

Atlantic Coast Port Access Route Study (ACPARS)

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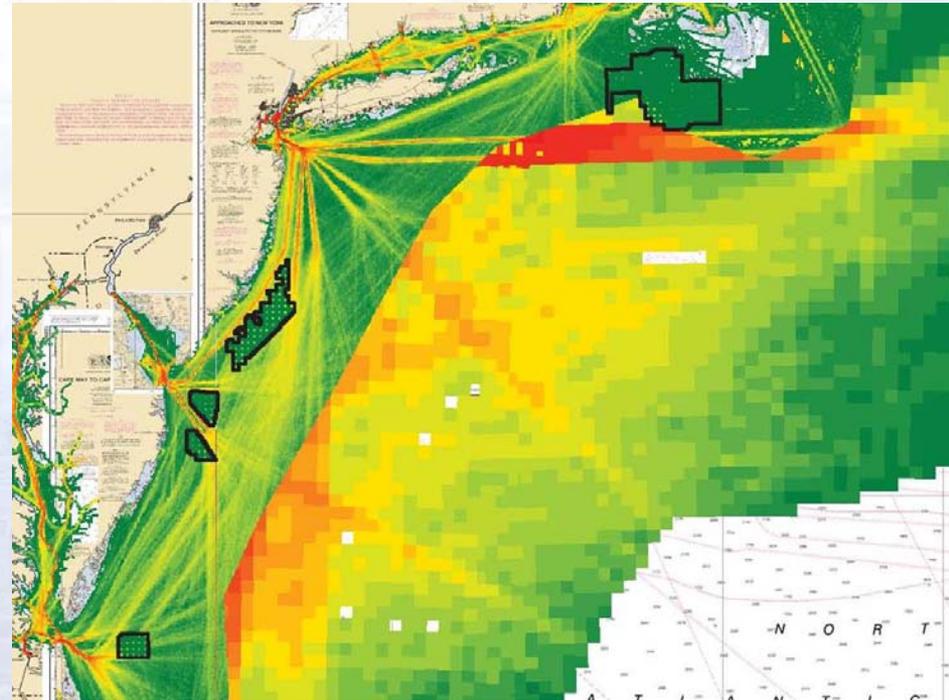
Agenda

- Background
- Study Approach
- Status of Study Efforts
- Summary and Conclusions
- Opportunities



Background

- Wind Energy Initiatives
 - CG's role as Cooperating Agency
 - Navigational Conflicts
 - Cumulative Impacts
- Coastal and Marine Spatial Planning
 - Characterize existing MTS/Shipping Routes
 - Balance multiple uses





ACPARS Process Overview

- **Phase 1 - Data Gathering**
- **Phase 2 - Determine existing shipping routes and apply the R-Y-G Methodology**
- **Phase 3 - Modeling and Analysis**
- **Phase 4 - Implementation of Study Results**



Phase 1- Data Gathering

Determine Shipping Routes-AIS data

- AIS- Primary source of vessel transit data
- GIS Products- Heat Maps, Density Plots, Trackline plots
- Capability and Capacity shortfalls

Public Comments

- Two Public Comment periods
- Received 128 submissions total
- 40% outside scope

Outreach

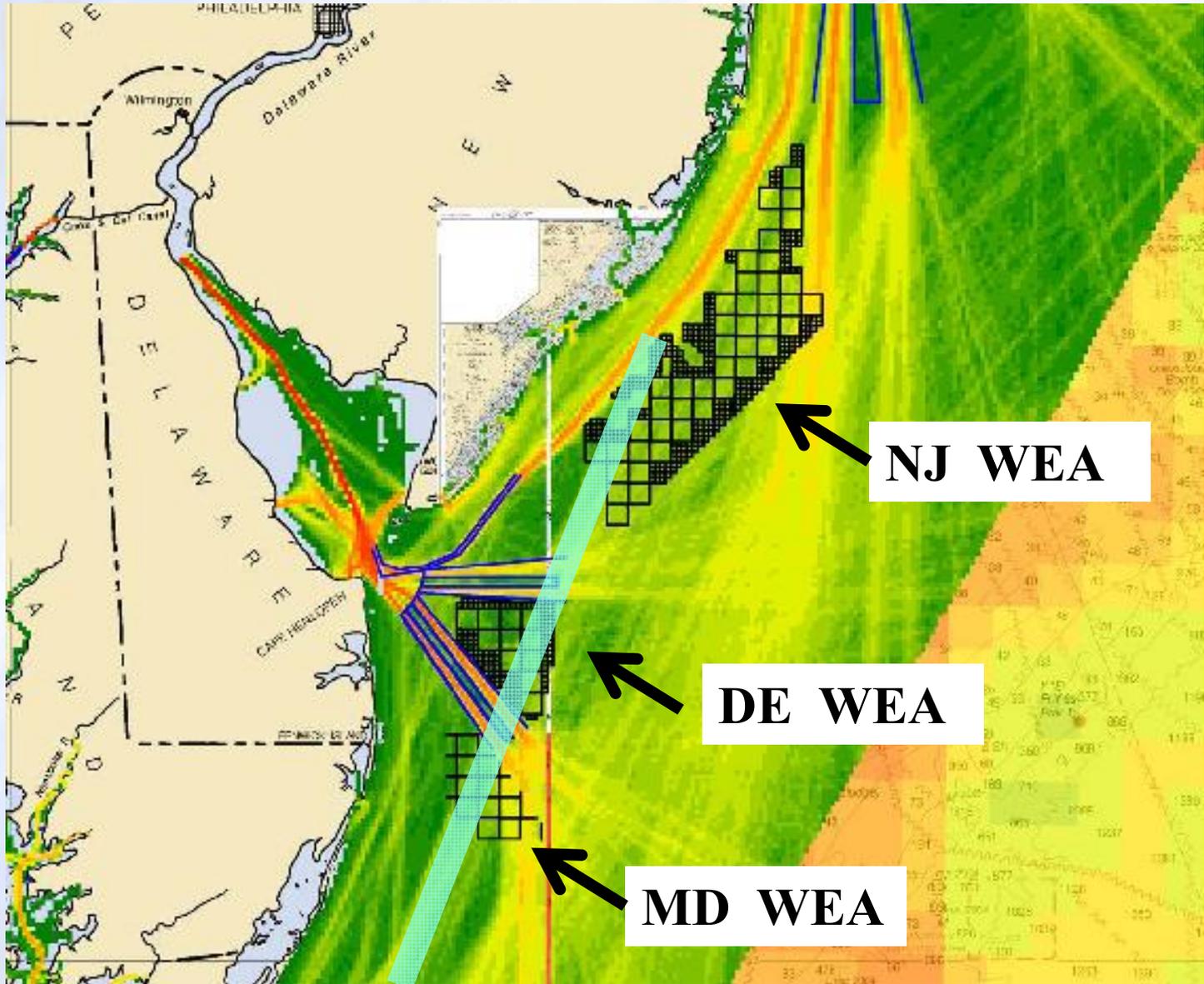
- Sector- port level meetings
- Industry Organizations
- Targeted outreach to towing vessel community

Gather MTS Data

- Importance of the MTS
- MARAD Marine Highways Program
- Panama Canal Expansion
- Energy Development

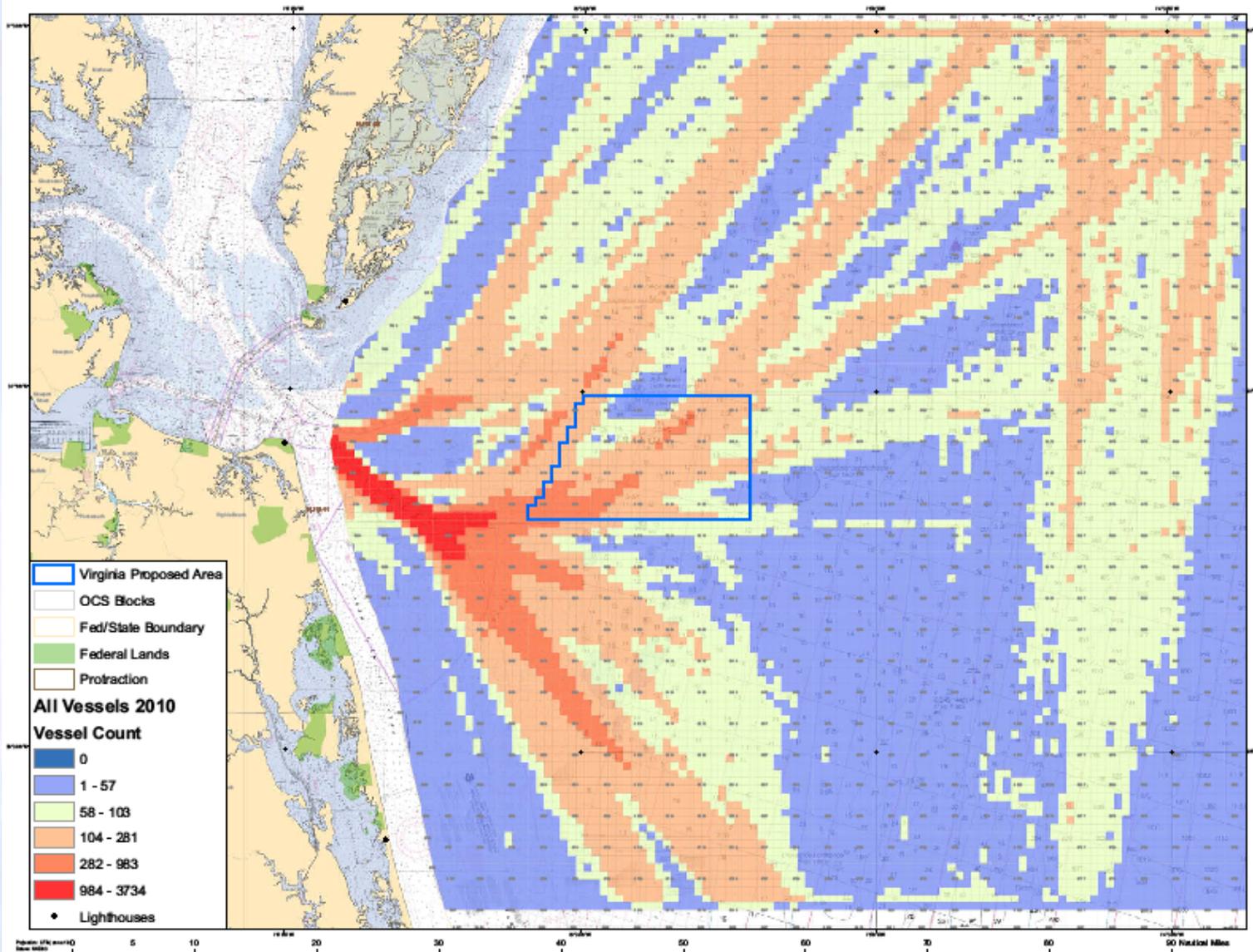


Delaware Bay Entrance





Density Plot for Virginia



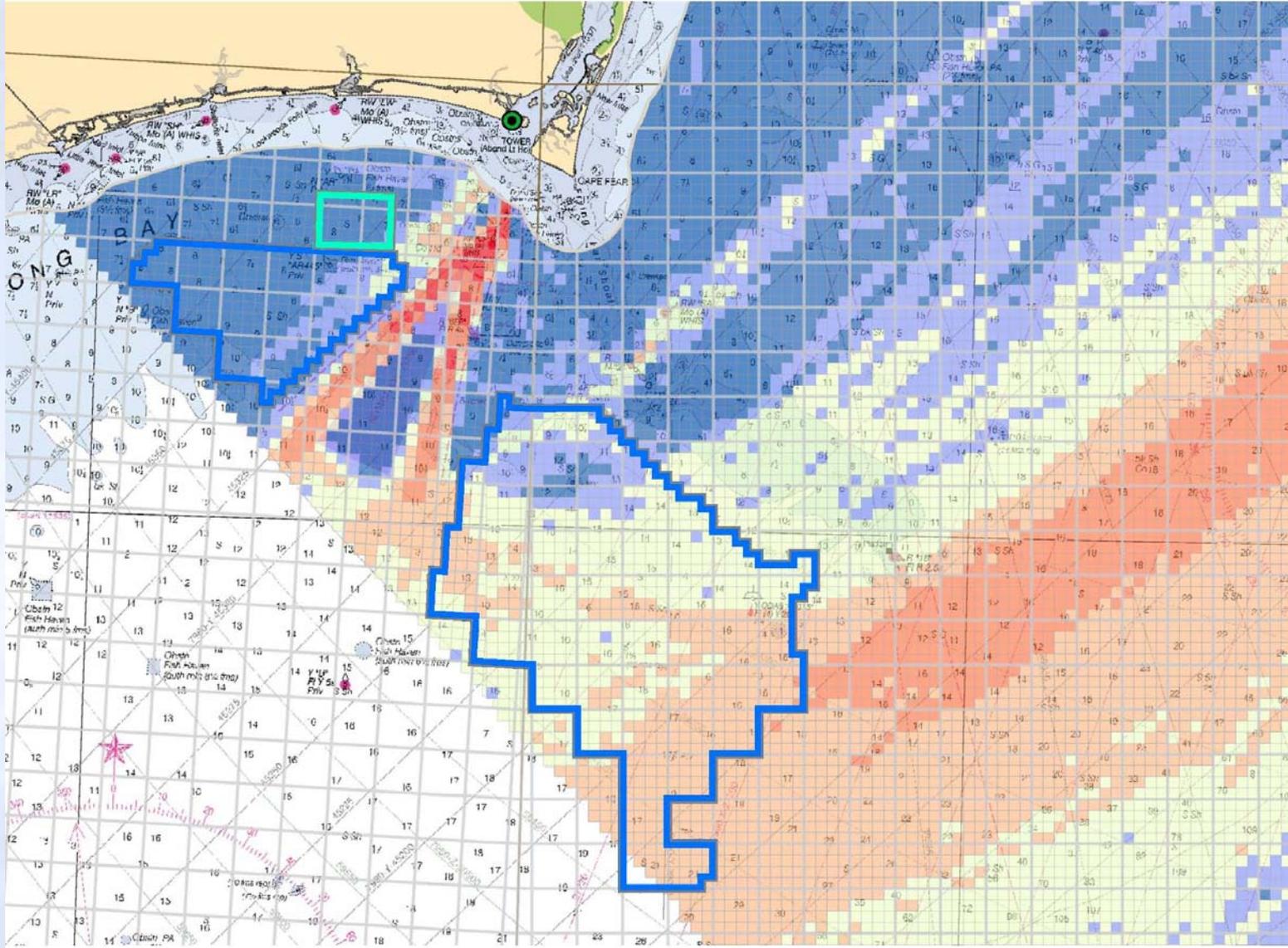


MA WEA



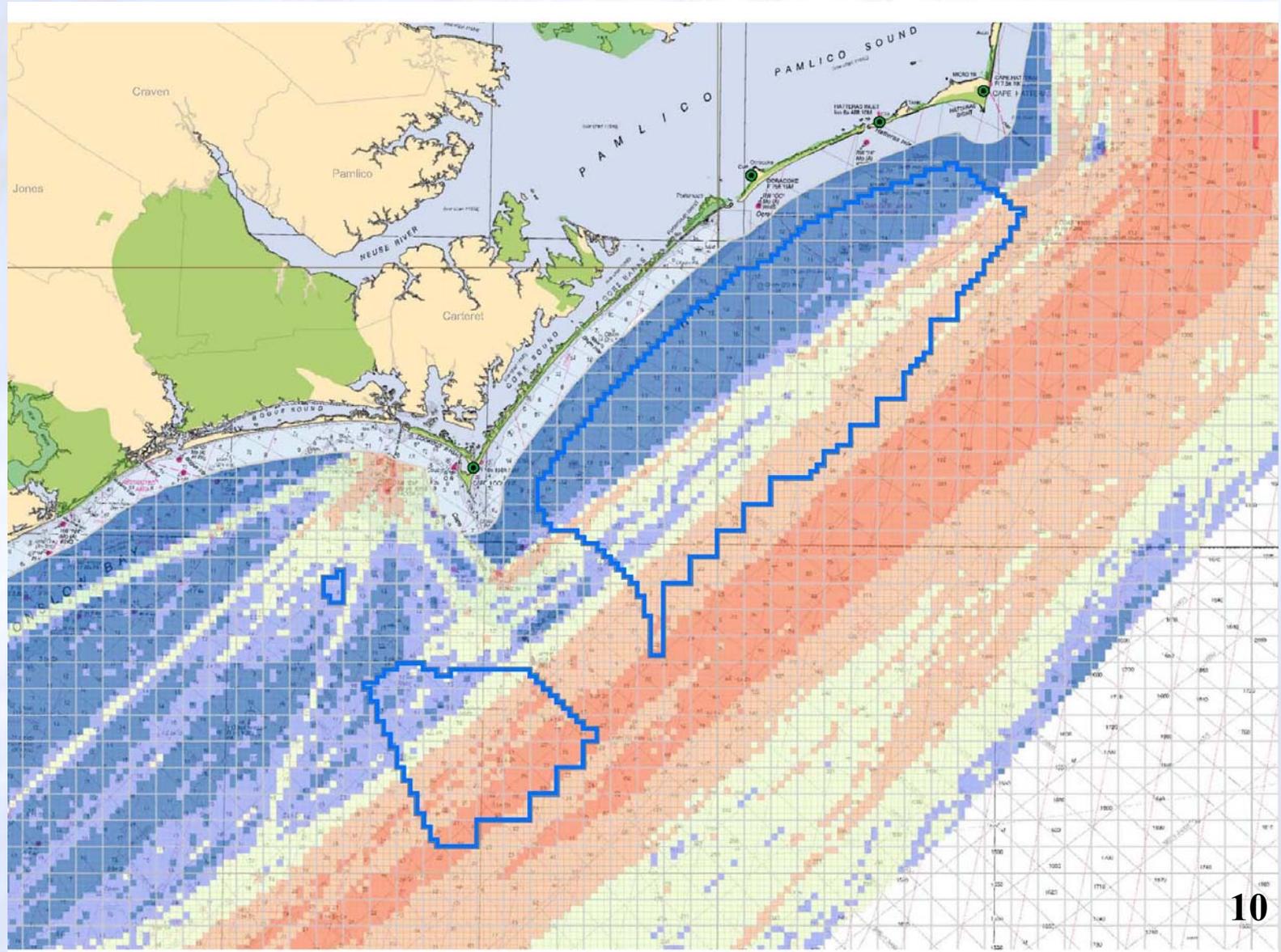


NC Areas 1 and 2



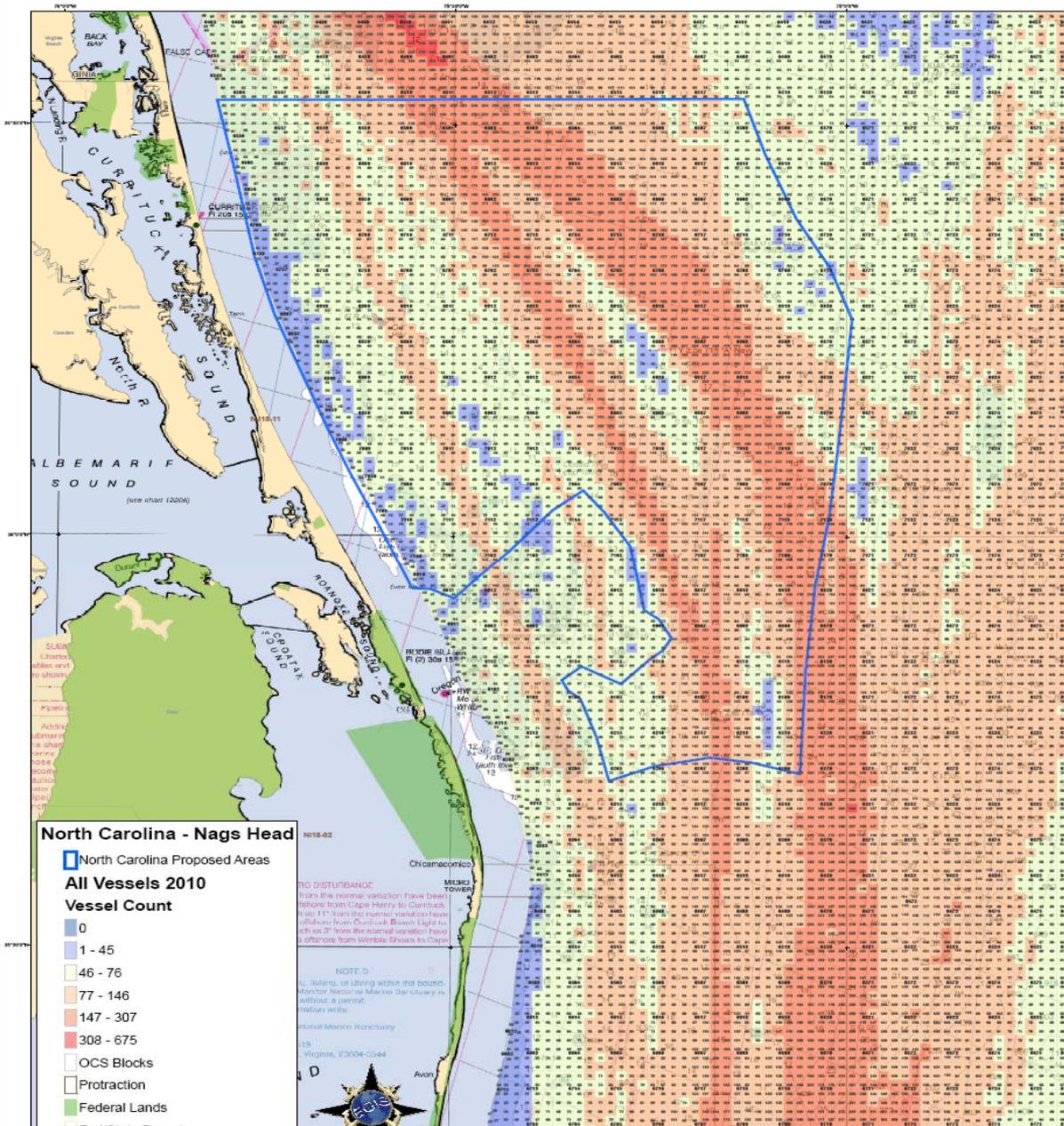


NC Areas 3 and 4





NC Area 5





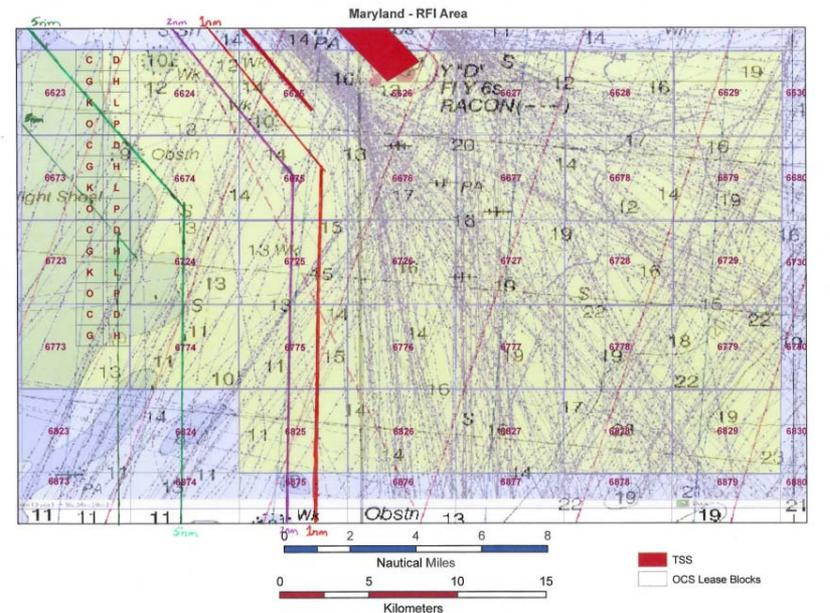
Phase 2- Apply R-Y-G Methodology



Deliverable – R-Y-G determinations (pending more detailed analysis)

Apply maritime risk guidance from UK MGN-371

Determine port & coastal shipping routes





UK Maritime Guidance Note

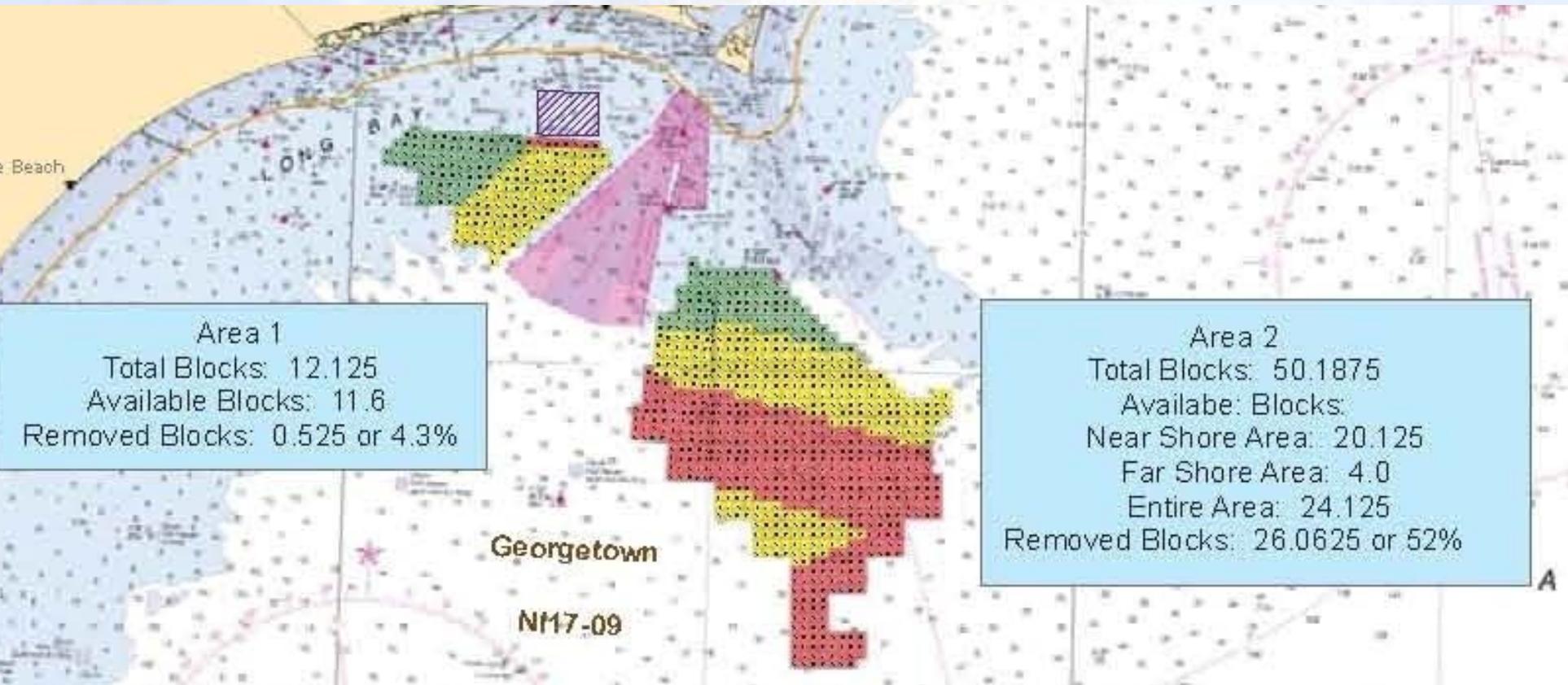
MGN-371



Distance	Factors	Risk	
< 0.25 NM	Inter-turbine spacing = only small craft recommended	Very High	RED
0.5 NM	Mariner's high traffic density domain	High	
1.0 NM	Minimum distance to parallel boundary of TSS	Medium	YELLOW
1.5 NM	S band radar interference - ARPA affected	Medium	
2.0 NM	Compliance with COLREGS becomes less challenging	Medium	
> 2.0 NM	But not near a TSS	Low	
5.0 NM	Adjacent wind farm introduces cumulative effect. Distance from TSS entry/exit	Very Low	GREEN
10.0 NM	No other wind farms	Very Low	

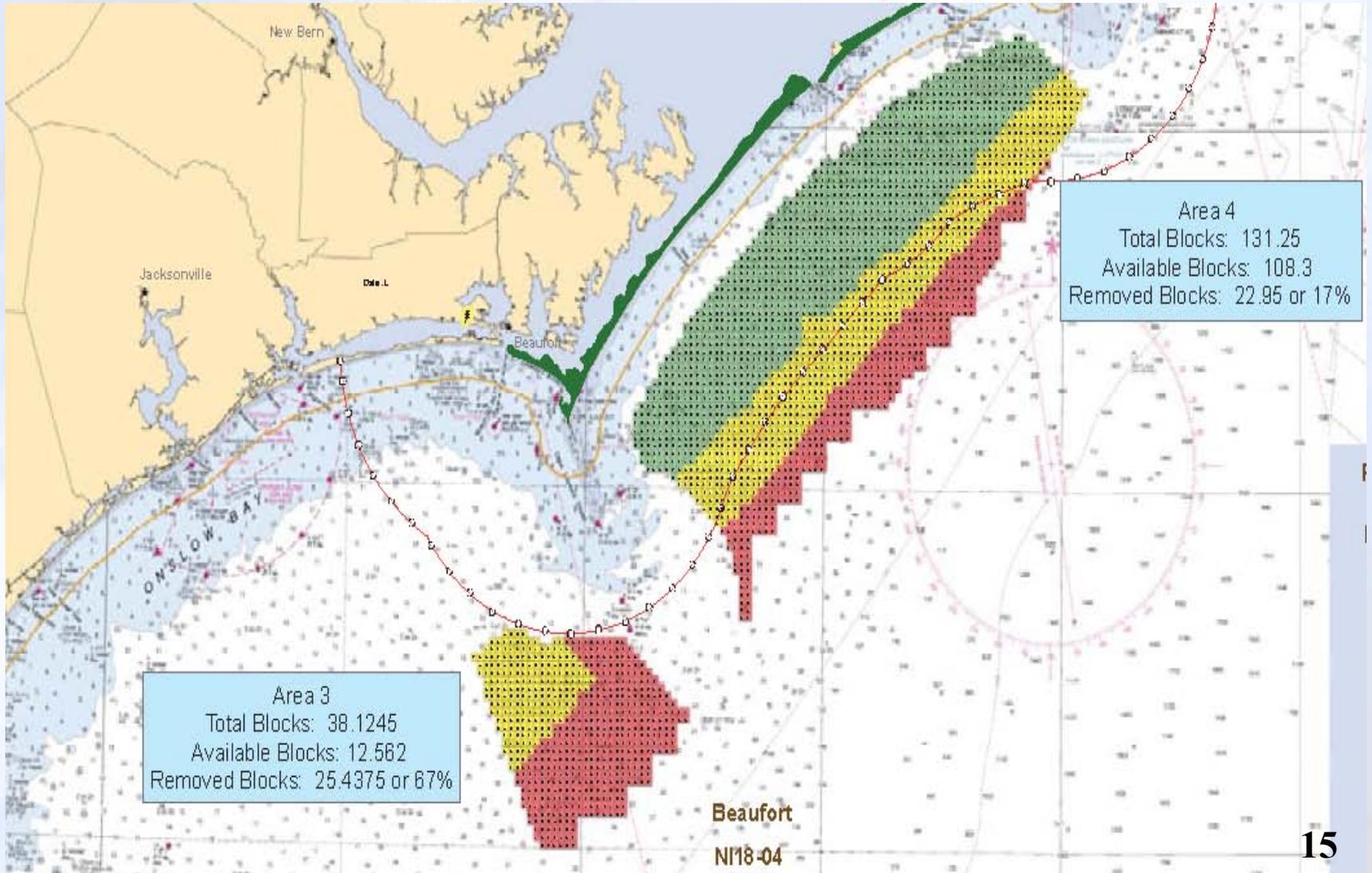


R-Y-G Determination for NC Areas 1 and 2



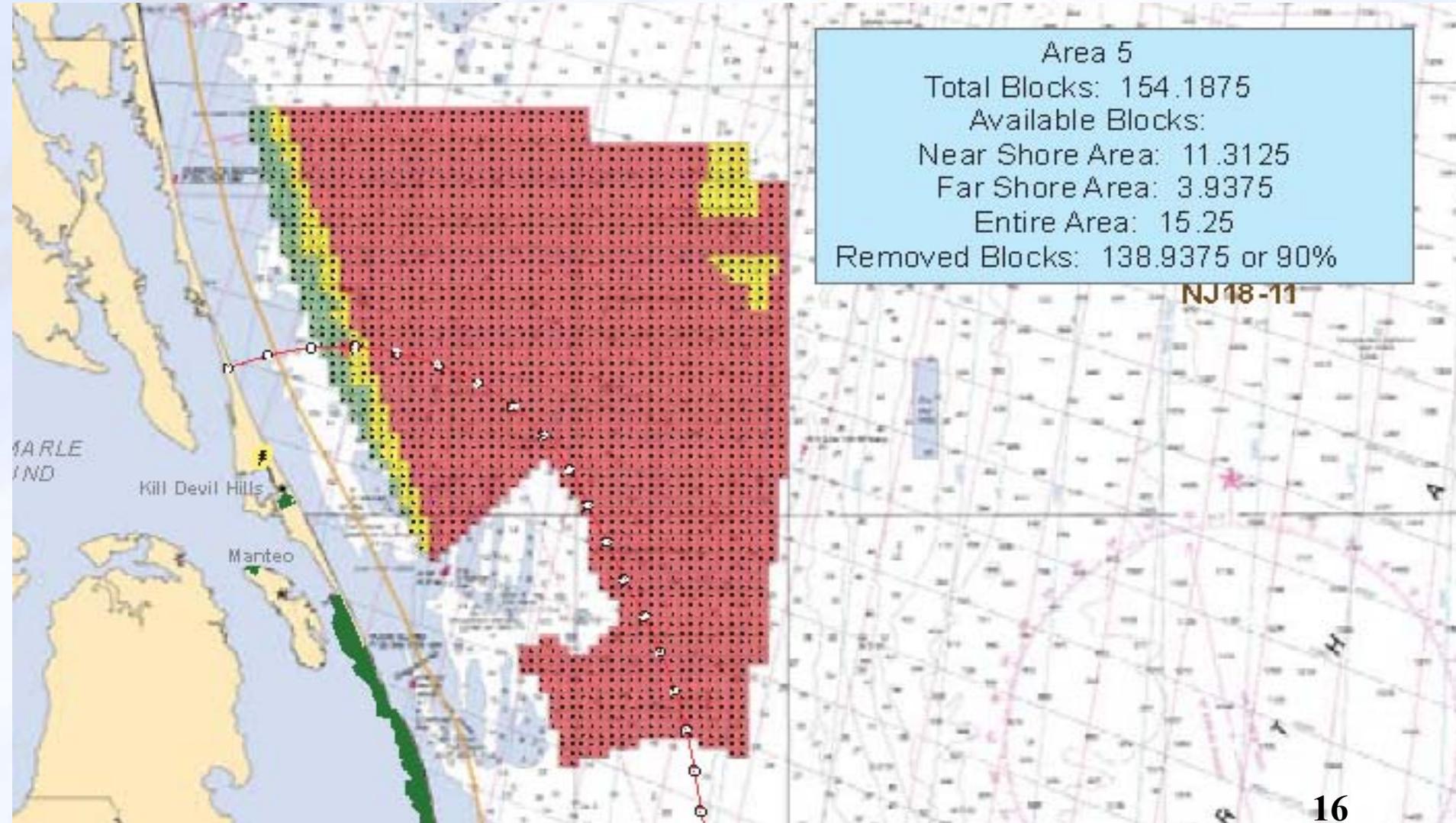


R-Y-G Determination for NC Areas 3 and 4



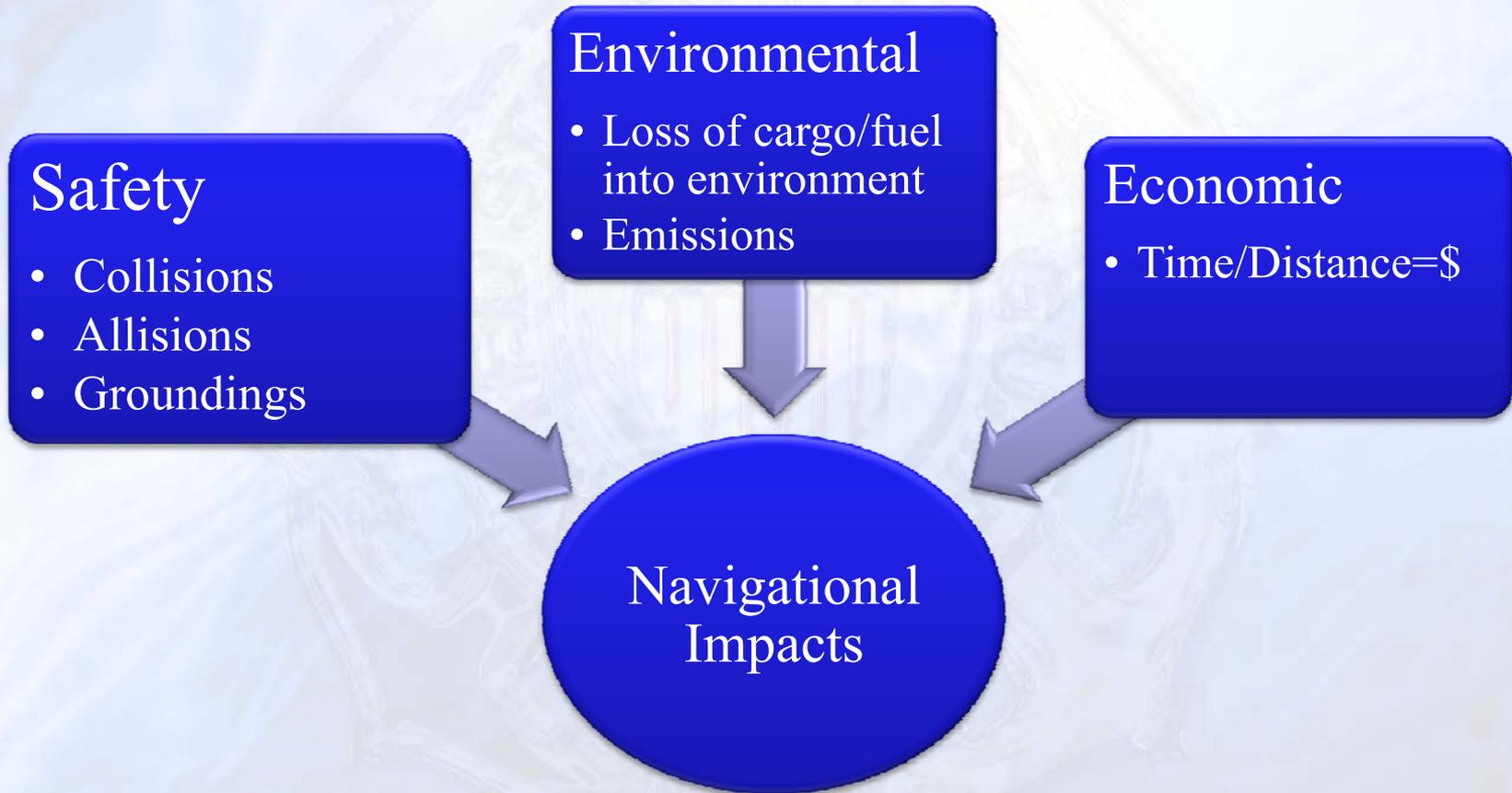


R-Y-G Determination for NC Area 5





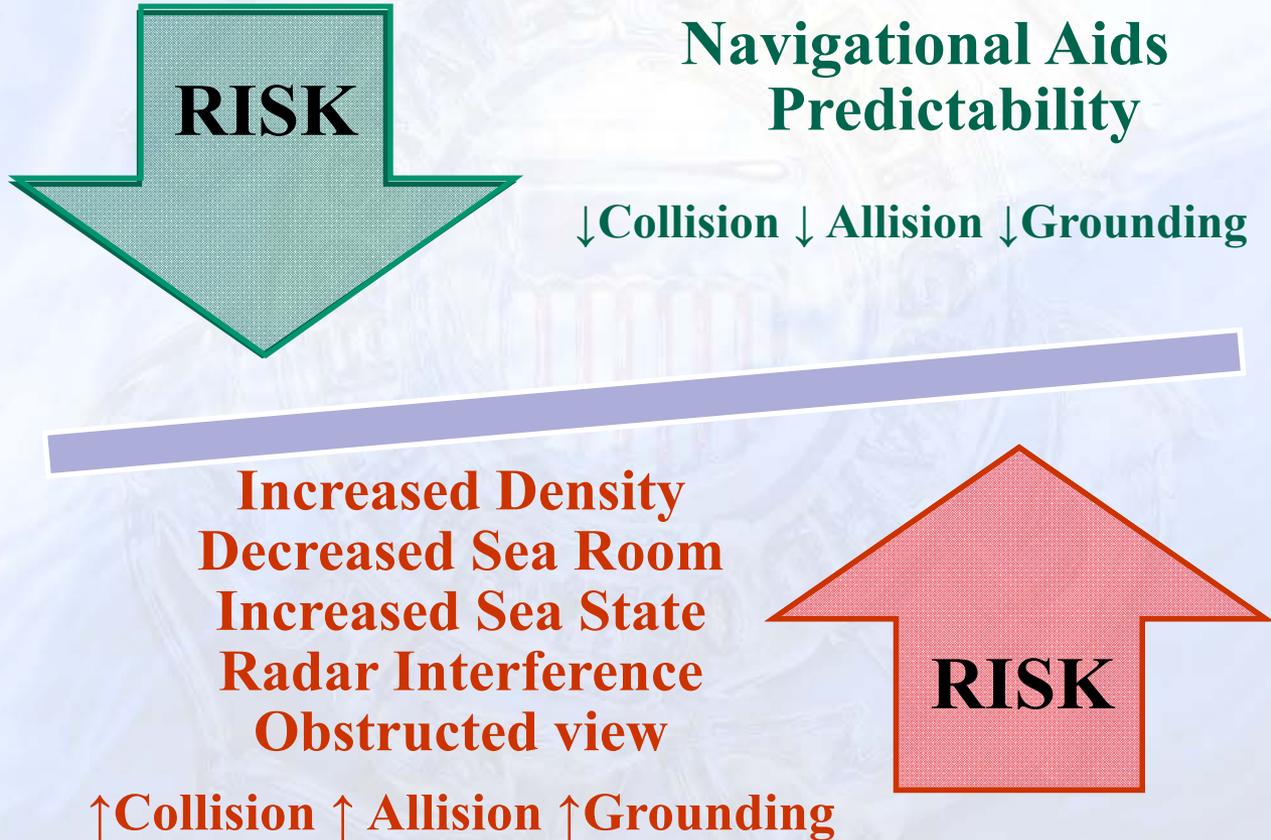
Impacts to Navigation





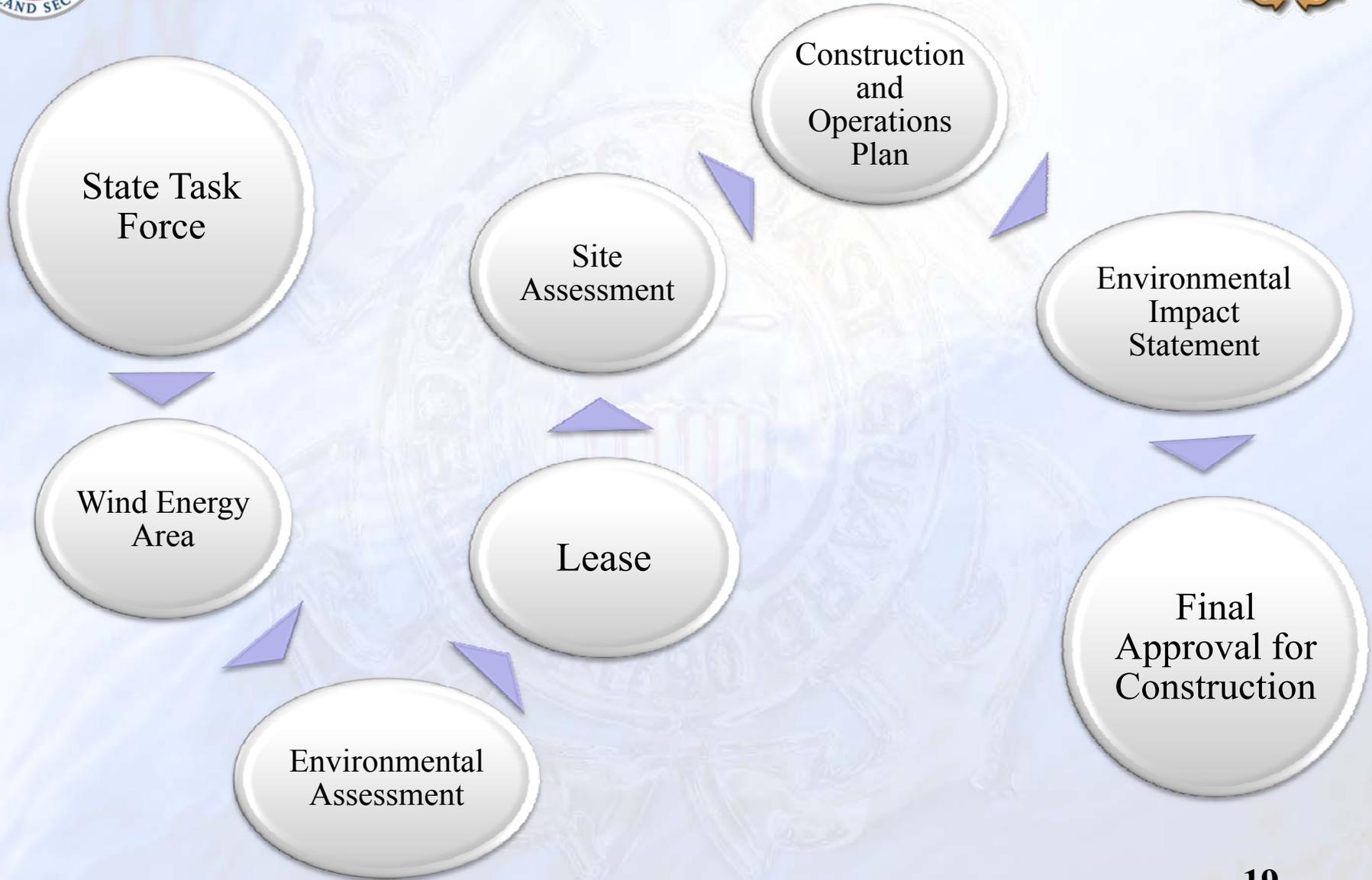
Navigational Safety Risk

Collisions / Allisions / Groundings





“Smart from the Start”





Summary and Conclusions

“Impact to Shipping”

Placement of structures on OCS:

- Will increase risk of allision
- May increase risk of collision
- May increase risk of grounding



Summary and Conclusions

“Establishment of WEAs”

- R-Y-G is defensible
- Leaves moderate conflicts available for further study
- Highlights area of concern



Summary and Conclusions

“Risks of Postponing Assessment of Navigational Impacts”

- EA for leases only evaluates impacts due to site assessment & site characterization activities
- Nav Safety Risk Assessment → COP
- Removal of areas late in process could hamper wind development efforts
- USCG has recommended impacts be evaluated prior to establishing WEAs



Summary and Conclusions

“Other Offshore Energy Installations”

- Emphasis currently on Wind
- Future “All of the Above Approach”
 - Oil and Gas
 - Hydrokinetics
 - Hydrothermal
- Need to consider other potential offshore activities



Summary and Conclusions

“Tug and Barge Routes”

- Most direct and Safe Route
- Vary based on weather, sea state and depth of water
- WEAs could force tug and barges further inshore or offshore
 - Increase congestion at port entrances
 - Higher sea states offshore
 - Mixing of vessel types (slow vs fast moving)



Summary and Conclusions

“Deep Draft Routes”

- Coastwise routes further offshore
 - Higher conflict with next round
- Higher conflict at harbor approaches
- Proposed WEAs would require modification or elimination of some routes



Summary and Conclusions

“Cumulative Impacts of Wind Farms”

- A primary objective of ACPARS is to assess cumulative impacts to MTS
- Displacement, Funneling, Increased Density
- Cascading effects



Summary and Conclusions

“Establishment of Routing Measures”

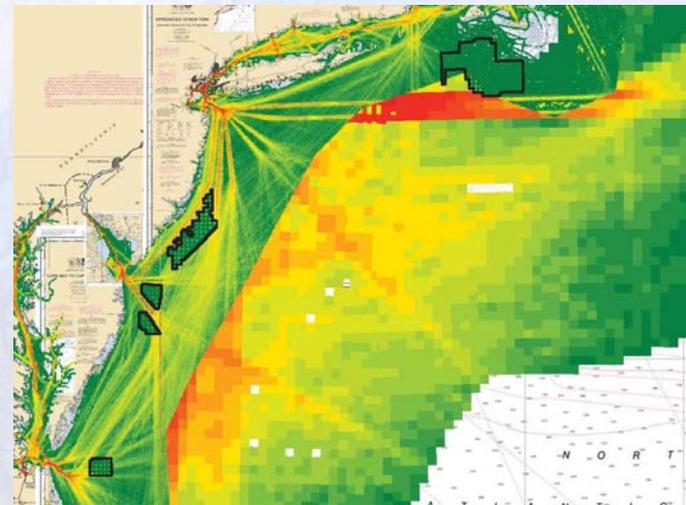
- Existing system of traditional routes is complex
- Determining nav impacts as a result of a significant change to routing is beyond capabilities of the WG
- Routes should not be created without full analysis



Phase 3- Modeling and Analysis



- Develop a GIS based model to predict traffic density and traffic patterns given alternative siting scenarios
- Determine the resultant nav safety risk
 - Increased density
 - Risk of allision
 - Risk of collision
 - Evaluate mitigation measures
- Working with BOEM to initiate





Opportunities

- Comment on Interim Report
- Expert Panel for PNNL modeling and analysis
- BOEM North Carolina Maritime Working Group
- Comments on the record to BOEM



Questions?

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