



Gray's Reef National Marine Sanctuary  
Advisory Council Meeting  
April 9, 2010  
College of Coastal Georgia  
Brunswick, GA

**Members Present**

(Chair) Clark Alexander, Non-living Resources  
Kellie Parr, Sport Diving  
LTJG Nathan Downend, U.S. Coast Guard  
Wendell Harper, Charter/Commercial Fishing  
Doug Lewis, GA DNR Law Enforcement  
Jack McGovern, NOAA Fisheries SE Regional Office  
Tim Tarver, Sport Fishing  
Al Samuels, NOAA Office of Law Enforcement  
Danny Gleason, Living Resources Research  
Spud Woodward, GA DNR Coastal Resources  
Dorset Hurley, Sapelo Island NERR

**Members Absent**

(Vice Chair) Will Berson, Georgia Conservation  
(Secretary) Venetia Butler, K-12 Education  
Mary Conley, Regional Conservation  
Scott Harris, University Education  
George Sedberry, GRNMS Superintendent

**GRNMS Staff Present**

Greg McFall, Deputy Superintendent/ Research Coordinator  
Cathy Sakas, Education Coordinator  
Becky Shortland, Resource Protection Coordinator  
Gail Krueger, Media and Outreach Coordinator  
Jody Patterson, Administrative Assistant

**Public Present**

Chuck Mead, St. Augustine Lighthouse & Museum  
Lauren Divine, GSU graduate student  
Patrick Hamilton, Friends of the GTM NERR  
Marcel Bentley, Friends of the GTM NERR  
Tim Goodall, College of Coastal Georgia  
Scott Noakes, UGA Athens

## **Welcome and Introductions**

Council Chairman Clark Alexander called the meeting to order, welcoming members, staff and public participants. Introductions were made and the agenda was reviewed with no changes. Gray's Reef Deputy Superintendent Greg McFall gave a brief commentary on the passing of Dr. Brian Keller, Science Coordinator for the ONMS SE/GoM/Carr Region.

## **Council Business**

**January 2010 Meeting Summary-**A motion was made and passed approving the summary of minutes from January's Sanctuary Advisory Council meeting.

**Council Membership-**The living resources research seat and Georgia conservation seat have been announced via the *Federal Register* as open for applications. Current seat holders are welcome to reapply as is the general public. Applications will be accepted through May 15, 2010.

**Retreat Follow-up-**A number of action items were developed during the January council retreat, from which GRNMS staff will collaborate with specific council members for resolution or discussion. The GRNMS budget and reauthorization of the National Marine Sanctuaries Act were discussed during the retreat. Council members and general public interested in contacting their legislators for support of the National Marine Sanctuaries Act and GRNMS are encouraged to do so as individuals. The contact list was distributed after the January retreat. In preparation for the 2011 management plan review, each of GRNMS programs will be highlighted during a council meeting. Greg McFall will begin with his summary of the Research and Monitoring Action Plan from the 2006 GRNMS Management Plan. The GRNMS staff would like to encourage topic discussion within the council and have requested an op-ed piece from each member on seat related topics.

A presentation by the Navy on the potential impacts of sonar and other related activities was requested by the council; however, Becky Shortland has had a difficult time finding the appropriate experts who may be local or regional. Bringing in the individuals that have been recommended would be costly. A pending lawsuit against the Navy may also prevent some of those individuals from presenting. Clark noted that this would, however, be a good opportunity for the Navy to present the public with their position. Further discussion led to a decision to invite the acoustic scientist and research coordinator from Stellwagen Bank NMS to present if possible. Becky will contact them.

Lastly, a letter was drafted for the council's approval to recommend that a replacement research coordinator be hired to assume responsibilities of the position that Greg McFall is carrying in addition to Deputy Superintendent duties. A motion was made for approval of the letter, seconded, and passed unanimously.

**Ocean Acidification Resolution-**Clark received a response letter from Dan Basta thanking the council for crafting the resolution that joins 13 other sanctuaries in promoting ocean acidification as a priority issue for the Office of National Marine Sanctuaries. Discussion on how to move forward will take place at the Sanctuary Advisory Council Summit, to be held in Port Angeles, WA.

**2010 ONMS Advisory Council Summit case study-**The GRNMS advisory council offered a case study for presentation at the national summit, however the preliminary report on Indo-Pacific Lionfish as an invasive species is still inconclusive and was not selected for presentation.

**GRNMS 2010 Programs Report-**The 2010 GRNMS Programs Report was distributed to the council prior to the meeting for review and the floor was opened to discussion on any particular items of interest. Danny inquired about the NOAA undersea laboratory, Aquarius, and the status of its operations after the fatality last year. The facility is 60' below the sea and used for underwater research and nitrogen saturation; it was placed on stand-down orders pending review by the NOAA Dive Board. Greg, who sits on the board, noted that a technical advisory committee was formed to evaluate operations and concluded with a letter to NOAA that operations should continue and added that he hopes it is back up and running soon.

**Meeting dates-**An effort has been made to set council meeting dates a year in advance, however cancelations keep occurring resulting in rescheduling. July 26, 28 and 29 were proposed for the next meeting. An email will be distributed to determine availability followed by a confirmation.

**Possible Agenda items-**Some possible discussion items and presentations for the next meeting are: a pre-management plan review of the resource protection action plan, a geological characterization of GRNMS, and a NOAA presentation on whale response to sonar and acoustics. Spud Woodward suggested that the council keep the Minerals Management Service meetings concerning offshore energy on the radar, and Clark mentioned Jim Henry's studies of geologic research on the continental shelf.

### **Research Area and Spearfishing Rule**

As of March 22, 2010, it is illegal to spearfish within the sanctuary. Transiting through the sanctuary with spearfishing gear onboard is allowed without stopping and as long as the gear is stowed and not available for immediate use. Becky thanked the council for their support over the years on this issue. The Research Area draft environmental impact statement and proposed rule are in NOAA for formal clearance; however no substantial changes are expected. A 90-day public comment period will follow release of the documents. Spud added that word on the street is that GRNMS is closed to the public; Clark noted that we are well advised to get ahead of the Research Area closure and keep the public informed.

Kellie Parr, redirecting back to the spear fishing ban, commented that it seems unfair to single out spearfishing as opposed to bottom fishing, which she claims is more damaging to the reef. As the sport diving representative, she voiced her constituents' concerns and public anger over the clause that boaters cannot stop within the sanctuary even with their spearfishing gear stowed. She mentioned that a spearfishing tournament was held in the sanctuary the week prior to the ruling in protest. As a diver, she agreed that this clause is excessive. Greg explained that from an enforcement point of view, transiting only within the sanctuary will remove the question of where speared fish came from. Danny noted that spearfishing is more selective and detrimental to the larger breed stock. Kellie reiterates that most of her reef cleanups have been removing

monofilament lines from bottom fishing-her second point being the mortality of fish caught at depth and brought to the surface. She questioned why bottom fishing isn't also banned. The concern is that a precedent has been set at GRNMS and the fear is that all state waters will be closed to spearfishing as well. Spud added that bottom fishing closures have left spearfishing open as an option. Kellie asked if there was any way to eliminate the stowed gear clause; Becky stated that trying to make a case against anyone without it would be difficult.

### **North Florida Sanctuary Interest**

During a Southeast implementation team meeting on the recovery of North Atlantic Right Whales and following a presentation by the Navy on offshore acoustics practices in North Florida waters, GRNMS Education Coordinator Cathy Sakas was approached by Marcella Bentley of the Friends of GTM NERR group. She expressed interest to Cathy in the development of a national marine sanctuary in the area, which Cathy addressed to ONMS SE/GoM/Carr Region Director, Billy Causey. The discussion has continued and progressed into the current development, with meetings taking place between the group, the St. Augustine Lighthouse and Museum, local politicians, George Sedberry, Billy Causey and the community at large. A letter was sent to NOAA Administrator Dr. Jane Lubchenco to open discussion on the topic.

Patrick Hamilton, addressing the local point of view, described the area as having a vibrant fish population, right whale calving ground, geologic interests with reef structures up to 30' tall, cultural interests, and natural springs. He expressed concern that there is little fisheries management and many pressures on the resources. They are looking to GRNMS as the model for development but are unsure of rules and boundaries. An idea was proposed that expanding the boundaries of GRNMS would be an easier task than developing a new sanctuary. Information on connectivity between GRNMS, the Guana Tolomato Matanzas NERR and NE Florida offshore areas is crucial in expressing a desire for boundary expansion. The sanctuaries protect cultural resources as well as biological and geological and this area boasts protected and unexplored archeological areas, and undetermined biological life. They are approaching this effort with a preservation and protection view point and want to see this area conserved for future generations.

Greg McFall reiterated that the establishment of a new site would be much more difficult than expanding the boundaries of an existing one, if there is connectivity. Multibeam and sidescan sonar mapping of this area would be helpful but may not be available. This is a citizen initiative but they have the support of the University of Florida. Becky Shortland mentioned that the Gray's Reef 2011 management plan review would be a good time to suggest boundary expansion as a topic for consideration. Greg suggests that we may be able to come down for dive surveys to help establish tangible connectivity and characterization. NOAA cannot designate new sanctuaries until the National Marine Sanctuaries Act is reauthorized, however boundary expansion is an option as well as congressional designation. This area is about 100 miles from GRNMS. Dorset Hurley suggested that someone with experience in the designation process would be good to involve in the discussions of a new sanctuary in NE Florida.

### **Enforcement Working Group**

Doug Lewis reported that DNR has conducted 10 trips to GRNMS in the last quarter with 17 vessel checks, none resulting in violations. He thanked Gray's Reef for funding personal floatation devices for DNR LE staff with money received from an anchoring fine. He also noted

that the law enforcement section is operating a new onboard computerized dispatch system as a pilot program which enables them to check licenses and request field support. The units are not yet available for offshore vessels. Budget cuts are prohibiting DNR LE from being at GRNMS more frequently.

LTJG Nathan Downend reported that the CG Cutter *Yellowfin* conducted one patrol in GRNMS with another cutter conducting two patrols. One of these patrols out of Station Brunswick partnered with DNR and in the process boarded 6 vessels. Nathan has spoken with the CO of the CG Cutter *Kingfisher* out of Atlantic Beach who said they have not made a concerted effort to patrol GRNMS; he requested they do so. Air Station Savannah has made no patrols. Nathan also mentioned that upcoming restructuring of USCG District 7 internal responsibilities may result in a change of representation on the GRNMS Advisory Council. They (SE Regional Fisheries Training Center) are currently operating under District 7 Law Enforcement but are changing to a training section of USCG. He is unsure if they will continue to work directly with GRNMS or SE Fisheries but that the USCG will still be represented on this council.

Al Samuels reported that he commented on the draft ONMS report “Strategy for Clarifying Enforcement Needs and Testing Enforcement Measures”. Becky reported that GRNMS staff also commented several times on the draft. Unfortunately, no comments were incorporated by either OLE or ONMS in the final report. There are errors and significant concerns that have not been addressed. Meanwhile, NOAA OLE has been under significant scrutiny after a report was released from Commerce Department Inspector General. Al noted that there may be changes in NOAA OLE as a result.

### **Climate Change and CO<sub>2</sub> Monitoring**

Dr. Scott Noakes reports that there are several groups working on the GA coast, including GRNMS. The South Atlantic bight is a complicated area due to multiple river drainage, big tidal influx, a shallow shelf out to about 100 meters and the Gulf Stream. A map depicting surface pCO<sub>2</sub> reflects a concentration of pCO<sub>2</sub> readings lower in the winter and higher when the temperature is warmer. This shows a correlation with the atmospheric temperature as the driving factor in pCO<sub>2</sub>. The NOAA Pacific Marine Environmental Lab has deployed a system of 6 coastal buoys, with GRNMS hosting a weather buoy and platform for buoy sensors. A modified buoy was installed with sensors detecting surface pCO<sub>2</sub> and about 100 yards from the buoy is the seafloor mount with pCO<sub>2</sub> sensor, temperature, and water quality sensors reading dissolved O<sub>2</sub> and salinity. GRNMS is the only sanctuary with pCO<sub>2</sub> sensors and comparative seafloor work being done. There is a lot of work to keep these going; solar cells to charge batteries and electronics boards needing replacement. It costs about \$450,000 to outfit one of these buoys. New Hampshire and Washington buoys show that the temperature change isn't reflected by corresponding pCO<sub>2</sub>; however the water depth in GA is shallower. Clark comments that the highest pCO<sub>2</sub> readings are near shore, questioning if the invection from the coastal area is the elevation factor as opposed to temperature. Scott counters that upwelling in the deeper WA buoy water column also reflects high pCO<sub>2</sub> levels. He notes the concept that the ocean will always absorb CO<sub>2</sub> is incorrect. If the 400ppm level is surpassed in the atmosphere, then the ocean becomes the source as opposed to the sink. There is a gap in data when the GRNMS buoy went on sabbatical to Cumberland Island, resulting in the loss of current temperature or salinity readings, however the pCO<sub>2</sub> is maintaining the trend by increasing as the temperature warms. No

difference resulted in the data during drought periods either. Clark refers to the seasonal flooding of estuarine marshes, during which sediment is pulled out, which could potentially account for excess CO<sub>2</sub>. According to Scott, this doesn't relate to the temperature factor which is trending alongside the pCO<sub>2</sub> readings. However he states that the marshes should add CO<sub>2</sub>. Again reiterating that this is a complicated area and it will take time to determine all factors. The seafloor package is about 100 yards from buoy, secured on a concrete base with a platform that is removable for cleaning. The seafloor and surface readings measured about the same until fall when levels spiked with water mass movement, likely from seasonal storms. The temperature tracked the same as the pCO<sub>2</sub> except when pCO<sub>2</sub> spiked from a different source. During summer months CO<sub>2</sub> is coming from the water column, acting as the source and not the sink, however cold months with atmospheric CO<sub>2</sub> below 400ppm, it becomes a sink. Come March and April, the level starts to break that line. More CO<sub>2</sub> in the water changes the pH level by lowering it. What do these spikes do to the water chemistry? The peak was 400-600ppm resulting in a major pH change as far as organisms go. How do they respond? This vast of a change in one week should show some responses. Data points from 1970-2007 show the equator as a CO<sub>2</sub> source (deep water) with winds creating upwelling; however the North Pacific and N Atlantic are sinks. Eventually this up wells around the equator. Overall, the ocean absorbs CO<sub>2</sub> but will eventually reach the point where it cannot. A pH sensor is being mounted on the GRNMS buoy to see changes as it happens-reflecting turbidity, temp, salinity, and surface water pCO<sub>2</sub>; funded by NOAA for ocean acidification studies. The seafloor part has not yet been funded except by UGA and GRNMS. Scott is requesting funding from the National Science Foundation. He is building a new platform for sensors, which should be installed this month, and installing new water quality probes. Further studies to determine what causes the spikes and how organisms are responding is needed. There is a lot of opportunity for research, just need the funding. Greg thanked Scott for his efforts as much of the research happens on his own dime and initiative. Through his own accord, he is applying for grants from NSF. The message to take out to the community is that CO<sub>2</sub> is a greenhouse gas that accumulates in the atmosphere. More heat in the atmosphere equals more CO<sub>2</sub> produced by ocean. Dorset comments that he thinks the rivers are a big contributing factor which Danny's dye study could present. The pCO<sub>2</sub> spikes happened when surface waves were calm. Clark says he thinks it might be interesting to brainstorm lateral experiments.

### **Programs overview: Research and Monitoring**

Greg McFall presents the first component of the management plan review by the Sanctuary Advisory Council. This is a synopsis of the research in the management plan for this 5 year period, which the sanctuary system mandates: support and coordinate scientific research.

**Strategy 1-*Investigate ecosystem processes and invertebrate recruitment dynamics*** (Danny has been working on these studies for 5 years)

Characterize the energy flow, who's eating who, to create a trophic model. This is a very expensive model to put together due to sampling and the processing of samples. Clark notes a conceptual model from annotated bibliographies could be done. Look at benthic and photo plankton, a web could be done now reasonably without the money for analysis.

**Strategy 2-*Investigate research area***

A working group was established and the SAC are familiar with the process. In May 04, they discussed pros and cons, developed possible area designs, identified unknown areas that would benefit from establishment, look at resource types and human activity and created a matrix of concerns. They looked at potential for interaction, established requirements and objectives for

medium and high priorities. The location of the research area was a lengthy process considering habit type and common usage. Tim Tarver suggested the southern boundary and this Tarver option has captured and eliminated most of the common concerns including displacement of recreational fishermen.

**Strategy 3-*Assess and categorize the sanctuaries resources***

The 1<sup>st</sup> priority was to update the GIS database. It looks like we'll get our GIS license reissued, however we have no in-house GIS experts, though there are many local resources.

- In 2001, a multibeam and side scan cruise was conducted to characterize the benthic habitat map that Matt Kendal has been working on. This was completed although it needs to be revisited due to sediment movement; the seafloor is not static.
- The development of an invertebrate identification guide was a priority and Danny completed this with many identified online through GSU. Some pictures are still needed.

The condition report was completed with the status of each, which we hope to revisit and update with each management plan review.

**Strategy 4-*Maintain and enhance existing monitoring programs***

- MARMAP and REEF have conducted biodiversity assessments, monitoring status and health of fish, along with our internal acoustic tagging projects. An Atlantic Shortnose Sturgeon from Delaware was acoustically picked-up on our receivers. Acoustic tags have no site specific id however external tags do. 16 fish have been tagged to date with 12 active receivers in the array. We're finding differences between species; gag and scamp grouper are staying within range of the receiver where they were caught or within 100meters of catch site. Snapper forage further and can be detected on several receivers, but there has been consistent detection of one snapper inside GRNMS. The potential for impact to resident populations could be high. Jeff Highland conducted a study of contaminant levels on benthic fish at GRNMS and found no problem.
- The design and implementation of an invertebrate monitoring program was taken on by Danny, who is moving forward with creating plots similar to what he's been doing at JY reef. A plot will be installed inside the proposed research and outside for comparison.
- The development of a comprehensive water quality program was initiated and is ongoing by Marc Frisher, who reports that the water at GRNMS is pristine. Part of this program is Scott's monitoring of pCO<sub>2</sub>.
- A sediment analysis program has not yet been initiated due to lack of funding. Lauren Divine plotted data from 07-09 at JY monitoring ledge outside GRNMS. At 1, 2, and 5 meters, she collected passive sediment consisting of shell particles, silt, and grains. She then burned off the organic particles and determined that there is very low organic sediment. Inorganic sediment goes from 1mil-250milgrams with higher sedimentation during fall/winter likely from storm events. This protocol could be adapted to GRNMS. Much info will be attained from remapping the sediment movement as some shifting has been detected visibly and from side scan sonar.
- Support and enhance regional operations initiated in Latitude 31<sup>30</sup> with a tie-in to Skidaway Institute of Oceanography and get a larger picture of the eco-region. SECOORA is set up but lacks the funding; integrating our pCO<sub>2</sub> research, etc ties in with that regional association.

- Expand and update our socioeconomic assessment that is partially completed with info attained from Bob Leeworthy and Rob Eller for the research area analysis. Provided funds to SSU for survey but it never got off the ground although it is in the works again through HQ.
- Synthesize and categorize paleoarcheology work that Erv Garrison has started and Scott is engaged with. Continued addition to our information in that regard is ongoing with the discovery of a 30,000 year old whale jaw bone at JY reef (JY reef at about 20m-70'). UGA supported by GRNMS excavated the bone and it is now being conserved at the Smithsonian with 3 casts being made for display at the Smithsonian, the GA Aquarium and UGA MECA. Paleontologist at Smithsonian drooling over bone which came from an extinct Atlantic Gray Whale. There are no other fossil records of this species at the Smithsonian. This species was whaled to extinction. Greg and Scott drove it to DC last winter.

**Funding-** Some items have not been accomplished due to funding. The proposed funding for research in 2001 was \$300,000, with a factor of increase of 10% per year to support ongoing projects. The total site budget was \$900,000 in 2001. The actual funding received to date for research is declining with the site budget this year at \$950,000; which a majority goes to vessel maintenance, marine operations support and fuel. The site operational costs have escalated over 10 years and we can barely support our research partners. Staff additions have been made with a boat captain and administrative support added; however the site budget has not increased. These required positions have been added to support all programs. This puts the council in a difficult position with the research area-how can we fund this? We have fewer resources to validate restrictions to the public, underlying this is the ongoing war on terror siphoning off government funding along with natural disasters. There is a big dip across the board in NOAA. Clark notes that this is likely an ongoing trend and that new business models are needed in government. Big ticket projects were the initial priority but over time we have worked more with research partners. Since 2005, no additional monies to support these partnerships have been received and so have declined as well. We appreciate Danny and Scott for their continued partnership. The bottom-line difference between our proposed budget and what we received is almost \$1.8million. Clark questions how we move forward giving the realities of the budget. Greg counts it as a personal success for the partners working at little to no cost to GRNMS; stating "I pitied the man who had no shoes until I met the man who had no feet". Other sanctuary sites have no budget but ample research partners. An ambitious plan to argue for more funding but prioritization in the site is needed for research, according to Clark. Former President Bush quantified Papahānaumokuākea as a national monument in 2006 and reallocated funding from other sites to support it. GRNMS research area needs an additional 400,000 to bring identified projects into the future. Dorset suggested that we need to pick a priority project and ask advisory council to make a statement to that affect. Promises have been made to the public that we will explore these projects. A working group for the research area is likely needed to address this. The mentality at HQ is that if you build it, they will come. Special preservation areas undisturbed by anyone need to be researched and looked at how they rebuild themselves. Our research area isn't just for research; it would still have the intrinsic value of rebuilding resources. Management relevant science is important to shutting down a portion of the sanctuary as our public credibility is on line. Spud suggests that public education is needed with an open forum discussing why we are doing this. Local contacts are needed, not just legislative. Conducting a krill survey with seed money identified in advance of the research area of \$25k is needed. DNR is already conducting a

federal survey and this offers framework to build on. Algae assessments are being redone this year and the lack in our characterization of pelagic birds has been completed. Bioacoustics to indicate pelagic fish biomass is ongoing, looking at interactions between pelagic and benthic fish reaction is ongoing with Peter Auster, CO<sub>2</sub> monitoring and paleoresources with Scott Noakes are also ongoing. We have had an impressive compilation of researchers involved over last 10 years and our volunteer divers have been essential during the tight budget.

### **Visitors Center Working Group**

In midst of budget issues we are looking at increasing our outreach to the public. A meeting with consultants contracted by HQ took place after they conducted a tourism survey; findings show that the community supported another visitor center in Savannah. The concept is in development and the possibility of partnering with other state/federal organizations exists. If we build it how do we support it? More meetings and discussion in upcoming in May and the draft marketing report will be forwarded around to the Council once complete.

### **Administrative Office Sustainability Audit**

Greening of the administrative offices and calculating our carbon footprint was discussed in the January 2009 Council meeting. While efforts have been made internally to capture and recycle this carbon, Danny Gleason's GSU graduate student, Lauren Divine, was asked to come in and complete an audit. She finds the following results and offers some recommendations. Lauren reports that the EPA defines sustainability as such, "The traditional definition of sustainability calls for policies and strategies that meet society's present needs without compromising the ability of future generations to meet their own needs." There are three considerations when determining sustainability: Environmental/Economic/Social. All three were considered for this audit. She conducted a thorough investigation of GRNMS offices, toilets, supply closets, warehouses, kitchen, waste disposal, office supplies, electricity, climate control and office equipment to determine ways to reduce our impact. Her findings were that we have an excellent recycling program, with over 80% of waste materials entering the facility recycled. Reusable dishes are used, local printed media suppliers, power strips in every office, and overhead lighting was minimized. An electronic thermostat is in use with hibernation mode on electronic appliances, natural lighting in all offices, no dishwasher in the kitchen, no irrigation and the use of native plants in the landscaping, local office suppliers, recyclable mixed source materials purchased and low paper usage. Her recommendations to us were to install occupancy sensors over existing light switches, energy efficient bulbs in all accessory lighting, window film to cut down on heat, and turning off surge protectors at night reducing vampire energy. Programmable thermostats eliminate excess heating and cooling while not in the building, environmentally preferable purchasing to account for raw materials/disposal/shipping, an HVAC system upgrade, removing space heaters, wrapping water heaters in thermal blankets, installing low flow toilets and faucets and selecting soy based inks on printed recycled materials were some additional options for carbon conservation.

### **NOAA SE Fisheries Service Report**

Jack McGovern provided an update on the South Atlantic Fisheries Management Council recent implementations and proposals. An assessment in 2008 determined red snapper is overfished and that simply closing the fishery wouldn't help. The council began development to end overfishing and requested an interim measure to address immediate overfishing. This

prohibits harvest of red snapper under amendment 17a. The preferred alternative was a closure of 98'-240' and 6,000 sq miles. The action on this amendment is effective in June. A new stock assessment for snapper should reflect by year end any changes in the snapper population. Clark asked why is it that the 17a boundary stops at the GA/SC line. Jack explains that not much game extends further up. The potential closure length will be as short a period as possible. Amendment 22 is a long term measure for snapper where the take will increase and eliminate the closure, but it could be years. He states the most he's heard is that it could be 5 years. The proposed closed area is closed to all fishing except spear fishing although displacement to GR is not likely. Closures are not something the council wants to do and the NOAA budget needs funds for monitoring. Danny inquires as to how you enforce this. What is the process for funding these amendments? Al states that the NOAA budget does not specify an amount of money to uphold amendments and the Office of Law Enforcement may not be able to back it. Does this doom it to failure? Spud suggests there will be some displacement to GRNMS for bottom fishing. The Magnusson act doesn't allow the council to stall this process. Spud contends this amendment action is a draconian measure and a fishery assessment showing everything is okay is unlikely.

### **Public Comment**

None

### **Adjourn**

The meeting was adjourned at 4pm