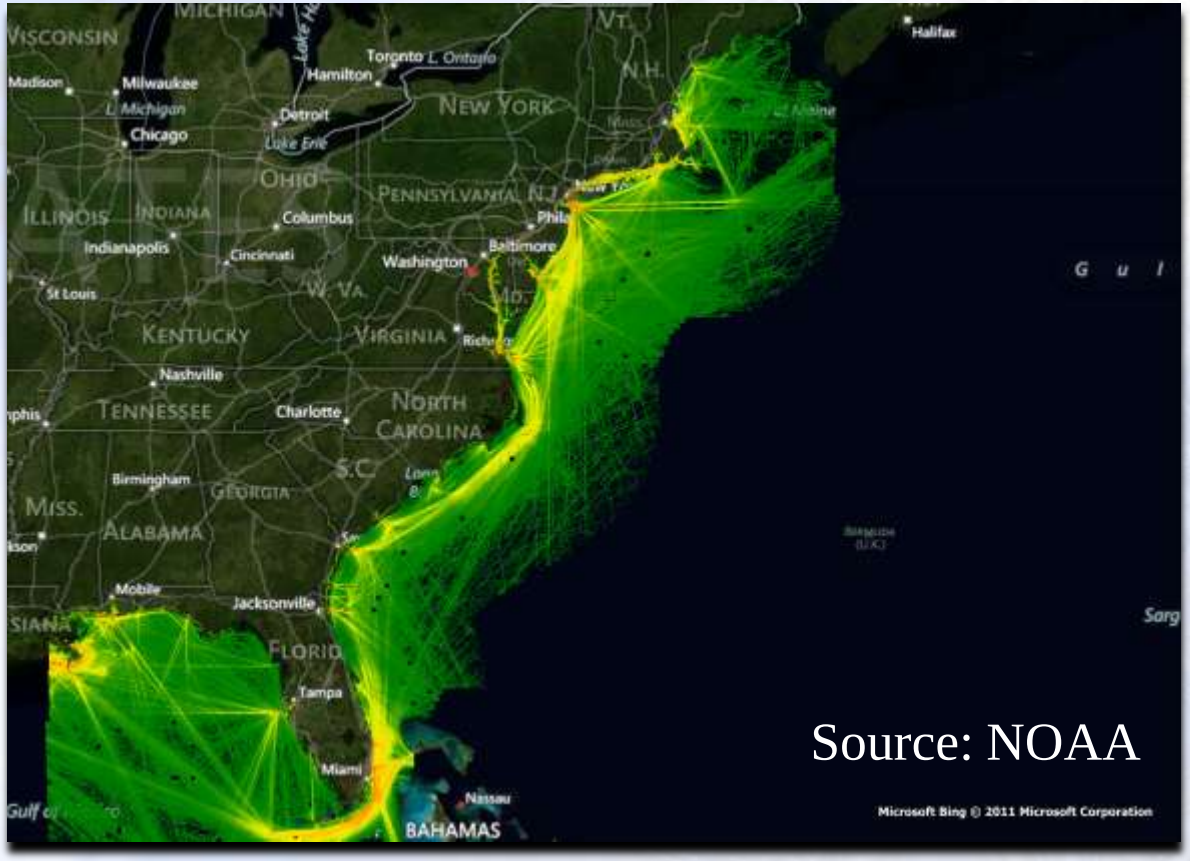
Atlantic Coast Port Access Route Study (ACPARS)



Source: NOAA

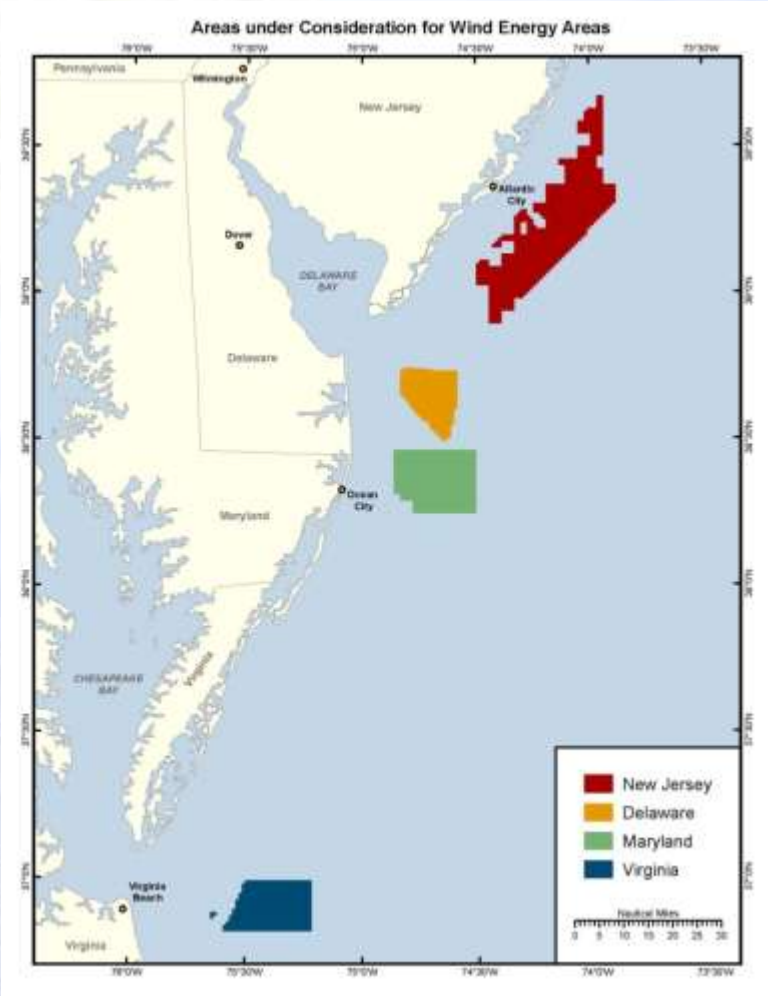
Mid-Atlantic Waterways Conference

04 April 2013

Emile Benard
ACPARS Project Manager
U.S. Coast Guard Atlantic Area

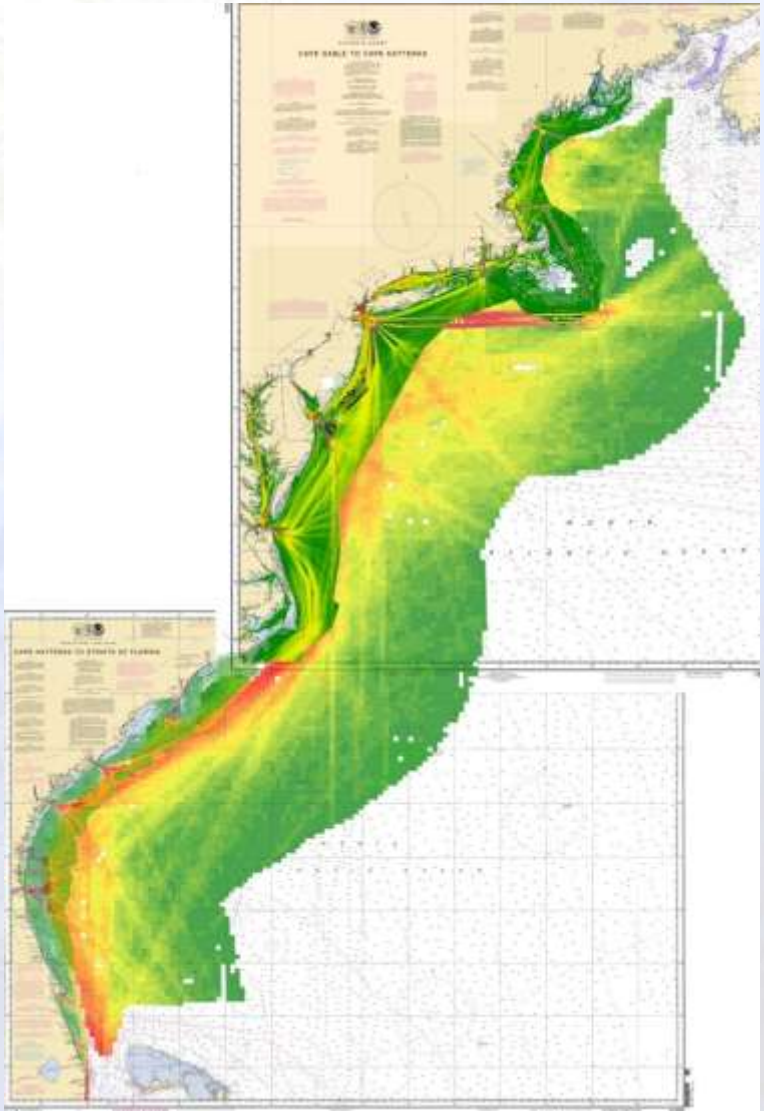
Wind Energy Leasing

- Individual State Task Forces
- Identify priority wind energy sites to promote large scale development
- EA for leases are limited to site assessment and site characterization activities
- EIS conducted for final approval of Construction & Operations Plan



Atlantic Coast PARS

- Marine Spatial Planning
  - Characterize existing MTS/Shipping Routes
  - Balance multiple uses
  - Ensure safe access routes
- Wind Energy Initiatives
  - Cooperating Agency
  - Navigational Conflicts
  - Cumulative Impacts

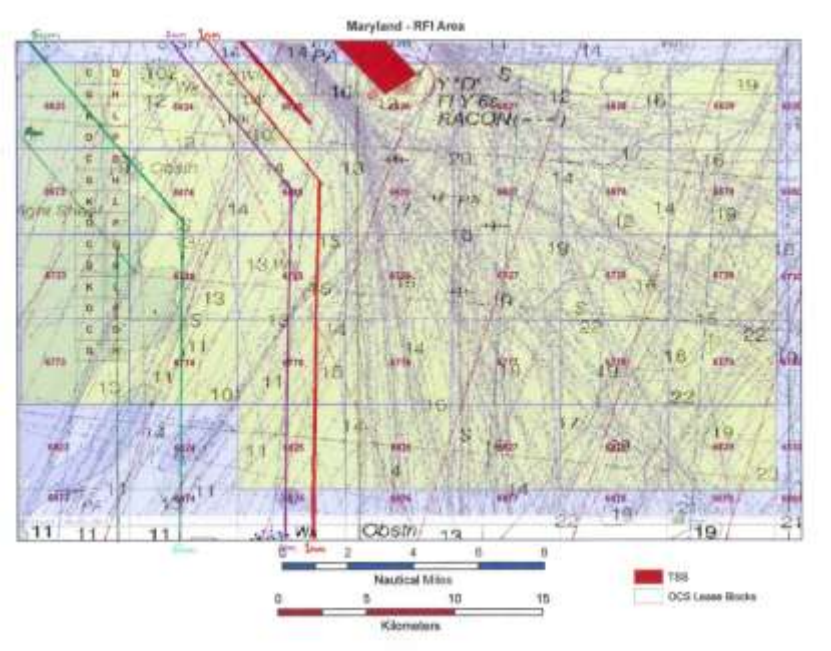


ACPARS Workgroup

- Develop, in the near term, AIS products and provide other support as necessary to assist Districts with all emerging coastal and offshore energy projects
- Provide data, tools and/or methodology to assist in future determinations of waterways suitability for proposed projects
- Determine whether to modify or create Routing measures

Phase 2- Apply R-Y-G Methodology

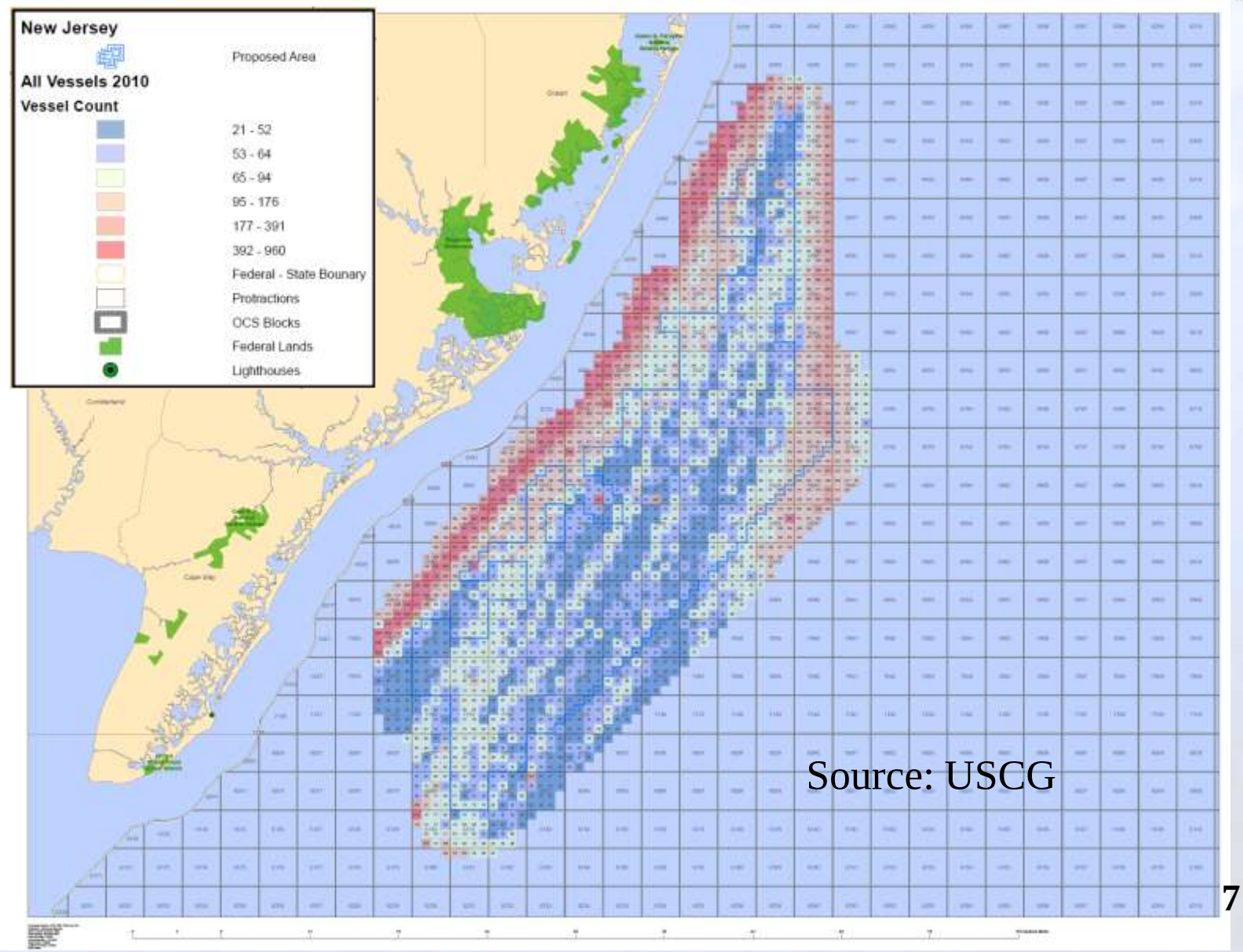
- Deliverable – R-Y-G determinations (pending more detailed analysis)
- Apply maritime risk guidance from UK MGN-371
- Determine port & coastal shipping routes



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	

Density Plot of NJ WEA

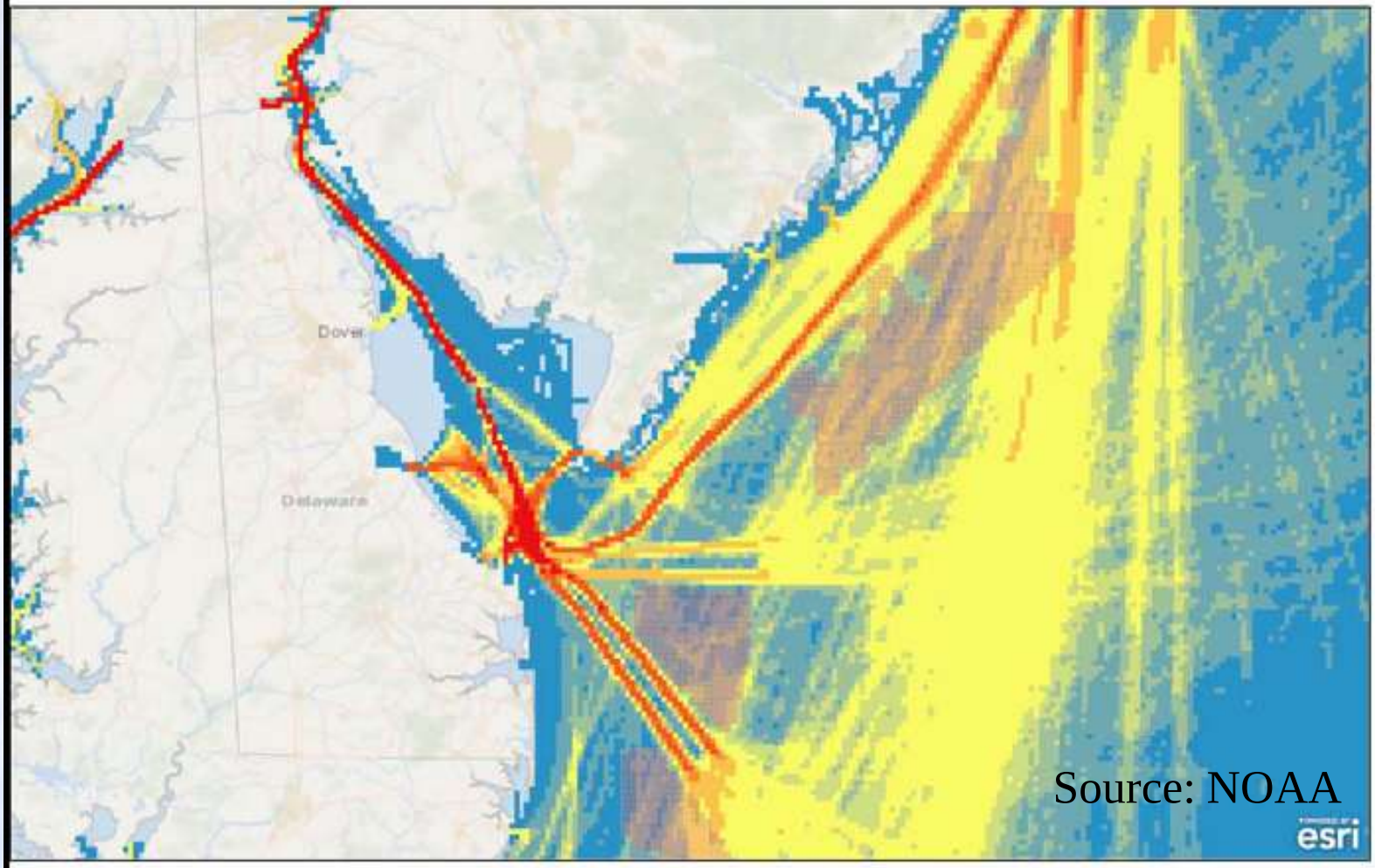


Source: USCG

All Commercial Vessels

Commercial Vessel Density October 2009 - 2010

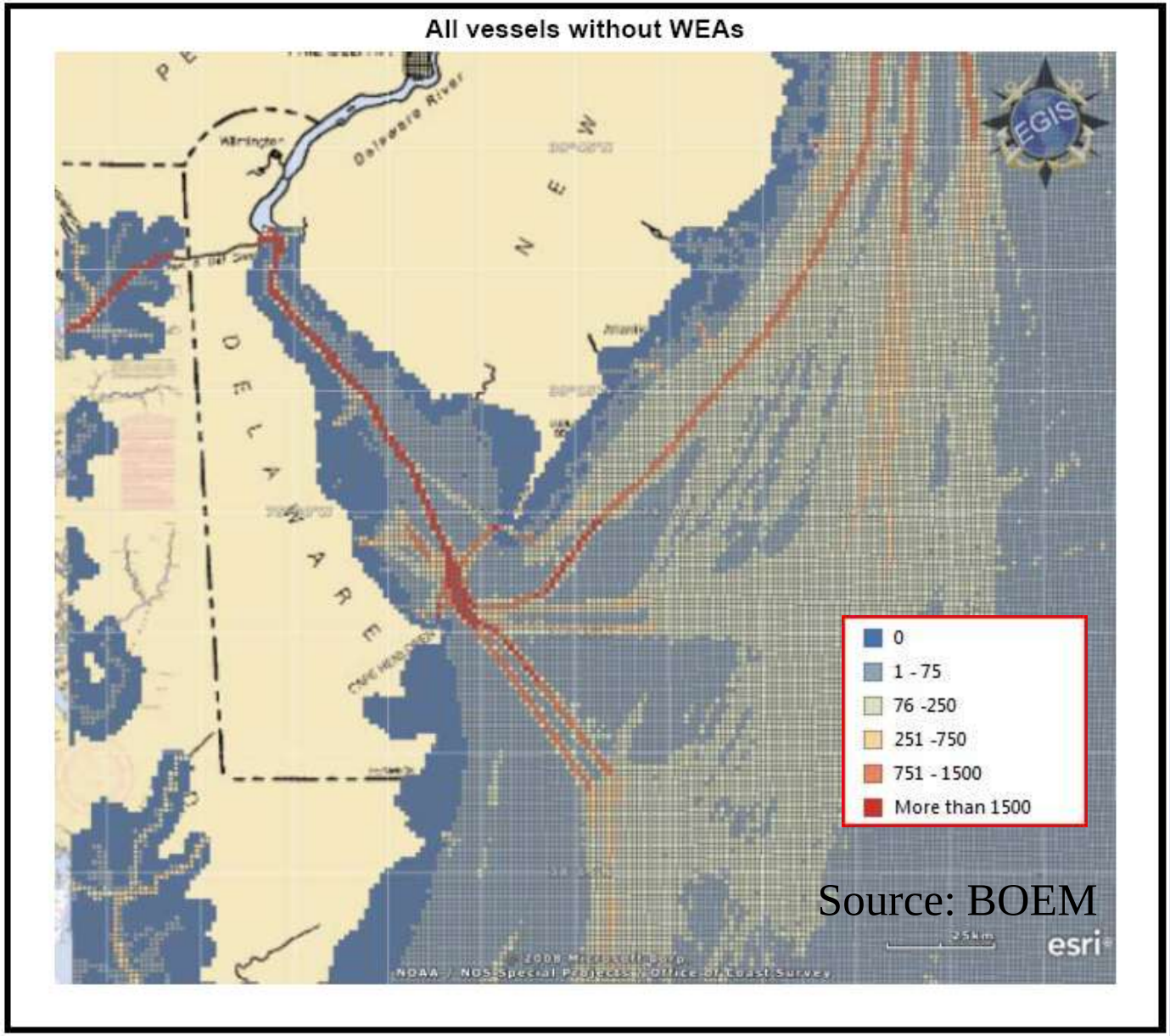
This data represents the total number of vessel transits from October 2009 - October 2010.



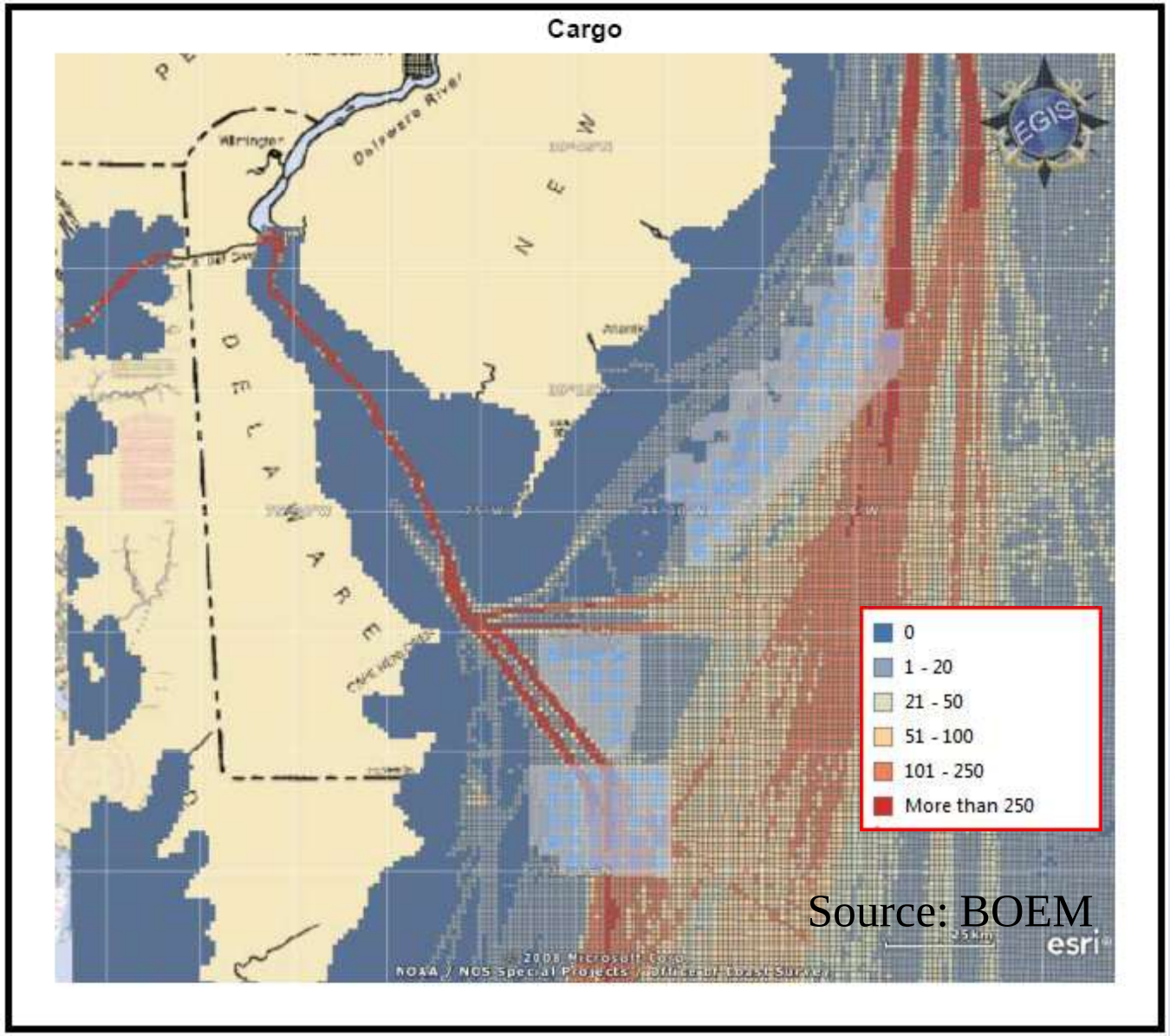
Source: NOAA

Sources: GEBCO, NOAA, National Geographic, DeLorme, and Esri

All Commercial Vessels

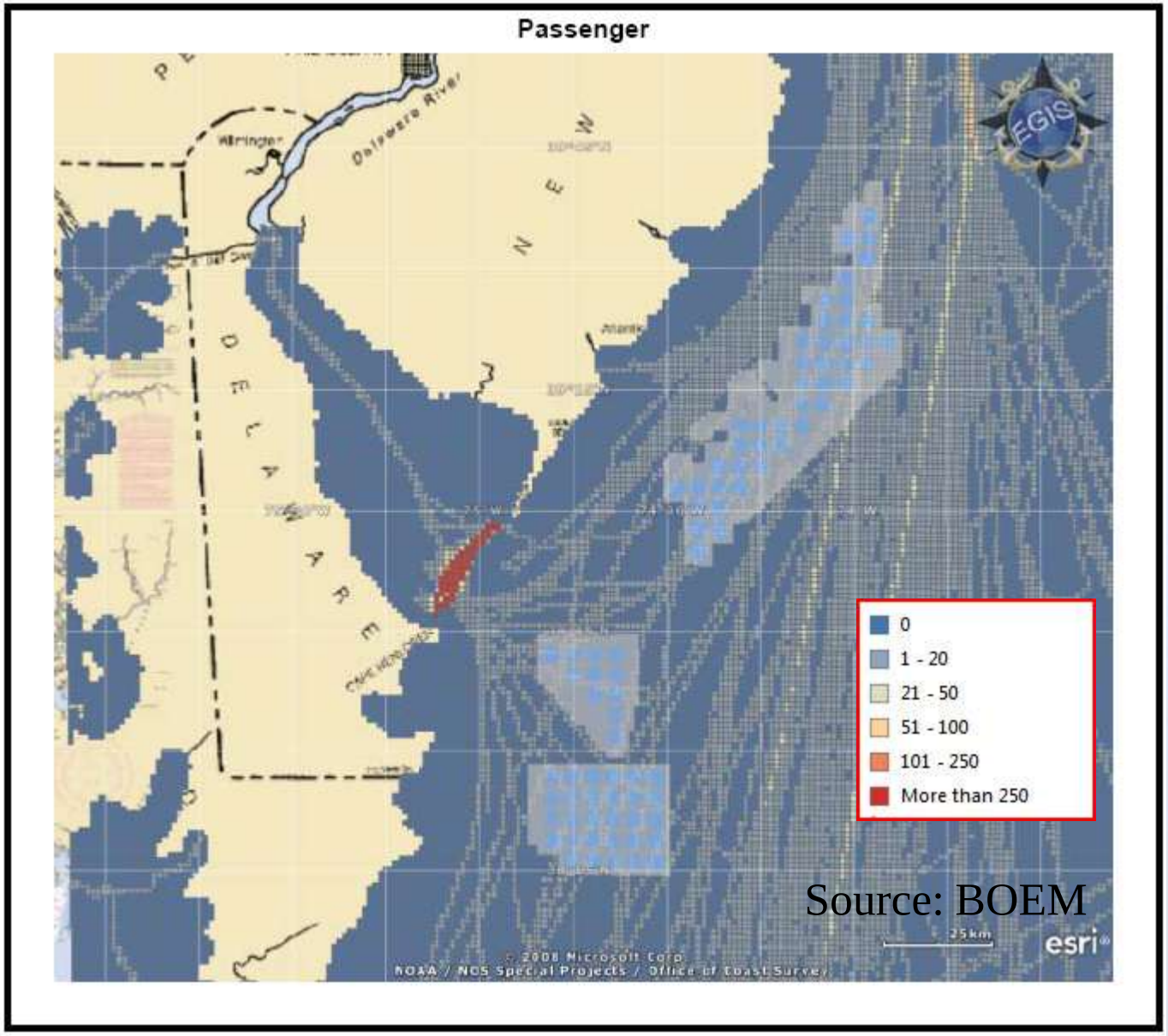


Cargo Vessels



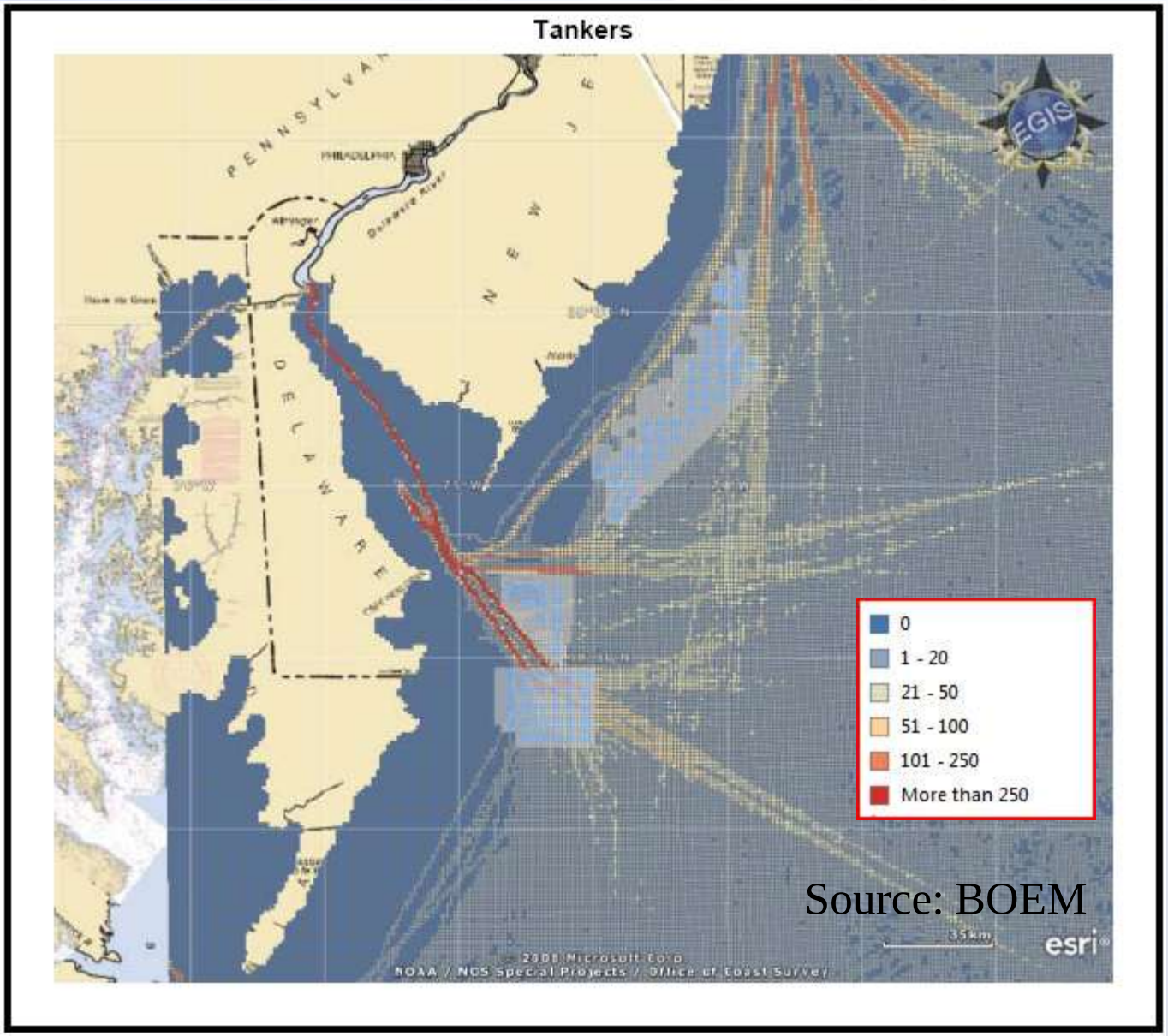
Source: BOEM

Passenger Vessels



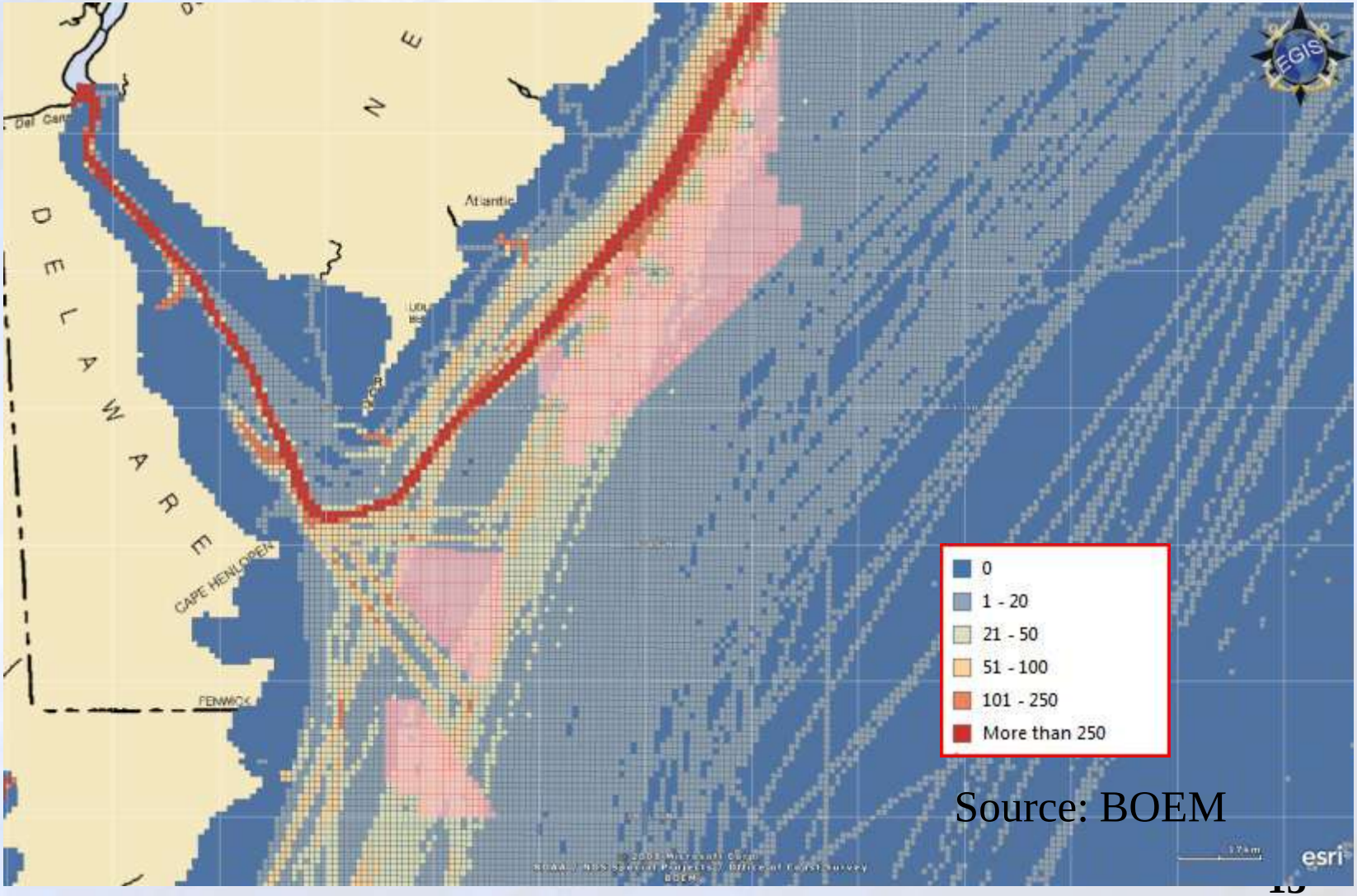
Source: BOEM

Tank Vessels



Source: BOEM

Tugs and Towing w/WEAs



Source: BOEM

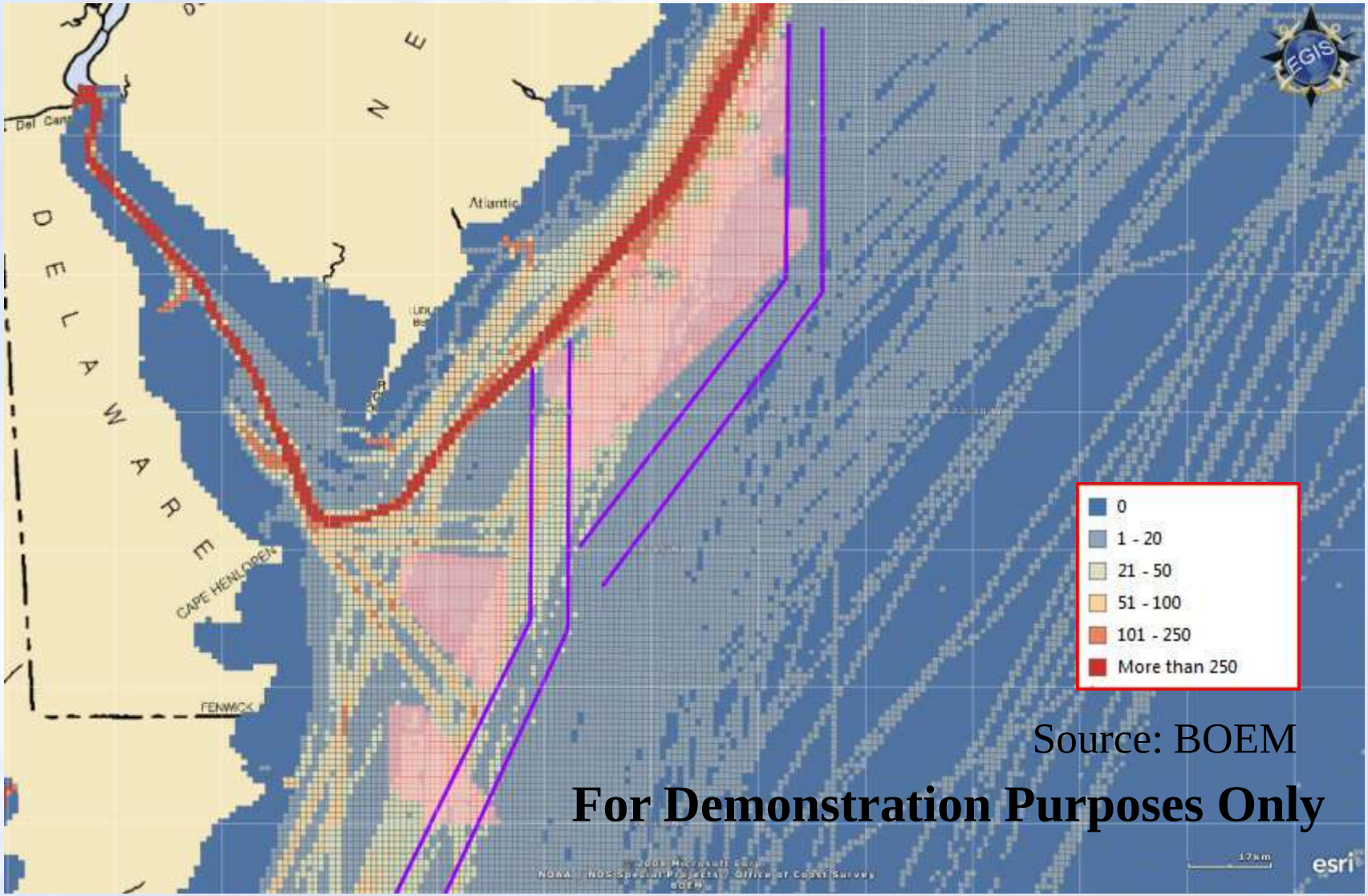
Tug & barges currently transit through the NJ, DE and MD WEAs

- Divert Offshore
  - Weather and sea state conditions
  - Mixing vessel types, slow vs. fast moving
- Divert Inshore
  - Increased vessel density at DelBay entrance
  - Longer Transits
- Transit through wind farm
  - Significant navigation risk concern
  - May require actions to prevent from occurring

Other Issues/Concerns

- How does WEAs impact routes/approaches to other areas
- Cumulative impacts of multiple WEAs
- Thresholds- Volume/density of traffic vs. critical routes
- Tug/barge routes vary based on weather, sea state, depth of water (catenary)

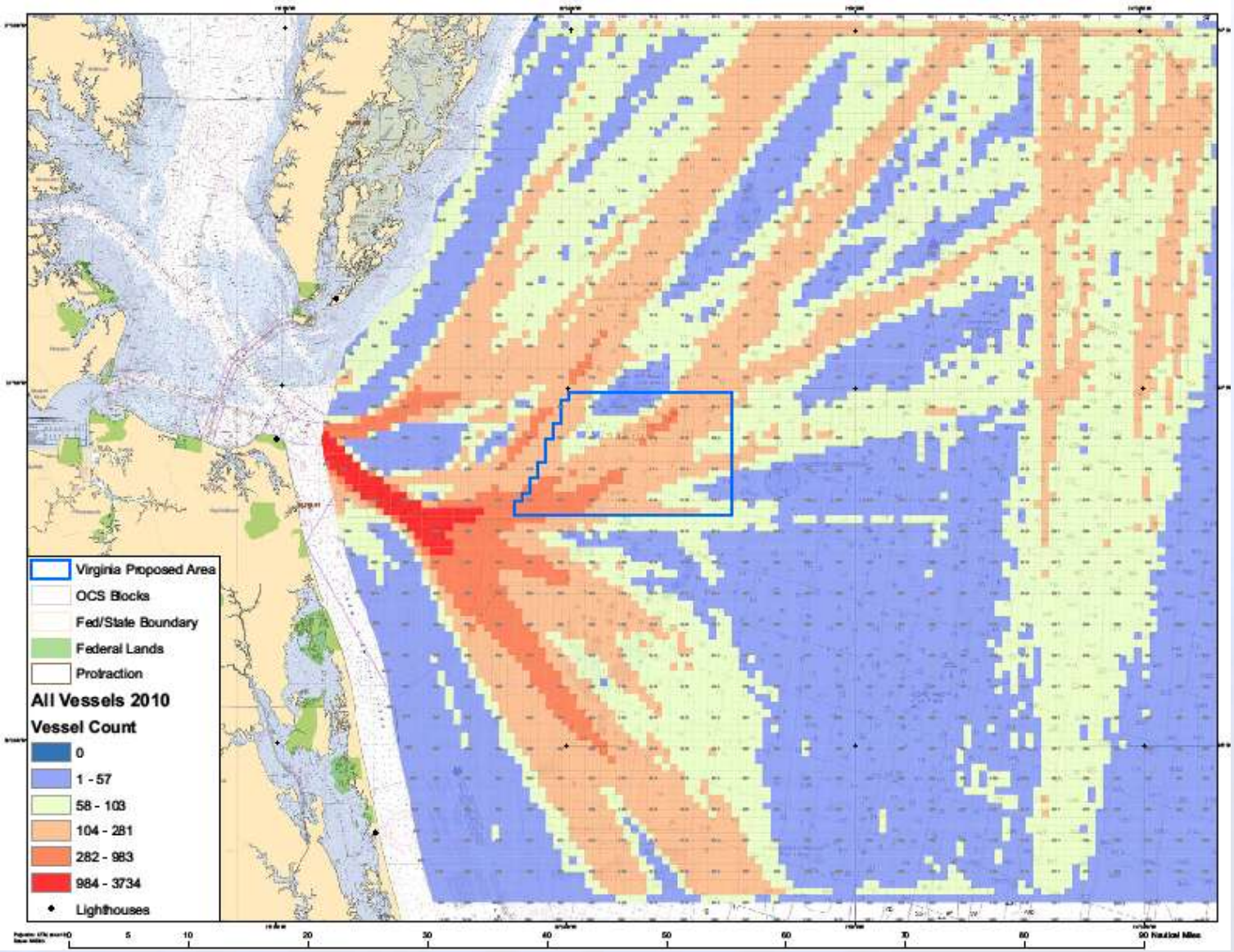
Potential Rerouting



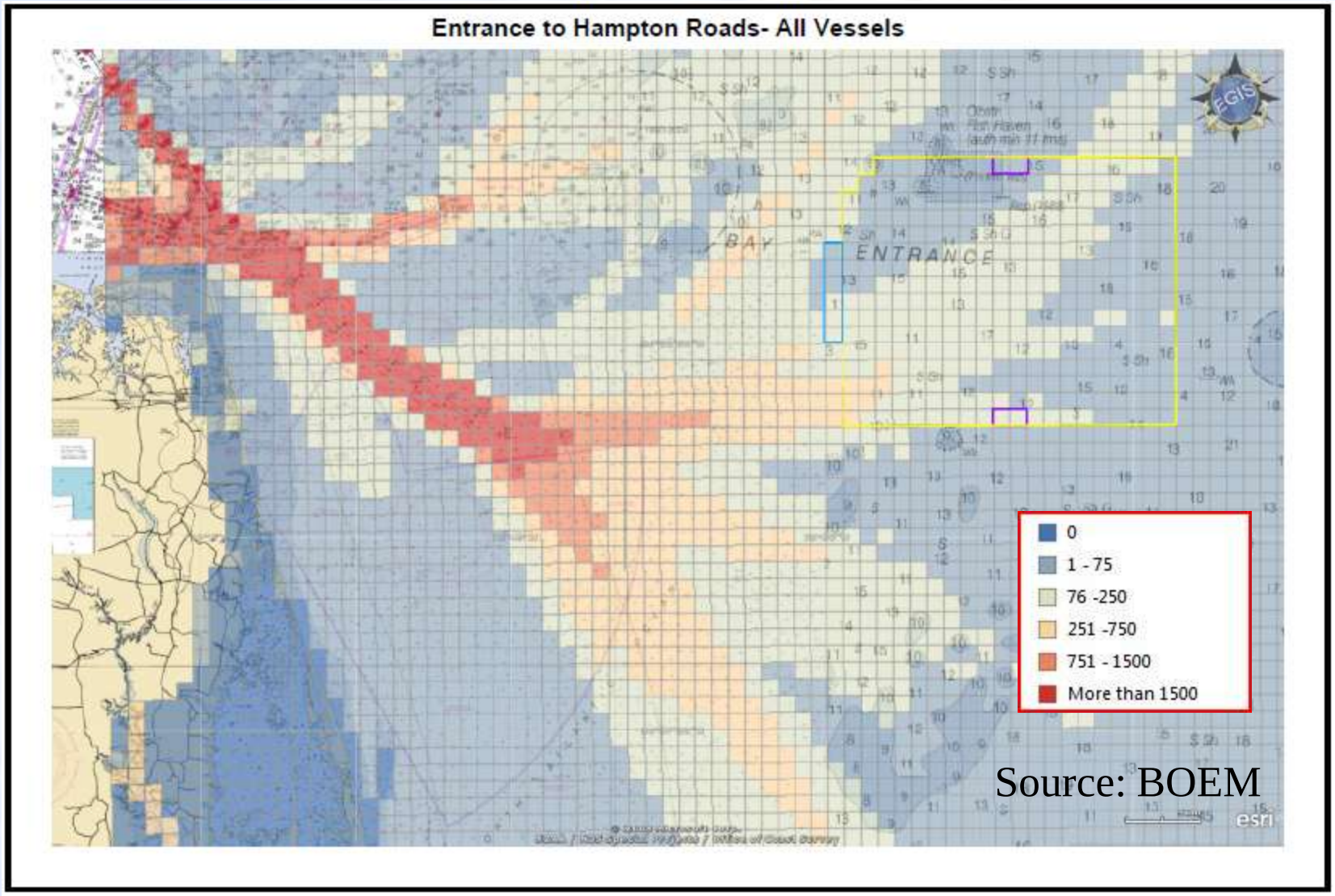
Source: BOEM

For Demonstration Purposes Only

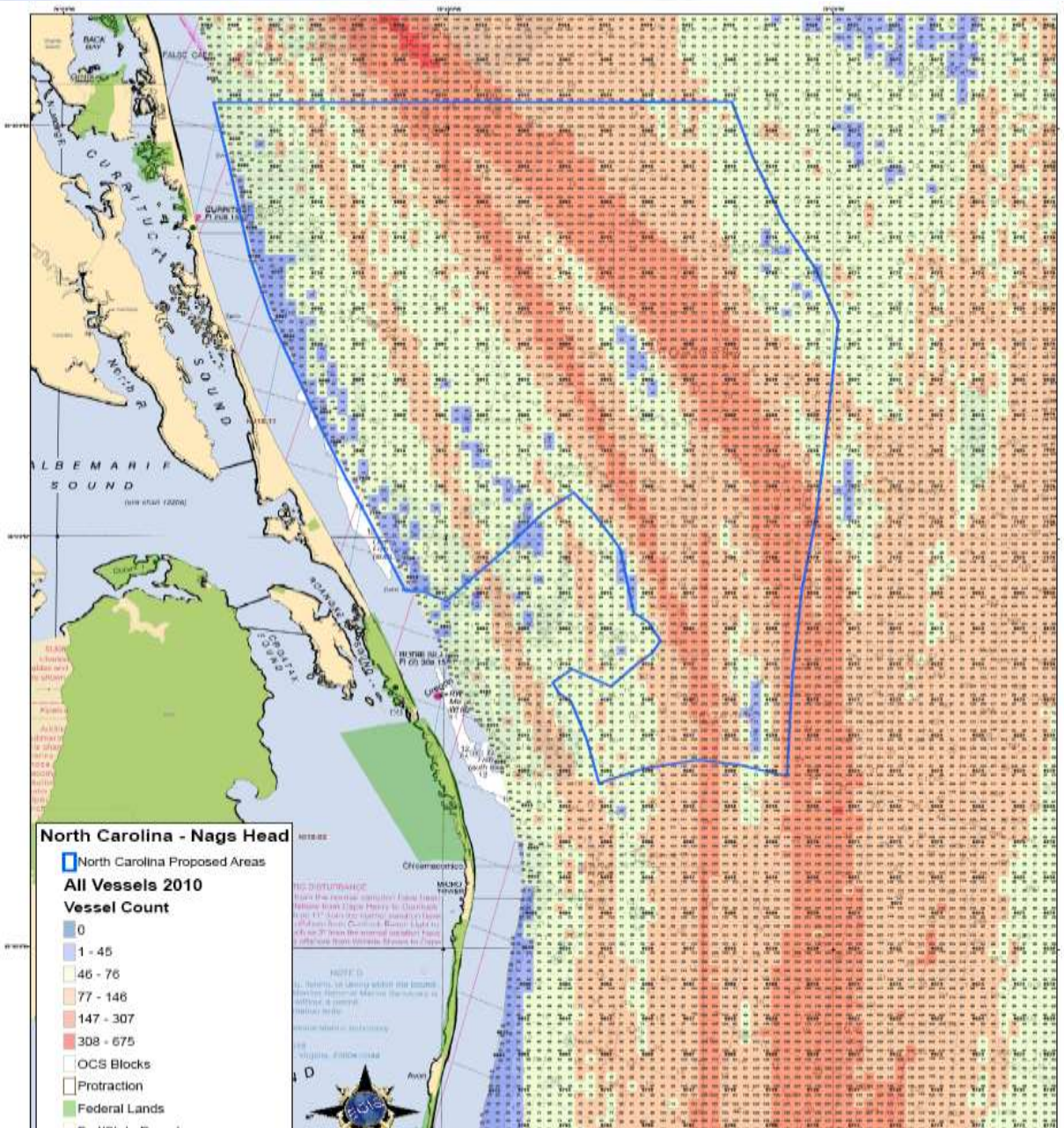
Density Plot for Virginia



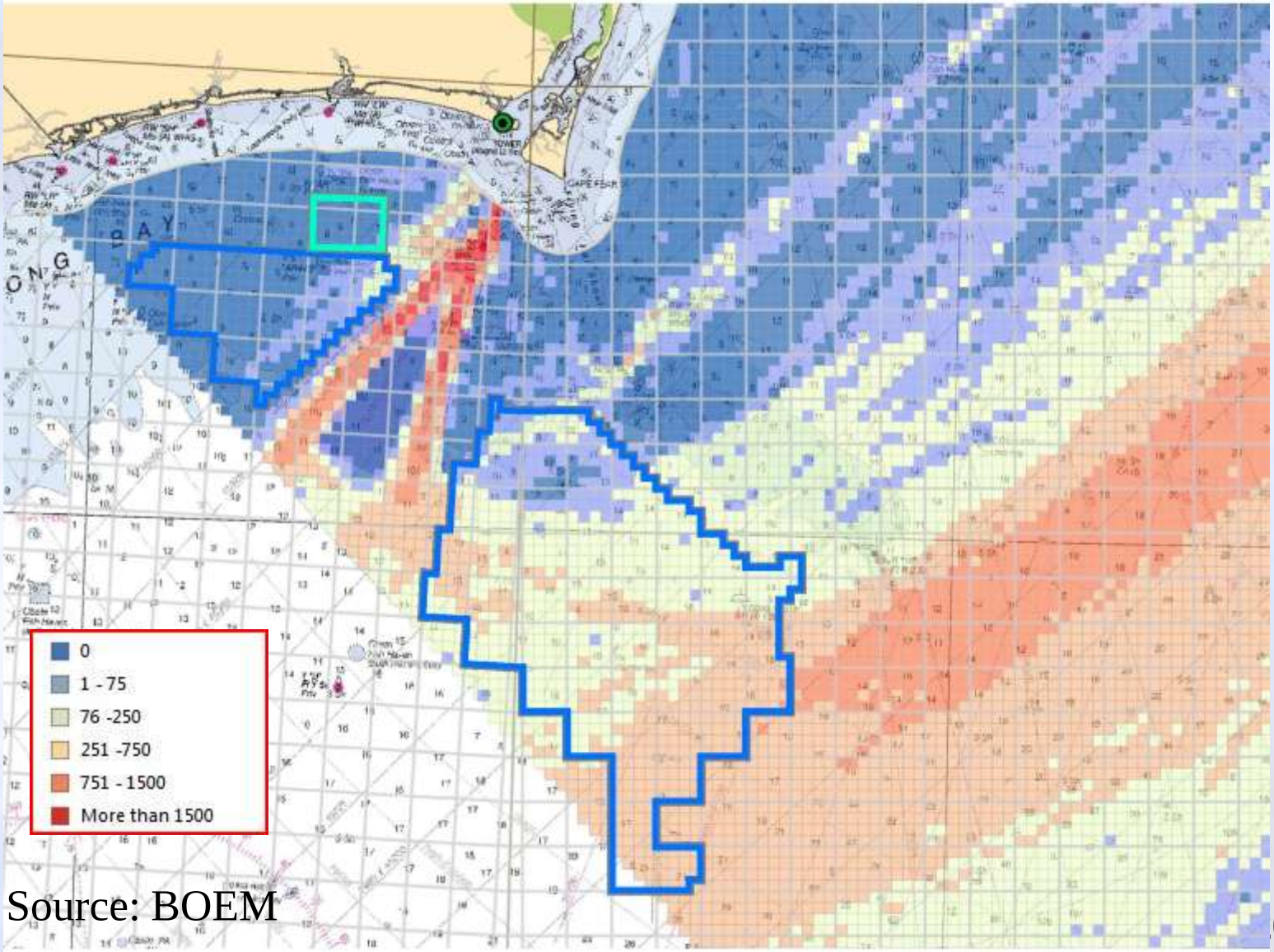
Virginia WEA



Kitty Hawk Call Area

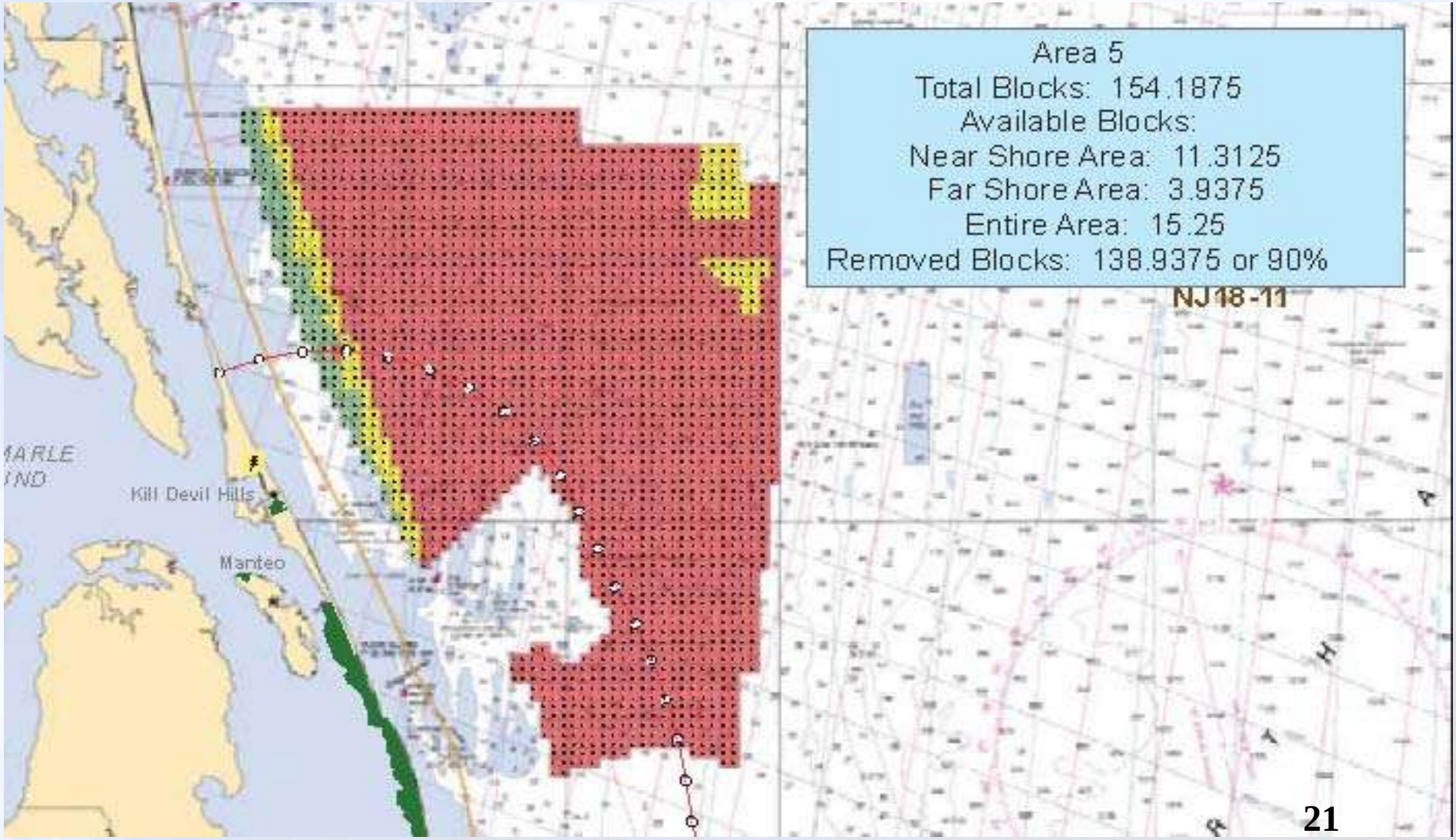


Wilmington West and East

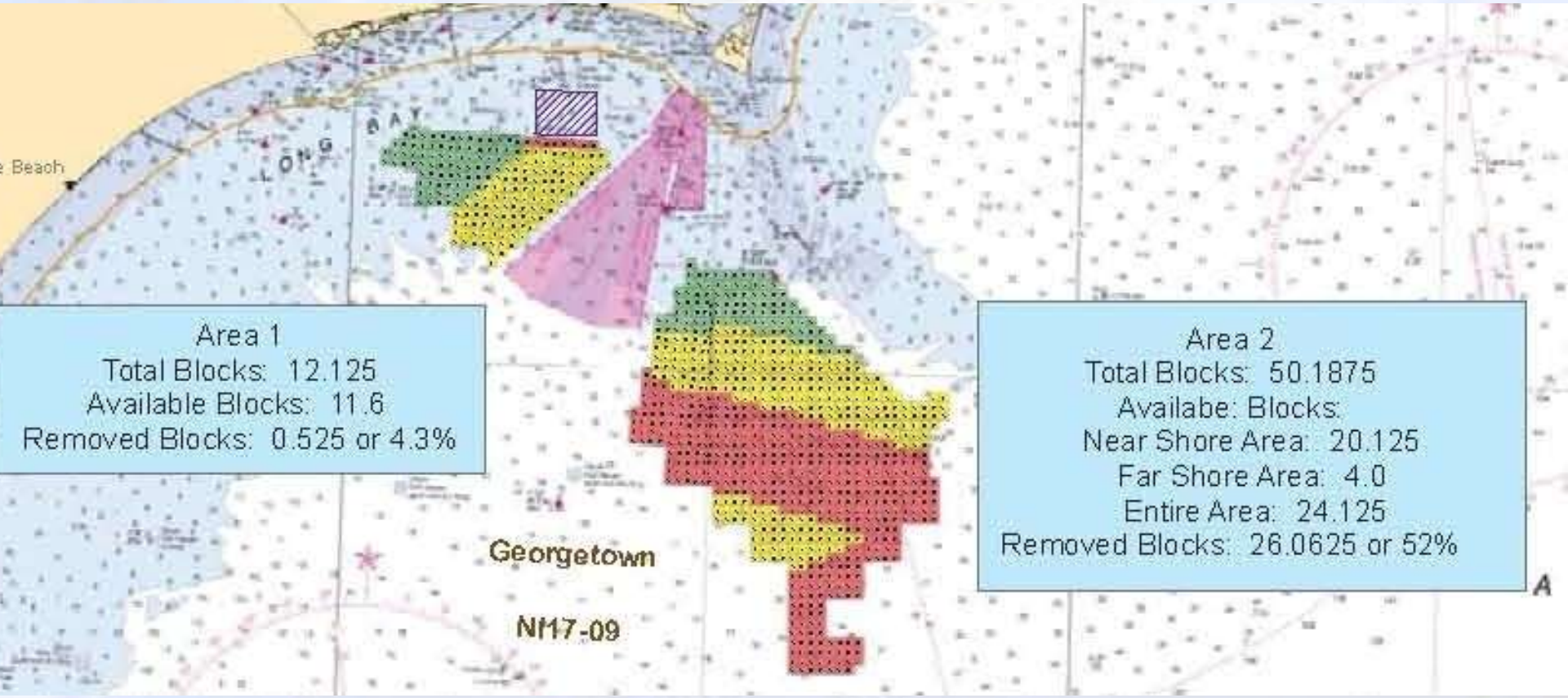


Source: BOEM

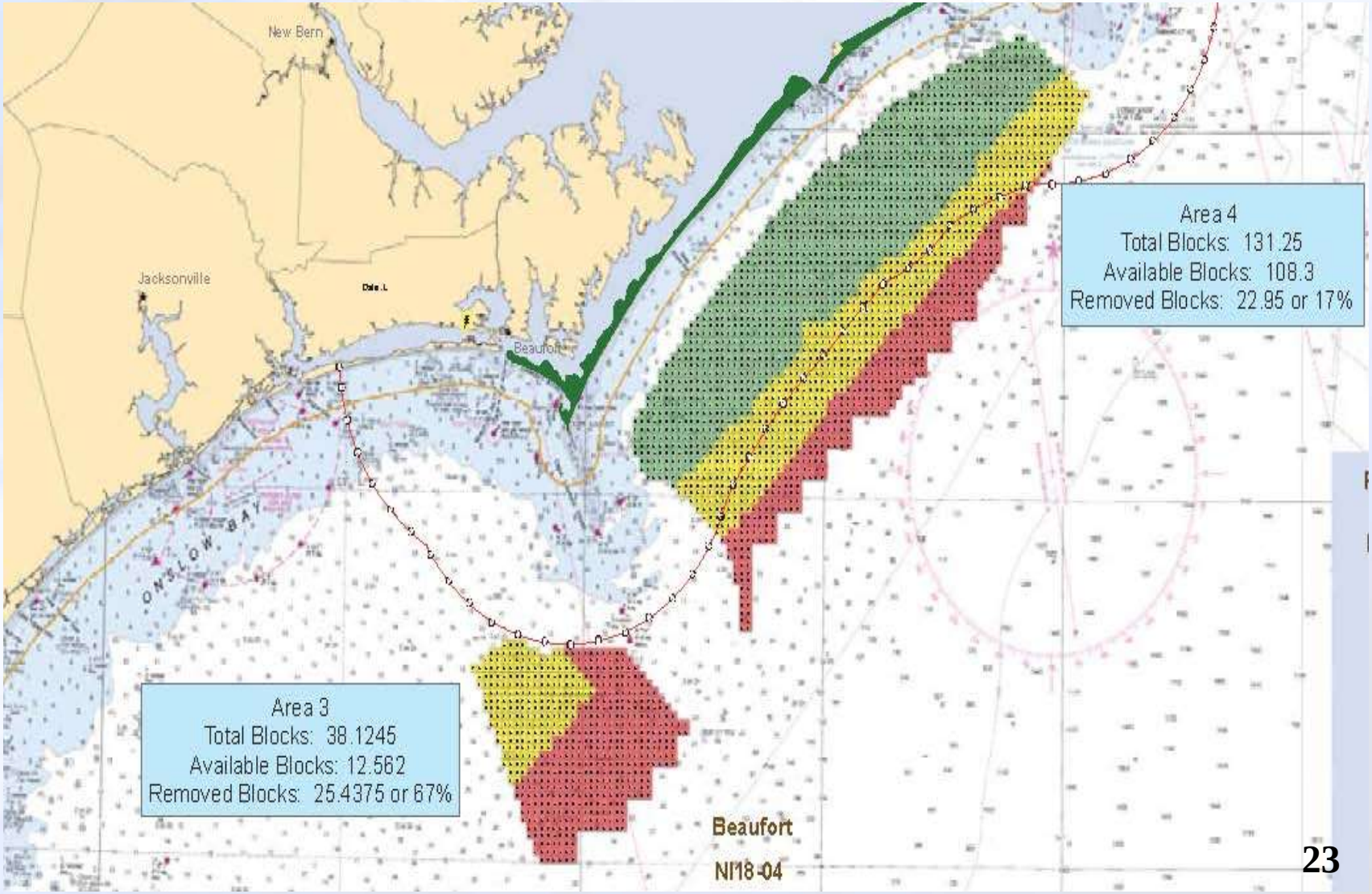
R-Y-G Determination for Kitty Hawk



R-Y-G Determination for Wilmington West and East

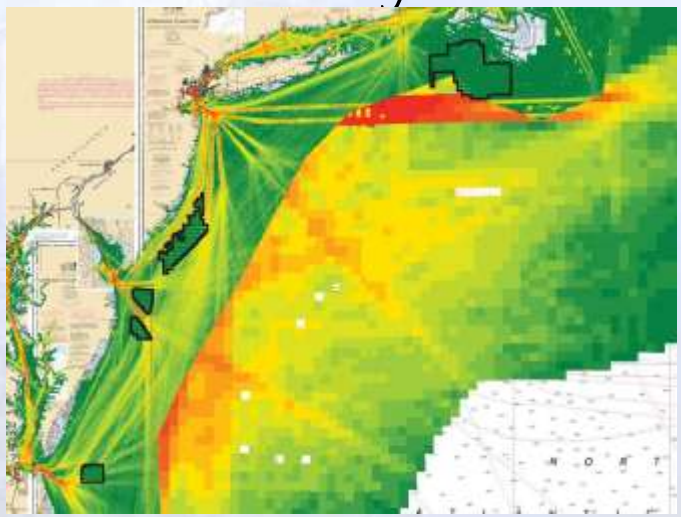


R-Y-G Determination for NC Areas 3 and 4



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



- Identify mitigation measures to enable WEAs and shipping to co-exist

Partnering and Outreach

- Partner with Regional Ocean Portals (MARCO & NROC)
  - Display AIS data
  - Other users (fishing, recreation, etc.)
- Identify critical routes
  - Tug and barge
- Future State
  - Deep draft approaches
  - Transshipments
  - Marine highways

Help Us Help You

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

ACPARS Interim Report

- Summarizes progress to date and what still needs to be done

- Available at:

http://www.uscg.mil/lantarea/ACPARS/

Questions?

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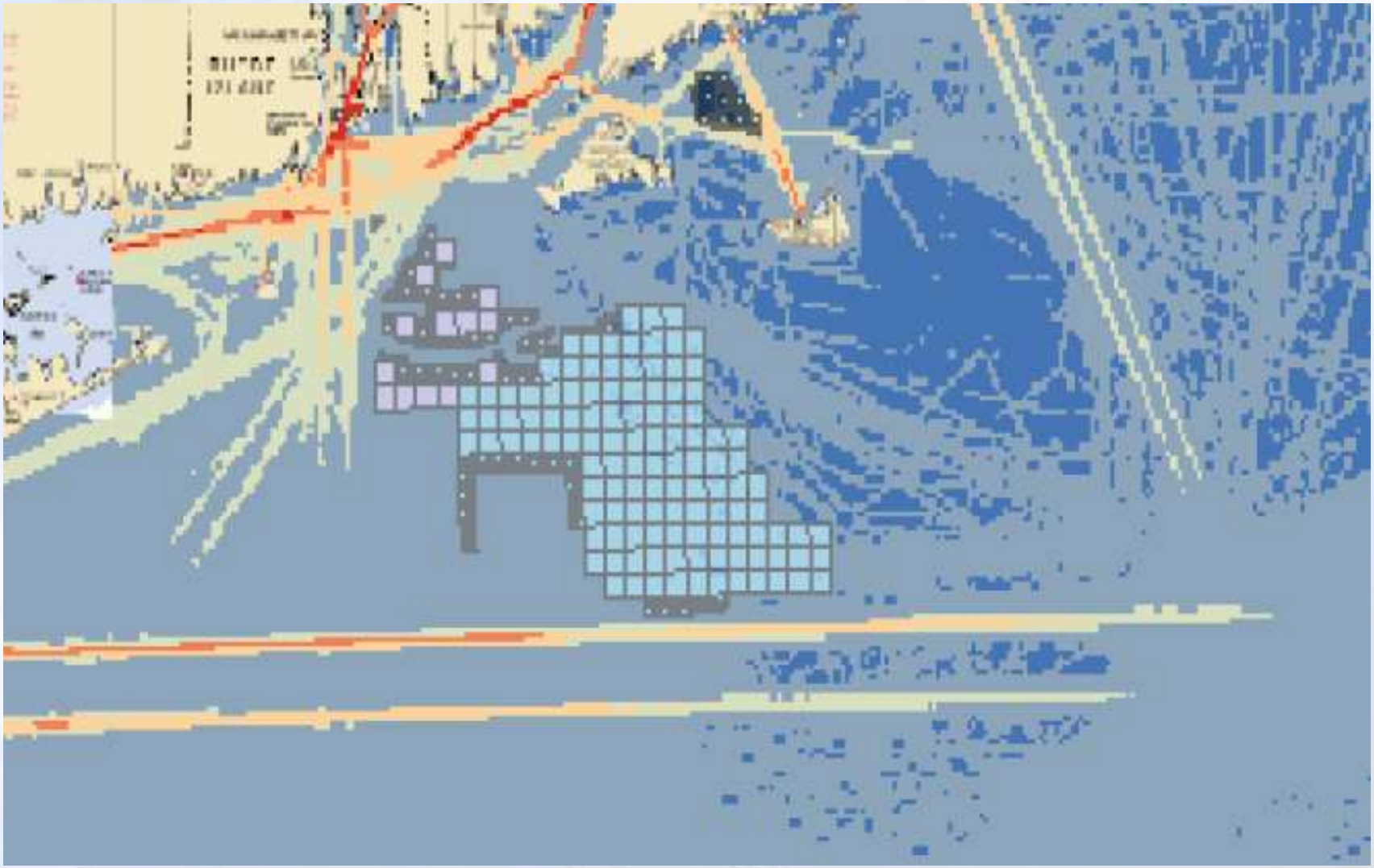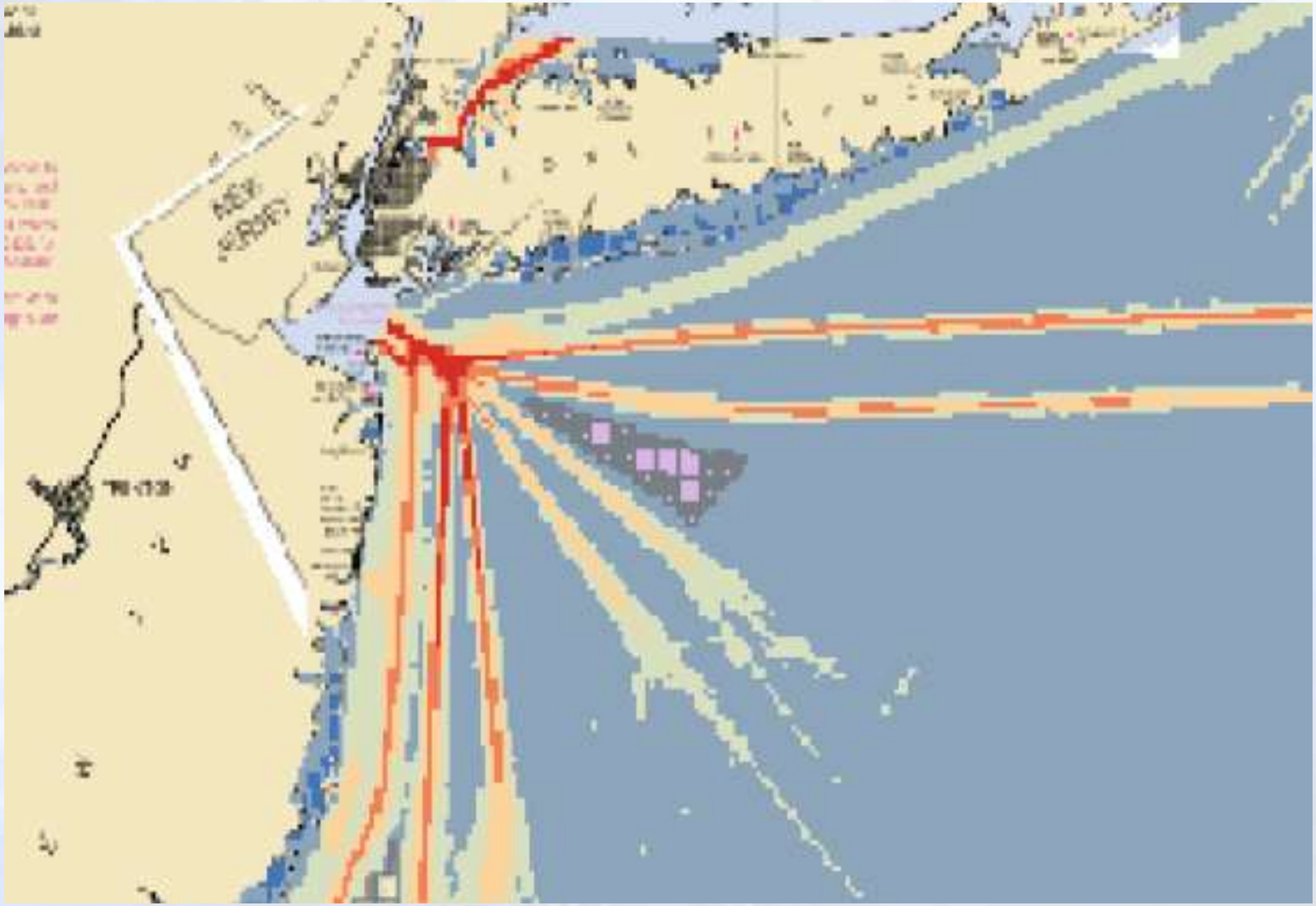
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