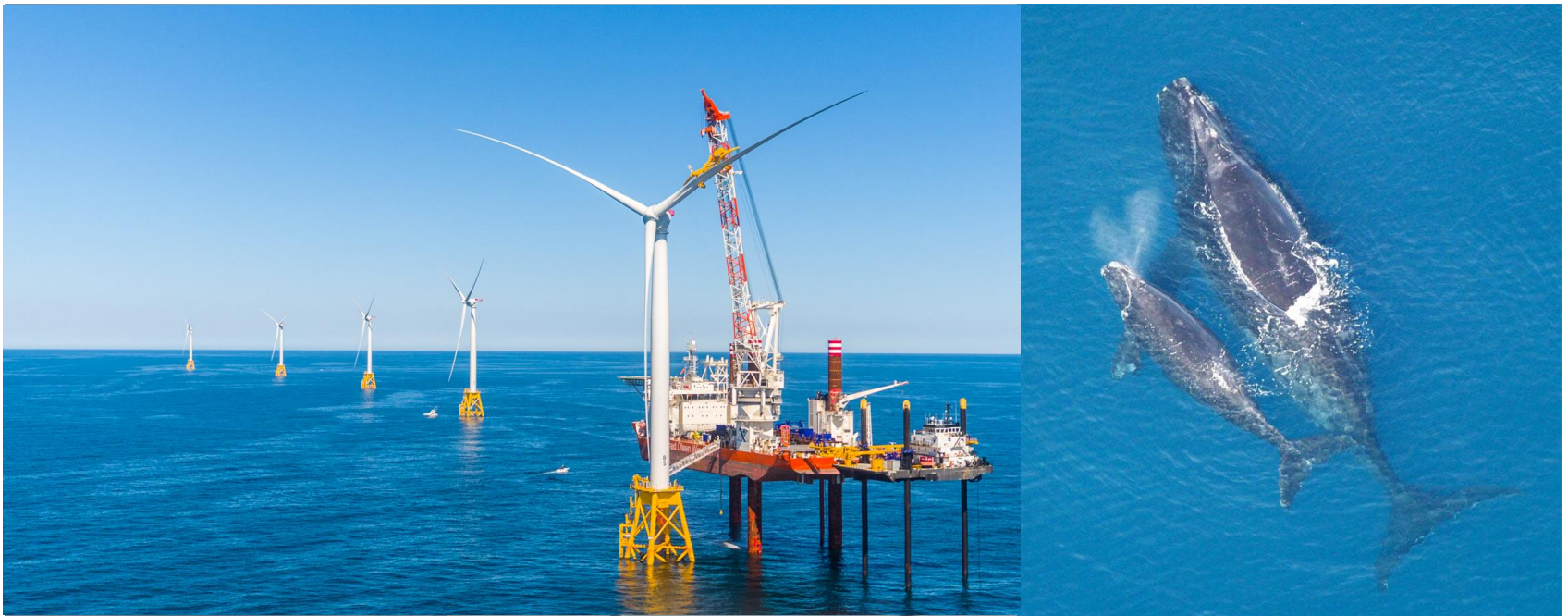


NGO Perspectives on Conservation Priorities for Protected Species



Catherine Bowes, *National Wildlife Federation*
Michael Jasny, *Natural Resources Defense Council*
Howard C. Rosenbaum, *Wildlife Conservation Society*

BMP Workshop for Atlantic Offshore Wind Facilities
March 7th, 2017

Environmental concerns across a range of species and habitats

Species concerns

- ▶ Vessel collisions
- ▶ Noise from pile driving
- ▶ Short and potential long-term displacement from important habitat
- ▶ Cumulative impacts

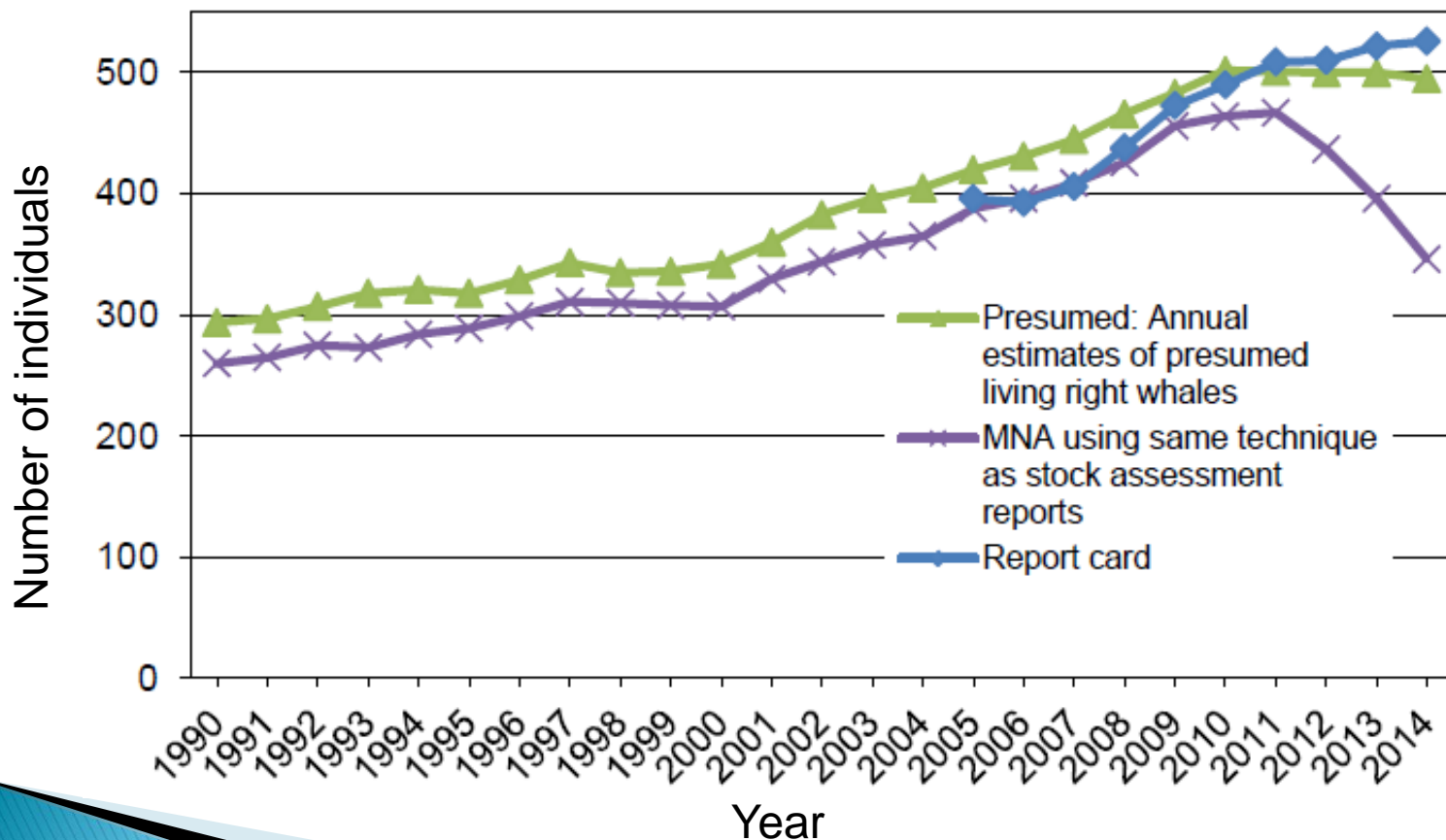
Habitat concerns

- ▶ Benthic habitat loss and/or modification
- ▶ Changes in turbulence and structure of the water column (prey base?)

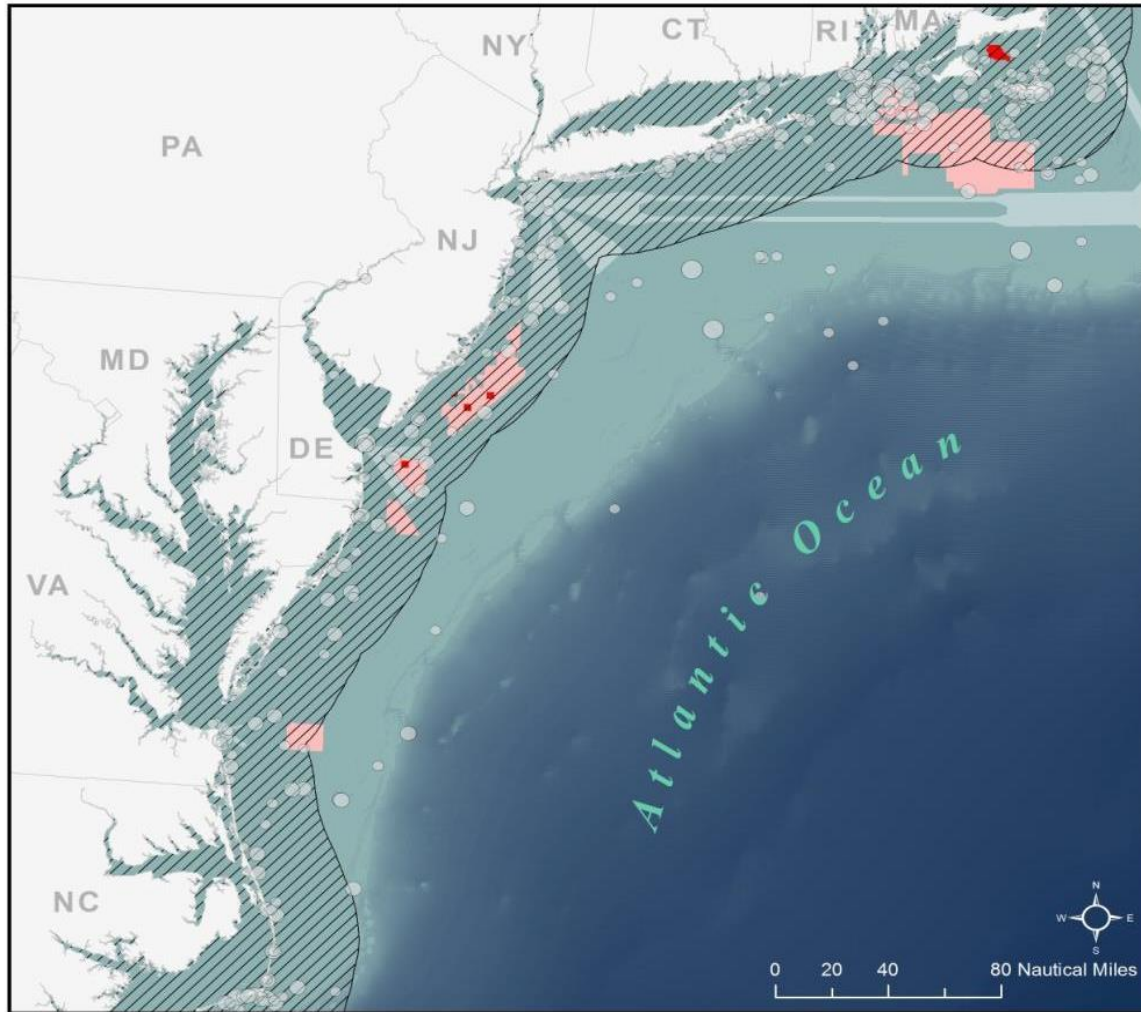


Working collaboratively to meet these challenges: Developing NARW mitigation measures

NARW are highly endangered and recent data indicates they are in decline:



Working collaboratively to meet these challenges: Developing NARW mitigation measures

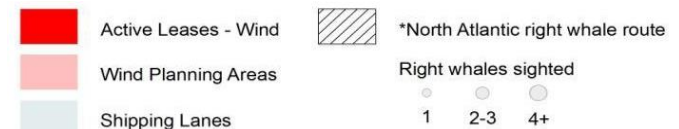


The NARW's limited range directly overlaps with a number of WEAs:

Northeast seasonal foraging

Mid-Atlantic migration

Southeast calving habitat



*The North Atlantic right whale route for the mid-Atlantic was created by measuring the distance of whale sightings to shore during the time of migration through the region (Nov-Apr). An area covering one standard deviation from the mean distance was created to encompass 95% of whale sightings.

Data sources: Right Whale Consortium Database, 1762-2010
Projection: NAD 83 UTM 19 N

Working collaboratively to meet these challenges: Developing NARW mitigation measures

- ▶ **Goal:** develop mitigation measures to **protect** the North Atlantic right whale while **facilitating** activities related to offshore wind energy development
- ▶ **Strategies:**
 - Most effective mitigation for NARWs is to separate development activity from animals
 - Special attention to moms and calves
- ▶ **Scope:**
 - First phase of development: site characterization and assessment (e.g. some mid-Atl, RI/MA WEAs)
 - Second phase of development: construction (e.g. Block Island)

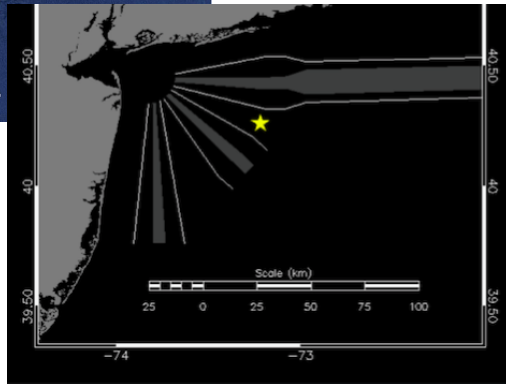


Mutual benefits from the agreements for protected species and industry



- ✓ **Reduces** co-occurrence of protected species with development activities
- ✓ **Provides** flexibility to developers
- ✓ **Proactive** step to remove a roadblock to development early on

Important considerations and solutions



daily analyst review:

Date	Sei whale	Fin whale	Right whale	Humpback whale
03/06/2017				
03/05/2017				
03/04/2017				
03/03/2017				
03/02/2017				
03/01/2017				
02/28/2017				
02/27/2017				
02/26/2017				
02/25/2017				
02/24/2017				
02/23/2017				

▶ Data gaps in species distribution

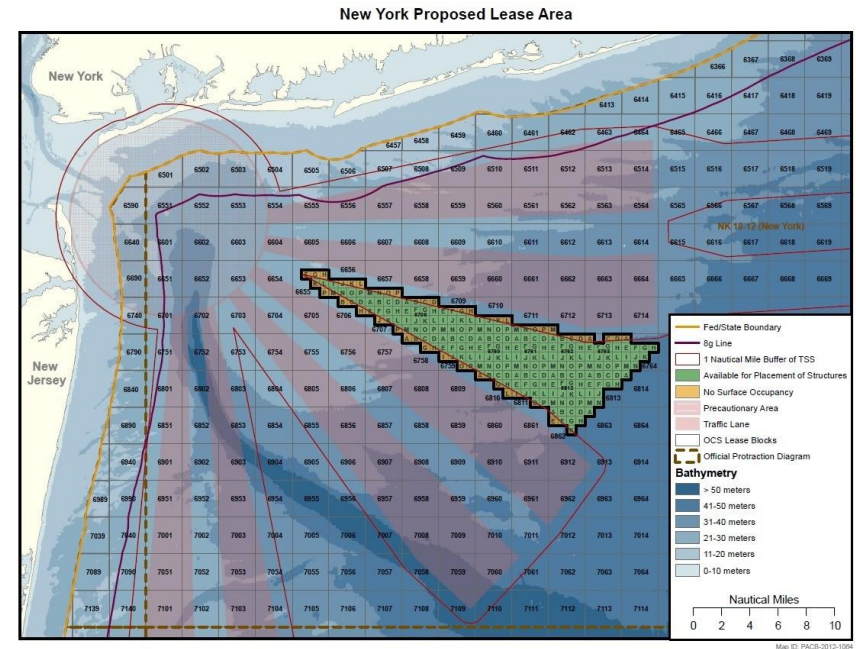
- ▶ Consideration & integration of multiple data sources (e.g. BOEM/MA CEC data, potential for NY)
- ▶ Recommendations on environmental baselines (e.g. Nowacek et al. 2016)
- ▶ Data & BMPs needed for other species, particularly resident populations

▶ Little data on the impacts of OW on marine species

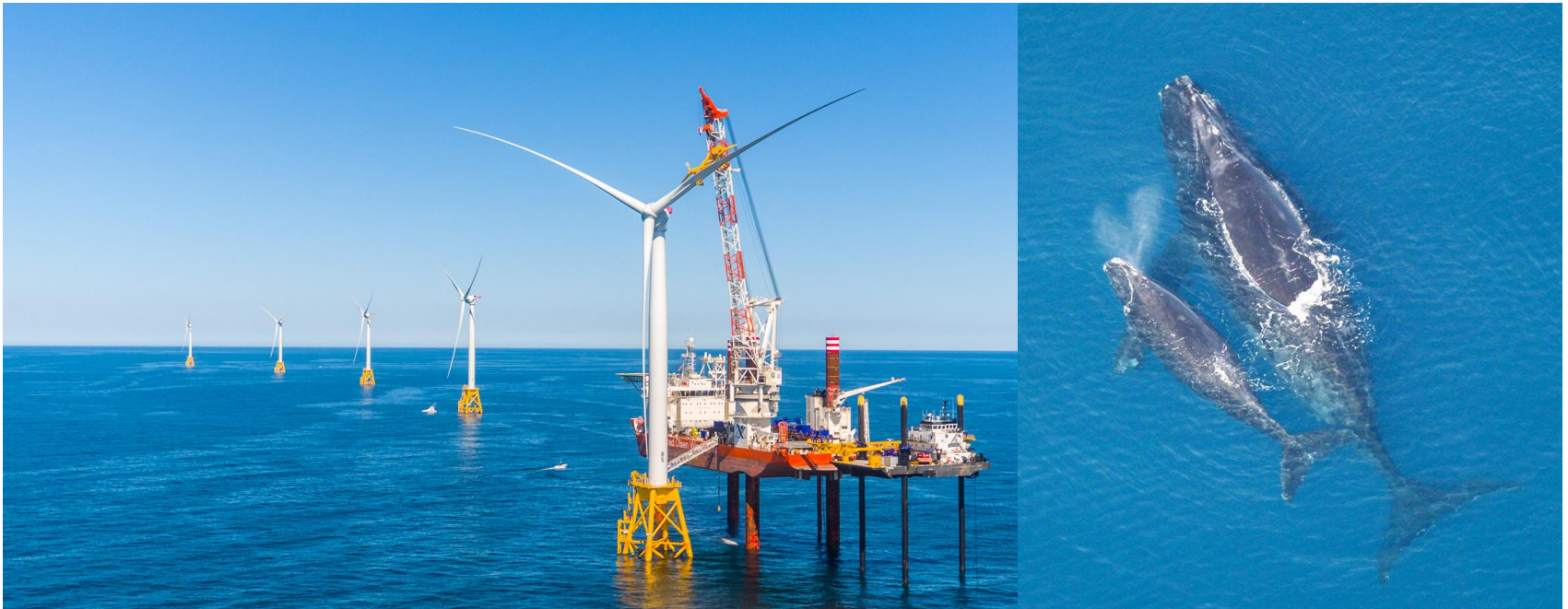
- ▶ Precautionary operating conditions based on best available science
- ▶ Adaptive management, with monitoring & data sharing
- ▶ New technologies to reduce noise/impacts at the source

Important considerations and solutions

- ▶ **Cumulative impacts require in-depth evaluation to inform alternatives**
 - ▶ Interacting stressors (e.g. habitat displacement into shipping lanes)
 - ▶ Across multiple WEAs at varying stages of the development pipeline
- ▶ **Scope of environmental assessments need to analyze long-term impacts**
 - ▶ Population consequences (e.g. long-term impacts of stress on health and fitness)
 - ▶ Ecosystem-level impacts (e.g. larval dispersal, habitat modification, etc.)



Thank you!



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