December 4, 2023

To: Administrator@safmc.net
Re: SAFMC Meeting, Dec 2023
Habitat and Ecosystem Report
Guidance for Resubmission of Amendment 10
NOAA-NMFS-2021-0126; Coral_Amendment10_Nov21_508
Public Comment- Comment 1

From:
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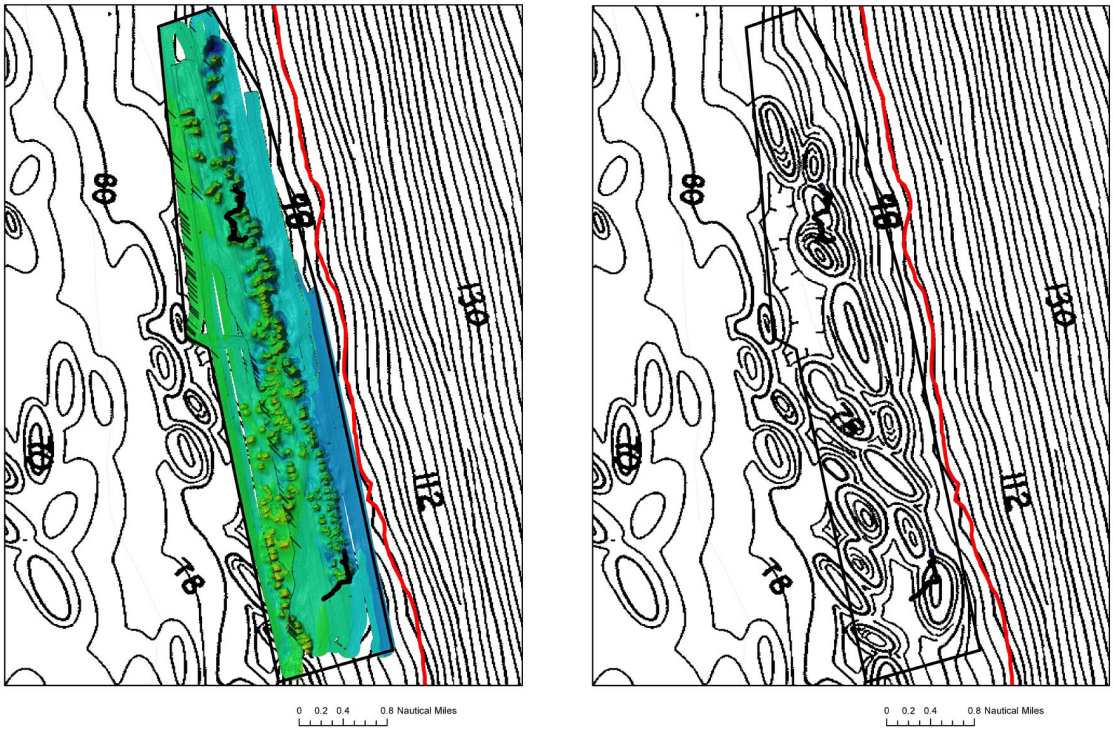
Comment: Shrimp Fishery Access Area (SFAA)
I am a retired senior research scientist and Research Professor at Harbor Branch Oceanographic Institution who has studied the deep-water Oculina coral reefs off Florida since their discovery in the 1970s. My research and that of many other scientists have provided data on the associated grouper/snapper fish and invertebrate communities associated with Oculina ecosystem showing the importance of protecting this truly unique ecosystem.

For the past 10 years (2010- 2021) I also have been a Co-Principal Investigator along with Stacey Harter and Andy David (NOAA Fisheries, Panama City Lab) on surveys for NOAA Fisheries and the SAFMC documenting the shelf-edge MPAs with ROV and multibeam sonar from south Florida to North Carolina, including the Oculina coral reefs and OHAPC. In fact, it was on our surveys in 2011 when we documented that the Oculina habitat extended north of Cape Canaveral and nearly up to St. Augustine. Our extensive surveys also show that the Oculina banks do not occur north of there, nor are they known to occur anywhere else on earth. These are truly a treasure, that should be protected for perpetuity. I presented these data from these NOAA cruises to the SAFMC; and together with members of the Council, Shrimp Advisory Panel, and Coral Advisory Panel present, the Council drew the new boundaries for the north extension that would protect all the coral habitat and ecosystem. In 2015 the SAFMC council passed the amendment to include the northern Oculina HAPC.

The region to the north of Cape Canaveral in the northern OHAPC is a continuation of the reef track that is apparent in NOAA regional bathymetric charts (Cape Canaveral 85, Titusville 84, New Smyrna 83, and Daytona 82). These regional contour charts were made by NOAA in 1983 at a scale of 1:100,000. They were obtained by the PI from NOAA (Scanned NOS Bathymetric Maps, Vol. 2, U.S. East and Gulf Coast) and were imported into ArcGIS 9.3 as georeferenced TIFF images. Reed and Farrington 2011 show that these NOAA regional charts are quite accurate in depicting high-relief features and when compared to newer multibeam maps (see Fig. 1 a,b). The multibeam clearly verifies high-relief features of the bathy charts although the individual mounds are not exact.



A. B.

Figure 1 A (left). 2011 NOAA Ship Pisces multibeam sonar off Daytona area with overlay of two ROV dive tracks (Dives 11-156A, 11-156 B). B (right). NOAA regional bathymetric contour chart of same site; black polygon is area of the multibeam in Figure 1 A. Red line= 100 m contour line and OHAPC eastern boundary (NOAA- CRM_10m_nad83). The multibeam map shows over 100 individual, high-relief mounds (base depth from 80-90+ m; peaks 60-70 m). Two ROV dives (thick black lines) verified that these are Oculina coral mounds (from Reed and Farrington, 2011, "A Proposal for Extension of the Boundaries of the Oculina Coral Habitat Area of Particular Concern (OHAPC)", submitted to South Atlantic Fishery Management Council, 21 pp.)

- Amendment 10 would allow bottom trawling within the OHAPC, leaving little buffer between the trawl nets and the high relief coral mounds. NOAA Regional Bathymetric charts clearly show the proposed area extends very close to high relief habitat, i.e., coral mounds (see Fig. 2; Reed letter to Janet Coit, NOAA Fisheries, April 7, 2022). Figure 2 shows exactly that the proposed SFAA is over probable coral habitat or immediately adjacent to it. Figure 2 shows background bathymetric contour lines which are very accurate for predicting probable high relief habitat (i.e., coral habitat). Also keep in mind that the multibeam map under parts of the SFAA are only 5 m resolution which will not even show corals of 10 ft diameter.

- The current eastern border of the OHAPC was purposely drawn along the 100 m contour line and varies from a minimum of 500 m to about 1000 m away from the high relief bathymetry. This is a quite reasonable buffer. Per the Coast Guard, straight borders, and wide buffer zones allows easier enforcement to keep potential poachers and errant trawls far from the reef habitat.

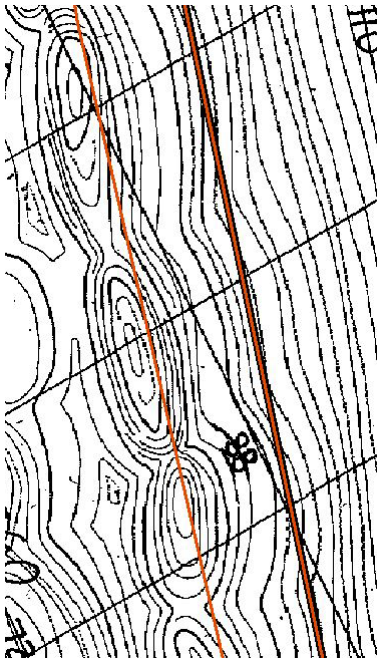


Figure 2. Proposed Shrimp Fishery Access Area (red polygon) in the northern Oculina HAPC with background of available bathymetric contour lines showing high relief topography and probable coral habitat directly adjacent to the western boundary of the proposed SFAA. Thick red line: current OHAPC eastern border. Thin red line: boundary of proposed Amendment 10 SFAA.

- Of the 89 km length of the proposed SFAA, two areas were mapped with multibeam sonar (10 km and 13 km in length) in detail to the west of the proposed SFAA. That means 74% of the length of the SFAA along the proposed western border has no multibeam sonar data. In other words, coral reefs could be immediately abutting the boundary. The SAFMC ignored these facts when drawing up the proposed SFAA boundary.

- SAFMC Coral Advisory Panel members supported establishing a substantial buffer of possibly 1,000 m from the known habitat as an approach that would address and account for uncertainty as directed by the Magnuson-Stevens Fishery Conservation and Management Act (Amendment 10 NMFS- SAFMC EA Report Aug 2021.pdf; 5.1.2 Coral AP Comments and Recommendations, pg. 59). The AP indicated the present boundary provided a buffer and approved a motion supporting the no action alternative (i.e., MOTION 11: Consider Option 1 status quo. Do not develop an action to address the issue).

- There is uncertainty about the location of the shrimp trawl rig on the bottom. National Marine Fisheries Service data indicate that the ratio of scope to depth for shrimp trawlers is, typically somewhere between 3 to 4.3 ratio in these depths and these kinds of currents. So, taking a conservative estimate means that the horizontal distance between the boat and the rig can be anywhere from about 230 m to 510 m (Amendment 10 NMFS- SAFMC EA Report Aug 2021.pdf; 5.1.2 Coral AP Comments and Recommendations, pg. 59).

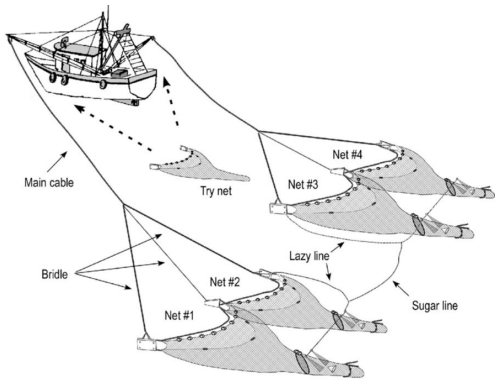


Fig 3. Typical gear configuration for U.S. southeastern shrimp vessels equipped with four nets. (Source: Scott-Denton et al. 2012; Amendment 10 NMFS- SAFMC EA Report Aug 2021.pdf; 5.1.2 Coral AP Comments and Recommendations, pg. 52).

- It is well known that the fishers (shrimp trawls) fish right on the border line of the HAPC. We have seen this numerous times while on NOAA vessels while working in the OHAPC. That means the fishers will track their vessels right along the new border and the nets will extend some unknow distance into the OHAPC, beyond their allowable fishing zone and into the no fishing zone (Fig. 3).

- Typically, fishers rely on standard chart packs for their navigation. The NOAA multibeam charts and NOAA regional bathymetric charts shown above are not available for their navigation. In other words, they are trawling blind as to what is on the bottom.

- Currently there are no shrimp fishery access areas within the OHAPC, and now is not the time to reverse course, nor to redraw the boundaries of the OHAPC. The deep-water Oculina coral reefs are a unique coral reef ecosystem like no other on earth. These are truly a treasure, that should be protected for perpetuity. Destructive fishing gear, specifically bottom trawls, should have no right to be used within the OHAPC. They have been banned for 38 years, there is no good data to suggest it is OK to allow it now.

References:

Koenig, C.C., A.N. Shepard, J.K. Reed, F.C. Coleman, S.D. Brooke, J. Brusher, and K.M. Scanlon. 2005. Habitat and fish populations in the deep-sea Oculina coral Ecosystem of the western Atlantic. American Fisheries Society Symposium 41: 795-805.

Reed and Farrington, 2011. A Proposal for Extension of the Boundaries of the Oculina Coral Habitat Area of Particular Concern (OHAPC), submitted to South Atlantic Fishery Management Council, 21 pp.

Reed, J. K., C. C. Koenig, and A. N. Shepard, 2007. Impacts of bottom trawling on a deep-water Oculina coral ecosystem off Florida. Bulletin of Marine Science 81: 481–496.