COMPREHENSIVE PHYLOGENETIC SPECIES LIST
OF BENTHIC MACROINVERTEBRATES
COLLECTED BY CPE
NORTH CAROLINA
APRIL-JULY 2003

ANNELIDA
OLIGOCHAETA
TUBIFICDA
TUBIFICIDAE
TUBIFICIDAE W/OUT HAIRS
TUBIFICIDAE WITH HAIRS
POLYCHAETA
ORBINIIDA
ORBINIIDAE
LEITOSCOLOPOLS FRAGILIS
PARAONIDAE
PARAONIS FULGENS
SPIONIDA
SPIONIDAE
DISPIO UNCINATA
POLYDORA LIGNI
SCOLELEPIS SQUAMATA
STREBLOSPIO BENEDICTI
MAGELONIDAE
MAGELONA PAPILLICORNIS
CAPITELLIDA
CAPITELLIDAE
CAPITELLA CAPITATA
PHYLLODOCIDA
NEREIDAE
NEANTHES SUCCINEA
NEPHTYIDAE
NEPHTYS PICTA
SABELLIDA
SABELLIDAE
CHONE AMERICANA
FABRICIA SP.

MOLLUSCA
BIVALVIA
BIVALVIA SP.
MYTILOIDA
MYTILIDAE
AMYGDALUM PAPYRIUM
GEUKENSIA DEMISSA
OSTEROIDEA
OSTREIDAE
CRASSOSTREA VIRGINICA
TELLINOIDEA
TELLINIDAE
DONAX VARIABILIS
MACOMA BALTHICA

ARTHROPODA

CRUSTACEA
ISOPODA
SPHAEROMATIDAE
ANCINUS DEPRESSUS
SPHAEROMA QUADRIDENTATA
IDOTEIDAE
EDOTEA TRILOBA

TANAIDACEA
LEPTOCHELIIDAE
HARGERIA REPAX
AMPHIPODA
GAMMARIDAE
GAMMARUS PALUSTRIS
HAUSTORIIDAE
ACANTHOHAUSTORIUS MILLSI
BATHYPOREIA PARKERI
NEOHAUSTORIUS SCHMITZI
HAUSTORIUS CANADENSIS
ORCHESTIA GRILLUS
PARAHAUSTORIUS LONGIMERIS
PHOXOCEPHALIDAE
EOBROLGUS SPINOSUS
DECAPODA
XANTHIDAE
RHITHROPANOPEUS HARRISII
UCA SP.
EMERITA TALPOIDA
STOMATOPODA
SQUILLIDAE
SQUILLA EMPUSA

CIRRIPEDIA
CIRRIPEDIA SP.
BALANIDAE
BALANUS IMPROVISUS

CHAETOGNATHA
CHAETOGNATHA SP.

MEMORANDM

TO: Ms. Erin Haight, Coastal Planning & Engineering, Inc., 2481 Northwest Boca Raton Blvd., Boca Rotan, Fl 33431
CC: CP# 1937.03
FROM: Samuel Cooper, CZR Incorporated, 4709 College Acres Drive, Suite #2, Wilmington, NC 28403
DATE: 22 July 2003, via e-mail
RE: Summary of Benthic Collections Data

Sample site	Description	Target location[a]	April Sample location[b]	July Sample location[b]	Difference (ft) in target vs. April	Difference (ft) in target vs. July	Sample date[c]	Approximate sample time
1	Bogue NW	34 38' 57.29935" N 77 06' 24.03596" W	34 38' 59.59234" N 77 06' 21.11735" W	34 38' 59.52539" N 77 06' 21.09050" W	336[d]	336[d]	16 Jul 03	1404
2	Bogue central	34 38' 49.06195" N 77 06' 06.74718" W	34 38' 51.28322" N 77 06' 04.75231" W	34 38' 51.46874" N 77 06' 04.51806" W	280[d]	306[d]	16 Jul 03	1428
3	Bogue SE	34 38' 38.06959" N 77 05' 50.46901" W	34 38' 39.19653" N 77 05' 48.94764" W	34 38' 39.34271" N 77 05' 48.76947" W	171[d]	192[d]	16 Jul 03	1443
4	Inlet NE	34 38' 40.84870" N 77 06' 28.60567" W	34 38' 40.99322" N 77 06' 28.55452" W	34 38' 40.97148" N 77 06' 28.51345" W	15	15	16 Jul 03	1507
5	Inlet central W	34 38' 29.17621" N 77 06' 33.77104" W	34 38' 29.08165" N 77 06' 33.92654" W	34 38' 29.08082" N 77 06' 33.91443" W	16	15	16 Jul 03	1616
6	Inlet SW	34 38' 19.56555" N 77 06' 30.38936" W	34 38' 23.64065" N 77 06' 36.95745" W	34 38' 19.60817" N 77 06' 36.13767" W	686[e]	480[e]	16 Jul 03	1639
7	Island #2	34 38' 48.49" N 77 06' 55.92" W	34 38' 48.49961" N 77 06' 55.94210" W	34 38' 48.50140" N 77 06' 55.95255" W	2	2	16 Jul 03	1758
8	Marsh - Bogue	34 39' 14.61" N 77 05' 44.38" W	34 39' 17.98759" N 77 05' 43.26482" W	34 39' 17.93717" N 77 05' 43.24019" W	354[f]	350[f]	15 Jul 03	1301
9	Marsh - Dudley	34 39' 30.96" N 77 06' 20.32" W	34 39' 31.78914" N 77 06' 21.08452" W	34 39' 31.74253" N 77 06' 21.11095" W	105[f,g]	103[f,g]	15 Jul 03	1331
10	Marsh - Bear	34 38' 43.57" N 77 07' 46.43" W	34 38' 45.79215" N 77 07' 49.30678" W	34 38' 45.79726" N 77 07' 49.3357" W	329[f,h]	331[f,h]	15 Jul 03	1742

[a] Lat/Long coordinates, NAD 83. Sites 1 through 7 provided by CPE. Sites 8 through 10 estimated from USGS topographic map.
[b] Coordinates obtained with Trimble Pro XR GPS unit.
[c] Water quality data collected in the vicinity of Bogue Inlet on 16 July 2003 were: salinity 32.0 ppt, temperature 27.1 C, dissolved oxygen 6.90 mg/ , and conductivity 51.1 ms.
[d] The differences between target and actual sample sites is due to erosion of the west end of Bogue Banks. Target Sites 1-3 were located in the inlet water, approximately 171 to 336 feet from shore. The actual sample sites were moved to the closest intertidal shore.
[e] Target site was in subtidal swash zone, within breaking waves. The actual sample site was moved to the closest intertidal area 480 feet to the NW. The difference between sampling site 5 and 6 is 976 feet.
[f] Difference is due largely to estimated target location from an old topographic map.
[g] Shoreline is eroding and marsh edge is an abrupt exposed peat scarp. Sample site was on slightly elevated berm.
[h] Target site was less than 200 feet from upland ridge behind Bear Island. To establish a 300-foot long transect from the target site would have required an orientation parallel and within 75 feet of a shoreline (either the main inlet or the channel behind Bear Island). Potential alternative sites included 1) across the channel parallel with Bear Island or 2) moving approximately 600 feet SW down the channel parallel with Bear. A discussion with CPE resulted in selection of the first alternative.
[I] Low tide was 1530 on 15 Jul 03 and 1615 on 16 Jul 03.

NORTH CAROLINA
COLLECTED: OCTOBER 2003
SAMPLE TYPE: 10 cm CORE

		SITE#1				
		REPLICATE				
	TAXON	**A**	**B**	**C**	**TOTAL**	**%**
8 AMPHIPOD	HATRIS CANSIS	0	1	0	1	100
	TOTAL ORGANISMS				1	
	TOTAL TAX				1	

		SITE#2				
		REPLICATE				
	TAXON	**A**	**B**	**C**	**TOTAL**	**%**
9 DADA	MERITATRIDA	0	0	1	1	100
	TOTAL ORGANISMS	0	0	1	1	
	TOTAL TAX				1	

		SITE#3				
		REPLICATE				
	TAXON	**A**	**B**	**C**	**TOTAL**	**%**
5 BIA	ONARIAS	2	0	0	2	29
9 DADA	MERITATRIDA	2	0	0	2	29
2 OCHEA	SCOPE SMITA	0	0	1	1	14
8 AMPHIPOD	HATORIS SP	1	0	0	1	14
8 AMPHIPOD	HATRIS CANSIS	1	0	0	1	14
	TOTAL ORGANISMS	6	0	1	7	
	TOTAL TAX				5	

		SITE#4				
		REPLICATE				
	TAXON	A	B	C	TOTAL	%
2 PYCHEA	LEOSCODES SP	1	1	0	2	100
	TOTAL ORGANISMS				2	
	TOTAL TAX				1	

		SITE#5				
		REPLICATE				
	TAXON	A	B	C	TOTAL	%
2 PYCHEA	LEOSCODES SP	0	0	1	1	50
8 AMPIPOD	CANTHOHATORIUS SPC	0	0	1	1	50
	TOTAL ORGANISMS	0	0	2	2	
	TOTAL TAX				2	

		SITE#6				
		REPLICATE				
	TAXON	A	B	C	TOTAL	%
8 AMPIPOD	NEOHATORIUS SCHMITZ	2	0	0	2	50
2 PYCHEA	SCOLIS SMITA	0	0	2	2	50
	TOTAL ORGANISMS				4	
	TOTAL TAX				2	

		SITE#7			
		REPLICATE			
	TAXON	A	B	C	TOTAL
2	NOTHING				

		SITE#8				
		REPLICATE				
	TAXON	A	B	C	TOTAL	&
5 BIVA	GENSIAMISSA	1	3	0	4	57
9 DIPA	CASP	0	1	0	1	14
1 OLGOCHAEA	MONOMORUS RHONIUS	0	1	0	1	14
1 OLGOCHAEA	ELPRIUS SP	0	1	0	1	14
	TOTAL ORGANISMS	1	6	0	7	
	TOTAL TAX				4	

		SITE#9				
		REPLICATE				
	TAXON	A	B	C	TOTAL	&
7 ISOPA	SPHAEROMARINTA	0	2	0	2	100
	TOTAL ORGANISMS	0	2	0	2	
	TOTAL TAX				1	

		SITE#10				
		REPLICATE				
	TAXON	A	B	C	TOTAL	&
2 PYCHAEA	CATACATA	2	7	3	12	71
9 DIPA	CASP	2	2	0	4	24
5 BIVA	GENSIAMISSA	0	0	1	1	6
	TOTAL ORGANISMS	4	9	4	17	
	TOTAL TAX				3	

CPE
NORTH CAROLINA
COLLECTED: OCTOBER 2003
SAMPLE TYPE: 0.1m CORE

STATISTICS	STATION				
	1	2	3	4	5
Taxa	1	1	5	1	2
Individuals	1	1	7	2	2
ORGS/m2	42	42	297	85	85
H'ln	0.0000	0.0000	1.5498	0.0000	0.6931
H'log10	0.0000	0.0000	0.6731	0.0000	0.3010
H'log2	0.0000	0.0000	2.2359	0.0000	1.0000
J'(equitability)	*	*	0.9630	*	1.0000
Marg, (richness)	*	*	2.0556	0.0000	1.4427
Simpson	*	*	0.0952	1.0000	0.0000
Gini	*	*	0.9048	0.0000	1.0000

* = Single taxon cannot calculate

STATISTICS	STATION				
	6	7	8	9	10
Taxa	2	NOTHING	4	1	3
Individuals	4		7	2	17
ORGS/m2	170		297	85	722
H'ln	0.6931		1.1537	0.0000	0.7530
H'log10	0.3010		0.5011	0.0000	0.3270
H'log2	1.0000		1.6645	0.0000	1.0863
J'(equitability)	1.0000		0.8322	*	0.6854
Marg, (richness)	0.7213		1.5417	0.0000	0.7059
Simpson	0.3333		0.2857	1.0000	0.5294
Gini	0.6667		0.7143	0.0000	0.4706

* = Single taxon cannot calculate

COMPREHENSIVE SPECIES LIST: OCTOBER 2003

1 OLGOE ERIS SP
1 OLGOE MONOYORS RONIV

2 PY A ATA TA
2 PY A ETOSOLDS SP
2 PY A SOES SNTA

5 BA ONARIS

7 ISOPA SPROMANINTA

8 MPIP ATHOHATORIS SPC
8 MPIP HATRIS NASIS
8 MPIP HATORIS SPD
8 MPIP NEOHATORIS SEMITZ

9 A DERITATAIA
9 A DASP

MEMORANDUM

TO: Ms. Erin Haight, Coastal Planning & Engineering, Inc., 2481 Northwest Boca Raton Blvd., Boca Rotan, FL 33431
CC: CP# 1937.03
FROM: Samuel Cooper, CZR Incorporated, 4709 College Acres Drive, Suite #2, Wilmington, NC 28403
DATE: 30 October 2003, via e-mail
RE: Summary of October 2003 Benthic Collections Data

Sample site	Description	Target location[a]	October Sample location[b]	Difference (ft) in target vs actual sample location	Sample date	Approximate sample time[g]
1	Bogue NW	34E 38' 57.29935" N 77E 06' 24.03596" W	34E 38' 59.71474" N 77E 06' 21.06370" W	348[c]	22 Oct 03	0932
2	Bogue central	34E 38' 49.06195" N 77E 06' 06.74718" W	34E 38' 51.76001" N 77E 06' 04.47446" W	332[c]	22 Oct 03	1035
3	Bogue SE	34E 38' 38.06959" N 77E 05' 50.46901" W	34E 38' 39.15964" N 77E 05' 48.88320" W	172[c]	22 Oct 03	1042
4	Inlet NE	34E 38' 40.84870" N 77E 06' 28.60567" W	34E 38' 40.85331" N 77E 06' 28.60625" W	1	22 Oct 03	1158
5	Inlet central W	34E 38' 29.17621" N 77E 06' 33.77104" W	34E 38' 29.17629" N 77E 06' 33.77540" W	1	22 Oct 03	1136
6	Inlet SW	34E 38' 19.56555" N 77E 06' 30.38936" W	34E 38' 22.80071" N 77E 06' 31.40309" W	338[d]	22 Oct 03	1117
7	Island #2	34E 38' 48.49" N 77E 06' 55.92" W	34E 38' 48.49683" N 77E 06' 55.92005" W	1	22 Oct 03	1232
8	Marsh - Bogue	34E 39' 14.61" N 77E 05' 44.38" W	34E 39' 18.00888" N 77E 05' 43.24425" W	356[e]	22 Oct 03	1312
9	Marsh - Dudley	34E 39' 30.96" N 77E 06' 20.32" W	34E 39' 31.81491" N 77E 06' 21.06635" W	107[e,f]	22 Oct 03	1254
10	Marsh - Bear	34E 38' 43.57" N 77E 07' 46.43" W	34E 38' 45.77726" N 77E 07' 49.31825" W	329[e]	23 Oct 03	1528

[a] Lat/Long coordinates, NAD 83. Sites 1 through 7 provided by CPE. Sites 8 through 10 estimated from USGS topographic map.
[b] Coordinates obtained with Trimble Pro XR GPS unit.
[c] The differences between target and actual sample sites is due to erosion of the west end of Bogue Banks. Target Sites 1-3 were located in the inlet water, approximately 172 to 348 feet from shore. The actual sample sites were moved to the closest intertidal shore.
[d] Target site was in subtidal swash zone.
[e] Difference is due largely to estimated target locations from an old topographic map.
[f] Shoreline is eroding and marsh edge is an abrupt exposed peat scarp. Sample site was on slightly elevated berm.
[g] Low tide was 1129 on 22 Oct 03 and 1224 on 23 Oct 03.

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 1

CODE	TAXON	REPLICATE A	REPLICATE B	REPLICATE C	TOTAL	%
AMPHIPOD 8 HAUTORIUS SP		0	1	5	6	75
BIVALVIA 9 MERITATA		2	0	0	2	25
	TOTAL ORGANISMS	2	0	0	8	
	TOTAL TAXA				2	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 2

CODE	TAXON	REPLICATE A	REPLICATE B	REPLICATE C	TOTAL	%
BIVALVIA 9 MERITATA		6	1	4	11	61
AMPHIPOD 8 HAUTORIUS SP		2	3	2	7	39
	TOTAL ORGANISMS	8	4	6	18	
	TOTAL TAXA				2	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 3

CODE	TAXON	REPLICATE A	REPLICATE B	REPLICATE C	TOTAL	%
BIVALVIA 9 MERITATA		0	0	1	1	100
	TOTAL ORGANISMS	0	0	1	1	
	TOTAL TAXA				1	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 4

CODE	TAXON	REPLICATE A	REPLICATE B	REPLICATE C	TOTAL	%
ISOPA 7	MKN RAMGNIFG	4	1	6	11	69
OMEA 2	ETOSOLDS RGIL	0	0	2	2	13
AMPIPA 8	ATHOHA ATORIS SPC	2	0	0	2	13
AMPIPA 8	AHPREA ASIS	0	1	0	1	6
	TOTAL ORGANISMS	6	2	8	16	
	TOTAL TAXA				4	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 5

CODE	TAXON	REPLICATE A	REPLICATE B	REPLICATE C	TOTAL	%
OMEA 2	ETOSOLDS RGIL	2	0	0	2	40
OMEA 2	RONIS GNS	0	0	2	2	40
BA 5	DNARIAS	0	0	1	1	20
	TOTAL ORGANISMS	2	0	3	5	
	TOTAL TAXA				3	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 6

CODE	TAXON	REPLICATE A	B	C	TOTAL	%
	NOTHING					

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 7

CODE	TAXON	REPLICATE A	B	C	TOTAL	%
GASTROPODA 4 OLIGIA		0	3	7	10	33
PYRAMIDELLA 2 HETOSOLODS RAGILS		0	2	6	8	27
PYRAMIDELLA 2 HETOSOLODS SP		5	0	0	5	17
HINOBRMATA 11 METASOMETRA		0	2	0	2	7
PYRAMIDELLA 2 RAPONIS GENS		0	0	1	1	3
PYRAMIDELLA 2 SOLDIS SNATA		0	1	0	1	3
AMPHIPODA 8 ANTHOHATORIUS SPC		0	1	0	1	3
AMPHIPODA 8 ASHPREAN ASIS		0	0	1	1	3
AMPHIPODA 8 BEDHATORIUS SP		1	0	0	1	3
	TOTAL ORGANISMS	6	9	15	30	
	TOTAL TAXA				9	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 8

		REPLICATE				
CODE	**TAXON**	**A**	**B**	**C**	**TOTAL**	**%**
9 ABNX		0	2	1	3	75
9 NOHERBTI		0	1	0	1	25
	TOTAL ORGANISMS	0	2	1	4	
	TOTAL TAXA				2	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 9

		REPLICATE				
CODE	**TAXON**	**A**	**B**	**C**	**TOTAL**	**%**
	NOTHING					

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

STA: 10

		REPLICATE				
CODE	**TAXON**	**A**	**B**	**C**	**TOTAL**	**%**
9 ABNX		3	1	2	6	100
	TOTAL ORGANISMS				6	
	TOTAL TAXA				1	

NORTH CAROLINA
COLLECTED: JAN. 2004
SAMPLE TYPE: 10 cm CORE

COMPREHENSIVE

CODE	TAXON
OLIGOCHAETA 1	ENCHYTRAEIDAE SP
OLIGOCHAETA 1	MONONAIDORUS REGIONIS
OLIGOCHAETA 1	TUBIFICIDAE WITH HAIRS
OLIGOCHAETA 1	TUBIFICIDAE WITH HAIRS
DIPTERA 2	ATHERIXIS
DIPTERA 2	CHIRONOMUS RIPARIUS
DIPTERA 2	CRICOTOPUS VIRIPES
DIPTERA 2	DICROTOMA SP
DIPTERA 2	ETESOCOLOPES REGILIS
DIPTERA 2	ETESOCOLOPES SP
DIPTERA 2	MACROPELOPIA NOTOPHILA
DIPTERA 2	NATARSIA SP
DIPTERA 2	NEOTAMYIA PICTA
DIPTERA 2	PARAMERINA FENESTRA
DIPTERA 2	PARAMETRIOCNEMUS
DIPTERA 2	SODIUS SPINATA
DIPTERA 2	STREBLOCERPA PECTINICORNIS
GASTROPODA 4	OLIGOSITA
BIVALVIA 5	ANODONTA IMBECILIS
BIVALVIA 5	BIVALVIA SP
BIVALVIA 5	CORBICULA FLUMINEA
BIVALVIA 5	DONACIDAE
BIVALVIA 5	GESIA FRAGILIS
BIVALVIA 5	MOMAEBIA
ISOPODA 7	ASELLUS MACRUS
ISOPODA 7	ASELLUS BRASILIENSIS
ISOPODA 7	CYATHURIDAE
ISOPODA 7	SPHAEROMA RUGICAUDA
AMPHIPODA 8	ANCHOHELOTORIUS MISI
AMPHIPODA 8	ANCHOHELOTORIUS SPC
AMPHIPODA 8	BHOREOGAMARUS
AMPHIPODA 8	CROCOTOPUS SPINOSUS
AMPHIPODA 8	GAMMARUS PATRIS
AMPHIPODA 8	HELOTRIUS ALABAMENSIS
AMPHIPODA 8	HELOTORIUS SPD
AMPHIPODA 8	NEOHELOTORIUS SCHMITZI
AMPHIPODA 8	ORCHESTIA GRILLUS

CODE	TAXON
AMPIDA 8 RHA	RHATORIS LONGIMERIS
AMPIDA 8 SOHA	SOHATORIS SP
DA 9 MERITA	MERITA DIA
DA 9 NOSHERBTI	NOSHERBTI
DA 9 SOMBA	SOMBA
DA 9 ABNA	ABNA
CRRIDA 10 AS	AS IMPROVISUS
CINOSMATA 11 METASOMERA	METASOMERA
CEOGNATHA 12 CEOGNATHA	CEOGNATHA SP

CPE
NORTH CAROLINA
COLLECTED: JANUARY 2004
SAMPLE TYPE: 0.1m CORE

STATISTICS	STATION				
	1	2	3	4	5
Taxa	2	2	1	4	3
Individuals	8	18	1	16	5
ORGS/m2	27	60	3	53	17
H'ln	0.5623	0.6682	0.0000	0.9507	1.0549
H'log10	0.2442	0.2902	0.0000	0.4129	0.4581
H'log2	0.8113	0.9641	0.0000	1.3716	1.5219
J'(equitability)	0.8113	0.9641	*	0.6858	0.9602
Marg, (richness)	0.4809	0.3460	*	1.0820	1.2427
Simpson	0.5714	0.4967	*	0.4750	0.2000
Gini	0.4286	0.5033	*	0.5250	0.8000

* = Single taxon cannot calculate

STATISTICS	STATION				
	6	7	8	9	10
Taxa	NOTHING	9	2	NOTHING	1
Individuals		30	4		6
ORGS/m2		100	13		20
H'ln		1.7647	0.5623		-0
H'log10		0.7664	0.2442		-0
H'log2		2.5459	0.8113		-0
J'(equitability)		0.8032	0.8113		*
Marg, (richness)		2.3521	0.7213		0
Simpson		0.1931	0.5000		1
Gini		0.8069	0.5000		0

* = Single taxon cannot calculate

MEMORANDUM

TO: Ms. Erin Haight, Coastal Planning & Engineering, Inc., 2481 Northwest Boca Raton Blvd., Boca Rotan, FL 33431
CC: CP# 1937.03
FROM: Samuel Cooper, CZR Incorporated, 4709 College Acres Drive, Suite #2, Wilmington, NC 28403
DATE: 21 January 2004, via e-mail
RE: Summary of January 2004 Benthic Collections Data

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2	Bogue central	34E 38' 49.06195" N 77E 06' 06.74718" W	34E 38' 51.91049" N 77E 06' 04.26422" W	355[d]	20 Jan 04	1105
3	Bogue SE	34E 38' 38.06959" N 77E 05' 50.46901" W	34E 38' 39.33692″ N 77E 05' 48.75072" W	192[d]	20 Jan 04	1115
4	Inlet NE	34E 38' 40.84870" N 77E 06' 28.60567" W	34E 38' 40.86255" N 77E 06' 28.63501" W	3	20 Jan 04	1153
5	Inlet central W	34E 38' 29.17621" N 77E 06' 33.77104" W	34E 38' 29.19299" N 77E 06' 33.77688" W	2	20 Jan 04	1236
6	Inlet SW	34E 38' 19.56555" N 77E 06' 30.38936" W	34E 38' 23.59420" N 77E 06' 36.92606" W	681[e]	20 Jan 04	1217
7	Island #2	34E 38' 48.49" N 77E 06' 55.92" W	34E 38' 48.55339" N 77E 06' 55.95331" W	7	20 Jan 04	1308
8	Marsh - Bogue	34E 39' 14.61" N 77E 05' 44.38" W	34E 39' 17.98524" N 77E 05' 43.25985" W	354[f]	20 Jan 04	1035
9	Marsh - Dudley	34E 39' 30.96" N 77E 06' 20.32" W	34E 39' 31.78953" N 77E 06' 21.10046" W	106[f,g]	20 Jan 04	1020
10	Marsh - Bear	34E 38' 43.57" N 77E 07' 46.43" W	34E 38' 45.78516" N 77E 07' 49.31327" W	329[f]	20 Jan 04	0940

[a] Lat/Long coordinates, NAD 83. Sites 1 through 7 provided by CPE. Sites 8 through 10 estimated from USGS topographic map.
[b] Coordinates obtained with Trimble Pro XR GPS unit.
[c] Water quality data collected in the vicinity of Bogue Inlet on 20 January 2004 were: salinity 34.9 ppt., temperature 7.4°C, dissolved oxygen 8.15 mg/, and conductivity 35.18 ms.
[d] The differences between target and actual sample sites is due to erosion of the west end of Bogue Banks. Target Sites 1-3 were located in the inlet water, approximately 192 to 370 feet from shore. The actual sample sites were moved to the closest intertidal shore.
[e] Target site was in subtidal swash zone.
[f] Difference is due largely to estimated target locations from an old topographic map.
[g] Shoreline is eroding and marsh edge is an abrupt exposed peat scarp. Sample site was on slightly elevated berm.
[h] Low tide was 1232 on 20 January 2004.