

Considerations for Navigational Safety in the Marine Planning Process

15th Biennial Harbor Safety Committee and Area Maritime Security Committee Conference

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26 AUG 2014



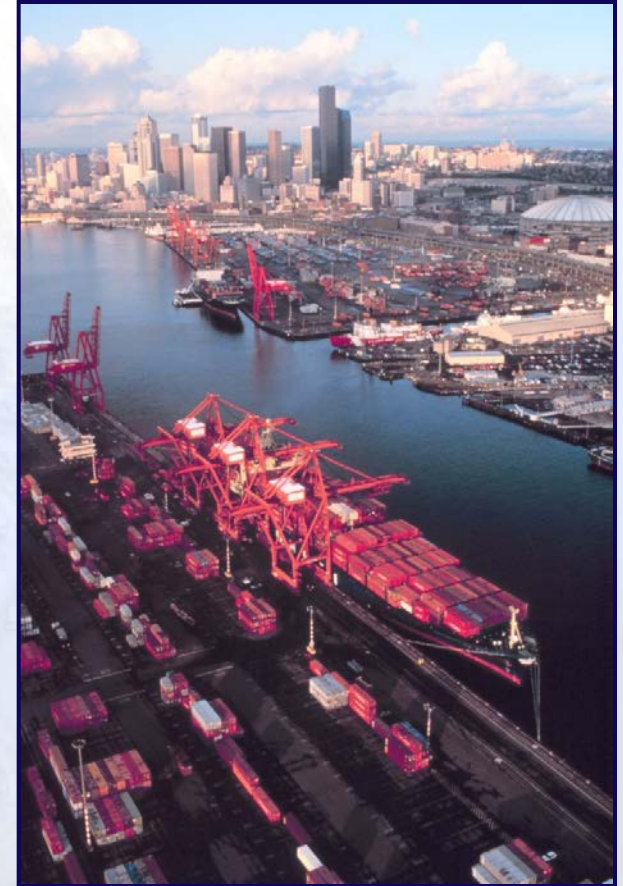
Coast Guard's Role as a Cooperating Agency

- CG responsible to waterways users for safe and efficient operation of the Marine Transportation System (MTS)
- BOEM consultation w/ Coast Guard
 - Safety of Navigation
 - Traditional uses
 - Impact to CG missions
- Navigational Safety Risk Assessment required of the developer



Value of the Marine Transportation System

- More than 90% of the world's trade is carried on the water
- Carries 78% of all U.S. international trade
- Transports 66% of all U.S. crude oil
- Contributes \$742 billion annually to U.S. GDP
- 51,000 port calls by 7,500 foreign ships





Impacts to Navigation

Safety

- Δ Vessel Density (collisions)
- Δ Allisions w/ fixed objects
- Δ Weather & Environs



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Impacts to Navigation

Safety

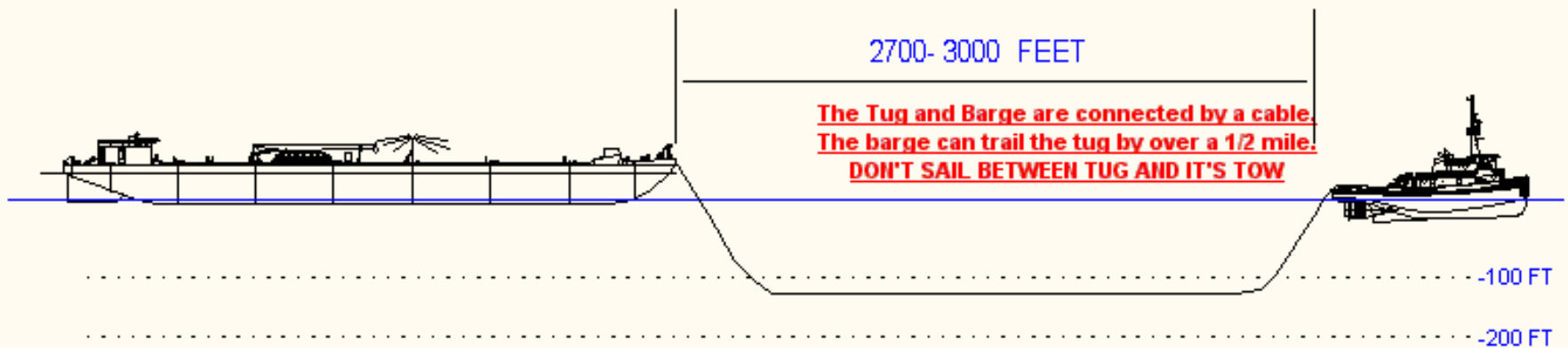
- Mixing Vessel Types
- Complexity of vessel interactions
- Decreased Sea Room





WATCH FOR BARGES AT SEA

APPROX. SPEED 7 - 10 KTS





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	



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1.0 NM	Minimum distance from TSS	Medium	YELLOW
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> 2 NM from route would be low risk except near a TSS



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**5 NM is the minimum distance
to the entry/exit of a TSS**



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At 2 NM from route COLREGS becomes less challenging



Other Guidelines

- **German Guidelines-** A distance of at least 2 nautical miles plus a 500 m safety zone is necessary between the traffic separation areas and the wind generators.
- **World Shipping Council-** A minimum distance of 2NM from traffic lanes. Increase distance as vessel speeds increase.
- **CESMA-** Minimum distance equals distance to comply with COLREG 0.3NM+ 2NM+ 500m



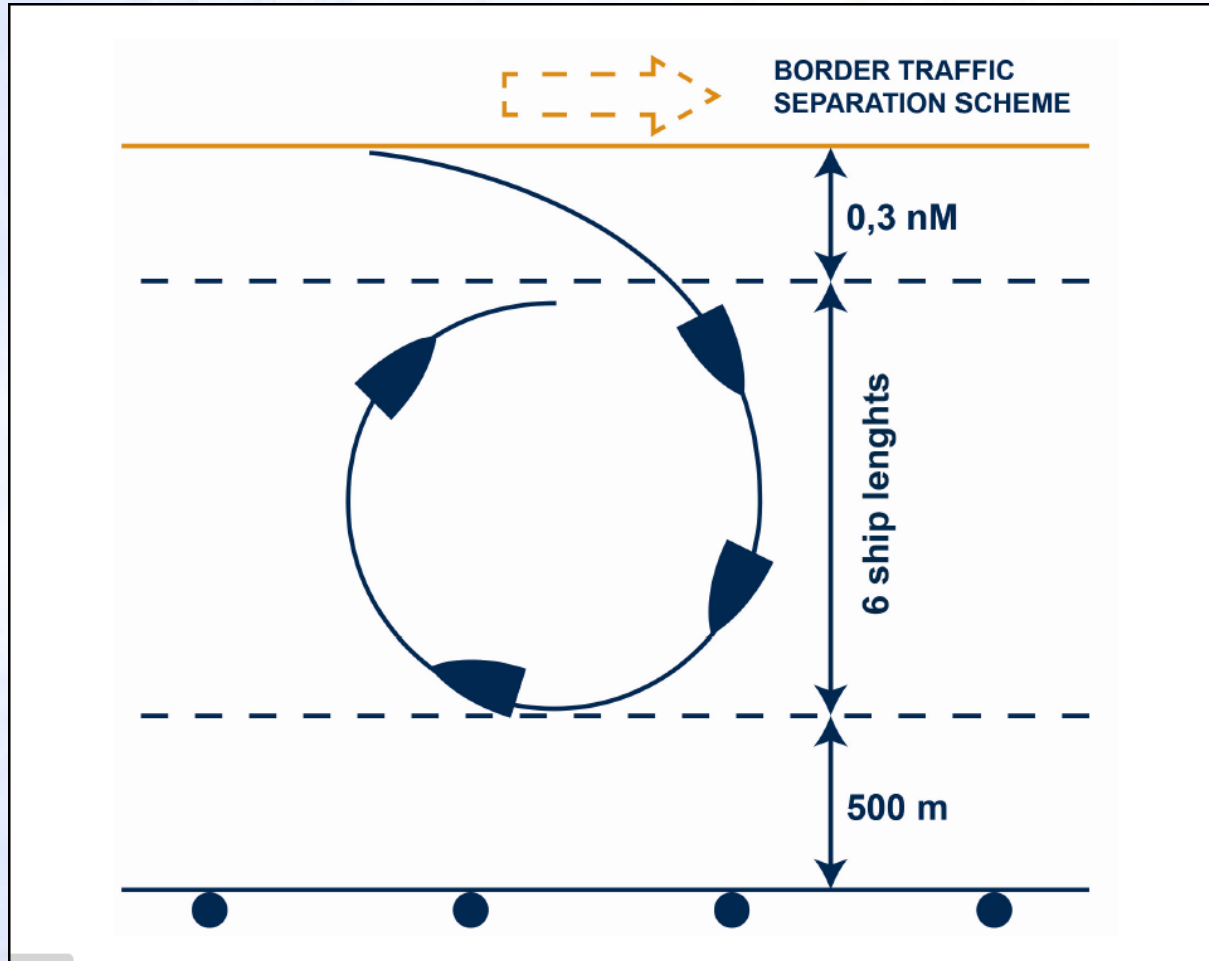
International Regulations and Guidelines



1. General Provisions on Ships' Routeing of International Marine Organization (GPSR)
2. United Nations Convention on the Law of the Sea (UNCLOS)
3. International Regulations for Preventing Collisions at Sea, 1972, as amended: (COLREG)

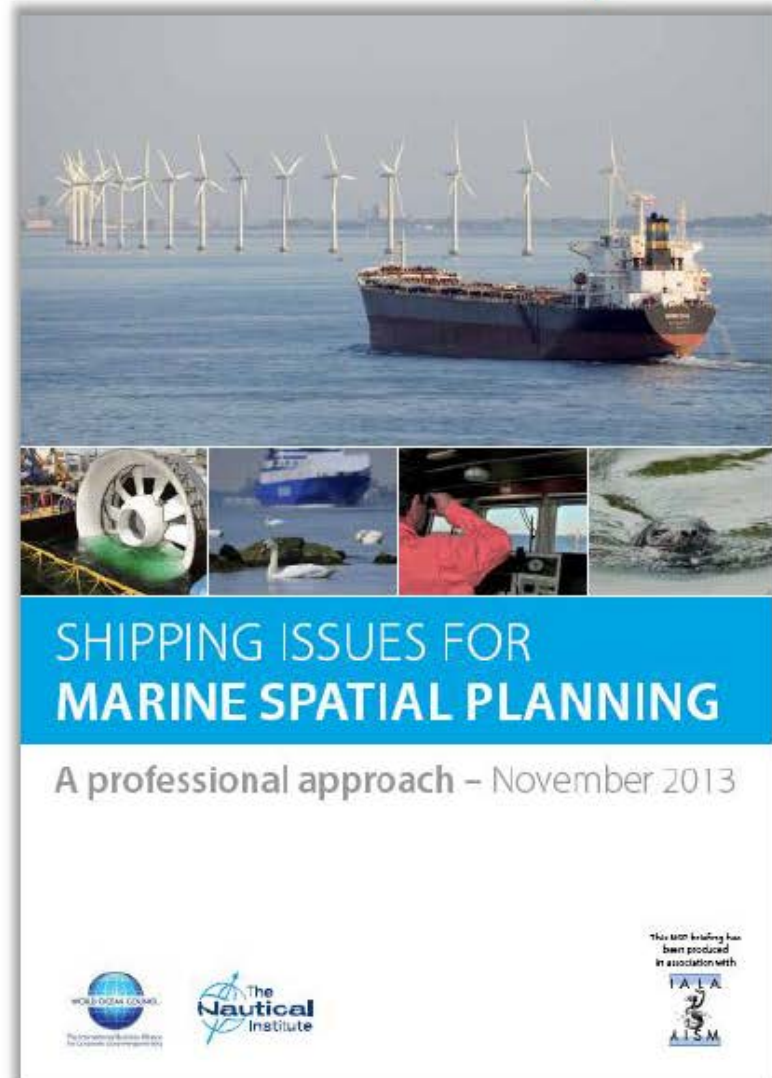


Confederation of European Shipmasters' Associations (CESMA)



Required Room for a Full Round Turn

- ▶ Visit www.nautinst.org/msp
- ▶ Free download
- ▶ Promote within your community
- ▶ Feedback for 'version 2.0'



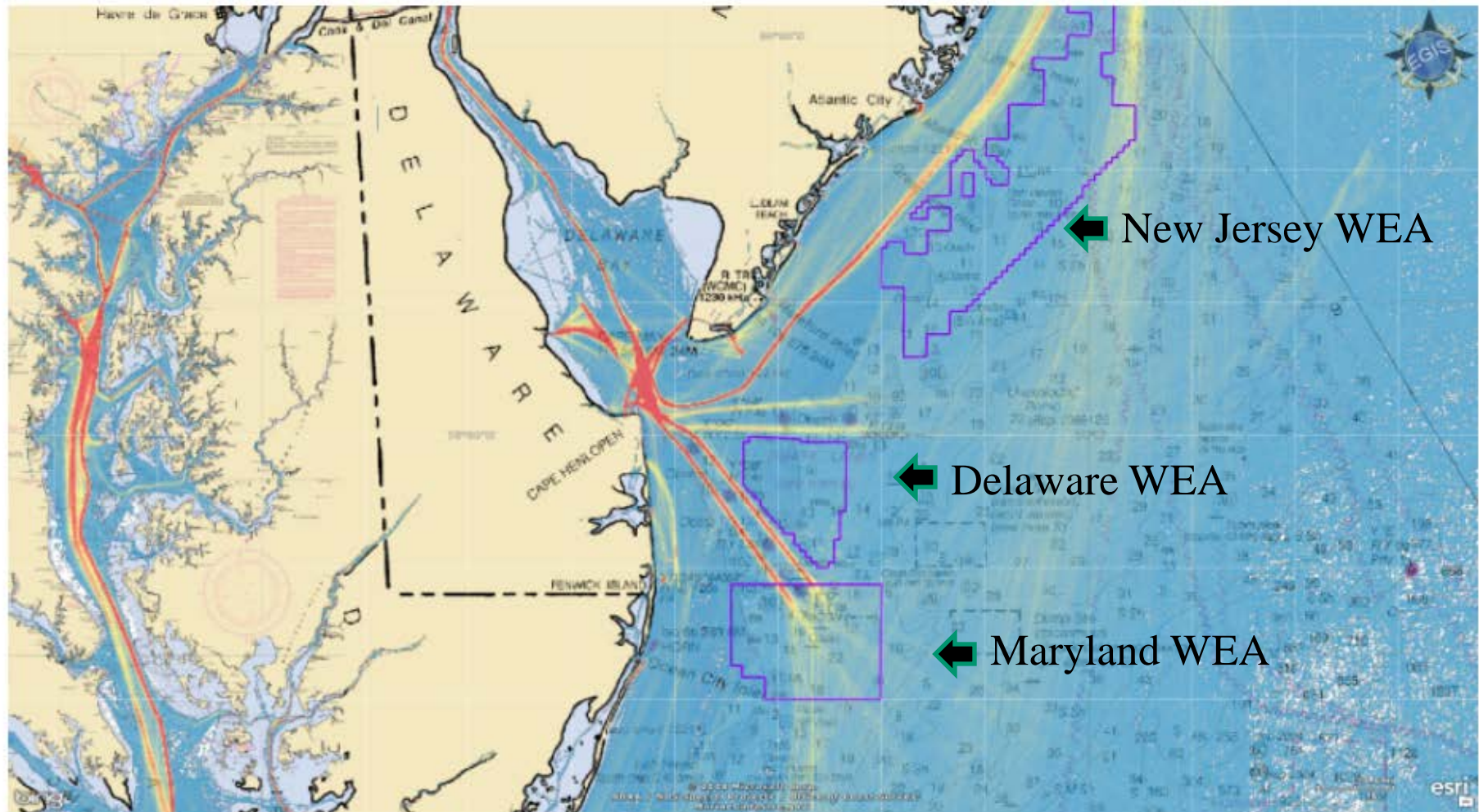


“Smart from the Start”



- Accelerated leasing process
- Identify priority wind energy sites- areas most suitable for development
- Individual State Task Forces
- Environmental Assessments for leases are limited to site assessment activities
- Environmental Impact Statement conducted for final approval of construction and operations plan

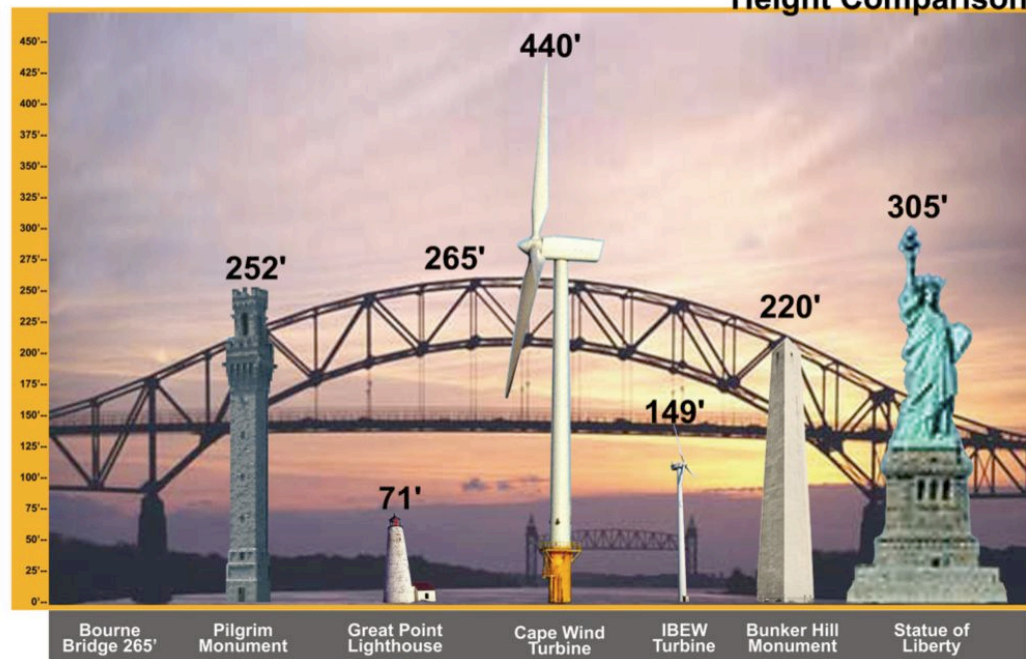
Delaware Bay Entrance with Initial WEAs



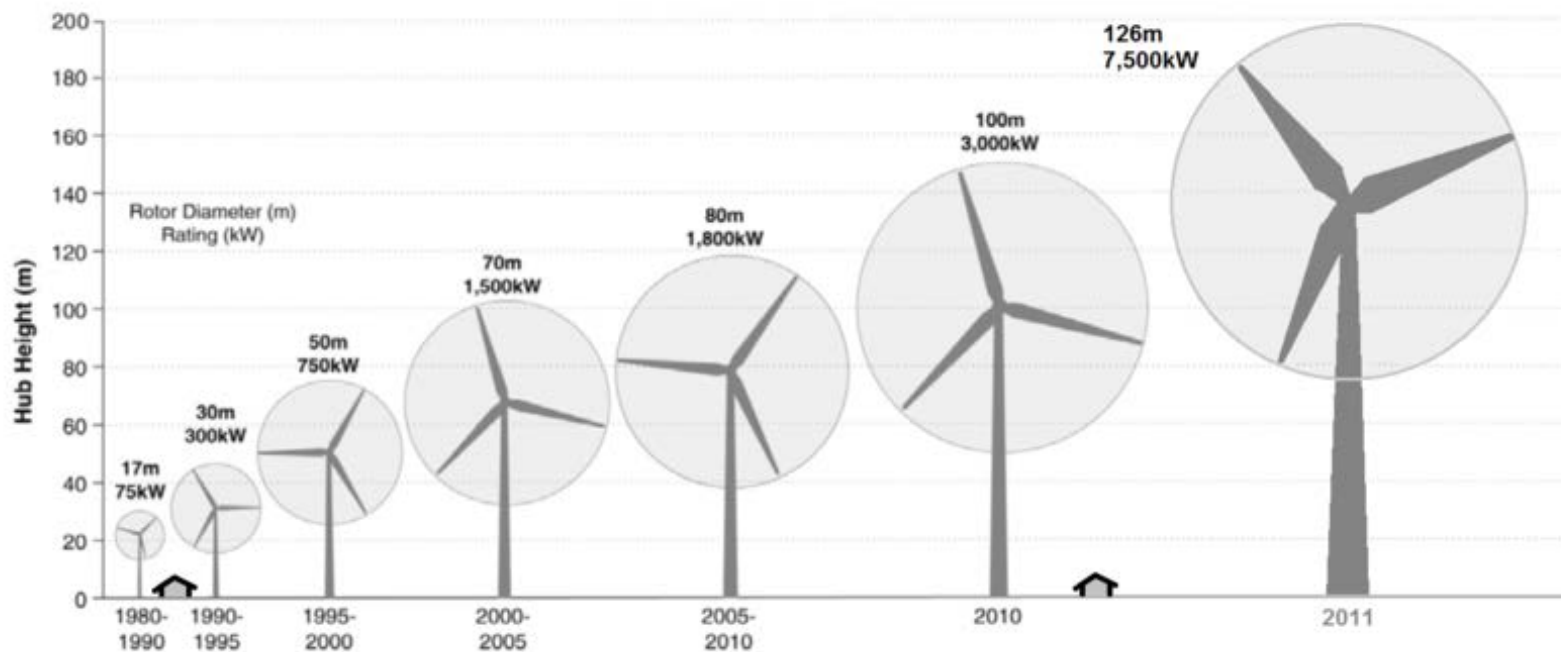
Wind Criteria using proven technology

1. < 30 meter water depth
2. Near population (load) centers
3. Within 30 miles of tie-in point

Height Comparison



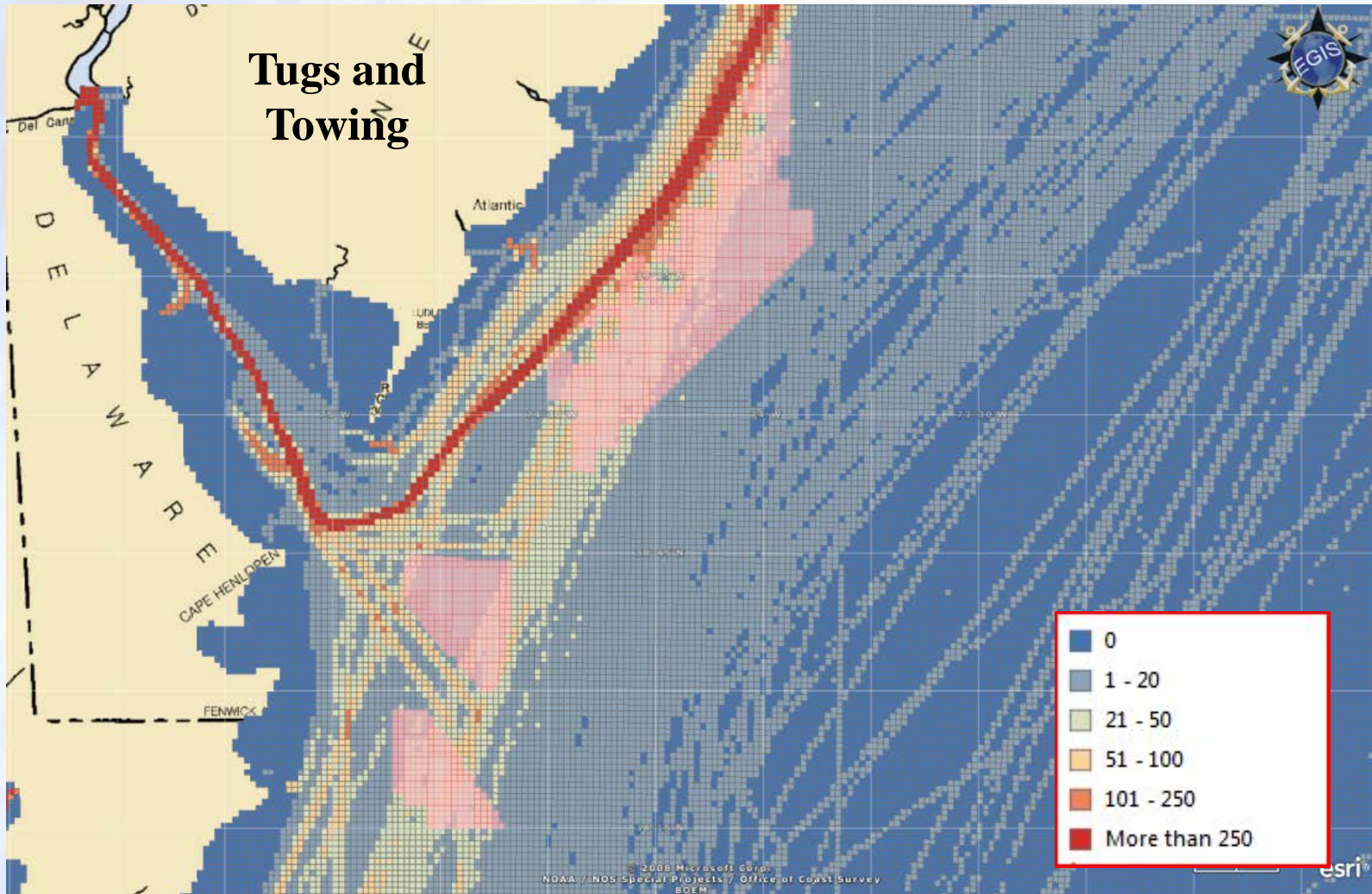
SAVE OUR SOUND
Alliance to protect nantucket sound







Remaining Conflicts





Ongoing Challenges



- WEAs moving forward without addressing navigation
- State by State approach
- Inconsistent process from one state to the next
- Developers are under impression all conflicts are addressed prior to leasing
- Lack the modeling and analysis tools to calculate changes in risk and cumulative impacts



Recommendations

- Address navigation early in the process along with other conflicts...consistent with the “Smart from the Start” approach.
- Identify navigation corridors necessary to ensure safety of navigation for all vessels along the coast.
- Better engage industry to identify areas compatible for both wind and navigation.



ACPARS Status

- Modeling and Analysis
- Marine Planning Guidelines
- Continue engagement with BOEM regarding addressing navigation in leasing process
- Navigation Safety Corridors



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

Proceedings Magazine

<http://www.uscg.mil/proceedings/>



Backup Slides



Future Considerations

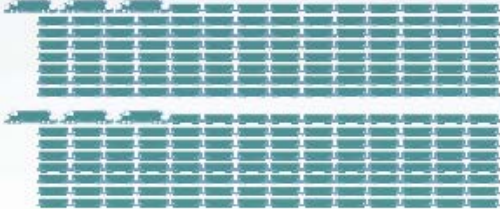
Marine Highways

Maritime = Safer, More Efficient, Greener

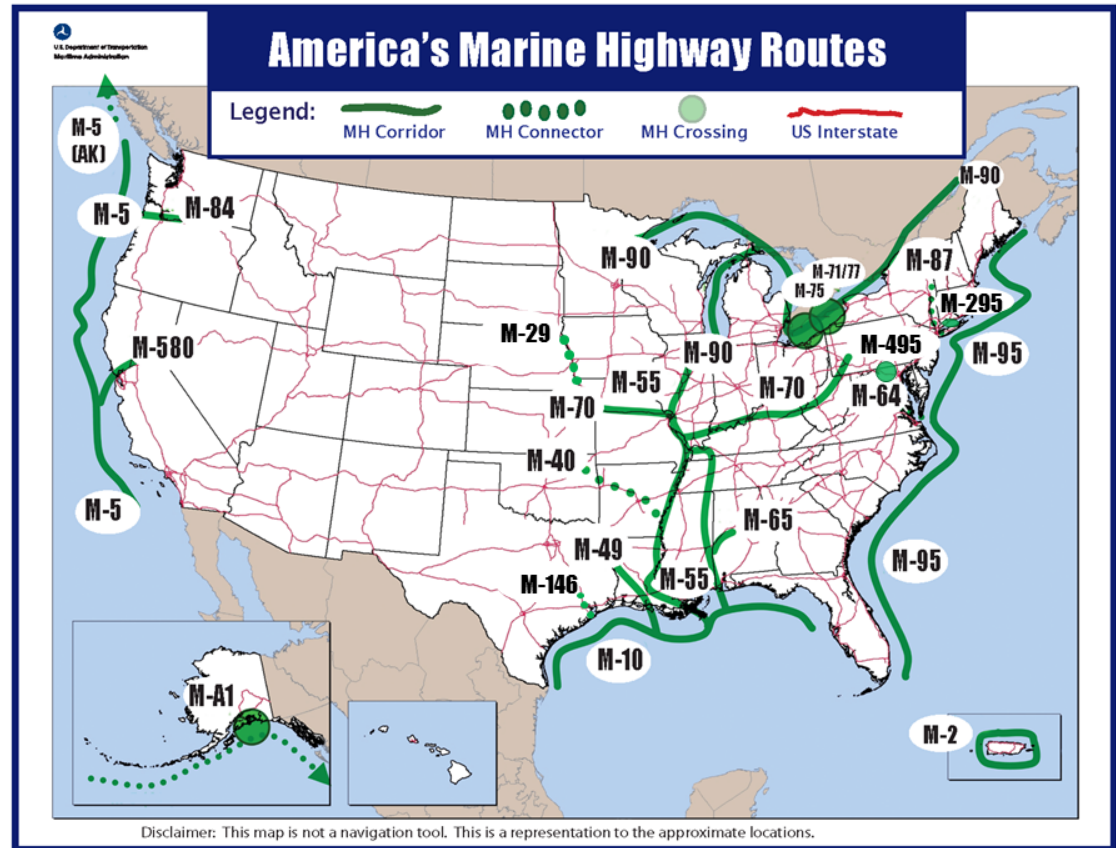
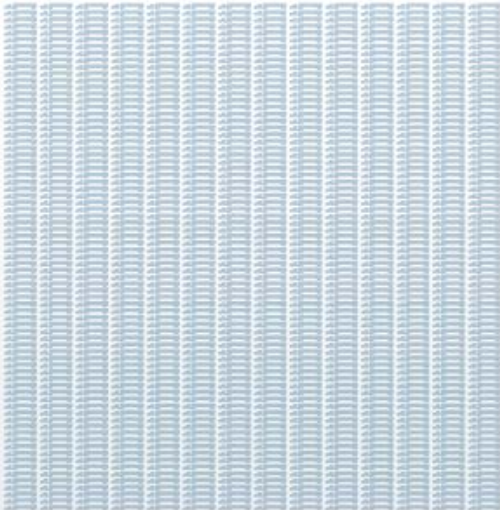
One 15-Barge Tow



216 Rail Cars + 6 Locomotives

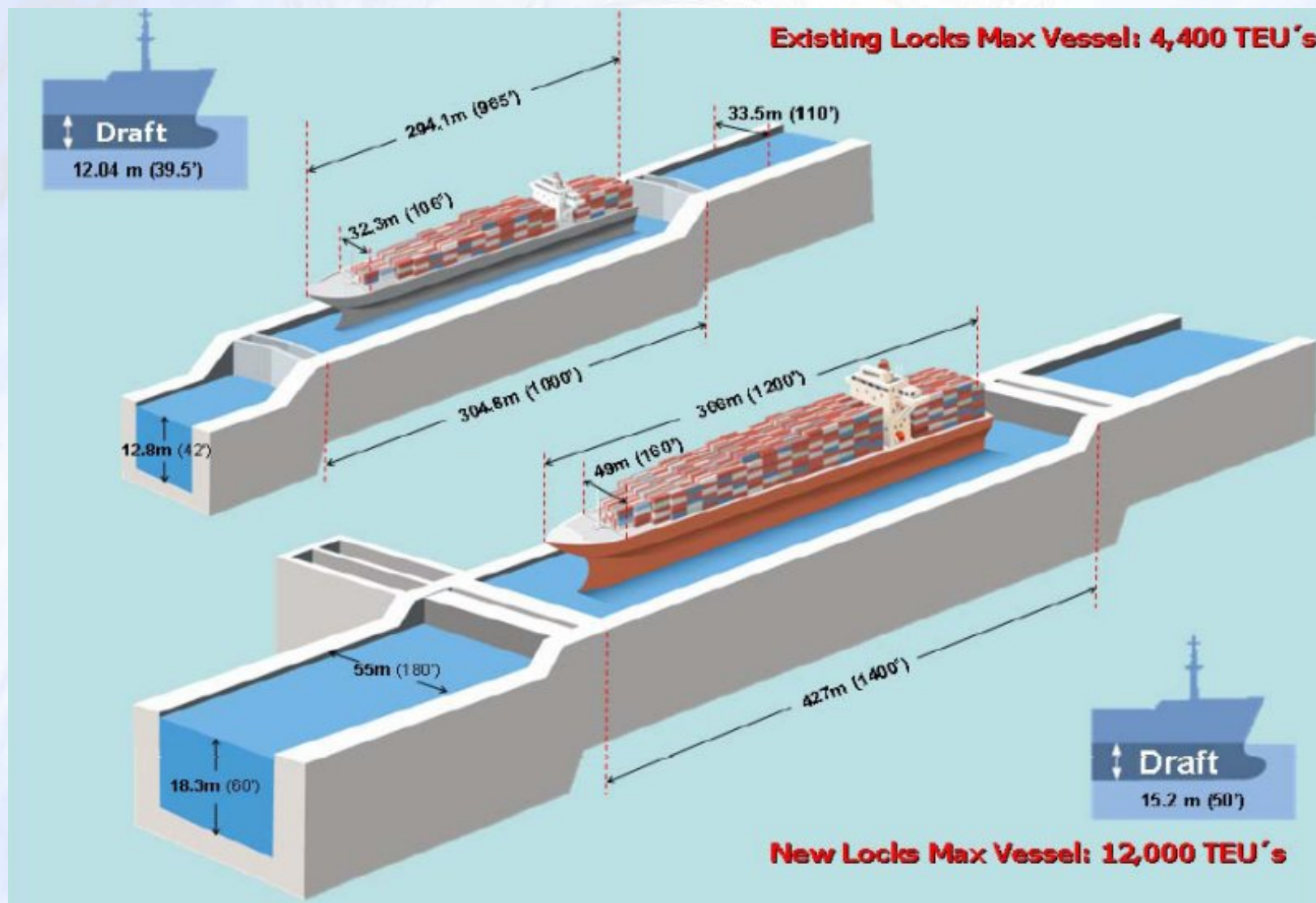


1,050 Large Semi Tractor-Trailers





Future Considerations Panama Canal Expansion



BOEM Four Stage Process

