



**SURFACE WATER SEDIMENT AND
BIOLOGICAL SAMPLING FOR
"BIG SLOUGH,
HUDSON BAYOU AND PHILLIPPI CREEK BASINS,
SARASOTA COUNTY, FLORIDA"**



Ardaman & Associates, Inc.

OFFICES

- Orlando**, 8008 S. Orange Avenue, Orlando, Florida 32809, Phone (407) 855-3860
- Bartow**, 1525 Centennial Drive, Bartow, Florida 33830, Phone (941) 533-0858
- Cocoa**, 1300 N. Cocoa Blvd., Cocoa, Florida 32922, Phone (407) 632-2503
- Fort Lauderdale**, 3665 Park Central Boulevard North, Pompano Beach, Florida 33064, Phone (954) 969-8788
- Fort Myers**, 9970 Bavaria Road, Fort Myers, Florida 33913, Phone (941) 768-6600
- Miami**, 2608 W. 84th Street, Hialeah, Florida 33016, Phone (305) 825-2683
- Port Charlotte**, 740 Tamiami Trail, Unit 3, Port Charlotte, Florida 33954, Phone (941) 624-3393
- Port St. Lucie**, 1017 S.E. Holbrook Ct., Port St. Lucie, Florida 34952, Phone (561) 337-1200
- Sarasota**, 2500 Bee Ridge Road, Sarasota, Florida 34239, Phone (941) 922-3526
- Tallahassee**, 3175 West Tharpe Street, Tallahassee, Florida 32303, Phone (850) 576-6131
- Tampa**, 1406 Tech Boulevard, Tampa, Florida 33619, Phone (813) 620-3389
- West Palm Beach**, 2511 Westgate Avenue, Suite 10, West Palm Beach, Florida 33409, Phone (561) 687-8200

MEMBERS:

A.S.F.E.
American Concrete Institute
American Society for Testing and Materials
Florida Institute of Consulting Engineers



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

August 20, 1999
File No. 97-8710

TO: Sarasota County Government
Transportation Department Stormwater
1301 Cattlemen Road, Building A
Sarasota FL 34232

Attention: Ms. Laura Ammeson

SUBJECT: Surface Water, Sediment and Biological Sampling for "Big Slough, Hudson Bayou
and Phillippi Creek Basins, Sarasota County, Florida"

Ladies and Gentlemen:

As requested, Ardaman & Associates, Inc. has completed the surface water and sediment sample collection. With regard to Sarasota County Transportation Department Contract No. 98-346, Work Assignment No. 99-21. This phase of the assessment is considered to be the wet period sampling for NPDES 1999 Sarasota County requirements.

On July 22, 1999, Ardaman representatives conducted sediment sampling activities in two (2) locations within Phillippi Creek, two (2) in Hudson Bayou, and two (2) in Myakkahatchee Creek in Sarasota County, Florida. Locations of the sediment sampling were chosen by Sarasota County personnel. Location No. 1 is within Phillippi Creek at Coburn Road, approximately 50 feet above the weir. Location No. 2 is in Phillippi Creek 50 feet south of the Bahia Vista bridge. Location No. 3 is in Hudson Bayou at the Osprey Avenue Bridge Location No. 4 is in Hudson Bayou at the Orange Avenue bridge Location No. 5 is in Myakkahatchee Creek 100 feet north of the I-75 bridge and Location No. 6 is within Myakkahatchee Creek approximately 100 yards north of the dam adjacent to the North Port Water Treatment Plant. As seen in the sediment sample, chain-of-custody forms and field notes, Samples 7 and 8 were also collected. Sample No. 7 is a duplicate sample of Location No. 1. The sample submitted labeled Station 8, is an equipment blank. The equipment blank consisted of analyte free rinse water, which was utilized in the final rinse after decontaminating the stainless steel augers and bowl in the field. Sediment samples were collected by use of a stainless steel hand auger and any compositing or mixing of the material was conducted with the use of stainless steel bowl and trowel. Sediment samples were dispensed directly into laboratory supplied vials and containers, supplied by ELAB, appropriately capped, labeled and packed on ice for transport to the Sarasota County Natural Resources Laboratory.

In addition, surface water samples were collected at each of the six (6) locations. A surface water duplicate sample, labeled Sample 7, was also collected, which is a duplicate of Location No. 1, and then an equipment blank was collected, labeled as Sample 8, which included rinse water from Rinsate from field cleaned equipment. Samples were dispensed into laboratory

supplied containers, capped, labeled, and also packed on ice for transport to the County lab. In addition, the temperature, pH, conductivity and dissolved oxygen were determined at each of the six (6) locations. The parameters are summarized in the attached Table 1. Field sampling notes and chain-of-custody forms for the sediment and surface water samples collected on July 21 are included in Appendix I.

Additional sediment samples were collected on July 22, 1999 for grain size distribution analysis. A copy of the field sampling notes and grain size distribution curves and sample data are presented in Appendix II.

Representatives of Ardaman & Associates, Inc. were later advised that one (1) of the surface water samples was to have been field filtered prior to submittal to the lab for dissolved phosphorous analysis. Therefore, additional sampling was conducted on August 15, 1999 of surface water samples at the above described locations. Samples collected were filtered in the field utilizing a Masterflex low-flow pump, fitted with a 0.45 micron filter prior to dispensing the samples into laboratory supplied containers. Containers were then appropriately preserved, capped, labeled and packed on ice for transport to the Sarasota County Laboratory. A copy of the field sampling notes and chain-of-custody forms for this event are included in Appendix III.

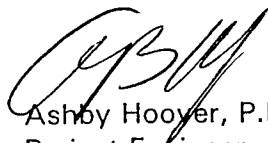
Field sampling was also conducted on July 20 and July 21 by representatives of Vanasse Hangen Brustlin (VHB) for biological analysis. To-date, the sampling and analysis activities are 45% complete. A copy of the VHB report will be submitted when received and reviewed by Ardaman & Associates, Inc.

The second phase of the sampling is tentatively scheduled for November or December, with hopes of achieving a dry season sampling event. Please contact our office when you wish for us to finalize the schedule of that sampling exercise.

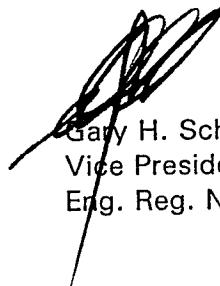
It has been an ongoing pleasure to be of assistance to you with this basin monitoring and analysis program. Please contact our office if you should have any questions concerning the above described work or to schedule the next phase of the program.

Very truly yours,

Ardaman & Associates, Inc.



Ashby Hoover, P.E.
Project Engineer
Eng. Reg. No. 49942



Gary H. Schmidt, P.E.
Vice President
Eng. Reg. No. 12305

AH/GHS:nh

TABLE 1
WATER QUALITY PARAMETERS
JULY 21, 1999

Station	Temp °c	pH	Cond.	DO
1	31.1	6.16	662 uS	1.5 mg/l
2	31.5	6.38	751 uS	2.22 mg/le
3	34.2	7.77	48.6 mS	6.67 mg/le
4	34.0	7.02	48.4 mS	6.64 mg/l
5	29.3	4.96	206 uS	3.08 mg/l
6	33.5	5.94	355 uS	1.72 mg/l

APPENDIX I

7-21-99

STATION 1 MILLER CREEK (DOWNSTREAM)

SARASOTA COUNTY 77-8710(8)

W.D. SURFACE TO TOP OF SEDIMENT: 4'

SEDIMENT THICKNESS: 2.13 "

TEMP: 31.1 °C

pH: 6.16

COND: 662 µS

D.O.: 19.8% @ 29.1 °C

SAMPLED AT 1:30

Flow Meter STAGNANT

SEDIMENT: BRNS SILTY/MUCKY

- STATION 7 IS A DUPLICATE OF #1

SAMPLE TIME 1:00 P.M.

STAINLESS STEEL HAND AUGER USED FOR

SEDIMENT SAMPLING.

7-21-99	SARASOTA COUNTY	97-8710 (CB)
STATION # 2	BAHIA VISTA	STATION # 3
H ₂ O SURFACE TO TOP OF SEDIMENT: 2.2-5'		OSPREY AVE BRIDGE
SEDIMENT THICKNESS: 2.1-5'		H ₂ O SURFACE TO TOP OF SEDIMENT: 2.6-5'
TEMP: 31.5		SEDIMENT THICKNESS: 2.1-5'
PH: 6.37		TEMP: 34.2 °C
COND: 751 μS		PH: 7.77
D.O.: 30.1 % @ 30.0 °C		COND: 48.6 μS
SAMPLED @ 2:30		D.O.: 95.9% @ 34.2 °C
OUTBOARD LOW TIDE / VELOCITY LOW		SAMPLED @ 4:10
SEDIMENT: BRFS/SILT/SHELL		LOW TIDE / SLACK
- STATION # 8 EQUIP. BLANK		SEDIMENT = DRY BRFS/SILT/MUCKY
SAMPLED @ 3:30		STAINLESS STEEL HAND AUGER USED FOR
STAINLESS STEEL HAND AUGER, TROWEL,		SED. SAMPLING.
AND BOWL CLEANED IN THE FIELD.		2' TEFLON BAIER USED FOR H ₂ O SAMPLES
ANALYTE FREE H ₂ O WAS THEN DISPENSED		
FROM THE BOWL DIRECTLY INTO THE		
SEDS CONTAINER. STAINLESS STEEL HAND		
AUGER USED FOR SEA SAMPLING @ STATIONS		
7 AUG 8		

7-21-99 SARASOTA COUNTY 97-8710(B)

STATION #4 ORANGE AVE - ALL SAMPLES LABELED AND PACKED

H₂O SURFACE TO TOP OF SEDIMENT: 2.5' ON ICE

SEDIMENT THICKNESS: 3.5' - ALL SAMPLED FOR:

TEMP: 34.0 °C - SEDIMENTS → MISC. INORGANICS (4%)

pH: 7.02 - OIL AND GREASE* (H₂SO₄)

COND: 48.4 mS - NUTRIENTS* (H₂SO₄)

P.O.: 94% @ 34.0 °C - COD* (H₂SO₄)

SAMPLED @ 3:45 - BOD MISC. INORGANICS* (4%)

LOW TIDE/SLACK - TSS/TDS MISC. INORGANICS* (4%)

SEDIMENT: DRY BRFS/SILT/MUCKY - METALS* (HNO₃)

STAINLESS STEEL HAND AUGER USED FOR - MISC. NUTRIENTS* (H₂SO₄)

SEDIMENT SAMPLING TRN / TP / NO₂/3

2' TEFLON BALLER USED FOR H₂O SAMPLES. * DENOTES GROUNDWATER SAMPLE

EQUIPMENT USED:

COLE/PALMER MODEL 1481-40 CONDUCTIVITY METER

COLE/PALMER MODEL SP85-80 pH METER

COLE/PALMER MODEL 100 SERIES D.O. METER

7-21-89 SAN ANTONIO COUNTY 97-8710(2)

STATION 5 (BIG SLOUGH)

STATION 6 (WATER PLANT)

H₂O SURFACE TO TOP OF SEDIMENT: 4.0' H₂O SURFACE TO TOP OF SEDIMENT: 3.5'

SEDIMENT THICKNESS: ± D.S.

SEDIMENT THICKNESS: ± 4'

TEMP: 29.3°C

TEMP: 33.5°C

pH: 4.96

pH: 5.94

COND: 376 μ S

COND: 355 μ S

D.O.: 40.4% @ 30.1°C

D.O.: 24.2% @ 30.4°C

NOTE: FLOW VELOCITY HIGH (H₂O)

H₂O ORGANIC / INANIC

COND. (2) pH: 7 / 7.05

SAMPLED @ 12:00

10/1/14, 27

H₂O LOW VELOCITY LOW / STAGNANT

A.O. METER CALIBRATED TO 100% SAT @ 33.8°C

SEDIMENT / BEDS / SILTY MUCK MATERIAL

H₂O INANIC / ORGANIC

H₂O ORGANIC

SAMPLED @ 11:30

ONE STAR CHECKED INCOMPETENCY BY CAS

SEDIMENT FINE TO COARSE GRAIN SANDS

CAP HAD #6 WRITTEN ON IT / LABEL

w/SMELL.

HAD #7 WRITTEN ON IT. CHECKED ALL

3' TEFLON BAILER USED FOR H₂O SAMPLING OTHER SAMPLES AND CHANGED # TO

CHAIN OF CUSTODY RECORD

SEDS AND MISC. Inorg. 4°C
OIL AND GREASE
NITROGEN
M.S.D.
M.S.D.
M.S.D.

Client: <i>Sarasota County</i>	Project: <i>HOUSED SAMPLES</i>	Sample Identification			Date	Time	Kil No.	Field	Lab	No. of Containers	Container Size	Container Type	Preservation Type	pH	Placed (Y or N)	Comments			
		Sampler (Signature):	Signature:	Signature:												Signature:	SEDS AND MISC. Inorg. 4°C	OIL AND GREASE	NITROGEN
Station No.	File No.: <i>97-870</i>									TOTAL									
STA # 1	7/21/77				1:30					8									
STA # 2					2:30					8									
STA # 3					4:10					8									
STA # 4					3:45					8									
STA # 5					11:30					8									
STA # 6					12:20					8									
STA # 7					1:00					8									
STA # 8					3:30					8									
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>	<i>[Signature]</i>	<i>1:50/7/22/77</i>
Remarks:	<i>★ STA. # 8 IS EQUIP. BLANK</i>																		

SARASOTA COUNTY GOVERNMENT
TRANSPORTATION DEPARTMENT STORMWATER/ ENVIRONMENTAL UTILITIES

CHAIN OF CUSTODY RECORD

Page 22 of 22
 Inorganics
 Organics
 H₂O
 METALS
 HNO₃
 H₂SO₄

Client: SANDEA COUNTY	File No. 97-8710	Sampler (Signature): <i>[Signature]</i>		Kit No.	Field	Lab	No. of Containers	Container Size	Container Type	Preservation Type	Filter (Yes or No)	Comments	
		Date	Time										Sample Identification
STA. # 1	7/2/97	1:30											
STA. # 2		2:30											
STA. # 3		4:10											
STA. # 4		3:45											
STA. # 5		11:30											
STA. # 6		12:20											
STA. # 7		1:00											
STA. # 8		3:30											
Relinquished by: <i>[Signature]</i> Date/Time: 7:50/7-2-97							Received by: <i>[Signature]</i> Date/Time:						
Relinquished by:							Received by:						
Relinquished by:							Received by:						
Remarks: STA. # 8 IS EQUIP. BLANK													

APPENDIX II

7-22-79 SARASOTA COUNTY (P.F. 87102)

SEDIMENT SAMPLES TAKEN AT STATIONS

1 THROUGH 6 FOR SIEVE ANALYSIS.

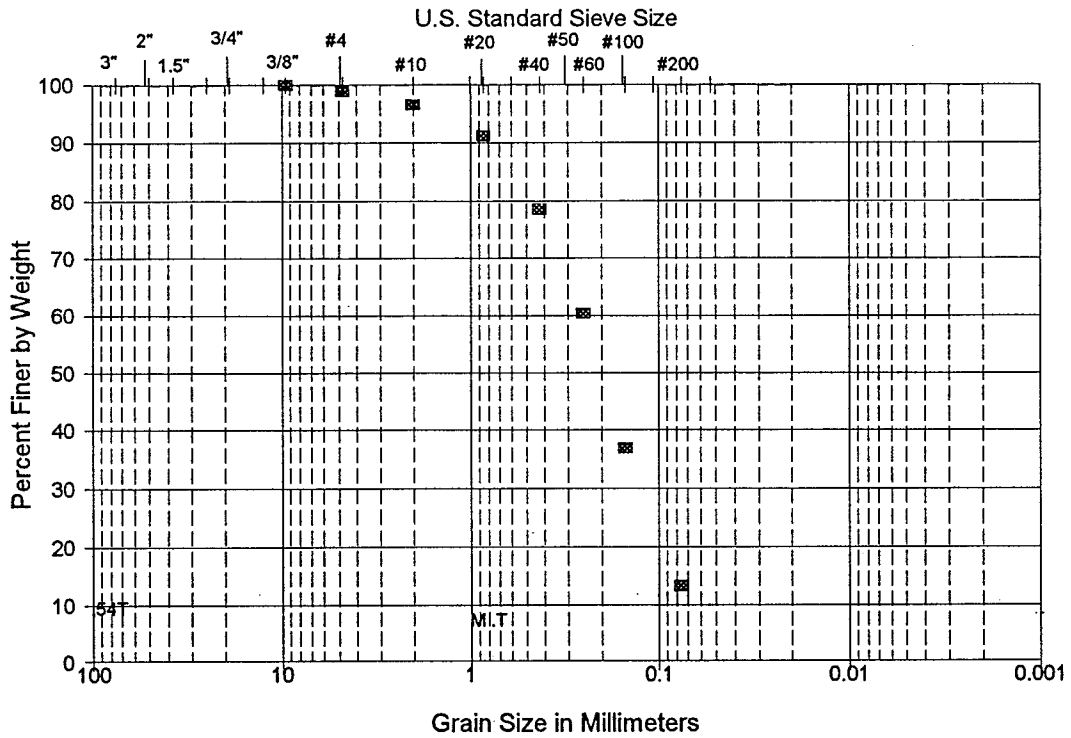
SAMPLES RETRIEVED WITH THE AID

OF A HAND AUGER AND PLACED

INTO 1500 ML PLASTIC SAMPLE

JARS.

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL		SAND			SILT OR CLAY
Coarse	Fine	Coarse	Medium	Fine	

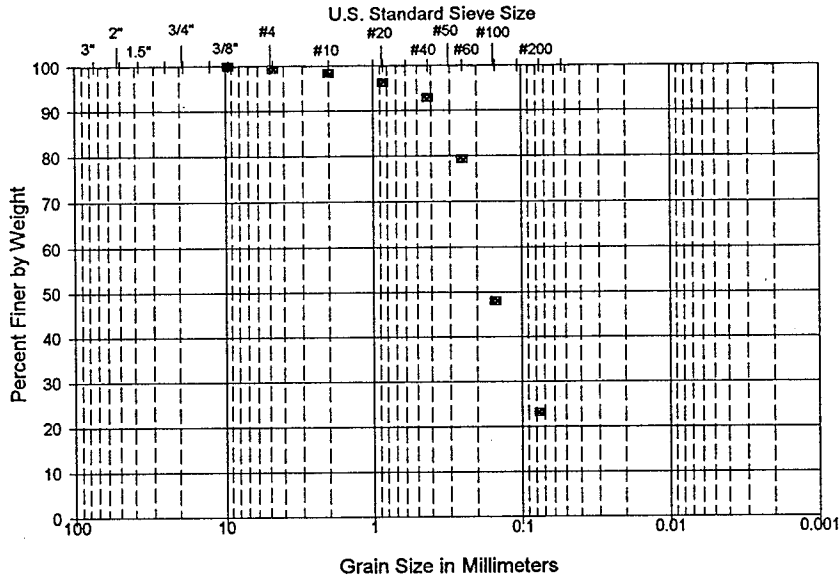
SIEVE ANALYSIS:

Sieve Size	Percent Passing
3 in.	
2 in.	
1-1/2 in.	
1 in.	
3/4 in.	
3/8 in.	100.0
No. 4	98.9
No. 10	96.5
No. 20	91.2
No. 40	78.6
No. 60	60.4
No. 100	36.9
No. 200	13.3

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"1"
Sample Depth (feet):	N.A.
Soil Description:	Brown silty fine sand
Unified Soil Classification:	SM

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL		SAND			SILT OR CLAY
Coarse	Fine	Coarse	Medium	Fine	

SIEVE ANALYSIS:

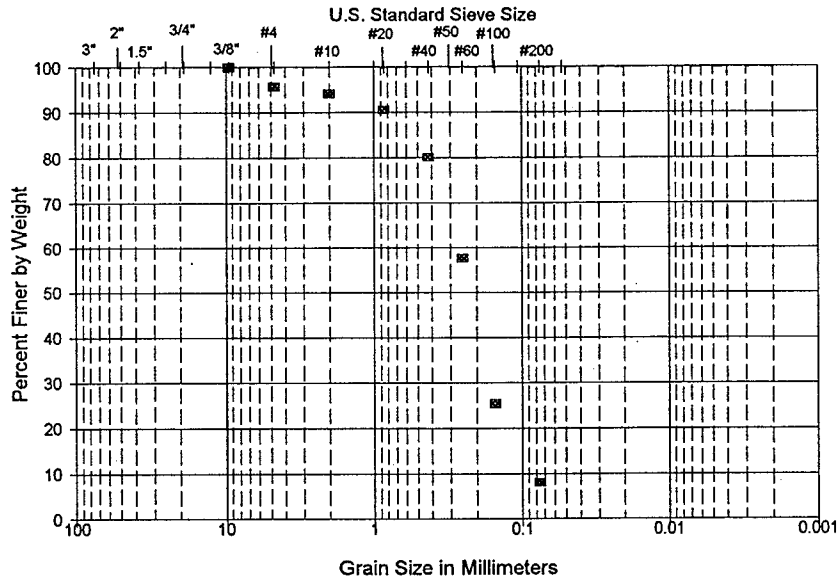
Sieve Size	Percent Passing
3 in.	
2 in.	
1-1/2 in.	
1 in.	
3/4 in.	
3/8 in.	100.0
No. 4	99.3
No. 10	98.4
No. 20	96.3
No. 40	92.9
No. 60	79.4
No. 100	48.1
No. 200	23.2

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"2"
Sample Depth (feet):	N.A.
Soil Description:	Light gray silty fine sand with organics
Unified Soil Classification:	SM

Sarasota County
Sarasota, Florida

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL		SAND			SILT OR CLAY
Coarse	Fine	Coarse	Medium	Fine	

SIEVE ANALYSIS:

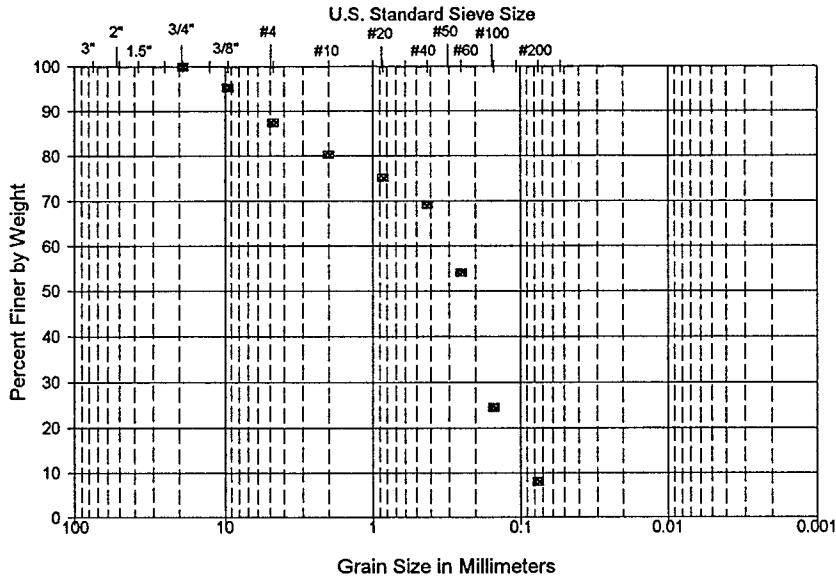
Sieve Size	Percent Passing
3 in.	
2 in.	
1-1/2 in.	
1 in.	
3/4 in.	
3/8 in.	100.0
No. 4	95.7
No. 10	94.2
No. 20	90.6
No. 40	80.2
No. 60	57.6
No. 100	25.4
No. 200	8.1

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"3"
Sample Depth (feet):	N.A.
Soil Description:	Dark gray fine sand with silt and organics
Unified Soil Classification:	SP-SM

Sarasota County
Sarasota, Florida

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL		SAND			SILT OR CLAY
Coarse	Fine	Coarse	Medium	Fine	

SIEVE ANALYSIS:

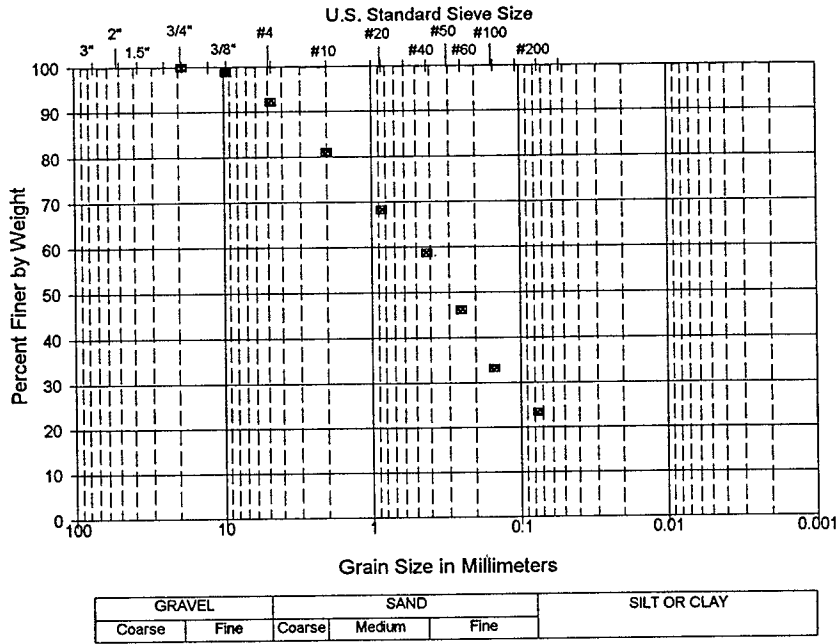
Sieve Size	Percent Passing
3 in.	100.0
2 in.	100.0
1-1/2 in.	100.0
1 in.	100.0
3/4 in.	100.0
3/8 in.	95.3
No. 4	87.4
No. 10	80.3
No. 20	75.3
No. 40	69.2
No. 60	54.0
No. 100	24.5
No. 200	8.0

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"4"
Sample Depth (feet):	N.A.
Soil Description:	Light and dark gray fine sand with silt
Unified Soil Classification:	SP-SM

Sarasota County
Sarasota, Florida

GRAIN SIZE DISTRIBUTION CURVE



SIEVE ANALYSIS:

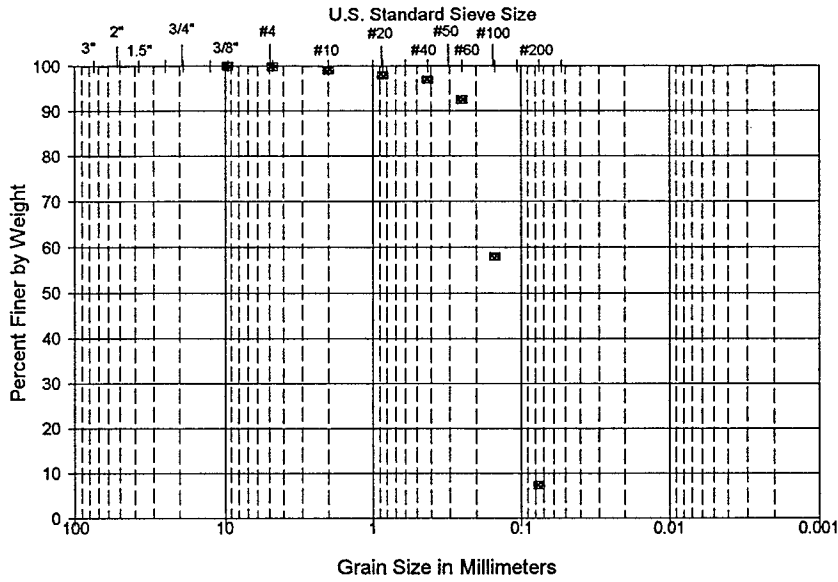
Sieve Size	Percent Passing
3 in.	100.0
2 in.	100.0
1-1/2 in.	100.0
1 in.	100.0
3/4 in.	100.0
3/8 in.	98.8
No. 4	92.2
No. 10	81.1
No. 20	68.2
No. 40	58.6
No. 60	46.1
No. 100	33.2
No. 200	23.3

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"5"
Sample Depth (feet):	N.A.
Soil Description:	Light gray silty fine sand
Unified Soil Classification:	SM

Sarasota County
Sarasota, Florida

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL		SAND			SILT OR CLAY	
Coarse	Fine	Coarse	Medium	Fine		

SIEVE ANALYSIS:

Sieve Size	Percent Passing
3 in.	
2 in.	
1-1/2 in.	
1 in.	
3/4 in.	
3/8 in.	100.0
No. 4	99.8
No. 10	99.0
No. 20	97.9
No. 40	96.9
No. 60	92.5
No. 100	58.0
No. 200	7.3

SAMPLE DATA:

Boring No.:	N.A.
Sample No.:	"6"
Sample Depth (feet):	N.A.
Soil Description:	Light and dark brown fine sand with silt and organics
Unified Soil Classification:	SP-SM

Sarasota County
Sarasota, Florida

APPENDIX III

8/15/99. SARASOTA COUNTY SLOUGHS 97.8710

978710

SAMPLE TIMES ARE AS FOLLOWS:

SAMPLED STATIONS 1 THRU 8 FOR

SARASOTA COUNTY SLOUGHS PROJECT.

- A MASTERFLEX 1/2 LOW FLOW PUMP

W/ A 0.45 MICRON FILTER

ATTACHMENT WAS USED TO OBTAIN

ALL SAMPLES.

- ALL EQUIPMENT WAS THOROUGHLY

CLEANED BETWEEN STATION SAMPLES.

- STATION 7 IS A DUPLICATE OF STA. 1

- STATION 8 IS AN EQUIPMENT BLANK.

- ALL SAMPLES COLLECTED FOR 365.2,

DISSOLVED PHOSPHOROUS PRESERVED W/H₂SO₄.

- SAMPLES PLACED IN A 250 ML

PLASTIC SAMPLE CONTAINER

STATION

DATE

TIME

1 8.15.99 10:40

2 11:00

3 11:40

4 11:25

5 9:55

6 8.16.99 10:25

7 8.15.99 1:00

8 12:00

* DUPLICATE OF STA. 1

* EQUIP. BLANK

MS. DAPHNE McCORD
 SARASOTA COUNTY
 BLDG. A
 1301 CATTLEMAN ROAD ROOM 218
 SARASOTA, FL 34232



ANALYTICAL REPORT

Submission Number: 9907000618 Client's P.O. Number:
 Date Received: 07/27/99 Project Number:
 Date Reported: 08/16/99 Project Name: SED SAMPLES
 Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 1 Date Sampled: 07/21/99
 Client Sample Number: 1 Sample Matrix: SOLID
 Sample Description: STA #1

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	40.3		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	2.9		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	730		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.16		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	6800		mg/kg	71	JAS	07/29/99	
3050/6010	CADMIUM (Total)	0.50		mg/kg	0.071	EM	07/28/99	
3050/6010	CHROMIUM (Total)	17		mg/kg	0.71	EM	07/28/99	
3050/6010	COPPER (total)	36		mg/kg	0.71	EM	07/28/99	
3050/6010	LEAD (Total)	14		mg/kg	0.34	EM	07/28/99	
3050/6010	ZINC (Total)	68		mg/kg	1.8	EM	07/28/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 2 Date Sampled: 07/21/99
 Client Sample Number: 2 Sample Matrix: SOLID
 Sample Description: STA #2

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	76.8		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	1.2		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	1400		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.010		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	320		mg/kg	3.4	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.33	U	mg/kg	0.33	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	3.3	U	mg/kg	3.3	JAS	07/29/99	
3050/6010	COPPER (total)	3.3	U	mg/kg	3.3	JAS	07/29/99	
3050/6010	LEAD (Total)	1.7		mg/kg	1.6	JAS	07/29/99	
3050/6010	ZINC (Total)	8.2	U	mg/kg	8.2	JAS	07/29/99	

MS. DAPHNE McCORD
SARASOTA COUNTY
BLDG. A
1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232



ANALYTICAL REPORT

Page 2

Submission Number: 9907000618 Client's P.O. Number:
Date Received: 07/27/99 Project Number:
Date Reported: 08/16/99 Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 2 Date Sampled: 07/21/99
Client Sample Number: 2 Sample Matrix: SOLID
Sample Description: STA #2

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
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Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 3 Date Sampled: 07/21/99
Client Sample Number: 3 Sample Matrix: SOLID
Sample Description: STA #3

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
SM2540G	PERCENT SOLID	65.4		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	2.3		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	500		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.050		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	1900		mg/kg	4.1	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.41	U	mg/kg	0.41	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	7.4		mg/kg	4.1	JAS	07/29/99	
3050/6010	COPPER (total)	9.5		mg/kg	4.1	JAS	07/29/99	
3050/6010	LEAD (Total)	23		mg/kg	2.0	JAS	07/29/99	
3050/6010	ZINC (Total)	36		mg/kg	10	JAS	07/29/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

MS. DAPHNE MCCORD
 SARASOTA COUNTY
 BLDG. A
 1301 CATTLEMAN ROAD ROOM 218
 SARASOTA, FL 34232



ANALYTICAL REPORT

Page 3

Submission Number: 9907000618 Client's P.O. Number:
 Date Received: 07/27/99 Project Number:
 Date Reported: 08/16/99 Project Name: SED SAMPLES
 Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 4 Date Sampled: 07/21/99
 Client Sample Number: 4 Sample Matrix: SOLID
 Sample Description: STA #4

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	48.8		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	5.8		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	1400		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.17		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	2700		mg/kg	56	JAS	07/29/99	
3050/6010	CADMIUM (Total)	0.56	U	mg/kg	0.56	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	19		mg/kg	5.6	JAS	07/29/99	
3050/6010	COPPER (total)	28		mg/kg	5.6	JAS	07/29/99	
3050/6010	LEAD (Total)	130		mg/kg	2.7	JAS	07/29/99	
3050/6010	ZINC (Total)	68		mg/kg	14	JAS	07/29/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 5 Date Sampled: 07/21/99
 Client Sample Number: 5 Sample Matrix: SOLID
 Sample Description: STA #5

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	73.4		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	2.2		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	2400		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.010		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	3000		mg/kg	35	JAS	07/29/99	
3050/6010	CADMIUM (Total)	0.76		mg/kg	0.35	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	10		mg/kg	3.5	JAS	07/29/99	
3050/6010	COPPER (total)	3.5	U	mg/kg	3.5	JAS	07/29/99	
3050/6010	LEAD (Total)	3.8		mg/kg	1.7	JAS	07/29/99	

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 (904) 672-5668 • Fax (904) 673-4001

Puerto Rico: Office (787) 787-0866 • Cellular (787) 390-3505 or (787) 399-4683

MS. DAPHNE McCORD
SARASOTA COUNTY
BLDG. A
1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232



ANALYTICAL REPORT

Page 4

Submission Number: 9907000618 Client's P.O. Number:
Date Received: 07/27/99 Project Number:
Date Reported: 08/16/99 Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 5 Date Sampled: 07/21/99
Client Sample Number: 5 Sample Matrix: SOLID
Sample Description: STA #5

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
3050/6010	ZINC (Total)	8.7	U	mg/kg	8.7	JAS	07/29/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 6 Date Sampled: 07/21/99
Client Sample Number: 6 Sample Matrix: SOLID
Sample Description: STA #6

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
SM2540G	PERCENT SOLID	28.6		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	3.7		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	650		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.20		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	3900		mg/kg	9.8	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.098	U	mg/kg	0.098	EM	07/28/99	
3050/6010	CHROMIUM (Total)	7.8		mg/kg	0.98	EM	07/28/99	
3050/6010	COPPER (total)	16		mg/kg	0.98	EM	07/28/99	
3050/6010	LEAD (Total)	4.7		mg/kg	0.47	EM	07/28/99	
3050/6010	ZINC (Total)	12		mg/kg	2.4	EM	07/28/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

MS. DAPHNE McCORD
 SARASOTA COUNTY
 BLDG. A
 1301 CATTLEMAN ROAD ROOM 218
 SARASOTA, FL 34232



ANALYTICAL REPORT

Submission Number: 9907000618 Client's P.O. Number:
 Date Received: 07/27/99 Project Number:
 Date Reported: 08/16/99 Project Name: SED SAMPLES
 Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 7 Date Sampled: 07/21/99
 Client Sample Number: 7 Sample Matrix: SOLID
 Sample Description: STA #7

duplicate of Station #1

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	41.8		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	3.0		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	0.090		mg/kg	0.025	KFE	08/13/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.18		%	0.0010	KFE	08/12/99	
3050/6010	ALUMINUM (Total)	5500		mg/kg	6.3	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.42		mg/kg	0.063	EM	07/28/99	
3050/6010	CHROMIUM (Total)	14		mg/kg	0.63	EM	07/28/99	
3050/6010	COPPER (total)	30		mg/kg	0.63	EM	07/28/99	
3050/6010	LEAD (Total)	12		mg/kg	0.30	EM	07/28/99	
3050/6010	ZINC (Total)	58		mg/kg	1.6	EM	07/28/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 8 Date Sampled: 07/21/99
 Client Sample Number: 8 Sample Matrix: GROUND WATER
 Sample Description: STA #8

BLANK

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
	PERCENT SOLID	0.00200				MGA	07/28/99	
365.2	TOTAL PHOSPHORUS	0.025	U	mg/L	0.025	SFI	08/05/99	
351+353	NITROGEN - TOTAL (TN)	0.21		mg/L	0.50	KFE	08/05/99	
9060	TOTAL ORGANIC CARBON (TOC)	1.0	U	mg/L	1.0	BBA	08/05/99	
6010	ALUMINUM (Total)	100	U	ug/L	100	JAS	07/29/99	
6010	CADMIUM (Total)	1.0	U	ug/L	1.0	EM	08/03/99	
6010	CHROMIUM (Total)	10	U	ug/L	10	EM	08/03/99	
6010	COPPER (total)	10	U	ug/L	10	EM	08/03/99	
6010	LEAD (Total)	5.0	U	ug/L	5.0	EM	08/03/99	
6010	ZINC (Total)	25	U	ug/L	25	EM	08/03/99	

MS. DAPHNE McCORD
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1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232



ANALYTICAL REPORT

Submission Number: 9907000618 Client's P.O. Number:
Date Received: 07/27/99 Project Number:
Date Reported: 08/16/99 Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1

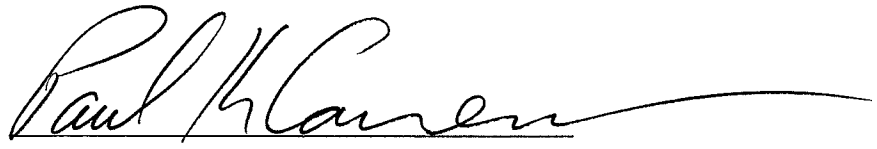
Lab Sample Number: 9907618 8 Date Sampled: 07/21/99
Client Sample Number: 8 Sample Matrix: GROUND WATER
Sample Description: STA #8

Method	Analyte	Result	Q	Units	Reporting		Date	
					Limit	Analyst	Analyzed	Prepared

Data Qualifier Code Key:
U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

CERTIFICATION: All analytical data reported above were obtained using the specified methods and were validated by our laboratory quality control system. This laboratory follows an approved quality assurance program.

Respectfully submitted:


Paul K. Canevaro
Laboratory Director

Quality Control Report

Client ID.:

SARASOTA COUNTY

Submis.: 9907000618

DATE:

8/16/99

Parameter	Precision				Accuracy					
	Sample I.D.	Rep A mg/L	Rep B mg/L	%RPD	Sample I.D.	Sample Conc. mg/L	MS Conc. mg/L	Spike Con. mg/L	%REC	Method blk mg/L
Alkalinity										
Ammonia										
BOD										
Silica										
COD										
Conductivity										
Cyanide										
Hex. Chromium										
Kjeldahl Nitrogen	07662-6	1.33	1.33	0.000	07662-6MS	1.33	7.56	6.00	104.	<0.500
Oil and Grease										
pH										
Phenol										
ide										
TDS										
TOC	07256-1	4.09	3.95	3.48	07256-1MS	4.02	8.31	4.00	107.	<1.00
Surfactants										
Total Phosphate	08065-1	<0.025	<0.025	0.000	08065-1MS	<0.025	1.14	1.20	95.0	<0.025
Total Solids										
TRPH 418.1/9073										
TSS										
Turbidity										
Oxidized Nitrogen										
Odor										
Color										
Flash Point										
Fluoride										
Chloride										
Nitrite										
Bromide										
Nitrate										
Ortho Phosphate										
Sulfate										

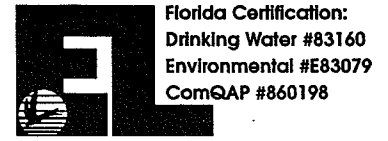
V:\ETCHEM\QC\076

V:\DATA\ADMIN\FORMS\QC\CWC1.XLS

$\%REC = [(MS\ Conc. - Sample\ Conc.) / Spike\ Conc.] \times 100$
 * = Insufficient Sample to perform QC.

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Florida Certification:
 Drinking Water #83160
 Environmental #E83079
 ComQAP #860198

ELAB, Inc.
 Formerly D/B/A EnviroLab

ICP METALS QUALITY CONTROL SUMMARY

(Solid Samples)

QC SAMPLE # 07604-8 ANALYSIS BATCH : ICP29JUL99-1

ELEMENT	DUP A (mg/kg)	DUP B (mg/kg)	RPD	AMT SPIKED	OBS SPIKE	SPIKE REC	BLANK
ALUMINUM	4401	4828	9%	331	7574	^	< 13.08
ANTIMONY	< 0.67	< 0.64	~	16.55	11.00	63%	< 0.65
ARSENIC	< 0.67	< 0.64	~	16.55	14.96	86%	< 0.65
BARIUM	3.4	3.1	~	33.1	35.9	98%	< 1.31
BERYLLIUM	< 0.13	< 0.13	~	3.310	3.151	91%	< 0.13
BORON	< 6.7	< 6.4	~	165.5	150.9	87%	< 6.54
CALCIUM	753	464	48%	1655	2132	92%	< 65.39
CADMIUM	< 0.13	< 0.13	~	3.310	3.006	87%	< 0.13
CHROMIUM	4.8	5.4	12%	16.55	22.11	103%	< 1.31
COPPER	< 1.3	< 1.3	~	33.10	31.51	91%	< 1.31
IRON	267	217	21%	132.4	863.3	469%	< 3.27
LEAD	8.22	4.90	51%	16.55	20.79	86%	< 0.65
MAGNESSIUM	103	82	~	1655	1827	105%	< 65.39
MANGANESE	< 0.67	< 0.64	~	16.55	16.55	96%	< 0.65
MOLYBDENUM	< 1.3	< 1.3	~	33.1	30.6	88%	< 1.31
NICKEL	< 1.3	< 1.3	~	33.10	32.44	94%	< 1.31
SELENIUM	< 0.67	< 0.64	~	16.55	14.96	86%	< 0.65
SILVER	< 1.3	< 1.3	~	33.1	31.6	92%	< 1.31
SODIUM	< 67	< 64	~	1655	1642	95%	< 65.39
THALLIUM	< 0.67	< 0.64	~	16.55	14.96	86%	< 0.65
VANADIUM	1.5	1.4	~	33.1	34.6	100%	< 1.31
ZINC	< 3.4	< 3.2	~	66.2	64.7	93%	< 3.27

~ Not Evaluated, Analyte Concentration < 3 x MRL.

^ Not Evaluated, Spike Concentration > 4 x Analyte Concentration.

! Not Evaluated, Sample Concentration Exceeded Linear Range.

v:\data\admin\forms\metals\solids.xls

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CHAIN OF CUSTODY RECORD

9967-618

Station No.	Date	Time	Sample Identification			No. of Containers	Container Size	Container Type	Preservative Type	pH	Filtered (Yes or No)	Test Parameters				Comments
			KIT No.	Field	Lab							SEDS AND MISC. Inorganic 4°C	OIL AND GREASE H ₂ SO ₄	NUTRIENTS H ₂ SO ₄	COD H ₂ SO ₄	
STA # 1	7/21/97	1:30				8						1	1	1	1	
STA # 2		2:30				8						1	1	1	1	
STA # 3		4:10				8						1	1	1	1	
STA # 4		3:45				8						1	1	1	1	
STA # 5		11:30				8						1	1	1	1	
STA # 6		12:20				8						1	1	1	1	
STA # 7		1:00				8						1	1	1	1	
STA # 8		3:30				8						1	1	1	1	
Relinquished by: <i>[Signature]</i>						Date/Time: 1:50/7/22/97	Received by: <i>[Signature]</i>	Relinquished by: <i>[Signature]</i>	Date/Time: 07/22/97	Received by: <i>[Signature]</i>	Remarks: STA # 8 is EQUIP. BLANK					
Relinquished by: <i>[Signature]</i>						Date/Time: 7/22/97	Received by: <i>[Signature]</i>	Relinquished by: <i>[Signature]</i>	Date/Time: 7/23/97	Received by: <i>[Signature]</i>	Remarks: Oil + Grease BOD NG-No ₂ by Benchmark					

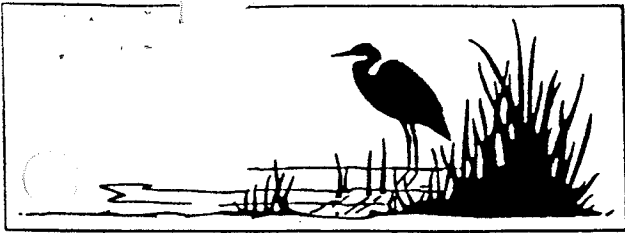
SARASOTA COUNTY GOVERNMENT
TRANSPORTATION DEPARTMENT STORMWATER ENVIRONMENTAL UTILITIES

CHAIN OF CUSTODY RECORD

BOD MISC. INORGANICS
4°C
TSS/TDS MISC. INORGANICS
4°C
METALS
HNO₃
MISC. NUTRIENTS TP/PP/NO₃
H₂SO₄

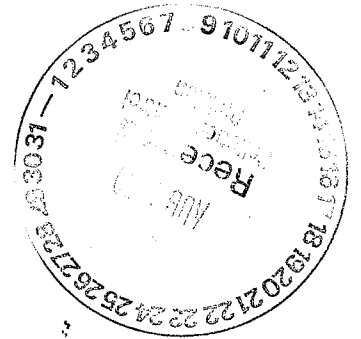
Page 2 of 2

Client File No.	Station No.	Date	Sampler (Signature):	Sample Identification			No. of Containers	Container Size	Container Type	Preservative Type	pH	Filtered (Yes or No)	Test Parameters				Comments
				KIT No.	Field	Lab							BOD MISC. INORGANICS 4°C	TSS/TDS MISC. INORGANICS 4°C	METALS HNO ₃	MISC. NUTRIENTS TP/PP/NO ₃ H ₂ SO ₄	
97-8710																	
	STA. # 1	7-21-99	1:30														
	STA. # 2		2:30														
	STA. # 3		4:10														
	STA. # 4		3:45														
	STA. # 5		11:30														
	STA. # 6		12:20														
	STA. # 7		1:00														
	STA. # 8		3:30														
Relinquished by:			Date/Time:	Received by:			Relinquished by:			Date/Time:	Received by:			Remarks:			
[Signature]			7/22/99 16:30	[Signature]			[Signature]			07/22/99 13:15	[Signature]			* STA. # 8 IS EQUIP. BLANK			
Relinquished by:			Date/Time:	Received by:			Received for Laboratory by:										



RESOURCE MANAGEMENT DIVISION

QUALITY ASSURANCE REPORT



SAMPLING EVENT: *NPDES Sampling (Sec).*

REVIEW DATE: *8/96*

REVIEWED BY: *Ue*

COMMENTS:

Al - O.K for target - TEL & PEL

Cd - Sta #5 .76 when TEL is .676

Chromium - O.K for soil target also TEL & PEL

Cu - Sta #1 is 36 when TEL is 19.7, PEL O.K

Sta #4 is 28 " " " " " "

Sta #7 is 30 " " " " " "

Pb - Sta #4 is 68 when TEL is 30.2, PEL O.K.

Zn - O.K.

QA used Dup A & B 51% RPD, Spike Rec. 86%

MS. DAPHNE MCCORD
SARASOTA COUNTY
BLDG. A
1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232

AMENDED REPORT
ORIGINAL REPORT DATE: 08/16/99
The total phosphorus result was corrected
for sample number 9907618-7.



ANALYTICAL REPORT

Page 6

Submission Number: 9907000618 Client's P.O. Number:
Date Received: 07/27/99 Project Number:
Date Reported: 10/20/99 Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 8 Date Sampled: 07/21/99
Client Sample Number: 8 Sample Matrix: GROUND WATER
Sample Description: STA #8

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
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Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

CERTIFICATION: All analytical data reported above were obtained using the specified methods and were validated by our laboratory quality control system. This laboratory follows an approved quality assurance program.

Respectfully submitted:

Paul K. Canevaro
Laboratory Director

REVISED
10/20

MS. DAPHNE McCORD
SARASOTA COUNTY
BLDG. A
1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232

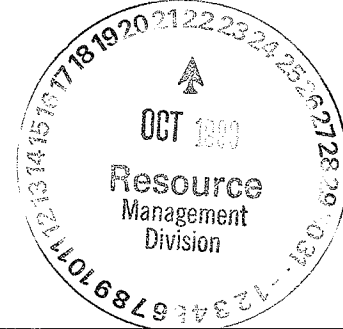
AMENDED REPORT
ORIGINAL REPORT DATE: 08/16/99
The total phosphorus result was corrected
for sample number 9907618-7.



ANALYTICAL REPORT

Submission Number: 9907000618
Date Received: 07/27/99
Date Reported: 10/20/99

Client's P.O. Number:
Project Number:
Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1



Page 1

Lab Sample Number: 9907618 1
Client Sample Number: 1
Sample Description: STA #1
Date Sampled: 07/21/99
Sample Matrix: SOLID

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
SM2540G	PERCENT SOLID	40.3		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	2.9		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	730		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.16		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	6800		mg/kg	71	JAS	07/29/99	
3050/6010	CADMIUM (Total)	0.50		mg/kg	0.071	EM	07/28/99	
3050/6010	CHROMIUM (Total)	17		mg/kg	0.71	EM	07/28/99	
3050/6010	COPPER (Total)	36		mg/kg	0.71	EM	07/28/99	
3050/6010	LEAD (Total)	14		mg/kg	0.34	EM	07/28/99	
3050/6010	ZINC (Total)	68		mg/kg	1.8	EM	07/28/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 2
Client Sample Number: 2
Sample Description: STA #2
Date Sampled: 07/21/99
Sample Matrix: SOLID

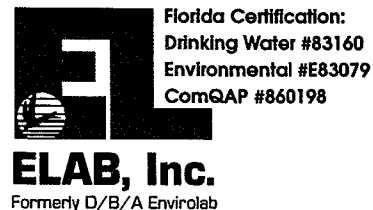
Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
SM2540G	PERCENT SOLID	76.8		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	1.2		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	1400		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.010		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	320		mg/kg	3.4	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.33	U	mg/kg	0.33	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	3.3	U	mg/kg	3.3	JAS	07/29/99	
3050/6010	COPPER (Total)	3.3	U	mg/kg	3.3	JAS	07/29/99	
3050/6010	LEAD (Total)	1.7		mg/kg	1.6	JAS	07/29/99	
3050/6010	ZINC (Total)	8.2	U	mg/kg	8.2	JAS	07/29/99	

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MS. DAPHNE McCORD
 SARASOTA COUNTY
 BLDG. A
 1301 CATTLEMAN ROAD ROOM 218
 SARASOTA, FL 34232

AMENDED REPORT
ORIGINAL REPORT DATE: 08/16/99
The total phosphorus result was corrected
for sample number 9907618-7.



ANALYTICAL REPORT

Submission Number: 9907000618 Client's P.O. Number:
 Date Received: 07/27/99 Project Number:
 Date Reported: 10/20/99 Project Name: SED SAMPLES
 Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 2 Date Sampled: 07/21/99
 Client Sample Number: 2 Sample Matrix: SOLID
 Sample Description: STA #2

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 3 Date Sampled: 07/21/99
 Client Sample Number: 3 Sample Matrix: SOLID
 Sample Description: STA #3

Method	Analyte	Result	Q	Units	Reporting		Date Analyzed	Date Prepared
					Limit	Analyst		
SM2540G	PERCENT SOLID	65.4		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	2.3		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	500		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.050		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	1900		mg/kg	4.1	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.41	U	mg/kg	0.41	JAS	07/29/99	
3050/6010	CHROMIUM (Total)	7.4		mg/kg	4.1	JAS	07/29/99	
3050/6010	COPPER (Total)	9.5		mg/kg	4.1	JAS	07/29/99	
3050/6010	LEAD (Total)	23		mg/kg	2.0	JAS	07/29/99	
3050/6010	ZINC (Total)	36		mg/kg	10	JAS	07/29/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

MS. DAPHNE McCORD
SARASOTA COUNTY
BLDG. A
1301 CATTLEMAN ROAD ROOM 218
SARASOTA, FL 34232

AMENDED REPORT
ORIGINAL REPORT DATE: 08/16/99
The total phosphorus result was corrected
for sample number 9907618-7.



ANALYTICAL REPORT

Page 4

Submission Number: 9907000618 Client's P.O. Number:
Date Received: 07/27/99 Project Number:
Date Reported: 10/20/99 Project Name: SED SAMPLES
Elab Report Name: Finalnew->Final2.RP1

Lab Sample Number: 9907618 5 Date Sampled: 07/21/99
Client Sample Number: 5 Sample Matrix: SOLID
Sample Description: STA #5

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
3050/6010	ZINC (Total)	8.7	U	mg/kg	8.7	JAS	07/29/99	

Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Lab Sample Number: 9907618 6 Date Sampled: 07/21/99
Client Sample Number: 6 Sample Matrix: SOLID
Sample Description: STA #6

Method	Analyte	Result	Q	Units	Reporting Limit	Analyst	Date Analyzed	Date Prepared
SM2540G	PERCENT SOLID	28.6		%	0.0	MGA	07/28/99	
SM2540G	ORGANIC MATTERS	3.7		%	N/A	MGA	08/03/99	
CE-81-1	TOTAL PHOSPHORUS	650		mg/kg	0.025	SFI	08/05/99	
CE-81-1	NITROGEN - TOTAL (TN)	0.20		%	0.0010	KFE	08/05/99	
3050/6010	ALUMINUM (Total)	3900		mg/kg	9.8	EM	07/28/99	
3050/6010	CADMIUM (Total)	0.098	U	mg/kg	0.098	EM	07/28/99	
3050/6010	CHROMIUM (Total)	7.8		mg/kg	0.98	EM	07/28/99	
3050/6010	COPPER (Total)	16		mg/kg	0.98	EM	07/28/99	
3050/6010	LEAD (Total)	4.7		mg/kg	0.47	EM	07/28/99	
3050/6010	ZINC (Total)	12		mg/kg	2.4	EM	07/28/99	

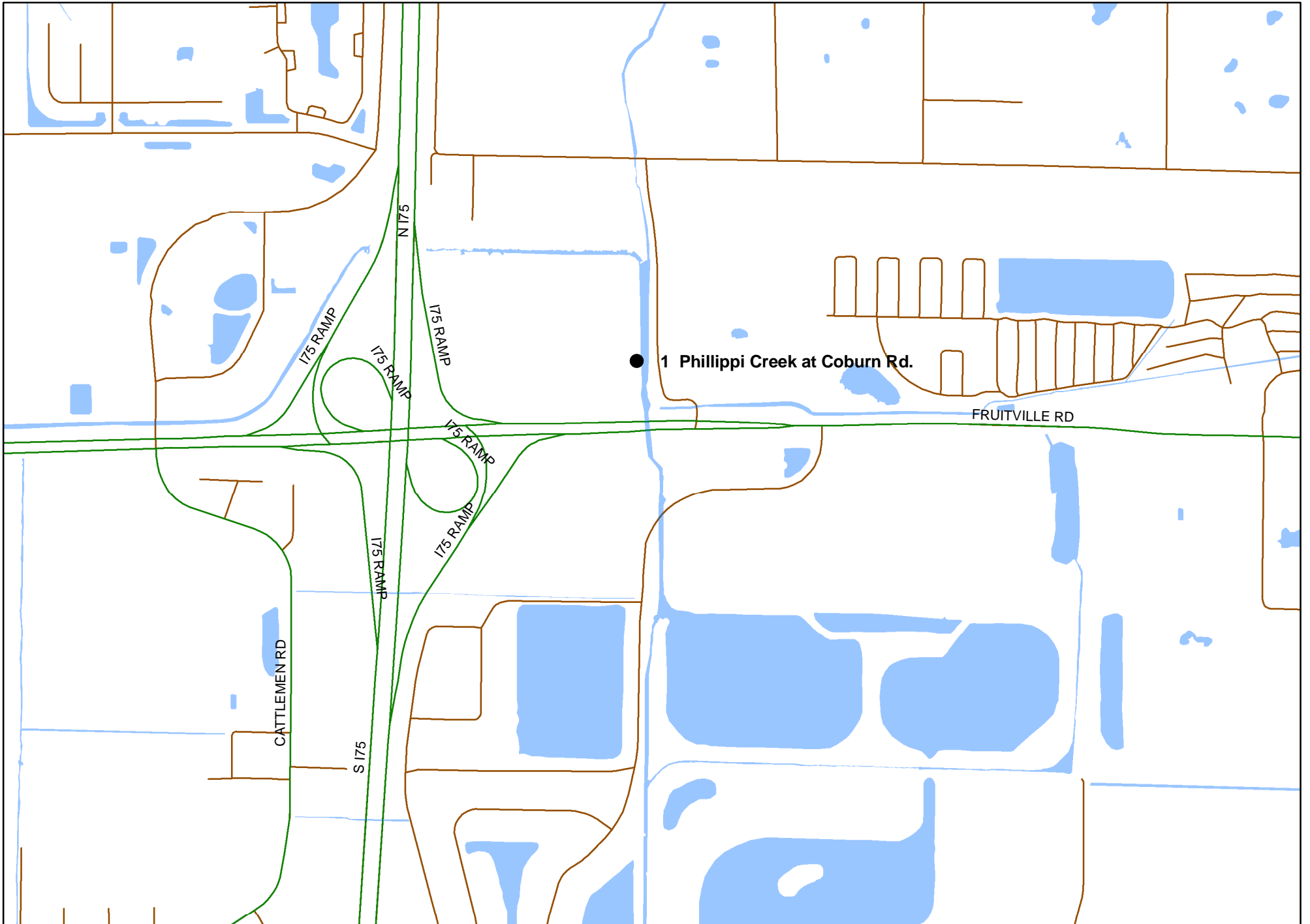
Data Qualifier Code Key:

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

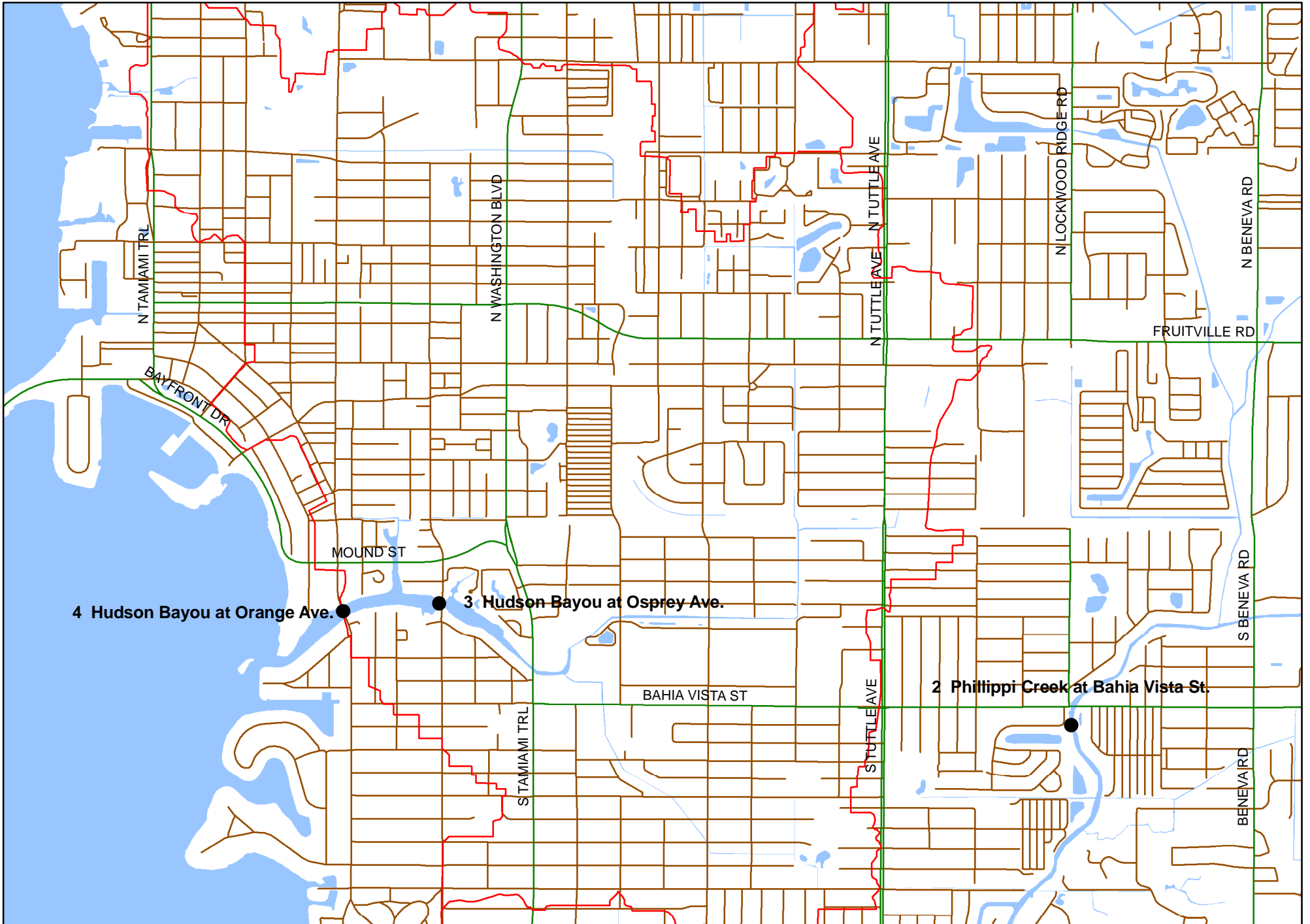
MS4 Monitoring Stations

- 1 Phillippi Creek near Coburn Road, 275 feet north of Fruitville Road and about 50 feet north of the former weir.
- 2 Phillippi Creek 50 feet south of Bahia Vista Street, in the Pinecraft neighborhood, (east of Lockwood Ridge Road).
- 3 Hudson Bayou at Osprey Avenue.
- 4 Hudson Bayou at Orange Avenue.
- 5 Myakkahatchee Creek 100 feet north of Interstate 75, near the staff gage.
- 6 Myakkahatchee Creek 100 yards north of the dam near the City of North Port water plant (5755 North Port Blvd.)

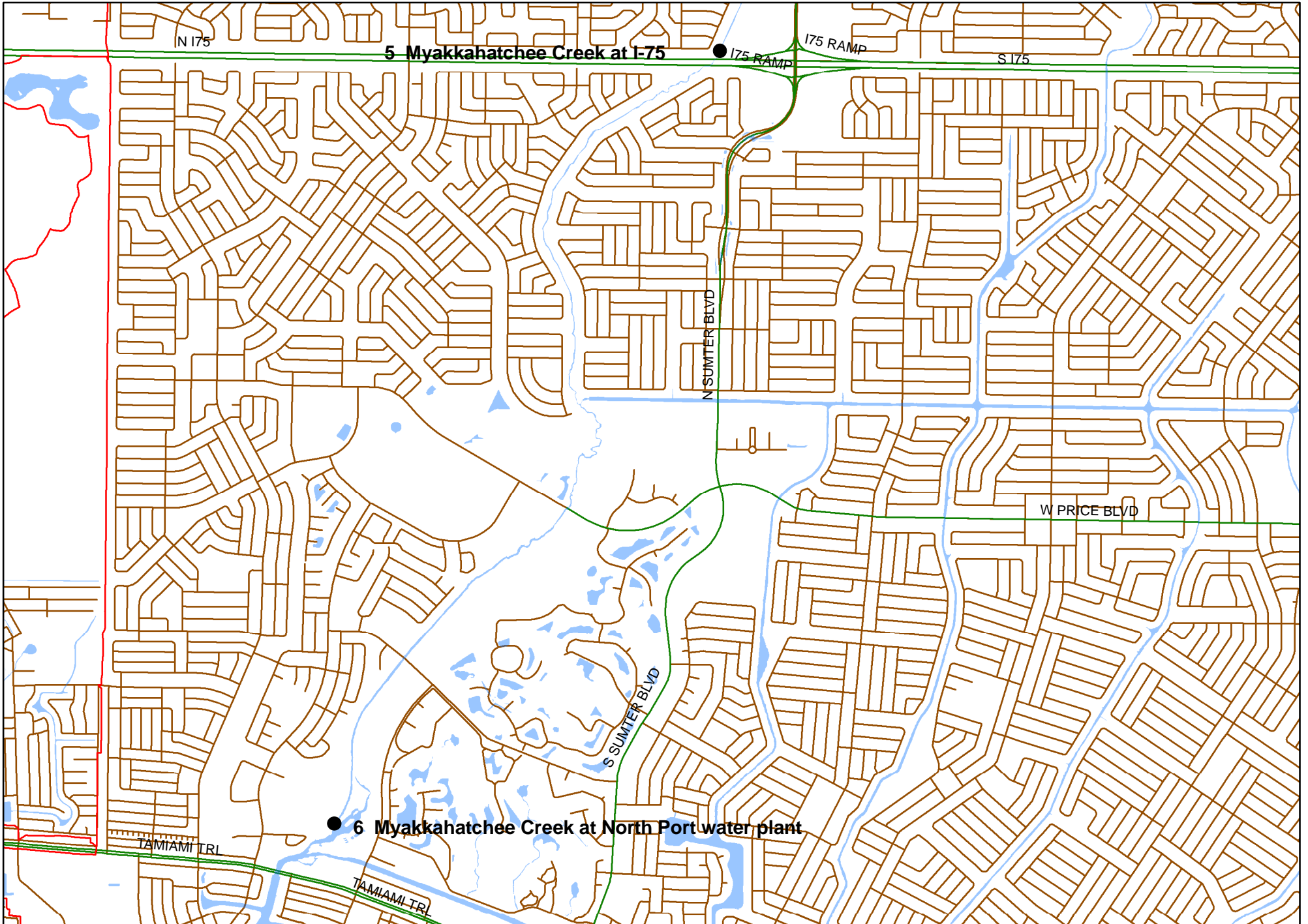
MS4 Monitoring Stations



MS4 Monitoring Stations



MS4 Monitoring Stations





MS4 Monitoring Station No. 1: Phillippi Creek at Coburn Road.

Looking north from the bridge 100 feet north of Fruitville Road.

June 4, 2002 at 3:00 p.m.



MS4 Monitoring Location No. 2: Phillippi Creek at Bahia Vista.

Looking south from the Bahia Vista Street bridge, just east of Lockwood Ridge Road.

June 4, 2002 at 3:00 p.m.



MS4 Monitoring Location No. 3: Hudson Bayou at Osprey Avenue.

Looking east from the Osprey Avenue bridge over Hudson Bayou.



MS4 Monitoring Location No. 4: Hudson Bayou at Orange Avenue.

Looking east from the Orange Avenue bridge over Hudson Bayou.



MS4 Monitoring Location No. 5: Myakkahatchee Creek at I-75.

Looking north from the east bank of the creek, about 400 feet north of Interstate 75.

June 5, 2002 at 10:30 a.m.



MS4 Monitoring Location No. 6: Myakkahatchee Creek at North Port water plant.

Looking north from the dam at the North Port water plant at 5755 North Port Boulevard.

June 5, 2002 at 10a.m.