Right Whale Mitigation for Wind Farm Site Assessment and Characterization

May 6, 2015

Presentation objectives

- Provide background on the agreements
- Present and discuss the mitigation measures in the agreements
- Discuss benefits of the agreements

A Collaborative Effort

These measures are the result of a collaborative discussion on how to mitigate right whale impacts in specific Wind Energy Areas.

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Background

- **Goal:** develop mitigation measures to protect the North Atlantic right whale while facilitating site and assessment and characterization activities related to offshore wind energy development

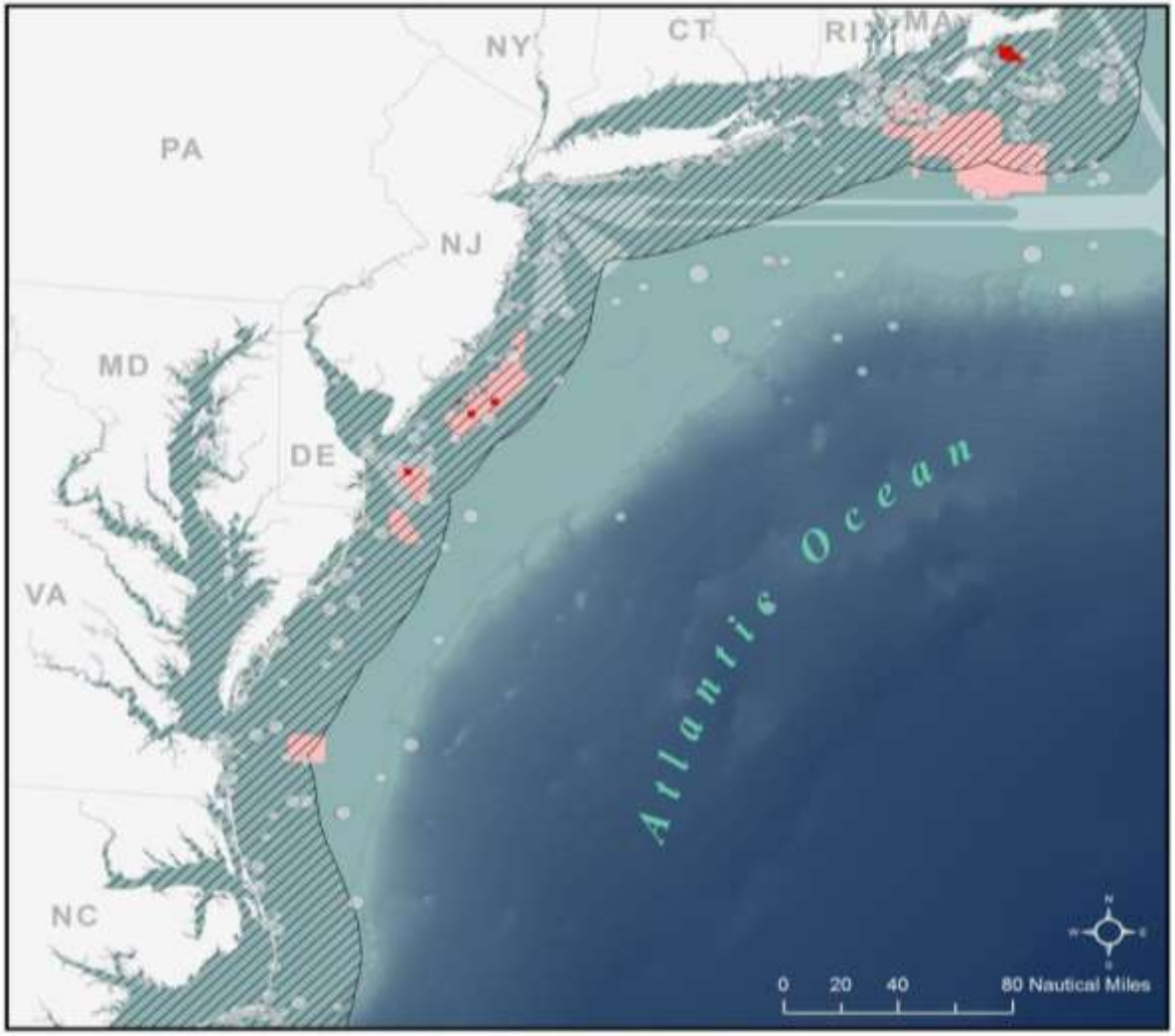
- **Scope**:

  -First phase of development: site characterization and assessment

  -Separate agreements for mid-Atlantic and RI/MA Wind Energy Areas

  -Special attention to moms and calves

WEAs and the North Atlantic right whale



Mid-Atlantic right whale migration (Nov.-Apr.) overlaps with mid-Atlantic Wind Energy Areas

Right whale foraging occurs seasonally within RI/MA Wind Energy Area; also possible use for migration

Map: New England Aquarium

Key Concerns to Address

- **Conservation**: minimize impacts on right whales
  - Most effective mitigation is to separate activity from animals
  - Focus on effective mitigation for specific threats: near-source injury, displacement into higher-risk areas, and ship-strikes
  - Provide for adaptive management in light of limited existing data and current systematic survey efforts

- **Development**: ensure efficient site assessment/ characterization
  - Preference to avoid bad weather months (good for right whales)
  - Focused discussions on the need for flexibility
  - Proactive step to remove a potential roadblock to offshore wind development early in the process

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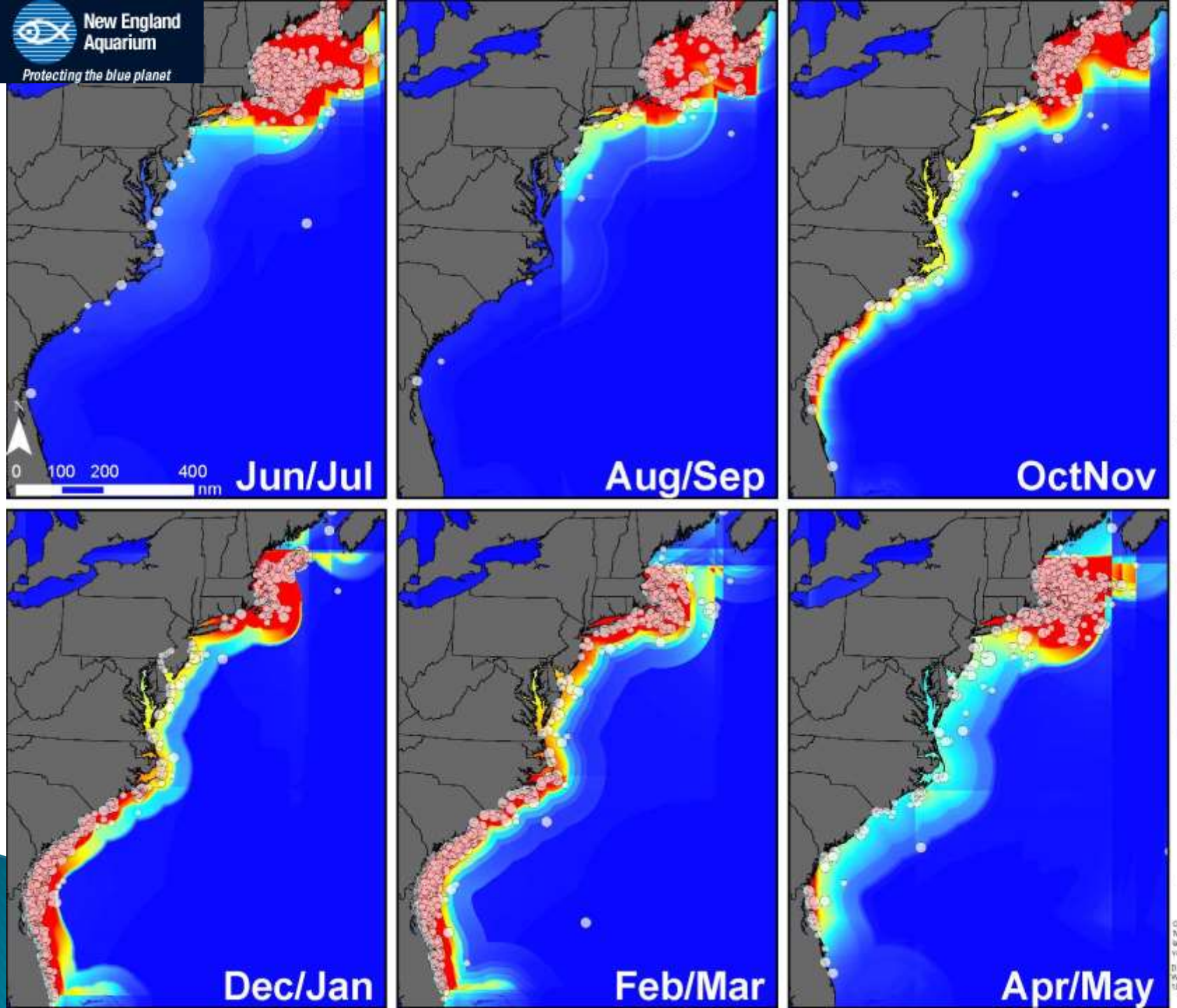
Predicted Right Whale Distribution



Agreement: Traffic Light Scheme

- **Key Goal**: minimize activities when whales are most likely to be present and enhance mitigation at other times
- Traffic light approach in RI/MA:

	Pile Driving	***Sub-bottom Profiling***
Red	**Nov. 1 – Apr. 30**	**Feb. 1 – Apr. 30**
Yellow	**May 1 – May 14**	**May 1 – May 14**
Green	**May 15 – Oct. 31**	**May 15 – Dec. 31**
Yellow		**Jan. 1 – Jan. 31**

Agreement: Traffic Light Scheme

- **Key Goal**: minimize activities when whales are most likely to be present and enhance mitigation at other times
- Traffic light approach in mid-Atlantic:

Green	**May 1 – October 31**
Yellow	**March 22 – April 30; November 1 - 22**
Red	**November 23 – March 21**

- No sub-bottom profiling or pile-driving allowed during the Red Period; other activities, such as biological surveys, can occur
- These activities can occur during the Green Period with some additional mitigation/ monitoring beyond that contained in BOEM's EA
- Additional protective measures during the Yellow Period

Measures During Yellow Period

- A *10-knot speed restriction* applies to all vessels associated with site assessment and characterization activities, including survey vessels as well as support vessels, operating in and transiting to and from the Wind Energy Area
- The developer is required to use *best commercially available technology* to reduce and attenuate noise from pile-driving, unless such technology is prohibitively expensive for the project.
- The agreement clarifies BOEM requirement as to the number of dedicated, NMFS-approved *visual observers* needed:
  - A minimum of 4 observers (2 on/2 off) at each pile driving site
  - A minimum of 2 observers (1 on/1 off) required at each sub-bottom profiling site
- During pile-driving, the developer will either conduct *aerial surveys* on the south side of the pile-driving site (Mid-Atlantic WEA) or real-time passive acoustics will be used to monitor within at least a 20km radius of the pile-driving source (RI-MA WEA).

Measures During Yellow & Green Periods

Yellow Period

Green Period

- The agreement sets a minimum 500m ***exclusion zone*** (the distance originally required by BOEM) for all marine mammals and sea turtles around the sub-bottom profiler, with an exception for bow-riding dolphins

Green Period

- The agreement clarifies BOEM requirement as to the number of dedicated, NMFS-approved ***visual observers*** needed:
  - A minimum of 4 observers (2 on/2 off) at each pile driving site
  - A minimum of 2 observers (1 on/1 off) required at each sub-bottom profiling site

Adaptive Management

- Both the Mid-Atlantic and RI/MA agreements specify that mitigation measures will remain in place for at least four years, at which time the measures may be modified to reflect new information and best practices.
- The RI/MA agreement expresses support for marine mammal surveys of the Massachusetts WEA and Rhode Island/ Massachusetts WEA and say they should acquire at least three years of data which may be used to revise mitigation measures before the four year period specified.

Benefits reviewed

Advantages of the agreements

- ✓ Reduces co-occurrence of right whales with development activities
- ✓ Minimizes impacts especially on the most vulnerable right whale cohort: pregnant females and mom-calf pairs
- ✓ Provides additional monitoring even during periods when right whales are not likely to co-occur
- ✓ Less effect on development since right whale seasonality coincides largely with bad-weather months
- ✓ Provides flexibility to developers
- ✓ Proactive step to remove a roadblock to clean energy development early on

Discussion

Thank you!