

Combining the Grand Strand Call Area with
Wilmington East and Wilmington West Wind
Energy Areas

Comments Received in Developing North Carolina Wind Energy Areas

- Visual
- Night skies
- Socioeconomic
- Tourism
- Vessel traffic
- Military use
- Historic Properties



Visual Concerns

State of North Carolina: 24 nm

Town of Sunset Beach: 24 nm

Bald Head Island:

- Village of Bald Head Island: 24 nm or >
- Bald Head Association s: 24 nm or >
- Bald Head Island Conservancy

Holden Beach Properties Owners Association: 30 nm

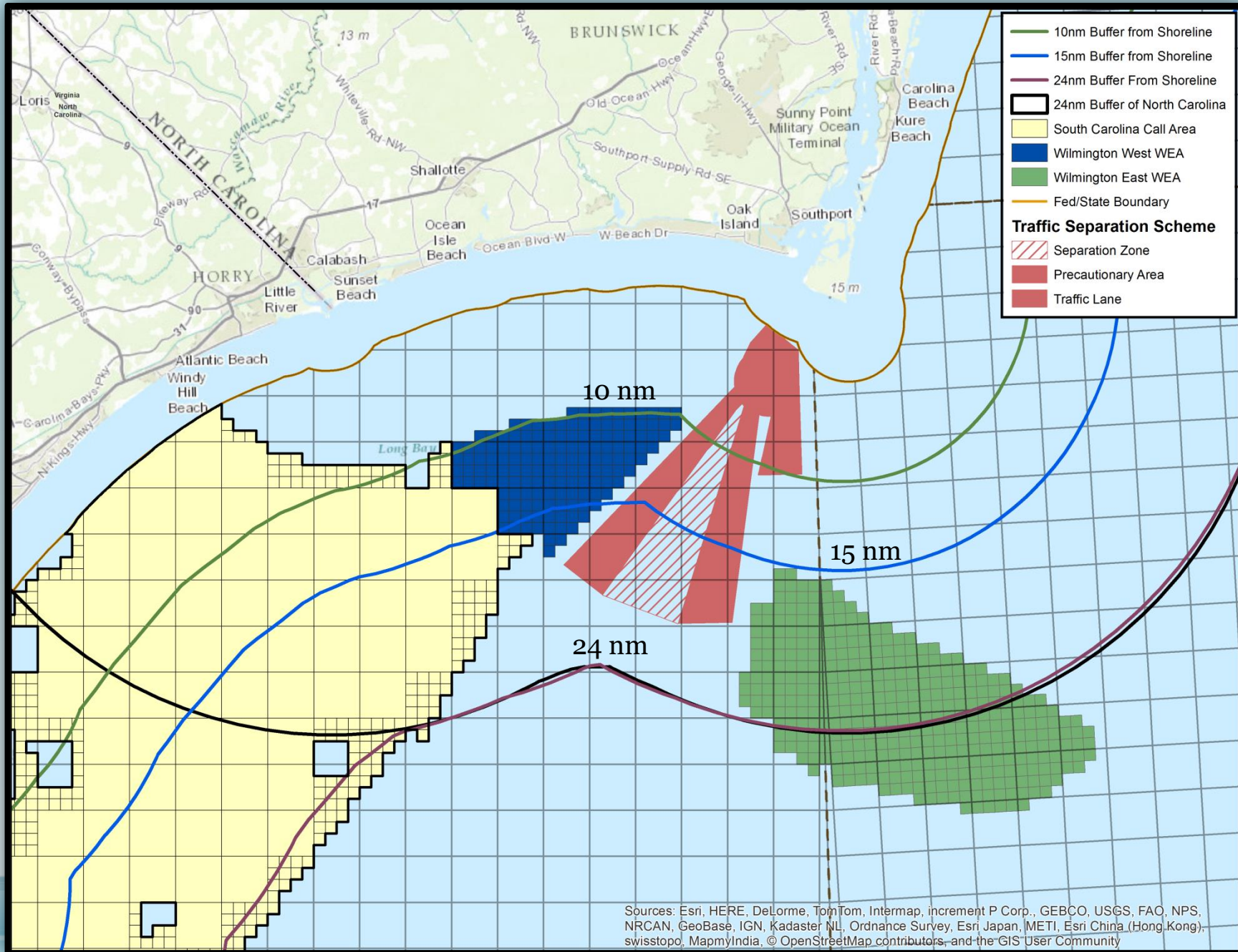
Town of Ocean Isle Beach: 25nm

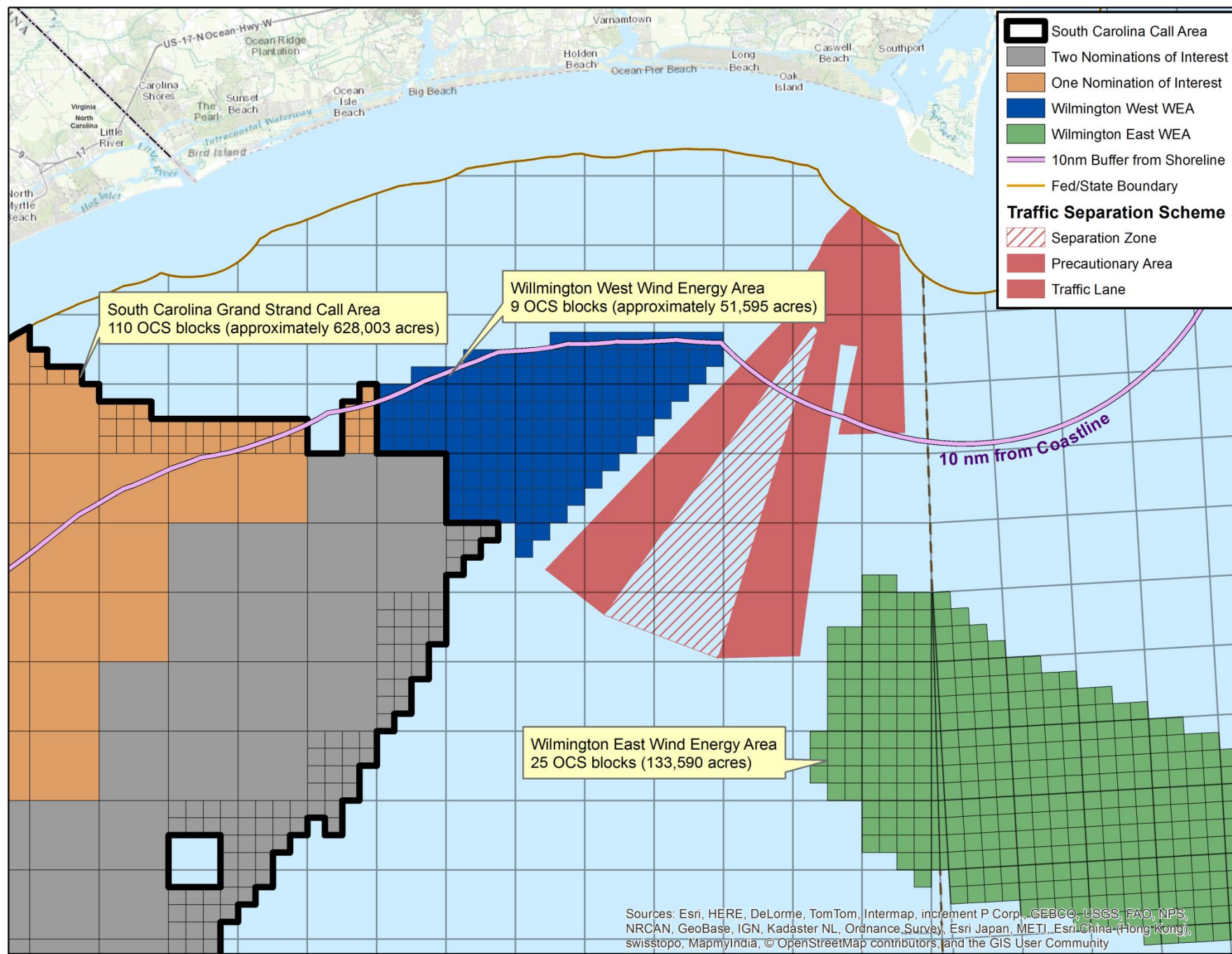
Caswell Beach (CB) : 33.7nm from CB, 24nm, 33.7nm Oak Island Light House

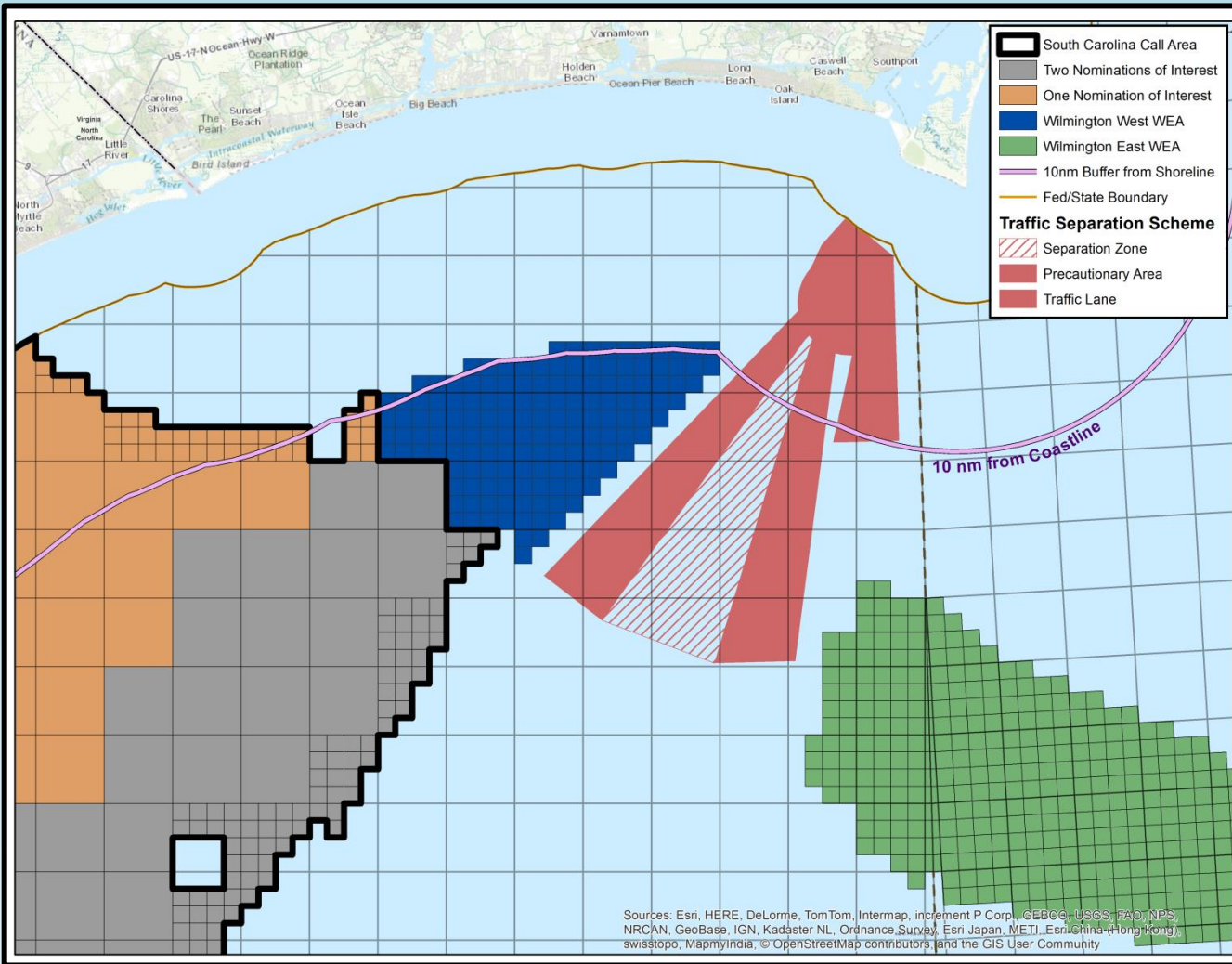
North Myrtle Beach: 24 nm setback unnecessary

Brunswick County – General Concerns

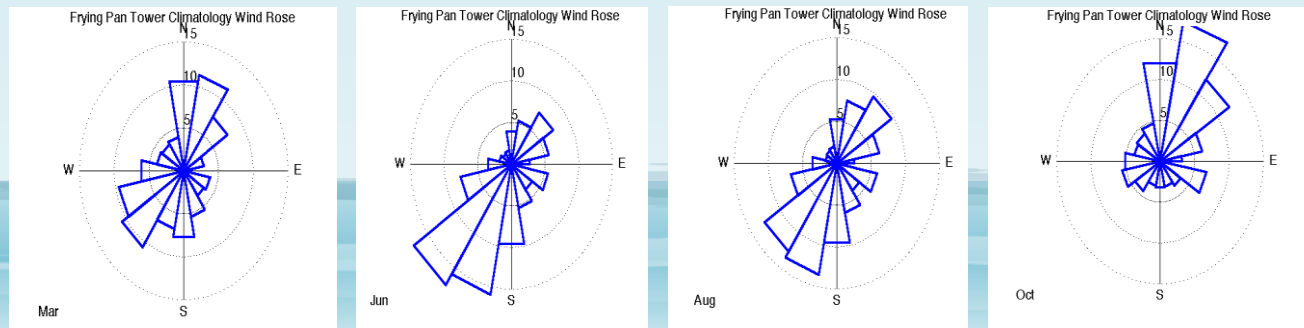
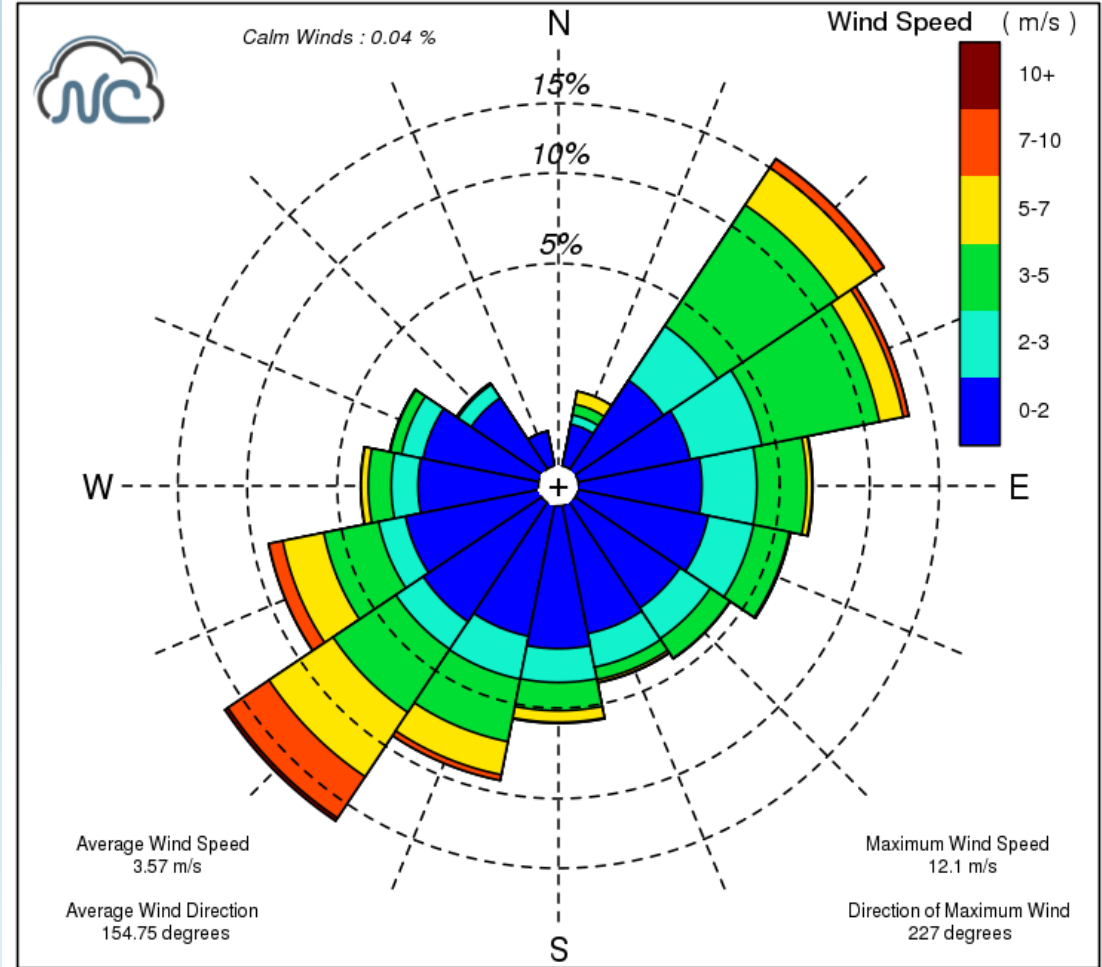
Not An All inclusive List

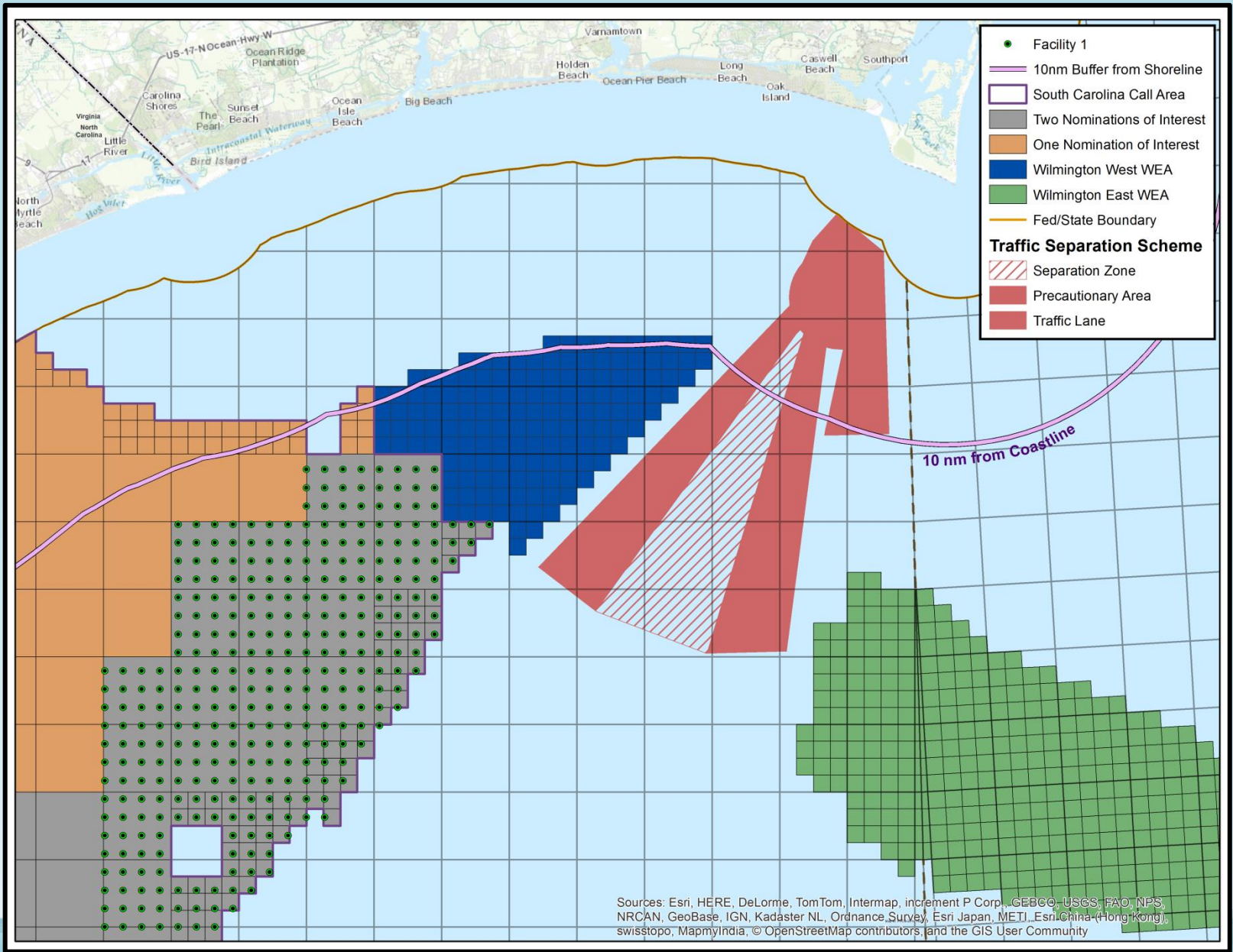






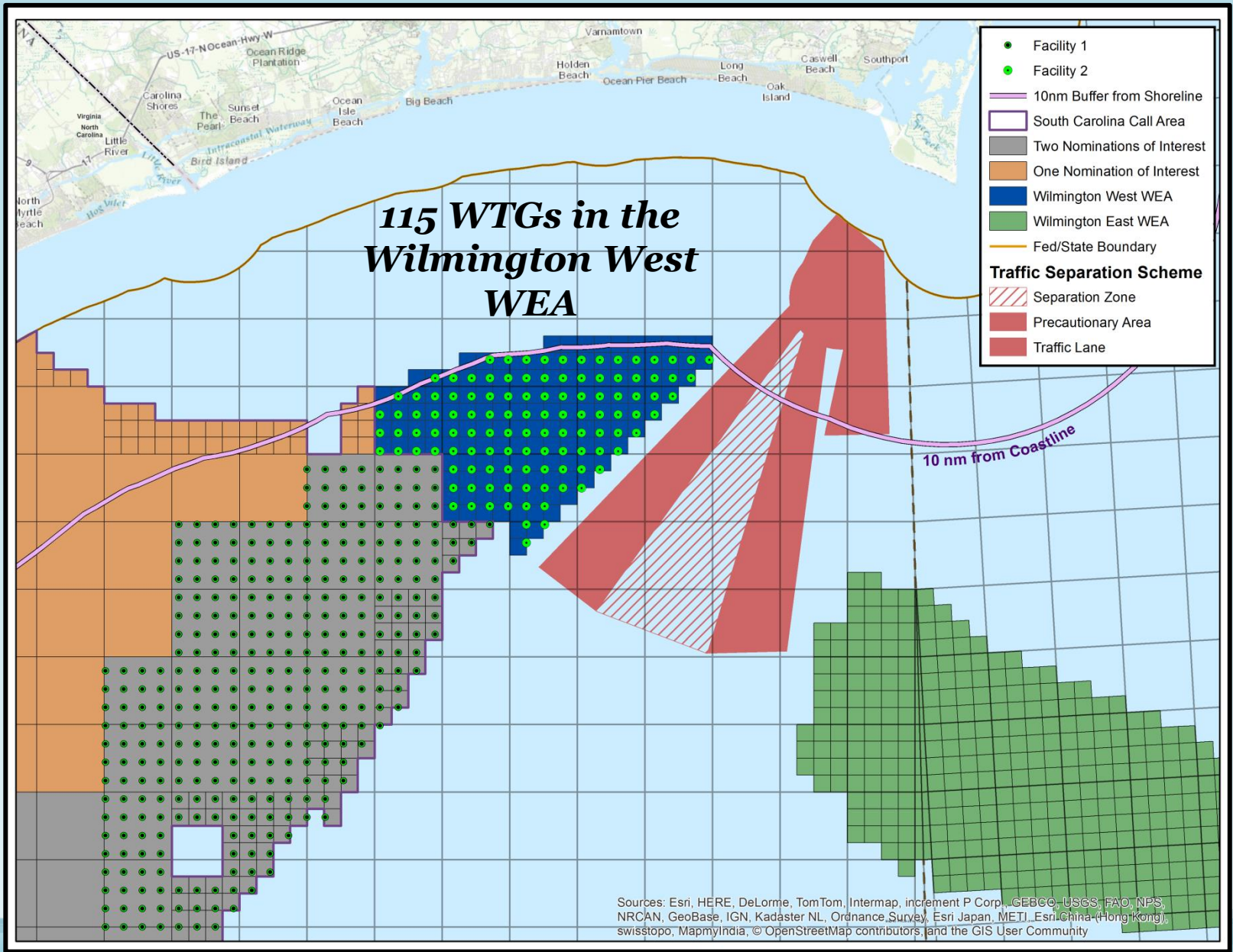
Wind Rose for Bald Head Island Conservancy (BALD) Jan. 1, 2015 to Dec. 31, 2015



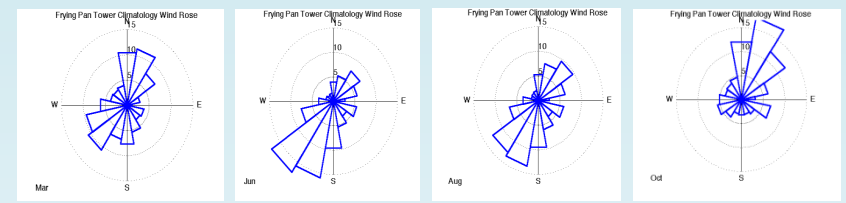
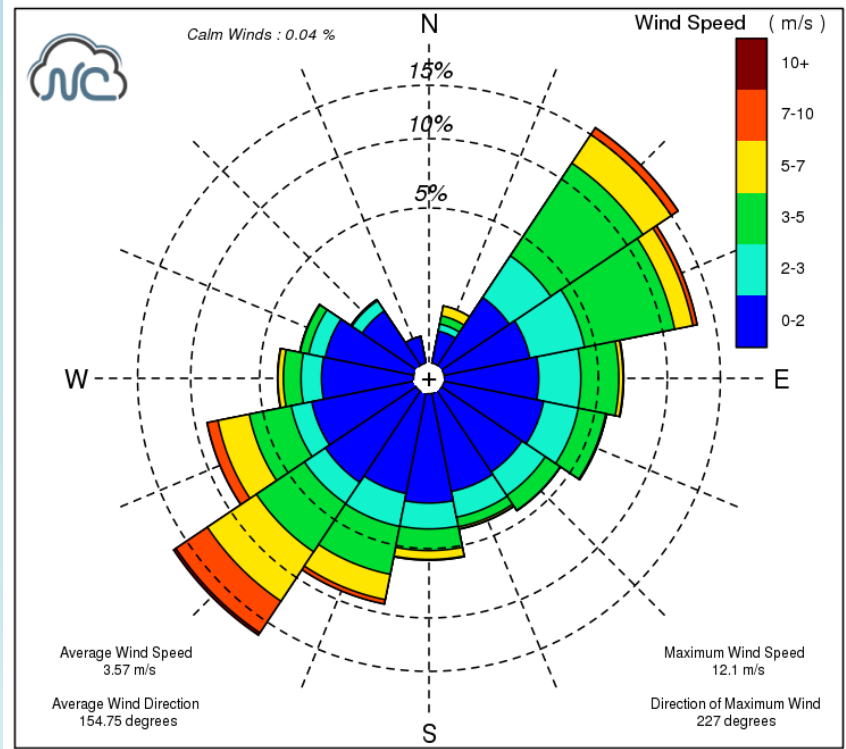


Hypothetical Scenario:

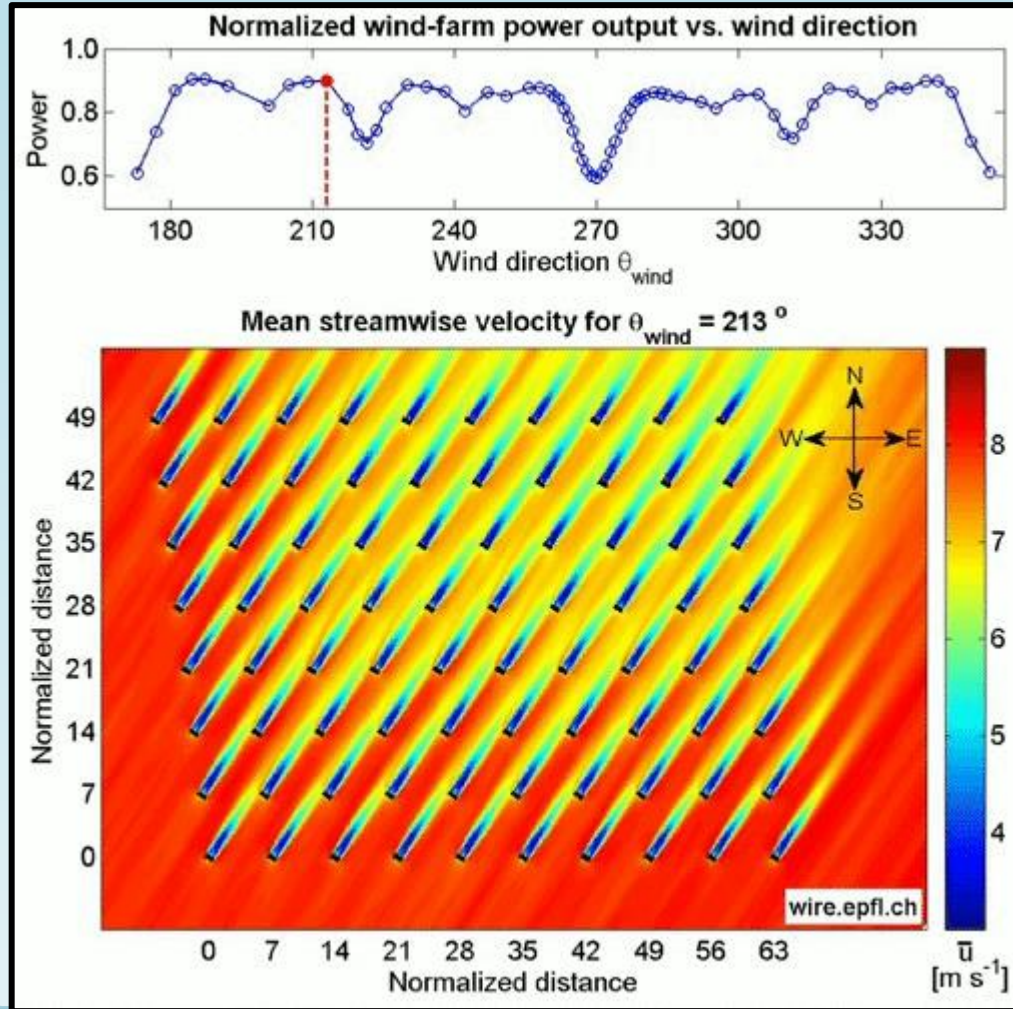
- Siemens SWT-4.0-130 Wind Turbine Generator (WTG)
 - Rotor Diameter (RD) 130 meter
 - 4MW Capacity
 - Blade Length 63.45 meters
 - Gearbox Drive Train
 - 3-5 m/s Cut-in Speed
- Spacing of 10D (1300 meters)
- All Turbines within an area of overlapping developer interest.
- No Offshore Substation



Wind Rose for Bald Head Island Conservancy (BALD) Jan. 1, 2015 to Dec. 31, 2015



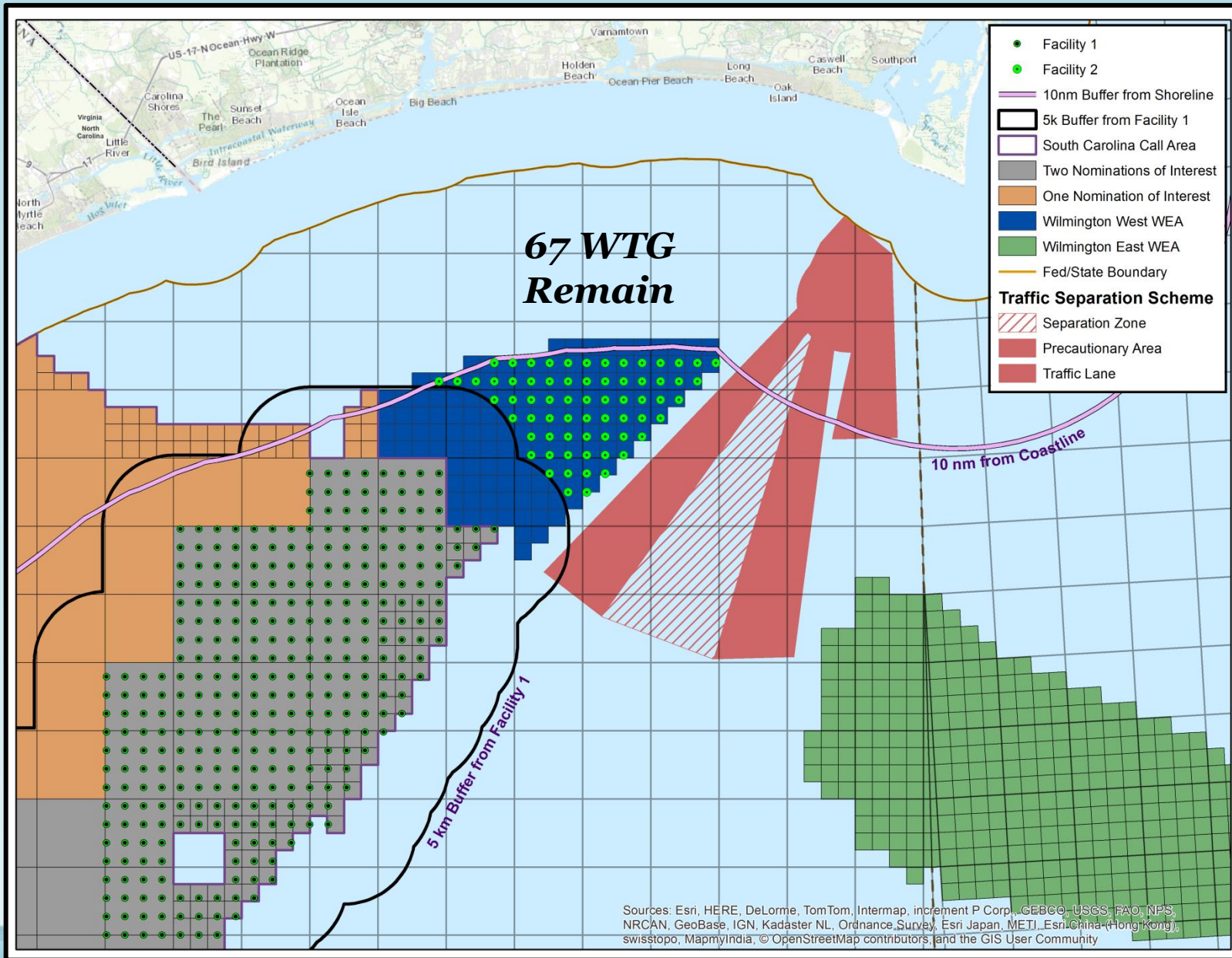
Wake Effects Between WTGs and Neighboring Wind Facilities



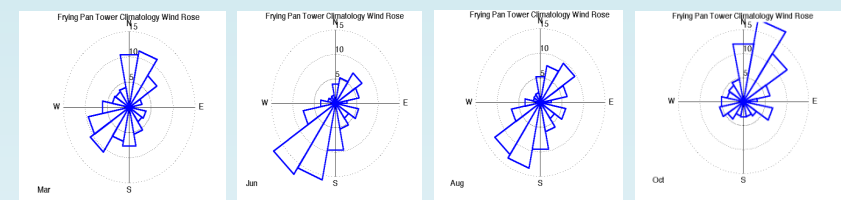
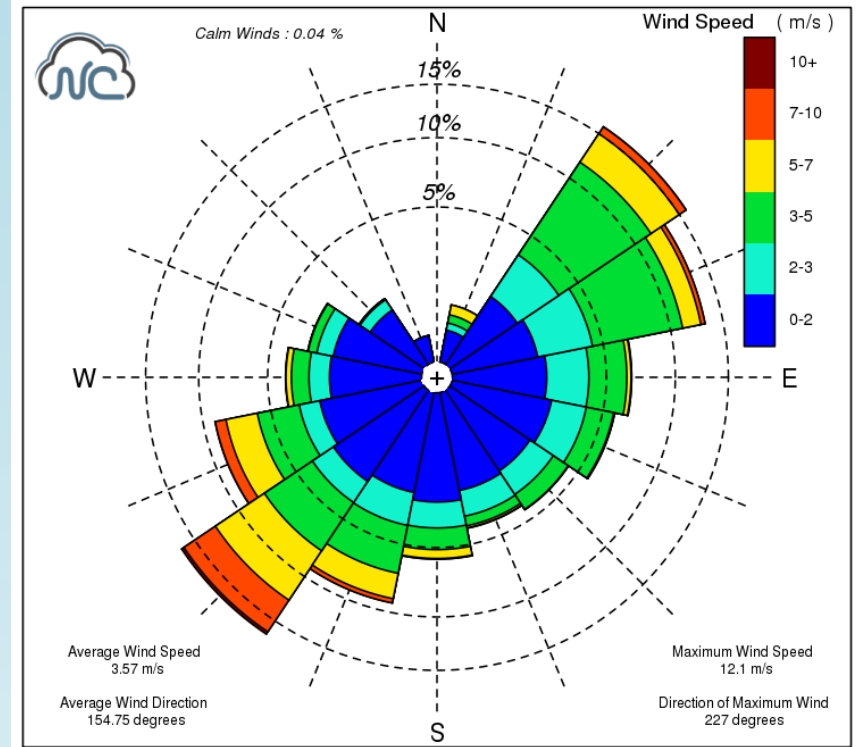
Mitigation Options

- Layout Optimization
 - Increase Spacing
 - Offset Spacing
 - Offset Layouts (Staggered)

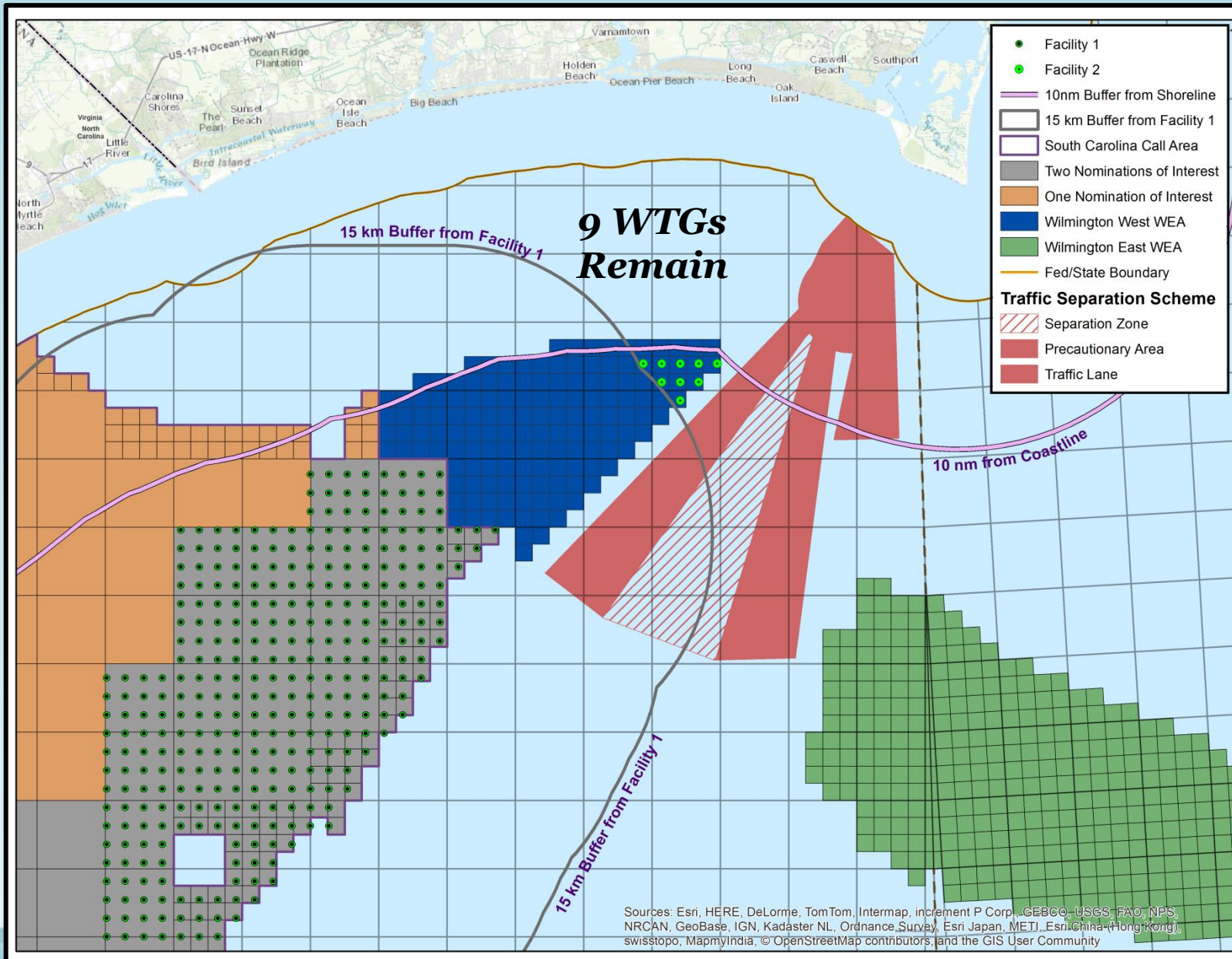




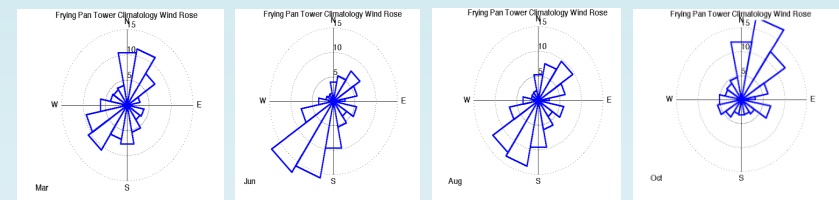
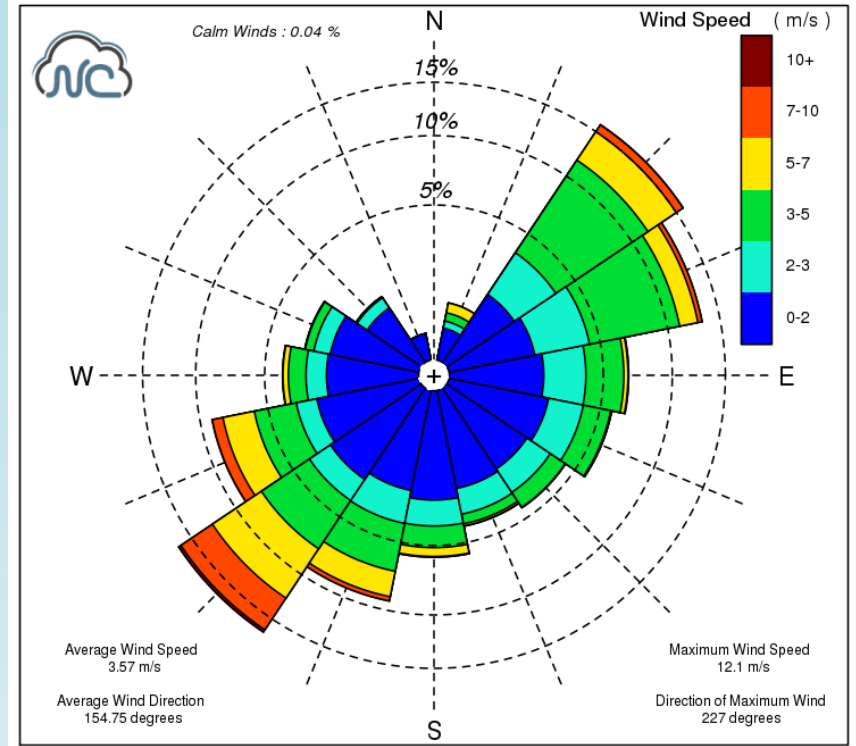
Wind Rose for Bald Head Island Conservancy (BALD) Jan. 1, 2015 to Dec. 31, 2015



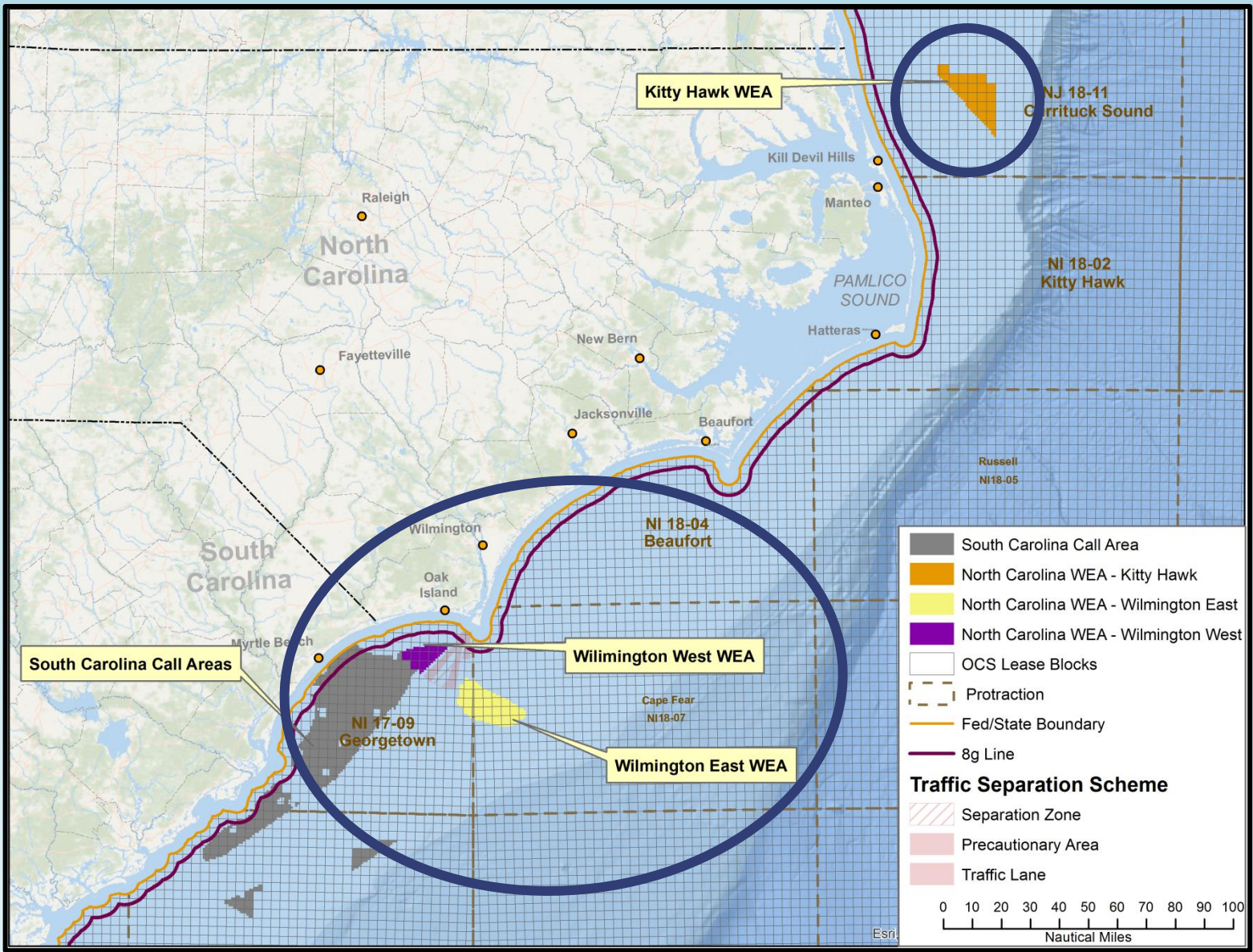
48 turbine loss due to wake effects results in potentially diminished resource extraction



Wind Rose for Bald Head Island Conservancy (BALD) Jan. 1, 2015 to Dec. 31, 2015



106 turbine loss due to wake effects for full resource recharge



Kitty Hawk WEA

- Included in a Proposed Sale Notice and Request for Interest

Wilmington East & Wilmington West WEAs

- Integrated into the South Carolina Leasing Process
- Stage 1: Analysis and Planning
- Integration of South Carolina and North Carolina Task Forces

A Single Common Approach



A decision on any of the areas will have impacts to the others

Stage 1: Planning and Analysis for South Carolina

Establish Intergovernmental Task Force

- March 2012: Charleston, SC
- May 2014: Charleston, SC
- September 2014: Charleston, SC
- September 2015: Pawleys Island, SC

Determine interest and review information received on Call and NOI

Complete Area Identification and Conduct Environmental Compliance Reviews

Publish Call for Information and Nominations and Notice of Intent to Prepare an Environmental Assessment

- Published November 25, 2015
- Comment Period Closed January 25, 2016



We are here

Convene a combined SC /NC Task Force

- Wilmington East
- Wilmington West
- South Carolina Call Areas

Stage 2: Leasing

- Proposed Sale Notice
- Comment Period
- Final Sale Notice
- Mock Auction
- Auction

Questions?



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