Behavioral responses of humpback whales (Megaptera novaeangliae) to approaching ships in Virginia Beach, Virginia, USA



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What are potential responses?

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Map from https://www.fisheries.noaa.gov/national/marine-life-distress/ 2016 2019-humpback-whale-unusual-mortality-event-along-atlantic-coast

- states, presumably foraging
- Extremely shallow area with heavy ship traffic 105 strandings since 2016, half with evidence of
- ship strike or entanglement

Research Questions

1. Do humpbacks respond to ship approaches, and if so, which behavioral parameters change? 2. Which aspect of a ship approach (acoustics or behavior) elicits which types of responses? 3. Does the behavioral context of the animal (foraging/nonforaging) affect probability of response?

Horizontal avoidance







pectral noise level	97 dB re: 1 uPa ² /Hz	114 dB re: 1 uPa ² /Hz
# dives (>4m)	8	14
vg. dive duration	4 min	1.9 min
Surface time	10 min	19 min



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Acknowledgements

VIRGINIA AQUARIUM