17 Nov 2014	1	4	8	14.5	6.5	8.4	8.8	3	5	3	-	-	rainfall last night 0.7 inch and this morning. 20 mph wind from NW. Clear. Hardness Reagent 5 expired 31 Oct 14
15 Dec 2014	1	99	20	15.5	6.5	9	9	1	3	1	-	-	Several weeks since significant rainfall. Weather clear and calm at the site when sampling. Hardness reagent #5 expired 10/14 - expect new supply next week.
12 Jan 2015	1	99	21	17	6.5	9	9	1	5	2	-	-	Note: Hardness #5 reagent expired 10/31/14 - replacement on order. Weather clear and calm with no noticeable rainfall for a week.
16 Feb 2015	1	99	18	16.5	6.5	9.4	9	3	4	1	-	-	overcast, wind S 17-26 mph, no rain in past 48 hrs.

Access: 1 - Adequate depth; 2 - Inadequate Depth; 3 - Dry; 4 - No Access || Tide: 1 - Rising; 2 - Falling; 3 - Uncertain

Site 06015002 is located in HUC12: 031602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on D Olive Creek. This site was first sampled on 12/22/2014 and last sampled on 1/19/2015. Total No. of Chemistry records: 2, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 2

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
										1	2		

22 Dec 2014	1	4	20.5	17.5	6.5	9	8.6	4	7	1	-	-	clear and calm. Had first significant rain two days ago in over a month, approx. 1 inch
19 Jan 2015	1	99	17	15	6.5	9.6	9.4	6	8	2	-	-	Clear and calm, very little rain in past week

Access: 1 - Adequate depth; 2 - Inadequate Depth; 3 - Dry; 4 - No Access || Tide: 1 - Rising; 2 - Falling; 3 - Uncertain

Site 06015003 is located in HUC12: 0301602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on D Olive Creek. This site was first sampled on 12/29/2014 and last sampled on 2/23/2015. Total No. of Chemistry records: 3, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 3

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
29 Dec 2014	1	4	16	17.5	6.5	8.4	8.8	1	3	2	-	-	clear and calm, overcast. Several inches of rain in the last week but none in less than 24 hrs.
26 Jan 2015	1	99	13	12	6.5	9.8	9.8	4	2	1	-	-	clear, wind NNW 15 - 23 mph, 2 in. rain 1/23 - 1/24 none since
23 Feb 2015	1	99	6.5	13	6.5	9.8	9.8	3	2	2	-	-	overcast, wind N15, trace of rain in past 48 hrs.

Access: 1 - Adequate depth; 2 - Inadequate Depth; 3 - Dry; 4 - No Access || Tide: 1 - Rising; 2 - Falling; 3 - Uncertain

Site 06015004 is located in HUC12: 031602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on Tiawasee Creek. This site was first sampled on 12/30/2014 and last sampled on 3/10/2015. Total No. of

Chemistry records: 3, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 3

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
30 Dec 2014	1	4	11	16	6.5	9	9	4	6	1	-	-	overcast, light wind. No rain for 48 hrs
02 Feb 2015	1	99	9	14.5	6.5	9.8	9.6	3	4	1	-	-	Clear, wind N 13 mph, 0.1 in. rain in past 24 hrs
10 Mar 2015	1	99	26.5	19	6.5	8.6	8.8	3	5	4	-	-	wind SSW 17 - 23, mostly cloudy, 1/75" rain in past 48 hrs.

Access: 1 - Adequate depth; 2 - Inadequate Depth; 3 - Dry; 4 - No Access || Tide: 1 - Rising; 2 - Falling; 3 - Uncertain

Site 06015005 is located in HUUC12: 031602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on Tiawasee Creek. This site was first sampled on 1/13/2015 and last sampled on 3/16/2015. Total No. of Chemistry records: 3, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 3

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
13 Jan 2015	1	4	10.5	15	6.5	9	8.6	2	4	1	-	-	overcast, cool and calm. No significant rain for at least 1 week,
09 Feb 2015	1	99	22.5	16.5	6.5	8.6	8.2	2	4	1	-	-	clear, wind NW 16-20 mph, no rain in past 48 hrs

16 Mar 2015	1	99	24.5	19	6.5	8	8	2	5	1	-	-	clear, wind SSW 11 mph, no rain in pat 48 hrs.
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Access: 1 - Adequate depth; 2 - Inadequate Depth; 3 - Dry; 4 - No Access || Tide: 1 - Rising; 2 - Falling; 3 - Uncertain

Site 06015006 is located in HUC12: 031602040505 in Baldwin County and is currently in the Group City of Daphne. Site is located on Tiawasee Creek. This site was first sampled on 1/16/2015 and last sampled on 2/18/2015. Total No. of Chemistry records: 2, Bacteria Records: 0, and Bioassessment Records: 0

Number of Sampling Events: 2

Sample Date	Access	Tides	Air Temp	Water Temp	pH	DO1	DO2	Hard Drops	Alk Drops	Turb 1	Turb 2	Secchi	Comments
16 Jan 2015	1	4	24	9	6	8.6	9	3	4	-	-	-	Rained yesterday, forgot tap water for turbidity test
18 Feb 2015	1	99	14	8	6.5	9.6	9.8	4	5	0	-	-	None.



City of Daphne

P.O.Box 400
Daphne, AL 36526
(251) 621-9000

Purchase Order

Fiscal Year 2015

Page 1

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Purchase Order # **01501061-00**

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LaMOTTE
802 WASHINGTON AVE. PO BOX 329

CHESTERTOWN, MD 21620-0329

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BLDG INSP- 1705 MAIN STREET
251-621-3080

DAPHNE, AL 36526

Vendor Phone Number		Vendor Fax Number		Requisition Number		Delivery Reference			
1 410 778 3100		1 410 778 6394		00001148					
Date Ordered		Vendor Number		Date Required		Freight Method/Terms		Department/Location	
02/26/15		007759		02/26/15				BUILDING INSPECTIONS	
Item#	Description/Part No.			Qty/Unit	Cost Each	Extended Price			
001	ORIGINAL LAMOTTE ALA WATER WATCH KITS 168000-54425			1.00 Each	120.00000	120.00			
					PO Total	120.00			


Mayor



City of Daphne

P.O.Box 400
Daphne, AL 36526
(251) 621-9000

Purchase Order

Fiscal Year 2015

Page 1

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Purchase Order # **01501061-00**

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LaMOTTE
802 WASHINGTON AVE. PO BOX 329

CHESTERTOWN, MD 21620-0329

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BLDG INSP- 1705 MAIN STREET
251-621-3080

DAPHNE, AL 36526

Vendor Phone Number		Vendor Fax Number		Requisition Number		Delivery Reference			
1 410 778 3100		1 410 778 6394		00001148					
Date Ordered		Vendor Number		Date Required		Freight Method/Terms		Department/Location	
02/26/15		007759		02/26/15				BUILDING INSPECTIONS	
Item#	Description/Part No.			Qty/Unit	Cost Each	Extended Price			
001	ORIGINAL LAMOTTE ALA WATER WATCH KITS 168000-54425			1.00 Each	120.00000	120.00			
					PO Total	120.00			

[Signature]
Mayor