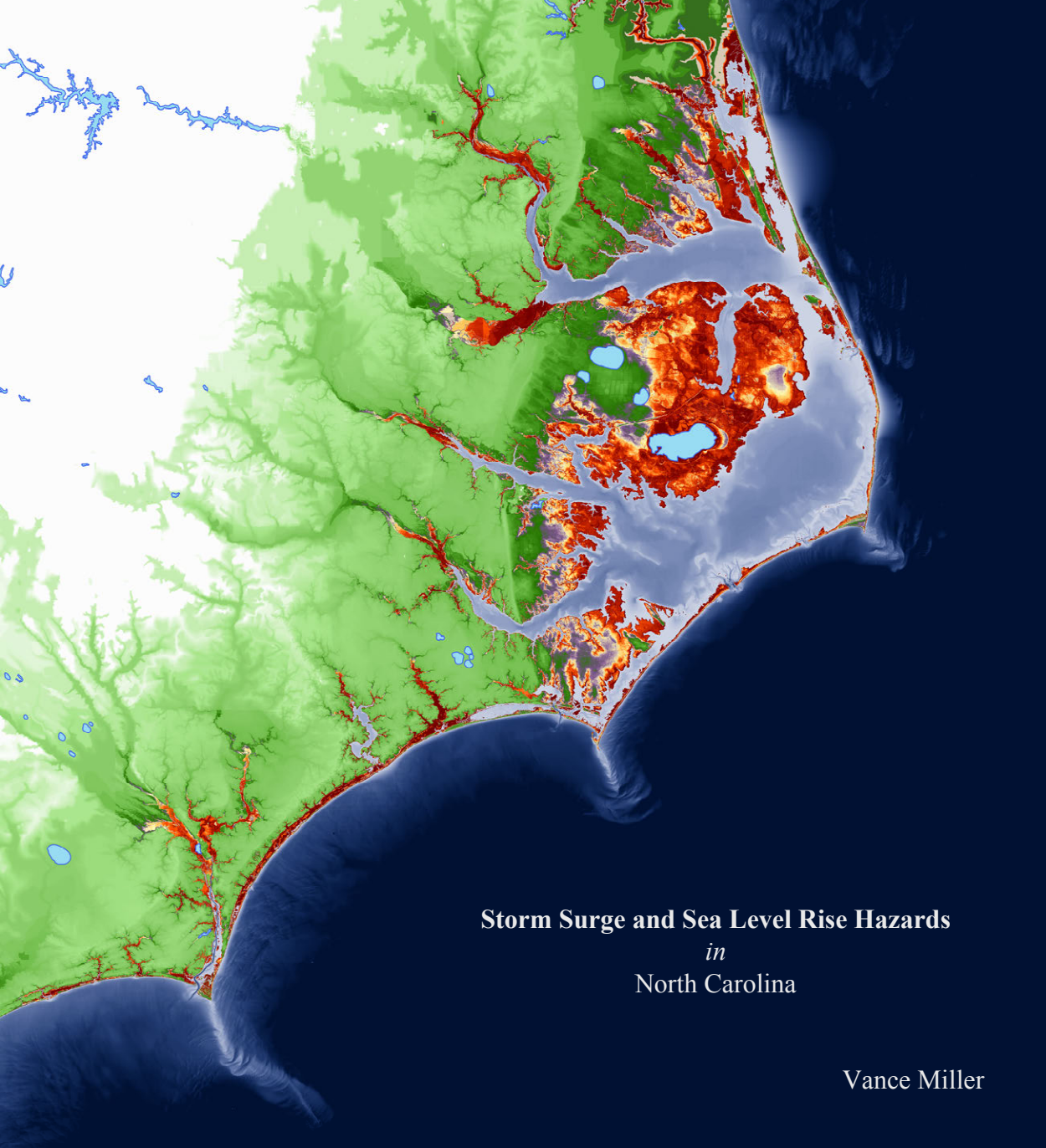


Storm Surge and Sea Level Rise Hazards
in
North Carolina

Vance Miller

Storm Surge and Sea Level Rise Hazards
in
North Carolina

Vance Miller
The University of Texas at Austin

1 Introduction

The oceans are rising. According to the National Oceanic and Atmospheric Administration (NOAA), sea level is presently rising at one-eighth of an inch every year. NOAA reports that by 2100 there is a greater than 90% chance that global sea level will rise between 8 inches and 6.6 feet[1].

Sea level rise doesn't just affect waterfront communities. Any low-lying area with a primary drainage outlet that is influenced by the ocean is impacted. I chose to analyze communities at elevations within 5 feet of mean high water because this elevation is within the projected range of sea level rise by 2100. Even today, without regard to changing sea levels, these low-lying areas are at risk of storm surge during strong hurricanes, flooding during heavy rain events, groundwater intrusion from high water tables, and nuisance flooding during king tide events.

How will North Carolina communities change over the next 80 years? I set out to answer this question by determining what percent of land area of coastal cities and towns lies below 5 feet of elevation. With 18 coastal counties and 3,375 miles of coastline, the study area is very large.

2 Methodology

This is an elevation based study. I used high accuracy digital elevation models to determine the extent of low-lying areas. I used bathymetry for coarse-grained data with broad coverage. For more accurate analysis I used LIDAR data from various sources. The ArcGIS "Spatial Analyst" package provided many of the tools needed to complete this project.

2.1 Data Collection

Data for this project is available on various US Government websites. Most data was available in a directly usable form. The bathymetry and LIDAR data required some preprocessing before being usable, as described in Section 2.2.

Southeast Atlantic Bathymetry
Cell size: 3 arc-seconds, Vertical Accuracy: 1 meter
National Geophysical Data Center, 1999. U.S. Coastal Relief Model - Southeast Atlantic. National Geophysical Data Center, NOAA. [12/01/2017].

[1]Climate Change: Global Sea Level, 2017. NOAA. Climate.gov. [12/01/2017].

Morehead City Coastal Elevation Model
Cell size: 1/3 arc-second
National Geophysical Data Center, 2011. Morehead City, North Carolina 1/3 arc-second MHW Coastal Digital Elevation Model. National Geophysical Data Center, NOAA. [12/01/2017].

Cape Hatteras Coastal Elevation Model
Cell size: 1/3/ arc-second
National Geophysical Data Center, 2006. Cape Hatteras, North Carolina 1/3 arc-second MHW Coastal Digital Elevation Model. National Geophysical Data Center, NOAA. [12/01/2017].

NOAA Sea Level Rise Viewer DEM
Cell size: 5 meters, Vertical Accuracy 20 centimeters
National Oceanic and Atmospheric Administration, National Ocean Service, Office for Coastal Management, 2017. NOAA Office for Coastal Management Coastal Inundation Digital Elevation Model: Aggregate Record. NOAA's Ocean Service, Office for Coastal Management. [12/01/2017].

NC County LIDAR
Cell size: 20 feet, Vertical Accuracy 20 centimeters
Floodplain Mapping Program, North Carolina Division of Emergency Management, 2006. NC Floodplain Mapping; LIDAR Bare Earth Derived 3-D Breaklines. EarthData International of North Carolina. [12/01/2017].

US and Canada Water Polygons
Used for labeling water bodies
ESRI, 2010. North America Water Polygons. ArcGIS Data Catalog. 12/01/2017].

US Census Places
Used for polygon areas and populations
TIGER/Line Shapefiles and TIGER/Line Files, 2010. United States Census Bureau. [12/01/2017].

County Boundaries, Roads, and Railroads
Used to visualize counties and transportation networks
GIS Data Layers, 2017. Connect NCDOT. [12/01/2017].

NetCDF Timeslice to Raster
Used for converting NetCDF bathymetry to Rasters
How To: Export each time slice from a NetCDF layer as a single raster (*.tif), 2016. ESRI Technical Support. [12/01/2017].

2.2 Data Preprocessing

The Morehead City and Cape Hatteras bathymetry was provided in the NetCDF format. This was slow to render in ArcMap so I converted it to a raster with pyramids by first importing the data into ArcMap with the "Make NetCDF Raster Layer" tool and then converted it to a raster using the "NetCDF Timeslice to Raster" tool. This data provided more detailed bathymetry than the 3 arcsecond Atlantic Coast bathymetry, but neither was relevant for the elevation statistics. The bathymetry data is used to create a more realistic and appealing visualization.

The NOAA Sea Level Rise Viewer DEM data was provided in multiple files. For ease of use in ArcMap, I merged the multiple rasters into one large raster with the "raster from mosaic" tool. This single raster is very large and must have pyramids to be usable. The mosaic compilation and pyramid generation took several hours. After pyramids were generated, the data was easy to use and rendered quickly.

I would have preferred to use North Carolina's county floodplain data for analysis due to its higher resolution and stated accuracy. Unfortunately upon inspection I found that the data was inaccurate at elevations close to zero, which was the scope of this work. These inaccuracies, which rendered the data unusable for our goals, are in Figure 1.

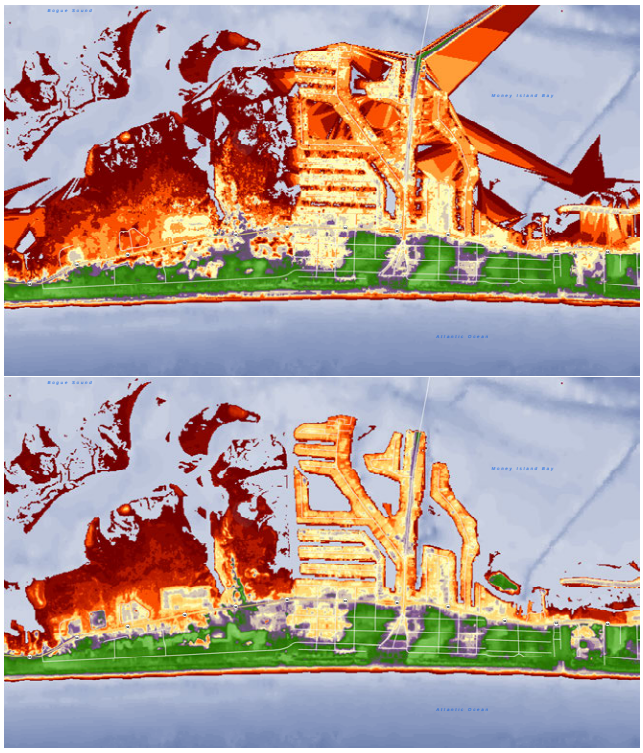


Figure 1: Artifacts in county floodplain data (top) and NOAA SLR Viewer data (bottom) in a map of Atlantic Beach, NC

2.3 ArcMap Processing

Symbology The data in the elevation rasters ranged from thousands of feet below sea level in the Atlantic Ocean to hundreds of feet above sea level in the Piedmont region of North Carolina. We are only interested in the elevations near sea level, namely -10 to 10 feet. There were no built in color ramps for such a specific range so I created a custom color ramp in the ArcMap Style Manager (Main Toolbar: Customize > Style Manager). I used a minimum-maximum color stretch with this custom scheme to symbolize elevations from -144 feet to 144 feet.

Water bodies such as lakes and marshes were symbolized with the corresponding default symbol. Roads were symbolized with simple cased line symbols in a neutral color scheme, and separate road lines were visually merged using the "symbol levels" options in the layer symbology properties. Their symbologies are illustrated in Figure 2.

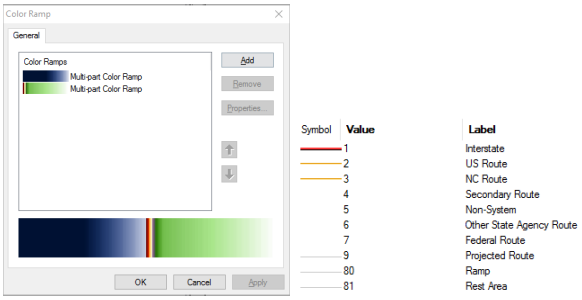


Figure 2: A color ramp designed to provide context on a broad scale with extra detail for elevations between -10 and 10 feet (left). Cased line symbology for roads and highways (right).

Labels All census places, water bodies, counties, and roads were labeled using the Maplex Label Engine. Cities were labeled with a font size corresponding to small, medium, large, and huge populations. Water bodies are labeled if they appear larger than 1 inch on the map.

Roads are divided into different classes based on road type and labeled with the customary road signs for interstate, US, and NC highways. Road signs repeat ranging from every 2 inches for major roads to 1 inch for minor roads. Since roads are only present to provide a visual reference and the map is not intended to be used for navigation, county roads and local roads are not labeled.

Affected Areas Besides presenting the data in a useful and aesthetically pleasing manner, the most important component of this map is quantifying the risk of inundation to people living in coastal North Carolina. The simplest approximation for where people live is the US Census places data. These polygons represent cities, towns, and census designated places.

Using the "zonal statistics as table" tool from the Spatial Analyst package, I computed the total area of each census place. Then using the "raster calculator" tool, I generated a mask of the elevation data consisting only of areas at elevations between zero and five feet. Again with the zonal

statistics as table tool, I computed the total area of each census place that intersected with the zero to five foot elevation mask. This resulted in two tables. One showing the land area for each census place and another showing the at risk land area less than five feet for each census place.

I used this data to generate Table 1. I performed the same computation using county outlines instead of census places and the results are shown in Table 2. This data is also included on each map.

Map Generation I generated 46 maps using ArcMap's "Data Driven Pages." This required the addition of an "index" layer that specifies the extent of each individual map. I mapped North Carolina's 27 most vulnerable census places, based on Table 1, the 18 coastal counties, and the entire coastline. The polygons representing census places and counties became the polygons specifying map extents in the index layer. The most difficult part of using data driven pages was generating a reasonable scale bar since the extent of each map is different. I worked around this in most cases by rounding the reference scale of each map to the nearest 5000. Unfortunately some maps have awkward scale bars with increments of $1^1/_2$ miles, but this is a small price to pay for easily generating so many maps.

The legend for each map was arranged in multiple columns, with each class showing only features that are present in a generated map extent. The custom elevation color ramp did not display correctly in the legend so I manually created an image using the GNU Image Manipulation Program (GIMP) as a replacement.

Each map has two insets, showing the detail area in a regional and statewide context. The were simply generated by setting the spatial extent of the inset data frame to match the spatial extent of the detail data frame, adding a margin to zoom out to the regional and statewide scope.

The maps have dynamic text showing the name of the map, population of the detail area, and the land area above and below five feet of elevation. This data is part of the index layer for the data driven pages and was computed as detailed in Affected Areas.

In addition to mapping the present conditions, I created a trio of maps comparing present conditions with sea levels 1 and 2 feet above normal and 5 and 10 feet above normal. This was easily accomplished by changing the symbology for the elevation layers, shifting the minimum and maximum values up by 1, 2, 5, and 10 feet for each elevation layer in each map.

3 Results

The most vulnerable North Carolina census places are listed here in Table 1. All coastal counties are listed in Table 2. This data contributed to the generation of many maps, shown in Section 5.

Census Place	2010 pop.	Acres	Acres above 5 ft	Percent below 5 ft
Fairfield	258	2453	2	99.90%
Hobucken	129	3176	8	99.80%
Davis	422	1359	10	99.20%
Swan Quarter	324	2455	28	98.90%
Columbia	891	769	18	97.70%
Belhaven	1688	989	26	97.40%
Manns Harbor	821	2524	95	96.30%
Engelhard	445	2042	79	96.10%
Marshallberg	403	402	35	91.30%
Mesic	220	653	64	90.20%
Ocracoke	948	5207	772	85.20%
Hatteras	504	901	143	84.10%
Wanchese	1642	2831	496	82.50%
Frisco	200	441	84	80.90%
North Topsail Beach	743	3511	741	78.90%
Topsail Beach	368	1453	317	78.20%
Vandemere	254	949	222	76.60%
Avon	776	1379	324	76.50%
Caswell Beach	398	1719	423	75.40%
Manteo	1434	1137	304	73.30%
Rodanthe	261	586	172	70.70%
Waves	134	322	103	67.90%
Salvo	229	586	198	66.20%
South Mills	454	1117	391	65.00%
Kitty Hawk	3272	4972	1788	64.00%
Coinjock	335	503	185	63.20%
Washington Park	451	167	88	47.40%
Atlantic Beach	1495	1377	737	46.50%
Holden Beach	575	1641	888	45.90%
Harkers Island	1207	1510	837	44.50%
Bald Head Island	158	2257	1271	43.70%
Surf City	1853	3765	2225	40.90%
Buxton	1273	1848	1102	40.40%
Stonewall	281	1069	645	39.70%
Hightsville	739	934	597	36.10%
Oriental	900	856	571	33.30%
Castle Hayne	1202	3027	2029	33.00%
Camden	599	970	652	32.80%
Fairfield Harbour	2952	1756	1206	31.30%
Gloucester	537	909	629	30.90%
Ocean Isle Beach	550	2239	1597	28.70%
Navassa	1505	8434	6219	26.30%
Plymouth	3878	2549	1884	26.10%
River Road	4394	4488	3334	25.70%
Bayboro	1263	1164	868	25.40%
Aurora	520	593	443	25.30%
Creswell	276	362	271	25.10%
Nags Head	2757	4135	3104	24.90%
Beaufort	4039	3115	2370	23.90%
Pine Knoll Shores	1339	1409	1090	22.60%
Jamesville	491	879	681	22.60%
Wrightsville Beach	2477	791	629	20.50%
Southern Shores	2714	2515	2000	20.50%
Morehead City	8661	4341	3470	20.10%
River Bend	3119	1584	1276	19.40%
Bayview	346	648	524	19.10%
Indian Beach	112	349	283	18.90%
New Bern	29524	17858	14573	18.40%
Elizabeth City	18683	7297	5974	18.10%
Wrightsboro	4896	7111	5879	17.30%
Pantego	179	499	414	17.00%
Sunset Beach	3572	4125	3474	15.80%

Census Place	2010 pop.	Acres	Acres above 5 ft	Percent below 5 ft
Cedar Point	1279	1385	1167	15.80%
Roper	611	547	461	15.70%
Winfall	594	1420	1198	15.60%
Emerald Isle	3655	3161	2671	15.50%
Hertford	2143	1764	1491	15.50%
Atlantic	543	588	505	14.10%
Carolina Beach	5706	1559	1346	13.70%
Pollocksville	311	196	170	13.20%
Washington	9744	5213	4540	12.90%
Bogue	684	1764	1544	12.50%
Southport	2833	2356	2062	12.50%
Windsor	3630	1786	1566	12.40%
Duck	369	1510	1326	12.20%
Sneads Ferry	2646	2419	2126	12.10%
Kill Devil Hills	6683	3570	3145	11.90%
Alliance	776	1335	1189	10.90%
Half Moon	8352	4720	4219	10.60%
Jacksonville	70145	29329	26332	10.20%
Edenton	5004	3400	3060	10.00%
Moyock	3759	6608	5980	9.50%
Belville	1936	1057	960	9.20%
Oak Island	6783	11763	10740	8.70%
Myrtle Grove	8875	4275	3917	8.40%
Sea Breeze	1969	1148	1052	8.30%
Bridgeton	454	971	891	8.30%
Leland	13527	12627	11592	8.20%
Bath	249	225	207	8.10%
Newport	4150	4939	4551	7.90%
Cape Carteret	1917	1609	1488	7.50%
Ogden	6766	2773	2568	7.40%
Varnamtown	541	593	550	7.30%
Broad Creek	2334	1982	1840	7.20%
Piney Green	13293	8663	8088	6.60%
Brices Creek	3073	4982	4664	6.40%
Trent Woods	4155	1857	1739	6.30%
James City	5899	4849	4548	6.20%
Peletier	644	2337	2196	6.00%
Calabash	1786	2223	2094	5.80%

Table 1: Top 100 North Carolina census places by land area within 5 feet of mean high water.

County	2010 pop.	Acres	Acres above 5 ft	Percent below 5 ft
Beaufort	45436	530502	455740	14.09%
Bertie	20411	438792	404155	7.89%
Brunswick	84454	540338	505060	6.53%
Camden	7058	151552	101869	32.78%
Carteret	70648	324982	204442	37.09%
Chowan	15196	110040	98586	10.41%
Craven	97431	456539	427051	6.46%
Currituck	20756	162008	80474	50.33%
Dare	36327	235758	37422	84.13%
Hyde	4607	372880	99630	73.28%
New Hanover	179810	121114	100909	16.68%
Onslow	181767	483446	457378	5.39%
Pamlico	12872	213093	148123	30.49%
Pasquotank	37715	143073	109088	23.75%
Pender	48251	548108	512394	6.52%
Perquimans	11352	156738	139861	10.77%
Tyrrell	3483	245148	32693	86.66%
Washington	12501	238627	205696	13.80%
Total	890075	5472738	4120570	24.71%

Table 2: Coastal North Carolina county land areas within 5 feet of mean high water.

4 Conclusions

The shape of the coastline is only relevant to waterfront communities. For many inland communities, what really matters are the drainage abilities and groundwater levels. These are influenced by local hydrology, which for low-lying areas is tied to the sea level. The heights of the ocean and sounds influence the hydrology of all areas that drain into them.

These maps illustrate zones of low elevation that extend far away from the coastline. These areas are hazardous not from erosion but from groundwater intrusion and poor drainage. Areas along the coast are at even greater danger from storm surge and sea level rise, but this is not news to anyone who lives there.

5 Maps

- Present Conditions
- Sea Level Rise of 1 and 2 Feet
- Sea Level Rise of 5 and 10 Feet

North Carolina Storm Surge and Sea Level Rise Hazards

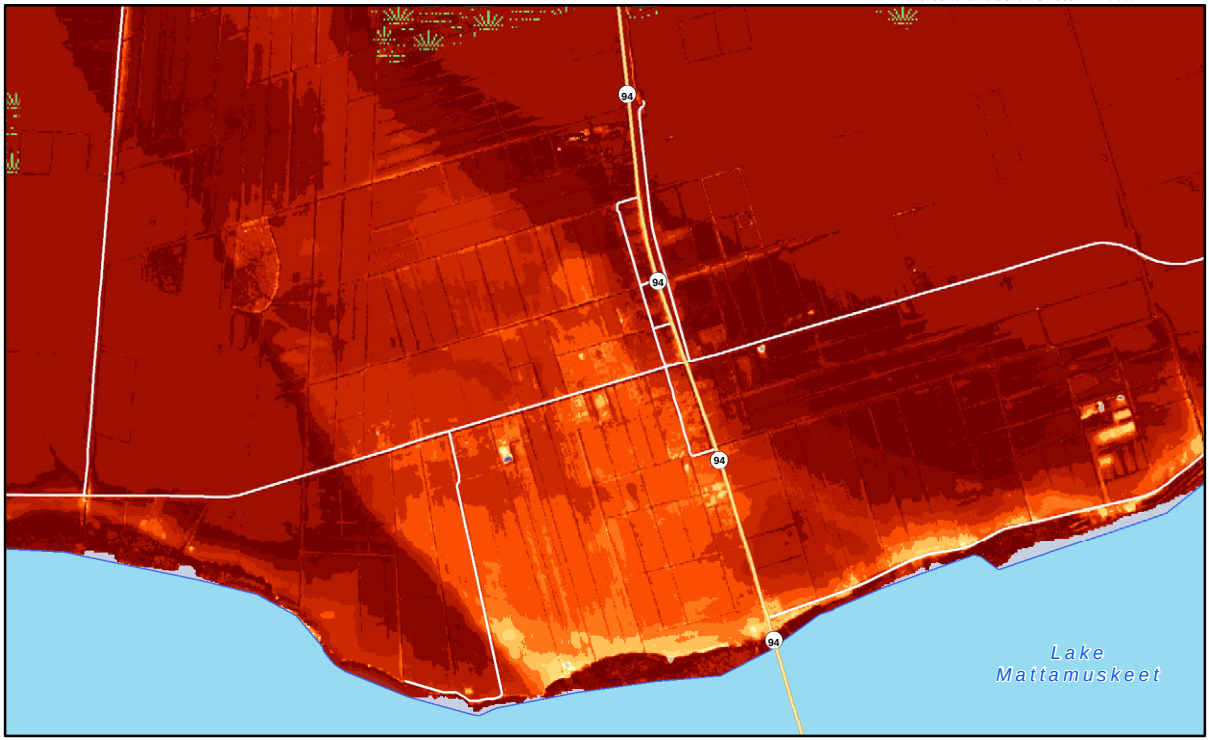
Fairfield

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	258
Land area:	2453 Acres
Land area above 5 feet:	2 Acres
Percent land below 5 feet:	99.91%



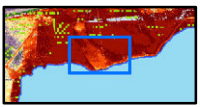
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Lake Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

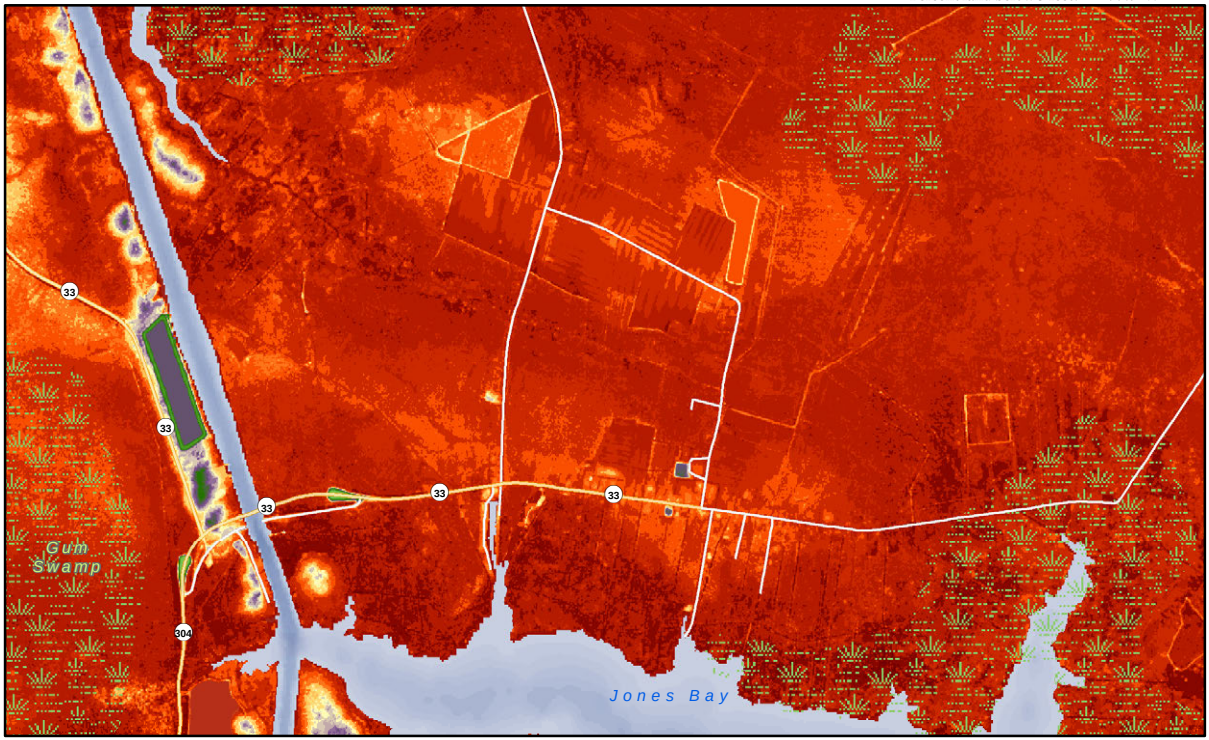
Hobucken

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	129
Land area:	3176 Acres
Land area above 5 feet:	8 Acres
Percent land below 5 feet:	99.74%

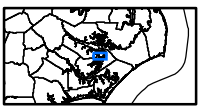


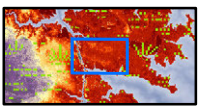
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

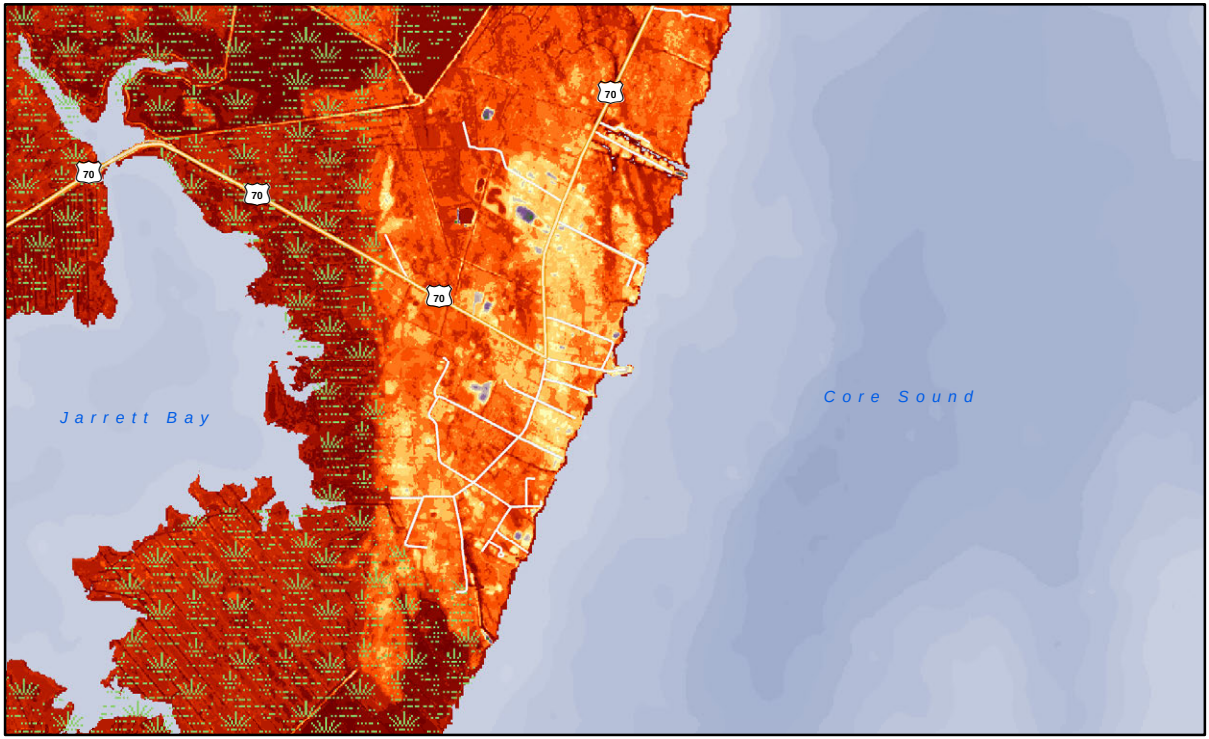
Davis

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	422
Land area:	1359 Acres
Land area above 5 feet:	10 Acres
Percent land below 5 feet:	99.26%



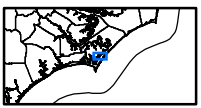
Explanation of Symbols

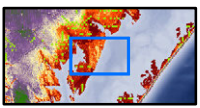
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

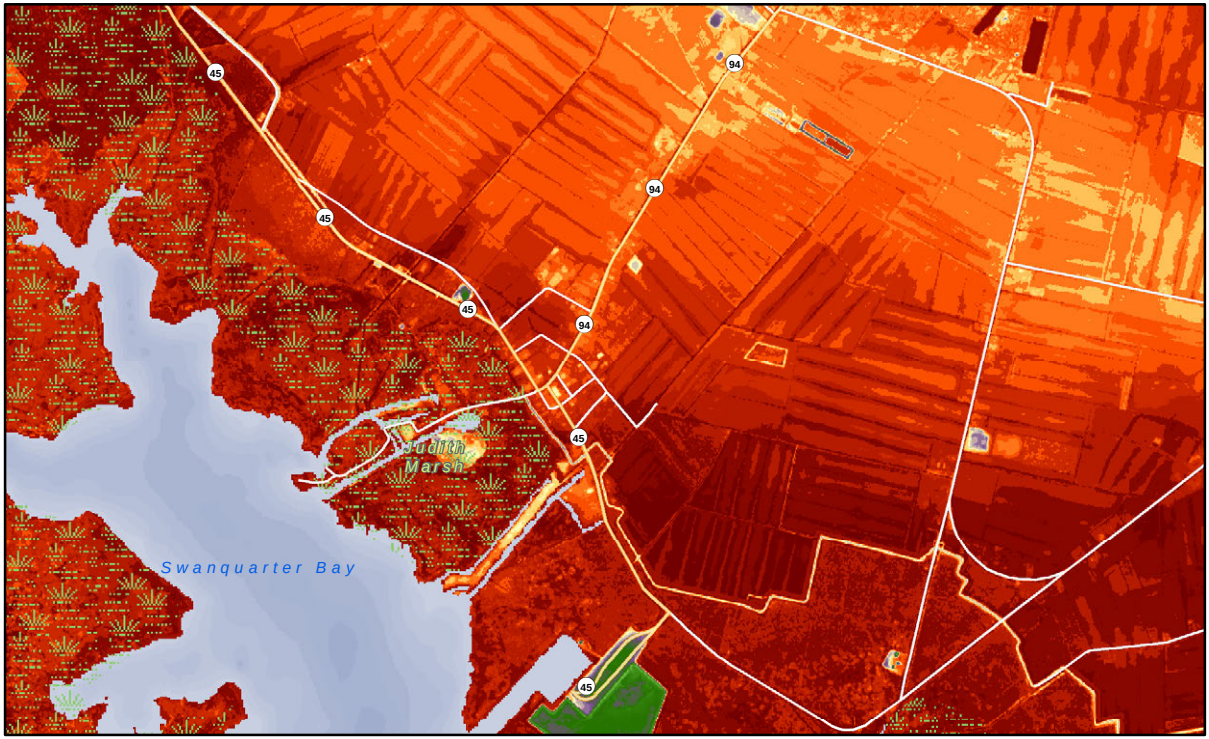
North Carolina Storm Surge and Sea Level Rise Hazards
Swan Quarter

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	324
Land area:	2455 Acres
Land area above 5 feet:	28 Acres
Percent land below 5 feet:	98.85%



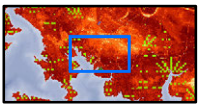
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

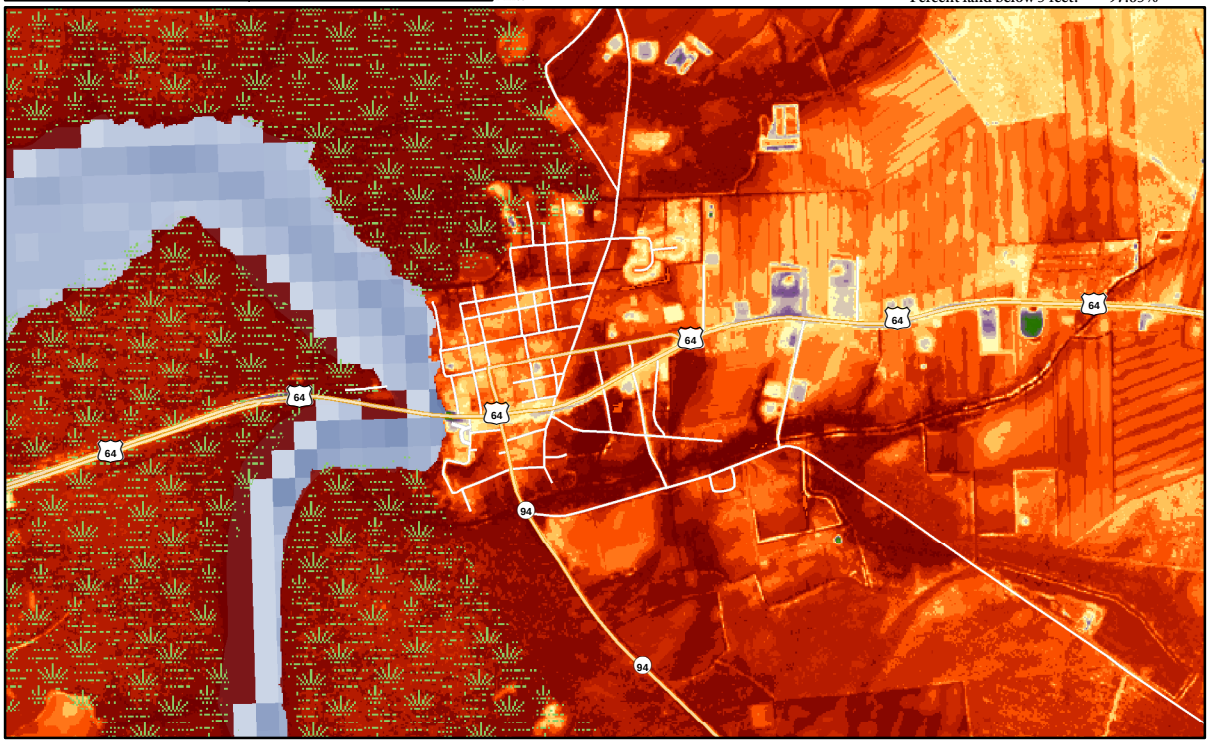
Columbia

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	891
Land area:	769 Acres
Land area above 5 feet:	18 Acres
Percent land below 5 feet:	97.65%



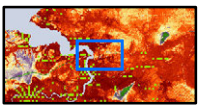
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

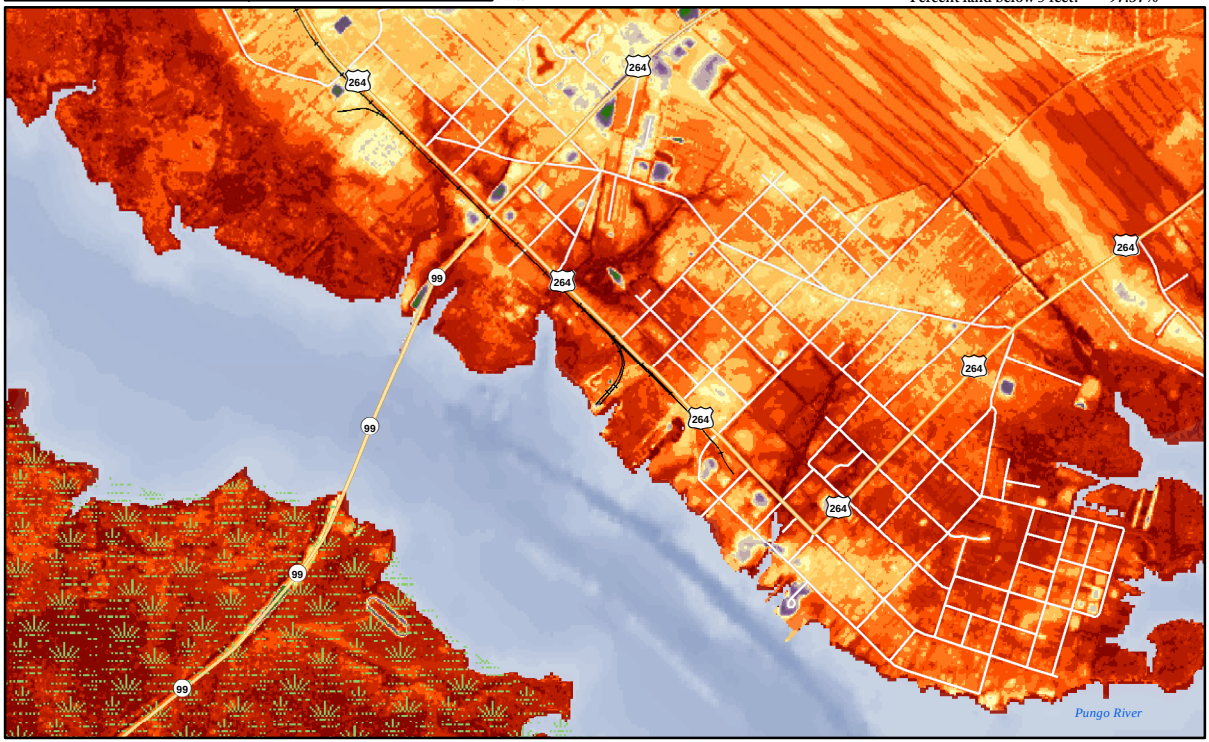
Belhaven

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	1688
Land area:	989 Acres
Land area above 5 feet:	26 Acres
Percent land below 5 feet:	97.37%



Explanation of Symbols

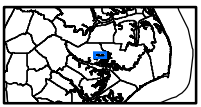
Elevation (ft)

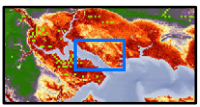
-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

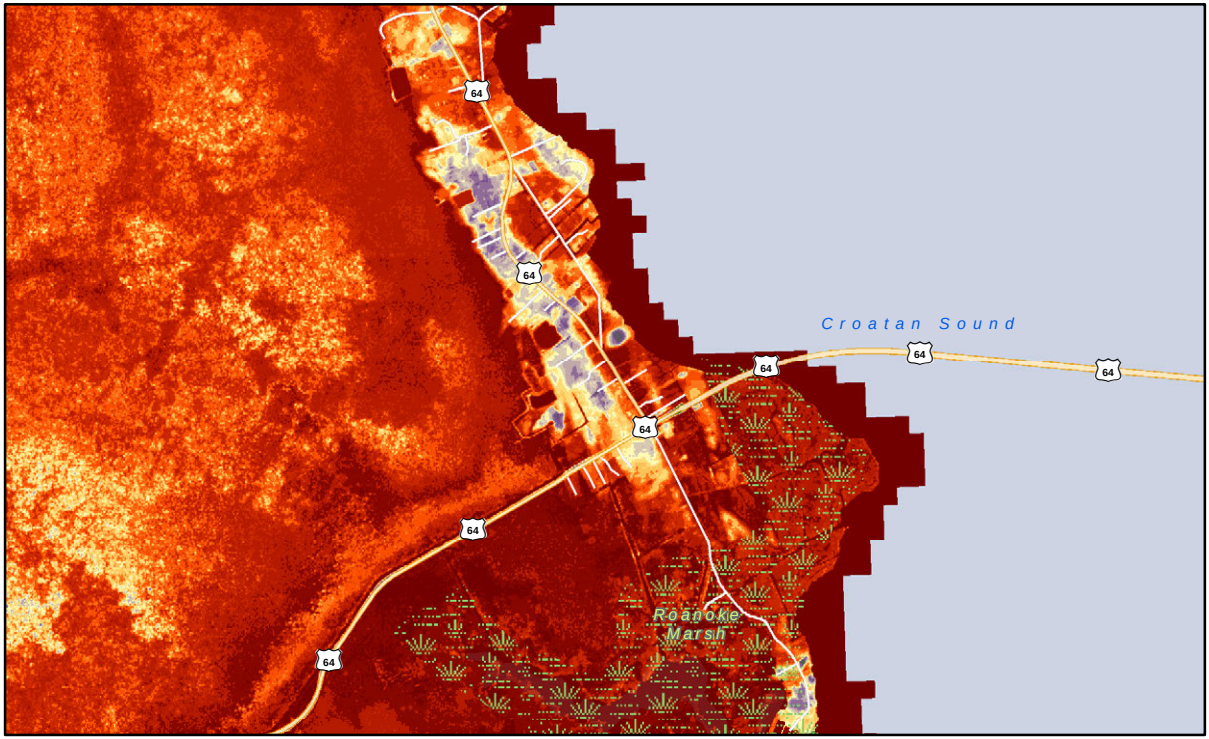
Manns Harbor

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	821
Land area:	2524 Acres
Land area above 5 feet:	95 Acres
Percent land below 5 feet:	96.23%



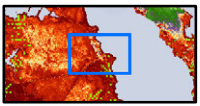
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

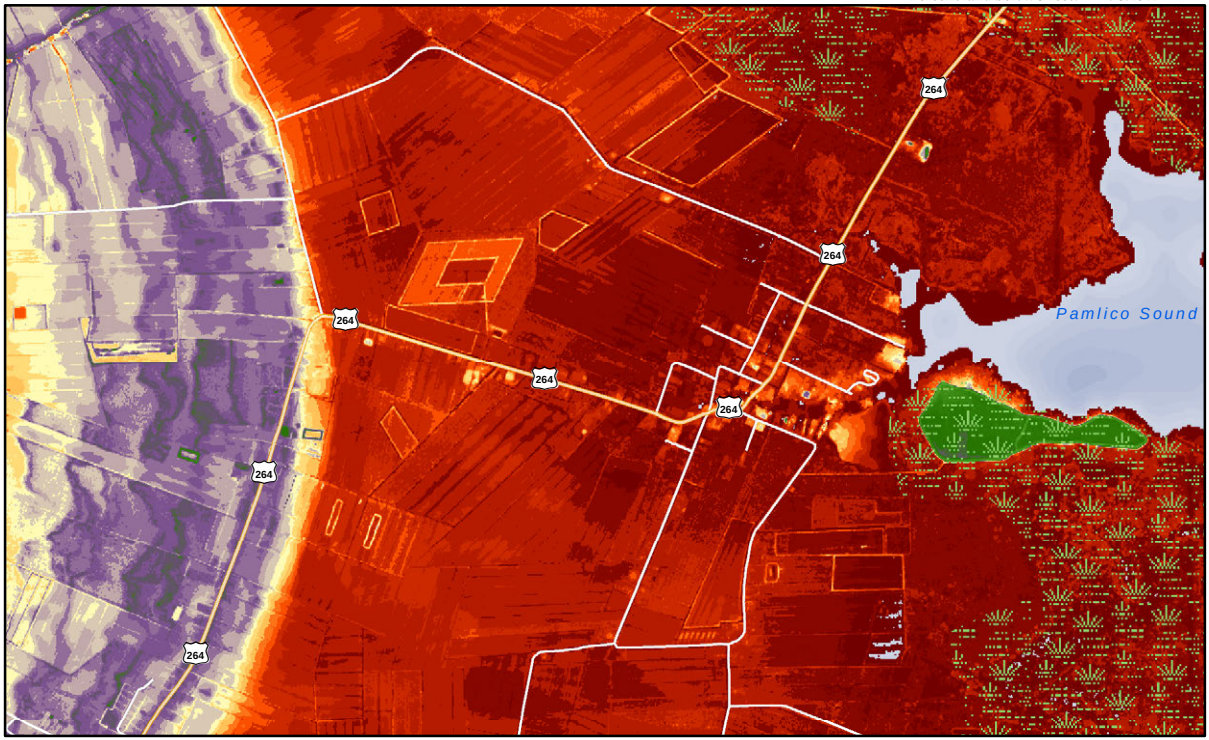
Engelhard

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	445
Land area:	2042 Acres
Land area above 5 feet:	79 Acres
Percent land below 5 feet:	96.13%



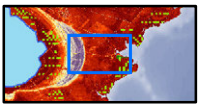
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

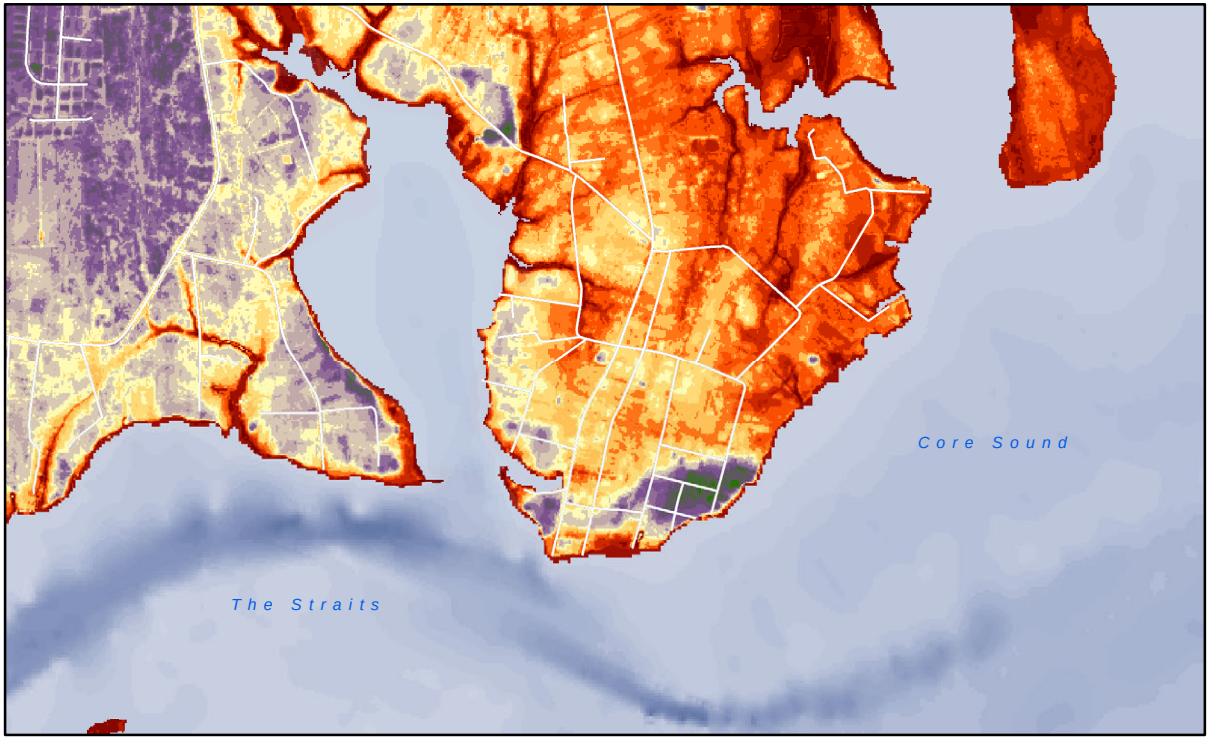
Marshallberg

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

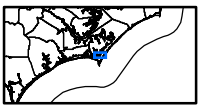
2010 population:	940
Land area:	402 Acres
Land area above 5 feet:	35 Acres
Percent land below 5 feet:	91.29%

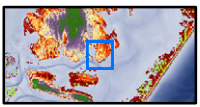


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

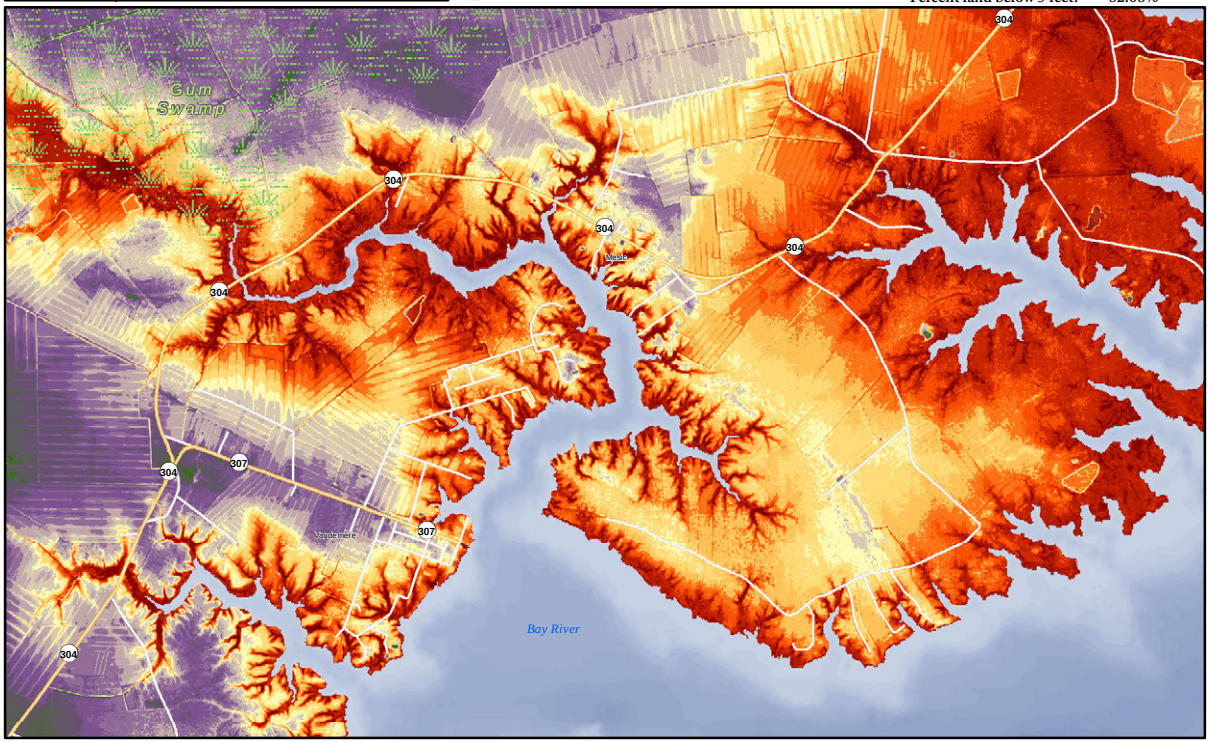
Vandemere and Mesic

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	474
Land area:	1602 Acres
Land area above 5 feet:	287 Acres
Percent land below 5 feet:	82.08%



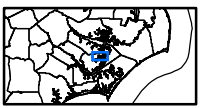
Explanation of Symbols

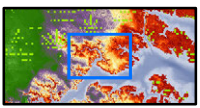
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

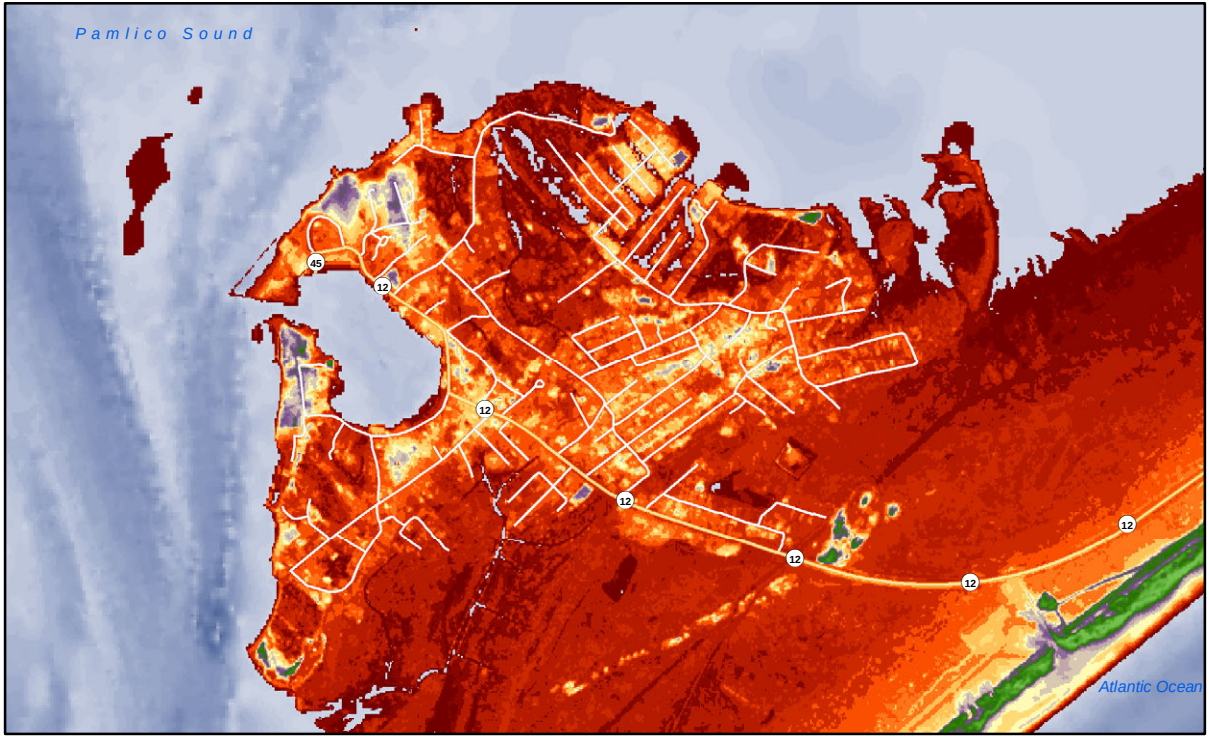
Ocracoke

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	948
Land area:	5207 Acres
Land area above 5 feet:	772 Acres
Percent land below 5 feet:	85.17%



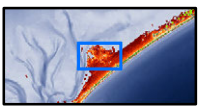
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

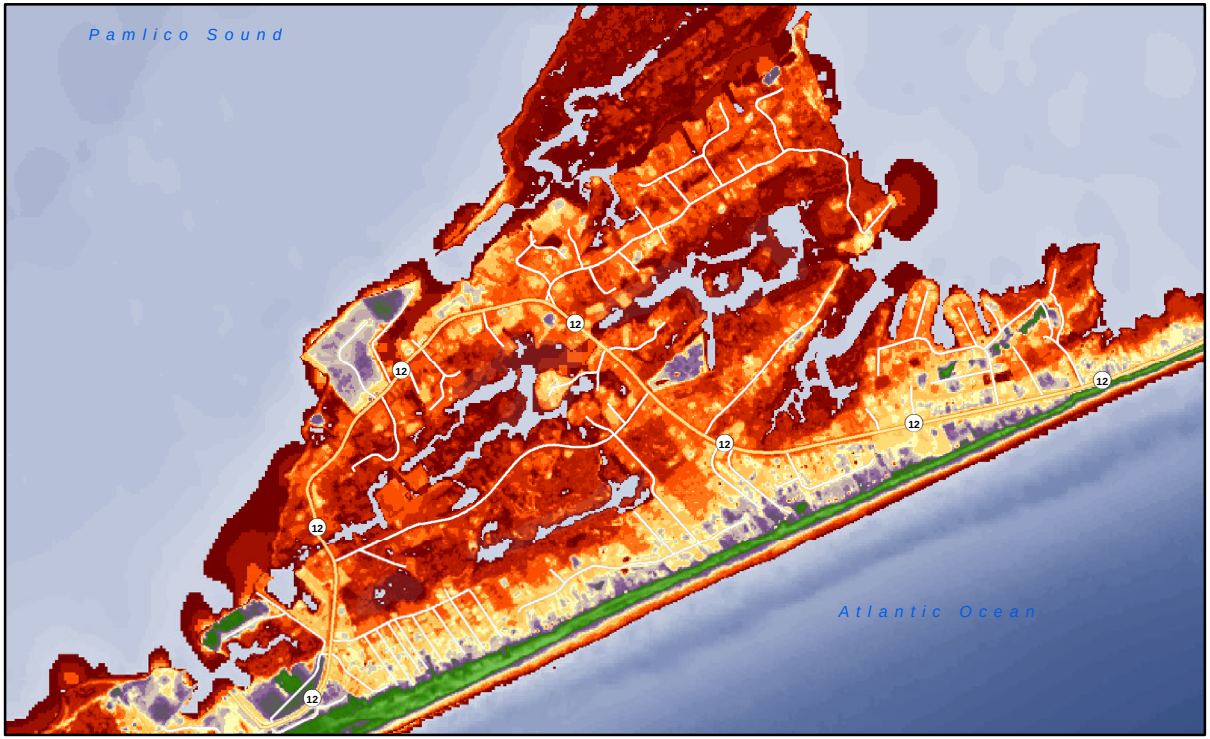
Hatteras

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	504
Land area:	901 Acres
Land area above 5 feet:	143 Acres
Percent land below 5 feet:	84.12%



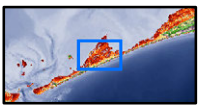
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

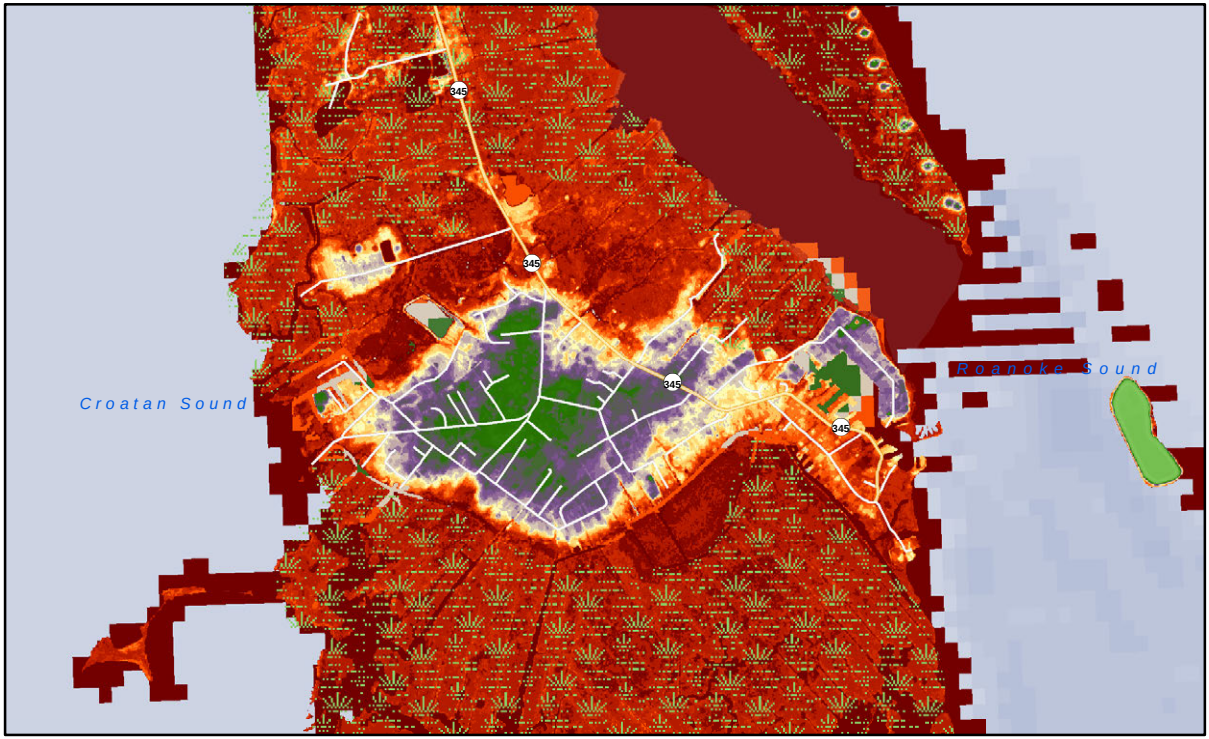
North Carolina Storm Surge and Sea Level Rise Hazards
Wanchese

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	1642
Land area:	2831 Acres
Land area above 5 feet:	496 Acres
Percent land below 5 feet:	82.47%



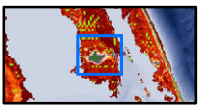
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

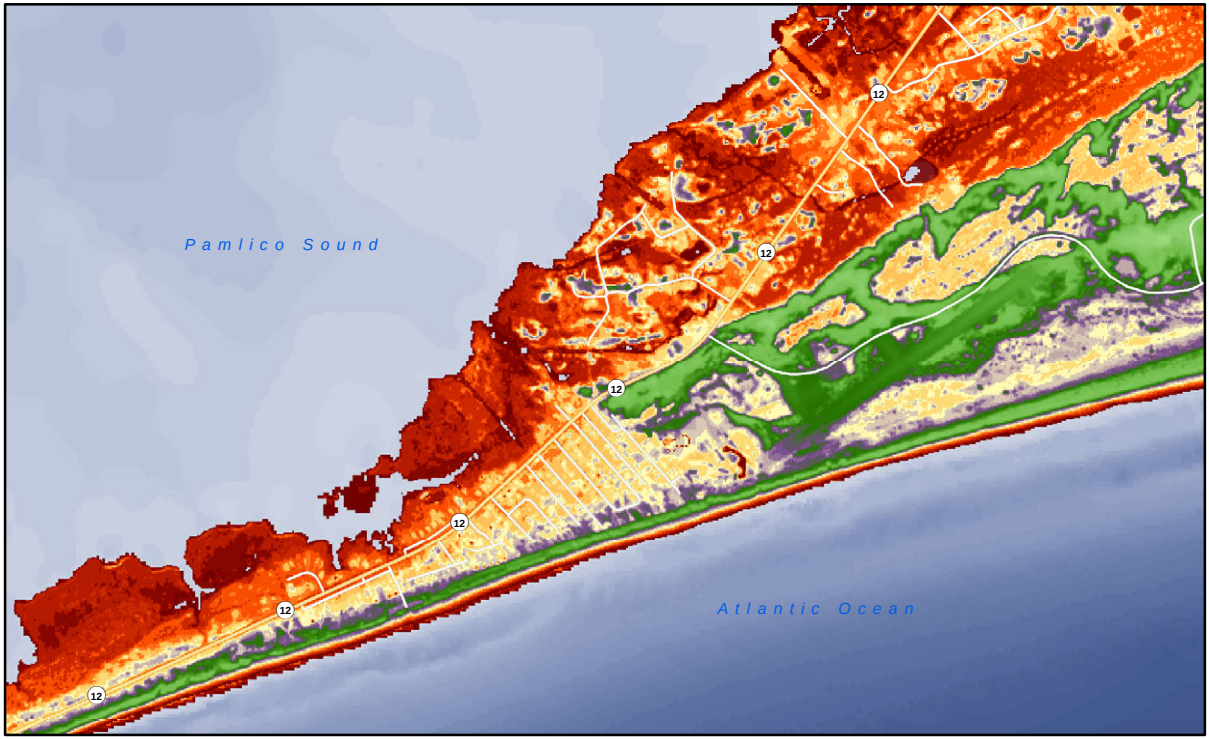
Frisco

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	200
Land area:	441 Acres
Land area above 5 feet:	84 Acres
Percent land below 5 feet:	80.95%



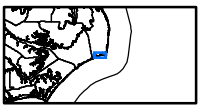
Explanation of Symbols

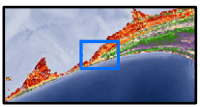
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

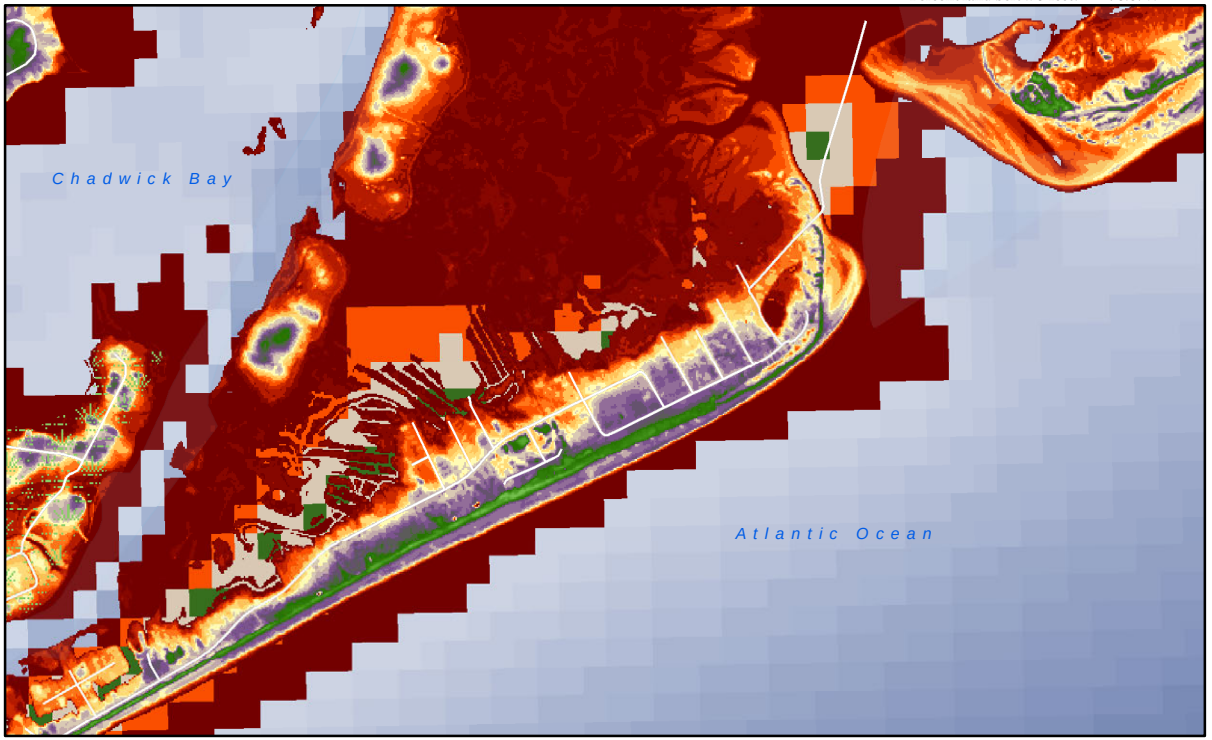
North Topsail Beach

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	743
Land area:	3511 Acres
Land area above 5 feet:	741 Acres
Percent land below 5 feet:	78.89%



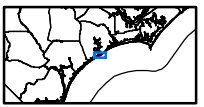
Explanation of Symbols

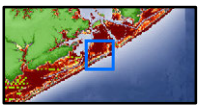
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

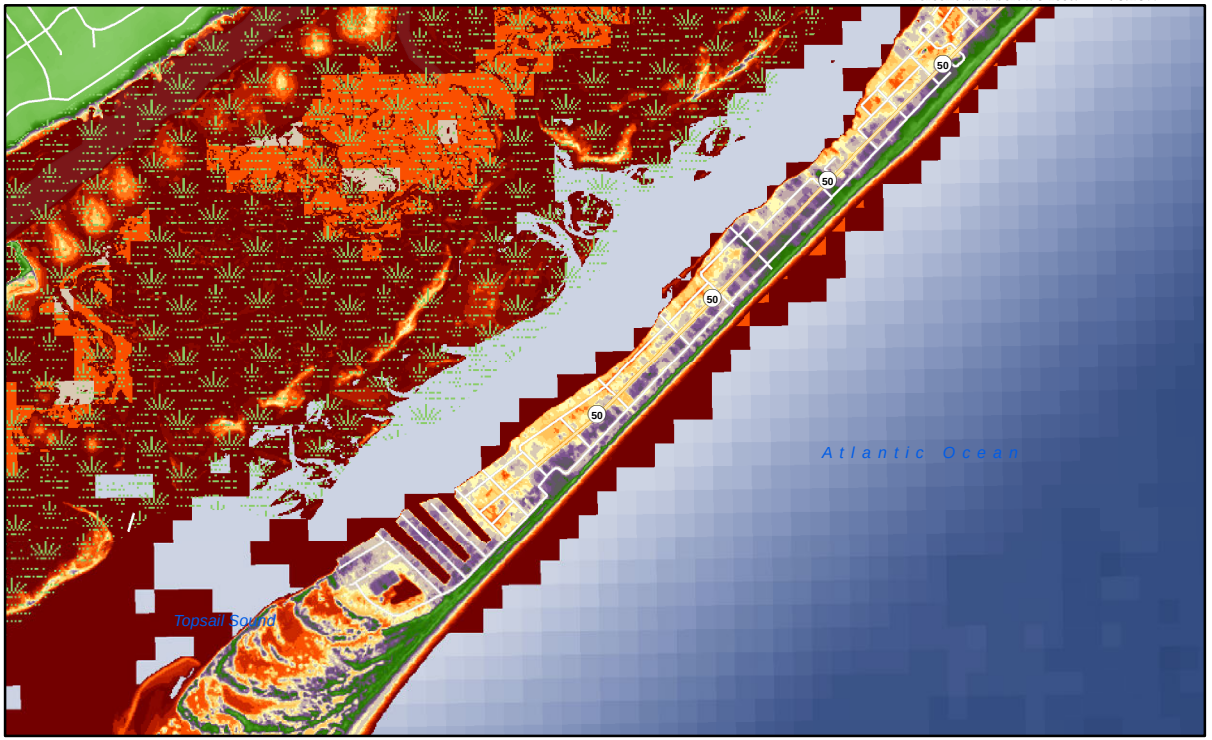
North Carolina Storm Surge and Sea Level Rise Hazards
Topsail Beach

Vance Miller
12/5/2017

1:30,000

0 ½ 1 Miles

2010 population:	368
Land area:	1453 Acres
Land area above 5 feet:	317 Acres
Percent land below 5 feet:	78.18%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

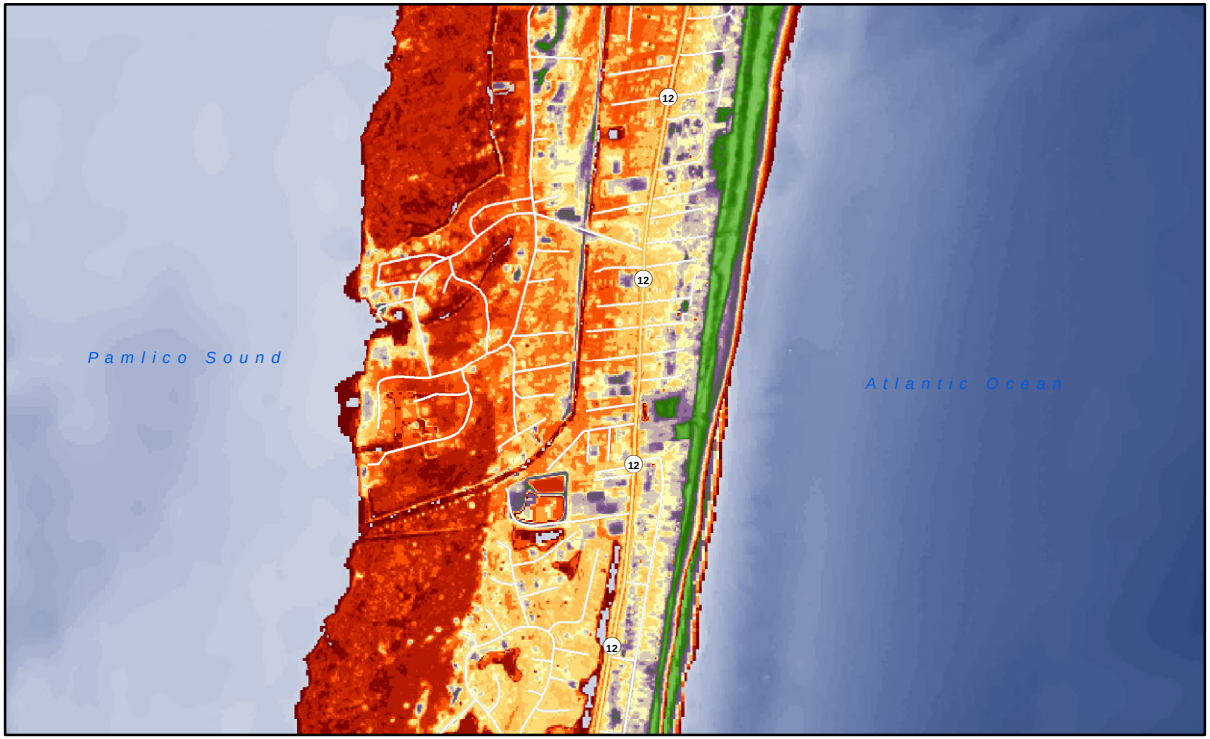
Avon

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	776
Land area:	1379 Acres
Land area above 5 feet:	324 Acres
Percent land below 5 feet:	76.5%



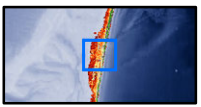
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

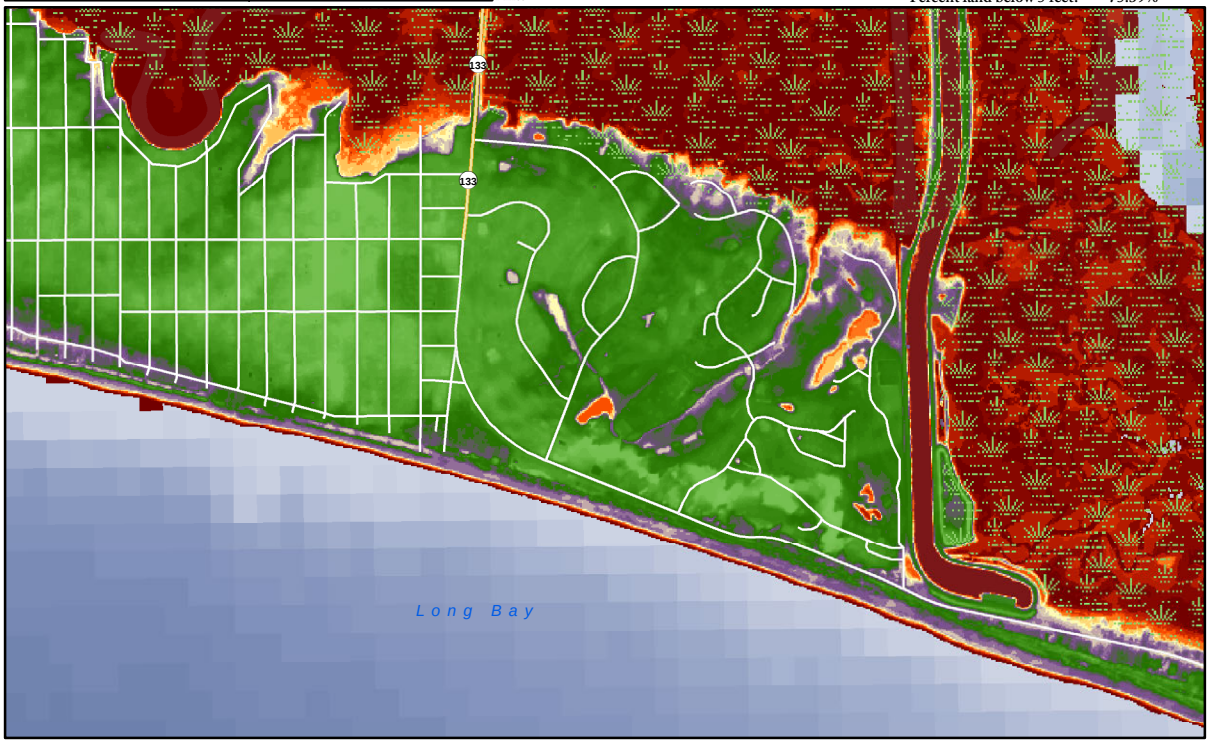
Caswell Beach

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	398
Land area:	1719 Acres
Land area above 5 feet:	423 Acres
Percent land below 5 feet:	75.39%



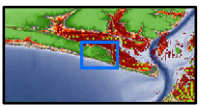
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

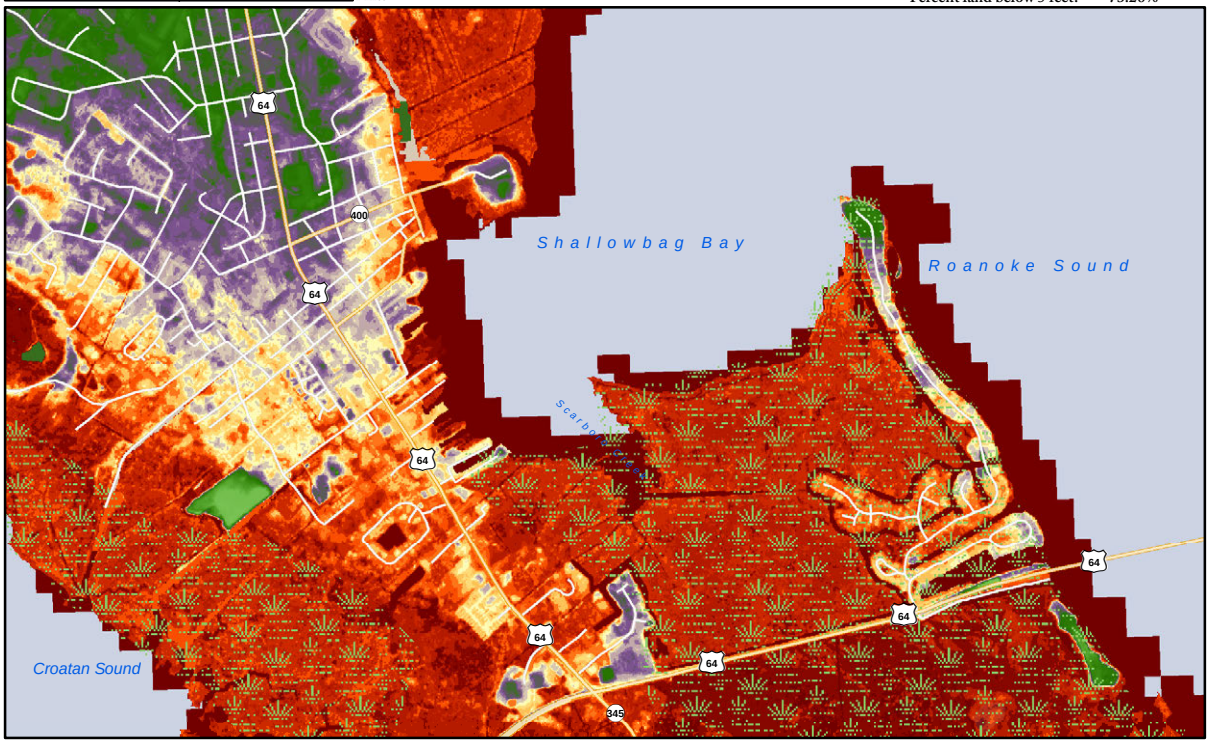
Manteo

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	1434
Land area:	1137 Acres
Land area above 5 feet:	304 Acres
Percent land below 5 feet:	73.26%



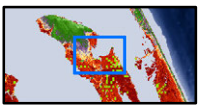
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

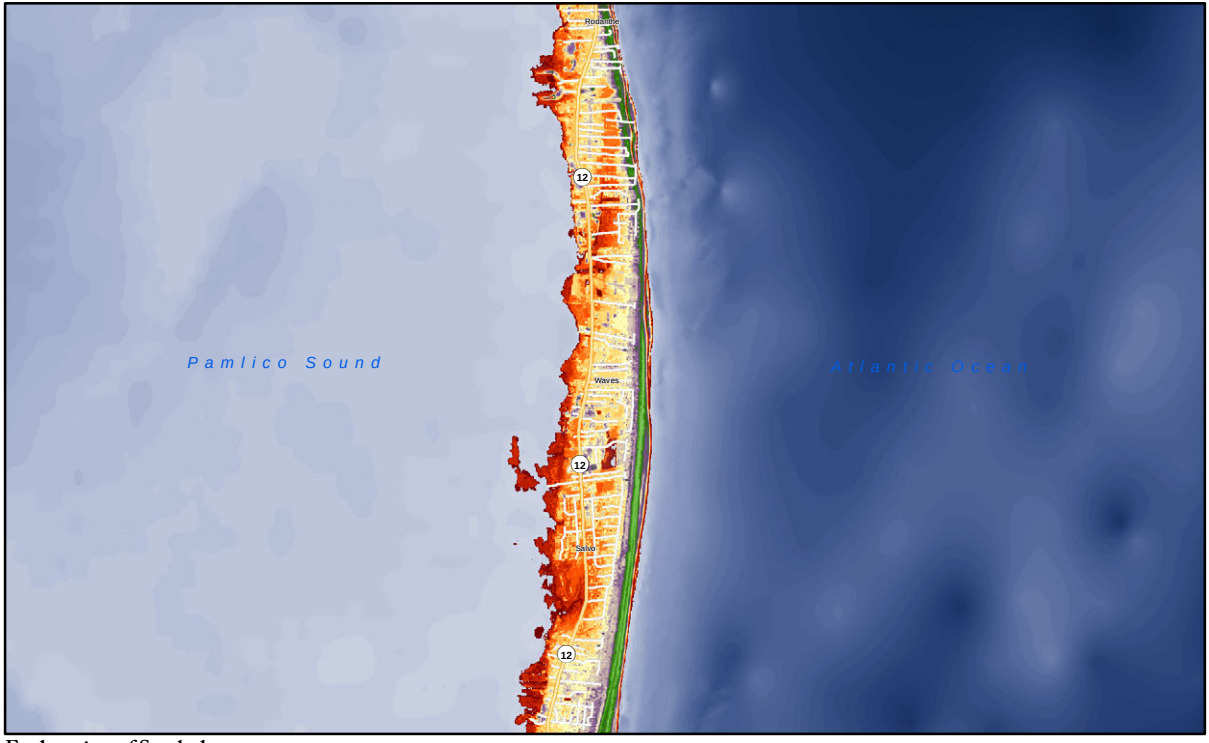
Rodanthe, Waves, and Salvo

Vance Miller
12/5/2017

1:75,000

0 ½ 1 2 3 Miles

2010 population:	624
Land area:	1494 Acres
Land area above 5 feet:	473 Acres
Percent land below 5 feet:	68.34%



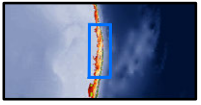
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

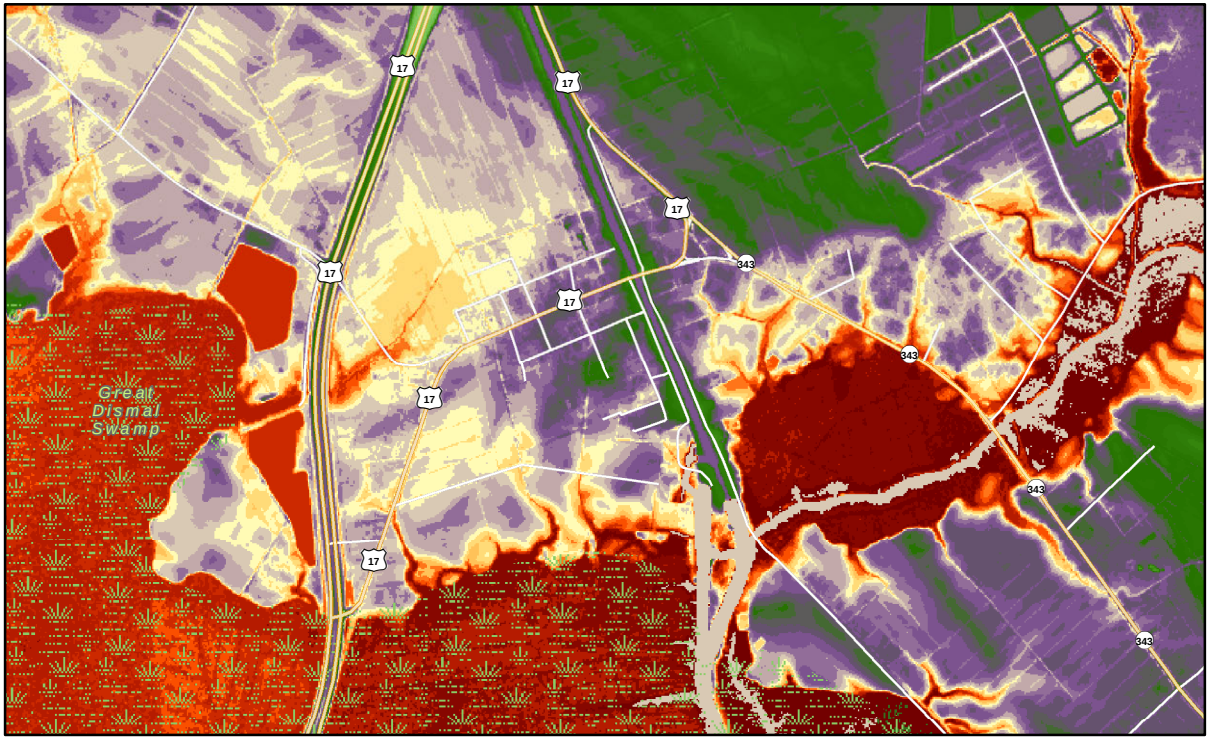
North Carolina Storm Surge and Sea Level Rise Hazards
South Mills

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	454
Land area:	1117 Acres
Land area above 5 feet:	391 Acres
Percent land below 5 feet:	64.99%



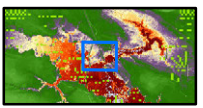
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

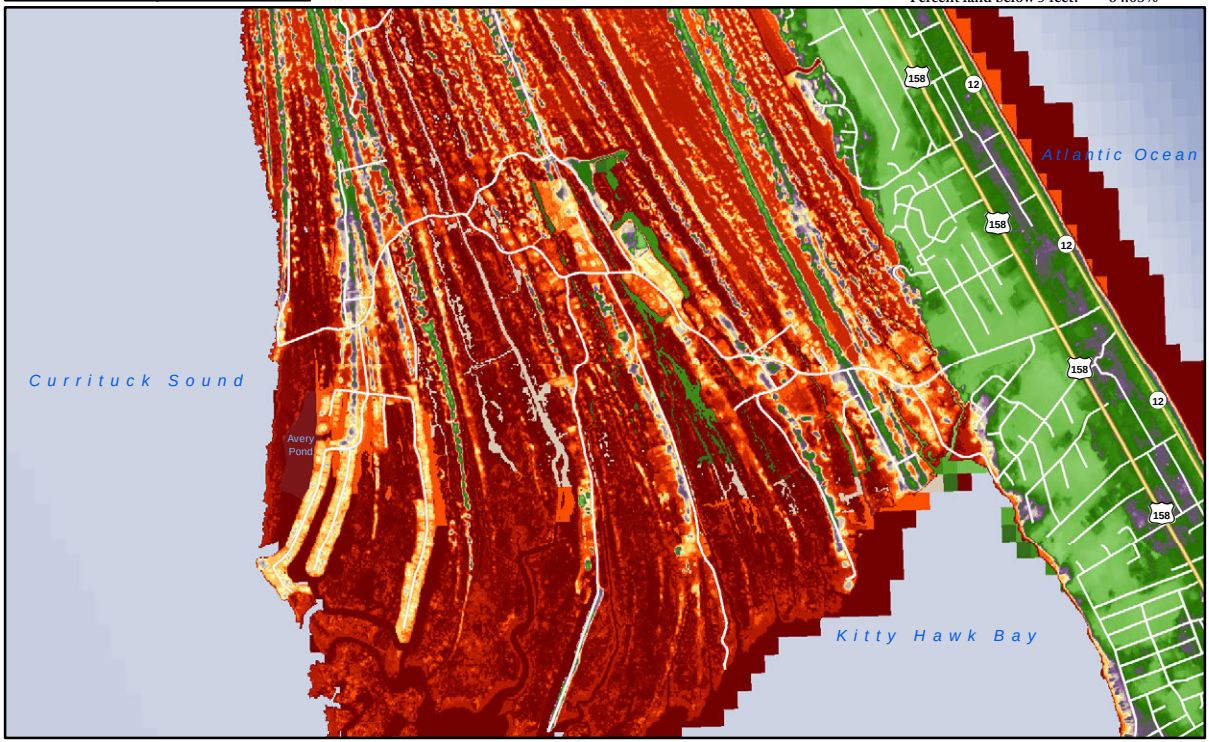
North Carolina Storm Surge and Sea Level Rise Hazards
Kitty Hawk

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	3272
Land area:	4972 Acres
Land area above 5 feet:	1788 Acres
Percent land below 5 feet:	64.03%



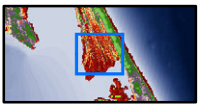
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

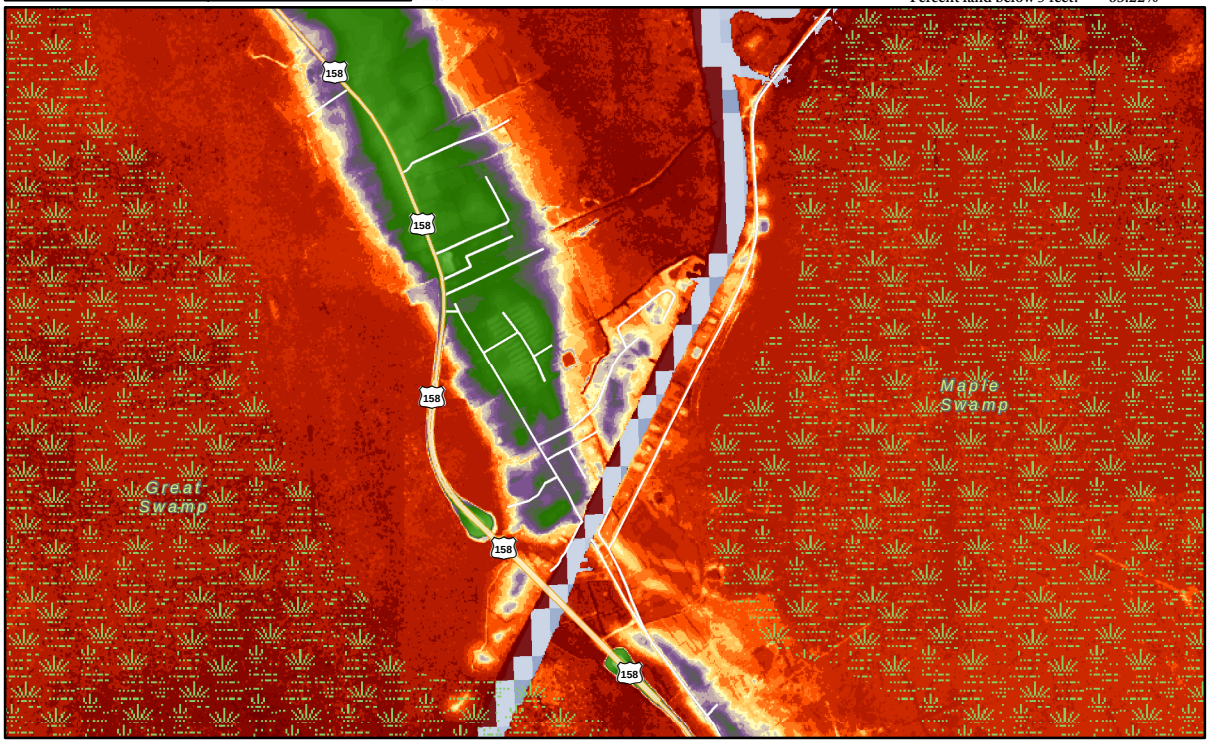
Coinjock

Vance Miller
12/5/2017

1:30,000

0 ½ 1 Miles

2010 population:	335
Land area:	503 Acres
Land area above 5 feet:	185 Acres
Percent land below 5 feet:	63.22%



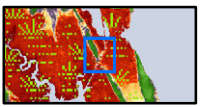
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

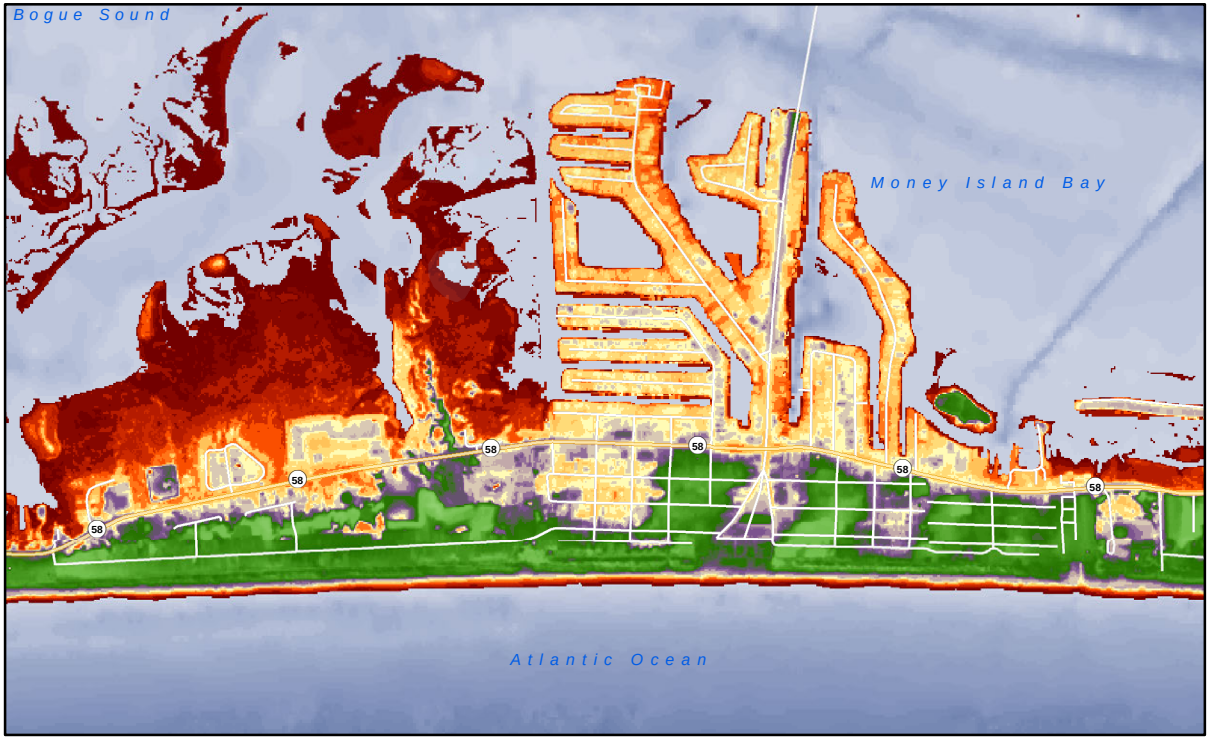
Atlantic Beach

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	1495
Land area:	1377 Acres
Land area above 5 feet:	737 Acres
Percent land below 5 feet:	46.47%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

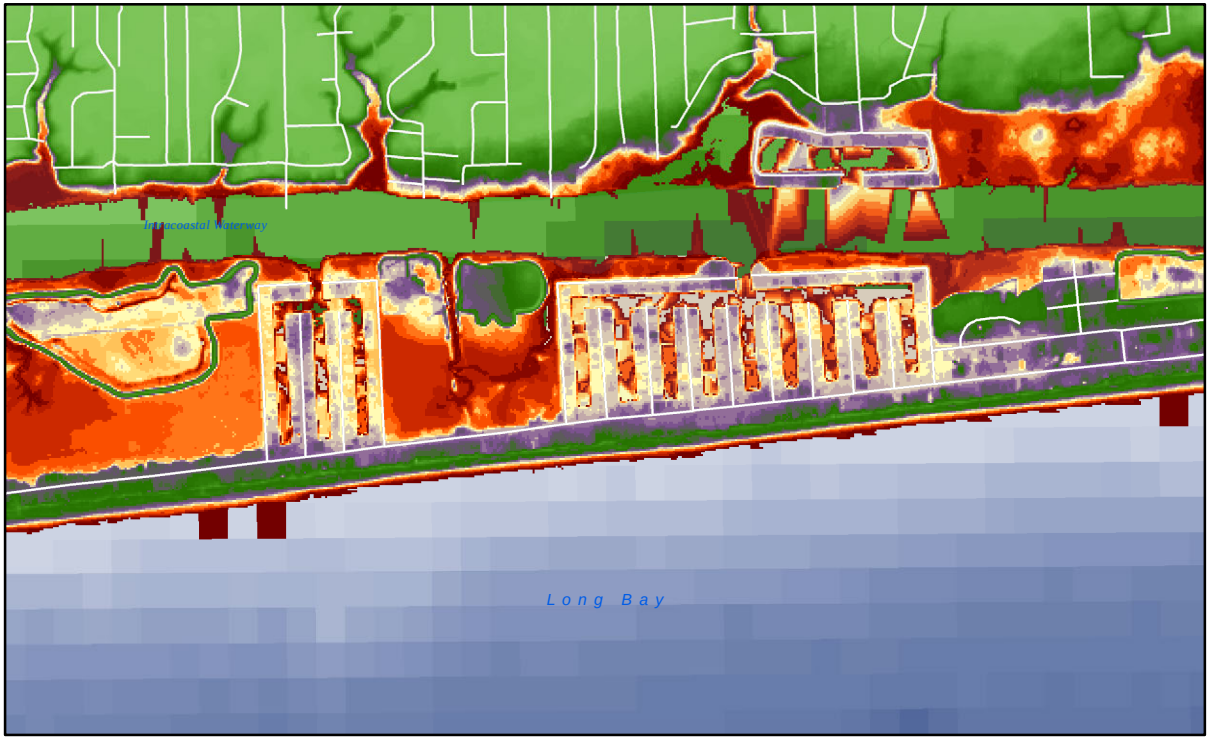
Holden Beach

Vance Miller
12/5/2017

1:20,000

0 0.4 0.8 Miles

2010 population:	575
Land area:	1641 Acres
Land area above 5 feet:	888 Acres
Percent land below 5 feet:	45.88%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

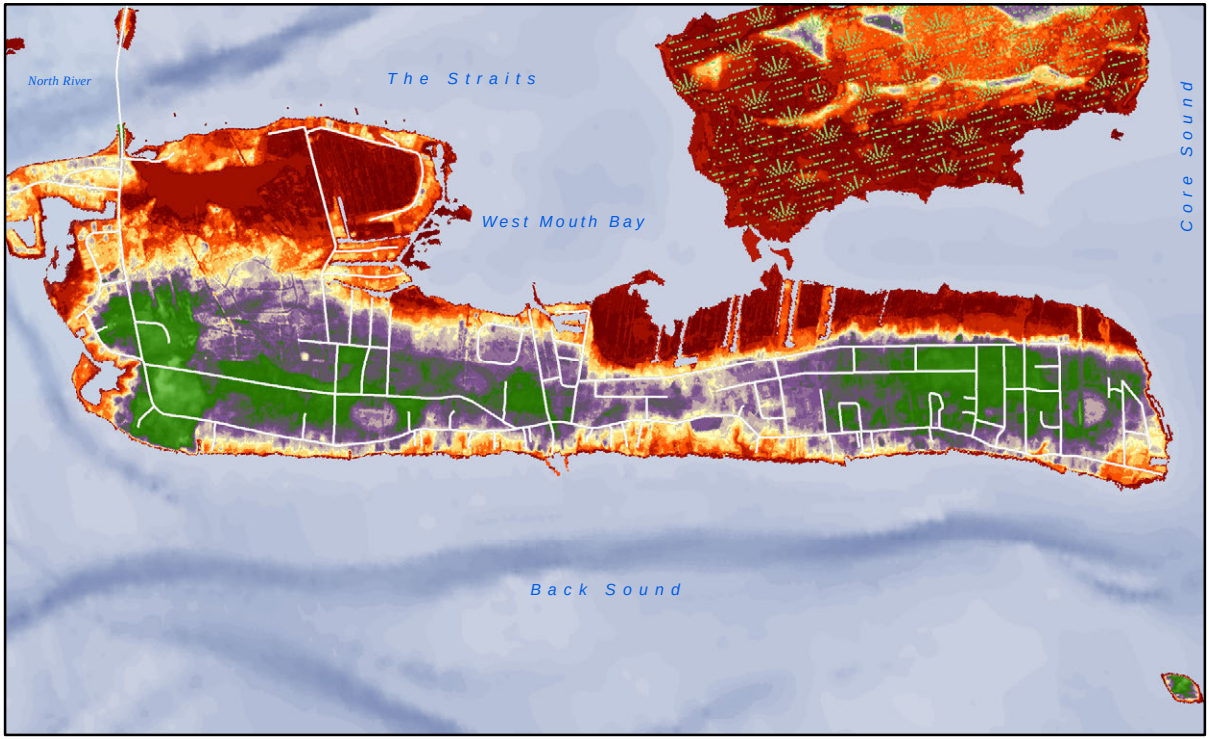
North Carolina Storm Surge and Sea Level Rise Hazards
Harkers Island

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	1207
Land area:	1510 Acres
Land area above 5 feet:	837 Acres
Percent land below 5 feet:	44.56%



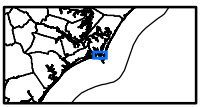
Explanation of Symbols

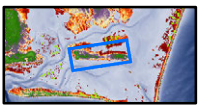
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

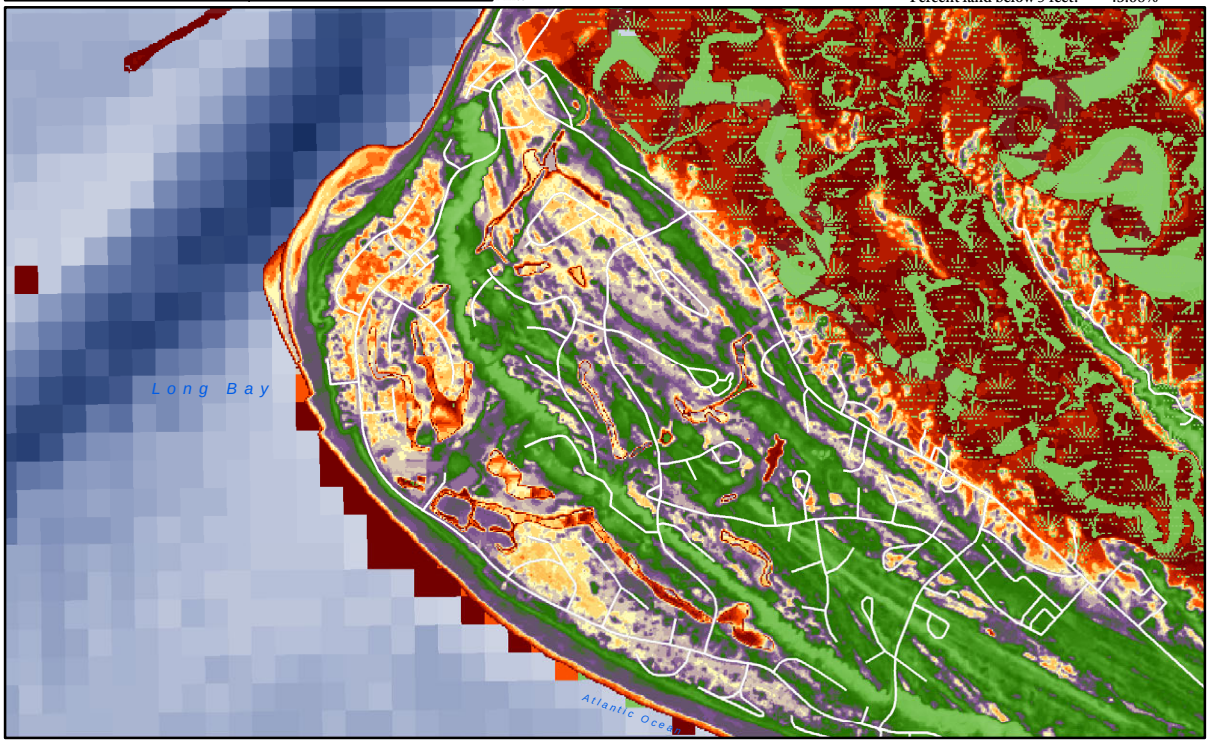
Bald Head Island

Vance Miller
12/5/2017

1:25,000

0 ½ 1 Miles

2010 population:	158
Land area:	2257 Acres
Land area above 5 feet:	1271 Acres
Percent land below 5 feet:	43.68%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

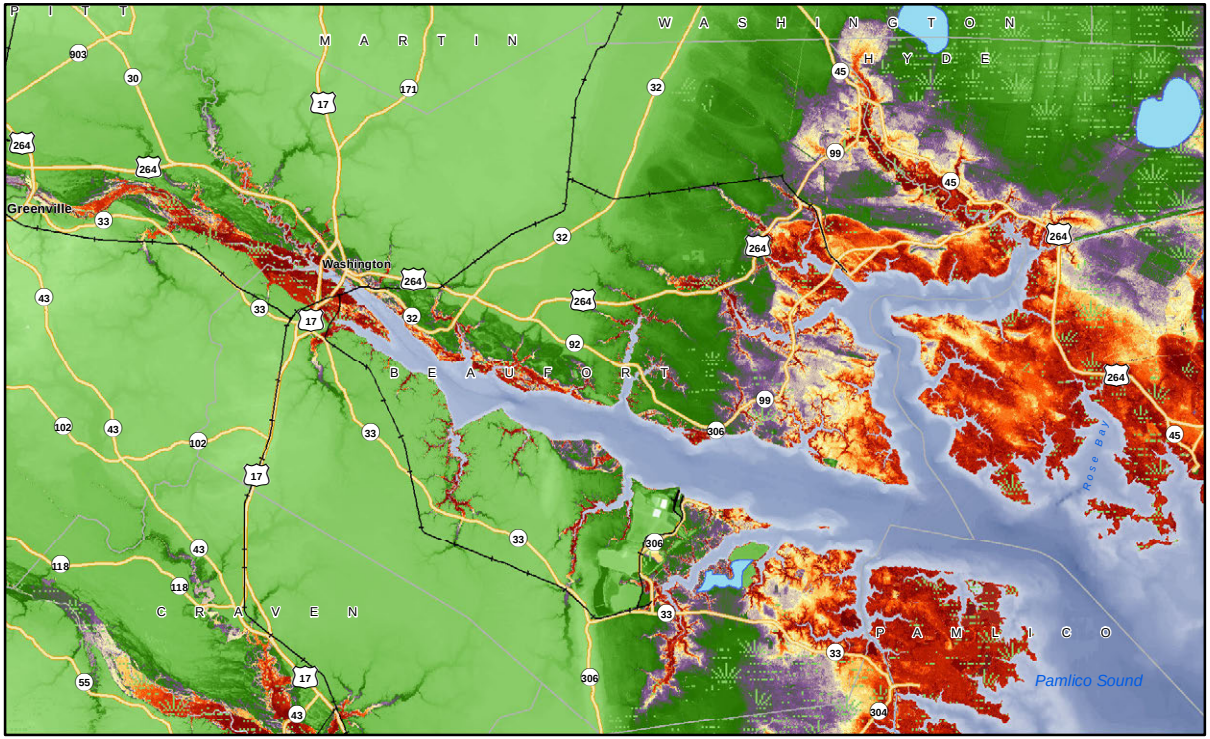
North Carolina Storm Surge and Sea Level Rise Hazards
Beaufort County

Vance Miller
12/5/2017

1:595,000

0 2 4 8 12 16 20 24 Miles

2010 population:	45436
Land area:	530502 Acres
Land area above 5 feet:	455740 Acres
Percent land below 5 feet:	14.09%



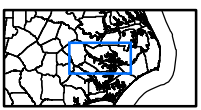
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Lake Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

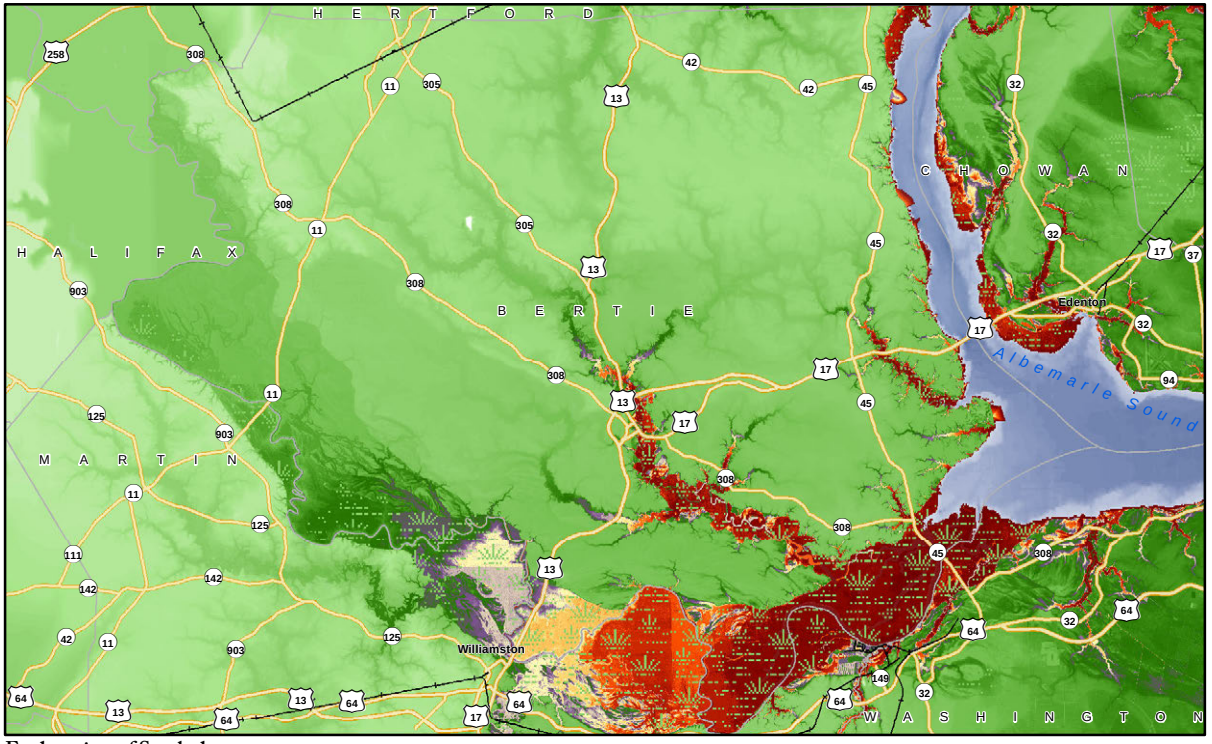
North Carolina Storm Surge and Sea Level Rise Hazards
Bertie County

Vance Miller
12/5/2017

1:500,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	20411
Land area:	438792 Acres
Land area above 5 feet:	404155 Acres
Percent land below 5 feet:	7.89%



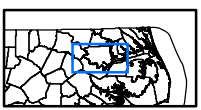
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

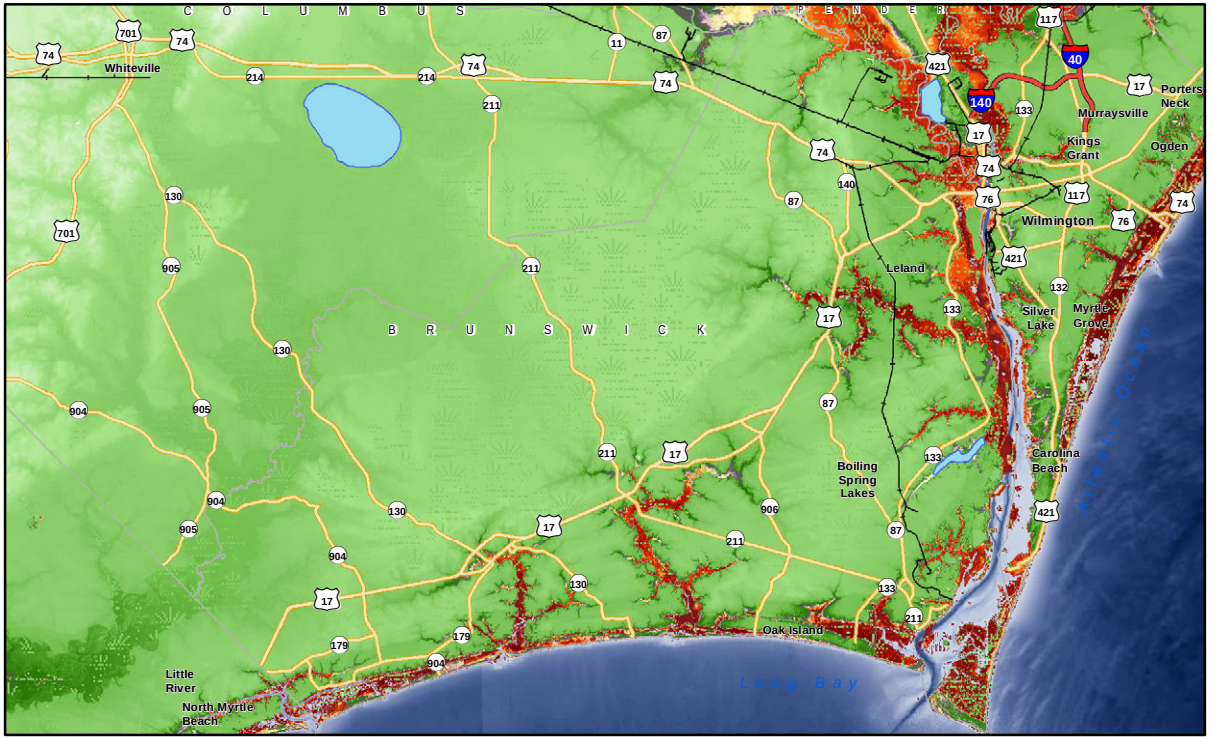
Brunswick County

Vance Miller
12/5/2017

1:610,000

0 2 4 8 12 16 20 24 Miles

2010 population:	84454
Land area:	540338 Acres
Land area above 5 feet:	505060 Acres
Percent land below 5 feet:	6.52%



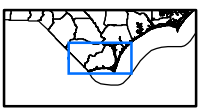
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

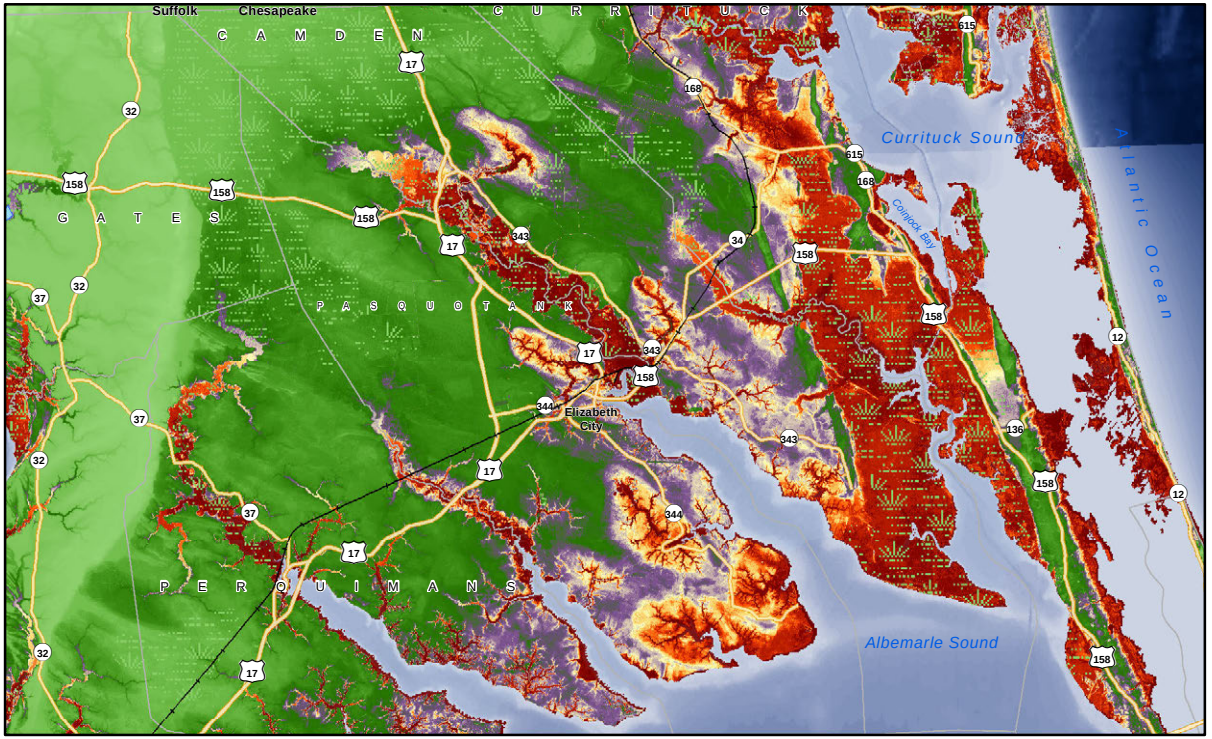
North Carolina Storm Surge and Sea Level Rise Hazards
Camden County

Vance Miller
12/5/2017

1:525,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	7058
Land area:	151552 Acres
Land area above 5 feet:	101869 Acres
Percent land below 5 feet:	32.78%

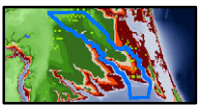


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Lake Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

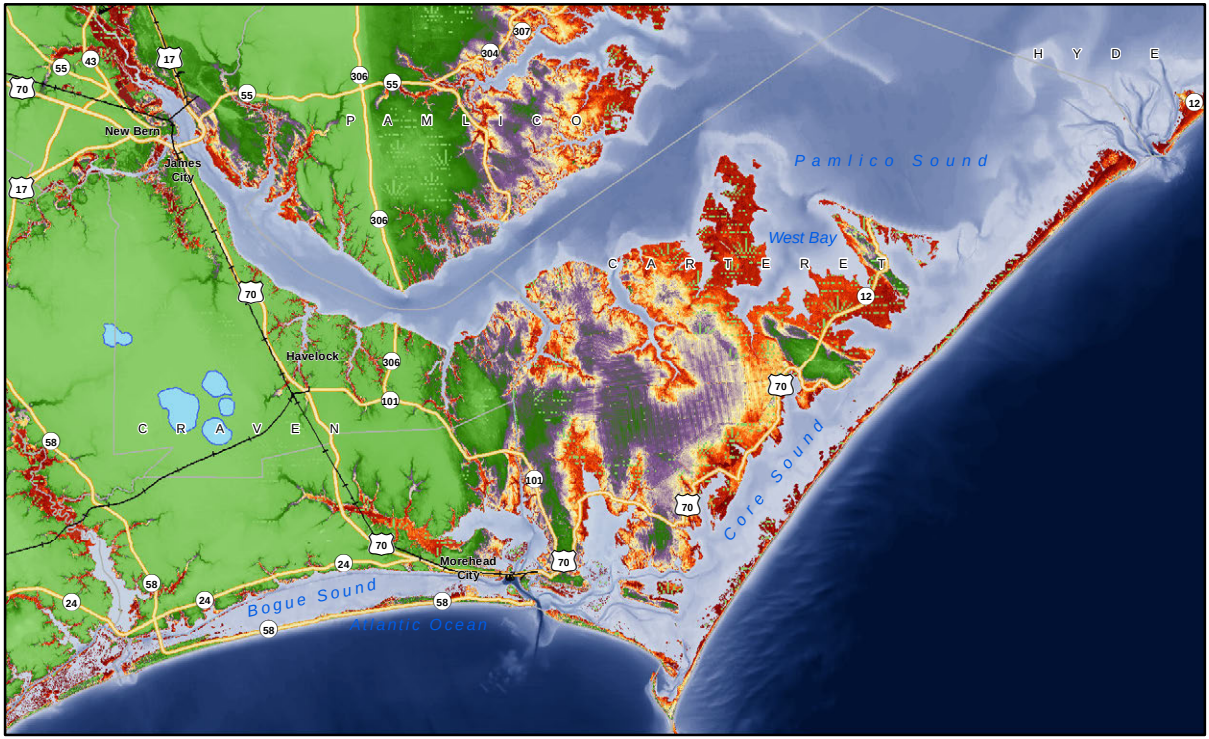
North Carolina Storm Surge and Sea Level Rise Hazards
Carteret County

Vance Miller
12/5/2017

1:720,000

0 2 4 8 12 16 20 24 Miles

2010 population:	70648
Land area:	324982 Acres
Land area above 5 feet:	204442 Acres
Percent land below 5 feet:	37.09%

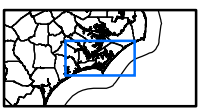


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Lake Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

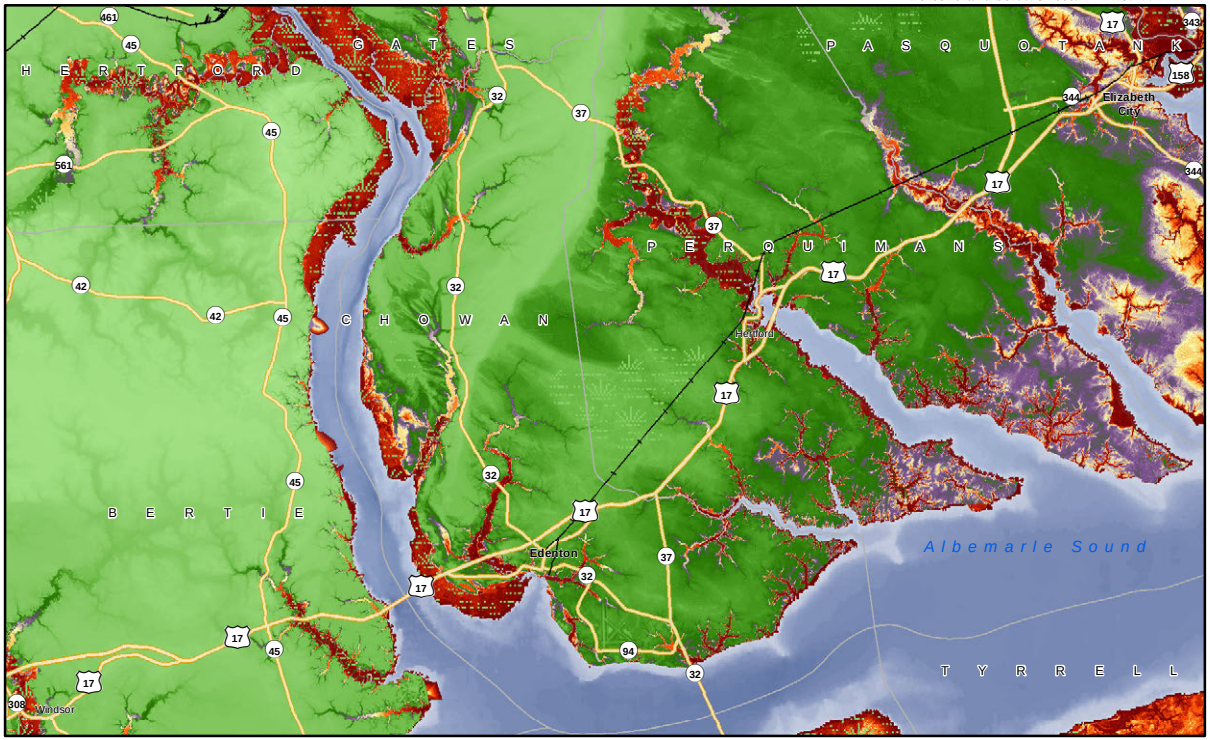
North Carolina Storm Surge and Sea Level Rise Hazards
Chowan County

Vance Miller
12/5/2017

1:435,000

0 1 2 4 6 8 10 12 Miles

2010 population:	15196
Land area:	110040 Acres
Land area above 5 feet:	98586 Acres
Percent land below 5 feet:	10.4%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

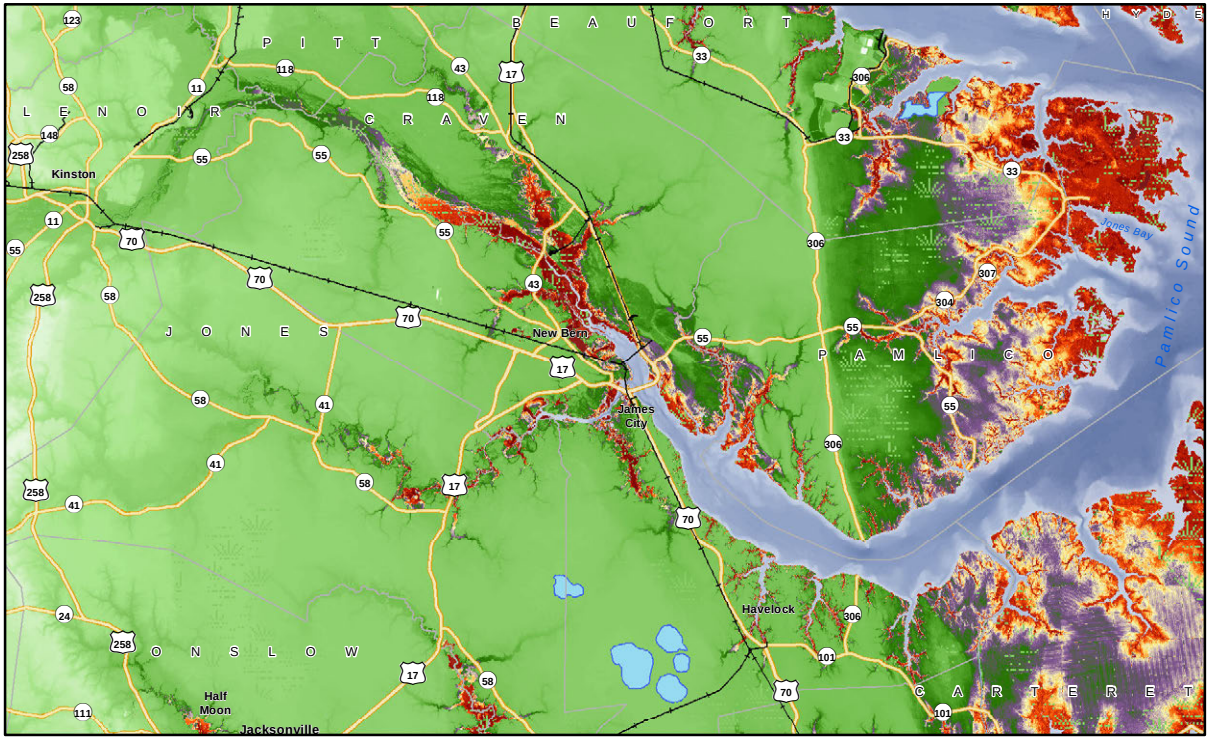
North Carolina Storm Surge and Sea Level Rise Hazards
Craven County

Vance Miller
12/5/2017

1:695,000

0 2 4 8 12 16 20 24 Miles

2010 population:	97431
Land area:	456539 Acres
Land area above 5 feet:	427051 Acres
Percent land below 5 feet:	6.45%



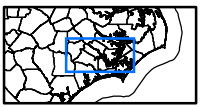
Explanation of Symbols

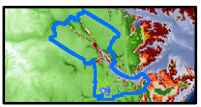
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

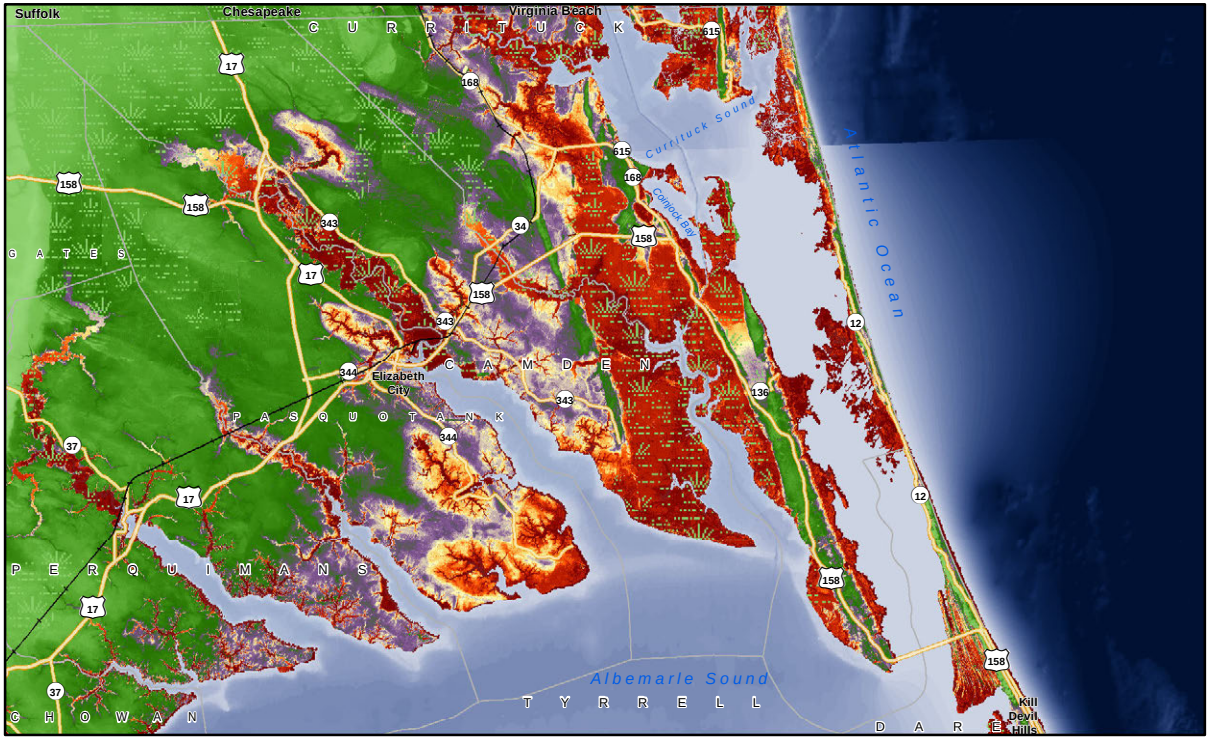
Currituck County

Vance Miller
12/5/2017

1:600,000

0 2 4 8 12 16 20 24 Miles

2010 population:	20756
Land area:	162008 Acres
Land area above 5 feet:	80474 Acres
Percent land below 5 feet:	50.32%



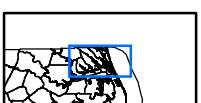
Explanation of Symbols

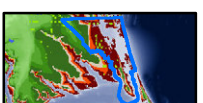
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

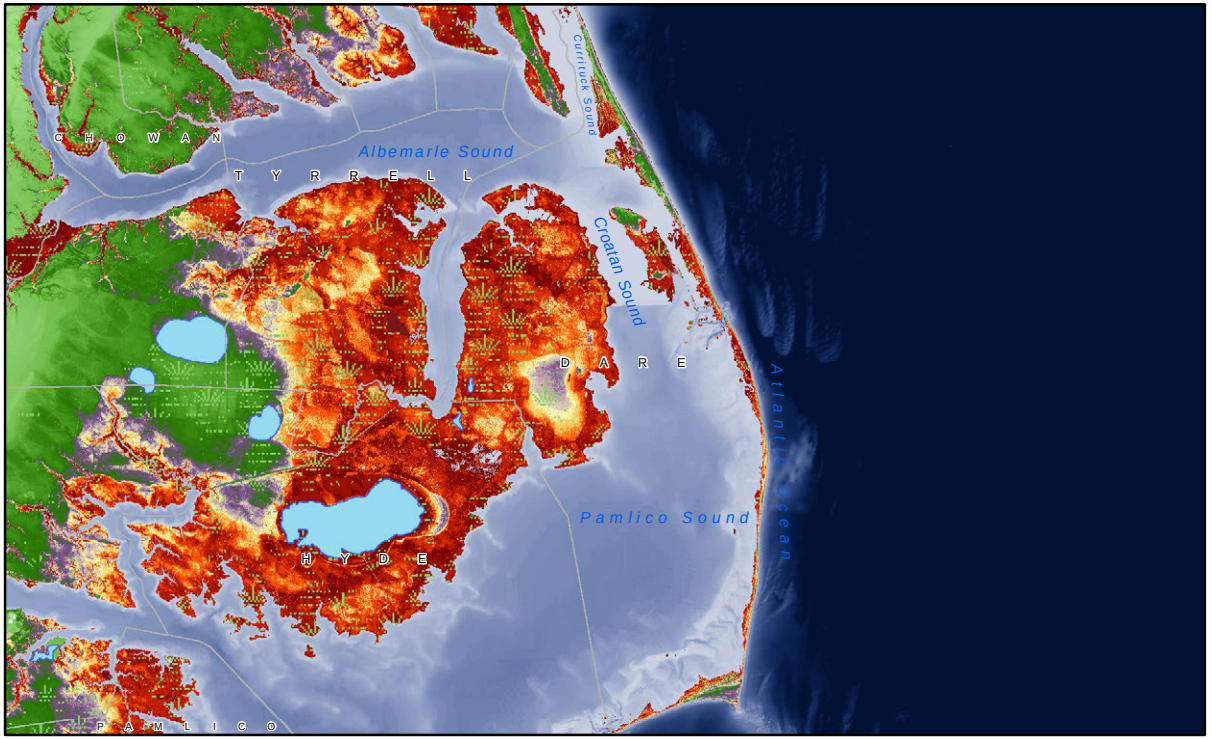
Dare County

Vance Miller
12/5/2017

2010 population:	36327
Land area:	235758 Acres
Land area above 5 feet:	37422 Acres
Percent land below 5 feet:	84.12%

1:1,200,000

0 4 8 16 24 32 40 48 Miles



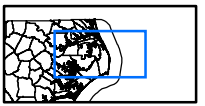
Explanation of Symbols

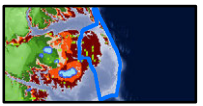
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Lake Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

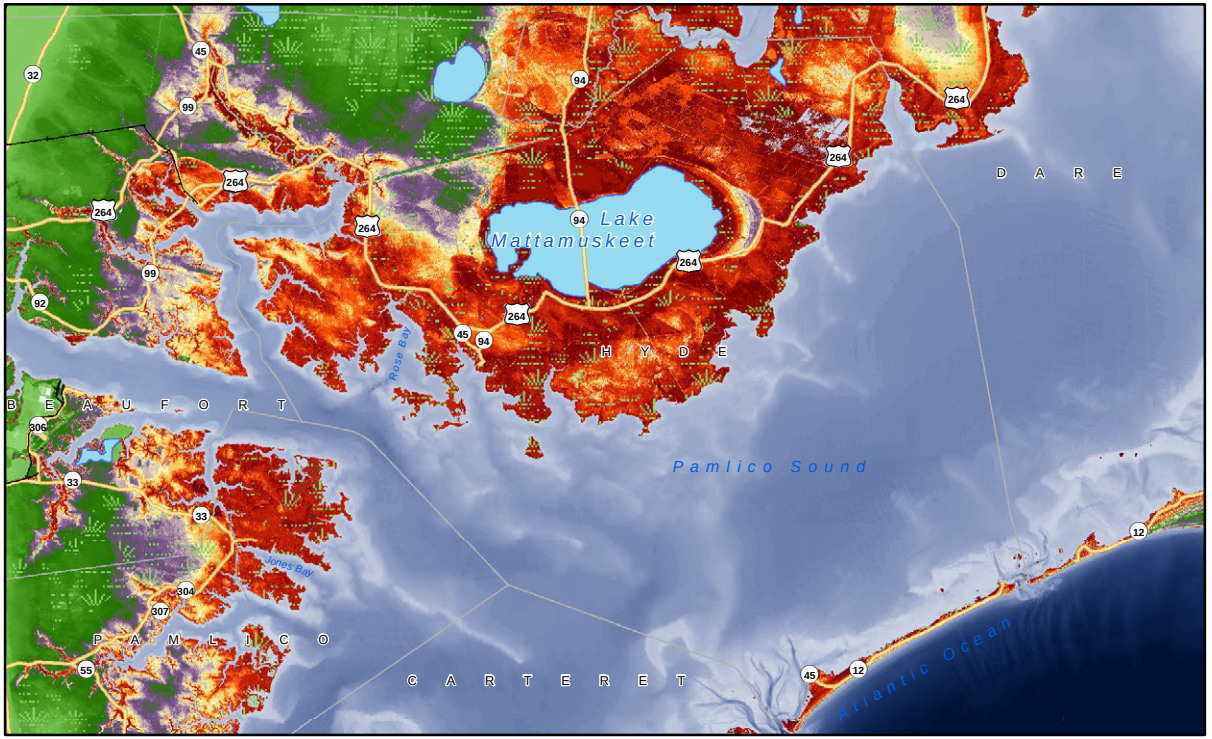
North Carolina Storm Surge and Sea Level Rise Hazards
Hyde County

Vance Miller
12/5/2017

1:730,000

0 2½ 5 10 15 20 25 30 Miles

2010 population:	4607
Land area:	372880 Acres
Land area above 5 feet:	99630 Acres
Percent land below 5 feet:	73.28%



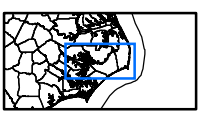
Explanation of Symbols

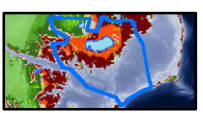
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

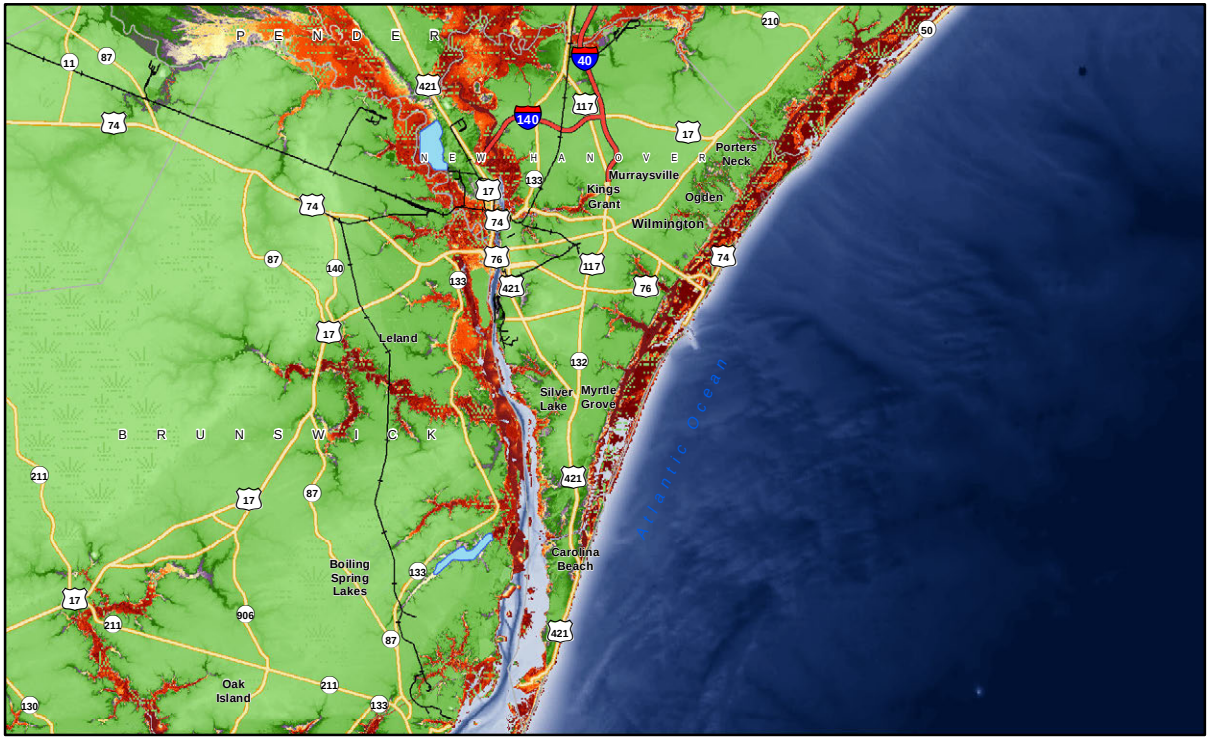
North Carolina Storm Surge and Sea Level Rise Hazards
New Hanover County

Vance Miller
12/5/2017

1:530,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	179810
Land area:	121114 Acres
Land area above 5 feet:	100909 Acres
Percent land below 5 feet:	16.68%



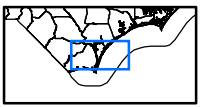
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

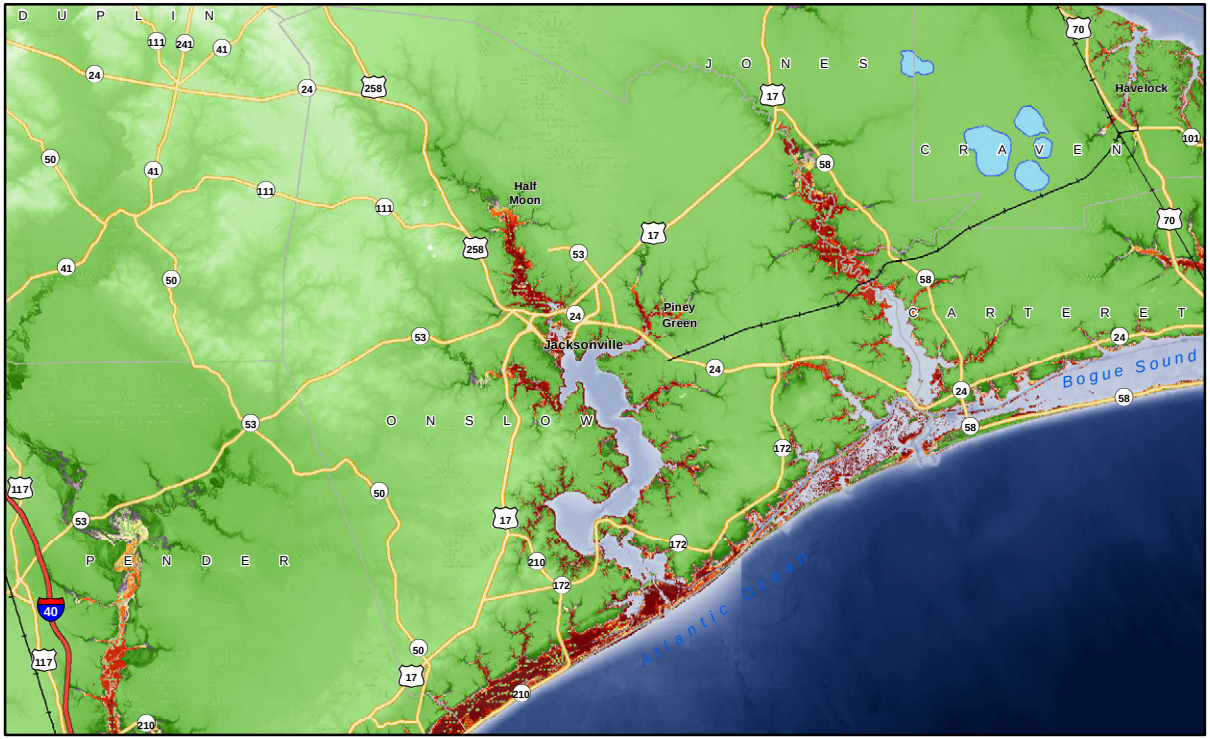
North Carolina Storm Surge and Sea Level Rise Hazards
Onslow County

Vance Miller
12/5/2017

1:625,000

0 2 4 8 12 16 20 24 Miles

2010 population:	181767
Land area:	483446 Acres
Land area above 5 feet:	457378 Acres
Percent land below 5 feet:	5.39%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — Interstate — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

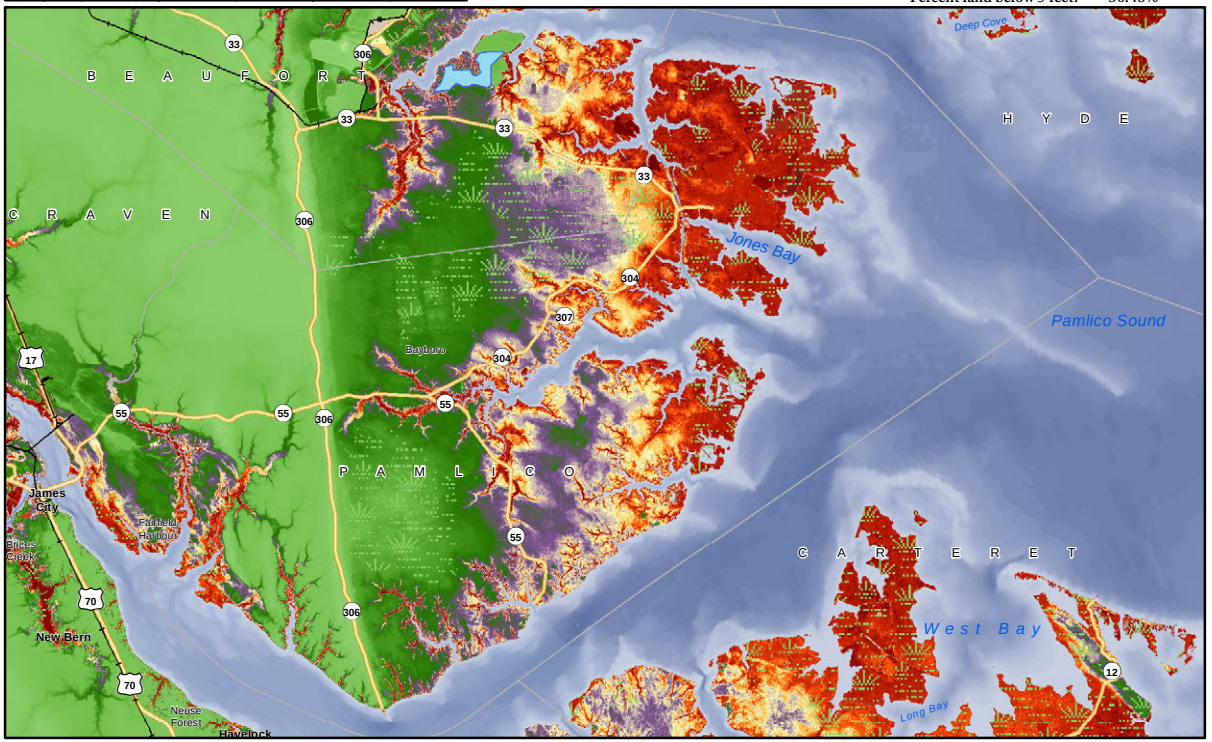
North Carolina Storm Surge and Sea Level Rise Hazards
Pamlico County

Vance Miller
12/5/2017

1:475,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	12872
Land area:	213093 Acres
Land area above 5 feet:	148123 Acres
Percent land below 5 feet:	30.48%

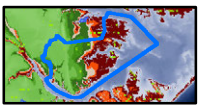


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

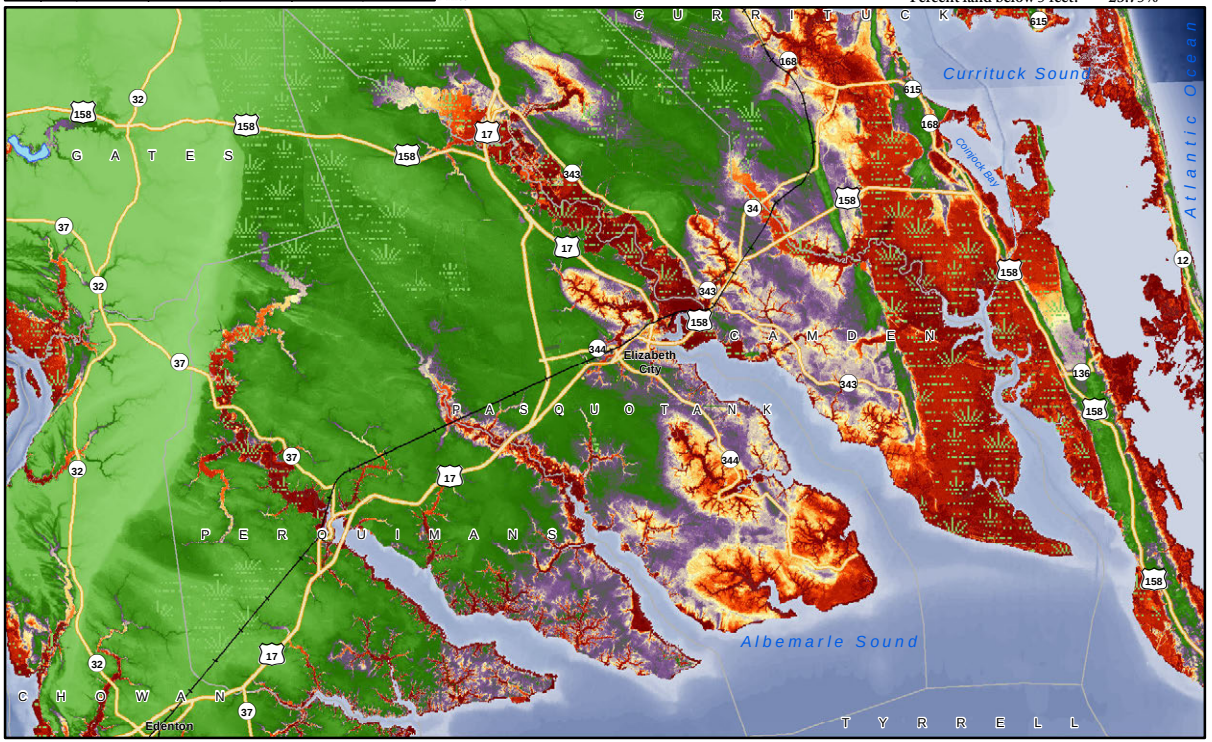
North Carolina Storm Surge and Sea Level Rise Hazards
Pasquotank County

Vance Miller
12/5/2017

1:510,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	37715
Land area:	143073 Acres
Land area above 5 feet:	109088 Acres
Percent land below 5 feet:	23.75%

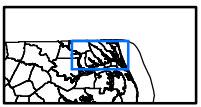


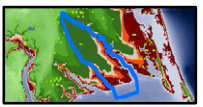
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Lake Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

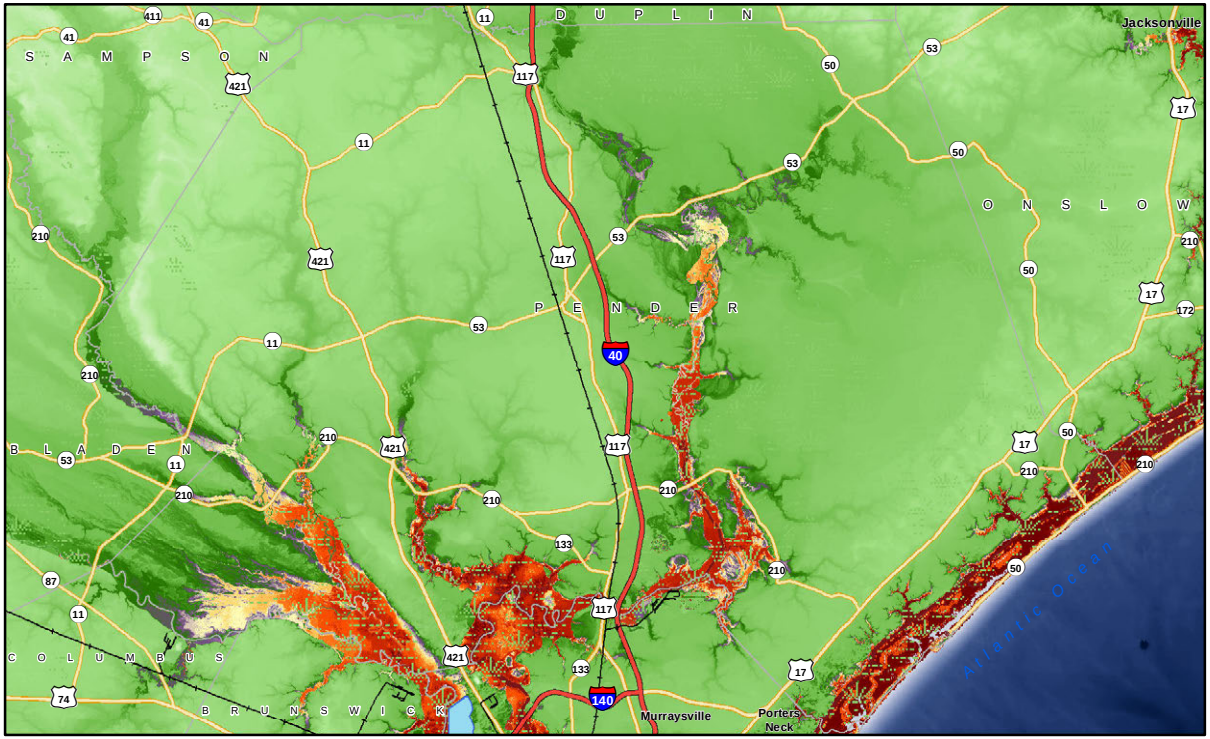
North Carolina Storm Surge and Sea Level Rise Hazards
Pender County

Vance Miller
12/5/2017

1:505,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	48251
Land area:	548108 Acres
Land area above 5 feet:	512394 Acres
Percent land below 5 feet:	6.51%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

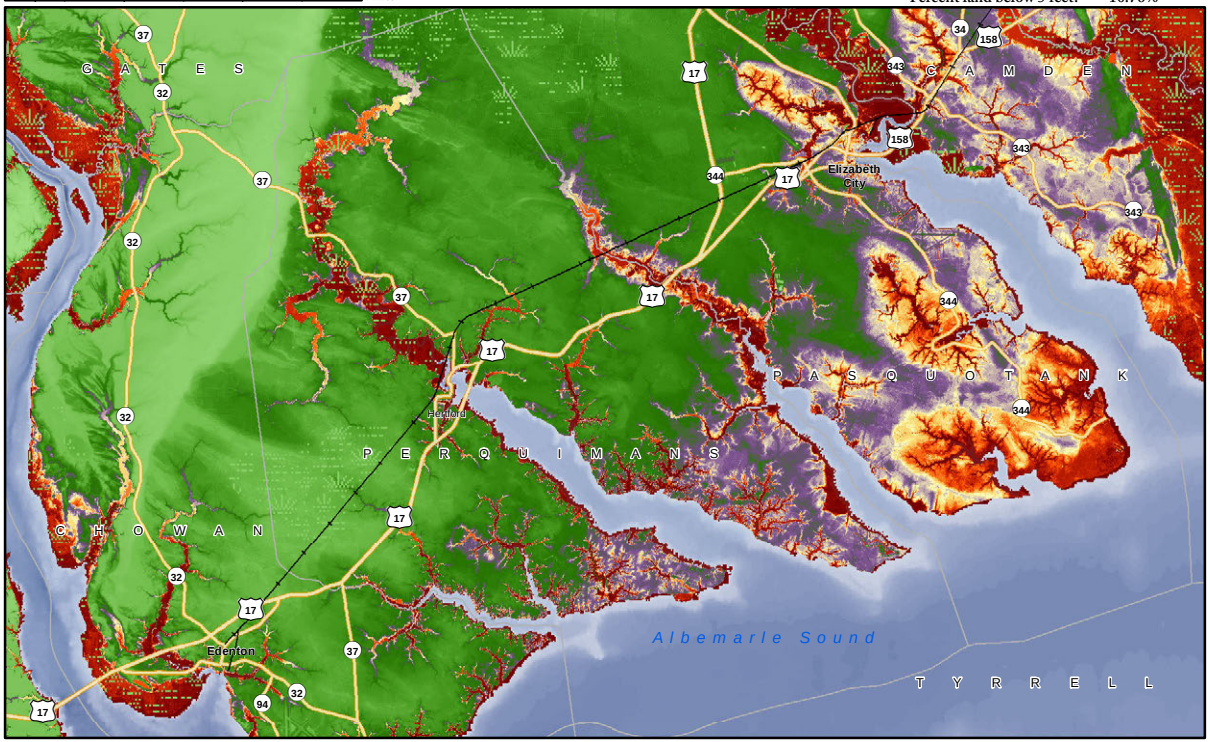
North Carolina Storm Surge and Sea Level Rise Hazards
Perquimans County

Vance Miller
12/5/2017

1:410,000

0 1 2 4 6 8 10 12 Miles

2010 population:	11352
Land area:	156738 Acres
Land area above 5 feet:	139861 Acres
Percent land below 5 feet:	10.76%



Explanation of Symbols

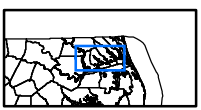
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

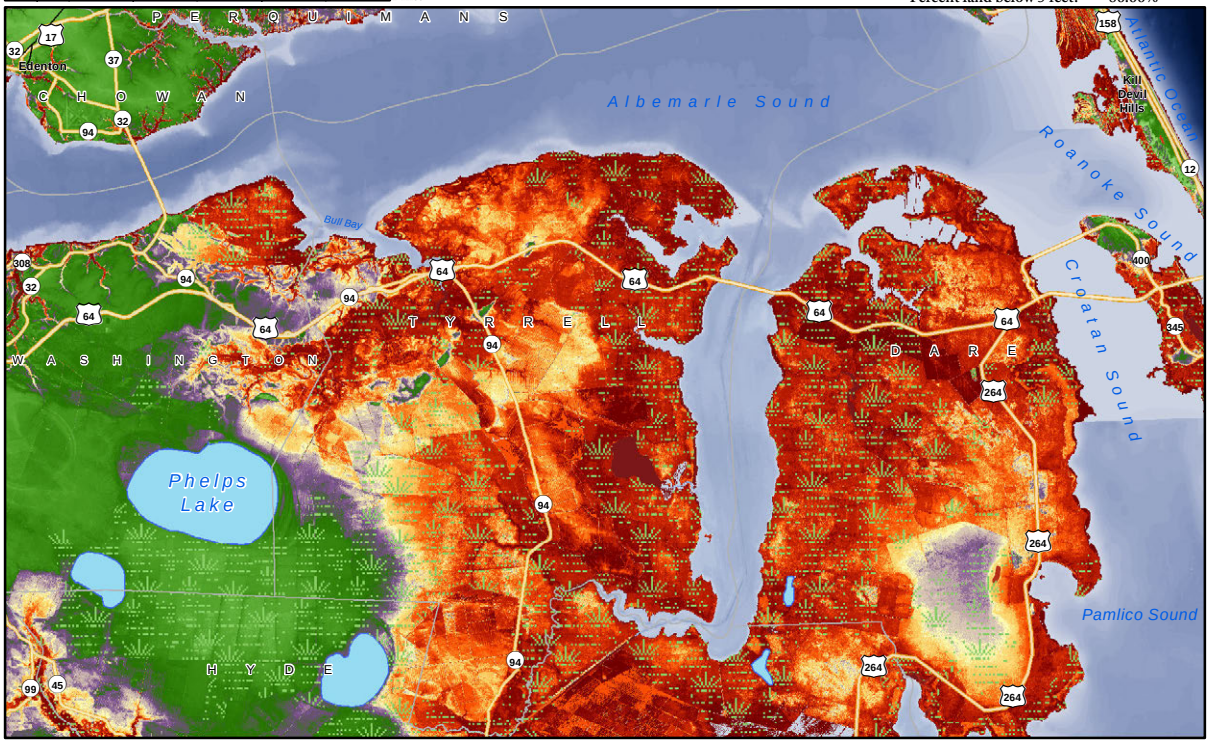
North Carolina Storm Surge and Sea Level Rise Hazards
Tyrrell County

Vance Miller
12/5/2017

1:570,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	3483
Land area:	245148 Acres
Land area above 5 feet:	32693 Acres
Percent land below 5 feet:	86.66%

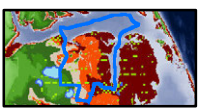


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways US Route NC Route Water Bodies Lake Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

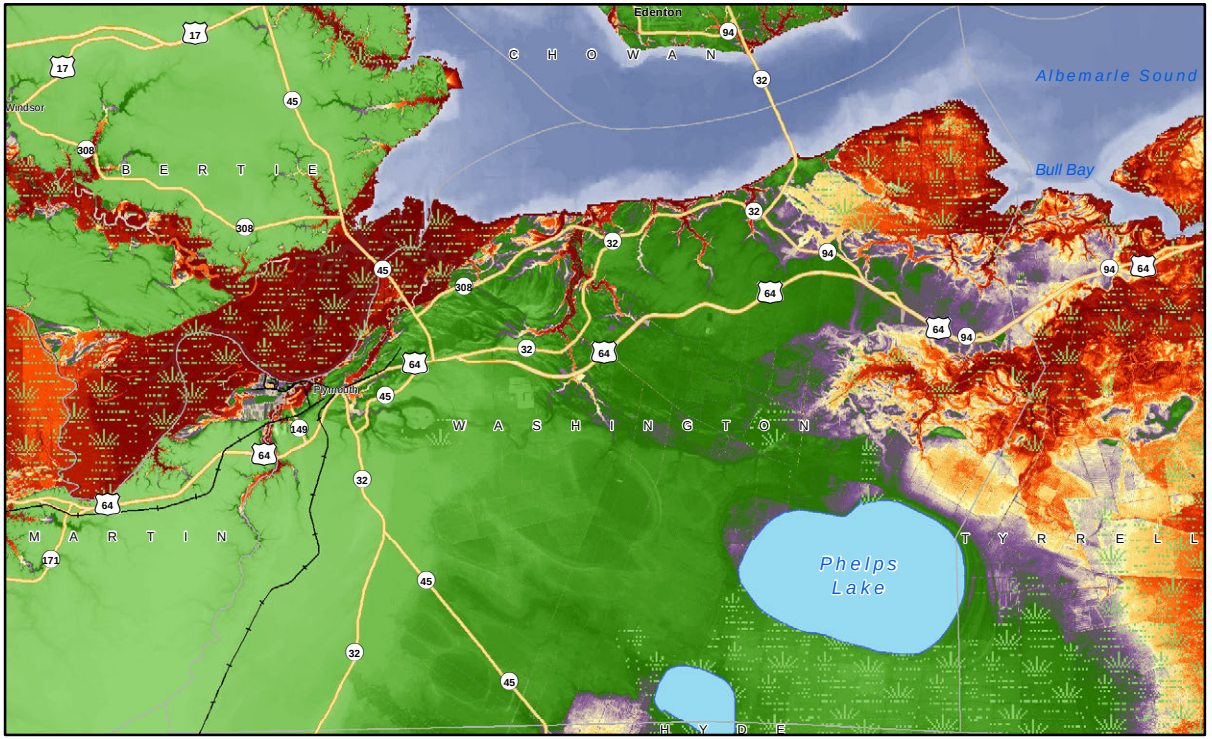
North Carolina Storm Surge and Sea Level Rise Hazards
Washington County

Vance Miller
12/5/2017

1:380,000

0 1 2 4 6 8 10 12 Miles

2010 population:	12501
Land area:	238627 Acres
Land area above 5 feet:	205696 Acres
Percent land below 5 feet:	13.8%



Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: US Route, NC Route

Water Bodies: Lake, Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

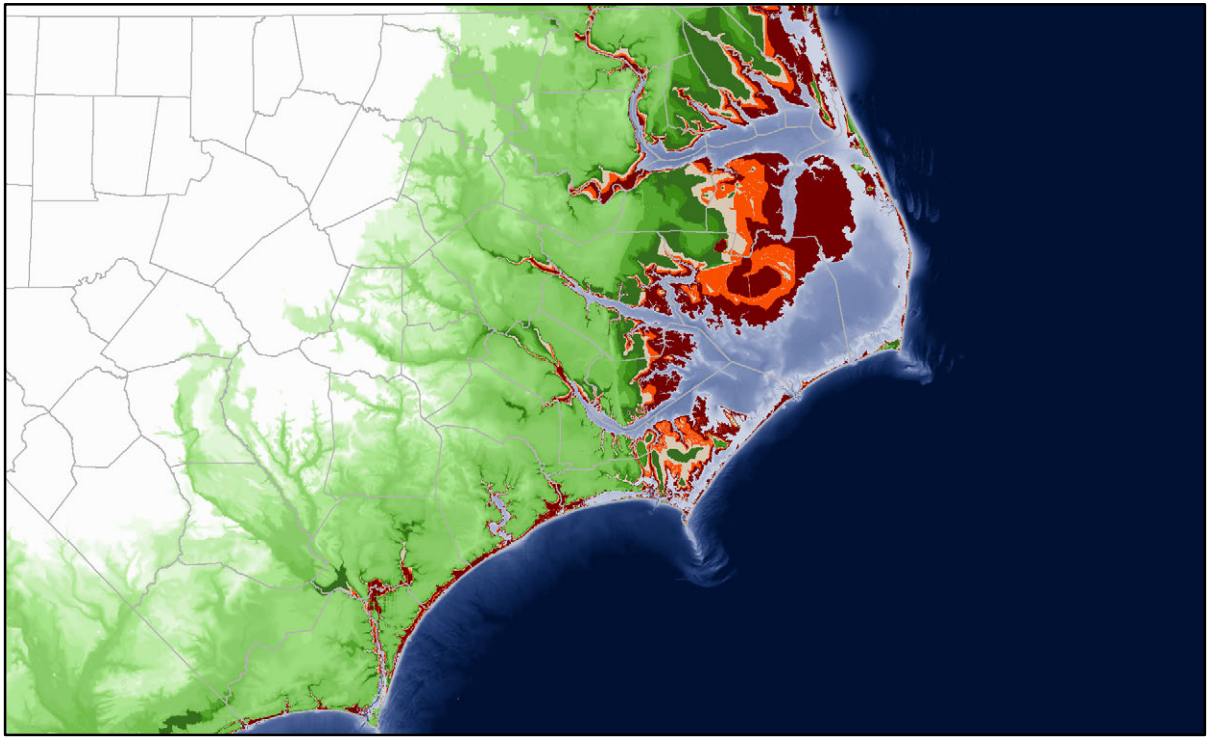
Coastal Counties

Vance Miller
12/5/2017

1:3,180,000

0 10 20 40 60 80 100 120
Miles

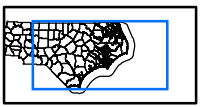
2010 population:	890075
Land area:	5472738 Acres
Land area above 5 feet:	4120570 Acres
Percent land below 5 feet:	24.71%

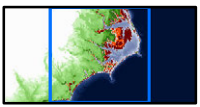


Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

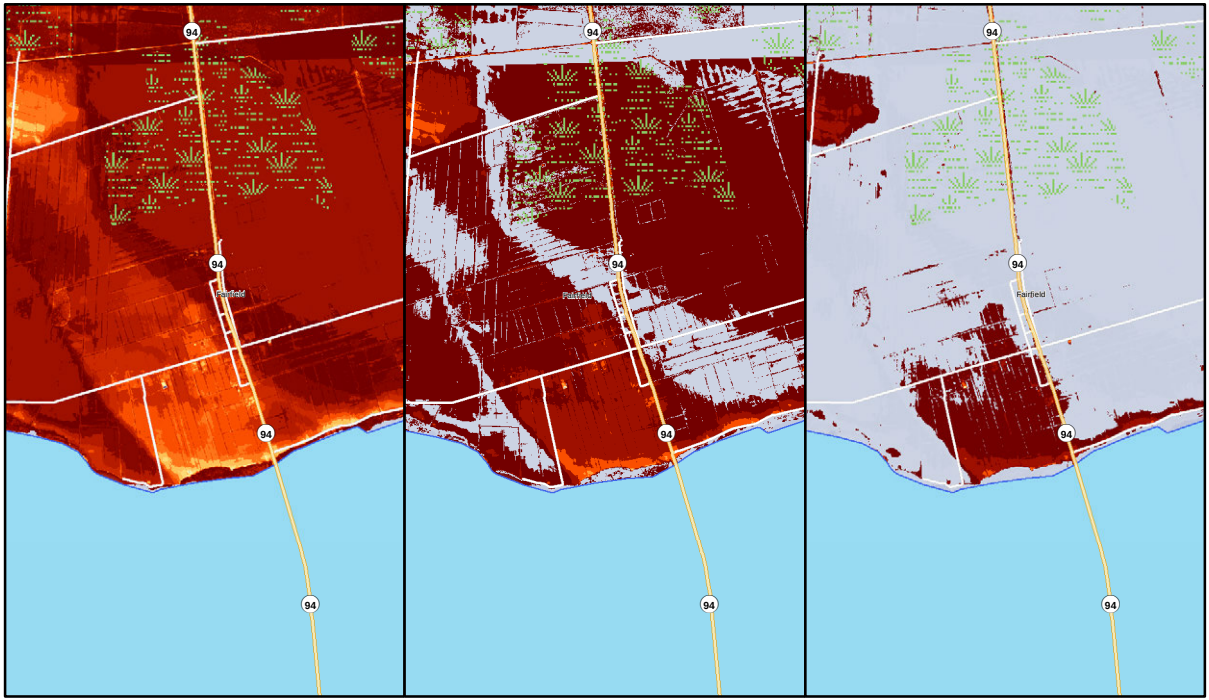
Fairfield

Vance Miller
12/5/2017

1:85,000

0 ½ 1 2 3 Miles

2010 population:	258
Land area:	2453 Acres
Land area above 5 feet:	2 Acres
Percent land below 5 feet:	99.91%



Present Conditions | Rise of 1 foot | Rise of 2 feet

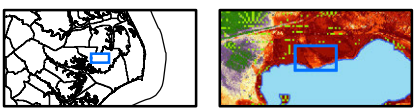
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

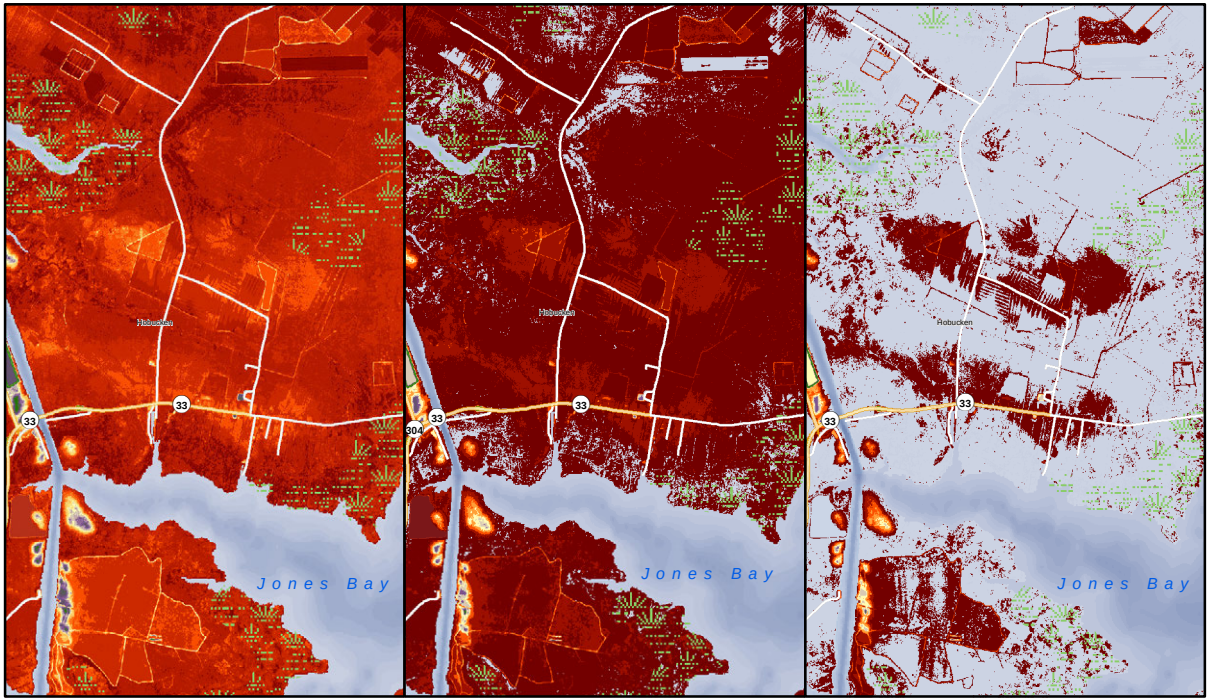
Hobucken

Vance Miller
12/5/2017

1:75,000

0 ½ 1 2 3 Miles

2010 population:	129
Land area:	3176 Acres
Land area above 5 feet:	8 Acres
Percent land below 5 feet:	99.74%



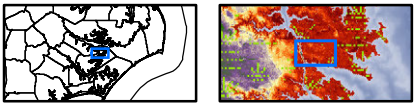
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

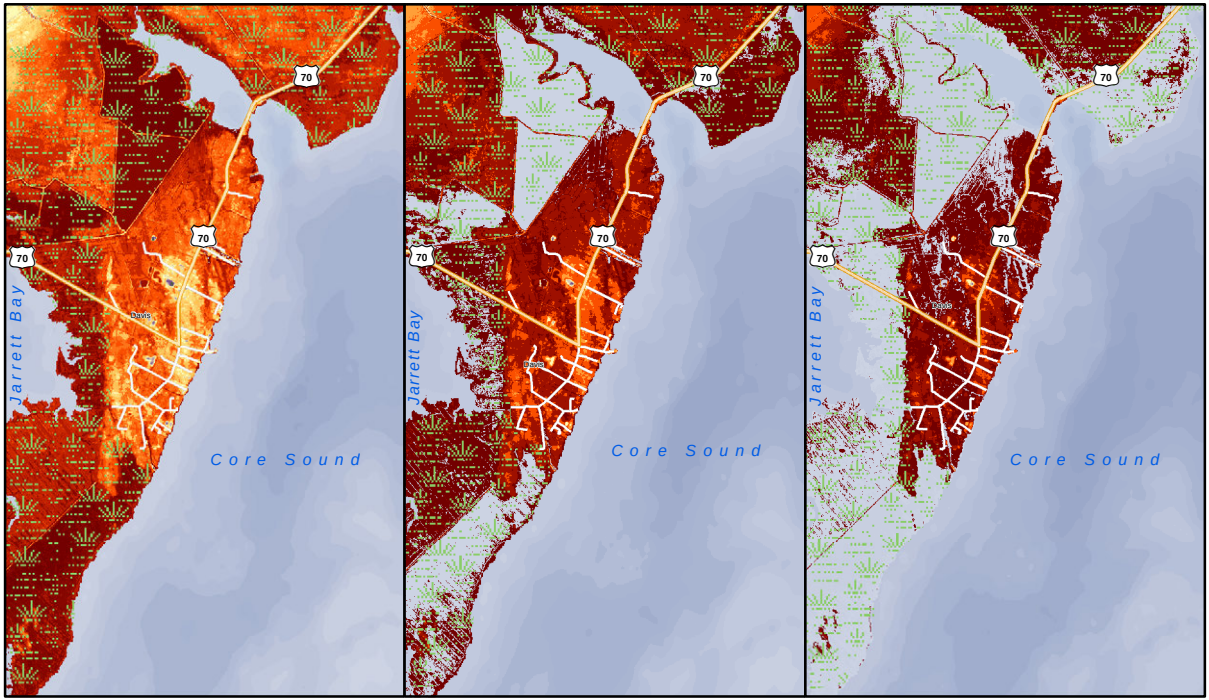
Davis

Vance Miller
12/5/2017

1:80,000

0 ½ 1 2 3 Miles

2010 population:	422
Land area:	1359 Acres
Land area above 5 feet:	10 Acres
Percent land below 5 feet:	99.26%



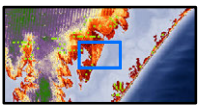
Present Conditions | **Rise of 1 foot** | **Rise of 2 feet**

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

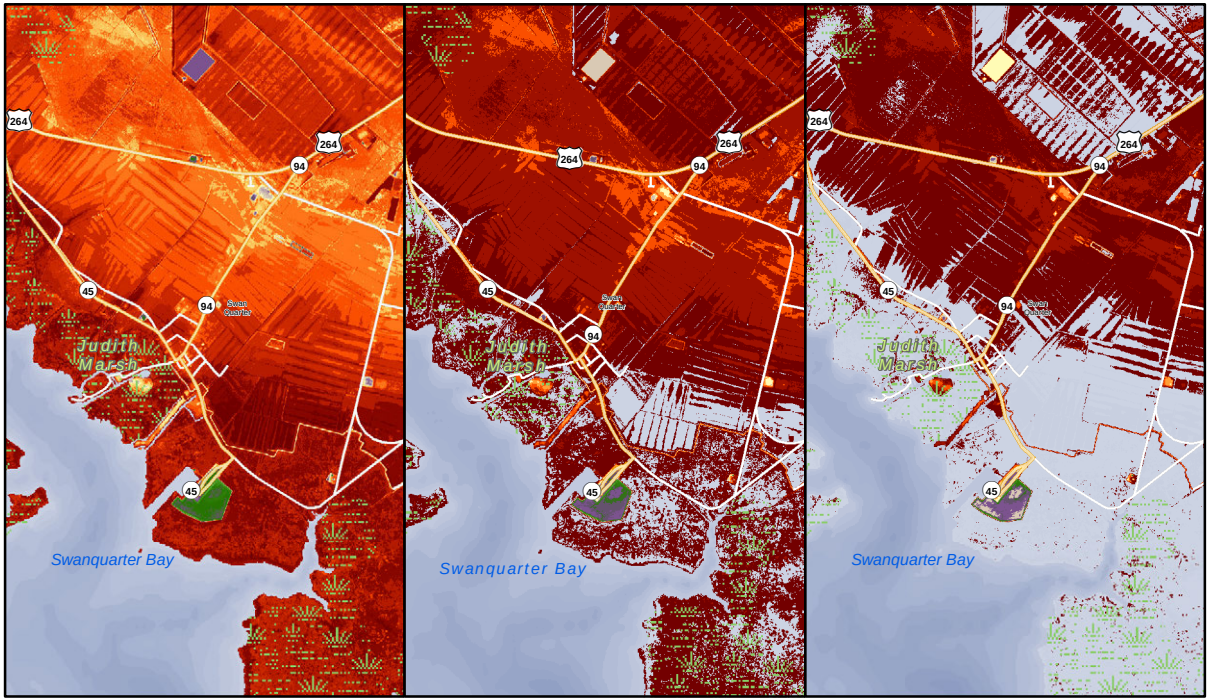
Swan Quarter

Vance Miller
12/5/2017

1:80,000

0 ½ 1 2 3 Miles

2010 population:	324
Land area:	2455 Acres
Land area above 5 feet:	28 Acres
Percent land below 5 feet:	98.85%



Present Conditions | Rise of 1 foot | Rise of 2 feet

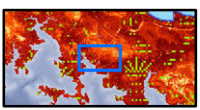
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

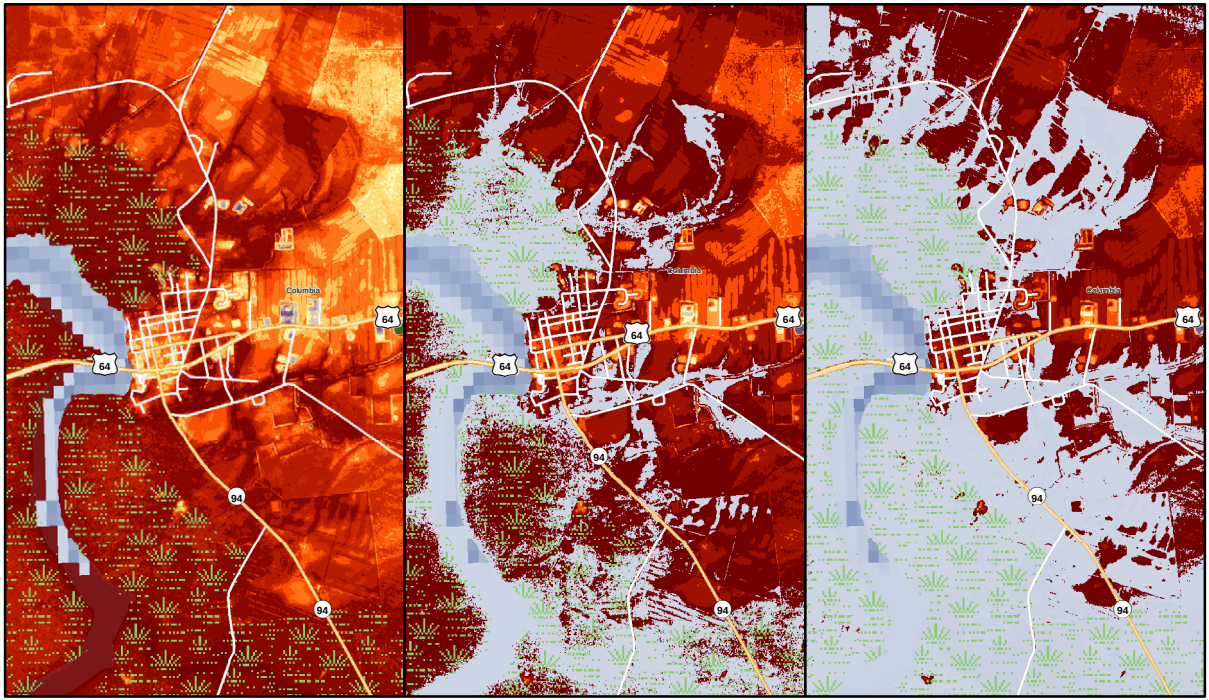
Columbia

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	891
Land area:	769 Acres
Land area above 5 feet:	18 Acres
Percent land below 5 feet:	97.65%



Present Conditions | Rise of 1 foot | Rise of 2 feet

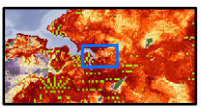
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

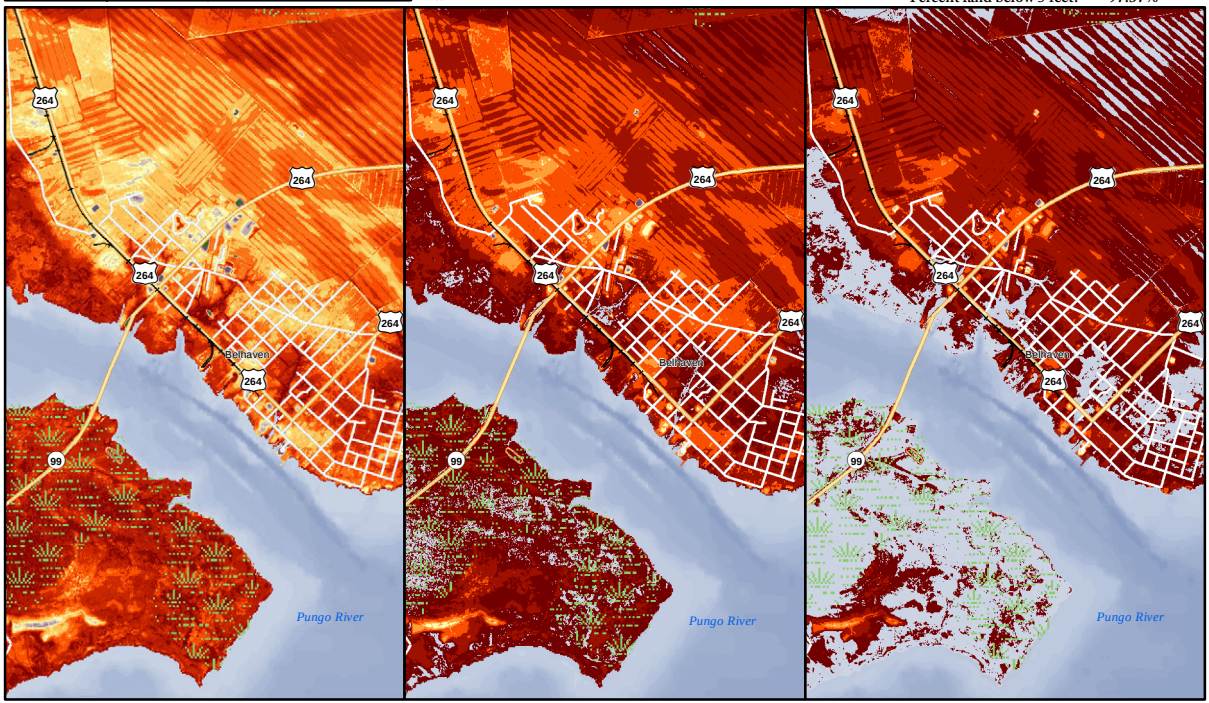
Belhaven

Vance Miller
12/5/2017

1:60,000

0 ½ 1 2 Miles

2010 population:	1688
Land area:	989 Acres
Land area above 5 feet:	26 Acres
Percent land below 5 feet:	97.37%



Present Conditions | Rise of 1 foot | Rise of 2 feet

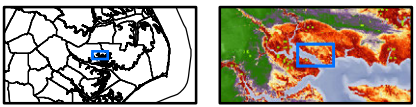
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

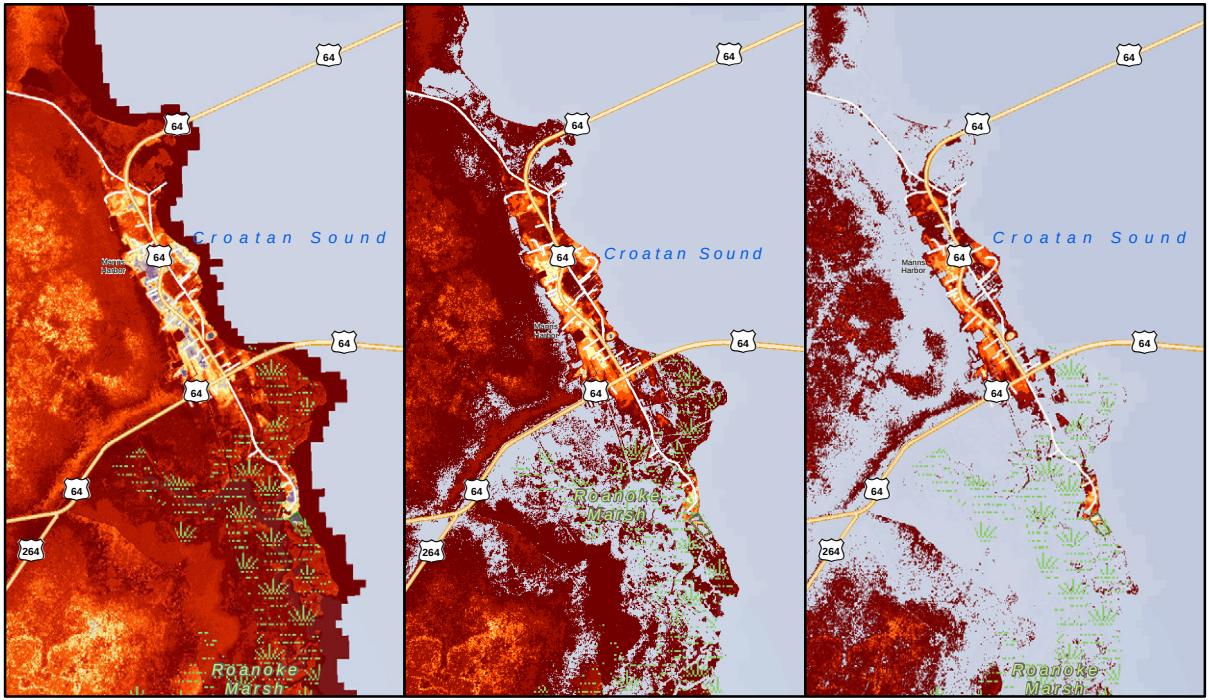
North Carolina Storm Surge and Sea Level Rise Hazards
Manns Harbor

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	821
Land area:	2524 Acres
Land area above 5 feet:	95 Acres
Percent land below 5 feet:	96.23%



Present Conditions | Rise of 1 foot | Rise of 2 feet

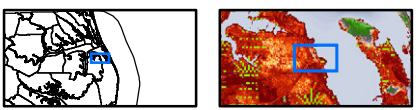
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

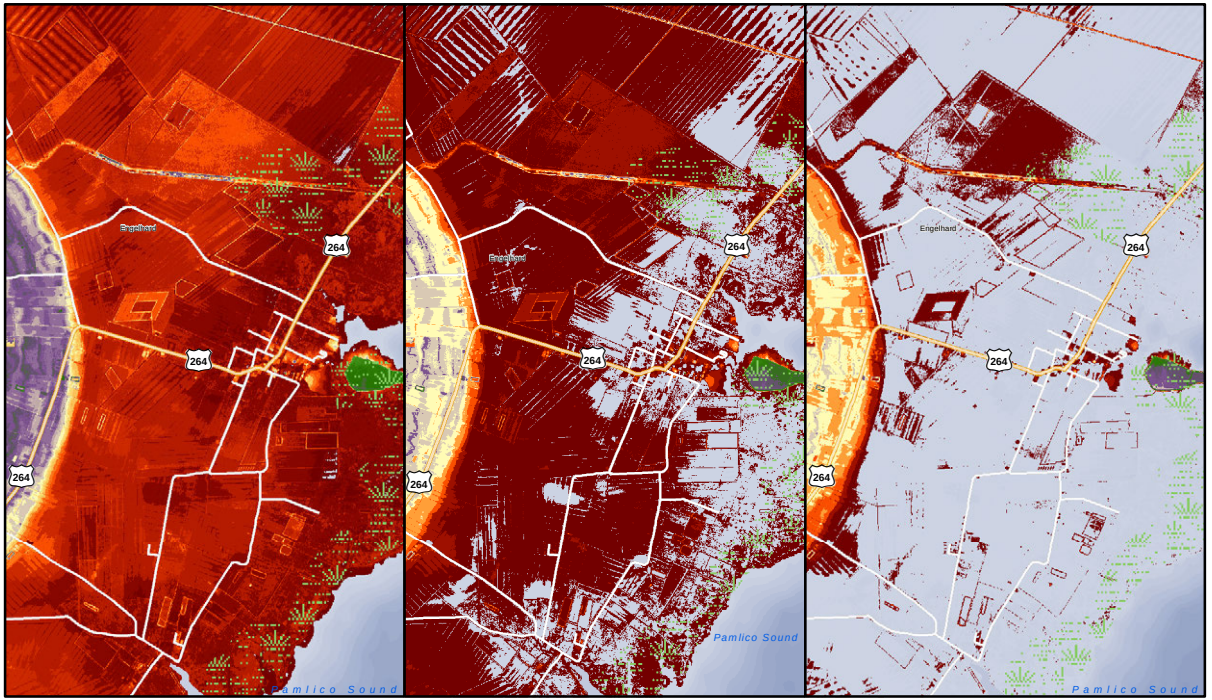
Engelhard

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	445
Land area:	2042 Acres
Land area above 5 feet:	79 Acres
Percent land below 5 feet:	96.13%



Present Conditions | Rise of 1 foot | Rise of 2 feet

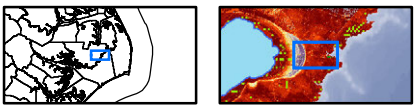
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

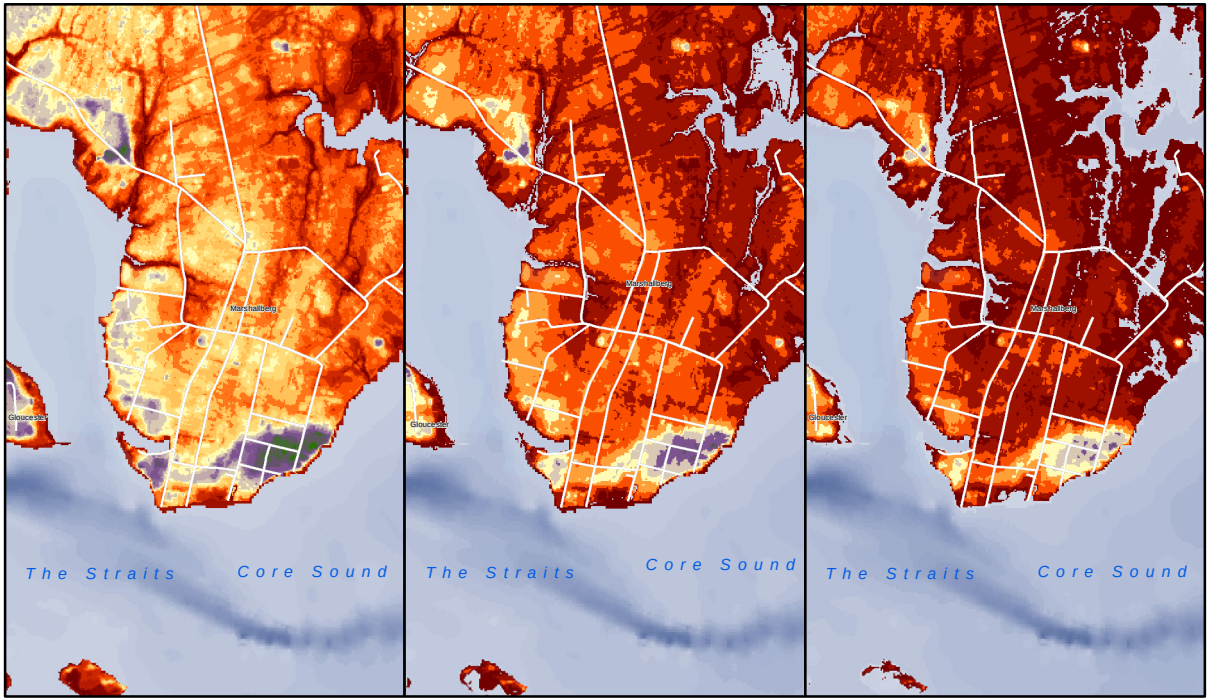
Marshallberg

Vance Miller
12/5/2017

1:30,000

0 ½ 1 Miles

2010 population:	940
Land area:	402 Acres
Land area above 5 feet:	35 Acres
Percent land below 5 feet:	91.29%

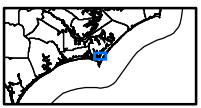


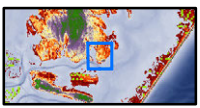
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

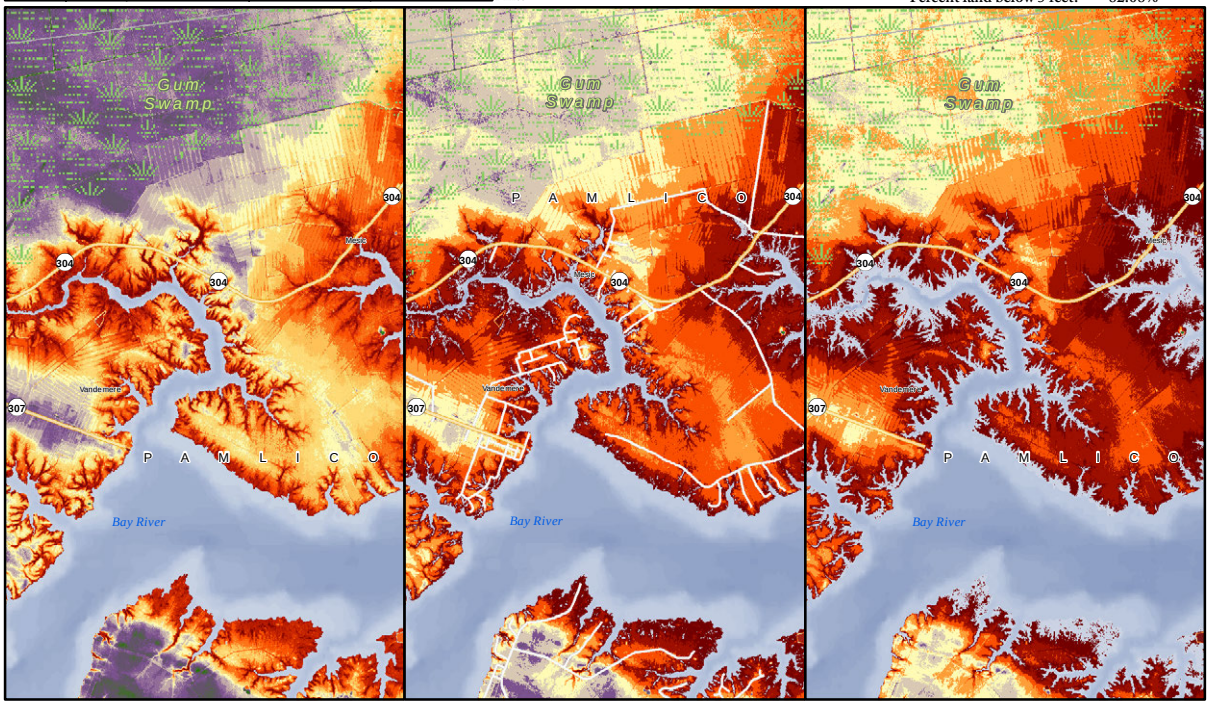
Vandemere and Mesic

Vance Miller
12/5/2017

1:100,000

0 ½ 1 2 3 4 Miles

2010 population:	474
Land area:	1602 Acres
Land area above 5 feet:	287 Acres
Percent land below 5 feet:	82.08%



Present Conditions | Rise of 1 foot | Rise of 2 feet

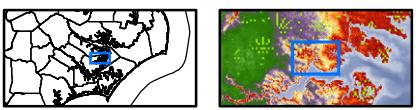
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

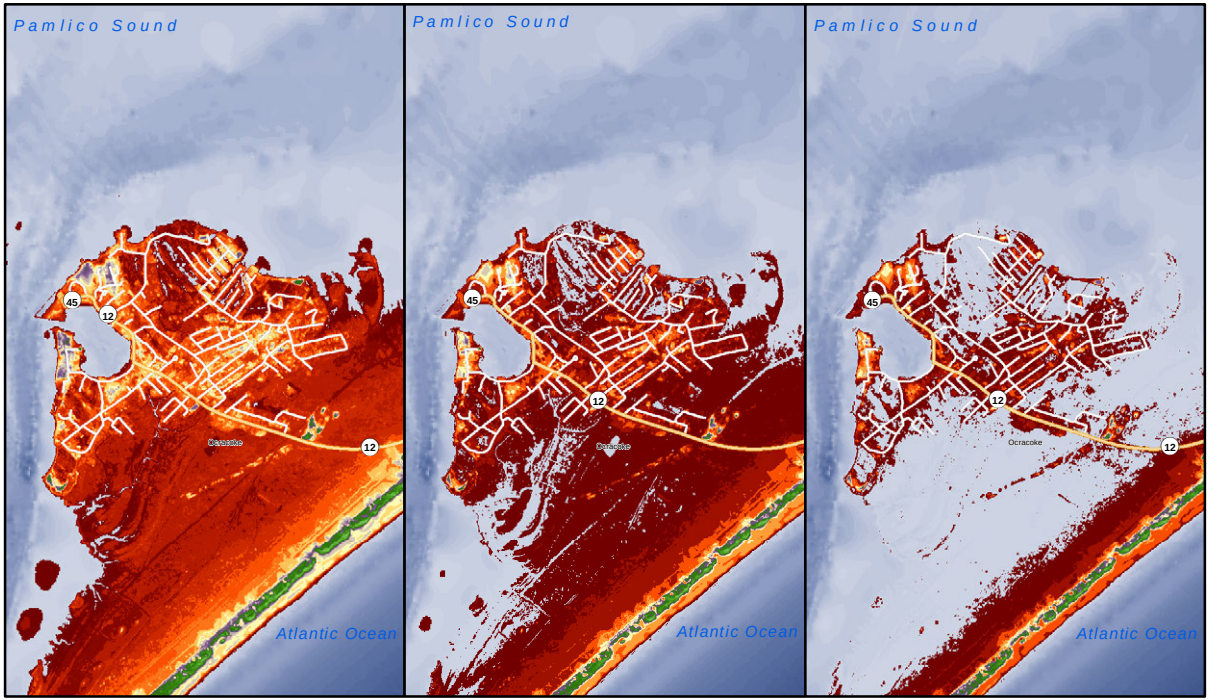
Ocracoke

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	948
Land area:	5207 Acres
Land area above 5 feet:	772 Acres
Percent land below 5 feet:	85.17%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

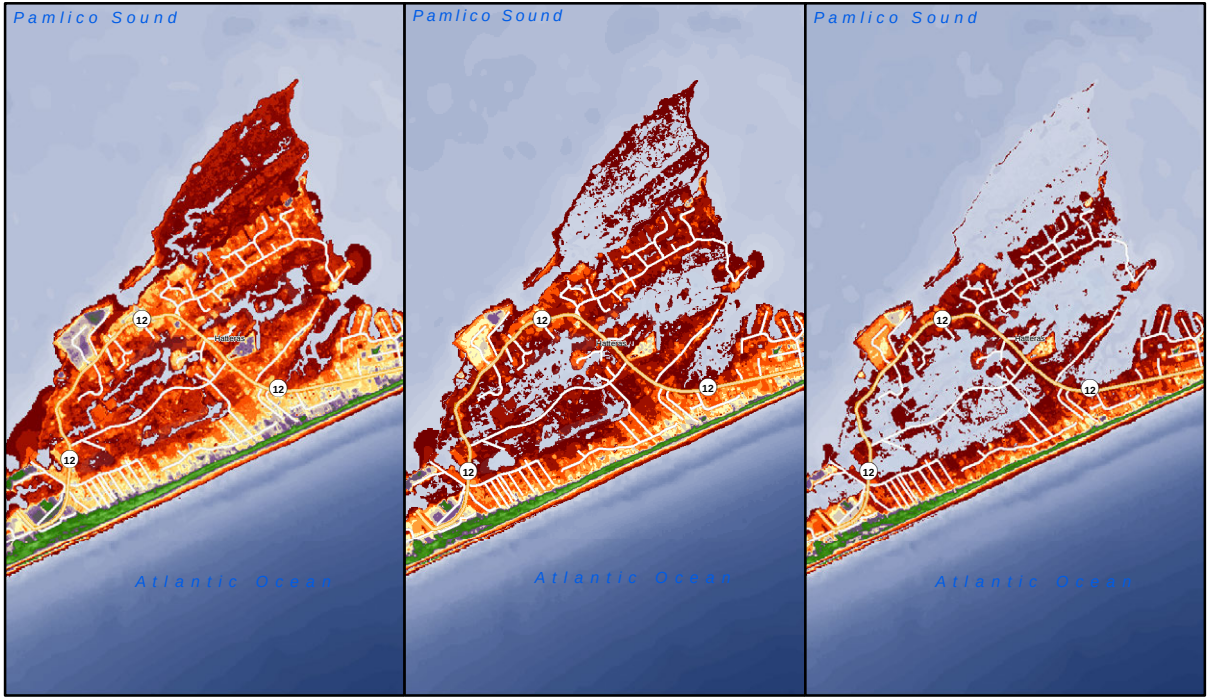
Hatteras

Vance Miller
12/5/2017

1:50,000

0 ½ 1 2 Miles

2010 population:	504
Land area:	901 Acres
Land area above 5 feet:	143 Acres
Percent land below 5 feet:	84.12%



Present Conditions | Rise of 1 foot | Rise of 2 feet

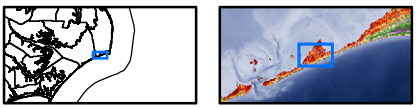
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

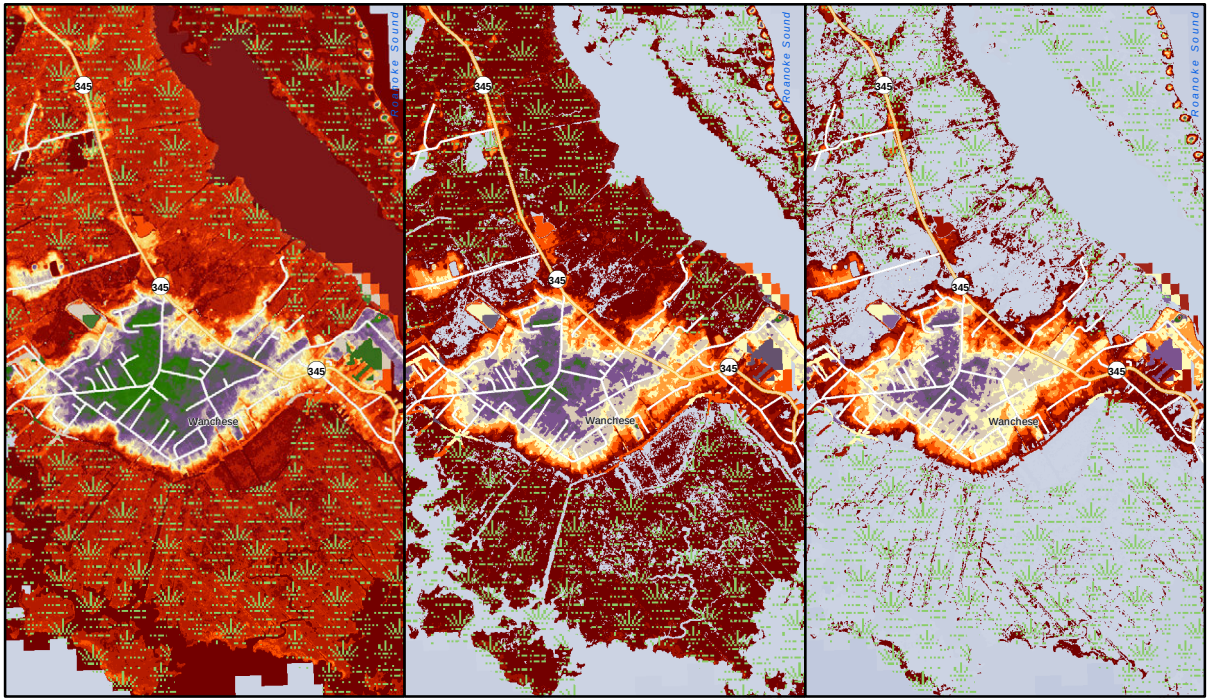
North Carolina Storm Surge and Sea Level Rise Hazards
Wanchese

Vance Miller
12/5/2017

1:65,000

0 ½ 1 2 Miles

2010 population:	1642
Land area:	2831 Acres
Land area above 5 feet:	496 Acres
Percent land below 5 feet:	82.47%



Present Conditions | Rise of 1 foot | Rise of 2 feet

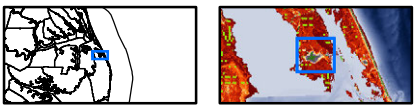
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

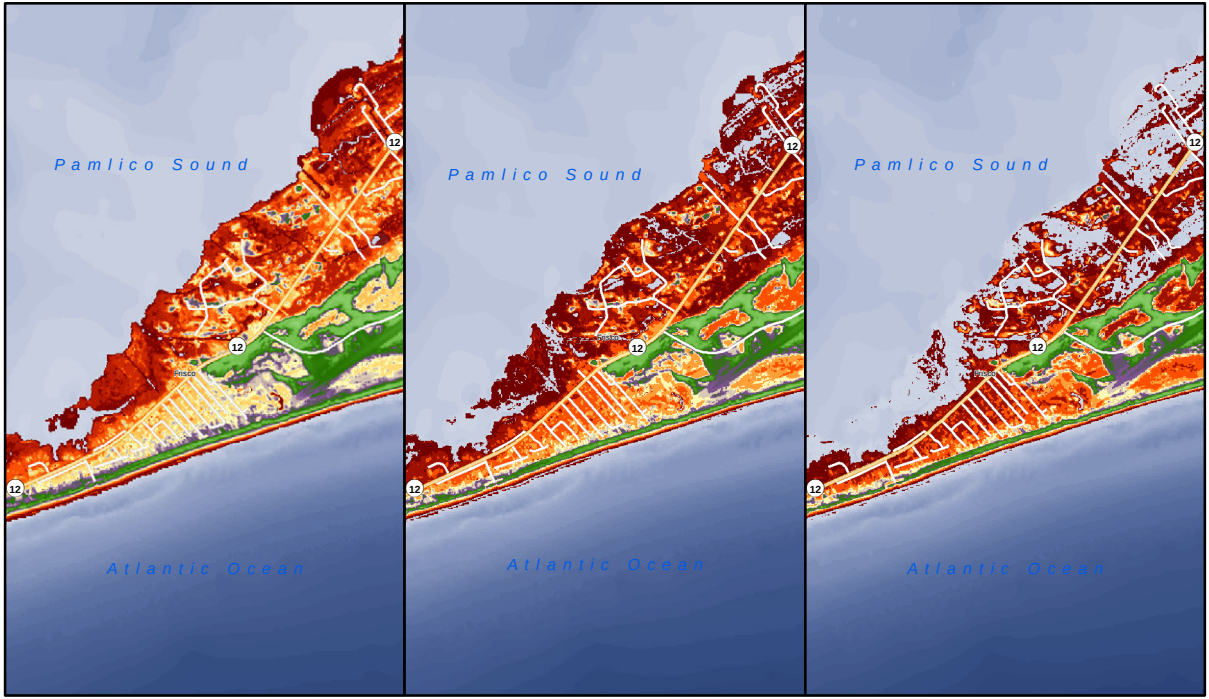
Frisco

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	200
Land area:	441 Acres
Land area above 5 feet:	84 Acres
Percent land below 5 feet:	80.95%



Present Conditions | Rise of 1 foot | Rise of 2 feet

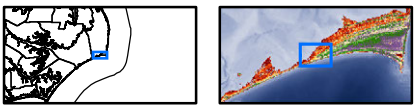
Explanation of Symbols

Elevation (ft)

-0	1	2	3	4	5	6	7	8	9	10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

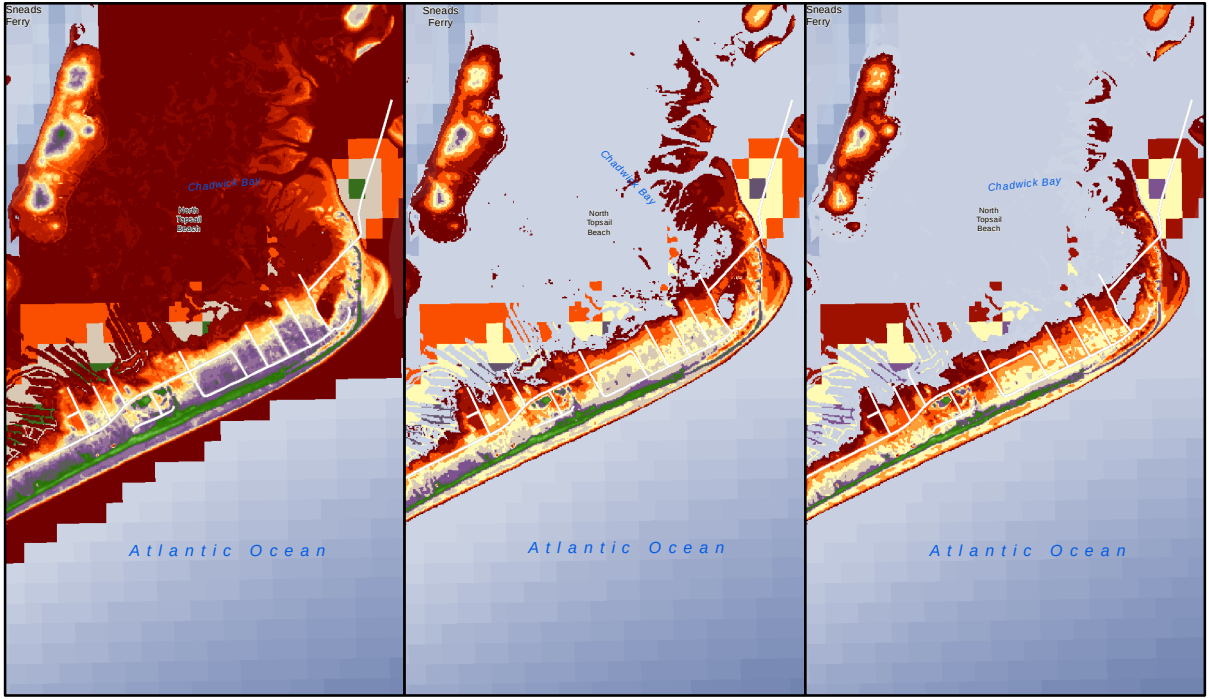
North Carolina Storm Surge and Sea Level Rise Hazards
North Topsail Beach

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	743
Land area:	3511 Acres
Land area above 5 feet:	741 Acres
Percent land below 5 feet:	78.89%



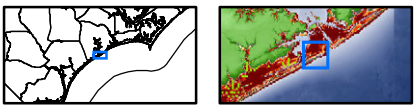
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

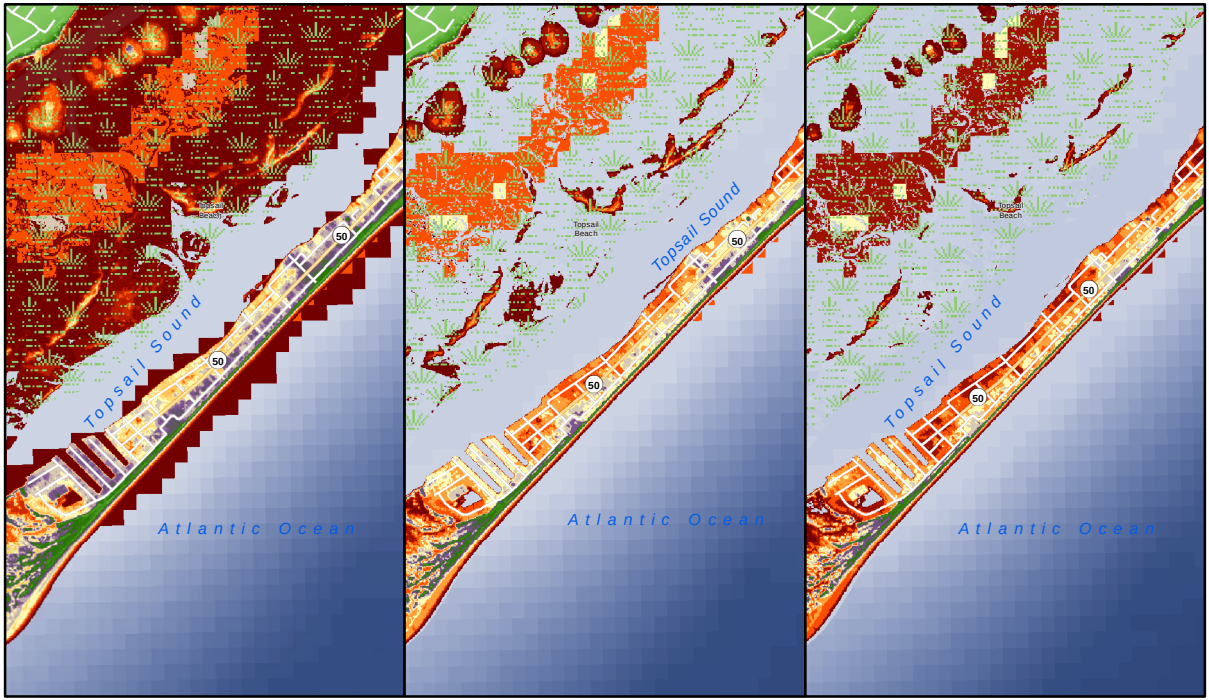
Topsail Beach

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	368
Land area:	1453 Acres
Land area above 5 feet:	317 Acres
Percent land below 5 feet:	78.18%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

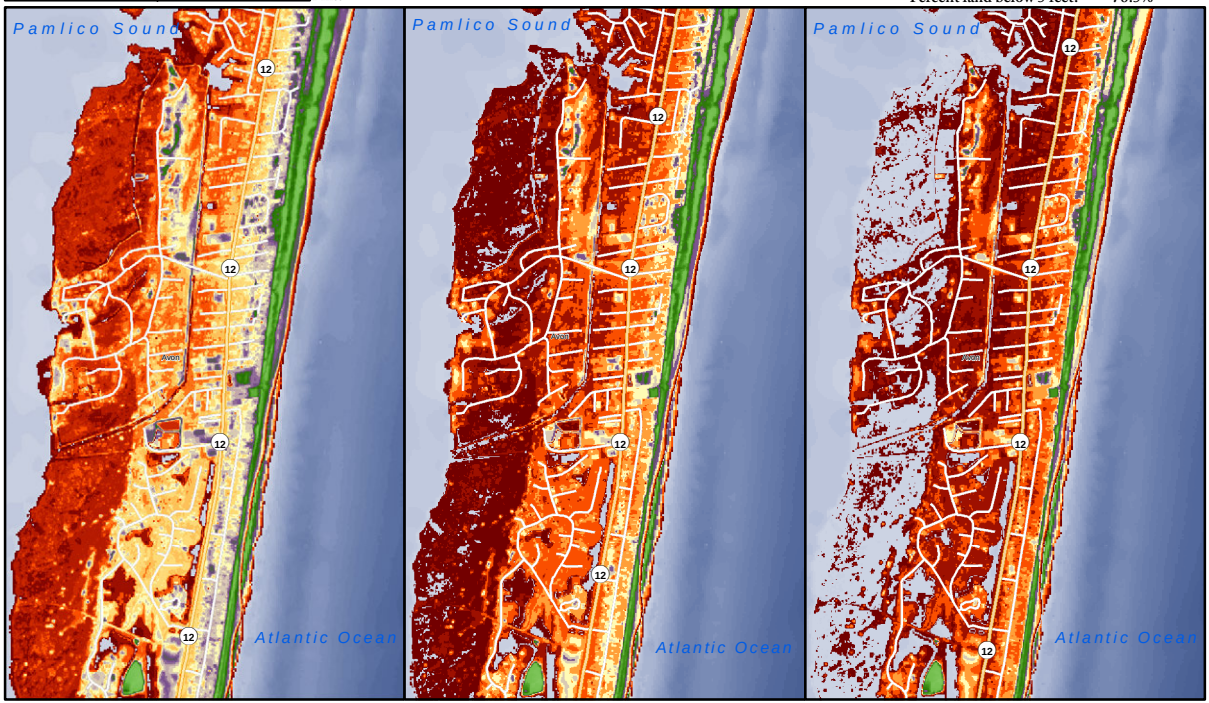
Avon

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	776
Land area:	1379 Acres
Land area above 5 feet:	324 Acres
Percent land below 5 feet:	76.5%



Present Conditions | Rise of 1 foot | Rise of 2 feet

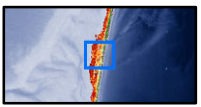
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

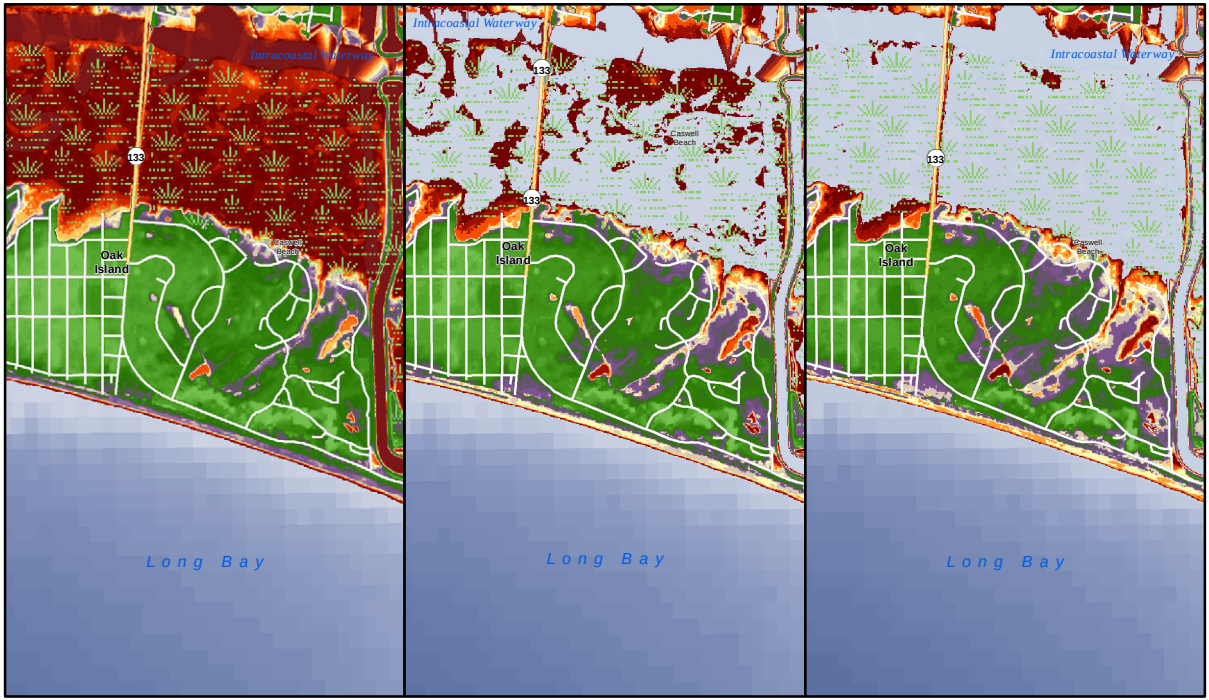
Caswell Beach

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	398
Land area:	1719 Acres
Land area above 5 feet:	423 Acres
Percent land below 5 feet:	75.39%



Present Conditions | Rise of 1 foot | Rise of 2 feet

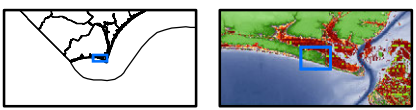
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

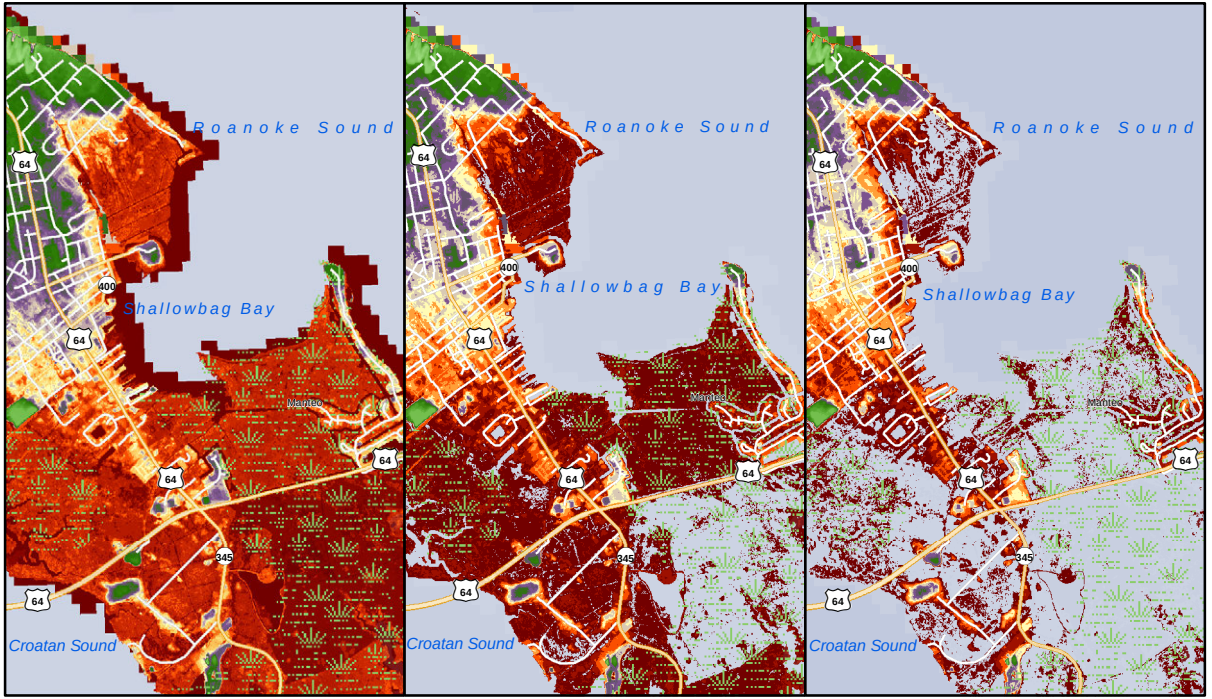
Manteo

Vance Miller
12/5/2017

1:70,000

0 ½ 1 2 Miles

2010 population:	1434
Land area:	1137 Acres
Land area above 5 feet:	304 Acres
Percent land below 5 feet:	73.26%



Present Conditions | Rise of 1 foot | Rise of 2 feet

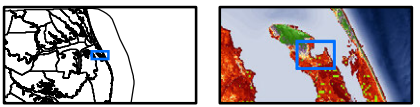
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

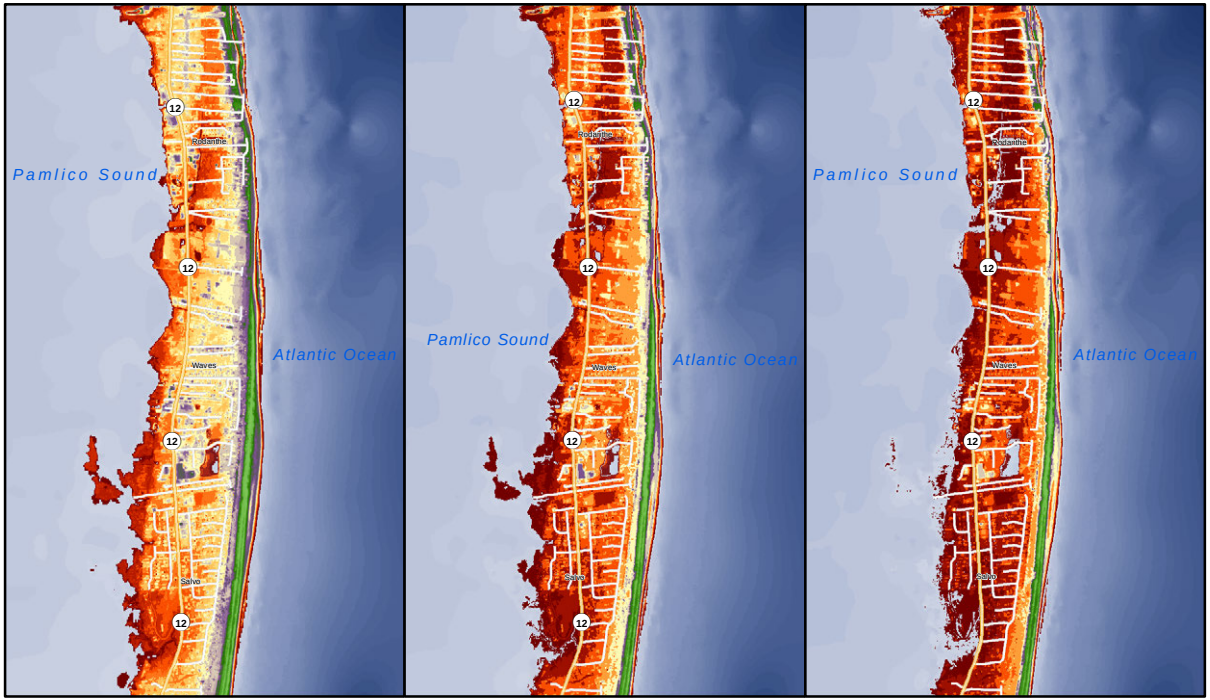
Rodanthe, Waves, and Salvo

Vance Miller
12/5/2017

1:60,000

0 ½ 1 2 Miles

2010 population:	624
Land area:	1494 Acres
Land area above 5 feet:	473 Acres
Percent land below 5 feet:	68.34%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

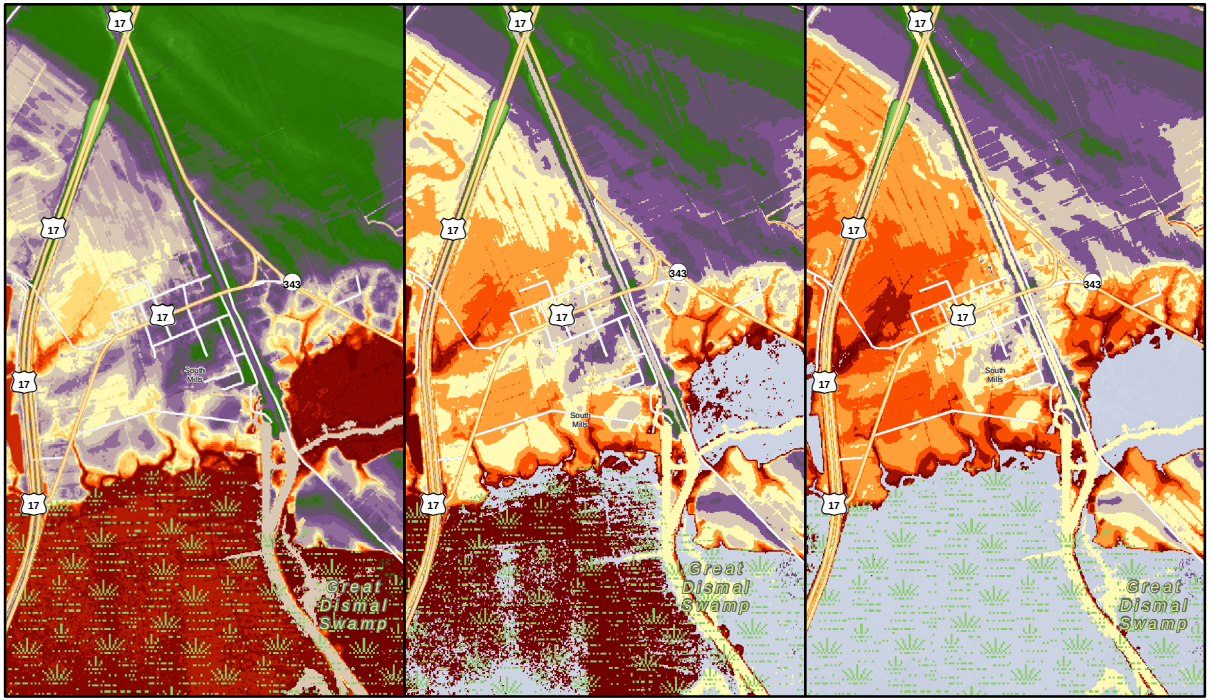
South Mills

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	454
Land area:	1117 Acres
Land area above 5 feet:	391 Acres
Percent land below 5 feet:	64.99%



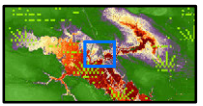
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

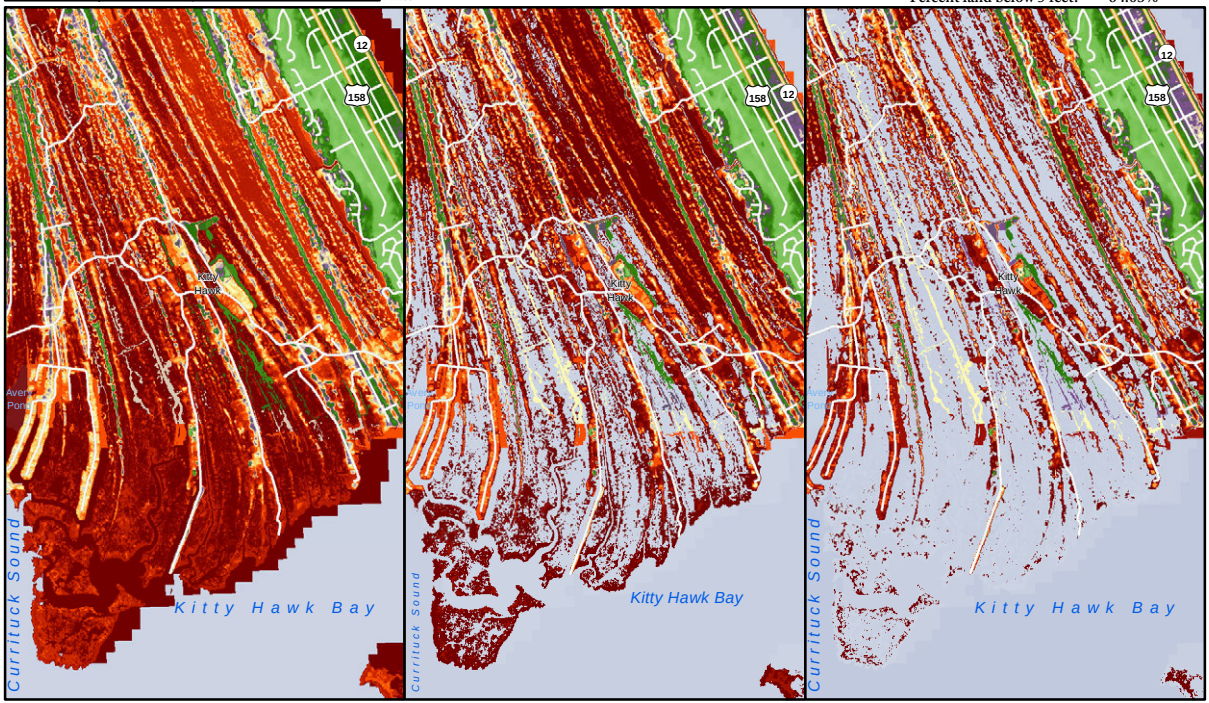
North Carolina Storm Surge and Sea Level Rise Hazards
Kitty Hawk

Vance Miller
12/5/2017

1:65,000

0 ½ 1 2 Miles

2010 population:	3272
Land area:	4972 Acres
Land area above 5 feet:	1788 Acres
Percent land below 5 feet:	64.03%



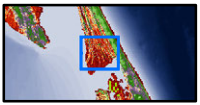
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

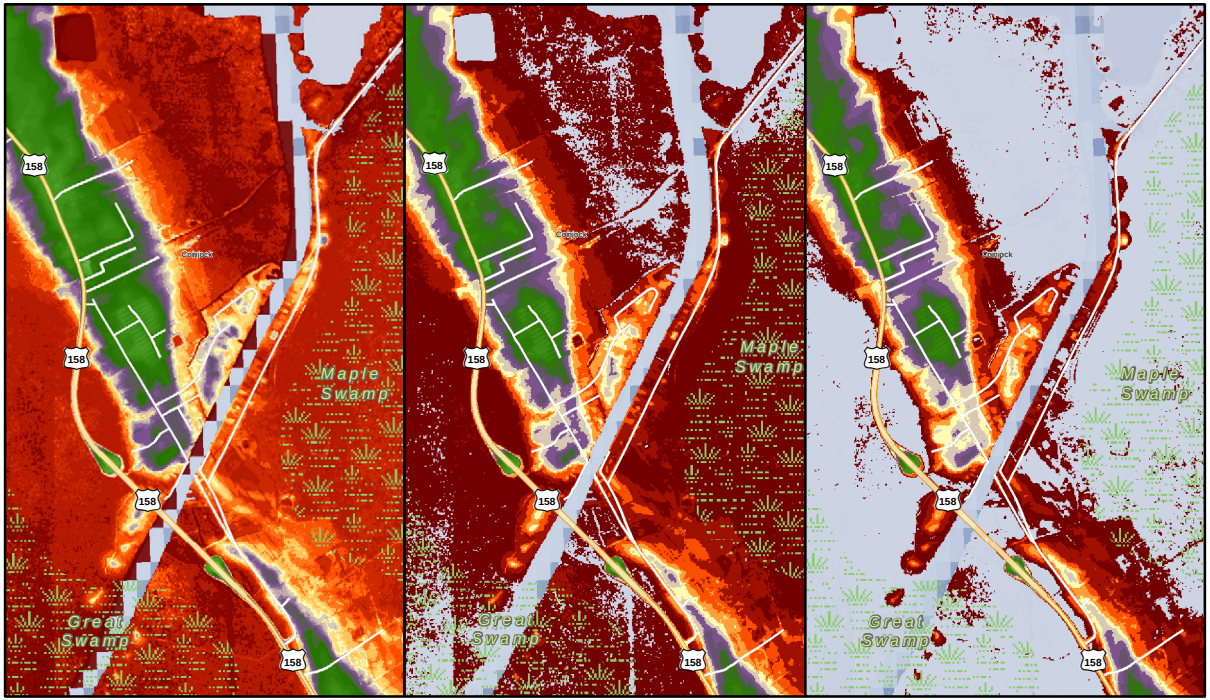
Coinjock

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	335
Land area:	503 Acres
Land area above 5 feet:	185 Acres
Percent land below 5 feet:	63.22%



Present Conditions | Rise of 1 foot | Rise of 2 feet

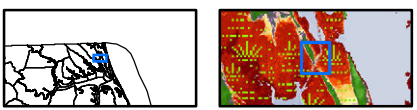
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

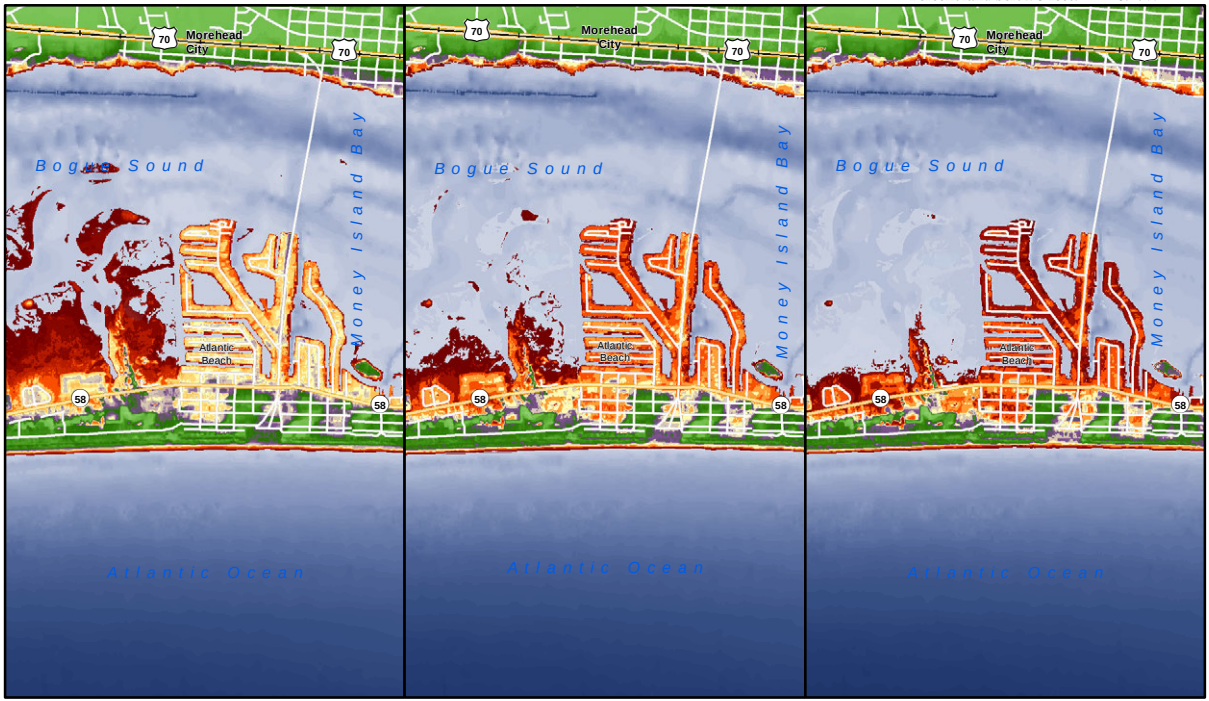
Atlantic Beach

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	1495
Land area:	1377 Acres
Land area above 5 feet:	737 Acres
Percent land below 5 feet:	46.47%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

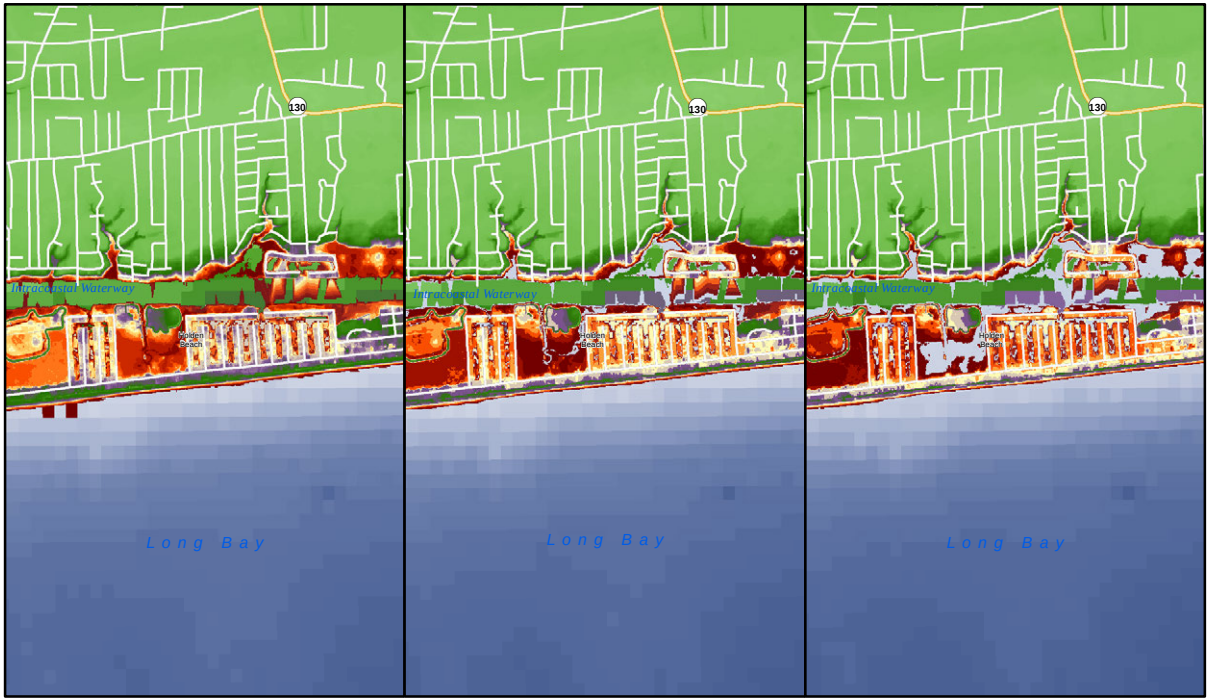
Holden Beach

Vance Miller
12/5/2017

1:50,000

0 ½ 1 2 Miles

2010 population:	575
Land area:	1641 Acres
Land area above 5 feet:	888 Acres
Percent land below 5 feet:	45.88%



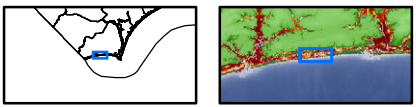
Present Conditions | **Rise of 1 foot** | **Rise of 2 feet**

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

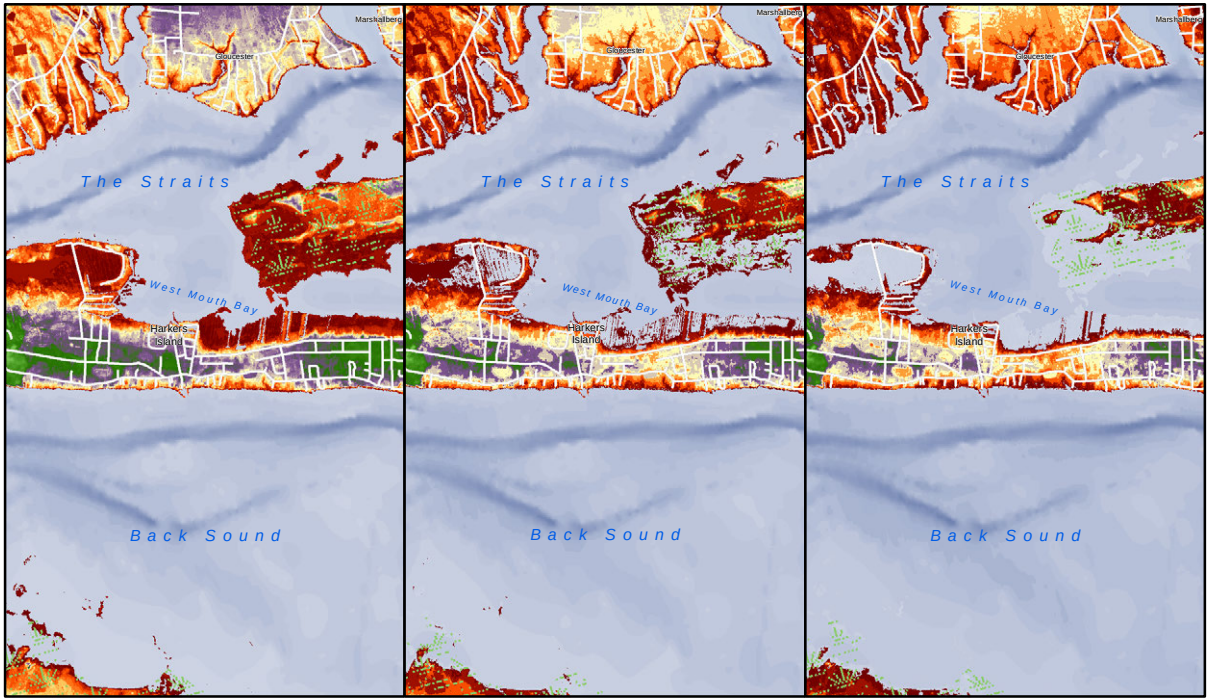
Harkers Island

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	1207
Land area:	1510 Acres
Land area above 5 feet:	837 Acres
Percent land below 5 feet:	44.56%



Present Conditions | Rise of 1 foot | Rise of 2 feet

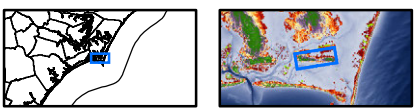
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

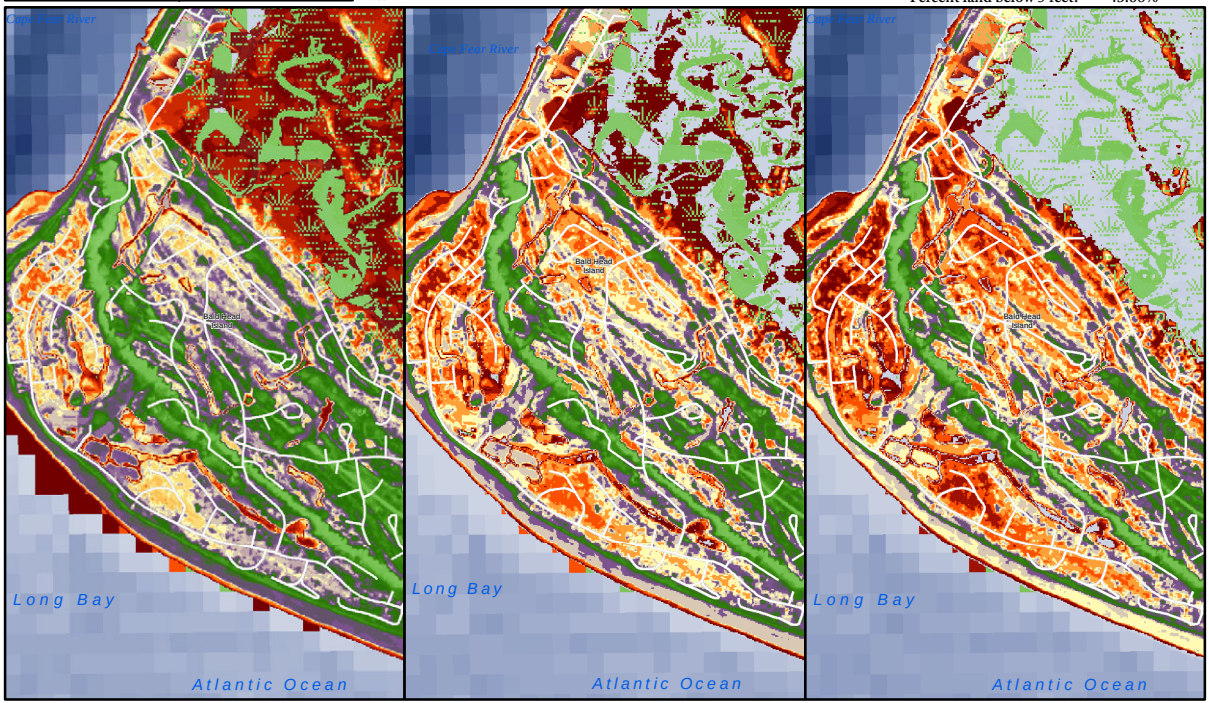
Bald Head Island

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	158
Land area:	2257 Acres
Land area above 5 feet:	1271 Acres
Percent land below 5 feet:	43.68%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

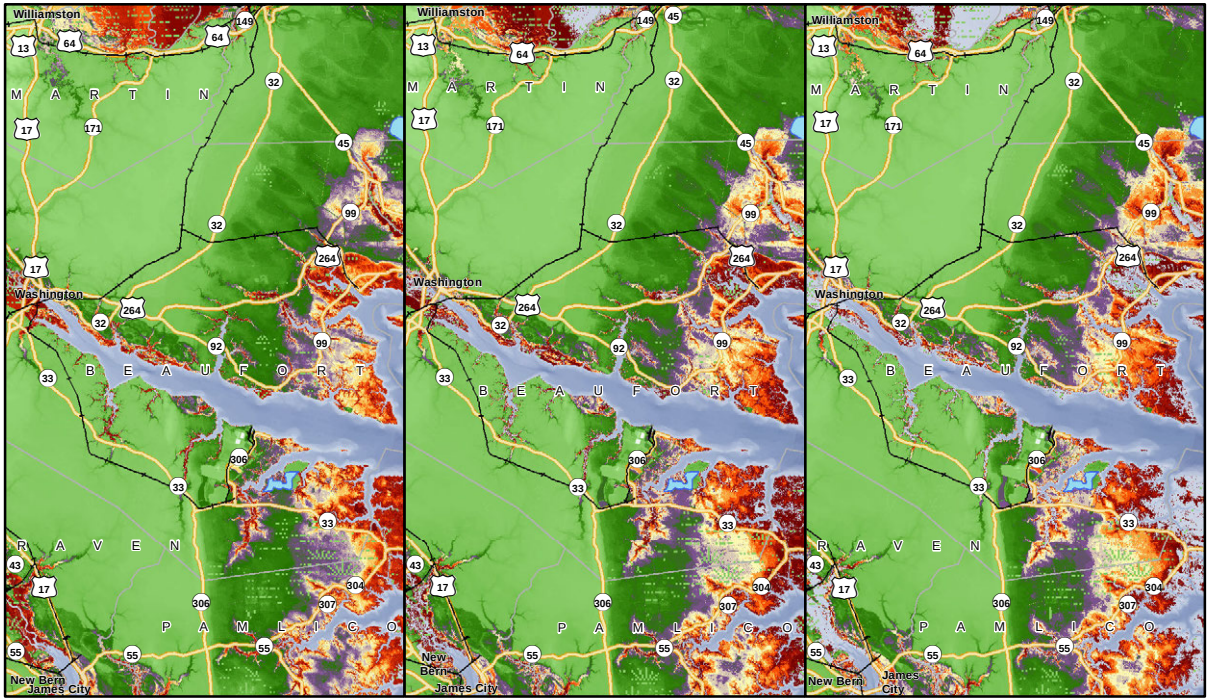
Beaufort County

Vance Miller
12/5/2017

1:940,000

0 3 6 12 18 24 30 36 Miles

2010 population:	45436
Land area:	530502 Acres
Land area above 5 feet:	455740 Acres
Percent land below 5 feet:	14.09%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

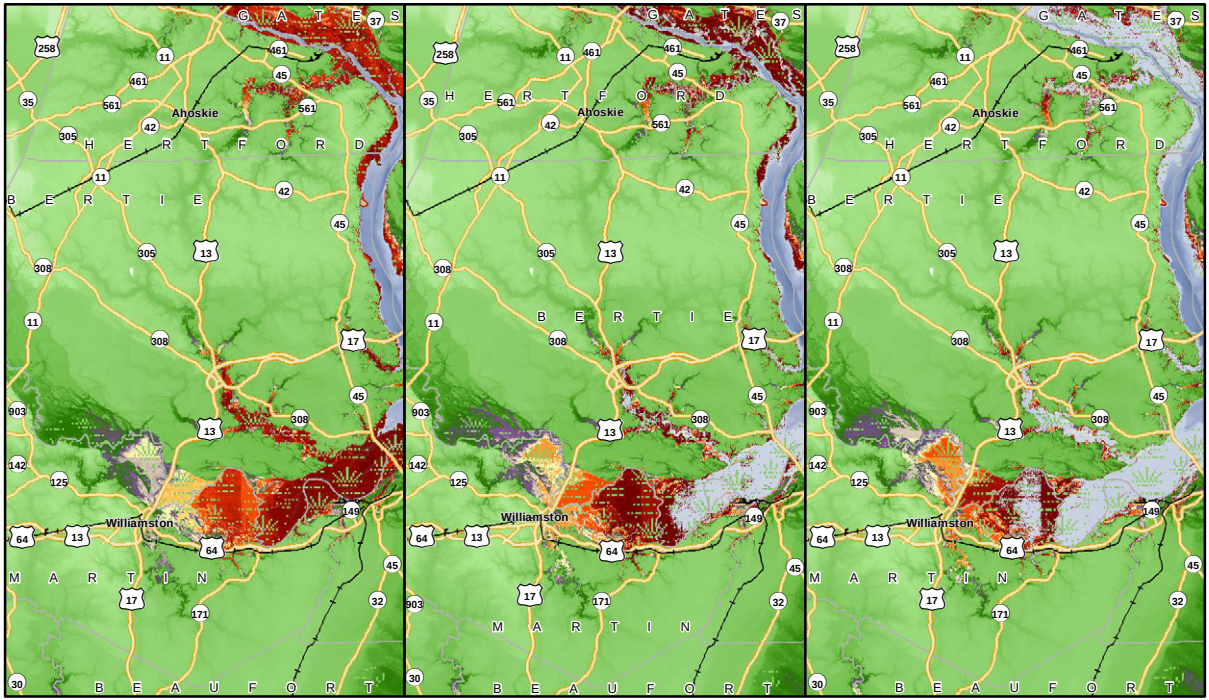
Bertie County

Vance Miller
12/5/2017

1:925,000

0 3 6 12 18 24 30 36 Miles

2010 population:	20411
Land area:	438792 Acres
Land area above 5 feet:	404155 Acres
Percent land below 5 feet:	7.89%



Present Conditions | Rise of 1 foot | Rise of 2 feet

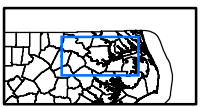
Explanation of Symbols

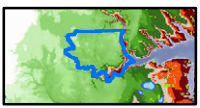
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

Brunswick County

Vance Miller
12/5/2017

1:940,000

0 3 6 12 18 24 30 36 Miles

2010 population:	84454
Land area:	540338 Acres
Land area above 5 feet:	505060 Acres
Percent land below 5 feet:	6.52%

Present Conditions | Rise of 1 foot | Rise of 2 feet

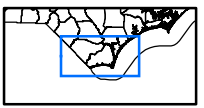
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

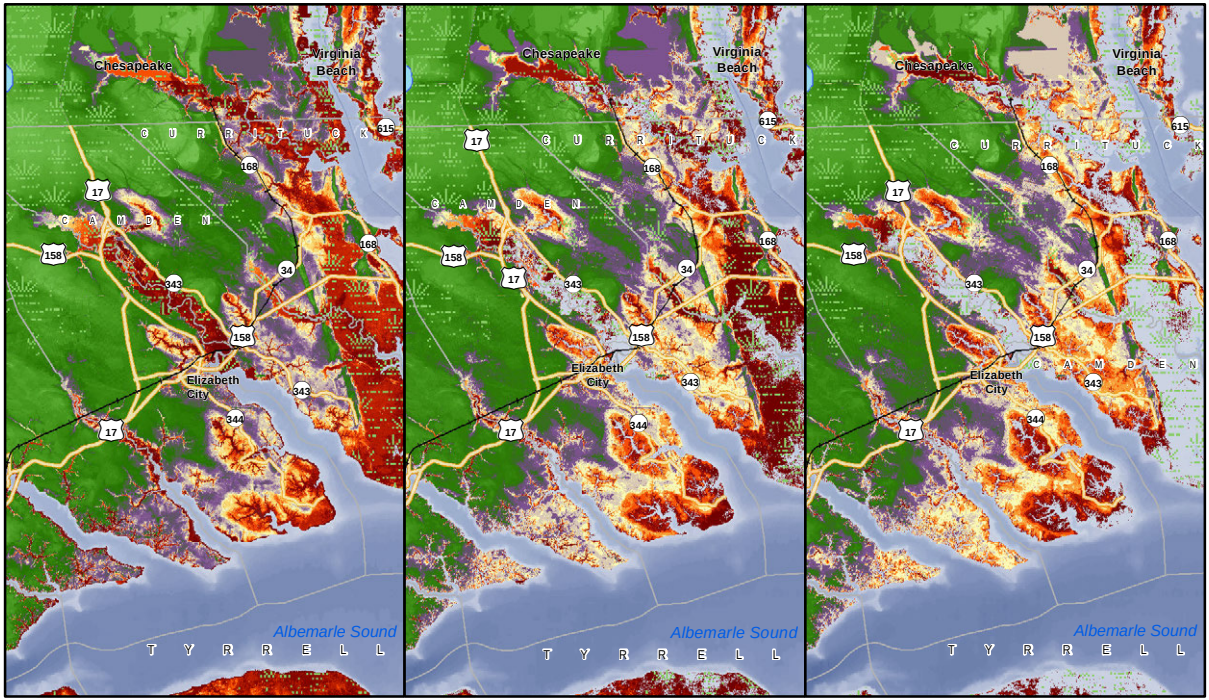
North Carolina Storm Surge and Sea Level Rise Hazards
Camden County

Vance Miller
12/5/2017

1:850,000

0 2½ 5 10 15 20 25 30 Miles

2010 population:	7058
Land area:	151552 Acres
Land area above 5 feet:	101869 Acres
Percent land below 5 feet:	32.78%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

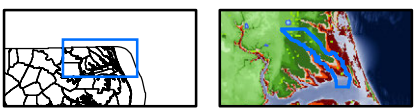
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

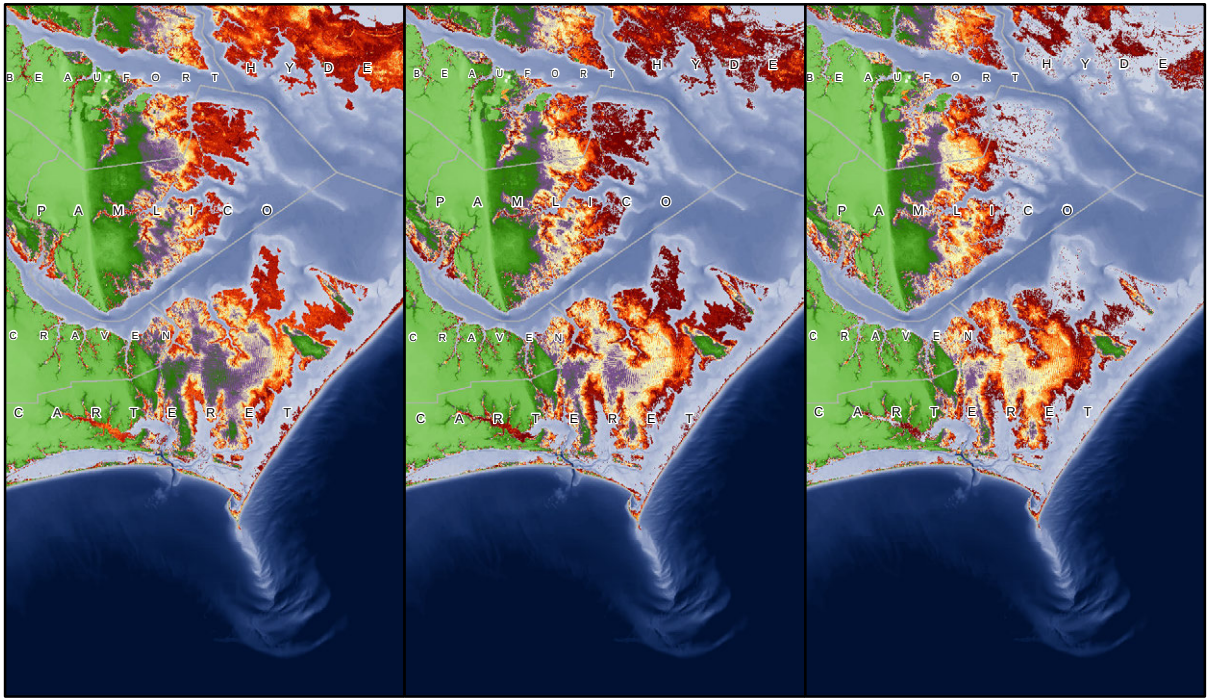
Carteret County

Vance Miller
12/5/2017

1:1,475,000

0 5 10 20 30 40 50 60 Miles

2010 population:	70648
Land area:	324982 Acres
Land area above 5 feet:	204442 Acres
Percent land below 5 feet:	37.09%

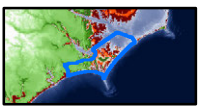


Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0	1	2	3	4	5	6	7	8	9	10+



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

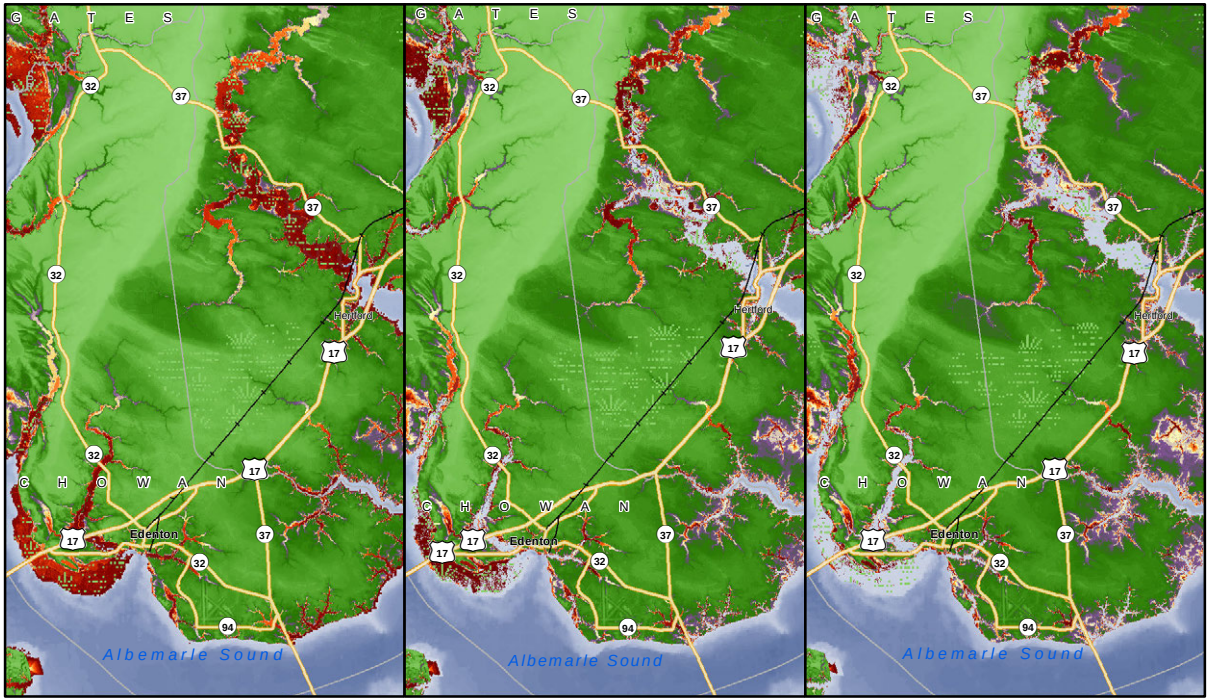
Chowan County

Vance Miller
12/5/2017

1:440,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	15196
Land area:	110040 Acres
Land area above 5 feet:	98586 Acres
Percent land below 5 feet:	10.4%



Present Conditions | Rise of 1 foot | Rise of 2 feet

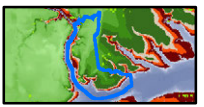
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards
Craven County

Vance Miller
12/5/2017

1:1,070,000

0 3½ 7 14 21 28 35 42 Miles

2010 population:	97431
Land area:	456539 Acres
Land area above 5 feet:	427051 Acres
Percent land below 5 feet:	6.45%

Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

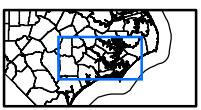
Elevation (ft)

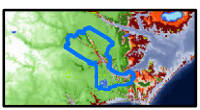
-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

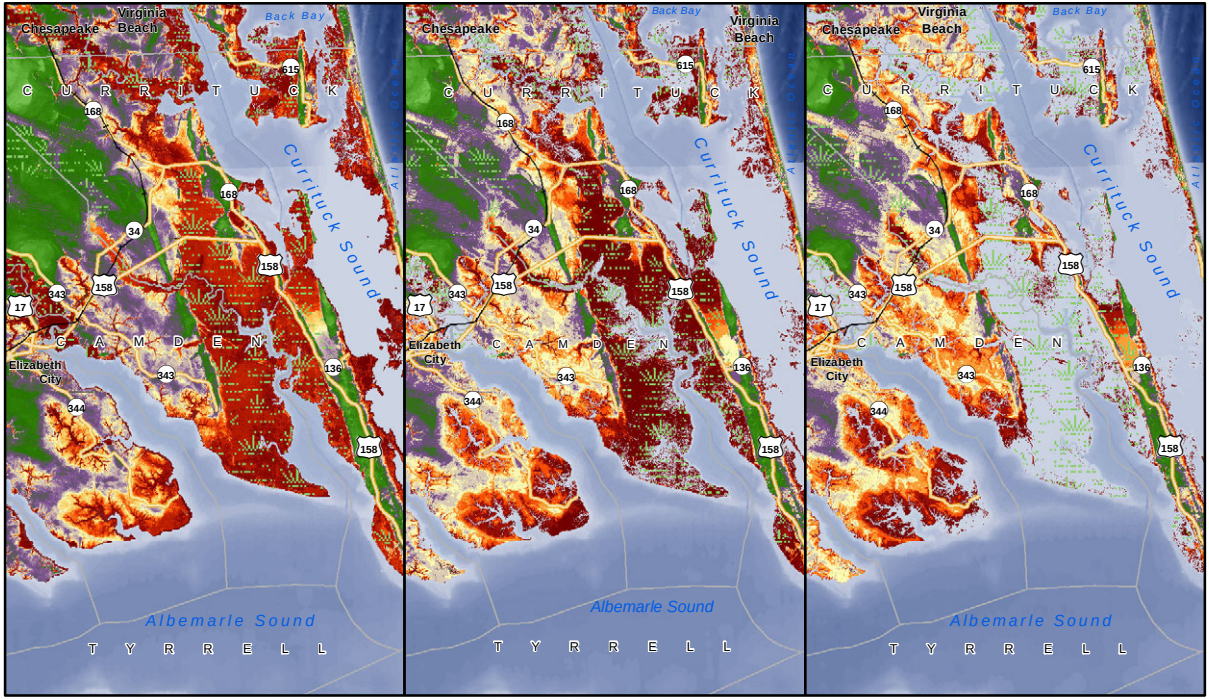
North Carolina Storm Surge and Sea Level Rise Hazards
Currituck County

Vance Miller
12/5/2017

1:725,000

0 2 4 8 12 16 20 24 Miles

2010 population:	20756
Land area:	162008 Acres
Land area above 5 feet:	80474 Acres
Percent land below 5 feet:	50.32%



Present Conditions | Rise of 1 foot | Rise of 2 feet

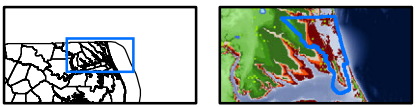
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

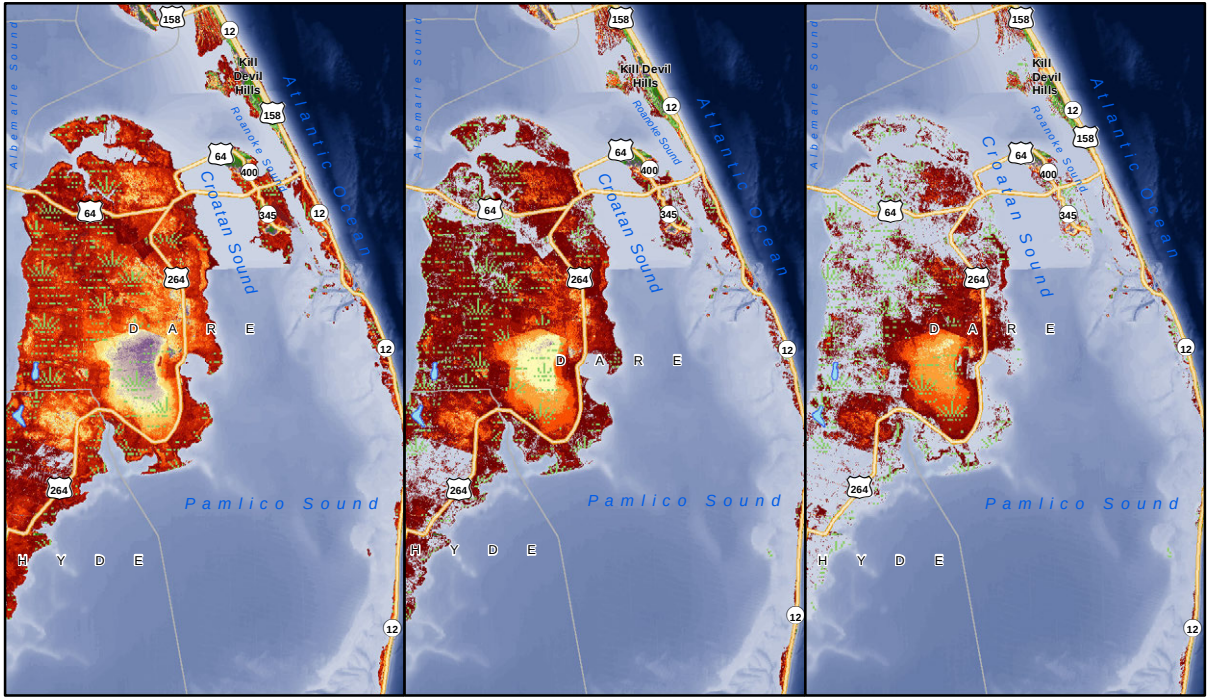
Dare County

Vance Miller
12/5/2017

1:950,000

0 3 6 12 18 24 30 36 Miles

2010 population:	36327
Land area:	235758 Acres
Land area above 5 feet:	37422 Acres
Percent land below 5 feet:	84.12%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

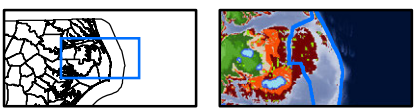
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

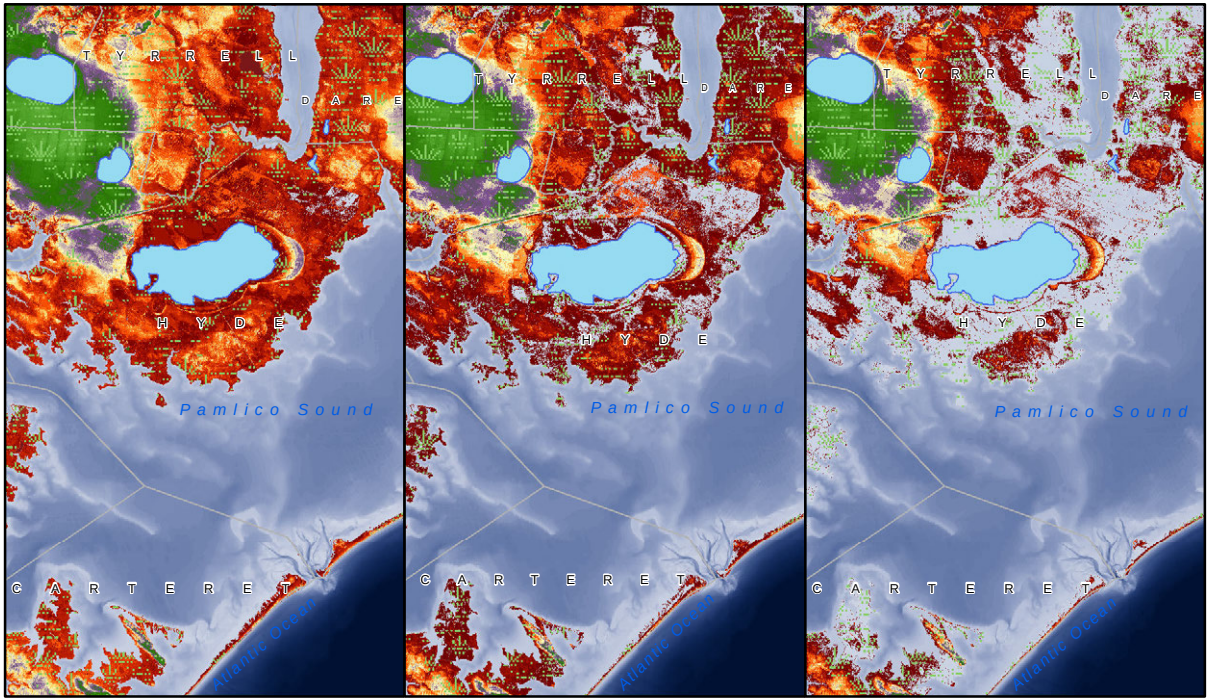
Hyde County

Vance Miller
12/5/2017

1:1,165,000

0 4 8 16 24 32 40 48 Miles

2010 population:	4607
Land area:	372880 Acres
Land area above 5 feet:	99630 Acres
Percent land below 5 feet:	73.28%



Present Conditions | Rise of 1 foot | Rise of 2 feet

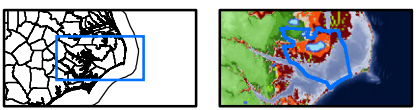
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Lake Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

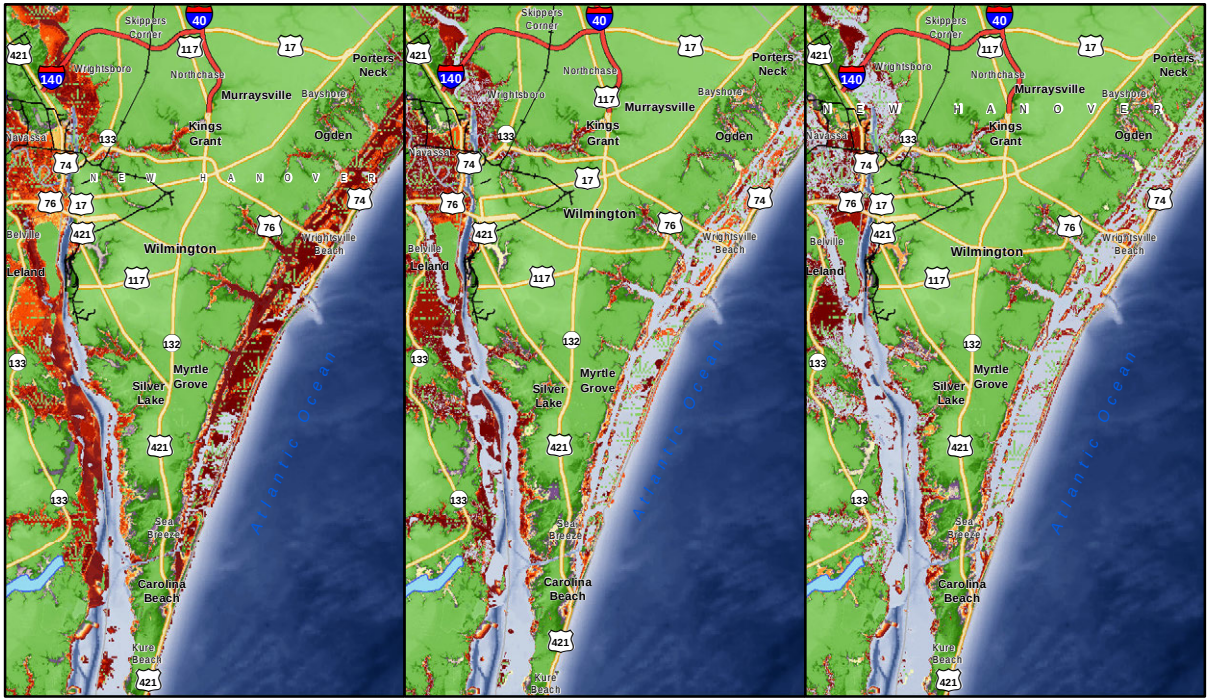
North Carolina Storm Surge and Sea Level Rise Hazards
New Hanover County

Vance Miller
12/5/2017

1:420,000

0 1 2 4 6 8 10 12 Miles

2010 population:	179810
Land area:	121114 Acres
Land area above 5 feet:	100909 Acres
Percent land below 5 feet:	16.68%



Present Conditions | Rise of 1 foot | Rise of 2 feet

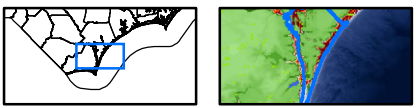
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — Interstate — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

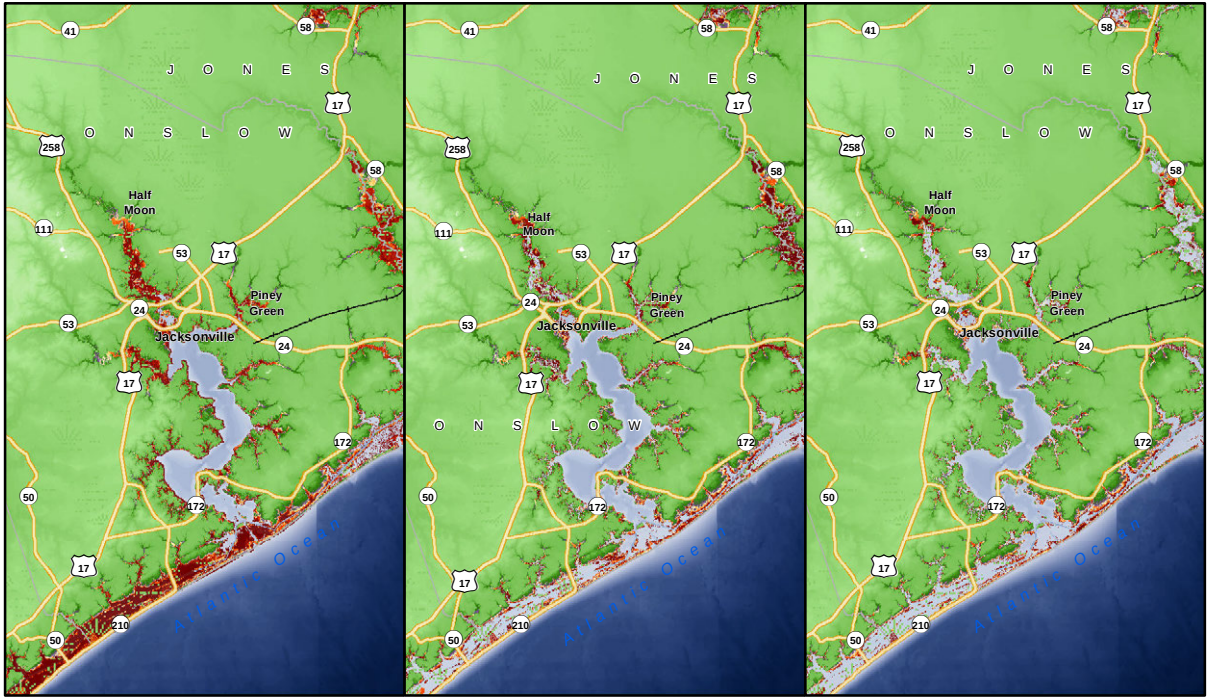
North Carolina Storm Surge and Sea Level Rise Hazards
Onslow County

Vance Miller
12/5/2017

1:765,000

0 2½ 5 10 15 20 25 30 Miles

2010 population:	181767
Land area:	483446 Acres
Land area above 5 feet:	457378 Acres
Percent land below 5 feet:	5.39%



Present Conditions | Rise of 1 foot | Rise of 2 feet

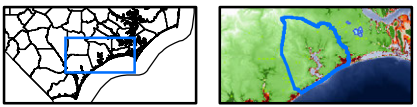
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

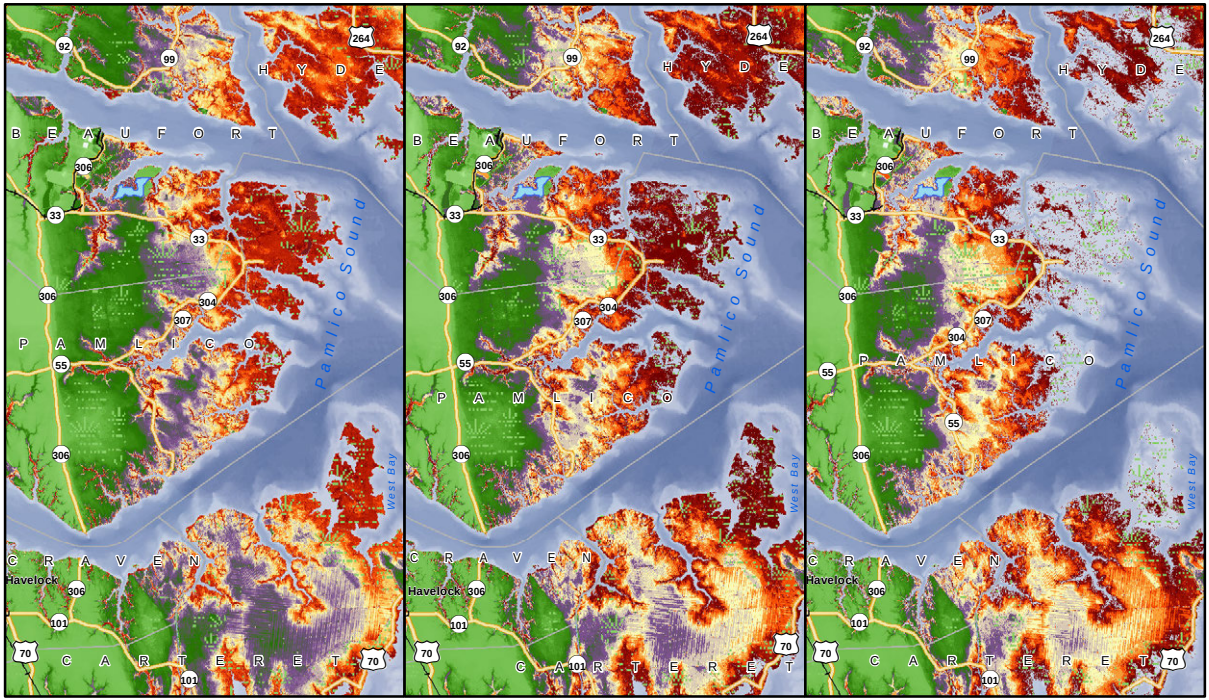
Pamlico County

Vance Miller
12/5/2017

1:880,000

0 3 6 12 18 24 30 36 Miles

2010 population:	12872
Land area:	213093 Acres
Land area above 5 feet:	148123 Acres
Percent land below 5 feet:	30.48%



Present Conditions | Rise of 1 foot | Rise of 2 feet

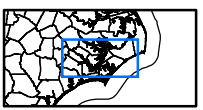
Explanation of Symbols

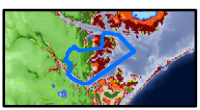
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

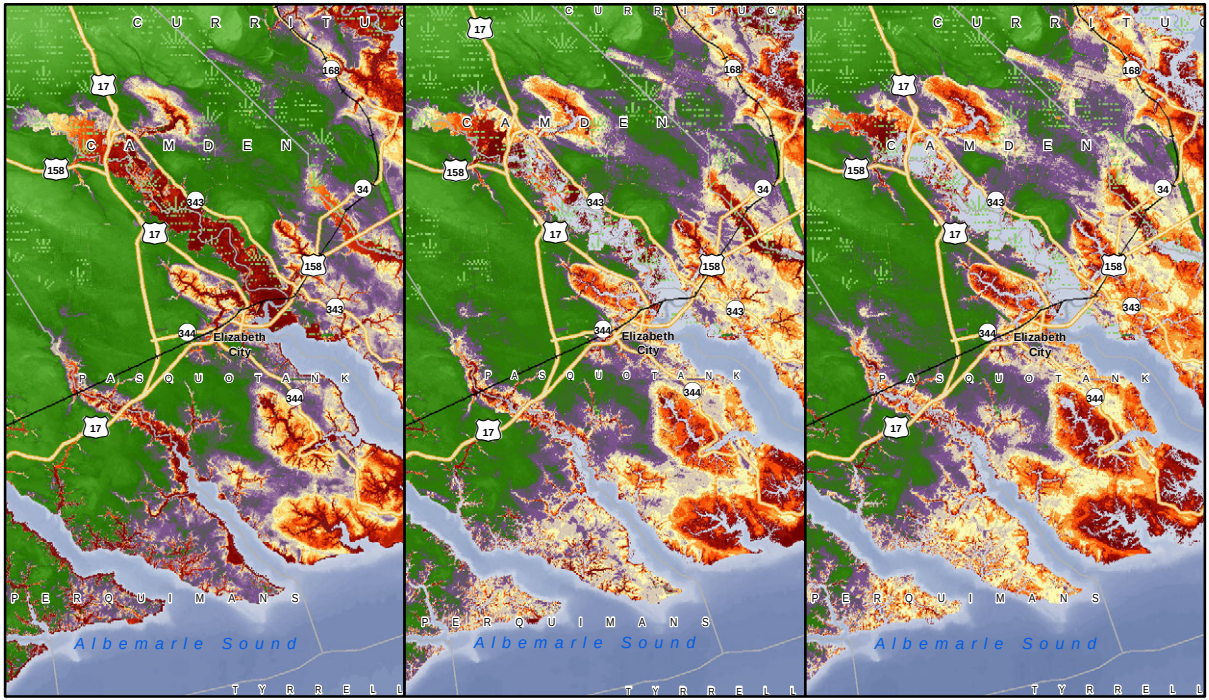
Pasquotank County

Vance Miller
12/5/2017

1:615,000

0 2 4 8 12 16 20 24 Miles

2010 population:	37715
Land area:	143073 Acres
Land area above 5 feet:	109088 Acres
Percent land below 5 feet:	23.75%



Present Conditions | Rise of 1 foot | Rise of 2 feet

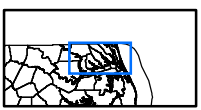
Explanation of Symbols

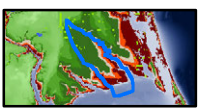
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983





Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

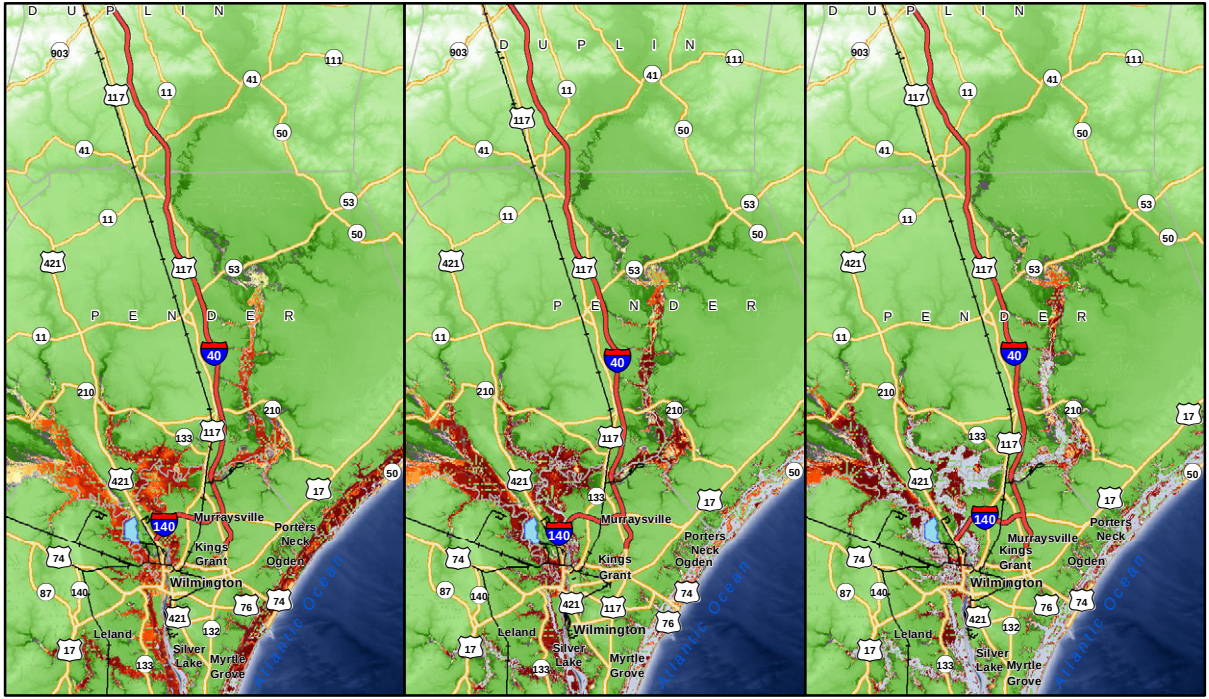
Pender County

Vance Miller
12/5/2017

1:985,000

0 3 6 12 18 24 30 36 Miles

2010 population:	48251
Land area:	548108 Acres
Land area above 5 feet:	512394 Acres
Percent land below 5 feet:	6.51%



Present Conditions | Rise of 1 foot | Rise of 2 feet

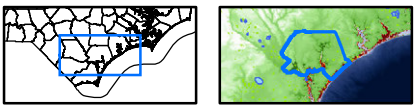
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

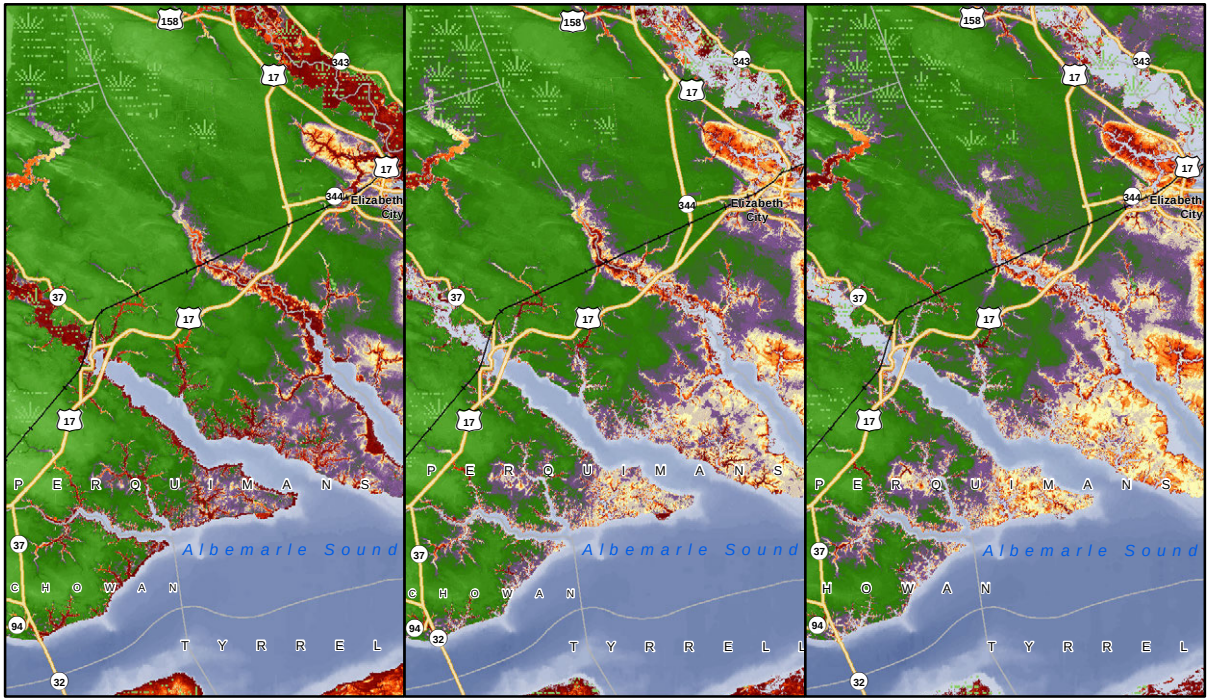
North Carolina Storm Surge and Sea Level Rise Hazards
Perquimans County

Vance Miller
12/5/2017

1:560,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	11352
Land area:	156738 Acres
Land area above 5 feet:	139861 Acres
Percent land below 5 feet:	10.76%



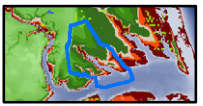
Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

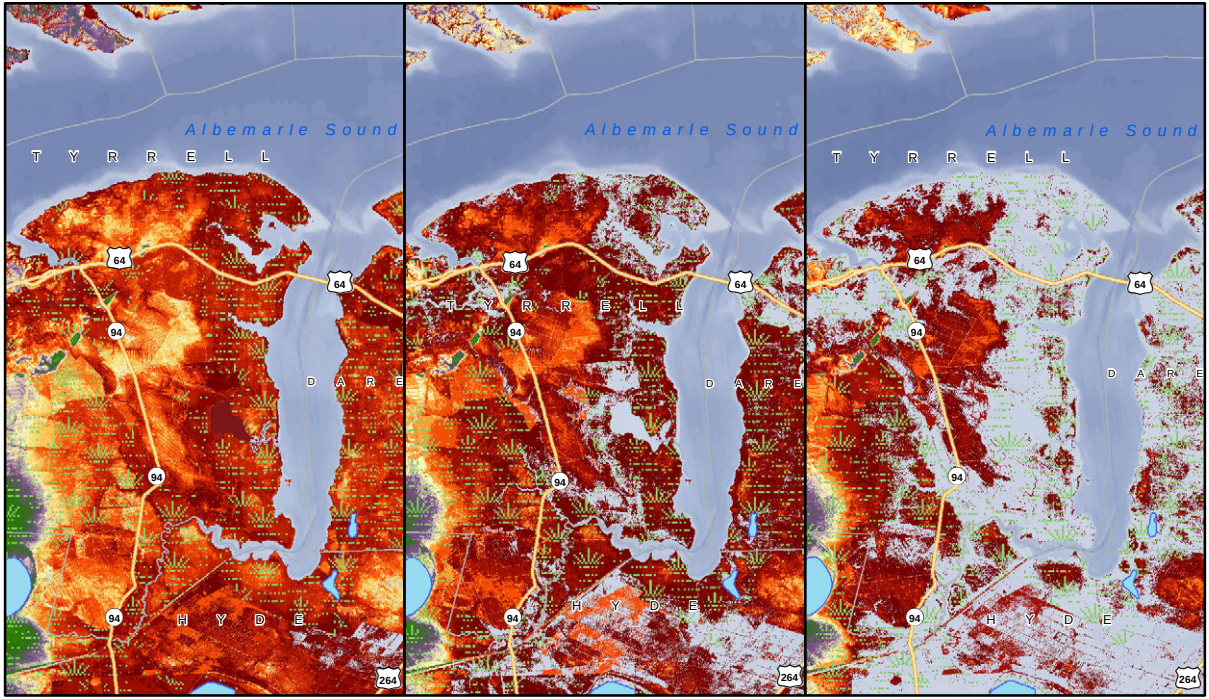
North Carolina Storm Surge and Sea Level Rise Hazards
Tyrrell County

Vance Miller
12/5/2017

1:710,000

0 2 4 8 12 16 20 24 Miles

2010 population:	3483
Land area:	245148 Acres
Land area above 5 feet:	32693 Acres
Percent land below 5 feet:	86.66%



Present Conditions | Rise of 1 foot | Rise of 2 feet

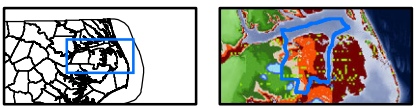
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

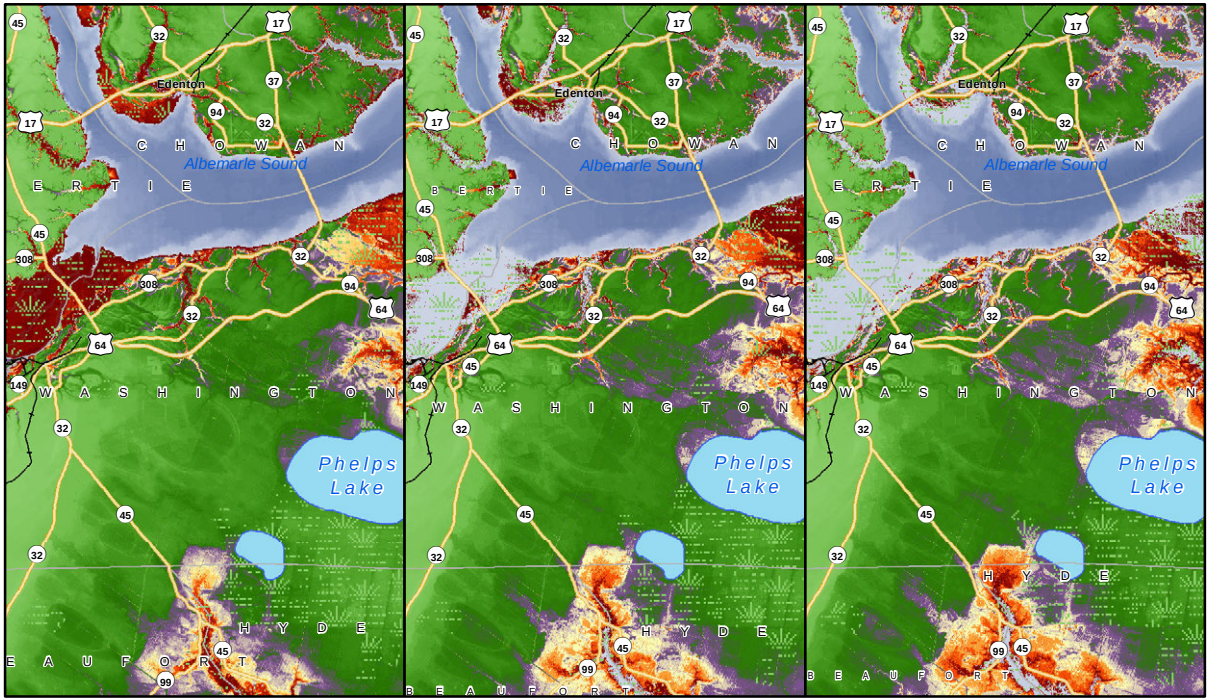
Washington County

Vance Miller
12/5/2017

1:625,000

0 2 4 8 12 16 20 24 Miles

2010 population:	12501
Land area:	238627 Acres
Land area above 5 feet:	205696 Acres
Percent land below 5 feet:	13.8%



Present Conditions | Rise of 1 foot | Rise of 2 feet

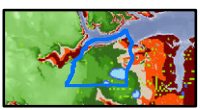
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

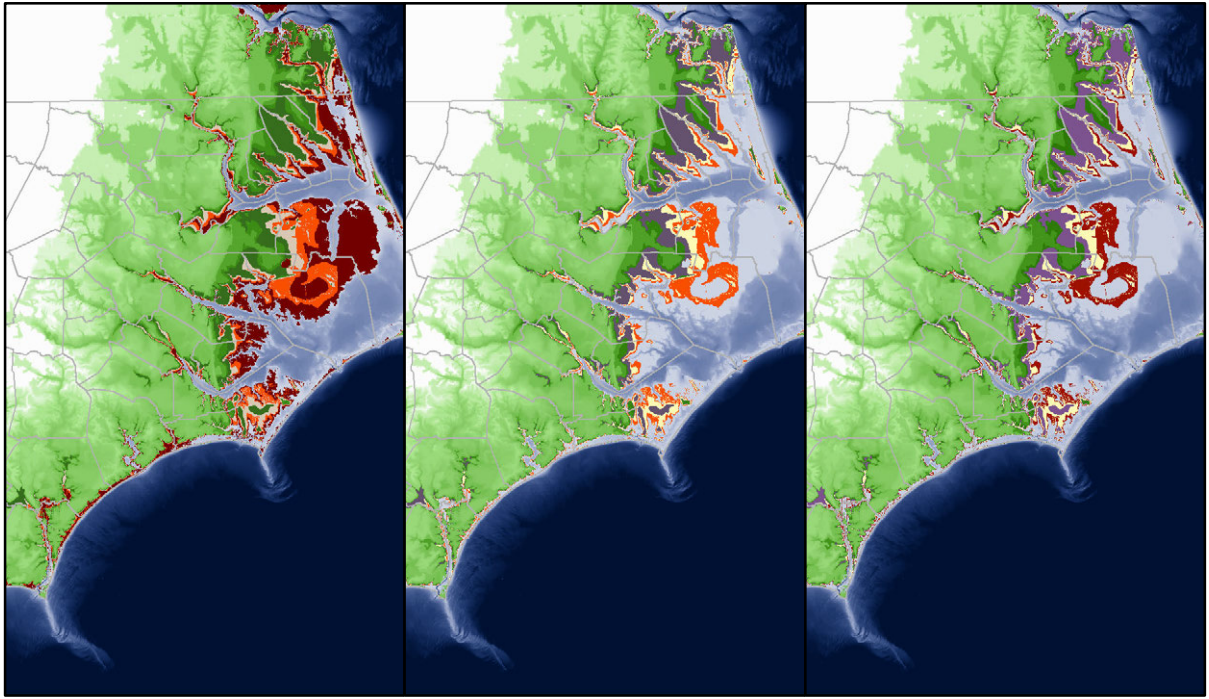
Coastal Counties

Vance Miller
12/5/2017

1:4,555,000

0 15 30 60 90 120 150 180 Miles

2010 population:	890075
Land area:	5472738 Acres
Land area above 5 feet:	4120570 Acres
Percent land below 5 feet:	24.71%



Present Conditions | Rise of 1 foot | Rise of 2 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

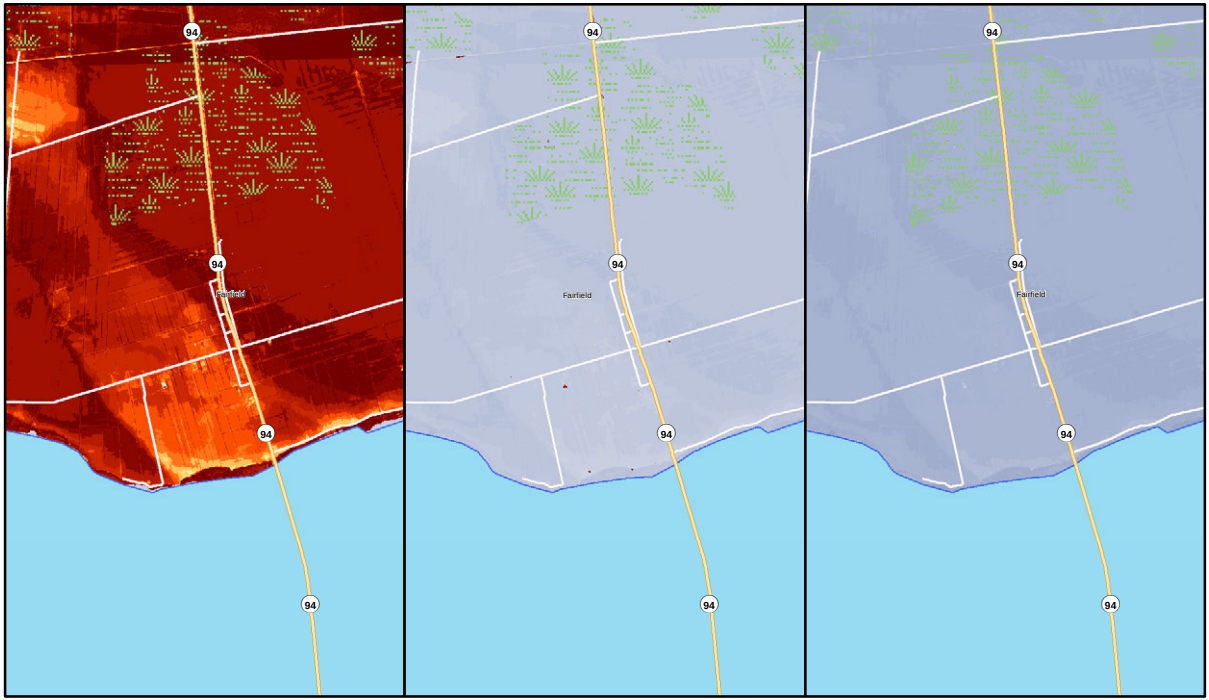
Fairfield

Vance Miller
12/5/2017

1:85,000

0 ½ 1 2 3 Miles

2010 population:	258
Land area:	2453 Acres
Land area above 5 feet:	2 Acres
Percent land below 5 feet:	99.91%



Present Conditions | Rise of 5 feet | Rise of 10 feet

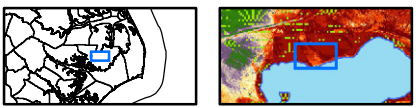
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

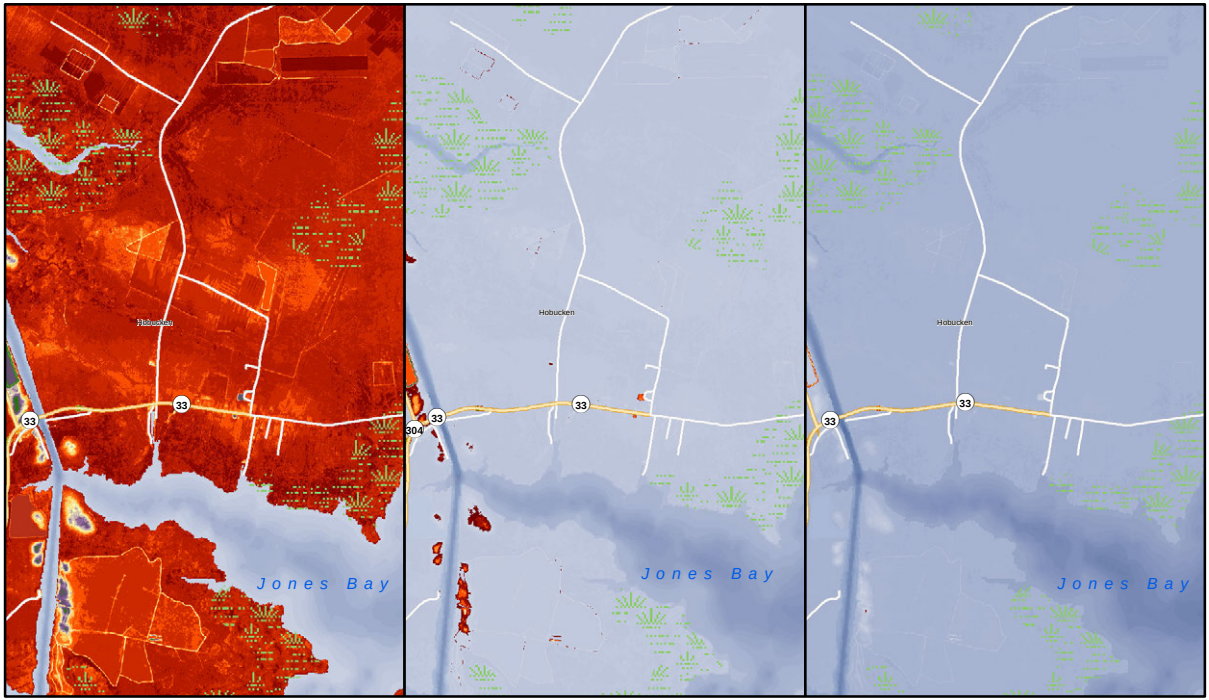
Hobucken

Vance Miller
12/5/2017

1:75,000

0 ½ 1 2 3 Miles

2010 population:	129
Land area:	3176 Acres
Land area above 5 feet:	8 Acres
Percent land below 5 feet:	99.74%



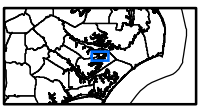
Present Conditions | Rise of 5 feet | Rise of 10 feet

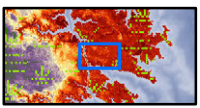
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | NC Route | Water Bodies | Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

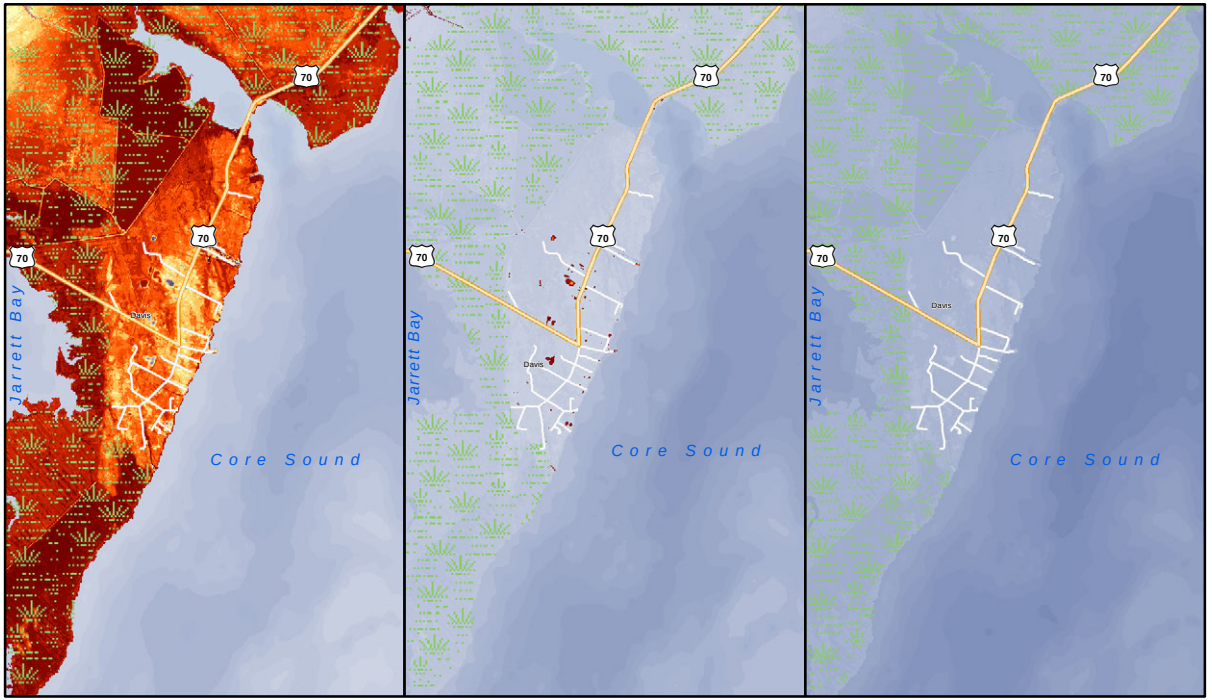
Davis

Vance Miller
12/5/2017

1:80,000

0 ½ 1 2 3 Miles

2010 population:	422
Land area:	1359 Acres
Land area above 5 feet:	10 Acres
Percent land below 5 feet:	99.26%



Present Conditions | Rise of 5 feet | Rise of 10 feet

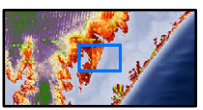
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

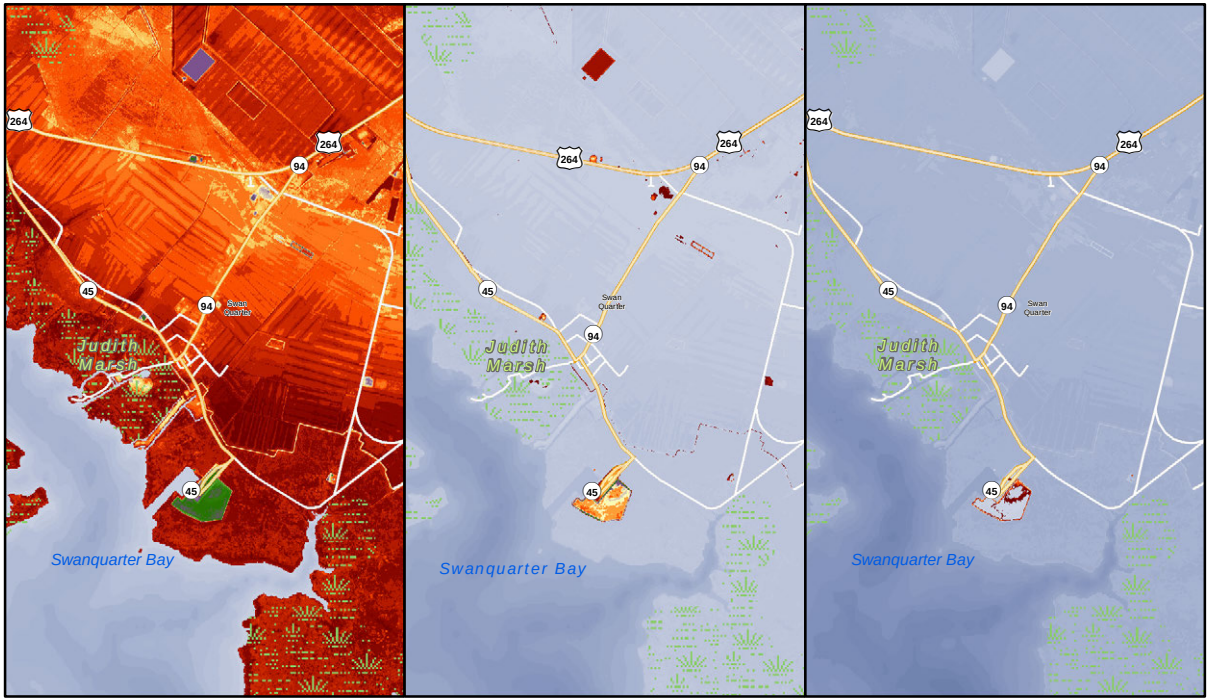
Swan Quarter

Vance Miller
12/5/2017

1:80,000

0 ½ 1 2 3 Miles

2010 population:	324
Land area:	2455 Acres
Land area above 5 feet:	28 Acres
Percent land below 5 feet:	98.85%



Present Conditions | Rise of 5 feet | Rise of 10 feet

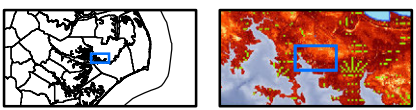
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route — Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

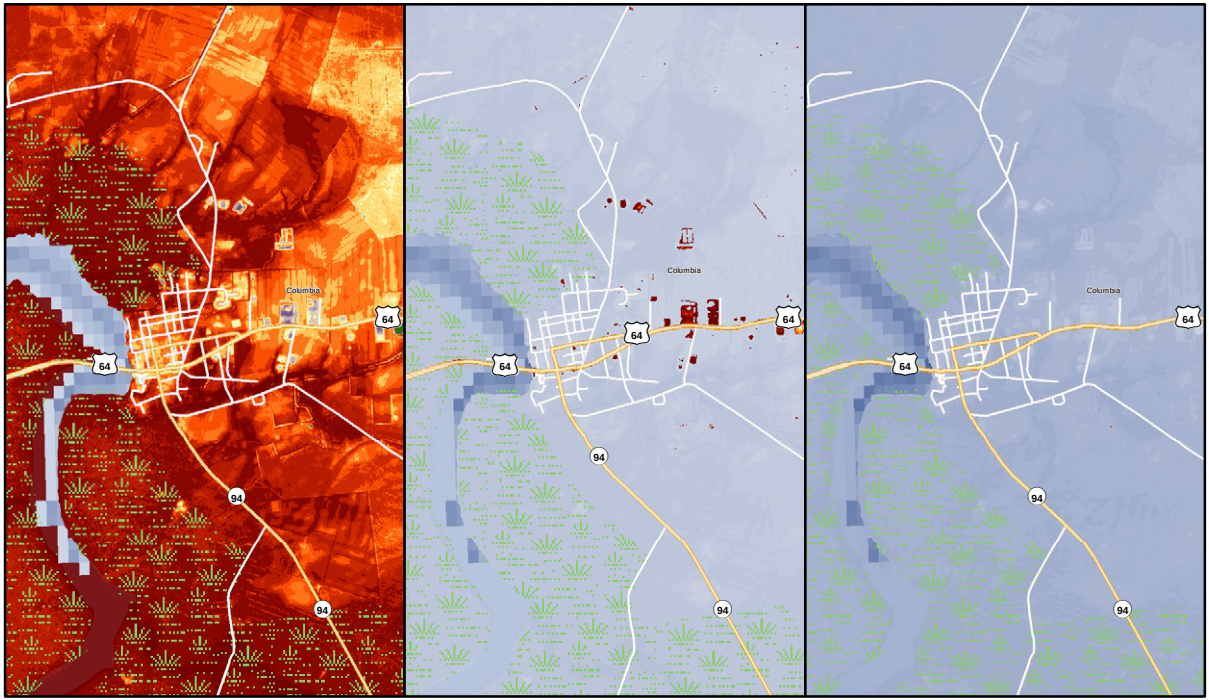
Columbia

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	891
Land area:	769 Acres
Land area above 5 feet:	18 Acres
Percent land below 5 feet:	97.65%



Present Conditions | Rise of 5 feet | Rise of 10 feet

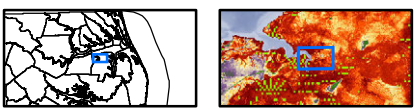
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route | Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

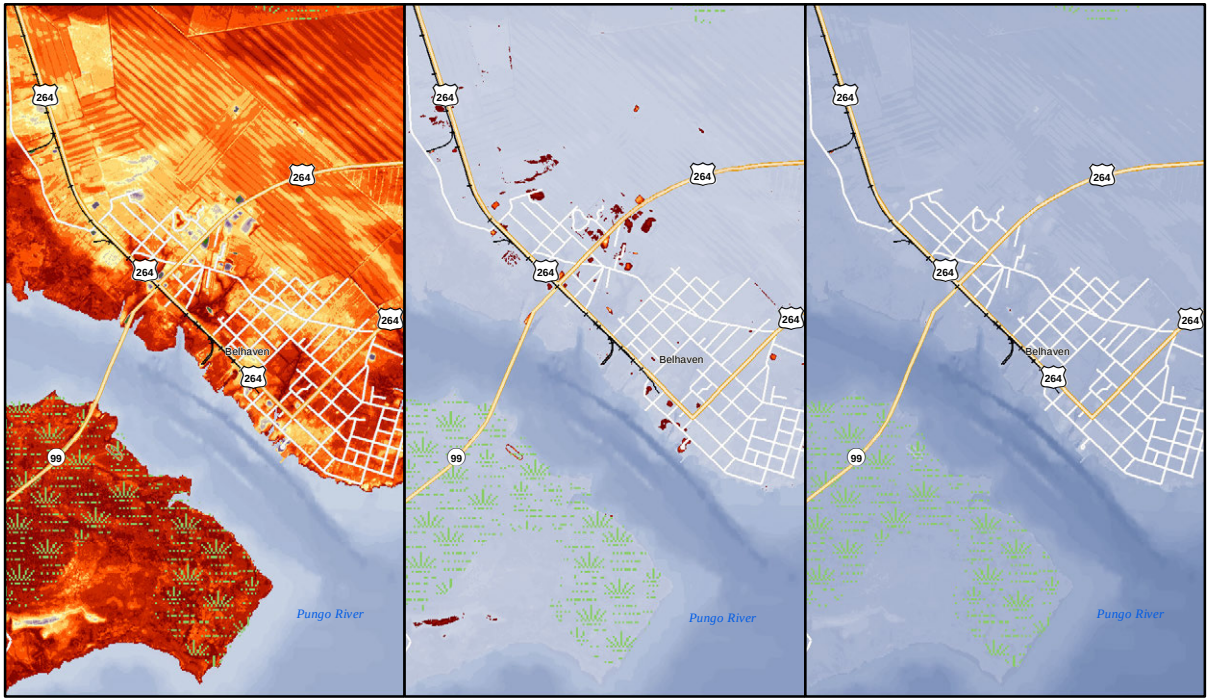
Belhaven

Vance Miller
12/5/2017

1:60,000

0 ½ 1 2 Miles

2010 population:	1688
Land area:	989 Acres
Land area above 5 feet:	26 Acres
Percent land below 5 feet:	97.37%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

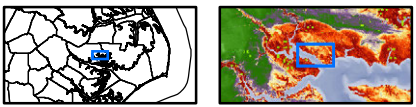
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: US Route, NC Route

Water Bodies: Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

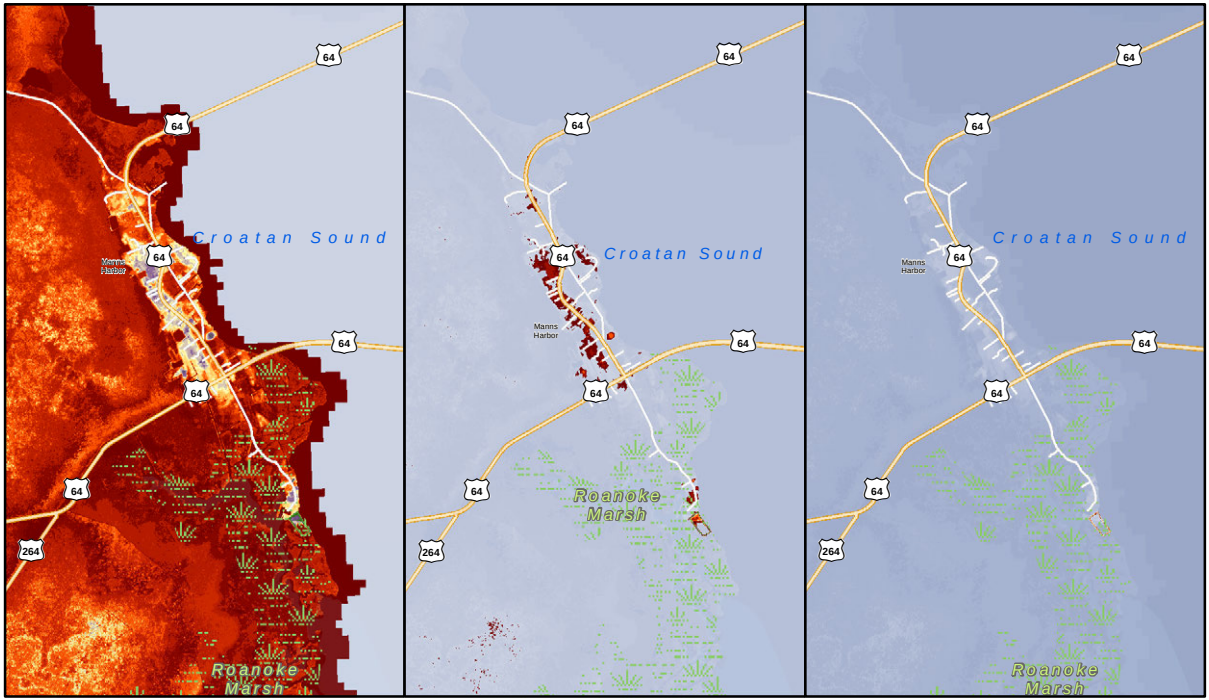
Manns Harbor

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	821
Land area:	2524 Acres
Land area above 5 feet:	95 Acres
Percent land below 5 feet:	96.23%



Present Conditions | Rise of 5 feet | Rise of 10 feet

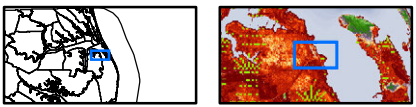
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

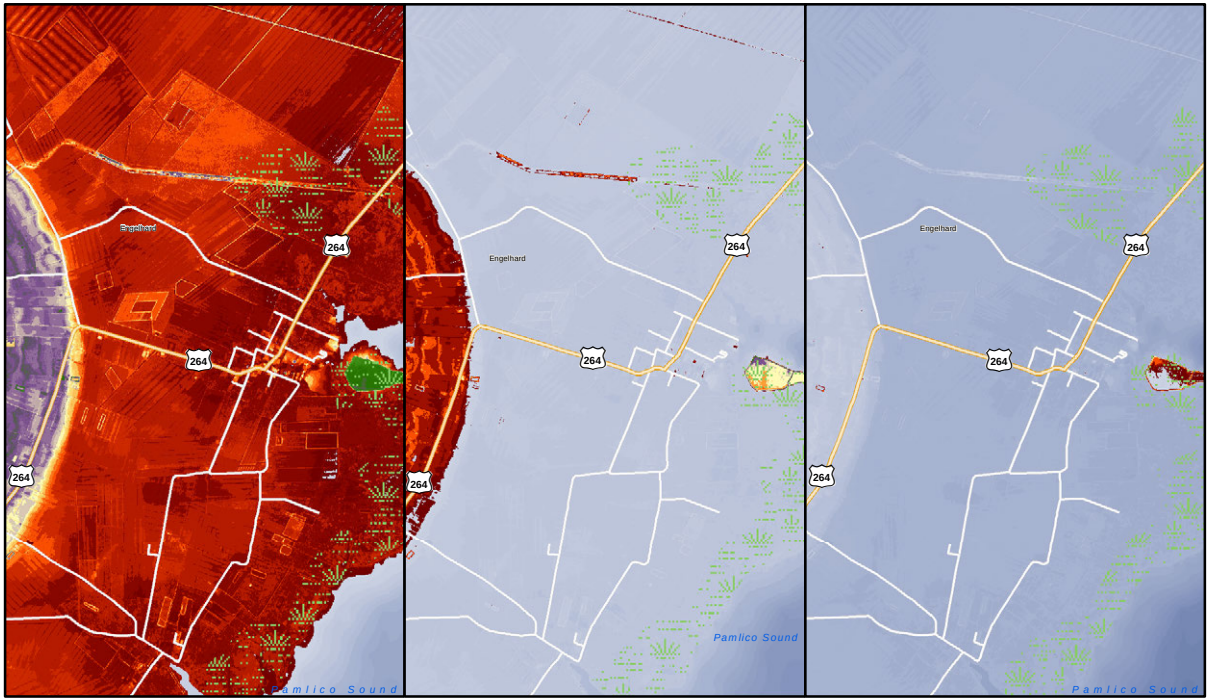
Engelhard

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	445
Land area:	2042 Acres
Land area above 5 feet:	79 Acres
Percent land below 5 feet:	96.13%



Present Conditions | Rise of 5 feet | Rise of 10 feet

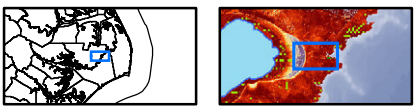
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

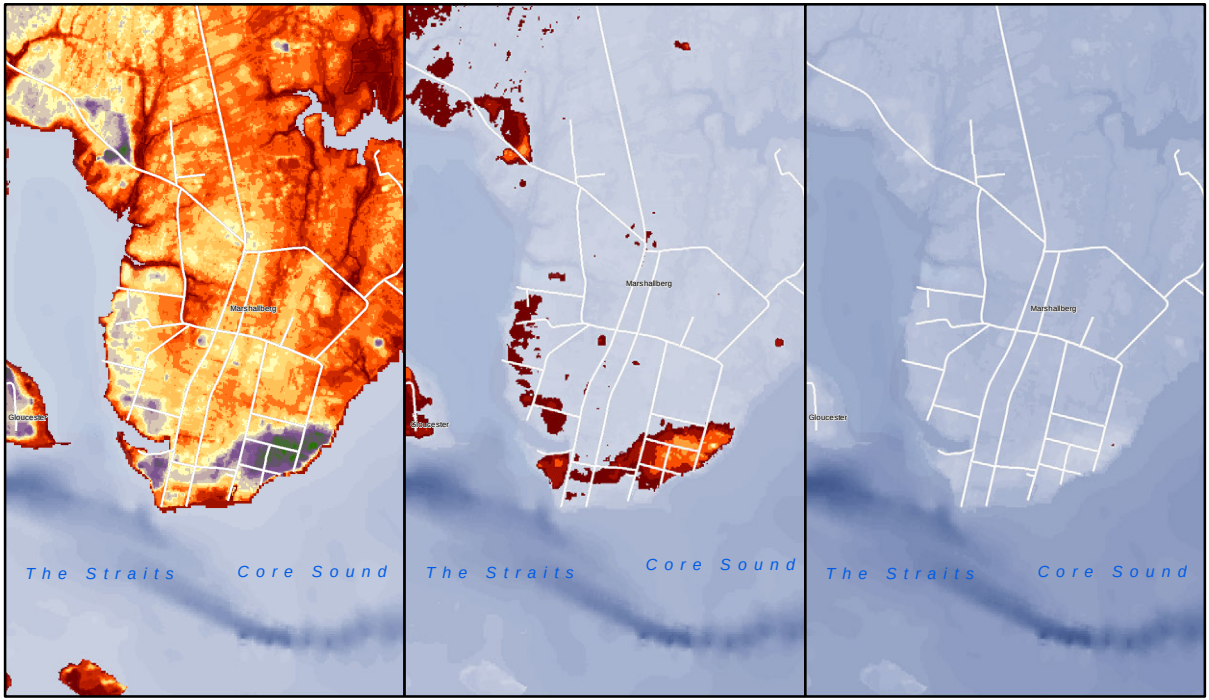
Marshallberg

Vance Miller
12/5/2017

1:30,000

0 ½ 1 Miles

2010 population:	940
Land area:	402 Acres
Land area above 5 feet:	35 Acres
Percent land below 5 feet:	91.29%

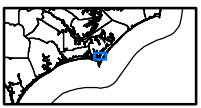


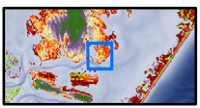
Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

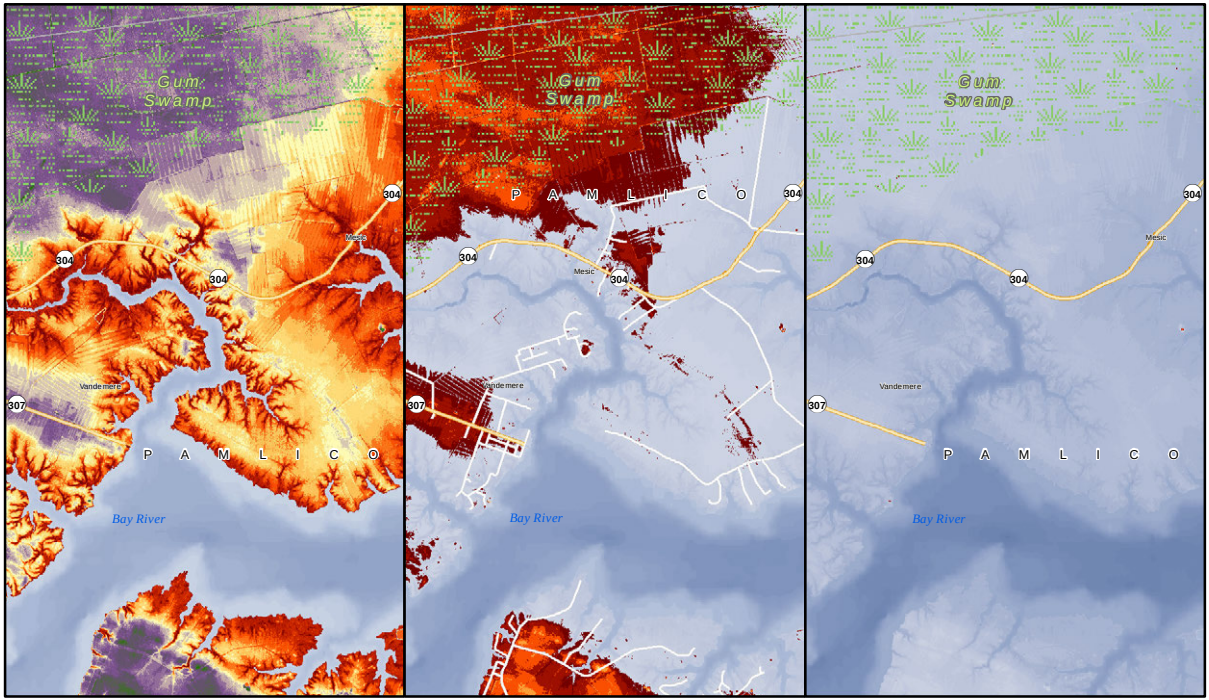
Vandemere and Mesic

Vance Miller
12/5/2017

1:100,000

0 ½ 1 2 3 4 Miles

2010 population:	474
Land area:	1602 Acres
Land area above 5 feet:	287 Acres
Percent land below 5 feet:	82.08%



Present Conditions | Rise of 5 feet | Rise of 10 feet

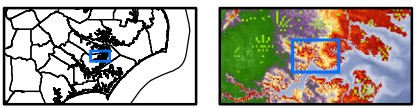
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

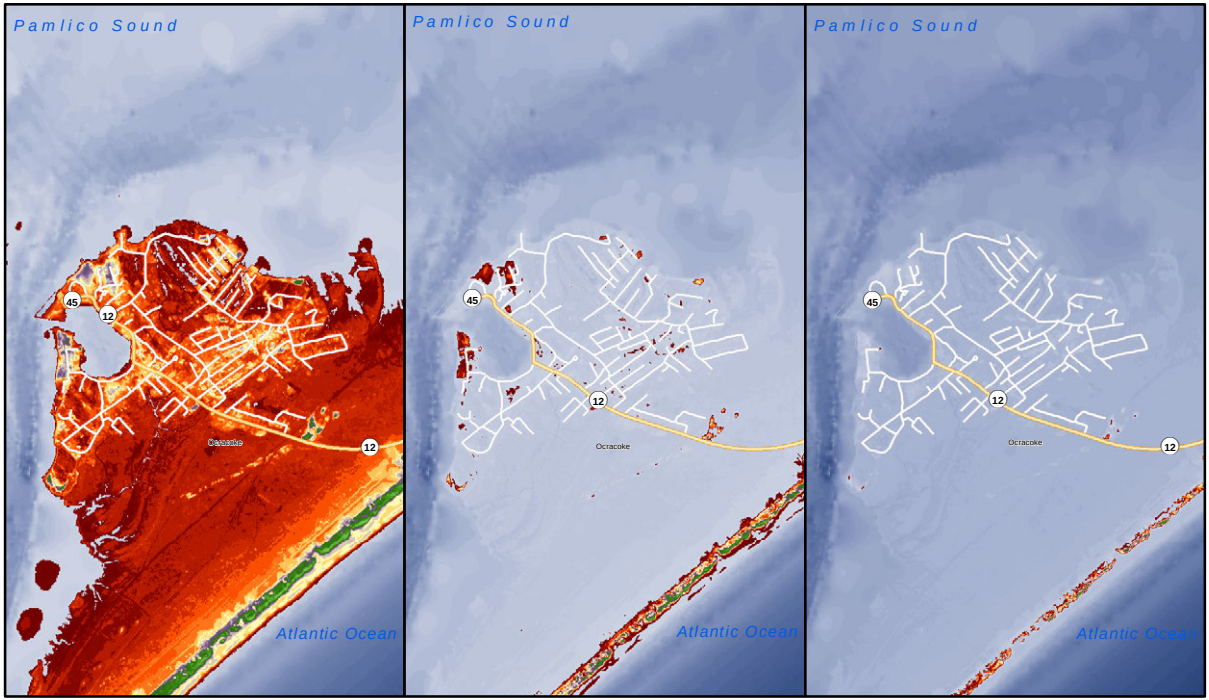
Ocracoke

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	948
Land area:	5207 Acres
Land area above 5 feet:	772 Acres
Percent land below 5 feet:	85.17%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

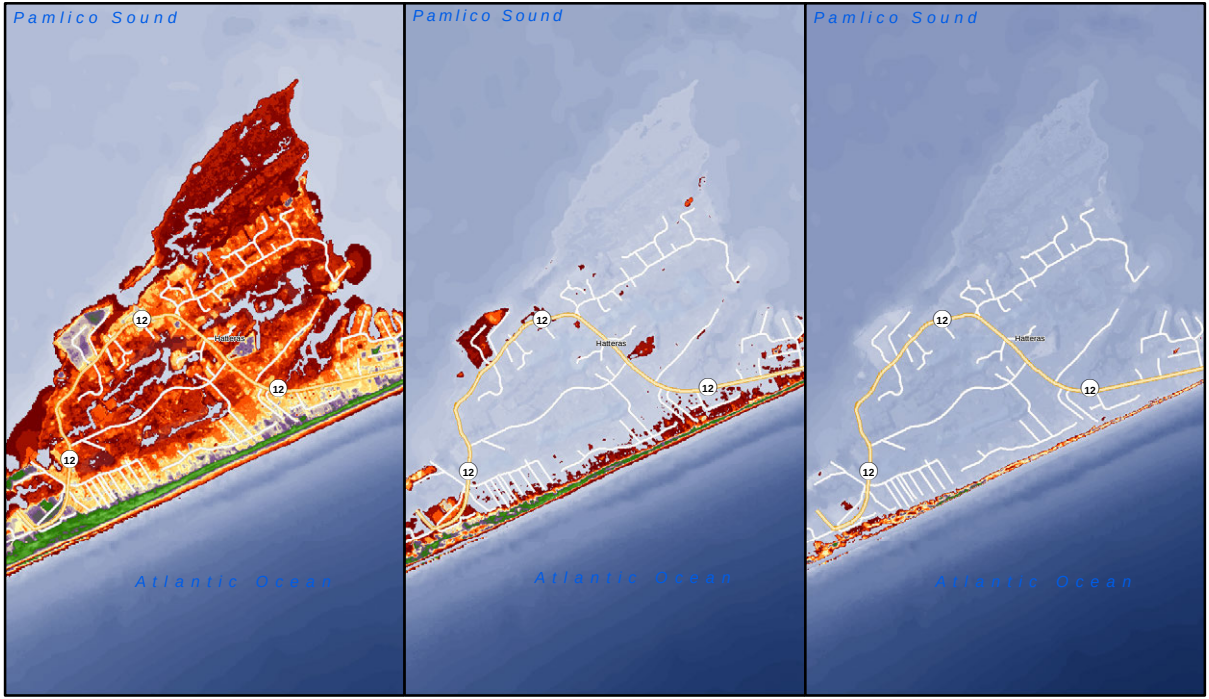
Hatteras

Vance Miller
12/5/2017

1:50,000

0 ½ 1 2 Miles

2010 population:	504
Land area:	901 Acres
Land area above 5 feet:	143 Acres
Percent land below 5 feet:	84.12%



Present Conditions | Rise of 5 feet | Rise of 10 feet

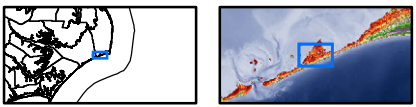
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

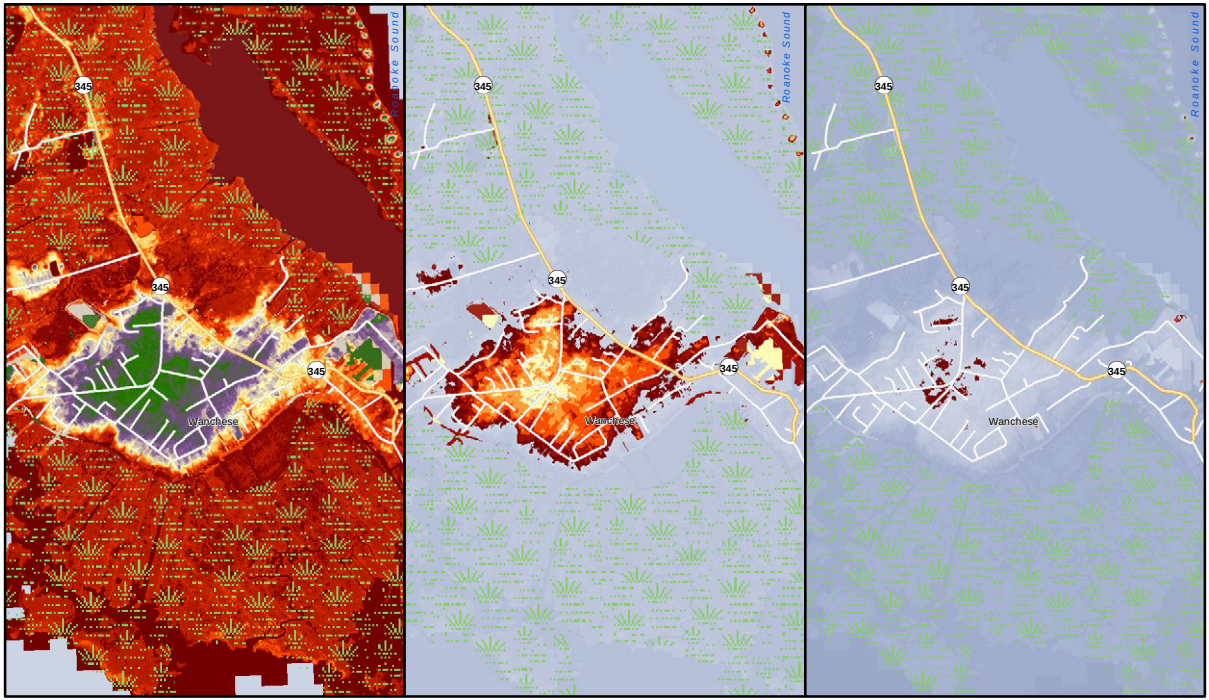
North Carolina Storm Surge and Sea Level Rise Hazards
Wanchese

Vance Miller
12/5/2017

1:65,000

0 ½ 1 2 Miles

2010 population:	1642
Land area:	2831 Acres
Land area above 5 feet:	496 Acres
Percent land below 5 feet:	82.47%



Present Conditions | Rise of 5 feet | Rise of 10 feet

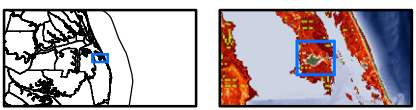
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

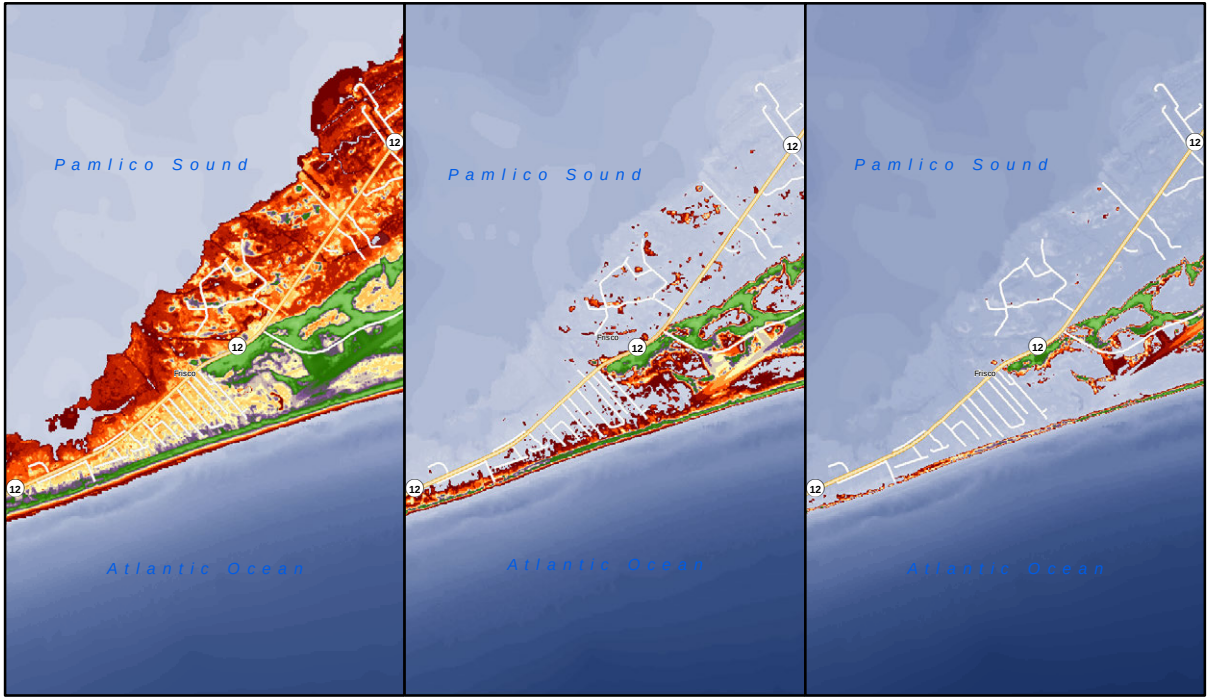
Frisco

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	200
Land area:	441 Acres
Land area above 5 feet:	84 Acres
Percent land below 5 feet:	80.95%



Present Conditions | Rise of 5 feet | Rise of 10 feet

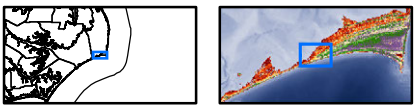
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

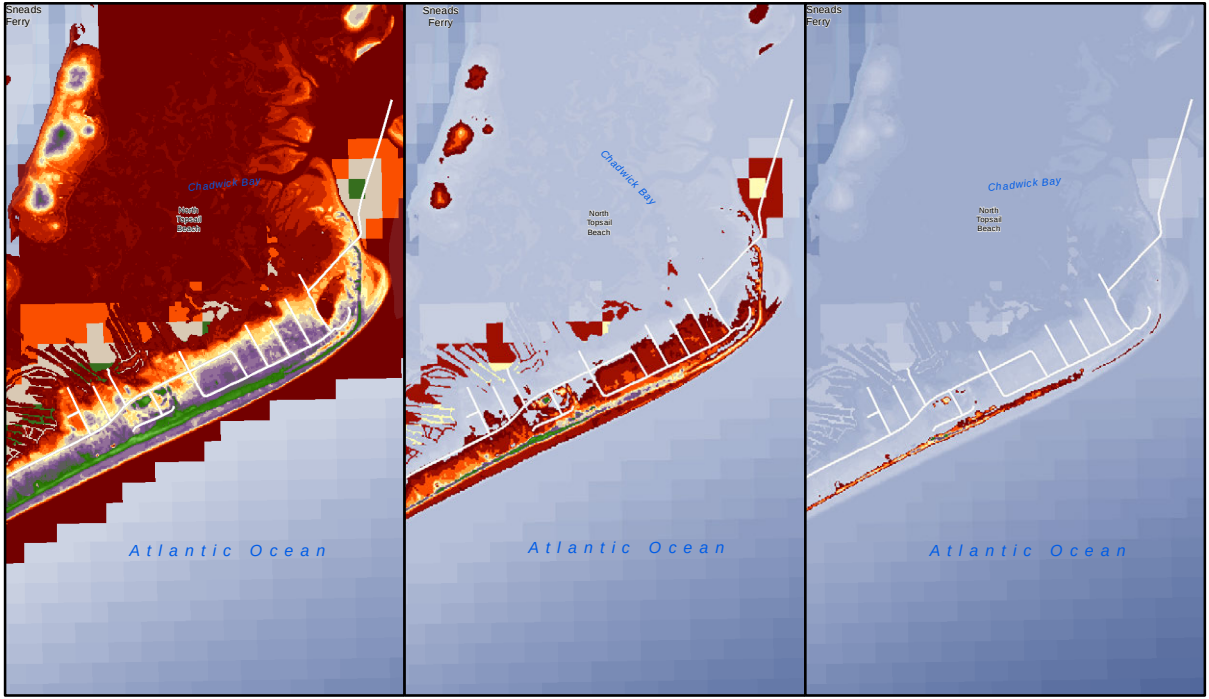
North Topsail Beach

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	743
Land area:	3511 Acres
Land area above 5 feet:	741 Acres
Percent land below 5 feet:	78.89%

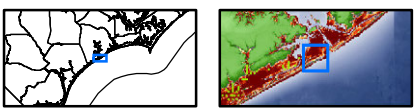


Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

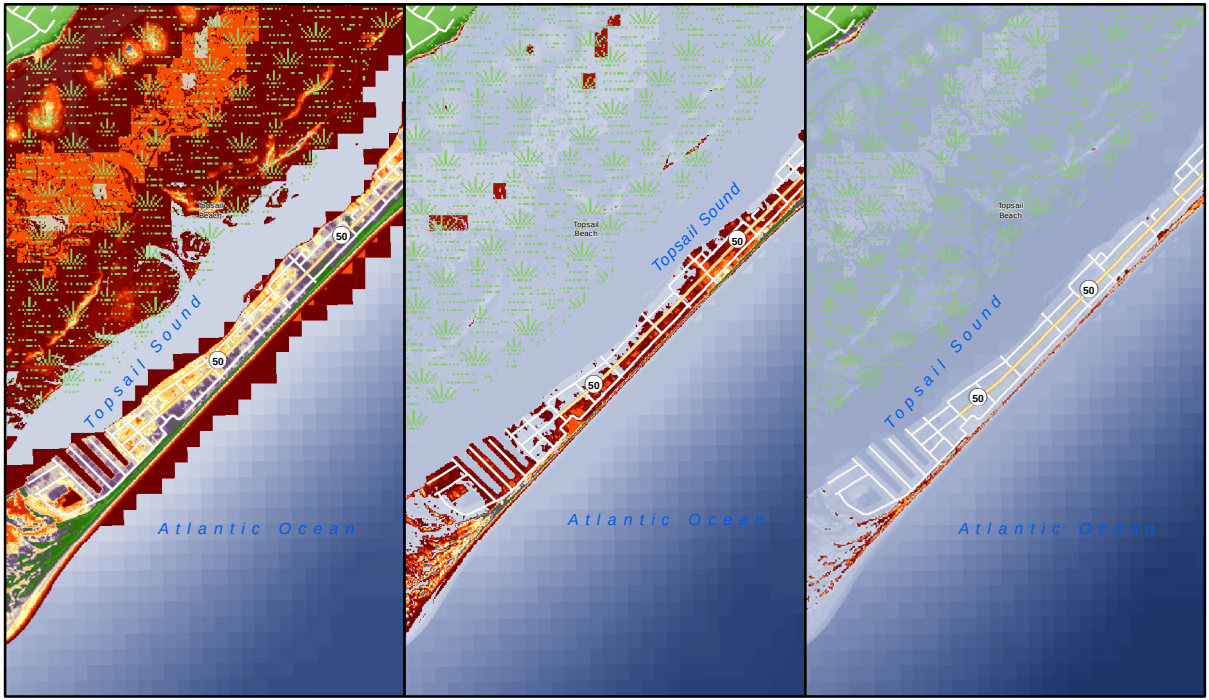
Topsail Beach

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	368
Land area:	1453 Acres
Land area above 5 feet:	317 Acres
Percent land below 5 feet:	78.18%



Present Conditions | Rise of 5 feet | Rise of 10 feet

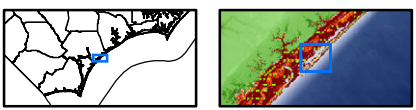
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

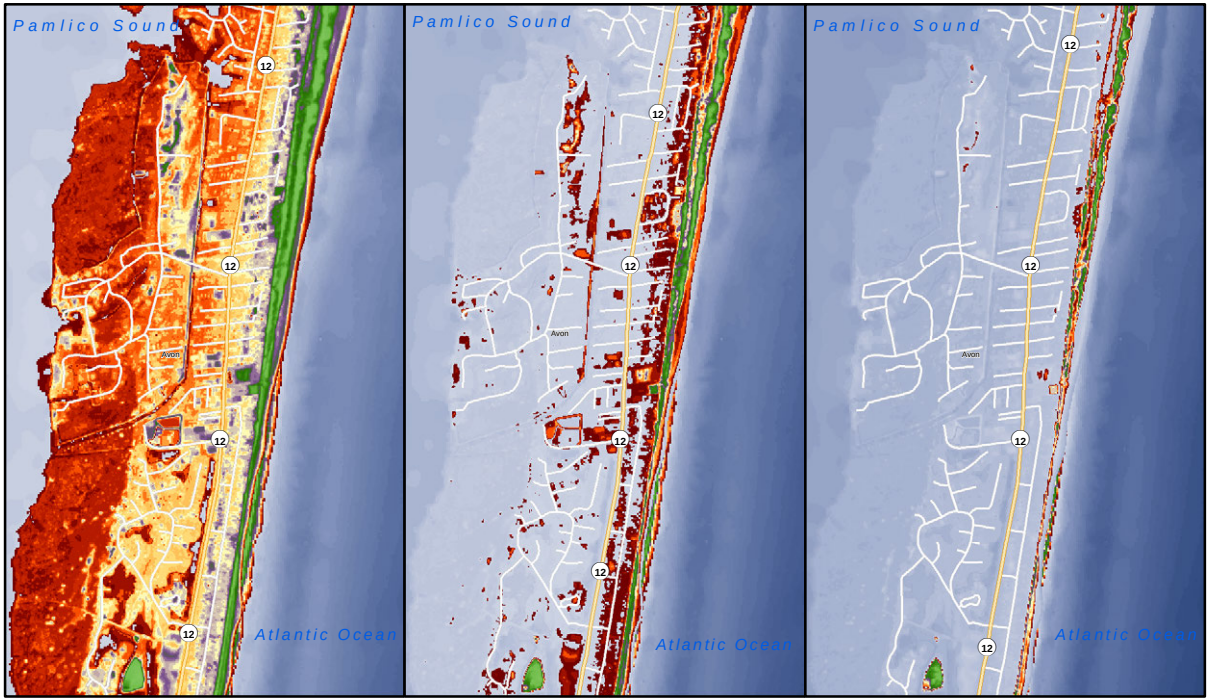
Avon

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	776
Land area:	1379 Acres
Land area above 5 feet:	324 Acres
Percent land below 5 feet:	76.5%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

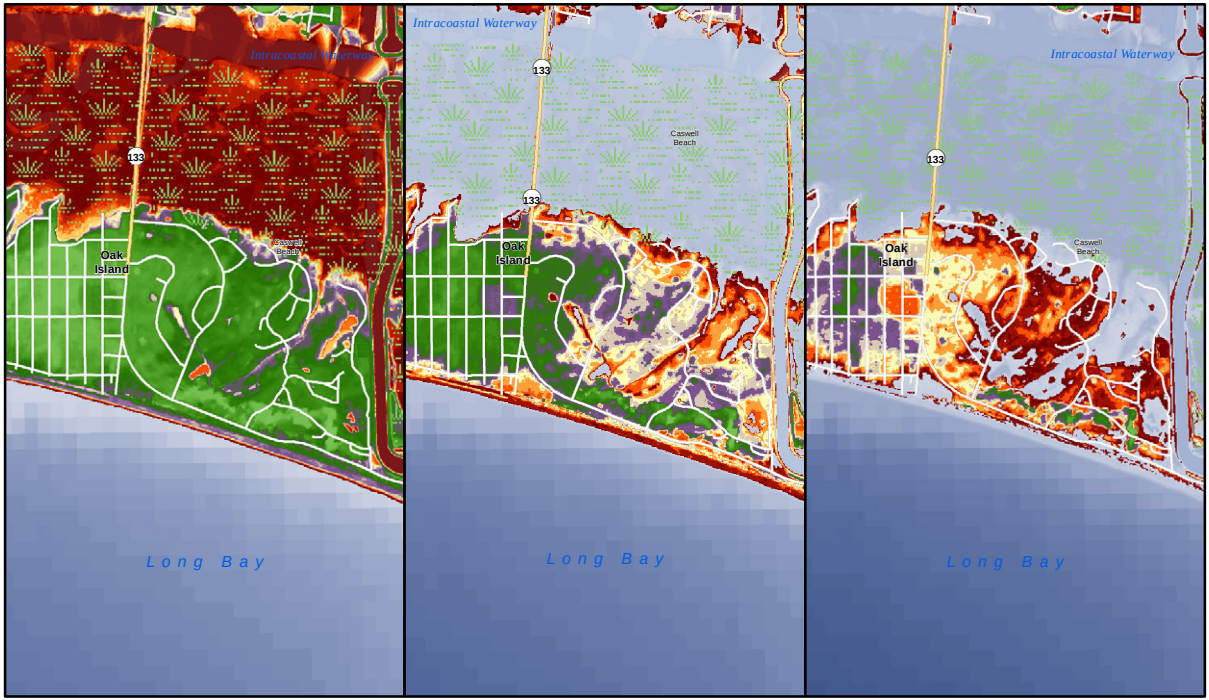
Caswell Beach

Vance Miller
12/5/2017

1:45,000

0 ½ 1 Miles

2010 population:	398
Land area:	1719 Acres
Land area above 5 feet:	423 Acres
Percent land below 5 feet:	75.39%



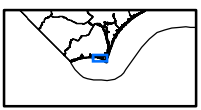
Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | NC Route | Water Bodies | Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

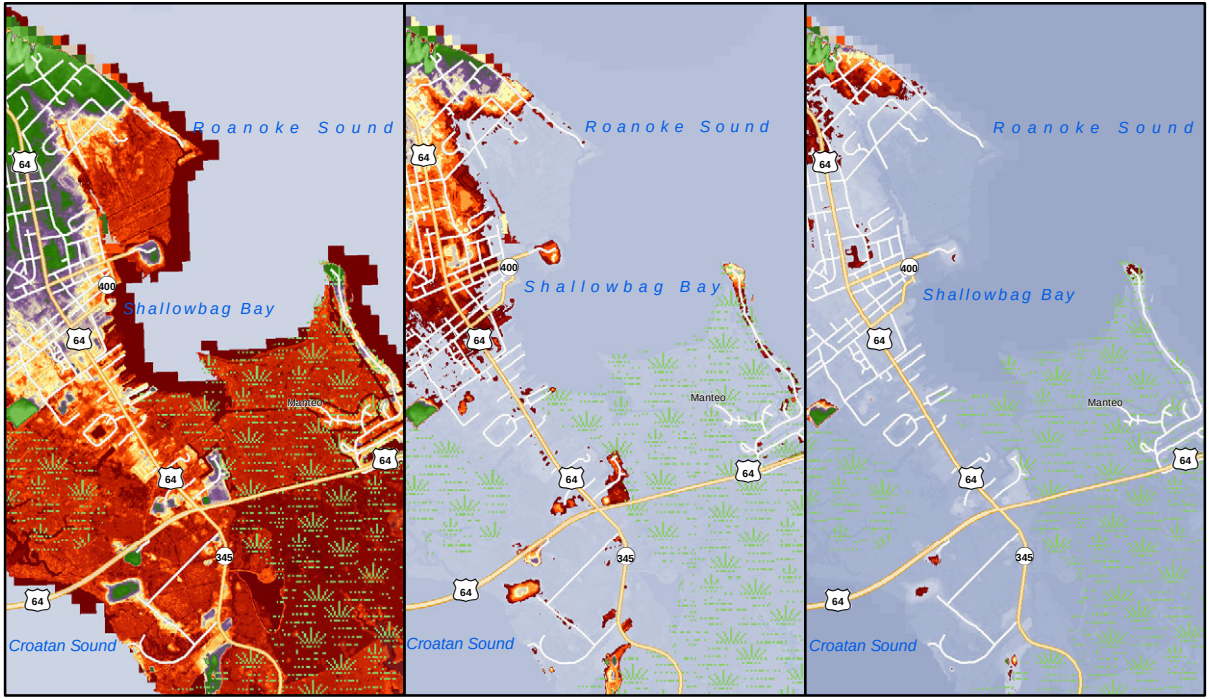
Manteo

Vance Miller
12/5/2017

1:70,000

0 ½ 1 2 Miles

2010 population:	1434
Land area:	1137 Acres
Land area above 5 feet:	304 Acres
Percent land below 5 feet:	73.26%



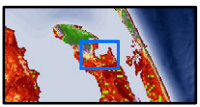
Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route — Water Bodies — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

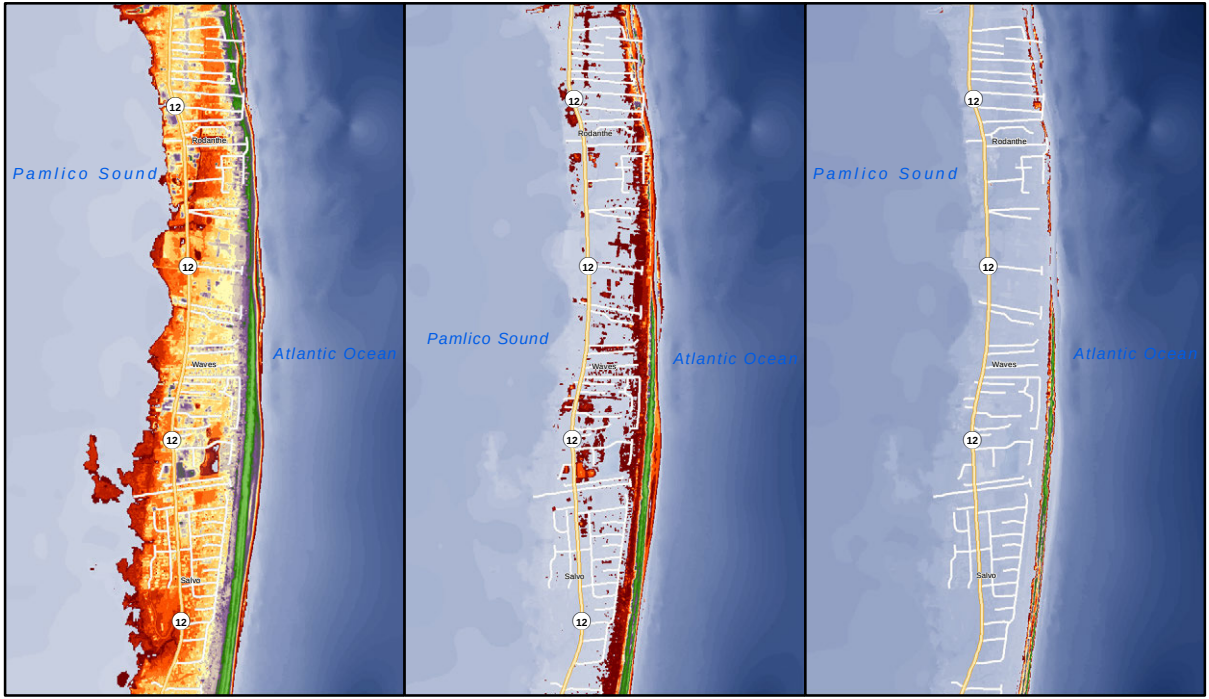
Rodanthe, Waves, and Salvo

Vance Miller
12/5/2017

1:60,000

0 ½ 1 2 Miles

2010 population:	624
Land area:	1494 Acres
Land area above 5 feet:	473 Acres
Percent land below 5 feet:	68.34%



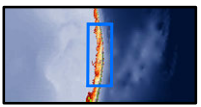
Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — NC Route



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

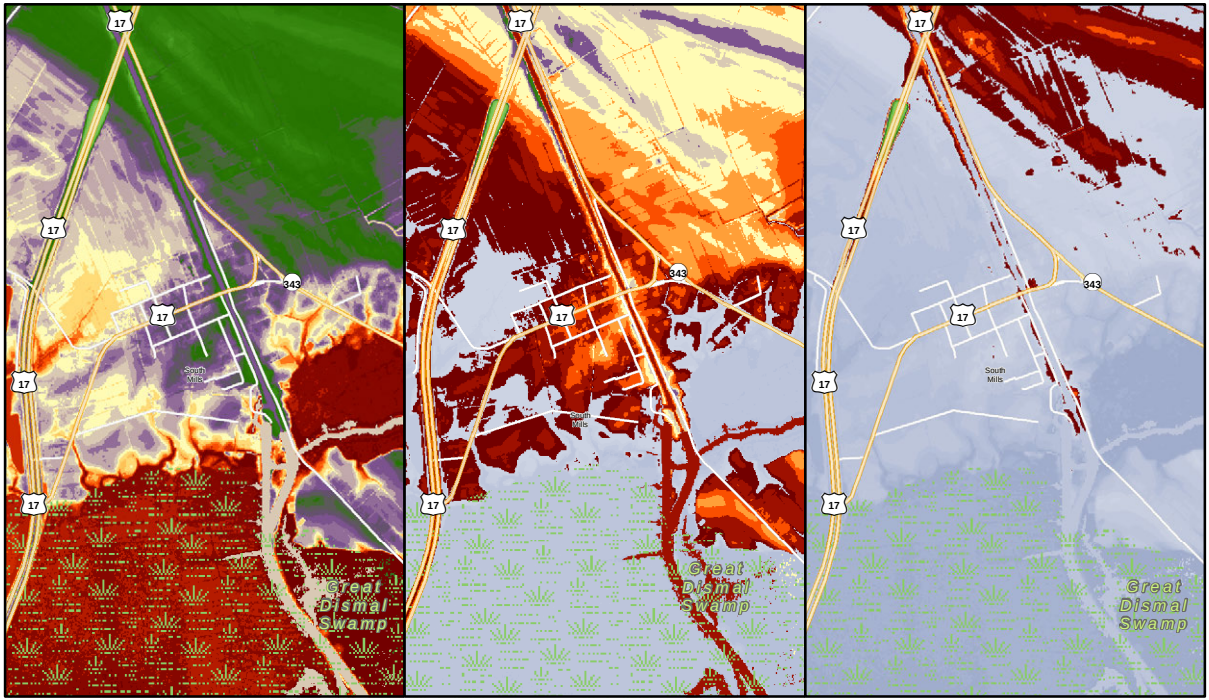
South Mills

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	454
Land area:	1117 Acres
Land area above 5 feet:	391 Acres
Percent land below 5 feet:	64.99%



Present Conditions | Rise of 5 feet | Rise of 10 feet

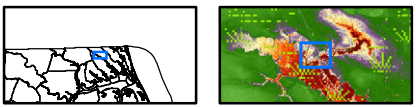
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

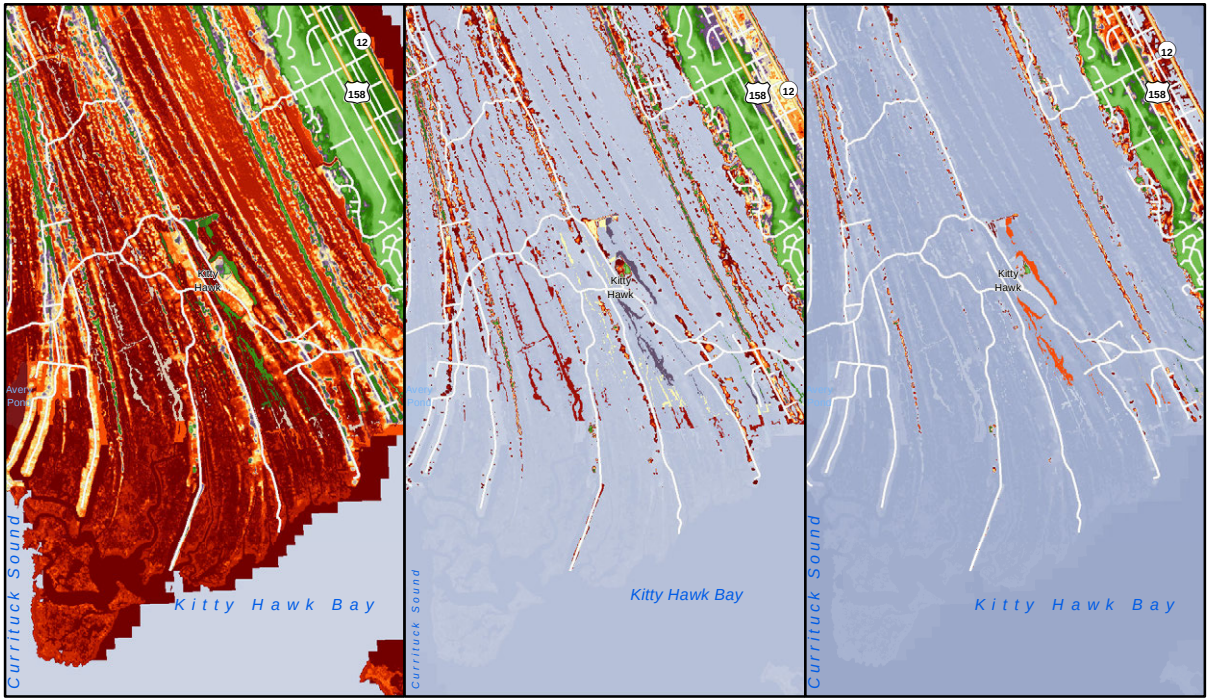
Kitty Hawk

Vance Miller
12/5/2017

1:65,000

0 ½ 1 2 Miles

2010 population:	3272
Land area:	4972 Acres
Land area above 5 feet:	1788 Acres
Percent land below 5 feet:	64.03%



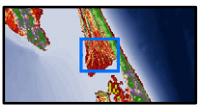
Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

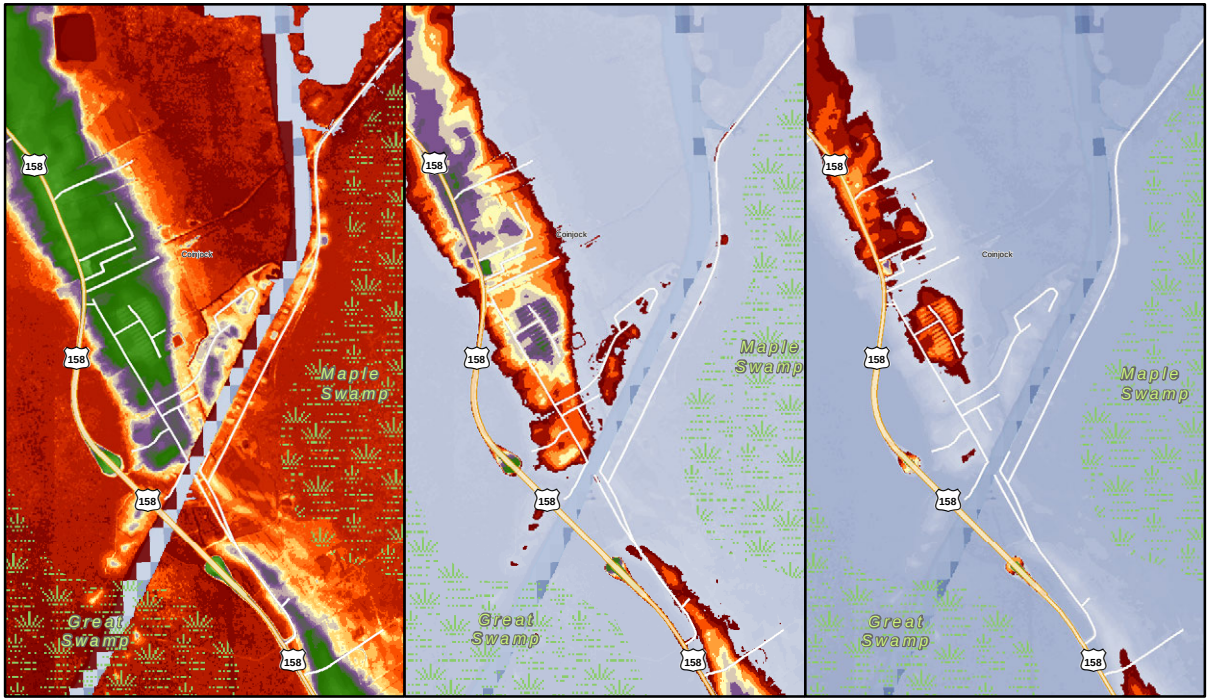
Coinjock

Vance Miller
12/5/2017

1:40,000

0 ½ 1 Miles

2010 population:	335
Land area:	503 Acres
Land area above 5 feet:	185 Acres
Percent land below 5 feet:	63.22%



Present Conditions | Rise of 5 feet | Rise of 10 feet

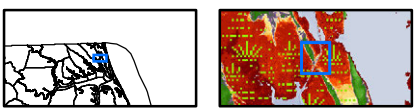
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

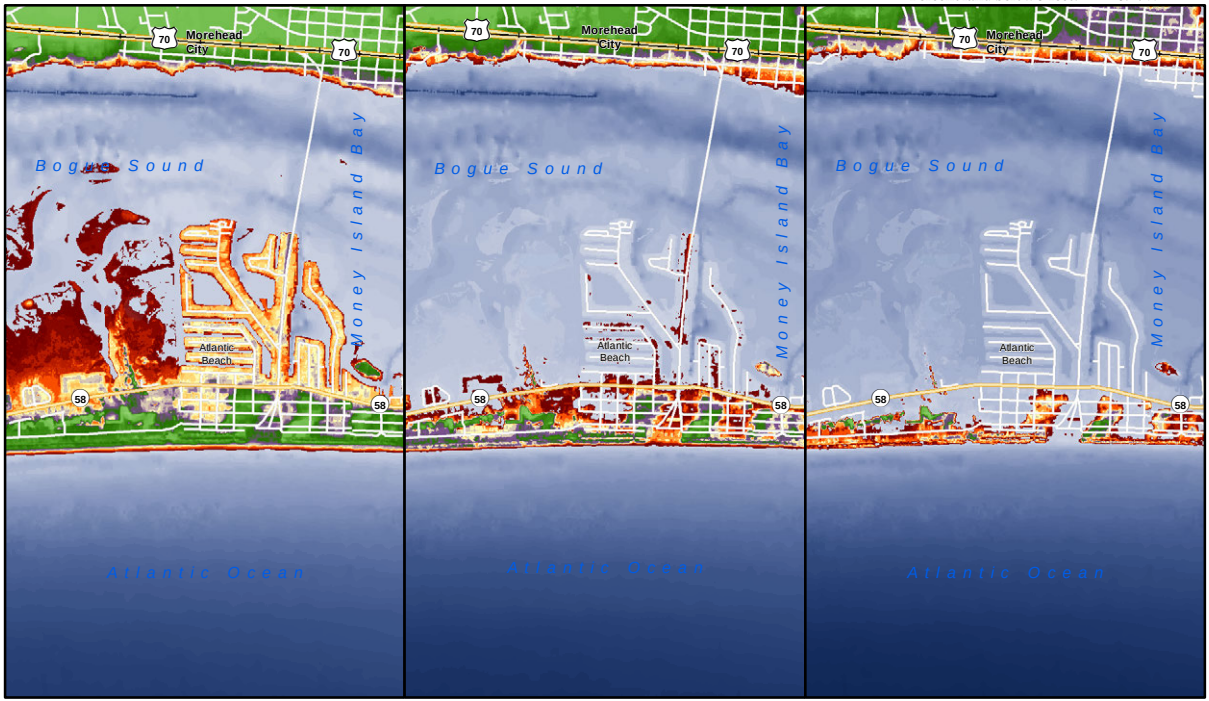
Atlantic Beach

Vance Miller
12/5/2017

1:55,000

0 ½ 1 2 Miles

2010 population:	1495
Land area:	1377 Acres
Land area above 5 feet:	737 Acres
Percent land below 5 feet:	46.47%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

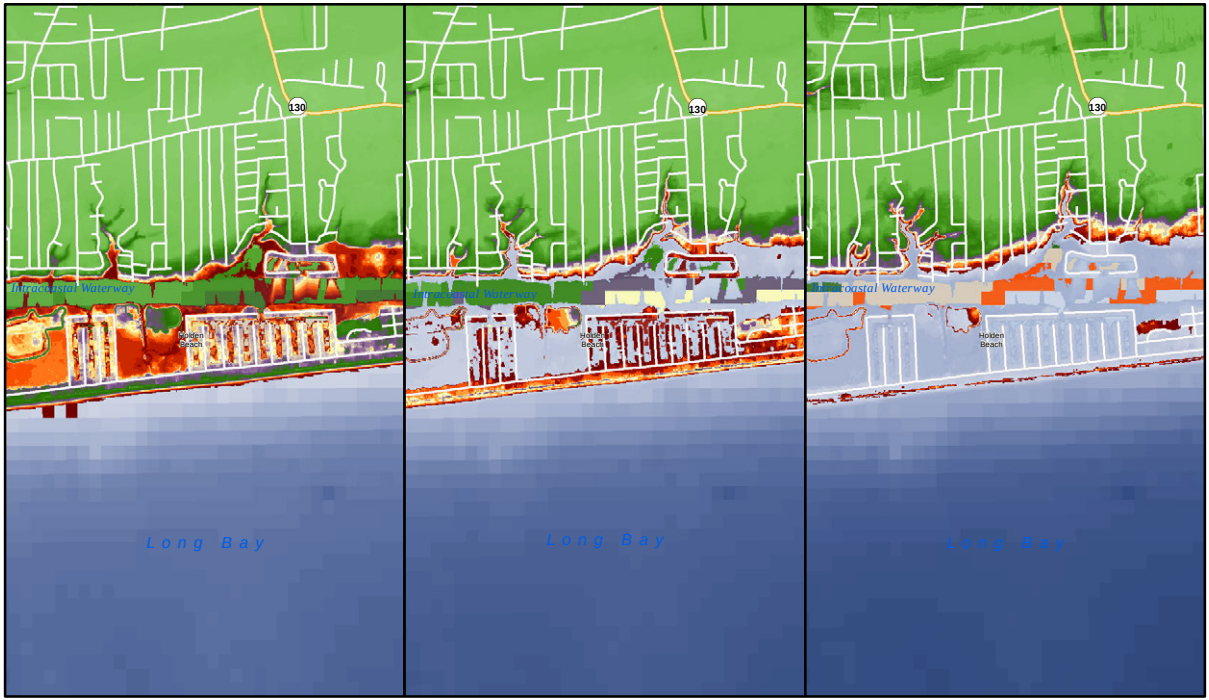
Holden Beach

Vance Miller
12/5/2017

1:50,000

0 ½ 1 2 Miles

2010 population:	575
Land area:	1641 Acres
Land area above 5 feet:	888 Acres
Percent land below 5 feet:	45.88%



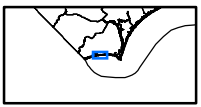
Present Conditions **Rise of 5 feet** **Rise of 10 feet**

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways NC Route



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

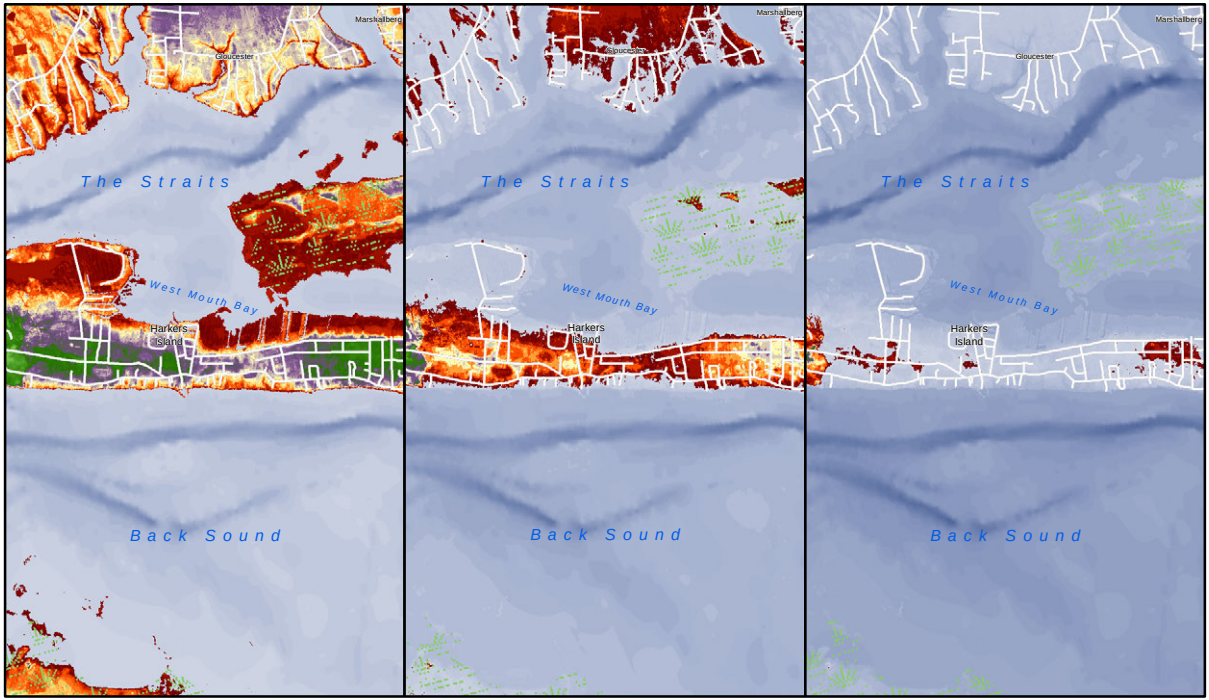
North Carolina Storm Surge and Sea Level Rise Hazards
Harkers Island

Vance Miller
12/5/2017

1:90,000

0 ½ 1 2 3 Miles

2010 population:	1207
Land area:	1510 Acres
Land area above 5 feet:	837 Acres
Percent land below 5 feet:	44.56%



Present Conditions | **Rise of 5 feet** | **Rise of 10 feet**

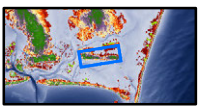
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

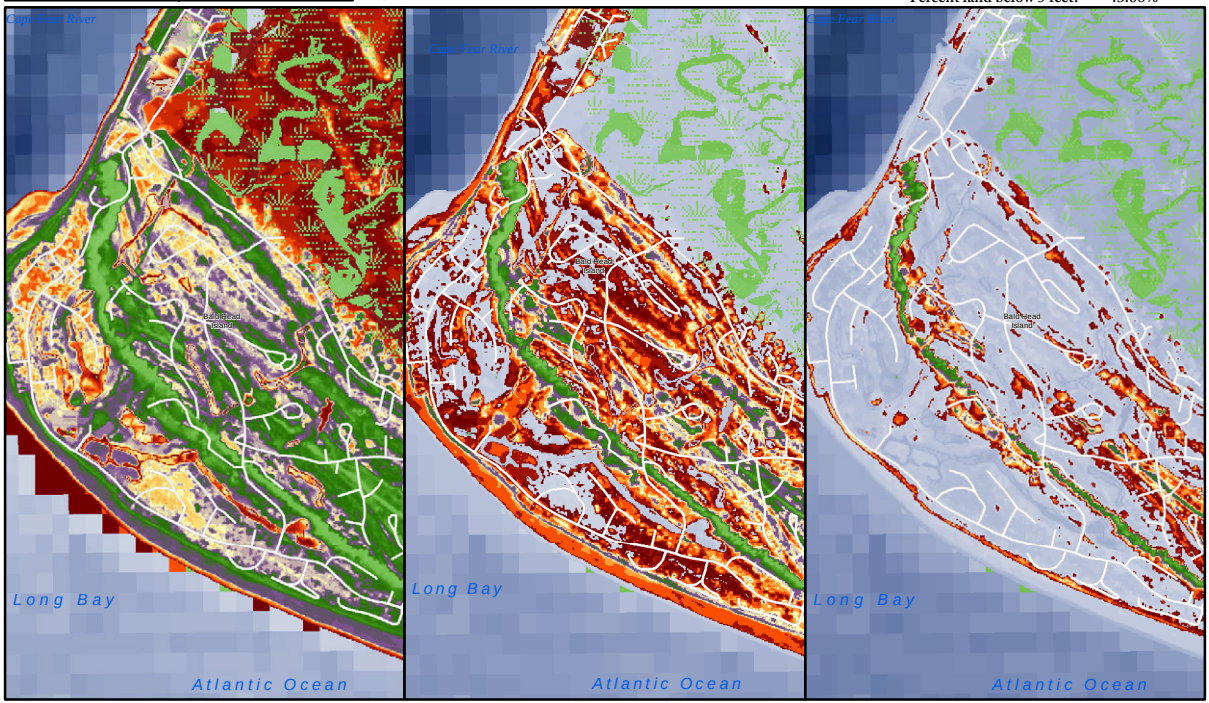
Bald Head Island

Vance Miller
12/5/2017

1:35,000

0 ½ 1 Miles

2010 population:	158
Land area:	2257 Acres
Land area above 5 feet:	1271 Acres
Percent land below 5 feet:	43.68%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

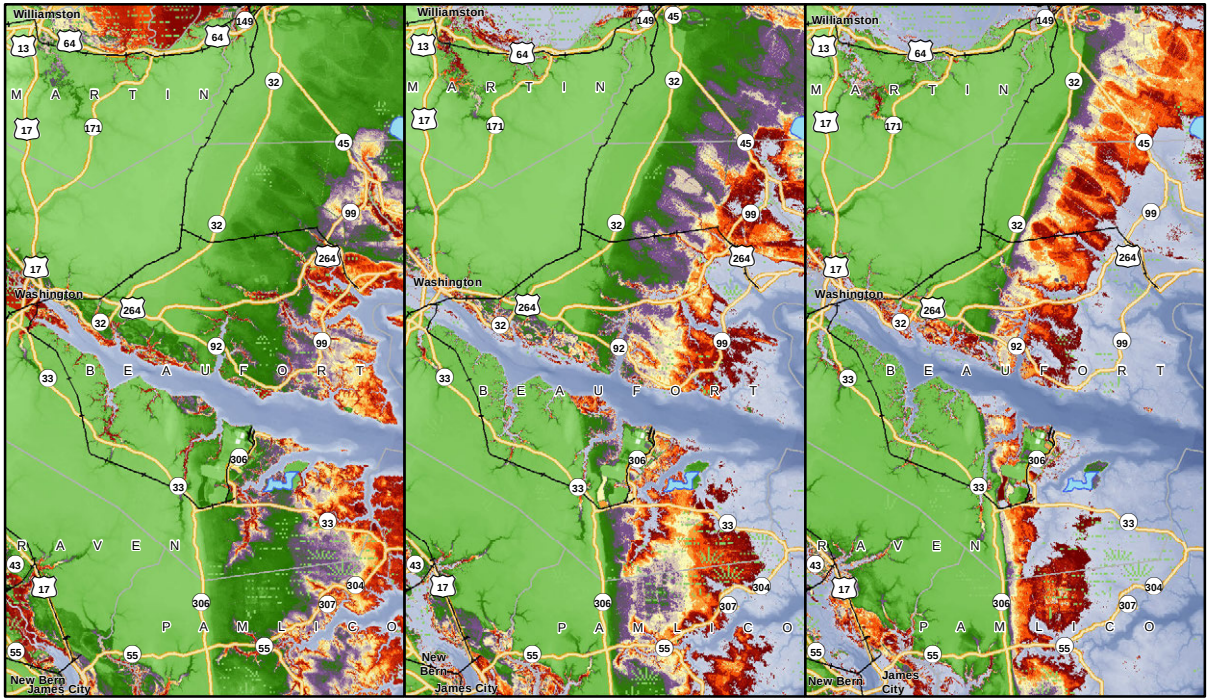
Beaufort County

Vance Miller
12/5/2017

1:940,000

0 3 6 12 18 24 30 36 Miles

2010 population:	45436
Land area:	530502 Acres
Land area above 5 feet:	455740 Acres
Percent land below 5 feet:	14.09%



Present Conditions | Rise of 5 feet | Rise of 10 feet

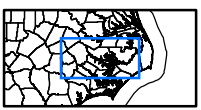
Explanation of Symbols

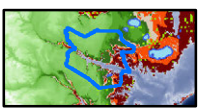
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

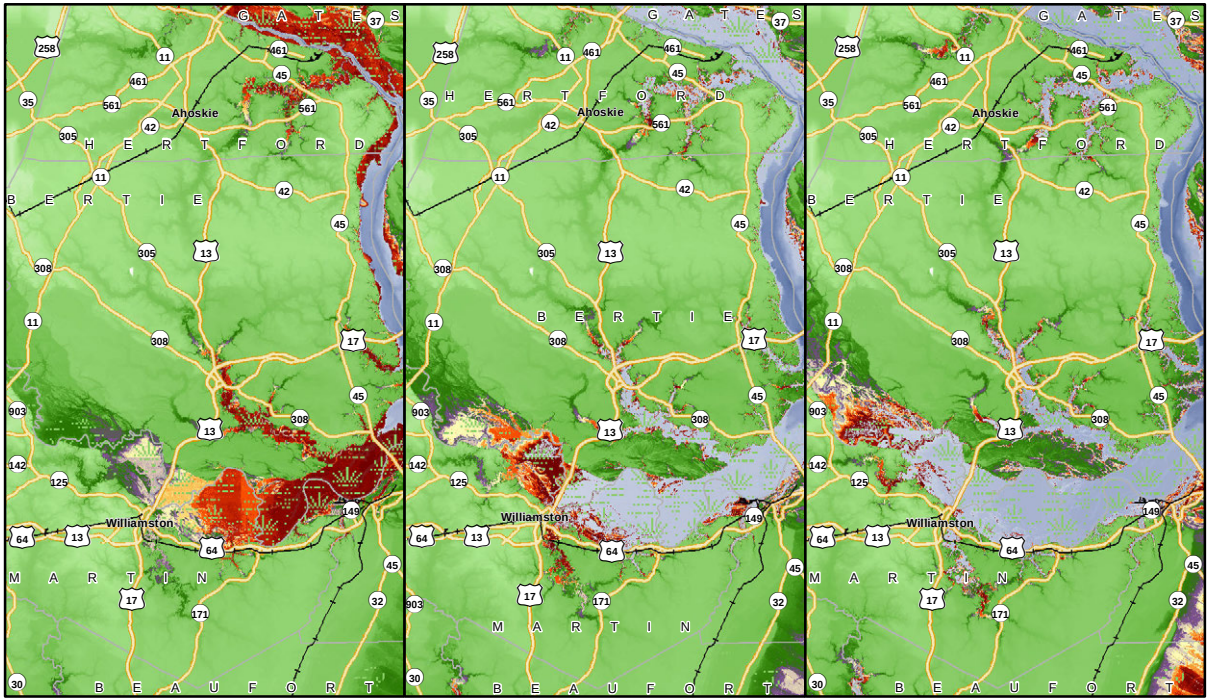
Bertie County

Vance Miller
12/5/2017

1:925,000

0 3 6 12 18 24 30 36 Miles

2010 population:	20411
Land area:	438792 Acres
Land area above 5 feet:	404155 Acres
Percent land below 5 feet:	7.89%



Present Conditions | Rise of 5 feet | Rise of 10 feet

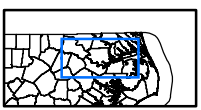
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways | US Route | NC Route | Water Bodies | Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

Brunswick County

Vance Miller
12/5/2017

1:940,000

0 3 6 12 18 24 30 36 Miles

2010 population:	84454
Land area:	540338 Acres
Land area above 5 feet:	505060 Acres
Percent land below 5 feet:	6.52%

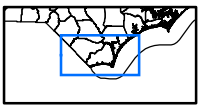
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

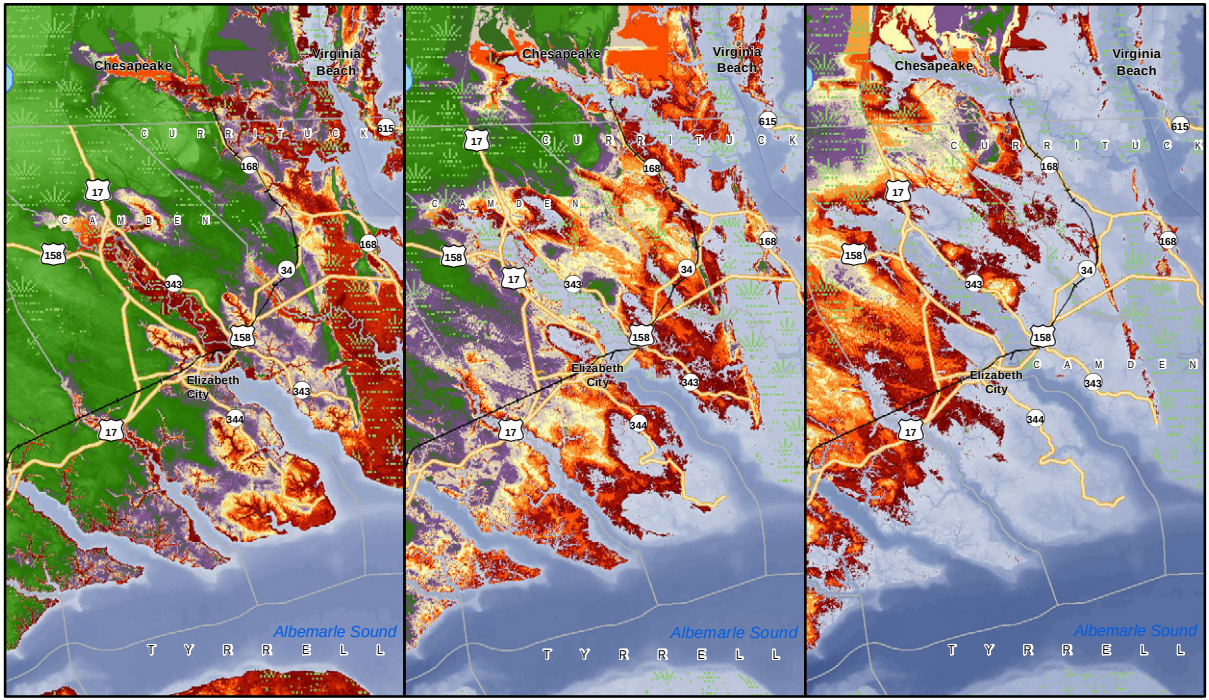
North Carolina Storm Surge and Sea Level Rise Hazards
Camden County

Vance Miller
12/5/2017

1:850,000

0 2½ 5 10 15 20 25 30 Miles

2010 population:	7058
Land area:	151552 Acres
Land area above 5 feet:	101869 Acres
Percent land below 5 feet:	32.78%



Present Conditions | Rise of 5 feet | Rise of 10 feet

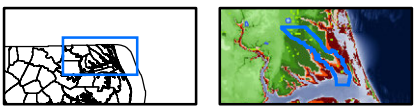
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

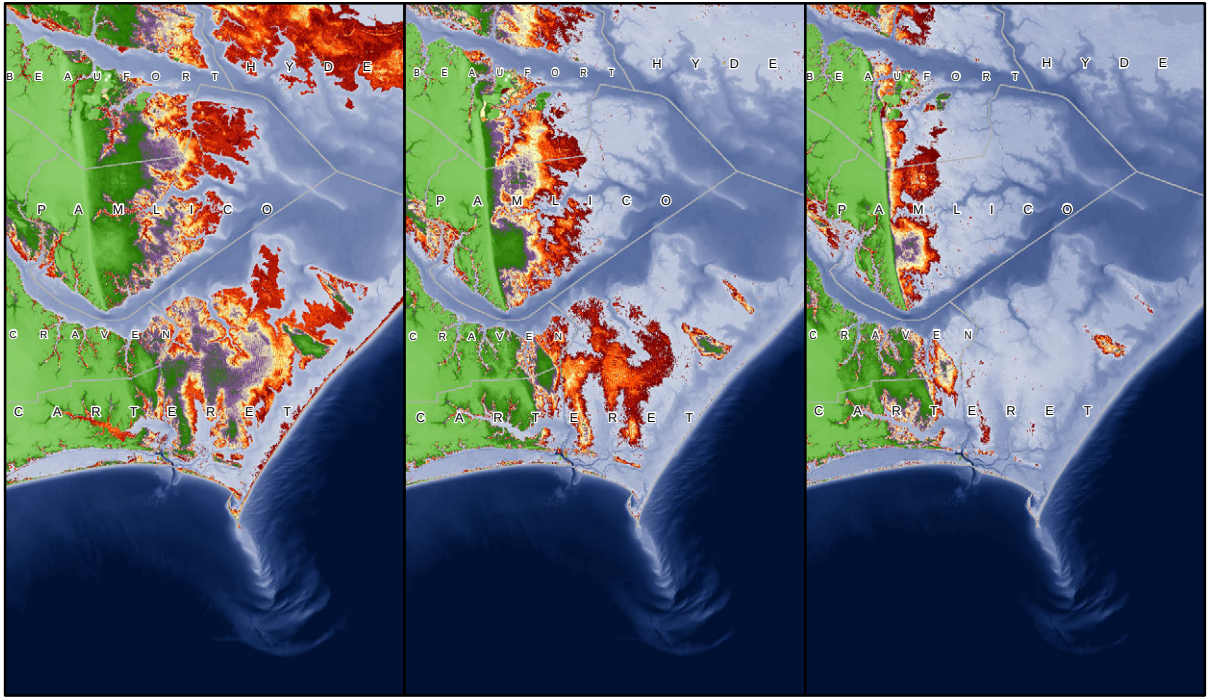
Carteret County

Vance Miller
12/5/2017

1:1,475,000

0 5 10 20 30 40 50 60 Miles

2010 population:	70648
Land area:	324982 Acres
Land area above 5 feet:	204442 Acres
Percent land below 5 feet:	37.09%

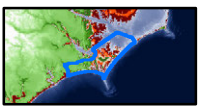


Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

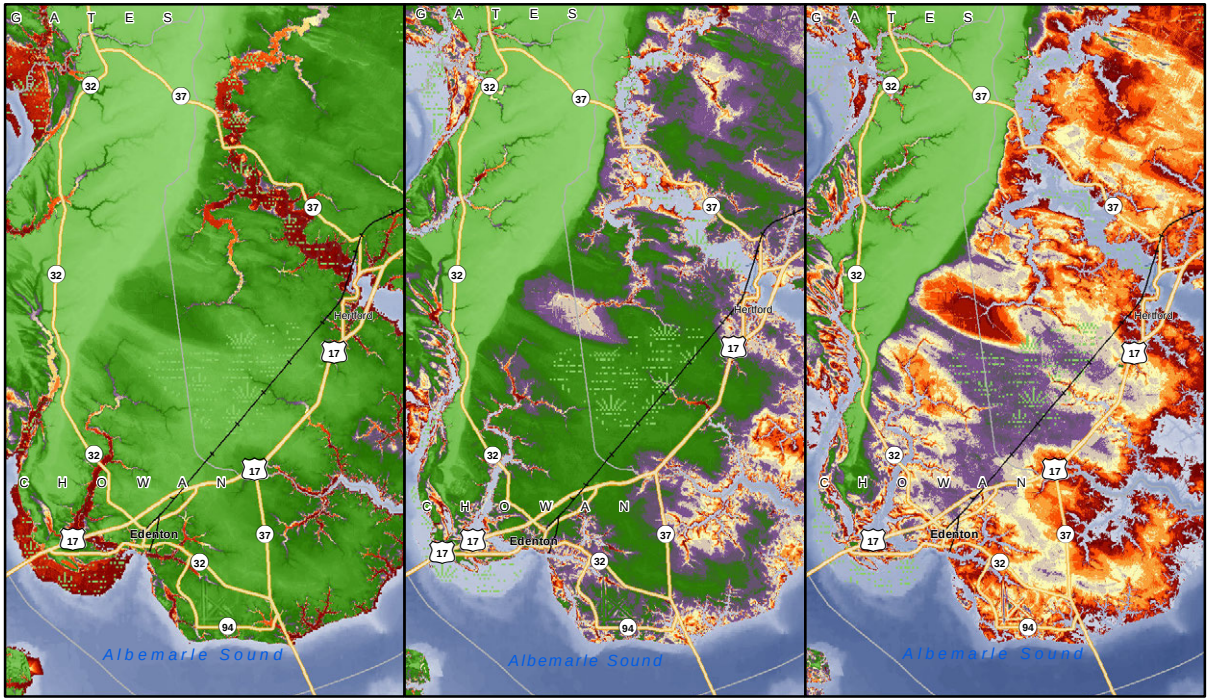
Chowan County

Vance Miller
12/5/2017

1:440,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	15196
Land area:	110040 Acres
Land area above 5 feet:	98586 Acres
Percent land below 5 feet:	10.4%



Present Conditions | Rise of 5 feet | Rise of 10 feet

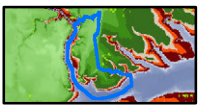
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route — Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

Craven County

Vance Miller
12/5/2017

1:1,070,000

0 3½ 7 14 21 28 35 42 Miles

2010 population:	97431
Land area:	456539 Acres
Land area above 5 feet:	427051 Acres
Percent land below 5 feet:	6.45%

Present Conditions | Rise of 5 feet | Rise of 10 feet

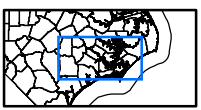
Explanation of Symbols

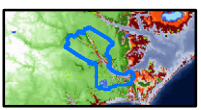
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

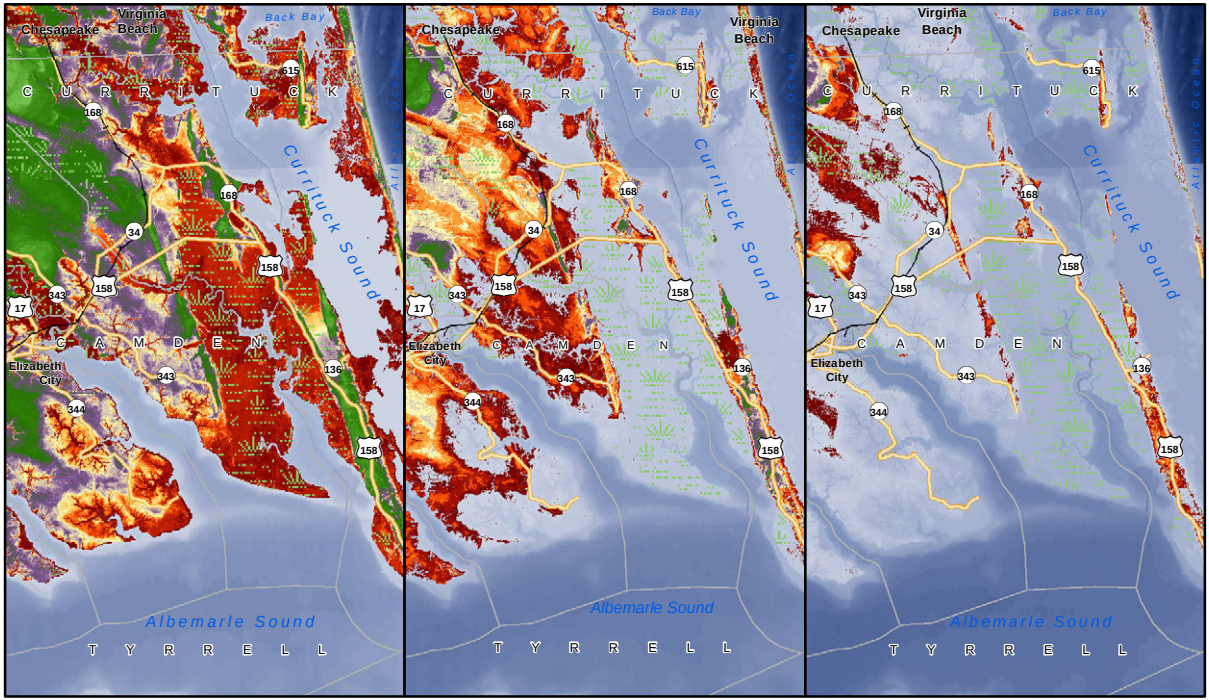
North Carolina Storm Surge and Sea Level Rise Hazards
Currituck County

Vance Miller
12/5/2017

1:725,000

0 2 4 8 12 16 20 24 Miles

2010 population:	20756
Land area:	162008 Acres
Land area above 5 feet:	80474 Acres
Percent land below 5 feet:	50.32%



Present Conditions | Rise of 5 feet | Rise of 10 feet

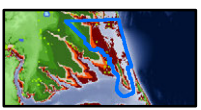
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route — Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

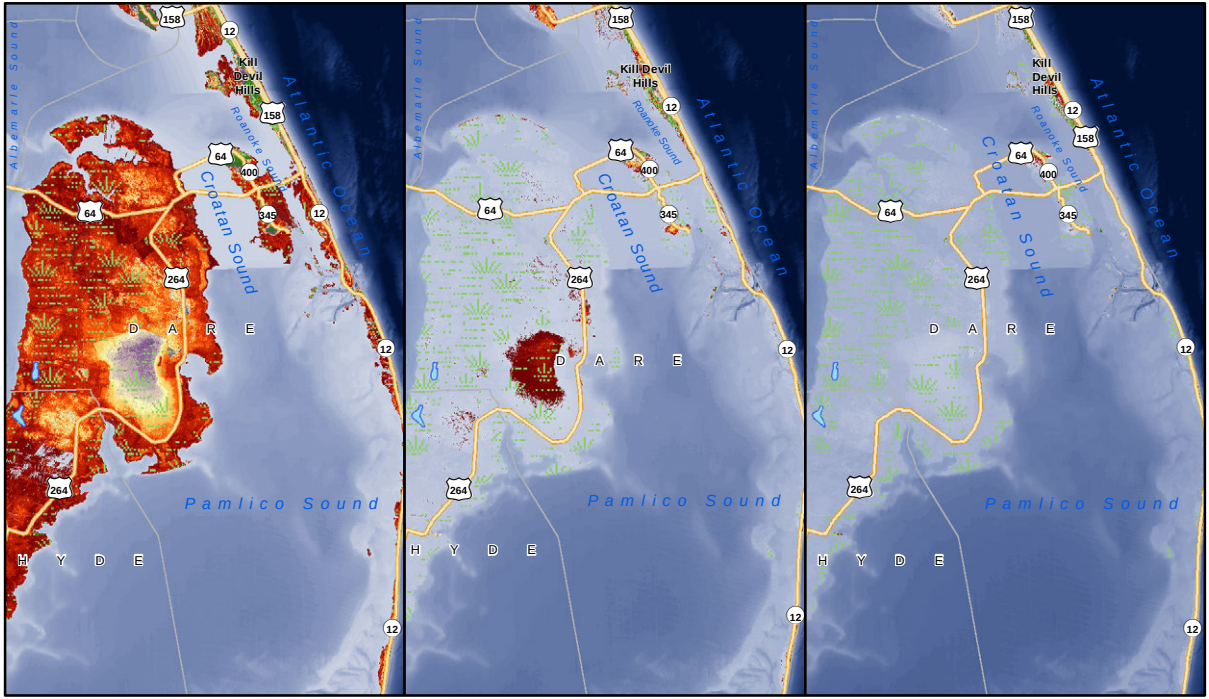
Dare County

Vance Miller
12/5/2017

1:950,000

0 3 6 12 18 24 30 36 Miles

2010 population:	36327
Land area:	235758 Acres
Land area above 5 feet:	37422 Acres
Percent land below 5 feet:	84.12%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

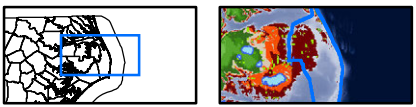
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

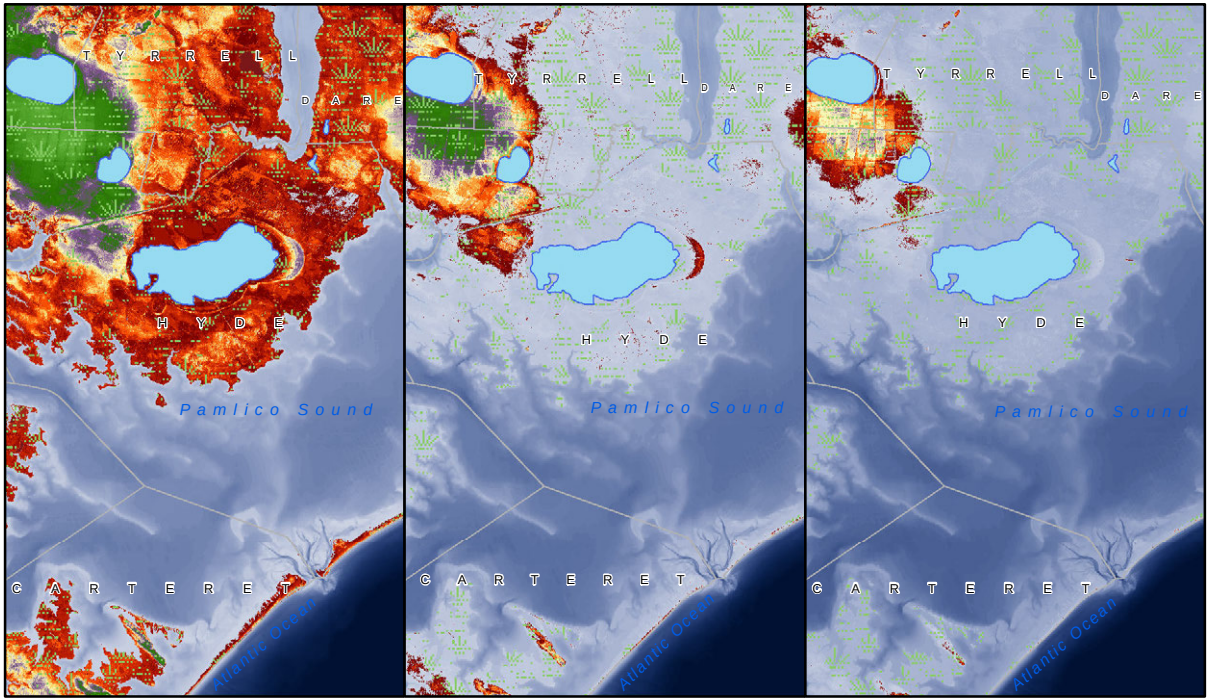
Hyde County

Vance Miller
12/5/2017

1:1,165,000

0 4 8 16 24 32 40 48 Miles

2010 population:	4607
Land area:	372880 Acres
Land area above 5 feet:	99630 Acres
Percent land below 5 feet:	73.28%



Present Conditions | Rise of 5 feet | Rise of 10 feet

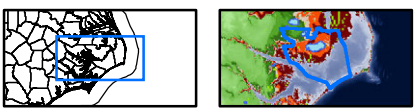
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Water Bodies Lake Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

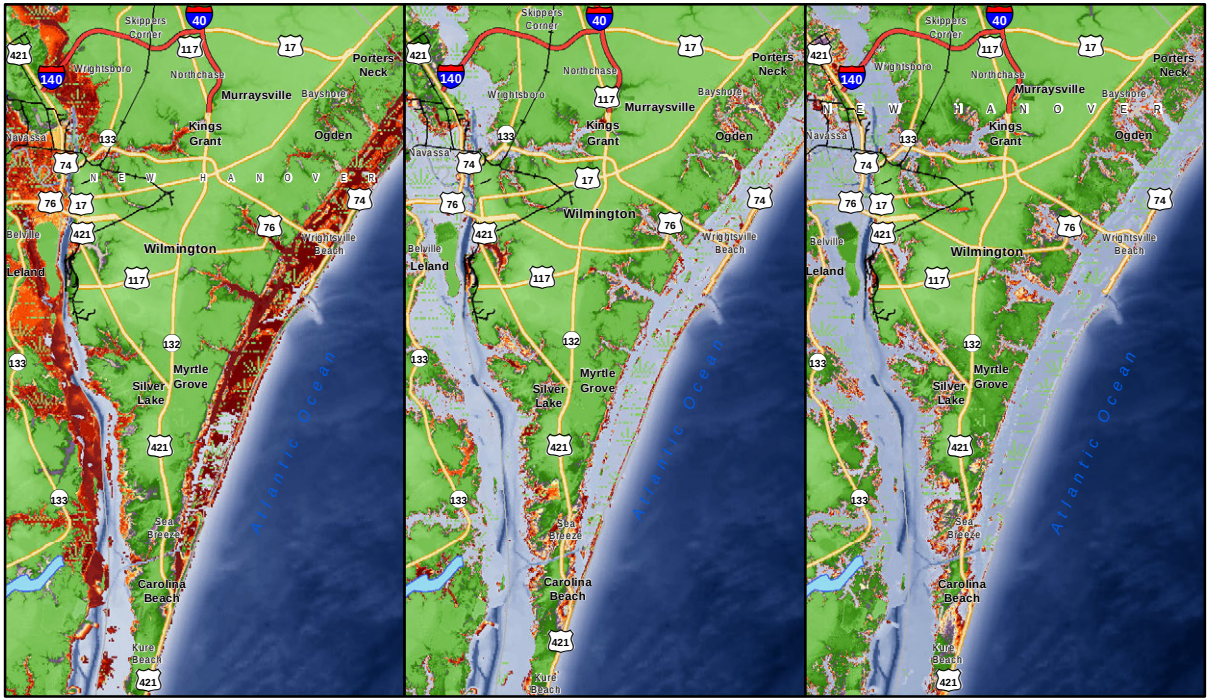
North Carolina Storm Surge and Sea Level Rise Hazards
New Hanover County

Vance Miller
12/5/2017

1:420,000

0 1 2 4 6 8 10 12 Miles

2010 population:	179810
Land area:	121114 Acres
Land area above 5 feet:	100909 Acres
Percent land below 5 feet:	16.68%



Present Conditions | Rise of 5 feet | Rise of 10 feet

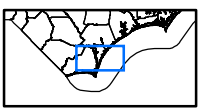
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

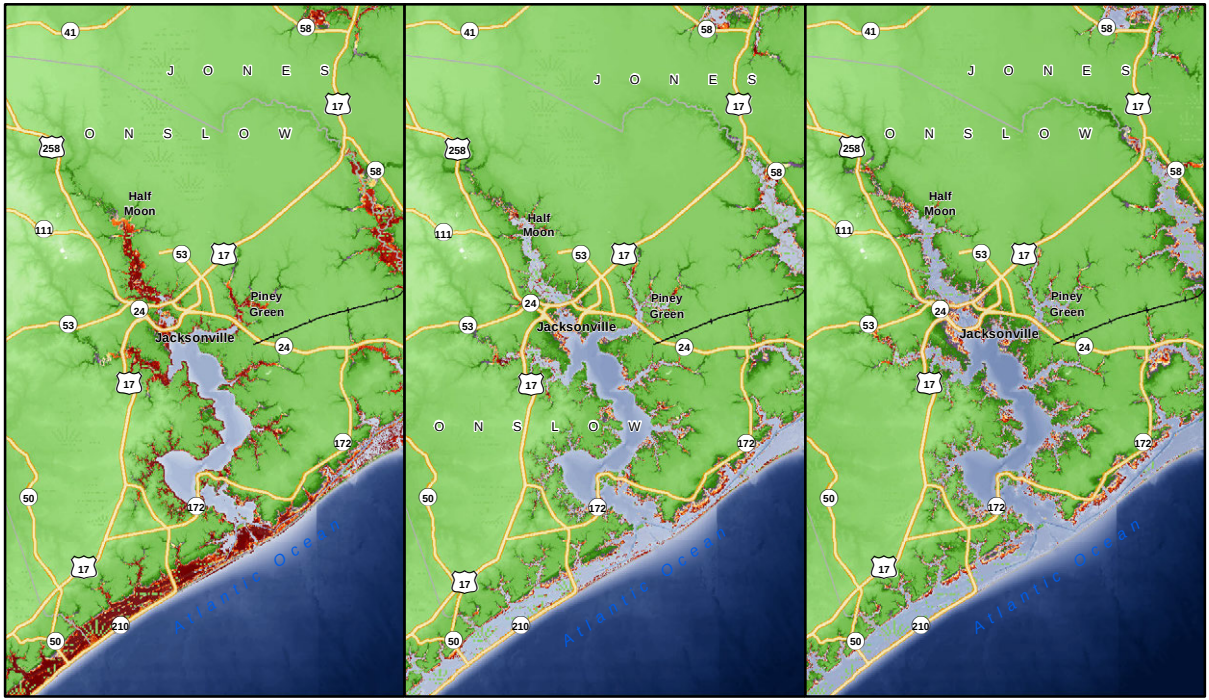
North Carolina Storm Surge and Sea Level Rise Hazards
Onslow County

Vance Miller
12/5/2017

1:765,000

0 2½ 5 10 15 20 25 30 Miles

2010 population:	181767
Land area:	483446 Acres
Land area above 5 feet:	457378 Acres
Percent land below 5 feet:	5.39%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route — Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

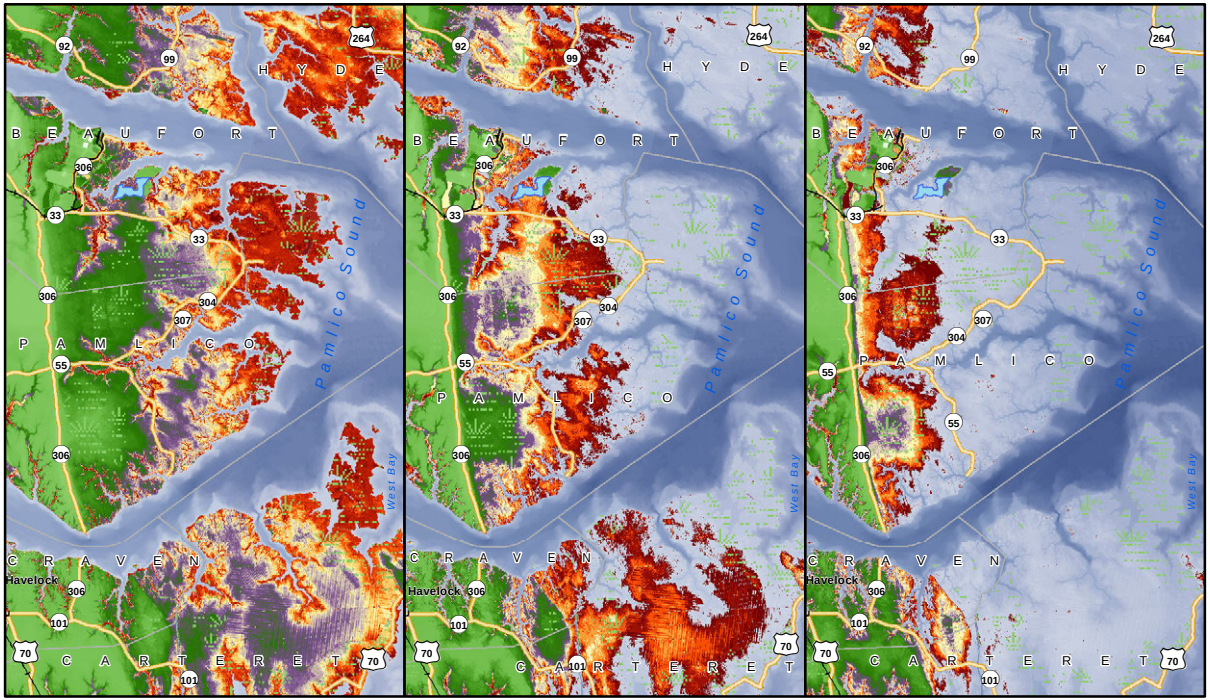
Pamlico County

Vance Miller
12/5/2017

1:880,000

0 3 6 12 18 24 30 36 Miles

2010 population:	12872
Land area:	213093 Acres
Land area above 5 feet:	148123 Acres
Percent land below 5 feet:	30.48%



Present Conditions | Rise of 5 feet | Rise of 10 feet

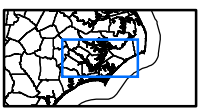
Explanation of Symbols

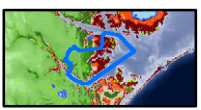
Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland





Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

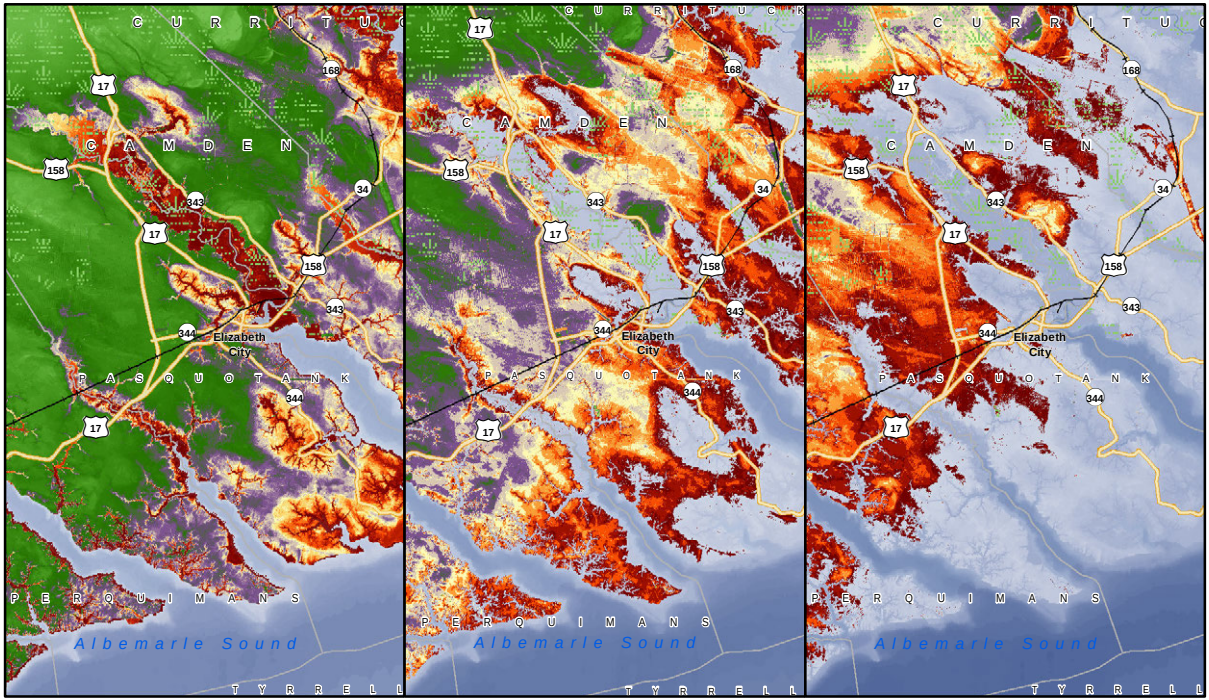
Pasquotank County

Vance Miller
12/5/2017

1:615,000

0 2 4 8 12 16 20 24 Miles

2010 population:	37715
Land area:	143073 Acres
Land area above 5 feet:	109088 Acres
Percent land below 5 feet:	23.75%



Present Conditions | Rise of 5 feet | Rise of 10 feet

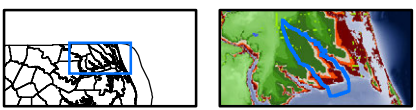
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route | Water Bodies — Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983



Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

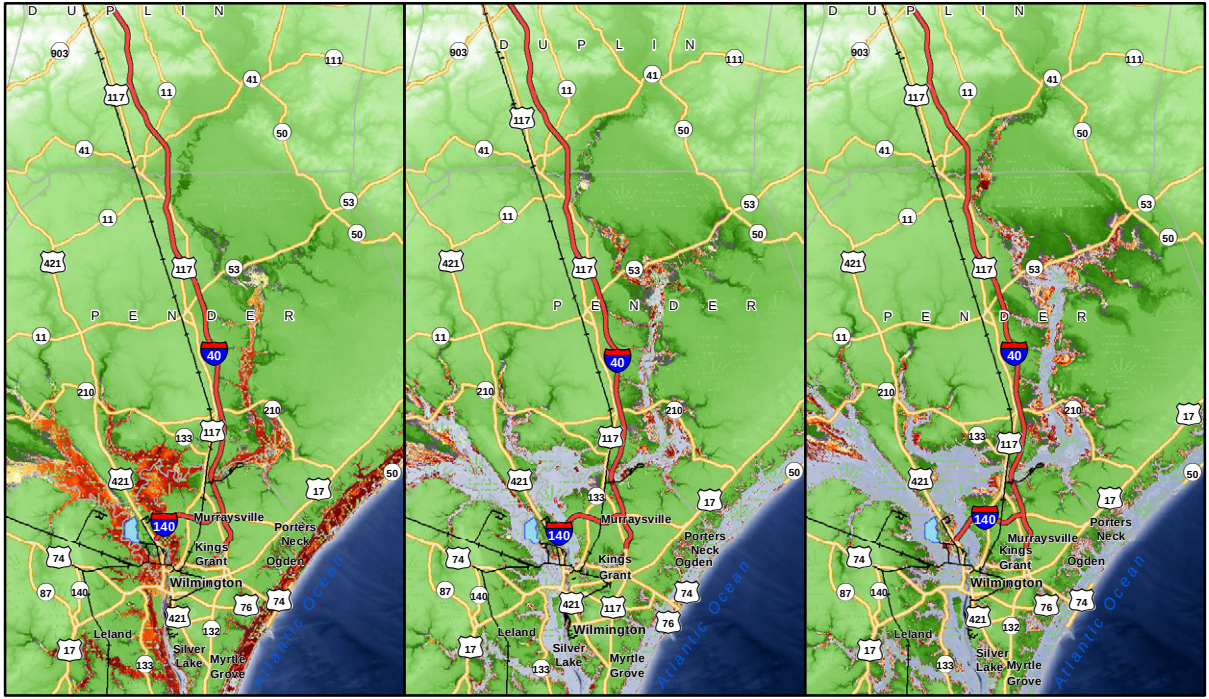
Pender County

Vance Miller
12/5/2017

1:985,000

0 3 6 12 18 24 30 36 Miles

2010 population:	48251
Land area:	548108 Acres
Land area above 5 feet:	512394 Acres
Percent land below 5 feet:	6.51%



Present Conditions | Rise of 5 feet | Rise of 10 feet

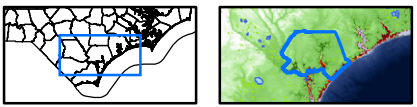
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways: Interstate, US Route, NC Route

Water Bodies: Lake, Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

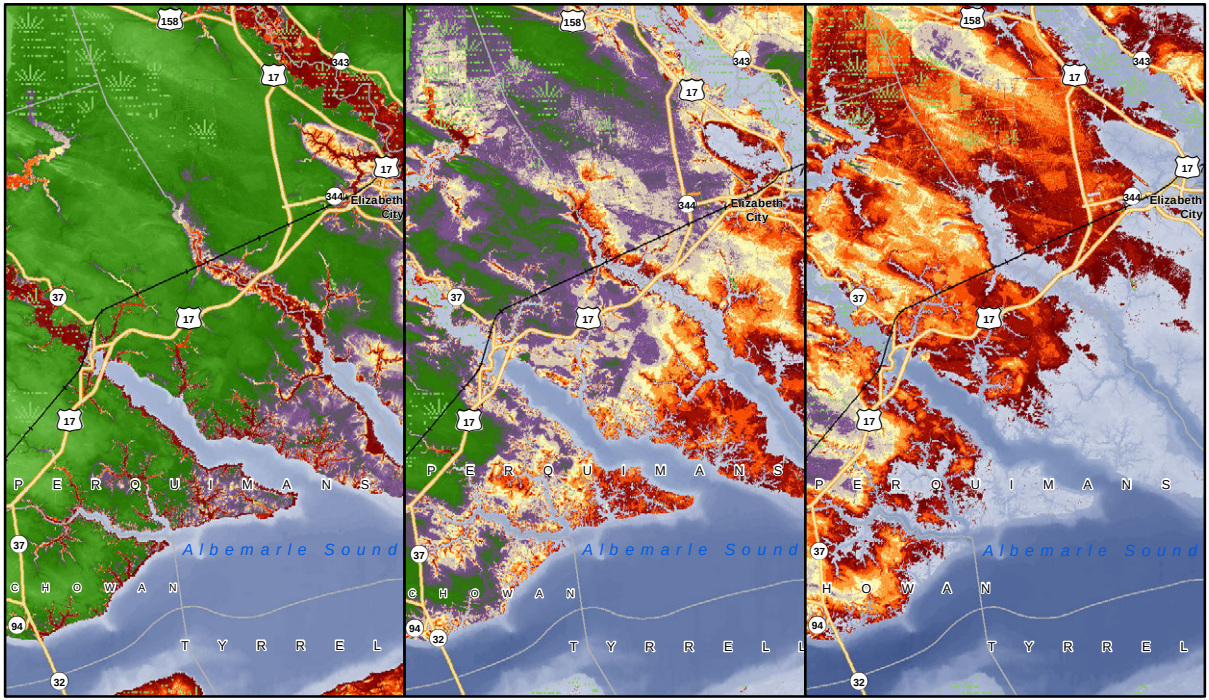
North Carolina Storm Surge and Sea Level Rise Hazards
Perquimans County

Vance Miller
12/5/2017

1:560,000

0 1½ 3 6 9 12 15 18 Miles

2010 population:	11352
Land area:	156738 Acres
Land area above 5 feet:	139861 Acres
Percent land below 5 feet:	10.76%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route Water Bodies Wetland

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

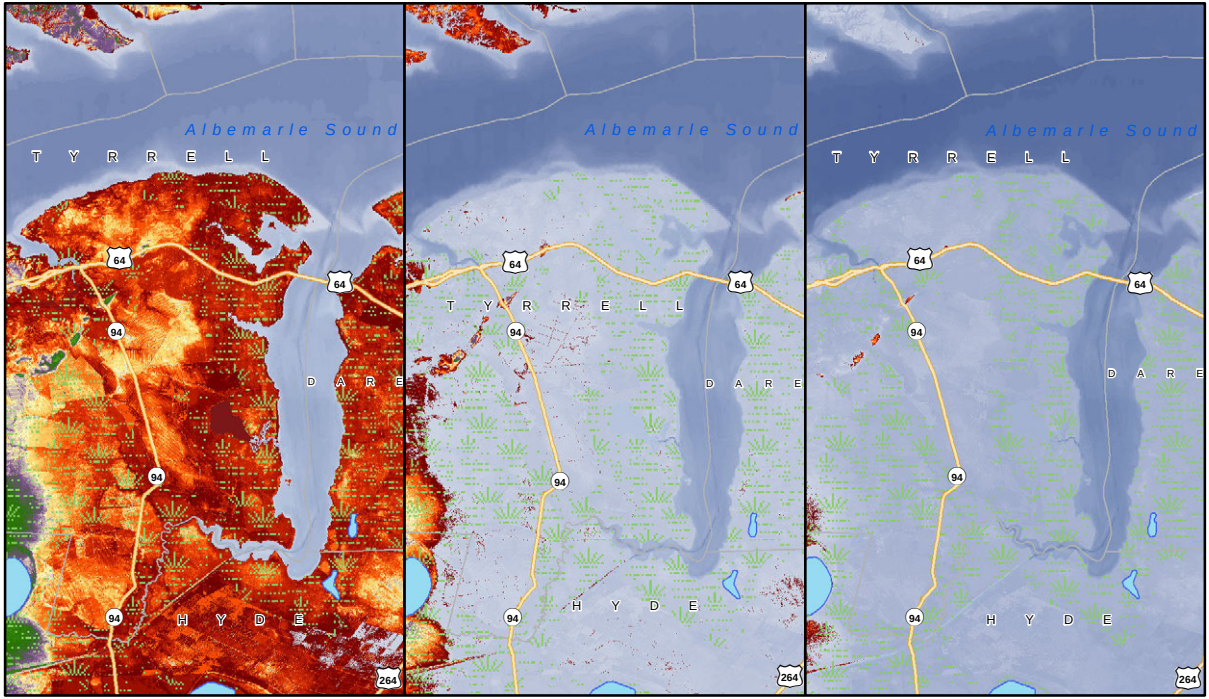
North Carolina Storm Surge and Sea Level Rise Hazards
Tyrrell County

Vance Miller
12/5/2017

1:710,000

0 2 4 8 12 16 20 24 Miles

2010 population:	3483
Land area:	245148 Acres
Land area above 5 feet:	32693 Acres
Percent land below 5 feet:	86.66%



Present Conditions | Rise of 5 feet | Rise of 10 feet

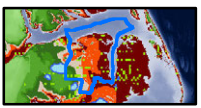
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

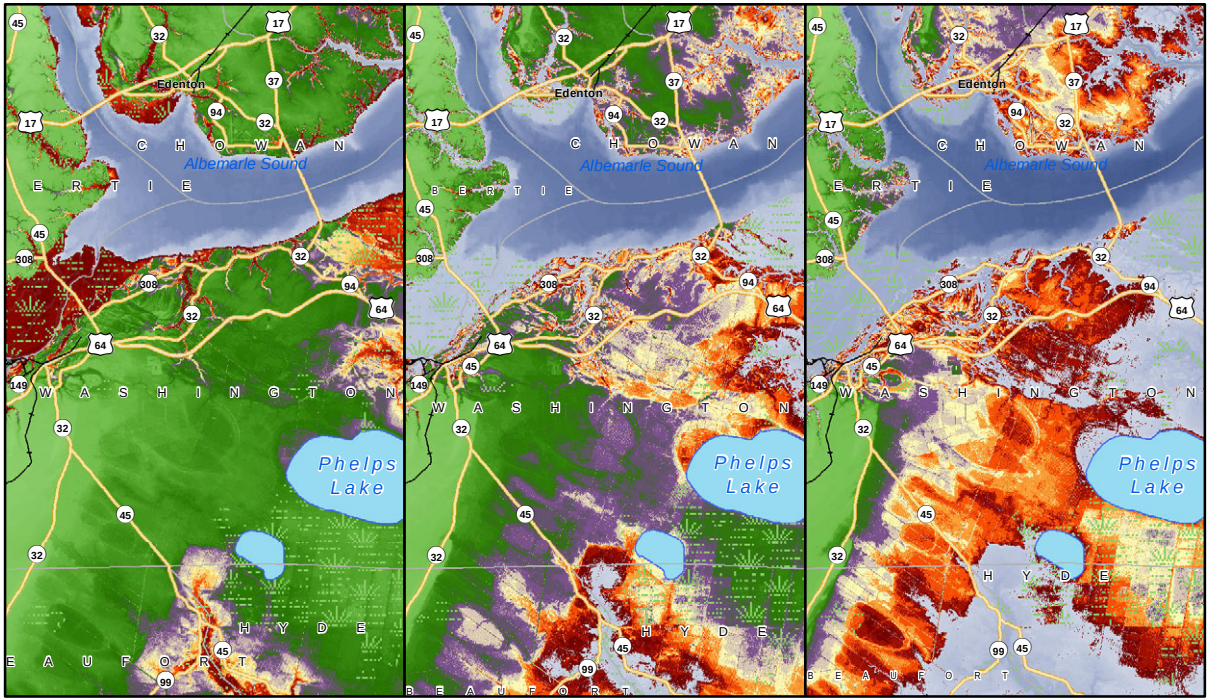
Washington County

Vance Miller
12/5/2017

1:625,000

0 2 4 8 12 16 20 24 Miles

2010 population:	12501
Land area:	238627 Acres
Land area above 5 feet:	205696 Acres
Percent land below 5 feet:	13.8%



Present Conditions | Rise of 5 feet | Rise of 10 feet

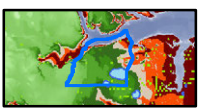
Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Highways — US Route — NC Route

Water Bodies — Lake — Wetland



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS

North Carolina Storm Surge and Sea Level Rise Hazards

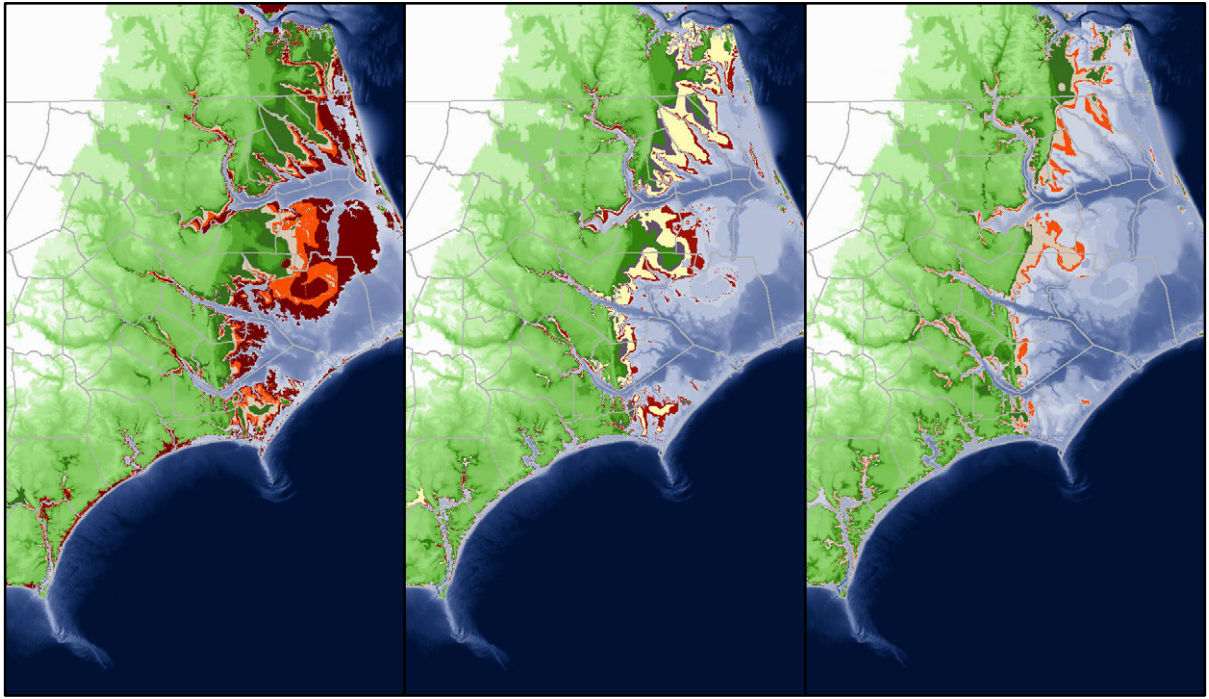
Coastal Counties

Vance Miller
12/5/2017

1:4,555,000

0 15 30 60 90 120 150 180 Miles

2010 population:	890075
Land area:	5472738 Acres
Land area above 5 feet:	4120570 Acres
Percent land below 5 feet:	24.71%



Present Conditions | Rise of 5 feet | Rise of 10 feet

Explanation of Symbols

Elevation (ft)

-0 1 2 3 4 5 6 7 8 9 10+

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Data Sources: ESRI, NCDOT, NOAA, US Census Bureau, USGS