

**Joint Coral Scientific and Statistical Committee  
and Coral Advisory Panel Summary  
May 27, 2015**

Coral SSC

Walter Jaap, Chair  
Sandra Brooke  
Judith Lang  
Paul Sammarco  
George (GP) Schmahl

Coral AP

Shelly Krueger, Chair  
Joseph Weatherby, Vice  
Chair  
J.P. Brooker  
Portia Sapp  
John Talbott

Shrimp Fishery

Representatives  
Steve Bosarge  
Johnny Nelson

Council and Council staff

Roy Williams  
Leann Bosarge  
Corky Perret  
Morgan Kilgour  
Charlotte Schiaffo  
Carrie Simmons  
Bryan Schoonard

Others in Attendance

David Dale  
Alexandra Eliopoulos  
Lauren Eliopoulos  
Sharon McBreen  
Mark Sramek  
Tom Wheatley  
Amber Whittle

The Coral Scientific and Statistical Committee (Coral SSC) and Coral Advisory Panel (Coral AP) met jointly on May 27, 2015 at the Council office in Tampa, Florida. The agenda was adopted as written and minutes from the April 24, 2014 meeting of the Coral SSC Coral AP were adopted as written. Shelley Krueger was elected chair of the Coral AP and Joseph Weatherby was elected as vice chair of the Coral AP. It should be noted that for brevity, identical motions outlining recommending proposed sites were condensed into one motion. It should also be noted that motions in the summary are not necessarily in the order in which they are made.

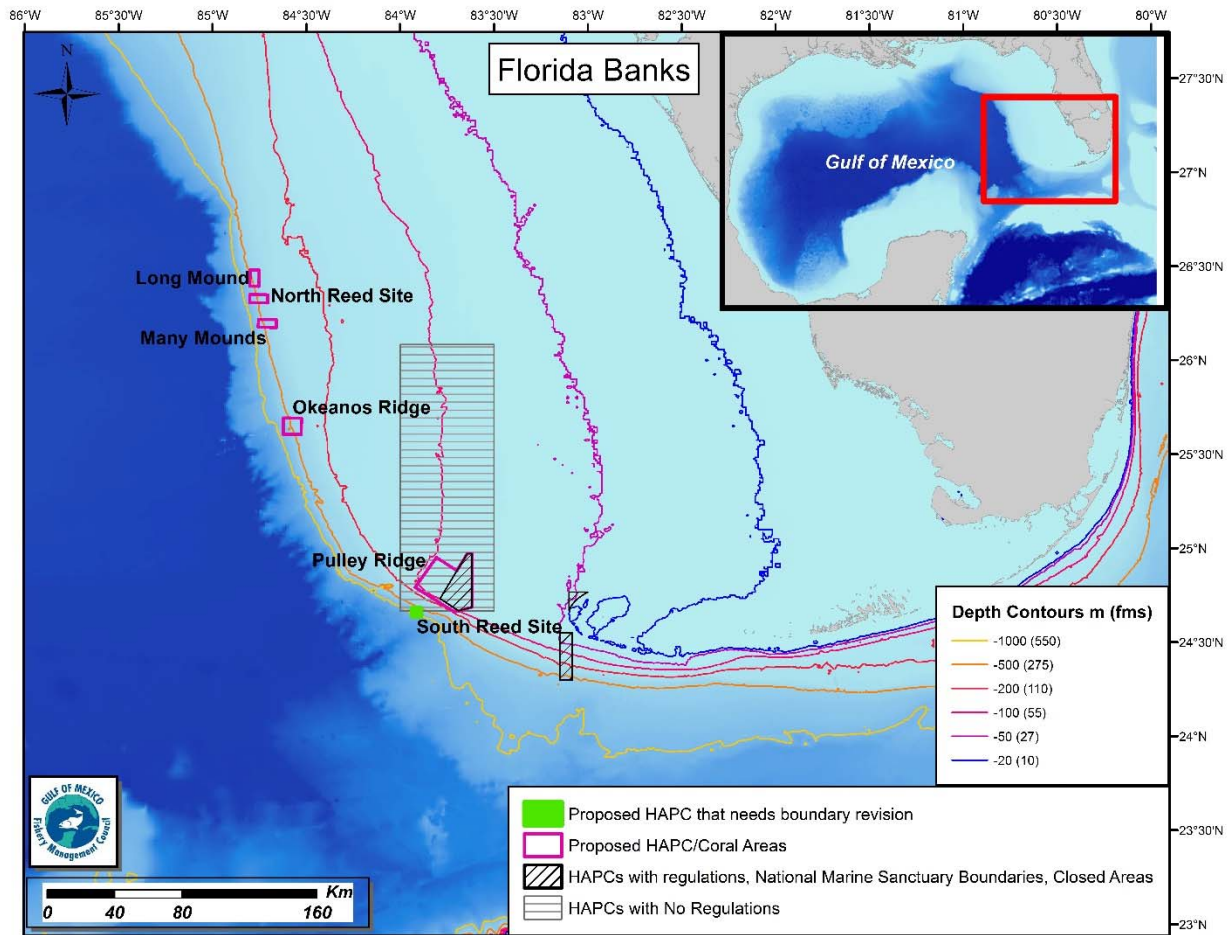
The Coral SSC/AP reviewed the working group summary report and divided the Gulf of Mexico into regions for discussion. Based on the recommendations from the working group, the Coral SSC/AP decided that all areas that were discussed in the meeting would be discussed as coral habitat areas of particular concern (HAPCs), and that for discussion at the meeting the Coral SSC/AP would focus on the areas that were described as “discrete” areas in the working group report. The Coral SSC/AP also discussed the recommendation from the working group to reincorporate deepwater octocorals into the Council’s fishery management unit. The Coral SSC/AP recommends **“that the Council reincorporate deep-water octocorals known to exist in 50 meters of water or deeper in the FMU.”**

The first areas that were investigated were off the Gulf coast of Florida (Florida Banks; Figure 1). For each area that was discussed the observed species, depth, size of the proposed area, and any other information available (e.g. vertical relief, coral density, number of fish species present). This information is summarized in Appendix A. There was significant discussion about incorporating members of the shrimp fishery (and other potentially affected fisheries) early in the process. The Coral SSC/AP discussed a desire to establish a timeline to provide more

information to the group in a timely manner. Throughout the meeting, there was significant concern and discussion that all affected fisheries/fisherman should be included in the process of establishing boundaries. It was noted that the key fishery that was identified as being affected was the shrimp fishery and the royal red fishery in particular for certain areas. The Coral SSC/AP advised that VMS data to be incorporated for future analyses and to identify if reef fish fisherman may use any of the proposed areas. Because some areas would have more of an effect on the shrimp fishery as boundaries are currently drawn, the Coral SSC/AP made two designations when recommending areas: 1) the group recommended the area as proposed by the December 2015 working group, or 2) a recommendation was made to reevaluate the boundaries of a particular area based on more information from the fishery to accommodate areas that are already prime trawling areas. The Coral SSC/AP recommended **“to create priority sites as well as a category for sites that may need more data for boundary revisions.”**

Shrimp industry representatives stated that they do not want to trawl on coral grounds or coral habitat as doing so would damage their nets; thus, where current trawling tracks exist, there is no coral. In particular, industry representatives felt there was concern that the boundaries of the south Reed site would affect royal red shrimping and that the boundary for this site may be inappropriate based on current drag practices. There was discussion on if it was easier to follow a straight line or a depth contour for the fishery and that following a contour line was easier with current technology. It was suggested that this is a contentious site and should fall into the boundary reevaluation category. The coral SSC/AP recommends **“to propose that the south Reed site belong to the category that needs more data.”**

It was noted that a main problem fishing concern may have been the golden crab fishery which is not allowed in the GMFMC waters. Based on the discussion of the Florida Banks areas, the Coral SSC/AP made many recommendations. The Coral SSC/AP recommends **“to accept the proposed boundaries presented for the Pulley Ridge, Okeanos Ridge, North Reed, Many Mounds, and Long Mound sites as the Working Group recommended.”**



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Figure 1. The proposed coral HAPCs from the Coral SSC/AP meeting. Note that the areas in bright green were recommended to have boundary revision with the inclusion of new data. The depth contours are in meters (in parentheses, fathoms). Existing HAPCs, closed areas, and National Marine Sanctuaries are noted but not labeled on this map.

Staff from the Florida Keys National Marine Sanctuary (FKNMS) presented on the process and the current status of the proposed expansion of FKNMS. For the proposed expansion boundary and study area, it was noted that draft boundary lines have not been proposed for Pulley Ridge though it will likely encompass areas that have been identified with recent expeditions. It was noted that identifying an area as a national marine sanctuary provides more protections to an area (such as no oil and gas extraction and no bilge discharge) than just designating an area as a coral HAPC. The light area (proposed study area) would affect shrimping in the north, and that the light area to the south was estimated to reduce the royal red shrimping area off of the Keys by 75% (Figure 2). This presentation on the FKNMS proposed expansion will be made to the Council at its June Council meeting.

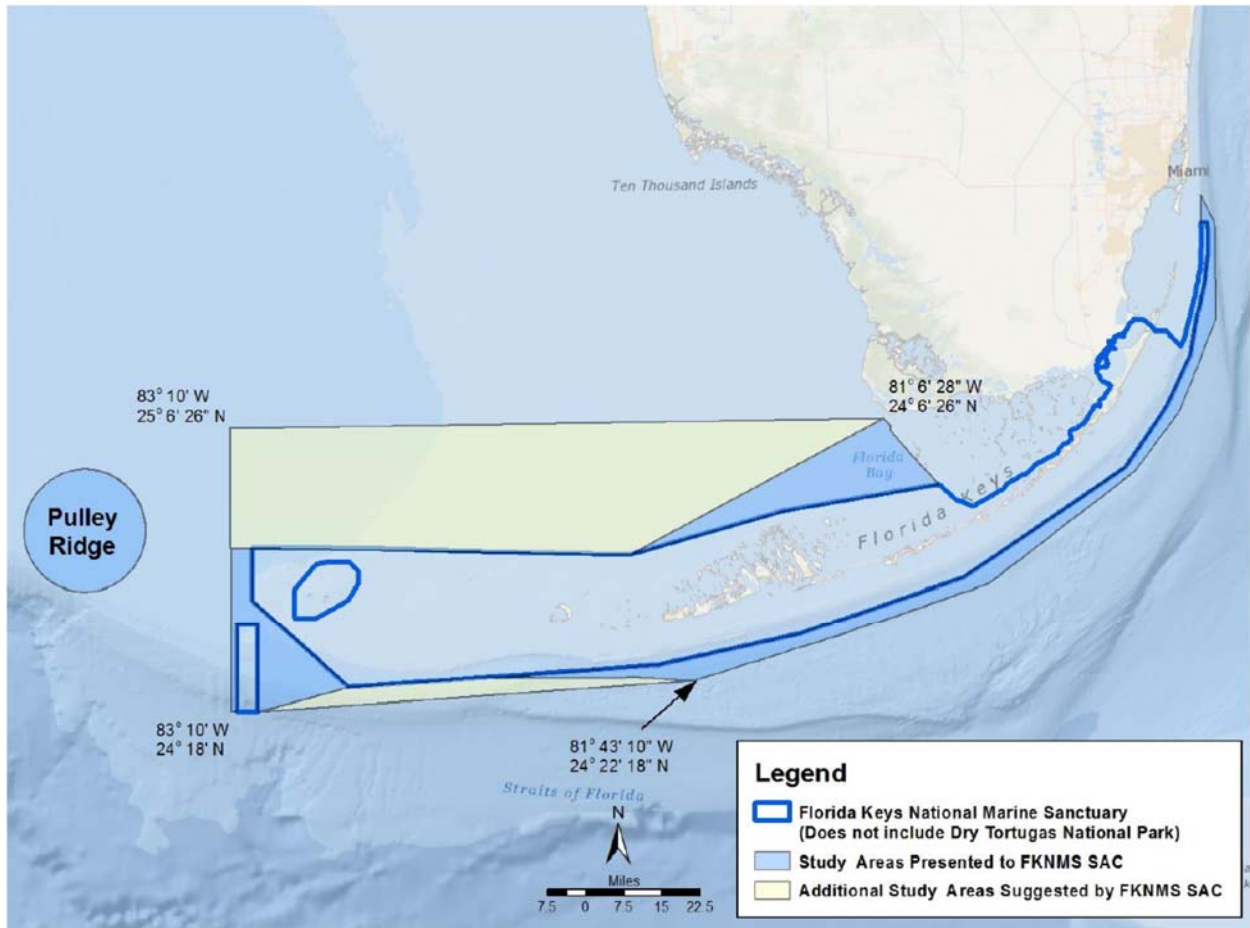


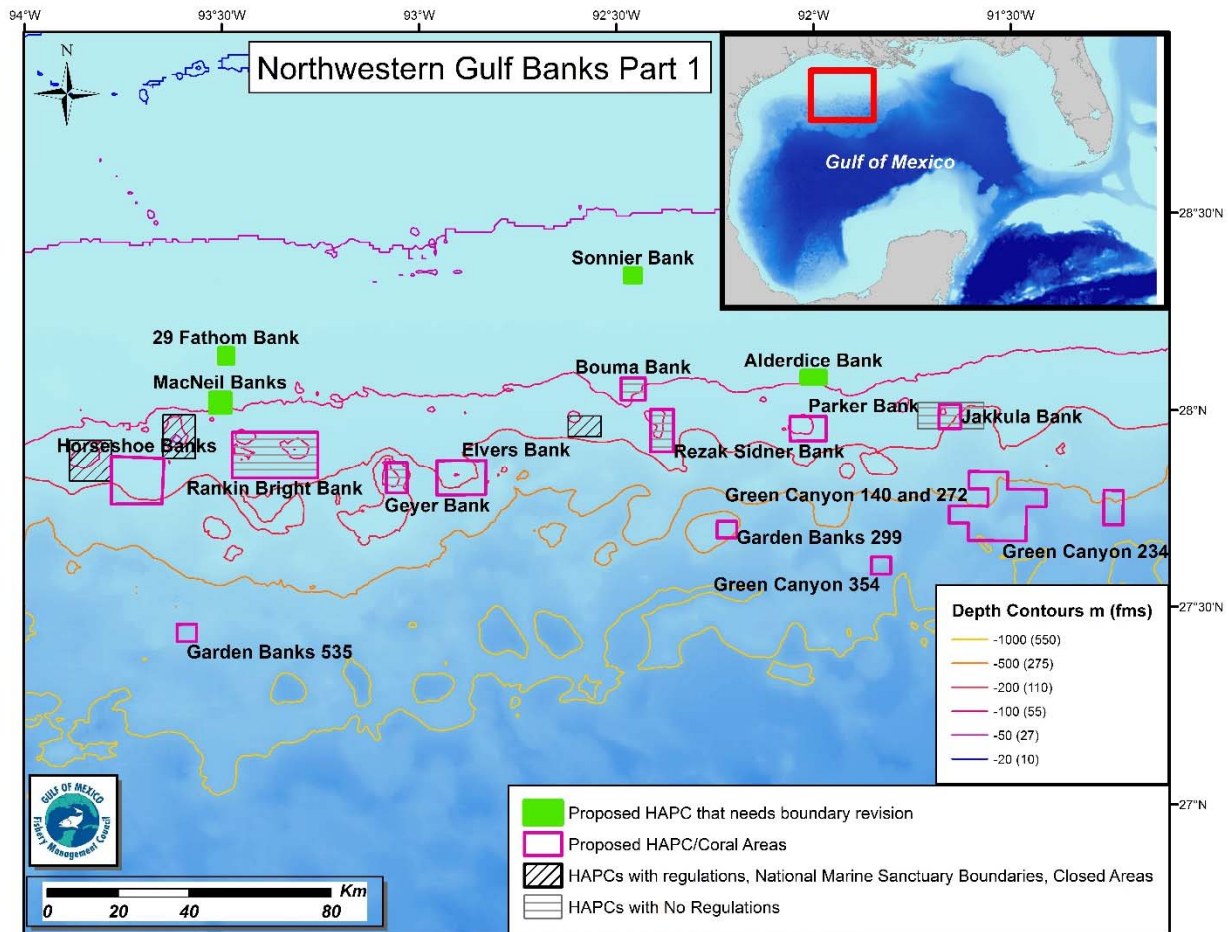
Figure 2. Proposed Florida Keys National Marine Sanctuary expansion and study areas from Dieveney presentation to the Coral SSC/AP.

Staff from the Flower Garden Banks National Marine Sanctuary (FGBNMS) reviewed the status of the proposed boundary expansion of the FGBNMS. The FGBNMS Advisory Council suggested areas to be included in the FGBNMS expansion based on the following criteria: resource significance, structural connectivity, biological connectivity, potential or perceived threat, public and scientific priority. Banks were ranked and sanctuary expansion proposal was based on the highest ranked zones. The FGBNMS is still in the process of identifying areas for expansion and should have a draft EIS by the end of 2015. The Coral SSC/AP recommends **“that the Council support the proposed expansion of the Flower Banks Marine Garden Sanctuary.”**

The Northwestern Gulf Banks were discussed next (Figures 3 and 4). For each area that was discussed the observed species, depth, size of the proposed area, and any other information available (e.g. vertical relief, coral density, number of fish species present). This information is summarized in Appendix A. Several areas (29 Fathom, MacNeil, Sonnier Bank, and Alderdice Bank; Figure 3) were identified as needing more data before moving forward with proposed boundaries. It was noted that many of these banks are currently under consideration for FGBNMS expansion and several are currently GMFMC HAPCs with no regulations. There has

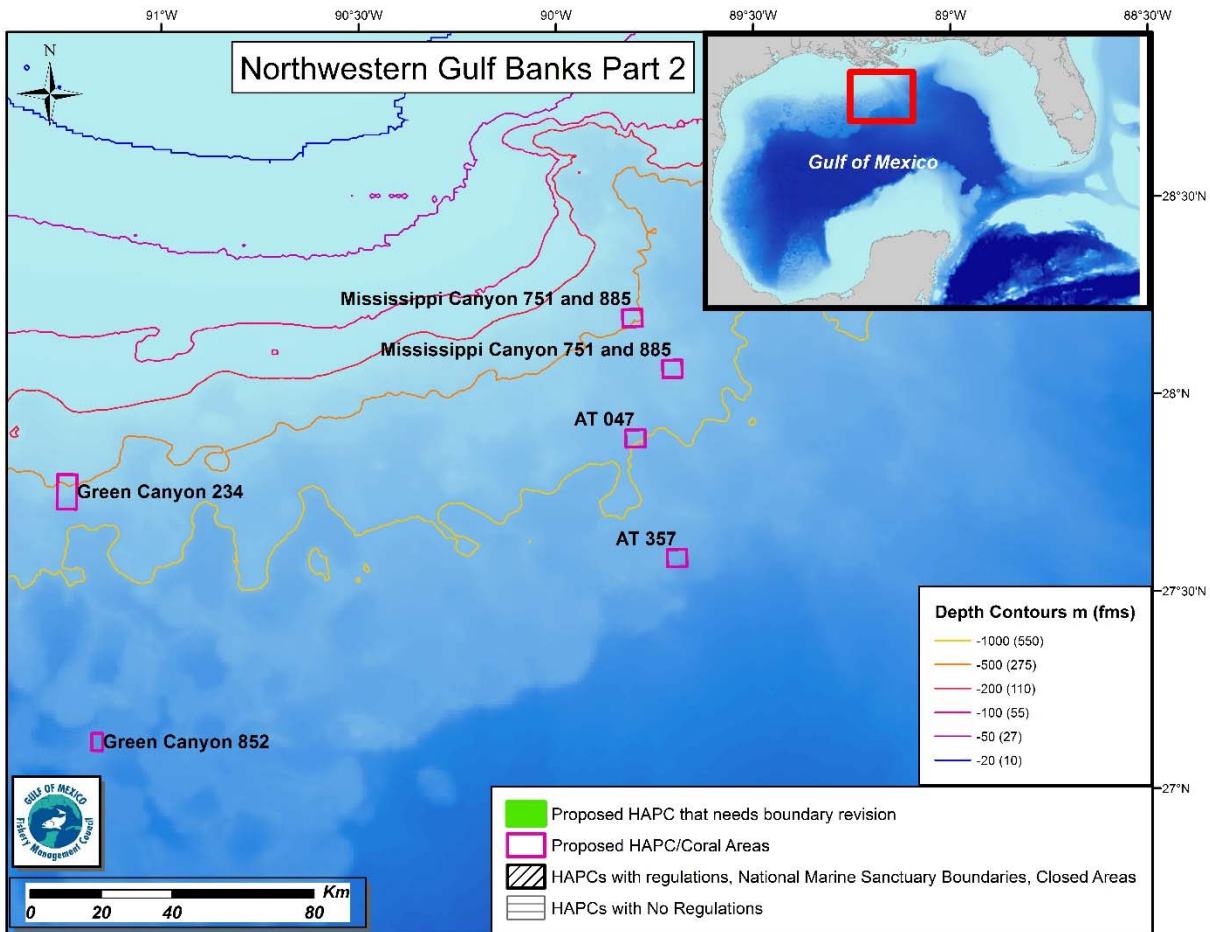
been significant research on coral density in many of these areas (Appendix A) in recent years. Areas that were identified as potentially affecting shrimp fisheries were suggested to have revisions based on the incorporation of shrimp track lines (and other fisheries), but that the overall features should be further investigated so appropriate boundaries can be established. Based on the information the Coral SSC/AP made the following recommendation: **“to propose that the 29 Fathom, MacNeil Bank, Sonnier Bank, and Alderdice Bank belong to the category that needs more data.”**

The Coral SSC/AP also recommends **“to accept the proposed boundaries presented for the Geyer Bank, Garden Bank 535, Rankin Bright Bank, Elvers Bank, Bouma, Rezak Sidner, Parker, Jakkula, Green Canyon 354, Green Canyon 140 and 272, Green Canyon 234, Green Canyon 852, and Garden Banks 299, Mississippi Canyon 751 and 885, AT047, and AT357 sites as the Working Group recommended.”**



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Figure 3. The proposed coral HAPCs from the Coral SSC/AP meeting. Note that the areas in bright green were recommended to have boundary revision with the inclusion of new data. The depth contours are in meters (in parentheses, fathoms). Existing HAPCs, closed areas, and National Marine Sanctuaries are noted but not labeled on this map.



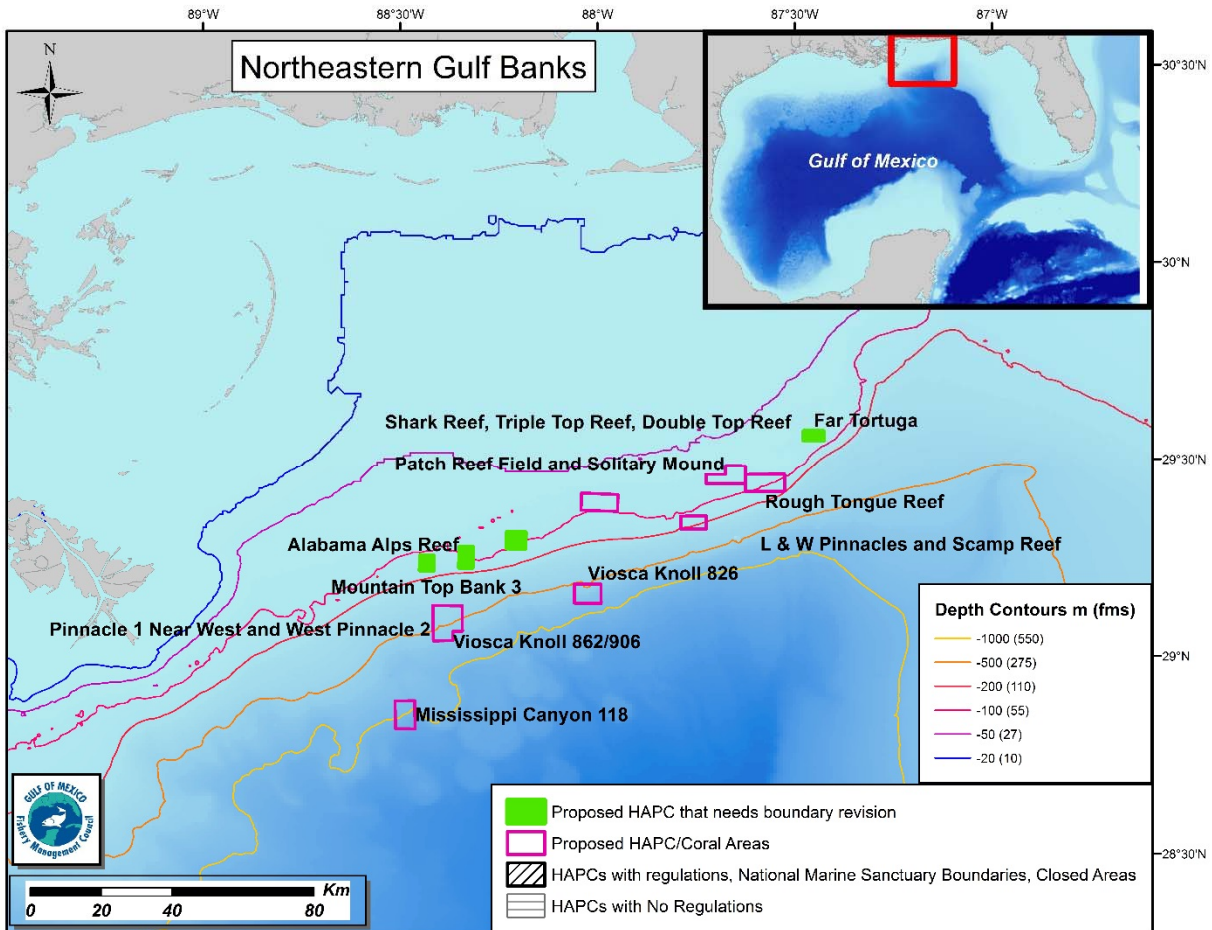
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Figure 4. The proposed coral HAPCs from the Coral SSC/AP meeting. Note that the areas in bright green were recommended to have boundary revision with the inclusion of new data. The depth contours are in meters (in parentheses, fathoms). Existing HAPCs, closed areas, and National Marine Sanctuaries are noted but not labeled on this map.

The Coral SSC/AP clarified that it would like similar regulations for these proposed coral HAPCs as those that currently apply to the existing coral HAPCs such as Pulley Ridge. The Coral SSC/AP recommends **“that within the discrete zones, there be fishing restrictions consistent with those for the existing coral HAPCs: Fishing with a bottom longline, bottom trawl, buoy gear, pot, or trap and bottom anchoring by fishing vessels are prohibited year-round in the area of the HAPC.”**

The Coral SSC/AP discussed the Northeastern Banks (Figure 5). For each area that was discussed, the observed species, depth, size of the proposed area, and any other information available (e.g. vertical relief, coral density, number of fish species present) were provided and are summarized in Appendix A. Several areas were identified as needing boundary revisions (Mountain Top Bank 3, Alabama Alps Reef, Pinnacle 1 Near West and West Pinnacle 2, and Far Tortugas). The Far Tortugas site was moved into the “needs more data” category not because of potential fishery interactions, but because of the lack of coral data. Staff will need to investigate

this area further to see if it warrants discussion in the future. The Coral SSC/AP made the following recommendations: **“to propose that the Mountain top Bank 3, Alabama Alps Reef, and Pinnacle 1 Near West and West Pinnacle 2, and Far Tortuga sites belong to the category that needs more data.”**



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Figure 5. The proposed coral HAPCs from the Coral SSC/AP meeting. Note that the areas in bright green were recommended to have boundary revision with the inclusion of new data. The depth contours are in meters (in parentheses, fathoms). Existing HAPCs, closed areas, and National Marine Sanctuaries are noted but not labeled on this map.

Two areas that were identified by the working group as being particularly vulnerable and unique were Viosca Knoll 862/906 and Viosca Knoll 826. These two areas, if the boundaries are kept as the working group presented would significantly affect the royal red shrimp fishery. Royal red shrimpers use these areas to pull up nets, but are not trawling directly on the banks. However, looking at effort and the current track lines for the shrimp fishery, there was not a viable boundary alternative that would protect both Viosca Knolls without limiting the royal red shrimp fishery. The Coral SSC/AP made the following motion to accommodate the royal red shrimp fishery because while they are technically “towing” inside the boundaries proposed, the gear is

not contacting the bottom and affecting the coral, and the areas is sensitive to other bottom disturbances. The Coral SSC/AP felt the proposed boundaries are appropriate, but that the royal red shrimp fishery should be exempted as it is not contacting the bottom. The Coral SSC/AP recommends **“that the Royal Red Shrimp Fishery be exempt from the boundaries proposed for Viosca Knoll 862/906.”**

Additionally, the Coral SSC/AP recommends **“to accept the proposed boundaries presented for the Viosca Knoll 862/906, as the Working Group recommended.”**

The Coral SSC/AP also recommends **“to propose that the Viosca Knoll 826 site belong to the category that needs more data.”**

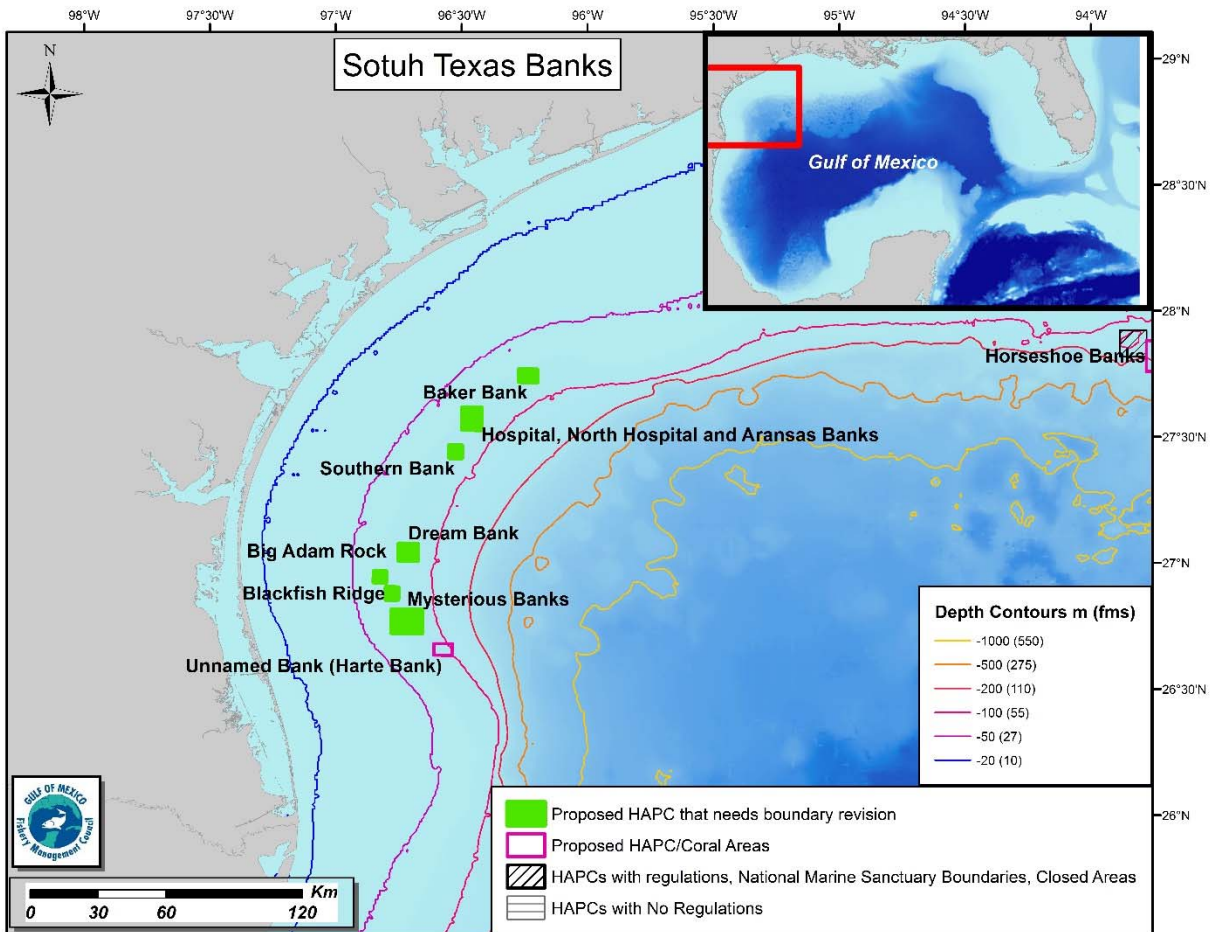
For all other Northeastern Gulf Banks areas, the Coral SSC/AP recommends **“to accept the proposed boundaries presented for the Mississippi Canyon 118, Shark Reef, Triple Top Reef, Double Top Reef, Rough Tongue Reef, Patch Reef and Solitary Mound, and L&W Pinnacles and Scamp Reef sites, as the Working Group recommended.”**

The Coral SSC/AP discussed the proposed areas on the South Texas Banks (Figure 6). There was a brief discussion on the state of the shrimp fishery with regard to current permits and the U.S. Coast Guard regulations. Each of the banks was discussed and it was presented that there is significant shrimping near to all of the banks. Staff will revise boundaries based on the track lines of the fishery and the location of the banks and present them to the Coral SSC and Coral AP when they are revised. There was discussion that the other affected fisheries would be recreational and not bottom contact fisheries. The Coral SSC/AP made two recommendations about the South Texas Banks:

1) **“to accept the proposed boundaries presented for the Harte Bank site, as the Working Group recommended,”**

2) **“to propose that the remaining South Texas Bank sites belong to the category that needs more data.”**





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Figure 6. The proposed coral HAPCs from the Coral SSC/AP meeting. Note that the areas in bright green were recommended to have boundary revision with the inclusion of new data. The depth contours are in meters (in parentheses, fathoms). Existing HAPCs, closed areas, and National Marine Sanctuaries are noted but not labeled on this map.

In total, the Coral SSC/AP considered a total areal footprint of 1,186 square miles. Of those areas, 15 were recommended to have additional analyses conducted to refine the boundaries. The total area of boundaries needing revision was 204 square miles. It was also recommended that if areas that were identified as coral areas previously (from past amendments, etc.) are found to not have corals, that they be removed as coral HAPCs.

Following the discussion on the areas proposed by the working group, the Coral SSC/AP discussed next steps. The Coral SSC/AP recommends **“that the Council start an amendment to designate coral HAPCs.”** Following the initiation of this document, the Coral SSC/AP recommends **“The Coral SSC/AP requests that the Council convene a meeting with representatives of the Joint Coral SSC/AP and Shrimp SSC/AP.”**

The meeting adjourned at 4:00 p.m.

## Appendix A.

KEY= Bold species are species identified in MSA, Bold and underlined species are species of concern from IUCN, Underlined Block names indicate current HAPCs

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Florida Banks</b>								
Long Mound	Bathypathes sp., Leiopathes sp., Stichopathes sp.	Enallopsammia sp., Lophelia sp.,	Anthomastus sp., Chelidonisis sp., Muriceides hirta, Paramuricea sp., Plumarella sp.,	46.60		300-700		
Many Mounds	Bathypathes sp., Leiopathes sp., Stichopathes sp.	Desmophyllum sp., Lophelia pertusa, Lophelia sp., Madrepora oculata, Thecopsammia socialis	<b>Acanella sp.</b> , Anthomastus sp., Anthothela sp., Paramuricea sp., Plumarella dichotoma, Plumarella sp.,	44.71		200-700		
North Reed Site	<b>Antipathes sp.</b> , Bathypathes alternata	Lophelia pertusa, Madracis sp., Madrepora oculata	Anthomastus sp., Plumarella sp.	46.60		300-900		
Okeanos Ridge	Bathypathes sp., Leiopathes sp., Stichopathes sp.	Lophelia sp.	Paracalyptrophora sp., Paramuricea sp., Plumarella sp.,	93.18		300-900		
South Reed Site	1 family (Antipathidae)	Lophelia pertusa	4 families (Chrysogorgiidae, Isididae, Paramuricidae, and Primnoidae)	23.28		400-1500		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Florida Banks</b>								
<u>Pulley Ridge</u>	<b>Antipathes atlantica,</b> <b>Antipathes furcata,</b> <b>Antipathes gracilis,</b> Cirripathes sp., Cupressopathes gracilis, Elatopathes abietina, Leiopathes sp., Rhipidipathes colombiana, Stichopathes lutkeni, Stichopathes sp.,  columnaris, Tanacetipathes hirta, Tanacetipathes sp.	Agaricia agaricites, Agaricia fragilis, Agaricia grahamae, <b>Agaricia lamarcki,</b> Agaricia undata, Agaricia sp., Leptoseris cucullata, Madracis asperula, Madracis auretenra, Madracis brueggemanni, Madracis decactis, Madracis formosa, Madracis myriaster, Madracis sp., Madrepora carolina, Manicina areolata, Montastrea cavernosa, Mussa sp., Oculina diffusa, Porites astreoides, Scolymia lacera, Scolymia sp.	Carijoa operculata, Carijoa sp., Chironephtha caribaea, Diodogorgia nodulifera, Ellisella atlantica, Ellisella barbadensis, Ellisella schmitti, Leptogorgia barbadensis, Leptogorgia cardinalis, Leptogorgia sp., Lytreia plana, Lytreia sp., Nicella deichmannae, Nicella goreau, Nicella Stylopathes guadalupensis, Nicella sp., Nidalia occidentalis, Placogorgia mirabilis, Pterogorgia citrina, Scleracis guadalupensis, Scleracis petrosa, Stereonephthya portoricensis, Swiftia exserta, Swiftia koreni, Telesto sp., Thelogorgia studer, Thesea citrina, Thesea nutans, Thesea sp., Trichogorgia viola, Villogorgia nigrescens	666.25		50-200	0.02-17.05	60

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
Northeastern Banks								
Alabama Alps Reef	<b>Antipathes atlantica</b> , <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Aphanipathes pedata, Stichopathes lukeni, Stichopathes sp.,	Cladopsammia manuelensis, Deltocyathus calcar, Guynia annulata, Javania cailleti, Madracis myriaster, Madracis sp., Madrepora carolina, Oculina sp., Paracyathus pulchellus, Phyllangia pequegnatae, Polycyathus senegalensis, Pourtalosmilia conferta, Schizocyathus fissilis	Bebryce cinera, Bebryce grandis, Bebryce sp., Ellisella sp., Hypnogorgia pendula, Hypnogorgia sp., Nicella guadalupensis, Nicella toeplitzae, Nicella sp., Nidalia occidentalis, Placogorgia sp., Siphonogorgia agassizii, Swiftia exserta, Swiftia sp., Thesea sp.	18.46		50-200		28
Far Tortuga Mississippi Canyon 118			Chrysogorgia sp., Paramuricea sp., Placogorgia sp.	12.55 37.88		50-100 800-1500		11
Mountain Top Bank 3	<b>Antipathes sp.</b> , Stichopathes sp.		Hypnogorgia sp., Swiftia sp.	13.37	6	100-200		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northeastern Banks</b>								
Patch Reef Field and Solitary Mound		Madracis myriaster	Placogorgia rudis, Swiftia exserta	36.91	3	50-100		25
L& W pinnacles and Scamp Reef	<b>Antipathes furcata</b> , <b>Antipathes gracilis</b> , Aphanipathes pedata, Aphanipathes salix	Cladopsammia manuelensis, Coenocyathus parvulus, Coenosmilia arbuscula, Javania cailleti, Madracis sp., Madracis asperula, Madracis myriaster, Madracis sp., Madrepora carolina, Oculina sp., Paracyathus pulchellus, Phyllangia americana, Pourtalesmilia conferta	Bebryce cinera, Bebryce grandis, Ctenocella sp., Ellisella sp., Nicella guadalupensis, Nicella sp., Thesea guadalupensis, Thesea sp., Villogorgia sp.	22.96	18	100-300		32
Pinnacle 1 NW and W pinnacle 2		Cladopsammia manuelensis, Oculina sp., Madrepora carolina	Ellisella sp., Nicella sp.,	20.21	18	50-150		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individual/m <sup>2</sup> )	Fish Species Present?
<b>Northeastern Banks</b>								
Rough Tongue Reef	<b>Antipathes atlantica</b> , <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Cupressopathes gracilis, Stichopathes lutkeni, Stichopathes sp., Tanacetipathes hirta, Tanacetipathes  tanacetum, Tanacetipathes thamnea	Cladopsammia manuelensis, Dasmosmilia lymani, Javania cailleti, Madracis myriaster, Madracis sp., Madrepora carolina, Oculina sp.,  Paracyathus pulchellus	Bebryce cinera, Bebryce grandis, Bebryce parastellata, Bebryce sp., Ctenocella sp., Ellisella barbadensis, Ellisella sp., Hypnogorgia pendula, Hypnogorgia sp., Nicella goreau, Nicella  guadalupensis, Nicella spicula, Nicella toeplitzae, Nicella sp., Paramuricea sp., Placogorgia rudis, Placogorgia sp., Scleracis guadalupensis, Scleracis sp., Swiftia exserta, Swiftia sp., Thesea sp.	46.65	15	50-200		29

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northeastern Banks</b>								
Shark Reef,	<b>Antipathes atlantica,</b>	Balanophyllia	Bebryce sp., Ctenocella sp.,	43.26	3.5-12	50-100		17
Triple top reef, Double top Reef	<b>Antipathes lenta,</b> Stichopathes lutkeni,  Stichopathes sp.	floridana, Cladopsammia  manuelensis, Madracis asperula, Madracis sp., Madrepora carolina, Oculina sp., Pourtalesmilium conferta	Ellisella funiculina, Eugorgia sp., Hypnogorgia pendula,  Leptogorgia stheno, Swiftia exserta, Telesto flavula, Thesea sp.					
Viosca Knoll 826	Leiopathes glaberrima,  Leiopathes sp., Sibopathes macrospina	Caryophyllia  berteriana, Lophelia pertusa, Oxysmilium rotundifolia	<b>Acanella sp.</b> , Anthothela grandiflora, Anthothela tropicalis, Anthothela sp., <b>Callogorgia americana,</b> <b>Callogorgia gracilis,</b> <b>Callogorgia sp.</b> , Muriceides hirta, Nicella sp., Paragorgia sp., Scleractinia sp.,	35.36		500-900		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northeastern Banks</b>								
Viosca Knoll 862/906	<b>Antipathes sp.</b> , Leiopathes glaberrima, Leiopathes sp.	Caryophyllia sp., Lophelia pertusa	Acanthogorgia sp., <b>Callogorgia americana,</b> <b>Callogorgia sp., Keratoisis</b> <b>flexibilis, Keratoisis sp.,</b> Muriceides hirta, Paramuricea multispina, Paramuricea sp.	64.5		300-700		
<b>Northwest Banks</b>								
<u>29 Fathom</u>	<b>Antipathes furcata,</b> <b>Antipathes sp.,</b> Plumapathes pennacea, Stichopathes sp., Tanacetipathes sp.,	Oxysmilia rotundifolia	Ellisella sp., Muricea pendula,	14.79		50-100	0.01-1.12	
AT 047		Madrepora oculata	Paramuricea sp., Swiftia sp.	23.29		1000-1500		
AT 357	Bathypathes sp.	Madrepora oculata	Paramuricea sp.	23.29		800-1500		



Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
<u>Alderdice Bank</u>	Acanthopathes thyoides, <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Aphanipathes pedata, Elatopathes abietina, Stichopathes sp., Tanacetipathes hirta, Tanacetipathes sp.	Madracis bruggemanni, Madracis myriaster, Madracis pharensis, Madracis sp., Oculina diffusa, Oxysmilia rotundifolia, Paracyathus pulchellus, Polycyathus senegalensis	Bathyalcyon robustum, Bebryce cinerea, Chironepthya caribaea, Ellisella sp., Hypnogorgia sp., Leptogorgia sp., Placogorgia sp., Scleracis guadalupensis, Scleracis sp., Swiftia sp., Thesea rubra, Thesea rugosa, Thesea sp.	20.69	35	50-100	0.01-1.59	
<u>Bouma Bank</u>	Acanthopathes thyoides, <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Aphanipathes pedata, Elatopathes abietina, Phanopathes expansa, Stichopathes sp., Tanacetipathes sp.,	Madracis asperula, Madracis brueggemanni, Madracis sp., Madrepora carolina, Oculina sp., Oxysmilia rotundifolia	Bathyalcyon robustum, Bebryce sp., Bellonella sp., <b>Callogorgia gracilis</b> , Chironepthya caribaea, Diodogorgia nodulifera, Ellisella sp., Hypnogorgia sp., Nicella sp., Nidalia occidentalis, Scleracis sp., Swiftia sp., Thesea sp.	37.80		50-100	0.01-8.08	

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
Elvers Bank	Acanthopathes thyoides, Elatopathes abietina, Phanopathes expansa, Plumopathes pennacea, Stichopathes sp., Tanacetipathes sp.	Madracis brueggemanni, Madracis sp., Oculina sp., Oxysmilia rotundifolia	Bathyalcyon robustum, Bebryce sp., Bellonella sp., Calliacis sp., <b>Callogorgia gracilis</b> , Chironephyta caribaea, Diodogorgia nodulifera, Ellisella elongata, Ellisella sp., Hypnogorgia sp., Muricea sp., Nicella guadalupensis, Nicella sp., Scleracis sp., Swiftia sp., Thelogorgia stellata	120.53		100-300	0.01-7.66	
Garden Banks 299	Leiopathes sp., Stichopathes sp.	Lophelia pertusa	<b>Callogorgia americana</b> , <b>Callogorgia sp.</b> , <b>Keratoisis sp.</b> , Paramuricea sp.,	22.42		400-600		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
Garden Banks 535	<b>Antipathes sp.</b> , Elatopathes abietina, Phanopathes expansa, Stichopathes sp., Tanacetipathes sp.	Lophelia pertusa, Oxysmilia rotundifolia	Acanthogorgia armata, Bebryce sp., Ellisella sp., Hypnogorgia sp., Muricea sp., Narella sp., Nicella sp., Scleracis sp., Thesea rubra	23.33		500-600	0.01-1.15	
<u>Geyer Bank</u>	<b>Antipathes atlantica</b> , <b>Antipathes sp.</b> , Elatopathes abietina, Phanopathes expansa, Stichopathes sp., Tanacetipathes thamnea, Tanacetipathes sp.	Javania cailleti, Madracis asperula, Madracis brueggemanni, Madracis myriaster, Madracis sp., Oxysmilia rotundifolia, Paracyathus pulchellus,	Bebryce sp., Bellonella sp., <b>Callogorgia verticillata</b> , Ellisella elongata, Ellisella funiculina, Ellisella sp., Hypnogorgia sp., Nicella guadalupensis, Nicella sp., Nidalia occidentalis, Placogorgia rudis, Riisea paniculata, Scleracis guadalupensis, Siphonogorgia agassizii, Swiftia exserta, Swiftia sp., Thesea guadalupensis, Thesea rubra	45.05	150	100-200	0.01-1.15	
Green Canyon 140 and 272			<b>Callogorgia delta</b>	280		300-1000		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
Green Canyon 234	Sibopathes macrospina	Caryophyllia berteriana, Caryophyllia sp., Deltocyathus italicus, Javania cailleti, Labryinthocyathus facetus, Lophelia pertusa, Tethocyathus cylindraceus	<b>Callogorgia americana</b> , <b>Callogorgia linguimaris</b> , Chelidonisis aurantiaca, <b>Keratoisis flexibilis</b> , Muriceides hirta, Swiftia sp.	46.62		400-900		
Green Canyon 354	<b>Antipathes sp.</b> , Cirripathes sp., Leiopathes sp., Sibopathes macrospina, Stichopathes sp.	Caryophyllia sp., Labyrinthocyathus facetus, Lophelia pertusa, Madrepora oculata	Acanthogorgia armata, Anthothela sp., Bathyalcyon sp., Chelidonisis sp., <b>Keratoisis flexibilis</b> , Muricea sp., Muriceides hirta, Paracalyptrophora carinata, Paracalyptrophora sp., Paramuricea sp., Paramuricea multispina, Placogorgia sp.	23.32		500-1000		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
Green Canyon 852	Bathypathes sp.	Enallopsammia rostrata, Madrepora oculata, Solenosmilia variabilis	<b>Corallium medea, Corallium sp.</b> , Iridogorgia pourtalesii, <b>Keratoisis sp.</b> , Narella sp., Paramuricea sp., Swiftia sp.	13.10		1500-2000		
Horseshoe Banks	Acanthopathes thyoides, <b>Antipathes atlantica, Antipathes furcata</b> , Aphanipathes pedata, Cirrhipathes sp., Elatopathes abietina, Phanopathes expansa, Plumapathes pennacea, Stichopathes sp., Tanacetipathes sp.	Madracis asperula, Madracis brueggemanni, Madrepora carolina, Oculina sp., Oxysmilia rotundifolia	Bathyalcyon robustum, Bebryce sp., <b>Callogorgia sp.</b> , Chironephthya caribaea, Chironephthya sp., Diodogorgia nodulifera, Ellisella sp., Hypnogorgia sp., Leptogorgia sp., Muricea pendula, Muriceides sp., Nicella sp., Scleracis sp., Swiftia sp., Thelogorgia stellata, Thelogorgia sp., Thesea sp.	170.93		100-300	0.01-11.03	

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
<u>Jakkula Bank</u>	<b>Antipathes</b> sp., Stichopathes sp.	Madracis sp.	Bebryce sp., <b>Callogorgia</b> sp., Hypnogorgia sp., Placogorgia sp.	36.63		100-300		
<u>MacNeil Banks</u>	Acanthopathes thyoides, <b>Antipathes</b> <b>atlantica</b> , <b>Antipathes</b> <b>furcata</b> , <b>Antipathes</b> <b>gracilis</b> , <b>Antipathes</b> <b>sp.</b> , Aphanipathes pedata, Elatopathes abietina, Phanopathes expansa, Stichopathes sp., Stylopathes columnaris, Stylopathes litocrada, Tanacetipathes tanacetum, Tanacetipathes sp.	Madracis decactis, Madracis senaria, Madrepora carolina, Oculina sp.	Chironepthya caribaea, Ellisella sp., Leptogorgia sp., Muricea pendula, Nicella sp., Swiftia sp., Thesea sp.	27.81		50-150		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
Mississippi Canyon 751 and 885		Caryophyllia polygona, Desmophyllum dianthus, Lophelia pertusa, Madrepora carolina, Madrepora oculata	<b>Callogorgia americana</b> , <b>Callogorgia sp.</b> , Muricea sp., Paragorgia johnsoni, Paragorgia sp., Paramuricea multispina, Paramuricea sp.,	46.57		400-700		
Parker Bank				62		100-150		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
<u>Rankin Bright Bank</u>	Acanthopathes thyoides, <b>Antipathes atlantica</b> , <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Aphanipathes pedata, Elatopathes abietina, Phanopathes expansa, Plumopathes pennacea, Stichopathes sp., Tanacetipates sp.	Caryophyllia berteriana, Guynia annulata, Madracis asperula, Madracis brueggemanni, Madracis sp., Madracis formosa, Madrepora carolina, Oculina sp., Oxysmilia rotundifolia, Paracyathus pulchellus, Phyllangia americana, Phyllangia pequegnatae	Anthomastus agassizii, Bathyalcyon robustum, Bebryce cinera, Bebryce sp., <b>Calligorgia gracilis</b> , <b>Callogorgia sp.</b> , Chironephthya caribaea, Chironephthya sp., Diodogorgia nodulifera, Ellisella sp., Hypnogorgia sp., Leptogorgia sp., Muricea pendula, Muricea sp., Nicella americana, Nicella flagellum, Nicella sp., Nidalia occidentalis, Placogorgia sp., Scleracis guadaleupnsis, Scleracis sp., Siphonogorgia agassizii, Swiftia exserta, Swiftia sp., Thelogorgia stellata, Thelogorgia sp., Thesea nivea, Thesea rubra, Thesea sp.	278.22		100-200	0.01-4.32	



Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>Northwest Banks</b>								
<u>Rezak Sidner Bank</u>	Acanthopathes thyoides, <b>Antipathes furcata</b> , <b>Antipathes</b> Elatopathes abietina, Plumapathes pennacea, Stichopathes sp., Tanacetipathes tanacetum	Coenocyathus parvulus, Madracis asperula, Madracis formosa, Madracis sp., Paracyathus pulchellus, Oculina sp., Oxysmilia rotundifolia	Bathyalcyon robustum, Bebryce cinera, Bebryce sp., Bellonella sp, <b>Callogorgia sp.</b> , <b>gracilis</b> , Chironepthya caribaea, Ellisella elongata, Ellisella sp., Hypnogorgia sp., Muricea sp., Nicella guadalupensis, Nicella sp., Riisea paniculata, Scleracis guadalupensis, Scleracis sp., Siphongorgia agassizii, Scleracis guadalupensis, Swiftia sp., Thelogorgia stellata, Thesea nutans, Thesea sp.	68.58	125	100-200	0.01-2.48	
<u>Sonnier Bank</u>	Acanthopathes thyoides, <b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Phanopathes expansa, Stichopathes sp.	Oxysmilia rotundifolia	Bebryce sp., Ellisella sp., Hypnogorgia sp., Leptogorgia sp., Muricea pendula, Nicella sp., Placogorgia sp., Scleracis sp., Swiftia sp., Thesea sp.	14.58		50-100	0.01-2.32	

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individuals/m <sup>2</sup> )	Fish Species Present?
<b>South Texas Banks</b>								
Big Adam Bank				23.32		50-100		
Blackfish Ridge	<b>Antipathes furcata,</b> <b>Antipathes sp.,</b> Stichopathes sp., Tanacetipathes barbadensis, Tanacetipathes tanacetum			25.75	14	50-100	0-2.3	
Dream Bank		Madracis myriaster, Oculina sp.	Bebryce cinera, Scleracis guadalupensis, Thesea nivea, Thesea parviflora, Thesea sp.	55.05		50-100		23
Hospital, North Hospital, and Aransas Bank	<b>Antipathes furcata,</b> <b>Antipathes sp.,</b> Cirripathes sp., Stichopathes setacea, Tanacetipathes barbadensis, Tanacetipathes tanacetum	Madracis asperula, Madracis brueggemanni, Paracyathus pulchellus	Bebryce cinera, Hypnogorgia sp., Muricea pendula, Nicella sp., Thesea sp.	71.78	14	50-100	0.-2.3	27
Mysterious Bank				122.9		50-100		

Block	Black corals present	Scleractinian corals present	Alcyonacean corals present	Area (km <sup>2</sup> )	Vertical Relief (m)	Depth (m)	Coral density data (individual/m <sup>2</sup> )	Fish Species Present?
<b>South Texas Banks</b>								
Southern Bank	<b>Antipathes atlantica</b> , Cirrhipathes sp., Stichopathes gracilis, Sticopathes setacea, Antipatharia	Madracis asperula, Madracis sp., Paracyathus pulchellus	Thesea nivea	26.4	16	50-100		
Unnamed Bank (Harte Bank)	<b>Antipathes furcata</b> , <b>Antipathes sp.</b> , Stichopathes sp., Tanacetipathes tanacetum		Hypnogorgia sp.	37.19	16	50-100		14