



**BOEM** BUREAU OF OCEAN  
ENERGY MANAGEMENT

# Oil and Gas Vessel Strike Risk Analysis: Whales in the Gulf of Mexico with a Focus on the Endangered Rice's Whale

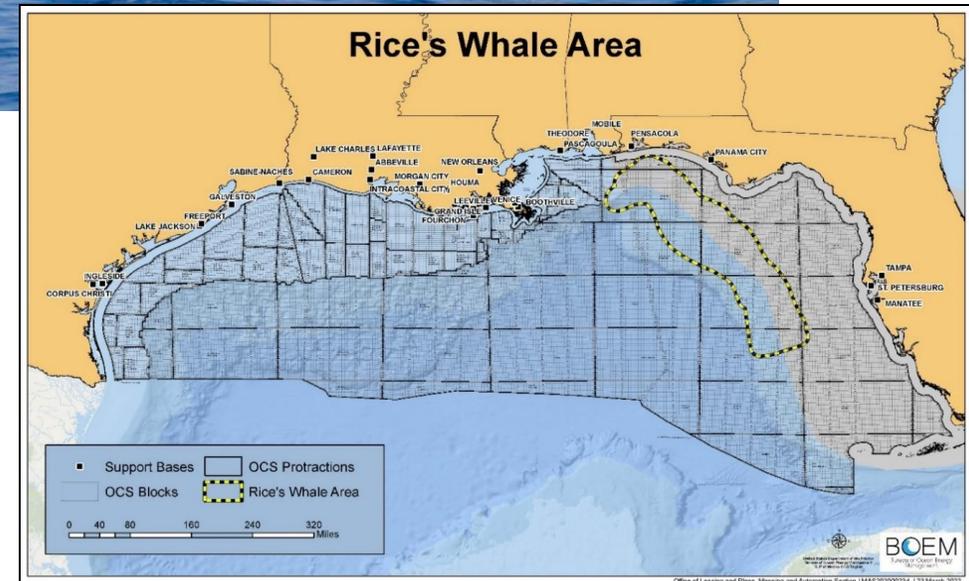
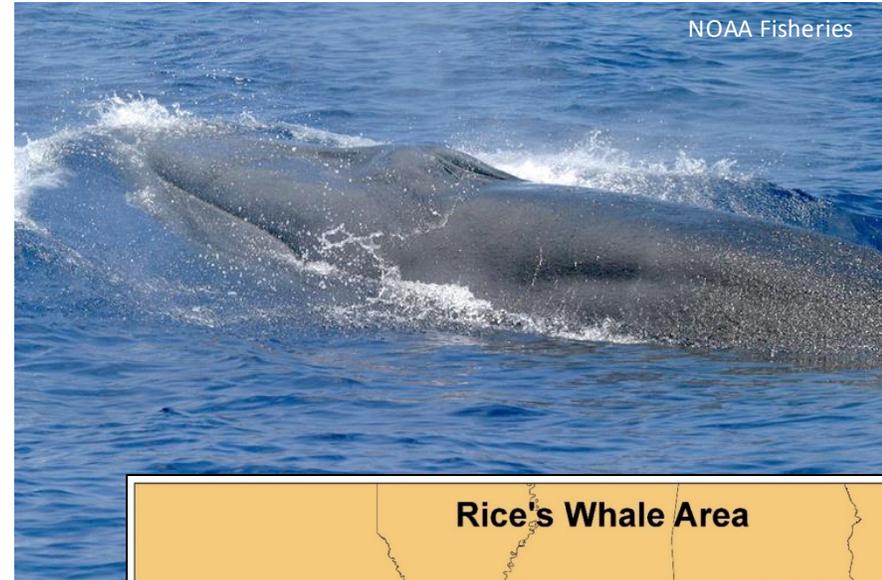
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# Background: Endangered Species Act (ESA)-listed Rice's Whale

- Only resident baleen whale species in the Gulf of Mexico
- Likely fewer than 100 individuals are left
- Daytime diving near the seafloor; nighttime is mainly spent within 50 feet of the surface
- Core distribution area off the west coast of Florida
- Critical habitat designation has been proposed and is near final



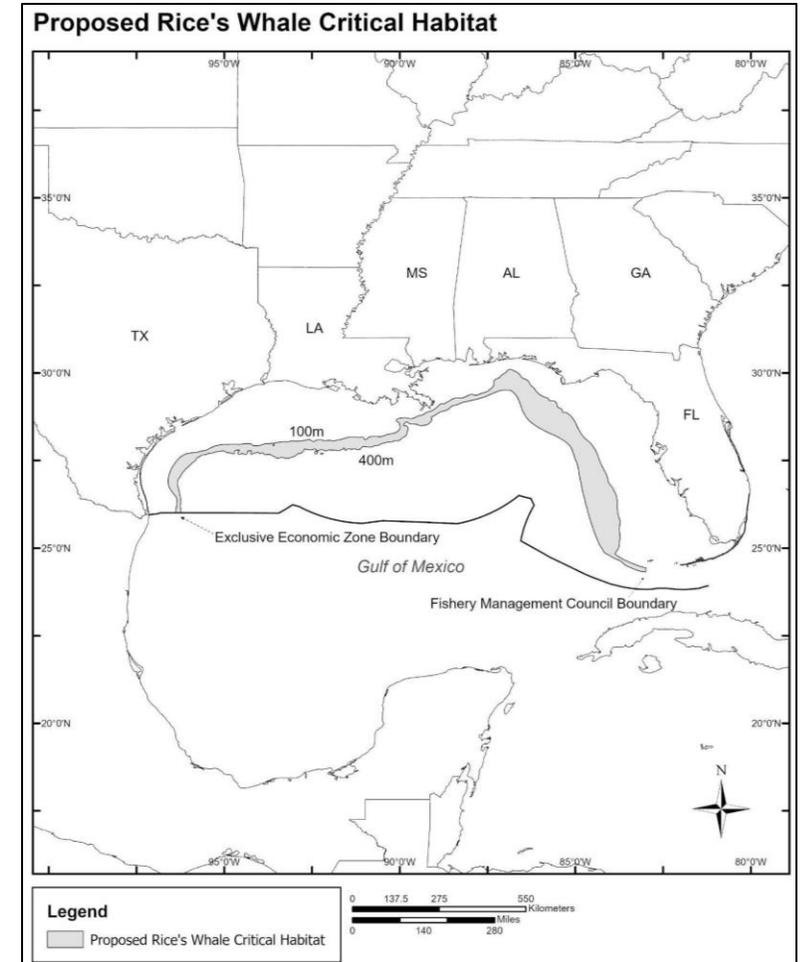
# Background: Oil and Gas Vessel Activity

- Vessels typically used for BOEM-regulated oil and gas activities include barges, support vessels, supply vessels, survey vessels, drillships, pipelaying vessels, etc.
- Best estimates are that oil and gas vessel traffic represents ~20-25 percent of all OCS vessel traffic
- BOEM requires operators to implement ESA-derived mitigations to avoid vessel strikes
  - Requires operators to watch for protected species
  - Establishes minimum separation distances between vessels and species when sighted
  - Restricts speed and nighttime passage through the Rice's whale area in the eastern Gulf of Mexico



# BOEM Information Need

- The 100- to 400-meter isobaths from Florida to Mexico waters are proposed critical habitat for the Rice's whale
- Oil- and gas-related vessel traffic may transit through this area when accessing the OCS
- BOEM is required to analyze effects to ESA-listed species from ongoing and future actions
- Evaluating strike risk will be reliant upon the methodology used, baseline data incorporated, and key assumptions made



# Study Objectives

- Predict vessel strike risk to the Rice's whale (and ESA-listed sperm whale) from BOEM-regulated oil and gas activities
- Generate a written synthesis that provides a critical analysis of strike risk, a summary of assumptions that were built into the analysis, and recommendations for future analyses
- Provide a tool that BOEM staff can use to predict risk given inputs of differing vessel activity levels and patterns



# Methods

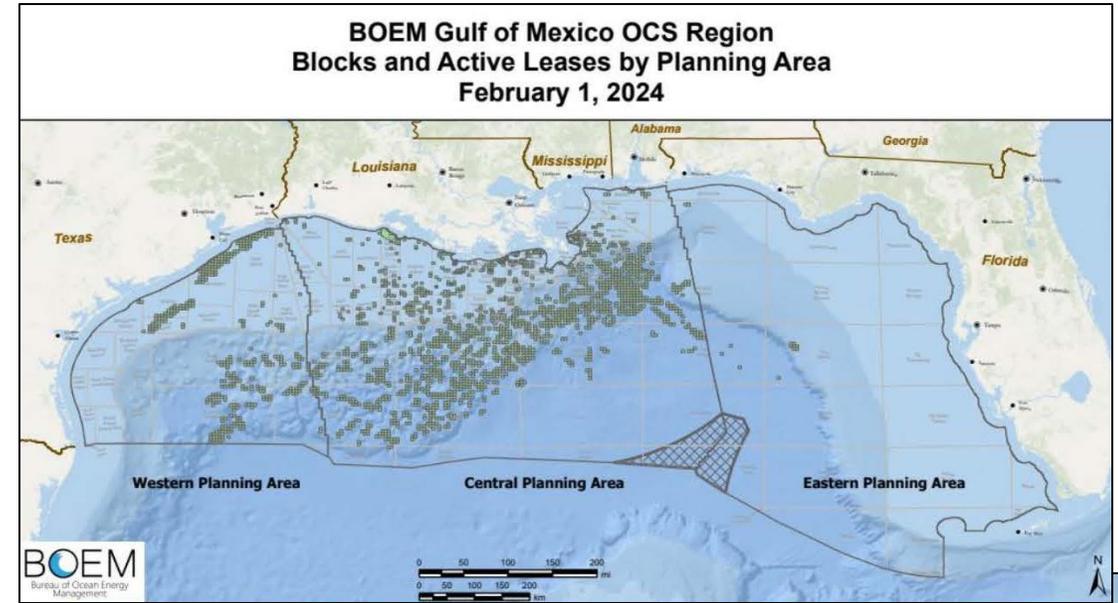
- Current BOEM Study: “Vessel Strike Risk to Rice’s Whale in the Gulf of Mexico: Review of Previous Methodologies, Information Gaps, and Recommendations for Future Efforts to Predict Strike Risks”
  - Evaluating previous strike risk efforts
  - Assessing the strengths/weaknesses of these past efforts
  - Making analysis recommendations for future risk assessments
  - Final report due in August 2024
- This study will carry the recommendations forward to perform a rigorous, statistically meaningful vessel strike analysis for the Rice’s whale and sperm whale

# Research Questions

- How can the probability of encounter risk be translated into a scale of relative risk, with a focus on transits through the 100- to 400-meter depth contours and risk to the Rice's whale?
  - <100 individuals
  - 28,270 square miles of continental shelf and slope associated waters
- What is the vessel strike risk in the GOM to ESA-listed Rice's and sperm whales from BOEM-regulated oil and gas activities?
- What additional information is needed to inform future strike risk analyses?
- What tool can BOEM staff use to make strike risk predictions?

# Requested Input from COSA

- Occurrence data are very limited. Are there similar efforts that have been done for other species that we should consider to inform this study?
- What type of predictive tool would be most useful to support BOEM's mission?
- How could cumulative risk be best addressed for the Oil and Gas Program?





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