

Science, Service, Stewardship



Discussion of Vertical Line Management Options

April 6, 2011

**NOAA
FISHERIES
SERVICE**

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Building Blocks of the Strategy

Whales (SPUE)

- Right Whales
- Humpback Whales
- Fin Whales
- Combined (unweighted)
- Combined (weighted)

Vertical Lines

- Trap/Pot
- Gillnet

Co-Occurrence

- RW – VL
- Humpback – VL
- Fin – VL
- Combined (uw) – VL
- Combined (w) - VL

Spatial

Temporal

AREAS		TIMING	Management Measure
Territorial Range		Year Round	<p>Trap/Pot Vertical Line Reduction (%)</p> <ul style="list-style-type: none"> • 3 traps/trawl • 5 traps/trawl • 10 traps/trawl (1 end line) • 10 traps/trawl (2 end lines) • Closure <p>Gillnet Vertical Line Reduction (%)</p>
		Seasonal	
Whale Species	Rights	Year Round	
		Seasonal	
	Humpbacks	Year Round	
		Seasonal	
	Fins	Year Round	
		Seasonal	
	Combined (weighted)	Year Round	
		Seasonal	
Combined (unweighted)	Year Round		
	Seasonal		
Vertical Lines		Year Round	
		Seasonal	
Co-Occurrence	Rights	Year Round	
		Seasonal	
	Humpbacks	Year Round	
		Seasonal	
	Fins	Year Round	
		Seasonal	
	Combined (weighted)	Year Round	
		Seasonal	
Combined (unweighted)	Year Round		
	Seasonal		



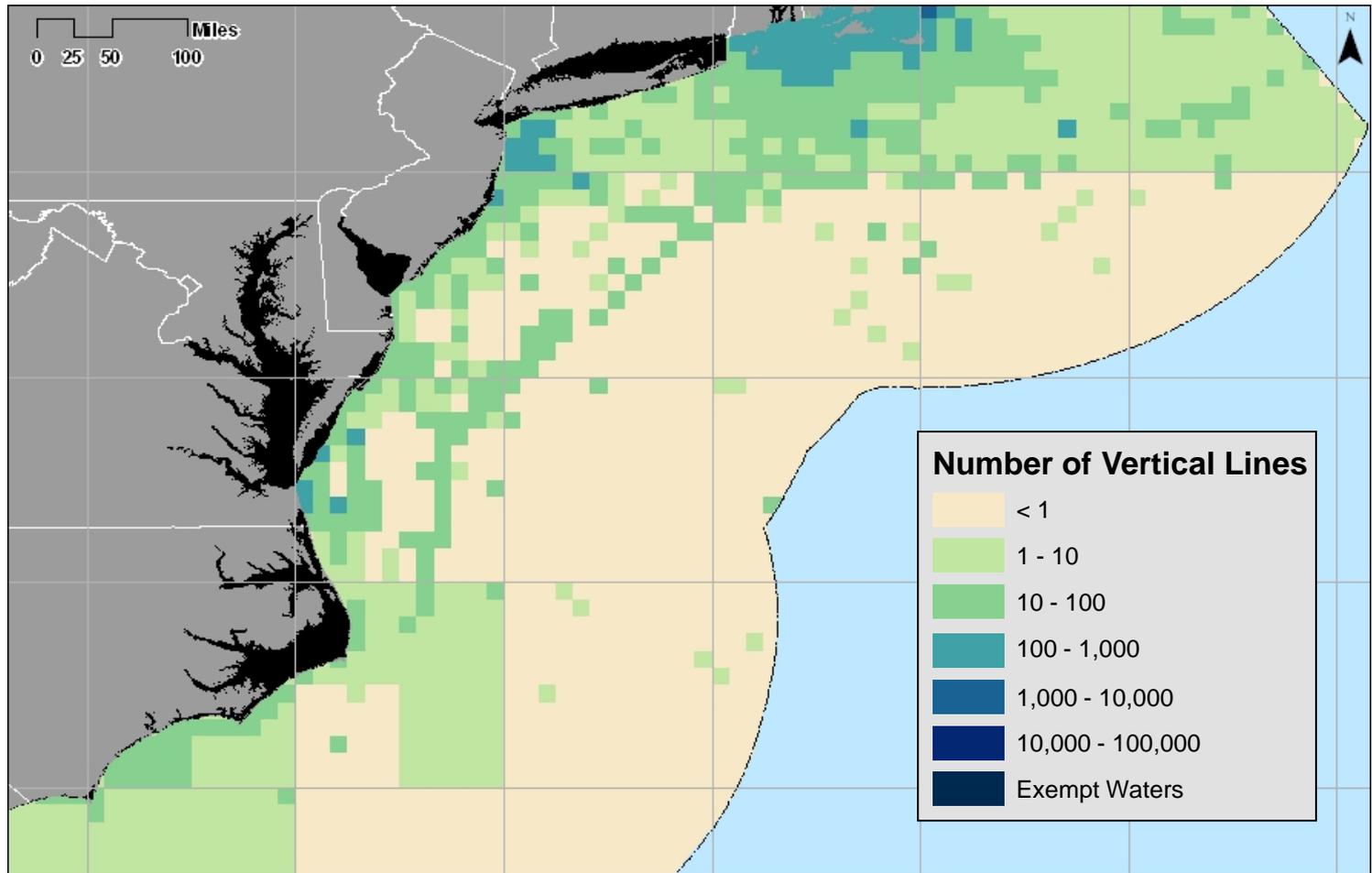
Scenarios

1. Select Areas based on Number of Vertical Lines
2. Select Areas on the Basis of SPUE
3. Select Areas on the Basis of Co-Occurrence



Scenario 1: Vertical Lines

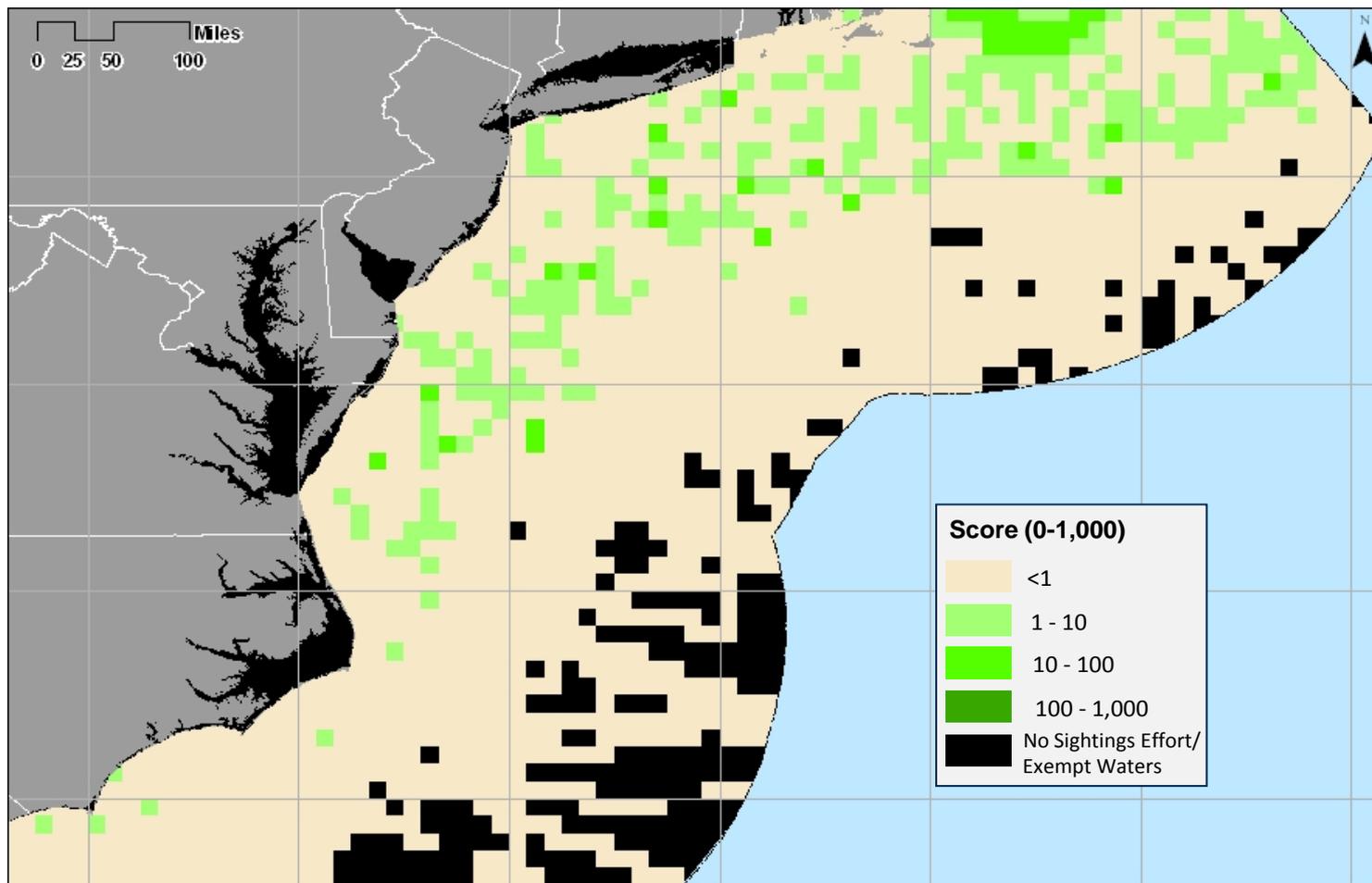
Average Number of Vertical Lines ~ All Fisheries





Scenario 2: Select Area on Basis of Whale SPUE

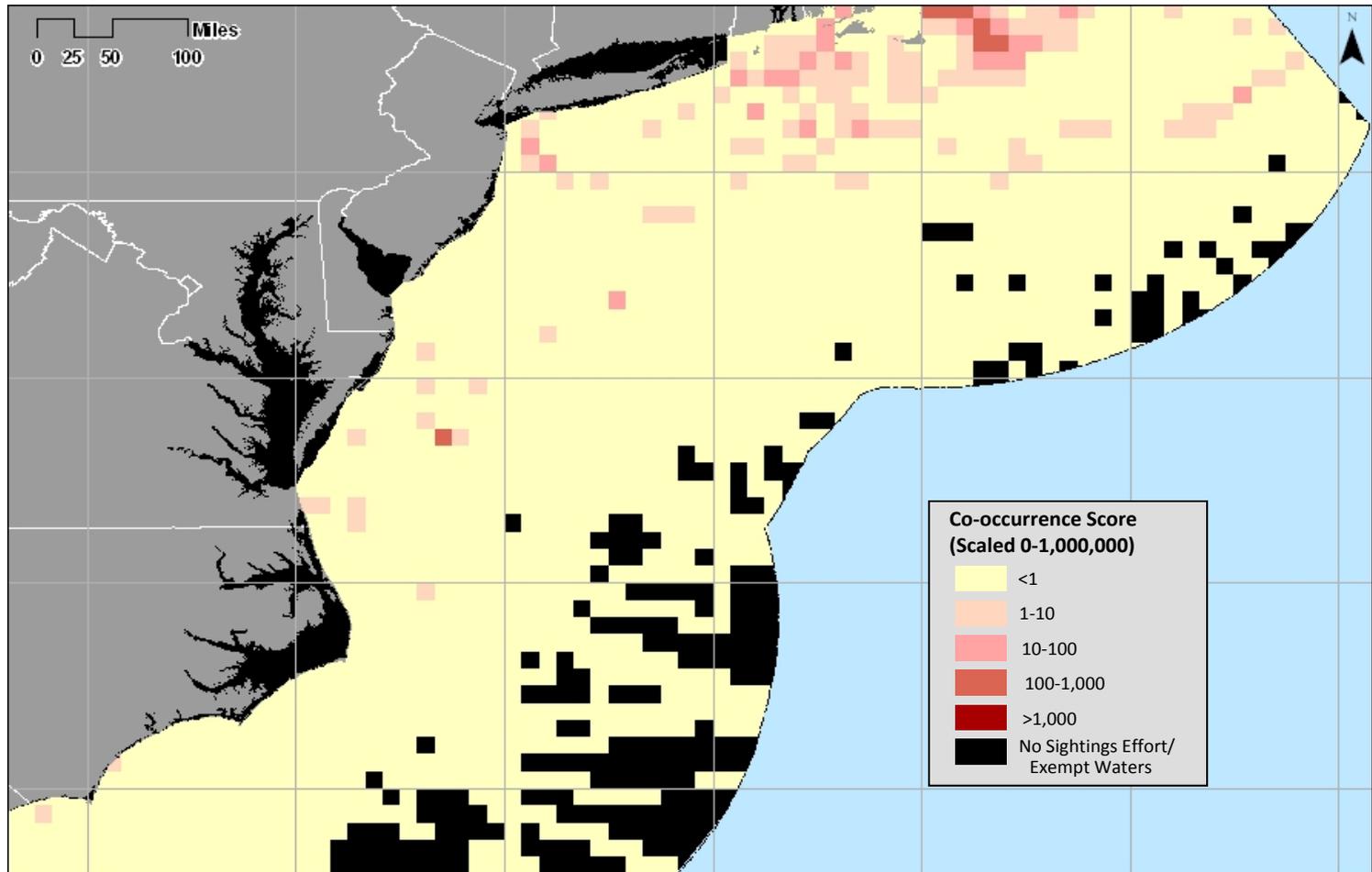
Average SPUE ~ All Fisheries, All Whales





Scenario 3: Select Area on Basis of Co-occurrence

Average Co-Occurrence ~ All Fisheries, All Whales





Mid Atlantic Conclusion

- No areas are identified as high “risk” due to density of lines, density of whales and/or co-occurrence index
- Recommend:
 - Gear marking
 - Reporting on effort, location, season, gear configuration