

North Carolina Estuarine Shoreline Mapping Project 2012 Statistical Reports

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North Carolina Division of Coastal Management
Department of Environment and Natural Resources

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Introduction

The North Carolina Department of the Environment and Natural Resources (DENR) Division of Coastal Management (DCM) is charged with the management and conservation of the State's coastal resources. In June of 2011 DCM completed the first detailed digital estuarine shoreline to aid with examining DCM's existing policy language within its estuarine and ocean system areas of environmental concern (AEC). The purpose of the project is to support numerous research ventures, creating inventories of shoreline and structure type, and quantifying shoreline mileage. The digital shoreline will support DCM as well as other agencies involved in the management of estuarine environments. As new imagery becomes available DCM will continue to update the digital estuarine shoreline to keep a current inventory of shorelines and structures.

The primary component of the ESMP involves deciphering digital imagery for shoreline type and shoreline structures. During the first mapping effort DCM considered available imagery for heads-up digitizing to ascertain the best potential dataset. At that time, imagery for the entire coast did not exist so each county was digitized using the most recent and highest resolution photography available. Imagery was used from years varying from 2006 to 2010 and pixel widths resolutions from 2-foot to 6-inch. The new mapping effort will utilize imagery from the Coastal Imagery 2012 Project¹ to delineation the shoreline and structures. The imagery is high resolution 6-inch pixel width, true color orthophotographs. Using this imagery will allow for a snapshot of the coastal within the same year and provide the most accurate inventory of shoreline and structures.

Heads-up digitizing will be conducted by DCM staff and will follow the same methodology set forth in "Charting the Estuarine Environment: A methodology spatially delineation a contiguous, estuarine shoreline of North Carolina"². After receiving feedback from users of the Estuarine Shoreline Mapping Project (ESMP) changes were identified to create a more complete and accurate digital shoreline. These alterations are outlined below.

¹ The Coastal Othroimagery 2012 Project was funded by the NC 911 Board and managed by the NC Center for Geographic Information and Analysis. The project team includes the NC Department of Transportation Photogrammetry Unit, the Land Records Management Program in the Secretary of State and the NC Geodetic Survey. Imagery is available through the NC OneMap Geospatial portal <http://data.nconemap.com/geoportal/catalog/main/home.page>

²Charting the Estuarine Environment: A methodology spatially delineation a contiguous, estuarine shoreline for North Carolina. Bendell and Geis 2010. <http://dcm2.enr.state.nc.us/estuarineshoreline/Complete%20Methodology%20Report.pdf>

Amendments to Shoreline Delineation Methodology

a. Digitizing an area where the tree canopy obscures the shoreline

The original methodology states, “[In] areas where tree canopies are the only visible elements along the shoreline, technicians are instructed to approximate the waterward edge of the tree canopy for the shoreline,” digitizing in this manner misrepresents the actual shape of the shoreline and may add significant mileage to total shoreline length. Some or most of the land/water interface is visible through the tree canopy. Digitizers are now instructed to digitize the shoreline visible through the tree canopy if it can be seen.



*Original method to digitize tree canopy



*New method to digitize land/water interface visible through tree canopy

b. Changes to attributes

After receiving input from stakeholders and users of the ESMP it was determined that additional attribution of natural shoreline in front of modified structure would make the project data more accurate and functional. See attribution table below.

Attribution of the shoreline segments will be as followed:

Attribute	Shoreline Type
10	Swamp Forest
20	Marsh
20.71	Marsh shoreline waterward of a sloped structure
20.91	Marsh shoreline waterward of a vertical structure
30	Sediment Bank
30.71	Sediment Bank shoreline waterward of a sloped structure
30.91	Sediment Bank shoreline waterward of a vertical structure
40	Modified
99	Miscellaneous

*There are no instances where swamp forest shoreline is located waterward of rip-rap revetments or bulkhead structures

Amendments to Polyline Structure Delineation

a. Types of structures

For the purpose of creating a more detailed inventory of shoreline structures the Groin/Jetty (41) category will be broken down to identify each structure separately. Groins will be labeled 41.1 and jetties 41.2

As alternatives for protecting a shoreline (bulkheads and rip-rap revetments) become more widely used throughout the state. A more accurate inventory of these structures needs to be created. These alternatives to hardening a shoreline, sills and living shorelines, are constructed from a variety of construction materials. For the purpose of inventorying the range of construction materials; sills constructed from oyster shell (loose or bagged) will be labeled 61.2, for sills constructed for rock will be labeled 61.3 and for sill constructed from sheet pile, timber or other materials will be labeled 61.4.

b. Changes to attributes

After receiving input from stakeholders and users of the ESMP it was determined that additional attribution of natural shoreline in front of modified structure would make the project data more accurate and functional. See attribution table below.

Attribution of shoreline structures will be as followed:

Attribute	Shoreline Structure Type
11	Boat Ramp
21	Breakwater
41.1	Groin
41.2	Jetty
61.2	Sill- Oyster Shell
61.3	Sill- Rock
61.4	Sill- Sheet Pile, Timber or Other
71	Sloped Structure
71.20	Sloped Structure landward of marsh shoreline
71.30	Sloped Structure landward of sediment bank shoreline
91	Vertical Structure
91.20	Vertical Structure landward of marsh shoreline
91.30	Vertical Structure landward of sediment bank shoreline

Amendments to Polygon Structure Delineation

a. Types of Structures

For the purpose of creating a more detailed inventory of shoreline access structures a category for culverts (31.3) will be added to record these structures. During the initial mapping effort culverts were not delineated because culverts represented where a waterbody narrows to 20ft even if the waterbody was wider than 20ft upstream of the culvert. The shoreline will be digitized upstream of culverts to the point where the waterbody narrows to 20ft.

b. Abandoned/Historic shoreline access structures

After receiving input from stakeholders and users of the ESMP a goal was identified to record shoreline access structures that are dilapidated in 2012 imagery. These abandoned/historic structures were not delineated during the initial mapping effort. Structures in this category could be in the process of being build or damaged by storm events. The entirety of the structure will be digitized as one single polygon even if the structure has broken into multiple pieces.



*examples of abandoned/historic structures

c. Changes to attributes

To record the presence of culvert and abandoned/historic structures additional attributes will be used. These alternations to the attribute table will created a more complete inventory of structures. See attribute table below.

Attribution of shoreline structures will be as followed:

Attribute	Shoreline Structure Type
31	Bridge
31.1	Culvert
51	Pier/Float Dock/Wharf
111.31	Abandoned/Historic Bridge
111.51	Abandoned/Historic Pier/Float Dock/Wharf

North Carolina



Legend

- CAMA County Boundaries
- ESMP Shoreline



Estuarine Shoreline

Total Mileage: 10,657.9

<u>Shoreline Type</u>	<u>Miles</u>
Swamp Forest	1,579.8
Marsh	7,487.1
Marsh with Rip-rap landward	13.2
Marsh with Bulkhead landward	80.5
Sediment Bank	785.2
Sediment Bank with Rip-rap landward	5.9
Sediment Bank with Bulkhead landward	18.3
Modified	805.7

Shoreline Access Structures

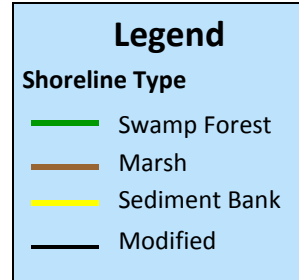
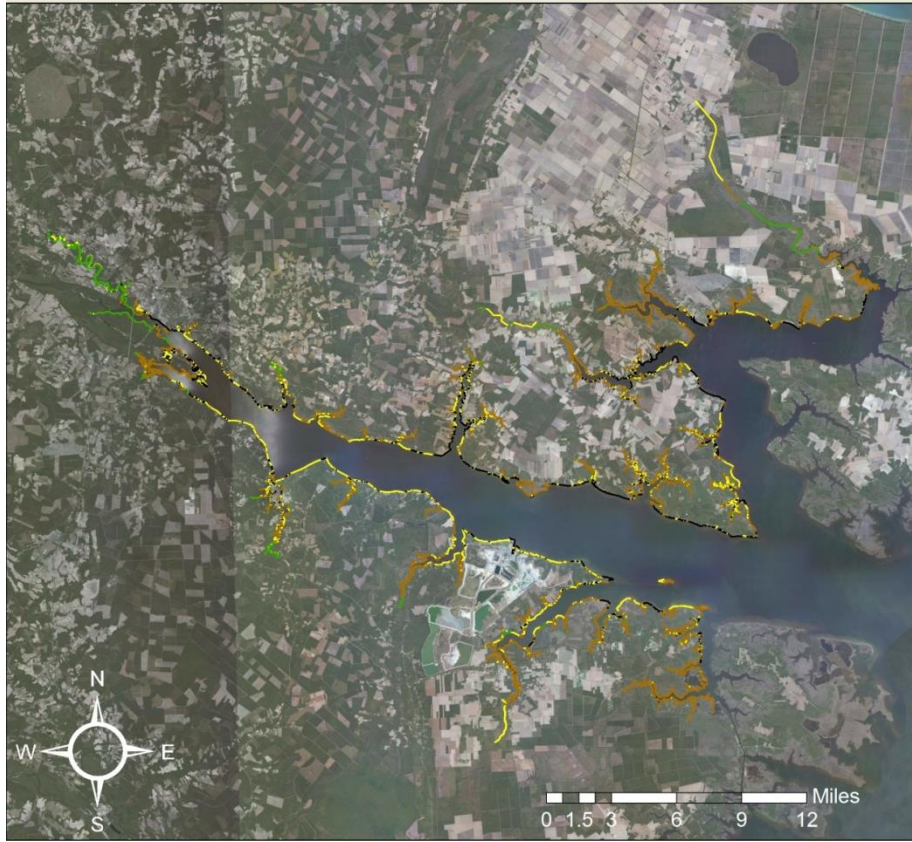
Total Acreage: 954.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	354.0	561
Pier/Float Dock/Wharf	597.3	29,583
Culvert	3.0	88

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	38,678	7.3	2,499
Breakwater	40,929	7.7	206
Groin	77,010	14.5	2,064
Jetty	24,999	4.7	166
Sill	26,832	5.0	97
Rip-rap	928,327	175.8	2,679
Rip-rap with Marsh waterward	149,740	28.3	363
Rip-rap with Sediment Bank waterward	30,983	5.8	153
Bulkhead	2,624,213	497.0	6,391
Bulkhead with Marsh waterward	400,820	75.9	1,694
Bulkhead with Sediment Bank waterward	92,041	17.4	471

Beaufort County



Estuarine Shoreline

Total Mileage: 693.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	167,903	31.8
Marsh	2,563,628	485.5
Marsh with Rip-rap landward	4,551	.8
Marsh with Bulkhead landward	8,517	1.6
Sediment Bank	380,889	72.1
Sediment Bank with Rip-rap landward	4,490	.8
Sediment Bank with Bulkhead landward	13,710	2.5
Modified	516,895	97.8

Shoreline Access Structures

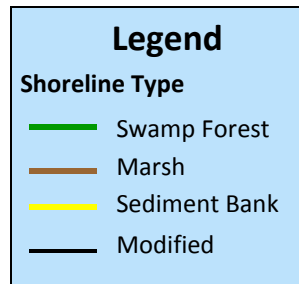
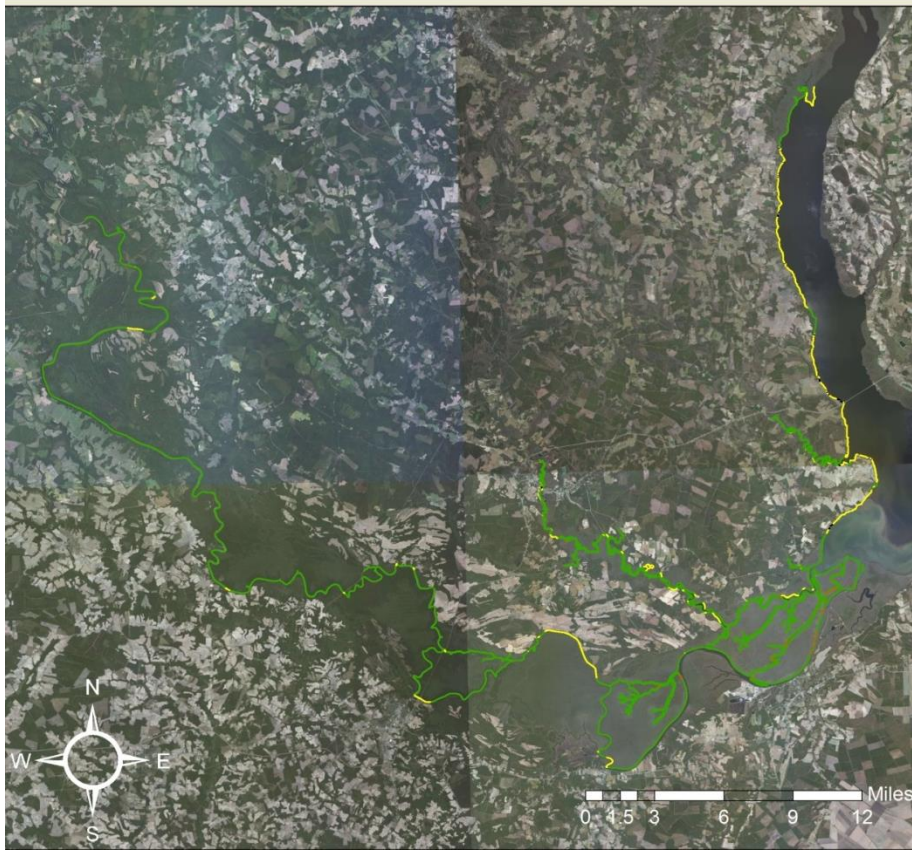
Total Acreage: 68.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	12.7	77
Pier/Float Dock/Wharf	55.5	2,400
Culvert	.4	7

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	4,241	.8	297
Breakwater	5,123	.9	12
Groin	16,952	3.2	605
Jetty	3,155	.5	35
Sill	194	<.1	1
Rip-rap	165,405	31.3	445
Rip-rap with Marsh waterward	4,312	.8	20
Rip-rap with Sediment Bank waterward	4,548	.8	17
Bulkhead	346,472	65.6	859
Bulkhead with Marsh waterward	6,156	1.1	50
Bulkhead with Sediment Bank waterward	12,968	2.4	74

Bertie County



Estuarine Shoreline

Total Mileage: 296.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	985,990	186.7
Marsh	468,708	88.8
Marsh with Rip-rap landward	263	.1
Marsh with Bulkhead landward	548	.1
Sediment Bank	81,694	15.5
Sediment Bank with Rip-rap landward	808	.1
Sediment Bank with Bulkhead landward	11,001	2.0
Modified	16,514	3.1

Shoreline Access Structures

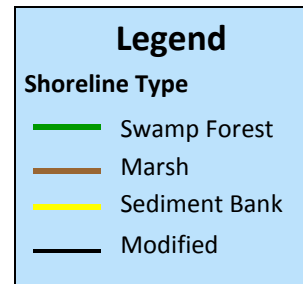
Total Acreage: 19.8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	16.8	13
Pier/Float Dock/Wharf	3.0	140
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	310	.1	21
Breakwater	0	0	0
Groin	2,084	.4	80
Jetty	0	0	0
Sill	0	0	0
Rip-rap	2,392	.4	16
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	781	.1	5
Bulkhead	14,630	2.7	44
Bulkhead with Marsh waterward	319	.1	2
Bulkhead with Sediment Bank waterward	10,976	2.0	21

Brunswick County



Estuarine Shoreline

Total Mileage: 825.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	202,232	38.3
Marsh	3,639,370	689.3
Marsh with Rip-rap landward	11,949	2.2
Marsh with Bulkhead landward	120,305	22.7
Sediment Bank	196,471	37.2
Sediment Bank with Rip-rap landward	1,360	.2
Sediment Bank with Bulkhead landward	3,363	.6
Modified	183,623	34.7

Shoreline Access Structures

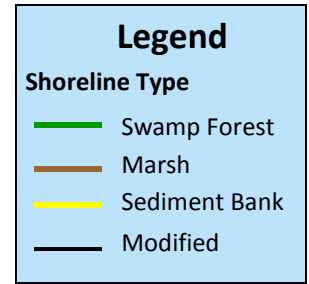
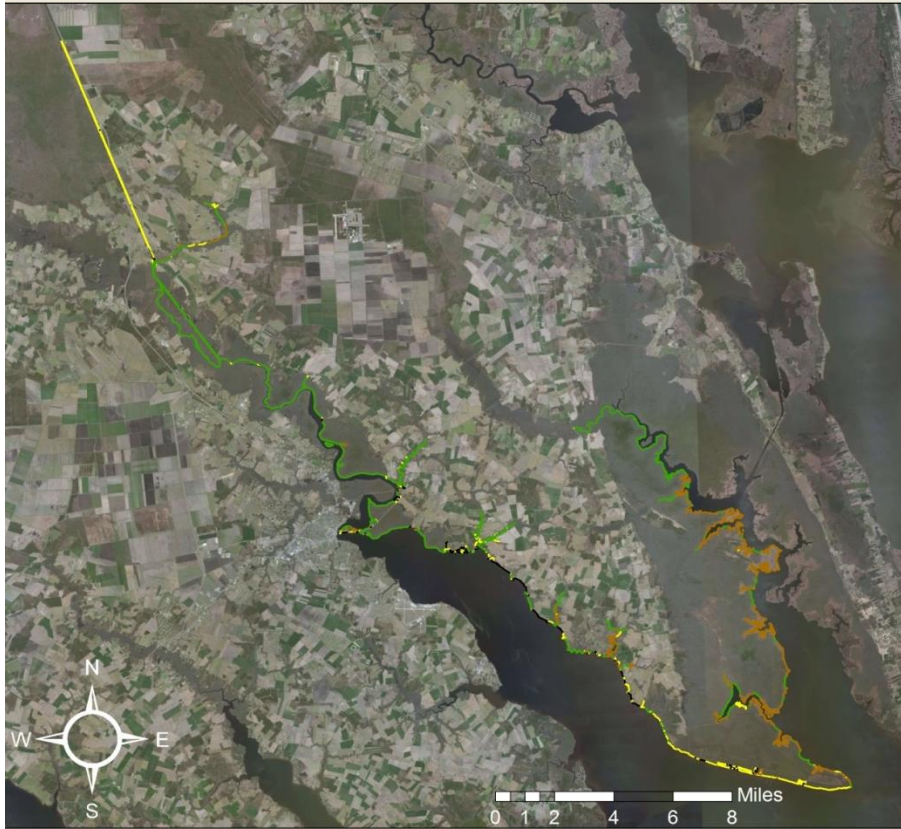
Total Acreage: 116.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	18.5	36
Pier/Float Dock/Wharf	97.8	4,392
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	2,262	.4	124
Breakwater	16,154	3.0	26
Groin	2,327	.4	45
Jetty	0	0	0
Sill	76	<.1	1
Rip-rap	28,563	5.4	89
Rip-rap with Marsh waterward	11,511	2.1	58
Rip-rap with Sediment Bank waterward	1,540	.2	13
Bulkhead	161,719	30.6	372
Bulkhead with Marsh waterward	119,347	22.6	405
Bulkhead with Sediment Bank waterward	2,851	.5	20

Camden County



Estuarine Shoreline

Total Mileage: 210.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	340,740	64.5
Marsh	650,846	123.3
Marsh with Rip-rap landward	161	<.1
Marsh with Bulkhead landward	740	.1
Sediment Bank	42,957	8.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	75,876	14.3

Shoreline Access Structures

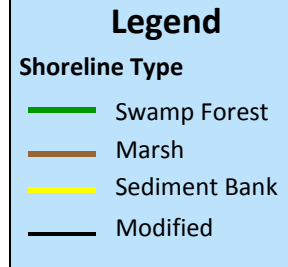
Total Acreage: 11.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	6.0	14
Pier/Float Dock/Wharf	5.6	252
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	619	.1	43
Breakwater	0	0	0
Groin	200	.1	20
Jetty	51	<.1	3
Sill	0	0	0
Rip-rap	19,039	3.6	64
Rip-rap with Marsh waterward	163	<.1	3
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	56,217	10.6	121
Bulkhead with Marsh waterward	659	.1	6
Bulkhead with Sediment Bank waterward	0	0	0

Carteret County



Estuarine Shoreline

Total Mileage: 1,530.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	19,593	3.7
Marsh	6,376,241	1,268.0
Marsh with Rip-rap landward	32,548	6.1
Marsh with Bulkhead landward	118,056	22.3
Sediment Bank	993,107	188.6
Sediment Bank with Rip-rap landward	8,205	1.5
Sediment Bank with Bulkhead landward	17,382	3.2
Modified	514,966	97.5

Shoreline Access Structures

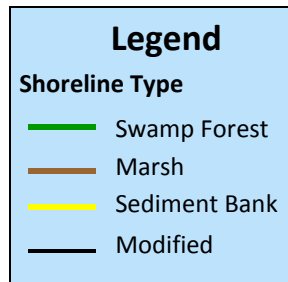
Total Acreage: 130.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	26.9	73
Pier/Float Dock/Wharf	102.7	5,770
Culvert	.5	13

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	7,630	1.4	458
Breakwater	2,620	.5	17
Groin	12,627	2.3	215
Jetty	9,113	1.7	43
Sill	9,127	1.7	26
Rip-rap	170,957	32.3	548
Rip-rap with Marsh waterward	28,888	5.4	159
Rip-rap with Sediment Bank waterward	8,156	1.5	54
Bulkhead	335,393	63.5	959
Bulkhead with Marsh waterward	107,954	20.4	488
Bulkhead with Sediment Bank waterward	16,138	3.0	101

Chowan County



Estuarine Shoreline

Total Mileage: 116.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	320,393	60.7
Marsh	130,145	24.6
Marsh with Rip-rap landward	980	.1
Marsh with Bulkhead landward	2,624	.5
Sediment Bank	59,851	11.3
Sediment Bank with Rip-rap landward	150	<.1
Sediment Bank with Bulkhead landward	2,955	.5
Modified	95,224	18.0

Shoreline Access Structures

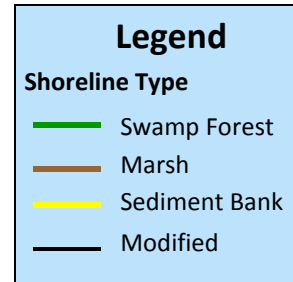
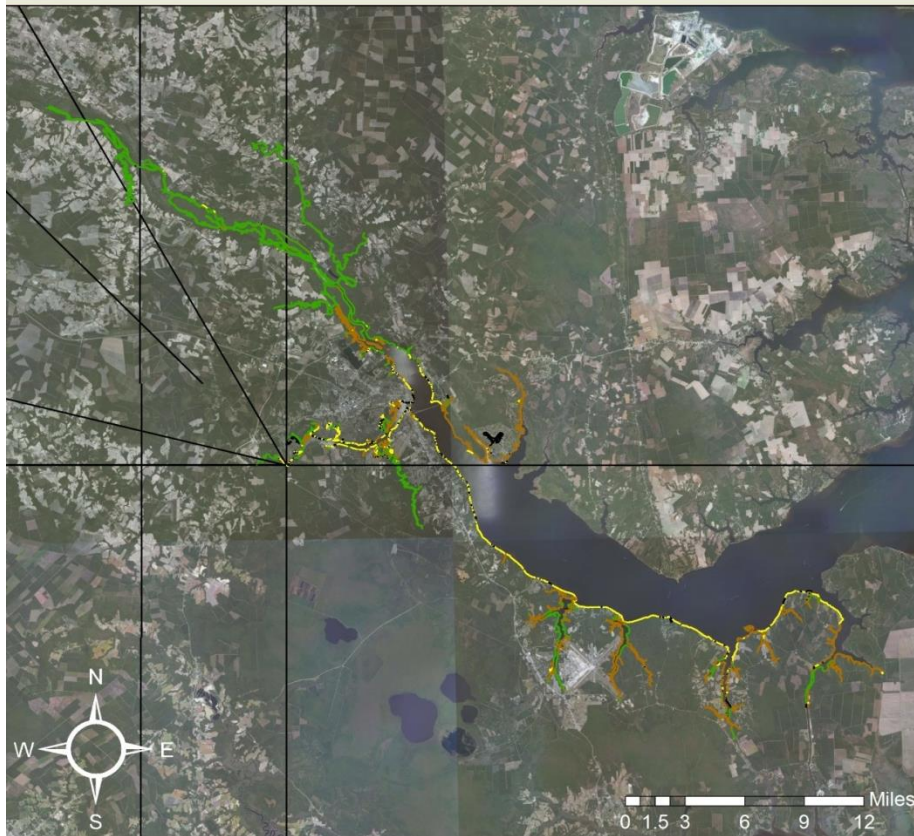
Total Acreage: 30.9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	19.2	19
Pier/Float Dock/Wharf	11.6	543
Culvert	<.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	555	.1	31
Breakwater	1,323	.2	14
Groin	5,157	.9	111
Jetty	1,067	.2	10
Sill	331	.1	1
Rip-rap	10,128	1.9	35
Rip-rap with Marsh waterward	956	.1	6
Rip-rap with Sediment Bank waterward	155	<.1	1
Bulkhead	84,509	16.0	140
Bulkhead with Marsh waterward	2,905	.5	10
Bulkhead with Sediment Bank waterward	3,079	.5	15

Craven County



Estuarine Shoreline

Total Mileage: 495.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	877,071	168.0
Marsh	1,199,404	227.2
Marsh with Rip-rap landward	1,213	.2
Marsh with Bulkhead landward	5,197	1.0
Sediment Bank	280,427	53.1
Sediment Bank with Rip-rap landward	9,349	1.7
Sediment Bank with Bulkhead landward	7,846	1.4
Modified	220,932	41.8

Shoreline Access Structures

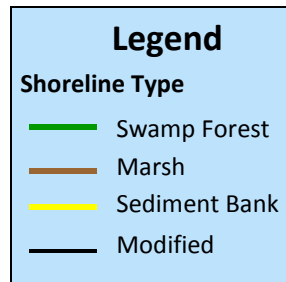
Total Acreage: 71.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	41.1	31
Pier/Float Dock/Wharf	29.5	1,616
Culvert	.4	3

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,832	.3	106
Breakwater	71	<.1	1
Groin	3,916	.7	115
Jetty	241	.1	2
Sill	626	.1	2
Rip-rap	59,321	11.2	205
Rip-rap with Marsh waterward	1,112	.2	5
Rip-rap with Sediment Bank waterward	9,674	1.8	30
Bulkhead	158,587	30.0	304
Bulkhead with Marsh waterward	5,221	1.0	34
Bulkhead with Sediment Bank waterward	7,666	1.4	47

Currituck County



Estuarine Shoreline

Total Mileage: 813.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	204,635	38.8
Marsh	3,574,084	676.9
Marsh with Rip-rap landward	158	<.1
Marsh with Bulkhead landward	3,581	.6
Sediment Bank	164,530	31.2
Sediment Bank with Rip-rap landward	149	<.1
Sediment Bank with Bulkhead landward	459	.1
Modified	347,138	65.7

Shoreline Access Structures

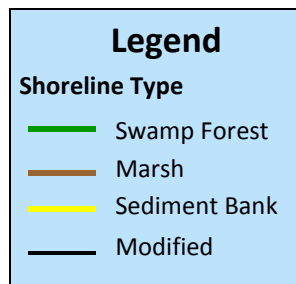
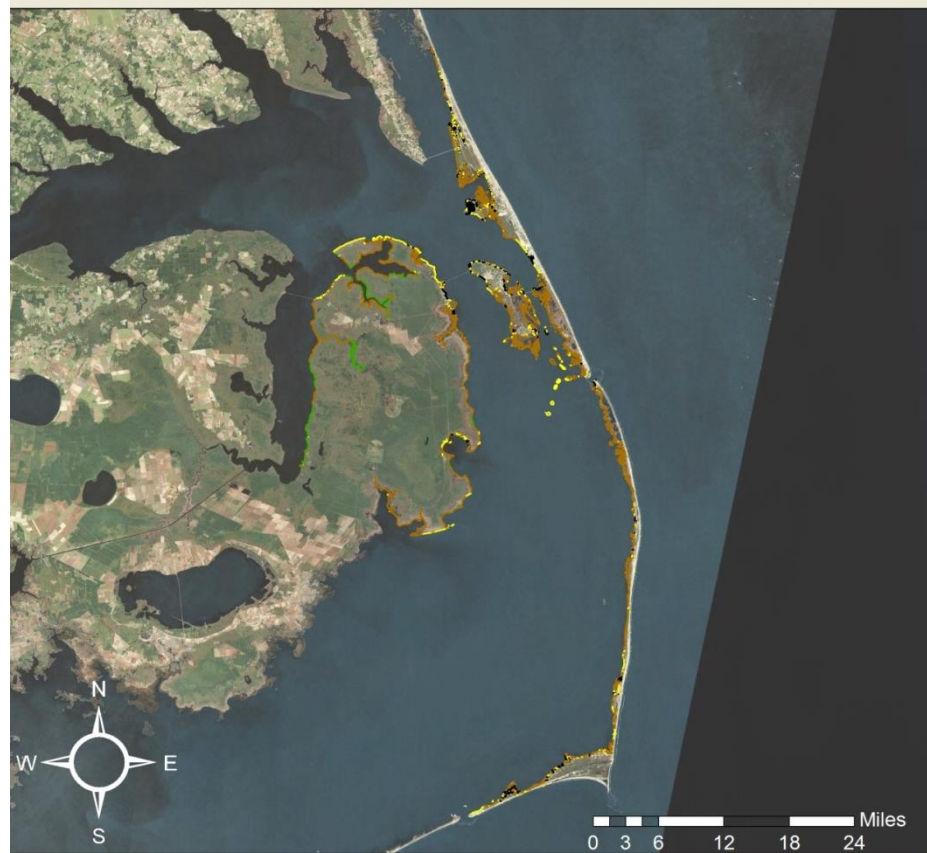
Total Acreage: 24.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	7.2	20
Pier/Float Dock/Wharf	16.8	1,270
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	3,589	.6	267
Breakwater	44	<.1	1
Groin	5,346	1.0	135
Jetty	103	<.1	1
Sill	873	.1	5
Rip-rap	51,684	9.7	145
Rip-rap with Marsh waterward	121	<.1	2
Rip-rap with Sediment Bank waterward	144	<.1	2
Bulkhead	292,592	55.4	606
Bulkhead with Marsh waterward	3,362	.6	15
Bulkhead with Sediment Bank waterward	358	.1	4

Dare County



Estuarine Shoreline

Total Mileage: 860.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	226,111	42.8
Marsh	3,381,350	640.4
Marsh with Rip-rap landward	1,665	.3
Marsh with Bulkhead landward	31,839	6.0
Sediment Bank	367,453	69.6
Sediment Bank with Rip-rap landward	604	.1
Sediment Bank with Bulkhead landward	8,438	1.5
Modified	527,649	99.9

Shoreline Access Structures

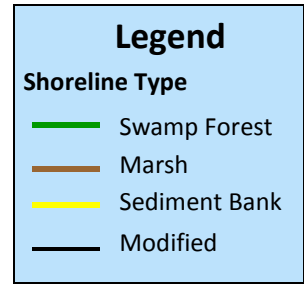
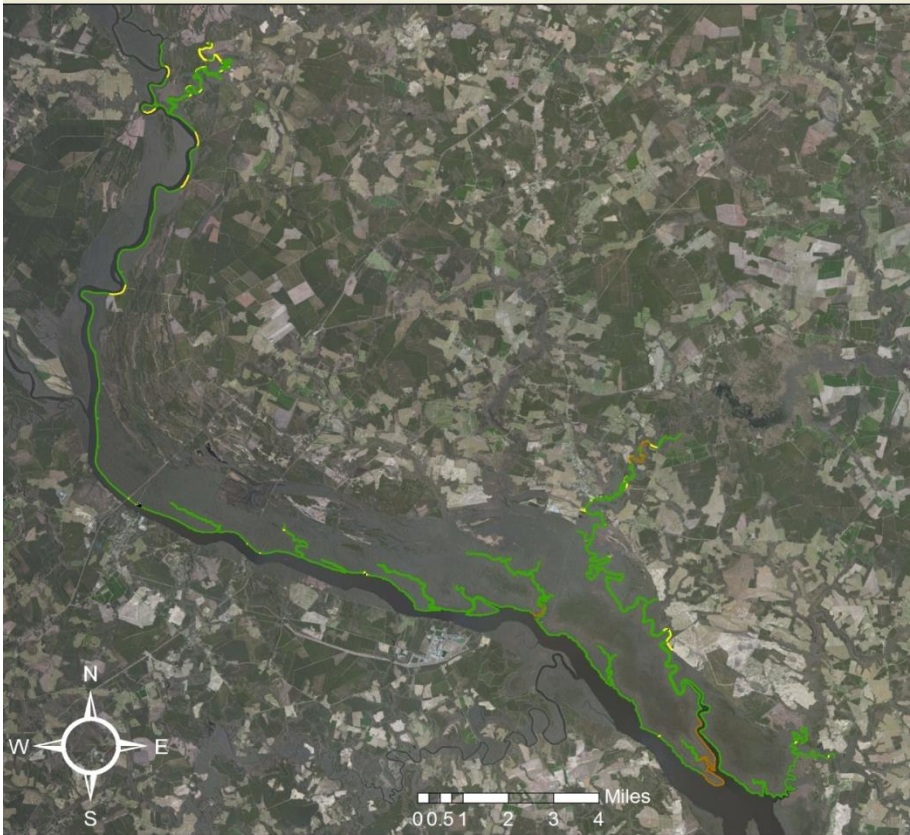
Total Acreage: 140.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	94.5	48
Pier/Float Dock/Wharf	45.5	3,010
Culvert	.3	19

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	2,221	.4	141
Breakwater	8,427	1.5	93
Groin	16,055	3.0	451
Jetty	4,359	.8	25
Sill	8,036	1.5	21
Rip-rap	118,792	22.4	241
Rip-rap with Marsh waterward	1,416	.2	10
Rip-rap with Sediment Bank waterward	592	.1	5
Bulkhead	406,525	76.9	652
Bulkhead with Marsh waterward	26,811	5.0	126
Bulkhead with Sediment Bank waterward	8,764	1.6	43

Gates County



Estuarine Shoreline

Total Mileage: 121.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	585,083	110.8
Marsh	51,799	9.8
Marsh with Rip-rap landward	51	<.1
Marsh with Bulkhead landward	0	0
Sediment Bank	2,515	.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	791	.1

Shoreline Access Structures

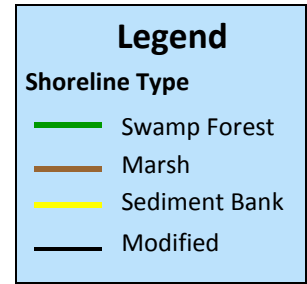
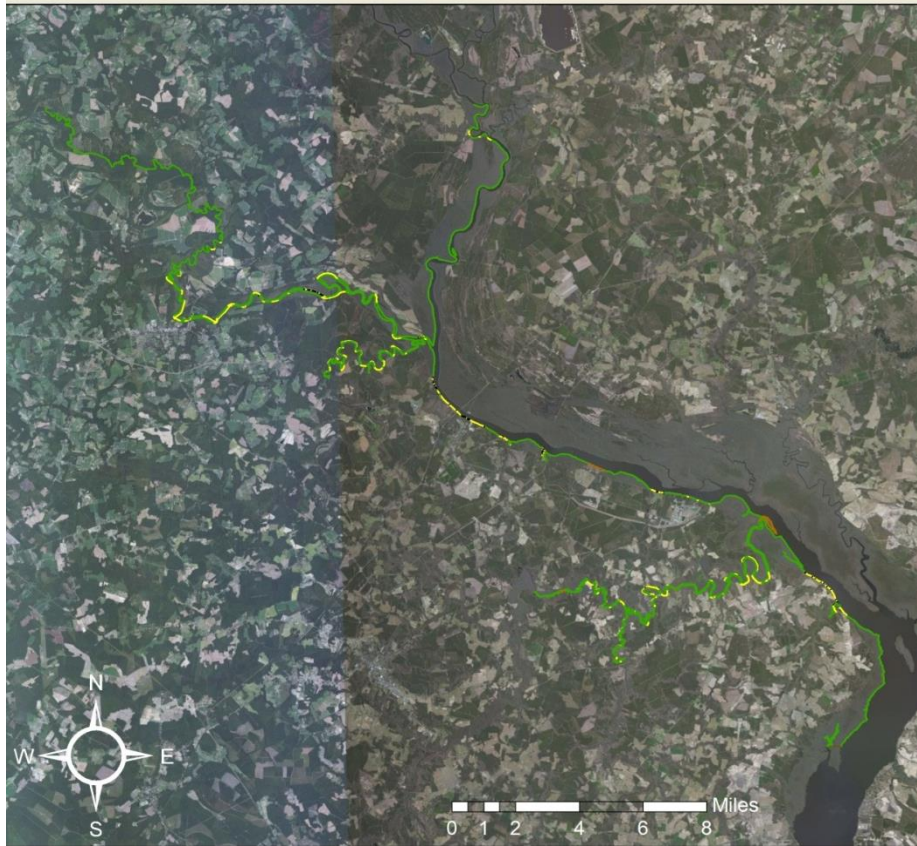
Total Acreage: .8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.7	4
Pier/Float Dock/Wharf	.1	13
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	143	<.1	7
Breakwater	0	0	0
Groin	43	<.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	264	.1	2
Rip-rap with Marsh waterward	52	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	382	.1	3
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Hertford County



Estuarine Shoreline

Total Mileage: 187.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	723,917	137.1
Marsh	234,696	44.5
Marsh with Rip-rap landward	368	.1
Marsh with Bulkhead landward	253	.1
Sediment Bank	11,236	2.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	16,730	3.1

Shoreline Access Structures

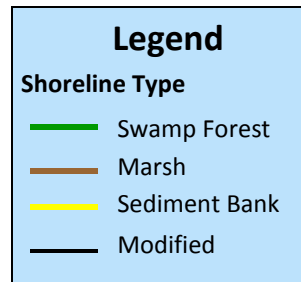
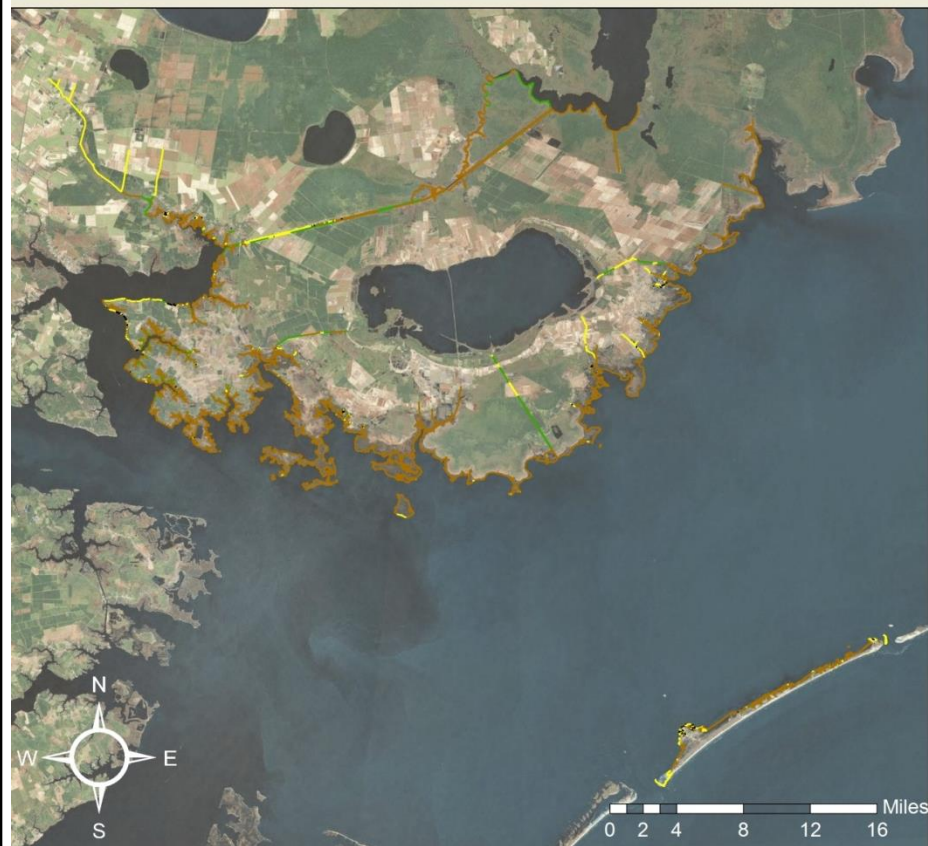
Total Acreage: 6.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	2.0	9
Pier/Float Dock/Wharf	3.9	184
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	541	.1	38
Breakwater	0	0	0
Groin	32	<.1	1
Jetty	0	0	0
Sill	0	0	0
Rip-rap	778	.1	7
Rip-rap with Marsh waterward	352	.1	5
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	15,457	2.9	63
Bulkhead with Marsh waterward	218	.1	3
Bulkhead with Sediment Bank waterward	0	0	0

Hyde County



Estuarine Shoreline

Total Mileage: 785.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	72,057	13.6
Marsh	3,798,020	719.3
Marsh with Rip-rap landward	505	.1
Marsh with Bulkhead landward	2,998	.5
Sediment Bank	197,350	37.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	706	.1
Modified	78,169	14.8

Shoreline Access Structures

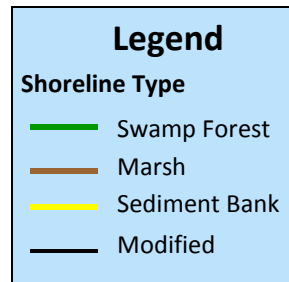
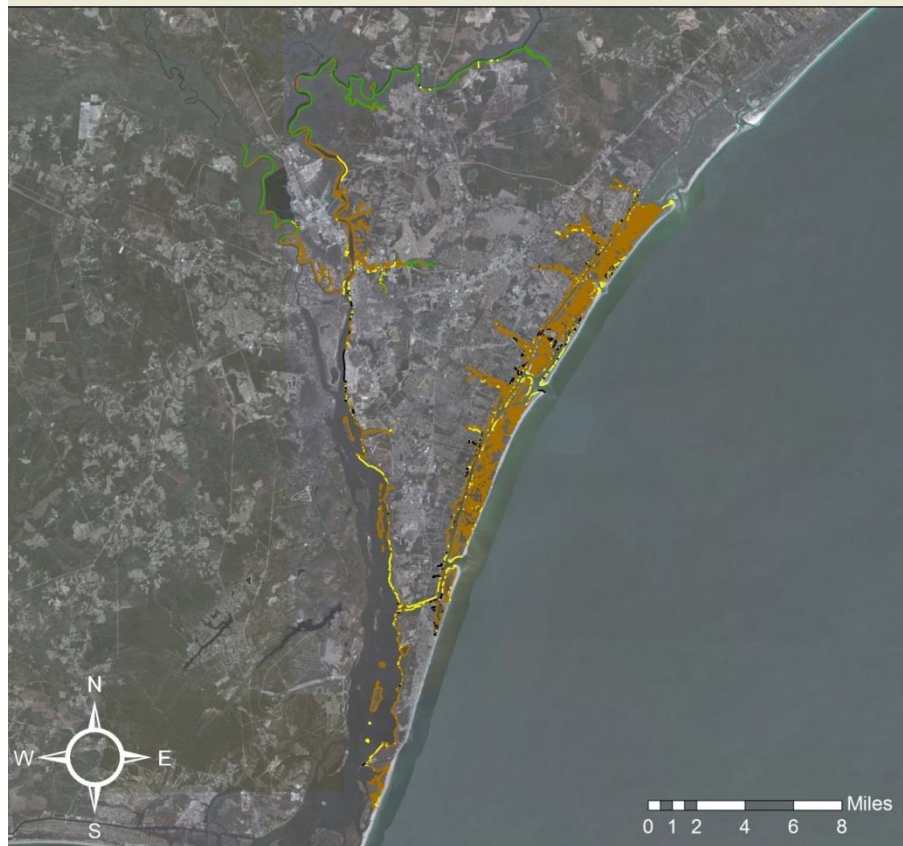
Total Acreage: 14.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	7.4	52
Pier/Float Dock/Wharf	6.8	407
Culvert	.3	19

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	870	.1	46
Breakwater	991	.1	5
Groin	1,217	.2	34
Jetty	455	.1	3
Sill	1,532	.3	5
Rip-rap	27,819	5.2	88
Rip-rap with Marsh waterward	551	.1	10
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	47,923	9.0	165
Bulkhead with Marsh waterward	2,719	.5	15
Bulkhead with Sediment Bank waterward	748	.1	3

New Hanover County



Estuarine Shoreline

Total Mileage: 592.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	182,762	34.6
Marsh	2,622,022	496.6
Marsh with Rip-rap landward	5,063	.9
Marsh with Bulkhead landward	67,926	12.8
Sediment Bank	120,725	22.9
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	11,461	2.1
Modified	117,784	22.3

Shoreline Access Structures

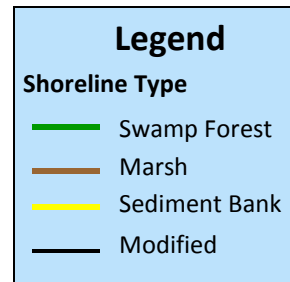
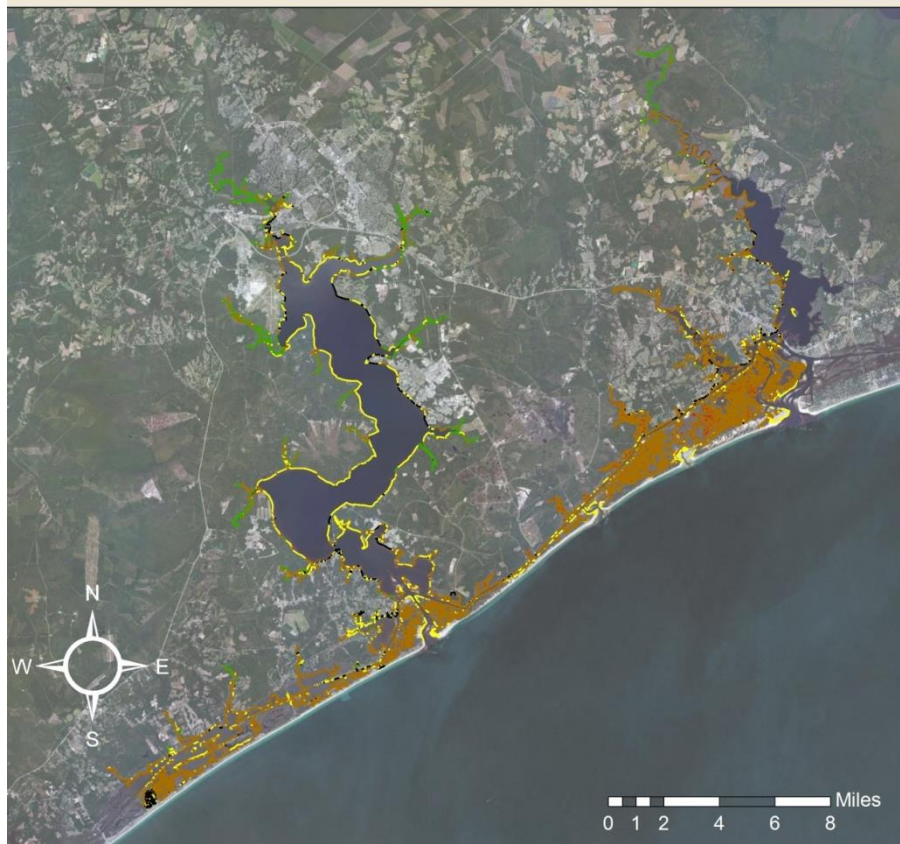
Total Acreage: 128.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	49.8	34
Pier/Float Dock/Wharf	78.3	2,144
Culvert	.1	2

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,233	.2	55
Breakwater	418	.1	2
Groin	482	.1	6
Jetty	2,222	.4	18
Sill	189	.1	1
Rip-rap	11,549	2.1	41
Rip-rap with Marsh waterward	4,715	.8	24
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	105,316	19.9	240
Bulkhead with Marsh waterward	67,500	12.7	210
Bulkhead with Sediment Bank waterward	11,389	2.1	41

Onslow County



Estuarine Shoreline

Total Mileage: 994.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	441,159	83.6
Marsh	4,029,608	763.2
Marsh with Rip-rap landward	4,718	.8
Marsh with Bulkhead landward	28,295	5.3
Sediment Bank	574,115	108.7
Sediment Bank with Rip-rap landward	1,701	.3
Sediment Bank with Bulkhead landward	7,354	1.3
Modified	126,000	23.8

Shoreline Access Structures

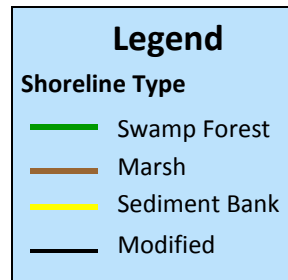
Total Acreage: 57.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	18.4	36
Pier/Float Dock/Wharf	39.0	2,131
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	5,714	1.0	401
Breakwater	2,382	.4	18
Groin	132	<.1	4
Jetty	219	<.1	1
Sill	2,398	.4	8
Rip-rap	54,670	10.3	108
Rip-rap with Marsh waterward	4,134	.7	24
Rip-rap with Sediment Bank waterward	1,134	.2	11
Bulkhead	104,743	19.8	469
Bulkhead with Marsh waterward	25,637	4.8	143
Bulkhead with Sediment Bank waterward	7,339	1.3	47

Pamlico County



Estuarine Shoreline

Total Mileage: 594.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	1,258	.2
Marsh	2,587,429	490.0
Marsh with Rip-rap landward	1,749	.3
Marsh with Bulkhead landward	7,182	1.3
Sediment Bank	313,351	59.3
Sediment Bank with Rip-rap landward	2,146	.4
Sediment Bank with Bulkhead landward	7,707	1.4
Modified	219,535	41.5

Shoreline Access Structures

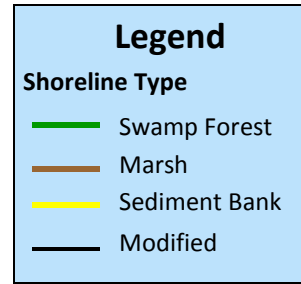
Total Acreage: 35.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	3.0	23
Pier/Float Dock/Wharf	32.4	1,763
Culvert	.2	5

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	2,850	.5	192
Breakwater	1,539	.2	10
Groin	4,218	.7	127
Jetty	1,772	.3	10
Sill	1,922	.3	9
Rip-rap	104,202	19.7	303
Rip-rap with Marsh waterward	1,643	.3	13
Rip-rap with Sediment Bank waterward	2,136	.4	9
Bulkhead	111,397	21.0	476
Bulkhead with Marsh waterward	6,726	1.2	42
Bulkhead with Sediment Bank waterward	7,156	1.3	33

Pasquotank County



Estuarine Shoreline

Total Mileage: 164.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	425,369	80.6
Marsh	225,795	42.8
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	650	.1
Sediment Bank	54,005	10.2
Sediment Bank with Rip-rap landward	113	<.1
Sediment Bank with Bulkhead landward	0	0
Modified	164,820	31.2

Shoreline Access Structures

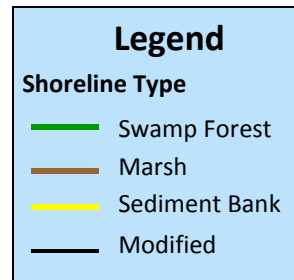
Total Acreage: 14.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.3	20
Pier/Float Dock/Wharf	12.5	554
Culvert	.2	7

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	874	.1	65
Breakwater	38	<.1	1
Groin	3,433	.6	25
Jetty	90	<.1	1
Sill	0	0	0
Rip-rap	46,759	8.8	92
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	65	<.1	2
Bulkhead	117,080	22.1	243
Bulkhead with Marsh waterward	569	.1	7
Bulkhead with Sediment Bank waterward	0	0	0

Pender County



Estuarine Shoreline

Total Mileage: 850.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	1,061,176	201.1
Marsh	3,200,944	606.2
Marsh with Rip-rap landward	2,902	.5
Marsh with Bulkhead landward	21,772	4.1
Sediment Bank	132,319	25.1
Sediment Bank with Rip-rap landward	165	<.1
Sediment Bank with Bulkhead landward	1,729	.3
Modified	68,039	12.8

Shoreline Access Structures

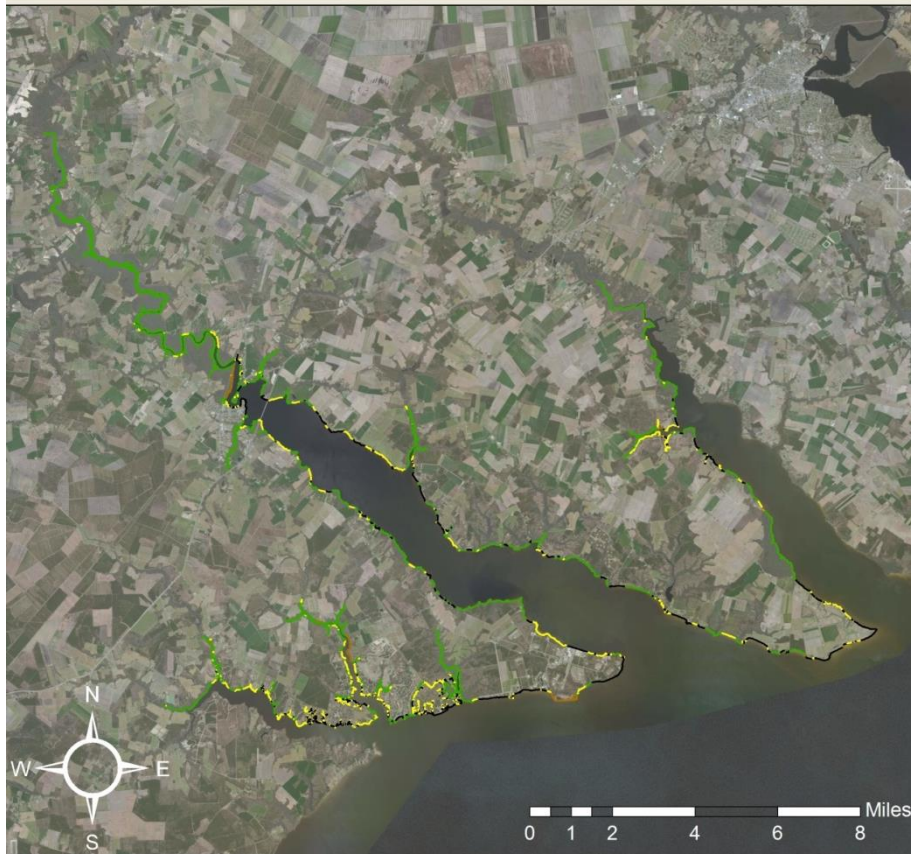
Total Acreage: 36.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	4.3	16
Pier/Float Dock/Wharf	32.2	1,772
Culvert	0	0

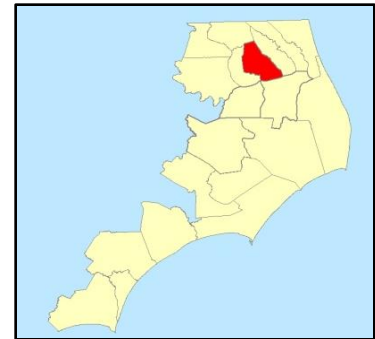
Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,974	.3	131
Breakwater	0	0	0
Groin	0	0	0
Jetty	618	.1	6
Sill	47	<.1	2
Rip-rap	10,957	2.0	52
Rip-rap with Marsh waterward	2,775	.5	20
Rip-rap with Sediment Bank waterward	164	<.1	2
Bulkhead	55,086	10.4	189
Bulkhead with Marsh waterward	20,787	3.9	103
Bulkhead with Sediment Bank waterward	1,421	.2	10

Perquimans County



Legend	
Shoreline Type	
—	Swamp Forest
—	Marsh
—	Sediment Bank
—	Modified



Estuarine Shoreline

Total Mileage: 186.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	472,509	89.5
Marsh	227,432	43.1
Marsh with Rip-rap landward	454	.1
Marsh with Bulkhead landward	3,914	.7
Sediment Bank	87,050	16.5
Sediment Bank with Rip-rap landward	1,850	.3
Sediment Bank with Bulkhead landward	437	.1
Modified	193,253	36.6

Shoreline Access Structures

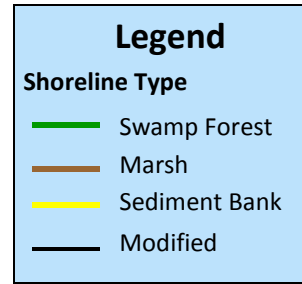
Total Acreage: 22.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.6	9
Pier/Float Dock/Wharf	16.4	896
Culvert	.1	3

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,155	.2	81
Breakwater	554	.1	1
Groin	592	.1	22
Jetty	363	.1	2
Sill	1,060	.2	2
Rip-rap	38,897	7.3	110
Rip-rap with Marsh waterward	334	.1	2
Rip-rap with Sediment Bank waterward	1,829	.3	2
Bulkhead	153,712	29.1	350
Bulkhead with Marsh waterward	3,513	.6	25
Bulkhead with Sediment Bank waterward	427	.1	2

Tyrrell County



Estuarine Shoreline
Total Mileage: 260.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	727,395	137.8
Marsh	539,474	102.2
Marsh with Rip-rap landward	469	.1
Marsh with Bulkhead landward	69	<.1
Sediment Bank	55,195	10.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	1,505	.2
Modified	51,661	9.7

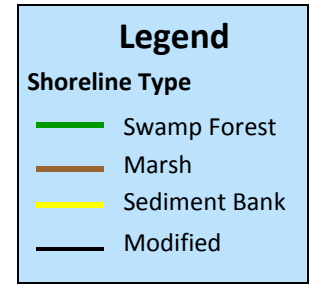
Shoreline Access Structures
Total Acreage: 12.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	8.6	14
Pier/Float Dock/Wharf	3.4	178
Culvert	.2	7

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	540	.1	34
Breakwater	1,209	.2	3
Groin	802	.1	31
Jetty	826	.1	6
Sill	421	.1	1
Rip-rap	29,296	5.5	69
Rip-rap with Marsh waterward	249	.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	21,166	4.0	81
Bulkhead with Marsh waterward	70	<.1	2
Bulkhead with Sediment Bank waterward	108	<.1	1

Washington County



Estuarine Shoreline

Total Mileage: 77.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	293,186	55.6
Marsh	31,133	5.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	488	.1
Sediment Bank	30,732	2.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	674	.1
Modified	50,731	9.6

Shoreline Access Structures

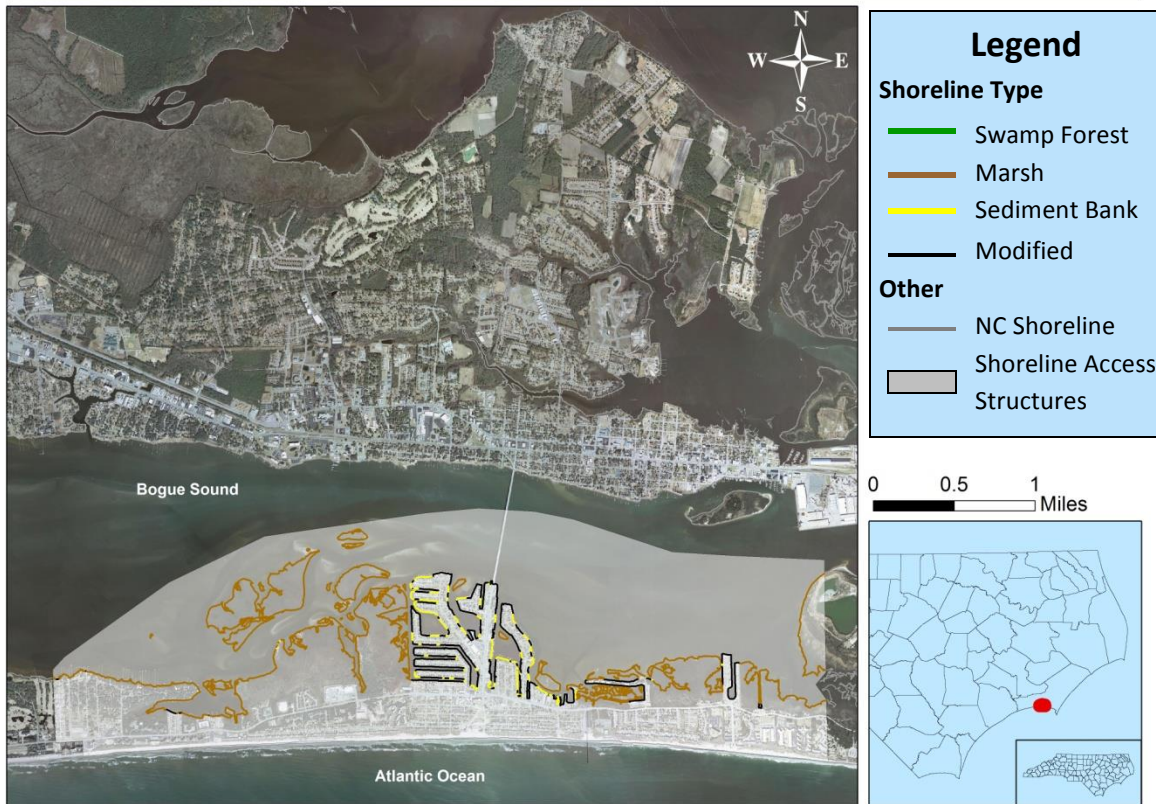
Total Acreage: 12.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	8.9	12
Pier/Float Dock/Wharf	3.4	148
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	397	.1	26
Breakwater	36	<.1	2
Groin	1,395	.2	45
Jetty	0	0	0
Sill	0	0	0
Rip-rap	11,943	2.2	19
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	38,517	7.2	55
Bulkhead with Marsh waterward	347	.1	8
Bulkhead with Sediment Bank waterward	653	.1	7

Atlantic Beach



Estuarine Shoreline

Total Mileage: 38.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	118,581	22.5
Marsh with Rip-rap landward	456	0.1
Marsh with Bulkhead landward	20,221	3.8
Sediment Bank	13,086	2.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	53,145	10.1

Shoreline Access Structures

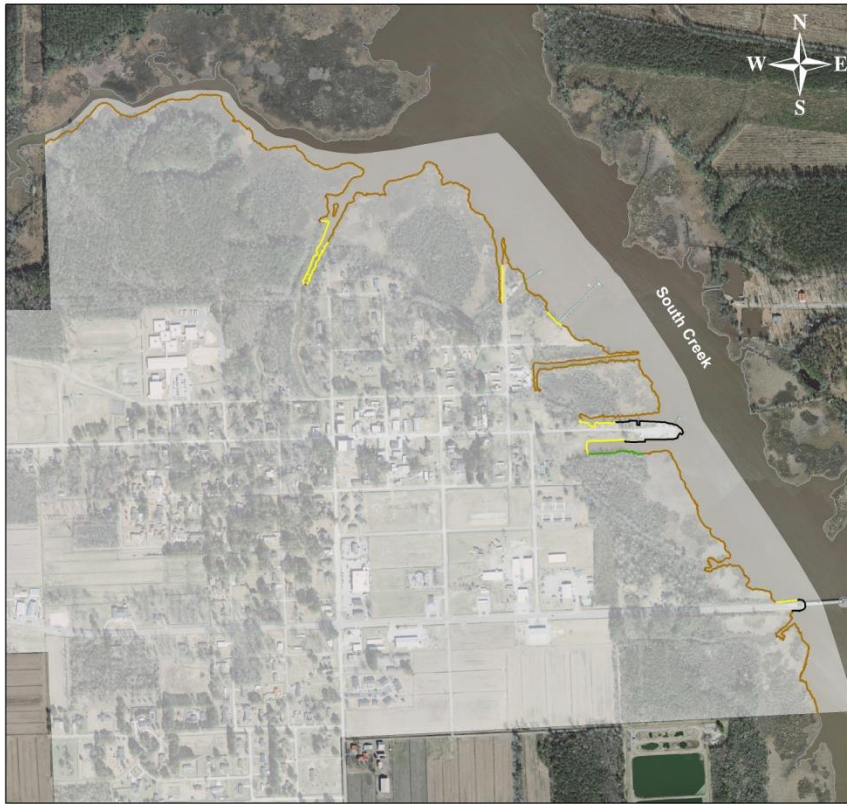
Total Acreage: 17.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	5.6	1
Pier/Float Dock/Wharf	11.6	982
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	632	.1	43
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,675	.3	9
Rip-rap with Marsh waterward	433	.1	3
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	50,915	9.6	77
Bulkhead with Marsh waterward	19,086	3.6	62
Bulkhead with Sediment Bank waterward	0	0	0

Aurora



Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures

0 0.15 0.3 Miles



Estuarine Shoreline

Total Mileage: 4.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	16,692	3.2
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	3,103	.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,081	.2

Shoreline Access Structures

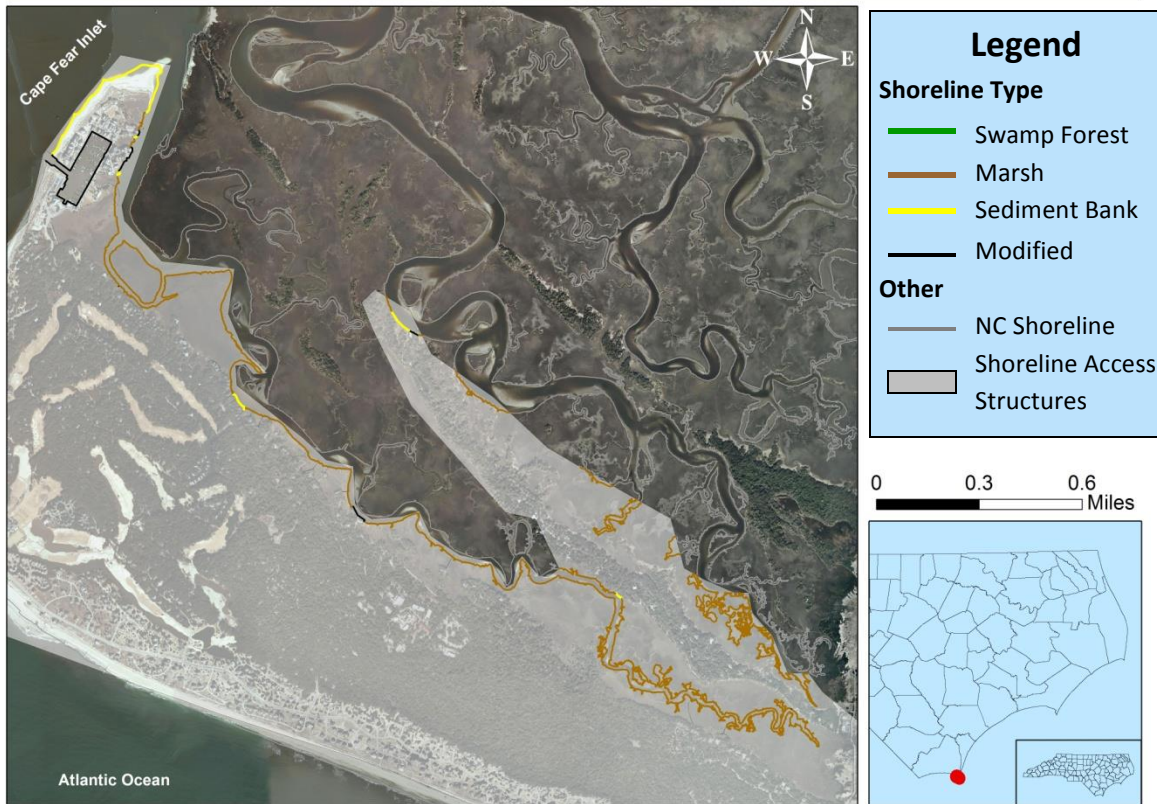
Total Acreage: .19

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.18	1
Pier/Float Dock/Wharf	.1	51
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	0	0	0
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	314	.1	2
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	766	.1	2
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Bald Head Island



Estuarine Shoreline

Total Mileage: 8.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	36,9236	7.0
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	3,356	.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	4,882	.9

Shoreline Access Structures

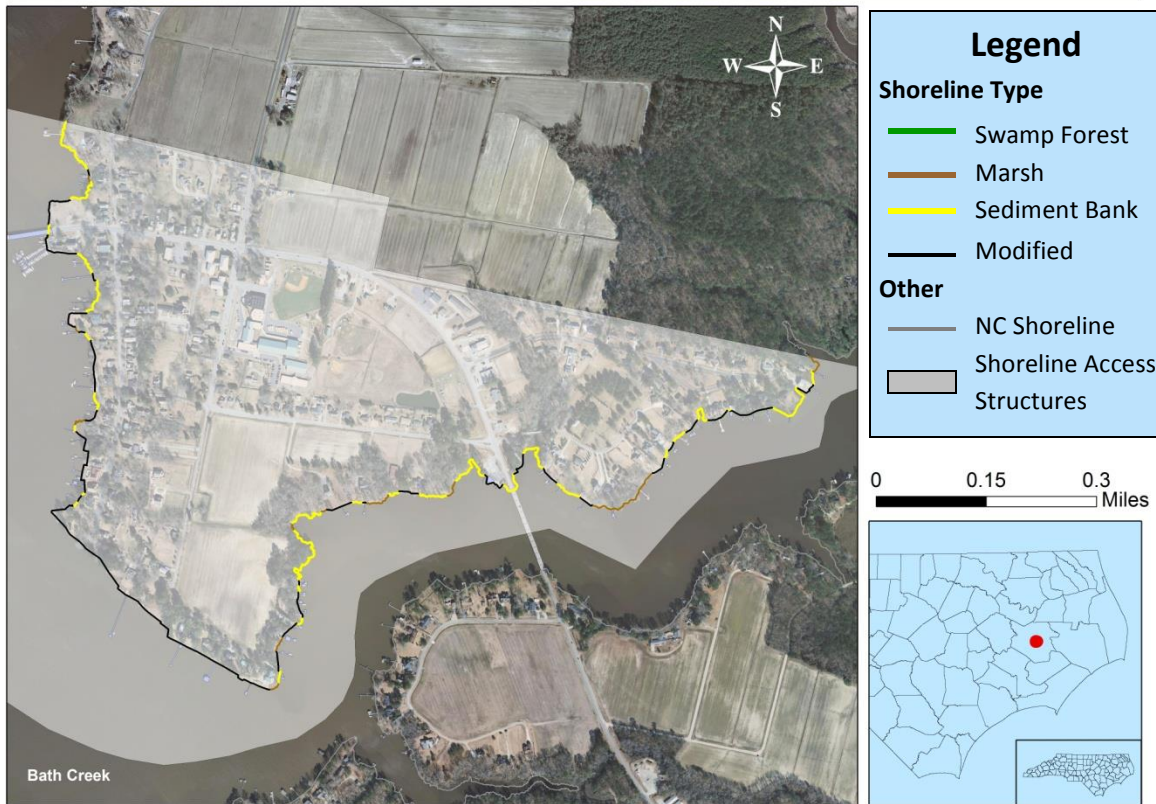
Total Acreage: 2.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	2.1	39
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	28	<.1	2
Breakwater	0	0	0
Groin	517	.1	6
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	4,872	.9	6
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Bath



Estuarine Shoreline

Total Mileage: 2.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	1,349	.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	1,748	.3
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	10,599	2.0

Shoreline Access Structures

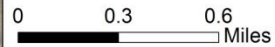
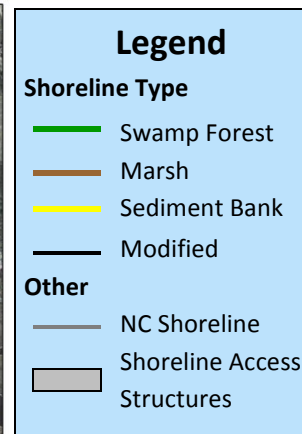
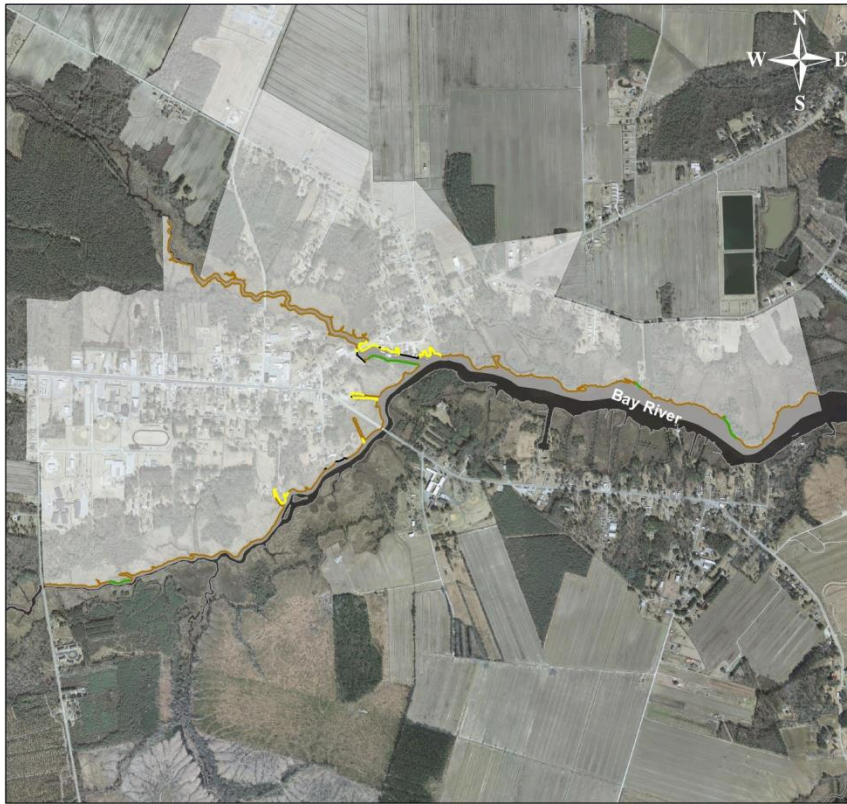
Total Acreage: 2.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.2	2
Pier/Float Dock/Wharf	1.2	68
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	49	<.1	4
Breakwater	0	0	0
Groin	32	.1	1
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,780	.3	9
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	8,840	1.6	13
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Bayboro



Estuarine Shoreline

Total Mileage: 6.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	27,562	5.2
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	39	<.1
Sediment Bank	3,679	.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	95	<.1
Modified	925	.2

Shoreline Access Structures

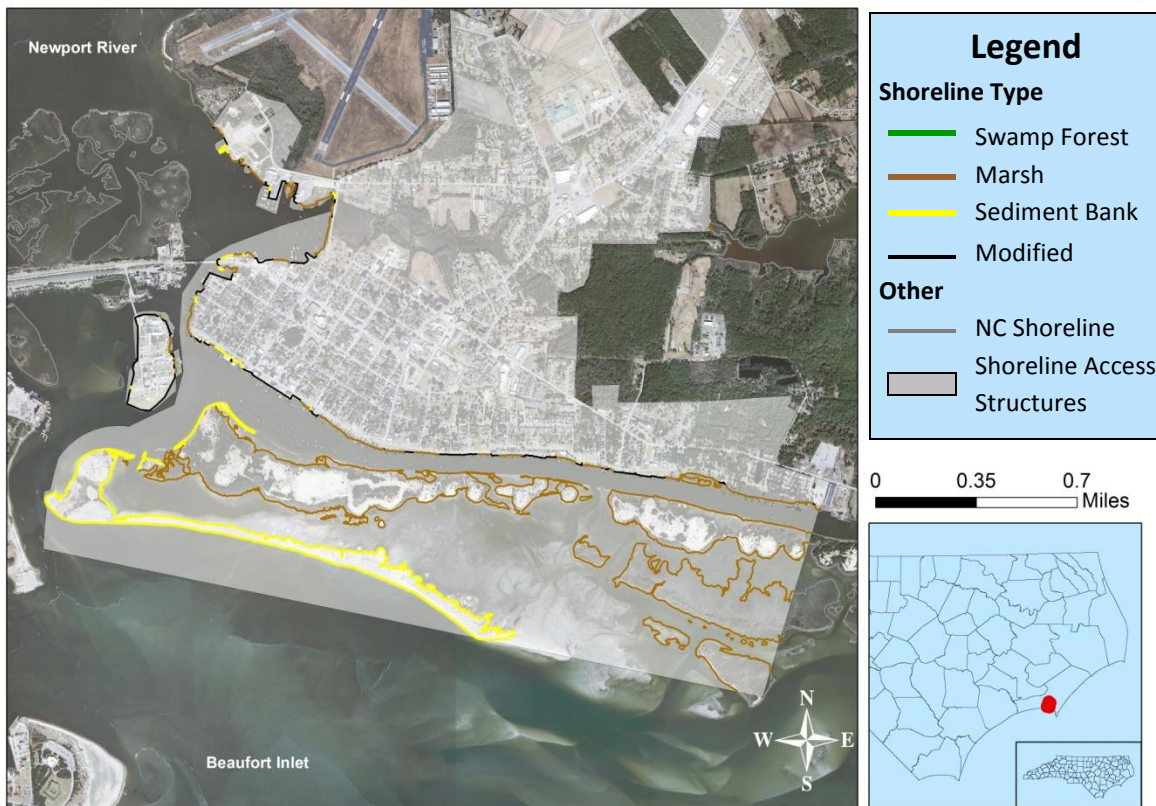
Total Acreage: .3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	2
Pier/Float Dock/Wharf	.2	14
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	32	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	31	<.1	1
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	860	.2	4
Bulkhead with Marsh waterward	36	<.1	1
Bulkhead with Sediment Bank waterward	87	<.1	2

Beaufort



Estuarine Shoreline

Total Mileage: 22.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	70,918	13.4
Marsh with Rip-rap landward	2,174	.4
Marsh with Bulkhead landward	4,380	.8
Sediment Bank	34,449	6.5
Sediment Bank with Rip-rap landward	169	<.1
Sediment Bank with Bulkhead landward	560	.1
Modified	15,022	2.8

Shoreline Access Structures

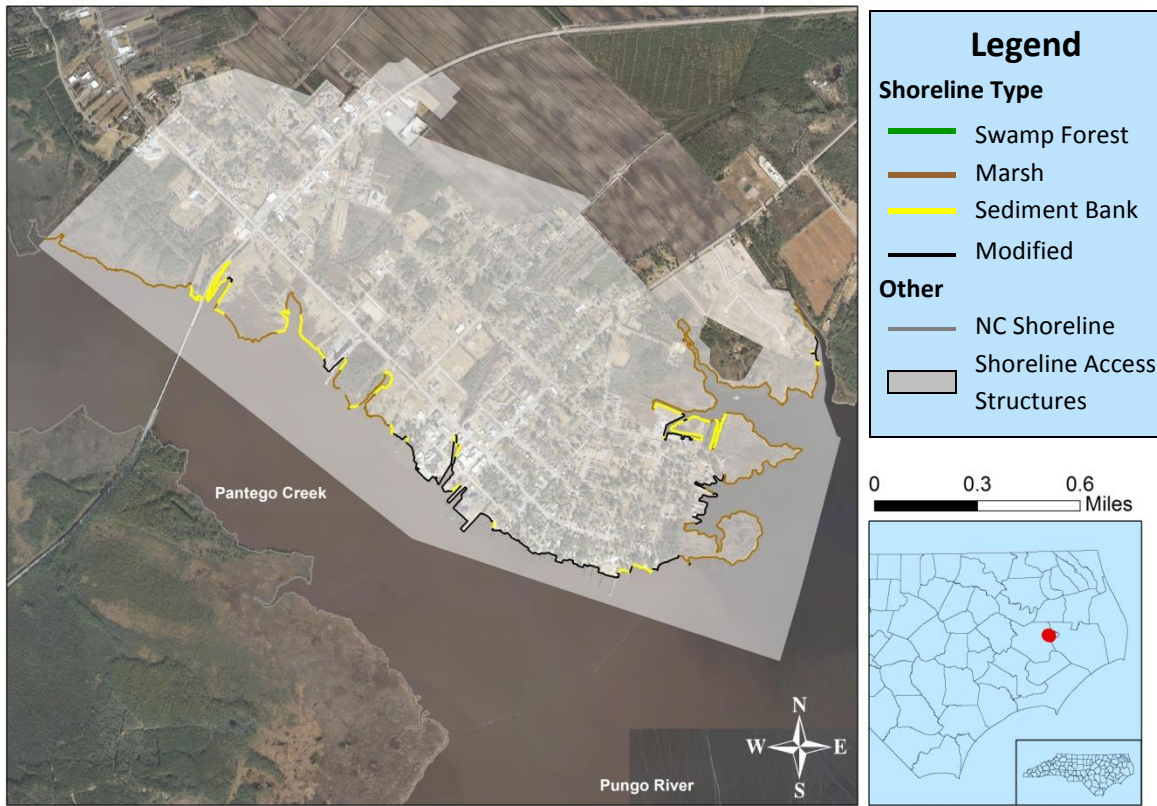
Total Acreage: 5.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	5.4	170
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	329	.1	15
Breakwater	0	0	0
Groin	0	0	0
Jetty	28	<.1	1
Sill	745	.1	5
Rip-rap	5,243	1.0	22
Rip-rap with Marsh waterward	2,016	.3	6
Rip-rap with Sediment Bank waterward	160	<.1	1
Bulkhead	9,332	1.7	33
Bulkhead with Marsh waterward	4,309	.8	24
Bulkhead with Sediment Bank waterward	465	.1	5

Belhaven



Estuarine Shoreline

Total Mileage: 9.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	25,978	4.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	8,264	1.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	14,990	2.8

Shoreline Access Structures

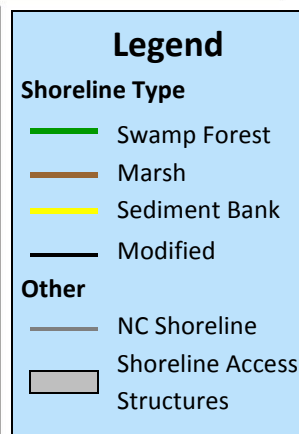
Total Acreage: 3.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	2.2	4
Pier/Float Dock/Wharf	.9	47
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	176	<.1	7
Breakwater	122	<.1	1
Groin	561	.1	11
Jetty	686	.1	1
Sill	0	0	0
Rip-rap	4,747	.9	12
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	9,886	1.8	22
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Belville



0 0.25 0.5
Miles



Estuarine Shoreline

Total Mileage: 2.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	13,239	2.5
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	46	<.1
Sediment Bank	1,524	.3
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	287	.1

Shoreline Access Structures

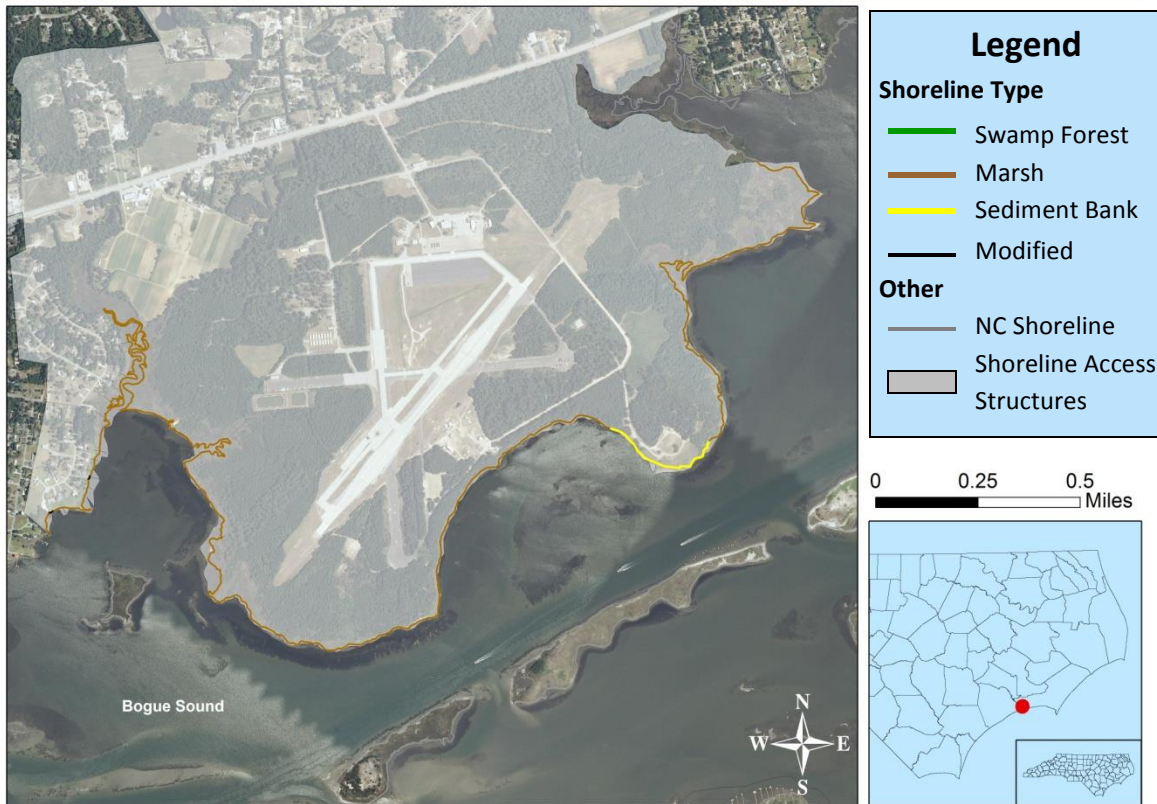
Total Acreage: .5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.5	9
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	64	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	222	.1	1
Bulkhead with Marsh waterward	57	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

Bogue



Estuarine Shoreline

Total Mileage: 1.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	4,489	.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	250	.1
Sediment Bank	343	.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	130	<.1

Shoreline Access Structures

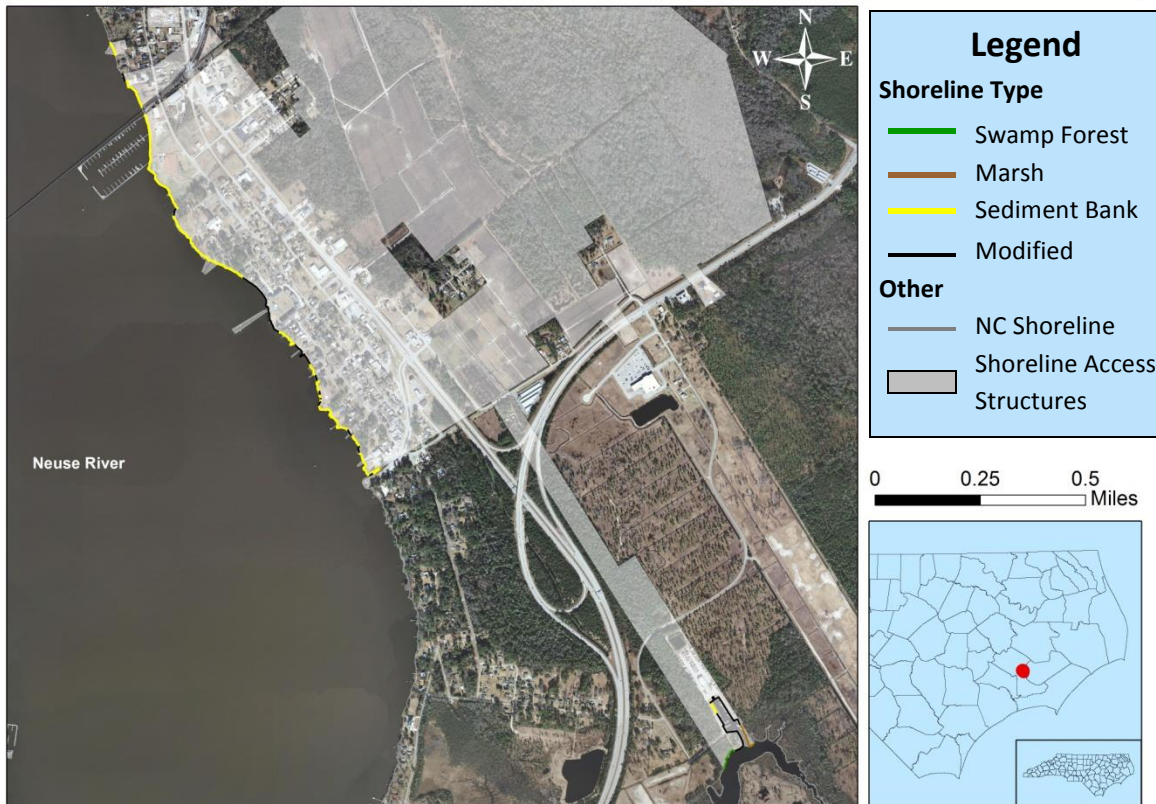
Total Acreage: .2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.2	13
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	18	<.1	1
Breakwater	0	0	0
Groin	23	<.1	1
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	111	<.1	2
Bulkhead with Marsh waterward	259	.1	2
Bulkhead with Sediment Bank waterward	0	0	0

Bridgeton



Estuarine Shoreline

Total Mileage: 1.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	688	.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	2,046	.4
Sediment Bank with Rip-rap landward	135	<.1
Sediment Bank with Bulkhead landward	147	<.1
Modified	6,222	1.2

Shoreline Access Structures

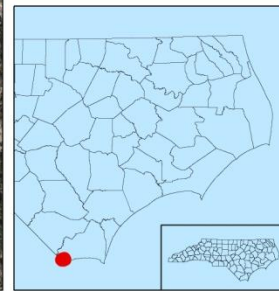
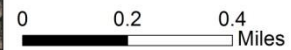
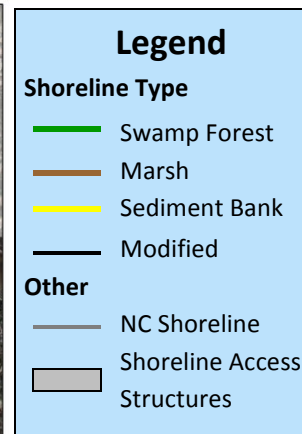
Total Acreage: 1.9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	1.9	37
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	40	<.1	3
Breakwater	0	0	0
Groin	270	.1	5
Jetty	0	0	0
Sill	0	0	0
Rip-rap	3,229	.6	10
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	123	<.1	1
Bulkhead	3,042	.5	12
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	118	<.1	1

Calabash



Estuarine Shoreline

Total Mileage: 8.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	37,491	7.1
Marsh with Rip-rap landward	54	<.1
Marsh with Bulkhead landward	1,346	.2
Sediment Bank	1,144	.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	54	<.1
Modified	6,205	1.1

Shoreline Access Structures

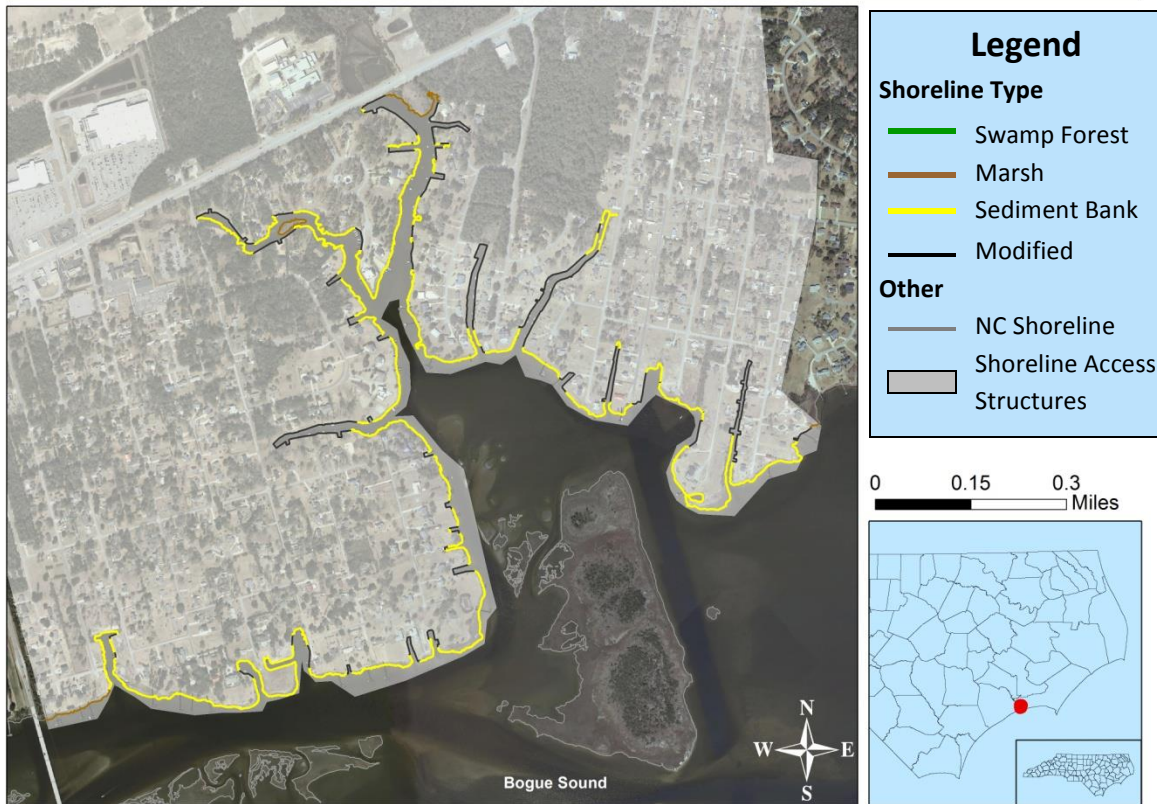
Total Acreage: .9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.9	27
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	87	<.1	5
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	3,833	.7	2
Rip-rap with Marsh waterward	98	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	2,338	.4	7
Bulkhead with Marsh waterward	1,387	.2	4
Bulkhead with Sediment Bank waterward	0	0	0

Cape Carteret



Estuarine Shoreline

Total Mileage: 12.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	22,768	4.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	8,085	1.5
Sediment Bank	12,438	2.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	21,108	4.0

Shoreline Access Structures

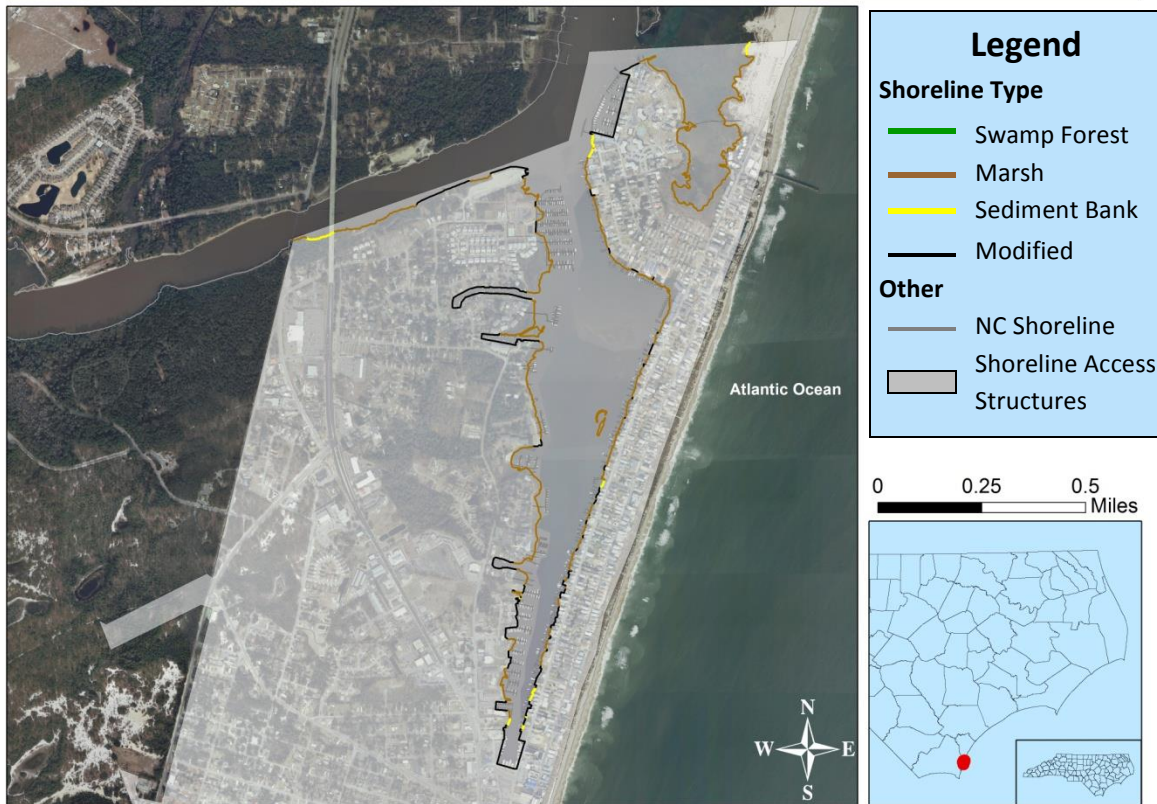
Total Acreage: 1.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	1
Pier/Float Dock/Wharf	1.5	164
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	96	<.1	8
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	273	.1	1
Rip-rap	792	.1	4
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	19,636	3.7	54
Bulkhead with Marsh waterward	7,613	1.4	34
Bulkhead with Sediment Bank waterward	0	0	0

Carolina Beach



Estuarine Shoreline

Total Mileage: 6.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	13,355	2.5
Marsh with Rip-rap landward	94	<.1
Marsh with Bulkhead landward	9,145	1.7
Sediment Bank	1,919	.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	10,757	2.0

Shoreline Access Structures

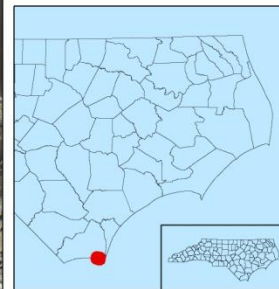
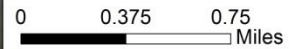
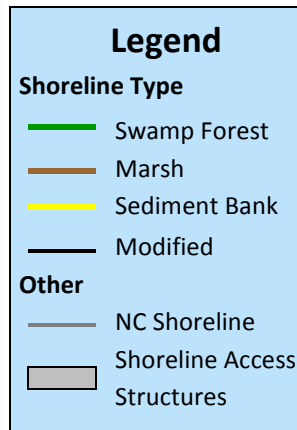
Total Acreage: 7.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	7.6	222
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	123	<.1	3
Breakwater	0	0	0
Groin	0	0	0
Jetty	894	.1	2
Sill	0	0	0
Rip-rap	1,439	.2	3
Rip-rap with Marsh waterward	87	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	9,194	1.7	23
Bulkhead with Marsh waterward	10,140	1.9	26
Bulkhead with Sediment Bank waterward	0	0	0

Caswell Beach



Estuarine Shoreline

Total Mileage: 31.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	159,839	30.3
Marsh with Rip-rap landward	703	.1
Marsh with Bulkhead landward	0	0
Sediment Bank	2,169	.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,223	.2

Shoreline Access Structures

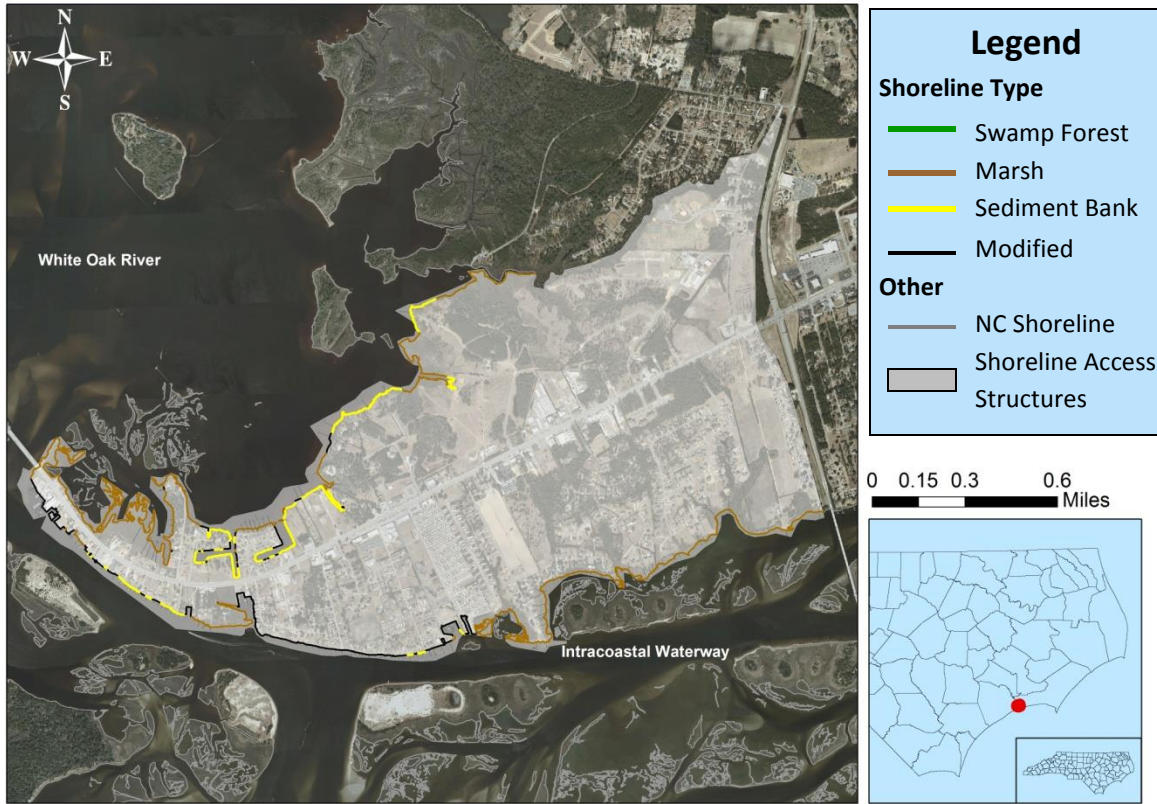
Total Acreage: 1.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	1.0	22
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	0	0	0
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,231	.2	3
Rip-rap with Marsh waterward	691	.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	0	0	0
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Cedar Point



Estuarine Shoreline

Total Mileage: 12.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	31,787	6.0
Marsh with Rip-rap landward	1,109	.2
Marsh with Bulkhead landward	6,473	1.2
Sediment Bank	8,880	1.7
Sediment Bank with Rip-rap landward	305	.1
Sediment Bank with Bulkhead landward	958	.1
Modified	14,845	2.8

Shoreline Access Structures

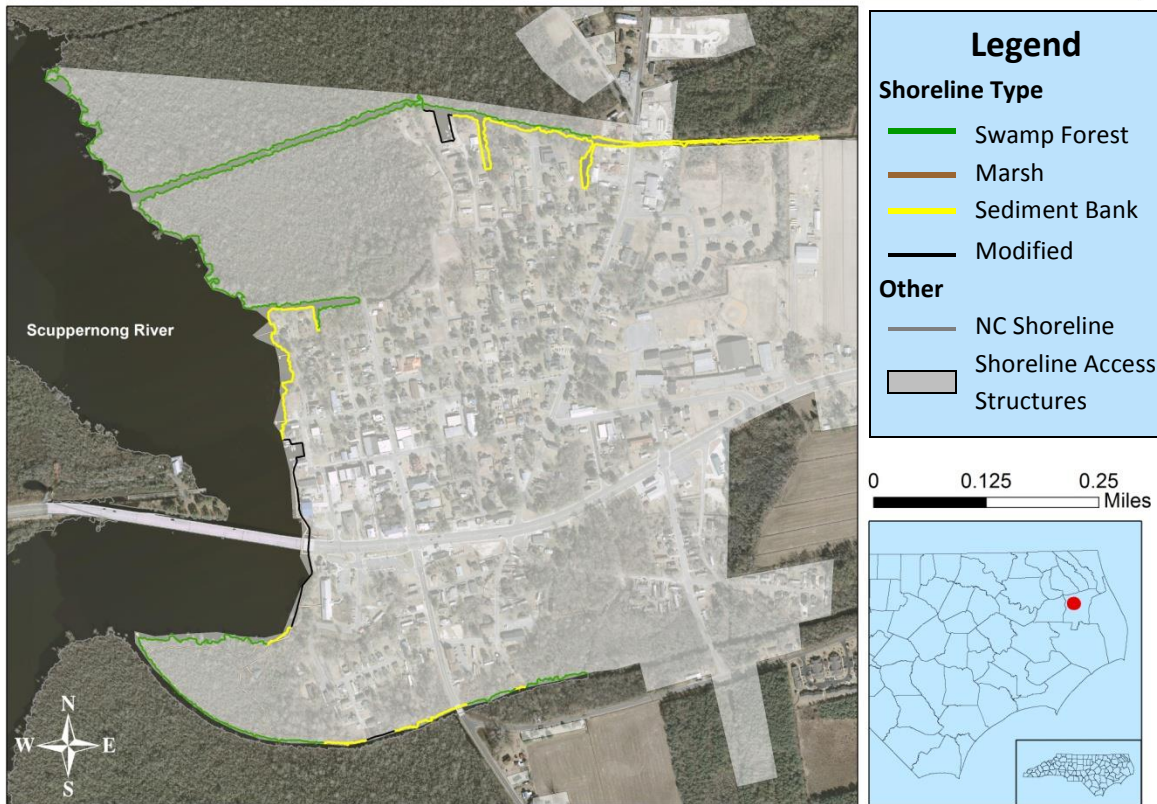
Total Acreage: 3.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	3.6	257
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	505	.1	34
Breakwater	0	0	0
Groin	0	0	0
Jetty	177	<.1	1
Sill	0	0	0
Rip-rap	3,828	.7	21
Rip-rap with Marsh waterward	987	.1	4
Rip-rap with Sediment Bank waterward	303	.1	3
Bulkhead	10,511	1.9	53
Bulkhead with Marsh waterward	5,761	1.0	26
Bulkhead with Sediment Bank waterward	912	.1	7

Columbia



Estuarine Shoreline

Total Mileage: 4.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	9,329	1.8
Marsh	6,663	1.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	3,166	.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	2,630	.5

Shoreline Access Structures

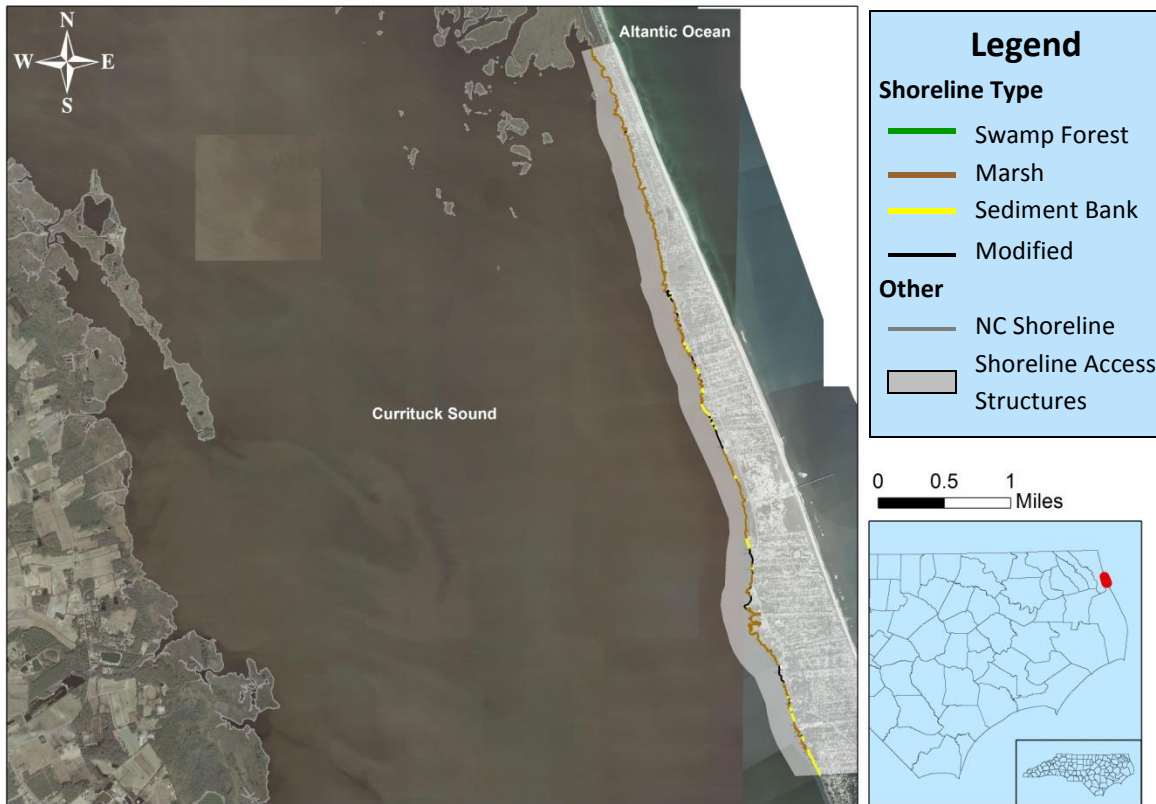
Total Acreage: .9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	3
Pier/Float Dock/Wharf	.7	11
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	10	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	925	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	1,607	.3	11
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Duck



Estuarine Shoreline

Total Mileage: 9.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	33,504	6.3
Marsh with Rip-rap landward	550	.1
Marsh with Bulkhead landward	3,810	.7
Sediment Bank	2,718	.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	91	<.1
Modified	6,659	1.3

Shoreline Access Structures

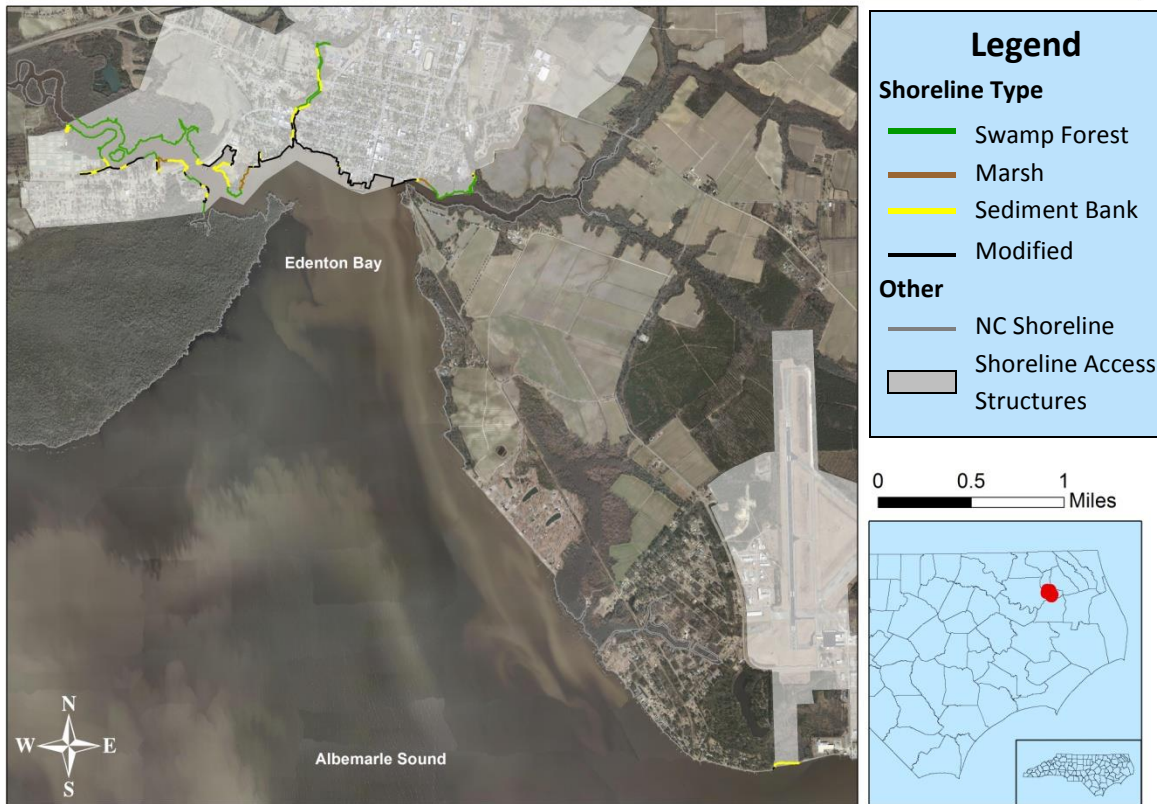
Total Acreage: 3.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	3.2	104
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	119	<.1	8
Breakwater	863	.1	10
Groin	1,141	.2	9
Jetty	0	0	0
Sill	0	0	0
Rip-rap	416	.1	4
Rip-rap with Marsh waterward	422	.1	2
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	6,123	1.1	23
Bulkhead with Marsh waterward	2,450	.4	11
Bulkhead with Sediment Bank waterward	111	<.1	1

Edenton



Estuarine Shoreline

Total Mileage: 8.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	14,379	2.7
Marsh	12,391	2.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	105	<.1
Sediment Bank	3,086	.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	13,714	2.6

Shoreline Access Structures

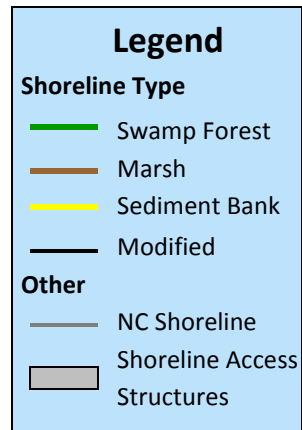
Total Acreage: 1.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.3	5
Pier/Float Dock/Wharf	1.3	84
Culvert	0	0

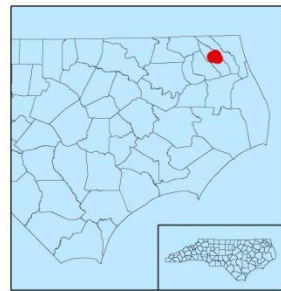
Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	83	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	465	.1	1
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	13,188	2.4	18
Bulkhead with Marsh waterward	97	<.1	2
Bulkhead with Sediment Bank waterward	0	0	0

Elizabeth City



0 0.5 1 Miles



Estuarine Shoreline

Total Mileage: 19.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	23,210	4.4
Marsh	25,853	4.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	100	<.1
Sediment Bank	13,408	2.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	39,911	7.6

Shoreline Access Structures

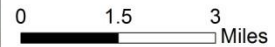
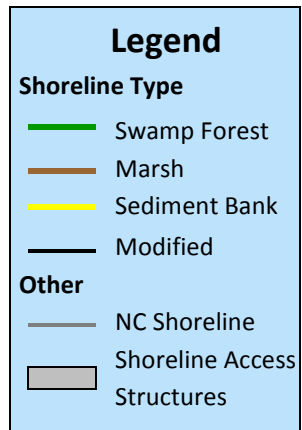
Total Acreage: 5.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.8	9
Pier/Float Dock/Wharf	4.0	155
Culvert	.2	3

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	211	.1	14
Breakwater	0	0	0
Groin	117	<.1	3
Jetty	90	<.1	1
Sill	0	0	0
Rip-rap	3,570	.6	13
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	37,480	7.0	56
Bulkhead with Marsh waterward	66	<.1	2
Bulkhead with Sediment Bank waterward	0	0	0

Emerald Isle



Estuarine Shoreline

Total Mileage: 22.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	69,827	13.2
Marsh with Rip-rap landward	487	.1
Marsh with Bulkhead landward	20,194	3.8
Sediment Bank	3,841	.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	847	.1
Modified	21,452	4.1

Shoreline Access Structures

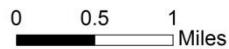
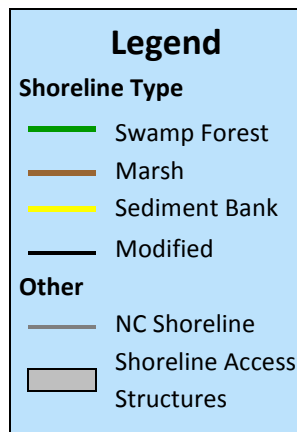
Total Acreage: 14.9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	14.9	610
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	519	.1	26
Breakwater	0	0	0
Groin	99	<.1	1
Jetty	183	<.1	1
Sill	0	0	0
Rip-rap	4,518	.8	19
Rip-rap with Marsh waterward	395	.1	4
Rip-rap with Sediment Bank waterward	65	<.1	1
Bulkhead	16,657	3.1	61
Bulkhead with Marsh waterward	18,059	3.4	71
Bulkhead with Sediment Bank waterward	832	.1	7

Havelock



Estuarine Shoreline

Total Mileage: 35.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	62,870	11.9
Marsh	94,897	18.0
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	19,212	3.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	101	<.1
Modified	9,472	1.8

Shoreline Access Structures

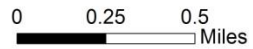
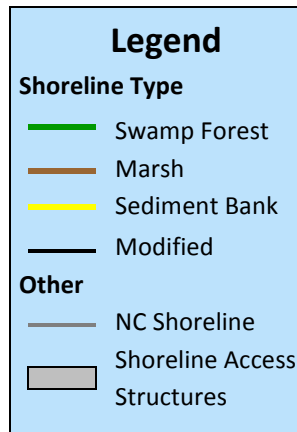
Total Acreage: .7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.3	7
Pier/Float Dock/Wharf	.4	33
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	121	<.1	8
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	306	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	3,856	.7	14
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	74	<.1	1

Hertford



Estuarine Shoreline

Total Mileage: 9.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	23,262	4.4
Marsh	11,893	2.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	287	.1
Sediment Bank	3,993	.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	7,684	1.5

Shoreline Access Structures

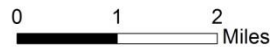
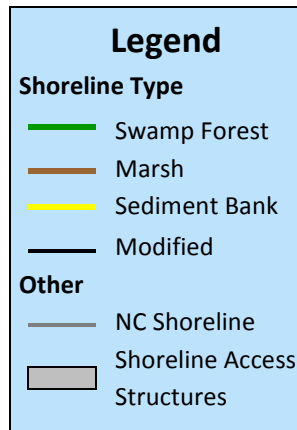
Total Acreage: 5.9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	5.3	6
Pier/Float Dock/Wharf	.6	35
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	41	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	918	.1	1
Rip-rap	2,905	.5	10
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	4,737	.8	10
Bulkhead with Marsh waterward	44	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

Holden Beach



Estuarine Shoreline

Total Mileage: 26.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	87,784	16.6
Marsh with Rip-rap landward	206	.1
Marsh with Bulkhead landward	23,912	4.5
Sediment Bank	1,299	.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	45	<.1
Modified	26,083	4.9

Shoreline Access Structures

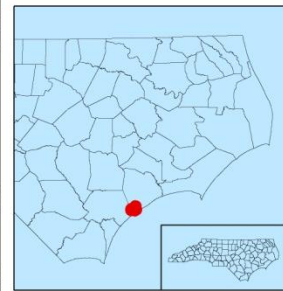
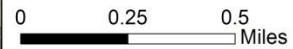
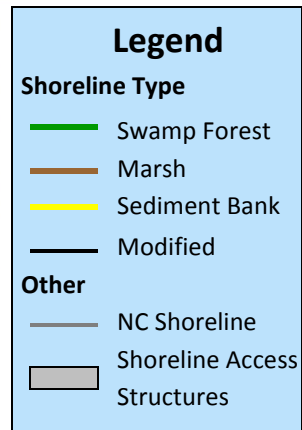
Total Acreage: 11.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	11.2	803
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	132	<.1	8
Breakwater	0	0	0
Groin	45	<.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	165	<.1	2
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	26,651	5.0	78
Bulkhead with Marsh waterward	24,501	4.6	83
Bulkhead with Sediment Bank waterward	42	<.1	1

Holly Ridge



Estuarine Shoreline

Total Mileage: 1.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	7,248	1.4
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	1,035	.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	19	<.1

Shoreline Access Structures

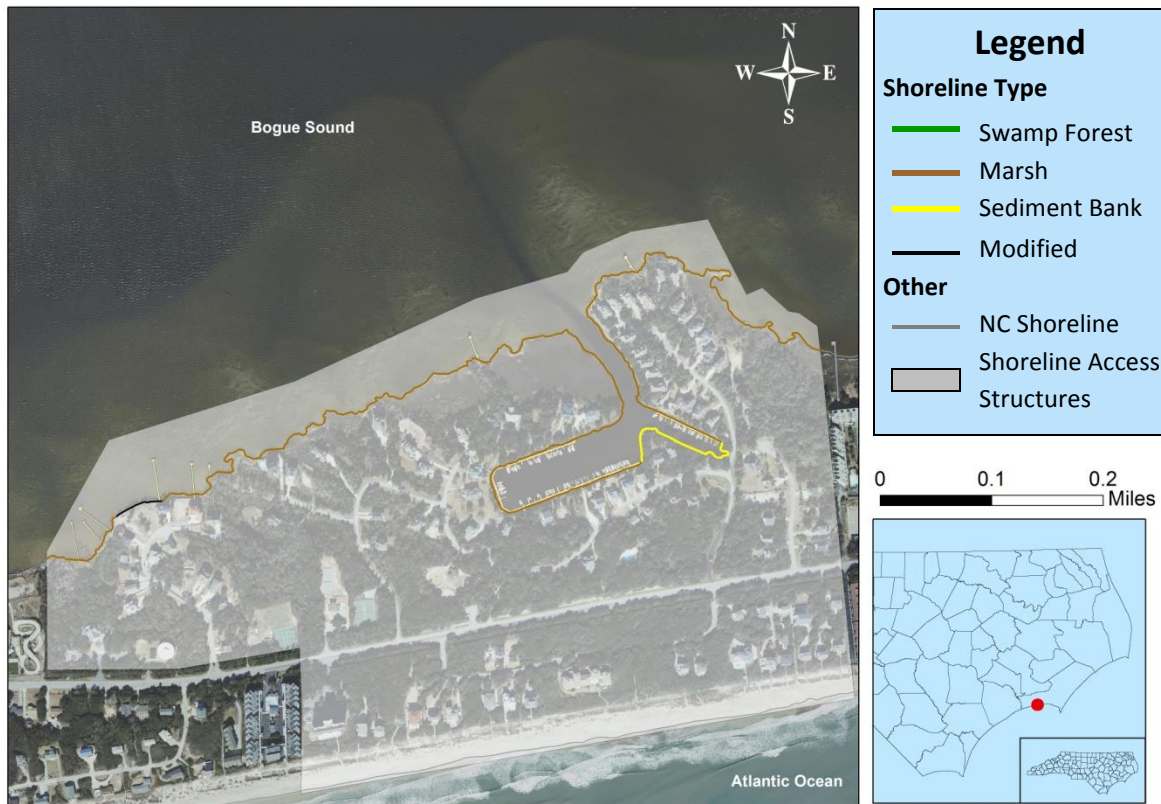
Total Acreage: .2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.2	4
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	19	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	369	.1	1
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	0	0	0
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Indian Beach



Estuarine Shoreline

Total Mileage: 1.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	2,554	.5
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	5,831	1.1
Sediment Bank	0	0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	640	.1

Shoreline Access Structures

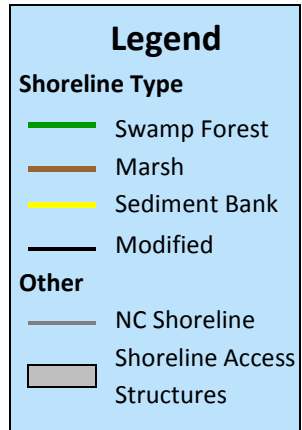
Total Acreage: .8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.8	11
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	9	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	360	.1	3
Bulkhead with Marsh waterward	5,383	1.0	8
Bulkhead with Sediment Bank waterward	0	0	0

Jacksonville



0 0.5 1 Miles



Estuarine Shoreline

Total Mileage: 20.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	17,477	3.3
Marsh	66,844	12.7
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	1,331	.2
Sediment Bank	11,217	2.1
Sediment Bank with Rip-rap landward	131	<.1
Sediment Bank with Bulkhead landward	668	.1
Modified	13,626	2.6

Shoreline Access Structures

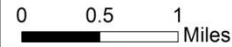
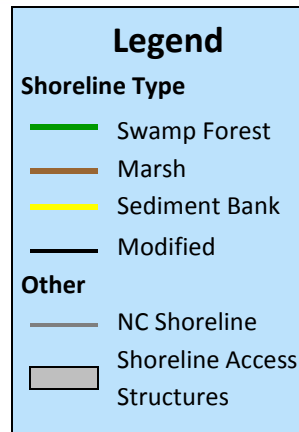
Total Acreage: 4.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.5	5
Pier/Float Dock/Wharf	2.8	98
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	195	<.1	9
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,645	.3	10
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	120	<.1	1
Bulkhead	11,685	2.2	32
Bulkhead with Marsh waterward	1,318	.2	8
Bulkhead with Sediment Bank waterward	844	.1	5

Kill Devil Hills



Estuarine Shoreline

Total Mileage: 4.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	12,805	2.4
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	1,321	.2
Sediment Bank	2,007	.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	131	<.1
Modified	6,190	1.2

Shoreline Access Structures

Total Acreage: 2.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	2.5	68
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	70	<.1	3
Breakwater	0	0	0
Groin	369	.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	508	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	5,610	1.0	15
Bulkhead with Marsh waterward	1,106	.2	6
Bulkhead with Sediment Bank waterward	135	<.1	1

Kitty Hawk



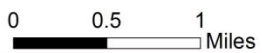
Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures



Estuarine Shoreline
Total Mileage: 36.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	148,335	28.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	1,901	.3
Sediment Bank	11,442	2.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	478	.1
Modified	32,953	6.2

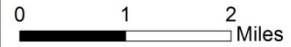
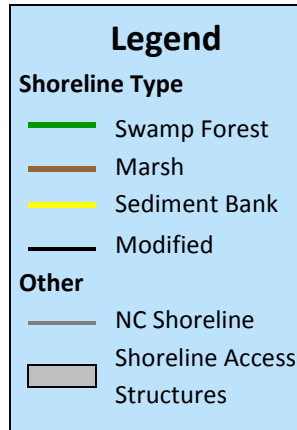
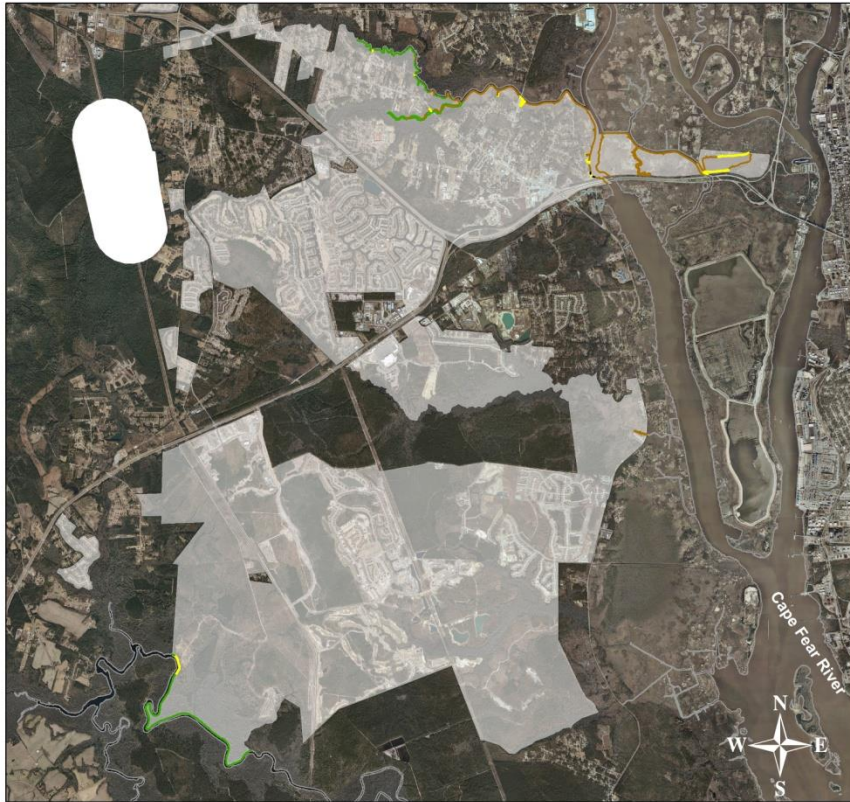
Shoreline Access Structures
Total Acreage: 15.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	13.3	8
Pier/Float Dock/Wharf	2.3	220
Culvert	.1	2

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	100	<.1	7
Breakwater	95	<.1	1
Groin	24	<.1	1
Jetty	557	.1	2
Sill	0	0	0
Rip-rap	3,601	.6	9
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	29,059	5.3	45
Bulkhead with Marsh waterward	1,262	.2	8
Bulkhead with Sediment Bank waterward	465	.1	2

Leland



Estuarine Shoreline

Total Mileage: 7.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	13,157	2.5
Marsh	7,524	1.4
Marsh with Rip-rap landward	97	<.1
Marsh with Bulkhead landward	1,891	.3
Sediment Bank	7,824	1.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	1,523	.2
Modified	5,185	1.0

Shoreline Access Structures

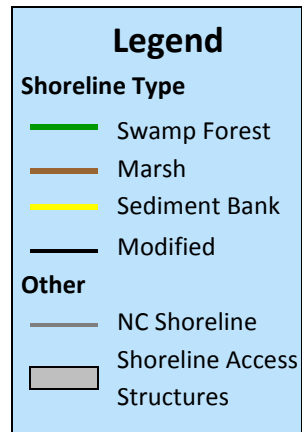
Total Acreage: 1.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.5	3
Pier/Float Dock/Wharf	.2	16
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	66	<.1	5
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	398	.1	1
Rip-rap with Marsh waterward	166	<.1	1
Rip-rap with Sediment Bank waterward	213	.1	1
Bulkhead	53	<.1	2
Bulkhead with Marsh waterward	30	<.1	1
Bulkhead with Sediment Bank waterward	46	<.1	1

Manteo



0 0.3 0.6
Miles



Estuarine Shoreline

Total Mileage: 17.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	53,465	10.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	6,938	1.3
Sediment Bank	3,771	.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	1,128	.2
Modified	27,926	5.3

Shoreline Access Structures

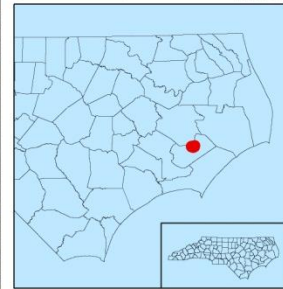
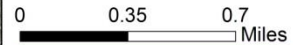
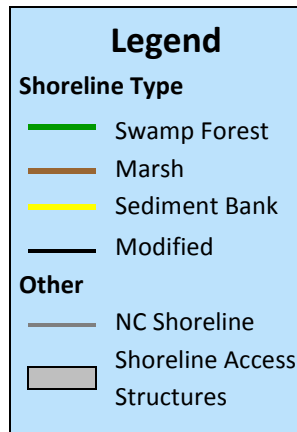
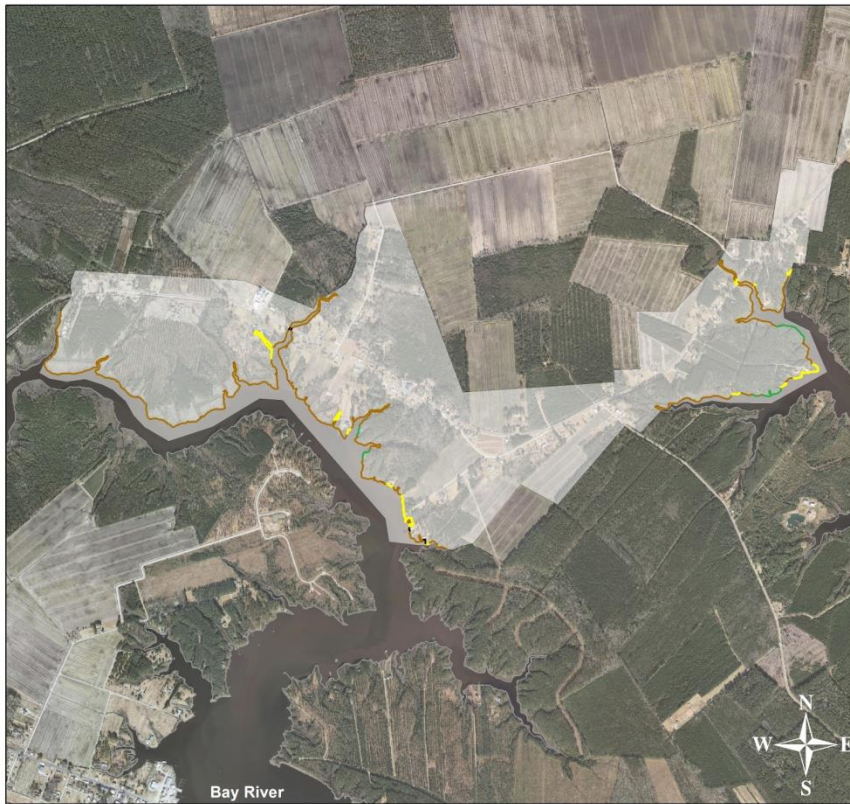
Total Acreage: 7.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.5	4
Pier/Float Dock/Wharf	7.0	174
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	40	<.1	3
Breakwater	1,749	.3	29
Groin	193	<.1	12
Jetty	0	0	0
Sill	2,924	.5	4
Rip-rap	1,402	.2	12
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	26,231	4.9	39
Bulkhead with Marsh waterward	7,070	1.3	25
Bulkhead with Sediment Bank waterward	1,059	.2	5

Mesic



Estuarine Shoreline

Total Mileage: 5.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	25,790	4.9
Marsh with Rip-rap landward	160	<.1
Marsh with Bulkhead landward	0	0
Sediment Bank	3,089	.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	583	31

Shoreline Access Structures

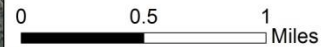
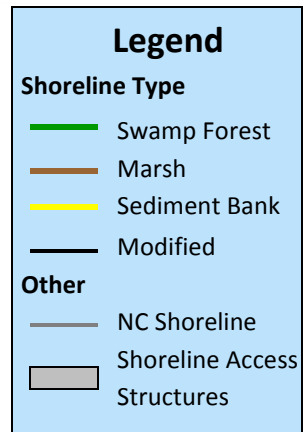
Total Acreage: .2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	2
Pier/Float Dock/Wharf	.1	8
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	0	0	0
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	291	.1	4
Rip-rap with Marsh waterward	145	<.1	2
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	291	.1	4
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Minnesott Beach



Estuarine Shoreline

Total Mileage: 6.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	7,717	1.5
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	13,878	2.6
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	424	.1
Modified	11,598	2.2

Shoreline Access Structures

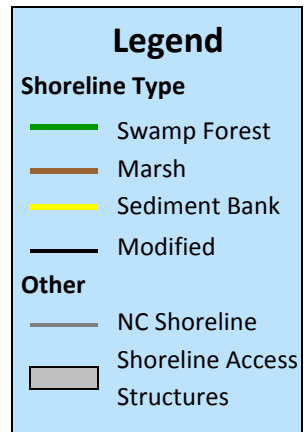
Total Acreage: 1.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	1.0	60
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	90	<.1	6
Breakwater	0	0	0
Groin	1,245	.2	32
Jetty	677	.1	5
Sill	0	0	0
Rip-rap	6,194	1.1	10
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	5,314	1.0	9
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	394	.1	3

Morehead City



Estuarine Shoreline

Total Mileage: 33.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	80,383	15.2
Marsh with Rip-rap landward	2,366	.4
Marsh with Bulkhead landward	6,818	1.2
Sediment Bank	30,358	5.7
Sediment Bank with Rip-rap landward	1,503	.2
Sediment Bank with Bulkhead landward	6,501	1.2
Modified	49,652	9.4

Shoreline Access Structures

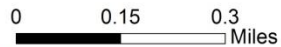
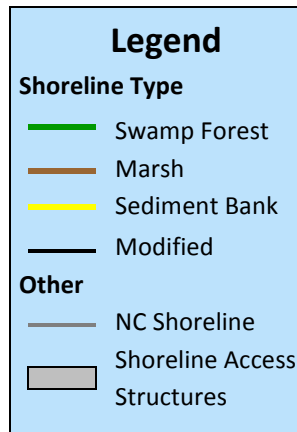
Total Acreage: 16.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	3.4	8
Pier/Float Dock/Wharf	13.1	539
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	427	.1	14
Breakwater	422	.1	3
Groin	2,735	.5	55
Jetty	0	0	0
Sill	781	.1	3
Rip-rap	13,120	2.4	46
Rip-rap with Marsh waterward	1,984	.3	9
Rip-rap with Sediment Bank waterward	1,625	.3	11
Bulkhead	36,149	6.8	55
Bulkhead with Marsh waterward	5,688	1.0	24
Bulkhead with Sediment Bank waterward	5,837	1.1	31

Murfreesboro



Estuarine Shoreline
Total Mileage: 2.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	2,040	.4
Marsh	7,144	1.4
Marsh with Rip-rap landward	76	<.1
Marsh with Bulkhead landward	0	0
Sediment Bank	0	0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	78	<.1

Shoreline Access Structures
Total Acreage: .1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.1	2
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	25	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	62	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	52	<.1	2
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Nags Head



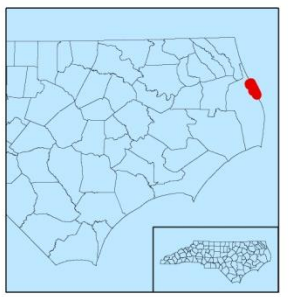
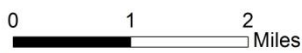
Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures



Estuarine Shoreline
Total Mileage: 22.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	66,770	12.6
Marsh with Rip-rap landward	366	.1
Marsh with Bulkhead landward	1,732	.3
Sediment Bank	9,772	1.9
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	372	.1
Modified	39,185	7.4

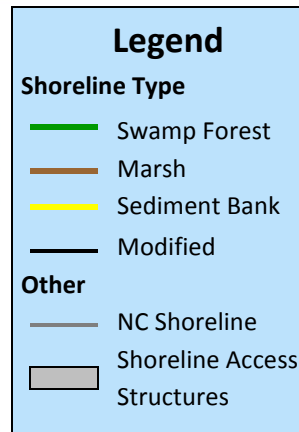
Shoreline Access Structures
Total Acreage: 5.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.0	2
Pier/Float Dock/Wharf	4.1	223
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	91	<.1	6
Breakwater	632	.1	8
Groin	1,119	.2	31
Jetty	0	0	0
Sill	1,132	.1	5
Rip-rap	12,148	2.3	32
Rip-rap with Marsh waterward	348	.1	3
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	26,945	5.1	42
Bulkhead with Marsh waterward	1,609	.3	5
Bulkhead with Sediment Bank waterward	616	.1	4

Navassa



0 0.5 1 Miles



Estuarine Shoreline

Total Mileage: 23.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	119,732	22.7
Marsh with Rip-rap landward	111	<.1
Marsh with Bulkhead landward	0	0
Sediment Bank	874	.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	745	.1

Shoreline Access Structures

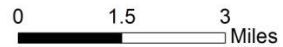
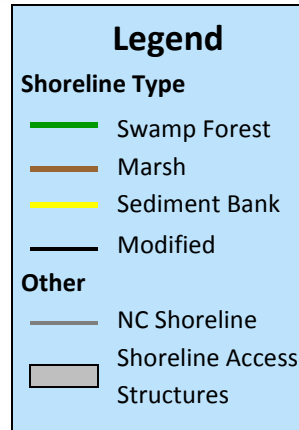
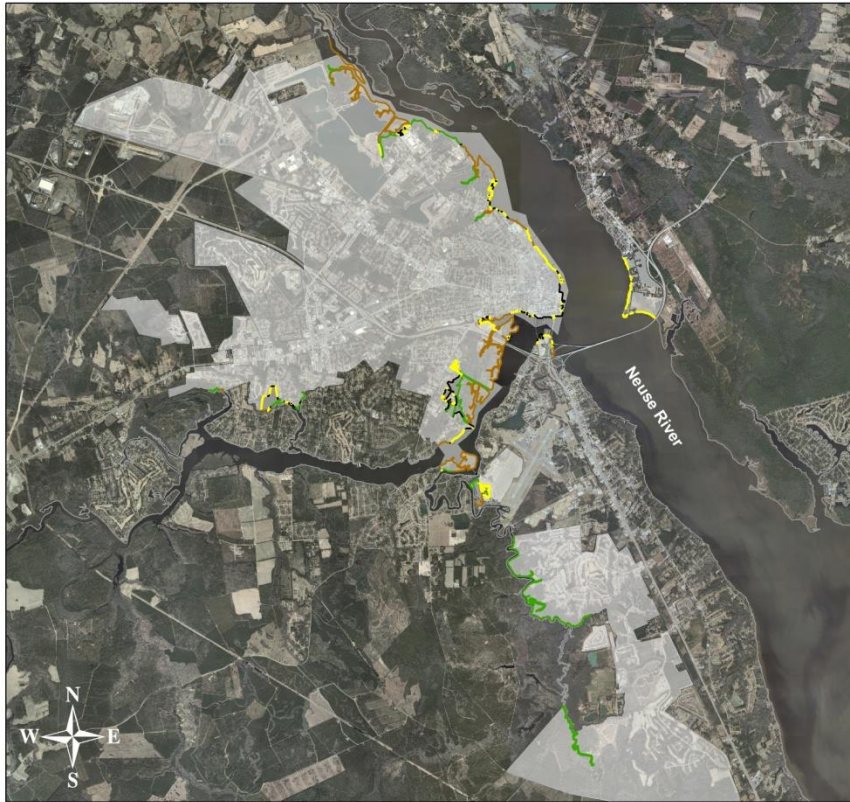
Total Acreage: .9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.6	3
Pier/Float Dock/Wharf	.3	9
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	33	<.1	2
Breakwater	0	0	0
Groin	50	<.1	1
Jetty	0	0	0
Sill	0	0	0
Rip-rap	506	.1	1
Rip-rap with Marsh waterward	124	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	204	.1	2
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

New Bern



Estuarine Shoreline

Total Mileage: 40.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	25,694	4.9
Marsh	142,536	27.0
Marsh with Rip-rap landward	120	<.1
Marsh with Bulkhead landward	1,836	.3
Sediment Bank	31,467	6.0
Sediment Bank with Rip-rap landward	452	.1
Sediment Bank with Bulkhead landward	440	.1
Modified	38,559	7.3

Shoreline Access Structures

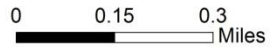
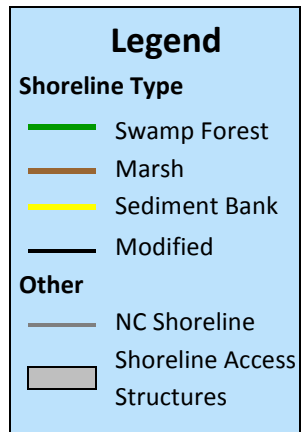
Total Acreage: 17.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	12.3	4
Pier/Float Dock/Wharf	5.4	202
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	358	.1	16
Breakwater	0	0	0
Groin	194	<.1	5
Jetty	72	<.1	1
Sill	0	0	0
Rip-rap	5,732	1.0	23
Rip-rap with Marsh waterward	111	<.1	1
Rip-rap with Sediment Bank waterward	477	.1	3
Bulkhead	32,768	6.2	54
Bulkhead with Marsh waterward	1,764	.3	7
Bulkhead with Sediment Bank waterward	490	.1	6

Newport



Estuarine Shoreline

Total Mileage: 7.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	31,072	5.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	4,804	.9
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	101	<.1
Modified	4,284	.8

Shoreline Access Structures

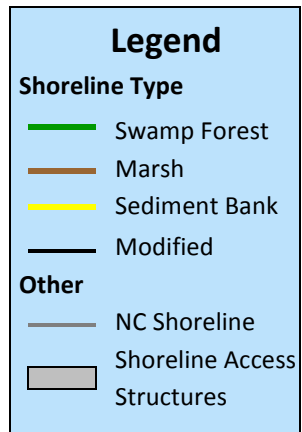
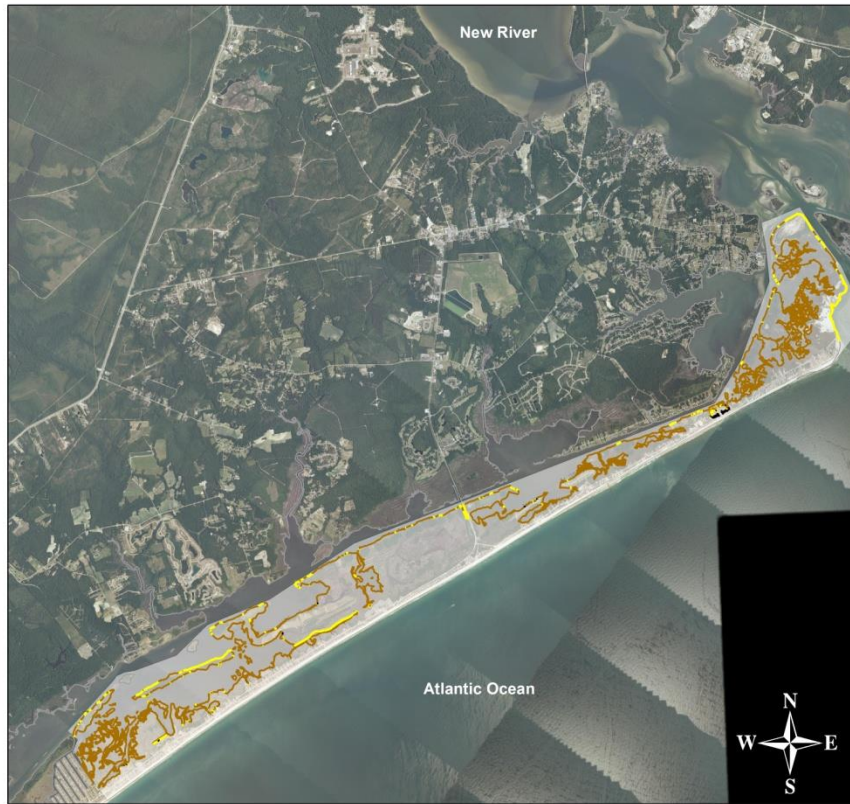
Total Acreage: .7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.3	7
Pier/Float Dock/Wharf	.4	33
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	121	<.1	8
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	306	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	3,856	.7	14
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	74	<.1	1

North Topsail Beach



Estuarine Shoreline

Total Mileage: 108.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	497,356	94.2
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	2,577	.4
Sediment Bank	67,937	12.9
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	4,635	.9

Shoreline Access Structures

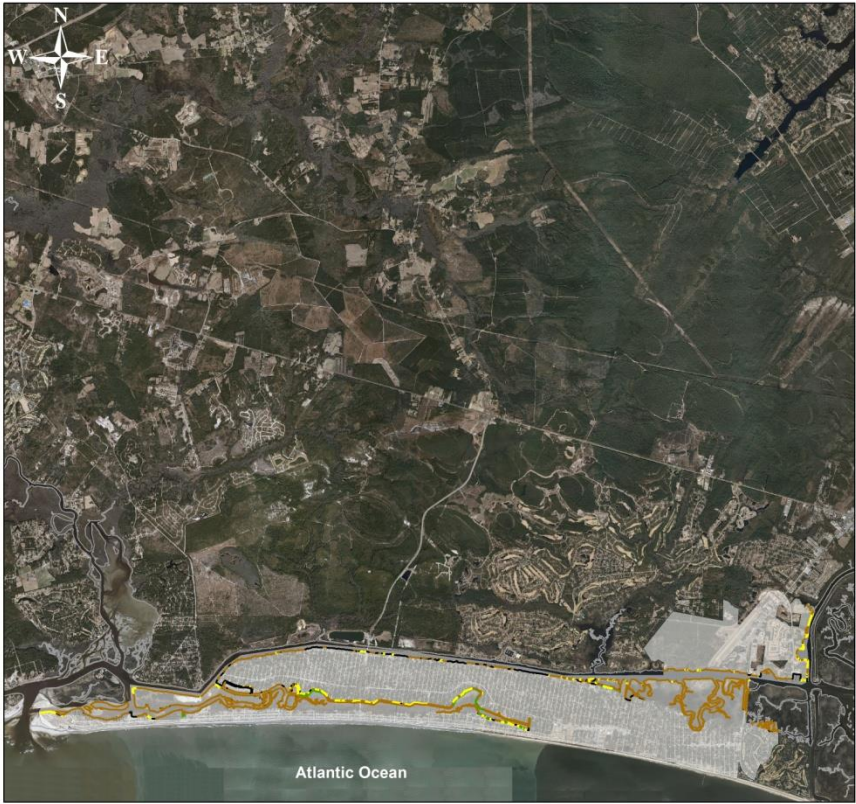
Total Acreage: 5.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.9	2
Pier/Float Dock/Wharf	3.4	163
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	330	.1	23
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	153	<.1	1
Rip-rap	455	.1	4
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	3,849	.7	22
Bulkhead with Marsh waterward	2,241	.4	13
Bulkhead with Sediment Bank waterward	74	<.1	1

Oak Island



Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures

0 1 2 Miles



Estuarine Shoreline
Total Mileage: 51.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	220,967	41.8
Marsh with Rip-rap landward	490	.1
Marsh with Bulkhead landward	20,747	3.9
Sediment Bank	7,174	1.4
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	21,804	4.1

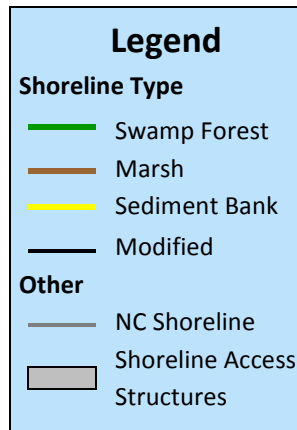
Shoreline Access Structures
Total Acreage: 16.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	3.3	5
Pier/Float Dock/Wharf	12.8	658
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	230	.1	11
Breakwater	41	<.1	1
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	2,332	.4	9
Rip-rap with Marsh waterward	505	.1	5
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	22,379	4.2	74
Bulkhead with Marsh waterward	19,660	3.7	92
Bulkhead with Sediment Bank waterward	0	0	0

Ocean Isle Beach



0 0.5 1 Miles



Estuarine Shoreline

Total Mileage: 33.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	76,773	14.5
Marsh with Rip-rap landward	2,690	.5
Marsh with Bulkhead landward	32,015	6.0
Sediment Bank	6,581	1.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	235	.1
Modified	58,991	11.2

Shoreline Access Structures

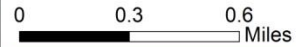
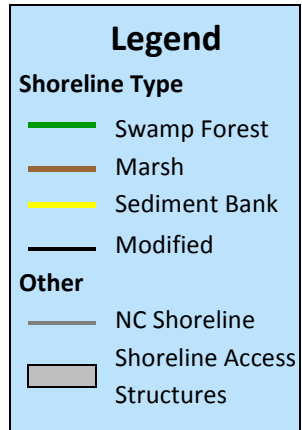
Total Acreage: 11.5

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.4	1
Pier/Float Dock/Wharf	10.1	1,283
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	157	<.1	9
Breakwater	0	0	0
Groin	407	.1	11
Jetty	0	0	0
Sill	0	0	0
Rip-rap	2,331	.4	8
Rip-rap with Marsh waterward	2,579	.4	5
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	57,164	10.8	44
Bulkhead with Marsh waterward	30,976	5.8	57
Bulkhead with Sediment Bank waterward	0	0	0

Oriental



Estuarine Shoreline

Total Mileage: 11.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	19,868	3.8
Marsh with Rip-rap landward	228	.1
Marsh with Bulkhead landward	1,111	.2
Sediment Bank	11,431	2.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	27,972	5.3

Shoreline Access Structures

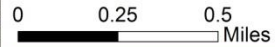
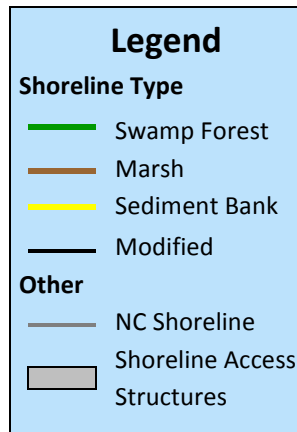
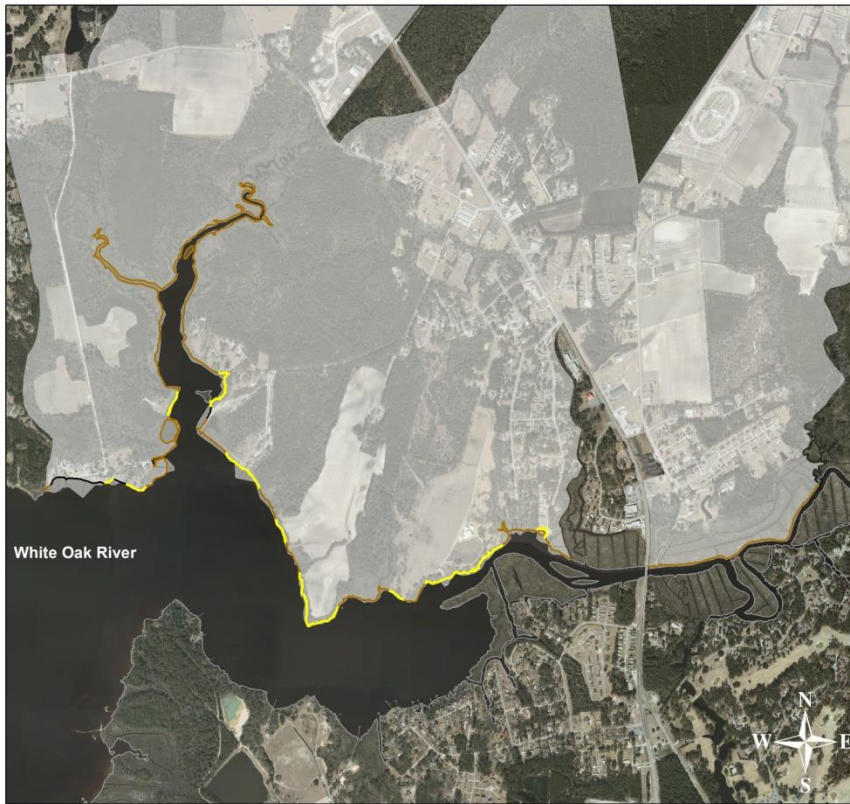
Total Acreage: .2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.2	238
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	115	<.1	7
Breakwater	565	.1	3
Groin	139	<.1	3
Jetty	632	.1	1
Sill	137	<.1	1
Rip-rap	14,221	2.6	21
Rip-rap with Marsh waterward	320	.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	13,636	2.5	40
Bulkhead with Marsh waterward	1,218	.2	6
Bulkhead with Sediment Bank waterward	0	0	0

Peletier



Estuarine Shoreline

Total Mileage: 5.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	24,586	4.7
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	4,294	.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	337	.1
Modified	1,318	.2

Shoreline Access Structures

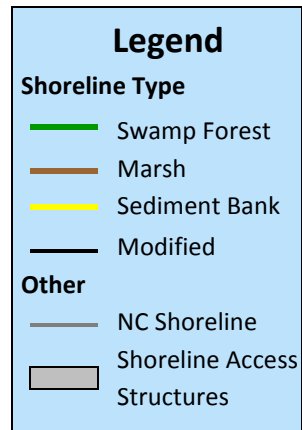
Total Acreage: .3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.3	21
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	32	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	765	.1	2
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	520	.1	4
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	352	.1	1

Pine Knoll Shores



Estuarine Shoreline

Total Mileage: 11.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	24,863	4.7
Marsh with Rip-rap landward	246	.1
Marsh with Bulkhead landward	5,792	1.0
Sediment Bank	419	.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	30,792	5.8

Shoreline Access Structures

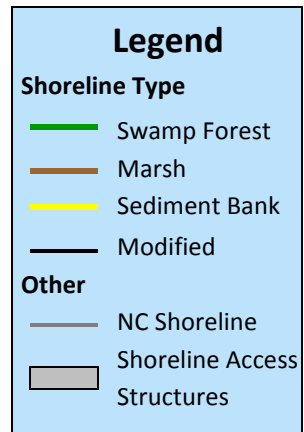
Total Acreage: 2.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	2
Pier/Float Dock/Wharf	2.6	264
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	78	<.1	1
Breakwater	174	<.1	1
Groin	0	0	0
Jetty	0	0	0
Sill	853	.1	3
Rip-rap	1,282	.2	5
Rip-rap with Marsh waterward	198	<.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	29,431	5.5	20
Bulkhead with Marsh waterward	5,486	1.0	16
Bulkhead with Sediment Bank waterward	0	0	0

Plymouth



Estuarine Shoreline

Total Mileage: 5.1

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	9,716	1.8
Marsh	11,921	2.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	71	<.1
Sediment Bank	3,997	.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,256	.2

Shoreline Access Structures

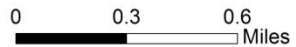
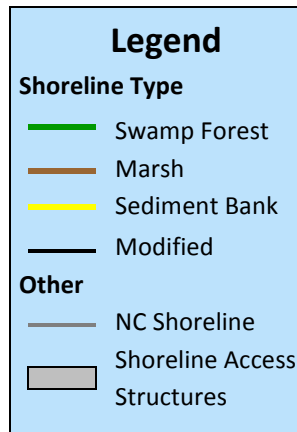
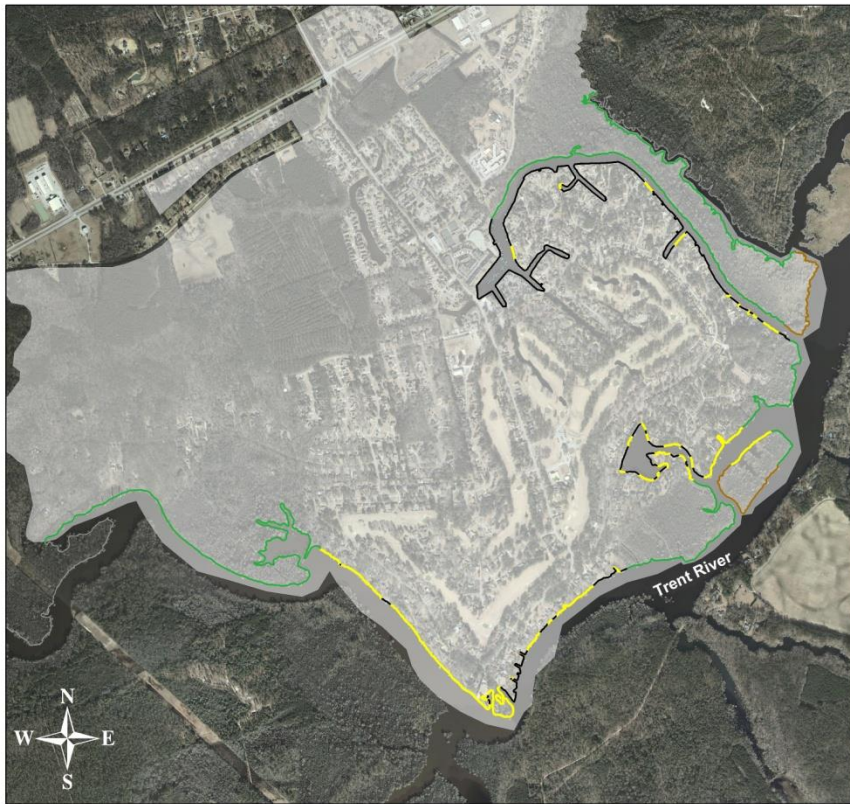
Total Acreage: 1.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.7	4
Pier/Float Dock/Wharf	.4	18
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	51	<.1	3
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	766	.1	5
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	523	.1	3
Bulkhead with Marsh waterward	86	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

River Bend



Estuarine Shoreline

Total Mileage: 13.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	19,393	3.7
Marsh	21,279	4.0
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	105	<.1
Sediment Bank	3,820	.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	27,362	5.2

Shoreline Access Structures

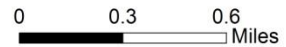
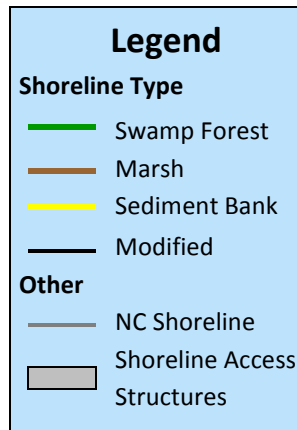
Total Acreage: 1.9

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	3
Pier/Float Dock/Wharf	1.9	210
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	71	<.1	3
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	955	.1	4
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	26,335	4.9	20
Bulkhead with Marsh waterward	99	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

Saint James



Estuarine Shoreline

Total Mileage: 5.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	23,615	4.5
Marsh with Rip-rap landward	189	.1
Marsh with Bulkhead landward	1,855	.3
Sediment Bank	51	<.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	3,007	.6

Shoreline Access Structures

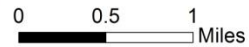
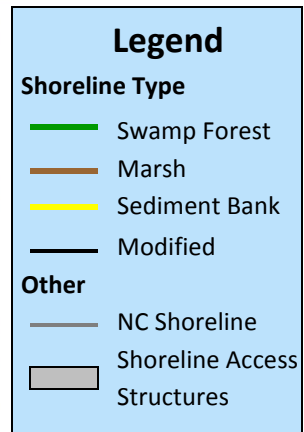
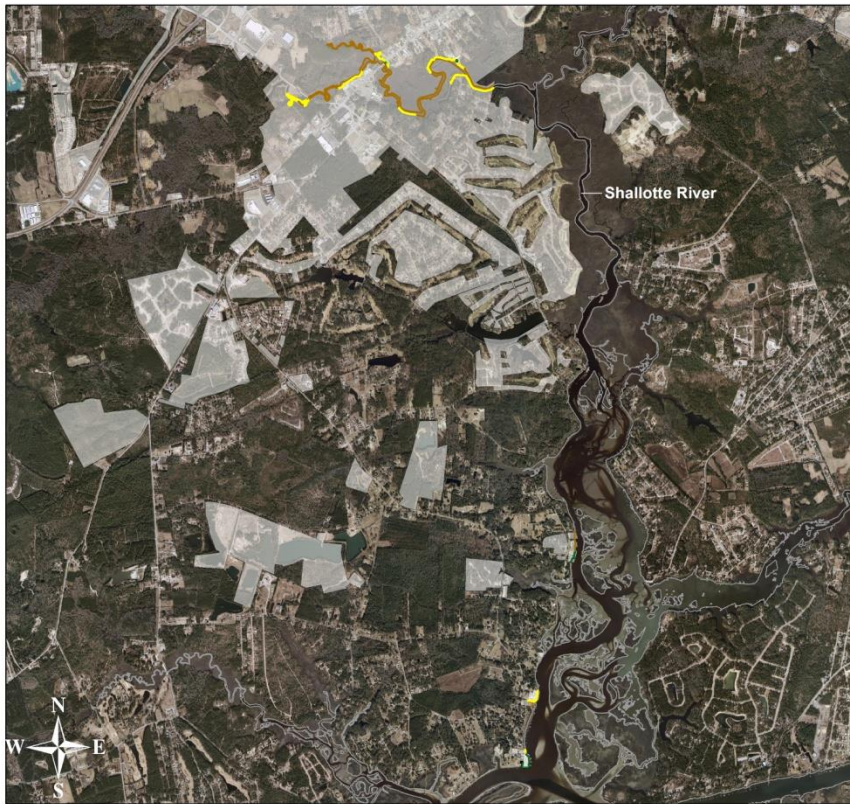
Total Acreage: 2.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	2.1	46
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	0	0	0
Breakwater	2,017	.3	23
Groin	62	<.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	192	<.1	2
Rip-rap with Marsh waterward	220	.1	3
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	2,935	.5	3
Bulkhead with Marsh waterward	1,808	.3	5
Bulkhead with Sediment Bank waterward	35	<.1	1

Shalotte



Estuarine Shoreline

Total Mileage: 5.8

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	19,611	3.7
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	410	.1
Sediment Bank	8,768	1.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	107	<.1
Modified	2,324	.4

Shoreline Access Structures

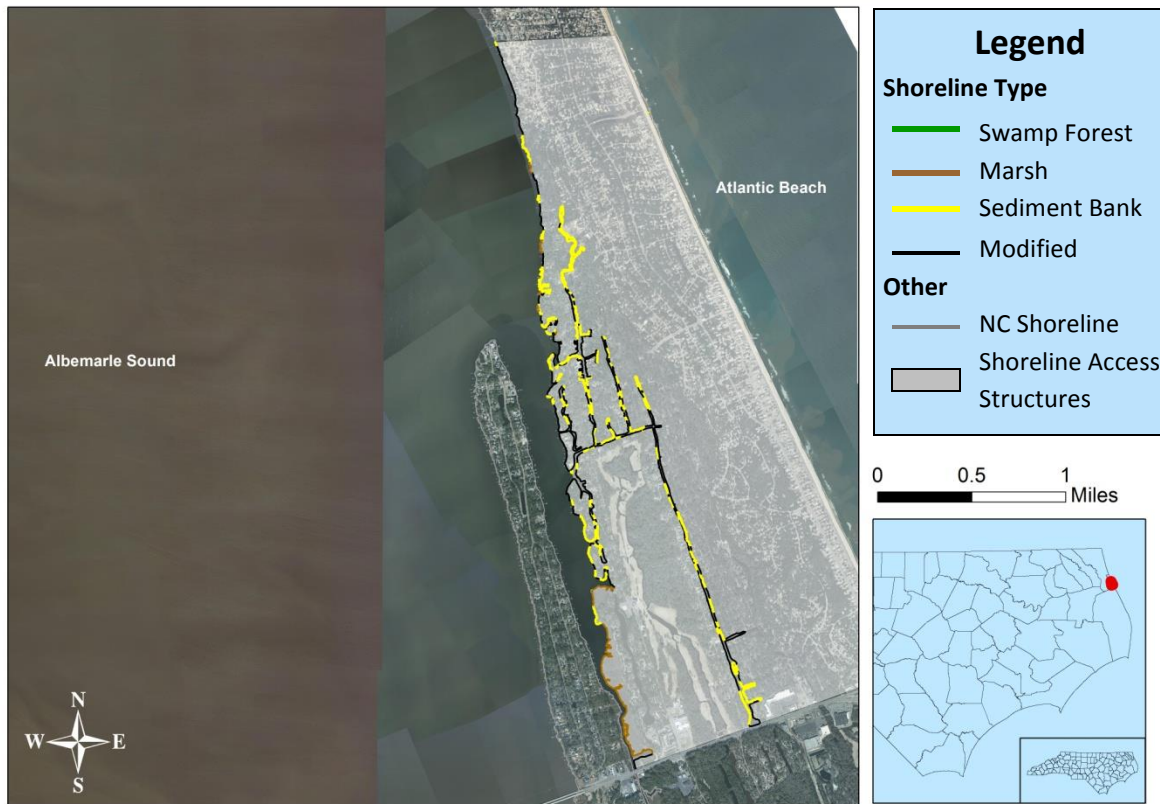
Total Acreage: .4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	2
Pier/Float Dock/Wharf	.3	30
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	67	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	806	.1	4
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	1,481	.2	5
Bulkhead with Marsh waterward	399	.1	3
Bulkhead with Sediment Bank waterward	102	<.1	2

Southern Shores



Estuarine Shoreline

Total Mileage: 21.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	11,159	2.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	334	.1
Sediment Bank	25,282	4.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	129	<.1
Modified	76,735	14.5

Shoreline Access Structures

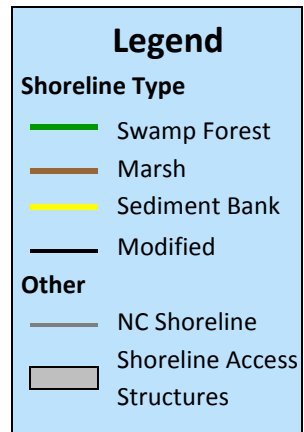
Total Acreage: 2.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	3
Pier/Float Dock/Wharf	2.1	229
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	95	<.1	6
Breakwater	274	.1	6
Groin	295	.1	14
Jetty	0	0	0
Sill	0	0	0
Rip-rap	915	.1	5
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	75,396	14.2	55
Bulkhead with Marsh waterward	257	.1	2
Bulkhead with Sediment Bank waterward	122	<.1	1

Southport



0 0.5 1 Miles



Estuarine Shoreline

Total Mileage: 7.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	19,980	3.8
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	334	.1
Sediment Bank	7,335	1.4
Sediment Bank with Rip-rap landward	290	.1
Sediment Bank with Bulkhead landward	1,110	.2
Modified	9,742	1.8

Shoreline Access Structures

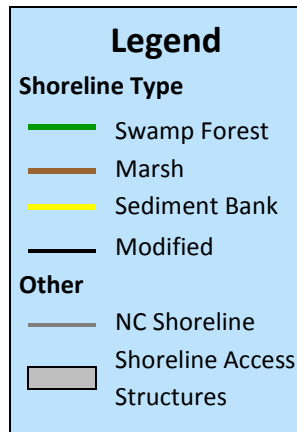
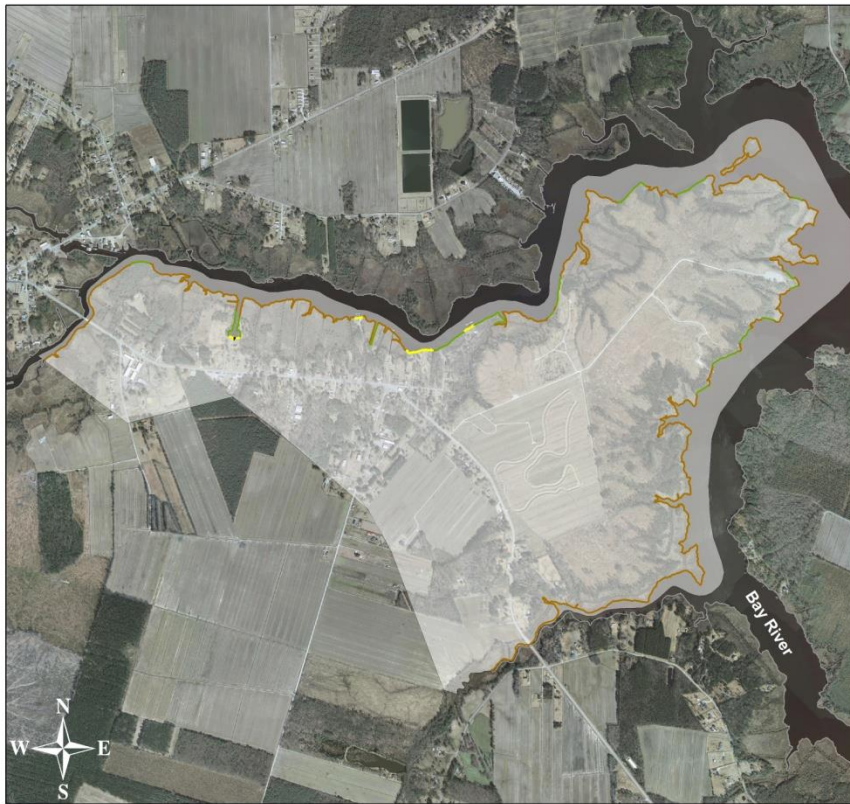
Total Acreage: 4.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	4.6	80
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	74	<.1	3
Breakwater	0	0	0
Groin	470	.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,170	.2	7
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	314	.1	2
Bulkhead	8,620	1.6	10
Bulkhead with Marsh waterward	330	.1	2
Bulkhead with Sediment Bank waterward	1,066	.2	5

Stonewall



Estuarine Shoreline

Total Mileage: 9.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	44,517	8.4
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	2,701	.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	41	<.1
Modified	229	.1

Shoreline Access Structures

Total Acreage: .3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.3	7
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	22	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	262	.1	3
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	43	<.1	1

Sunset Beach



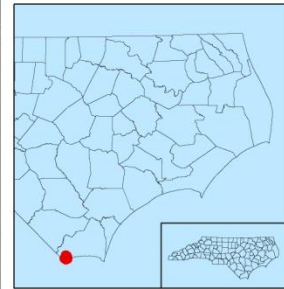
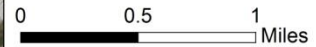
Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures



Estuarine Shoreline

Total Mileage: 40.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	183,560	34.8
Marsh with Rip-rap landward	687	.1
Marsh with Bulkhead landward	14,658	2.7
Sediment Bank	5,549	1.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	534	.1
Modified	11,955	2.3

Shoreline Access Structures

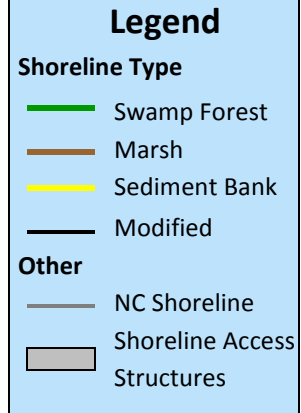
Total Acreage: 8.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	2.1	1
Pier/Float Dock/Wharf	6.2	331
Culvert	0	0

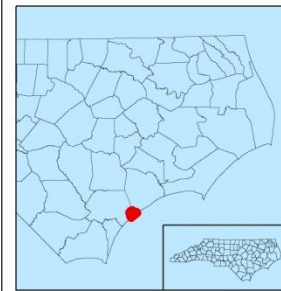
Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	75	<.1	4
Breakwater	0	0	0
Groin	586	.1	13
Jetty	0	0	0
Sill	0	0	0
Rip-rap	805	.1	5
Rip-rap with Marsh waterward	697	.1	5
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	11,262	2.1	36
Bulkhead with Marsh waterward	14,332	2.7	55
Bulkhead with Sediment Bank waterward	553	.1	3

Surf City



0 0.5 1
Miles



Estuarine Shoreline

Total Mileage: 70.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	315,753	59.8
Marsh with Rip-rap landward	450	.1
Marsh with Bulkhead landward	4,185	.7
Sediment Bank	13,256	2.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	330	.1
Modified	36,381	6.9

Shoreline Access Structures

Total Acreage: 10.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.4	2
Pier/Float Dock/Wharf	10.2	874
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	2,962	.5	245
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	2,283	.4	11
Rip-rap with Marsh waterward	434	.1	3
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	35,816	6.7	249
Bulkhead with Marsh waterward	4,287	.8	22
Bulkhead with Sediment Bank waterward	983	.1	4

Swansboro



Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures

0 0.25 0.5 Miles



Estuarine Shoreline

Total Mileage: 4.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	11,764	2.2
Marsh with Rip-rap landward	568	.1
Marsh with Bulkhead landward	2,372	.4
Sediment Bank	2,866	.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	469	.1
Modified	7,105	1.3

Shoreline Access Structures

Total Acreage: 4.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.9	2
Pier/Float Dock/Wharf	2.1	83
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	24	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	1,343	.2	6
Rip-rap with Marsh waterward	545	.1	1
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	5,854	1.1	18
Bulkhead with Marsh waterward	2,257	.4	12
Bulkhead with Sediment Bank waterward	431	.1	3

Topsail Beach



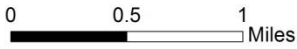
Legend

Shoreline Type

- Swamp Forest
- Marsh
- Sediment Bank
- Modified

Other

- NC Shoreline
- Shoreline Access Structures



Estuarine Shoreline
Total Mileage: 7.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	9,005	1.7
Marsh with Rip-rap landward	349	.1
Marsh with Bulkhead landward	4,405	.8
Sediment Bank	1,181	.2
Sediment Bank with Rip-rap landward	98	<.1
Sediment Bank with Bulkhead landward	1,043	.2
Modified	23,950	4.5

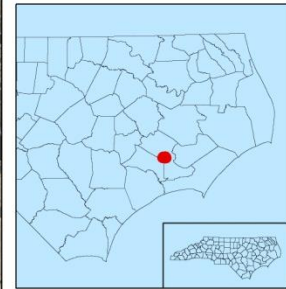
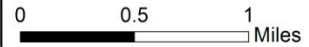
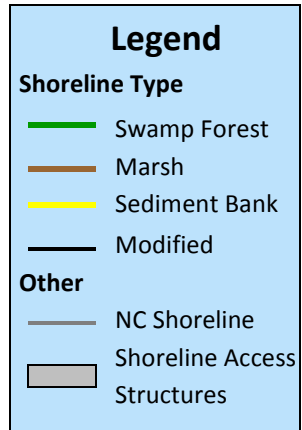
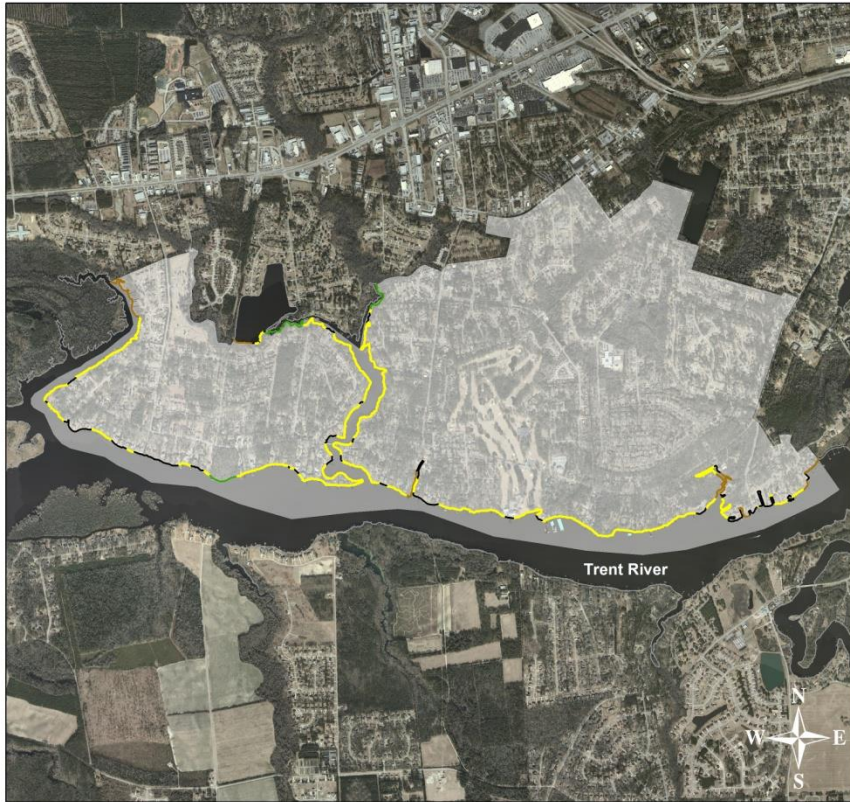
Shoreline Access Structures
Total Acreage: 7.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	7.6	442
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	198	<.1	12
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	588	.1	7
Rip-rap with Marsh waterward	337	.1	1
Rip-rap with Sediment Bank waterward	83	<.1	1
Bulkhead	23,173	4.3	31
Bulkhead with Marsh waterward	4,248	.8	30
Bulkhead with Sediment Bank waterward	1,058	.2	6

Trent Woods



Estuarine Shoreline

Total Mileage: 9.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	13,921	2.6
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	791	.1
Sediment Bank	16,874	3.2
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	306	.1
Modified	18,074	3.4

Shoreline Access Structures

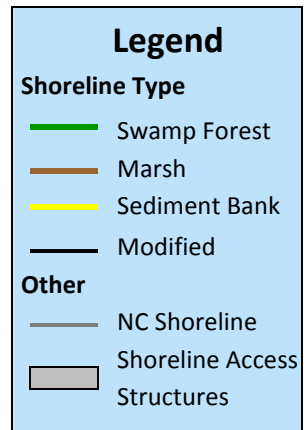
Total Acreage: 4.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.2	2
Pier/Float Dock/Wharf	4.2	171
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	72	<.1	6
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	4,163	.7	19
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	13,889	2.6	32
Bulkhead with Marsh waterward	1,005	.2	5
Bulkhead with Sediment Bank waterward	51	<.1	2

Vanceboro



Estuarine Shoreline

Total Mileage: 1.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	3,725	.7
Marsh	2,727	.5
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	59	<.1
Sediment Bank	0	0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	155	<.1

Shoreline Access Structures

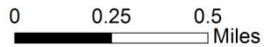
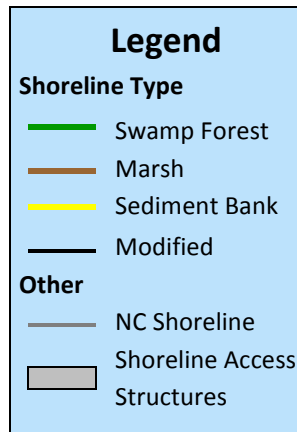
Total Acreage: .1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.1	2
Pier/Float Dock/Wharf	0	0
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	0	0	0
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	71	<.1	1
Bulkhead with Marsh waterward	53	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

Vandemere



Estuarine Shoreline

Total Mileage: 8.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	28,751	5.4
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	7,751	1.5
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	136	<.1
Modified	10,593	2.0

Shoreline Access Structures

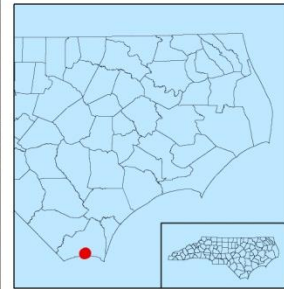
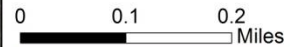
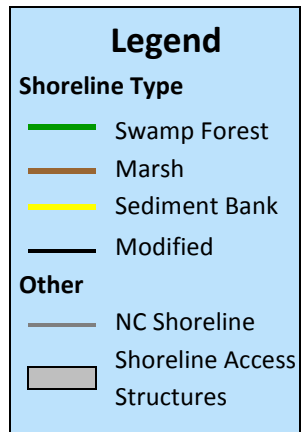
Total Acreage: .8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.8	39
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	91	<.1	5
Breakwater	0	0	0
Groin	31	<.1	1
Jetty	0	0	0
Sill	0	0	0
Rip-rap	6,170	1.1	20
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	4,240	.8	17
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	117	<.1	2

Varnamtown



Estuarine Shoreline

Total Mileage: 1.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	4,044	.8
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	1,350	.2
Sediment Bank	0	0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,108	.2

Shoreline Access Structures

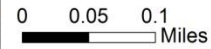
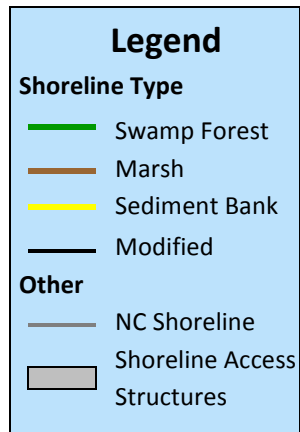
Total Acreage: .8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.8	36
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	55	<.1	2
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	1,052	.2	3
Bulkhead with Marsh waterward	1,500	.2	4
Bulkhead with Sediment Bank waterward	0	0	0

Washington Park



Estuarine Shoreline

Total Mileage: 1.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	360	<.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	4,593	.9
Sediment Bank with Rip-rap landward	102	<.1
Sediment Bank with Bulkhead landward	196	<.1
Modified	3,087	.6

Shoreline Access Structures

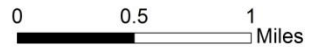
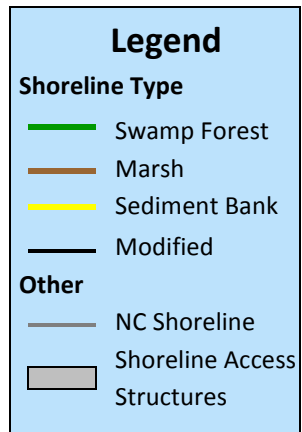
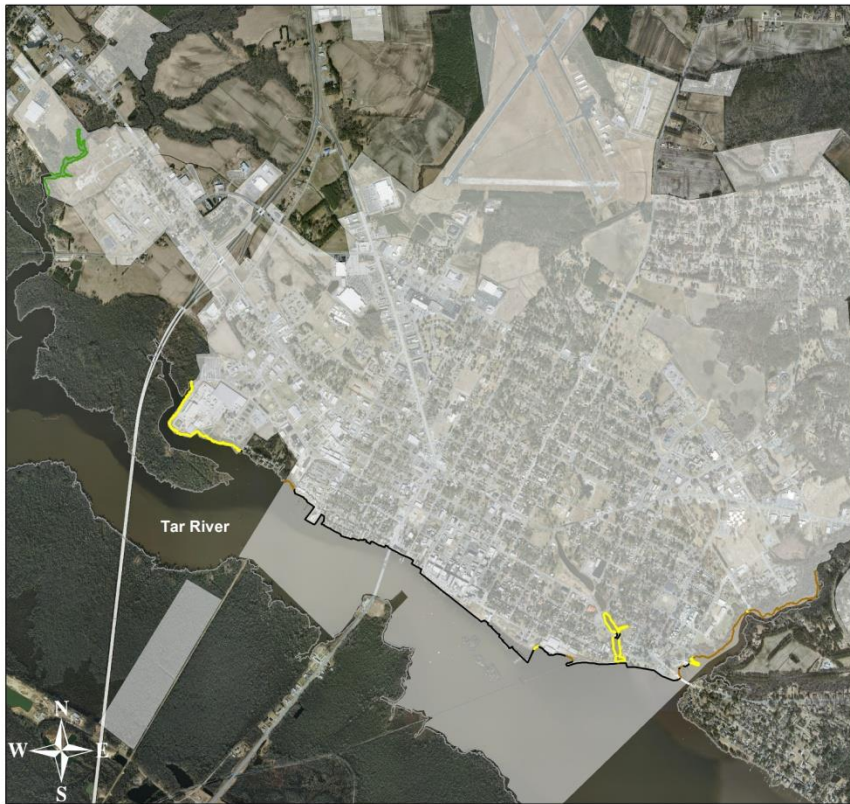
Total Acreage: 1.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.6	2
Pier/Float Dock/Wharf	.4	18
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	32	<.1	3
Breakwater	0	0	0
Groin	364	<.1	11
Jetty	130	<.1	2
Sill	0	0	0
Rip-rap	185	<.1	1
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	90	<.1	1
Bulkhead	2,869	.5	7
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	192	<.1	1

Washington



Estuarine Shoreline

Total Mileage: 8.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	16,646	3.2
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	9,160	1.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	2,524	.4
Modified	13,716	2.6

Shoreline Access Structures

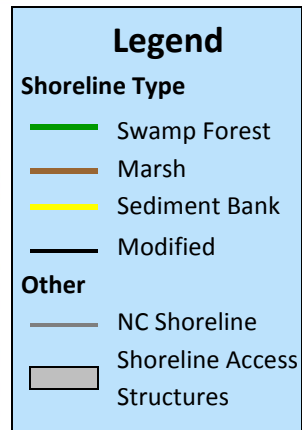
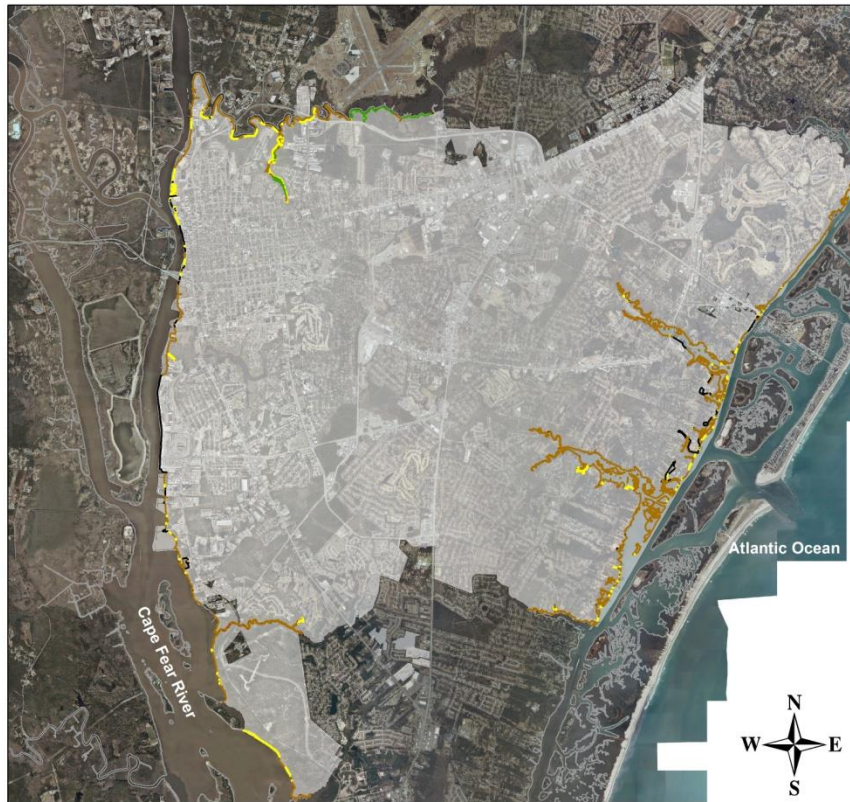
Total Acreage: 3.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	2.3	7
Pier/Float Dock/Wharf	1.3	37
Culvert	<.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	76	<.1	3
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	4,681	.8	9
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	8,829	1.6	13
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	2,380	.4	2

Wilmington



Estuarine Shoreline

Total Mileage: 71.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	2,214	.4
Marsh	306,770	58.1
Marsh with Rip-rap landward	1,986	.3
Marsh with Bulkhead landward	10,895	2.0
Sediment Bank	20,509	3.9
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	4,115	.7
Modified	30,706	5.8

Shoreline Access Structures

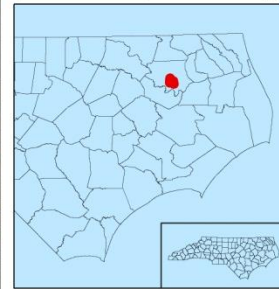
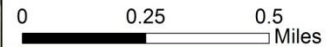
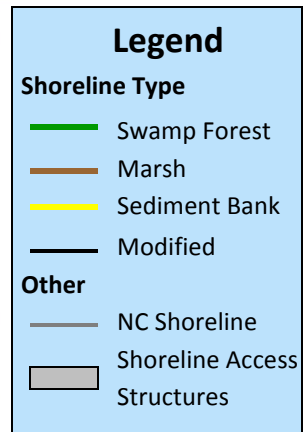
Total Acreage: 46.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	22.5	18
Pier/Float Dock/Wharf	24.2	399
Culvert	<.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	287	<.1	16
Breakwater	0	0	0
Groin	154	<.1	1
Jetty	690	.1	6
Sill	189	<.1	1
Rip-rap	2,162	.4	10
Rip-rap with Marsh waterward	1,845	.3	7
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	28,153	5.3	62
Bulkhead with Marsh waterward	10,367	1.9	42
Bulkhead with Sediment Bank waterward	3,765	.7	8

Windsor



Estuarine Shoreline

Total Mileage: 5.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	22,932	4.3
Marsh	5,288	1.0
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	84	<.1
Sediment Bank	624	.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	495	.1

Shoreline Access Structures

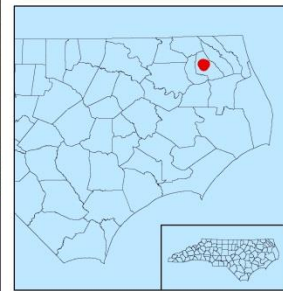
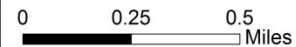
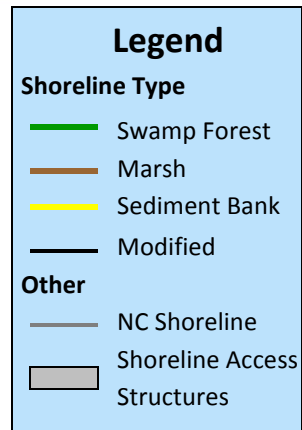
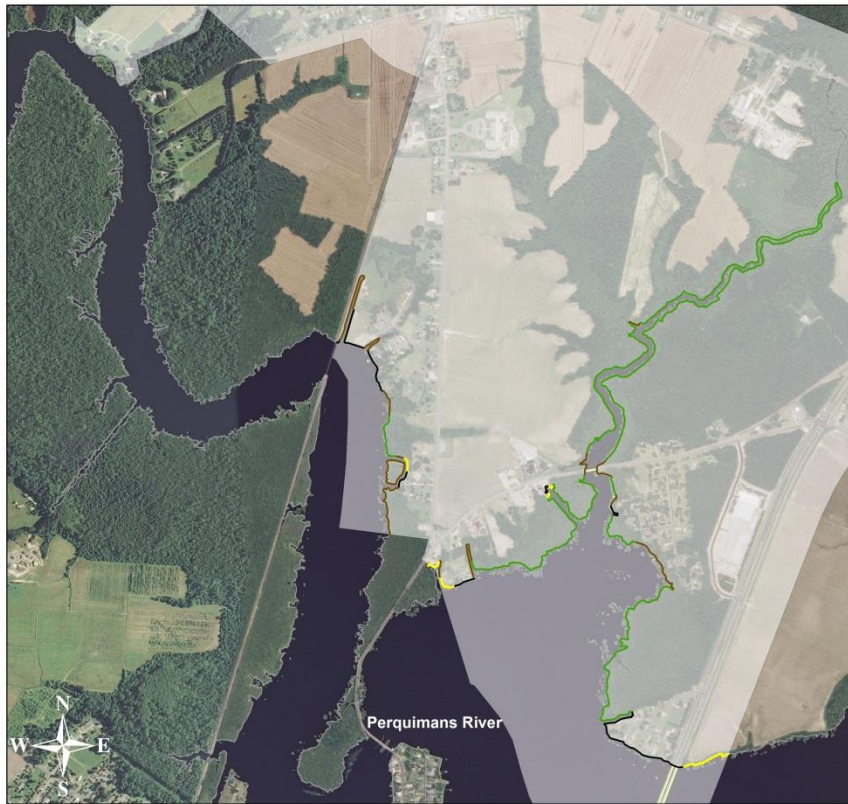
Total Acreage: .6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.2	1
Pier/Float Dock/Wharf	.4	5
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	86	<.1	5
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	322	.1	1
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	322	.1	4
Bulkhead with Marsh waterward	126	<.1	1
Bulkhead with Sediment Bank waterward	0	0	0

Winfall



Estuarine Shoreline

Total Mileage: 6.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	20,436	3.9
Marsh	6,646	1.3
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	1,421	.3
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	3,799	.7

Shoreline Access Structures

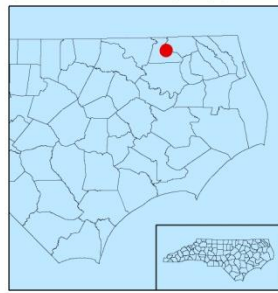
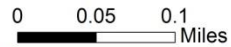
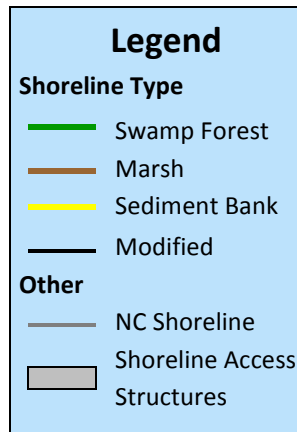
Total Acreage: 5.1

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	4.6	2
Pier/Float Dock/Wharf	.5	25
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	11	<.1	1
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	320	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	3,466	.6	8
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Winton



Estuarine Shoreline

Total Mileage: .5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	1,156	.2
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	0	0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,736	.3

Shoreline Access Structures

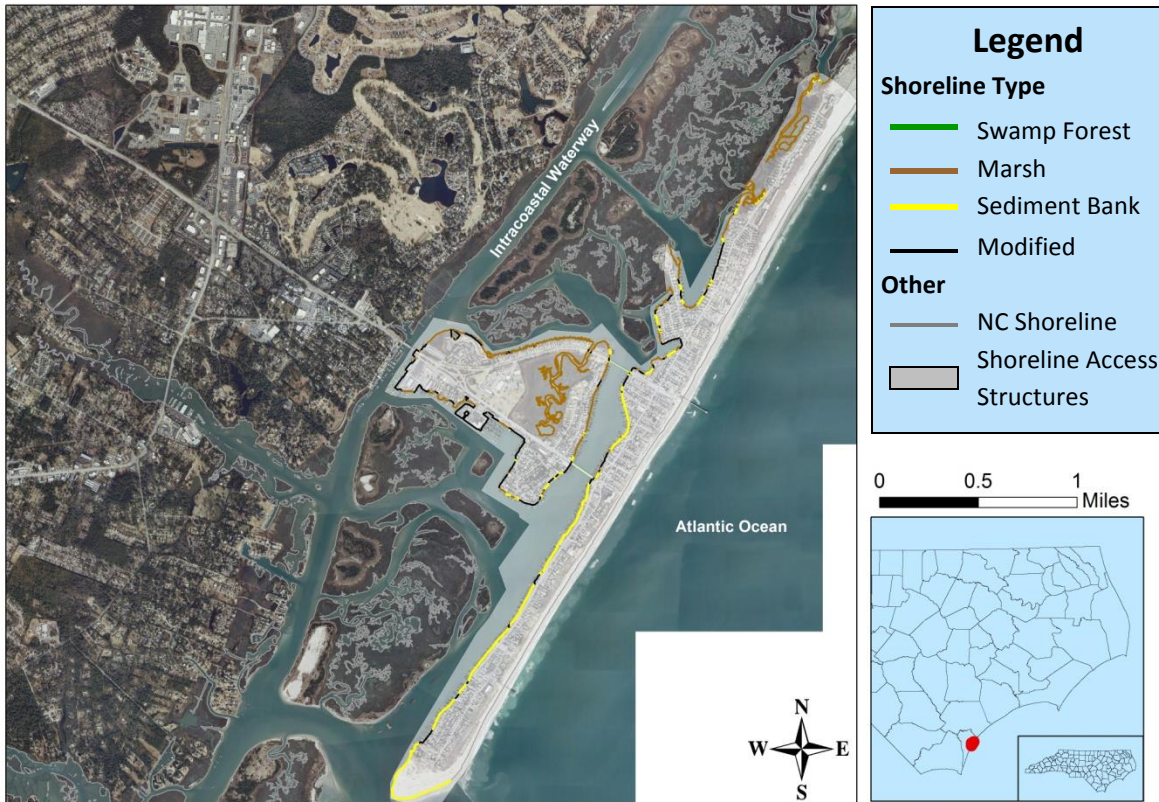
Total Acreage: .3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	0	0
Pier/Float Dock/Wharf	.3	11
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	848	.1	4
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	0	0	0
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	1,712	.3	2
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Wrightsville Beach



Estuarine Shoreline

Total Mileage: 13.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	21,468	4.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	11,269	2.1
Sediment Bank	4,271	.8
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	3,869	.7
Modified	27,867	5.3

Shoreline Access Structures

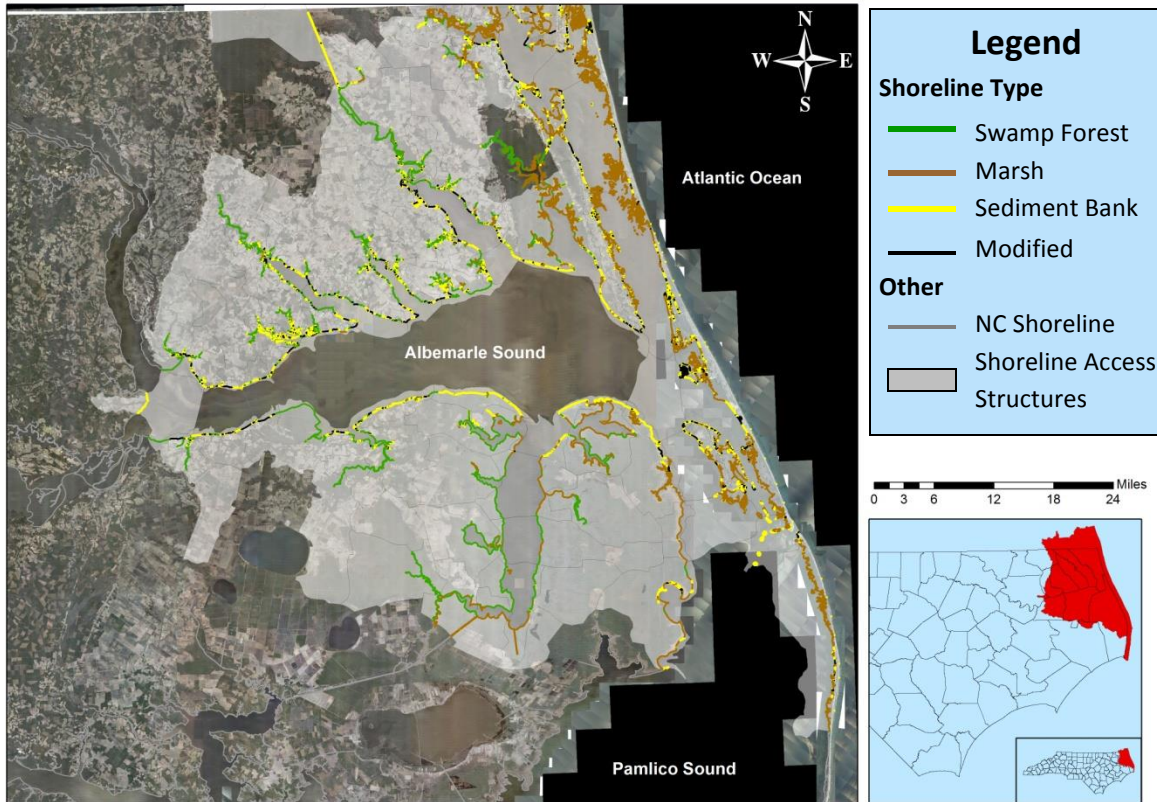
Total Acreage: 17.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	3.0	4
Pier/Float Dock/Wharf	14.7	473
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	848	.1	4
Breakwater	0	0	0
Groin	91	<.1	1
Jetty	87	<.1	2
Sill	0	0	0
Rip-rap	727	.1	3
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	25,959	4.9	51
Bulkhead with Marsh waterward	12,011	2.2	30
Bulkhead with Sediment Bank waterward	4,068	.7	20

Albemarle



Estuarine Shoreline

Total Mileage: 2,456.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	2,706,352	512.6
Marsh	8,094,162	1,533.0
Marsh with Rip-rap landward	3,819	.7
Marsh with Bulkhead landward	37,518	7.1
Sediment Bank	755,254	143.0
Sediment Bank with Rip-rap landward	2,585	.5
Sediment Bank with Bulkhead landward	11,291	2.1
Modified	1,358,076	257.2

Shoreline Access Structures

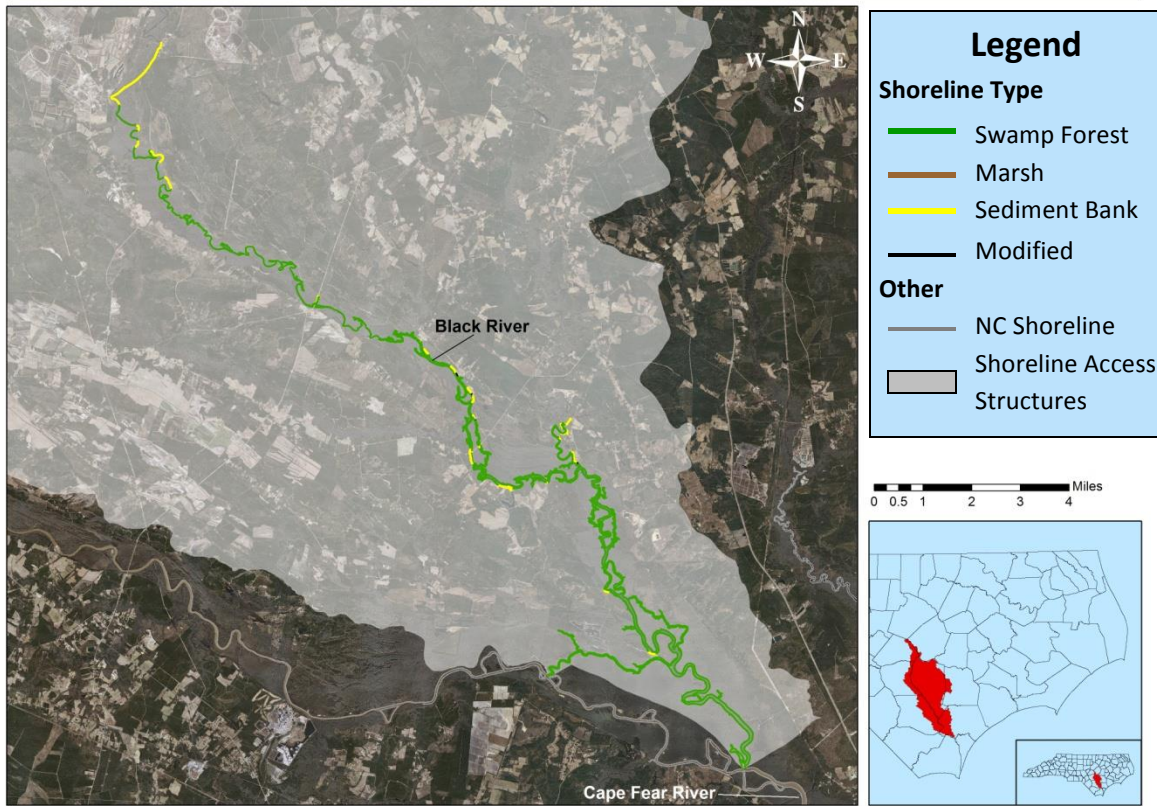
Total Acreage: 240.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	139.0	129
Pier/Float Dock/Wharf	100.6	5,910
Culvert	.7	26

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	8,726	1.7	603
Breakwater	10,486	2.0	106
Groin	29,790	5.6	735
Jetty	6,042	1.1	40
Sill	9,091	1.7	24
Rip-rap	258,806	49.0	713
Rip-rap with Marsh waterward	3,127	.6	23
Rip-rap with Sediment Bank waterward	2,581	.5	10
Bulkhead	1,056,832	200.0	1,983
Bulkhead with Marsh waterward	32,743	6.2	155
Bulkhead with Sediment Bank waterward	14,688	2.8	62

Black



Estuarine Shoreline

Total Mileage: 96.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	409,669	77.6
Marsh	90,516	17.1
Marsh with Rip-rap landward	461	.1
Marsh with Bulkhead landward	0	0
Sediment Bank	8,787	1.7
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	1,341	.2

Shoreline Access Structures

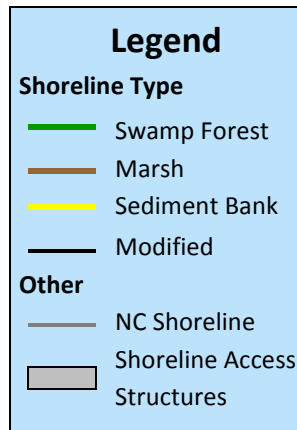
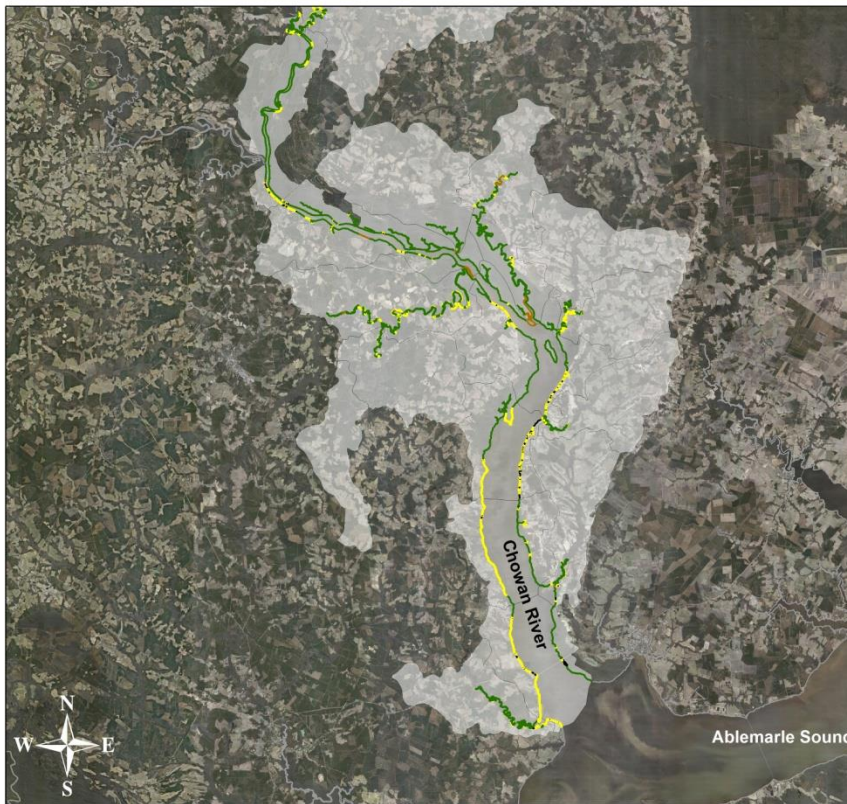
Total Acreage: 1.7

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.0	4
Pier/Float Dock/Wharf	.7	79
Culvert	0	0

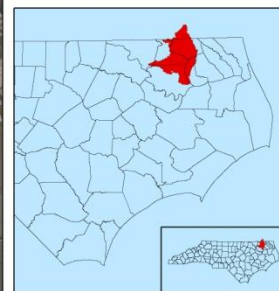
Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	157	<.1	11
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	999	.2	4
Rip-rap with Marsh waterward	434	.1	5
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	184	<.1	1
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	0	0	0

Chowan



0 1.25 2.5 5 7.5 10 Miles



Estuarine Shoreline

Total Mileage: 276.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	1,153,965	218.6
Marsh	158,293	30.0
Marsh with Rip-rap landward	343	.1
Marsh with Bulkhead landward	575	.1
Sediment Bank	77,790	14.7
Sediment Bank with Rip-rap landward	808	.1
Sediment Bank with Bulkhead landward	8,579	1.6
Modified	61,662	11.6

Shoreline Access Structures

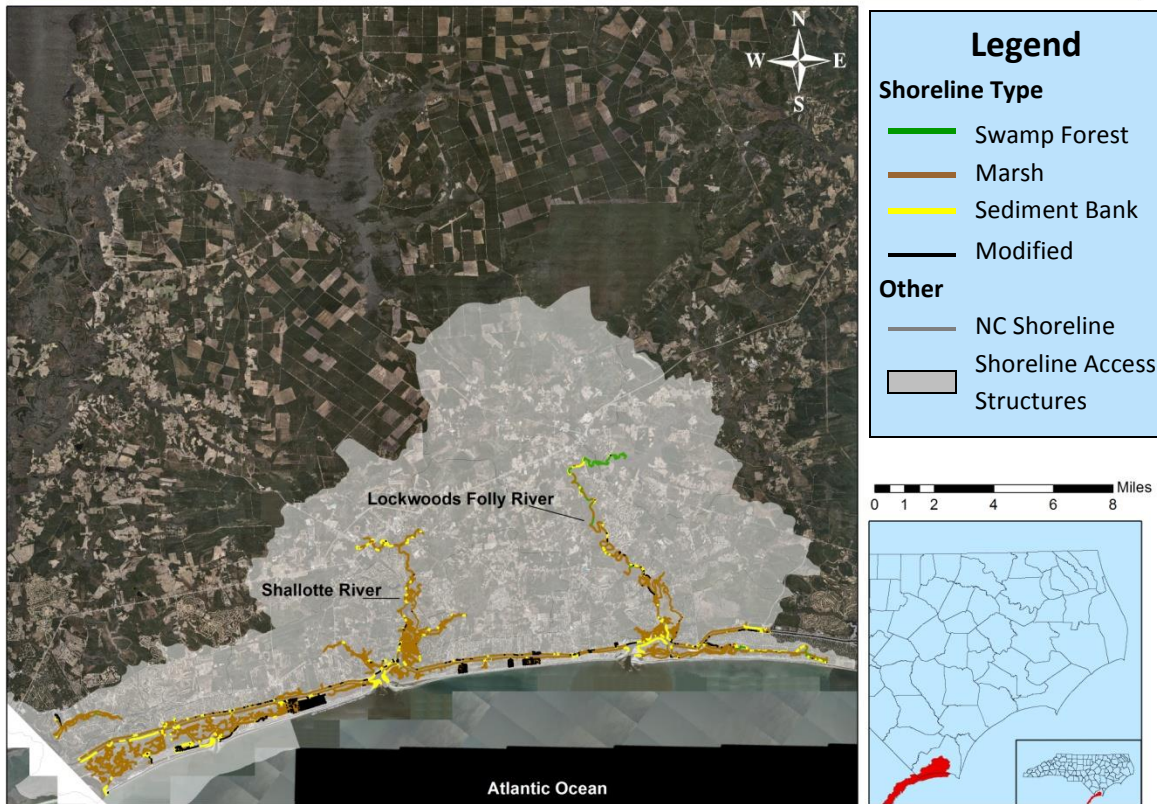
Total Acreage: 28.8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	17.3	12
Pier/Float Dock/Wharf	11.5	456
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	666	.1	45
Breakwater	25	<.1	1
Groin	3,458	.6	131
Jetty	0	0	0
Sill	331	.1	1
Rip-rap	7,926	1.5	35
Rip-rap with Marsh waterward	289	.1	4
Rip-rap with Sediment Bank waterward	781	.1	5
Bulkhead	53,115	10.0	123
Bulkhead with Marsh waterward	322	.1	3
Bulkhead with Sediment Bank waterward	8,744	1.6	29

Coastal Carolina



Estuarine Shoreline

Total Mileage: 382.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	39,248	7.4
Marsh	1,637,506	310.1
Marsh with Rip-rap landward	10,570	2.0
Marsh with Bulkhead landward	108,805	20.6
Sediment Bank	82,221	15.6
Sediment Bank with Rip-rap landward	330	.1
Sediment Bank with Bulkhead landward	1,430	.2
Modified	139,834	26.4

Shoreline Access Structures

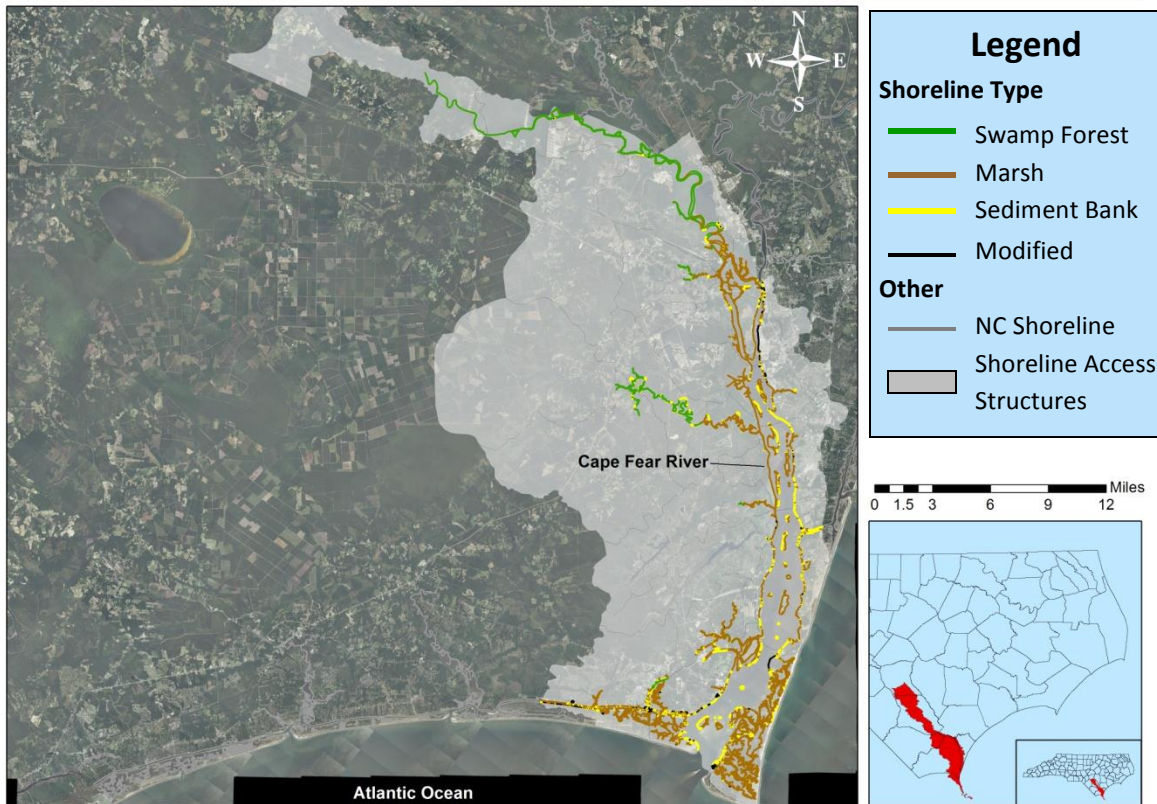
Total Acreage: 72.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	7.8	17
Pier/Float Dock/Wharf	64.5	3,886
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,557	.3	90
Breakwater	0	0	0
Groin	1,174	.2	32
Jetty	0	0	0
Sill	76	<.1	1
Rip-rap	16,171	3.0	52
Rip-rap with Marsh waterward	10,191	1.9	51
Rip-rap with Sediment Bank waterward	310	.1	3
Bulkhead	128,465	24.3	284
Bulkhead with Marsh waterward	108,344	20.5	358
Bulkhead with Sediment Bank waterward	1,147	.2	10

Lower Cape Fear



Estuarine Shoreline

Total Mileage: 530.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	190,983	36.2
Marsh	2,374,316	449.7
Marsh with Rip-rap landward	3,097	.5
Marsh with Bulkhead landward	13,226	2.5
Sediment Bank	152,368	28.9
Sediment Bank with Rip-rap landward	1,030	.2
Sediment Bank with Bulkhead landward	2,037	.3
Modified	66,054	12.5

Shoreline Access Structures

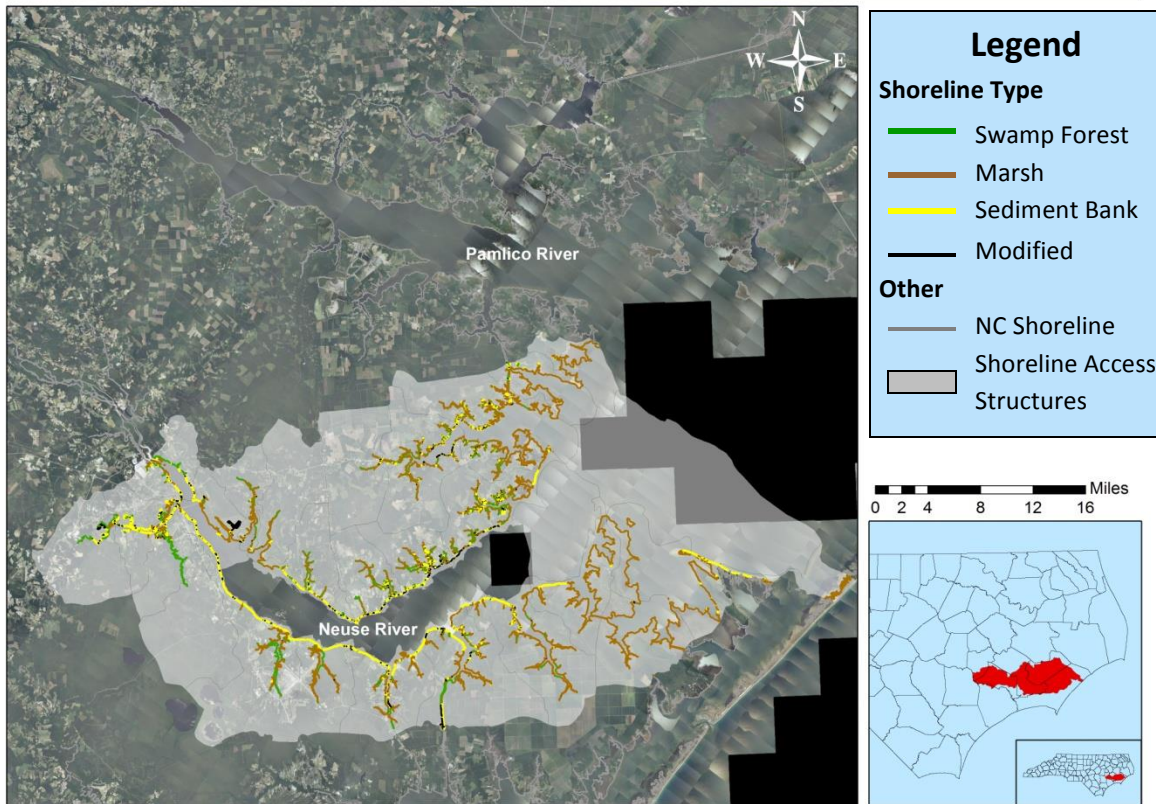
Total Acreage: 62.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	17.2	25
Pier/Float Dock/Wharf	45.4	608
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	958	.1	43
Breakwater	16,573	3.1	28
Groin	1,376	.2	16
Jetty	0	0	0
Sill	0	0	0
Rip-rap	17,798	3.3	51
Rip-rap with Marsh waterward	2,925	.5	12
Rip-rap with Sediment Bank waterward	1,230	.2	10
Bulkhead	50,574	9.5	116
Bulkhead with Marsh waterward	12,615	2.3	54
Bulkhead with Sediment Bank waterward	1,848	.3	11

Lower Neuse



Estuarine Shoreline

Total Mileage: 1,092.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	207,925	39.4
Marsh	4,248,925	804.7
Marsh with Rip-rap landward	3,214	.6
Marsh with Bulkhead landward	12,376	2.3
Sediment Bank	795,487	150.7
Sediment Bank with Rip-rap landward	12,361	2.3
Sediment Bank with Bulkhead landward	16,763	3.1
Modified	471,968	89.3

Shoreline Access Structures

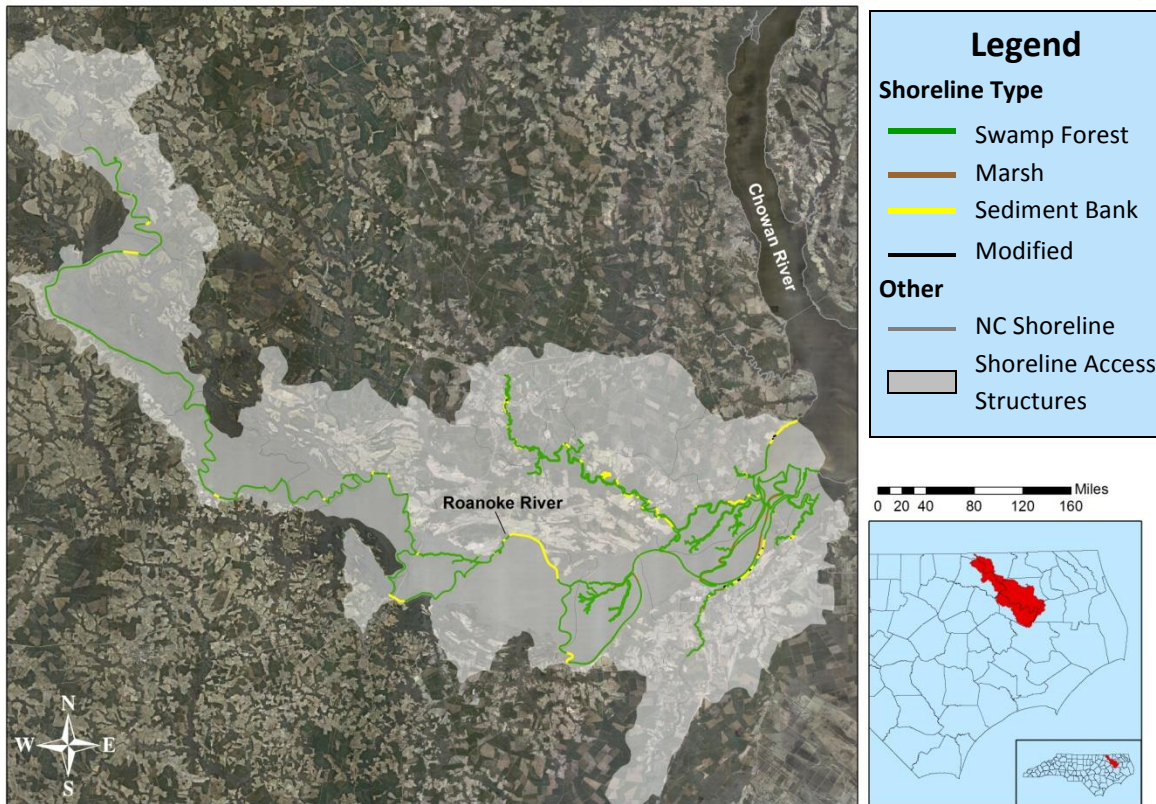
Total Acreage: 110.8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	42.7	51
Pier/Float Dock/Wharf	67.3	3,667
Culvert	.7	10

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	4,820	.9	306
Breakwater	1,781	.3	13
Groin	9,188	1.7	267
Jetty	4,788	.9	15
Sill	2,547	.4	11
Rip-rap	181,935	34.4	546
Rip-rap with Marsh waterward	2,980	.5	20
Rip-rap with Sediment Bank waterward	12,668	2.3	42
Bulkhead	276,466	52.3	822
Bulkhead with Marsh waterward	11,748	2.2	69
Bulkhead with Sediment Bank waterward	16,004	3.0	85

Lower Roanoke



Estuarine Shoreline

Total Mileage: 277.6

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	966,443	183.0
Marsh	475,574	90.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	475	.1
Sediment Bank	16,358	3.1
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	0	0
Modified	7,395	1.4

Shoreline Access Structures

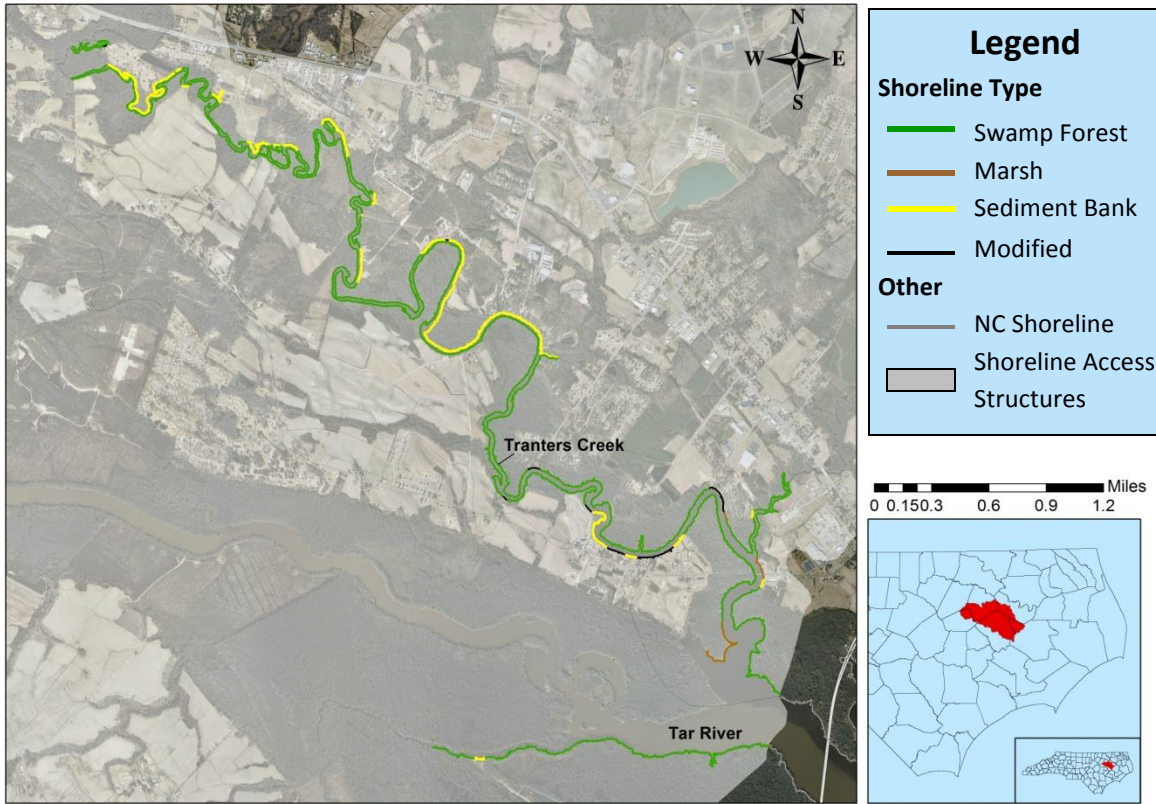
Total Acreage: 14.4

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	12.3	18
Pier/Float Dock/Wharf	2.0	91
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	299	.1	18
Breakwater	0	0	0
Groin	155	<.1	2
Jetty	0	0	0
Sill	0	0	0
Rip-rap	2,006	.3	9
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	4,362	.8	20
Bulkhead with Marsh waterward	383	.1	7
Bulkhead with Sediment Bank waterward	0	0	0

Lower Tar



Estuarine Shoreline

Total Mileage: 21.3

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	54,043	10.2
Marsh	47,167	8.9
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	0	0
Sediment Bank	8,036	1.5
Sediment Bank with Rip-rap landward	69	<.1
Sediment Bank with Bulkhead landward	255	.1
Modified	2,831	.5

Shoreline Access Structures

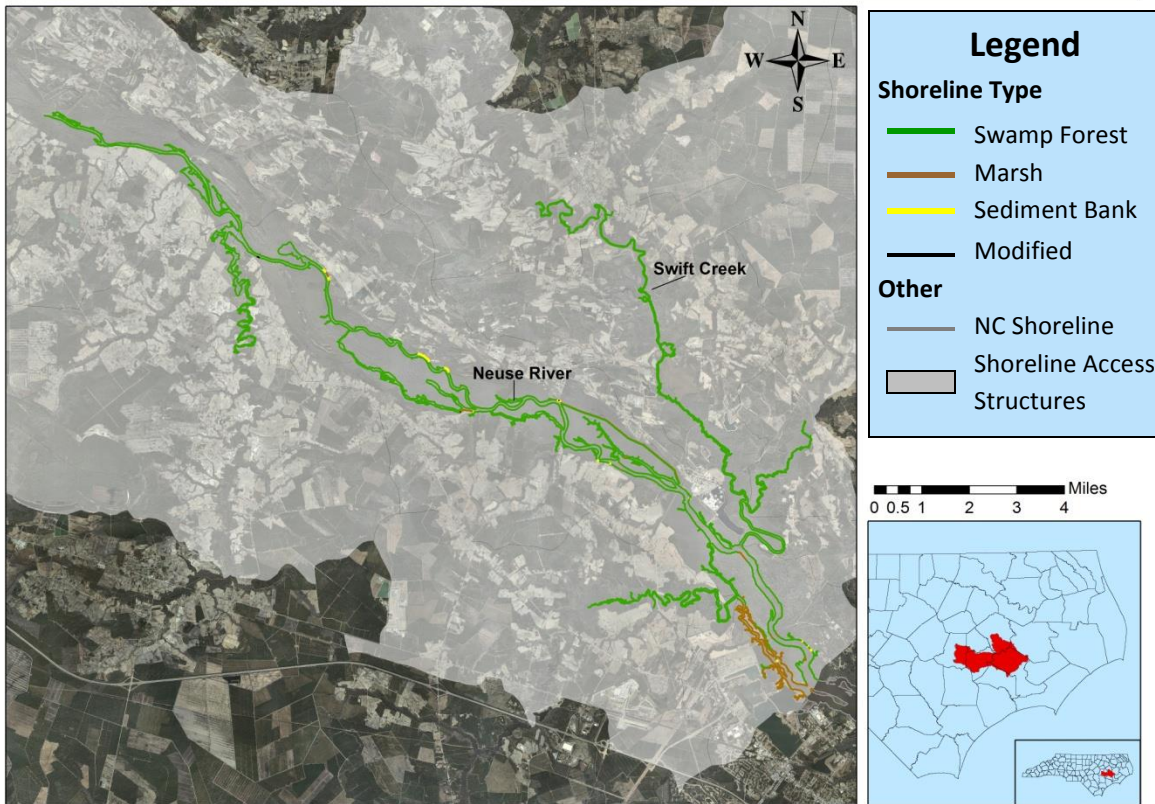
Total Acreage: .8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	.6	2
Pier/Float Dock/Wharf	.2	29
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	101	<.1	5
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	182	<.1	1
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	76	<.1	1
Bulkhead	2,546	.4	8
Bulkhead with Marsh waterward	0	0	0
Bulkhead with Sediment Bank waterward	234	.1	2

Middle Neuse



Estuarine Shoreline

Total Mileage: 166.5

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	680,404	128.9
Marsh	185,297	35.1
Marsh with Rip-rap landward	0	0
Marsh with Bulkhead landward	588	.1
Sediment Bank	10,379	2.0
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	75	<.1
Modified	2,131	.4

Shoreline Access Structures

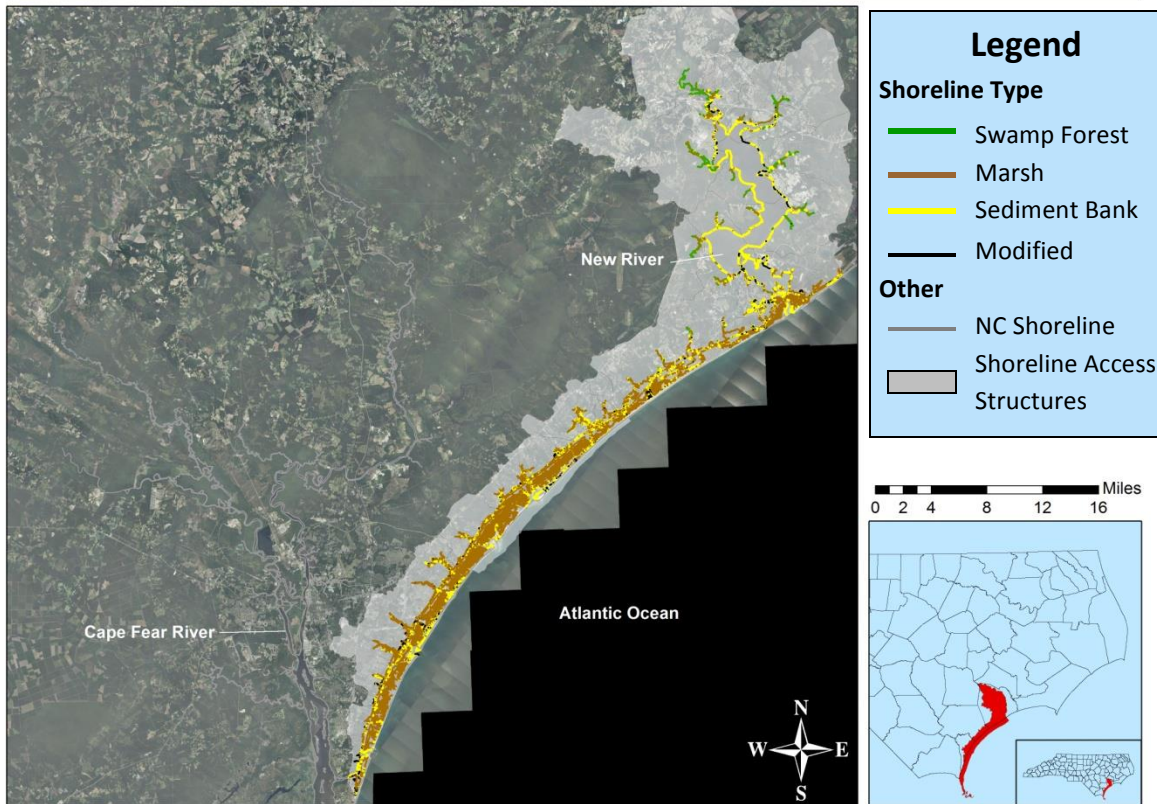
Total Acreage: 2.2

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	1.7	8
Pier/Float Dock/Wharf	.5	25
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	231	.1	13
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	839	.1	7
Rip-rap with Marsh waterward	0	0	0
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	1,060	.2	10
Bulkhead with Marsh waterward	583	.1	11
Bulkhead with Sediment Bank waterward	75	<.1	1

New River



Estuarine Shoreline

Total Mileage: 1,417.9

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	390,338	73.9
Marsh	6,078,924	1,151.3
Marsh with Rip-rap landward	7,256	1.3
Marsh with Bulkhead landward	97,869	18.5
Sediment Bank	608,582	115.3
Sediment Bank with Rip-rap landward	1,422	.2
Sediment Bank with Bulkhead landward	14,601	2.7
Modified	287,522	54.4

Shoreline Access Structures

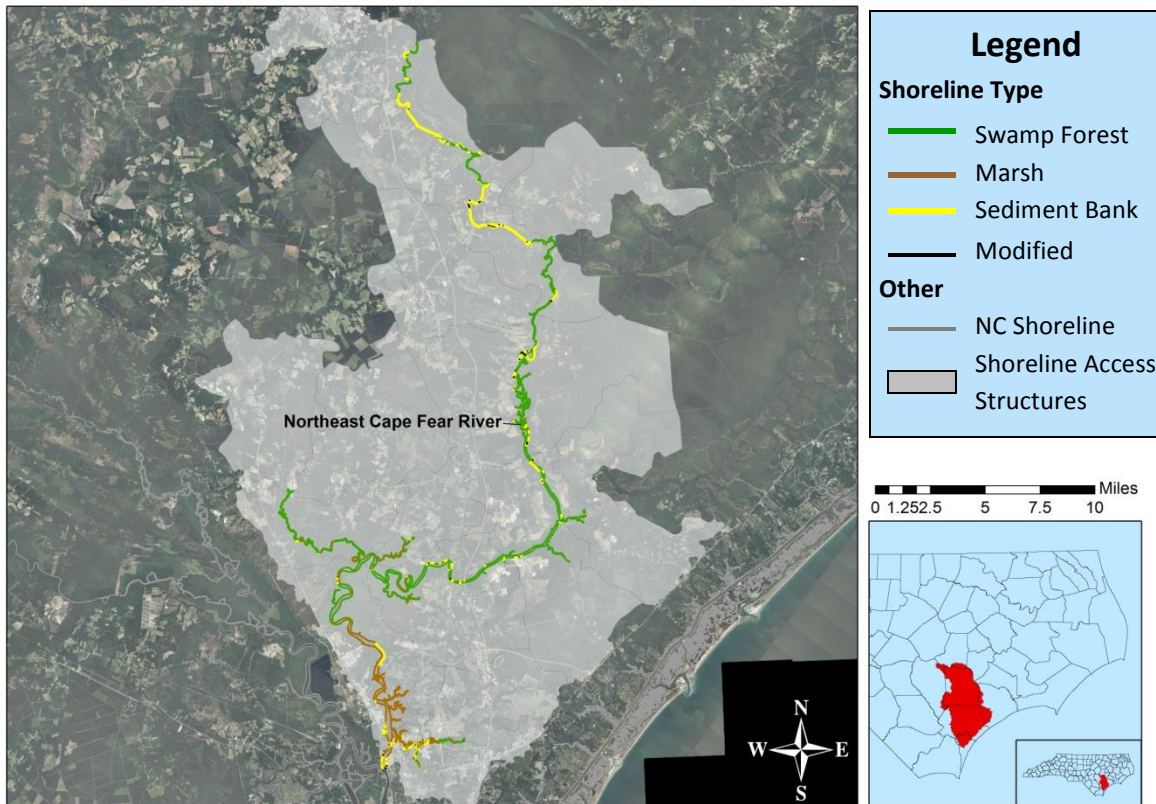
Total Acreage: 40.8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	13.5	25
Pier/Float Dock/Wharf	27.3	1,553
Culvert	0	0

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	4,851	.9	338
Breakwater	2,382	.4	18
Groin	108	<.1	4
Jetty	219	.1	1
Sill	1,557	.3	7
Rip-rap	46,426	8.7	129
Rip-rap with Marsh waterward	2,185	.4	15
Rip-rap with Sediment Bank waterward	803	.1	7
Bulkhead	88,134	16.6	413
Bulkhead with Marsh waterward	11,848	2.2	74
Bulkhead with Sediment Bank waterward	5,129	.9	36

Northeast Cape Fear



Estuarine Shoreline

Total Mileage: 280.7

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	742,667	140.7
Marsh	647,681	122.7
Marsh with Rip-rap landward	313	.1
Marsh with Bulkhead landward	3,470	.6
Sediment Bank	70,376	13.3
Sediment Bank with Rip-rap landward	0	0
Sediment Bank with Bulkhead landward	3,561	.6
Modified	13,961	2.6

Shoreline Access Structures

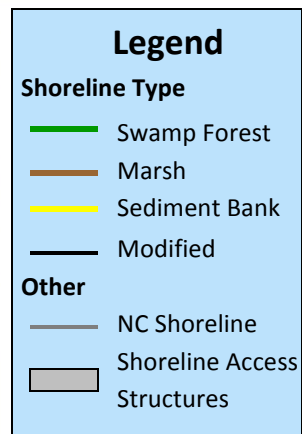
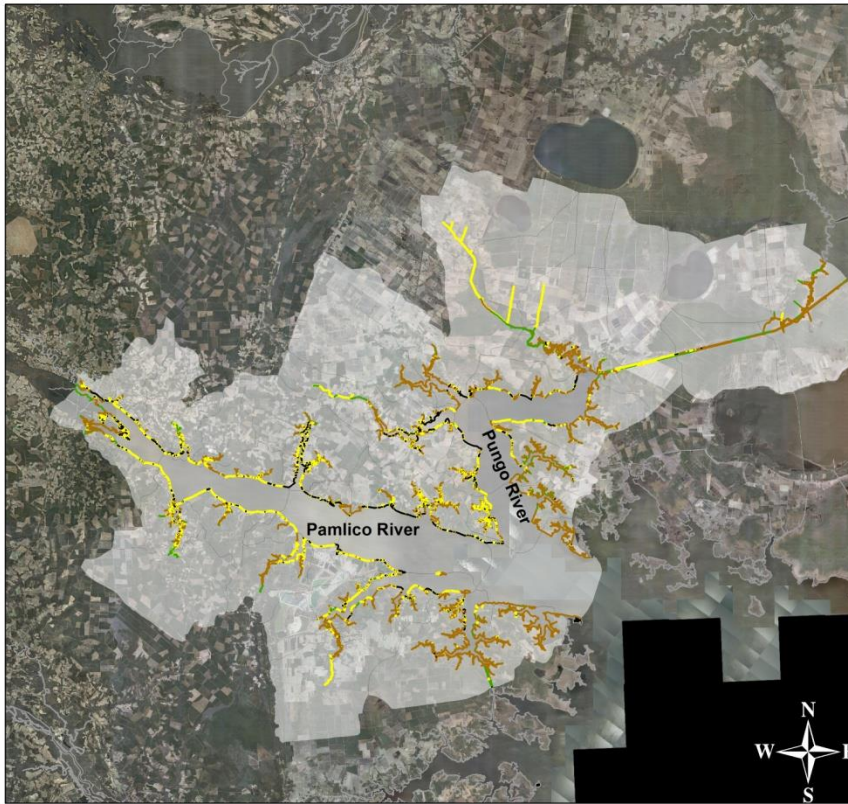
Total Acreage: 49.8

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	41.1	25
Pier/Float Dock/Wharf	8.6	308
Culvert	.1	1

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	604	.1	36
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	0	0	0
Rip-rap	4,943	.9	18
Rip-rap with Marsh waterward	321	.1	2
Rip-rap with Sediment Bank waterward	0	0	0
Bulkhead	8,116	1.5	50
Bulkhead with Marsh waterward	3,442	.6	16
Bulkhead with Sediment Bank waterward	3,257	.6	4

Pamlico



Estuarine Shoreline

Total Mileage: 1,029.2

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	144,915	27.4
Marsh	4,265,607	807.9
Marsh with Rip-rap landward	4,687	.8
Marsh with Bulkhead landward	9,461	1.7
Sediment Bank	446,961	84.7
Sediment Bank with Rip-rap landward	4,421	.8
Sediment Bank with Bulkhead landward	13,454	2.5
Modified	544,801	103.1

Shoreline Access Structures

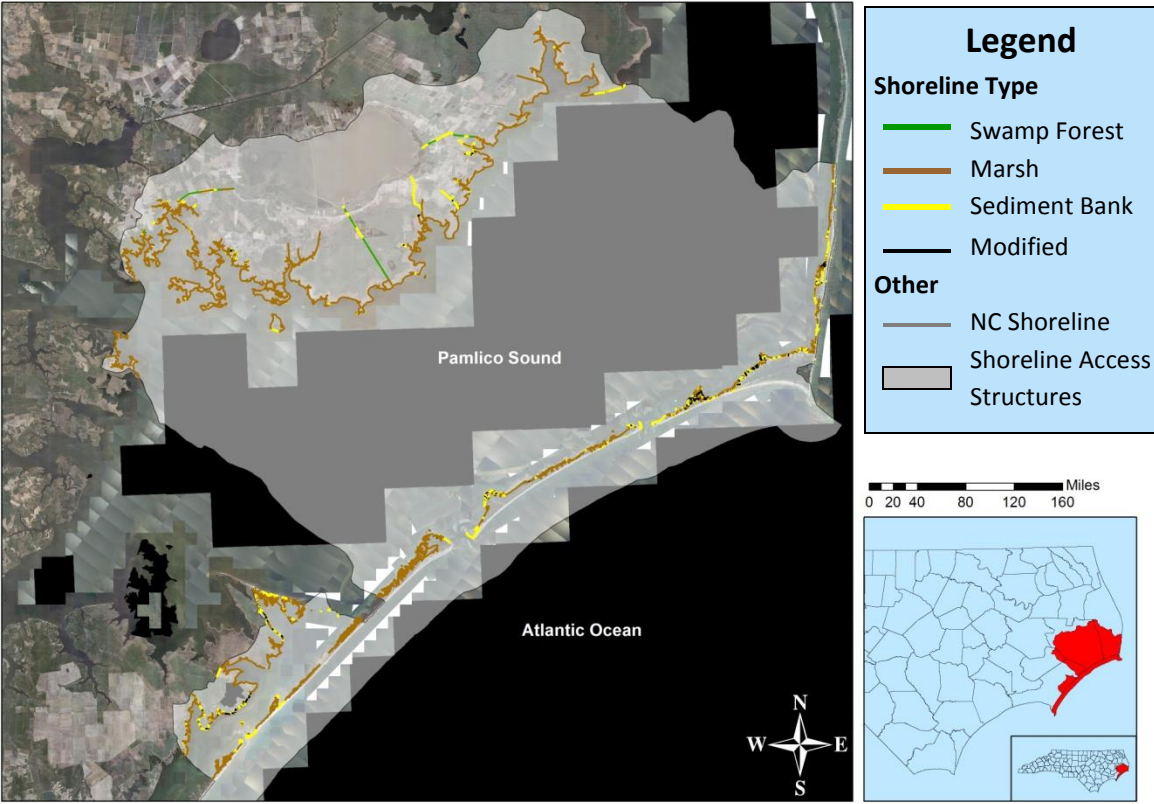
Total Acreage: 74.6

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	17.6	88
Pier/Float Dock/Wharf	56.7	2,508
Culvert	.1	9

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	4,587	.8	322
Breakwater	5,195	.9	13
Groin	16,978	3.2	610
Jetty	3,155	.5	35
Sill	194	<.1	1
Rip-rap	181,556	34.3	491
Rip-rap with Marsh waterward	4,428	.8	21
Rip-rap with Sediment Bank waterward	4,472	.8	16
Bulkhead	357,618	67.7	917
Bulkhead with Marsh waterward	7,015	1.3	58
Bulkhead with Sediment Bank waterward	12,733	2.4	72

Pamlico Sound



Estuarine Shoreline
Total Mileage: 935.4

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	0	0
Marsh	4,247,033	804.4
Marsh with Rip-rap landward	435	.1
Marsh with Bulkhead landward	8,398	1.5
Sediment Bank	462,090	87.5
Sediment Bank with Rip-rap landward	1,513	.2
Sediment Bank with Bulkhead landward	1,608	.3
Modified	217,979	41.2

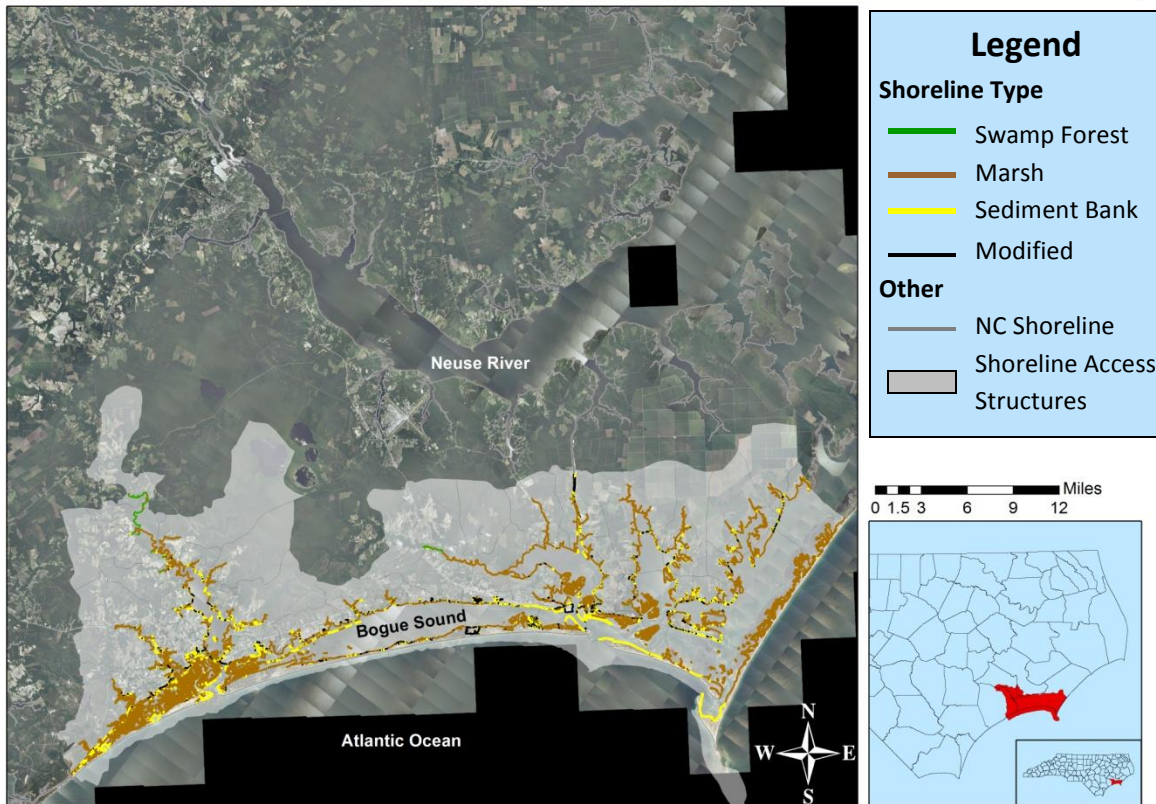
Shoreline Access Structures
Total Acreage: 23.0

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	6.3	60
Pier/Float Dock/Wharf	16.1	1,156
Culvert	.6	30

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	1,361	.2	83
Breakwater	3,617	.6	24
Groin	2,823	.5	72
Jetty	1,374	.2	11
Sill	3,262	.6	11
Rip-rap	38,398	7.2	90
Rip-rap with Marsh waterward	547	.1	10
Rip-rap with Sediment Bank waterward	248	.1	2
Bulkhead	120,628	22.8	316
Bulkhead with Marsh waterward	7,005	1.3	44
Bulkhead with Sediment Bank waterward	1,694	.3	8

White Oak River



Estuarine Shoreline

Total Mileage: 1,503.0

<u>Shoreline Type</u>	<u>Feet</u>	<u>Miles</u>
Swamp Forest	70,413	13.3
Marsh	6,586,388	1,247.4
Marsh with Rip-rap landward	34,521	6.5
Marsh with Bulkhead landward	131,819	24.9
Sediment Bank	637,741	120.8
Sediment Bank with Rip-rap landward	6,482	1.2
Sediment Bank with Bulkhead landward	18,011	3.4
Modified	450,665	85.3

Shoreline Access Structures

Total Acreage: 134.3

<u>Structure Type</u>	<u>Area in Acres</u>	<u>Count</u>
Bridge	27.9	71
Pier/Float Dock/Wharf	105.9	5,818
Culvert	.3	9

Stabilization Structures

<u>Structure Type</u>	<u>Feet</u>	<u>Miles</u>	<u>Count</u>
Boat Ramp	864	.1	53
Breakwater	0	0	0
Groin	0	0	0
Jetty	0	0	0
Sill	9,835	1.8	28
Rip-rap	8,244	1.5	43
Rip-rap with Marsh waterward	1,948	.3	9
Rip-rap with Sediment Bank waterward	331	.1	4
Bulkhead	16,608	3.1	73
Bulkhead with Marsh waterward	13,788	2.6	69
Bulkhead with Sediment Bank waterward	2,209	.4	11