

**BOEM Manta Ray Research: Summary of Changes to the Action and the Inclusion of Two
Additional Federal Agencies
Memo for the NOAA Institutional Repository
February 16, 2023**

“Biological Opinion on the Bureau of Ocean Energy Management’s Proposal to Fund a Study on the Behavioral and Spatial Ecology of the Threatened Giant Manta Ray (*Mobula birostris*, formerly *Manta birostris*)”

OPR-2021-02758

D.O.I: <https://doi.org/10.25923/4kzg-zk97>

Background

The Bureau of Ocean Energy Management (BOEM) consulted with the National Marine Fisheries Service (NMFS) in 2021 on their action to fund a research study on giant manta rays off the Atlantic Coast of Florida. The consultation was completed in March of 2022 resulting in a no jeopardy opinion. Field research was to be conducted and completed from March to July of 2022. There were several complications with the research (bad weather, difficulties tagging manta rays), and the field season did not occur as planned.

In August 2022, BOEM made NMFS aware of several changes they wanted to make to their giant manta ray research consultation. BOEM reached out to NMFS about the possibility of adjusting the action to allow for additional fieldwork, while also making some changes to the research procedures.

In addition to the changes to the research activities, BOEM also wanted to add two Federal Agencies to the action: the United States Navy and the National Aeronautical and Space Administration (NASA). The three agencies had recently entered into a cooperative research agreement, with the three agencies intending to collaborate on the giant manta ray research project. The agencies confirmed that they wished to be included on the existing biological opinion.

This document summarizes the changes to the action. All agencies would adhere to the action as described here, and follow the best management practices and procedures as described in OPR-2021-02758.

Consultation History

- **October 7, 2021:** The ESA Interagency Cooperation Division determined the initiation package was complete and initiated consultation with BOEM as of September 30, 2021.
- **March 18, 2022:** Formal consultation concluded with a no jeopardy opinion.

- **August 2022:** BOEM contacted NMFS regarding potential changes to the giant manta ray research project, as well as the possible addition of two Federal Agencies as participants on the project: the Navy, and the (NASA).
- **January-February 2023:** BOEM, the Navy, and NASA provided a response containing information clarifying the details of the proposed revisions to the research, and provided responses to NMFS's questions. The Navy and NASA confirmed their role in the research project, and stated their intent to be included in the consultation.

Description of the Changes to the Action

Timing and Duration of the Action

- Spring 2023 to January 2025

Action Area

- Atlantic Florida shoreline to 20 meters deep.
- Action to focus more specifically on the Canaveral region (Brevard County) with most effort expended between Canaveral National Seashore and Patrick Space Force Base, with some expected effort possible in Volusia County (Ponce Inlet) and Indian River County (Sebastian Inlet).

Newly Listed or Proposed Species and Critical Habitat in the Action Area

There are no new species or critical habitat that are going to be exposed beyond those already considered in the 2022 biological opinion. The range of queen conch (proposed threatened; 87 FR 55200) does not overlap with the action area. The proposed critical habitat for Nassau grouper (87 FR 62930) does not fall in the action area.

Additional Mitigation

- Sign up for NOAA Whale Alerts to know when protected whales have been reported near Ponce, Canaveral, and Sebastian.
- Report all sighted right whales to 877-WHALE-HELP.
- Reduce vessel speed to less than 10 knots when in sight of North Atlantic right whales or sea turtles.
- Forego free-hooking on days that right whales are reported in the sampling area.

Amount of Take of Giant Manta Rays

- Capture, sample, and tag up to 30 giant manta rays, juveniles and adults (>1.5 meter disc width. Five animals were already tagged.
 - Action will still target this number, and plan to capture, sample, and tag the remaining 25 animals.

Capture Methods

- Focusing on close approach with a vessel; free-hooking would still take place. No compass netting.
- There is no increase in the number of individuals targeted for capture, tagging, and sampling.

Tag Types

- Individual or combination of satellite, acoustic, and/or suction cup tags:
 - Acoustic (Venmo) tags: no small internal acoustic tags. No change to larger acoustic tags attached externally via dart tag.
 - New external tag: depth sensor tags V16P-4H pressure tags, roughly 18 x 90 millimeters and 12 grams in water. Similar in size/shape to the external acoustic Venmo tags, attached externally (via dart tag).
 - Satellite tags: attached externally to the dorsal fin via the four-point bolt-on method.
 - No inertial measurement unit (IMU) tags. IMU tags replaced with pop-off satellite tags attached using a pole (equipped with a biopsy punch)

Biological Sampling

- Tissue sampling would occur through a biopsy punch integrated into the tagging pole (sample taken at same time as tagging during close approach, no restraint). The size of the sample would be similar to that of a fin clip (max 0.5 x 1.5 cm punches).
- Not conducting muscle biopsy, mucus swabs, or blood samples.