

Gulf of Maine Task Force Meeting

# Underwater Sound and Protected Species

## What sounds will be made?

The major sources of noise include geological and geophysical surveys, vessel noise, and construction noise. **Pile driving** is the loudest sound of concern from the project. Not all project-related sounds are expected to be harmful. Some sounds will only be present during pre-construction data collection, construction, or operations over the life of an offshore wind farm.

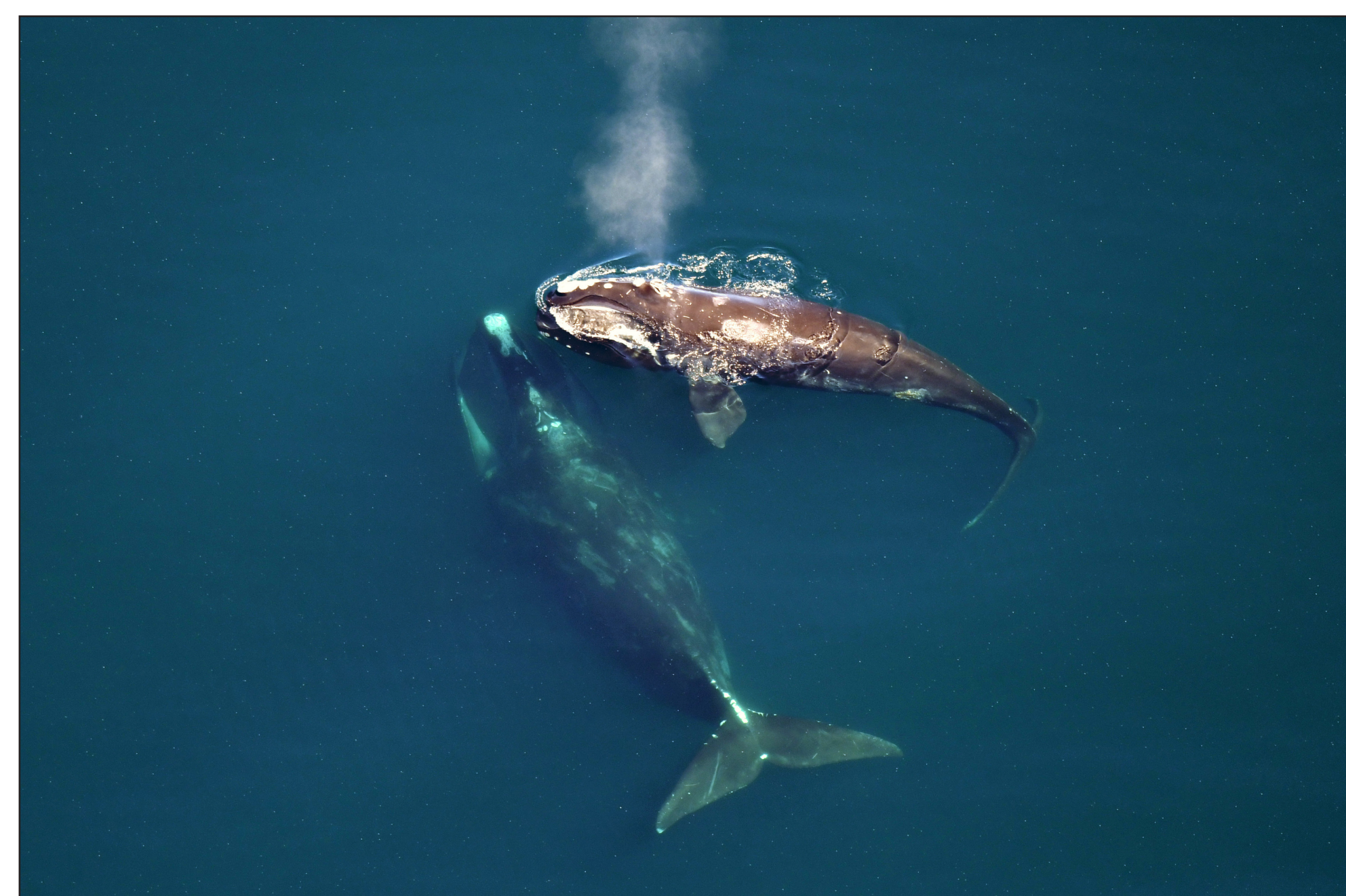


*Studies in European waters show that harbor porpoises may leave an area and feed less when pile driving begins, but generally return within weeks after pile driving activities end.*

## What natural and man-made sounds may be present?

Baseline acoustic studies are needed to characterize:

- Commercial and recreational boats
- Scientific surveys
- Fishing and navigational sonars
- Animal vocalizations
- Wave action, storms



*The endangered population of North Atlantic right whales has been declining and is a species of particular concern in offshore wind development areas. BOEM will work with it's partners to develop appropriate mitigation, monitoring, and reporting conditions for whales and other protected species.*

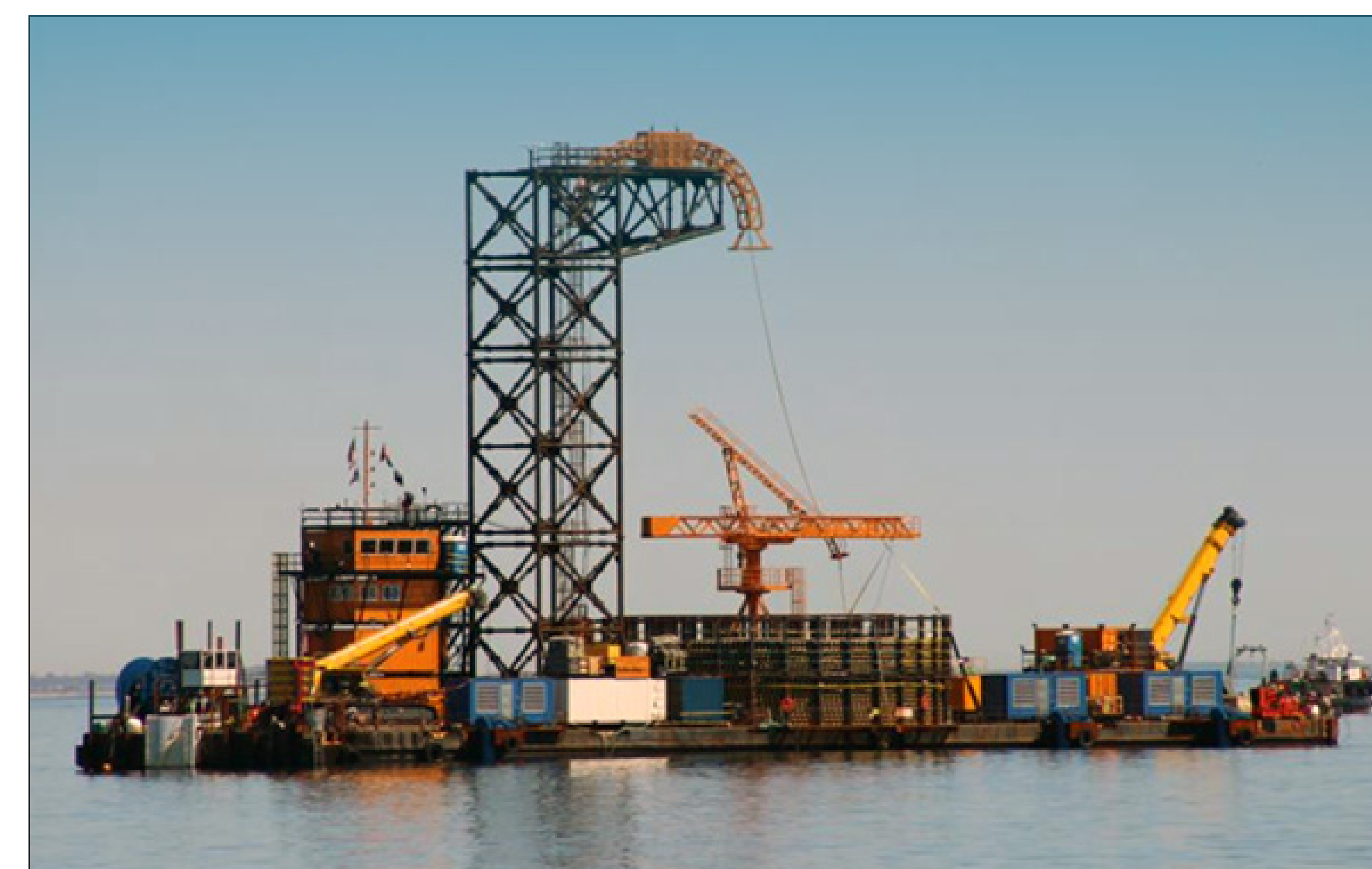
*Photo taken under NMFS permit number 19674.*

## Why is underwater sound an issue of concern?

- Animal communication
- Finding mates
- Navigation
- Feeding (echolocation)
- Avoiding predators/danger
- Man-made impacts to the acoustic habitat
- Public and scientific concern

## PROJECT IMPACTS: What sounds will be made?

Not all project-related sounds are expected to be harmful. Some sounds will only be present during some stages over the life of an offshore wind facility.



*A cable laying vessel installation an electricity transmission cable.*

## What information will inform BOEM assessments?

- Baseline measurements of ambient sound levels
- Technical information on sound sources
- Underwater sound modeling
- Animal movement modeling to assess realistic exposures
- The seasonal occurrence of protected species in the lease area
- Information on animal responses to sound
- NOAA guidance on assessing the effects of sound on marine mammals