

1. 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 40 years, there is no good data to suggest it is OK to allow it now.
2. The proposed revised Amendment 11-12 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 abuts and in some areas even extends on top of high relief habitat, i.e., coral ecosystem habitat.
3. The current eastern border of the OHAPC of Amendment 8 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.
4. 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.
5. 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.
6. During ROV dives conducted with NOAA Fisheries at the sites in the northern OHAPC (Reed and Farrington, 2011), the dominant fish observed included scamp (common), gag grouper, snowy grouper, red porgy (common), amberjack (abundant), black seabass (abundant), tilefish, and red hogfish. Dominant invertebrates include *Oculina varicosa* coral (10-40 cm colonies), gorgonian corals, black coral (abundant), sponges, starfish, sea urchins, and mollusks. Unfortunately, the mounds appear to have been impacted by years of bottom shrimp trawling as documented within the *Oculina* HAPC.
7. Indirect effects to coral could result through influx of suspended benthic sediments created while trawling the bottom. Although surface currents are usually strong and northerly from the Gulf Stream, the bottom currents have strong E-W, north and south components. Bottom currents occur up to 75 cm sec<sup>-1</sup> (Reed and Hoskin, 1987). During a deployment of a bottom current meter at the *Oculina* reefs for 289 days, bottom currents had 3 main paths of flow: East-west (tidal), North and South. Average near bottom current speed was 8.6 cm sec<sup>-1</sup> but equaled or exceeded 15 cm sec<sup>-1</sup> 11- 17% of the time.
8. Studies on larval transport of *Oculina* coral larvae indicate that the cross-shelf mechanism of transport is more robust from deep to shallow due to upwelling events, that bring the water across the shelf (Brooke 2002; Brooke and Young 2003, Brooke and Young 2005). These events would also bring any sediment laden water across the reefs. Reed (1981) showed that these upwelling events occur at the shelf edge *Oculina* reefs throughout the year.
9. The sediments on shelf-edge *Oculina* reefs are relatively fine and have a higher composition of muds (14.4% mud) compared to sediments in shallow coral reef counterparts (Hoskin et al.1987). In addition, areas east of the high relief *Oculina* mounds have a higher (29%) average percentage of muds (Hoskin et al. 1987). Fine sediments tend to have greater negative effects on corals than coarse sediments. Depending on direction and magnitude of water currents in the affected area, shrimp trawls could create sediment plumes during fishing operations and the plumes could be transported to coral habitats.
10. Sedimentation is known to stress corals which do not need another stress factor. Increased sedimentation can cause smothering and burial of coral polyps, shading, tissue necrosis, and reduces recruitment, survival, and settlement of coral larvae (Erftemeijer et al. 2012). Sedimentation can affect coral physiology and reproductive health (Dr. Joshua Voss, FAU, pers. comm.). Sedimentation could affect the planula larvae of coral which are released into the water column where they live for weeks or more before they settle (Brooke 2002). Sediment plumes from trawling along the edge of the reef will impact the remaining corals nearby and prevent baby coral recruits from settling. Coral recruits are particularly susceptible (Fourney and Figueiredo 2017). Sediment plumes can also create enabling conditions for coral diseases to thrive. For example, researchers in the Great Barrier Reef found a significant, positive relationship between overall coral disease prevalence and the length of time that a reef was exposed to sediment plumes (Pollock et al. 2014).