DWH Restoration: Developing Methods to Observe Sea Turtle Interactions in the Gulf of Mexico Menhaden Fishery

Implemented by NOAA with industry collaboration

Presentation by: Rebeccah Hazelkorn, Southeast Regional Office, NOAA

Developing Methods to Observe Sea Turtle Interactions in the Gulf of Mexico Menhaden Purse Seine Fishery

Project Approval and Funding

- This project was funded through the Deepwater Horizon Open Ocean Trustee Implementation Group in Restoration Plan 2

- A total of 6 sea turtle restoration projects were selected and funded

- This project began in 2021 and will conclude at the end of 2024

Why was this project selected?

- Sea turtles are known to utilize the same waters at the same times the fishery operates.

- We do not have information on the level of interaction this fishery may have with sea turtles (and bottlenose dolphins).

- We do not currently have an effective methodology for observing this fishery.

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Project Objective:

- The goal of the project is to **develop effective observer methods** to collect information about interactions with sea turtles and other protected species in the GOM menhaden purse seine fishery, and **to identify opportunities for voluntary measures to avoid and reduce interactions.**
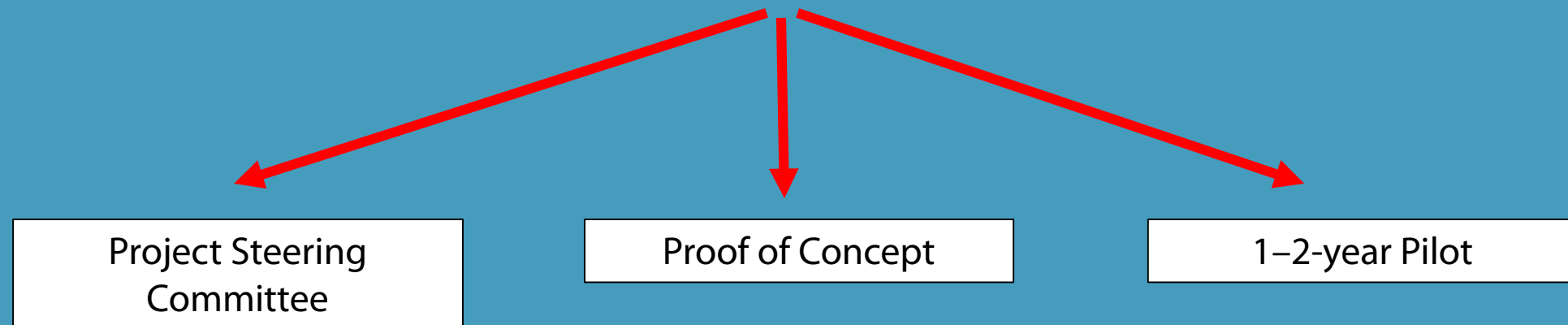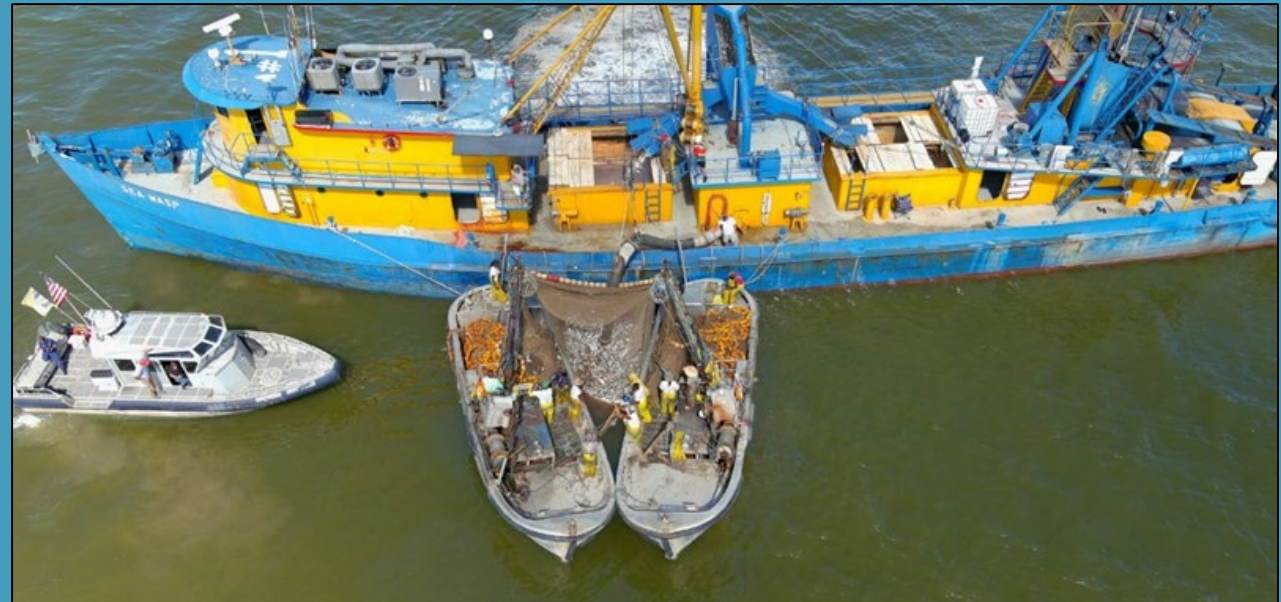
| Project Steering Committee | Proof of Concept | 1–2-year Pilot |

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Proof-of-Concept Results:

- 7-day trial of 3 monitoring methods in October 2021

- Human observers from Alternate Platform
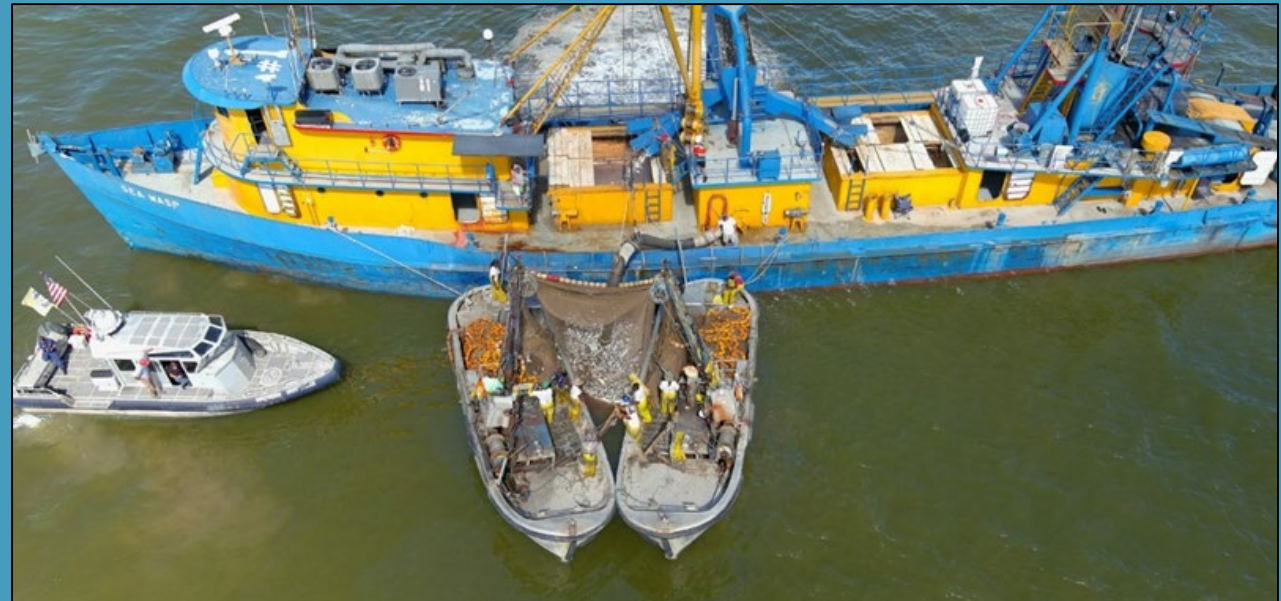
- Electronic monitoring

- Drones

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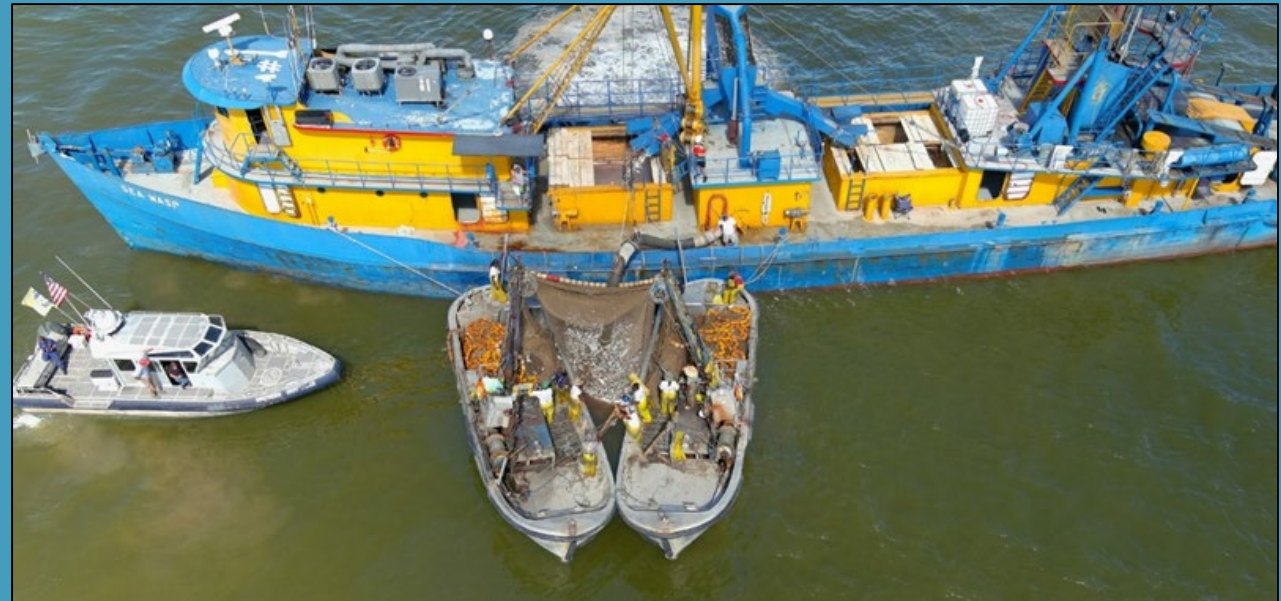
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  - <mark>VIABLE</mark> ✅

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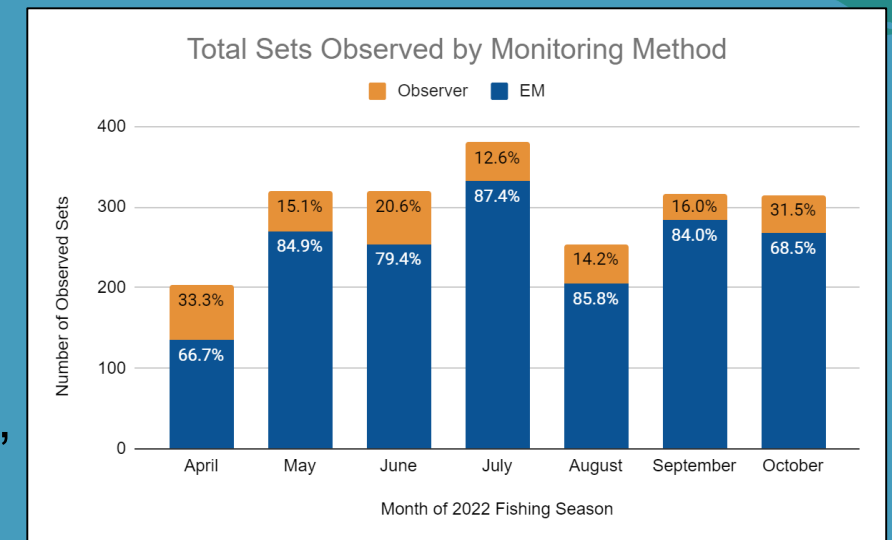
- Drones
  - NOT VIABLE 🚫
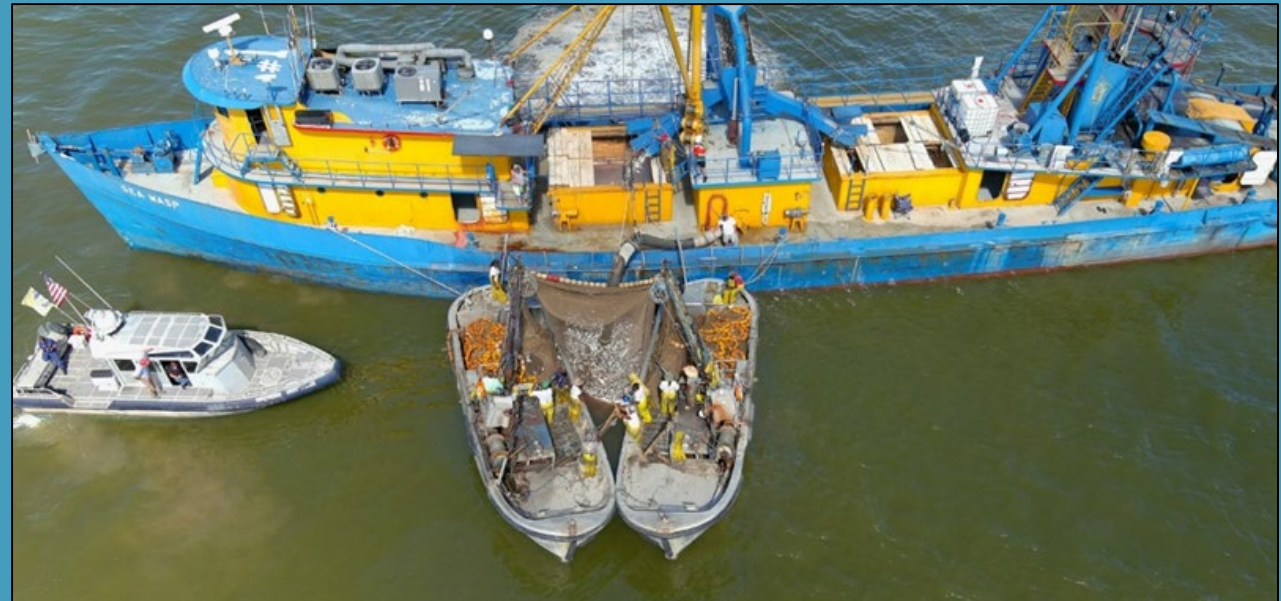
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Pilot Year 1 - 2022:

- Human Observers

- Observers utilized an alternate platform to obtain observations of as many sets from as many vessels as possible

- Electronic Monitoring

- 8 vessel in total, spanning eastern to western port locations, were selected from industry recommendations

- Outfitted with a camera on:
  - Crows nest to view pumping operation
  - Sorting grate

- 9.7% set coverage (n=2108 sets) based on 2022 total sets

Total Sets Observed by Monitoring Method

Observer | EM

Month	Observer	EM
April	33.3%	66.7%
May	15.1%	84.9%
June	20.6%	79.4%
July	12.6%	87.4%
August	14.2%	85.8%
September	16.0%	84.0%
October	31.5%	68.5%

Number of Observed Sets

Month of 2022 Fishing Season

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Pilot Year 1 - 2022: Sea Turtle and Marine Mammal Interactions
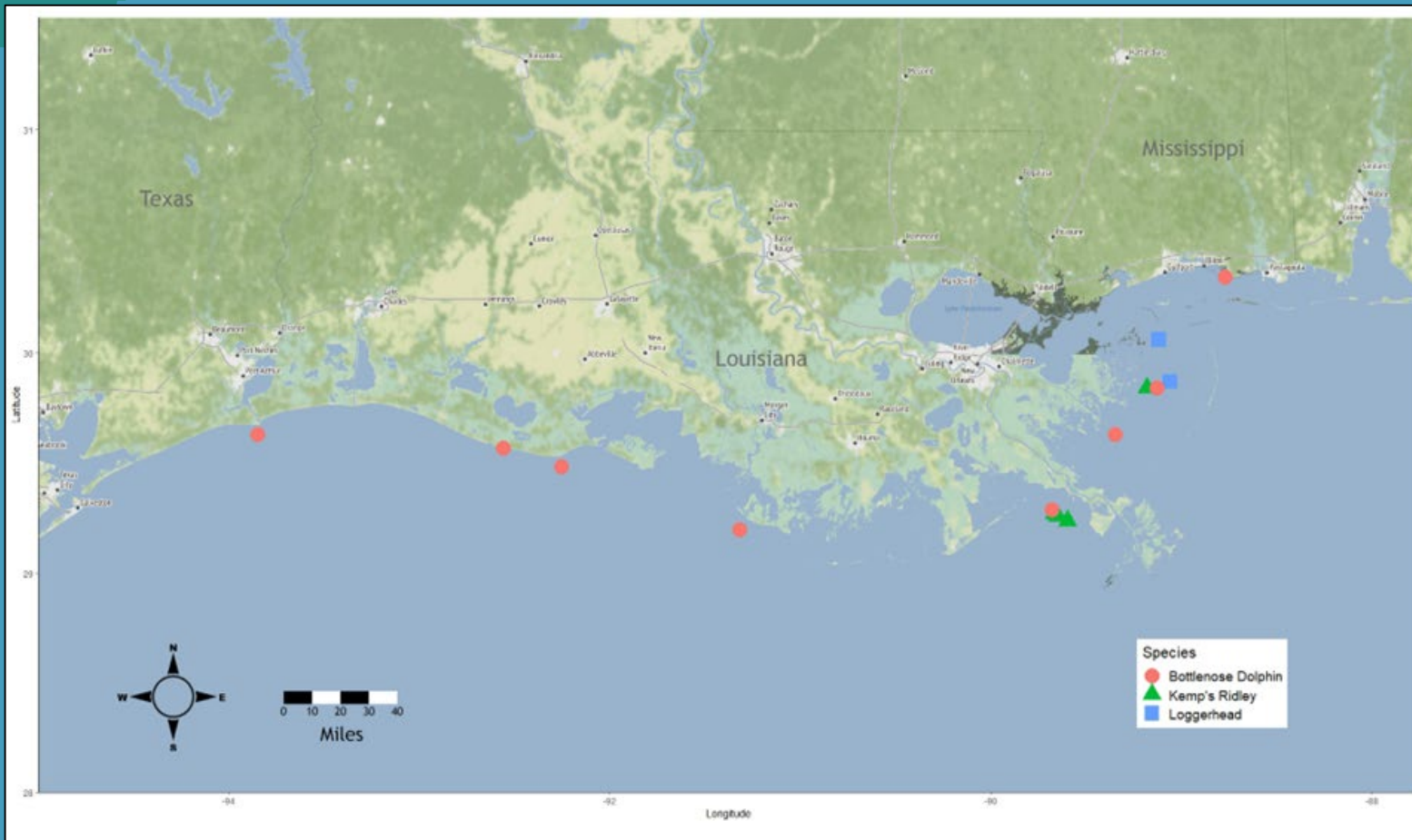
	Sea Turtles	Marine Mammals
Total number of sets with interactions	6	8
Total number of animals observed	6	14
Released at the finish of pumping	6	13
Release condition "Alive"	6	5
Release condition "Unknown"	0	7
Release condition "dead"	0	1

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Pilot Year 2 - 2023:

- Adaptively managed issues from Pilot Year 1 and increased efficiency in Pilot Year 2
- Eliminated use of observers due to logistical issues and lack of ability to see the pumping operation
- Performed better testing of EM on boats prior to season start
- Modified data retrieval methods to limit the burden on vessel captains
- Modified the contractors schedule to be able to deliver more timely data to the steering committee
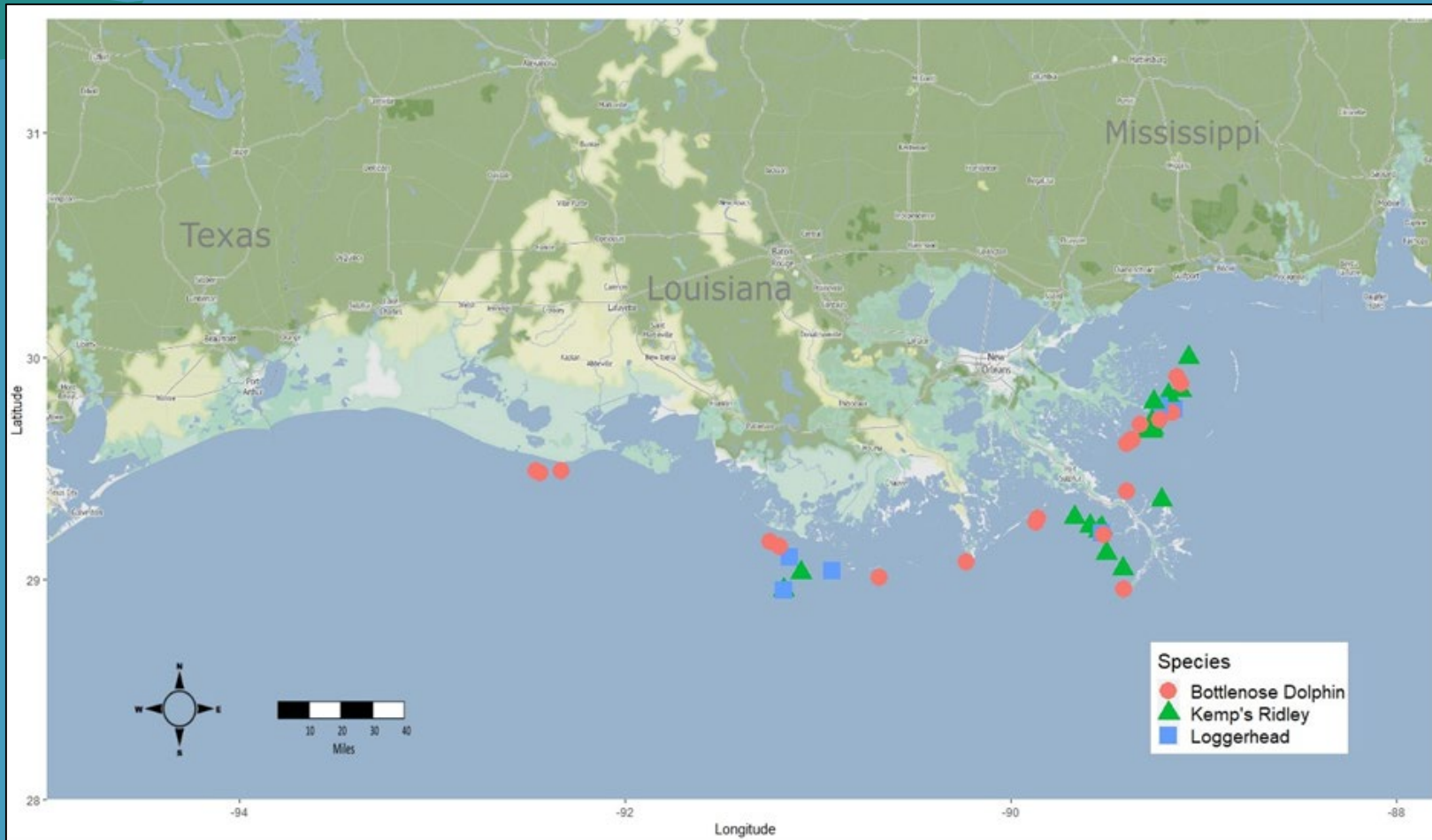
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- Proved Effective ➡️

Category	Sets Observed	Total Sets Made by Industry per Year	% Set Coverage
Based on actual data reviewed in Pilot Year 1	1,748	17,857	9.8%
Based on actual data reviewed in Pilot Year 2	3,160	14,720	21.5%

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Pilot Year 2 - 2023: Sea Turtle and Marine Mammal Interactions

	Sea Turtles	Marine Mammals
Total number of sets with interactions	22	20
Total number of animals observed	25	31
Released at the finish of pumping	25	31
Release condition "Alive"	22	8
Release condition "Unknown"	3	17
Release condition "dead"	0	6

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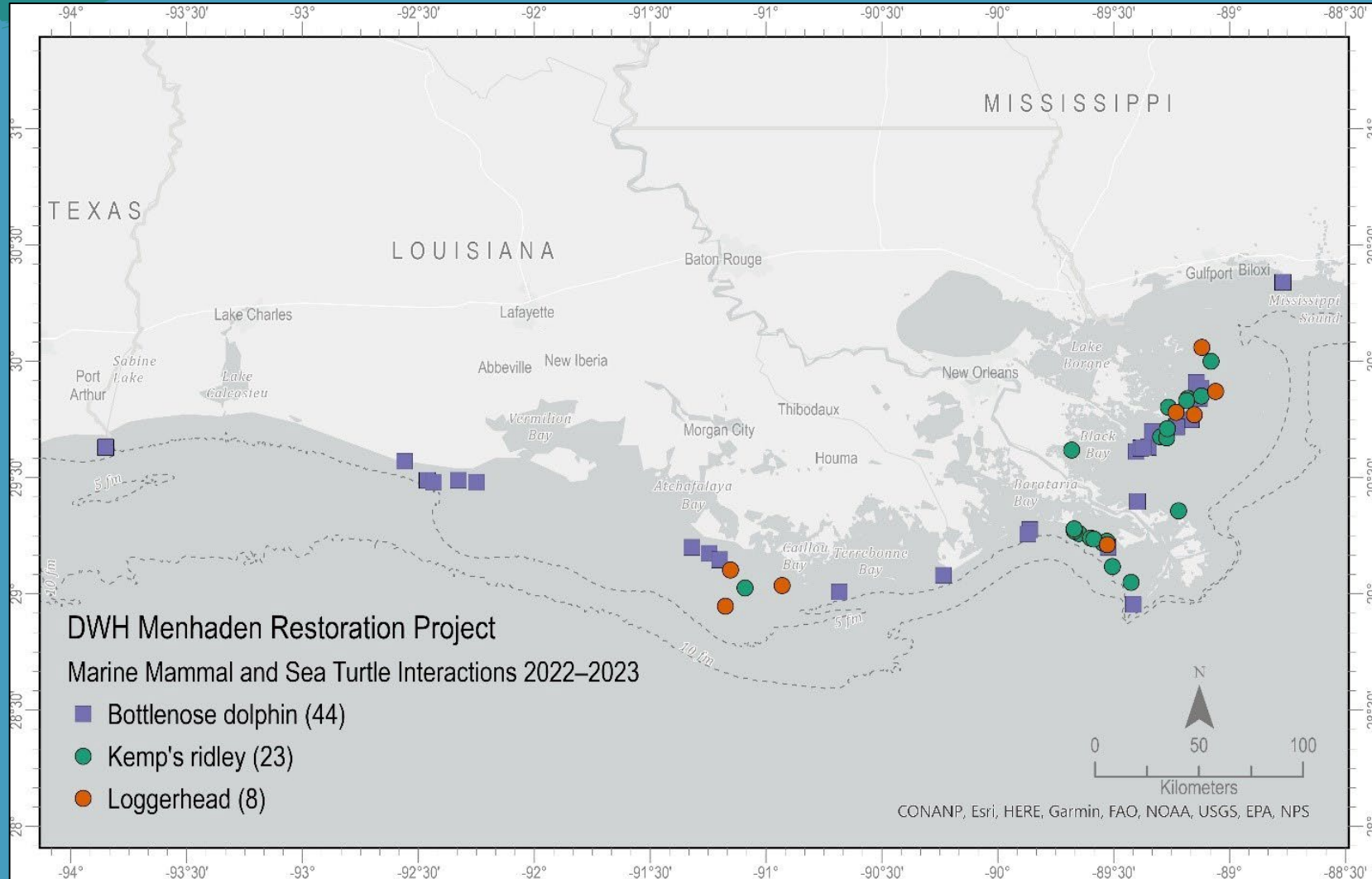
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What comes next:

- The full project team has finalized all documents, and those are publicly available on the Gulf Spill Restoration website

- Project managers are completing closeout documentation now, to fully close the project by end of Dec 2024

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What happens with project data:

- All raw data, and vessels names will remain private

- No videos will be released to the public – as agreed upon with the steering committee

- Videos containing marine mammal interactions will be passed for a serious injury/mortality assessment and stock assignment – as agreed upon with the steering committee

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Future plans:

- No follow-up restoration project for sea turtles is being proposed

- Continue collaboration between NOAA and Menhaden industry to identify, if possible, safe and feasible ways to remove protected species to reduce the frequency and severity of interactions

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Thank you!

- <u>Industry Steering Committee members</u>: Peter Himchak, Kenny Herbert, Monty Diehl, Ben Landry, Scott Hebert, Jason Walker, Francois Kuttel, Shane Treadaway

- <u>Saltwater contractors</u>: Kathryn Carovano, Alicia Cozza, Greg Norris Mark Seramur, Jeanpaul Menegolo

- <u>NOAA participants</u>: Christy Fellas, Dennis Klemm, Stacey Horstman, Ray Mroch, Liz Scott-Denton, Sara Wissmann