MARINE FISHERIES COMMISSION BUSINESS MEETING
Blockade Runner Hotel, Wrightsville Beach N.C.
Feb. 17-19, 2016

N.C.G.S. 138A-15(e) mandates at the beginning of any meeting of a board, the chair shall remind all members of their duty to avoid conflicts of interest under Chapter 138. The chair also shall inquire as to whether there is any known conflict of interest with respect to any matters coming before the board at that time.

N.C.G.S. 143B-289.54.(g)(2) states a member of the Marine Fisheries Commission shall not vote on any issue before the Commission that would have a "significant and predictable effect" on the member's financial interest. For purposes of this subdivision, "significant and predictable effect" means there is or may be a close causal link between the decision of the Commission and an expected disproportionate financial benefit to the member that is shared only by a minority of persons within the same industry sector or gear group. A member of the Commission shall also abstain from voting on any petition submitted by an advocacy group of which the member is an officer or sits as a member of the advocacy group's board of directors. A member of the Commission shall not use the member's official position as a member of the Commission to secure any special privilege or exemption of substantial value for any person. No member of the Commission shall, by the member's conduct, create an appearance that any person could improperly influence the member in the performance of the member's official duties.

Commissioners having questions about a conflict of interest or appearance of conflict should consult with counsel to the Marine Fisheries Commission or the secretary's ethics liaison. Upon discovering a conflict, the commissioner should inform the chair of the commission in accordance with N.C.G.S. 138A-15(e).

Feb. 17

6 p.m. Public Meeting
Receive public comment relative to any fisheries management issues

Feb. 18

9 a.m. Call to Order *
Invocation
Conflict of Interest Reminder
Roll Call
Vote on Approval of Agenda**
Vote on Approval of Meeting Minutes**

9:15 a.m. Public Comment
Receive public comment relative to any fisheries management issues

10:15 a.m. South Atlantic Fishery Management Council Nominations
- **Vote on replacement candidate(s) for obligatory seat****

10:30 a.m. Petition for Declaratory Ruling
The commission must vote to grant or deny consideration of a petition for a declaratory ruling from American Eel Farm and the Division of Marine Fisheries regarding 15A NCAC 03M .0510
- Declaratory Ruling Process Overview – Phillip Reynolds
- Presentation of Request – Louis Daniel
  - **Vote to grant or deny consideration of the merits of the petition****

11:15 a.m. 2015 Coastal Habitat Protection Plan Update – Jimmy Johnson (Presentation)
- Review public input
- **Vote on final approval of plan update ****

11:45 a.m. Chairman's Report
- Letters
- Advisory Committee Appointments
- Ethics Training Reminder
- 2016 Meeting Schedule Reminder

Noon Lunch Recess

1:30 p.m. Issues from Commissioners
- Standard Commercial Fishing Licensing Criteria

2:30 p.m. Committee Reports
- Northern
- Southern

- Shellfish/Crustacean
- Habitat and Water Quality
- Oyster and Hard Clam Fishery Management Plans
- Commercial Fishing Resource Fund
  - **Vote to delegate authority to the commission's Coastal Fishing Resource Fund Committee to develop and implement a memorandum of understanding with the Funding Committee****
- Coastal Recreational Fishing License – Louis Daniel

2:45 p.m. Fishery Management Plan Update – Catherine Blum

- Status of ongoing plans

3 p.m. Recommendations for Total Allowable Landings for Pound Nets by Waterbodies for Supplement A to the Southern Flounder Fishery Management Plan Amendment 1 – Louis Daniel

3:30 p.m. Oyster Fishery Management Plan Amendment 4 and Hard Clam Fishery Management Plan Amendment 2 – Tina Moore (Presentation)

- Review advisory committee and public input
- **Select preferred management options for each plan****
- **Vote on approval of draft plans to send to the Department of Environmental Quality and the Joint Legislative Commission on Governmental Operations for review and comment****

5 p.m. Recess

Feb. 19

8:30 a.m. Rules Suspensions – Kathy Rawls

The commission must vote to continue suspension of the following rule(s):

- **Vote on rule suspension for 15A NCAC 03J .0501 (e)(2) regarding flounder pound net escape panels****

8:45 a.m. Director's Report

Reports and updates on recent Division of Marine Fisheries activities

- Atlantic States Marine Fisheries Commission
- South Atlantic Fishery Management Council Update – Michelle Duval
  - **Vote on possible changes to cobia harvest restrictions****
- Shrimp Trawl Industry Workgroup Update – Kevin Brown
- Informational Materials
  - Rule Suspension Notices/No Action Required
  - Quota Update
  - Landings Update
    - Red Drum
    - Southern Flounder
  - Protected Resources Update
    - Observer Program
    - Incidental Take Permit Updates
  - Mid-Atlantic Fishery Management Council Update
  - Highly Migratory Species Update

10 a.m. Issues from Commissioners

10:15 a.m. Meeting Assignments and Preview of Agenda Items for May Meeting – Nancy Fish

10:30 a.m. Adjourn

2016 Meeting Dates

Feb. 17-19 Blockade Runner, Wrightsville Beach
May 18-20 Crystal Coast Civic Center, Morehead City
Aug. 17-19 Hilton Brownstone, Raleigh
Nov. 16-18 Hilton Garden Inn, Kitty Hawk

**** Times indicated are merely for guidance. The commission will proceed through the agenda until completed.***
*****Potential Action Items***

Minutes

THE MFC ADVISER
Marine Fisheries Commission Business Meeting
Jennette's Pier
Nags Head, North Carolina
Nov. 18-20, 2015

The commission held a public meeting on the evening of Nov. 18, followed by a business meeting Nov. 19-20, at Jennette's Pier in Nags Head, North Carolina.

The briefing book, presentations and audio from this meeting can be found at http://portal.ncdenr.org/web/mf/nov-2015-briefing-book.

PUBLIC MEETING – NOV. 18

Chairman Sammy Corbett called the meeting to order at 6 p.m. The following individuals spoke:

Chris McCaffity, a commercial fisherman from Morehead City, said there are a lot more fisheries rules now than 20 years ago and that it seems like the fisheries are worse off. He encouraged the commission to focus on enhancing the public food supply rather than restricting fishing, saying we could have a bumper crop of everything and a world class recreational fishery. He also said it is a crime to shut down herring when all we have to do is work with fish hatchery to rebuild the stock. He questioned why we didn't stock oysters at end of the season - each fisherman could take a bushel of oysters and spread in area where they work. He encouraged everyone to put their bickering aside and work on hatcheries.

Bud Gruninger, executive chef of Lone Cedar Café in Nags Head, has been purchasing fresh seafood for 20 years along the Outer Banks and seen species come and go and said he believes Mother Nature has a cycle where species go away and then she brings them back. He said he only deals with fresh, local seafood and sometimes only one or two fish are on his menu while neighboring restaurants have several different species because of imports. If the commission is looking at completely eliminating gill netting, he said there will be a trickle-down effect to the local businesses, sales tax and license revenue.

Leigh Forbes, who owns a home on the Currituck Sound in Kitty Hawk, shared with the commission a problem he was having with an individual commercial fisherman who was setting gill nets around his pier and his neighbors' piers creating a navigational hazard and preventing him from being able to access his dock. He and his neighbors have spoken with this fisherman, but there has been no resolution to the problem. He requested some type of rule language from the commission to stop this navigational hazard.

Senator Bill Cook, D-1, said our state is blessed with a great maritime asset with 320 miles of coastline and 19 inlets that are a public trust and a significant economic resource and we have the largest estuary of any single state in the nation. However, in 2012, a NOAA report said commercial fishing in the South Atlantic region generated roughly $17 billion in sales impacts in Florida, $2 billion in sales impacts in Georgia, and only $783 million in sales impacts to North Carolina. He wants to find new ways to take advantage of our God-given maritime assets and cautions that the commission needs to be judicious in regulating fisheries and to make decisions

based on science and fact, and not politics. He feels there is potential for the state's aquaculture industry to become a greater source of income and economic prosperity. He talked about open-water fish farming, and that one-half of all fish consumed globally are harvested from aquaculture facilities. This country imports large quantities of aquaculture products resulting in a trade deficit of $13.4 billion in 2006. He said other countries have invested heavily in aquaculture and we should as well. The N.C. commercial fishing industry is at a critical juncture and the number of fishermen, fish houses and processors is at a historic low. The total dockside value of seafood is also at an all-time low when measured in constant dollars. County boards of commissioners in Carteret, Currituck, Camden, Dare, Hyde, Pasquotank, Perquimans and Tyrrell counties, as well as the town of Nags Head and the Dare County Visitor's Bureau, have sent him resolutions in support of the commercial seafood industry and in opposition to the Southern Flounder Fishery Management Plan Supplement, which would effect change on some very contentious issues. He and other legislators have been working to foster growth in our fishing industry and he hopes the Marine Fisheries Commission can join with them to continue to grow this industry. He talked about a bill recently signed into law urging community colleges to offer courses on commercial fishing and aquaculture. He also reported the legislature cut red tape by eliminating unnecessary regulations that stifle businesses and has reformed the shellfish lease cultivation process by cutting fees and removing regulatory barriers, putting the state on the path of abundant natural water resources. Studies show the public overwhelmingly prefers local seafood over imports and he wants to be able to continue to work with the commission to give the public what it wants.

Edward Lee Mann read a letter from himself and former commissioners Jess Hawkins, Allyn Powell, Rusty Russ and Barbara Garrity-Blake, saying decisions should be made using scientific fact and economic/social data. Southern flounder status is unknown because the latest assessment was rejected; but, much is known because data has been collected for 35 years. Fishing mortality has decreased or leveled off since 2007. Sizes of flounder in the commercial catch remain unchanged for 20 years, indicating the stock is replenishing itself. While there has been a high percentage of immature fish in catches since 1991, there has been little change in those percentages, indicating the population is sustaining itself. N.C. surveys show no declining trends in the abundance of juveniles for 25 years. S.C. and GA. surveys show declines, but their surveys are not the same magnitude as N.C. Effort with gill nets and pound nets has been reduced due to interactions with sea turtles and harvest has been reduced by 39 percent from 2011 to 2014. The commission chose to pursue a supplement instead of going through the amendment process and arbitrarily picked measures they felt achieved 25 – 60 percent reductions in catch. Some claim a 40 percent reduction is needed to avoid a stock collapse, but there is no science to support such measures.

Forest Oakes, a commercial fisherman from Tyrrell County, said where he's from you are either farmer or fisherman, or you have to go out of the county for a job. He told the commission if they wanted to give him a job as a janitor for $35,000, he will take it. He feels big oil and special interests are pushing fishermen off the water and there are plenty of fish. He closed by saying it seems like the commission is biased against us and you have your minds made up already.

Wally Overman, vice chair of Dare County Commissioners, said he came to meetings earlier this year, and sadly, nothing has changed. He said the commission is using the supplement process to enact severe reductions without a real or accurate assessment of the stock and questioned why the amendment process was not being used. He asked if commission members

are being unduly influenced by a group that claims to represent all recreational fishermen, when in fact, only represents a small portion of recreational fishermen. He said if the commission was not making its decision based on science, then it was making its decision based on blind faith.

Ricky Sexton, a commercial fisherman from the Albemarle Sound area, said there needed to be more commercial fishermen on the commission and that restrictions don't make sense and they created more bycatch. Since the 1980s, the commercial industry has been regulated to death. He said he had his license reinstated three years ago and has been unable to fish for six months of the year. He told the commission if you want me to stop gill netting, buy me out. He feels regulation over turtles in his area are ridiculous and that turtles are being planted in the Albemarle Sound.

Perry Wood Beasley, a board member of N.C. Watermen United and a working waterman from Tyrrell County, said there were over 1.5 million licensed recreational fishermen and approximately 247 gill net permit holders and the public is being told that those 247 permit holders are killing all the fish and that is not true. Fresh seafood is a good source of protein and good for you. There are reports of tainted imported seafood coming in to US and there have been 385 convictions of people doing this. Fishermen can't draw unemployment because they are self-employed and what you are doing is putting people out of work.

Andrew Berry, from the N.C. Watermen United Board of Directors and a commercial fishermen from Dare County, said that commercial landings of southern flounder from 1990 to 2014 show at least 50 percent of fishing ability taken away, and in some cases 75 to 80 percent. Unit B, which is the largest waterbody in the state, has only been open 11 days this year. In 2013 landings were 2.1 million pounds and in 2014 they were 1.6 million pounds. If we had the same fishing ability as in the 1990s, in 2013, we would have landed 4.3 million pounds. The fish are there, we just not allowed to catch them. The supplement should only be used if long-term viability is at risk, but Dr. Daniel has said that the stock is listed as unknown. He presented the commission with a petition that had 1,979 signatures opposing any and all proposals to put further restrictions on southern flounder.

Ron Curtis, with the N.C. Lions Club, wanted to thank the Division of Marine Fisheries for its help during his organization's three-day fishing tournament for the blind that brings people from around the state.

Bill Rich, Hyde County Manager, speaking on behalf of the Hyde County Board of Commissioners, said it was difficult to understate the impact and importance of the southern flounder fishermen on the Hyde County economy, which is a Tier 1, economically distressed county. The county's primary industries are agriculture, commercial fishing and tourism. Commercial fishermen contributed more than $7.3 million to the Hyde County and state economies in 2013, with $5.6 million coming from flounder. In 2014 that amount was reduced to $4.8 million. He talked about the value of tourism Ocracoke and Hyde County, and the link between the fishing and tourism industries and that the economy would be severely crippled if the fish and tourism industries were diminished.

David Bush, fisheries biologist for N.C. Fisheries Association, said the commission was standing between unsubstantiated regulations and small businesses and he urged them to be vigilant with the oath they took to be on this board. He questioned if the Division of Marine

Fisheries cannot offer a recommendation based on sound science, then how can others be expected to?

Elizabeth Granitzki said **c**ommercial and recreational fishing is what makes Dare County. She was born here and has set nets and crab pots all her life. She loves fresh seafood, but every time she turns around, there's a new regulation. She said she is not a scientist, but can't we all share? It is sad when we the people can say yes and then the people in suits go into a back room and say no. She said she feels like she lives in a communist country. She had a friend that invested $10,000 in fishing gear that he now cannot use or sell. She would like for the suits to go fishing.

Wayne Twiford, a commercial fisherman from Currituck County, said he has done it all and has seen flounders go up and down over the years. He doesn't think decisions being made are based on facts. He asked the commission to keep people's livelihoods in mind when making decisions.

Watson Stuart, a commercial fisherman from Bells Island, said he has gill netted and he fishes a pound net now, and this is all he has ever done, except he was in the Army for two years. He doesn't think more restrictions are needed and would like to see things stay the same.

Joe Speight talked about issues he has with the trip ticket process. He said he got audited by IRS and the state rolled over and gave them his trip tickets. He said the division had doubled landings for some of his trips and had also furnished prices for crabs that were too high. He said it was irresponsible for the state to not collect price data.

Dewey Hemilright, a Dare County commercial fisherman, said he did not fish for southern flounder and that he participated mostly in federal fisheries. In 15-20 years of going to meetings, you usually see position papers on issues the commission was considering and that he had not seen a position from the Division of Marine Fisheries on any part of this southern flounder supplement. He said when people's livelihoods are at stake, it is a disgrace that the science/data collection agency does not have a position. He questioned why there was not a position from the division and said something smells, and it ain't fresh fish.

Glen Hopkins, a commercial fisherman from Manteo, said integrity, honesty and truth, those are the three things he wants and if the Marine Fisheries Commission gives him that, he will be satisfied.

Duke Spencer, a board member of N.C. Watermen United and a charter boat fisherman, said he served on the advisory committee for the first flounder fishery management plan. That process started with proposals by division staff to make reductions in harvest. He made the motion to reduce bag limit from eight fish to six fish and it passed. He said he also served on the advisory committee for the second flounder fishery management plan and again they were told they had to reduce the take again and as that fishery management plan developed, the turtle regulations came into effect. He felt that with the new proposals, the commission would have brought back the fishery management plan advisory committee.

Stetson Sexton, a commercial fisherman from Tyrrell County, said all he wants is a break and to be able to teach his son to provide for himself and not to wait for a handout. He said he buys gear and gets ready to fish and here comes a proclamation making his gear illegal. He doesn't want to be unemployed. All he is asking, he said, is let us fish.

Thomas Sanders said he was a commercial fisherman, but the last few days he was a painter because his boat motor is broke and he needed money. He said to ignore the science would be a tragedy and that commercial fishermen are hard-working people that just want to work. He doesn't want to kill a turtle, but accidents can happen. He questioned if highways are shut down because too many opossum get killed and why is a turtle more important than an opossum? Who gets to make that decision? He said he didn't know the commission's background, but they need to learn a little more about what's going on.

Mary Ellen Balance, a commercial fisherman, said fishing is more than a job, it's a way of life and is more than numbers on a scientific chart. She said she was trying to make a living and feed her children and that she knows there is a need to balance with science and politics, but please keep in mind that they just want to work.

Amanda Hooper said she hoped the commission understood the economic impact of its decisions on the individual and questioned if there was so much concern about the stock, why is the commission letting so many fish go to waste with bycatch and catch limits. This is nothing compared to drilling and she expects to see this commission fight against seismic testing that will come with offshore drilling. She said commercial fishing is a wonderful industry that has done much good for state.

BUSINESS MEETING - MOTIONS AND ACTIONS – NOV. 19-20

Chairman Sammy Corbett convened the Marine Fisheries Commission business meeting at 9 a.m. and reminded commissioners of their ethics requirements. He introduced a new commissioner, Rick Smith, who fills a recreational seat and replaces Kelly Darden.

The following commission members were in attendance: Sammy Corbett-Chairman, Joe Shute - Vice Chairman, Mark Gorges, Chuck Laughridge, Keith Rhodes, Janet Rose, Rick Smith, Mike Wicker and Alison Willis.

Chairman Corbett asked Nancy Fish to read Commissioner Rick Smith's Statement of Economic Interest Evaluation from the State Ethics Commission into the record.

Agenda was approved by consensus

The minutes from Aug. 18-20, 2015 meeting were approved by consensus

Public Comment

Rick Sasser, from Goldsboro, said on April 20 he had a conversation with Dr. Daniel, who said that by all indications, at least a 40 percent reduction is needed for southern flounder. He said he was also told by Dr. Daniel that the 2005 southern Flounder Fishery Management Plan said a 38 percent reduction was needed and that this was never met, that since 2005 landings are down in North Carolina, South Carolina, Georgia and Florida, that the age structure is shrinking, and that currently 90 percent of the landings consist of juvenile fish. Since then, Dr. Daniel has publicly restated that position on several occasions and has also said that all coast-wide indictors show a decline in the index of abundance and recruitment. Mr. Sasser feels a 40 to 60 percent reduction in catch is needed and that it is clear the flounder fishery is in trouble and has been for decades.

He said that the commission asked for public comment on the supplement proposals and over 90 percent of the public supported taking sustainable measures and Proposal 1 received the overwhelming majority of support. During the public comment period, out of 986 emails, 260 letters and 3,976 petition signatures, only 45 supported status quo. The public wants the southern flounder stock restored and supports limited commercial harvest using sustainable gear and wants a prohibition on the use of large mesh anchored gill nets. The supplement, he said, was an extraordinary management tool to be used only in extraordinary circumstances. He encouraged the commission to listen to the public and to use the science and to take action on behalf of resource.

Ray Brown from Goldsboro, said he was not foolish enough to tell you what to do. On Nov. 26, his oldest grandchild was old enough to get a driver's permit. When that grandchild was one-year-old, that was when the state began working on southern flounder and he was told at that time the harvest needed to be cut 40 percent, but the commission only cut harvest 25 percent and said they knew they weren't doing enough and hoped the science was wrong. Now, 15 years later, we are still talking about same thing. We are fishing on the young stock. Back then we thought mixing might be an issue and now we know that is a reality. That may cause us to not know what we specifically need to do, but we do know the southern flounder stock needs to be rebuilt. These are public trust resources he said and the public has spoken. For those of us who fish for fun, he said it is hard to teach grandchildren to appreciate nature when you cannot show it to them. He closed by saying regardless what you do, please do something for southern flounder.

Tim Hergenrader, a Pamlico County recreational fisherman and conservationist, urged the commission to adopt Proposal 1 for the Southern Flounder Supplement, saying it contained the required minimum 40 percent reduction that the director has repeatedly said is necessary for the recovery of this stock. If Proposal 1 was adopted the pound net fishery would have more fish to harvest, thus solidifying their profitability and it was a clean fishery. And although gigging would be shortened by one day per week, the harvest limit would be higher. Adoption of a Total Allowable Catch would ensure the harvest reached the poundage limit, the fishery would close and most importantly, he said, the harvest reduced by the needed 40 percent. The elimination of anchored large mesh gill nets would be gone as well as the mandatory observer costs and the countless meetings and staff time devoted to ensuring that the most destructive gear remains in the water. Plus the hated bycatch problems associated with gill nets would be eliminated. This proposal also ensures the commercial industry remains viable using sustainable gear and the public will still have a source of local caught fresh flounder. He asked if the commission's legacy will be the continued depletion of our valuable fishery resources or the adoption of sustainable fishing practices.

Ron McCoy, of Hampstead, said he was committed to saving southern flounder and reversing the years of decline. North Carolina used to have great fishing, but not anymore. He said the commission and division needed a one line vision statement that is easy to understand. His suggestion was "The Marine Fisheries' vision is for all fishermen, commercial and recreational, to catch more fish by making decisions that grow the fishery." He closed by saying that commission decisions should be guided by science.

Fred Walker, from Pender County, said science and public input has confirmed that the southern flounder fishery in serious trouble. More than 5,000 people spoke up and favored

action, with the majority favoring Proposal 1. He said when he came into his courtroom as a magistrate, he always tried to separate fact from fiction. Dr. Daniel is a good fellow, but under his leadership, thousands of recreational fishing jobs are being killed. The latest debacle was the southern flounder stock assessment, where the division was unable to produce an adequate document that would pass peer review. He said it was time to make change in fisheries management leadership.

Marcia Bryant, a Dare County native and who works in the net supply business, said changing net size restrictions would increase her business, but she empathized with her customers who are being squeezed out. Fishermen, she said, typically order six months ahead of time, which means she must order her supplies six months prior to that. Fishermen try to target what they can get the most money for. She said one size net does not catch every fish in the ocean, and that gill nets are very selective. She asked the commission to please look at fishermen as individuals.

Jerry Schill, Director of the N.C. Fisheries Association, gave the commission a petition containing 2,761 signatures opposing the southern flounder supplement process, which is in addition, he said, to Andrew Berry's petition that was presented last night. He said his association does not endorse using the supplement process and believes the commission should undertake a full amendment for southern flounder, but given current circumstances his board did meet and recommends that it should be acknowledged that substantial restrictions have already been made starting in 1979 and that additional restrictions have been made recently due to the Incidental Take Permit for sea turtles and sturgeon, and given those restrictions harvest has remained relatively steady. They recommend adopting 5 ¾ minimum mesh-size for pound net escape panels and a 5 ¾ minimum mesh size for gill nets except in the Management Unit A (Albemarle Sound) and a 14-inch minimum recreational size limit to reduce regulatory discards. He also talked about the nominations to the obligatory seat on the South Atlantic Fishery Management Council currently held by Jack Cox. He said there had been a gentlemen's agreement for over 30 years that the obligatory has gone to a commercial interest and the at-large seat goes to a recreational interest. The N.C. Fisheries Association recommend Jack Cox, Kenny Fex and David Bush. The Nominating Committee did not include David Bush, so they recommend John Hagg to round out nominations.

Hain Ficken, of Wayne County, said that he has been fishing in Pamlico County for 40 years and seen the decline of the fisheries. He said he looks forward to weekends and the magic of going to the coast to go fishing, but he sees that magic going away. Nobody is fishing out on Jennette's Pier this morning and he questioned why. He said the commission should have something to subsidize commercial fishermen who will lose their income.

Riley Williams, a commercial fisherman from Chowan County, said the southern flounder issue disturbs him because it circumvents the fishery management plan process by not going through the advisory committees. He said holding one public meeting is not the same. He talked about asking to open flounder in December, and was told that can't be done because caught too many fish would be caught. He talked about all the nets he has that can't be used anymore and asked how fishermen are supposed to be able to plan when the regulations keep constantly changing. He said the stock assessment was determined not to be usable for management and he thinks staff should have been more forthcoming.

Kevin Nunemaker, a fourth generation commercial fisherman, said his grandparents had to close business because of regulations and he told the commission that before they make a decision on flounder, to make sure they have researched the impact that decision will have on the local economy. It will have an impact not just for flounder, but for rock fish, red drum everything caught in nets and that decision will impact fish houses and restaurants.

Bert Owens, of Beaufort, talked about playing baseball when he was young. His uncle played for the Red Sox, but that family talent went downhill through the generations. He said it was the same with southern flounder, it had gone downhill over the years. He told the commission to take care of the fish and the fishermen will be okay.

Steve Brewster, an Onslow County recreational fisherman, said we have all heard of stories of good old days, always followed by the same story of the decline of our fisheries. In our state we have not taken aggressive enough action. As a recreational fisherman, he said he was fine with taking more restrictions. He feels we have to pay the price. Other states have set successful examples by removing destructive gear and their fisheries have flourished. If we need a 40 percent reduction for southern flounder to recover, then you should shoot for 80 percent, he said.

Allen Jernigan, an Onslow County for-hire captain, said he has lost all confidence in the process and in Division of Marine Fisheries leadership after the events of August. He said we're just kicking the can down the road and it is time to take the politics out of fisheries management. He told the commission they are appointed to take care of the resource for everybody in the state. You've got to do it. And if it requires a moratorium, then implement a moratorium. He said it is time to do resource management, not gear management.

Terry Pratt, a commercial fisherman and conservationist, said the Albemarle Sound Association supports comments made by Riley Williams and Jerry Schill. He also said that based on studies, the blueback herring and alewife herring populations could support a fishery now. Having been involved in conservation for 40 years and worked on the Coastal Habitat Protection Plan since inception, what has recently been done to that plan is a travesty and has made it worth nothing.

Bradley Styron, a commercial fisherman from Cedar Island and former Marine Fisheries Commissioner said, it may be true that the southern flounder stocks are going down for many reasons and he talked about the impacts of Hurricane Sandy and turtle regulations on landings. He said trip tickets will show that catching large fish before nor'easters hit. There is no information to quantify stock status and we need to find out where fish are going. He suggested having every pound net fishermen give up 10 fish and take them to the Gulf Stream and see where they go. He also thought the commission should take into account that since 1997, recreational fishing has increased and commercial fishing has decreased.

Mikey Daniels, a commercial fisherman from Dare County and former Marine Fisheries Commissioner, said nothing has changed. The commission hears the same comments over and over. Everybody wants more fish. Where have they gone? What's happening? He said nobody is perfect and it is important not to tell a lie. He said fishermen need to make a living and the recreational fishermen need to catch fish and it is their right to catch fish. We freak out when we go to a fishing place and there's no fish and blame someone, he said. It could be that there's no fish that day because they are somewhere else. He asked the commission to reduce recreational

size limit to 14 inches so the size limit will be the same for everyone. He closed by saying we need to do a new fishery management plan.

Lauren Morris, with N.C. Fisheries Association, said southern flounder was a swirling mess of rhetoric and confusion. She told the commission their guidelines bog the fishery management process down, giving rise to supplement process. It no longer makes sense to run every section of a fishery management plan through the advisory committee and try to make honorary scientists out of fishermen. By time the advisory committee gets to management sections, she said, everyone is frustrated.

Pete McClintock, from the Currituck Sound are, said he was a former environmental engineer with Virginia and now works in private restoration. He said he was a recreational fisherman and holds a Recreational Commercial Gear License and he loves to set gill net with his grandchildren. He would hate to see a moratorium on gill nets and feels for commercial fishermen who are trying to make a living. He said Southern Flounder Supplement Proposals 3, 4 and 5 seem to strike more of a balance.

Hardy Plyler, a commercial pound net fishermen and member of the Ocracoke Working Watermen's Association, said he oppose the supplement, but realizes it will be voted on today. He urged the commission to be fair and reasonable and said he supports Proposal 5. He said he strongly objects to a moratorium on gill nets or a closure before Dec. 1. He said a Total Allowable Catch is not scientifically defendable until a coast-wide stock assessment is completed. He asked the commission to begin the amendment process immediately for the Southern Flounder Fishery Management Plan and to look for common ground.

Browny Douglas, from Dare County, said he was a recreational fishermen and had fished commercially for 20 years. Commission has reached the point where right is wrong, he said, and there is no scientific evidence to support this Southern Flounder Supplement. It's no longer about science, it's about politics. He said there had been mention of illegal meetings and if we have gotten to this point, then the whole process is compromised. If he were voting today, he said, he would have to vote no or have to explain why he had compromised his personal integrity. Why challenge the integrity of the Department of Environmental Quality, the Division of Marine Fisheries and the governor's office, when you know this is wrong.

Todd Bennett said he would like the commission members to introduce themselves and they did.

Chris Elkins, a recreational fisherman from Gloucester and former Marine Fisheries Commissioner, said today is a historic day, because for the first time the Marine Fisheries Commission has a pro-resource majority from both sides of the aisle. He said all of the members were appointed by present administration, and this was not an accident, despite mixed signals from the administration. He cautioned that it could be a temporary phenomenon however, and said the vote today on flounder will be your legacy.

Tom Roller, a working waterman from Beaufort, said the commission shouldn't be talking about rebuilding southern flounder, it should have already rebuilt more than a decade ago. Option 3 is what we were trying to accomplish with first plan years ago and if you don't take action we will be talking about the same things five years from now. He said people are trying to make this

about allocations between various user groups and gear types. All of us in the room has lost faith that fisheries management will lead to brighter future for fishermen. We have been having this discussion for almost a year now and there is no excuse for last minute information and opinions. The public is saying emergency measures need to be taken to address the root cause of the problem, which is large mesh gill nets. Please show us that management can work and fix this problem.

Bud Abbott, President of Coastal Conservation Association – N.C., said Dr. Daniel publicly stated that we need 40 percent reduction in southern flounder and that the commercial sector takes 80 percent of harvest so the majority of the needed reductions must come from commercial fishermen. He said the recreational sector took only 8 percent of 2014 harvest. He said it was time to rebuild the stock and that we all need to have southern flounder that we can harvest and eat.

Charlie Venters, thanked the commission for its attention, but said it was barking up the wrong tree. He said we have destroyed the Albemarle Sound and that it's no longer water, its urine. He said we've got a problem with water quality and he's having to dump crabs overboard because they are dead. He hears it is low oxygen, but that's what you call pollution.

Britton Shackelford, commercial fisherman and member of the N.C. Watermen United, said the problem with lie is have to tell it over and over and you have to remember what you said. We've been told as soon as a stock is rebuilt, we will given more of that stock to catch, but there's been no increase in red drum, or speckled trout or striped bass. He said we all know it's about gill nets and that the recreational groups got whipped on game fish and they didn't get a Joint Enforcement Agreement or a for-hire log book either. He said this year had been the cleanest shrimping in history and when they dump the tailbag there are no fish in the catch. He said he doesn't want to catch something he can't sell. If we are given 738 turtles a year then give me 738 turtles to sell, every other country does this he said. And if you want to know what is happening to our fisheries, just look out the window at all the cormorants. They are an invasive species that eat fish and the U.S.F.W.S won't let us harvest them because they are a migratory species.

Commissioner Mike Wicker said he had a hard time believing there was no fish in the shrimp catch that Shackelford described. Chairman Corbett said division studies showed it was a clean year and he had photographs from Swansboro showing only two or three fish in the shrimp catch and that many people reported clean tows.

Benny O'Neal, a fish house owner from Dare County, said last night commercial industry supporters spoke with clarity and passion and he has heard the same today, but he also heard some ignorance about the facts. The commission is voting today on more than southern flounder, he said, you will be setting a precedent on using the supplement process. Anyone who wants to do something without the proper science can just do it through a supplement and circumvent the amendment process. He said the amendment process could result in more stringent regulations on commercial and/or recreational, but it does bring a degree of correctness. He asked the commission to consider the source of the supplement.

Jim Reilly, of Morehead City, said the southern flounder fishery is in a bad situation and the commission needs to do something to fix it soon. Since the commercial fishery harvests the

majority of the southern flounder, then that is where immediate action is needed. He said eliminating gill nets for the short term can get us there.

David Knight, with the N.C. Wildlife Federation, said they supported the implementation of Coastal Habitat Protection Plan and applauded the commission for first two items on today's agenda. He said the definition of commercial fisherman has more of a long-term importance than any single species. For the Southern Flounder Supplement, he said most of comments have supported Proposal 1. He said it was time for commercial quota or a Total Allowable Catch that achieves a 50 percent reduction, and it should be done by region and, if need be, seasonal closures and prohibiting large-mesh gill nets. He said he supported the state helping gill netters transition to other gears.

Senator Jerry Tillman, D-29, Randolph, Moore counties, said he was a sports fisherman and that y'all must not be good fishermen; I catch fish every time I come to the coast. He told the commission they had a big job and he appreciated what they did. He said the CCA has tried several legislative tactics and they struck out. We are not going to ban gamefish as long as we have the current membership in the Senate and the House he said. The highest paid lobbyist was hired for gamefish and he failed. Just to show you the foolishness of that, if you catch in your net a catch red drum, speckled trout, or striped bass and you drag them in, you can't sell them or keep them and have to throw back dead fish and that is no good for anybody. He hoped the commission will do the right thing and he said he felt they all had independent minds, except that one commissioner showed his hand when he questioned Britton Shackelford earlier. He said he fished for fun; but these boys back here fish for a living. If you are going to make it punitive, make it on sportfishing side. It seems like everything being done is trying to put these boys out of business. He told the commission they had a big decision to make and the final word will reside in the legislature. He said 13 or 15 of us wrote a letter to the DEQ secretary saying slow down and don't do this now. This is a supplemental process and the amendment process is what is supposed to be used for these weighty things. If you do something this big right now, it's going to raise a whole lot of eyebrows in the legislature. He said he was not making any threats whatsoever, I'm just saying this is too big to do it this way. Take some time, wait a few minutes, hold off a little bit, and then work on this when you get the amendment.

Someone from the audience yelled "That's a threat," and Senator Tillman responded they could take it any way they wanted it.

Dixie Smith, a commercial fisherman, said he was just a simple commercial fisherman trying to make a living and that conservation means as much to him as anyone. If he can't catch a fish, he said, then he can't make a living. If he is taken off water and not allowed to fish, who makes up his wages?

Tilman Gray, a fish house owner from Dare County and a former Marine Fisheries Commissioner, said there was a certain truth to what everyone says. He said he was appointed to the commission under Gov. Jim Martin, served under three governors. He talked about the reduction in the number of commercial fishermen, saying it was down 70 percent. He said if the commission develops a management plan and it doesn't start making a difference in 3-5 years, then you've done something wrong. We've done something wrong here, he said, but you can't do knee-jerk reactions. He said we have gone from 10,000 commercial fishermen to 2,500 now and no one can argue with that.

Bob McBride said he has heard about all the science and has read the letter from Jess Hawkins, Edward Lee Mann, Allyn Powell and Barbara Garrity-Blake. He said that southern flounder harvest has been reduced by 39 percent from 2011 to 2013 and it was disturbing that commission has yet to receive guidance on needed reductions from the Division of Marine Fisheries.

Mike Blanton, an Albemarle Sound commercial fishermen, said this is an emotional subject that the commission is trying to tackle and he doesn't feel like they are doing the right thing. He said only about four of the commissioners knows anything about it. The issues are about special interests and hate for gill nets. He said this is regulatory genocide against the commercial fishermen. In the area he fishes, gill nets are how they make their living and it is hard to catch a flounder with a pound net there. Most of gill netters try to be responsible and follow regulations. He said he had taken out observers three to four days in a row because nobody else will take them. He said this was a wonderful flounder year this year.

Myron Smith, who comes from a commercial fishing family in the Core Sound area, said the Southern Flounder Supplement doesn't allow commercial fishermen to catch southern flounder. Marine life is part of coastal area since country was founded and it is still there except when pollution kills it. If you want to do something for the fish, do something with pollution. An East Carolina University study in 2012 said we have got dead bottom and if we want more marine fisheries, take care of those dead bottoms. She said trawling stirs up the bottom and disperses the pollution.

Supplement A to the Southern Flounder fishery Management Plan Amendment 1

Division biologists Chris Stewart and Mike Loeffler gave an overview of the supplement process and public comments that the commission had solicited earlier this year on six proposals for southern flounder management. This discussion was postponed from the commission's August meeting.

To view this presentation go to
http://portal.ncdenr.org/c/document_library/get_file?uuid=5eedfcba-ecd8-4c62-b8aa-2a9eb3f3cb3d&groupId=38337

After a lengthy discussion, the commission adopted a supplement to the Southern Flounder Fishery Management Plan that included the following southern flounder management measures:

- All commercial fishing and recreational fishing will observe a 15-inch minimum size limit beginning Jan. 1, 2016.
- Minimum mesh size for anchored large-mesh gill nets is 6 inches effective Jan. 1, 2016.
- Anchored large mesh gill nets and trammel nets in the southern flounder fishery will close Oct. 16 – Dec. 31 statewide. Gear will be removed from the water.
- Flounder pound nets will be subject to a 5 ¾-inch escape panel and will operate under a Total Allowable Landings of 38 percent reductions based on 2011-2015 pound net landings. The Total Allowable Landings will be based on the water body where the pound nets are set, as presented by the Division of Marine Fisheries by the February 2016 commission meeting (assumes that the Total Allowable Landings equals the Total Allowable Catch).
- Commercial gig fishery will close when Total Allowable Landings is met.

- Recreational hook-and-line and gig fisheries will close Oct. 16-Dec. 31.

Flounder Supplement Motions

Motion by Chuck Laughridge for seasonal commercial southern flounder closures Oct. 1-Dec. 31 in areas A, B and C and Oct. 20- Dec. 31 in areas D-1, D-2 and E. Reopen Jan. 1. Establish a Total Allowable Landings for a 45 percent reduction in southern flounder based on the 2011-2015 landings. If the Total Allowable Landings is reached prior to those dates, the areas will close. Recreational closure Oct. 20-31 (reopen Jan. 1). Size limit 15-inches for commercial and recreational. Second by Rick Smith. Motion withdrawn.

Motion by Chuck Laughridge for the following southern flounder management measures:

- **All commercial fishing and recreational fishing will observe a 15-inch minimum size limit beginning Jan. 1, 2016**
- **Minimum mesh size for anchored large-mesh gill nets is 6 inches effective Jan. 1, 2016.**
- **Anchored large mesh gill nets and trammel nets in the southern flounder fishery will close Oct. 1 – Dec. 31 in areas A, B and C. Gear removed from water.**
- **Anchored large mesh gill nets and trammel nets in areas D-1, D-2 and E will close Oct. 16- Dec. 31. Gear removed from water.**
- **Flounder pound nets will be subject to a 5 ¾-inch escape panel and will operate under a Total Allowable Landings of 40 percent reductions based on 2011-2015 pound net landings. The Total Allowable Landings will be based on the area that the pound nets are in (assumes that the Total Allowable Landings equals the Total Allowable Catch).**
- **Commercial giggers will be subject to a 35-fish limit per vessel per day or per trip if the trip occurs over more than one calendar day.**
- **Recreational hook-and-line and giggers will close Oct. 16-Dec. 31.**

Second by Mike Wicker.

Roll call vote:

Joe Shute: Abstain
Rich Smith: Yes
Alison Willis: No
Mark Gorges: Yes
Chuck Laughridge: Yes
Janet Rose: No
Keith Rhodes: No
Mike Wicker: Yes
Sammy Corbett: No

Motion fails 4-4 with one abstention.

- **Substitute motion by Alison Willis to amend Chuck Laughridge's motion by moving forward with Proposal 5 and requesting permission from the Department of Environmental Quality secretary to move forward with an amendment to the**

Southern Flounder Fishery Management Plan after completion of a peer reviewed stock assessment. Second by Janet Rose.
Motion fails 2-5 with 1 abstention.

- **Substitute motion by Joe Shute to amend Alison Willis' substitute motion and adopt Proposal 3, changing closure for all fisheries date to Nov. 1- Dec. 31.Second by Rick Smith.**
  Motion fails 1-5 with 2 abstentions.

  - **Substitute motion by Alison Willis to amend Joe Shute's substitute motion for Proposal 3, changing the closure date back to Nov. 16-Dec. 31. Second by Janet Rose. Motion fails 2-5 with 2 abstentions.**

- **Substitute motion by Mike Wicker to amend Alison Willis' initial substitute motion and adopt a modified version of Proposal 1, as below.**
  Pound Net Set Permits:

  - **15-inch minimum size for southern flounder**
  - **Escape panels shall be a minimum mesh size of**
    - ~~**Option 1: 5 ¾ inch**~~
    - ✓ **Option 2: 6 inches**

    (all other escape panel requirements remain)

  - **Immediately initiate a Total Allowable Catch that represents a 25 percent reduction of the 2013 landings (highest landings on record since 2005). The 2013 landings represent a 79 percent jump in landings from the 2005 Fishery Management Plan landings level of concern.**
  - **Total Allowable Catch = 625,626 pounds (higher than all but one year between 2005-2012)**
  - ~~**Active pound net set permits may be renewed, but no new permit applications will be processed after June 1, 2015, until the completion of the next amendment.**~~
  - ~~**No pound net set permit transfers will occur until the completion of the next amendment except upon death of the permittee pursuant to 15NCAC O3J .0504.**~~
  - ~~**Daily reporting as a condition of the permit for flounder pound nets.**~~

  Commercial Gig:

  - **Commercial gigging will only be allowed four days per week, beginning Monday at sunrise and ending on Friday at sunrise.**
  - **15-inch size limit**
  - **Trip limit of 36 flounder per valid Standard Commercial Fishing License with maximum of one limit per operation, regardless of the number of valid Standard Commercial Fishing Licenses present.**

- ✓ **Option 1: A maximum of one limit per operation regardless of the number of valid Standard Commercial Fishing Licenses present.**
- o ~~**Option 2: A maximum of two limits per operation regardless of the number of valid Standard Commercial Fishing Licenses present.**~~

Anchored Large Mesh Gill Nets (commercial and recreational):

- **2015 season will remain status quo.**
- **Effective Jan. 1, 2016, anchored large mesh gill nets will be a prohibited gear in the taking and possession of flounder in internal waters.**

Commercial harvest by other gear:

- **15-inch size limit**

Motion fails for lack of second

- **Motion by Janet Rose to strike the initial motion by Chuck Laughridge and ask the secretary of the Department of Environmental Quality for permission to proceed immediately with the review process known as the amendment process for the southern flounder fishery management plan following completion of a stock assessment. Second by Alison Willis. Motion fails 2-5 with one abstention.**

Motion by Janet Rose to reconsider Proposal 3, as presented by Joe Shute. Second by Chuck Laughridge. Motion passes unanimously.

Reconsideration of motion by Joe Shute to adopt Proposal 3, changing closure for all fisheries date to Nov. 1- Dec. 31.

- **Motion by Chuck Laughridge to amend Joe Shute's motion, changing closure dates to Oct. 16-Dec. 31. Second by Mike Wicker.**

- **Motion by Janet Rose to amend Chuck Laughridge's proposed amendment changing the closure date to Nov. 15 – Dec. 31. Second by Alison Willis.**

- **Substitute amendment by Chuck Laughridge for the following southern flounder management measures:**
  - **All commercial fishing and recreational fishing will observe a 15-inch minimum size limit beginning Jan. 1, 2016**
  - **Minimum mesh size for anchored large-mesh gill nets is 6 inches effective Jan. 1, 2016.**

- **Anchored large mesh gill nets and trammel nets in the southern flounder fishery will close Oct. 16 – Dec. 31 statewide. Gear removed from water.**
- **Flounder pound nets will be subject to a 5 ¾-inch escape panel and will operate under a Total Allowable Landings of 38 percent reductions based on 2011-2015 pound net landings. The Total Allowable Landings will be based on the water body where the pound nets are set, as presented by DMF by February 2016 meeting (assumes that the Total Allowable Landings equals the Total Allowable Catch).**
- **Commercial gig fishery will close when TAL is met.**
- **Recreational hook-and-line and gig fisheries will close Oct. 16-Dec. 31.**

Second by Mike Wicker

Substitute motion passes 6-3

Joe Shute's motion as amended by Chuck Laughridge.

Roll call vote:
Joe Shute: Yes
Rick Smith: Yes
Alison Willis: No
Mark Gorges: Yes
Chuck Laughridge: Yes
Janet Rose: No
Keith Rhodes: Yes
Mike Wicker: Yes
Sammy Corbett: No
Motion passes 6-3

Chairman's Report

Chairman Corbett asked Commission Liaison Nancy Fish to review letters that were received and sent on various issues since the last commission meeting last meeting.

An issue raised in an email from Mr. Bill Hines from Oriental about Department of Transportation spraying in Pamlico County was referred to the commission's Habitat and Water Quality Advisory Committee for review and consideration.

Fish also reminded the commission of its ethics training requirements.

The commission was reminded of its business meeting dates for 2016:

February 17–19 in Wrightsville Beach
May 18–20 in Morehead City
August 17–19 in Raleigh
November 16–18 in Kitty Hawk

South Atlantic Fishery Management Council Nomination

Staff reported that the commission's Nominating Committee voted to forward the names of Jack Cox, Kenny Fex and Bernie McCants to Gov. Pat McCrory for nomination to North Carolina's obligatory seat on the South Atlantic Fishery Management Council. There was discussion that obligatory seats are typically held by commercial fishing interests, while at-large seats are usually held by recreational interest, and that not all of the slate of nominees were commercial fishermen. The commission is required to submit a minimum of three candidates for consideration for this seat. After some deliberation, the commission voted to forward the names of Jack Cox, Kenny Fex, Bernie McCants and Jon Haag to the governor for consideration for nomination to the South Atlantic Fishery Management Council obligatory seat.

Motion by Chuck Laughridge to send the names of Jack Cox, Kenny Fex and Bernie McCants to the governor for consideration for nomination to the South Atlantic Fishery Management Council obligatory seat.

> **Motion by Alison Willis to amend motion to replace the name of Bernie McCants with John Haag. Second by Janet Rose.**
> **Motion fails 4-5.**

Chuck Laughridge amends his original motion so that the commission sends the names of Jack Cox, Kenny Fex, Bernie McCants and Jon Haag to the governor for consideration for nomination to the South Atlantic Fishery Management Plan obligatory seat. Second by Mike Wicker.
Motion passes 6-0 with three abstentions.

Oyster and Hard Clam Fishery Management Plans

Division biologist Tina Moore, one of the co-leads for the Oyster and Clam Fishery Management Plans, reviewed the draft amendments.

The draft Oyster Fishery Management Plan Amendment 4 looks at:

- Whether to re-open shallow bays (less than six feet deep) of Pamlico Sound to mechanical harvest.
- Whether to continue the monitoring trigger of 26 percent legal-sized live oysters to determine when to close mechanical harvest (adopted in Supplement A to Amendment 2 to the N.C. Oyster Fishery Management Plan).
- Whether to make hand harvest limits the same statewide.
- How to mitigate harvest effort impacts on oyster resources in the Southern region.

The draft Hard Clam Fishery Management Plan Amendment 2 looks at:

- Whether to increase the recreational maximum daily harvest limit for hard clams.
- Whether to allow the use of power hauling equipment in the hand harvest of hard clams.
- Whether to modify mechanical clam harvest lines to exclude areas no longer fished.

The draft amendments to the oyster and clam plans also consider multiple changes to the shellfish lease program, changes to the shellfish license, and shading requirements for shellfish.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?uuid=b630ee5f-012e-4c06-845f-2be1f9d2b394&groupId=38337 .

The commission voted to seek public comment on the draft plans by sending them out to receive input in conjunction with several advisory committee meetings.

Motion by Chuck Laughridge to send the Oyster and Hard Clam fishery management plans to public comment. Second by Alison Willis.
Motion passes unanimously.

Interjurisdictional Fishery Management Plan
At its May 2015 meeting, the commission agreed with the division's recommendation that no management measures were needed for the Interjurisdictional Fishery Management Plan and voted to move forward with an information update of the plan. An information update is a procedural method for reviewing a fishery management plan that refreshes the plan document with the most current statistics, trends and research available, but does not propose any regulatory or other management changes.

At its August 2015 meeting the commission voted to hold a public comment period on the draft information update. The division reported that no comment was received during the 30-day comment period.

To view the information update, go to:
http://portal.ncdenr.org/c/document_library/get_file?uuid=b7cd4302-7136-4ec6-937f-87beb39ecd03&groupId=38337 .

The commission voted to approve the information update for the state's Interjurisdictional Fishery Management Plan.

Motion by Alison Willis to approve the information update for the Interjurisdictional Fishery Management Plan. Second by Chuck Laughridge.
Motion passes 8-0 with one abstention.

Kingfish Fishery Management Plan
At its May 2015 meeting, the commission agreed with the division's recommendation that no management measures were needed for the Kingfish Fishery Management Plan and voted to move forward with an information update of the plan. An information update is a procedural method for reviewing a fishery management plan that refreshes the plan document with the most current statistics, trends and research available, but does not propose any regulatory or other management changes.

At its August 2015 meeting the commission voted to hold a public comment period on the draft information update. The division reported that no comment was received during the 30-day comment period.

To view the information update, go to:

http://portal.ncdenr.org/c/document_library/get_file?uuid=32f86d2b-aea6-4f4e-9d54-4ed687383a96&groupId=38337

The commission voted to approve the information update for the state's Kingfish Fishery Management Plan.

Motion by Alison Willis to approve the information update for the Kingfish Fishery Management Plan. Second by Janet Rose.
Motion passes 8-0 with one abstention.

Striped Mullet Fishery Management Plan Amendment 1 and Associated Rules
The commission approved Amendment 1 to the N.C. Striped Mullet Fishery Management Plan and two associated permanent rules.

The first rule amends the Marine Fisheries Commission rule 15A NCAC 03J .0103 to establish one of the same restrictions for runaround or non-stationary gill nets as already exist for anchored gill nets. The change is meant to address user conflicts between gill net fishermen and shoreline residents and recreational hook-and-line fishermen in smaller coastal creeks by prohibiting non-stationary gill nets from blocking more than two-thirds of a water body or interfering with navigation or other traditional uses of the area.

The second rule amends rule 15A NCAC 03R .0112 to remove the Newport River Trawl Net Prohibited Area as a small mesh gill net attendance area, making attendance requirements consistent with similar areas of the state.

To view the draft Striped Mullet Fishery Management Plan Amendment 1, go to:

http://portal.ncdenr.org/c/document_library/get_file?uuid=e72d0f60-2608-4377-bdbb-af991f8e8b53&groupId=38337.

Motion by Chuck Laughridge to give final approval to the Striped Mullet Fishery Management Plan Amendment 1 and two associated permanent rules (15A NCAC 03J .0103 and 03R. 0112). Second by Joe Shute.
Motion passes 7-0 with one abstention.

Other Rules
The commission also approved a rule that amends the existing rule for mechanical methods for oyster harvesting to clarify that it only applies to internal coastal waters, not the Atlantic Ocean.

Motion by Alison Willis to give final approval to the mechanical oyster harvesting clarification rule (15A NCAC 03R .0108). Second by Chuck Laughridge.
Motion passes 7-0 with one abstention.

Joint Enforcement Agreement Letter
The commission voted to send a letter to the governor, the state senate president pro-tem, the speaker of the state house of representatives and all members of the General Assembly requesting consideration of comments from all user groups related to the issuance of a joint enforcement agreement with National Marine Fisheries Service law enforcement.

Motion by Chuck Laughridge to send a letter to the governor, Senate president pro-tem and speaker of the House and all members of the General Assembly requesting consideration of comments from all user groups, related to the Joint Enforcement Agreement. Second by Rick Smith.
Motion passes 5-0 with three abstentions.

Coastal Habitat Protection Plan

Plan Coordinator Jimmy Johnson presented the draft 2015 Coastal Habitat Protection Plan, reviewing the plans four goals and four priority issues:

- Goal 1 – Improve effectiveness of existing rules and programs protecting coastal fish habitats -- includes five recommendations to enhance permit compliance, monitoring, outreach, coordination across environmental commissions and management of invasive species.
- Goal 2 – Identify and delineate strategic coastal habitats -- includes two recommendations regarding mapping and monitoring fish habitat, assessing their condition and identifying priority areas for fish species.
- Goal 3 – Enhance and protect habitats from adverse physical impacts – includes eight recommendations on expanding habitat restoration, managing ocean and estuarine shorelines, protecting habitat from destructive fishing gear and dredging and filling impacts.
- Goal 4 – Enhance and protect water quality – includes eight recommendations to reduce point and non-point sources of pollution in surface waters through encouragement of best management practices, incentives, assistance, outreach and coordination. This applies not only to activities under the authority of the Department of Environmental Quality, such as development and fishing, but for all land use activities, including forestry, agriculture and road construction.
-

Priority issues for the plan's implementation actions include oyster restoration, living shorelines, reducing sedimentation in tidal creeks and developing metrics to evaluate habitat trends.

To view this presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?uuid=4116d94d-b388-4392-8b6e-8c32f49f66bf&groupId=38337 .

The commission voted to send a draft update to the Coastal Habitat Protection Plan out for public comment.

Motion by Chuck Laughridge to send the Coastal Habitat Protection Plan update out for public comment. Second by Joe Shute.
Motion passes unanimously.

The meeting adjourned.

SAFMC Nominations

Joseph Andrew High

452 Causeway Dr.
Wrightsville Beach NC, 28480
Phone: H&W(910) 617-0528
Email: AndyrIntlss@aol.com

EDUCATION

1979-1984 B.S. Computer Science, University of North Carolina Wilmington

EMPLOYMENT

1996-Present Owner/Operator of a South Atlantic Commercial Boat
Job responsibilities include all things related to the operation of a commercial fishing operation. I handled all details in dealing with fish houses, Government agencies, maintenance and upkeep of a 41' fishing vessel.

1992-1996 Owner/Operator Relentless Charters
Job responsibilities include all things related to the operation of a charter/commercial fishing operation. I handled all details in dealing with customers, fish houses, Government agencies, maintenance and upkeep of a 35' fishing vessel.

1992-1993 Corporate Captain, Pritchard Paint & Glass
I ran the corporate 47' Buddy Davis entertaining clients and potential clients. My responsibilities included the maintenance and upkeep of the vessel and all equipment used in the operation.

1985-1992 Manager of Information Services, Flour Daniels
I was in charge of database design, development and maintenance for the regional Dupont construction site. Applications included Material Inventory, Job Costing, Account Receivables, and Electronic Funds Transfer. The applications were developed on a Digital Equipment Corporations VAX using the fourth generation database Adabas/Natural. I supervised two keypunchers and one other programmer.

Personal Fisheries Philosophy

Fisheries management should be done in the best possible manner with integrity and confidence that the decisions entered into are not only backed by good scientific data but have involvement of the users of the resource. At no time should any laws/restrictions be imposed on any segment of the industry with faulty data or pressed into being by political pressure. Management needs to be methodical as well as considerate of the economical aspects and should address and offer solutions to the effects of the measures on the communities.

Fisheries History

I have held South Atlantic fisheries permits for King Mackerel, Spanish Mackerel and Snapper/Grouper for as long as permits have been being issued and participate in the Black Sea Bass trap fishery. In the past I have longlined for Tuna, Swordfish and Sharks as well as trolled with a green stick for tuna's. I have used gill nets for Spots, Croakers, Spanish Mackerel and Dog Sharks.

Declaratory Ruling

January 28, 2016

Richard Allyn
American Eel Farm, LLC
1633 Highway 41
Trenton, NC 28585
(252) 448-0037

Mr. Sammy Corbett
Chairman, North Carolina Marine Fisheries Commission
P.O. Box 769
Morehead City, NC 28557

Re: American Eel Farm Aquaculture Permit #1634393

Dear Mr. Corbett,

The North Carolina Eel Farm began operating in 2002 under the ownership of George Koonce. It operated successfully until 2010 and restarted again in 2013 under the new ownership of American Eel Farm LLC (AEF). AEF is proposing to continue to rear American eel (*Anguilla rostrata*) elvers/glass eels to a marketable size for the local bait and food markets. As well as consider the market opportunities in overseas markets. This project meets a growing demand for American eel consumption both overseas and in the U.S. It complements and enhances the mission statement of the U.S. Department of Commerce in promoting job creation and economic growth that is environmentally sound. Also, it is supported by the National Aquaculture Act approved by Congress on September 26, 1980. Additionally, it meets the goals of the North Carolina Rural Economic Development Center by creating job opportunities in economically depressed counties, like Jones County, which has a population of approximately 10,300 and is classified as a Tier 1 area by the North Carolina Department of Commerce. This classification indicates the county is economically distressed.

American Eel Farm, LLC currently holds an Aquaculture Operation Permit from North Carolina Department of Agriculture valid until 2017 and has had the same from the North Carolina Division of Marine Fisheries since 2013 renewing each year as required.

There is no successful commercial hatchery for the American eel in the U.S. For that matter there is no successful hatchery for this species of eel anywhere on the planet. This is the case in spite of millions of dollars spent on this research all over the globe. As a result the AEF is forced to do what all eel farmers do in other countries which is to purchase its seed stock from fisherman/dealers that have caught them in the wild.

AEF proposes to harvest American eel elvers/glass eels from North Carolina coastal fishing waters in accordance with the North Carolina Aquaculture Plan for American Eel being voted on at the Atlantic States Marine Fisheries Commission (ASMFC) February 2-4, 2016 winter meeting in Alexandria, Virginia. If the North Carolina Aquaculture Plan for American Eel is not approved by the ASMFC then AEF will withdraw its request for this declaratory ruling. The American eel glass eels will be grown out in a state-of-the-art closed recirculating system located in Jones County. The impact to the economy of Jones County is immeasurable. The AEF operated successfully for many years under the ownership of George Koonce until his health failed. Currently AEF is in full operation with 100% of the facility operable. AEF has already hired several consultants and a farm manager to operate and improve the facility and its operations.

We understand the North Carolina Marine Fisheries Commission (NCMFC) rule regarding possession of American eels under nine (9) inches and the reasoning behind the rule. The AEF would like a declaratory ruling on NCMFC Rule 15A NCAC 03M .0510 allowing the AEF to harvest, possess, and sell undersize American eels in North Carolina for grow out. We are willing to provide all chain of custody documents regarding all American eel glass eels harvested. The facility has been visited by the North Carolina Marine Patrol and will be open for inspection at any time.

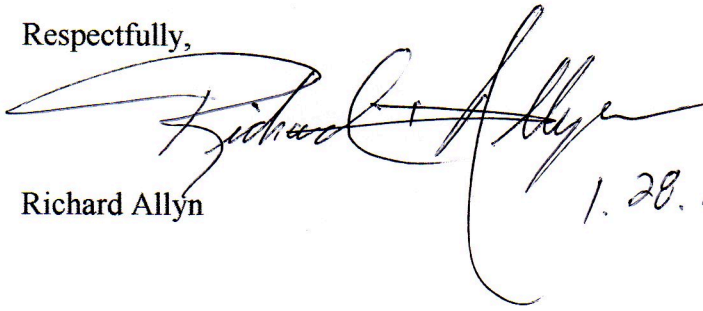
Previously in 2002 the North Carolina Eel Farm (now AEF) received a declaratory ruling allowing the possession of undersize American eel (Attachment 1). Then again in 2015 the AEF received a declaratory ruling allowing the possession of undersize American eel (Attachment 2). The 2015 ruling was necessary because an increase in the minimum size limit from six to nine inches resulted in an amendment to NCMFC Rule 15A NCAC 03M .0510 which invalidated the 2002 declaratory ruling. This declaratory ruling request differs from the previous two in that it would allow the AEF to harvest and sell undersize American eels from North Carolina waters according to the provisions of the North Carolina Aquaculture Plan for American Eel approved by the ASMFC.

Timing is critical for this venture to be successful. The harvest season for American eel glass eels being considered under the North Carolina Aquaculture Plan for American Eel is February 22 to May 31, 2016. We propose to harvest and grow out glass eels once we have permission to

harvest them in North Carolina. The first crop should be ready for market by October 2016. Any delay in receiving a declaratory ruling will cause a full year setback and jeopardize the ability to locate this industry in North Carolina.

We respectfully ask for your prompt consideration for a declaratory ruling allowing the AEF to harvest, possess, and sell undersize American eels for aquaculture purposes in accordance with the North Carolina Aquaculture Plan for American Eel pending approval by the ASMFC. We are available to answer any questions and address any concerns you may have.

Respectfully,



Richard Allyn

1.28.

CC: Dr. Louis Daniel
Mr. Mark Gorges
Mr. Chuck Laughridge
Mrs. Janet Rose
Mr. Joe Shute
Mr. Rick Smith
Mr. Mike Wicker
Mrs. Alison Willis

Statement of Facts:

I. SUBJECT

Mr. Richard Allyn with American Eel Farm, LLC (Petitioner) requests a declaratory ruling from the N.C. Marine Fisheries Commission (Commission) regarding the applicability of the size limit for American eel. The Petitioner seeks a ruling regarding the applicability of N.C. Marine Fisheries Commission (Commission) Rule 15A NCAC 03M .0510, as it relates to the take, possession, and sale by the Petitioner of American eel under nine inches. The N.C. Division of Marine Fisheries (Division) is joining the Petitioner in this request for a declaratory ruling.

II. ORGANIZATION

By a letter dated January 29, 2016 and received January 29, 2016 the American Eel Farm, LLC requests a declaratory ruling on Commission Rule 15A NCAC 03M .0510 to allow the American Eel Farm, LLC to take, possess, and sell undersize American eels in North Carolina under the conditions in the North Carolina Aquaculture Plan for American Eel being voted on by the Atlantic States Marine Fisheries Commission (ASMFC) at their February 2-4, 2016 winter meeting. Paragraph (a) of N.C. General Statute Section 150B-4, Declaratory rulings, states the "agency shall prescribe in its rules the procedure for requesting a declaratory ruling and the circumstances in which rulings shall or shall not be issued." These rules are set forth in Title 15A (Environment and Natural Resources) of the N.C. Administrative Code, Chapter 03 (Marine Fisheries), Subchapter 03P (Hearing Procedures), Section .0200 (Declaratory Rulings).

III. BACKGROUND

Petitioner is requesting a declaratory ruling regarding the applicability of Commission Rule 15A NCAC 03M .0510, prohibiting the take, possession or sale of American eel under the allowable size limit as it relates to an aquaculture operation where glass eels and elvers would be harvested, raised, and sold in domestic and foreign bait and food markets under an Aquaculture Plan once approved by the ASMFC. The Commission amended Rule 15A NCAC 03M .0510 in 2015 to comply with the new minimum size limit adopted by the ASMFC in Addendum III (adopted 2013) to the Interstate Fishery Management Plan for American Eel. In 2014 the ASMFC adopted Addendum IV which granted states the ability to apply for a limited harvest of glass eels. Under an Aquaculture Plan approved by the ASMFC a maximum of 200 pounds of glass eels may be harvested annually from state waters for use in domestic aquaculture facilities.

In 2002 on behalf of North Carolina Eel Farm (now the American Eel Farm), George Koonce and Alexis Blanchard requested a declaratory ruling as to the applicability of the same rule that is the subject of the current request predicated on the applicability of the rule to aquaculture operations. The Commission issued a declaratory ruling allowing the North Carolina Eel Farm (now the American Eel Farm), which had been issued a valid aquaculture operation permit by the Division, to possess (not harvest or sale) American eel under six-inches (termed glass eels) for the purpose of grow out. The Commission's ruling allowed the North Carolina Eel Farm to

purchase glass eels from Maine or South Carolina and import them into North Carolina with the appropriate permits for grow out.

In 2015 on behalf of American Eel Farm, Richard Allyn requested a declaratory ruling as to the applicability of the same rule that is the subject of the current request predicated on substantially similar facts presented in 2002. The request was necessary because the rule the 2002 declaratory ruling was issued for was amended by the Commission. The Commission issued a new declaratory ruling allowing the American Eel Farm, which had been issued a valid Aquaculture Operation Permit by the Division, to possess (not harvest or sale) American eel under nine-inches (termed glass eels) for the purpose of grow out. The Commission's ruling allowed American Eel Farm to purchase glass eels legally harvested outside North Carolina and import them into North Carolina with the appropriate permits for grow out.

The current request is necessary because the Petitioner is seeking to take, possess, and sell undersize American eels from State waters in accordance with the North Carolina Aquaculture Plan for American Eel. This action was not authorized in previous declaratory rulings.

Petitioner has been issued an Aquaculture Operation Permit annually since 2013 (permits are valid for one year from the date of issuance), and is seeking a declaratory ruling allowing for the take, possession, and sale of American eel under nine inches. Additional facts are contained in Petitioner's request, a copy of which accompanies this document, and will be discussed by the Division during its presentation of the request. Further discussion is also contained in this document, below.

IV. AUTHORITY

a. North Carolina General Statutes
   §§ 113-134, 113-170.4, 113-170.5, 113-182, 143B-289.52
b. N.C. Marine Fisheries Commission Rules
   15A NCAC 03P .0201-.0203
c. Atlantic States Marine Fisheries Commission
   Addendum IV to the Interstate Fishery Management Plan for American Eel

V. DISCUSSION

American eel are managed by the ASMFC Interstate Fishery Management Plan for American Eel, adopted initially in 2000. Federal law requires the conservation management actions approved through an ASMFC or regional federal council Fishery Management Plan be implemented by the state of North Carolina. In 2014 the ASMFC adopted Addendum IV which allowed states the ability to apply for a limited harvest of glass eels. Under an Aquaculture Plan approved by the ASMFC a maximum of 200 pounds of glass eels may be harvested annually from state waters for use in domestic aquaculture facilities.

American eel is included in the North Carolina Interjurisdictional Fishery Management Plan. The goal of the North Carolina Interjurisdictional Fishery Management Plan is to adopt Fishery Management Plans, consistent with North Carolina law, approved by Councils or ASMFC by reference and implement corresponding fishery regulations in North Carolina to provide compliance or compatibility with approved Fishery Management Plans and amendments, now and in the future.

North Carolina General Statute Section 113-132 authorizes the Commission to regulate aquaculture facilities which cultivate or rear marine and estuarine resources. The Commission is also authorized to issue permits for specialized activities pursuant to N.C. General Statute §113-169.1, and to regulate the importation and exportation of fish pursuant to N.C. General Statute §113-170. The Commission has adopted regulations establishing an Aquaculture Operations Permit which, at the discretion of the Director, may be conditional as to species, quantity, size, time or location (NCMFC Rules 15A NCAC 03O .0501, .0502, and .0503), and has adopted regulations establishing a Permit to Introduce, Transfer or Hold Imported Marine Estuarine Organisms (15A NCAC 03I .0104). These authorities and permits allow the Commission the ability regulate aquaculture facilities, including the size of the species to be reared, and has implemented its statutory authority regarding aquaculture operation permits through its rules.

The Commission's 2002 and 2015 declaratory rulings held that the prohibition on possession of American eels under the minimum size limit did not apply to an aquaculture facility issued a valid Division of Marine Fisheries aquaculture operation permit for the cultivation or rearing of eels legally harvested outside North Carolina and imported into this State. The ruling further held that such facilities were subject to the conditions of the permit issued by the Division.

In December 2015 the Division submitted an Aquaculture Plan to the ASMFC for consideration which would allow the Petitioner to harvest 200 pounds of American eel glass eels for grow out. The ASMFC approved the Aquaculture Plan at its February 2-4, 2016 winter meeting.

The American Eel Farm currently possesses a valid Division of Marine Fisheries Aquaculture Operation permit and has done so since 2013.

As noted above, the Division has joined Petitioner's request, and is in favor of the request being granted by the Commission. The Division notes that, should the Commission grant the request, the Petitioner's facility and operations would continue to be subject to the Aquaculture Operation Permit issued by the Division and any other applicable statutes and regulations.

STATE OF NORTH CAROLINA

COUNTY OF JONES

BEFORE THE
NORTH CAROLINA MARINE
FISHERIES COMMISSION

IN THE MATTER OF:	)	
PETITION FOR DECLARATORY RULING BY	)	
RICHARD ALLYN	)	
CONCERNING THE APPLICATION OF	)	**DECLARATORY RULING**
COMMISSION RULE 15A NCAC 03M .0510	)	
TO AQUACULTURE OPERATIONS	)	

THIS MATTER came before the North Carolina Marine Fisheries Commission (hereinafter the Commission) at its regularly scheduled meeting in Wrightsville Beach, North Carolina on February 18, 2016, as a request for a declaratory ruling pursuant to N.C.G.S. §150B-4 by Mr. Richard Allyn on behalf of American Eel Farm (hereafter Petitioner). As described more fully in the Findings of Fact and Conclusions, below, Petitioner seeks a ruling concerning the application of Commission Rule 15A NCAC 03M .0510, as it relates to an aquaculture operation.

The Petitioner and the North Carolina Division of Marine Fisheries, through its Director, stipulated to the facts presented in Petitioner's January 29, 2016 Petition for Declaratory Ruling, as supplemented by the Statement of Facts submitted by the Director on January 29, 2016, and the matter was presented to the Commission as a joint request by the Petitioner and the Division. The Fisheries Director presented the joint request to the Commission at its meeting on February 18, 2016. The Commission by proper motion and majority vote granted the Request for Declaratory Ruling, and to proceed to the merits of the applicability of 15A NCAC 03M .0510 to the given state of facts. Upon review of the record documents and stipulated facts, the Commission makes the following:

FINDINGS OF FACT AND CONCLUSIONS

1. Petitioner American Eel Farm, through Mr. Richard Allyn, seeks a declaratory ruling on the issue of whether the current prohibition on the take, possession, and sale of American eels less than nine (9) inches (also known as "glass eels" or "elvers"), as provided in 15A NCAC 03M .0510 applies to an

aquaculture facility that is included in a North Carolina Aquaculture Plan for American Eel approved by the ASMFC and is permitted under an Aquaculture Operation Permit and Aquaculture Collection Permit issued pursuant to N.C.G.S. §113-169.1 and Commission Rules 15A NCAC 03O .0501, .0502, and .0503(f).

Petitioner's Operation

2. Petitioner proposes to operate an aquaculture facility located at Highway 41, Trenton, Jones County, North Carolina, for the purposes of rearing American eels. The facility includes a building housing 24 self-contained (closed-loop) 1,000 gallon and two 7,500 gallon, automated, self-cleaning and oxygenated holding tanks in which American eels are to be reared until they reach a marketable size at which they may be legally sold within and outside of the State of North Carolina to bait shops, bait brokers or other markets in accordance with applicable state and federal laws and regulations.

3. Petitioner intends to take, possess, and sell undersize American eels from Coastal Fishing Waters in the State of North Carolina in accordance with the North Carolina Aquaculture Plan for American Eel approved by the Atlantic States Marine Fisheries Commission.

Previous Commission Declaratory Rulings

4. In 2002 on behalf of North Carolina Eel Farm (now the American Eel Farm), George Koonce and Alexis Blanchard requested a declaratory ruling as to the applicability of the size limitation found in Rule 15A NCAC 03M .0510.

5. Predicated on the 2002 Request for Declaratory Ruling filed by North Carolina Eel Farm (now the American Eel Farm), the Commission issued the following Ruling:

> The 15A NCAC 3M .0150 prohibition on possession of American eels less than six (6) inches in length does not apply to an aquaculture facility issued a valid Division of Marine Fisheries aquaculture operation permit for the cultivation or rearing of eels legally harvested outside North Carolina and imported into this State. This Declaratory Ruling does not exempt an aquaculture facility permitted by the Division of Marine Fisheries from complying with the requirements of all other applicable State and federal laws and regulations.

6. In 2015 on behalf of the American Eel Farm, Richard Allyn requested a declaratory ruling as to the applicability of the size limitation found in Rule 15A NCAC 03M .0510. This request was

necessary because Rule 15A NCAC 03M .0510 was suspended by the Fisheries Director in November 2014 and amended by the Commission in February 2015 and rendered the 2002 declaratory ruling null and void.

7. Predicated on the 2015 Request for Declaratory Ruling filed by the American Eel Farm, the Commission issued the following Ruling:

> The prohibition in Rule 15A NCAC 03M .0510 on possession of American eels less than nine (9) inches in length does not apply to an aquaculture facility issued a valid Division of Marine Fisheries Aquaculture Operation Permit for the cultivation or rearing of eels legally harvested outside North Carolina and imported into this State. This Declaratory Ruling does not exempt an aquaculture facility permitted by the Division of Marine Fisheries from complying with the requirements of all applicable State and Federal laws and regulations

8. Petitioner purchased North Carolina Eel Farm in 2012, renamed the facility the American Eel Farm, and operated the facility pursuant to the Commission's 2002 and 2015 Declaratory Rulings and an applicable Aquaculture Operation Permit as issued by the Fisheries Director.

American Eel Fishery Management Plan, Addendum IV

9. The Atlantic States Marine Fisheries Commission adopted Addendum IV to the Interstate Fishery Management Plan for American Eel in 2014. Addendum IV contains a provision allowing states to submit for approval an Aquaculture Plan that would allow for a limited harvest (take) of American eel glass eels for use in domestic aquaculture facilities. Specifically, states are allowed to request for a harvest of up to 200 pounds of glass eels under an Aquaculture Plan.

10. The North Carolina Division of Marine Fisheries submitted an Aquaculture Plan for review by the Atlantic States Marine Fisheries Commission in December 2015. At their February 2-4, 2016 winter meeting the Atlantic States Marine Fisheries Commission will be voting to approve the North Carolina Aquaculture Plan for American Eel submitted in accordance with Addendum IV to the Interstate Fishery Management Plan for American Eel.

Commission's Authority to Regulate Aquaculture Facilities

11. In accord with its authority to regulate aquaculture facilities which cultivate or rear marine resources pursuant to N.C.G.S. §113-132, to issue permits for specialized activities pursuant to N.C.G.S.

§113-169.1, and to regulate the importation and exportation of fish pursuant to N.C.G.S. §113.70, the Commission has adopted regulations establishing an aquaculture operations permit which, in the discretion of the Director, may be conditioned as to species, quantity, size, time or locations (15A NCAC 03O .0501, .0502, and .0503) and has adopted regulations establishing a permit for the importation and transfer of marine and estuarine organisms (15A NCAC 03I .0104).

12. Legally obtained state stocks of this marine resource, American eel, qualify as "artificially propagated stocks of marine resources" under the rule defining aquaculture operation. 15A NCAC 03I .0101(2)(a)

Based upon the foregoing findings of fact and conclusions, the North Carolina Marine Fisheries Commission makes the following:

DECLARATORY RULING

The prohibition in Rule 15A NCAC 03M .0510 on the take, possession, and sale of American eels less than nine (9) inches in length does not apply to an aquaculture facility included in a North Carolina Aquaculture Plan for American Eel approved by the Atlantic States Marine Fisheries Commission and issued a valid Division of Marine Fisheries Aquaculture Operation Permit and Aquaculture Collection Permit for the harvest, cultivation or rearing, and sale of eels legally harvested inside North Carolina. This Declaratory Ruling does not exempt an aquaculture facility permitted by the Division of Marine Fisheries from complying with the requirements of all applicable State and Federal laws and regulations

This the____day of March, 2016

_____
Sammy Corbett, Chairman
Marine Fisheries Commission

Coastal Habitat Protection Plan

2015 North Carolina Coastal Habitat Protection Plan

Final Draft

By

North Carolina Department of Environmental Quality

Editors:

Teresa J. Barrett, Anne S. Deaton, Ernie F. Hain, Jimmy Johnson
North Carolina Department of Environmental Quality
Division of Marine Fisheries
Morehead City, NC 28557

EXECUTIVE SUMMARY

This document is intended as a resource and guide compiled by Department of Environmental Quality staff to assist the Marine Fisheries, Environmental Management, and Coastal Resources commissions in the development of goals and recommendations for the continued protection and enhancement of fishery habitats of North Carolina. Implementation of any of the recommendations through specific rules or policies will involve further discussion with stakeholders as well as the balancing of competing ecological and economic values. By adopting this update, the commissions agree to cooperatively manage aquatic habitats towards the goal of coastal fishery resources long-term viability. The "Source Document" continues to be a work-in-progress as more scientific data, inventories, and indicators become available. GS. 143B-279.8 requires that a Coastal Habitat Protection Plan (CHPP) be drafted by the Department of Environmental Quality, (formerly the Department of Environment and Natural Resources), and reviewed every five years. The purpose of the plan is to recommend actions to protect and restore habitats critical to enhancement of North Carolina's coastal fisheries. This is the third iteration of the plan. The Marine Fisheries, Coastal Resources, and Environmental Management commissions are required to approve the plan recommendations.

The 2015 Coastal Habitat Protection Plan summarizes the economic and ecological value of coastal fish habitats to North Carolina, their status, and the potential threats to their sustainability. Goals and recommendations to protect and restore fish habitat, including water quality, are included. The appended Source Document, compiled by staff of the Department of Environmental Quality, provides the science to support the need for such recommendations. Throughout the plan, there are references to the chapter of the Source Document where more details and references can be found.

The 2015 plan and Source Document describe many of the accomplishments that have occurred since the first iteration of the plan in 2005. Most have been non-regulatory, collaborative efforts across divisions. Continued progress will require cooperation across additional agencies.

2015 Goals and Recommendations

Goal 1. Improve effectiveness of existing rules and programs protecting coastal fish habitats.

Includes 5 recommendations regarding enhancement of compliance, monitoring, outreach, coordination across commissions, and management of invasive species.

Goal 2. Identify and delineate strategic coastal habitats.

Includes 2 recommendations regarding mapping and monitoring fish habitat, assessing their condition, and identifying priority areas for fish species.

Goal 3. Enhance and protect habitats from adverse physical impacts.

Includes 8 recommendations on expanding habitat restoration, managing ocean and estuarine shorelines, protecting habitat from destructive fishing gear, and dredging and filling impacts.

Goal 4. Enhance and protect water quality.

Includes 8 recommendations to reduce point and non-point sources of pollution in surface waters through encouragement of Best Management Practices, incentives, assistance, outreach, and coordination. This applies not only to activities under the authority of the Department of Environmental Quality, such as development and fishing, but to all land use activities, including forestry, agriculture, and road construction.

The Coastal Habitat Protection Plan and Source Document can be viewed and downloaded from:
http://portal.ncdenr.org/web/mf/habitat/chpp/downloads

The 2015 North Carolina Coastal Habitat Protection Plan

North Carolina's approximately 2.3 million acres of estuarine waters comprise the largest estuarine system of any state along the Atlantic seaboard. Located at the confluence of warm southern and cool northern currents, North Carolina's waters support a high diversity of aquatic species and six distinct, but interdependent, marine habitats. These waters are vital not only for the state's important fish species, but also for fish that migrate along the east coast.

North Carolina, with its billion dollar commercial and recreational fishing industries, ranks among the nation's highest seafood producing states. Aquatic species important to these industries depend on sufficient quality and quantity of habitats in our rivers, sounds, and ocean waters. From shellfish beds in the lower estuaries, to swamps in the upper estuaries, fish habitats are at risk. Activities causing habitat loss and degradation threaten more than the fishing industry vital to North Carolina's economy. They also threaten coastal tourism, outdoor recreation, and residential development.

Recognizing the critical importance of healthy fish habitat, the NC General Assembly passed the Fisheries Reform Act (GS.143B-279.8), requiring three of the state's regulatory commissions - the Marine Fisheries, Environmental Management, and Coastal Resources commissions - to adopt a plan to protect and restore resources critical to North Carolina's fisheries. The Department of Environmental Quality (DEQ) developed a Coastal Habitat Protection Plan (CHPP) through a cooperative, multiagency effort. The CHPP was written by DEQ staff, adopted by the three commissions in 2004, and updated in 2010.

The CHPP is a guidance document providing the latest science on North Carolina's coastal fish habitats, their ecological functions, values, and threats, as well as goals and recommendations to protect, enhance, and restore fish habitat. By adopting the revised plan, the commissions are committing to implement these goals and recommendations. To this end, each DEQ division develops a biennial implementation plan that includes tangible and achievable actions to progress forward.

In this 2015 plan, there is information on past implementation progress, updated recommendations, and priority issues to focus actions. Background on the six fish habitats, their status, and pertinent threats are included. Full details are in the 2015 CHPP Source Document (**http://portal.ncdenr.org/web/mf/habitat/chpp/downloads**). A key to acronyms is provided at the end of this document.

Value of NC's coastal fish habitats: *

- 2013 Economic impact of NC fisheries: commercial - $305 million; recreational - $1.7 billion.
- Submerged aquatic vegetation produces food, improves water quality. In Bogue Sound, NC, pollution removal services value - $3,000/ac/yr. Ecosystem services of seagrass and algae - $7,700/ac/yr.
- Oyster reefs remove pollutants, increase fish production, stabilize shorelines – ecosystem services estimated $2,200 - $40,200/ac/yr, without value of fishery. Recreational fishing from reef restoration value estimated - $640,000/yr.
- Coastal wetlands provide storm protection valued at $25.6 billion/yr.
- Property values adjacent to open shellfish harvest waters are higher than next to closed waters.
- NC hard bottom fishery generated more than $4.2 million average annually for each of three years between 2011-2013.
- For every $1 invested in land conservation in NC, ~$4 return from natural resource goods and services.
- Beach property 80' wide ~35% more valuable than same property 79' wide.

* Refer to the Source Document for details and literature references.

Water Column | Submerged Aquatic Vegetation | Shell Bottom | Wetlands | Hard Bottom | Soft Bottom

CHPP Implementation

The overarching goal of the CHPP is to enhance fisheries by protecting and restoring important coastal habitats. The plan includes *recommendations* that fall under four broad goals and address issues such as minimizing habitat impacts from fishing gear and channel dredging, as well as reducing water quality impacts from point and nonpoint sources.

To fulfill these recommendations, each DEQ division and department develops biennial *implementation plans* that include tangible achievable actions. Implementation actions have varied over time based on needs and changing priorities. Implementation actions are carried out by DEQ, the Marine Fisheries Commission (MFC) and Division of Marine Fisheries (DMF), the Coastal Resources Commission (CRC) and Division of Coastal Management (DCM), the Environmental Management Commission (EMC) and Division of Water Resources (DWR), the Sedimentation Control Commission (SCC) and Division of Energy, Mineral, and Land Resources (DEMLR), and other partnering agencies. Implementation progress is tracked on a regular basis (Ch. 1).

In the 2015 CHPP, four *priority habitat issues* were selected for the focus of implementation plans. Suggested implementation actions for these issues were developed and are included in the plan. The four issues are oyster restoration, living shorelines, sedimentation, and developing metrics to assess habitat trends and management effectiveness (Ch. 12).

Department of Environmental Quality

DEQ is the lead stewardship agency for the preservation and protection of North Carolina's outstanding natural resources. The organization, which has offices from the mountains to the coast, administers programs designed to protect and enhance water quality, aquatic resources, public health, fish, wildlife, and wilderness areas.

The department is responsible for drafting the habitat plan. The CHPP Team, consisting of staff from DEQ divisions, draft the plan with guidance from the department.

DEQ implementation actions include those of the Albemarle-Pamlico National Estuary Partnership, Office of Land and Water Stewardship, and Division of Mitigation Services. Other participating state agencies include the Division of Soil and Water Conservation, NC Forest Service, Wildlife Resources Commission, and the Department of Agriculture and Consumer Services.

CHPP Steering Committee

The CHPP Steering Committee consists of two commissioners from each of the three commissions specified in the Fisheries Reform Act - MFC, CRC, and EMC. Their role is to review and approve of the draft plan, be an advocate for the plan to their full commission, meet regularly as a committee to discuss solutions for difficult and cross-cutting habitat and water quality issues, and review implementation progress to ensure that the plan is implemented.

CHPP Implementation

The primary divisions responsible for implementing CHPP recommendations are the Division of Marine Fisheries, Division of Coastal Management, Division of Water Resources, and Division of Energy, Minerals, and Land Resources (Ch. 1).

Division of Marine Fisheries

The division, under the rulemaking authority of the MFC, manages the commercial and recreational fisheries in North Carolina's estuarine and ocean waters. The division protects habitats through fishing gear rules, planning, research, and enhancement activities. The division's mission is to ensure sustainable marine and estuarine fisheries for the benefit of the people of North Carolina.

Division of Coastal Management

Under the rulemaking authority of the CRC, this division manages coastal development in accordance with the NC Coastal Area Management Act and the NC Dredge and Fill Law. The DCM works to protect, conserve, and manage North Carolina's coastal resources through an integrated program of planning, permitting, education, and research.

Division of Water Resources

The DWR's mission is to protect, preserve, enhance, and manage North Carolina's surface water and groundwater resources for the health and welfare of the citizens of North Carolina and the economic well-being of the state. This division functions under the rulemaking authority of the EMC.

Division of Energy, Mineral, and Land Resources

The division, under the rulemaking authority of the EMC, manages and provides technical assistance related to sediment and erosion control, stormwater management, mining, dams, and energy. The mission of DEMLR is to promote the wise use and protection of North Carolina's land and geologic resources.

Implementation Progress

Substantial implementation progress has been made over the past ten years, with some positive habitat signs evident. In addition, some fishery species' populations have rebounded or are showing strong signs of recovery. Examples include spotted seatrout, red drum, gag grouper, black sea bass, oysters, and bay scallops. While this advancement cannot be directly or solely related to habitat improvement, it is a positive indication for management overall. Some examples of implementation success are below (Ch. 1).

Oyster restoration

- Since 2005, oyster sanctuary development has greatly expanded. DMF has constructed 13 oyster sanctuaries in the Pamlico Sound system, each ranging from 5 - 60 acres of permitted area, and totaling 159 acres of developed reef (Ch. 3 & 12).
- Creation of an oyster shell recycling program provided additional shell material to supplement the division's shell planting activities. Recycled and purchased shell and rock material is used to create additional oyster reef habitat that supports the oyster fishery and provides fish habitat. The area of oyster reef created annually through shell planting varies based on funding and availability of material. Despite budget cuts, efforts continue through partnerships, grant funding, and mitigation contract work (Ch. 3 & 12).

Improving strategies to reduce nonpoint runoff

- EMC adopted coastal stormwater rules to reduce further degradation of receiving waters (Ch. 14).
- DWR and DEMLR incorporated low impact development techniques as acceptable Best Management Practice options for controlling runoff from development (Ch. 14).

Mapping and assessing habitat condition

- Since 2005, much progress has been made in submerged aquatic vegetation (SAV) mapping. Through a coordinated partnership of APNEP, DMF, DCM, DWR, and others, the entire coast was mapped in 2007-2008, with portions repeated in 2013 and 2015. A monitoring plan was developed to improve mapping methods in low salinity waters and to allow repeat mapping to evaluate change over time (Ch. 4).
- DMF accelerated estuarine shellfish bottom mapping (to a maximum water depth of 15 ft). Mapping is now over 95% complete (Ch. 3).
- DCM mapped the coastal estuarine shoreline and shoreline structures such as bulkheads and piers (Ch.8).
- DMF has developed and begun a process to identify a subset of strategic habitats, based on their condition and location. This will allow conservation measures to focus on priority areas (Ch. 13).

Implementation Progress

Managing shorelines

- DCM developed sediment criteria for beach nourishment and a Beach and Inlet Management Plan that provides guidelines for ocean beach nourishment to minimize ecological impacts and address socioeconomic concerns (Ch. 8).
- DCM has taken several actions to encourage greater use of living shorelines for estuarine shoreline stabilization. Working with DMF, DWR, and other agencies, DCM surveyed living shorelines for success, and agencies worked to simplify the permitting process. Outreach to multiple audiences through workshops, written material, and websites continues (Ch. 8).

Coordination and compliance

Regular CHPP Steering Committee meetings and CHPP quarterly permit reviewer meetings have greatly improved collaboration among divisions and problem solving on cross-cutting issues. New compliance positions were established in several divisions through appropriated funds, allowing greater assessment of compliance. However, due to budget shortfalls and resulting staff reductions over the past few years, divisions have maintained compliance monitoring through reorganization, reprioritization, and placing additional responsibilities on staff. (Ch. 1).

Research and outreach

- The Coastal Recreational Fishing License grant program funded multiple research projects that were identified as priorities in CHPP Implementation Plans or that will expand our understanding of the link between habitat condition and fish use (Ch. 1).
- The National Estuarine Research Reserve has produced educational materials on the value of different fish habitats and environmentally friendly shoreline stabilization techniques. The NERR also held workshops to promote living shorelines (Ch. 14).
- Several educational kiosks and displays on the value of fish habitat were constructed at a variety of museums and public access locations using Coastal Recreational Fishing License funds (Ch. 14).

Restoring fish passage

- In 2012, a rock ramp fish passage was constructed around Lock and Dam #1 on the Cape Fear River by the US Army Corps of Engineers to allow anadromous fish to migrate farther upstream to spawn. The work was done collaboratively with DMF, WRC, USFWS, and other partners (Ch. 9).

Goals and Recommendations

GOAL 1:

IMPROVE EFFECTIVENESS OF EXISTING RULES AND PROGRAMS PROTECTING COASTAL FISH HABITATS

North Carolina has a number of programs in place to protect coastal fisheries and the natural resources that support them. The Marine Fisheries Commission has adopted rules addressing the impacts of certain types of fishing gear and fishing practices that may damage fish habitats. The Coastal Resources Commission regulates development impacts on certain types of critical habitat, such as saltwater marshes and Primary Nursery Areas. The Environmental Management Commission has water quality standards that address pollution of all waters, from direct discharges to dredge and fill impacts. The Division of Energy, Mineral, and Land Resources addresses erosion and sediment control from land development or mining, and regulates energy activities. The Coastal Habitat Protection Plan identifies strategies that could continue to improve rule compliance, coordination of environmental monitoring, and outreach, which in turn will result in greater success in protecting critical fish habitats (Ch. 15).

RECOMMENDATIONS:

1. Continue to ensure compliance with Coastal Resources Commission (CRC), Environmental Management Commission (EMC), and Marine Fisheries Commission (MFC) rules and permits.
2. Coordinate and enhance:
    a. monitoring of water quality, habitat, and fisheries resources (including data management) from headwaters to the near-shore ocean.
    b. assessment and monitoring of effectiveness of rules established to protect coastal habitats.
3. Enhance and expand educational outreach on the value of fish habitat, threats from land use and other activities, and explanations of management measures and challenges.

4. Continue to coordinate among commissions and agencies on coastal habitat management issues.
5. Enhance management of invasive species with existing programs. Monitor and track status in affected waterbodies.

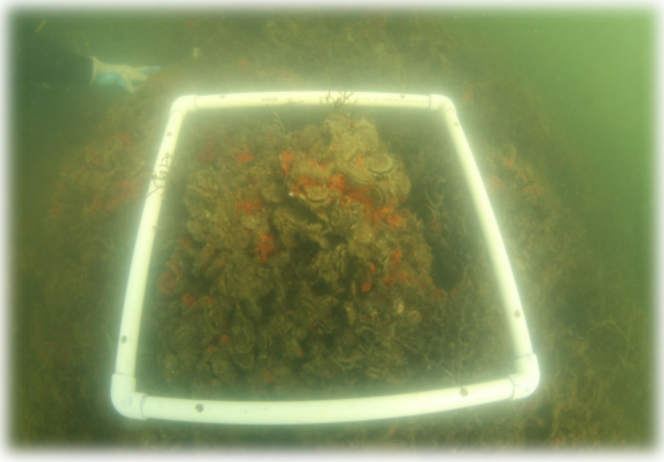
GOAL 2:

IDENTIFY AND DELINEATE STRATEGIC COASTAL HABITATS

Maintaining healthy coastal fisheries requires consideration of the entire ecosystem and the way different types of fish habitats work together. For example, coastal marshes help prevent erosion of shallow soft bottom habitat, which provides a food source and corridor for juvenile finfish. Shell bottom reduces sediment and nutrients in the water column, which enhances conditions for submerged aquatic vegetation. Together these habitats provide different functions for fish and protective stepping stones for their migration through coastal waters. Fragmenting these habitats, or damaging one of a series of interrelated habitats, makes it more difficult for aquatic systems to support strong and healthy coastal fisheries. The Marine Fisheries Commission identified a need to locate strategic habitats. These areas are a subset of all coastal habitats and consist of strategically located complexes of fish habitat that provide exceptional ecological functions ("best of the best"), or are particularly at risk due to vulnerability or rarity. These areas merit special attention and should be given high priority for research, monitoring, and possibly conservation (Ch. 15).

RECOMMENDATIONS:

1. Support assessments to classify habitat value and condition by:
    a. coordinating, completing, and maintaining baseline habitat mapping (including seagrass, shell bottom, shoreline, and other bottom types) using the most appropriate technology.
    b. selectively monitoring the condition and status of those habitats.
    c. assessing fish-habitat linkages and effects of land use and other activities on those habitats.
2. Continue to identify and field groundtruth strategic coastal habitats.



NC Fishing

Goals and Recommendations

GOAL 3:

ENHANCE AND PROTECT HABITATS FROM ADVERSE PHYSICAL IMPACTS

The CHPP identifies a number of ways in which fish habitats can be damaged by direct physical impacts. Some examples include filling of wetlands, dredging of soft bottom habitat, destruction of shell bottom and hard bottom areas, damage to submerged aquatic vegetation by use of certain types of fishing gear, and physical obstructions that block fish movement to and from spawning areas. While large impacts can directly contribute to the loss of habitat functions, the accumulation of many small impacts can make a habitat more vulnerable to injuries from which it might otherwise recover quickly. In some cases, historic damage to a habitat can be mitigated through the creation of sanctuaries where the resource can recover. One such program involves creation of protected oyster reefs. In other cases, the cumulative impacts of multiple projects can be more effectively managed through comprehensive planning (Ch. 15).

RECOMMENDATIONS:

1. Expand habitat restoration in accordance with restoration plan goals, including:
    a. increasing subtidal and intertidal oyster habitat through restoration.
    b. re-establishing riparian wetlands and stream hydrology.
    c. restoring SAV habitat and shallow soft bottom nurseries.
2. Sustain healthy barrier island systems by maintaining and enhancing ecologically sound policies for ocean and inlet shorelines, and implement a comprehensive beach and inlet management plan that provides ecologically based guidelines to protect fish habitat and address socioeconomic concerns.
3. Protect habitat from adverse fishing gear effects through improved compliance.

Goals and Recommendations

GOAL 3:

ENHANCE AND PROTECT HABITATS FROM ADVERSE PHYSICAL IMPACTS

RECOMMENDATIONS:

4. Improve management of estuarine and public trust shorelines and shallow water habitats by revising shoreline stabilization rules to include consideration of site specific conditions, and advocate for alternatives to vertical shoreline stabilization structures.
5. Protect and restore habitat for migratory fishes by:
    a. incorporating the water quality and quantity needs of fish in water use planning and management.
    b. restoring fish passage through elimination or modification of stream obstructions, such as dams and culverts.
6. Ensure that energy development and infrastructure is designed and sited to minimize negative impacts to fish habitat, avoid new obstructions to fish passage, and, where possible, provide positive impacts.
7. Protect and restore important fish habitat functions from damage associated with activities such as dredging and filling.
8. Develop coordinated policies including management adaptations and guidelines to increase resiliency of fish habitat to ecosystem changes.

Seasonal restrictions on navigational dredging are an effective means of protecting fish during critical times of their lives, such as during spawning periods or when early juvenile fish are growing in nursery areas.

GOAL 4:

ENHANCE AND PROTECT WATER QUALITY

Clean water is essential to coastal fisheries. Water conditions necessary to support coastal fish include the right combination of temperature, salinity, and oxygen, as well as the absence of harmful pollutants. Achieving and maintaining good water quality for purposes of fish productivity requires management of both direct discharges to surface waters and nonpoint runoff from land activities. While there have been great improvements to water quality management, support through funding and technological advances is needed to sustain water quality as coastal uses increase. The CHPP recommends strategies to address water quality impacts by maintaining rule compliance through inspections, local government incentives, and developing new technology to reduce point and nonpoint pollution through voluntary actions. Maintaining the water quality necessary to support vital coastal fisheries will benefit not only the fishing industry, but also a large sector of the entire coastal economy built around travel, tourism, recreational fishing, and other outdoor activities (Ch. 15).

RECOMMENDATIONS:

1. Reduce point source pollution discharges by:
    a. increasing inspections of wastewater discharges, treatment facilities, collection infrastructure, and disposal sites.
    b. providing incentives and increased funding for upgrading all types of discharge treatment systems and infrastructure.
    c. developing standards and treatment methods that minimize the threat of endocrine disrupting chemicals on aquatic life.
2. Address proper reuse of treated wastewater effluent and promote the use of best available technology in wastewater treatment plants (including reverse osmosis and nanofiltration effluent), to reduce wastewater pollutant loads to rivers, estuaries, and the ocean.

3. Prevent additional shellfish closures and swimming advisories by:
    a. conducting targeted water quality restoration activities.
    b. prohibiting new or expanded stormwater outfalls to coastal beaches and to coastal shellfishing waters (EMC surface water classifications SA and SB) except during times of emergency (as defined by the DWR's Stormwater Flooding Relief Discharge Policy) when public safety and health are threatened.
    c. continuing to phase out existing outfalls by implementing alternative stormwater management strategies.
4. Enhance coordination with, and provide financial/technical support for, local government/private actions to effectively manage stormwater and wastewater.

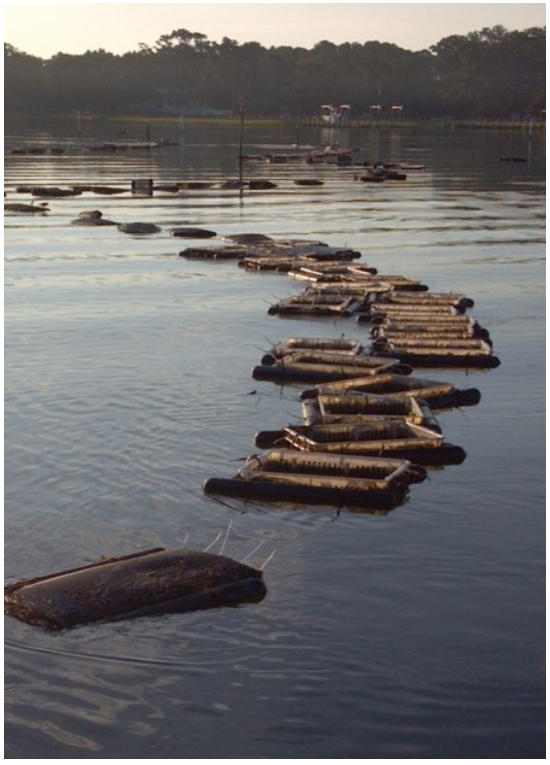
Goals and Recommendations

GOAL 4:

ENHANCE AND PROTECT WATER QUALITY

RECOMMENDATIONS:

5. Continue to improve strategies throughout the river basins to reduce nonpoint pollution and minimize cumulative losses of fish habitat through voluntary actions, assistance, and incentives, including:
    a. improving methods to reduce pollution from construction sites, agriculture, and forestry.
    b. increasing on-site infiltration of stormwater.
    c. encouraging and providing incentives for implementation of Low Impact Development practices.
    d. increased inspections of onsite wastewater treatment facilities.
    e. increasing use of reclaimed water and recycling.
    f. Increasing voluntary use of riparian vegetated buffers for forestry, agriculture, and development.
    g. increasing funding for strategic land acquisition and conservation.
6. Maintain effective regulatory strategies throughout the river basins to reduce nonpoint pollution and minimize cumulative losses of fish habitat, including use of vegetated buffers and established stormwater controls.
7. Maintain adequate water quality conducive to the support of present and future mariculture in public trust waters.
6. Reduce nonpoint source pollution from large-scale animal operations by:
    a. Ensuring proper oversight and management of animal waste management systems.
    b. Ensuring certified operator compliance with permit and operator requirements and management plan for animal waste management systems.



For every $1 invested in land conservation in NC, there is estimated to be a $4 return in economic value from natural resource goods and services alone, without considering other economic benefits.

Priority Habitat Issue - *Oyster Restoration*

Oyster populations in North Carolina have declined by as much as 90% from historic levels. Overfishing, habitat destruction, disease, and pollution have contributed to the significant decline and slow recovery rates of oyster reefs. Recognized as an ecosystem engineer, oyster reefs are critical economically for the seafood industry, and ecologically for improving water quality and providing fish habitat. For 100 years, DMF has been "planting" oyster shell in open harvest areas to provide additional hard substrate for oyster recruitment. The planted shell soon becomes a living oyster reef, enhancing the oyster fishery and providing fish habitat. Since 1998, DMF has constructed 13 subtidal oyster sanctuaries where shellfish harvest is not allowed. Oysters growing in the protected sanctuaries serve as broodstock, providing larvae that recruit onto hard substrate in surrounding waters. Despite these efforts, oyster populations remain well below historic levels, fishing pressure increases, and water quality declines. Lack of additional funding to purchase and deploy hard material and conduct research limits the ability to expand oyster restoration activities. The CHPP Steering Committee considers this one of the most important activities that could be done to improve habitat and water quality in North Carolina's coastal waters (Ch. 12).

Proposed Implementation Actions

Cultch Planting

- ◊ Increase spending limit per bushel of shell to compete with other states.
- ◊ Develop a cooperative public/private, self-sustaining shell recycling program by providing financial incentives in exchange for recycled shell.
- ◊ Work with the shellfish industry to institute an "oyster use fee" to help support the cultch planting program.
- ◊ Identify alternative substrates for larval settlement in intertidal and subtidal reefs, including a cost-benefit analysis.
- ◊ Establish long term monitoring program to support future decision making.
- ◊ Utilize new siting tools and monitoring protocols to maximize reef success.

Hatchery Oyster Seed Production

- ◊ Explore options for increasing funds to support UNCW oyster hatchery.
- ◊ Identify regional genetic variability within NC.
- ◊ Improve availability of seed oysters genetically suited to respective regions.

Oyster Sanctuaries

- ◊ Identify alternative substrates for larval settlement in intertidal/subtidal reefs, including cost-benefit analysis.
- ◊ Identify the size and number of sanctuaries needed.
- ◊ Develop reefs that deter poaching by mechanical means.
- ◊ Utilize new siting tools to maximize reef success.
- ◊ Explore options for in situ sampling protocol to incorporate alternative construction materials.

Priority Habitat Issues - *Living Shorelines*

Living shorelines is the term used for a type of designed shoreline stabilization technique that incorporates live components such as marsh plants, frequently in combination with rock or oyster sill structures. Wetland and shell bottom habitat along the shoreline have declined in many areas due to natural erosion and vertical shoreline hardening with bulkheads. Living shorelines offer an effective alternative for protecting waterfront property, while restoring fish habitat and ecosystem services. Since 2005, progress has been made in documenting, through scientific studies, the benefits and limitations of living shorelines. Research in North Carolina has shown that living shorelines support a higher diversity and abundance of fish and shellfish than bulkheaded shorelines, effectively deter erosion, and survive storm events well. Outreach efforts have been done to increase awareness of this technique to the public and contractors. Nonprofit organizations and DCM have constructed several demonstration projects. Despite these efforts, approximately 60 living shorelines have been permitted coastwide, in contrast to 93 miles of bulkheads (based on 2012 DCM mapping). The CHPP Steering Committee requested that efforts continue to focus on encouraging living shorelines to protect property, restore shoreline habitat, and improve water quality (Ch. 12).

Proposed Implementation Actions

Outreach

- ◊ Seek funding and partnerships to increase the number of highly visible demonstration projects.
- ◊ Develop case studies that property owners can relate to that discuss site conditions, initial and ongoing costs, and performance of the structure.
- ◊ Actively engage with contractors, realtors, and homeowners associations in the design and benefits of living shorelines.
- ◊ Enhance communications, marketing, and education initiatives to increase awareness of, and build demand for, living shorelines among property owners.

Research

- ◊ Examine the effectiveness of natural and other structural materials for erosion control and ecosystem enhancement.
- ◊ Examine the long-term efficacy of living shorelines and vertical structures, particularly after storm events.
- ◊ Map areas where living shorelines would be suitable for erosion control.
- ◊ Investigate use of living shorelines as BMP or mitigation options.

Permitting

- ◊ Continue to simplify the federal and state permitting process for living shorelines.

Priority Habitat Issue - *Sedimentation*

Sedimentation in creeks, particularly in nursery areas, is a continuing concern. While a moderate amount of sediment input is necessary to maintain shallow soft bottom habitat that supports wetlands, excessive amounts can silt over existing oyster beds and submerged aquatic vegetation, smother invertebrates, clog fish gills, reduce survival of fish eggs and larvae, reduce recruitment of new oysters onto shell, and lower overall diversity and abundance of marine life. Pollutants such as toxins, bacteria, and nutrients bind to sediment particles and are transported into estuarine waters, where they can accumulate in the sediment and impact aquatic organisms. Sediment enters the upper estuary via runoff and ditching due to land clearing activities associated with agriculture, forestry, and development. Shoreline erosion, tidal inflow, and dredging also contribute sediment in the lower estuary. Studies in North Carolina indicate that relatively high sedimentation has occurred in the past. The effect on estuarine productivity is uncertain. More assessment on the extent and effect of sedimentation in coastal creeks and rivers is needed, along with current rates of sediment inputs, to determine the best way to address the issue (Ch. 12).

Proposed Implementation Actions

- ◊ Determine magnitude and change in sedimentation rates and sources over time at sufficiently representative waterbodies and regions.
- ◊ Determine the effect of sedimentation in the upper estuaries on primary and secondary productivity and juvenile nursery function.
- ◊ Encourage research for innovative and effective sediment control methods in coastal river basins.
- ◊ Encourage expanded use of voluntary stormwater BMPs and low impact development (LID) to reduce sediment loading into estuarine creeks.
- ◊ Partner with NC Department of Transportation to retrofit road ditches that drain to estuarine waters.
- ◊ Improve effectiveness of sediment and erosion control programs by:
  - ♦ Encouraging development of effective local erosion control programs to maintain compliance and reduce sediment from reaching surface waters.
  - ♦ Enhancing monitoring capabilities for local and state sediment control programs (e.g., purchase turbidity meters and train staff in their use).
  - ♦ Continuing to educate the public, developers, contractors, and farmers on the need for sediment erosion control measures and techniques for effective sediment control.

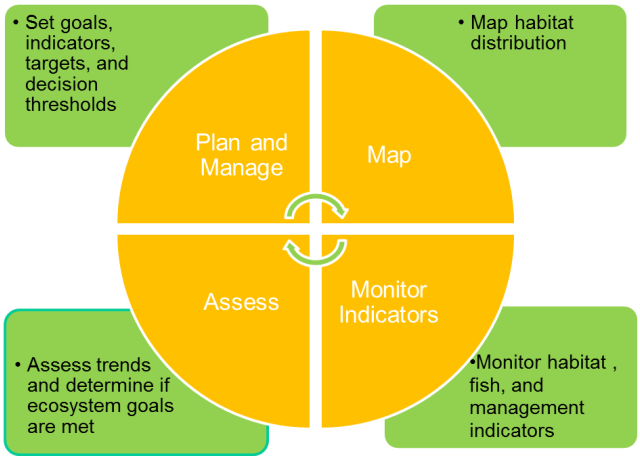
♦ Provide education and financial/ technical support for local and state programs to better manage sediment control measures from all land disturbing activities.

In 2014, 6,290 acres were impaired by turbidity for the aquatic life use support classification in coastal subbasins (DWR 2014 Integrated Report).

Priority Habitat Issue - *Developing Metrics*

Developing metrics to assess habitat trends and management effectiveness is the cornerstone of habitat protection and restoration. Without them, needed habitat conservation initiatives are unknown. Ecosystem-based management is the process where monitoring of ecosystem indicators is done to assess the condition of the resource and the effectiveness of management strategies; management actions are modified based on monitoring results. This process requires mapping all habitat to assess trends in distribution, developing and monitoring representative indicators to assess habitat condition, monitoring fish use of habitats in priority areas, and developing management performance criteria for measuring success of management actions. The DEQ has already initiated mapping and monitoring of some habitats, but has not established continual monitoring to evaluate management effectiveness. The Albemarle-Pamlico National Estuary Partnership established ecosystem indicators in 2012 to help determine the status of that system. The DMF has identified strategic coastal habitats in most of the coastal waters that are high priority for protection so that fish populations are sustained. More work is needed to establish a cyclic process to monitor, assess, and successfully and efficiently manage North Carolina's coastal resources.

The lack of quantified trends in habitat condition and success of management actions was identified as a priority concern of the CHPP Steering Committee (Ch. 12).



Proposed Implementation Actions

- ◊ Develop indicator metrics for monitoring the status and trends of each of the six habitat types within North Carolina's coastal ecosystem (water column, shell bottom, SAV, wetlands, soft bottom, hard bottom).
- ◊ Establish thresholds of habitat quality, quantity, or extent similar to limit reference points - or traffic lights - which would initiate pre-determined management actions.
- ◊ Develop indicators for assessing fish utilization of strategic coastal habitats.
- ◊ Develop performance criteria for measuring success of management decisions.
- ◊ Include specific performance criteria in CHPP management actions where possible.

The Fishery Reform Act requires the CHPP to describe, classify, and evaluate biological habitat systems, including wetlands, spawning grounds, nursery areas, shellfish beds, and submerged aquatic vegetation, and outstanding resource waters.

NC Coastal Habitats

North Carolina's coastal fish habitats provide crucial functions for the plants and animals living in them. This diversity of interconnected habitats provides food and shelter in which to reproduce and grow for a tremendous variety of fish, shellfish, and crustaceans. Protecting and restoring these habitats is essential to the survival of North Carolina's fisheries.

While poor water quality puts the habitats' ability to function and support fish populations at risk, physical damage caused by humans is also a serious threat. Conversion of wetlands by draining, filling, and water control projects are the major sources of wetland loss in eastern North Carolina. Shell bottom habitat along our coast has been decimated by a century of excessive mechanical harvests and diseases. More recently, dredging for navigation channels and marinas, as well as damage from bottom-disturbing fishing gear, threatens remaining shell bottom and submerged aquatic vegetation habitat and impedes establishment of those habitats. Submerged aquatic vegetation is also vulnerable to uprooting by boat propellers and to shading by docks and piers. These and other types of physical impacts affect the ability of fish habitats to sustain fisheries and increase their vulnerability to water quality problems (Ch. 2-7).

The CHPP identifies six fish habitats that need protection or enhancement:

- Water Column
- Shell Bottom
- Submerged Aquatic Vegetation (SAV)
- Wetlands
- Soft Bottom
- Hard Bottom

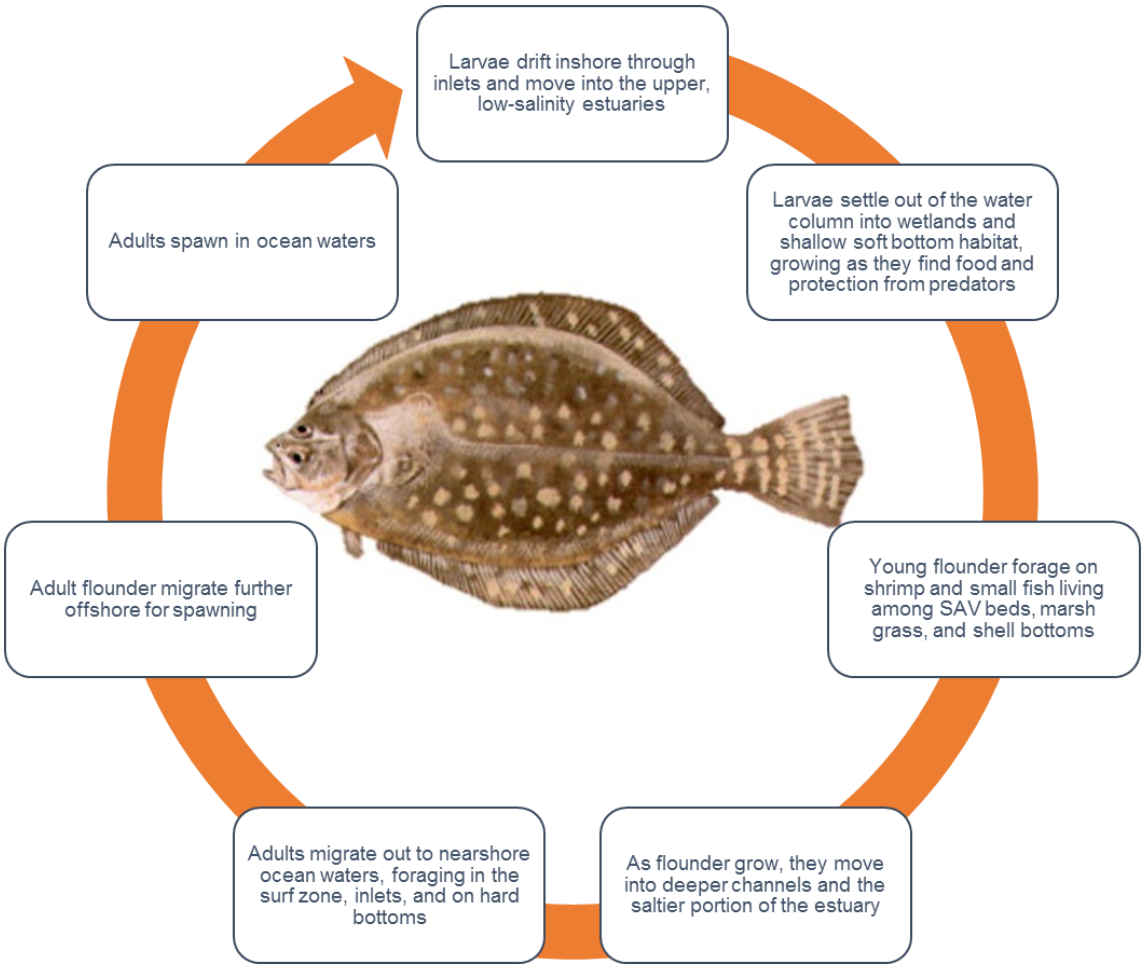
Habitats provide important functions for fish species.

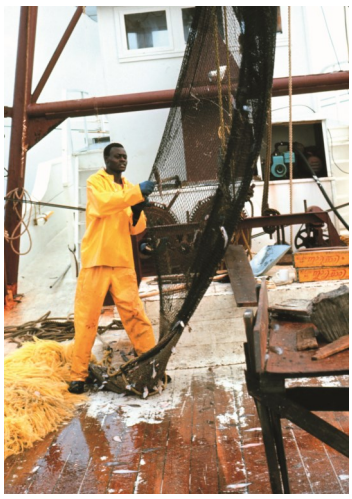
Refuge:	shelter for fish at various life stages and a place for plants and animals to attach
Nursery:	refuge and foraging habitat suitable for development of juvenile life stages of fish, shellfish, and crabs
Spawning:	conditions that allow adults to reproduce
Foraging:	presence and accessibility of food sources
Corridor:	connectivity for safe passage among foraging, spawning, and refuge areas

Habitat: "a place, or set of places, in which a fish or fish population finds the physical, chemical, and biological features needed for life."

NC Coastal Habitats

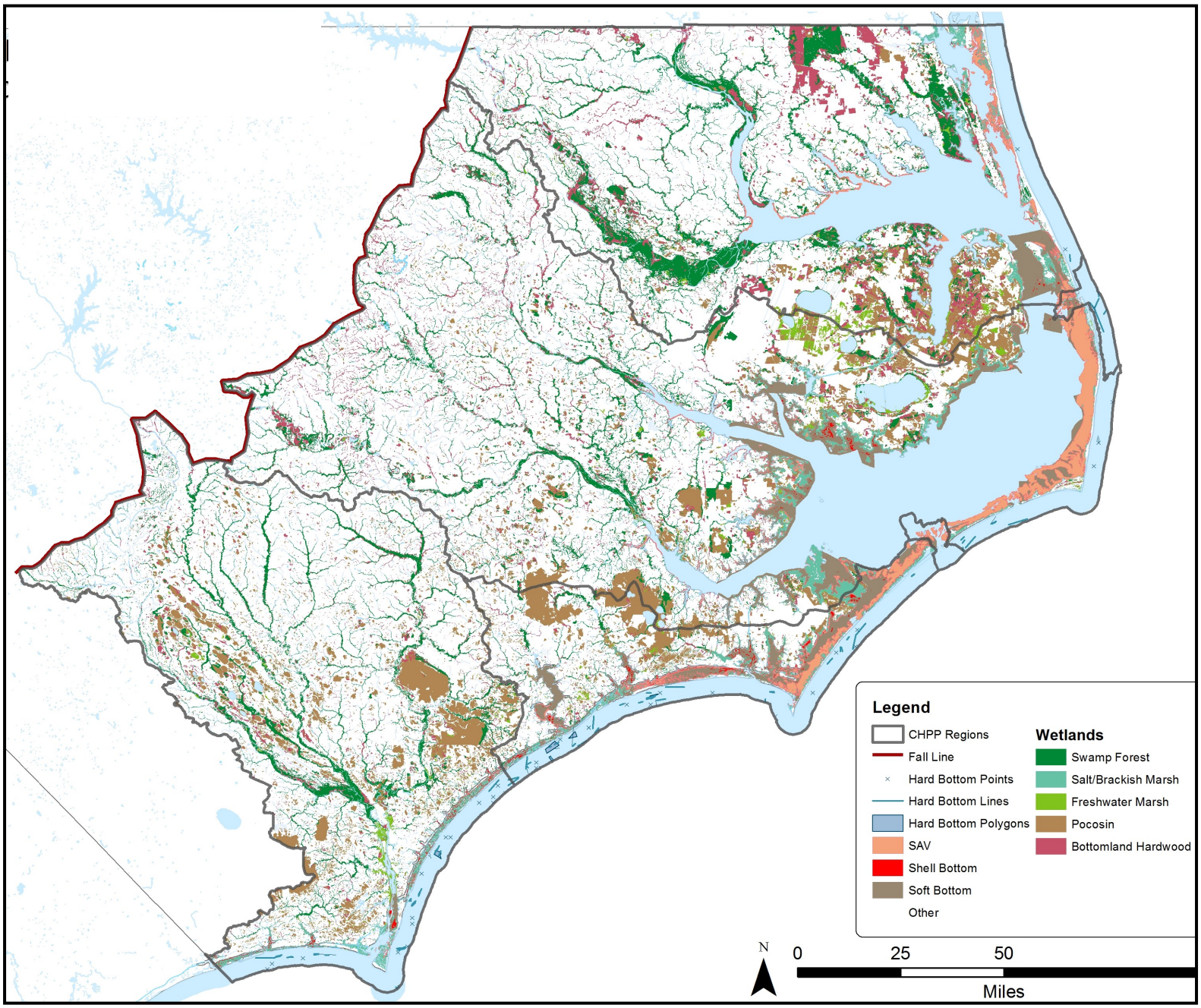
All fish habitats are integral components of the entire aquatic ecosystem because species require use of multiple habitats throughout their life history; the water column connects them all. Organisms occupy specific areas or habitats that meet their needs for each particular life stage. Certain areas, such as nursery areas, are especially important to fish production, and some, such as shallow grass beds, are particularly vulnerable to human impacts. To maintain a healthy coastal ecosystem that provides all the ecological functions necessary for North Carolina's coastal fish populations, it is more effective to address the entire system of interdependent habitats, rather than a single habitat type (Ch. 2-7).





The relationship between habitat conditions and populations of fishery species is complex. In the past, the decline of a particular fish stock was often attributed to overfishing. We know now that the quality and quantity of fish habitats is important to healthy fish populations. Habitat loss and degradation make fish populations more susceptible to overfishing and can cause a delay in recovery, even after management actions have successfully reduced fishing pressures. River herring and shortnose sturgeon are examples of species that have not recovered despite lengthy fishing moratoriums. Thus, the status of fisheries can be an indicator of impacts to fish habitats. Successful implementation of the CHPP recommendations is a necessary component for sustaining productive fisheries for future generations.

MAPPED FISH HABITATS OF COASTAL NORTH CAROLINA



Water Column - *The Most Essential Habitat*

Water column is the medium through which all aquatic habitats are connected, affecting all other habitats and the distribution and survival of fish. The water column includes riverine, estuarine, lacustrine, palustrine, and marine systems. Properties affecting fisheries resources and distribution include: temperature, salinity, dissolved oxygen (DO), total suspended solids (TSS), nutrients (nitrogen, phosphorus), chlorophyll a, pollutants, pH, velocity, depth, movement, and clarity. Within a river basin, these properties change as you move from the headwaters to the ocean (Ch. 2).

Fish distribution in the water column is often determined by salinity and proximity to inlets. The potential productivity of fish and invertebrates begins with energy and nutrient production at the base of the food chain. Productivity in the water column comes from phytoplankton, floating plants, macroalgae, benthic microalgae, and detritus.

Economic Benefits

U.S. commercial and recreational saltwater fishing generated more than $199 billion in sales in 2012, according to the Fisheries Economics of the United States. In North Carolina, the recreational and commercial fishery generated $1.87 billion in 2011.

Habitat Functions and Fish Use

The corridor between freshwater creeks or rivers and estuarine/marine systems is important to all fish, particularly species whose life spans more than one system, such as species that must migrate upstream to spawn (anadromous) or marine-spawning estuarine-dependent species.

Water column provides nursery habitat for juvenile pelagic species, such as bluefish and pompano, in the surf zone. Optimum physical and chemical properties, such as currents, temperature, and salinity determine survival and settlement of larvae. The water column is a food source for all size organisms, supporting microscopic plants and animals (phytoplankton and zooplankton), and prey species of all sizes.

The ability of the water column to provide predatory refuge varies relative to area, depth, water quality, and vegetation. Juvenile fishes are protected in shallow areas inaccessible to larger fish. Turbidity and DO can provide refuge for pelagic species by excluding predators that feed visually or are not tolerant of low DO.

FACT: 76,927 acres of coastal water column is designated as Primary Nursery Area. 82,000 acres is designated as Secondary or Special Secondary Nursery Area.

Habitat Profile

Water Column Functions

- Connects all habitat types
- Allows fish to move among habitats
- Surrounds and supports aquatic animals and habitats

How Fish Use the Water Column

- Transports eggs, larvae, and oxygen
- Nursery area for all fish species
- Foraging area for all fish species
- Spawning area for all fish species

Water Column - *The Most Essential Habitat*

Status and Trends

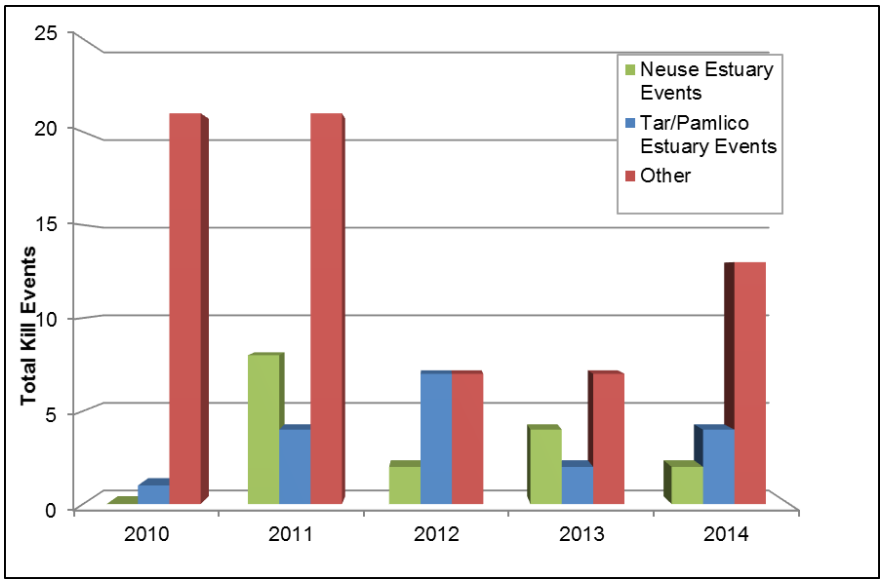
The condition of the water column is described by physical and chemical properties, pollution indicators, and the status of the fishery resources. However, evaluating the status and trends of water column characteristics is difficult. The number of monitoring agents, monitoring site distribution, frequency of data collection, and parameters measured are not conducive to comprehensive water quality assessments. Monitoring for microbial contamination of shellfish harvesting waters remains the most abundant measurement of estuarine water quality. Data collected from monitoring stations within the CHPP area include those from ±1,020 shellfish growing area stations, 240 recreational water quality stations, and ±256 DWR ambient stations. Water quality data from selected stations are shown in the CHPP Source Document.

The health of pelagic fishery species can be an indicator of water quality. Spanish mackerel, bluefish, and Atlantic menhaden are positive examples of species with improving or stable populations.

FACT: As of March 2014, over 442,106 acres of shellfish harvesting waters, or 20% of classified shellfish waters, were closed in North Carolina due to high levels of fecal coliform or the potential risk of bacterial contamination. As an adaptive measure to reduce permanent closures, 55,628 acres are conditionally opened and closed based on rainfall and sampling.

Threats to Water Column

Whether certain species will thrive and reproduce is strongly affected by conditions such as water clarity, DO, and nutrient levels. Fish kills and harmful algal blooms during the 1980s and 1990s were visible signs of coastal water quality problems. Most frequently reported species in fish kills are Atlantic menhaden, spot, flounder, and croaker. Large fish kills have diminished somewhat in recent years, but many coastal waters remain impaired. Excess sediment loading is the most common cause of impairment.



Human activities often change the chemistry of the water, reducing water quality. These changes can originate from point sources, such as industrial or wastewater discharges, or from non-point runoff from construction or industrial sites, development, roads, agriculture, or forestry. Any number of sources can result in pollutants and sediment entering surface waters. It is apparent when excess sediment clouds the water and fills a waterway, but beneath the water's surface, these particles clog fish gills and bury plants, shellfish, and other aquatic species.

All coastal habitats are connected by water. Clean water is essential to aquatic life.

Shell Bottom - *Building Reefs & Cleaning Water*

Shell bottom is unique because it is the only coastal fish habitat that is also a fishery species (oysters). Shell bottom is estuarine intertidal or subtidal bottom composed of surface shell concentrations of living or dead oysters, hard clams, and other shellfish. Oysters, the primary shell-building organism in North Carolina estuaries, are found throughout the coast, from southeast Albemarle Sound to the South Carolina border. The protection and restoration of living oyster beds is critical to the restoration of numerous fishery species, as well as to the proper functioning and protection of surrounding coastal fish habitats. Historically, restoration was managed for oyster fishery enhancement. Current efforts mix fishery and ecosystem enhancement with sanctuary development (Ch. 3).

Habitat Profile

Shell Bottom Functions

- Provides structure, shelter, and food source
- Filters pollutants and other particles from water
- Protects shoreline by slowing wave energy

How Fish Use Shell Bottom

- Place for oysters and other shellfish to attach
- Nursery area for blue crab, sheepshead, and stone crab
- Foraging area for drum, black sea bass, and southern flounder
- Spawning area for hard clams, toadfish, and goby
- Refuge for goby, grass shrimp, and anchovy

Economic Benefits

Conservatively, restored and protected oyster reefs provide up to $40,200 per acre per year (2012 dollars) in ecosystem benefits, including water filtration and sediment stabilization. The dollar benefit of the nitrogen removal service provided by oyster reefs was estimated to be $3,167 per acre per year (2014 dollars).

Habitat Functions and Fish Use

Shell bottom is widely recognized as essential fish habitat (EFH) for oysters and other reef-forming mollusks and provides critical fish habitat for ecologically and economically important finfish, mollusks, and crustaceans. In North Carolina, over 40 species of fish and crustaceans have been documented to use natural and restored oyster reefs, including American eel, Atlantic croaker, Atlantic menhaden, black sea bass, sheepshead, spotted seatrout, red drum, and southern flounder. Oysters are ecosystem engineers that alter current and flows, protect shorelines, and trap and stabilize large quantities of suspended solids, reducing turbidity by building high relief structures. The interstitial spaces between and within the shell matrix of oyster reefs are critical refuges for the survival of recruiting oysters and other small, slow-moving macrofauna, such as worms, crabs, and clams. Shell bottom is also valuable nursery habitat for juveniles of commercially and recreationally important finfish, such as black sea bass, sheepshead, gag grouper, and snappers. Additionally, shell bottom is important foraging ground for many economically and ecologically important species. The proximity and connectivity of oyster beds enhances the fish utilization of nearby habitats, especially SAV. Shell bottom contributes primary production indirectly from plants on and around it, but it is more important for its high secondary productivity contribution from the biomass of oysters and other macroinvertebrates living among the shell structure. This in turn supports a high density of mobile finfish and invertebrates, which was found to be more than two times greater than in marshes, soft bottom, and SAV.

Shell bottom areas include reefs made of living oysters or shells, located in the subtidal or intertidal zone of estuaries.

Shell Bottom - *Building Reefs & Cleaning Water*

Status and Trends

North Carolina oyster stocks declined for most of the twentieth century. Poor harvesting practices led to initial degradation and loss of shell bottom habitat in the Pamlico Sound area. After 1991, oyster stocks and harvests began to collapse from disease mortalities and low spawning stock biomass. Harvests began to rise again around 2002, and the trend has continued. Between 2000 and 2013, oyster dredging trips and hand harvest trips have risen substantially, with increasing harvest. A trend of stable or increasing spatfall coastwide is indicative of increasing larval availability, connectivity, and recruitment potential for restored and existing reefs. As of January 2015, there were 13 established oyster sanctuaries, with an additional two proposed.

Fact: Oyster beds were once so abundant that they were considered a navigation hazard.

Threats to Shell Bottom

Shell bottom habitat can be damaged by overharvesting, mechanical harvest fishing gear, navigational dredging, marinas and boating activity. Water quality degradation, especially toxin contamination, sedimentation, and hypoxia, can cause lethal or sublethal impacts. Shell bottom is occasionally susceptible to diseases and microbial stressors. The protozoan pathogen *Perkinsus marinus*, also called "dermo" has been responsible for major oyster mortalities in North Carolina. Monitoring of dermo disease by DMF shows a declining trend in prevalence, with an increasing trend in overall infection.

Boring sponge, sponges belonging to the genus *Cliona*, are found in North Carolina shell bottom habitats. Boring sponges compromise the integrity of shells and are linked to reduced reproductive viability and possibly increased oyster mortality rates. Two North Carolina oyster sanctuaries experienced dramatic population declines since 2012, coinciding with increasing percent cover of marine boring sponge. *Cliona* is endemic to North Carolina but has recently become more pervasive, especially on limestone marl rocks. To improve reef design in high salinity waters, DMF is conducting research on alternative substrates to identify materials that maximize oyster recruitment, growth, and survival, while offering high resistance to environmental stressors, such as *Cliona* boring sponge.

Shell bottom is considered to be one of the most threatened habitats because of its greatly reduced extent.

SAV - Underwater Gardens

Submerged aquatic vegetation (SAV) is a fish habitat dominated by one or more species of underwater vascular plants that occur in patches or extensive beds in shallow estuarine waters. The presence and density of SAV varies seasonally and inter-annually. A key factor affecting distribution is adequate light penetration; therefore, SAV occurs in shallow clear water. Sediment composition, wave energy, and salinity are also determining factors (Ch. 4).

Habitat Profile

SAV Functions

- Provides refuge for fish and other aquatic animals
- Serves as food for fish and waterfowl
- Produces dissolved oxygen
- Reduces wave energy and limits erosion
- Uses nutrients and traps sediments

How Fish Use SAV

- Nursery area for blue crab, pink shrimp, and red drum
- Foraging area for spotted sea trout, gag, and flounder
- Spawning area for spotted sea trout, grass shrimp, and bay scallop
- Refuge for bay scallop and hard clam

Economic Benefits

SAV habitat has a very high economic value due to the ecosystem services it provides. The estimated value of SAV and algal beds combined is $7,700/acre/year. This estimate takes into account services such as seafood production, wastewater treatment, climate regulation, erosion control, recreation, and others. The value of SAV for denitrification services (wastewater treatment) is estimated at $3,000/acre/year compared to approximately $400/acre/year for subtidal soft bottom. With North Carolina having the second largest expanse of SAV on the east coast, protection and enhancement of this valuable resource should be a high priority for the state.

Habitat Functions and Fish Use

Submerged aquatic vegetation is recognized as essential fish habitat because of five interrelated features – primary production, structural complexity, modification of energy regimes, sediment and shoreline stabilization, and nutrient cycling. Water quality enhancement and fish utilization are especially important ecosystem functions of SAV relevant to the enhancement of coastal fisheries. Seagrasses produce large quantities of organic matter. Many fish species occupy SAV at some point in their life for refuge, spawning, nursery, foraging, and corridors. SAV is considered essential fish habitat for red drum, shrimp, and species in the snapper-grouper complex. Spotted seatrout are also highly dependent on SAV, and bay scallops occur almost exclusively in SAV beds.

Due to its stringent water quality requirements, SAV presence is considered a barometer of water quality.

SAV - Underwater Gardens

Status and Trends

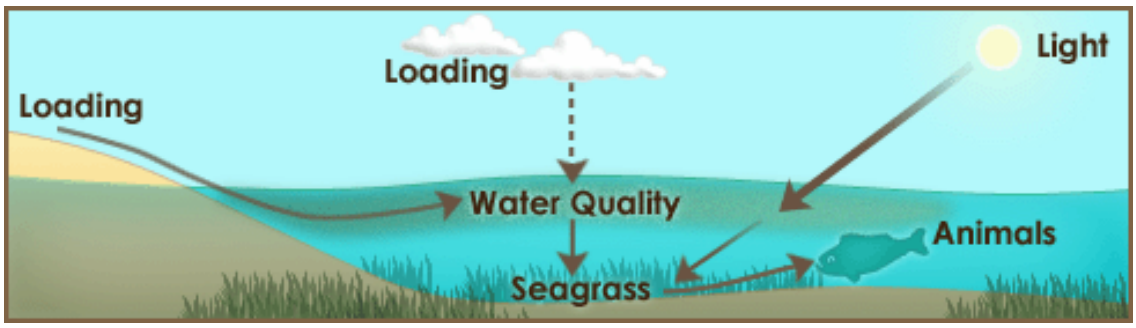
There has been a global and national trend of declining SAV habitat, with seagrasses disappearing at rates similar to coral reefs and tropical rainforests. In North Carolina, SAV loss has not been quantified, but anecdotal reports indicate that the extent of SAV may have been reduced by as much as 50%, primarily on the mainland side of coastal sounds. Mapping of SAV has been done by several entities since the 1980s, but often with different methods, and not coastwide. Comprehensive mapping of SAV habitat in coastal North Carolina was initiated in 2007 by a joint effort of federal and state agency and academic institutions. In 2013, mapping protocols for high and low salinity areas was developed so that mapping can be repeated approximately every five years on a rotational basis among five coastal areas. This mapping, in combination with sentinel sampling, will allow trends to be assessed. In 2013 high salinity SAV from Currituck Sound to Bogue Sound were mapped using aerial photography and field groundtruthing. In Albemarle Sound and Tar-Pamlico River SAV was mapped in 2014-15 using a newly developed method for low salinity turbid waters with side scan data and low light underwater photography for groundtruthing. In 2015, SAV south of Bogue Sound was mapped.

Fact: Over 150,000 acres of SAV were mapped in coastal North Carolina since 2000.

While a quantified change analysis is not yet available, preliminary review of core areas of SAV, such as behind the Outer Banks in Pamlico Sound and Core Sound, did not detect large changes since previous imagery for those areas in 2004. Expansion of SAV has been observed in Albemarle Sound and south of Bogue Inlet. Bay scallop abundance in the southern area is increasing in areas of expanding SAV.

Threats to SAV

Major threats to SAV habitat are channel dredging and water quality degradation from excessive nutrient and sediment loading. Natural events, human activities, and an ever-changing climate influence the distribution and quality of SAV habitat. Natural events include shifts in salinity due to drought and excessive rainfall, animal foraging, storm events, temperature, and disease. Submerged vegetation is vulnerable to water quality degradation, in particular, suspended sediment and pollutant runoff. Large amounts of algae and sediment make the water cloudy such that sufficient light cannot reach the plants, reducing their growth, survival, and productivity. Dredges and boat propellers can also have a direct effect on SAV habitat by uprooting and destroying the plants.

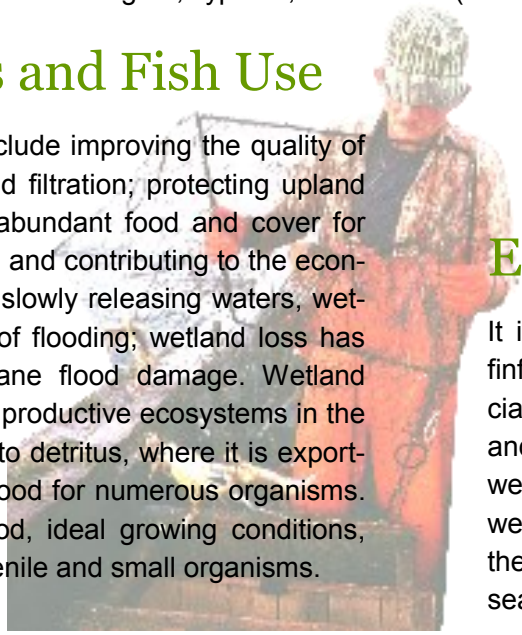


Wetlands - *Nature's Nurseries*

Wetlands are essential breeding, rearing, and feeding grounds for many species of fish and wildlife. They provide critical ecosystem services that contribute to healthy ecosystems and fisheries habitat. Coastal wetlands cover 40 million acres in the continental United States, with 81% in the southeast. Wetlands require the presence of water at or near the surface and vegetation adapted to wet soils. Wetlands occupy low areas, often marking the transition between uplands and submerged bottom, in areas subject to regular or occasional flooding by lunar or wind tides. Wetlands are vegetated with marsh plants such as cordgrass and black needle rush, or forested wetland species like sweet gum, cypress, and willows (Ch. 5).

Habitat Functions and Fish Use

Services provided by wetlands include improving the quality of habitats through water control and filtration; protecting upland habitats from erosion; providing abundant food and cover for finfish, shellfish, and other wildlife; and contributing to the economy. By storing, spreading, and slowly releasing waters, wetlands are linked to reduced risk of flooding; wetland loss has been linked to increased hurricane flood damage. Wetland communities are among the most productive ecosystems in the world. The plant matter decays into detritus, where it is exported to other waters and provides food for numerous organisms. Additionally, wetlands provide food, ideal growing conditions, and predator refuge for larval, juvenile and small organisms.



Economic Benefits

It is estimated that over 95% of the finfish and shellfish species commercially harvested in the United States, and over 90% in North Carolina, are wetland-dependent. Consequently, wetlands significantly contribute to the productivity of North Carolina's seafood and fishing industries.

Habitat Profile

Wetland Functions

- Provide refuge and food for fish and other animals
- Filter pollutants
- Trap sediments
- Shoreline erosion control
- Hold and slowly release flood waters

How Fish Use Wetlands

- Nursery area for blue crab, shrimp, and southern flounder, spot, and croaker
- Foraging area for spotted sea trout, red drum, and flounder
- Spawning area for river herring, killifish, and grass shrimp
- Refuge for blue crab and grass shrimp

The economic benefit of wetlands in providing flood control, stabilizing shorelines, and trapping and filtering pollutants has been extensively studied. By providing flood control and reducing shoreline erosion, wetlands protect coastal property. Wetlands also protect property by deterring shoreline erosion. Studies have shown that even narrow (7-25m) marsh borders reduce wave energy by 60-95%. These services explain why wetland habitat has been linked to reducing hurricane damage. One study estimated that the loss of 1 acre of coastal wetlands could result in a $13,360 loss in gross domestic product ($14,759 in 2014 dollars), and that U.S. coastal wetlands could provide as much as $23.2 billion/year (25.63 billion/year in 2014 dollars) in storm protection services.

Wetlands - *Nature's Nurseries*

Status and Trends

The 2015 CHPP Source Document summarizes wetlands within the CHPP region based on two data sources: the National Land Cover Dataset (NLCD) and the National Wetlands Inventory (NWI). According to the 2011 NLCD, there were ±3,759,729 acres of woody and emergent herbaceous wetlands within the CHPP regions. This represents a 2.7% decrease in woody wetlands and an 18.9% increase in emergent herbaceous wetlands since 2001. During the same time and area, developed land increased approximately 30%. The US Fish and Wildlife Service (FWS) has produced a NWI since the mid 1970s. The distribution of these wetlands is presented in Table 5.1 of the 2015 CHPP Source Document. Populations of spotted seatrout and red drum, two wetland-dependent species, have shown great improvements in the past few years.

Fact: Over 95 percent of the United States' commercially harvested finfish and shellfish are wetland dependent.

Threats to Wetlands

In the late 1800s and early 1900s, large amounts of wetland loss resulted from ditching and draining for agriculture and forestry. Over the years, wetland loss has occurred from dredging conversion to deep-water habitat for boat basins and navigation channels, followed by upland development, erosion, and shoreline hardening.

Statewide wetlands losses/gains and compensatory mitigation during FY 2012/13, 2013/14, and 2014/15. Data reflect permitting by DEQ and compensatory mitigation by DMS.

	Permitted gains and losses		
Linear feet of streams	**2012-13**	**2013-14**	**2014-15**
Losses	81,473.0	117,694.0	59,498.9
Gains	48,712.0	78,024.0	22,620.0
Net change	-32,761.0	-39,670.0	-36,878.9
Acres of wetlands			
Losses	203.6	98.9	102.1
Gains	197.8	59.9	104.5
Net change	-5.8	-39.0	2.4
Acres of riparian buffers			
Losses	75.6	48.0	56.1
Gains	37.9	21.2	18.2
Net change	-37.8	-26.9	-37.9

*Data provided by DWR and DMS

Wetland impacts are now regulated by numerous federal and state laws including the US River and Harbors Act, the US Clean Water Act, the NC Coastal Area Management Act (CAMA), and the NC Dredge and Fill Law, among others. Wetland filling for development and wetland loss due to erosion and rising water levels are currently the primary threats. Reduction of vegetated buffers can result in wetland loss and increased stormwater runoff. Legislative changes increasing thresholds for permitted impacts could contribute to additional freshwater wetland loss. Mitigation is required for larger wetland impacts. Offsetting historic wetland loss may now be possible through opportunities such as wetland restoration on conservation lands, creating marsh habitat on unused dredge disposal sites, and constructing living shorelines.

Coastal wetlands are critical nursery areas and serve as the primary buffer between land and water-based impacts.

Soft Bottom - *The Dynamic Habitat*

Soft bottom is unconsolidated, unvegetated sediment that occurs in freshwater, estuarine, and marine systems. Mud flats, sand bars, inlet shoals, and intertidal beaches are specific types of soft bottom. Grain size distribution, salinity, DO, and flow characteristics affect the condition of soft bottom habitat and the type of organisms that use it. Soft bottom covers approximately 1.9 million acres. North Carolina's coast can be divided into geologically distinct northern and southern provinces. In the northern province (north of Cape Lookout), the seafloor consists of a thick layer of unconsolidated mud, muddy sand, and peat sediments. The low slopes of the bottom result in an extensive system of drowned river estuaries, long barrier islands, and few inlets. The southern province has a thin and variable layer of surficial sands and mud, with underlying rock platforms, a steeper sloping shoreline with narrow estuaries, short barrier islands, and numerous inlets (Ch. 6).

Habitat Functions and Fish Use

Soft bottom is important as a storage reservoir of nutrients, chemicals, and microbes in coastal ecosystems, allowing for both deposition and resuspension of nutrients and toxic substances. The surface supports benthic microalgae, contributing substantial primary production to the coastal system. Estuarine soft bottom supports over 400 species of benthic invertebrates in North Carolina. Juvenile stages of species such as summer and southern flounder, spot, Atlantic croaker, and penaeid shrimp use the shallow unvegetated flats, which larger predators cannot access, as important nursery habitat. As fish get larger, they will venture out of protective cover to forage in soft bottom. Fishery independent data from shallow creeks and bays in Pamlico Sound documented 78 fish and invertebrate species. Eight of those — spot, bay anchovy, Atlantic croaker, Atlantic menhaden, silver perch, blue crab, brown shrimp, and southern flounder — comprised > 97% of the total nekton abundance. Soft bottom between structured habitat (SAV, wetlands, shell bottom) acts as a barrier to connectivity, which can be beneficial to small invertebrates by reducing predation risk. Fish and invertebrates that commonly occur in this habitat, including hard clams, flatfish, skates, rays, and other small cryptic fish such as gobies, avoid predation by burrowing into the sediment, thus camouflaging themselves from predators. Ocean soft bottom, particularly in the surf zone and along shoals and inlets, serves as an important feeding ground for fish that forage on benthic invertebrates. These predators generally have high economic value as recreational and commercial species, and include Florida pompano, red drum, kingfish, spot, Atlantic croaker, weakfish, Spanish mackerel, and striped bass. Many demersal and estuary-dependent fish spawn over soft bottom habitat in North Carolina's coastal waters.

Habitat Profile

Soft Bottom Functions

- Stores and recycles nutrients, chemicals
- Is a source of sand for other habitats
- Provides an area for marine animals to burrow

How Fish Use Soft Bottom

- Nursery area for blue crab, flounder, and croaker
- Foraging area for seatrout, red drum, and flounder
- Spawning area for shrimp, sturgeon, and kingfish
- Refuge area for hard clam, shrimp, and flounder

Soft bottom includes features such as mud flats, inlets, shoals, channel bottoms, and ocean beaches.

Economic Benefits

Soft bottom benefits the economy by providing habitat for critical food sources, by cycling nutrients, burying pollutants, and dampening wave energy. Beaches are extremely valuable for tourism and recreation, including surf fishing, surfing, and beach going. One study, averaging data from seven North Carolina beaches, found the net economic benefits of a day at a beach ranged from $14—$104 for single day trips and $14 to $53 overnight stays. For example, the total average annual benefits of long-term beach nourishment was estimated to be $14,836,688 (2014 dollars) due to recreational and storm damage reduction benefits.

Status and Trends

Comprehensive mapping of soft bottom habitat has not been completed. The loss of more structured habitat, such as SAV, wetlands, and shell bottom, has undoubtedly led to gains in soft bottom habitat. The quality of soft bottom habitat is a better indicator of soft bottom status than quantity. The best available information on sediment quality comes from EPA's latest National Coastal Condition Report (NCCR IV). The report rated the coast from North Carolina to Florida at 3.6 (fair) overall, while sediment quality was rated 2 (fair to poor), which was lower than in previous reports. Sediment quality is based on toxicity, contaminants, and total organic carbon (TOC). The percentage of area determined to be in poor condition was 13%. The primary reason for the low rating was sediment toxicity. The quality of soft bottom habitat can affect species abundance and diversity. Sediments in soft bottom habitat can accumulate both chemical and microbial contaminants, potentially affecting benthic organisms and community structure. Tidal creeks are sensitive to various aspects of human development, but sensitivity depends on the size and location of the creeks. Because tidal creeks are the nexus between estuaries and land-based activities, potential for contamination is high. Intertidal creeks close to headwaters demonstrate greater concentrations of nonpoint source contamination than larger systems near the mouth. The degree of contamination also depends on the impervious cover surrounding the land.

Fact: Soft bottom covers about 2.1 million acres of estuarine and ocean bottom within state waters.

Threats to Soft Bottom

Soft bottom strongly influences the water column by the constant cycling of nutrients and sediments.

Inadequate information is available to determine the current condition of soft bottom. Many human activities aimed at enhancing the "coastal experience" can inadvertently degrade this habitat. The ecological functions provided by soft bottom can be altered by activities such as dredging for channels or marinas, shoreline stabilization, water churning in marinas, and use of certain types of fishing gear. Along the oceanfront, jetties form barriers to the movement of sand, altering the natural sediment cycle. Excess nutrient concentrations in coastal rivers, in combination with certain environmental conditions, can lead to no or low oxygen levels near the bottom, killing the benthic organisms in the sediment, which reduces food availability for larger invertebrates and fish. Sediment contaminated with toxins can affect reproduction and growth of shellfish and other aquatic animals. Soft bottom habitat is relatively resistant to a changing environment.

Hard Bottom - *Rocks, Reefs, and Wrecks*

Hard bottom habitat, also referred to as live bottom or reef, consists of exposed areas of rock or consolidated sediments that may or may not be characterized by a thin veneer of live or dead biota and is generally located in the ocean rather than in the estuarine system. Natural hard bottom is colonized to a varying extent by algae, sponges, soft coral, hard coral, and other sessile invertebrates. In South Atlantic waters, hard bottom can consist of exposed rock ledges or outcrops with vertical relief or can be relatively flat and covered by a thin veneer of sand.

Artificial reefs are structures constructed or placed in waters for the purpose of enhancing fishery resources. Because artificial reefs become colonized by algae, invertebrates, and other marine life, they provide additional hard bottom habitat and serve similar ecological functions for fish. Some of the materials used in artificial reef construction are vessels, concrete pipe, or prefabricated structures such as reef balls. The DMF Artificial Reef Program is responsible for deployment and maintenance of artificial reef sites in state and federal waters. There are 50 DMF-managed artificial reefs of varying construction in North Carolina, of which 29 are located in federal ocean waters, 13 in state ocean waters, and eight in estuarine waters (Ch. 7).

Habitat Functions and Fish Use

Exposed hard substrate provides stable attachment surfaces for colonization by numerous marine invertebrates and algae. This productive three-dimensional habitat is often the only source of structural refuges in open shelf waters and a source of concentrated food. Most reef fish spend almost their entire life cycle on hard bottom, which serves as nursery, spawning, and foraging grounds. The presence of ocean hard bottom off North Carolina, along with appropriate water temperatures, allows for the existence of a temperate-to-subtropical reef fish community and a snapper-grouper fishery. Because of their importance for spawning, nursery, and foraging, all of the nearshore hard bottoms off North Carolina have been federally designated as Habitat Areas of Particular Concern for the snapper-grouper complex.

Habitat Profile

Hard Bottom Functions

- Provides a place for sponges, algae, and coral to attach
- Offers refuge for reef fish
- Supplies new sand through erosion

How Fish Use Wetlands

- Nursery area for groupers, snapper, and black sea bass
- Foraging area for king mackerel, gag, and snapper
- Spawning area for black sea bass, grouper, and tropicals
- Refuge area for gag and black sea bass

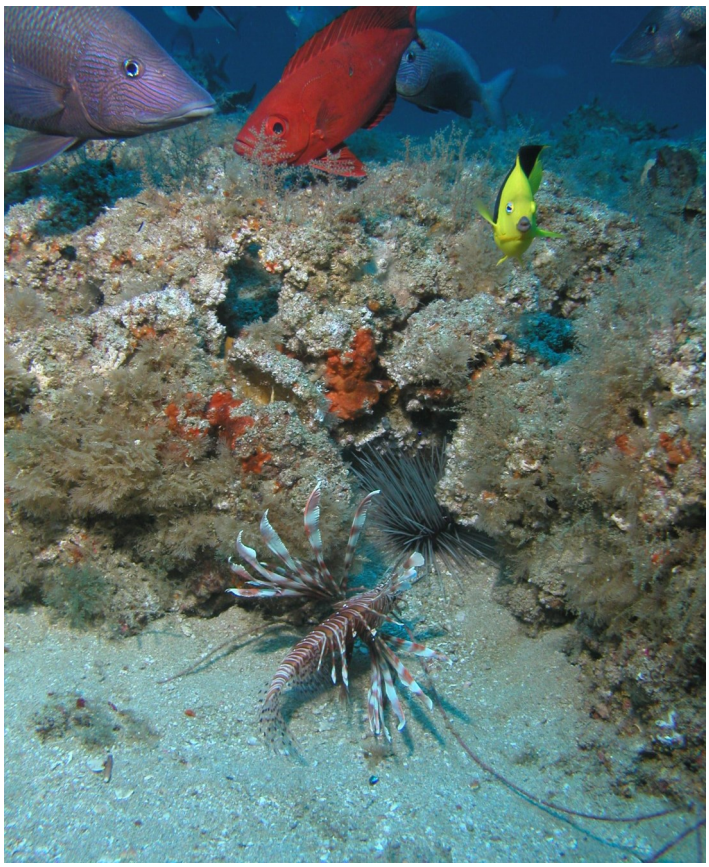
Economic Benefits

Between 2011 and 2013, the North Carolina commercial snapper-grouper fishery harvested an annual average of 1,638,434 lbs of fish (total of 5,015,570 lbs) with an annual market value of over $4.2 million (total for 3 years - $12,567,964). During that same time period, recreational fisherman (private boats, charter boats, and head boats) harvested an average of 568,146 lbs of fish in the snapper-grouper complex/year, for a total of 1,204,439 lbs. Economic benefits also include revenue from the dive industry, since hard bottom reefs are popular dive sites.

Hard Bottom - Rocks, Reefs, and Wrecks

Status and Trends

The condition of shallow hard bottom in North Carolina state territorial waters is of particular importance to the health and stability of estuary-dependent snapper-grouper species that utilize this habitat as “way stations” or protective stopping points as they emigrate offshore. Because of market value, high recreational participation, and the associated fishing tackle industry, the offshore snapper-grouper complex supports productive commercial and recreational fisheries. The South Atlantic Fishery Management Council reported that nearshore hard bottoms in the South Atlantic were considered to be in “good general” condition overall in 2002. Although adequate information exists on the distribution of hard bottom off the North Carolina coast, little information is available to evaluate the status and trends of hard bottom habitat in state territorial waters. The black sea bass populations north and south of Cape Hatteras and gag grouper have improved in the past few years.



Fact: 50 artificial reefs are located in ocean waters along North Carolina’s coast and 8 are located in estuarine waters. In addition, there are numerous shipwrecks along the coast

Threats to Hard Bottom

Threats to nearshore hard bottom habitat in North Carolina include beach nourishment, certain fishing gear, and water quality degradation. Sand from nourished beaches can also cover hard bottom structures. Studies have found that some hard bottom areas adjacent to nourished beaches were buried by sand washed off of nourished beaches. These once productive reef fishing grounds are no longer fished due to poor yield. Boat anchors and bottom trawls can uproot coral and tear loose chunks of rock. Poor water quality can affect growth or survival of the invertebrates living on hard bottom structure. A growing threat to hard bottom is the impact of the highly invasive Pacific lionfish on the reef community. This species has rapidly expanded in range from more southerly waters to North Carolina, and has exhibited extremely high predation rates on snapper and grouper species. Ocean acidification is another concern. More acidic ocean water over time is expected with increasing carbon dioxide levels which can cause calcium based organisms like corals and sponges to disintegrate.

The hard bottom habitat of the North Carolina coast is considered crucial spawning and foraging habitat for many commercially important species of grouper and snapper.

ACRONYM LIST

APNEP:	**Albemarle-Pamlico National Estuary Partnership**
BMPs:	**Best Management Practices**
CAMA:	**NC Coastal Area Management Act**
CHPP:	**Coastal Habitat Protection Plan**
CRC:	**Coastal Resources Commission**
CRFL:	**Coastal Recreational Fishing License**
DACS:	**Department of Agriculture and Consumer Services**
DCM:	**Division of Coastal Management**
DEMLR:	**Division of Energy, Mineral, and Land Resources**
DENR:	**Department of Environment and Natural Resources**
DEQ:	**Department of Environmental Quality (formerly DENR)**
DMF:	**Division of Marine Fisheries**
DMS:	**Division of Mitigation Services**
DO:	**Dissolved Oxygen**
DOT:	**Department of Transportation**
DSWC:	**Division of Soil and Water Conservation**
DWR:	**Division of Water Resources**
EBM:	**Ecosystem-Based Management**
EFH:	**Essential Fish Habitat**
EMC:	**Environmental Management Commission**
EPA:	**US Environmental Protection Agency**
FWS:	**US Fish and Wildlife Service**
LID:	**Low Impact Development**
MFC:	**Marine Fisheries Commission**
NCCR:	**National Coastal Condition Report**
NCFS:	**NC Forest Service**
NLCD:	**National Land Cover Database**
NWI:	**National Wetlands Inventory**
SAFMC:	**South Atlantic Fishery Management Council**
SAV:	**Submerged Aquatic Vegetation**
SCC:	**Sedimentation Control Commission**
SCH:	**Strategic Coastal Habitats**
SWCC:	**Soil and Water Conservation Commission**
TOC:	**Total Organic Carbon**
TSS:	**Total Suspended Solids**
USACE:	**US Army Corps of Engineers**
WRC:	**Wildlife Resources Commission**

For more information or to download the CHPP and Source Document, go to http://portal.ncdenr.org/web/mf/habitat/chpp/downloads

This document should be cited as follows:
NCDEQ (North Carolina Department of Environmental Quality). North Carolina Coastal Habitat Protection Plan. Morehead City, NC. Division of Marine Fisheries; 2016. 33 p.

Chairman's Report

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

Jan. 21, 2016

Mr. Kenneth Fex, Jr.
122 NE 38th Street
Oak Island, NC 28465

Dear Mr. Fex,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an obligatory appointment to the South Atlantic Fishery Management Council (Council) in August 2015. The N.C. Marine Fisheries Commission is responsible for compiling a list of nominees for the governor's consideration. At its Nov. 18-20, 2015 business meeting, the commission reviewed information from candidates interested in an appointment to the Council. Your name was among those selected by the commission for submission to Governor McCrory as a nominee for an appointment to the Council.

Each council nominee is required to complete nomination materials provided by the National Marine Fisheries Service (NOAA Fisheries). Your nomination materials are attached and are also available in fillable, .pdf format at: http://www.nmfs.noaa.gov/sfa/reg_svcs/Councils/Nominations/applicationkit.htm. All forms must be completed in detail in order for you to be considered for an appointment. Please complete the forms and return no later than Feb. 8, 2016 to: Michelle Duval, N.C. Division of Marine Fisheries, P.O. Box 769, Morehead City, NC 28557. The division will review your forms for completeness and forward them to the governor's office for submission to the National Marine Fisheries Service by March 15, 2016.

I wish to congratulate you on your selection by the commission as a nominee for an obligatory appointment to the South Atlantic Fishery Management Council. Please feel free to contact Dr. Duval by phone at 252-808-8011 or by email at michelle.duval@ncdenr.gov if you need additional information concerning the nomination process.

Sincerely,

Sammy Corbett, Chairman
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Knott
Caroline Daley
Matt Dockham
Louis Daniel
Nancy Fish
Michelle Duval

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

Jan. 21, 2016

Mr. Charles "Bernie" McCants, Jr.
2325 Windy Wood Drive
Raleigh, NC 27606

Dear Mr. McCants,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an obligatory appointment to the South Atlantic Fishery Management Council (Council) in August 2015. The N.C. Marine Fisheries Commission is responsible for compiling a list of nominees for the governor's consideration. At its Nov. 18-20, 2015 business meeting, the commission reviewed information from candidates interested in an appointment to the Council. Your name was among those selected by the commission for submission to Governor McCrory as a nominee for an appointment to the Council.

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Sincerely,

Sammy Corbett

Sammy Corbett, Chairman
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Knott
Caroline Daley
Matt Dockham
Louis Daniel
Nancy Fish
Michelle Duval

P.O. Box 769, Morehead City, NC 28557-0769
www.ncfisheries.net

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

Jan. 27, 2015

Ms. Janet Cowell, Treasurer
The Department of State Treasurer
325 North Salisbury Street
Raleigh, NC 27603-1385

Dear Ms. Cowell:

Session Law 2005-455, Senate Bill 1126 established the Coastal Recreational Fishing License (CRFL). This Legislation establishes both the Marine Resources Endowment Fund (G.S. 113-175.5) and the Marine Resources Fund (G.S. 113-175.1). The revenues from these funds can only be disbursed with the approval of the chair of the Marine Fisheries Commission.

This will serve as notification of disbursements approved by the Marine Fisheries Commission. Monies have been approved to be disbursed from the Marine Resources Fund with the following listing showing the specific project and budget approved by the Marine Fisheries Commission, with consultation of the Wildlife Resources Commission.

Project Title	**FY 2016-17 Funding**
Validating and Updating Maturation Schedules	$46,392
NC Marine Patrol Technology	$96,476
NC Red Drum Juvenile Abundance Index	$60,282
A Partnership for Sustained Fisheries Management	$57,488
An Economic and Social Survey of CRFL Holders	$17,329
Submerged Aquatic Vegetation SONAR Mapping	$77,103

Development of Inshore Fishing Oyster Reefs and Protection of Oyster Sanctuaries	$101,200
Maintenance on the M/V West Bay	$250,000
Sedimentation in Tidal Creeks	$104,433
Update and Reprint North Carolina Angler's Guide	$77,750
NC Marine Patrol Education Team - Continuation	$11,800
Oak Island Regional Fishing Pier and Kayak Launch	$69,955
Sunken Vessel Artificial Reefs in Northern Onslow Bay, NC	$185,000
West Onslow Boat Access Area Reconstruction	$300,000
Enhancement of Artificial Reef (AR430)	$339,000
Increase Funds for SAV Mapping Study	$9,500
TOTAL:	**$ 1,803,708**

The Controller for N.C. Department of Environmental Quality will process these disbursements from the cash available in the fund. The Division of Marine Fisheries assigned coordinator for these projects is Wayne Johannessen and can be reached at (252) 808-8004 with any questions.

Sincerely,

Sammy Corbett

Sammy Corbett, Chairman
N.C. Marine Fisheries Commission

cc: Rex Whaley, NCDEQ Chief Financial Officer
Tracy Little, OSBM Senior Budget Analyst
Louis Daniel, DMF Director

REMINDER

MANDATORY EDUCATION REQUIREMENTS

MANDATORY EDUCATION.

Public Servants and Ethics Liaisons. The State Government Ethics Act *requires* that every public servant and ethics liaison complete an ethics and lobbying education presentation/program approved by the State Ethics Commission *within 6 months* of the person's election, reelection, appointment, or employment and complete a refresher ethics presentation *at least every two years thereafter*.

The willful failure of a public servant serving on a board to comply with the education requirements may subject the person to removal from the board. The willful failure of a public servant who is a State employee to comply with the education requirement may be considered a violation of a written work order permitting disciplinary action. Therefore, if there are public servants in your agency or on your covered state board or commission who are past due for completing their ethics education requirements, **those individuals should attend a live presentation, distance video-streamed presentation *or* complete the online education as soon as possible.**

Legislators. The State Government Ethics Act *requires* that every legislator complete an ethics and lobbying education presentation/program approved by the State Ethics Commission and the Legislative Ethics Committee *within 2 months* of either the convening of the General Assembly to which the legislator is elected or the legislator's appointment, whichever is later, and complete a refresher ethics education presentation *at least every two years thereafter*.

The willful failure of a legislator to comply with these education requirements may subject the legislator to sanctions under the Legislative Ethics Act.

Legislative Employees. The State Government Ethics Act *requires* that every legislative employee complete an ethics and lobbying education presentation/program approved by the State Ethics Commission and the Legislative Ethics Committee *within 3 months* of the person's employment and complete a refresher ethics education presentation *at least every two years thereafter*.

The willful failure of a legislative employee to comply with these education requirements may subject the person to disciplinary action by their hiring authority.

Legislators and Legislative Employees may check the status of their ethics education by going to the General Assembly intra-net page. Legislators and legislative employees who are past due for completing their ethics education requirements should contact Denise Adams with the Research Division of the General Assembly at denise.adams@ncleg.net or 919-301-1991 to coordinate/schedule their ethics education training.

ETHICS AND LOBBYING EDUCATION TRAINING.

Public Servants and Ethics Liaisons may complete the required basic or refresher ethics and lobbying education training by either attending a live presentation, a distance video streamed presentation or completing the online education modules.

- **Live and Distance Video-Streamed Presentation Dates.** The State Ethics Commission has scheduled live ethics and lobbying education presentations and distance video-streamlined presentations for the remainder of 2014. Dates, locations, and registration information are on the Commission's website at: www.ethicscommission.nc.gov/education/eduSchedule.aspx.

- **Online Education.** The State Ethics Commission also offers online ethics and lobbying education. The education modules and instructions are on the Commission's website at: www.ethicscommission.nc.gov/education/eduOnline.aspx.

Legislators may complete the required basic or refresher ethics and lobbying education training by attending a live presentation at the beginning of the legislative session jointly provided by the Ethic Commission and the Research Division of the General Assembly.

Legislative Employees may complete the required basic or refresher ethics and lobbying education training by going online to the General Assembly intra-net page.

REGISTRATION AND QUESTIONS.

- **Public Servants and Ethics Liaisons** please contact Sue Lundberg at (919) 715-2071 or by e-mail at Education.Ethics@doa.nc.gov to register for ethics and lobbying education training or if you have ethics education questions.

- **Legislators and Legislative Employees** please contact the General Assembly ethics hotline at 919-301-1991 or email Denise Adams at denise.adams@ncleg.net if you have questions about the ethics and lobbying education training or have ethics education questions.

Thank you for giving this matter your immediate attention and for sharing this information with all members of your covered board, commission or committee, all staff and employees covered under the State Government Ethics Act, and all legislators and legislative employees.

2016 Meeting Planning Calendar

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- MFC
- ASMFC
- SAFMC
- MAFMC
- State Holiday
- Sea Turtle AC
- Southern Regional AC
- Northern Regional AC
- Finfish AC
- Habitat and Water Quality AC
- Shellfish/Crustacean AC

Overview of Past Efforts to Refine the Standard Commercial Fishing License Criteria

Background

- In 2010 and 2012, two ad hoc Marine Fisheries Commission committee meetings were held to discuss the issue of defining a professional commercial fishermen and make changes to the Standard Commercial Fishing License.
- The general consensus among attendees was that there are no significant problems with the current definition that requires fixing. The current definition and license system as devised by the Moratorium Steering Committee in 1999 is adequate. [see G.S. 113-168.2 (h) Identification as a Commercial Fisherman - The receipt of a current and valid Standard Commercial Fishing License or shellfish license issued by the division shall serve as proper identification of the licensee as a commercial fisherman].
- Although neither committee made any significant changes to the current system, there were some recommendations to investigate license transfers, license assignments, how to handle latent licenses (use it or lose it), establishing some form of apprenticeship program, and to consider eliminating the Shellfish License for N.C. residents.

Previous Actions

- **July/August 2010 Taskforce Meetings** – chaired by Joe Smith
  - Making changes to the definition of a commercial fisherman is always a contentious issue.
  - The industry felt that:
    - The definition is fine as is.
    - There is no reason to establish landing limits or frequency of use to exclude part-timers as there are many reasons why people hold commercial licenses: investment for retirement, for later use, to pass down to future generations, or as a side-line business to their land-based employment.
    - Further limiting available licenses and limited entry fisheries are not popular concepts.
    - License transfers should be limited to family only.
    - License assignments are necessary.
    - The revenue from latent licenses is necessary to the division.

- **January 2012 Taskforce Meeting** – chaired by Rob Bizzell
  - Industry members in attendance reiterated that the problem has not been defined and if it isn't broken, then don't try to fix it.
  - Much discussion ensued about impact of less knowledgeable commercial fishermen on the industry using the striped bass trawler episode as an example.
  - Three [non-binding] motions were made and passed by the committee:
    - Require all individuals who held a Standard Commercial Fishing License during the 2010 license year that had no recorded sales transactions be required to have at least 12 days of documented fishing activity within a three-year time period in order to renew their licenses.
    - The commission shall explore the concept of developing an apprentice program/license for persons who have no history in commercial fishing, and allowing an individual with an apprentice license to qualify for a Standard Commercial Fishing License issued through the eligibility pool once the apprenticeship is completed.
    - The commission should consider eliminating the Shellfish License for N.C. residents.

Constraints and Considerations

- The current commercial license system has been in place since 1999 and is based on recommendations by the Moratorium Steering Committee and resultant actions by the General Assembly.
- The system as implemented has many good points and is in general favor by the commercial fishing industry.
- The following is a list of the main points of discussion and constraints upon any actions:
    - The current definition of a commercial fisherman simply says one who holds a license. Most people feel this is adequate but also see problems with adolescents holding licenses, recreational fishermen holding licenses, and the large number of unused licenses. The discussion should be focused on what constitutes a "professional" commercial fishermen and could include such criteria as: relying on proceeds from commercial fishing for the bulk of their annual salary, reporting income to the IRS from commercial fishing, an individual fully licensed and permitted to operate in one or more fisheries, and an individual with the knowledge, education or experience to profit from commercial fishing. How each of these criteria is determined is currently unknown. In addition, any definition must include criteria for professional crew members who may or may not have any licenses or recorded landings.
        - Can the commission eliminate or reduce the number of available licenses? Yes, the commission has the authority to adjust the number of Standard Commercial Fishing License's in the pool based on the amount of effort it considers appropriate in the fishery. The difference between the number of SCFLs in the pool and the number of active licenses is around 1,500. The commission cannot refuse to renew a license.
        - Can license transfers be restricted to family and transfers to non-qualified individuals prevented? This is addressed in GS 113-168.2 (g) which describes the allowable reasons for license transfers (family, upon death, or sale of vessel upon retirement). Seventy-two percent of license transfers are categorized as "Other." This allowance was a legal interpretation due to discrepancies in the interpretation of "retirement" and because not all license holders had an accompanying vessel to sell with the license. This could be revisited.
        - Part time commercial fishermen play an important role and should not be discouraged. Traditionally, commercial fishermen in North Carolina have always held other money making jobs in order to support their families. Part time fishermen provide valuable product to dealers and to the market when conditions allow.
        - There should be no "use-it or lose-it" clause as fishermen hold licenses for a variety of reasons - investment, holding for retirement years, to assign to others, etc. Unused licenses have no impact on the resource yet contribute to the division's operating revenue. Forcing license holders to use their license will put more pressure on the resource and more gear in the water. Standard Commercial Fishing License holders have made the decision to spend the money to renew the license each year and therefore have an investment in that license. The revenue derived from commercial licenses is critical to the division to fund the license, trip ticket and marine patrol activities. Commercial license revenue has been on the decline in recent years and there is concern that recent increases in license fees will create further reduced revenue for the division. [follow-up: the division conducted a survey of license holders in January 2015 asking about product retained for personal use and not reported on trip tickets]
        - Establishing income levels for license qualification is unpopular and unfeasible. This is similar to establishing "days used" or a "use-it or lose-it" policy. Using

income levels requires holders to substantiate their claims with tax records which in turn require someone to determine the validity of the tax records. The division does not wish to get involved in personal tax filing issues. Establishing a minimal threshold of days the license is required to be used could not only increase pressure on the resources but lead to falsified recording of catch on trip tickets in order to meet the minimal criteria.

- Establishing an Apprenticeship Program in order to get new entrants into the fishery received general support. However, the division feels as though the current Shellfish License and proper use of assignments provides most of the benefits of an apprentice program. Neither of these licenses requires any previous qualifications. A true apprenticeship program will require someone to function as the mentor, a role best fulfilled by commercial fishermen, not the division. The industry could still support this concept by hiring individuals as crew or by assigning licenses and eliminate the division from the program. The experience gained by working as crew or working under an assignment would qualify the individual for a Standard Commercial Fishing License through the Eligibility Board.
- The issue of recreational fishermen obtaining Standard Commercial Fishing Licenses on the open market and using them to sell fish to cover their fuel costs and save on taxes on tackle and equipment was also discussed extensively. This issue probably is of less importance today as the South Atlantic Fisheries Management Council has almost entirely eliminated bag limit sales of most federally managed species. Purchasing a commercial license in order to save on fuel and tackle costs is a federal and state taxing authority issue, not a division management issue.
- Should the Shellfish License be eliminated? This low cost license available only to N.C. residents was meant by the General Assembly to appease the older, traditional, clammers and oystermen who may not have qualified for a Standard Commercial Fishing License but still wanted a low cost license to gather some shellfish. It was also intended to be a license available to high school and college students to use to make some money during the summer months clamming. Eliminating this license will negatively impact applicants to the Eligibility Board and the apprenticeship program concept of entering into commercial fishing by obtaining a Shellfish License. It will have the positive benefits of reducing harvest pressure on diminishing oyster resources in the southern part of the state and reducing illegal oyster sales.

Summary

- There have been previous attempts at defining a commercial fisherman and making changes to the current license system. It is a heated topic and any changes should not be considered lightly.
- Given the commission's authorities, the most logical and achievable options to look at to address certain issues are:
    - Reduce the number of available Standard Commercial Fishing Licenses in the Eligibility Pool
- Changes to the following authorities will require legislative changes to existing statutes:
    - Limiting renewals of existing Standard Commercial Fishing Licenses
    - Further increases in license fees
    - Adjustments to nonresident fees
    - Limit license transfers
    - Limit license assignments

    - Address inequities in licensing costs between residents and nonresidents (especially with Land or Sell license privileges)
- Fee increases beginning in fiscal year 2016 will impact the number of licenses issued, especially those Standard Commercial Fishing Licenses that are not used. Any reductions in commercial license sales will further negatively impact division revenue and its ability to adequately implement and enforce fisheries regulations.

Commercial Fishing License Review Taskforce

Final Report

Submitted to the N. C. Marine Fisheries Commission

October 12, 2010

Prepared by Don Hesselman
Chief, License and Statistics Section
N.C. Division of Marine Fisheries

Taskforce Members
Joe Smith – Chairman
Anna Beckwith – Vice Chairman
Dr. B.J. Copeland
David Hilton
Tom Burgess
Ronnie McArthur

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Executive Summary

The Commercial License Review Taskforce was established at the May 2010 Marine Fisheries Commission (MFC) business meeting to address concerns about the availability and use of commercial license. Licensing issues were brought to the attention of the MFC during the public comment period at this meeting. At the forefront of the list of tasks was a request from the MFC chairman to define a commercial fisherman. The list of tasks grew into considerations of license transferability, minimum criteria to hold a commercial license, the for-hire license structure and the continuation of the Recreational Commercial Gear License. The MFC chair asked that the taskforce report its findings at the MFC's November 3-5, 2010 business meeting.

The taskforce held two meetings in July and August 2010 in Morehead City. The taskforce concluded its business with a recommendation that no changes to the current license structure are warranted at this time. The taskforce did have two recommendations for consideration by the MFC: 1) that the Division of Marine Fisheries (DMF) conduct a survey of commercial license holders who do not sell any seafood products to determine why they hold the license and 2) that the DMF organize a stakeholder meeting of for-hire industry participants to discuss changing the for-hire license structure.

Summary of the Taskforce Recommendations

The taskforce made the following recommendations:

1. Make no changes to the existing definition of a commercial fisherman;
2. DMF shall seek funding and conduct a survey to determine impact on the resource of latent (unused) Standard Commercial Fishing Licenses;
3. DMF shall hold a stakeholder meeting to examine the pros and cons of a guide license, similar in cost and structure to the Standard Commercial Fishing License; and
4. Make no changes to the structure of the Recreational Commercial Gear License.

Introduction

The Commercial License Review Taskforce was established as a result of public comments made to the Marine Fisheries Commission (MFC) at the May 2010 business meeting. During public comment, Mr. Ronnie McArthur, a commercial fisherman from Beaufort, stated commercial fishing licenses should not be available on the open market and there should be qualifying criteria to hold a license. MFC members discussed his comment and expanded on it to include the questions such as: What is a commercial fisherman? Should holders of commercial licenses make a minimum percentage of their income from commercial fishing to qualify for the license? Should for-hire guides and charter captains have a commercial fishing license? Should North Carolina expect an influx of commercial fishermen from the Gulf as a result of the Deep Water Horizon oil spill? MFC members realized these issues were not going to be resolved during their business meeting and elected to establish the taskforce to address these concerns.

MFC member Joe Smith of Atlantic Seafood in Hampstead was selected as chairman of the taskforce and MFC member Anna Beckwith as vice chairman. Other taskforce members were: MFC member B.J. Copeland, Mr. David Hilton, Mr. Tom Burgess and Mr. Ronnie McArthur. With the exceptions of Beckwith and Copeland, the taskforce was comprised of mostly commercial industry representatives. Copeland was selected partly based on his experience in serving on the Moratorium Steering Committee when the current DMF license structure was developed in the mid-1990s.

Public meetings of the taskforce were held at the Division of Marine Fisheries (DMF) Central District Office in Morehead City on July 12 and August 27, 2010. Members of the public and the media were in attendance along with DMF staff.

During the first meeting, taskforce members were provided background information reviewing previous MFC attempts to define a commercial fisherman, data on license sales and use, and income ranges of fishermen (Appendix I). A list of issues extracted from the minutes of the May MFC meeting was also presented.

Taskforce members received an information paper entitled “Potential Increase of Fishermen in North Carolina Coastal Waters Due to the Gulf Oil Spill” prepared by DMF staff (Appendix II). This paper summarized non-resident licensing requirements and fees and concluded that the DMF did not expect an influx. Taskforce members also stated they felt displaced fishermen were welcome since North Carolina fishermen had in the past temporarily relocated to surrounding states when conditions in North Carolina were unfavorable. This issue was then considered resolved and it was removed from further consideration.

Subsequent to this meeting and prior to the August meeting, MFC members were informally surveyed for any other issues in an effort to ensure all concerns and issues were deliberated.

During the second meeting of the taskforce, members discussed in detail each of the eleven issues remaining.

Taskforce members were made aware that almost all license requirements were written in N.C. General Statutes and thus any changes must be approved by the General Assembly. These requirements include; obtaining a license, qualifications to hold a license, transferring a license, renewing a license, license fees, for-hire license structure and the Recreational Commercial Gear License.

There are a few licensing requirements that the MFC does have the authority to change because they are established in the North Carolina Rules for Coastal Fishing Waters and not by general statute. Taskforce members were notified that the MFC has the authority to modify the number of licenses in the Eligibility Pool, but only if justified by fisheries resource management needs, such as reducing effort and/or over-capitalization. There was also some discussion on whether or not the MFC had the authority to change transfer requirements since these are in rule and statute. It was eventually determined that transfer requirements should remain status quo.

It was evident from public comment, summaries of the Moratorium Steering Committee deliberations and previous presentations to the MFC, that many, if not all, of these issues have been deliberated before. Many attendees and taskforce members felt these issues were resolved and questioned why they were resurfacing. At the same time, there was the agreement that the current commercial license structure had been in place for about 10 years and a review and possibly modifications were appropriate. Some of the issues discussed were new, such as the for-hire license structure, which changed with the implementation of the Coastal Recreational Fishing License on January 1, 2007.

Summary of Deliberations

Many of the issues intertwined and overlapped but the following is a general summary of the deliberations and the resolution of each of the eleven issues.

Defining a Commercial Fisherman

The taskforce was notified that G.S.113-168.2 states “The receipt of a current and valid SCFL or shellfish license issued by the Division shall serve as proper identification of the licensee as a commercial fisherman.”

An internet search indicates North Carolina is not the first entity to attempt to define what and who a commercial fisherman is. This is a difficult undertaking because the types of activities a fishermen engages in varies so much from one fishery to the next and from one

region to the next. The MFC received a presentation on this topic from DMF staff in 2007 with no resolution (see Appendix III).

The general consensus among the group was that the statute is adequate and there was no real need to modify the definition.

Restricting transfers of licenses to family members only

This issue received extensive discussion as it did during deliberations of the Moratorium Steering Committee (NC Sea Grant, 1996). At that time, there were some MFC members who felt there should be limited restrictions on transfers and some who felt there should be restrictions to prevent unqualified fishermen from obtaining a commercial license. Current restrictions as stated in G.S. 113-168.2 (g) limit transfers to family members, upon sale of a vessel, upon retirement and sale of the vessel and gear, and upon the death of the fishermen to the executor of the estate, who in turn may transfer the license. However, current DMF policy allows transfers to any eligible candidate for three reasons:

1) The commercial license is a commodity because it is essentially limited entry and because there is a cap on the number of available licenses;
2) Not everyone has a vessel to transfer; and
3) Businesses and corporations do not have families to transfer the license to.

The inherent value of a license was intended from the onset so that retiring fishermen had something of value to sell. An information paper entitled “Standard Commercial Fishing License Transfers” that discusses how and why license transfers are administered was presented to the taskforce (Appendix IV).

There was discussion about applying similar criteria that the Eligibility Board applies to new applications to license transfers. For example, the Eligibility Board requires evidence of previous or current commercial fishing involvement to qualify for a license. This was thought to be too restrictive and would serve to lessen the value of existing licenses upon retirement because it would be much less expensive to acquire a license through the Eligibility Board ($200) than to buy one from a retiring fisherman ($1500-$2500), given the identical qualifications.

Ultimately, the taskforce decided to not pursue changes to license transfer criteria.

Adding minimum income requirements to maintain a license

This issue involves establishing minimum income requirements to obtain or maintain a commercial license. The concept of “use it or lose it” was also discussed. The intent here, was that by requiring minimum use or income derived from fishing, would in effect lead to only “true” commercial fishermen holding licenses and exclude license holders who do not use the license

and part-timers who likely have other sources of personal income. This would have the effect of making the license more valuable and reducing competition from "weekend warriors." It would lead to a smaller, more professional, commercial fishing industry.

The Standard Commercial Fishing License structure in North Carolina is already a form of limited entry because of the qualification criteria and cap on the number. This proposal to add minimum income requirements creates additional limits on obtaining and maintaining a commercial license. The taskforce was notified that the MFC's authority to establish limited entry programs is restricted to species under a federal quota or to achieve sustainability under a state Fishery Management Plan. Implementing across-the-board minimum income requirements would therefore require a statutory change.

The taskforce discussed, and at times members supported, some minimum requirements such as selling seafood at least once in a three or five-year time frame, making 50 percent of income from commercial fishing or some other criteria.

Ultimately, the taskforce did not support establishing minimum criteria. There were a number of reasons for this stance. Among these reasons was how certain outside influences can affect how often an individual fishes or how much they may catch. Examples of this are the recent gill net restrictions implemented in order to minimize turtle encounters and illness, which may limit a commercial fisherman's activity.

The taskforce realized that traditionally, commercial fishing in North Carolina has comprised only a portion of a fisherman's total income. Because of the seasonal nature of fishing, many fishermen have always had other occupations such as carpentry, guiding and farming. Although many fishermen only fish during fall runs of fish (ex. flounder pound nets), income derived from this part time activity can supply a major proportion of their income. .

The taskforce discussed why license holders continue to renew their license yet do not ever use it to sell seafood (latent license holders). There was speculation that license holders use commercial gear to harvest seafood for personal consumption, harvest commercial limits of seafood for personal use or simply renew the license with the possibility of future use. License holders realize commercial licenses are not easy to re-acquire and for that reason continue to pay the $200 annual renewal fee. Moreover, commercial licenses have value and can usually be sold above the annual renewal cost at any given time. The general consensus was that fishermen should be allowed to decide whether to use their license or not.

There was also general consensus among the taskforce that part time commercial fishermen play a valuable role in supplying seafood. It was also mentioned that the state of North Carolina promotes fresh, locally caught seafood and to supply this product requires commercial fishermen and a seafood dealer network. For these reasons there was little support in further reducing commercial fishing activities through license restrictions.

Hilton stated that if the state was truly interested in reducing capacity and the number of commercial licenses that it should investigate a license buy-back program. This concept was used in Virginia to reduce capacity in the blue crab fishery. It was Hilton's opinion that the state should find the funds for the buy-back, rather than implementing rules to unfairly reduce the number of available licenses.

The taskforce determined there were too many unknowns in how latent license holders impact the resource and why they continue to renew their license**.** The taskforce felt the DMF should conduct a survey of latent license holders to obtain answers to these questions.

Placing unused licenses in an "inactive status," but allow holder to retain landings

This concept was introduced to limit the number of latent commercial licenses. It would require licenses be placed in an inactive (unusable) status, but if the fisherman elected to return to commercial fishing he would still retain his landings history. This proposal was accompanied by a suggestion to reduce the annual cost for inactive licenses versus active licenses.

DMF staff notified the taskforce that unused commercial licenses were already in a de facto inactive status and that the landings history was retained by the holder. The annual renewal fee however, remains at $200, the same as the renewal fee for active licenses. There is no category in any statute defining inactive status, nor does the DMF license administration database and policy allow for this.

The taskforce was also reminded that revenue from licenses provides staff and operations money to the DMF and that any reduction in fees or revenue could severely impact the DMF functions.

The taskforce did not recommend implementing an "inactive" license status.

Lowering the number of licenses in the eligibility pool, making licenses harder to get from pool

There are currently 8,896 licenses in the pool of Standard Commercial Fishing Licenses. This cap was established by the Fisheries Reform Act in 1997 based on the number of existing Endorsement to Sell licenses. In any given year since, the DMF has issued about 7,400 licenses, leaving about 1,500 licenses in the pool. There has been some discussion by the MFC about lowering the number of licenses in the pool. Theoretically, the 1,500 licenses in the pool could be reduced to zero, thereby preventing any new entries into commercial fishing. However, the taskforce was notified that although the MFC has the authority (S.L. 1998-225, Part IV) to adjust the number of licenses issued on an annual basis, this can only be done if the MFC determines the effort in the fishery is not supported by the status of the stock based on the

best available scientific evidence (ie. a Fisheries Management Plan recommendation). To date, this recommendation has not been made.

This same session law states that the MFC may not refuse to renew a license that was issued the previous year and which has not been suspended or revoked. This prevents the MFC from taking away active (or latent) licenses in an effort to reduce the number of commercial licenses available.

The taskforce was also notified that about 100 licenses are not renewed each year for various reasons. The Eligibility Board issues about 100 licenses each year, so in recent years the number of licenses has remained approximately the same (ie. there is no significant increase or decrease in the number of commercial licenses). Since 2000 however, there has been a slight decrease in the number of standard and retired commercial licenses from 7,507 to 6,827. This infers natural attrition in the industry and questions the need to reduce the number of licenses in the pool.

The taskforce also discussed the ability of license holders to obtain licenses from the pool and subsequently sell these licenses. MFC rules restrict this from occurring. First, if an individual claims retirement from fishing or transfers (sells) a license, that individual is prevented from applying to the Eligibility Pool for two years (N.C.A.C. 03O. 0402 (e)). Second, MFC rules only allow an individual to sell one license obtained from the pool and the individual cannot reapply to the pool (N.C.A.C. 03O. 0404 (3)). Third, individuals holding a license can not apply to the pool. These restrictions in effect prevent individuals from engaging in the “brokering” of licenses from the pool.

Since the MFC can only adjust the number of licenses in the pool based on an identified need to reduce effort, and because there is ongoing natural attrition , the taskforce did not elect to make any substantive recommendations on this issue.

Develop a less expensive special permit or endorsement for specific fisheries (ie. bluefin tuna) and eliminate the commercial license requirements.

The DMF has had species-specific vessel licenses (crab, shellfish) in the past and found they did not work well. It overcomplicated the license system and reduced the DMF’s analytical capabilities. The taskforce discussed the concept of species-specific endorsements but expressed little support. There were concerns over requests for other species-specific licenses (where does it end?) and felt that there was no overriding advantage to this. In addition, any decrease in license fees would reduce revenue to the DMF and that lost revenue would need to be made up by increases in other license fees.

The taskforce did not recommend establishing special permits or endorsements for specific fisheries.

Characterize for-hire license holders, eliminate the free for-hire permit, and require for-hire participants to have commercial liability insurance.

These three issues were submitted as separate issues but aggregated to simplify summarizing. Beckwith brought these issues to the attention of the MFC and the taskforce as the sole member representing this segment of the industry. The primary purpose was to professionalize the for-hire industry by 1) development of a license that recognizes guides and charter captains as professionals and 2) requiring an equitable financial investment, just as commercial fishermen are required to invest into their license system. In addition, the commercial license identifies the commercial fisherman as a professional while the blanket for-hire was only implemented as a service that the for-hire operator could offer.

DMF staff briefed the taskforce on the current for-hire license structure. There is a for-hire permit that is available at no cost as long as the applicant has a valid U.S. Coast Guard captain's license. This permit was enacted to provide the DMF with a list of who was involved in the for-hire industry so the DMF could survey participants for catch and effort. At this time there was not a recreational fishing license in North Carolina. Subsequently, in 2007 the Coastal Recreational Fishing License Blanket For-Hire License was implemented for either six or fewer passengers ($250) or more than six ($350). The blanket license was implemented so guides and charter captains could allow anglers to fish aboard their vessel without having to purchase a recreational fishing license.

Since 2007, there has been an average of 683 blanket licenses sold and about 160 for-hire permits issued each fiscal year. These were obtained by an average of 752 participants indicating that many individuals purchase more than one permit or license.

The request to characterize the industry was made so the taskforce would have information on fishing effort and types of activities of the for-hire license and permit holders. DMF staff prepared data describing how the permit and the blanket licenses are used (Appendix V). The blanket is used more often and targets primarily offshore species, while the permit is used less and targets inshore species. This also indicates the blanket is popular with larger sportfishing boats, while the inshore guides obtain, or obtain along with a blanket, the for-hire permit.

Since the for-hire permit is in rule, the MFC has the authority to change it (N.C.A.C. 03O. 0503(k)) and could theoretically terminate the permit. There would be two considerations however; first, rules (N.C.A.C. 03O .0112 and 03O. 0503), state either the permit or the blanket license must be obtained to engage in for-hire fishing and two, the statute (G.S. 113-174.3) governing the blanket Coastal Recreational Fishing License would need to be changed since it states that individuals "may" elect to purchase the blanket license.

The characterization data supplied by the DMF indicate that many individual participants held multiple licenses or permits. During the Moratorium Steering Committee, there was not unanimous agreement whether the for-hire permit should be applied to the vessel or the

operator. The General Assembly ultimately decided the permit would apply to the vessel, not the individual. This same structure was repeated during implementation of the blanket for-hire. The small boat guide segment feels this creates an inequity and advantages the big boat offshore segment because the offshore segment generally only has one boat while the small boat guides often run multiple boats, which all must be licensed or permitted. . For this reason, guides often obtain one blanket license and may obtain other free for-hire permits for their other vessels.

Beckwith proposed the blanket license could be incorporated into a guide license with subsequent blanket licenses being less expensive. Hilton countered that the commercial license structure offers no savings when purchasing multiple licenses.

There was also a proposal that for-hire participants should maintain commercial liability insurance to qualify for a license. Commercial liability coverage can be added to personal liability insurance for a reasonable fee if less than 25 trips are made a year and for a slightly higher fee for more than 25 trips. The taskforce felt that this was certainly reasonable and responsible but outside the authority of the MFC to mandate.

The taskforce discussed implementing a guide license and it was suggested the license and associated vessel license should follow the commercial license format, i.e. a separate license for the operator and the vessel with the vessel fees according to the size of the boat.

A comment was made that the for-hire industry was represented on the taskforce by only one person and that the other members were not knowledgeable enough to make some of the necessary decisions. A motion was subsequently made to hold a stakeholder meeting of for-hire industry representatives to obtain input on any changes to the for-hire license structure.

Phase out the Recreational Commercial Gear License

There was a recommendation from the MFC that the Recreational Commercial Gear License should be discussed by the taskforce and considered for possible termination. This issue actually arose prior to establishment of the taskforce and did not actually fit in with the commercial license deliberations of the taskforce, but it was felt nonetheless to incorporate these discussions into the taskforce deliberations.

The reasoning behind the recommendation to terminate the Recreational Commercial Gear License is multi-layered: resource competition with commercial fishermen, impacts on the resource, and the license promotes additional gill net use with associated by-catch and protected species interaction issues. DMF staff developed a Recreational Commercial Gear License information paper describing the history behind development of the license, a summary of the catch and effort in the Recreational Commercial Gear License fishery, a discussion of the various issues surrounding the license, and advantages and disadvantages of terminating the license (Appendix VI).

The taskforce was informed within the information paper that the DMF conducted a Recreational Commercial Gear License survey from 2003 to 2008 to estimate catch and effort in the fishery. The survey indicated that total catch was less than 1percent of the commercial catch and therefore had minimal impact on fisheries resources. The survey also indicated landings and effort were decreasing and the Recreational Commercial Gear License population was getting older.

The taskforce concluded that since the landings were declining and the population of Recreational Commercial Gear License holders was aging out there was no need to make any changes to the license. Additionally, it was recognized that new gill net restrictions will further limit Recreational Commercial Gear License gill net use and there are no real issues with Recreational Commercial Gear License pots, trawls and seines.

Summary of Taskforce Motions

There were two motions made during the taskforce meeting on August 27, 2010.

Motion by David Hilton that the Commercial Fishing License Taskforce is not knowledgeable enough to make a recommendation on the need for a for-hire license because it is primarily composed of commercial fishermen and requests the MFC hold a stakeholder meeting of guides to assess the need for a for-hire license. Seconded by Anna Beckwith – passed 4 in favor and 1 opposed.

Motion by B.J. Copeland that the Commercial Fishing License Taskforce recommends to the MFC:

- **No changes are needed to the existing definition of a commercial fisherman;**
- **Ask DMF to conduct a survey to determine impact on the resource of latent Standard Commercial Fishing Licenses;**
- **Ask DMF to examine the pros and cons of a for-hire license, similar in cost and structure to the Standard Commercial Fishing License; and**
- **No changes are needed to the structure of the Recreational Commercial Gear License.**

Motion seconded by Joe Smith – motion passed unanimously.

Additional Issues Discussed

Concern was expressed by Hilton regarding the fact that Recreational Commercial Gear License gill nets, or other gear, could result in interactions with sea turtles, which could close down the entire commercial fishery. Hilton suggested having a separate sea turtle interaction limit for Recreational Commercial Gear License holders. Hilton also noted the inconsistency in how recreational nets were not required to adhere to the requirements of the Large Whale Take Reduction Team for weak links and 22-lb. anchors. It is hoped that Recreational Commercial Gear License gill net use and requirements will be discussed by the MFC's newly formed Sea Turtle Advisory Committee.

During the deliberations on the for-hire license a comment was made that catch and effort data obtained from the for-hire fleet could be improved. Beckwith related how for-hire guides often get surveyed, but due to the random nature of the survey often are not asked for data on the boat they used that month, but instead another boat that was not used at all. DMF staff explained that the current for-hire survey was conducted under contract with the National Marine Fisheries Service and was standardized along the East Coast. Beckwith also stated that many guides keep personal logbooks and probably would not be adverse to a mandatory for-hire logbook. DMF staff informed the taskforce that an electronic logbook project was being tested in the Gulf. Hilton stated that the commercial industry is required to complete trip tickets and that there should be a similar program for the for-hire industry to obtain better data for stock

assessments. There was subsequent discussion and support for a logbook program for the for-hire industry in North Carolina.

Conclusions

The taskforce concluded their deliberations with a motion to leave the commercial and the recreational commercial gear licenses as they are currently structured. There was no motion to implement minimum qualifications to maintain a license, restrict transfers, implement species-specific endorsements or adjust the number of licenses in the Eligibility Pool.

The taskforce recommended to the MFC that the DMF conduct a survey of commercial license holders who do not report any sales of seafood and conduct a stakeholder meeting to discuss restructuring the for-hire license system.

Literature Cited

NC Sea Grant, 1996. Final Report of the Fisheries Moratorium Steering Committee to the Joint Legislative Commission on Seafood and Aquaculture of the North Carolina General Assembly. NC Sea Grant, UNC-SG-96-11. 154 pp.

Appendix I

BACKGROUND DATA ON COMMERCIAL LICENSE SALES AND USE

Table 1. Number of Commercial Licenses issued for License Year 2009.

License	
Commercial Fishing Vessel Registration	9,215
SCFL	5,868
Recreational Commercial Gear	5,275
NC Resident Shellfish	2,130
Retired SCFL	1,046
Fish Dealer	790
License to Land Flounder (ocean trawl)	167
Land or Sell	143
Ocean Pier	22
Menhaden License for Non-Residents	10
	15,451

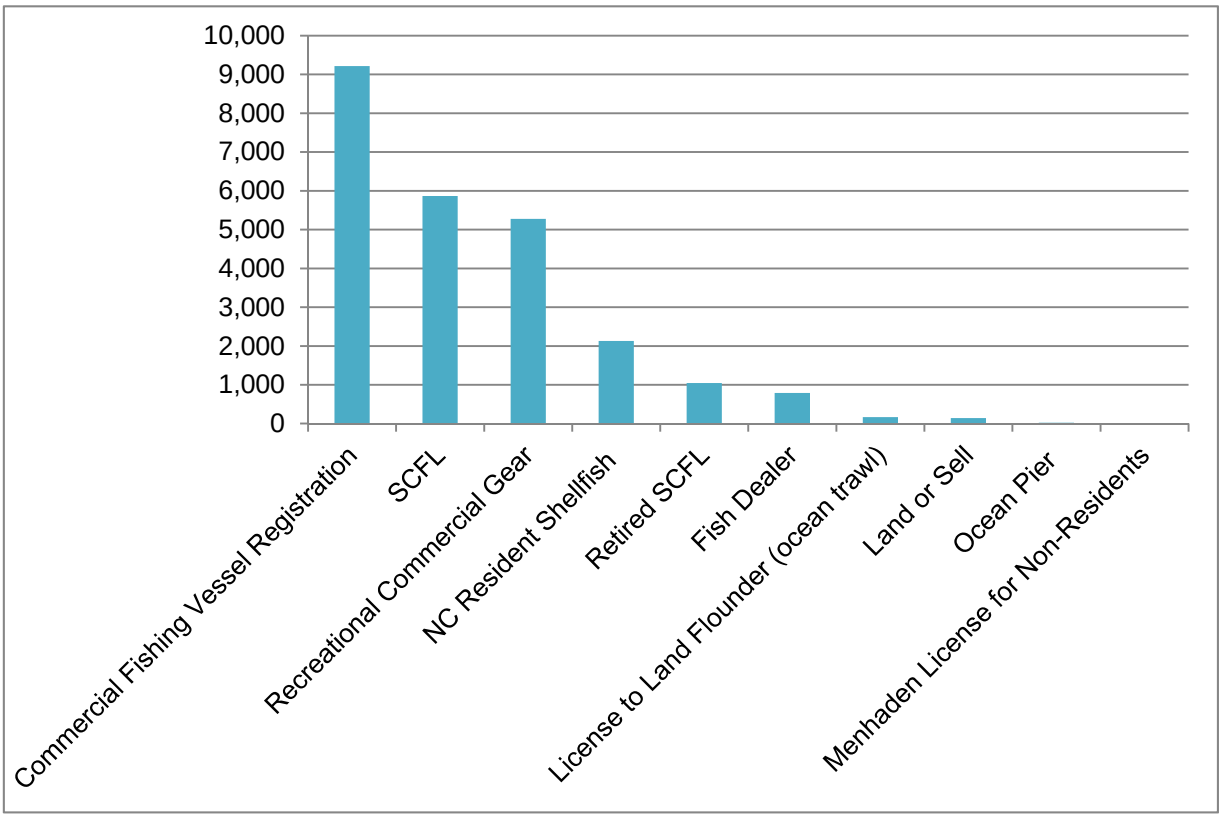

Figure 1. Number of Commercial Licenses issued for License Year 2009.

Table 2. License Year and Calendar Year License and Participant Counts.

	LICENSE YEAR		
Year	Licenses Issued	Licenses used	Participants (FY)
1994	6,779	4,819	3,890
1995	7,535	6,544	5,229
1996	7,798	7,148	5,115
1997	8,173	6,716	4,928
1998	8,595	7,008	4,910
1999	8,426	6,528	4,558
2000	9,711	5,892	4,760
2001	9,677	5,805	5,169
2002	9,712	5,353	4,891
2003	9,494	5,013	4,607
2004	9,146	4,717	4,355
2005	8,875	4,499	4,082
2006	8,615	4,122	3,639
2007	8,652	4,076	3,714
2008	8,681	4,031	3,576
2009	9,108	3,929	3,696

*Licenses issued includes SCFL, Retired SCFL, Endorsement to Sell (1994-99) , Menhaden, Shellflish and Land or Sell.

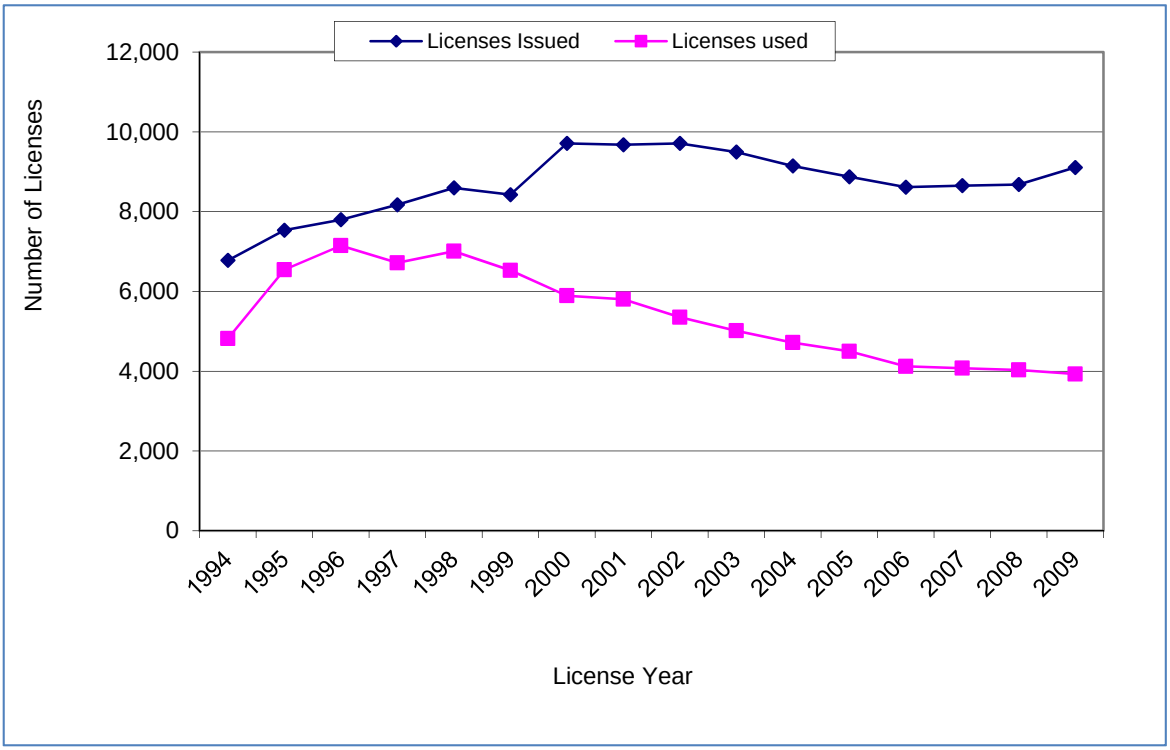

Figure 2. Trend of licenses issued versus used.

Table 3. License Year 2009 counts, usage and revenue from sales of licenses with ability to sell.

License Type	Issued	Used	% Used
SCFL	5,868	2,825	48%
Retired SCFL	959	299	31%
Shellfish	2,128	691	32%
Land or Sell	143	73	51%
Menhaden	10	0	0%
Other		41	
Total	9,108	3,929	43%

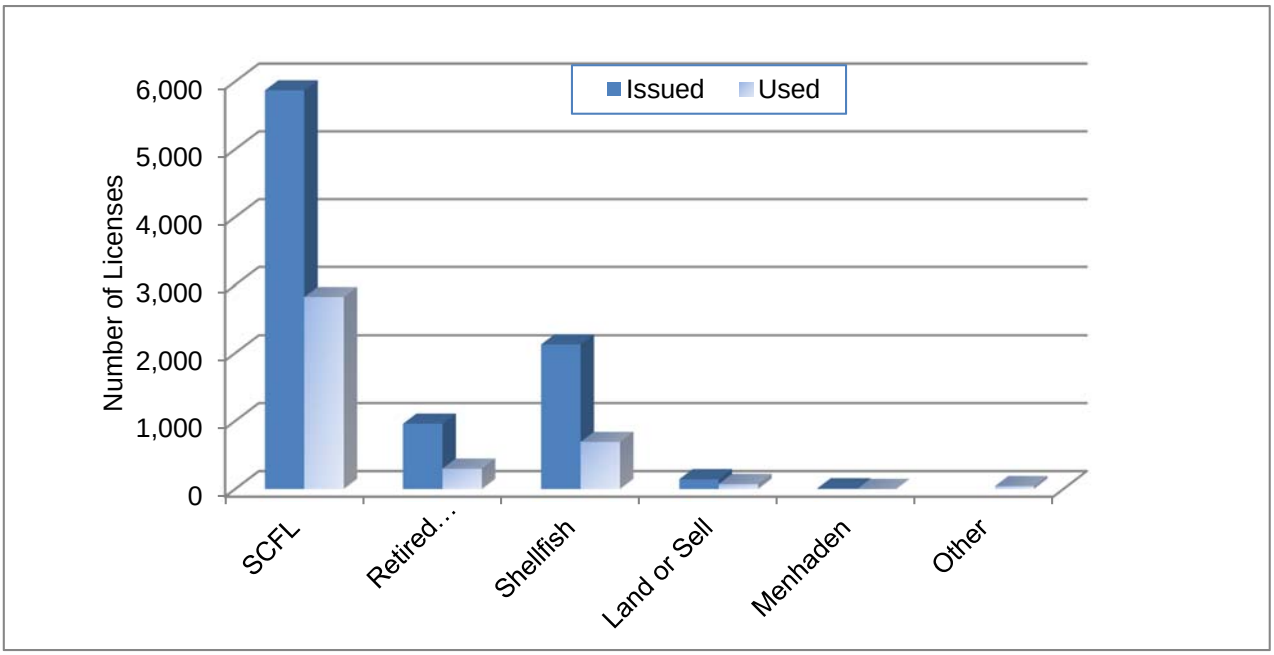

Figure 3. Graph showing license use by type for 2009.

Table 4. Standard Commercial Fishing License and Retired SCFL transfers by category for license year 2009.

Reason for Transfer	SCFL	RSCFL	Percent
Transferred-Other	318	46	72.08%
Transferred by Executor	22	10	6.34%
Transferred by Retirement claim	33	13	9.11%
Transferred by Sale of Boat	26	5	6.14%
Transferred to Family	19	13	6.34%
Total	418	87	1.00

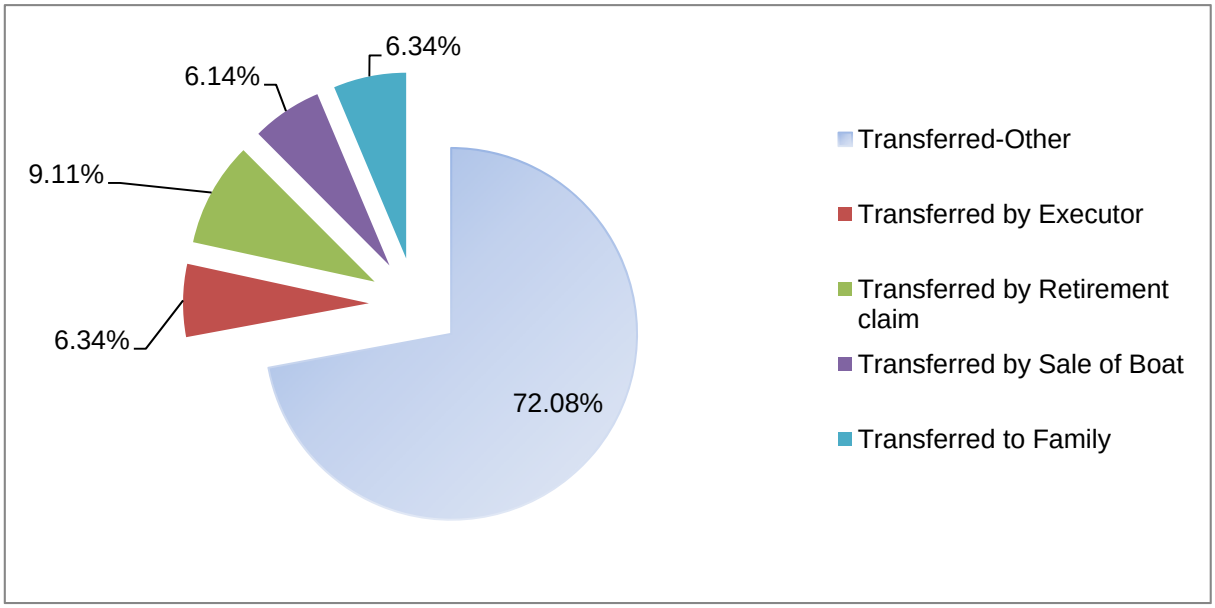

Figure 4. Standard Commercial Fishing License and Retired SCFL license transfers by category for license year 2009.

Table 5. Number of commercial fishermen responding to economic survey questions about percentage of income derived from commercial fishing by year.**

Lic Type and Income	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SCFL>50% income	4,702	4,425	4,128	3,855	3,679	3,550	3,213	2,920	2,847	2,774	2,886
SCFL<50% income	2,040	2,269	2,410	2,585	2,677	2,686	2,894	3,058	3,032	2,966	2,739
RSCFL>50% income	195	228	245	261	263	265	272	276	295	306	326
RSCFL<50% income	292	389	425	459	484	481	500	561	606	624	638
Total SCFL issued*	6,990	6,783	6,632	6,505	6,421	6,301	6,172	6,053	5,949	5,868	5,796
Total RSCFL issued*	515	630	676	727	754	754	787	853	912	959	1,018

*totals are not additive due to unknowns. Data compiled by Larry from FIN 7/8/10.

**economic survey is conducted on or during application for license.

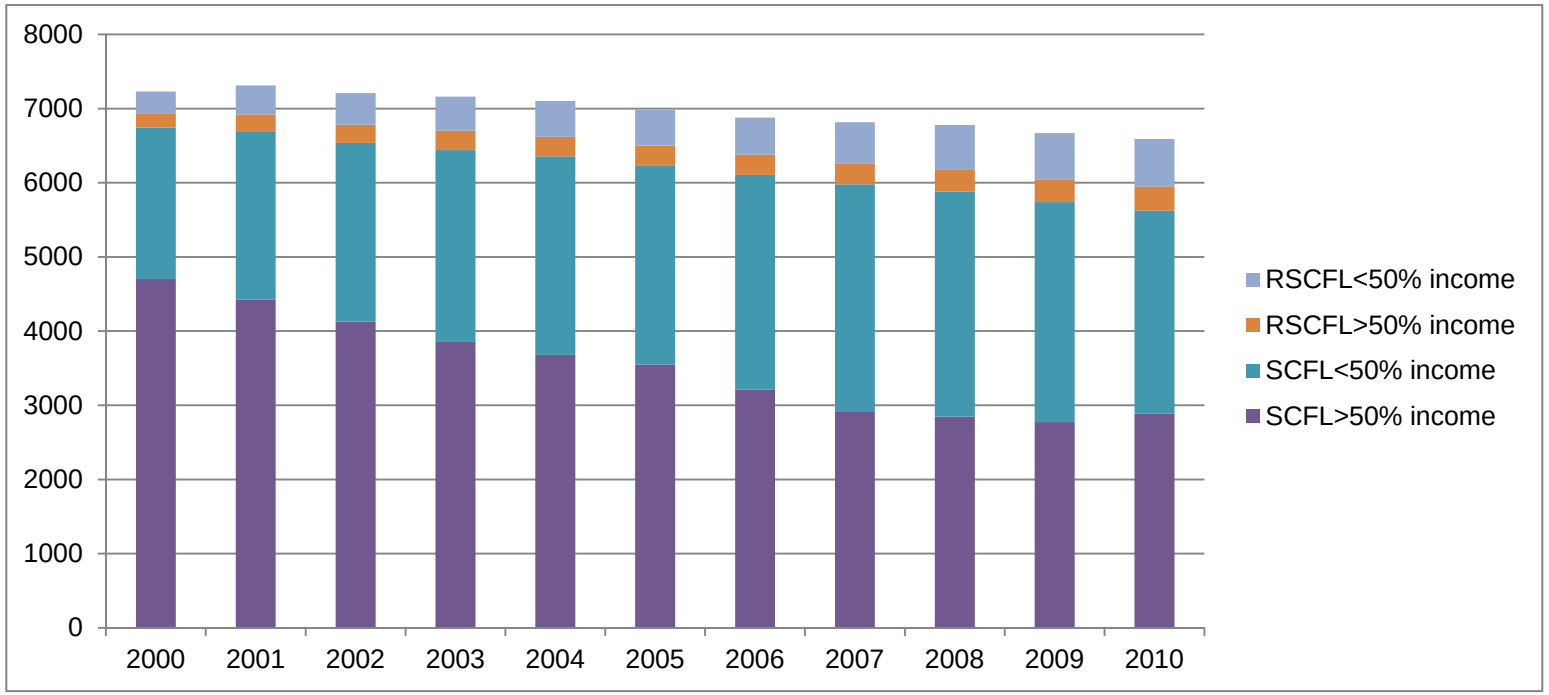

Figure 5. Number of commercial fishermen responding to economic survey questions about percentage of income derived from commercial fishing by year.

Table 6. Number of participants by various ex-vessel value ranges, pounds landed, and cumulative totals for all licenses with ability to sell.

YEAR	Ex-Vessel Value Range	Pounds Reported	Value	# Participants	Cumulative % Total Landings	Cumulative % Total Value	Cumulative % Participants
2009	$1-$499	109,271	$168,599	893	0.16%	0.22%	23.78%
2009	$500-$999	178,818	$248,998	342	0.42%	0.54%	32.88%
2009	$1,000-$4,999	1,492,857	$2,218,968	859	2.59%	3.42%	55.75%
2009	$5,000-$9,999	2,095,275	$2,981,111	414	5.65%	7.30%	66.77%
2009	$10,000-$24,999	6,481,160	$8,482,123	524	15.09%	18.31%	80.72%
2009	$25,000-$49,999	9,536,042	$10,912,429	309	28.98%	32.48%	88.95%
2009	$50,000-$99,999	15,187,513	$15,966,428	224	51.11%	53.22%	94.91%
2009	$100,000-$249,999	20,744,179	$23,307,157	161	81.17%	83.26%	75.43%
2009	$250,000-$499,999	7,749,785	$7,273,975	23	92.62%	92.93%	99.81%
2009	Over $500,000	5,062,934	$5,444,176	7	100.00%	100.00%	100.00%
	Total	68,637,834	$77,003,964	3,756			

Appendix II

POTENTIAL INCREASE OF FISHERMEN IN NORTH CAROLINA COASTAL WATERS DUE TO THE GULF OIL SPILL INFORMATION PAPER

June 23, 2010

I. ISSUE:

Determine if North Carolina will have an increase of non-resident fishermen obtaining fishing licenses to fish in North Carolina coastal waters as a result of fishermen being displaced in the Gulf of Mexico due to the Deepwater Horizon oil spill.

II. ORGINATION:

The Marine Fisheries Commission

III. BACKGROUND:

On April 20, 2010, BP's Deepwater Horizon oil rig, located in the Gulf of Mexico, suffered a blowout, caught fire and sank to the bottom. Since April 20, the oil well has been leaking crude oil into the Gulf of Mexico. The National Marine Fisheries Service has closed large portions of the Gulf of Mexico to commercial and recreational fishing, including catch and release in the closed area. Additionally, there are reports of oil entering the rivers and estuaries of the states bordering the Gulf.

There is concern that fishermen displaced due to the fishing closures may go to other states to fish, both commercially and recreationally, including North Carolina. This potentially can place additional fishing effort on North Carolina's fishery resources and compete with North Carolina fishermen.

IV. AUTHORITY:

G.S. 113-168.2 for Standard Commercial Fishing License;
G.S. 113-168.3 for Retired Standard Commercial Fishing License;
G.S. 113-169 for Menhaden License for Non-Residents without a Standard Commercial Fishing License;
G.S. 113-169.5 for Land or Sell License
G.S. 113-169.2 for Shellfish License

V. DISCUSSION:

<u>Commercial Fishermen:</u>

North Carolina has provisions allowing non-residents to purchase commercial fishing licenses. Eligibility, requirements, fees, etc. are governed by North Carolina General Statutes. There are three specific types of commercial fishing licenses a non-resident can purchase, 1) Non-Resident Standard Commercial Fishing License or Retired Standard Commercial Fishing License; 2) Menhaden License for Non-Residents without a Standard Commercial Fishing License; and 3) Land or Sell License. Each has specific eligibility requirements, allowances, fees, etc. limiting the number of licenses that may be issued.

Some North Carolina fishermen who hold a Standard Commercial Fishing License have indicated they are willing to assign this license to displaced fishermen who want to fish in North Carolina. Legally this is allowed, but for a resident license to be assigned to a non-resident, that non-resident must surrender any resident commercial fishing license held in another state. Dual residency cannot be claimed and operating under an assigned resident license is claiming dual residency. A non-resident license can be assigned to another non-resident without surrendering a resident commercial fishing license issued from another state. There is no claim on dual residency under this scenario.

There has been concern about commercial oyster fishermen moving to North Carolina to take advantage of the state's oyster resources. To commercially harvest shellfish, a fisherman has to establish residency in North Carolina for a least six months to be eligible to purchase a Standard Commercial Fishing License with a shellfish endorsement or a Shellfish License for NC residents.

To establish residency, a person must have resided in North Carolina for six months before purchasing a license. For these fishermen, the division requires the applicant to complete and have notarized a Certification for Eligibility for Residency/Domicile form. On this application, the fishermen certifies that he/she has established a bona fide residence and abode at a specific location and has intention to maintain such a residence within the boundaries of the State of North Carolina as the principle place of residence. It is illegal for a person to hold a license as a North Carolina resident if that person holds any currently valid resident commercial fishing license issued by another state. Doing so is considered dual residency in multiple states.

Below is a brief summary of each:

Non-Resident Standard Commercial Fishing License (SCFL) or Retired Standard Commercial Fishing License (RSCFL)

Allowances:

The Non-Resident SCFL or RSCFL allows the licensed fisherman to harvest and sell finfish, shrimp, crabs, or any other legally allowed commercial fish, except menhaden. To harvest and sell menhaden, the fisherman must also purchase a menhaden endorsement. To harvest and sell shellfish, the fisherman must be a resident of North Carolina and must obtain a shellfish endorsement.

This non-resident license allows the fisherman to catch fish from state waters (i.e., within 3 miles of the ocean, sounds, rivers, etc.) and to sell to licensed dealers.

Eligibility:

The person requiring this license can only renew the SCFL or RSCFL held the previous year, receive the license by being awarded through the SCFL/RSCFL Eligibility Pool, or has a SCFL or RSCFL transferred to him/her from someone who already holds an active SCFL or RSCFL.

The SCFL/RSCFL is a personal license issued to an individual or business entity, as defined by N.C. General Statute. It is not a vessel license. If the person holding the SCFL or RSCFL uses a vessel, the vessel must also have a Commercial Fishing Vessel Registration (CFVR).

The SCFL can be assigned and can be transferred. Resident licenses can only be assigned to residents. If the fisherman holds a resident commercial fishing license issued by another state, the fishermen will have to surrender that license to be eligible to hold an assigned resident license.

The RSCFL cannot be assigned but can be transferred.

Fees:

$800 for non-residents or the amount charged to North Carolina residents in the non-resident's home state, whichever is less. In no event is it to be less than $200.

The North Carolina Division of Marine Fisheries (NCDMF) surveys all states from Maine to Texas on cost of commercial fishing licenses for North Carolina residents to determine the fees to charge non-residents. This survey is conducted and fees updated annually (fiscal year) because states continually change license structure and fees. Attached is the 2010-2011 Non-Resident License Fees for Non-Resident SCFL and Land or Sell Licenses (see below for Land or Sell License information). Also, note there is no fee discount for a non-resident RSCFL so most only purchase the non-resident SCFL so that they can assign the license at a later date.

This license can be transferred for a $10.00 fee.

If the person is eligible for this license and wants to engage in commercial menhaden purse seine fishing operations, the person must also purchase a menhaden endorsement for an additional fee of $2.00 per gross ton of the mother ship.

If the person establishes residency in North Carolina and meets other SCFL eligibility requirements, the person can obtain a shellfish endorsement to harvest and sell shellfish. This endorsement is free.

If the non-resident is going to use a vessel, the person must also purchase a Commercial Fishing Vessel Registration. Fees for this registration are the same for residents and non-residents.

Table 1 (attached) shows the number of Non-Resident SCFL issued by the division for the last three fiscal years.

Menhaden License for Non-Residents without a Standard Commercial Fishing License (SCFL)

Allowances:

This license allows the non-resident fisherman to commercially harvest menhaden from purse seine fishing operations from state waters (i.e., within 3 miles of the ocean) and to sell to licensed dealers.

Eligibility:

Any non-resident who wants to engage only in commercial menhaden purse seine fishing operations and is not eligible for a non-resident SCFL or RSCFL can purchase this license.

This license cannot be assigned and cannot be transferred.

Fees:

$2.00 per gross ton of the mother ship.

Additional vessels that may be used in conjunction with a Menhaden License for Non-Resident without a SCFL must be registered (i.e., must purchase a Commercial Fishing Vessel Registration).

Land or Sell License

Allowances:

This license allows commercial fishing vessels fishing beyond state waters (greater than 3 miles in the ocean) to land the harvested catch at a North Carolina licensed fish dealer. This license does not allow commercial fishing in North Carolina state waters.

Eligibility:

This license is available to any vessel owner or vessel master that has a vessel with a homeport (determined by the hailing port listed on the U.S. Coast Guard Documentation) in any state other than North Carolina or has a state registration from another state who fishes beyond the state's territorial waters (greater than 3 miles in the ocean) and wishes to land harvested catch in North Carolina. Additionally, the applicant must provide proof of having a commercial fishing license issued from another state or a federal permit that allows commercial fishing.

The license must be purchased prior to offloading the catch.

Fees:

$200 or an amount equal to the non-resident fee charged by the non-resident's state, whichever is greater.

The North Carolina Division of Marine Fisheries (NCDMF) surveys all states from Maine to Texas on cost of commercial fishing licenses for North Carolina residents to determine the fees to charge non-residents. This survey is conducted and fees updated annually (fiscal year) because states continually change their license structure and fees. Attached are the 2010-2011 Non-Resident License Fees for Non-Resident SCFL and Land or Sell Licenses.

Table 2 (attached) shows the number of Land or Sell Licenses issued by the division for the last three fiscal years.

Shellfish License

Allowances:

Allows commercial harvest of shellfish (scallops, clams, conchs, whelks, oysters, and mussels) and sale of shellfish to a licensed fish dealer.

Eligibility:

The license is only issued to individuals (no businesses) and the individual must be a North Carolina resident. There are no other eligibility requirements like the SCFL requires.

Fees:

$25 and is not transferable

Recreational Fishermen:

North Carolina has no restrictions on non-residents obtaining Coastal Recreational Fishing Licenses. In fact, nearly half of all licenses issued are to non-residents. Non-resident fees are greater than resident fees. Some local businesses are hoping that some tourists, including recreational fishermen, who were planning on vacationing and fishing in the Gulf States, will change plans and take advantage of North Carolina's tourism and recreational fishing industries. To date, there is no evidence of this occurring. As the summer months close, DMF can review license sales data to determine if this occurred.

Some of the other south Atlantic states have informed the division of receiving inquiries from charterboats, headboats, and guideboats from the Gulf region inquiring about license requirements to relocate to these states. North Carolina has not received such inquiries, to date, and data have not shown that this has occurred. For the boats to operate in North Carolina, the vessels can either purchase blanket for-hire licenses (there is no difference in fee between residents or non-residents) or can obtain a free for-hire fishing permit and each person on the vessel must have their own Coastal Recreational Fishing License.

VI. Conclusion

North Carolina does allow non-residents to purchase commercial and recreational fishing licenses, but there are many restrictions on eligibility requirements, what type of commercial fishing operation is allowed, where commercial fishing is allowed, and fees. These restrictions limit the number of non-residents who can commercially fish in state waters. If the fishermen meet these legal legislatively mandated requirements, the division cannot restrict the issuance of a license.

There may be a remote possibility that current SCFL holders will assign licenses to non-residents. Although this is a concern, there is only a finite number of SCFLs that can be assigned. These SCFL's are already eligible to fish in North Carolina waters, although many may be inactive so effort may increase. Additionally, for a non-resident to hold an assigned resident SCFL, the fishermen will have to surrender any resident commercial licenses held from another state. Some may not be willing to surrender their license because it may remove their eligibility to hold that resident license from the other state in the future.

There is information in the news media, that BP and their contractors are contracting with fishermen to assist in the clean-up (as high as $3,000 per day) and compensating fishermen and others whose income has been negatively impacted by the oil spill. This compensation may reduce the number of displaced fishermen considering fishing in other areas.

Currently, there is no evidence that displaced Gulf fishermen (commercial or recreational) are transitioning to fish in North Carolina. There have been some inquiries on license requirements and residency requirements, but there are no data, to date, to conclude this is or will occur. The division will continue to monitor license sales to determine if this is occurring. Although, the division cannot restrict issuing a license if all eligibility requirements are met, the division can use other methods to reduce fishing effort such as limiting type of gear, limiting fishing days, time restrictions, trip limits, etc.

Prepared by: Dee Lupton
June 23, 2010

Table 1. Number of Non-Resident Standard Commercial Fishing Licenses

State of Residence	FY2007-2008	FY2008-2009	FY2009-2010*
Alabama	--	--	1
California	1	1	2
Colorado	1	1	1
Delaware	1	1	2
Florida	13	11	14
Georgia	14	17	18
Maryland	5	3	3
Maine	1	1	--
Michigan	1	1	--
New Jersey	6	8	11
New York	2	2	2
North Dakota	--	1	--
Other	--	1	1
Pennsylvania	3	3	4
South Carolina	14	10	11
Tennessee	1	--	--
Texas	--	1	1
Virginia	34	36	29
West Virginia	1	--	--
Total	**98**	**98**	**100**

*Incomplete information. The fiscal year will end June 30, 2010.

Table 2. Number of Land or Sell Licenses

State of Residence	FY2007-2008	FY2008-2009	FY2009-2010*
Alaska	1	1	1
Alabama	--	--	--
Colorado	1	1	
Connecticut	6	3	1
Delaware	1	1	1
Florida	8	11	6
Georgia	--	1	1
Massachusetts	13	17	10
Maryland	3	6	13
Maine	4	4	2
New Hampshire	--	1	--
New Jersey	26	39	32
New York	5	9	6
North Dakota	--	--	--
Other	4	7	5
Pennsylvania	5	4	6
Rhode Island	6	5	3
South Carolina	15	21	21
Tennessee	--	1	--
Texas	--	--	--
Virginia	6	11	8
West Virginia	--	--	--
Total	**104**	**143**	**116**

*Incomplete information. The fiscal year will end June 30, 2010.

(Use this reference sheet to determine the total amount to pay the North Carolina Division of Marine Fisheries for non-resident SCFL and RSCFL and Land or Sell licenses)

Non-residents (out-of-state) are to be charged a non-resident fee for:

1. Standard Commercial Fishing License (SCFL) - $800 or the amount charged to North Carolina residents in the non-resident state, whichever is less (see list below). In no event is it to be less than $200.

2. Land or Sell License - $200 or an amount equal to the non-resident fee charged by the non-resident's state, whichever is greater.

State	SCFL ($)	Land Or Sell Fees ($)
Alabama	503.00	<30 ft = 202 20-45 ft = 252 >45 ft = 503
Connecticut	800.00	400
Delaware	800.00	1,500
Florida	750.00	400
Georgia	236.00	200
Louisiana	800.00	2,900
Maine	418.00	418
Maryland	647.50	200
Massachusetts	800.00	Vessels 0-59 ft =260 60-99 ft = 390 >99 ft = 520
Mississippi	800.00	200
New Hampshire	300.00	300
New Jersey	800.00	200
New York	800.00	500
Rhode Island	200.00	600
South Carolina	800.00	500
Texas	800.00	205
Virginia	800.00	200
All other states	800.00	200

Appendix III

VARIOUS OPTIONS FOR DEFINING A PROFESSIONAL COMMERCIAL FISHERMAN

INFORMATION PAPER

August 23, 2007

I. ISSUE

The statutory definition of a commercial fisherman in North Carolina is "any person holding a valid license from the Department to take or deal in marine fisheries resources." Continuing pressure on marine resources, especially federally managed species, have led and will continue to lead to reduced quotas and Total Allowable Catch (TAC). This continually-shrinking pie is making it increasingly difficult for the commercial fishing industry to survive. Reallocation may help commercial fishermen to remain profitable and maintain an economic presence on the coast, while simultaneously maintaining and strengthening biological populations.

II. ORIGINATION

The Marine Fisheries Commission (MFC) has asked the Division of Marine Fisheries (DMF) to investigate redefining all or some portion of the commercial fishing fleet for the purpose of reallocating marine resources in permitted fisheries towards those who can best preserve the state's commercial fishing heritage, and to report to the MFC for further instruction.

III. BACKGROUND

Limited entry systems restrict access to a fishery. Capping or reducing fishing participation, harvest share or effort can protect the biological viability of a species and the economic integrity of the fishery. Limited commercial fisheries to "professional" fishermen is not a new topic for fisheries management in North Carolina. During the moratorium on the sale of state commercial licenses in 1994 and the corresponding study of the entire coastal fisheries management process, several research studies were conducted that dealt with this topic (Johnson and Orbach 1996, Griffith 1996, Garrity-Blake 1996). These studies noted that characterizing North Carolina commercial fishermen is difficult because of strong regional differences, because fishermen switch gears and fisheries throughout the year, and because even among self-declared full-time fishermen one-third held some sort of shore based work during a year. Given the uncertainty of mother nature and the ever changing regulatory restrictions to ones livelihood, North Carolina fishermen have adopted an economic strategy that hedges and spreads the risk both within and outside of their fishing careers. Because limited entry adds further complications onto the business of fishing, any efforts in that direction should involve the fishing constituencies and be for the protection of the resource, and not for the benefit of one interest group over another. Goals, objectives, standards, and procedures for any system must be clearly specified. According to Johnson and Orbach (1996), there are six objectives toward which any potential limited entry or access system should be directed:

1) "To control, or reduce, the effort in the fisheries under consideration so that the effort more closely matches the available fishery resource;
2) To increase stability in the fisheries, and promote maximum net incomes for fishermen;
3) To promote flexibility for fishermen in their fishing operations;
4) To avoid conflicts among fishermen and between fishermen and other marine users;
5) To ensure that fishermen who have traditionally fished in the fisheries under consideration be able to continue to do so, as much as possible in their traditional fishing patterns; and
6) To make management of the fisheries more efficient and effective."

Griffith (1996) used a number of criteria (fishing, percent of income, time commitment, flexibility index, number of vessel, number of others (crew) involved, relationship to marketing sector, and principal social and biological issues) to classify fishermen into one of four groupings:

1) Full-time Owner-Operator (~1800 fishermen who own their vessels, the study's "Professional Fishermen"),
2) Full-time Fleet (fish primarily for a dealer or processor),
3) Part-time retired/poor, and

4) Part-time with full-time shore based work.

Based on these studies and substantial public input the Moratorium Steering Committee's License Subcommittee concluded that "vesting general authority in the Marine Fisheries Commission (MFC) to appropriately limit entry into North Carolina fisheries on a case-by-case basis and as a part of a relevant Fishery Management Plan will best serve the State's long-term management needs" (1996 Moratorium final report).

This recommendation was not formally included in the 1997 Fisheries Reform Act (FRA). However, G.S. 113-182.1 was amended and the following stipulation (g) was added in regards to recommending limited entry in state developed Fishery Management Plans (FMP):

§ 113-182.1. Fishery Management Plans.

(g) To achieve sustainable harvest under a Fishery Management Plan, the Marine Fisheries Commission may include in the Plan a recommendation that the General Assembly limit the number of fishermen authorized to participate in the fishery. The Commission may recommend that the General Assembly limit participation in a fishery only if the Commission determines that sustainable harvest cannot otherwise be achieved. In determining whether to recommend that the General Assembly limit participation in a fishery, the Commission shall consider all of the following factors:

(1) Current participation in and dependence on the fishery.
(2) Past fishing practices in the fishery.
(3) Economics of the fishery.
(4) Capability of fishing vessels used in the fishery to engage in other fisheries.
(5) Cultural and social factors relevant to the fishery and any affected fishing communities.
(6) Capacity of the fishery to support biological parameters.
(7) Equitable resolution of competing social and economic interests.
(8) Any other relevant considerations.

G.S. 143B 289.52 also allows for the MFC to limit participation in a federal fishery that imposes a state quota:

§ 143B 289.52. Marine Fisheries Commission – powers and duties.

(d1) The Commission may regulate participation in a fishery that is subject to a federal fishery management plan if that plan imposes a quota on the State for the harvest or landing of fish in the fishery. If the Commission regulates participation in a fishery under this subsection, the Division may issue a license to participate in the fishery to a person who:

(1) Held a valid license issued by the Division to harvest, land, or sell fish during at least two of the three license years immediately preceding the date adopted by the Commission to determine participation in the fishery; and

(2) Participated in the fishery during at least two of those license years by landing in the State at least the minimum number of pounds of fish adopted by the Commission to determine participation in the fishery.

During the 2006 Legislative session and at the request of the Division and the MFC language was added to G.S. 113-169.1 that allowed for limiting participation in the Atlantic Ocean striped bass fishery:

§ 113 169.1. Permits for gear, equipment, and other specialized activities authorized.

(a) The Commission may adopt rules to establish permits for gear, equipment, and specialized activities, including commercial fishing operations that do not involve the use of a vessel and transplanting oysters or clams.

(b) The Commission may adopt rules to establish gear specific permits to take striped bass from the Atlantic Ocean and to limit the number and type of these permits that may be issued to a person. The Commission may establish a fee for each permit established pursuant to this subsection in an amount that compensates the Division for the administrative costs associated with the permit but that does not exceed ten dollars ($10.00) per permit.

Other states have taken measures to limit entry to particular fisheries. Virginia divides participants in its black sea bass fishery into two permit categories. The first group falls under the Directed Fishery Permit. The qualifications for the Directed Fishery are to hold a valid state license, a valid Federal Permit for black sea bass and to have sold in Virginia at least 10,000 pounds of sea bass from July1, 1997 through December 31,2001. The second group is the Bycatch Fishery Permit for black sea bass. The qualifications for this permit is to hold a valid state license, a valid Federal Permit for black sea bass and have sold in Virginia at least one pound of black sea bass from July1,1997 through December31,2001. The Spiny Lobster Fishery in Florida limits the amount of gear in the fishery (e.g., number of pots or trawls) but allows the gear to be transferred. This type

of system allows maximum flexibility for fishermen to adjust their fishing effort and allows new entrants into the fishery at a relatively low cost(Johnson and Orbach 1996). Gear shares are transferable with upper limits imposed to prevent monopolies.

The current limited entry system gaining favor in many fisheries is the individual transferable quotas (ITQ) or Limited Access Privilege Program (LAPP), were the privilege of landing a portion of the total annual fish catch in the form of transferable quota shares (pounds or percentage) is allocated to individual operators. LAPPs are intended to reduce overcapitalization, promote conservation of stocks, improve market conditions, and leave the ultimate decision regarding whether to participate in the fishery and at what level to the individual fishermen. The NMFS has been implementing Limited Access Programs for several federally managed species for years. Some examples fisheries managed with ITQs are the Wreckfish , King Crab, Halibut, and Sablefish fisheries.

IV. AUTHORITY

§ G.S. 113-169.1, G.S. 113-182.1, G.S. 143B 289.52

V. DISCUSSION

North Carolina has always had a diverse group of commercial fishermen (full time, part time, seasonal) harvesting a diverse group of fisheries (inshore finfish, offshore finfish, shellfish). These groups are not easily delineated by the species they catch, and restricting harvests to particular sections of the commercial fleet produces an economic impact beyond the immediate confines of the fishermen's businesses. Dealers in the Southern District, for example, rely more heavily on King Mackerel catches from a large pool of seasonal fishermen who exclusively use hook-and-line and stay within the recreational bag limits. Dealers in the Wanchese area receive harvested fish primarily from larger commercial boats using trawls and gill nets, and ship much of their product out of state. Attempts to distribute shares of the quota from one group to another will produce a geographically disproportionate economic impact.

Redistributing any fishery harvest among fewer individuals will also make the industry less resilient to business cycles, as risk is spread among a smaller number of businesses. Any movement by the MFC to change the definition of a commercial fisherman or add new categories should be done in the context of an identifiable end result. The most important question to consider is as follows: does increasing the percentage of North Carolina fishermen who work full time or year-round make the industry stronger, even if the overall number of fishermen goes down?

The following standards may be of use in defining professional commercial fishermen:

1. Status quo. A commercial fisherman is the holder of a commercial fishing or shellfishing license.
    a. Positives:
        i. Easily defined.
        ii. Consistent with current rules and public expectations.
        iii. Most fishermen seem to consider it "fair"
        iv. Would encompass the largest number of fishermen.
    b. Negatives:
        i. Some license holders only hold the license for investment, possible future use, or assignment.
        ii. Many shellfish license holders are recreational harvesters who purchase the license simply to harvest more than the recreational bag limit.
        iii. Because it encompasses the largest number of fishermen it does little to reduce fishing pressure.
2. Landings. A commercial fisherman holds a license and has used it to sell seafood to a dealer (ie. has documentation of commercial catch from a governmental entity).
    a. Positives:
        i. Ends speculative use of licenses
        ii. Easy to validate through trip ticket reports.
        iii. Would encompass a large number of fishermen
    b. Negatives:
        i. May encourage fishing just to keep license
        ii. May still lead to excessive fishing pressure because of the large number of fishermen encompassed.
        iii. NC fishermen who also fish out of state would not have all of their landings qualify (i.e. full time commercial fishermen who fish only part of the year in NC)
3. Gear use. A commercial fisherman uses commercial gear such as trawls, gill nets, and pound nets OR has a federal or state permit.
    a. Positives:

i. Eliminates hook-and-line recreational users from competing with commercial fishermen

b. Negatives:
   i. May exclude some commercial users who do not use appropriate gear.
   ii. A fisherman could get around this by catching a minimal amount with a crab pot, etc
   iii. Difficult to establish qualifying gears since trip ticket analysis shows that even our highliners may use crab pots or clam rakes at some time during the year.
   iv. Hook & line gear used by highliners as well (snapper-grouper)
   v. It may be difficult to predict what commercial gear will be used in the future due to regulations (fishery, habitat, or protected species specific), fishing behaviors, markets, target species, etc.
   vi. Reduced flexibility for gear changes.

4. Income (fixed). A commercial fisherman earns a minimum amount of earned income from fishing in dollar terms.
   a. Positives:
      i. Easily defined except for out-of-state fishermen
      ii. Group that has some demonstrated success in fishing.
   b. Negatives:
      i. Will differ substantially between regions of the state. Southern district has more small operators.
      ii. Difficult to establish and justify minimum income level for qualification.
      iii. Income could vary according to species, ie. one bluefin tuna = 3 months of clamming. Does that make the bluefin tuna fishermen more "professional" than the clammer?
5. Income (majority). A commercial fisherman earns a majority of his or her income from commercial fishing.
   a. Positives:
      i. Have a current definition from license sales, though not a verifiable one.
      ii. Includes those fishermen who rely on commercial fishing as their primary income source.
      iii. Excludes recreational fishermen selling bag limit fish.
   b. Negatives:
      i. Fluctuates based on non-fishing related activities.
      ii. Difficult to validate (IRS records required).
6. Permits. A commercial fisherman possesses a permit for a federally-managed species, potentially one that is closed to new entrants.
   a. Positives:
      i. Easily defined. Easy to implement logistically.
      ii. Meeting the qualifying criteria and cost of a federal permit indicates the owner is serious about commercial fishing and willing to make a substantial investment.
   b. Negatives:
      i. Would result in the smallest number of fishermen.
      ii. Would exclude new entrants.
      iii. Applies only to federally-managed species.
7. Frequency of trips. A commercial fisherman takes a minimum number of trips or fishes at least once in each defined window (months or seasons).
   a. Positives:
      i. Easily defined for in-state fishermen
   b. Negatives:
      i. Not necessarily indicative of full time status
      ii. Can behavior modifying in biologically detrimental ways.
      iii. Difficult to define for out-of-state fishermen who infrequently land in NC.
      iv. Difficult to define some in-state fishermen who frequently land outside NC (have licenses in other states).

VI. PROPOSED ACTIONS

At this time, the MFC should indicate which (if any) of the above standards are of interest in improving the management of certain fisheries (king mackerel, Spanish mackerel, snappers/groupers, striped bass, or summer flounder) to reduce quota overages, reduce user conflicts and improve profitability. The DMF can characterize participants in these fisheries by count, mean and median fishing incomes, species caught, and other economic characteristics.

VII. RECOMMENDATION

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February 2, 2016
Date, Revised

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Appendix IV

STANDARD COMMERCIAL FISHING LICENSE TRANSFERS INFORMATION PAPER

August 27, 2010

I. ISSUE:

Determine if restrictions are necessary on transferring of Standard Commercial Fishing Licenses.

II. ORGINATION:

The Marine Fisheries Commission

III. BACKGROUND:

Standard Commercial Fishing Licenses (SCFL) and Retired Standard Commercial Fishing Licenses (RSCFL) can only be acquired by one of three ways:

Note: For the purpose of this document, the term SCFL will be used synonymously for SCFL and RSCFL.

1. A person held a valid vessel endorsement to sell fish license on June 30, 1999. Additionally any person who held a non-vessel endorsement to sell license, other than a non-vessel endorsement to sell license issued for an aquaculture operation or a fishing tournament on June 30, 1999 was eligible to receive a SCFL. If the person held more than one endorsement to sell license, the person was eligible to receive a SCFL for each endorsement to sell previously held. These licenses had to be converted to a SCFL by June 30, 2000. Since then, the SCFL has to be renewed each subsequent year. If it is not renewed, the license is eligible to become available through the SCFL Eligibility Pool.

2. The person qualifies and is awarded eligibility to purchase a SCFL from the SCFL Eligibility Pool.

3. Transfer of the license from one person to another.

SCFLs transfers can occur when the both the transferor and the transferee have no current license suspensions or revocations. General statute and Marine Fisheries Commission rules allow a SCFL to be transferred upon the request:

1. From a license holder to a member of the licensee's immediate family.
2. Upon the death of a licensee through a detailed process and ultimately to a third-party purchaser of the deceased licensee's fishing vessel.
3. Retirement from commercial fishing to a third-party purchaser of the licensee's fishing vessel.

In addition, Division of Marine Fisheries (DMF) policy allows transfer for 'other' reasons. This paper identifies issues that resulted in this policy.

A SCFL can be issued to a person. In North Carolina, a person is defined as an individual or a business. A business entity can be a corporation, partnership (DMF only accepts written partnership agreements), sole proprietorship, and limited liability companies and similar limited type of companies. Depending on the type of company, documentation must be given to the division validating the company. Examples of documentation include, Articles of Incorporation and list of current corporate holders (Certificates of Existence are not acceptable), written partnership agreements, limited liability documents, etc. For sole proprietors, the proprietor must provide an Assumed Name Statement (i.e., Doing Business As) or it must be listed in the real name of the person listing the business as a sole proprietor.

- An example of a Sole Proprietorship that needs an Assumed Name Statement: Downeast Fish Company.

- An example of a Sole Proprietorship that does not need an Assumed Name Statement because the name is in a real name: John E. Smith's Downeast Fish Company.

All businesses must list a responsible party (business agent) and that person must sign the license and be listed on the license as the overall responsible party. The responsible party (business agent) is the person who coordinates, supervises or otherwise directs operations of a business entity, such as a corporate officer or executive-level supervisor of business operations and is the person responsible for use of the issued license in compliance with applicable laws and regulations.

In addition, single vessel corporations must provide the Master of the Vessel information. By doing so, single vessel corporations do not have to assign the SCFL, but if the Master of the Vessel changes, the responsible party must notify the DMF within five days to update the license information.

At the time of license renewal, updated documents are not required unless a change has occurred since the last license issuance.

IV. AUTHORITY:

G.S. 113-168.2 for Standard Commercial Fishing License;
G.S. 113-168.3 for Retired Standard Commercial Fishing License;
15A NCAC 03O.0108 License Transfers

V. DISCUSSION:

North Carolina implemented the current license system on July 1, 1999 as part of the 1997 Fisheries Reform Act (FRA) as a component to help the state achieve sustainable harvest through development and implementation of Fishery Management Plans. The basic level of information needed to manage fisheries is to determine the number of fishermen and the amount of fish harvested from all users. The 1997 FRA established a commercial fishing license system allowing North Carolina fishery managers the ability determine the number of commercial fishermen, the number of commercial fishing vessels and landings associated with these licenses. This has become a long term data source used by the division and has proven to provide the quality of data needed for fisheries management. Tables 1 - 3 shows the number of licenses issued, transferred and actually used by the fishermen.

Table 1. Number of SCFLs, RSCFLs, total SCFLs and RSCFLs combined, and assignments issued by fiscal year.

Fiscal Year	Number of SCFLs	Number of RSCFLs	Total Number of SCFLs and RSCFLs	Assignments (SCFL only)
2000	6,990	515	7,505	547
2001	6,783	630	7,413	585
2002	6,632	676	7,308	671
2003	6,505	727	7,232	736
2004	6,421	754	7,175	734
2005	6,301	754	7,055	783
2006	6,171	787	6,958	703
2007	6,053	853	6,906	780
2008	5,947	912	6,859	805
2009	5,868	959	6,827	870

Table 2. Number of SCFL transfers, RSCFL transfers, and SCFL and RSCFL transfers combined by fiscal year.

Fiscal Year	SCFL Transfers	RSCFL Transfers	Total Number of SCFL and RSCFL Transfers
2000	788	39	827
2001	630	64	694
2002	489	43	532
2003	489	48	537
2004	494	65	559
2005	500	76	576
2006	488	69	557
2007	465	73	538
2008	443	76	519
2009	418	87	505

Table 3. Number of licenses used (i.e., have commercial landings associated with the license) for 2009.

License Type	Number issued	Number with Landings	Percent Used
SCFL	5,868	2,825	48
RSCFL	959	299	31
Total	6,827	3,124	46

Fees

All SCFL transfers occur at the DMF offices. The person receiving the license through the transfer pays the fees.

Cost to transfer a license is $10.00.

When the person the license is being transferred to is a non-resident, that person must pay the $10.00 transfer fee plus the difference in fees between a North Carolina resident fee ($100 for RSCFL and $200 for SCFL) and the non-resident state's fees. DMF updates a list of these fees annually to use to determine the difference.

When the license to be transferred is a RSCFL and the person the license is being transferred to is less than 65 years of age, that person must pay the difference between a SCFL and RSCFL (i.e., $100) so the total fee is $110 or more than $110 if the person is also a non-resident.

As law and policy exist today, there is some marketability of the SCFL. This occurs when one party 'sells' the license to another party for a fee that is only exchanged between the two parties outside of the DMF. The DMF does not have knowledge of this monetary exchange and does not gain any funds from this exchange. There is no law prohibiting this exchange. DMF has no data to substantiate exactly how much marketability a SCFL has. In fact, not all SCFLs are 'sold' between parties. Many may only pay fees required by DMF for a transfer and have no additional market value.

Eligibility Requirements to Transfer:

To be eligible to transfer the SCFL or accept a SCFL transfer:

1. The transferor and the transferee have no current suspensions or revocations.
2. If transfer is due to retirement from commercial fishing, the person transferring the license must submit evidence of retirement. Examples are:
    - Evidence of the transfer of all licensee's SCFLs.
    - Sale of all the licensee's commercial fishing registered vessels.
    - Discontinuation of any active involvement in commercial fishing.
3. In case of death of the license holder, the Administrator/Executor must provide a copy of the deceased licensee's Death Certificate, a photocopy of the Certificate of Administration and a list of eligible immediate family members to DMF and can be transferred to the following:
    - To the Administrator or Executor of the estate.
    - From the Administrator or Executor of the estate to an immediate family member (mother, father, brother, sister, spouse, child, stepparent, stepbrother, stepsister, ore stepchild of the deceased).
    - From the immediate family member of the deceased to a third-party purchaser of the deceased licensee's fishing vessel.
4. 'Other' reasons, the person must list why the license is being transferred.

Additionally, the person transferring the SCFL to another person is not eligible to apply to the SCFL Eligibility Pool for two years.

Reasons for the 'Other' category

Once the commercial fishing license system was implemented in 1999, DMF and fishermen encountered issues related to transfers. The transfer provisions were too restrictive for the everyday business actions of fishermen. Below are some complications that resulted in the 'other' category for SCFL transfers:

Market Value

Based on discussion with legal counsel over the years resulted in the fact that SCFLs differ from other professional licenses in that they are a commodity, not a privilege, because they are limited. SCFLs are a limited entry fishing license. The very nature of this limited license adds value to the license. There is only a finite number that will ever exist. Only 8,896 licenses can ever be available based on the legislative criteria establishing the cap. Unlike a contractor's license that is issued to all who pass the exam without a cap, SCFLs can only be obtained through a limited number of sources thus placing a type of value on the license. For some fishermen, their license is the only item of value they may have and are often passed through the family to third parties when an individual dies (i.e., is the only inheritance some fishermen leave their family). As Table 1 shows, the actual number of licenses issued, even with the approvals through the SCFL Eligibility Pool and transfers, has declined every year since implementation.

Lack of Link to Vessels

One of the reasons the other category was listed is that not all SCFLs are linked to a vessel. In fact, the very nature of the license system is the ability to track fishermen via the SCFL independently of the vessel. This was a desire of fisheries managers because sometimes fishing effort is based on the number of fishermen regardless of the vessel used such as some of the smaller inshore fisheries while other fisheries management policies need to be based on the vessel such as larger vessels involved in inshore and offshore fisheries. An example of the latter is the management policy is based on the fishing power of the vessel (i.e., vessel size and capacity to hold fish) regardless of the number of licensed fishermen on board. Since these were independent of one another, the requirement to transfer to the third-party purchaser of the vessel is difficult to determine since the SCFL and vessel are not legally linked. Fishermen transfer vessels all the time, sometimes back and forth between parties. In addition, if the fisherman waits until the Commercial Fishing Vessel Registration (CFVR) expires, and then sells the vessel to a third party, a CFVR transfer is not required. That third party can purchase a new CFVR, whereas he SCFL must be renewed and transferred. This further complicates the DMF's ability to determine third-party purchasers of the vessel. Finally, another complicating fact is that some fishermen holding SCFL do not own the vessel they fish. Someone else may own the vessel with the CFVR.

Definition of Retirement

What is retirement? There was an attempt to define as noted above, but there was no way to determine retirement satisfactorily. This ended up being a survey question. If DMF did not have the 'other' category, everyone would categorize the transfer as 'retirement'.

Businesses

In North Carolina, a person is legally defined to include individuals, corporations, LLCs, etc. Businesses 'do not retire' and have business needs to be able to transfer licenses in, out and between business entities and individuals affiliated with that business. There are businesses that have multiple SCFLs that assign licenses to individuals and at times desire to transfer licenses to their employees and crew members who are outside the immediate family. There have been occasions when businesses dissolved in the business world for various reasons and had to transfer the license from that business to a new business or individual.

Rules could be refined to specify the category and authorization to request to additional information.

<u>Biological Reasons</u>

There needs to be a biological and/or resource reason to further restrict SCFLs and the transferring of SCFLs. Section 5.2 of S.L. 1997-400(f) pertains to the SCFL Eligibility Pool but can also relate to SCFL transfers. This part of the Session Law states:

"….The Commission shall increase or decrease the number of SCFLs that are issued to reflect its determination as to the effort that the fishing can support, based on the best available scientific evidence."

Data shown in Table 3 indicates that only 46% of SCFLs are actively used. Although DMF does not know the amount of harvest from fishermen using the SCFL for personal use to exceed recreational harvest and gear limits, landings data from the Recreational Commercial Gear License proved that the entire user group landed less than one million pounds (approximately

1% of the total commercial harvest). Inactive SCFLs may have similar landings to the Recreational Commercial Gear License with many not having any landings. There has been no evidence to prove latent SCFLs have an impact fisheries in NC.

Limiting the ability to transfer a license can lead to attrition of people out of the commercial fishing industry as family members decide to not continue commercial fishing while at the same time restricting new entrants into the fishery. Reduction or restriction in SCFLs needs to be scientifically justifiable through the FMP process that was established by the FRA to ensure sustainable harvest for the fisheries on North Carolina.

VI. Conclusion

The SCFL is a tool that implemented limited entry into commercial fishing in North Carolina. There are a variety of reasons SCFLs are transferred. The general business practices of fishermen necessitate some of these transfers. Not everyone who wants a license can get a license. Not everyone who wants a license qualifies through the SCFL Eligibility Pool nor can afford to 'purchase' from another license holder, even though there are licenses transferred between individuals for a fee. In fact, each year approximately 80 SCFLs are not renewed (this means they are not sold between fishermen). There already is a limit to the market value of the license which indicates some fishermen are getting out of the business through natural attrition. This is also seen in the downward trend in SCFL sales and most notably in the number of licenses actually used.

Currently, there is no biological evidence identified in the FMPs that support restricting SCFL transfers. Fishing effort can and has been managed through a variety of other tools such as reduced fishing times, restrictions on areas that can be fished, seasons, gear modification, etc. Until a biological reason is identified, it is difficult to recommend any further restrictions on transferring of licenses.

Prepared by: Dee Lupton
August 27, 2010

Appendix V

FOR-HIRE CHARACTERIZATION DATA

The following tables summarize the North Carolina Division of Marine Fisheries for-hire survey responses. Ten percent of the for-hire vessels are surveyed each week. The results represent actual unexpanded survey responses.

Table 1. The number of for-hire vessels by year and license/permit category.

	For-hire Blanket CRFL		For-hire Permit		Yearly Total	
Year	Number	Percent	Number	Percent	Number	Percent
2007	698	80.4	170	19.6	868	100.0
2008	673	81.1	157	18.9	830	100.0
2009	636	79.3	166	20.7	802	100.0
2010	599	79.2	157	20.8	756	100.0

Table 2. Distribution of the number of for-hire trips reported by Month and license/permit category during 2009.

	For-hire Blanket CRFL		For-hire Permit	
Month	Number of Trips	Percent	Number of Trips	Percent
January	28	1.7	4	3.4
February	20	1.2	0	0.0
March	12	0.7	3	2.5
April	69	4.1	5	4.2
May	176	10.5	9	7.6
June	318	19.0	22	18.6
July	391	23.4	19	16.1
August	323	19.3	21	17.8
September	140	8.4	10	8.5
October	114	6.8	14	11.9
November	61	3.6	9	7.6
December	20	1.2	2	1.7
Total	1,672	100.0	118	100.0

Table 3. Distribution of the number of for-hire trips reported by vessel size and license/permit category during 2009.

	For-hire Blanket CRFL		For-hire Permit	
Vessel Size	Number of Trips	Percent	Number of Trips	Percent
16 to 20 feet	51	3.1	42	40.4
20 to 25 feet	472	28.7	56	53.8
26 to 30 feet	183	11.1	4	3.8
Greater than 30 feet	939	57.1	2	1.9
All*	1,645	100.0	104	100.0

*Vessels of an unknown length are not included.

Table 4. Distribution of the number of for-hire trips reported by vessel size and license/permit category during 2009.

	For-hire Blanket CRFL		For-hire Permit	
Vessel Size	Number of Trips	Percent	Number of Trips	Percent
Ocean (less than 3 miles)	464	28.0	21	18.6
Ocean (greater than 3 miles)	780	47.1	10	8.8
Inside coastal waters	413	24.9	82	72.6
All*	1,657	100.0	113	100.0

*Trips where area was missing are not included.

Table 5. Distribution of the number of for-hire trips taken per week and license/permit category during 2009. Includes vessels that took more than one trip per day.

Number of trips per week	For-hire Blanket CRFL		For-hire Permit	
	Number	Percent	Number	Percent
0	1,372	69.8	415	86.5
1	217	11.0	35	7.3
2	124	6.3	17	3.5
3	85	4.3	6	1.3
4	57	2.9	4	0.8
5	41	2.1	3	0.6
6	28	1.4	-	-
7	23	1.2	-	-
8	10	0.5	-	-
9	4	0.2	-	-
10	1	0.1	-	-
11	1	0.1	-	-
12	1	0.1	-	-
13	1	0.1	-	-
14	2	0.1	-	-
All	1,967	100.0	480	100.0

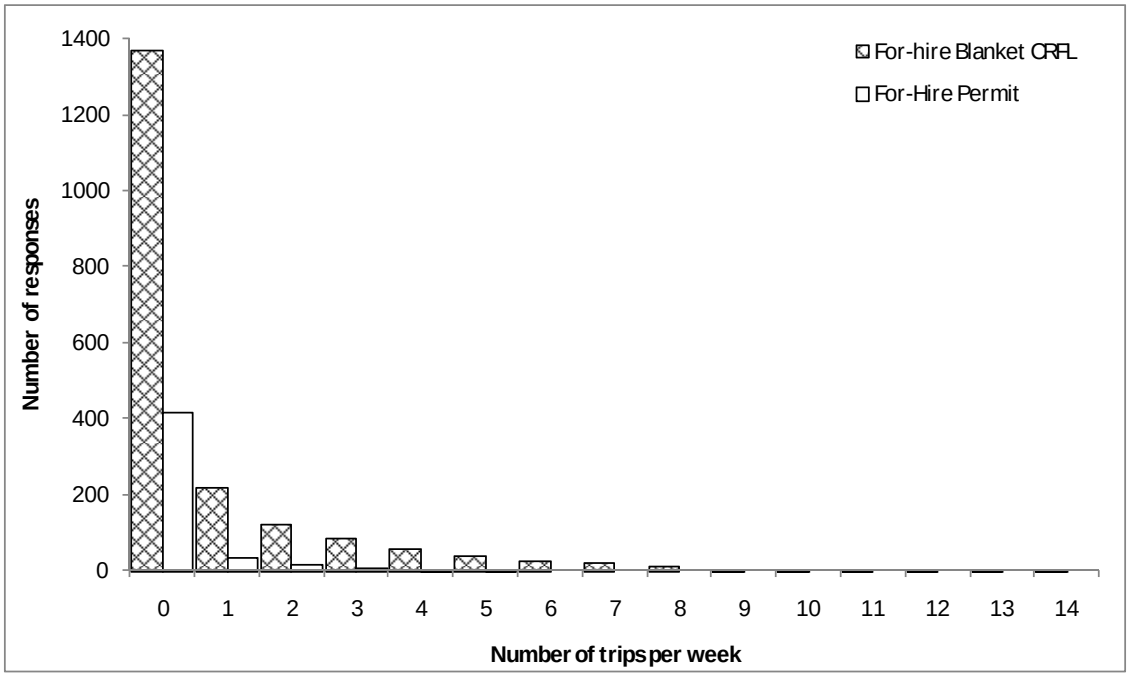

Figure 1. Distribution of the number of for-hire trips taken per week by license/permit category during 2009. Includes vessels that took more than one trip per day.

Table 6. Primary target species identified by license/permit category during 2009. Trips where target species were not provided are not included in this table.

	For-hire Blanket CRFL		For-hire Permit	
Target Species	Number of Trips	Percent	Number of Trips	Percent
Spanish mackerel	291	18.0	7	6.7
Bluefish	283	17.5	1	1.0
Dolphin	266	16.5	2	1.9
Red Drum	116	7.2	28	26.9
King mackerel	133	8.2	6	5.8
Spotted seatrout	77	4.8	37	35.6
Striped bass	57	3.5	6	5.8
Tuna	62	3.8	-	-
Flounder	57	3.5	9	8.7
Billfish	59	3.7	-	-
Black sea bass	55	3.4	1	1.0
Wahoo	41	2.5	-	-
Cobia	32	2.0	-	-
Yellowfin tuna	14	0.9	2	1.9
Amberjack	15	0.9	-	-
Bluefin tuna	9	0.6	2	1.9
Atlantic croaker	8	0.5	-	-
Weakfish	8	0.5	-	-
Black drum	5	0.3	1	1.0
Blackfin tuna	5	0.3	-	-
Sheepshead	5	0.3	-	-
Snowy grouper	4	0.2	-	-
Blue marlin	3	0.2	-	-
Vermilion snapper	2	0.1	-	-
Tarpon	2	0.1	-	-
Snapper	2	0.1	-	-
Triggerfish	2	0.1	-	-
Blueline tilefish	1	0.1	-	-
False albacore	-	-	1	1.0
Spot	-	-	1	1.0
All	1,614	100.0	104	100.0

Appendix VI

RECREATIONAL COMMERCIAL GEAR LICENSE
INFORMATION PAPER

September 2, 2010

I. ISSUE:

To provide information to the Marine Fisheries Commission (MFC) characterizing the Recreational Commercial Gear License (RCGL).

II. ORIGINATION:

A request was made by the Marine Fisheries Commission Chairman to research the need for maintaining a RCGL in North Carolina.

III. BACKGROUND:

License History:

This section reviews the North Carolina Division of Marine Fisheries (-DMF-) RCGL related licenses, past and present. It refers solely to licenses pertaining to the RCGL and does not include the entire license structure.

The RCGL was recommended by the Moratorium Steering Committee (MSC) to be included in the Fisheries Reform Act (FRA) of 1997(MSC Report). The objective of creating a RCGL was to allow individuals and families who traditionally accessed the state's public trust fishery resources by fishing commercial gears to harvest fresh seafood to continue this tradition. The MSC also intended to limit the commercial effort that may be expanded by this class of fishermen both individually and as a group. A guiding principle was that all persons who harvest state public trust resources pay for the privilege by investing in coastal fisheries conservation and management.

The licensing history in North Carolina was fairly static prior to 1994. Before 1994 the Division of Marine Fisheries (division) had two major license types. The first was the Commercial Fishing Vessel License (vessel decal) that identified a commercial fishing vessel. This license was all that was required (except for shellfish) to use commercial fishing gear, abide by commercial creel limits, size limits, and allowed fishermen to sell their catch to properly licensed fish dealers. The second type, the Shellfish License, was issued to the individual. Everyone in a commercial shellfish operation was required to have the license in their possession to harvest shellfish. Also, the vessel decal for the commercial vessel was required if a commercial vessel was used in a shellfishing operation.

The North Carolina General Assembly created a new license in 1994 that was issued to individuals who intended to sell their catch. This license was called an Endorsement to Sell (ETS) and was required to sell their catch in addition to the vessel decal (if a vessel was used). If fishermen used commercial gear and followed commercial size and creel limits, but did not sell their catch, the only license required was the vessel decal.

The FRA of 1997 created a new license system that was implemented on July1, 1999. Licenses created by the FRA include the Standard Commercial Fishing License (SCFL), Retired Standard Commercial Fishing License (RSCFL), Commercial Fishing Vessel Registration (CFVR), and the RCGL. The RCGL was created for individuals who previously had vessel decals to use commercial fishing gear, commercial size and creel limits but did not have an ETS. A fisherman had to hold a valid ETS on June 30, 1999 to be eligible for a SCFL or RSCFL. These licenses were issued to the person, not the vessel. If a vessel was used, it must have a valid CFVR and someone on board must possess a valid SCFL or RSCFL. These licenses were required for fishermen to sell their catch to a licensed fish dealer.

The division identified a total of 6,348 commercial vessel decals that did not hold a valid ETS from July 1, 1997 thru June 30, 1998. These individuals were considered a group of fishermen using commercial gear for personal consumption. In 1998, the 6,348 vessel decal holders were sent a survey to collect data on the types and amount of commercial gear used. The survey and results (Attachment 1) were used as a baseline for identifying the amount of commercial gear used recreationally prior to the RCGL. The division used these data as the basis for their recommendation to the Marine Fisheries Commission (MFC) what commercial gear could be used by RCGL holders. The MFC passed 15A NCAC 03O .0302 Authorized Gear as a temporary rule in July, 1999. Permanent rules were enacted in August 2000 under the authority of G.S.113-173, Recreational

Commercial Gear License (Attachment 3). The legislature made some minor adjustments to the statutes. For example, the division had included gigs as a required gear for a RCGL but prior to rule implementation a bill was passed by the General Assembly exempting gigs from RCGL requirements. The General Assembly also increased the yardage of gillnets allowed by RCGL users per vessel. Some of the major differences between holding the former vessel decal and the RCGL were the restrictions to certain types and amounts of commercial gears, no sale of product, and fishermen must abide by the recreational creel and size limits. The RCGL was strictly designed for those license holders to harvest fish for personal consumption only.

RCGL Rule History:

The rule history of the RCGL has changed over time. RCGL holders have always been limited to the same bag and size limits of fish as recreational fishermen, and in 2007, the same as Coastal Recreational Fishing License (CRFL) holders. Implementation of five Fishery Management Plans (FMPs) resulted in a reduced bag limit for RCGL holders. The River Herring FMP prohibited the harvest of herring by all fisheries (due to dwindling stocks) including the RCGL users. The Southern Flounder FMP implemented a bag limit of eight flounder per RCGL holder in internal coastal waters. Prior to the Southern Flounder FMP there was no limit of flounders a RCGL holder could harvest or posses. The Shrimp FMP limited the RCGL holders to 48 quarts of heads on shrimp they can posses in one day greatly reducing the harvest in some areas. The MFC also allowed RCGL holders the option of retrieving shrimp trawls with mechanical gear as long as a Turtle Excluder Device (TED) was used. The shrimp pound was added as authorized RCGL gear under the Shrimp FMP. The Speckled Trout FMP is still under review. The limit prior to this FMP was ten fish per RCGL holder. The draft FMP recommends the bag limit be reduced to six spotted seatrout but only three of the six can be over 24 inches. The Red Drum FMP required that large mesh gillnets used by RCGL holders be attended at all times south of Highway 58 at Emerald Isle. The size and possession of bag limits of fish for RCGL holders will be reviewed as other FMPs are completed.

A catch and effort survey of RCGL holders started in 2002 and terminated in 2008. The survey was discontinued in the context of budget constraints due to the small resource impact of RCGL harvest. While the RCGL take has been shown to be minimal, the lack of current data may revive debate about the need for the RCGL without providing answers about its validity.

RCGL Revenues:

The fee for a RCGL is $35 for North Carolina residents and $250 for nonresidents. This license is issued by the Division of Marine Fisheries and the Wildlife Resources Commission (WRC) License Agents on the Point of Sale Terminal operated by WRC (there is a $1.00 surcharge for purchases other than at DMF offices). The license expires one year from the date of purchase.

The total revenue from RCGL sales is approximately $180,000 annually and is part of the $2.1 million received from the sale of all DMF commercial licenses. This revenue is used to operate many DMF programs, including programs in License & Statistics, Marine Patrol, and Information Technology sections. Commercial fishing licenses receipts support 24.15 positions throughout the division.

IV. AUTHORITY:

G.S. 113-173 Recreational Commercial Gear License
15A NCAC 03I .0101, Definitions, Sub-item (3)(c), Commercial Fishing Equipment or Gear
15A NCAC 03M .0506, Snapper-Grouper Complex, Sub-item (a)
15A NCAC 03O .0301, Eligibility for Recreational Commercial Licenses
15A NCAC 03O .0302, Authorized Gear
15A NCAC 03O .0303 Recreational Commercial Gear Limits

V. DISCUSSION:

RCGL Participation:

There has been an average of 5,815 residential and 19 non residential RCGLs sold per year from 2000 through 2008. RCGL sales have declined overall by 24% except for 2002 (increased by 1.6%) (Attachment 2, Table1). Twenty five counties

compromise 85% of RCGL sales each year. Brunswick, Carteret, New Hanover, Craven, and Columbus Counties account for an average of 38% of total sales each year (Attachment 2, Table 2).

RCGL Survey:

Prior to 2001, the impact RCGL users had on fishery management plans was unknown. Two surveys were used to collect data from RCGL users. In 2001, 2004, and 2007 a socioeconomic survey was conducted. From 2002 through 2008 a catch and effort survey was conducted monthly. The two surveys were summarized by four regions using the DMF Fisheries Management District boundaries (Attachment 2, Figure1). Details of the survey methodology can be found in the Appendix.

Regional RCGL Characterization:

The top three gears used by RCGL holders in three of the four regions were crab pot, small mesh gill net, and large mesh gill net. Shrimp trawls were the fourth most common gear used in the Pamlico, Southern, and Central Regions. In the Northern Region, crab pots, small mesh gill nets, fish pots and large mesh gill nets were the gears most commonly used (Attachment 2, Table 3).

The top ten finfish species harvested by RCGL holders from 2002 through 2008 were spot, flounder, striped mullet, bluefish, white perch, American shad, Atlantic croaker, speckled trout, hickory shad and river herring. Collectively these ten species contributed 88% of the total RCGL finfish harvest. Blue crab accounted for approximately 70% of the crustacean harvest while shrimp comprised 30% (Attachment 2, Table 4)

Pamlico Region:
The Pamlico Region averaged 15,449 RCGL trips per year from 2002 through 2008. Crab pots ranked first with 6,294 trips followed by small mesh gill nets with 3,863 trips, and large mesh gill nets with 3,526 trips per year (Attachment 2, Table 3). Blue crabs topped the landings by crab pot with an average of 22,678 pounds per year with a bycatch of flounder at 559 pounds per year. In large mesh gill nets, flounder dominated the harvest with 17,288 pounds per year and American shad following with 2,802 pounds per year. In small mesh gill nets, the other category (includes American shad, Atlantic menhaden, black drum, and miscellaneous finfish) accounted for 22,506 pounds per year with spots at 11,067 pounds per year. Shrimp trawls were the fourth most common gear used in the Pamlico Region. It accounted for 27,739 pounds of shrimp per year with a bycatch of blue crabs at 7,814 pounds per year. (Attachment 2, Tables 5, 6, 7, 8)

Southern Region:
The Southern Region averaged 14,502 RCGL trips per year from 2002 through 2008. Small mesh gill nets ranked first with 7,197 trips followed by crab pots with 4,439 trips, and large mesh gill nets with 1,972 trips per year (Attachment 2, Table 3). Spots were the most targeted species by small mesh gill nets with an average of 156,145 pounds per year followed by striped mullet with 7,339 pounds per year. Crab pots accounted for an average of 22,044 pounds of blue crabs per year with a bycatch of flounder of 828 pounds per year. Large mesh gill nets accounted for 11,063 pounds of flounder per year followed by American shad with 5,282 pounds per year. Shrimp trawls were the fourth most common gear used in the Southern Region harvesting 11,900 pounds of shrimp per year with a bycatch of blue crabs at 704 pounds per year. (Attachment 2, Tables 9, 10, 11,12)

Northern Region:
The Northern Region averaged 10,317 RCGL trips per year from 2002 through 2008. Crab pots ranked first with 5,086 trips followed by small mesh gill nets with 2,340 trips, and fish pots with 1,241 trips per year (Attachment 2, Table 3). Crab pots accounted for 31,596 pounds of blue crabs with a bycatch of flounder at 246 pounds per year. Striped mullets were the most harvested species in small mesh gill nets at an average of 8,121 pounds per year followed by hickory shad at 6,419 pounds per year. Fish pots were the third most common gear used harvesting 11,632 pounds of white perch followed by catfish at 1,106 pounds per year. The fourth most common gear used was the large mesh gill net harvesting 5,919 pounds of flounder followed by 1,602 pounds of miscellaneous finfish per year. (Attachment 2, Tables 13, 14, 15, 17)

Central Region:
The Central Region averaged 10,205 RCGL trips per year from 2000 through 2008. Crab pots ranked first with 4,948 trips followed by small mesh gill nets with 2,654 trips, and large mesh gill nets with 2,097 trips per year (Attachment 2, Table 3). Crab pots accounted for 23,655 pounds of blue crabs with a bycatch of flounder at 732 pounds per year. Spots were the most targeted species harvested by small mesh gill nets with an average of 27,926 pounds followed by striped mullet at 17,121pounds per year. Large mesh gill nets accounted for 11,529 pounds of flounder followed by red drum at 1,568 pounds

per year. The fourth most common gear used in the Central Region were shrimp trawls harvesting 7,501 pounds of shrimp with a bycatch of blue crabs at 274 pounds per year (Attachment 2, Tables 18, 19, 20, 21).

RCGL Harvest, Comparison with Other Fisheries:

When compared to North Carolina's commercial harvest statistics from the North Carolina Trip Ticket Program (NCTTP) and recreational angling harvest estimates from the Marine Recreational Information Program (MRIP), the average yearly RCGL harvest has been shown to contribute only minimally to the overall harvest of those species encountered using RCGL gears. The overall harvest contribution from RCGL holders varies by species from less than 0.10% for weakfish and up to 12% for hickory shad. Hickory shad landings ranged from 31,157 pounds in 2002 and declined to 756 pounds in 2008. This decrease in landings is attributed to gill net mesh size restrictions that eliminated the directed fishery (Attachment 2, Table 15). The overall finfish contribution from RCGL harvest for the period 2002 through 2008 was 0.54% while the overall crustacean contribution from RCGL harvest was 0.42% for the same period (Table 1).

Table 1. Percent contribution of RCGL harvest to the overall harvest of finfish and shellfish based on the average yearly harvest from each sector during the period 2002 though 2008.

	Recreational Angling Harvest (lb) MRIP[1]	RCGL Harvest (lb) RCGL Surveys	Commercial Harvest (lb), NCTTP	Percent contribution from RCGL Harvest
Finfish Species				
Bluefish	1,081,016	17,022	2,778,336	0.44
Catfish	-	6,864	405,198	1.67
Croaker, Atlantic	194,940	14,534	10,286,338	0.14
Drum, Black	313,684	6,101	189,932	1.20
Drum, Red	207,967	7,522	142,492	2.10
Flounder	535,996	65,059	6,086,025	0.97
Herring, River	-	10,873	132,193	7.60
Mackerel, Spanish	544,071	3,611	490,265	0.35
Menhaden, Atlantic	-	5,959	26,404,767	0.02
Mullet, Striped	-	41,197	1,788,300	2.25
Perch, White	-	15,531	272,052	5.40
Pigfish	51,777	1,263	36,327	1.41
Pinfish	121,754	268	43,224	0.16
Seatrout, Spotted	612,409	13,207	229,927	1.54
Shad, American	-	14,623	247,917	5.57
Shad, Hickory	-	12,053	91,260	11.67
Sheepshead	326,030	1,298	67,130	0.33
Spot	1,397,217	203,535	1,605,764	6.35
Striped bass	1,908,784	5,225	610,673	0.21
Weakfish (gray trout)	154,301	602	641,914	0.08
All finfish	21,656,437	453,065	62,021,830	0.54
Crustacean and Shellfish				
Blue Crab	-	116,797	31,392,856	0.37
Shrimp	-	60,334	6,868,230	0.87
All Crustacean	-	169,445	40,294,392	0.42

[1]The Marine Recreational Information Program (MRIP) is a survey of marine and estuarine finfish species. The majority of interviews conducted each year are from angling trips, therefore species such as menhaden, striped mullet, and anadromous species are not encountered frequently enough to provide precise estimates

Enforcement:

The DMF Marine Patrol is responsible for enforcing regulations associated with the Recreational Commercial Gear License. The state is divided into three law enforcement districts unlike the DMF Fisheries Management District boundaries that include four biological districts. Marine Patrol has been checking RCGL holders since its implementation but in 2009 they created a data base to capture details about inspections. For example, in 2009 the Marine Patrol made 433 RCGL checks in District One, 1,372 checks in District Two, and 1,303 checks in District Three. The Marine Patrol Vessel Roanoke made 19 checks and 1 check was done by Aviation. Table 2 shows the number of citations and the violation that occurred from 1999 thru 2009. In the early years Marine Patrol only recorded two major violations. The first violation was fishing with commercial gear without a RCGL and the second violation was exceeding the amount of authorized gear for use with a RCGL. Table 3 shows the number of warnings and violations that occurred from 1999 thru 2009 for the same criteria.

In addition, there have been some civil penalties assessed to RCGL holders for selling fish taken with RCGL gear. Fishermen are usually charged with selling without the proper license and therefore are not tracked as a RCGL violation.

Table 2 Number of Citations and Violation Type by Year

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
LICE 17	8	40	34	41	27	35	27	34	45	33	56
LICE 18	1	6	10	13	8	8	10	16	6	5	10
LICE 23									1	4	
NETG 29											21
NETG 30								1			30
RGEAR 01											8
Total	9	46	44	54	35	43	37	51	52	42	125

Table 3 Number of Warnings and Violation Type by Year

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
LICE 17	4	8	5	21	17	7	15	29	23	22	20
LICE18			1	6	3	1	7	3		2	3
LICE 23											1
NETG 29											36
NETG 30											6
RGEAR 01										1	1
Total	4	8	6	27	20	8	22	32	23	25	77

Legend:
LICE 17- Fishing with commercial gear without a RCGL
LICE 18- Exceeding amount of authorized gear for use with a RCGL
LICE 23- Exceed legal catch limit permitted with a RCGL
NETG 29- RCGL Gear without proper buoys (gillnets only)
NETG 30- Leave RCGL gillnet unattended
RGEAR 01- Use RCGL gear with improper buoys (all RCGL gear)

Protected Species:

The Endangered Species Act (ESA) states “It is unlawful for any person subject to the jurisdiction of the United States to import, export, take within the US or territorial sea of the US, take upon the high seas, possess, sell, deliver, carry, transport, ship, receive, or offer for sale, any endangered species, or to violate any regulation pertaining to such species or to a threatened species under Section 4(d) of the ESA.” RCGL gear falls within the scope of the ESA and thus, just like other types of gear, the only allowed takes or interactions with endangered species would have to be covered under a Section 10 permit. Section 10 of the ESA provides for exceptions to the take prohibitions in the form of permits. Section 10 incidental take permits are for activities (such as fishing) that are otherwise lawful but are expected to incidentally take a listed species. The division is in the process of applying for a Section 10 permit for the inshore gill net fishery, and this permit, if granted, would cover RCGL gill nets.

VI. SUMMARY FINDINGS:

In summary, the elimination of the Recreational Commercial Gear License could have the following impacts.

A positive impact associated with the elimination of the RCGL would be the decrease in the overall harvest of finfish by an average of 453,065 pounds per year or 0.54% of the total annual harvest of finfish. The crustacean harvest reduction would be 169,445 pounds per year or 0.42% of the total annual harvest of crustaceans. Also, the fishing effort and bycatch associated with the use of RCGL gear would be eliminated.

A negative impact associated with the elimination of the RCGL would be the loss of the general public’s privilege (approximately 5,000) to fish with limited amounts of commercial gear for personal consumption. In addition, the General Statutes and MFC Rules pertaining to the RCGL would need to be altered. RCGL holders can obtain a SCFL through transfers or the Eligibility Board therefore allowing them the use of more commercial gear and harvest commercial limits of fish. An average of seventy six RCGL holders per year has obtained a SCFL from years 2000 thru 2009. Approximately $180,000.00 would be lost in license revenue to the division.

Resource or conflict issues related to the RCGL since its implementation have been minimal. There have been instances, as with all gear, where the user was not acting responsible. Reports to the DMF have ranged from improperly marked gear, unattended gillnets, and the illegal sale of RCGL harvested fish. There are reports of gill nets left high and dry during low tide, crab pots in closed areas, and shrimpers harvesting over the legal limit. In the development of future FMPs, the data from the RCGL gear will be reviewed.

Elimination of the Recreational Commercial Gear License may have the following impacts:

Pros:

+ Reduced Harvest
+ Reduced Bycatch
+ Reduced Effort and Gear
+ Eliminate perceived conflict issues

Cons:

- Major Statute Changes
- Many Rule Changes
- Not a Resource Issue
- Eliminating approximately five thousand customers the privilege to fish for personal consumption using commercial gear
- The probability of RCGL holders upgrading to a SCFL.
- Loss of Revenue

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Amended September 2, 2010

Survey of Recreational Use of Commercial Fishing Gears in Coastal North Carolina - 1998

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October 1998

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Introduction

North Carolina has a long history of recreational use of commercial fishing gear (without sale of the catch), such as gill nets, crab pots, and small trawls. Recreational fishing using commercial gear is enjoyed by many coastal residents, as well as by visitors to the coast from inland areas and other states. Under current North Carolina law, persons who participate in the recreational-commercial gear fishery possess Commercial Fishing Vessel licenses, but they do not have an Endorsement to Sell license, which is required to sell one's catch. At present, no data exist that describe this segment of the fisheries, other than the number of licensees and vessel data from license applications. However, data on the fishing activities are essential for management of the fisheries.

The Fisheries Reform Act of 1997 establishes a new license, the Recreational Commercial Gear License (RCGL), effective 1 July 1999. The Act requires the North Carolina Marine Fisheries Commission (MFC) to establish limits on recreational use of commercial fishing gear by 1 July 1999. Under the new license system, anyone will be able to obtain the the RCGL. This license will enable persons to use limited amounts of certain commercial fishing gear to take coastal fisheries resources, subject to recreational fishing size and possession limits on their catch.

This report summarizes the results of a state-wide mail survey of North Carolina fishermen who used commercial fishing gear recreationally during July 1997 - June 1998. The survey was designed to provide data on areas fished (water body), types of gears used (Appendix A), amount of gears used, target species, and number of days fished. Data from the survey will be provided to the MFC to aid in their decision-making process.

Methods

Mail Survey

A mail survey was conducted by the North Carolina Division of Marine Fisheries (DMF) to collect information on fishing patterns of recreational-commercial fishermen. The sampling universe for the survey consisted of all commercial fishing vessel licensees who did not hold an endorsement to sell (ETS) for the vessel licensed during the 1997-1998 license year. These persons were identified from the DMF license database. After eliminating headboats, charterboats (both types of vessels are commercial in nature because they take people fishing for a fee), and duplicates (eliminated by matching the first five letters of the first and last names and the date of birth), a total of 6,348 licensees was identified. This group included self-designated full-time, part-time, and pleasure fishermen.

A two-page survey instrument (Appendix B) was sent with a prepaid return envelope to the selected fishermen during late July 1998. The survey form asked for responses by 7 August 1998, but responses were accepted through 31 August 1998 to allow for late responses.

Fishing Areas

North Carolina's coastal waters are divided into 31 specific waterbodies for statistical purposes, such as Pamlico Sound and Cape Fear River. For this report, fishing areas were defined as eight major waterbodies and their tributaries, including the ocean and seven estuarine areas. The full area classification system used for this study is presented in Table 1.

Results

Response Rate

A total of 313 surveys (5%) of the 6,348 surveys mailed was returned by the U. S. Postal Service as undeliverable. Of the remaining 6,035 surveys, 2,522 were returned, for a response rate of approximately 42%. Responses were checked for usability and completeness. A total of 515 (20%) of the respondents reported they had not fished recreationally with commercial fishing gear in the previous twelve months, leaving 2,007 (80%) licensees who had fished recreationally with commercial fishing gear during the 1997-98 license year. Of these persons, 1,988 provided at least some data on their fishing activities. Data from these fishermen provide the basis for the information discussed in this report. Many respondents provided only partial data, such as gear used, but not the water body where it was used. All data provided were utilized.

Gear Use

A total of 22 different gears was listed as being used recreationally in coastal North Carolina. The primary gears were gill nets (small mesh, large mesh, drift), crab pots, shrimp trawls, clam rakes, gigs, and cast nets. Other gears reported by 10 or more individuals were seines over 12 feet long, crab trawls, fish pots, oyster dredges, scallop dredges, and tongs used to take oysters and clams. Table 2 shows the average size of all net gears used (in yards or feet) or the amounts used for other fishing gears on a coast wide basis, as well as the range of sizes or amounts used. Data are not presented for gigs, rakes, or tongs because a person can use only one at a time.

The gear used most frequently coast wide was the small mesh gill net (less than 5 inches stretched mesh), used by 82% of respondents, followed by large mesh gill nets (44%), and crab pots (35%) (Table 2). While many fishermen indicated they used only one gear, most used at least two different gears during the year. Some fishermen used a wide variety of fishing methods, with a few

listing 7 - 10 different fishing gears. Table 3 lists the most-frequently used gears on a coast-wide basis and by area relative to the entire coast. The southern area supported the most intensive overall recreational use of these gears. Very little activity occurred in the ocean.

Small mesh gill nets were used primarily from the Neuse River area southward. The primary species targeted by these nets was spot, especially in the fall in the southern area. The average size of these gill nets was about 148 yd, with a few people reporting nets up to1,000 yd in length (Table 2). Average net lengths ranged from 118 yd in the Albemarle area to more than 200 yd in Pamlico Sound (Table 4). Eighty-five percent of the respondents using this gear used 200 yd or less (Table 5). However, there were significant regional variations in length of nets used. In the Albemarle Sound area, over 80% of the fishermen used 150 yd or less, while in Pamlico Sound, over 250 yd was used by about 35% of the survey respondents (Table 5). Approximately 80% of the fishermen in the rest of the coastal area fished 200 yd or less of small mesh gill nets (Table 5).

Large mesh gill nets were used primarily to catch flounder. Use of this gear was less concentrated than for small mesh nets. Greatest use occurred in the Pamlico Rver, Neuse River, Carteret, and southern areas (Table 3). While a few fishermen set up to 900 yd of large mesh nets, the average length used was 170 yd (Table 2). Almost 80% of the fishermen fished 200 yd or less (Table 6). Again, there was variation among areas. About 30% of the fishermen in the Pamlico Sound, Pamlico River, Neuse River, and New/White Oak areas set more than 250 yd of large mesh gill net at a time (Table 6). Average length of these nets varied from 106 yd in the ocean to 217 yd in Pamlico Sound (Table 4).

The heaviest use of crab pots occurred from the Pamlico River southward, with one-third of the crab potters fishing in the southern area (Table 3). The average number of pots used coast wide was seven, although some people stated they used more than 100 pots. Eight pots or less were set by about 80% of those who used this gear (Table 7). However, more pots per fishermen were used in the Albemarle Sound and Pamlico River areas than in other areas. About 80% of the respondents in these two areas used up to 12 pots (Table 7).

About 80% of the recreational clam rake fishery occurred in the Carteret and southern areas. (Table 3). These areas also support most of the commercial hard clam fishery. Overall, 21% of the survey respondents used clam rakes (Table 2).

Gigs are used by both commercial and recreational fishermen to harvest flounder. This fishery takes place at night as fishermen work in calm, shallow waters with lights to find flounder hidden in the bottom, striking them with gigs when spotted. About 20% of the fishermen answering the survey reported they used gigs. Almost half of the use of this gear occurred in the southern area, with the Carteret area ranking second (Table 3).

Shrimp trawls were used by 19% of the fishermen (Table 3). Greatest use was from the Neuse River southward. This area also reported use, on average, of the largest trawls, 28 -30 ft headrope length (Table 8). The greatest numbers of recreational shrimp trawlers fished in the southern area, followed by the Neuse River area (Table 3). The average headrope length of shrimp trawls coast wide was 26 ft (Table 2), with about 5% of survey respondents who used trawls indicating their nets exceeded 35 ft in headrope length. More than 80% of the fishermen used nets measuring 30 ft or less (Table 8).

Cast nets were used by about 18% of the fishermen (Table 3). Target species included mullet, shrimp, and menhaden, almost all of which were taken for bait. The greatest use of this gear was in the southern and Carteret areas.

About 12% of the survey respondents reported that they used drift gill nets (Table 3) to take river herring and shad. Highest drift net use was in the Albemarle Sound area, mainly in Roanoke River, and in the Neuse River area(Table 3). The average length of these nets was about 75 yd (Table 2), although about about 3% of the fishermen stated that they used drift nets exceeding 200 yd in length. Over 80% of the fishermen reported using drift gill nets of 100 yd or less (Table 9).

Target Species

The distribution of target species across fishing areas is presented in Table 10. The most popular species coast wide were spot (targeted by 62% of the fishermen) and flounder (59%), taken with small mesh and large mesh gill nets, respectively. These species were followed by blue crabs (34%), shrimp (24%), and hard clams (21%). All other species were targeted by fewer than 15% of the survey respondents. Spot and flounder were the dominant target species except in the Albemarle Sound area, where river herring and blue crabs were the most important species, and in the Pamlico River area, where blue crabs ranked second.

Frequency of Fishing

The number of days fished varied among areas and gears. Table 11 provides coast wide data for all gears reported. The most popular gears (gill nets, crab pot, shrimp trawl, cast net, clam rake, and gig) were used, on average, 12 or more days (Table 11). The very wide ranges reflect a few more intensive fishermen. Most people were grouped around the averages. Data for the major gears in each area are provided in Table 12. Frequency of use of small mesh gill nets was similar in all areas, with averages of 14 - 19 days. Large mesh gill nets were used 15 - 23 days, on average, except in the ocean (9 days). Crab pots were used more often than other gear, with an average of 27 days (Table 11). Most frequent use was in the Albemarle Sound and Pamlico River areas, with lowest use in the New/White Oak area (Table 12). Shrimp

trawling was similar in all areas in which it was reported, with average use of 11 - 16 days in all areas except Pamlico River (6 days).

Summary

The Division of Marine Fisheries conducted a mail survey of recreational use of commercial fishing gear in coastal North Carolina during July - August 1998 for the 1997 - 98 license year. The purpose of the survey was to obtain information for use by the North Carolona Marine Fisheries Commission for use in managing the recreational commercial gear fisheries, as required by the Fisheries Reform Act of 1997. Over 6,000 commercial fishing vessel licensees who did not possess endorsement to sell licenses were surveyed, and about 42% responded. About 20% of the respondents did not use any commercial fishing gear during the last year. Fishermen reported using a total of 22 different gears. Small mesh gill nets were used most frequently (82%), followed by large mesh gill nets (44%), crab pots (35%), cast nets (20%), and shrimp trawls (19%). The most intensive recreational commercial gear fishing occurred in the southern coastal area, followed by the Carteret and Neuse River areas. Lengths of gill nets used varied widely, with the longest nets in the Pamlico Sound and Pamlico River areas. More crab pots per person were used in the Albemarle Sound and Pamlico River areas than elsewhere. The average headrope length of shrimp trawls was smallest in the Pamlico River area (22 ft) and largest in the southern areas (26 ft). Of the most-frequently used gears, crab pots were fished most often (27 days average), followed by large mesh gill nets (20 days), cast nets (19 days), and small mesh gill nets (17 days).

Table 1. Classification of fishing areas.

Name	Waterbodies included
Atlantic Ocean	Atlantic Ocean
Albemarle Sound area	Albemarle Sound, Alligator River, Chowan River, Currituck Sound, North River (Currituck Co.), Pasquotank River, Perquimans River, Croatan Sound, Roanoke Sound, and Roanoke River
Pamlico Sound area	Pamlico Sound
Pamlico River area	Pamlico River and Pungo River
Neuse River area	Neuse River and Bay River
Carteret area	Bogue Inlet, Bogue Sound, Core Sound, Newport River, and North River (Carteret Co.)
New/White Oak area	New River and White Oak River
Southern area	Cape Fear River, Lockwood Folly River, Masonboro Sound, Shallotte River, Stump Sound, Topsail Sound, and Intracoastal Waterway south of White Oak River

Table 2. Size/amount of gear used coast wide (not including gigs, rakes, tongs, or hand).

Gear	Frequency	Average	Range
Gill net - small mesh	82%	148 yd	20 - 1,000 yd
Gill net -large mesh	44%	170 yd	19 - 900 yd
Gill net - drift	12%	75 yd	20 - 875 yd
Crab pot	35%	7	1 - 150
Cast net	20%	6 ft	? - 20 ft*
Shrimp trawl	19%	26 ft	15 - 75 ft
Seine over 12 feet	2%	52 ft	12 - 450 ft
Fish pot	2%	12	3 - 90
Crab trawl	1%	24 ft	5 - 35 ft
Channel net	less than 1%	78 ft	20 - 120 ft
Trotline	less than 1%	68 ft	5 - 150 ft
Eel pot	less than 1%	2	1 - 3
Dip net	less than 1%	5 ft	? - 12 ft*
Skimmer trawl	less than 1%	11 ft	10 ft - 12 ft
Oyster dredge	less than 1%	2	2 - 8
Scallop dredge	less than 1%	2	2 - 3
Fyke net	less than 1%	2	2

* Respondents appear to have mixed sizes and amounts, because the number "1" was listed when a size was requested. For example, there are no 1 ft cast nets

Table 3. Primary fishing gears used coast wide and by area.

	Percent of fishermen using gear by area								
Fishing gear	Coast wide	Ocean	Albemarle Sound	Pamlico Sound	Pamlico River	Neuse River	Carteret	New/ White Oak	Southern
Small mesh gill net	82%	3%	6%	4%	8%	16%	14%	7%	40%
Large mesh gill net	44%	<1%	7%	5%	16%	21%	16%	8%	22%
Crab pot	33%	<1%	7%	4%	11%	14%	21%	6%	33%
Clam rake	21%	0%	<1%	8%	1%	1%	38%	5%	41%
Gig	20%	<1	2%	3%	3%	11%	24%	5%	47%
Shrimp trawl	19%	0%	4%	6%	3%	20%	13%	12%	37%
Cast net	18%	2%	1%	5%	2%	10%	28%	7%	37%
Drift gill net	12%	<1%	40%	<1%	3%	36%	2%	<1%	15%
All others	<3%								

Table 4. Average size/number and range of gears used by area.

	Average size/number and range of gear used							
Fishing gear	Ocean	Albemarle Sound	Pamlico Sound	Pamlico River	Neuse River	Carteret	New/ White Oak	Southern
Small mesh gill net	129 yd 40 - 300 yd	118 yd 29 - 500 yd	209 yd 50 - 500	170 yd 50 - 800 yd	171 yd 25 - 500 yd	154 yd 20 - 600 yd	183 yd 40 - 950	126 yd 25 - 500 yd
Large mesh gill net	106 yd 30 - 200 yd	121 yd 20 - 808 yd	217 yd 24 - 600	208 yd 50 - 800 yd	181 yd 25 - 600 yd	146 yd 25 - 600 yd	201 yd 35 - 800	140 yd 19 - 600 yd
Crab pot		11 1 - 50	8 2 - 50	13 1 - 150	7 1 - 30	5 1 - 50	3 1 - 12	5 1 - 129
Shrimp trawl		25 ft 15 - 35 ft	24 ft 18 - 38 ft	22 ft 12 - 35 ft	25 ft 18 - 50 ft	25 ft 15 - 45 ft	26 ft 18 - 60 ft	26 ft 10 - 50 ft
Drift gill net	150 yd 100 - 200 yd	64 yd 20 - 200 yd		73 yd 30 - 100 yd	76 yd 25 - 200 yd	106 yd 50 - 200 yd		92 yd 30 - 200 yd

Table 5. Proportion of fishermen using specific amounts of small mesh gill nets by area, except the ocean.

	Percent of fishermen using indicated amount or less				
Area	50 yd	100 yd	150 yd	200 yd	250 yd
Coast wide	13	58	66	85	87
Albemarle Sound	33	71	82	88	90
Pamlico Sound	16	39	42	60	65
Pamlico River	12	44	55	80	82
Neuse River	17	46	54	75	76
Carteret	13	51	60	82	87
New/White Oak	4	41	48	78	81
Southern	11	71	76	94	95

Table 6. Proportion of fishermen using specific amounts of large mesh gill nets by area, except the ocean.

	Percent of fishermen using indicated amount or less				
Area	50 yd	100 yd	150 yd	200 yd	250 yd
Coast wide	18	53	59	78	80
Albemarle Sound	37	71	80	86	89
Pamlico Sound	16	37	40	61	65
Pamlico River	9	38	46	70	71
Neuse River	20	47	51	72	76
Carteret	20	60	67	87	89
New/White Oak	6	42	45	69	70
Southern	22	65	72	87	87

Table 7. Proportion of fishermen using specific numbers of crab pots by area, except the ocean.

	Percent of fishermen using indicated amount or less				
Area	4	6	8	10	12
Coast wide	53	74	80	89	93
Albemarle Sound	15	48	52	72	78
Pamlico Sound	50	71	na*	88	92
Pamlico River	30	49	58	74	78
Neuse River	33	57	65	84	91
Carteret	62	84	91	96	97
New/White Oak	60	86	93	98	100
Southern	72	86	90	95	97

* na = not available

Table 8. Proportion of fishermen using specific headrope lengths of shrimp trawls by area, except the ocean.

	Percent of fishermen using indicated amount or less				
Area	20 ft	24 ft	26 ft	28 ft	30 ft
Coast wide	28	37	68	72	88
Albemarle Sound	36	50	71	82	93
Pamlico Sound	29	50	na*	na	96
Pamlico River	64	na	91	na	na
Neuse River	24	37	72	79	88
Carteret	38	na	69	75	88
New/White Oak	32	36	66	68	87
Southern	23	33	62	66	84

*na = not available

Table 9. Proportion of fishermen using specific amounts of drift gill nets by area, the ocean.

	Percent of fishermen using indicated amount or less				
Area	50 yd	75yd	100 yd	125 yd	150 yd
Coast wide	51	61	87	89	90
Albemarle Sound	63	73	93	na*	94
Pamlico Sound					
Pamlico River	50	na	100		
Neuse River	48	63	84	88	89
Carteret					
New/White Oak					
Southern	31	na	78	na	86

*na = Not available

Table 10. Top five target species and percent of fishermen targeting them by fishing area.

	Rankings									
Area	1	%	2	%	3	%	4	%	5	%
Coast wide	Spot	62	Flounder	59	Blue crabs	34	Shrimp	24	Clams	21
Ocean	Spot	60	Flounder	11	Menhaden	6	Other edible fish	6	Baitfish	4
Albemarle	River herring	43	Blue crabs	13	Flounder	12	White perch	10	Spot	6
Pamlico Sound	Flounder	23	Spot	16	Shrimp	13	Clams	13	Blue crabs	11
Pamlico River	Flounder	39	Blue crabs	18	Spot	17	Croaker	5	Weakfish	4
Neuse River	Flounder	25	Spot	21	Blue crabs	13	River herring	10	Shrimp	10
Carteret	Flounder	24	Spot	17	Clams	16	Blue crabs	14	Shrimp	10
New/White Oak	Spot	30	Flounder	26	Shrimp	16	Blue crabs	12	Clams	8
Southern	Spot	33	Flounder	22	Blue crabs	13	Clams	11	Shrimp	10

Table 11. Number of days fished by gear type, coast wide.

Gear	Average	Range
Gill net - small	17	1 - 215
Gill net -large	20	1 - 240
Gill net - drift	12	1 - 159
Crab pot	27	1 - 200
Cast net	19	1 - 300
Shrimp trawl	14	1 - 212
Seine over 12	9	1 - 60
Fish pot	35	2 - 180
Crab trawl	10	2 - 25
Channel net	11	3 - 20
Trotline	39	5 - 90
Eel pot	19	4 - 40
Dip net	5	4 - 7
Skimmer trawl	63	35 - 90
Oyster dredge	9	2 - 25
Scallop dredge	8	2 - 31
Fyke net	21	-
Gig	14	1 - 240
Tongs	15	1 - 30
Bull rake	15	-
Clam rakes	13	1 - 180
By hand	13	2 - 28

Table 12. Frequency of use of principal gears by area.

		Average frequency and range of gear used (days)						
Fishing gear	Ocean	Albemarle Sound	Pamlico Sound	Pamlico River	Neuse River	Carteret	New/ White Oak	Southern
Small mesh	15	14	18	17	19	16	14	16
gill net	1 - 80	1 - 90	1- 100	1 - 200	1 - 200	1 - 150	1 - 104	1- 215
Large mesh	9	19	15	23	19	19	20	19
gill net	2 - 20	2 - 120	1 - 75	1 - 200	1 - 180	1 - 130	1 - 156	1 - 240
Crab pot		40	20	37	29	20	15	27
		1 - 180	4 - 90	2 - 160	2 - 120	1 - 200	1 - 60	1 - 200
Clam rake		8	9	8	17	12	10	14
		5 - 10	1 - 60	2 - 12	5 - 30	1 - 100	2 - 40	1 - 180
Gig	42	8	7	7	13	12	12	15
	15 - 90	2 - 15	1 - 20	2 - 23	1 - 120	1 - 150	1 - 50	1 - 240
Shrimp trawl		16	11	6	15	14	16	13
		1 - 60	1 - 35	1 - 20	1 - 60	1 - 90	1 - 212	1 - 104
Cast net	14	4	15	26	17	19	14	20
	3 - 30	1 - 10	4 - 35	4 - 100	1 - 120	1 - 200	2 - 40	1 - 300
Drift gill net		10		10	14	7		12
		1 - 104		3 - 20	1 - 159	1 - 15		2 - 105

Appendix A.

Commercial fishing gears used recreationally in coastal North Carolina.

Fishing gear	Description
Small mesh gill net	Stretched mesh size less than 5 inches
Large mesh gill net	Stretched mesh size 5 inches or more
Drift gill net	Gill net of any mesh size used to catch anadromous fishes by drifting in coastal rivers
Shrimp trawl	Small mesh (1.5 inches stretched mesh) conical net towed behind a boat intended to catch shrimp
Crab trawl	Large mesh (3 inches stretched mesh or larger) conical net towed behind a boat intended to catch blue crabs
Crab pot	A cubical trap made of wire mesh, with or without escape rings, used to capture blue crabs
Other pots	Traps of various configurations used to catch finfish, eels, and shrimp
Seine over 12 feet	Wall of net pulled through the water to entrap fish and shrimp; generally pulled from the water onto a beach
Clam rake	Small rake with curved teeth pulled by hand through the bottom to capture hard clams
Gig	A spear, generally with three or four prongs
Cast net	Circular net with weights along the outer edge, thrown by hand to land on the water and sink rapidly to the bottom, entrapping finfish and shrimp
Dredge	Rectangular steel cage with mesh bag towed behind a vessel to capture bay scallops (toothless dredge) or oysters (toothed dredge)

Appendix B. Survey Instrument

Survey of Recreational Fishermen Using Commercial Gears

The North Carolina Division of Marine Fisheries asks you to participate in a survey of fishermen who used commercial fishing gears recreationally in the last 12 months (July 1997 - June 1998). This information will be used to assist the Marine Fisheries Commission in evaluating future management of this segment of the fisheries in coastal North Carolina.

For this survey, recreational fishing is defined as fishing which does not result in sale of the catch.

For this survey, commercial fishing gear includes all fishing gears EXCEPT rod and reel.

Please answer with your ***best estimates*** *and* return this survey to the North Carolina Division of Marine Fisheries by AUGUST 7, 1998 in the enclosed preaddressed envelope.

If you have any questions, please call Mike Street at 1-800-682-2632 or (252) 726-7021 in the Morehead City area. A report will be available in September, 1998.

Thank you for your assistance.

1. County of residence:_____

2. Did you fish recreationally (no sale of catch) with commercial fishing gear in the last 12 months?

   1.□ YES 2.□ NO IF "**NO**", **STOP** and return the survey.

3. What commercial fishing gears did you use recreationally (no sale of catch) in the last 12 months? (Check all that apply)

   1. □ Gillnet - small mesh (less than 5 inches stretched mesh)
   2. □ Gillnet - large mesh (5 inches stretched mesh and larger)
   3. □ Gillnet - drift (shad and herring)
   4. □ Shrimp trawl
   5. □ Crab trawl
   6. □ Crab pot
   7. □ Other pots
   8. □ Seine over 12 ft. long
   9. □ Clam rake
   10. □ Gig
   11. □ Cast net
   12. □ Dredge
   13. □ Other _____

PLEASE TURN TO QUESTION ON BACK

G:\street\rcglrep8.wpd

4. The main information needed by the Marine Fisheries Commission is a description of your fishing activities (gear use, location, frequency, target species). In the table below, please give your **best estimates** of your fishing activities **during the last 12 months for the gears checked in question #3.**

- For amount/size of gear used, please give the following information:
  - for trawls, please give headrope length in feet
  - for gill nets, give length in yards and **type** - **small mesh** (less than 5 inches stretched mesh); **large mesh** (5 inches stretched mesh and larger); and **drift nets**
  - for pots, rakes, gigs and dredges, give number, **NOT** size, such as 5 crab pots or 3 clam rakes
  - for seines and cast nets, give size in feet
- Please name the principal county where you fished this gear
- Please name the principal water body (such as Newport River or Albemarle Sound) where you used the gear
- Please name the target species (finfish or shellfish you wanted to catch) you tried to catch with this gear
- Please estimate number of days you fished with this gear.

Please see example.

	Example	**Please fill in columns for each gear you used**						
Gear used	*gill net - small mesh*							
Amount/ size	*50 yd*							
County	*New Hanover*							
Water body	*Cape Fear River*							
Target species	*spot, croaker*							
Number of days fished	*8*							

IF NEEDED, PLEASE COPY BLANK TABLE AND USE ADDITIONAL SHEETS
THANK YOU FOR HELPING

6,350 copies of this document were printed at a cost of $0.05 per copy

Survey Methodology and Results:

Socioeconomic Survey

The socioeconomic surveys included the entire population of RCGL license holders. Questions included on annual survey questionnaires address demographics, experience, opinions on pertinent topics, and typical spending on fishing trips taken by RCGL holders. Question formats varied among three general types.

a. Questions that requested the participant to fill in a specific number (i.e., age, years of residence, spending, etc.),
b. Scaled questions that asked the participant to select a box that most appropriately matched his/her level of agreement for a given statement (i.e., strongly disagree to strongly agree), and
c. Multiple-choice questions that allowed the participant to indicate his/her choice by checking one or more boxes adjacent to the available choices (i.e., point of access for fishing trips, sources of information on fisheries regulations, etc.).

Questions within the first category were examined by two methods: (1) calculation of the mean from the responses given; and (2) categorizing the responses into specific groupings and calculating the percentage that each group contributes to the total sample. The five potential responses for the "level of agreement" questions are ranked from one to five with one representing strongly disagree to five representing strongly agree. Mean rank values were obtained and the percentages that each agreement level contributed to the total are calculated. Only the percent contributions for each multiple-choice category are derived from the third type of question.

The disposition of each questionnaire mailed typically result in one of four possible outcomes: (1) returned and usable, (2) returned and not usable, (3) returned by the U.S. Postal Service as non-deliverable, and (4) not returned. Returned surveys that do not contain the participant's name or contain illegible handwriting are considered unusable. Return rates are calculated by dividing the total number of questionnaires returned and deemed usable by the total number of questionnaires mailed minus the number of non-deliverable questionnaires.

Catch and Effort Monthly RCGL Survey

The catch and effort survey questionnaires were designed to determine the number of trips taken and type and quantities of gear used during the month of survey. Participants were also requested to provide estimates for the numbers and pounds of each species caught and retained as well as the number of each species discarded.

Participants for the survey were randomly selected using two different rates of sampling. A 30.0% coverage rate by county of residence for the period May through December is used. This is the period when the bulk of RCGL holders are actively fishing and is sufficient for the gears used and majority of the species targeted. Species such as white perch, river herrings, and striped bass are targeted during the months January through April; however, the activities that target these species are localized within the Northern Region where the RCGL population is relatively sparse. Further exacerbating the ability to accurately produce landing estimates for this area and species combination, the use of fish pots, a seldom used gear in other regions, is often used to harvest catfish and white perch within the Northern Region. To provide more precise estimates for these species, gear, and area, the sampling rate was increased from 30.0% to 40.0%.

To estimate the total number of trips taken by all RCGL holders, the monthly survey data are extrapolated for each monthly sample period and gear combination by:

- Calculating the level of participation by dividing the total number of participants actively using a specific gear by the total number of returned questionnaires,
- Calculating the mean number of trips taken by the participants indicating actively using a specific gear, and
- The effort estimate was the product of the mean number of trips, level of participation, and the total number of RCGL holders for the given sample period.

Determination of the estimated catch for each species is also calculated for each sample period and gear level by:

- Summing the total catch by species, sample period, and gear combination,
- Summing the total number of trips taken by sample period and gear combination,
- Dividing total catch by the total number of trips to determine the mean catch for each species for every sample period and gear combination, and
- The catch estimate was the product of the mean catch and the estimated effort.

Quantities of Gear Used (monthly surveys)

The participants were asked to specify the average amount of gear used. Quantities were categorized into ranges of values for the yardage of gill nets, head rope length of trawls, and length of seine. Gears such as eel and crab pots were simply enumerated. Range, average, median and mode are calculated for the quantity of each gear type.

Survey Results

RCGL Participation

With the exception of 2002, the number of RCGLs sold on a fiscal basis has declined each year from 2002 through 2008 (Table 1); with 24% overall decline from the first to last year in this period. The largest single year decline occurred in 2001 (8%) followed by 2006 (5%). Twenty-five counties consistently comprise approximately 85% of the total number of RCGLs purchased each year. Southern counties such as Onslow, Pender, New Hanover, and Brunswick consistently rank in the top ten counties each year (Table 2).

Table 1. Number of Recreational Commercial Gear Licenses 2000 though 2008 by fiscal year, July1 thru June 30.

Fiscal Year	Number of Resident RCGLs Sold	Number of Non-Residents RCGLs Sold	Percent Change from Previous Sales Year
2000	6,702	19	-
2001	6,189	13	-8.00%
2002	6,282	18	1.60%
2003	6,137	20	-2.30%
2004	5,844	24	-4.70%
2005	5,639	14	-3.70%
2006	5,344	24	-5.00%
2007	5,114	20	-4.40%
2008	5,090	23	-0.40%

Table 2. Top 25 counties with RCGL holders, presented as an average percentage of the total number of RCGL holders for each year.

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Brunswick	9.82	10.09	10.3	10.08	10.83	10.15	10.53	11.52	11.26	10.51
Carteret	8.72	7.54	7.04	7.09	7.16	7.51	7.84	9.55	9.59	8.00
New Hanover	7.51	7.57	7.5	6.99	6.55	7.1	7.25	6.98	6.87	7.15
Craven	6.76	6.74	6.38	6.77	6.36	6.64	6.33	6.74	6.87	6.62
Columbus	3.9	5.18	5.59	5.74	6.41	7	6.68	7.24	7.08	6.09
Onslow	6.13	5.32	5.75	5.58	5.76	5.7	5.51	5.77	5.62	5.68
Pender	5.01	5.66	5.57	5.05	5.59	5.23	4.96	5.25	5.35	5.30
Beaufort	4.62	4.69	4.72	5.47	4.41	4.36	4.96	4.2	4.5	4.66
Pitt	4.42	4.19	4.38	3.75	4.22	3.84	3.19	2.25	1.71	3.55
Pamlico	3.45	3.2	3.21	3.5	2.77	3.13	3.86	3.64	3.98	3.42
Robeson	2.05	2.56	2.72	2.41	2.36	2.21	2.22	2.21	2.5	2.36
Dare	2.43	2.3	2.07	2.65	1.91	2.32	2.56	1.81	1.71	2.20
Lenoir	2.65	2.54	2.31	1.95	2.5	2.03	1.92	1.99	1.69	2.18
Martin	2.17	2.33	2.23	2.27	2.38	2.06	2.2	1.43	1.52	2.07
County	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Currituck	1.9	1.83	1.88	2.31	2.14	1.72	2.07	2.05	2.48	2.04
Wake	1.95	2.22	2.09	2.15	2.28	2.24	2.2	1.75	1.37	2.03

Duplin	1.72	1.75	1.92	1.9	2.01	2.01	1.87	1.73	1.87	1.86
Johnston	1.72	1.65	1.68	1.75	2.12	2.01	1.68	1.53	1.58	1.75
Cumberland	1.98	1.91	1.82	1.77	1.45	1.54	1.5	1.51	1.58	1.67
Wayne	1.32	1.37	1.6	1.59	1.84	1.79	1.7	2.01	1.64	1.65
Bladen	1.14	1.47	1.22	1.48	1.54	1.48	1.46	1.69	1.64	1.46
Sampson	0.96	1.29	1.49	1.22	1.26	1.3	1.19	1.25	1.12	1.23
Wilson	1.05	1.2	0.98	1.21	1.28	1.41	1.24	0.88	1	1.14
Guilford	0.76	0.86	0.73	0.92	0.79	0.94	0.9	0.88	0.92	0.86
Greene	0.9	0.94	0.97	0.9	0.91	0.85	0.82	0.64	0.5	0.83

RCGL Survey

Many of the species taken by recreational users of commercial gear are included in fisheries management plans. Until 2002, the influence that RCGLs may have on these species was unknown. Two survey strategies were used to collect information from RCGL holders; a socioeconomic survey, conducted in 2001, 2004, and 2007, and catch and effort surveys conducted monthly from 2002 through 2008. Findings from the two surveys were summarized by regions, using the DMF Fisheries Management District boundaries (Figure 1).

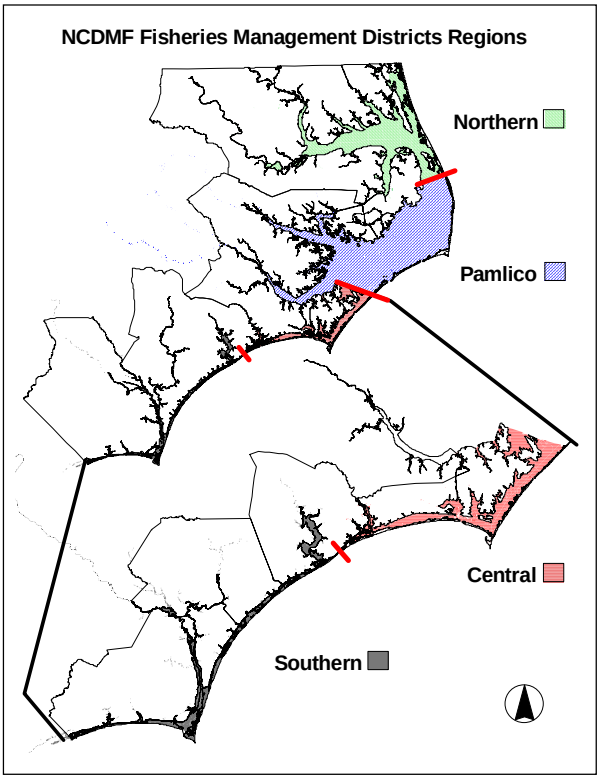

Figure 1. Regions used to summaries findings from the RCGL surveys.

Survey Results:

The majority of RCGL holders surveyed were married Caucasian males with an average age of 56. Findings from license sales statistics and the three socioeconomic surveys conducted in 2001, 2004, and 2007 indicated that coastal counties, in particular, southern coastal counties, substantially contributed to the overall number of RCGL holders (Figure 2).

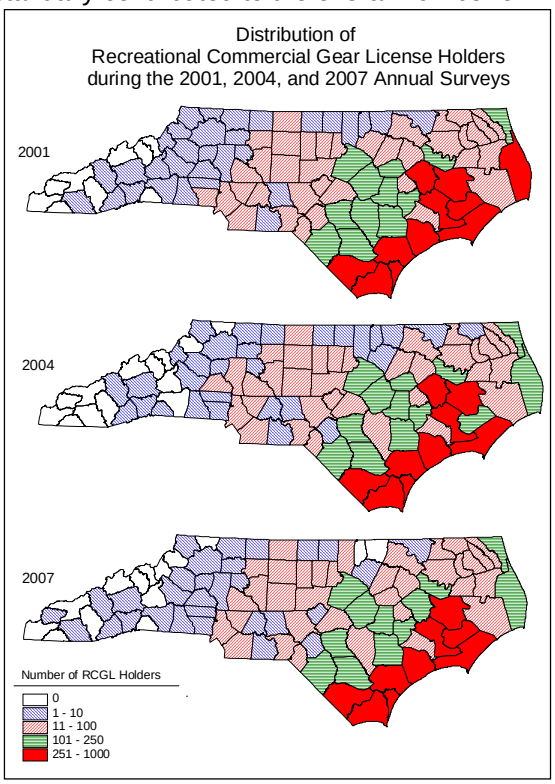

Figure 2. Distribution of active RCGL holders during 2001, 2004, and 2007 socioeconomic surveys.

The top three gears used by RCGL holders fishing in all regions were crab pot, small mesh gill net, and large mesh gill net. Shrimp trawls were the fourth most common gear used in the Pamlico, Southern, and Central Regions. In the Northern Region, crab pots, small mesh gill nets, fish pots and large mesh gill nets were the most commonly used gear (Table 3). The total number of trips taken from all regions except the Northern Region has declined.

Table 3. Number of trips by gear type and region, 2002 through 2008.

Region	Year	Crab Pot	Small Mesh Gill Nets	Large Mesh Gill Nets	Shrimp Trawl	Fish Pot	Other RCGL Gear	Total
Pamlico	2002	9,532	7,744	6,221	2,384	39	226	26,146
	2003	5,134	3,834	4,076	1,448	0	208	14,700
	2004	5,657	3,642	3,602	2,122	18	46	15,087
	2005	6,614	3,413	4,182	1,127	0	159	15,496
	2006	5,748	3,350	2,756	1,441	0	97	13,391
	2007	6,192	2,791	2,109	1,510	0	54	12,656
	2008	5,179	2,267	1,736	1,464	0	21	10,667
	Average	6,294	3,863	3,526	1,642	8	116	15,449
South	2002	3,208	9,473	3,283	1,123	572	205	17,865
	2003	5,626	9,823	2,606	711	123	145	19,034
	2004	5,225	8,716	2,831	392	10	222	17,397
	2005	4,288	6,371	1,806	553	240	185	13,443
	2006	4,477	6,605	1,353	471	107	91	13,105
	2007	4,012	4,813	1,174	355	38	82	10,474

Region	Year	Crab Pot	Small Mesh Gill Nets	Large Mesh Gill Nets	Shrimp Trawl	Fish Pot	Other RCGL Gear	Total
	2008	4,239	4,579	751	500	0	126	10,196
	Average	4,439	7,197	1,972	586	156	151	14,502

Region	Year	Crab Pot	Small Mesh Gill Nets	Large Mesh Gill Nets	Shrimp Trawl	Fish Pot	Other RCGL Gear	Total
North	2002	6,888	5,671	2,802	742	3,905	221	20,229
	2003	4,111	3,108	599	348	1,142	480	9,789
	2004	4,143	1,713	883	911	714	57	8,421
	2005	3,386	1,814	406	387	730	48	6,771
	2006	4,669	1,493	900	50	476	95	7,684
	2007	6,022	1,137	994	69	795	41	9,058
	2008	6,384	1,441	1,100	337	925	82	10,269
	Average	5,086	2,340	1,098	406	1,241	146	10,317
Central	2002	6,367	4,994	3,238	1,070	34	144	15,848
	2003	5,858	2,512	2,878	246	102	0	11,596
	2004	5,511	2,424	3,001	318	36	84	11,374
	2005	5,384	2,209	1,922	365	84	24	9,989
	2006	3,608	2,064	1,261	464	0	55	7,452
	2007	3,996	2,264	1,152	295	0	62	7,769
	2008	3,912	2,111	1,228	132	7	14	7,405
	Average	4,948	2,654	2,097	413	38	55	10,205

The top ten finfish species harvested by RCGL holders from 2002 through 2008 were spot, flounder, striped mullet, bluefish, white perch, American shad, Atlantic croaker, spotted seatrout, hickory shad and river herring. Collectively these ten species contributed 88% of the total RCGL finfish harvest. Blue crab accounted for approximately 70% of the crustacean harvest while shrimp comprised 30% (Table 4)

Table 4. Harvest (lb) of species by RCGL gear from 2002 through 2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Spot	339,704	255,060	252,726	193,769	180,342	97,753	105,392	203,535
Flounder	100,514	86,408	85,915	58,099	45,622	41,542	37,315	65,059
Mullet, Striped	64,213	24,774	35,947	36,314	37,385	40,168	51,785	41,512
Bluefish	29,849	15,156	13,565	13,431	10,263	17,338	19,554	17,022
Perch, White	13,617	34,950	11,533	4,751	6,474	14,042	23,347	15,531
Shad, American	13,699	33,947	8,703	10,185	5,756	25,833	4,235	14,623
Croaker, Atlantic	36,392	12,136	13,956	9,544	7,328	8,899	13,480	14,534
Seatrout, Spotted	21,876	11,592	7,079	9,752	12,950	14,749	14,448	13,207
Shad, Hickory	43,235	13,936	12,371	3,628	4,605	3,132	3,467	12,053
Herring, River	22,797	29,415	9,089	8,859	3,806	30	0	10,571
Drum, Red	9,922	4,582	4,620	8,089	7,781	8,767	8,896	7,522
Catfish	7,619	4,998	5,751	6,885	5,835	7,837	9,121	6,864
Drum, Black	16,101	3,821	3,651	1,518	4,496	4,450	8,670	6,101
Menhaden, Atlantic	29,238	3,826	1,997	2,749	2,107	1,510	284	5,959

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Finfish (misc.)	20,092	6,006	2,342	903	1,958	3,857	1,553	5,244
Striped bass	9,078	10,199	3,651	3,058	3,381	3,472	3,735	5,225
Mackerel, Spanish	3,987	2,185	2,007	3,152	1,614	3,817	8,517	3,611
Sharks and rays	4,024	572	434	2,467	293	538	1,020	1,335
Sheepshead	3,613	1,123	535	406	608	1,387	1,411	1,298
Pigfish	2,513	244	2,734	881	667	1,755	46	1,263
Weakfish	1,651	576	494	647	447	221	181	602
Pinfish	976	35	0	378	565	180	715	407
TOTAL FINFISH	794,710	555,541	479,100	379,465	344,283	301,277	317,172	453,078
CRUSTACEANS								
Blue crab	134,171	157,942	117,590	105,179	94,459	98,003	110,234	116,797
Shrimp	101,766	50,961	43,698	32,542	49,362	33,778	54,359	52,352
Other (misc.)	247	455	248	346	269	190	318	296
TOTAL CRUSTACEANS	236,184	209,358	161,536	138,067	144,090	131,971	164,911	169,445
GRAND TOTAL	1,030,894	764,899	640,636	517,532	488,373	433,248	482,083	622,524

Regional RCGL Characterization:

Pamlico Region:

Crab Pot

The top five species harvested by crab pots within the Pamlico Region were, blue crab, flounder Spotted seatrout, red drum and pinfish. The average poundage harvested for all species within the Pamlico Region by crab pot for the period 2002 through 2008 was 23,524 pounds per year (Table 5).

Table 5. Top five species harvested (lb) by crab pot within the Pamlico Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Blue crab	34,461	20,145	20,493	25,023	19,769	20,812	18,046	22,678
Flounder	1,554	674	505	107	403	330	342	559
Speckled trout	72	101	.	.	502	696	55	285
Drum, Red	29	37	37	.	135	68	0	51
Pinfish	0	0	0	.	.	14	80	19
Others*	53	0	45	0	24	19	34	25
Total	36,169	20,957	21,080	25,130	20,833	21,939	18,557	23,524

*Others include catfish, croaker, misc. species, pigfish, sheepshead, shellfish (misc.), spot, weakfish, white perch

Large Mesh Gill Net

The top five species harvested by large mesh gill net within the Pamlico Region were, flounder, American shad, striped bass, red drum, and blue crab. The average poundage harvested for all species within the Pamlico Region by large mesh gill net for the period 2002 through 2008 was 28,325 pounds per year (Table 6).

Table 6. Top five species harvested (lb) by large mesh gill net within the Pamlico Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Flounder	30,741	20,400	18,447	22,467	12,140	8,824	7,998	17,288
American shad	4,439	2,838	1,544	2,622	2,140	5,598	435	2,802
Striped bass	3,250	2,148	1,591	1,553	1,005	956	1,088	1,656
Drum, Red	2,071	422	650	2,385	1,099	1,771	1,131	1,361
Blue crab	251	2,364	3,735	1,687	499	299	387	1,317
Other*	12,823	3,829	2,086	2,529	1,744	2,134	2,155	3,900
Total	53,575	32,001	28,053	33,243	18,627	19,582	13,194	28,325

*Others include: Atlantic menhaden, black drum, bluefish, catfish, croaker, hickory shad, mullet, striped bass, pigfish, pinfish, river herring, sharks and rays, sheepshead, Spanish mackerel, spot, spotted seatrout, weakfish, white perch

Small Mesh Gill Net

The top five species harvested by small mesh gill net within the Pamlico Region were, spot, striped mullet, croaker, river herring, and spotted seatrout. The average poundage harvested for all species within the Pamlico Region by small mesh gill net for the period 2002 through 2008 was 57,713 pounds per year (Table 7).

Table 7. Top five species harvested (lb) by small mesh gill net within the Pamlico Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Spot	29,001	5,921	8,065	12,800	12,039	5,192	4,448	11,067
Striped mullet	11,968	4,295	6,571	8,643	9,161	7,428	6,629	7,814
Croaker	16,173	4,832	3,360	5,013	2,499	3,490	6,700	6,010
River herring	9,750	15,210	6,356	6,366	2,407	0	0	5,727
Spotted seatrout	10,383	5,132	1,996	2,231	3,609	5,103	3,677	4,590
Other*	40,855	37,032	21,459	14,278	11,731	17,235	14,953	22,506
Total	118,130	72,422	47,807	49,331	41,446	38,448	36,407	57,713

Others include: American shad, Atlantic menhaden, black drum, blue crab, bluefish, catfish, flounder, hickory shad, pigfish, pinfish, red drum, sharks and rays, sheepshead, Spanish mackerel, striped bass, weakfish, white perch

Shrimp Trawl

The top four species harvested by shrimp trawl within the Pamlico Region were shrimp, blue crab, flounder, and spot. The average poundage harvested for all species within the Pamlico Region by shrimp trawl for the period 2002 through 2008 was 33,507 pounds per year (Table 8).

Table 8. Top four species harvested (lb) by shrimp trawls within the Pamlico Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Shrimp	48,983	24,622	19,963	10,764	19,536	26,574	43,734	27,739
Blue crab	11,815	6,792	10,808	4,195	3,268	800	1,844	5,646
Flounder	283	17	18	0	110	68	0	71
Spot	0	0	48	0	137	170	0	51
Total	61,081	31,431	30,837	14,959	23,051	27,611	45,578	33,507

Southern Region:

Crab Pot

The top five species harvested by crab pots within the Southern Region were blue crab, flounder, miscellaneous crustaceans, red drum, and pinfish. The average poundage harvested for all species within the Southern Region by crab pot for the period 2002 through 2008 was 23,173 pounds per year (Table 9).

Table 9. Top five species harvested (lb) by crab pot within the Southern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Blue crab	15,967	33,681	24,495	21,592	21,617	18,639	18,319	22,044
Flounder	1,380	467	830	506	920	384	1,312	828
Crustaceans (misc)	10	363	29	213	182	56	114	138
Red drum	0	0	0	350	0	188	0	77
Pinfish	9	31	0	0	46	102	0	27
Other*	0	54	0	195	18	82	59	58
Total	17,366	34,596	25,354	22,856	22,783	19,451	19,804	23,173

*Other includes: bluefish, catfish, croaker, misc. crustacean species, pigfish, sheepshead, spot, spotted seatrout, striped mullet

Large Mesh Gill Net

The top five species harvested by large mesh gill net within the Southern Region were flounder, American shad, spot, red drum, and bluefish. The average poundage harvested for all species within the Southern Region by large mesh gill net for the period 2002 through 2008 was 19,192 pounds per year (Table 10).

Table 10. Top five species harvested (lb) by large mesh gill net within the Southern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Flounder	19,805	15,057	15,601	7,998	9,782	6,083	3,112	11,063
American shad	828	6,638	5,117	5,903	1,760	14,124	2,605	5,282
Spot	1,066	2,523	658	48	377	577	726	854
Drum, Red	2,288	352	628	1,121	982	134	134	806
Bluefish	165	605	720	186	154	282	190	329
Other*	1,193	1,674	753	246	759	775	617	860
Total	25,345	26,849	23,477	15,502	13,814	21,975	7,384	19,192

*Other includes: Atlantic menhaden, black drum, blue crab, catfish, croaker, misc. species, pigfish, pinfish, sharks and rays, sheepshead, crustaceans (misc.), Spanish mackerel, spotted seatrout, striped bass, striped mullet

Small Mesh Gill Net

The top five species harvested by small mesh gill net within the Southern Region were spot, striped mullet, bluefish, flounder, and spotted seatrout. The average poundage harvested for all species within the Southern Region by small mesh gill net for the period 2002 through 2008 was 197,923 pounds per year (Table 11).

Table 11. Top five species harvested (lb) by small mesh gill net within the Southern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Spot	246,010	215,187	192,258	147,544	137,142	77,398	77,478	156,145
Striped mullet	17,490	5,120	5,204	4,506	4,980	6,914	7,158	7,339
Bluefish	15,312	4,687	4,388	6,235	5,217	6,405	7,130	7,053
Flounder	4,567	12,679	7,358	6,020	8,456	5,846	3,300	6,889
Spotted seatrout	8,448	3,538	3,322	4,583	4,088	5,086	4,649	4,816
Other*	23,955	25,948	16,161	11,006	8,684	9,857	14,146	15,680
Total	315,782	267,159	228,691	179,894	168,567	111,506	113,861	197,923

*Other includes: croaker, Spanish mackerel, black drum, blue crab, American shad, misc. species, Atlantic menhaden, hickory shad, red drum, sharks and rays, pigfish, weakfish, white perch, catfish, pinfish, sheepshead, striped bass, river herring

Shrimp Trawl

The top four species harvested by shrimp trawl within the Southern Region were shrimp, blue crab, flounder, and spot. The average poundage harvested the top four species within the Southern Region by shrimp trawl for the period 2002 through 2008 was 13,379 pounds per year (Table 12).

Table 12. Top four species harvested (lb) by shrimp trawl within the Southern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Shrimp	25,642	14,897	5,810	9,585	20,041	2,400	4,928	11,900
Blue crab	1,271	1,363	826	640	221	339	268	704
Flounder	603	383	365	1,151	121	15	143	397
Spot	0	29	667	65	789	256		378
Total	27,516	16,672	7,668	11,441	21,172	3,010	6,178	13,379

Northern Region:

Crab Pot

The top five species harvested by crab pots within the Northern Region were blue crab, flounder, catfish, miscellaneous crustaceans, and spotted seatrout. The average poundage harvested for all species within the Northern Region by crab pot for the period 2002 through 2008 was 32,103 pounds per year (Table 13).

Table 13. Top five species harvested (lb) by crab pot within the Northern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Blue crab	40,907	34,037	25,179	22,270	27,819	28,579	42,378	31,596
Flounder	731	268	111	121	131	63	295	246
Catfish	141	51	0	0	166	354	892	229
Crustaceans (misc)	0	2	1	35	7	2	54	14
Spotted seatrout	0	0	0	0	0	0	37	5
Other*	12	0	0	37	0	5	36	13
Total	41,791	34,358	25,291	22,463	28,123	29,003	43,692	32,103

*Other includes: black drum, bluefish, pinfish, red drum, sheepshead, striped bass, weakfish, white perch

Large Mesh Gill Net

The top five species harvested by large mesh gill net within the Northern Region were flounder, miscellaneous finfish species, black drum, striped bass, and red drum. The average poundage harvested for all species within the Southern Region by large mesh gill net for the period 2002 through 2008 was 11,361 pounds per year (Table 14).

Table 14. Top five species harvested (lb) by large mesh gill net within the Northern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Flounder	13,988	2,997	9,846	1,779	3,389	3,401	6,031	5,919
Misc species	10,450	659	0	0	88	14	0	1,602
Black drum	7,383	107	190	0	191	0	209	1,154
Striped bass	2,557	496	181	116	564	487	706	730
Red drum	789	276	90	43	332	855	449	405
Others*	3,961	2,521	232	331	662	1,486	1,670	1,552
Total	39,128	7,056	10,539	2,269	5,226	6,243	9,065	11,361

*Others Include: American shad, bluefish, blue crab, Atlantic menhaden, catfish, croaker, sheepshead, spotted seatrout, sharks and rays, spot, weakfish, river herring, white perch, striped mullet

Small Mesh Gill Net

The top five species harvested by small mesh gill net within the Northern Region were striped mullet, hickory shad, river herring, spot, and white perch. The average poundage harvested for all species within the Northern Region by small mesh gill net for the period 2002 through 2008 was 33,774 pounds per year (Table 15).

Table 15. Top five species harvested (lb) by small mesh gill net within the Northern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Striped mullet	14,147	3,248	6,870	5,659	7,916	4,990	14,019	8,121
Hickory shad	31,157	7,085	2,406	597	1,746	1,188	756	6,419
River herring	12,712	14,068	2,656	2,167	1,260	28	0	4,699
Spot	5,298	2,745	1,470	2,711	3,596	694	1,981	2,642
White perch	1,494	5,085	1,743	390	806	1,051	6,262	2,404
Others	15,682	11,962	4,206	4,421	6,749	9,194	14,202	9,488
Total	80,490	44,193	19,351	15,945	22,073	17,145	37,220	33,774

Others include: American shad, Atlantic menhaden, black drum, blue crab, bluefish, catfish, croaker, flounder, pigfish, pinfish, red drum, sharks and rays, sheepshead, Spanish mackerel, spotted seatrout, striped bass, weakfish.

Shrimp Trawl

The top four species harvested by shrimp trawl within the Northern Region were shrimp, blue crab, croaker, and flounder. The average poundage harvested for the top four species within the Northern Region by shrimp trawl for the period 2002 through 2008 was 5,334 pounds per year (Table 16).

Table 16. Top four species harvested (lb) by shrimp trawl within the Northern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Shrimp	7,875	5,172	9,374	1,952	118	57	2,852	3,914
Blue crab	1,404	1,112	488	1,227	2	251	66	650
Croaker	0	78	2,815	65	0	0	0	423
Flounder	433	134	1,500	41	0	316	0	346
Total	9,712	6,496	14,177	3,285	120	624	2,918	5,334

Fish Pot

The top four species harvested by fish pot within the Northern Region were white perch, catfish, blue crab, and American shad. The average poundage harvested for all species within the Northern Region by fish pot for the period 2002 through 2008 was 12,902 pounds per year (Table 17).

Table 17. Top four species harvested (lb) by fish pot within the Northern Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
White perch	12,033	29,389	9,056	3,036	2,978	11,856	13,073	11,632
Catfish	2,715	34	379	96	383	2,661	1,475	1,106
Blue crab	34	0	0	0	0	0	1,014	150
American shad	55	0	0	0	0	0	0	8
Other*	0	0	0	0	8	0	41	7
Total	14,837	29,423	9,435	3,132	3,369	14,517	15,603	12,902

*Other includes: finfish (misc) and shrimp

Central Region:

Crab Pot

The top five species harvested by crab pots within the Central Region were blue crab, flounder, miscellaneous shellfish, spotted seatrout, and red drum. The average poundage harvested for all species within the Central Region by crab pot for the period 2002 through 2008 was 24,724 pounds per year (Table 18).

Table 18. Top five species harvested (lb) by crab pot within the Central Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Blue crab	26,749	38,505	23,756	21,716	16,335	18,361	20,163	23,655
Flounder	1,002	870	1,035	1,114	320	557	228	732
Crustacean (misc)	9	86	217	97	72	58	120	94
Spotted seatrout	0	0	79	167	0	272	50	81
Red drum	0	0	52	0	86	158	107	58
Others	15	4	0	685	0	11	9	103
Total	27,775	39,465	25,139	23,779	16,813	19,417	20,677	24,724

*Other includes: pinfish, pigfish, croaker, weakfish, catfish, sheepshead, sharks, and rays.

Large Mesh Gill Net

The top five species harvested by large mesh gill net within the Central Region were flounder, red drum, bluefish, American shad, and sheepshead. The average poundage harvested for all species within the Central Region by large mesh gill net for the period 2002 through 2008 was 16,104 pounds per year (Table 19).

Table 19. Top five species harvested (lb) by large mesh gill net within the Central Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Flounder	19,782	17,659	16,656	8,064	4,960	7,590	5,990	11,529
Red drum	3,266	1,696	558	1,054	1,097	1,610	1,698	1,568
Bluefish	923	1,060	224	505	330	762	602	629
American shad	1,193	1,315	0	750	35	20	117	490
Sheepshead	1,531	502	367	39	28	510	282	466
Other*	3,398	2,078	935	1,201	419	854	1,066	1,422
Total	30,093	24,310	18,740	11,613	6,869	11,346	9,755	16,104

*Other includes: Atlantic menhaden, black drum, blue crab, croaker, hickory shad, striped mullet, pigfish, pinfish, river herring, sharks and rays, spotted seatrout, spot, striped bass, and weakfish.

Small Mesh Gill Net

The top five species harvested by small mesh gill net within the Central Region were spot, striped mullet, bluefish, flounder, and croaker. The average poundage harvested for all species within the Central Region by small mesh gill net for the period 2002 through 2008 was 62,583 pounds per year (Table 20).

Table 20. Top five species harvested (lb) by small mesh gill net within the Central Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Spot	58,267	28,497	42,994	25,249	16,038	10,073	14,363	27,926
Striped mullet	20,609	11,656	17,078	16,953	11,888	20,093	21,568	17,121
Bluefish	6,640	4,276	5,693	1,962	1,367	3,386	2,536	3,694
Flounder	2,609	7,527	5,137	2,642	1,427	3,037	1,943	3,475
Croaker	6,445	1,654	1,598	664	1,255	2,008	2,234	2,265
Others*	13,412	7,328	6,437	4,658	7,071	7,859	9,953	8,103
Total	107,982	60,938	78,937	52,128	39,046	46,456	52,597	62,583

*Other includes: American shad, Atlantic menhaden, black drum, blue crab, hickory shad, pigfish, pinfish, red drum, river herring, sharks and rays, sheepshead, Spanish mackerel, spotted seatrout, striped bass, weakfish, white perch.

Shrimp Trawl

The top four species harvested by shrimp trawl within the Central Region were shrimp, blue crab, flounder, and croaker. The average poundage harvested for the top four species within the Central Region by shrimp trawl for the period 2002 through 2008 was 7,845 pounds per year (Table 21).

Table 21. Top four species harvested (lb) with shrimp trawls within the Central Region, 2002-2008.

Species	2002	2003	2004	2005	2006	2007	2008	AVG.
Shrimp	19,095	4,100	6,966	7,213	9,280	3,677	2,175	7,501
Blue crab	927	189	0	581	200	7	15	274
Flounder	246	41	0	0	51	14	0	50
Croaker	0	0	0	78	61	0	0	20
Total	20,268	4,330	6,966	7,888	9,592	3,698	2,190	7,845

Recreational Commercial Gear License General Statutes and MFC Rules

General Statute:

G.S. 113-173. Recreational Commercial Gear License.

(a) License Required. -- Except as provided in subsection (j) of this section, it is unlawful for any person to take or attempt to take fish for recreational purposes by means of commercial fishing equipment or gear in coastal fishing waters without holding a RCGL. As used in this section, fish are taken for recreational purposes if the fish are not taken for the purpose of sale. The RCGL entitles the licensee to use authorized commercial gear to take fish for personal use subject to recreational possession limits. It is unlawful for any person licensed under this section or fishing under a RCGL to possess fish in excess of recreational possession limits.

(b) Sale of Fish Prohibited. -- It is unlawful for the holder of a RCGL or for a person who is exempt under subsection (j) of this section to sell fish taken under the RCGL or pursuant to the exemption.

(c) Authorized Commercial Gear. --

(1) The Commission shall adopt rules authorizing the use of a limited amount of commercial fishing equipment or gear for recreational fishing under a RCGL. The Commission may authorize the limited use of commercial gear on a uniform basis in all coastal fishing waters or may vary the limited use of commercial gear within specified areas of the coastal fishing waters. The Commission shall periodically evaluate and revise the authorized use of commercial gear for recreational fishing. Authorized commercial gear shall be identified by visible colored tags or other means specified by the Commission in order to distinguish between commercial gear used in a commercial operation and commercial gear used for recreational purposes.

(2) A person who holds a RCGL may use up to 100 yards of gill net to take fish for recreational purposes. Two persons who each hold a RCGL and who are fishing from a single vessel may use up to a combined 200 yards of gill net to take fish for recreational purposes. No more than 200 yards of gill net may be used to take fish for recreational purposes from a single vessel regardless of the number of persons aboard the vessel who hold a RCGL.

(d) Purchase; Renewal. -- A RCGL may be purchased at designated offices of the Division and from a license agent authorized under G.S. 113-172. A RCGL may be renewed by mail.

(e) Replacement RCGL. -- The provisions of G.S 113-168.1(h) apply to this section.

(f) Duration; Fees. -- The RCGL shall be valid for a one-year period from the date of purchase. The fee for a RCGL for a North Carolina resident shall be thirty-five dollars ($35.00). The fee for a RCGL for an individual who is not a North Carolina resident shall be two hundred fifty dollars ($250.00).

(g) RCGL Available for Inspection. -- It is unlawful for any person to engage in recreational fishing by means of restricted commercial gear in the State without having ready at hand for inspection a valid RCGL. A holder of a RCGL shall not refuse to exhibit the RCGL upon the request of an inspector or any other law enforcement officer authorized to enforce federal or State laws, regulations, or rules relating to marine fisheries.

(h) Assignment and Transfer Prohibited. -- A RCGL is not transferable. Except as provided in subsection (j) of this section, it is unlawful to buy, sell, lend, borrow, assign, or otherwise transfer a RCGL, or to attempt to buy, sell, lend, borrow, assign, or otherwise transfer a RCGL.

(i) Reporting Requirements. -- The holder of a RCGL shall comply with the biological data sampling and survey programs of the Commission and the Division.

(j) Exemptions. --

(1) A person who is under 16 years of age may take fish for recreational purposes by means of authorized commercial gear without holding a RCGL if the person is accompanied by a parent, grandparent, or guardian who holds a valid RCGL or if the person has in the person's possession a valid RCGL issued to the person's parent, grandparent, or guardian.

(2) A person may take crabs for recreational purposes by means of one or more crab pots attached to the shore along privately owned land or to a privately owned pier without holding a RCGL provided that the crab pots are attached with the permission of the owner of the land or pier.

(3) A person who is on a vessel may take fish for recreational purposes by means of authorized commercial gear without holding a RCGL if there is another person on the vessel who holds a valid RCGL. This exemption does not authorize the use of commercial gear in excess of that authorized for use by the person who holds the valid RCGL or, if more than one person on the vessel holds a RCGL, in excess of that authorized for use by those persons.

(4) A person using nonmechanical means may take shellfish for personal use within the limits specified in G.S. 113-169.2(i) without holding a RCGL.

(5) A person may take fish for recreational purposes by means of a gig without holding a RCGL.

(1997-400, s.5.1; 1997-456, s. 55.7; 1998-225, s. 4.21; 1999-209, s. 9; 2000-139, s.1; 2001-213, s. 2; 2003-340, s. 1.2; 2004-187, s. 4; 2005-455, s. 1.18.)

Marine Fisheries Commission Rules:

15A NCAC O3I .0101 DEFINITIONS

(c) Commercial Fishing Equipment or Gear. All fishing equipment used in coastal fishing waters except:

(i) Cast nets;

(ii) Collapsible crab traps, a trap used for taking crabs with the largest open dimension no larger than 18 inches and that by design is collapsed at all times when in the water, except when it is being retrieved from or lowered to the bottom;

(iii) Dip nets or scoops having a handle not more than eight feet in length and a hoop or frame to which the net is attached not exceeding 60 inches along the perimeter;

(iv) Gigs or other pointed implements which are propelled by hand, whether or not the implement remains in the hand;

(v) Hand operated rakes no more than 12 inches wide and weighing no more than six pounds and hand operated tongs;

(vi) Hook-and-line and bait-and-line equipment other than multiple-hook or multiple-bait trotline;

(vii) Landing nets used to assist in taking fish when the initial and primary method of taking is by the use of hook and line;

(viii) Minnow traps when no more than two are in use;

(ix) Seines less than 30 feet in length;

(x) Spears, Hawaiian slings or similar devices, which propel pointed implements by mechanical means, including elastic tubing or bands, pressurized gas or similar means.

15A NCAC 03O .0302 AUTHORIZED GEAR

(a) The following are the only commercial fishing gear authorized (including restrictions) for use under a valid Recreational Commercial Gear License:

(1) One seine 30 feet or over in length but not greater than 100 feet with a mesh length less than 2 1/2 inches when deployed or retrieved without the use of a vessel or any other mechanical methods. A vessel may be used only to transport the seine;

(2) One shrimp trawl with a headrope not exceeding 26 feet in length per vessel.

(3) With or without a vessel, five eel, fish, shrimp, or crab pots in any combination, except only two pots of the five may be eel pots. Peeler pots are not authorized for recreational purposes;

(4) One multiple hook or multiple bait trotline up to 100 feet in length;

(5) Gill Nets:

(A) Not more than 100 yards of gill nets with a mesh length equal to or greater than 2 1/2 inches except as provided in (C) of this Subparagraph. Attendance is required at all times;

(B) Not more than 100 yards of gill nets with a mesh length equal to or greater than 5 1/2 inches except as provided in (C) of this Subparagraph. Attendance is required when used from one hour after sunrise through one hour before sunset in internal coastal fishing waters east and north of the Highway 58 Bridge at Emerald Isle and in the Atlantic Ocean east and north of 77° 04.0000' W. Attendance is required at all times in internal coastal fishing waters west and south of the Highway 58 Bridge at Emerald Isle and in the Atlantic Ocean west and south of 77° 04.0000' W; and

(C) Not more than 100 yards of gill net may be used at any one time, except that when two or more Recreational Commercial Gear License holders are on board, a maximum of 200 yards may be used from a vessel;

(D) It is unlawful to possess aboard a vessel more than 100 yards of gill nets with a mesh length less than 5 1/2 inches and more than 100 yards of gill nets with a mesh length equal to or greater than 5 1/2 inches identified as recreational commercial fishing equipment when only one Recreational Commercial Gear License holder is on board. It is unlawful to possess aboard a vessel more than 200 yards of gill nets with a mesh length less than 5 1/2 inches and more than 200 yards of gill nets with a mesh length equal to or greater than 5 1/2 inches identified as recreational commercial fishing equipment when two or more Recreational Commercial Gear License holders are on board;

(6) A hand-operated device generating pulsating electrical current for the taking of catfish in the area described in 15A NCAC 03J .0304;

(7) Skimmer trawls not exceeding 26 feet in total combined width.

(8) One pound net used to take shrimp with each lead 10 feet or less in length and with a minimum lead net mesh of 1 1/2 inches, and enclosures constructed of net mesh of 1 1/4 inches or greater and with all dimensions being 36 inches or less. Attendance is required at all times and all gear must be removed from the water when not being fished. Gear is to be marked and set as specified in 15A NCAC 03J .0501.

(b) It is unlawful to use more than the quantity of authorized gear specified in Subparagraphs (a)(1) through (a)(8) of this Rule, regardless of the number of individuals aboard a vessel possessing a valid Recreational Commercial Gear License.

(c) It is unlawful for a person to violate the restrictions of or use gear other than that authorized by Paragraph (a) of this Rule.

(d) Unless otherwise provided, this Rule does not exempt Recreational Commercial Gear License holders from the provisions of other applicable rules of the Marine Fisheries Commission or provisions of proclamations issued by the Fisheries Director as authorized by the Marine Fisheries Commission.

History Note: *Authority G.S. 113-134; 113-173;*
Temporary Adoption Eff. August 9, 1994, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. February 1, 1995;
Temporary Amendment Eff. August 1, 1999; July 1, 1999;
Amended Eff. August 1, 2000;
Temporary Amendment Eff. August 1, 2000;
Amended Eff. April 1, 2009; July 1, 2006; November 1, 2005; August 1, 2002.

15A NCAC 03O .0303 RECREATIONAL COMMERCIAL GEAR LICENSE POSSESSION LIMITS

(a) It is unlawful to possess more than a single recreational possession limit when only one person aboard a vessel possesses a valid Recreational Commercial Gear License and recreational commercial fishing equipment as defined in 15A NCAC 03O .0302(a) is used, regardless of the number of persons on board.

(b) It is unlawful to possess individual recreational possession limits in excess of the number of individuals aboard a vessel holding valid Recreational Commercial Gear Licenses except as provided in Paragraph (f) of this Rule.

(c) It is unlawful for any person who holds both a Recreational Commercial Gear License and a Standard or Retired Standard Commercial Fishing License and who is in possession of identified recreational commercial fishing equipment as defined in 15A NCAC 03O .0302(a), to exceed the single recreational possession limit.

(d) It is unlawful for persons aboard a vessel collectively holding only one Recreational Commercial Gear License and any Standard Commercial Fishing License or Retired Standard Commercial Fishing License and who are in possession of any identified recreational commercial fishing equipment as defined in 15A NCAC 03O .0302(a), to exceed one recreational possession limit.

(e) It is unlawful to possess more than 48 quarts, heads on, or 30 quarts, heads off, of shrimp when only one person aboard a vessel possesses a valid Recreational Commercial Gear License and recreational commercial fishing equipment as defined in 15A NCAC 03O .0302(a) is used.

(f) It is unlawful to possess more than 96 quarts, heads on or 60 quarts, heads off, of shrimp if more than one person aboard a vessel possesses a valid Recreational Commercial Gear License and recreational commercial fishing equipment as defined in 15A NCAC 03O .0302(a) is used.

History Note: *Authority G.S. 113-134; 113-170.4; 113-173; 143B-289.52;*
Temporary Adoption Eff. August 9, 1994, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. February 1, 1995;
Temporary Amendment Eff. June 7, 1998;
Amended Eff. April 1, 1999;
Temporary Amendment Eff. July 1, 1999;
Amended Eff. July 1, 2006; August 1, 2000.

MEMORANDUM:

To: **N.C. Marine Fisheries Commission**
Define a Commercial Fisherman Committee
Louis Daniel

From: **Nancy Fish**
Don Hesselman

Subject: **Define a Commercial Fisherman Committee Meeting**

Date: **Jan. 19, 2012**

The Define a Commercial Fisherman Committee met at the Department of Environment and Natural Resources Regional Field Office, 943 Washington Square Mall, Washington, N.C. on Jan. 11, 2012 at 10 a.m. The following attended:

Committee:	Rob Bizzell - chair, Robbie Beasley, Sammy Corbett, Keith Bruno, Jack Cox, David Kielmeier, Ken Seigler and Billy Carl Tillett
Commission:	Darrell Taylor
DMF Staff:	Nancy Fish, Don Hesselman, Patricia Smith, Chris Bennett, Greg Judy, Lele Judy, Roz Camp, Jason Rock, Jon Anglemyer, Katherine Janell and Doug Mumford
Media:	Maureen Donald, Pamlico County News
Public:	There were approximately 25 public in attendance

Rob Bizzell chaired the meeting and opened by saying he convened the committee to examine the definition of a commercial fisherman. Chairman Bizzell explained there are no proposals at this point, and that the purpose of this meeting is to consider if the current definition needs to be refined and if so, to put a proposal together.

Bizzell told the committee anything we do here today is simply a suggestion for consideration by the Marine Fisheries Commission which will be meeting at the Crystal Coast Civic Center in Morehead City on Feb. 22-24. A report on this committee's work will be discussed at this meeting. If the commission decides the definition needs to be refined, it may have to submit a proposal to the General Assembly for consideration.

Bizzell explained whatever we decide on is not necessarily going to be acted on by the commission, but will be a guide to help them put their arms around the issue.

The committee was provided e-mails from Chris MaCaffity, Elton Parker and Ira Craft that had been sent to the commission office.

MODIFICATIONS TO THE AGENDA

There were no modifications to the agenda.

PUBLIC COMMENT

Terry Pratt, President of the Albemarle Fisherman's Association, said he'd been a fisherman for over 50 years and had watched government intervention reduce the number and ability of people to commercially fish. The definition that is in place is fine, he said. Pratt said the government was oppressive and that government intervention was not needed in our fishing business. If the commission wanted to help, he said, it could get rid of regulations. Pratt said that if a man wanted to fish and can get a license to fish from family or the eligibility pool, then let him try to fish. Some people are squeezed and cannot fish full time and have to have an outside job. We don't need to be confined by income levels or gear numbers, he said. If we have the time to go fish and the resource is there, we should be allowed to go fish without having to conform to some government standard that is concocted by the same man who defines overfishing.

Michael Peele, a commercial fisherman from Hatteras, said he was from a family that had been fishing for five generations. He said he thought commercial fishing meant that you could go fish for whatever you could catch. Now, he said, commercial fishing is overregulated – fishermen are told how, when, where and how much they can keep. Peele gave examples of how difficult it is to adhere to regulations in the federal shark fishery. He said people who come up with laws have to have some common sense. Peele encouraged the committee to let commercial fishermen fish and that the availability of fish mandates what they do. He closed by saying it seems like all fisheries are being made into limited entry fisheries and commercial fishermen need help.

Jeremy Braddy, a commercial fisherman from Beaufort, said commercial fishing is regulated to the point where hardly anybody can make a living at it. He said the rules and regulations are too strict. He said he has not commercially fished for years and now works with the state, but the state was not in good financial shape and he could lose his job and have to go back to commercial fishing and if he were able to retire from the state he would like to be able to commercially fish then. He asked if the state would compensate people for their commercial gear if their commercial licenses were taken away. Braddy said he had to take a vacation day to come to this meeting because it was being held during the day and he also said he felt the meeting was not advertised adequately and that was unethical.

Buck Cuthrell, a commercial fisherman from Aurora, said he had heard the committee was talking about taking back licenses that were not being used. He said it was a natural fact that the division that regulates commercial fishing is broke. He said he had heard that officers had to siphon gas from one vehicle to another just to be able to patrol. Cuthrell asked why the state is considering taking back the unused licenses when they bring raw income into the division. He said he has two grandchildren that he would like to pass his licenses on to them. He said licenses are a fisherman's property and cannot be

taken away. He asked if the state was going to reimburse people for their licenses. Cuthrell said rules and regulations are putting people out of business. He closed by saying if you define a commercial fisherman, then you also need to define a recreational fisherman.

Sean McKeon, Executive Director of the N.C. Fisheries Association asked the chairman to clarify if he had said that regardless of what is decided here that the MFC can do what it wants. Bizzell agreed that is what he said.

DISCUSSION OF ISSUES SURROUNDING EXISTING DEFINITION OF A COMMERCIAL FISHERMAN

Bizzell then said what compelled him to form the committee was there seems to be an abuse of the system – that the Standard Commercial Fishing License (SCFL) allows its holders to buy gear that is exempted from sales tax. Also, there are some SCFL holders who are really recreational fishermen that just hold the license because it allows them to keep commercial quantities of fish. He indicated that these fish are not being sold and, therefore, not being captured by the Trip Ticket Program and that was not good for the resource. He also said some recreational fishermen that hold a SCFL do sell their catch to cover the cost of their fishing trip and he does not believe that is what the SCFL is for. Bizzell also said there were many people who hold a SCFL but they are not using it, they are called latent license holders. He then said he would like to open the floor up for discussion to see where the committee thinks it needs to go or if it needs to go anywhere with these issues.

Ken Seigler passed out a license proposal he developed and said he had talked with several people and what he was passing out was a conglomeration of comments. He said this was not an attempt to take anyone's license away, but rather an attempt to foster growth and bring people into the industry. He said the industry was suffering from death by attrition from regulations and through losing participants.

Seigler said to induce participation the state should develop a Coastal Waters Endorsement to Sell (apprentice license) by putting the Recreational Commercial Gear Licenses into the SCFL Eligibility Pool. He said that would put about 5,000 licenses into the pool. He said the current eligibility pool had 1,800 licenses in it, but that it was difficult for the public to get them. He said he was proposing a mechanism to let new people use limited amounts of commercial gear and get experience in landing and selling fish and then, once they have proven themselves and have completed an apprenticeship, they can go to the eligibility pool and get a SCFL because they have experience. He reiterated that his suggestion was not about taking anybody's license away, but it is about telling people if you go through the apprenticeship program you can get a license. He also said the committee could set minimum requirements that if a person got an apprentice license they would have to have at least 50 trip tickets with at least 50 pounds of fish on each ticket, or some other range of numbers, and that would qualify that person to become a SCFL holder and a commercial fisherman. Seigler said this would foster new entrants into the industry.

Bizzell reviewed with Seigler about how his proposal would work, using himself as a hypothetical apprentice license recipient and Seigler said he would have to prove himself with a limited amount of gear and them he could be turned loose to use the full complement of gear that a SCFL allows. Bizzell pointed out that right now, because he holds a SCFL, that he can legally set nets, but that he has no business doing so because he does not know what he is doing with that gear.

Jack Cox asked Seigler to clarify what he meant by apprenticeship program and Seigler said you take someone off the street that does not know anything about commercial fishing but that wants a job. The apprenticeship program would give them some mechanism to get into the industry. Seigler said the apprentice could take a course or fish with an experienced fisherman and capture that effort on the trip ticket or the apprentice license for documentation. Cox said he could support that.

Keith Bruno said we have jumped right into having to fix something, but have not defined that there is really a problem. Bruno said the commission had put together a taskforce to look at licensing issues and that taskforce had reported back to the commission 14 months ago. He questioned why the issue was being revisited and said he agreed with that taskforce's findings that said no change was needed to the Recreational Commercial Gear License or the SCFL. Bruno said most of the people in the room were against making any changes to the SCFL, but he also offered that most commercial fishermen did not like change. He asked about the taskforce's recommendation to study latent effort. He said he wondered if there was a solution that someone was seeking a problem for here and he worries if the same argument that is being used for game fish is going to be used to get rid of the last of the commercial fishermen – get rid of the half that don't really matter now (latent license holders) and then get rid of the other half later.

Bruno said he does not see a problem with the latent licenses. He said the tax break was a tax problem and let someone else figure that out and it should not be a concern of this committee. He said there are unethical people out there and changing the definition of a commercial fisherman will not change that – he said that was a law enforcement problem. If you sell fish you are a commercial fisherman, if you keep your fish for personal consumption, you are not a commercial fisherman – a commercial fisherman sells fish. If someone doesn't sell fish, only let them keep a recreational limit. He said we didn't determine if there was a problem before we jumped into Ken Seigler's fix. Bruno said he did not see a problem with the current definition and a lot of other people don't see a problem either.

Bizzell responded to the question about what was different between this committee and the previous license taskforce. He said the process the taskforce considered was a cumbersome process to define a commercial fisherman based on dollars and looking at setting income levels to determine if you were a commercial fisherman. That was hard for people to put their arms around and they were uncomfortable with that.

But then, Bizzell said, it was mentioned by some people to look at effort, how much effort that they put into commercial fishing. If someone goes out and has 30 to 40 trips a year, then maybe they are a commercial fisherman. But in 2010, he said, there were 1,100

license holders who only made between one and 10 trips. Bizzell asked Division of Marine Fisheries License and Statistics Section Chief Don Hesselman how many SCFL holders had no trips in 2010 and Hesselman responded that approximately half, or 3,500 SCFL holders, had no trips reported and were considered latent license holders. Bizzell said he wondered why people would pay $200 every year to have the license and then not use it.

Keith Bruno said his wife had a license and he had a son that will want to fish one day. Bizzell responded that there was an eligibility pool that issued licenses if you could demonstrate a family history in fishing. Bruno indicated he did not have confidence that the pool would always be there, but if he had a license in hand he knew it was there if needed. He said he did not have confidence that the license pool would be there in the future.

Bizzell responded that Bruno had previously said that a commercial fisherman was someone who sells fish, but Bizzell said he had a recreational license and a SCFL – what am I? Bruno responded that he also had both licenses and why do we have to further define the SCFL? Bizzell said because we have 3,500 people who have a SCFL and are not using it.

Sammy Corbett said to Bruno, you say a commercial fisherman is someone who sells fish, how do you qualify those 3,500 SCFL holders who do not sell fish as commercial fishermen?

Bruno said North Carolina was a right-to-work state and by state law he did not know if we had the right to take someone's SCFL away. Bizzell responded that holding a SCFL was a privilege granted by the state – not a right.

Corbett said that the state probably did not want the latent SCFLs to go away because they were generating income for the state.

Robbie Beasley said he had received an e-mail from Elton Parker from Snead's Ferry who has held a SCFL for over 25 years so he would be able to fish when he retired. Beasley said we are weighing potential abuses against the potential for people to work in the future. Beasley said he was leaning towards letting people keep the SCFL, regardless of whether they were using it or not.

Billy Carl Tillett said he was old school and the system we have in place is not broken; so if it is not broken, don't fix it. Tillett asked what is the problem. He said back in the early 1990s, the General Assembly formed the Moratorium Steering Committee to look at fisheries issues. It was a lot of very hard work by some very qualified people and they came up with the system we have today. There were some hot arguments about who was a commercial fisherman and who wasn't. He said the issues were thoroughly vetted and the system that is in place now is working well. He asked if the Recreational Commercial Gear License was a problem and Bizzell responded that the committee was not talking about that license. Tillett said he ran a trawl boat for 20 years, but never had a license because the boat was licensed at that time. So when it came time for him to get a

license after the Fisheries Reform Act restructured the license system, he had to go through the license eligibility pool, but he has only used that license a few times. He said he feared we are trying to fix something that is not broken. He said he understood what Bizzell was saying about recreational people only holding the license so they could keep more than the commercial limit, but that is a completely different issue that needs to be looked at by itself.

Bizzell questioned how he would approach that problem and Tillett responded that Marine Patrol could help him address the issue.

Bizzell then asked the committee if recreational fishermen who hold SCFLs should be able to sell their catch to cover the cost of their fishing trip and was that not taking money out of the commercial fisherman's pocket? Is that not flooding the market with product and lowering the price? Tillett responded not necessarily, but that you would have to find out how much of that was going on if you can.

Bizzell said there are 3,500 people out there paying $200 a year for this license and not using it to sell fish. Tillett responded that is good, they are not catching fish. Bizzell pointed out that they are not turning in trip tickets, but you can't say they are not catching fish – we don't know that.

Bizzell then said there are also 1,000 fishermen that made 10 trips or less in 2010. Seigler pointed out that there could have been 25,000 pounds of fish in each of those 10 or less trips. Tillet said he was one of those, he just came in from a trip on a trawl boat and caught 17,000 pounds of flounder, but his license was not used. Tillett said the Moratorium Steering Committee designed a system that gave people what they needed and this committee needs to leave this issue alone. Tillett said that there was not a problem on the commercial end, but it sounded like there was a problem on the recreational end. He said he did not want to take away the system we have now to resolve a recreational problem.

Bizzell said if a recreational fisherman was selling fish to cover the cost of a trip or to save on fuel tax, but they held a SCFL, then it was a commercial problem. Tillett said it was a Division of Marine Fisheries problem and Bizzell responded then tell me how to address it.

Bizzell said it reminded him of a member of Congress several years ago that said he could not define pornography, but he knew it when he saw it. He said I can't define the problem, but when you have 3,500 people holding a SCFL and not using it then it makes me say what in the world are they doing with that. He said what if I suddenly show up after having my SCFL for 12 years and decide to start fishing commercially and I buy and set gill nets and I make a mess I will put a black eye on the commercial industry because I don't know what I'm doing and that is not right. It will create a problem for commercial fishermen as a whole. Bizzell said whenever you hear about one of these run around netters for speckled trout going into where some recreational fishermen are, they are not talking about that one netter when they complain, and they are talking about all commercial fishermen. That one netter has given the whole commercial industry a black

eye. The accident that happened with the trawler last year has given the whole striped bass trawl industry a black eye. If you get somebody out there that does not know what they are doing it is going to hurt the whole commercial fishing community and I do not want that.

Tillett responded you could have something like that happen with the recreational community just as easily, and Bizzell agreed, but said it tends to get more press with the commercial guys.

Corbett said his fear was not what would happen with this committee or the Marine Fisheries Commission, but what would happen in the General Assembly when they convened and they start talking about recreational game fish status. When you talk to legislators they say they need to know what a commercial fisherman is because they support the game fish bill. So if they hear that a commercial fisherman is someone who sells fish, then they are going to say if these 3,500 people are not selling fish, then their licenses need to go away. My fear is that all of this is going to come out of the General Assembly if we don't do something. Corbett said, we could do something like what Ken Seigler says, but we need to put a definition of some kind in place and I don't want it to just be a man that sells fish because they are going to use that against every license out there that is not working right now. And if you don't think they won't do it, he said, you call them and ask them - they are not on our side.

Bizzell said he was not looking at taking away licenses of real commercial fishermen. He said he did not think that was anyone's intent. But, he said, he had some concerns about it and there were recreational and commercial folks who had concerns about this. Do we want to leave it alone? Do we want to say you have to do more than 10 trip tickets a year? Something as low as 10 trip tickets a year will not hurt a real or part time commercial fisherman, but it will get rid of some of those out there that are causing problems, some of those out there that are abusing the system and he said he thought it would help the commercial industry as a whole.

Seigler asked how the state calculated how much gill net was used. Division of Marine Fisheries License and Statistics Section Chief Don Hesselman explained those numbers were calculated using the average yardage our biologist determined through the fish house sampling, multiplied by the number of commercial trips. The division also uses the gear information that fishermen provide in the gear surveys.

Cox asked how many license are retired. Hesselman responded there is a cap of 8,896 on SCFLs. Of that, there are roughly 7,400 that are purchased each year, leaving 1,450 in the Eligibility Pool. He said about 100 SCFLs are not renewed each year and about 100 SCFLs are issued by the Eligibility Board each year.

Bizzell said there was no real growth in the industry and that is where Ken Seigler's recommendation could come into play to bring more people in – not with the SCFL, but with an apprentice program. Seigler said you have to foster growth in business and Bizzell agreed.

Hesselman said we have always looked at the Shellfish License as an apprentice-type license that provided people with experience fishing, and that could be used to show experience in the fishing industry when applying for a SCFL from the Eligibility Pool. Hesselman also pointed out that the requirements to get a license from the pool are not overly strict – family history, experience as a crew member.

Tillett said that regulations have driven a lot of people out of fishing full time. You have to be careful. Go back to Moratorium Steering Committee's hard work – look at those 3,500 that you are worried about. Look at who those people are. Sounds like we are trying to create a problem to solve a problem and I am not comfortable with this.

Bizzell said he was not trying to create a problem and if this committee doesn't think there is a problem with me keeping my license and let me go out there and give you all a black eye and then five or six times a year sell the fish that I can sell to pay for the gas for my boat and reduce the price on commercial fisherman's fish – if ya'll think that is okay, then it is fine with me, he said. This is about you all.

Tillett asked has this situation hurt us. Bizzell said that the 1,100 fishermen that had one through 10 trips in 2010 sold over 3 million pounds of fish. Average that out and it is 300 pounds per trip - is that causing a problem with the price of your goods, Bizzell asked? Keith Bruno said you are talking about trips and not days and a croaker boat leaves out of Wanchese and catches 300,000 pounds of croaker; that boat could go out and fish 10 times that winter can bring in large catches, so the number of trips may appear low, but the catch can be substantial.

Bizzell reiterated that those 1,100 SCFL holders that had one through 10 trips in 2010 brought in about 3 million pounds of seafood.

Seigler said if a fisherman sold fish then he felt they were a commercial fisherman.

Corbett said if the 3,500 SCFL holders who did not have sales - if those licenses went away, then fees would increase for the SCFL holders that were left to make up for the revenue shortfall. Seigler said you are not considering what will come through the door if you open the pool up with the apprentice program.

Corbett then said if you want to look at actions that are hurting stuff, down in the southeast area of the state Marine Patrol has written 25 or 30 tickets in the last two weeks for people illegally selling oysters out of their yard. These people collect unemployment, and then get a $25 Shellfish License and post on the internet that they are selling oysters for $20 a bushel out of their yard. That hurts the legitimate dealers. Corbett said he had more heartburn with the $25 Shellfish License than he did with the SCFL, but that was probably a discussion for another day.

Bruno said the $25 Shellfish License was something that should be discussed.

Corbett said again, he did not have a problem with the SCFL, except for the issue of the 3,500 SCFLs that did not have sales and that legislators keep mentioning that to him.

Bizzell said if you want to get out in front of it now is the time to do so.
Corbett said he had talked with Marine Fisheries Commissioners Joe Smith and Bradley Styron and said they were fine with setting a threshold of 12 trip tickets to retain a SCFL, but then listening to Keith Bruno talking about croaker boats he wasn't so sure.

Bizzell said the committee could consider either trip tickets or poundage thresholds.

Cox said with almost any type of license you get you have to show you have been through an apprenticeship program that teaches people how to do the right thing. Cox then said that it was the part timers that were keeping dealers in business because the regulations have beaten them down so bad.

Bizzell asked how many trip tickets would a part timer do a year – 20 or 30? Cox responded that this past year he had made 26 fishing trips snapper-grouper fishing.

Bizzell then asked if 12 trip tickets would be a good threshold. Cox responded that snapper-grouper boats stay out four days at a time in this area and others can stay out five to eight days at sea, so you have to be careful.

Corbett said we could look at days instead of trip tickets as a qualifier. Bizzell said it would be the same concept. Bruno said a shrimp boat may only make eight trips, but they are multi-day trips. Tillett said a flounder boat may only go out seven or eight times a year and that is a full time, bonafide commercial boat.

Bizzell said maybe we need to look at days instead of trip tickets.

Seigler said that the 50 trip ticket threshold he had used in his proposal was arbitrary, but he also included 30 days at sea as the same equivalent. He said maybe days-at-sea was a better way of looking at it.

Tillett questioned what was being considered – that if a person does not have a certain number of trip tickets or a certain number of days at sea that they can no longer be considered a commercial fisherman?

Bizzell said let's pick the number 12 and say if a SCFL holder does not spend 12 days on the water commercially fishing, then he is not a commercial fisherman. We could count either 12 trip tickets or 12 days fishing as the standard, he said.

Corbett said it is easy to get a license from the eligibility pool and if you have a history with commercial fishing you should not have to go through an apprenticeship program.

David Keilmeier said the threshold should be an either/or option; either a 12 day or 12 trip ticket limit that could be verified on the trip ticket or through federal tax statements. He said you could produce your 1099 that showed you were a crewman on a boat.

Bizzell said that whenever a SCFL holder were to reapply for that license and they didn't have the data with the state to back up the 12 days at sea then they would have to provide that documentation. He then talked about if a corporate boat was out fishing then there would have to be some way to document all the crew members on that vessel.

Corbett asked if there could be extra boxes on the trip ticket that would document crew participation.

Tillett said let me give you my scenario again, here are my credentials – I am a fish dealer, I am an ex-fisherman, but sometimes my boat captain is not available. Some years I don't fish and some years I may only make a trip or two. But I still have a SCFL and I grew up fishing. So I would lose my license under the proposal being discussed.

Bizzell said if you lost your license you could apply back through the Eligibility Pool. Bizzell asked Tillett what is the big deal in keeping that license and Tillett responded, because I earned it - I have fished all of my life like a lot of other people have and I earned that right. Bizzell responded I did not earn mine and Tillett said maybe you don't need it. Bizzell agreed that he did not need his SCFL, but the thing is he said, that you don't earn the license, you pay for the license and if you stop paying for the license you lose the license. In five years you see that you need to get back into fishing then you apply to the Eligibility Pool and there should be no problem for someone like you getting another license.

Cox asked what if his boat captain gets sick and Tillett has to take the boat out and does not have time to go through the pool process. Bizzell responded that if he has a corporate boat there should not be a problem.

Keilmeier said licenses can be assigned to another person and that gives someone a chance at a job. That would document participation and help with unemployment. But that can be a double edged sword because you want to help people go back to work but you also want to protect the resource, he said.

Bizzell said you also want to protect the commercial industry and if your numbers keep decreasing then you will be overlooked and will not be considered on anything. So it is important to keep active people in the industry. What Ken Seigler suggested is a good way and the apprenticeship is a good way too. An apprentice would have more knowledge of commercial fishing than I do, even though I have had a license longer.

Cox said he knows a bunch of Coastal Conservation Association people that hold a commercial license and to him that is a problem. Bizzell said then let's get it out of their hands.

Tillett said if we get rid of the 3,500 that hold SCFLs but are not selling, that will reduce revenue to the division by $700,000 – I don't think the state will like that. Bizzell said that will have to be addressed somewhere along the way.

Tillett said the system is taking care of itself and if it is not, prove it. He said he did not think the burden of proof is there, that the committee has not proven that the recreational people we have been talking about are as good a fisherman as he is. Tillett said to Bizzell - I am picking on you.

Bizzell said I know, but doggone it I am going to go out there and set my nets and I might set them in the middle of the ICW and get a ticket, but in the meantime the press is going to come down there and say look what those commercial fishermen are doing.

Tillett said you will probably figure out you are in the wrong business and quit. Bizzell responded I might, but in the meantime, I am going to cause you and the rest of the commercial fisherman harm.

Bruno said, but you are not a true commercial fisherman and Bizzell responded, but how are you going to define me? Bizzell asked what is the difference between a part timer and a full-timer?

Bruno said maybe we should call you a dit dot or a ding batter. Bizzell laughed and said the problem is that we do not have any real definitions here. What's a part-timer? What's a full-timer? Bizzell said all a commercial fisherman is at this point in time, is somebody who can pay $200 for a license, or buy a license on the open market for $2,000. Are you commercial fishermen happy with that as a definition?

Seigler said for $2,000 you can put an unlimited amount of gear in a person's hands that knows absolutely nothing about it. Seigler talked about complaints about people new to the industry that string nets clear across waterways, blocking navigation and creating bad situations.

Tillett said even the most experienced people can screw up at times. Sometime those experienced people can get desperate and hungry and they take a chance to go do what they have to do. Bizzell said that can be true of many people and he said I know where you are coming from, desperate times result in desperate measures, but that is something we cannot predict. Tillett said I know, and that is why we can't predict that someone inexperienced is going to get a license and screw it up for everybody else.

Bizzell responded if I get out there I'm going to screw it up because I don't know what I am doing.

Tillett said I am going to tell you it will take care of itself because you will figure out your not suppose to be there. Bizzell said, but in the meantime I'm going to cause you all problems and right now commercial fishing does not need any problems. What Sammy Corbett was suggesting about getting out in front of this with some level of definition about what is a commercial fisherman is real appropriate. I'm seeing some stuff in Raleigh right now that I do not like and it is going to be a battle and I've got my little speech lined up to speak against game fish status.

Tillett asked what did they want at the General Assembly and Bizzell responded he did not know. Tillett asked how can we tell them anything if they don't know.

Bizzell said are there any other thoughts on this or what direction the committee wants to go with this, if any. We have heard some things about having to have 12 days on the water, which I don't think would impact the part-timer. We have heard about the apprentice program to develop a pathway for people who do not know anything about fishing to get into the industry. We don't have to develop that pathway right now, but could develop the concept. What does the committee want to do right now? If someone wants to make a motion they can do that.

Bruno said he would be very reluctant to change anything or anybody that has a license currently. If you got it, got it though the laws in place, you renew it, you pay money, it is yours. If you wanted to develop an avenue for new people to enter the industry through an apprenticeship program but still maintain the free trade of allowing someone to buy a license from someone. For example, if I want to buy Billy Carl's license and would need to go work with him for a certain number of days before I am qualified to buy that license as an apprentice. He talked about other states that have different types of apprenticeship programs. Bruno said he could get behind something like that but could not support messing with people who currently have the license. They will eventually go away, die off, or fix themselves.

Bizzell said unless they sell them. If I was on my deathbed and no one in my family wanted the license and I could get $100 for it, I'd sell it. Bruno responded that Bizzell couldn't because the buyer would have to go through an apprenticeship.

Bruno said as he was talking he realized the apprenticeship program would hurt people who buy licenses as an investment. Bruno said we are hurting somebody with anything we do.

Bizzell said, so what you are suggesting is that anytime a new individual enters into the commercial fishing realm and they get a brand new license, not any type of a renewal, they need to go through an apprenticeship program. Bruno said the apprenticeship should not be under the seller of the license because that individual will simply sign off that the apprenticeship was complete in order to sell the license.

Bizzell said we were talking about these 12 days, what if this was not something that would be enacted right now. We could say you have 2 years to show you are going to be a 12-day-a-year commercial fisherman. At the end of that 2 years if you haven't shown that 12 days of fishing, then we are not renewing your license.

Bruno asked Bizzell if he was going to run out tomorrow and buy some net and give the industry a black eye faster than you would if waited until you retired. Bizzell said no, but you have to think am I going to go out and commercially fish for 12 days a year. Bruno asked would you fish for 12 days and Bizzell replied I doubt it.

Corbett said he had one problem with that, because you are going to go over to your buddy and say write me out a trip ticket that says I landed fish every now and then so that I can get enough trip tickets that I can keep my license and then those fish are recorded on that trip ticket and they will count against the commercial quota and if you multiply that by the other 3,500 people who need to get trip tickets recorded, that could have a big impact.
Bizzell said that people would have to pay income tax on that so he did not think it was likely. It was pointed out there was not price on the trip ticket so that was not really accurate.

Tillett said there was one more problem, if the 3,500 latent license holders are not catching fish; they are leaving fish for the active commercial fishermen. If you put in a requirement that people have to fish 10 days to keep their license, you will make them catch fish they would not have caught in the first place.

Bizzell responded that they also might say it is not worth it. Tillett said then don't you give the state your $200 dollars.

Bizzell said even though I don't do it anymore, I don't have to pay sales tax and if I screw up and catch too many fish under the recreational bag limits then I can say here's my commercial license, I've got a get-out-of-jail-free card.

Division of Marine Fisheries License and Statistics Section Chief Don Hesselman said he wanted to speak to the apprenticeship program – it is a good idea, but I think we already have one. We have the Shellfish License for $25 and we have assignments and that is how people are getting into the industry now. We can track assignments on the trip tickets. So I think we are in good shape there. Hesselman also said the committee needed to separate the definition of a commercial fisherman from limited entry. I think we can define a commercial fisherman – it may not be one thing, but a suite of things that define who are the professional commercial fishermen, Hesselman said. But when you bring in the limited entry aspect of it and you remove licenses from people who currently hold them, that is what is scaring people.

Bizzell asked if the division didn't already have limited entry. Hesselman responded that yes, there was only a certain number of SCFLs available.

Bizzell told the committee, this is about you. Yes I am a commercial fisherman, but I'm not a commercial fisherman. So this is about what direction ya'll want to take with your profession. I would not want to hire a pharmacist from China that did not have a N.C. Board of Pharmacy license, even though they have a license in China. They are going to come over here and kill people and give the profession a black eye. That is what I am thinking about when I compare myself to you. Myself and the other 3,499 people who hold SFCLs and do not sell can really give your industry a black eye if given the opportunity. It is about whatever direction you all want to proceed with your profession and that is what it is all about.

Tillett asked about going to the legislature and bragging about what we have got and being proud of what we have accomplished. We have the best trip ticket program in the country so if the legislature is worried about what a commercial fishermen is, right there is it. Use what we have got. The Moratorium Steering Committee put a lot of work in the license restructure and did a heck of a job and it has come to help us. I wasn't a fan of it, Tillet said, in fact I was scared to death of it. But we have a lot to be proud of. At this point, however, you are not going to get me to agree to any changes.

Bizzell said look at perception versus reality. One of the laundry list of items this study committee is looking at is a trawler ban and that has come in because of that one accident last year. That is what it took to get it on the General Assembly's agenda to see about getting rid of it – one person, one time. They are looking at that, they are looking at a net ban. They are looking at game fish status. They are looking at a lot of anti-commercial legislation. That is the reality and I can't tell you what they are going to do – no one in this room can tell you, Bizzell said. But the thought of getting out in front of this a little bit is not a bad idea. But once again, it is your profession and this committee needs to tell me what direction you want to take with your profession.

Cox said that on the federal level there were 60 guys that participated in the back sea bass pot fishery and the South Atlantic Fishery Management Council decided there were too many people sea bass potting and the quota was being caught too fast so they decided to limit participation and fishermen who caught less than 2,500-pounds-a-year were booted out. I just don't want to do anything that stringent, Cox said. Some people might be relying on what appears to us to be a small amount of fish.

Bizzell responded that is a concern and what the General Assembly is looking at are things that will put people out of work and it will be hurtful and I have no desire to hurt anybody. I have a desire to help the resource first, and then help the fishermen, be it commercial or recreational. But again, this is your profession, he said. If you want to make a motion to do nothing or to do something let's go ahead and bring one forward and see where we take it.

PROPOSED MODIFICATIONS TO THE COMMERCIAL FISHERMAN DEFINITION

Motion by Ken Seigler that the Marine Fisheries Commission create an apprentice program that opens the eligibility pool to the general public with endorsements-to-sell (apprentice license) to create an avenue for a person to get a SCFL and set a 12-fishing-days-per-year standard to qualify for a SCFL – motion died for lack of a second.

Motion by David Kielmeier to require all individuals who held a SCFL during the 2010 license year that had no recorded sales transactions be required to have at least 12 days of documented fishing activity within a three-year time period in order to renew their licenses, seconded by Ken Seigler – motion carries 5-2.

Kielmeier said that he felt some people held the SCFL for speculation and maybe some people even think they will be able to sell their licenses back to the state, like they did in Virginia and Maryland, but he doesn't think that will happen. But, he said, for the sake of the industry, maybe it would be good for some of those licenses to go to people who would be active. Kielmeier said getting some younger people in the system may benefit the industry and three years gives people plenty of time to become compliant and it shows the commission is trying to address this problem. All of this legislation that is coming up, along with the striped bass trawl issue that happened last year, is stirring up a lot of dynamics and we should probably do something, Kielmeier said.

In discussing the above motion, Corbett said he wanted to make sure that crew could be captured on trip tickets, so the division could document fishing effort.

Tillett had concerns about being able to keep up with the crew. He said he saw a lot of problems with the motion.

Tillett said he was in a family business and his son had two licenses, but does not fish. He has bought two $200 licenses every year for 10 years at a cost of $4,000 and now you want to tell him you are taking his license because he has not gone fishing?

Bizzell questioned why he would buy two licenses if he does not use them. Tillett responded maybe we wanted to buy another trawl boat some day. Regardless, that is our right and something we have paid for.

Tillett asked Bizzell why he had a SCFL and Bizzell responded that he got a SCFL to harvest blue fin tuna.

Bizzell asked Tillett if his son commercially fished and Tillett said he did not, but he was in the commercial fishing business. Then Tillett asked why are we doing this, to prove a point? Bizzell responded we are not proving a point; we are trying to do something for the profession. If you think your profession is fine the way it is, I'm fine with that.

Motion by Ken Seigler that the Marine Fisheries Commission explore the concept of developing an apprentice program/license for persons who have no history in commercial fishing, and allowing an individual with an apprentice license to qualify for a SCFL to be issued through the eligibility pool once the apprenticeship is completed, seconded by David Kielmeier – motion carries 5-2.

Bizzell asked if there were any other issues and Corbett said the $25 Shellfish License was a problem because it undercuts dealers, and fishermen who use that license do not harvest a quality product and damage the oyster rock.

Motion by Sammy Corbett for the Marine Fisheries Commission to consider eliminating the $25 Shellfish License, seconded by Keith Bruno – motion carries 5-1, with 1 abstention.

Chairman Bizzell thanked the committee for their work and adjourned the meeting at approximately 12:15 p.m.

Committee Reports

Marine Fisheries
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission
Northern Regional Advisory Committee

FROM: Holly White
Katy West
Division of Marine Fisheries, NCDEQ

DATE: Jan. 13, 2016

SUBJECT: Northern Regional Advisory Committee Meeting December 10, 2015

The Northern Regional Advisory Committee met on Thursday, Dec. 10, 2015 at 5:30 p.m. at the Department of Environmental Quality Regional Office, Washington NC. The following attended:

Advisers: Riley Williams, Gilbert Tripp, Bill Van Druten, Everett Blake, Keith Bruno (Dell Newman, Sara Winslow, Jim Rice, Bill Mandulak, Raymond Pugh absent)

Staff: Kathy Rawls, Katy West, Trish Murphey, Holly White, Anne Deaton, Tina Moore, Sgt. Brian Long, Joe Facendola, Jimmy Johnson (NCDEQ)

Public: Jeff Miles

Everett Blake, serving as chair, called the meeting to order at 5:40 p.m.

Attendance lacked a majority of the duly appointed committee members, therefore the committee did not constitute a quorum according to the "Bylaws of the N.C. Marine Fisheries Commission" Article IX, Section 1. Without a quorum of members the committee could not vote to approve the agenda or minutes from September 2015.

PUBLIC COMMENT

Jeff Miles provided public comment concerning the decline in oysters, flounder, rock and perch. He does not think that these species are replenishing in the Tar River. He feels that fishermen overfish. He was concerned about the amount of gill net deployed in the Tar River during certain time periods. He noted in a discussion with Bill Van Druten the need for removal from the coastal waters discarded or abandoned fishing gear. He also asked where he could take oyster shells and staff provided him with current oyster shell recycling locations.

REVIEW OF COASTAL HABITAT PROTECTION PLAN

Anne Deaton presented the five year update on the Coastal Habitat Protection Plan. She explained the origin and purpose of the plan. She reviewed the substantial re-organization of the plan and described the six habitats; wetlands, shell bottom, soft bottom, hard bottom, submerged aquatic vegetation and the water column. She went through the changes to the plan and how it is shorter, more user friendly, and de-emphasizes regulations. She provided the value of habitats to fisheries, tourism, and ecosystem services, such as water quality enhancement and shoreline protection. Deaton went through the Coastal Habitat Protection Plan four priority issues that DEQ divisions will address, which included oyster restoration, living shorelines, sedimentation and development of habitat condition indicator metrics.

Gilbert Tripp contested the commercial fisheries economic estimate in the CHPP presentation, saying that it was low. Staff explained that the estimate was derived from DMF economic analysis and while it may not be the most accurate estimate it is included in the presentation to illustrate that the economic contribution of the commercial fishery is substantial. Trip expressed concern in the disappearance of the Core Point marsh and with land owners being able to build on the CAMA set back with a congressional waiver. He was displeased with the DEQ stance on the sand mine permit for Blounts Creek. Tripp also asked what to do with reef tires that are washing up on his property. Staff provided him with a contact that will come and pick them up.

Riley Williams expressed concern about the strength of the 2015 CHPP plan compared to the old plan for enforcement purposes. He noted without strong rules how do you make things happen. Deaton explained that the DEQ does not support any new regulatory actions in the updated plan. In the past, implementation plan actions that were completed were primarily non-regulatory. Compliance with existing rules is not considered new regulations.

Everett Blake asked if we are working with the NCSU Agriculture program when creating this document. Deaton did not believe that we were. Blake suggested that we contact NCSU because farmers upstream are becoming more aware of the effects downstream. Blake also asked if we are working with coastal counties planning boards with regards to runoff. Deaton explained that we were not at the moment but once the plan is approved staff will be reaching out to these boards.

Van Druten wanted a clarification on the definition of shellfish sanctuary, better science on the status of oyster reefs and the impacts of the dermo virus and boring sponges. He was also concerned with the runoff from hog and poultry farms as well as agricultural pesticides and their impact on sensitive life stages of marine organisms.

The committee moved to support the draft 2015 Coastal Habitat Protection Plan by consensus. They also wanted to see more efforts to circulate the plan throughout the state and to a diversity of agencies.

REVIEW OF OYSTER FISHERY MANAGEMENT PLAN AMENDMENT 4 AND HARD CLAM FISHERY MANAGEMENT PLAN AMENDMENT 2

Tina Moore, FMP co-lead, gave the committee the option to discuss each issue of the plans as she came to it in the presentation or to review issues after the presentation. The committee decided to address each issue as she came to it in the presentation. Moore began with a description of the management units, stock status, and status of both fisheries as well as private culture. She also discussed the socioeconomic status for both species. She discussed habitat enhancement using oysters. She also reviewed the environmental factors for both species se well as the different threats to the environments of both species. Moore then explained that three issues were discontinued due to legislative action. These were the use of GPS coordinates instead of a survey for lease boundaries, the Core Sound lease moratorium and redefining off bottom culture.

The committee moved to support the DMF recommendation by consensus on all issues **except** the following:

Hard Clam FMP-Mechanical Clam Harvest. Moore reviewed the issues of management of public mechanical clam harvest.

The committee recommended allowing mechanical clam harvesters to have access to the bottom before maintenance dredging occurs. Additionally, they added that mechanical clam harvesters should be provided reasonable notification or prior notice before dredging activity occurs.

Both Plans (Private Culture)-Lease Modifications. Moore provided a history of the lease changes through time and through earlier plans. Options were divided into three sections; production, acreage, and reissuance of leases.

The committee did not reach a consensus recommendation. Committee felt this was a very complex issue with many sub-issues beyond their expertise.

Both Plans-Shading Shellstock. Moore reviewed the issue of requiring shading for shellstock and explained that division staff worked with the advisory committee to develop shading criteria that would be implemented by proclamation for flexibility.

The committee recommended status quo (no shading) by consensus. The committee felt that this issue was between the dealer and fishermen.

Moore concluded by briefly reviewing the research recommendations.

MARINE FISHERIES COMMISSION UPDATE

Holly White reviewed the actions from the Nov. 18-20, 2015 Marine Fisheries Commission business meeting. Williams questioned what data was used to set the 6 inch mesh size for gill nets in the MFC flounder supplement motion.

MISCELLANEOUS

The committee agreed by consensus that the work and service of Bill Van Druten on the advisory committee be recognized by the MFC at the next business meeting. He had opted not to seek reappointment to the committee.

The meeting was adjourned at 10:30 p.m.

Cc:
Catherine Blum
Mike Bulleri
Scott Conklin
Dick Brame
Louis Daniel
Charlotte Dexter
Jess Hawkins
Brad Knott
Dee Lupton
Nancy Marlette
Phillip Reynolds
Jerry Schill
Gerry Smith
District Managers
Committee Staff Members
Marine Patrol Captains
Section Chiefs

Marine Fisheries
ENVIRONMENTAL QUALITY

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Governor

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Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission
Southern Regional Advisory Committee

FROM: Trish Murphey
Division of Marine Fisheries, NCDEQ

DATE: Dec. 21, 2015

SUBJECT: Southern Regional Advisory Committee Meeting

The Southern Regional Advisory Committee met at 5:30 p.m. on Wed. Dec. 9, 2015 at the Department of Environmental Quality Regional Office, 127 Cardinal Drive Ext., Wilmington. The following attended:

Advisers: Chris Hunt, Tom Smith, Charles Griffin, Fred Scharf, Amy Dickson, Randy Proctor, Phillip Smith and Pam Morris

Absent: Bob Lorenz and Ron McPherson

Commissioners: Chairman Sammy Corbett

Staff - Trish Murphey, Nancy Fish, Tina Moore, Anne Deaton, Chris Stewart, Joe Facendola, Ann Markwith, Capt. Jason Walker, Jimmy Johnson, Mark Etheridge

Public: Rachel Flanagen, Nancy Brechtlein, Elain Brill, Henry Whitney

Fred Scharf, serving as chair, called the meeting to order.

MODICATION TO THE AGENDA

Tom Smith made a motion to approve the agenda. Charles Griffin seconded the motion. The motion passed unanimously.

APPROVAL OF MINUTES

Randy Proctor made a motion to approve the Sept. 23, 2015 minutes. The motion was seconded by Chris Hunt. The motion passed unanimously.

PUBLIC COMMENT

Sammy Corbett, Marine Fisheries Commission Chairman, talked about the Shellfish License and the negative impact the $50 license was having on the economically important oyster resource. He asked the committee to consider limiting holders of the Shellfish License to two bushels for areas south of the Highway 58 Bridge. He said the original intent of Shellfish License was not to be a meant to be a full time license. He also said the culling tolerance for oysters needed to be lowered from 10 percent to 5 percent to protect the resource.

REVIEW OF OYSTER FISHERY MANAGEMENT PLAN AMENDMENT 4 AND HARD CLAM FISHERY MANAGEMENT PLAN AMENDMENT 2

Tina Moore, FMP co-lead, gave the committee the option to discuss each issue of the plans as she came to it in the presentation or to review issues after the presentation. The committee decided to address each issue as she came to it in the presentation.

Moore began with a description of the management units, stock status, and status of both fisheries as well as private culture. She also discussed the socioeconomic status for both species. She discussed habitat enhancement using oysters. She also reviewed the environmental factors for both species se well as the different threats to the environments of both species.

Moore then explained that three issues were discontinued due to legislative action. These were the use of GPS coordinates instead of a survey for lease boundaries, the Core Sound lease moratorium and redefining off bottom culture.

Oyster FMP-Shallow Bays. Moore reviewed the issue of reopening the shallow bays. Phillip Smith asked if anyone was pushing to do anything in the shallow bay areas. Scharf asked about the six week time frame. Chris Hunt explained that the number one sales of oysters is during Thanksgiving and Christmas. Moore told the group that other dealers liked the idea of splitting the six week season.

Pam Morris made a motion to support status quo for shallow bay management. The motion was seconded by Tom Smith. The motion passed unanimously.

Chris Hunt made a motion to change the harvest timeframe for deep bays to Nov. 15 through Nov. 30 and Dec. 15 through the end of the six week. The motion was seconded by Pam Morris. The motion passed unanimously.

Oyster FMP-Supplement A. Moore reviewed the issue of adopting the 26 percent trigger to manage the mechanical oyster harvest in the northern region. Scharf asked about the process of the supplement. Moore explained that the supplement will go away unless it is adopted through the Oyster Amendment 4. Pam Morris asked about the differences between the division recommendation and the advisory committee recommendation, specifically the term ground truth which is in the division's recommendation. Scharf explained that ground truthing is implied in the advisory committee's recommendation. Moore also explained that the trigger is not specific to the bays but also included the sound as well. Scharf asked how long the division has been sampling. Moore told him five or six years and that this is real time sampling, where we sample where the fishermen are fishing.

Pam Morris made a motion to support the advisory committee recommendation. The motion was seconded by Amy Dickson. The motion passed unanimously.

Oyster FMP-Hand Harvest Limits. Moore reviewed the issue of different hand harvest limits in the state. Scharf asked when it changed in the northern region. Moore explained that the change came through amendment 2 in 2008.

Pam Morris made a motion to support the division and advisory committee recommendations. The motion was seconded by Chris Hunt. The motion passed unanimously.

Oyster FMP-Southern Effort Impacts. Moore explained the issue of southern region harvest impacts on oysters and the damage that has incurred on the southern region oyster resource. Chris Hunt talked about the oysters that come into his fish house for purchase and said they were often full of garbage. He has turned down bags from fishermen because of the quality. During 2010 through 2012, fishermen had no idea how to oyster. Culling tolerance of five or 10 percent will make no difference. Brunswick County is torn up already. Morris felt that the southern region needs to be differentiated from the northern region and that line should be south of the Highway 58 Bridge. She also talked about oyster maps provided by Gene Ballance and why can't that information be used. Moore explained that those maps only provide a snap-shot in time. Morris stated that it still shows where oyster are located. Anne Deaton, Habitat Enhancement staff explained that the division also has more recent mapping data but that follow up mapping and field sampling are needed to assess change. Scharf stated that having an index in the southern region is critical.

Pam Morris made a motion to support the division recommendation and clarify that the southern region be defined as waterbodies located south of the Highway 58 Bridge. The motion was seconded by Tom Smith. The motion passed unanimously.

Both Plans-Shellfish License. Moore reviewed the issue of eliminating the shellfish license. Morris explained that she is member of the Standard Commercial License Eligibility board and that shellfishermen already use their shellfish license for eligibility for a standard commercial license. Morris stated that everyone should have a standard commercial license but the shellfish license is a cheap means to get a standard commercial license through the eligibility board. Joe Facendola, FMP co-lead explained that we are seeing an increase in shellfish license holders in the southern region which is responsible for the majority of the landings in the south. We are also seeing a reduction in the number of bushels per trip in the southern region.

Tom Smith made a motion to support the division recommendation. The motion was seconded by Randy Proctor. The motion passed unanimously.

Hard Clam FMP-Recreational Limits. Moore preceded into discussion of issues within the Hard Clam Fishery Management Plan Amendment 2. She began with the issue of increasing the recreational harvest limit. Tom Smith asked about the thought of why to go to 600 with up to six recreational fishermen in a boat. Moore explained that an advisory committee member who has a for-hire business wanted 600 for when he takes six people out. The division recommended 400

clams per boat, so the committee compromised and recommended 500. Since that recommendation, the advisory committee member explained that harvesting 600 is a lot of work and so the committee changed its recommendation to the same as the division of 400 clams.

Amy Dickson made a motion to support the division/advisory committee recommendation. The motion was seconded by Randy Proctor. The motion passed unanimously.

Hard Clam FMP-Power Hauling. Moore reviewed the issue of using power hauling equipment to hand harvest hard clams. Scharf thought that this would be an enforcement issue. Facendola explained that this came from a couple of older gentlemen who requested it to make lifting clams into the boat easier.

Pam Morris made a motion to support status quo. The motion was seconded by Tom Smith. The motion passed unanimously.

Hard Clam FMP-Mechanical Clam Harvest. Moore reviewed the issues of management of public mechanical clam harvest. Morris advocated for the rotation of areas. She asked why shut it down if it isn't being used. It will be available to be used if it needed.

Pam Morris made a motion to support the advisory committee recommendation with the exception of removing the Pamlico Sound area in rule. The motion was seconded by Chris Hunt. The motion passed unanimously.

Both Plans (Private Culture)-Protection of Lease and Franchise Rights. Moore moved on to the private culture issues addressed in both fishery management plans. She began with discussion of protecting shellfish lease and franchise rights. Smith stated that fines should be set by the judge. A reasonable judge will make appropriate fines. The committee also discussed the deterrent of a first conviction resulting in a revocation of licenses.

Tom Smith made a motion to not increase the minimum penalty and include bottom leases. The motion was seconded by Pam Morris. The motion failed 4 to 4 due to a tied vote.

Chris Hunt made a motion to include protection to all shellfish leases and franchises, not just those with water column amendments. The motion was second by Amy Dickson. Motion passed unanimously.

Both Plans (Private Culture)-Adverse Impact to Submerged Aquatic Vegetation. Moore reviewed the issue of lease impacts to sea grass beds.

Pam Morris made a motion to support the division and advisory committee recommendation. The motion was seconded by Randy Proctor. The motion passed unanimously.

Both Plans (Private Culture)-Brunswick County Lease Moratorium. Moore then reviewed the issue of the Brunswick County lease moratorium.

Pam Morris made a motion to support the division and advisory committee recommendation. The motion was seconded by Randy Proctor. The motion passed unanimously.

Both Plans (Private Culture)-Lease Modifications. Moore provided a history of the lease changes through time and through earlier plans. Options were divided into three sections; production, acreage, and reissuance of leases.

Scharf asked about availability of leases that were returned to the state. Deaton explained that the section chief of the Habitat Enhancement section supports the concept. It is becoming harder to find bottom that fits the lease criteria. Morris explained that the old central regional advisory committee spent a lot of time on this issue and supported the 5 acre/10 acre rule. She thought that everything should be left alone. She was not sure she supported the "act of God" aspect. Production requirements should be met every year and did not understand why there was a need for extensions. She did state that leases that had been returned to the state remain delineated for a period of one year.

Pam Morris made a motion to support status quo and allow non-productive leases returned to the state to remain delineated for one year before being reissued to other shellfish growers and to improve public notice of proposed lease applications. The motion was seconded by Phillip Smith. Motion passed unanimously.

Both Plans-Shading Shellstock. Moore reviewed the issue of shading shellstock and explained that division staff worked with the advisory committee to develop criteria that would be implemented by proclamation for flexibility.

Randy Proctor made a motion to support the division and advisory committee recommendation. The motion was seconded by Charles Griffin. The motion passed unanimously.

Moore reviewed the research recommendations from both plans.

REVIEW OF COASTAL HABITAT PROTECTION PLAN

Deaton presented the five year update on the Coastal Habitat Protection Plan. She explained the origin and purpose of the plan. She reviewed the organization of the plan and described the six habitats; wetlands, shell bottom, soft bottom, hard bottom, submerged aquatic vegetation and the water column. She went through the changes to the plan and how it has been made shorter, more user friendly, and de-emphasizes the need for additional regulations. She provided the value of habitats to fisheries, tourism, and ecosystem services, such as water quality enhancement and shoreline protection.

Morris asked how values were generated. Deaton explained that there were several studies documenting the value and explained the methods used. Deaton continued on to explain the past accomplishments of the plan. She reviewed the goals and recommendations. Morris asked about the mapping done by Shellfish Sanitation and that this plan should make water quality better but has not seen any differences. Deaton explained that some water quality improvement actions that were recommended in previous CHPP plans were implemented and contributed to water

quality improvements. However, some actions have been reversed and other existing rules, like the coastal stormwater and buffer rules that protect water quality and wetlands, were weakened during the 2015 legislative session.

Deaton went through the priority issues that DEQ divisions will address, which included oyster restoration, living shorelines, sedimentation and development of indicator metrics. Morris asked about the oyster recycling program. Deaton explained that the program had been cut due to budget issues but that the division still maintains many of the existing shell drop-off sites with existing staff. She also mentioned that the Jean Preston Marine Oyster Sanctuary legislation could result in additional funding for oyster restoration and enhancement activities. She also mentioned that the UNC-Wilmington hatchery program will be receiving funding for enhancing their existing brood stock program.

Tom Smith made a motion to support the draft 2015 Coastal Habitat Protection Plan. The motion was seconded by Pam Morris. The motion was seconded by Randy Proctor. The motion passed unanimously.

MARINE FISHERIES COMMISSION UPDATE

Trish Murphey reviewed the actions from the Nov. 18-20, 2015 Marine Fisheries Commission business meeting.

PLAN AGENDA ITEMS FOR NEXT MEETING

Charles Griffin asked for information concerning editing trip tickets to accommodate the 34 line that breaks the southern and northern quota for blacknose shark. He was also interested in discussing the issue of cutting sharks at sea. He was also interested in discussing king mackerel bycatch in the shark fishery.

Pam Morris made a motion to adjourn. The motion was seconded by Randy Proctor. The motion passed unanimously.

Cc:

Catherine Blum	Jess Hawkins	Gerry Smith
Mike Bulleri	Brad Knott	District Managers
Scott Conklin	Dee Lupton	Committee Staff Members
Dick Brame	Nancy Marlette	Marine Patrol Captains
Louis Daniel	Phillip Reynolds	Section Chiefs
Charlotte Dexter	Jerry Schill	

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Director

MEMORANDUM

To: Shellfish/Crustacean Advisory Committee

From: Trish Murphey
Anne Deaton
Division of Marine Fisheries, NCDEQ

Date: Dec. 18, 2015

Subject: Shellfish/Crustacean Advisory Committee Meeting

The Shellfish/Crustacean Advisory Committee met at 5:30 p.m., Tuesday, Dec. 8, 2015 at the Division of Marine Fisheries Central District Office at 5285 Highway 70 West, Morehead City, NC. The following attended:

Advisers: Joe Shute, Janet Rose, Elaine Davis, Jim Hardin, Mark Hooper, Ted Wilgis

Absent: Perry Beasley, Bruce Morris, Martin Posey, Tony Tripp, Adam Tyler

Staff: Trish Murphey, Anne Deaton, Steve Murphey, Garry Wright, Tina Moore, Joe Facendola, Tere Barrett, Major Dean Nelson, Patrick Gillum

Public: Chris Elkins, Lauren Morris, David Kielmeier, J.C. Davis, Wanda Beasley

Joe Shute, serving as chair, called the meeting to order. A quorum was not present at the time of the call to order. However a quorum was eventually present.

MODIFICATIONS TO THE AGENDA

No modifications were made and the agenda was approved by consensus.

APPROVAL OF MINUTES

The committee approved the minutes by consensus.

PUBLIC COMMENT

Chris Elkins, Coastal Conservation Association (CCA) of North Carolina, focused his comments on major issues of the oyster and hard clam fishery management plans. CCA opposes the opening of shallow bays to dredging but does not oppose dredging on leases and requests a phase-out on oyster dredging on natural reefs. Regarding the 26 percent trigger, if oyster

dredging is eliminated, the expense of monitoring would also end. However CCA supports the monitoring if oyster dredging is continued. Hand harvest limits in the oyster fishery were put in place to encourage hand harvest in the northern region of the state. However, it has not worked and recommends that the hand harvest limit be the same state wide. For the harvest effort impacts in the southern portion of the state, the CCA relies on the expertise of the division but believes some action is needed. The CCA has no comment on the recreational harvest limit for hard clams, and does not support the use of power hauling in the hand harvest of hard clams and requests clam harvest by mechanical means be closed in areas not fished.

Lauren Morris, NC Fisheries Association (NCFA), takes exception that dredges are more destructive to the oyster stock. To address elimination of the shellfish license, the NCFA has received repeated calls to eliminate the shellfish license and complaints that these license holders are given the same access to the fishery at 10 percent of the investment. There are also claims that the shellfish license is contributing to black market oyster sales. NCFA supports the Brunswick County Fishermen's Association recommendation to reduce the oyster harvest limit to two bushels for shellfish license holders because of impacts from these license holders on the oyster stock, which disadvantages those that have been in the fishery longer and with greater investments. This also limits impact of black market sales on the market. This addresses the concerns surrounding the license while maintaining some access to lower income fishermen and does not require a statutory change. NCFA also recommends that Marine Patrol examine the illegal oyster harvest in the southern region. NCFA also supports the Coastal Habitat Protection Plan which has been neutered to ineffectiveness and to consider that water quality also has impacts on the oyster stocks and is important to protect.

REVIEW THE OYSTER FISHERY MANAGEMENT PLAN AMENDMENT 4 AND HARD CLAM FISHERY MANAGEMENT PLAN AMENDMENT 2

Tina Moore, FMP co-lead, presented both the oyster and hard clam plans to the committee. She described the management units, stock status and status of the fisheries and private culture for both species. She also discussed the socio economic status for both species as well as the habitat value of oysters as well as environmental factors for both species, including physical threats, biological threats and water quality degradation. She described three issues initially addressed by the plans but were discontinued for discussion due to passage of Session Law 2015-241. These were issues concerning using GPS coordinates instead of surveys of lease boundaries, the Core Sound lease moratorium, and redefining off bottom culture. She described four issues in the oyster plan; two issues concerning both species and several issues regarding private culture, also in both plans. She finished by reviewing the research recommendations for both plans.

Chairman Shute opened the meeting up to discussion and vote on the different issues.

Oyster FMP-Shallow Bays. Mark Hooper asked about the difficulties of completing a dredge study. Moore explained that it would be difficult. The division has done some dredge impact studies looking at dredge weights. Ted Wilgis explained that the Advisory Committee thought there was a need for more information. Moore explained that since this study is a management recommendation, the division would be required to do it.

Mark Hooper made a motion to support the NCDMF position. Elaine Davis seconded the motion. The motion passed unanimously.

Oyster FMP-Supplement A. Hooper asked about the sampling protocols. Tina went through the sampling protocol that occurs in the four areas within Pamlico Sound. She explained that 100 oysters are measured per sample site within each area for an overall percentage of legal oysters. The division samples using commercial dredge gear and samples are taken where the fishery is being prosecuted.

Mark Hooper made a motion to support the Advisory Committee position. Ted Wilgis seconded the motion. The motion passed unanimously.

Wilgis requested that a note be taken back to the committee concerning the dredge study within the shallow bays.

Oyster FMP-Hand Harvest Limits. No discussion.

Jim Hardin made a motion to support the NCDMF/Advisory Committee position. Mark Hooper seconded the motion. The motion passed 4-1.

Oyster FMP-Southern Effort Impacts. No discussion.

Janet Rose made a motion to support the Advisory Committee position. Mark Hooper seconded the motion. The motion passed unanimously.

Both Plans-Shellfish License. Janet Rose asked about the rest of the state because she had concerns of impacting license holder in the northern region. Trish Murphey, FMP co-lead explained that a Standard Commercial Fishing License is required to mechanically harvest oysters and that the division recommendation should have minimal impact to the northern oyster fishery and that the majority of oyster harvest trips were made by Standard Commercial Fishing License holders, though there are trips made by shellfish license holders. Moore explained that this is really a southern area issue. Elaine Davis wanted to make sure that hand clammers could still clam with a shellfish license.

Elaine Davis made a motion to support the NCDMF position. The motion died due to lack of a second.

The committee discussed the ability of shellfish license holders to apply for Standard Commercial Fishing Licenses and they may also buy them from others.

Janet Rose made a motion to support the Advisory Committee position. Ted Wilgis seconded the motion. The motion passed 4-1.

Hard Clam FMP-Recreational Limits. No discussion

Mark Hooper made a motion to support the NCDMF/Advisory Committee position. Jim Hardin seconded the motion. The motion passed unanimously.

Hard Clam FMP-Power Hauling. No discussion

Elaine Davis made a motion to support the NCDMF/Advisory Committee position. Mark Hooper seconded the motion. The motion passed 4-0 with one abstention.

Hard Clam FMP-Mechanical Clam Harvest. Davis asked about the reason to remove Pamlico Sound from the mechanical harvest area rule. Moore explained that the area is no longer in use. When it was opened, only large boats could fish it due to water depths. It was also difficult for boats to get through the Wainwrights and that after a couple of years, production from the area was very low.

Ted Wilgis made a motion to support the NCDMF/Advisory Committee position of Status quo and removal of Pamlico Sound mechanical harvest in rule. Mark Hooper seconded the motion. The motion passed unanimously.

Janet Rose made a motion to support the Advisory Committee position of taking latitude and longitude coordinates in New River and to allow mechanical clam harvesters access to the bottom before maintenance dredging occurs. Jim Hardin seconded the motion. The motion passed unanimously.

Both Plans (Private Culture)-Protection of Lease and Franchise Rights. Jim Hardin asked about the first violation and how it compares to stealing crab pots. He stated that he thought there should be a minimum fine, theft is theft. Major Dean Nelson stated that the fines are up to the discretion of the judge. Murphey explained that the division is also working on this for other fishing gear too.

Jim Hardin made a motion to support the NCDMF/Advisory Committee of modifying G.S. 113-208 and G.S. 113-269. Ted Wilgis seconded the motion. The motion passed unanimously.

The committee had some discussion of license revocation on the first offense. The recommended rule change by both the division and the Advisory Committee will result in a revocation of a license on the first offense. It was noted that if the suspect does not have a license there is nothing to revoke.

Mark Hooper made a motion to support the NCDMF/Advisory Committee position. Ted Wilgis seconded the motion. The motion passed 4-1.

Both Plans (Private Culture)-Adverse Impact to Submerged Aquatic Vegetation.

Mark Hooper made a motion to support the NCDMF/Advisory Committee position. Jim Hardin seconded the motion. The motion passed unanimously.

Both Plans (Private Culture)-Brunswick County Lease Moratorium. Rose asked why the division did not support removal of the moratorium. Moore explained that it is a small area with a lot of closures from rainfall. Wilgis added there was not a lot of options to consider.

Mark Hooper made a motion to support the NCDMF/Advisory Committee position. Elaine Davis seconded the motion. The motion passed unanimously.

Both Plans (Private Culture)-Lease Modifications. Hooper asked about differences of acreage due to being for clams or oysters. He thought that it was five acres for clams and 10 acres for oysters. Moore stated that she did not think that was the case. Hardin asked Wilgis about the differences between the division recommendations and the advisory committee recommendations. Steve Murphey, Section Chief for Habitat Enhancement explained that allowing 10 acres in the southern region would restrict public bottom. Even if restricted to five acres, a person may hold up to 50 acres total. Wilgis explained the thought was an applicant could apply one time instead of multiple times.

Mark Hooper made a motion to support the NCDMF position of establishing a rule to support extension where "Acts of God" prevent a lease holder from making production, with a two year extension and only one extension allowed per term and Status quo for lease acreage. Elaine Davis seconded the motion. The motion passed unanimously.

The committee discussed the advisory committee recommendation on allowing a lease returned to the state to remain delineated. Hooper commented that one shellfish per meter meets the division's definition of a natural shellfish bed and that to 're-lease' previous leased bottom, it is difficult because the site usually has remaining shellfish product and therefore exceeds the criteria of not containing a natural shellfish bed, and can therefore not be leased. S. Murphey explained that 10 bushels per acre (one shellfish/meter) came about during the 1950s and 1960s. The statute does not say anything about size of shellfish. He also pointed out the down side of re-issuing leases returned to the state is the issue of creating 'dynasty' leases and keeping them in the family. Rose asked about a reasonable time period to allow a delineated lease to remain.

Mark Hooper made a motion to support the Advisory Committee position that allows leases returned to the state to remain delineated for one year and to improve public notice of proposed lease applications. Jim Hardin seconded the motion. Motion passed unanimously.

Both Plans-Shading Shellstock. Hooper asked how shading would be defined. Moore explained that S. Murphey worked with the advisory committee to develop shading criteria and that it would be regulated through proclamation. That way, it can be tweaked as needed.

Janet Rose made a motion to support the NCDMF/Advisory Committee position. Elaine Davis seconded the motion. The motion passed unanimously.

REVIEW THE COASTAL HABITAT PROTECTION PLAN

Anne Deaton presented the Coastal Habitat Protection Plan (CHPP), its origin and purpose. She described the components of the plan and how recommendations are implemented. She also

described the six different habitats; wetlands, soft bottom, shell bottom, hard bottom, submerged aquatic vegetation and the water column. The plan has been reorganized and is shorter and has brought in some economic information. There is a source document that goes with the new plan. Wilgis asked about a study on the economic value of habitat restoration and if this information can be added to the document. Deaton said that they can add some information on that in the source document.

Deaton further explained the economic importance of healthy habitats to fisheries, tourism and the growing population on the coast. The ecosystem services have economic value also. She then reviewed the different goals and recommendations in the plan. Wilgis asked about oyster sanctuaries and why recommendations focused on the subtidal zone. He suggested adding intertidal to the recommendations as well. Deaton finished with a review of the four priority issue for the different agencies to focus.

Jim Hardin made a motion to approve the CHPP. Mark Hooper seconded the motion. The motion passed unanimously.

MARINE FISHERIES COMMISSION UPDATE

T. Murphey gave an update on the latest commission meeting held in Nags Head at Jennette's Pier. She reviewed the commission vote on the Southern Flounder Supplement A to Amendment 1. She also stated that Amendment 1 to the Striped Mullet Fishery Management Plan and associated rules were approved as well as information updates for the Interjurisdictional and Kingfish management plans ewer approved.

PLAN AGENDA ITEMS FOR NEXT MEETING

Hooper asked about any action on the blue crab traffic light. T. Murphey explained that the stoplight will hit its third year this year. There is an expectation that it will kick in some regulations. Hooper discussed his concerns over the fishery independent data weighing too heavily on the traffic light. He requested that the traffic light analysis be presented to the Shellfish/Crustacean Advisory Committee. T. Murphey commented that she thought it was required to be presented.

Wilgis asked about the shrimp fishery management plan. T. Murphey explained that it was approved last year and that the division is working on rules for a live shrimp bait fishery and that bycatch reduction work was ongoing with the industry.

The meeting was adjourned.

Cc:

Catherine Blum	Jess Hawkins	Gerry Smith
Mike Bulleri	Brad Knott	District Managers
Scott Conklin	Dee Lupton	Committee Staff Members
Dick Brame	Nancy Marlette	Marine Patrol Captains
Louis Daniel	Phillip Reynolds	Section Chiefs
Charlotte Dexter	Jerry Schill	

Marine Fisheries
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MEMORANDUM

TO: N.C. Marine Fisheries Commission
Habitat and Water Quality Advisory Committee

FROM: Anne Deaton
Katy West
Division of Marine Fisheries, NCDEQ

DATE: December 15, 2015

SUBJECT: Habitat and Water Quality Advisory Committee Meeting

The Habitat and Water Quality Advisory Committee Meeting met at 1:30 pm, Monday, December 14, 2015 at the Department of Environment Quality Washington Regional Office, Washington, NC. The following attended:

Advisers: Bob Christian, David Glenn, Terry Pratt, Mike Street, Shelby White, Clay Willis, Joel Fodrie

Absent: David Duane, Dick Bierly

Commissioners: Chuck Laughridge, Allison Willis

Staff: Anne Deaton, Trish Murphey, Tina Moore, Clay Caroon

Public: David Knight, Heather Deck, James Fletcher, Terry Pratt

Other agency staff: Jimmy Johnson, Kevin Hart

Chuck Laughridge called the meeting to order. He welcomed Allison Willis as the new commission representative to the committee.

MODIFICATIONS TO THE AGENDA

No modifications were made to the agenda initially. However, later in the meeting, the chair asked to table the Marine Fisheries Commission update and discussion on roadside spraying in Pamlico County due to the lengthy meeting. **The committee agreed by consensus**.

APPROVAL OF AGENDA AND MINUTES

Mike Street made a motion to approve the agenda and the August 2015 minutes. Terry Pratt seconded the motion. Motion passed unanimously.

PUBLIC COMMENT

David Knight, representing the NC Wildlife Federation, said that the NC Wildlife Federation supports the CHPP because without habitat, there are no critters. Their organizations program, "Sound Solutions", calls for a moderate approach and sustainability of resources; fish and habitat. He stated that the CHPP needs to be beyond politics and is important for the future of our coast. He would prefer if the plan didn't focus on just the priority issues, but added some specifics regarding those. He also noted the importance of integrating climate change into the plan and that the NC Wildlife Federation looks forward to partnering on CHPP implementation.

Heather Deck, representing Sound Rivers, formerly Tar-Pamlico Foundation, said that she would provide written comments. She supported recommendations about assistance to local sedimentation control programs, noting that they have a better capability of addressing problems in the field. She said that neither reached its nutrient reduction loading goals, and data indicates an increasing influence from poultry farms, that do not require a permit.

Terry Pratt stated that the staff did a good job on compiling information but emphasized that DEQ should not go backward on habitat and water quality protection and improvements. He mentioned that the Chowan River has experienced algal blooms recently due to the increase in poultry operations. He said he couldn't endorse a CHPP plan that is less protective than previous plans. When asked what was missing specifically from this plan, Pratt mentioned funding for treating endocrine disrupting chemicals.

James Fletcher also discussed the negative impact of endocrine disrupting chemicals on water quality and fish. He recommended that all treated wastewater be land disposal application and to consider using highway medians for the disposal area. He noted impacts from water withdrawal from Lake Gaston on flows for anadromous fish. He would like to see concrete solutions go to the legislature.

Review of the oyster fishery management plan amendment 4 and hard clam fishery management plan amendment 2

Tina Moore, FMP co-lead, gave the committee the option to discuss each issue of the plans as she came to it in the presentation or to review issues after the presentation. The committee decided to address each issue as she came to it in the presentation.

Moore began with a description of the management units, stock status, and status of both fisheries as well as private culture. She also discussed the socioeconomic status for both species. She discussed habitat enhancement using oysters. She also reviewed the environmental factors for both species se well as the different threats to the environments of both species.

Moore then explained that three issues were discontinued due to legislative action. These were the use of GPS coordinates instead of a survey for lease boundaries, the Core Sound lease moratorium and redefining off bottom culture.

Oyster FMP-Shallow Bays. Moore reviewed the issue of reopening the shallow bays. Clay Willis said that the committee might want to consider a motion to support more funding for oyster restoration, cultch planting, and leasing. Funding increases and legislative changes regarding these topics was explained to the committee. After discussion from the committee regarding the study, Moore pointed out that there is a research recommendation that is very similar to the proposed study.

Mike Street made a motion to support status quo for shallow bay management. The motion was seconded by Terry Pratt. The motion passed 7-0, with 2 abstentions.

Oyster FMP-Supplement A. Moore reviewed the issue of adopting the 26 percent trigger to manage the mechanical oyster harvest in the northern region. Clay Willis made a motion to accept the Oyster Advisory Committee (AC) recommendation. Motion failed due to lack of a second.

Clay Willis made a motion to accept the division's recommendation. The motion was seconded by Bob Christian. Mike Street made a friendly amendment that on the study wording, to delete the word "help" since it means the same as assist. The amendment passed 7-0, with 2 abstentions. Bob Christian made a motion to accept the division's recommendation with the friendly amendment word change. C. Willis seconded. The motion passed 7-0, with 2 abstentions.

Oyster FMP-Hand Harvest Limits. Moore reviewed the issue of different hand harvest limits in the state.

Christian made a motion to support the division recommendation. C. Willis seconded the motion. Motion passed 7-0, with 2 abstentions.

Oyster FMP-Assessing and mitigating harvest effort impacts in Southern region. Moore explained the issue of southern region harvest impacts on oysters and the damage that has incurred on the southern region oyster resource. This is thought to be due to the high effort. The committee discussed if other states have developed a fishery independent index of abundance. Rhode Island and Louisiana have and Trish Murphey noted that the division staff are already looking into it. Joel Fodrie commented on the importance of looking at larval availability when determining where to put cultch plantings. He said larvae have not caught at the New River Artificial Reef or the Jones Island planting, the latter done by NC Coastal Federation. C. Willis noted the importance of getting more recreational harvest data.

Street made a motion to support the division recommendation. David Glenn seconded. The motion passed 7-0, with 2 abstentions.

Both Plans-Shellfish License. Moore reviewed the issue of eliminating the shellfish license. After hearing the options, the committee discussed other possible options. Laughridge suggested requiring a permit to harvest shellfish, in addition to the shellfish license, as a means of increasing the cost. Street suggested requiring shellfish harvest reporting, although Allison Willis said that the data may not be good since there are so many participants and not a clear paper trail.

Street made a motion to require all shellfish harvest, occurring through use of the Shellfish License, be reported through the trip ticket program or other reporting method provided by the division or commission rulemaking. Pratt seconded and the motion passed 7-0, with 2 abstentions. Christian made a motion to support the Advisory Committee's recommendations. Glenn seconded the motion. The motion passed 7-0, with 2 abstentions.

Hard Clam FMP-Recreational Limits. Moore preceded into discussion of issues within the Hard Clam Fishery Management Plan Amendment 2. She began with the issue of increasing the recreational harvest limit. The committee discussed that this would allow a large number of clams to be harvested by people on ecotourism trips and this might be problematic since the stock status is unknown.

After one failed motion and further discussion, Street made a motion to support status quo and Fodrie seconded the motion. The motion passed 7-0, with 2 abstentions.

Hard Clam FMP-Power Hauling. Moore reviewed the issue of using power hauling equipment to hand harvest hard clams.

Street made a motion to support the division recommendation, and Pratt seconded the motion. The motion passed 7-0, with 2 abstentions.

Hard Clam FMP-Mechanical Clam Harvest. Moore reviewed the issues of management of public mechanical clam harvest.

Pratt made a motion to support the three division recommendations. C. Willis seconded the motion. The motion passed 7-0, with 2 abstentions.

Both Plans (Private Culture)-Protection of Lease and Franchise Rights. Moore moved on to the private culture issues addressed in both fishery management plans. She began with discussion of protecting shellfish lease and franchise rights. The committee agreed that higher fines could deter theft.

Christian made a motion to support the division recommendations. Shelby White seconded the motion. The motion passed 7-0, with 2 abstentions.

Both Plans (Private Culture)-Adverse Impact to Submerged Aquatic Vegetation. Moore reviewed the issue of lease impacts to sea grass beds. She explained that since this issue was addressed by the Oyster/Clam Advisory Committee, an interagency interim agreement with the US Corps of Engineers, National Marine Fisheries Service, US Fish and Wildlife Service, DMF, Wildlife Resource Commission, and Division of Coastal Management was made that allows

leases to be sited where a small amount of SAV is present. Specific threshold amounts were set. This procedure will be followed until the Corps reviews and updates the nationwide permits in 2016, which will provide permanent guidelines. Fodrie said that this low threshold allowance seemed like a good approach since very low SAV presence has made it more difficult for some living shoreline projects as well as leases behind the Outer Banks.

C. Willis made a motion to support the division recommendation of status quo. Street seconded the motion. The motion passed 6-0, with 3 abstentions.

Both Plans (Private Culture)-Brunswick County Lease Moratorium. Moore then reviewed the issue of the Brunswick County lease moratorium.

Street made a motion to support the division recommendation, and Christian seconded the motion. The motion passed 6-1, with 2 abstentions.

Both Plans (Private Culture)-Lease Modifications. Moore provided a history of the lease changes through time and through earlier plans. Options were divided into three sections; production, acreage, and reissuance of leases.

Pratt made a motion to support the Oyster and Clam Advisory Committee's four recommendations. C. Willis seconded the motion. Street made a friendly amendment to the motion. He added a time limit "up to one year" to the recommendation about allowing leases returned to the state to remain marked "for a period of time and allowed to be re-issued to another shellfish grower. The friendly amendment was accepted. The motion passed 5-0, with 4 abstentions.

Both Plans-Shading Shellstock. Moore reviewed the issue of shading shellstock and explained that division staff worked with the advisory committee to develop criteria that would be implemented by proclamation for flexibility.

C. Willis made a motion to support the division recommendation. Pratt seconded the motion. The motion passed 6-0, with 3 abstentions.

Moore reviewed the research recommendations from both plans.

Glenn made a motion that the committee email any specific comments on research recommendations to Moore. White seconded the motion. The motion passed 7-0, with 2 abstentions.

REVIEW OF COASTAL HABITAT PROTECTION PLAN

Jimmy Johnson, CHPP coordinator, gave an overview of the plan and what was different from the last update. He said that the plan was shorter and reorganized, with the general information and recommendations in the plan, and the majority of scientific background that supports the recommendations in the Source Document. He noted that literature and data on economic value of fish habitats is emphasized, and that there are no rule-making recommendations. The

committee discussed the four priority issues. When asked why water quality was not a priority issue, Laughridge explained that regulatory actions were not likely to be successfully implemented. He said that focusing on actions like oyster restoration and living shorelines are more likely to be successful. Anne Deaton mentioned that these actions and addressing sedimentation in tidal creeks will have water quality benefits. Street pointed out some concerns such as there is a recommendation to increase monitoring, but monitoring positions in Department of Environmental Quality have been cut; legislative changes have weakened vegetated buffers and coastal stormwater rules, although they have been shown to be effective; and sea level is rising.

Christian made a motion that the committee endorses the Coastal Habitat Protection Plan and Source Document and recommends further strengthening of its role in protecting and enhancing habitats that support healthy fisheries. Street seconded the motion. The motion passed 6-1, with 1 abstention (Allison Willis left the meeting early, thus one less committee member in vote count).

OTHER BUSINESS

There was no other business. Laughridge adjourned the meeting at 6:15 pm.

Cc:
Catherine Blum
Mike Bulleri
Scott Conklin
Dick Brame
Louis Daniel
Charlotte Dexter
Jess Hawkins
Brad Knott
Dee Lupton
Nancy Marlette
Phillip Reynolds
Jerry Schill
Gerry Smith
District Managers
Committee Staff Members
Marine Patrol Captains
Section Chiefs

Marine Fisheries
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Governor

DONALD R. VAN DER VAART
Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Tina Moore
Stephen Taylor
Division of Marine Fisheries, NCDEQ

DATE: January 4, 2016

SUBJECT: Oyster and Hard Clam Fishery Management Plan Advisory Committee Meeting

The Oyster and Hard Clam Fishery Management Plan Advisory Committee met Monday, January 4, 2016 at the Department of Environmental Quality Regional Office, 943 Washington Square Mall, Hwy. 17, Washington, N.C. The following attended:

Advisers: Bob Cummings, Adam Tyler, Ted Wilgis, Jeff Taylor, Stephen Swanson, Lee Setkowsky

Absent: Nancy Edens, Dell Newman, Ami Wilbur, Niels Lindquist, Joey Daniels

Staff: Tina Moore, Dean Nelson, Trish Murphey, Joe Facendola, Curt Weychert, Amy Comer, Jeff Rheubottom, Alan Saunders, Garry Wright, Clay Caroon, Steve Murphey, Jason Peters.

Public: Chuck Weinich

Bob Cummings, serving as chair, called the meeting to order.

MODIFICATIONS TO THE AGENDA
The agenda was approved by consensus.

APPROVAL OF MINUTES
The minutes were approved by consensus.

PUBLIC COMMENT
No public comments were offered.

Review public and MFC Advisory Committees' input and finalize the Oyster and Hard Clam Fishery Management Plan Advisory Committee management and research recommendations for both amendments

Plan Development Team co-lead Tina Moore presented to the Advisory Committee a review of the public comments and the MFC Advisory Committees management recommendations for them to discuss and select their final management and research recommendations for both amendments. Moore presented each issue one at a time, allowing for discussions and the making and voting on of motions.

Re-open shallow bays (< 6 ft) of Pamlico Sound to mechanical harvest:

Bob Cummings suggested keeping the original committee recommendation. Trish Murphey, plan co-lead, suggested that the group may want to discuss the time frames proposed by the various other advisory committees. Stephen Swanson stated that he supports the time frame of keeping the season open around Thanksgiving and Christmas. Bob Cummings suggested that the standing AC recommendation would allow the division the flexibility to have the season open on those dates. Swanson commented that he did not like the public comment on this issue, and thought it was too negative. Cummings added that both the northern and southern committees put specific dates on the opening, but their previous recommendation keeps the season flexible in case of weather or closure. Adam Tyler suggested that some fisherman would like the season in the bays to run later in the year so there will be a place to work when the weather turns bad. Cummings asked what the division usually does. Moore stated that the division tries to avoid opening a season then closing based on phone calls, adding that having dates would reduce inconsistency between years. Moore commented the reasoning behind the dates proposed by the Southern Advisory Committee was to extend the season in the bays to when the weather is bad, but to maintain Thanksgiving and Christmas as open. Swanson stated that he would like to keep the window around Thanksgiving and Christmas. Moore asked the group if they would like to suggest a specific timeframe for consistency. Adam Tyler commented that the opening should be ten days prior to thanksgiving, and then take enough time off after Thanksgiving and before Christmas to extend the season to Jan 1. Cummings asked if the group felt they should support the specific dates suggested by the Northern Advisory committee, as this issue was pertinent to their region. Tyler asked if the division would like specific dates. Moore replied that it would help. Cummings stated that he does not have a problem with the existing DMF recommendation. Tyler commented that he would like to figure out the dates required to keep it open from Thanksgiving until the New Year, keeping the season to six weeks. Swanson questioned if their initial recommendation was to keep the shallow bays open all the time, and to recommend a study. Tyler replied that was for a different area. Cummings added that the study was to look at the effects of dredging to turn over shell, and then suggested adopting the Northern Advisory Committee recommendation. Tyler commented that this year there was a one week closure for rainfall in this area, and asked how that impacted the six week season. Moore replied that the rainfall closure resulted in a 5 week season. Cummings commented that the Southern Advisory Committee picked a specific set of dates to include Thanksgiving, Christmas, and New Year in the season. Tyler asked if it would be possible to use the wording "the week before Thanksgiving"? Moore replied yes.

Adam Tyler made a motion to maintain the AC recommendation and to recommend a six-week opening timeframe for deep bays to begin on the Monday of the week prior to

Thanksgiving week through the Friday after Thanksgiving. Reopen two weeks before Christmas for the remainder of the 6-week season. Jeff Taylor seconded the motion. The motion passed unanimously.

Adopting Supplement A to Amendment 2 to the NC Oyster Fishery Management Plan:
Ted Wilgis asked if harvest goals could be set, adding that currently the trigger is the only tool available to get a sense of what is out there. Moore replied that the trigger is a real time tool see to see the size of oysters in the active fishing areas. Wilgis commented that he recommends finding a metric for management in the southern region of the state. Moore replied that topic is addressed in a separate issue regarding effort impacts for hand harvest in the area south of the Highway 58 Bridge.

Adam Tyler made a motion to maintain the AC recommendation. Lee Setkowsky seconded the motion. The motion passed unanimously.

Differences in hand harvest limits statewide:
No discussion by the committee.

Adam Tyler made a motion to maintain the AC recommendation. Lee Setkowsky seconded the motion. The motion passed unanimously.

Assessing and mitigating harvest effort impacts on oyster resources in the Southern region:
Cummings, addressing the public comments, stated that he does not have a problem with the five percent culling tolerance however increasing the size limit to four inches would eliminate the majority of harvest. He added that in some areas oysters barley grow to 3 inches, and would never get to four. Wilgis commented that the CHPP document addressed cultch planting, stressing long term monitoring and maximizing reef success. He added he would like to add language to the AC recommendation on this issue to get it aligned with the CHPP recommendations. Swanson commented that he would like to be able to demonstrate his culling ability. He clarified, that he has never been checked for meeting the current ten percent allowance and has no clue how his culling measures up. Swanson added that lowering the culling tolerance to five percent will not make any difference if it is never enforced. Tyler stated he does not have a problem with a five percent culling tolerance, Cummings agreed. Swanson stated that the culling tolerance is at 10 percent because of coon oysters, and that they would all have to be busted up to get to five percent. Dean Nelson, added that it would not be a problem to enforce a five percent tolerance, and that they could do that now by filling the current container up only half way. Cummings stated that when you give someone a tolerance for undersized product, the will go right to that limit, adding that people now think they can go to 10 percent. He added that he feels 10 percent is a lot. Swanson questioned if it would be possible to have a ten for coon and five for rock oysters. Cummings replied that there is no real legal definition for rock or coon oysters. Tyler agreed that the tolerance needs to be the same across the board.

Ted Wilgis made a motion to increase efforts to plan and monitor available cultch materials in the southern region using lessons learned to maximize success in the cultch planting program. To explore and attempt to develop a preliminary fishery independent

index of oyster abundance to inform future management actions. To decrease the 10% culling tolerance to 5% in the southern region. Adam Tyler seconded the motion.

Cummings stated that from their earlier discussion the tolerance should be the same state wide. Tyler commented that he would have liked to see the five percent tolerance only for the hand fishery as oyster in the dredge fishery of Pamlico Sound can get beaten and broken smaller than three inches in rough weather. Cummings stated that he doesn't think the breaking of shells during rough weather is a big problem. Lee Setkowsky asked what the impact of a five percent tolerance would have on the dredge fisherman. Tyler responded that is might result in violations if the shell breaks down on deck. Cummings stated that the five percent tolerance is to allow for that breakage, and a Marine Patrol officer can tell the difference between broken legal and small oysters. He added that he is seeing too many little oysters being sold.

Ted Wilgis agreed to amend his initial motion andAdam Tyler, as the second to the motion, agreed to the amendment.

Ted Wilgis amended the motion to increase efforts to plan and monitor available cultch materials in the southern region using lessons learned to maximize success in the cultch planting program. To explore and attempt to develop a preliminary fishery independent index of oyster abundance to inform future management actions. To decrease the 10% culling tolerance to 5% statewide. Adam Tyler seconded the amended motion. The motion passed unanimously.

<u>Consider the elimination of the Shellfish License and require all shellfish harvesters to have a Standard/Retired Commercial Fishing License</u>:
Swanson commented that there should be a special license for each gear type used to harvest oysters. He added that any oysters landed for personal consumption will not be reported, and there should be a number to call to report that catch. Tyler questioned the accuracy of self-reported landings data. Cummings asked if the recreational survey people could already get at these landings. Moore responded that there is no license required for recreational harvest, so it is not possible. Cummings suggested it was possible for DMF to call and survey those people who hold a shellfish license but do not show any landings. Setkowsky asked why if he has a commercial license, but has his wife on the boat sunbathing he is held to the recreational limit. Nelson responded that is not the case, you would be allowed the commercial limit, however if she were to be helping in the harvest in any way she would need a commercial license or you would be held to the recreational limit.

Stephen Swanson made a motion to maintain the AC recommendation. Lee Setkowsky seconded the motion. The motion passed unanimously.

<u>Consider increasing the recreational maximum daily harvest limit for hard clams</u>:
No discussion by the committee.

Stephen Swanson made a motion to maintain the AC recommendation. Lee Setkowsky seconded the motion. The motion passed unanimously.

The use of power hauling equipment in the hand harvest of hard clams:
No discussion by the committee.

Jeff Taylor made a motion to maintain the AC recommendation. Stephen Swanson seconded the motion. The motion passed unanimously.

Management of public mechanical clam harvest:
Cummings asked if there were currently any areas that are open to mechanical harvest that are not fished. Tyler replied there are some areas not fished mechanically because all the clams are raked during the summer. Cummings stated that the public comment on this issue was not valid as all areas are being fished. Swanson questioned if it was possible for the U.S. Army Corps to give reasonable notice prior to dredging an area, suggesting that people just need to get out of the way once dredging begins. Cummings commented that it was not intended to have people mechanically harvesting clams at the same time as dredging. Tyler added that the clams will not survive being dredged up and put on a spoil island, and he would rather not see the resource be wasted to feed sea gulls.

Ted Wilgis made a motion to maintain the AC recommendation. Jeff Taylor seconded the motion. The motion passed unanimously.

Protection of shellfish lease and franchise rights:
No discussion by the committee.

Jeff Taylor made a motion to maintain the AC recommendation. Adam Tyler seconded the motion. The motion passed unanimously.

Defining adverse impacts to submerged aquatic vegetation from shellfish leases and franchises:
No discussion by the committee.

Stephen Swanson made a motion to maintain the AC recommendation. Adam Tyler seconded the motion. The motion passed unanimously.

Brunswick County shellfish lease moratorium:
No discussion by the committee.

Stephen Swanson made a motion to maintain the AC recommendation. Adam Tyler seconded the motion. The motion passed unanimously.

Modify shellfish lease provisions:
Wilgis asked if the GPS issue had been taken out of the document. Moore replied that it was no longer considered an issue as it was in statute, but the developed paper is now found in the appendix so the information would not be lost. Wilgis asked if one year was enough time to leave leases returned to the state to be delineated. Steve Murphey, Habitat and Enhancement section chief, replied that would depend if it was a popular area with a high demand for leases. Wilgis asked if it is useful to the division to have a period of time where the leases would remain available for re-issue. Murphey replied if a one year period was established we could offer these

leases to people who apply. Swanson asked if a returned bottom lease could be re-issued as a water column lease. Murphey replied that if a lease is in compliance a water column amendment can be applied for.

Ted Wilgis made a motion to maintain the AC recommendation, but to replace the wording "a period of time" to "one year". Adam Tyler seconded the motion. The motion passed unanimously.

Requirements for shading Molluscan shellstock:
In response to public comment on this issue, Cummings stated that this was a public health issue not just a marketing issue. Tyler commented that this is intended mostly for people who stack clams on the deck of the boat while bull raking. Cummings stated that is was for all product left in the sun, and supports the DMF and standing AC recommendation. Wilgis questioned if this would apply to people harvesting oysters off leases in the summer. Cummings responded that DMF already has a 5 hour time to temperature limit for oysters, but a 14 hour limit for clams.

Stephen Swanson made a motion to maintain the AC recommendation. Lee Setkowsky seconded the motion. The motion passed unanimously.

OTHER BUSINESS
Moore outlined the next steps of the FMP process. She stated that once the final Advisory Committee recommendations are added to the document, it will be presented to the Marine Fisheries Commission at the February 2016 meeting. The document will then go to the department and legislative review, to be adopted in 2017.

MEETING ARRANGEMENTS
Moore discussed that there were five issues needing rule changes. During any of the reviews in the next steps if there are any issues we may need to reconvene, as this group is still considered a standing committee until the FMP is adopted in 2017. She then expressed her appreciation to the committee for all the hard work, and thanked them for their service.

Chairman Cummings adjourned the meeting.

/jjf

Cc:	Catherine Blum	Jess Hawkins	Jerry Schill
	Mike Bulleri	Brad Knott	Gerry Smith
	Scott Conklin	Dee Lupton	District Managers
	Dick Brame	Nancy Marlette	Committee Staff Members
	Louis Daniel	Lauren Morris	Marine Patrol Captains
	Charlotte Dexter	Phillip Reynolds	Section Chiefs

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LOUIS DANIEL
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission
Commercial Fishing Resource Funding Committee

FROM: Nancy Fish and Beth Govoni
Division of Marine Fisheries, NCDEQ

DATE: Feb. 1, 2016

SUBJECT: Commercial Fishing Resource Funding Committee Meeting

The Commercial Fishing Resource Fund Committee held its initial meeting with the Funding Committee at 2 p.m. on Thursday, Jan. 21, 2016 at the N.C. Division of Marine Fisheries, 3441 Arendell Street, Morehead City. The following attended:

Commercial Fishing Resource Funding Committee: Sammy Corbett – chair, Alison Willis and Janet Rose (via phone)

Funding Committee: Gilbert Baccus (via phone), Steve Parrish, Bill Hooper, Benny O'Neal

Absent: Funding Committee members Andrew Barry and Ernest Doshier

DMF Staff – Louis Daniel, Nancy Fish, Beth Govoni (via phone) Suzanne Guthrie, Dee Lupton Don Hesselman, Chris Batsavage

Public: Jerry Schill

Sammy Corbett, serving as chair, called the meeting to order. He explained as this was the first meeting of the two committees, it might flow more smoothly if he ran this meeting.

The three members of the commission committee introduced themselves, they are:

- Sammy Corbett
- Alison Willis
- Janet Rose

It was explained at its February 2015 meeting, the Marine Fisheries Commission voted to request that the chairman convene a Commercial Fishing Resource Funding Committee comprised of the members holding the three commercial seats on the commission and to delegate

authority to that committee for funding decisions related to the Commercial Fishing Resource Fund.

Then the members of the Funding Committee of the Commercial Fishing Resource Fund introduced themselves, they are:

- Gilbert Baccus representing the Albemarle Fisherman's Association
- Steve Parrish representing Brunswick County Fisherman's Association
- Bill Hooper representing Carteret County Fisherman's Association
- Benny O'Neal representing N.C. Fisheries Association

Jerry Schill, with the N.C. Fisheries Association explained that Ernest Doshier representing Ocracoke Working Waterman's Association and Andrew Berry representing N.C. Waterman United, were unable to make the meeting.

ELECTION OF FUNDING COMMITTEE CHAIRMAN

Bill Hooper made a motion to nominate Gilbert Baccus as chairman of the Funding Committee. Benny O'Neal seconded the motion.
The motion passed unanimously (only Funding Committee members voted).

MODICATION TO THE AGENDA

The agenda was approved by consensus by both committees.

PUBLIC COMMENT

There was no public comment.

REVIEW OF AUTHORIZING LEGISLATION § 113-173.1. NORTH CAROLINA COMMERCIAL FISHING RESOURCE FUND

Chairman Corbett asked Marine Fisheries Commission Liaison Nancy Fish to walk the committee through the authorizing legislation, which is § 113-173.1. North Carolina Commercial Fishing Resource Fund.

Before the review began there were several questions about revenues for the Observer Program. The division's Budget Officer Suzanne Guthrie explained the estimated revenues from the license fees is approximately $1.3 million and Division Director Louis Daniel explained that once the costs of the Observer Program were paid out, any leftover monies are available for projects to develop and support sustainable commercial fishing in the state. The committees were advised that the division will not know precisely how much money will be available for projects until probably mid-August of each year, because the fiscal year does not end until June 30 – but it is estimated that this year it will be at least between $300,000 and $400,000. Director Daniel explained that the Observer Program has spent between $700,000 and $900,000 so far this fiscal year and that gill net closures effected the cost of the program. He also advised that the amount of money needed for the Observer Program could vary from year to year. Staff confirmed that the money in the fund would roll over if it was not used, but that the interest reverted to the General Fund. It was also confirmed by Director Daniel that funding for the Observer Program

was solely for implementing and maintaining the incidental take permits for sea turtles and sturgeon.

Fish then walked the committee through the statute. It was reiterated that the first priority of the N.C. Commercial Fishing Resource Fund was to fully fund the state's incidental take permits and that any remaining monies may be used for other projects to develop and support sustainable commercial fishing in the state. The procedure for disbursement of funds was reviewed, as well as the establishment of the commission committee and the Funding Committee. The statute requires the committees to develop and implement a memorandum of understanding setting forth the procedures for agreeing to and authorizing the disbursements from the fund. It was also pointed out that members of the committees are public servants.

Chairman Corbett recommended that to make thing flow more smoothly, that he lead the joint meetings until there is a decision needing a vote; then Baccus will take the lead as chair for votes from the Funding Committee and Chairman Corbett will handle the votes from the commission's committee. There was no opposition to this approach.

DISCUSSION ON DEVELOPMENT OF A MEMORANDUM OF UNDERSTANDING AND OPERATING PROCEDURES FOR THE COMMITTEES

The committees discussed various types of grant programs, and while they did not want to make the process for applying for the funds too cumbersome, they also were advised there needed to enough oversight and structure that the program would stand up to audit scrutiny. The division offered to come back at the next meeting with a draft memorandum of understanding if the committees could provide direction.

The Funding Committee felt it needed to have more discussion about its vision of what should be contained in a memorandum of understanding.

There was some discussion about funding projects that would improve water quality.

Committee members asked if there were examples of various types of memorandums of understanding that they could review. Beth Govoni, the staff lead for the committee, said she would distribute some different examples for the committees to consider.

There was also discussion that the committee could let the fund grow, or set thresholds, but that projects should be funded on an annual basis.

The idea of trying to find a way to help large mesh gill net fishermen who have been displaced by recent restrictions was discussed. Another view was to fund projects that helped everyone, and to not just benefit one area.

PLAN AGENDA ITEMS FOR NEXT MEETING

The Funding Committee will meet, prior to the next meeting of the two committees. The division advised that a news release would need to be issued anytime either of the committees met and offered to send out a news release for the Funding Committee for its meetings.

It was discussed that the Marine Fisheries Commission needed to grant authority to its committee to develop and implement the memorandum of agreement.

The division also said it would provide a budget report on the Observer Program at the next meeting of the two committees and there was a brief overview of how the Observer Program worked.

Cc:
Catherine Blum
Mike Bulleri
Scott Conklin
Dick Brame
Louis Daniel
Charlotte Dexter
Jess Hawkins
Brad Knott
Dee Lupton
Nancy Marlette
Phillip Reynolds
Jerry Schill
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District Managers
Committee Staff Members
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MEMORANDUM

To: Marine Fisheries Commission

From: Wayne Johannessen

Subject: Coastal Recreational Fishing License Committee Meeting

Date: Dec. 14, 2015

The Marine Fisheries Commission Coastal Recreational Fishing License Committee met at the Division of Marine Fisheries Central District Office on Dec. 14, 20154. The following attended:

Committee: Mark Gorges, Joe Shute, Rick Smith, Dr. Louis Daniel

Advisory Members: Galen Maxwell, Alexander Rich, Richard Sear, Robert Schoonmaker, Jan Willis

Staff: Dee Lupton, Suzanne Guthrie, Beth Govoni, Charlton Goodwin, Steve Murphey, Joe Facendola, Don Hesselman, Nancy Fish

APPROVAL OF AGENDA AND MINUTES

Division of Marine Fisheries Director Louis Daniel called the meeting to order.

Director Daniel made comments on the purpose of the newly added advisory committee and called the roll.

The meeting agenda was approved by consensus with no modifications.

The minutes from the April 16, 2014 meeting were approved by consensus with no modifications.

PUBLIC COMMENT

Representatives from Onslow Bay Artificial Reef Association, Rita Merritt and Nancy Brechtlein, offered comment in support of the work their association has done in recent years requesting consideration for future funding.

UPDATES

The committee received updates on the Coastal Recreational Fishing License sales report, the status of the Marine Resources Fund, future obligations and current projects.

Status of Funds in the Marine Resources Fund
And Future Obligations as of 6/30/2015

Source	**Net Funds ($)**
FY 2007	2,592,912
FY 2008	4,215,401
FY 2009	4,392,507
FY 2010	4,378,770
FY 2011	4,514,387
FY 2012	4,378,884
FY 2013	4,308,349
FY 2014	4,651,965
FY 2015	4,817,270
Total	38,250,445
Actual spending through 6/30/2015	
FY 2008	608,751
FY 2009	1,281,245
FY 2010	1,740,114
FY 2011	4,773,350
FY 2012	4,381,767
FY 2013	4,091,363
FY 2014	6,160,705
FY 2015	5,012,727
Paid to WRC for Implementation	821,516
Total	28,871,538
FY 2015 Obligations	
DMF Projects:	
FY 15/16 Five-Year Plan	2,333,021
Inshore Fishing/Oyster Reefs NCE (H002)	452,674
Citation Program NCE (P003)	5,949
Anadromous Fish Telemetry NCE (F013)	87,125
Oyster Shell Recycling NCE (H017)	5,998
AR Guide NCE (P014)	106,123
Fishing Digest NCE (P015)	1,334
Multispecies Tagging Program NCE (F017)	38,612
Oyster Shell Recycling: Phase 3 NCE (H023)	14,919
Monitoring of Oyster Sanctuaries NCE (H024)	75,828
SAV Mapping along Southern NC coast NCE (H025)	10,158
Carcass Collection Program NCE (F016)	7,117

WRC Projects:	
ADA NCE	98,700
Turkey Creek BAA	37,997
2015 RFP Projects Funded for FY16	1,551,623
Multi-Year Projects Approved for FY16 Funding	1,144,634
Invoices paid after 6/30/15	69,261
NCE carried over from previous RFP projects	675,058
Total	6,716,131
Total Spent & Obligations	35,587,669
Balance less obligations as of 6/30/2015	**2,662,776**

REVIEW/APPROVE 2016 PROPOSALS

The committee then considered proposals that had been submitted for the 2015 Coastal Recreational Fishing License grant cycle. The proposals were divided into three categories – fish, habitat, and people.

FISH PROPOSALS

- **University of North Carolina at Wilmington A comprehensive evaluation of the North Carolina red drum juvenile abundance index: assessment of spatial and temporal persistence and the potential for a partial replacement survey design - $60,282**
  Three-year grant to conduct a comprehensive evaluation of the North Carolina red drum juvenile abundance index.
- **N.C. Division of Marine Fisheries An Economic and Social Survey of Coastal Recreational Fishing License Holders in North Carolina – $17,329**
  One-year grant to conduct a representative survey that collects economic and social information from individuals who were licensed to fish in coastal areas of North Carolina.
- **N.C. Division of Marine Fisheries Validating and updating maturation schedules for better management of North Carolina fisheries - $46,392**
  Three-year grant to validate and update maturity schedules for commercially and recreationally important North Carolina finfish fisheries.
- **University of North Carolina at Wilmington A Partnership for sustained fisheries management: development of a research fellowship program between NCDMF and UNCW – $57,488**
  Three-year grant to focus UNCW faculty researchers on the mentoring of master's level graduate students and undergraduate students to explore and address the research needs identified by Division of Marine Fisheries topic experts.
- **N.C. Division of Marine Fisheries Marine Patrol NC Marine Patrol Technology – $96,476**

Three-year grant to funding for equipment that will allow officers to respond to request from the public for information pertaining to fisheries rules and regulations, perform license verifications, allow the officers to provide printed documents on site, and complete reporting assignments in the field.

There was discussion on the proposal East Carolina Understanding recreational angler behaviors, preferences, perceptions, and attitudes: A socio-cultural analysis to enhance coastal fishing experiences and fisheries management in North Carolina - $46,413, the point was raised that the information from this survey was not beneficial to management of recreational fisheries, as well as it is in large part information that is already known.

Motion by Commissioner Joe Shute to approve funding as indicated for five of the six recommended fish proposals. Accept Proposals F035,F037, F038, F040, and F041, do not fund East Carolina Understanding recreational angler behaviors, preferences, perceptions, and attitudes: A socio-cultural analysis to enhance coastal fishing experiences and fisheries management in North Carolina - $46,413; seconded by Commissioner Mark Gorges – motion passed unanimously.

HABITAT PROPOSALS

- **University of North Carolina at Chapel Hill Investigating rates of sedimentation in tidal creeks and resulting impacts on fishery production in primary and secondary nurseries - $104,433**
  Three-year grant to develop a more thorough understanding of how sedimentation is affecting recreationally important fisheries.
- **East Carolina University Submerged Aquatic Vegetation SONAR Mapping Surveys in low salinity habitats: Neuse River - $77,103**
  One-year grant to continue the routine monitoring of the submerged aquatic vegetation resources in the low-salinity regions of the Albemarle, Pamlico Estuarine System, continuing with the Neuse River Estuary in 2016.
- **N.C. Division of Marine Fisheries Development of Inshore Fishing Oyster Reefs and the development and protection of Oyster Sanctuaries - $101,200**
  Two-year grant to provide funding to increase the productivity of Deep Bay, West Bay, and Middle Bay sanctuaries by enhancing these sites.
- **N.C. Division of Marine Fisheries Funding for Maintenance on the M/V West Bay to Continue Development of Artificial Reefs and Oyster Sanctuaries - $250,000**
  One-year grant to provide Funding for Maintenance on the M/V West Bay to Continue Development of Artificial Reefs and Oyster Sanctuaries.

Motion by Commissioner Joe Shute to approve funding as indicated for four of the five recommended habitat proposals. Accept Proposals H051, H054, H055, and H056, defer a decision on N.C. Division of Marine Fisheries Developing methodology for assessing recreational fish use in Strategic Habitat Areas – $103,973 until the April meeting to give

the PI time to re-evaluate the scope of sampling and field work in the proposal; seconded by Commissioner Rick Smith – motion passed unanimously.

PEOPLE PROPOSALS

- **N.C. Division of Marine Fisheries Marine Patrol Education Team - Continuation - $11,800**

  One-year grant to continue provide educational equipment and resources to the Marine Patrol.
- **N.C. Division of Marine Fisheries Update and Reprint North Carolina Angler's Guide - $77,750**

  Two-year grant to provide funding for the fourth update and printing of the North Carolina Coastal Recreational Angler's Guide.
- **Town of Oak Island Oak Island Regional Fishing Pier and Kayak Launch - $69,955**

  One-year grant to provide funding to install a fishing pier, and ADA accessible kayak launch at a Town of Oak Island park facility.
- **Long Bay Artificial Reef Association Enhancement of Inshore Artificial Reef (AR430) - $339,000**

  One-year grant to provide funding for the enhancement the artificial reef site AR 430 off Brunswick County.
- **N.C. Wildlife Resource Commission West Onslow Boat Access Area Reconstruction - $300,000**

  One-year grant to provide funding to redevelop the West Onslow Boating Access Area located ½ mile northwest of North Topsail Beach.
- **Eastern Carolina Artificial Reef Association Multi-Year acquisition, establishment an monitoring of sunken vessel artificial reefs in Northern Onslow Bay, NC - $185,000**

  CJRT recommended approval as a one-year grant with the removal of the monitoring portion of the proposal funding to establish sunken vessel artificial reefs in Northern Onslow Bay, NC.

Discussion was raised by advisers on the proposal N.C. Division of Marine Fisheries Update and Reprint North Carolina Angler's Guide as to using the funds to create a mobile application in conjunction with a smaller number of printed documents. To allow the same information to be available, as well as giving the division the ability to collect data and to keep changing regulations updated in real time. It was suggested to look into the application companies being used in Georgia and South Carolina. Director Daniel raised the point that many other states can only make regulatory changes on an annual basis through their legislative process, whereas North Carolina allows the division director proclamation authority so changes can occur more frequently. Also the Anglers Guide is an educational booklet that does not contain regulations, the Anglers Digest contains regulation. It was pointed out that some states are finding applications very difficult to maintain. The division can look at adding a request to the strategic plan requesting proposals for development of a mobile application. This would encourage applicants to apply for funding to develop a mobile application.

Motion by Commissioner Rick Smith to approve funding as indicated for all 6 recommended people proposals; second Commissioner Mark Gorges – motion passed unanimously.

REQUEST FOR ADDITIONAL FUNDING

- **N.C. Division of Marine Fisheries project 2014-H-025 SAV Mapping along the Southern NC Coast**
  A 2014 project currently in process that requested additional funding of $9,500. The funded amount $23,500 was originally requested based on the estimate received from NCDOT. However, after the funding was awarded and Division of Marine Fisheires proceeded to make plans with NCDOT staff, they informed us that their estimate for photo-interpretation was higher based on other work they had just completed. The total cost for the project is now $33,000.

Motion by Commissioner Mark Gorges to approve additional funding as indicated for H025 Submerged Aquatic Vegetation Mapping Along the Southern Coast; second Commissioner Joe Shute – motion passed unanimously.

The committee agreed to fund 15 proposals in year one totaling $1,794,208, as well as $9,500 additional funding for 2014-H-025, leaving an unobligated balance in the Marine Resources Fund of approximately $859,068.

ADDITIONAL ITEMS

Director Daniel advised the committee on the status of the Division of Marine Fisheries Five-Year Plan, on-going/previously funded Coastal Recreational Fishing License projects from 2007-2015 with division status reports, grantees semi-annual progress reports and technical monitor reviews.

The meeting adjourned at 4:55 pm.

Cc:
Catherine Blum
Mike Bulleri
Scott Conklin
Dick Brame
Louis Daniel
Charlotte Dexter
Jess Hawkins
Brad Knott
Dee Lupton
Nancy Marlette
Phillip Reynolds
Jerry Schill
Gerry Smith
District Managers
Committee Staff Members
Marine Patrol Captains
Section Chiefs

Environmental Quality

Release: Immediate	Contact: Patricia Smith
Date: Jan. 25, 2015	Phone: 252-726-7021

Fisheries approves 15 Coastal Recreational Fishing License grants

MOREHEAD CITY – Revenues from the N.C. Coastal Recreational Fishing License will pay $1.7 million in the coming year for projects that provide coastal fishing access and fisheries and habitat research.

The N.C. Marine Fisheries Commission approved 15 grants totaling $1,794,208 for the 2016-17 cycle. The grants are funded from the N.C. Marine Resources Fund, which receives revenues from the sale of Coastal Recreational Fishing Licenses.

The grants are sorted into three focus areas. Grants that fall under the People focus area include public education and public water access projects. Grants that fall under the Fish focus area are fisheries research projects. Grants that fall under the Habitat focus area include projects that enhance, protect or research fisheries habitat.

Six grants, totaling $983,505, were approved in the People focus area. They are:

- **N.C. Division of Marine Fisheries to update and reprint North Carolina Angler's Guide - $77,750**
  Two-year grant to fund the fourth update and printing of the North Carolina Coastal Recreational Angler's Guide
- **N.C. Division of Marine Fisheries for Marine Patrol Education Team continuation - $11,800**
  One-year grant to continue to provide educational equipment and resources to the N.C. Marine Patrol
- **Town of Oak Island for a regional fishing pier and kayak launch - $69,955**
  One-year grant for the installation of a fishing pier with an Americans with Disabilities Act-compliant kayak launch at a Town of Oak Island park
- **Eastern Carolina Artificial Reef Association for sunken vessel artificial reefs in Northern Onslow Bay - $185,000**
  One-year grant to fund the acquisition of retired marine vessels to establish sunken vessel artificial reefs in Northern Onslow Bay
- **N.C. Wildlife Resources Commission's West Onslow Bay's boating access area reconstruction - $300,000**
  One-year grant for site improvements to the boating and fishing access at the West Onslow Bay Boat Access Area
- **Long Bay Artificial Reef Association for enhancement of artificial reef (AR-430) - $339,000**
  One-year grant to fund enhancements of the nearshore artificial reef site AR-430 off Brunswick County

Five grants, totaling $277,967, were approved in the Fish Focus area. They are:

- **N.C. Division of Marine Fisheries for validating and updating maturation schedules for better management of North Carolina fisheries - $46,392**
  Three-year grant to fund a project that will use a combined maturity staging approach to validate and update maturity schedules for commercially and recreationally important North Carolina finfish fisheries
- **N.C. Division of Marine Fisheries for N.C. Marine Patrol technology - $96,476**
  Two-year grant to provide funding for equipment that will allow officers to respond to request from the public for information pertaining to fisheries rules and regulations, perform license verifications, allow the officers to provide printed documents on site, and complete reporting assignments in the field

- **University of North Carolina at Wilmington for a comprehensive evaluation of the North Carolina red drum juvenile abundance index - $60,282**
  Three-year grant to conduct a comprehensive evaluation of the North Carolina red drum juvenile abundance index, assessing spatial and temporal persistence and the potential for a partial replacement survey design
- **University of North Carolina at Wilmington for a partnership for sustained fisheries management: development of a research fellowship program - $57,488**
  Three-year grant to establish a partnership between the N.C. Division of Marine Fisheries and the University of North Carolina at Wilmington whereby master's level graduate students and undergraduate students would address specific research needs identified by division topic experts
- **N.C. Division of Marine Fisheries for an economic and social survey of Coastal Recreational Fishing License holders in North Carolina - $17,329**
  One-year grant to conduct a representative survey that collects economic and social information from individuals who were licensed to fish in coastal areas of North Carolina in 2015 that will provide valuable data that is representative of specific research needs related to the division's current and future fisheries management plans

The Habitat Focus area has four grants totaling $532,736, including:

- **East Carolina University for submerged aquatic vegetation SONAR mapping surveys in low-salinity habitats: Neuse River - $77,103**
  One-year grant to expand the current program that uses long-shore rapid assessment survey techniques to obtain maps in areas of submerged aquatic vegetation
- **N.C. Division of Marine Fisheries for development of inshore fishing oyster reefs and the development and protection of oyster sanctuaries - $101,200**
  Two-year grant to provide funding for a project to increase the productivity of Deep Bay, West Bay, and Middle Bay sanctuaries by enhancing structures at these sites
- **N.C. Division of Marine Fisheries Funding for maintenance of the vessel West Bay to continue development of artificial reefs and oyster sanctuaries - $250,000**
  One-year grant to fund maintenance of the West Bay, the primary vessel needed to continue the programmatic goals of the artificial reef and oyster sanctuary program
- **University of North Carolina at Chapel Hill for investigating rates of sedimentation in tidal creeks and resulting impacts on fishery production in primary and secondary nurseries - $104,433**
  Three-year grant to fund a study to combine coring, surveying, and experimental approaches to develop a more thorough understanding of how sedimentation is affecting recreationally important fisheries via the tidal creek and estuarine nurseries they rely on

For more information on these grants or the Coastal Recreational Fishing License grant program, contact Wayne Johannessen, Coastal Recreational Fishing License grants coordinator, at 252-808-8004 or Wayne.Johannessen@ncdenr.gov.

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Issues/Reports

N.C. FISHERY MANAGEMENT PLANS

February 2016

OYSTER FISHERY MANAGEMENT PLAN AMENDMENT 4

13.1 PREFERRED MANAGEMENT STRATEGIES

13.1.1 INSUFFICIENT DATA

The data necessary for a robust estimate of oyster standing stock and sustainable harvest still does not exist and very limited data are collected for the recreational harvest of oysters. Socioeconomic surveys of recreational participants need to be performed to determine specific characteristics of the user group, to determine which issues are important to them, attitudes toward management of the fishery, as well as general demographics. The statutory obligation to maintain sustainable harvest in the oyster fishery cannot be calculated until the appropriate data are collected. While landings records reflect population abundance to some extent, the relationship is confounded by changes in harvest effort and efficiency. The trip ticket program, initiated in 1994, provides commercial landings as well as individual trip information. Fishery-dependent and independent monitoring programs continue, yet data in some areas still are not enough.

13.2.1 OYSTER MANAGEMENT STRATEGIES

13.2.1.1 RE-OPEN SHALLOW BAYS (< 6 ft) OF PAMLICO SOUND TO MECHANICAL HARVEST

Proposed Management Options

1. Status quo (Maintain shallow bays (< 6ft) as defined in 15A NCAC 03R .0108)
2. Re-open all shallow bays (< 6 ft.) previously closed to mechanical harvest as listed in 15ANCAC 03R .0108
3. Consider changing criteria used to designate hand harvest areas
4. Status quo (Maintain opening of deep bays (≥ 6ft) during the November-December timeframe)
5. Increase the time frame for opening the deep bays (≥ 6 ft.) from 6 weeks
6. Decrease the time frame for opening the deep bays (≥ 6 ft.) from 6 weeks
7. Change the time frame for opening the deep bays (≥ 6 ft.) from the November-December to allow flexibility within the season
8. Remove the six-week time frame for opening deep bays (≥ 6 ft.) and manage by a trigger (Refer to Supplement A)
9. Close all bays to mechanical harvest

Management Recommendations

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Status quo (Maintain shallow bays (< 6ft) as defined in 15A NCAC 03R .0108)

NCDMF

- Status quo (Maintain opening of deep bays (≥ 6ft) during the November-December timeframe)

Advisory Committee

- Recommend a six-week opening timeframe for deep bays to begin on the Monday of the week prior to Thanksgiving week through the Friday after Thanksgiving. Reopen two weeks before Christmas for the remainder of the 6-week season.
- Recommend a controlled study of dredges impacts on areas currently closed to mechanical harvest

13.2.1.2 ASSESSING AND MITIGATING HARVEST EFFORT IMPACTS ON OYSTER RESOURCES IN THE SOUTHERN REGION

Proposed Management Options

1. Status quo
2. Reduce the culling tolerance for oysters statewide to 5% (**rule change required**)
3. Implement relay participation as a requirement to retain a commercial shellfish license (**requires statutory change**)
4. Increase efforts to plant available cultch materials in the southern region
5. Institute rotational area closures for both commercial and recreational oyster harvest from public bottom annually
6. Explore a preliminary fishery independent index of oyster abundance to inform future management actions
7. Reduce the number of fishing days south of Highway 58 Bridge for both commercial and recreational oyster harvest from public bottom
8. Reduce daily commercial harvest limit from public bottom for all oyster harvesters south of Highway 58 Bridge
9. Reduce the daily oyster harvest limit from public bottom south of Highway 58 Bridge for Shellfish License holders only

Management Recommendations

MFC Preferred Management Strategy

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NCDMF

- Increase efforts to plant and monitor available cultch materials in the southern region and to encourage the review and approval by regulatory agencies of the use of alternative cultch material
- Explore a preliminary fishery independent index of oyster abundance to inform future management actions

Advisory Committee

- Increase efforts to plant and monitor available cultch materials in the southern region using lessons learned to maximize success in the cultch planting program and to emphasize the review and approval by regulatory agencies of the use of alternative cultch material
- Explore and attempt to develop a preliminary fishery independent index of oyster abundance to inform future management actions.
- Decrease the culling tolerance to 5% statewide **(rule change required)**

13.2.1.3 DIFFERENCES IN HAND HARVEST LIMITS STATEWIDE

Proposed Management Options

1. Status quo (continue to maintain the 15 bushel hand/mechanical harvest limit in Pamlico Sound mechanical harvest areas outside the bays, 10 bushel hand/mechanical harvest limit in the bays and in the Mechanical Methods Prohibited area along the Outer Banks of Pamlico Sound)
2. Raise all harvest to 15-bushel trip limit for hand harvest methods for areas north of Core Sound and maintain 5/person – 10/operation from Core Sound south
3. Allow all harvest to 10-bushel trip limit for hand harvest methods for all areas from Core Sound south
4. Expand 10-bushel hand harvest trip limit for hand harvest methods from Core Sound south to US Hwy. 58 Bridge at Emerald Isle
5. Return to five bushels per person/10 bushel per commercial fishing operation for all hand harvest, statewide

Management Recommendations

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Status quo (Maintain the 15 bushel hand/mechanical harvest limit in Pamlico Sound mechanical harvest areas outside the bays, 10 bushel and/mechanical harvest limit in the bays and in the Mechanical Methods Prohibited area along the Outer Banks of Pamlico Sound)

13.2.1.4 ADOPTING SUPPLEMENT A TO AMENDMENT 2 INTO THE N.C. OYSTER FISHERY MANAGEMENT PLAN

Proposed Management Options

1. Status quo – Reinstate the 15-bushel per operation mechanical harvest limit for oysters and close the season based on public perception and increases in law enforcement actions
2. Adopt the provisions of Supplement A – a flexible harvest limit up to 20 bushels, a trigger of 26 percent legal-sized oysters for closing an area to mechanical harvest and set the upper harvest limit of 20 bushels in rule **(rule change required)**
3. Change the Supplement A harvest trigger calculation to exclude oysters less than 25 mm
4. Phase out mechanical harvest of oysters

Management Recommendations

MFC Selected Management Strategy

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NCDMF and Advisory Committee

- Adopt the provisions of Supplement A – a flexible harvest limit up to 20 bushels, a trigger of 26 percent legal-sized oysters for closing an area to mechanical harvest and set the upper harvest limit of 20 bushels in rule

NCDMF

- Attempt to develop and ground truth a fishery dependent metric of effort to better inform management decisions in the future

Advisory Committee

- Develop a fishery dependent metric of effort to help assist with management decisions

13.2.1.5 CONSIDER THE ELIMINATION OF THE SHELLFISH LICENSE AND REQUIRE ALL SHELLFISH HARVESTERS TO HAVE A STANDARD COMMERCIAL FISHING LICENSE OR A RETIRED COMMERCIAL FISHING LICENSE

Proposed Management Options

1. Status quo
2. Increase the cost of the shellfish license to one-half the cost of a SCFL/RSCFL **(requires statutory change)**
3. Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require SCFL/RSCFL with a shellfish endorsement to harvest oysters **(requires statutory change)**
4. Cap the number of available shellfish licenses **(requires statutory change)**
5. Phase out the shellfish license; allowing time for license holders to show participation to be eligible for a SCFL/RSCFL **(requires statutory change)**
6. Eliminate the shellfish license and develop an apprenticeship program in place of a shellfish license **(requires statutory change)**
7. Eliminate the shellfish license and require a SCFL or RSCFL with a shellfish endorsement **(requires statutory change)**

Management Recommendations

MFC Preferred Management Strategy

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NCDMF

- Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require Standard/Retired Commercial Fishing License with a shellfish endorsement to harvest oysters from public bottom **(requires statutory change)**.
- From Highway 58 Bridge south to NC/SC state line, maintain a daily trip limit of 2 bushels of oysters per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain the daily trip limit at 5 bushels of oysters per person for Standard/Retired Commercial Fishing License holders in the southern region.

Advisory Committee

- From Swan Point Marina south to the NC/SC state line, maintain a daily trip limit of 2 bushels per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain a daily trip limit at 5 bushels of oysters per person for SCFL and RSCFL holders in the southern region.
- Allow Shellfish License holders to be eligible to acquire a SCFL after they show a history of sale of shellfish.

13.2.1.6 REQUIREMENTS FOR SHADING MOLLUSCAN SHELLSTOCK

Proposed Management Options

1. Status quo (Continue with no shading requirements)
2. Require shading for clams only during June through September on vessel and transport vehicle to dealer
3. Require shading for clams and oysters during June through September on vessel and transport vehicle to dealer
4. Require shading for clams and oysters during transport to dealer only (in vehicle) during June through September
5. Implement shading requirements for clams during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually

Management Recommendation

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Implement shading requirements for clams on a vessel, during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually.

13.3.1 PRIVATE CULTURE

The current shellfish lease program in North Carolina needs to be evaluated and changes implemented in order be productive for culturists. Improvements in the allocation of leases and requirements for the continuance of leases are needed. Other issues of concern include the protection of shellfish lease and franchise rights, re-visiting the issues on lease prohibitions in certain water bodies, and consider modification to specific lease provisions.

13.3.1.1 PROTECTION OF SHELLFISH LEASE AND FRANCHISE RIGHTS

Proposed Management Options

1. Status Quo (Continue classifying larceny of shellfish from private bottom and damage to property from an aquaculture facility or operation as a Class A1 misdemeanor, which may include a fine of not more than $5,000)
2. Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises **(requires statutory change)**
3. Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**
4. Modify Rule 15A NCAC 03O .0114 so that convictions under G.S. 113-208 or G.S. 113-269 would count as more than one conviction for license suspension or revocation purposes **(rule change required)**

Management Recommendations

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises. With minimum fines set at $500 for the first violation and $1,000 for the second violation **(requires statutory change)**.
- Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**.
- Modify Rule 15A NCAC 03O .0114, so that a first conviction under G.S. 113-208 or G.S. 113-269 the Fisheries Director shall revoke all licenses issued to the licensee for a period of one year **(rule change required)**.

13.3.1.2 DEFINING ADVERSE IMPACTS TO SUBMERGED AQUATIC VEGETATION FROM SHELLFISH LEASES AND FRANCHISES

Proposed Management Options

1. Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following the 15% sparse SAV measure identified in the interim
2. NCDMF/NMFS/USACE reevaluate benthic sampling protocol for shellfish lease investigations to ensure that the current sampling density of 50 one meter samples per acre is not excessive
3. NCDEQ/NCDMF issue shellfish leases in areas containing SAV

Management Recommendations

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following measures identified in the interim)

13.3.1.3 BRUNSWICK COUNTY SHELLFISH LEASE MORATORIUM

Proposed Management Options

1. Status quo (Continue the moratorium of shellfish leases in Brunswick County)
2. Allow shellfish leases in Brunswick County **(requires statutory change)**
3. Allow shellfish leases in Brunswick County, limiting acreage and availability **(requires statutory change)**

Management Recommendations

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Continue the moratorium of shellfish leases in Brunswick County

13.3.1.4 MODIFY SHELLFISH LEASE PROVISIONS

Proposed Management Options

1. Status Quo (Maintain current lease terms of 5 years with 5 year production average)
2. Establish a 7 year period for the initial lease with the last five years of the lease averaged for production. Upon renewal, lease period returns to 5 years **(requires statutory change)**
3. Established rule to support extensions for where "Acts of God" prevent lease holder from making production, with a two year extension and only one extension allowed per term. **(requires statutory change)**
4. Status Quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)
5. Allowing 10 acres per lease in Mechanical Method Prohibited Area (MMP) **(rule change required)**
6. Increasing maximum of 50 acres of shellfish leased bottom per lease holder **(requires statutory change)**
7. Waive natural shellfish bed designation after 10 years of a shellfish lease termination date and allow re-application for those leases **(requires statutory change)**
8. Establish grace periods for planting/production requirements when a lease is transferred to meet standards **(requires statutory change)**
9. Waive survey requirements on terminated leases when applying within same footprint **(requires statutory change)**

Management Recommendations

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Establish a rule to support extensions for where "Acts of God" prevent lease holder from making production, with a two year extension and only one extension allowed per term **(rule change required)**.
- Allow leases returned to the state to remain delineated for one year to allow the pre-existing leased bottom to be re-issued to other shellfish growers **(requires statutory change)**.
- Improve public notice of proposed lease applications on the physical lease, at fish houses, and/or through electronic notices.

NCDMF

- Status Quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)

Advisory Committee

- Allow a maximum of 10 acres in both mechanical methods prohibited areas and mechanical methods allowed areas **(rule change required)**.

HARD CLAM FISHERY MANAGEMENT PLAN AMENDMENT 2

13.1 PREFERRED MANAGEMENT STRATEGIES

The selected management strategies and research needs listed below are organized according to the General Problem Statements in Section 5.2. Each strategy is followed by a reference to the Principal Issue(s) and Management Options from Section 12.0 and indicated in parentheses that supports it, followed by which Objective(s) it addresses from Subsection 4.1.

13.1.1 INSUFFICIENT DATA

NCDMF will only be able to approximate management that prevents overfishing and achieves sustainable harvest until necessary data are collected. Data are lacking from the recreational fishery and some life history aspects of the population to provide a stock assessment. While landings records reflect population abundance to some extent, the relationship is confounded by changes in harvest effort and efficiency. Fishery-dependent and independent monitoring programs to collect biological data to complement trip ticket landings information occurs in Core Sound and needs to be expanded to more areas in the state. Very limited data is collected for the recreational harvest of hard clams. A socioeconomic survey for the recreational hard clam fishery is necessary to determine the economic impacts and demographics of this user group. The socioeconomic survey of the hard clam commercial fishery should be continued and updated periodically to determine the specific business characteristics, the economics of working in the fishery, fishery demographics, issues of importance for commercial participants, and attitudes towards management of the fishery.

[(Section 6.0 and Section 9.0), (Objectives 1, 3, 6, and 7)]

13.1.2 MANAGEMENT OF PUBLIC BOTTOM

The hard clam fishery has been managed through harvest and size limits, and gear and area restriction. The management program needs to be evaluated and modified as new information becomes available. Rules specific to hard clam management on public bottom should be periodically reviewed to clarify the intent and reflect changes concurrent with new information.

[(Section 12.0), (Objectives 1, 4, 6, and 7)]

13.1.2.1 ISSUE: CONSIDER INCREASING THE RECREATIONAL MAXIMUM DAILY HARVEST LIMIT

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue the daily harvest limit for recreational purposes at 100 clams per person per day not to exceed 200 per clams per vessel per day)
2. Increase the daily vessel maximum recreational clam harvest limit and maintain the daily personal harvest limit of 100 clams per person per day for all recreational participants **(rule change required)**
3. Increase the daily vessel maximum recreational harvest limit for clams for just recreational participants under a for-hire license with six or fewer participants and maintain the 200 clams maximum daily vessel limit for all other recreational participants **(rule change required)**

4. Eliminate the daily vessel maximum recreational harvest limit for clams but maintain the daily individual harvest limit at 100 clams per person per day for all recreational participants **(rule change required)**
5. Use a volumetric measurement for the individual and vessel recreational clam daily harvest limit **(rule change required)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Increase the daily vessel maximum recreational clam harvest limit to 400 clams and maintain the daily personal harvest limit of 100 clams per person per day for all recreational participants **(rule change required)**

13.1.2.2 ISSUE: MANAGEMENT OF PUBLIC MECHANICAL CLAM HARVEST

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam harvest lines to exclude areas where oyster habitat and SAV habitat exist based on all available information)
2. Modify mechanical clam harvest lines to exclude areas no longer fished but are currently open to mechanical clam harvest
3. Modify mechanical clam harvest lines currently open to mechanical clam harvest with a wider buffer between the lines and where oyster habitat and SAV habitat exist, based on all available information
4. Increase rotation of mechanical harvest in existing sites
5. Rotation of current mechanical harvest areas with previously unopened areas **(rule change required)**
6. Shorten the mechanical clam harvest season
7. Eliminate all mechanical clam harvest areas
8. Remove the Pamlico Sound mechanical clam harvest area in rule no longer in use **(rule change required)**
9. Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats
10. Shorten or eliminate the minimum 25-foot distance requirement mechanical clam harvesters must maintain from privately marked and maintained navigation channels, docks, and piers
11. Expand the mechanical clam harvest areas **(rule change required)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Status quo (Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam

harvest lines to exclude areas where oyster habitat and SAV habitat exist based on all available information)
- Remove the Pamlico Sound mechanical clam harvest areas in rule no longer in use **(rule change required)**
- Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats

Advisory Committee
- Allow mechanical clam harvesters to have access to the bottom before maintenance dredging occurs

13.1.2.3 ISSUE: THE USE OF POWER HAULING EQUIPMENT IN THE HAND HARVEST OF HARD CLAMS

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain current definitions and enforcement of hand harvest methods)
2. Amend rules to set conditions allowing for the general use of power hauling equipment in the hand harvest of hard clams **(rule change required)**
3. Modify mechanical clam harvest lines to include additional waterbody areas where the use of power hauling equipment is the only mechanical harvest gear allowed through proclamation

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy
-

NCDMF and Advisory Committee
- Status quo (Maintain current definitions and enforcement of hand harvest methods)

13.1.2.4 ISSUE: CONSIDER THE ELIMINATION OF THE SHELLFISH LICENSE AND REQUIRE ALL SHELLFISH HARVESTERS TO HAVE A STANDARD COMMERCIAL FISHING LICENSE OR RETIRED STANDARD COMMERCIAL FISHING LICENSE

PROPOSED MANAGEMENT OPTIONS
1. Status quo
2. Increase the cost of the shellfish license to one-half the cost of a SCFL/RSCFL **(requires statutory change)**
3. Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require SCFL/RSCFL with a shellfish endorsement to harvest oysters **(requires statutory change)**
4. Cap the number of available shellfish licenses **(requires statutory change)**
5. Phase out the shellfish license; allowing time for license holders to show participation to be eligible for a SCFL/RSCFL **(requires statutory change)**
6. Eliminate the shellfish license and develop an apprenticeship program in place of a shellfish license **(requires statutory change)**
7. Eliminate the shellfish license and require a SCFL or RSCFL with a shellfish endorsement **(requires statutory change)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

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NCDMF

- Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require Standard/Retired Commercial Fishing License with a shellfish endorsement to harvest oysters from public bottom **(requires statutory change)**
- From Highway 58 Bridge south to NC/SC state line, maintain a daily trip limit of 2 bushels of oysters per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain the daily trip limit at 5 bushels of oysters per person for Standard/Retired Commercial Fishing License holders in the southern region

Advisory Committee

- From Swan Point Marina south to the NC/SC state line, maintain a daily trip limit of two bushels of oysters per person maximum four bushels of oysters per vessel off public bottom from Highway 58 Bridge south only for holders of the Shellfish License. Maintain the daily trip limit at five bushels of oysters per person for SCFL and RSCFL holders in the southern region
- Allow Shellfish License holders to be eligible to acquire a SCFL after they show a history of sale of shellfish

13.1.3 PRIVATE CULTURE

The current shellfish lease program in North Carolina needs to be evaluated and changes implemented in order be productive for culturists. Improvements in the allocation of leases and requirements for the continuance of leases are needed. Other issues of concern include the protection of shellfish lease and franchise rights, re-visiting the issues on lease prohibitions in certain water bodies, and consider modification to specific lease provisions.

[(Section 12.0), (Objectives 1, 2, and 4)]

13.1.3.1 ISSUE: PROTECTION OF SHELLFISH LEASE AND FRANCHISE RIGHTS

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue classifying larceny of shellfish from private bottom and damage to property from an aquaculture facility or operation as a Class A1 misdemeanor, which may include a fine of not more than $5,000)
2. Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises **(requires statutory change)**
3. Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**
4. Modify Rule 15A NCAC 03O .0114 so that convictions under G.S. 113-208 or G.S. 113-269 would count as more than one conviction for license suspension or revocation purposes **(rule change required)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Support modification of G.S. 113-208 and G.S. 113-269 to add minimum fines for violations on shellfish leases and franchises. With minimum fines set at $500 for the first violation and $1,000 for the second violation **(requires statutory change)**
- Support modification of G.S. 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**
- Modify Rule 15A NCAC 03O .0114, regardless whether statute changes occur, so that a first conviction under G.S. 113-208 or G.S. 113-269 the Fisheries Director shall revoke all licenses issued to the licensee **(rule change required)**

13.1.3.2 ISSUE: DEFINING ADVERSE IMPACTS TO SUBMERGED AQUATIC VEGETATION FROM SHELLFISH LEASES AND FRANCHISES

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following the 15% sparse SAV measure identified in the interim
2. NCDMF/NMFS/USACE reevaluate benthic sampling protocol for shellfish lease investigations to ensure that the current sampling density of 50 one meter samples per acre is not excessive
3. NCDEQ/NCDMF issue shellfish leases in areas containing SAV

MANAGEMENT RECOMMENDATION

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following measure identified in the interim)

13.1.3.3 ISSUE: BRUNSWICK COUNTY SHELLFISH LEASE MORATORIUM

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue the moratorium of shellfish leases in Brunswick County)
2. Allow shellfish leases in Brunswick County **(requires statutory change)**
3. Allow shellfish leases in Brunswick County, limiting acreage and availability **(requires statutory change)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Continue the moratorium of shellfish leases in Brunswick County

13.1.3.4 ISSUE: MODIFY SHELLFISH LEASE PROVISIONS

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain current lease terms of 5 years with 5 year production average)
2. Establish a 7 year period for the initial lease with the last five years of the lease averaged for production. Upon renewal, lease period returns to 5 years **(requires statutory change)**
3. Establish a rule to support extensions for where "Acts of God" prevent lease holder from making production, with a two year extension and only one extension allowed per term. **(rule change required)**
4. Status quo (Maintain five acres within a MMPA and ten acres within a mechanical methods area, not to exceed 50 acres)
5. Allow ten acres per lease in MMPA **(rule change required)**
6. Increasing maximum of 50 acres of shellfish leased bottom per lease holder **(requires statutory change)**
7. Status quo (Once a lease is terminated it returns to public bottom and is assessed for future leases based on "natural shellfish bed" definition.
8. Waive natural shellfish bed designation after ten years of a shellfish lease termination date and allow re-application for those leases **(requires statutory change)**
9. Establish grace periods for planting/production requirements when a lease is transferred to meet standards **(requires statutory change)**
10. Waive survey requirements on terminated leases when applying within same footprint **(requires statutory change)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Establish a rule to support extensions for where "Acts of God" prevent lease holder from making production, with a two year extension and only one extension allowed per term **(rule change required)**
- Allow leases returned to the state to remain delineated for a period of one year to allow the pre-existing leased bottom to be re-issued to other shellfish growers **(requires statutory change)**.
- Improve public notice of proposed lease applications on the physical lease, at fish houses, and/or through electronic notices

NCDMF

- Status quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)

Advisory Committee

- Allow a maximum of ten acres in both mechanical methods prohibited areas and mechanical methods allowed areas **(rule change required)**

13.1.4 ENVIRONMENT AND PUBLIC HEALTH

Adequate habitat and suitable water quality are imperative to the hard clam population. Support of the CHPP is essential in collaborating with other agencies such as, the CRC and the EMC to improve habitat and water quality coastwide. Sanitary controls are also established over all phases of the growing, harvesting, shucking, packing, and distribution of fresh and frozen shellfish, based on public health principles designed to prevent human illness associated with the consumption of hard clams. These recommendations should include ways to prevent or minimize potential negative impacts to shellfish growing waters and the prevention of human illnesses associated with the consumption of molluscan shellfish.

[(Sections 11.0 and 12.0), (Objectives 2, 4, and 5)]

13.1.4.1 ISSUE: REQUIREMENTS FOR SHADING MOLLUSCAN SHELLSTOCK

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue with no shading requirements)
2. Require shading for clams only during June through September on vessel and transport vehicle to dealer
3. Require shading for clams and oysters during June through September on vessel and transport vehicle to dealer
4. Require shading for clams and oysters during transport to dealer only (in vehicle) during June through September
5. Implement shading requirements for clams during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

-

NCDMF and Advisory Committee

- Implement shading requirements for clams on a vessel, during transport to a dealer, or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually.

Director's Report

Volume 24, Issue 6
December 2015/January 2016

ASMFC
FISHERIES focus
Vision: Sustainably Managing Atlantic Coastal Fisheries

INSIDE THIS ISSUE

ASMFC Winter Meeting

February 2-4, 2016

The Westin Alexandria
400 Courthouse Square
Alexandria, VA
703.253.8600

Final Agenda

Please note: The agenda is subject to change. The final agenda will include additional items and may revise the bulleted items provided below. The agenda reflects the current estimate of time required for scheduled Board meetings. The Commission may adjust this agenda in accordance with the actual duration of Board meetings. Interested parties should anticipate Boards starting earlier or later than indicated herein.

TUESDAY, FEBRUARY 2

9 AM - Noon — **American Lobster Management Board**

- Discuss Future Management of Southern New England Lobster Stock **Possible Action**
- Technical Committee Report (*B. Glenn*)
- Review and Discuss Catch and Landings Records for Jonah Crab-only Trap Fishermen (*M. Ware*)
- Consider Draft Addendum I to the Jonah Crab Fishery Management Plan for Public Comment (*M. Ware*) **Action**
- Review Catch Records from Jonah Crab Claw Fishermen and Discuss Action to Create a Standard for Claw Landings (*M. Ware*) **Possible Action**
- Approve Implementation Plans for the Jonah Crab Fishery Management Plan (*M. Ware*) **Action**
- Update on New England Fishery Management Council Deep Sea Coral Habitat Amendment (*D. Grout*)
- Update on State/Federal American Lobster Observer Programs (*M. Ware*)

1 - 2:30 PM — **Atlantic Herring Section**

- Draft Amendment 3 to the Atlantic Herring Fishery Management Plan (*A. Harp*) **Final Action**
  - Review Options (*A. Harp*)
  - Public Comment Summary (*A. Harp*)
  - Advisory Panel Report (*J. Kaelin*)
  - Consider Final Approval of Amendment 3 (*R. White*)
- Overview on the Research Set-Aside Program

continued, see WINTER MEETING FINAL AGENDA on page 6

Upcoming Meetings

February 2 - 4
ASMFC Winter Meeting, The Westin Alexandria, 400 Courthouse Square, Alexandria, VA.

February 8 - 10
Atlantic Croaker and Spot Stock Assessment Workshops, Francis Marion Hotel, 387 King Street, Charleston, SC.

February 9 - 11
Mid-Atlantic Fishery Management Council, DoubleTree by Hilton New Bern-Riverfront, New Bern, NC.

March 3 - 5
Maine Fishermen's Forum, Samoset Resort, Rockport, ME.

March 6 - 8
Seafood Expo North America, Boston Convention Center, Boston, MA.

March 7 - 11
South Atlantic Fishery Management Council, Westin Jekyll Island, 110 Ocean Way, Jekyll Island, GA.

March 21 - 25
ASMFC Technical Committee Meeting Week, location to be determined.

April 12 - 14
Mid-Atlantic Fishery Management Council, Montauk Yacht Club, Montauk, NY.

April 19 - 21
New England Fishery Management Council, Hilton Hotel, Mystic, CT.

May 2 - 5
ASMFC Spring Meeting, The Westin Alexandria, 400 Courthouse Square, Alexandria, VA.

June 13 - 17
South Atlantic Fishery Management Council, Hilton Cocoa Beach Oceanfront, 1550 N. Atlantic Avenue, Cocoa Beach, FL.

June 14 - 16
Mid-Atlantic Fishery Management Council, Courtyard Marriott, Newark, DE.

June 20 - 24
ASMFC Technical Committee Meeting Week, location to be determined.

June 21 - 23
New England Fishery Management Council, Holiday Inn by the Bay, Portland, ME.

August 2 - 4
ASMFC Summer Meeting, The Westin Alexandria, 400 Courthouse Square, Alexandria, VA.

August 8 - 11
Mid-Atlantic Fishery Management Council, Hilton, Virginia Beach, VA.

August 20 - 24
American Fisheries Society 145th Annual Meeting, Kansas City, KS.

September 12 - 16
South Atlantic Fishery Management Council, Marina Inn at Grande Dunes, 8121 Amalfi Place, Myrtle Beach, SC.

September 12 - 16
ASMFC Technical Committee Meeting Week, location to be determined.

September 20 - 22
New England Fishery Management Council, DoubleTree by Hilton, Danvers, MA.

October 23 - 27
ASMFC 75th Annual Meeting, Harborside Hotel, 55 West St, Bar Harbor, ME.

The Atlantic States Marine Fisheries Commission was formed by the 15 Atlantic coastal states in 1942 for the promotion and protection of coastal fishery resources. The Commission serves as the deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and diadromous species. The fifteen member states of the Commission are: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida.

Looking Back and Reviewing the Year Ahead

2015 was another busy year for the Commission and our member states. One of the most visible achievements was the completion of six benchmark stock assessments for Atlantic menhaden, black drum, tautog, American lobster, scup, and bluefish. Stock assessments are the foundation upon which Commission management decisions are made, and for three of these species (Atlantic menhaden, tautog, and American lobster) we will consider new management approaches to address the stocks' needs. Though the benchmark assessments are labor intensive and time consuming (they can take up to 2 years prepare and peer review), we demonstrated our commitment to consistently pursuing the best science to ensure management is sound.

2015 also featured important management decisions, most notably for Atlantic striped bass and Atlantic menhaden. New Atlantic striped bass harvest reductions were implemented this year to rebuild the stock to target levels following a number of years with below average spawning success. For Atlantic menhaden, the total allowable catch was increased by 10% in tandem with continued development of ecological-based reference points to reflect Atlantic menhaden's role as a forage species. The Commission is currently funding an unprecedented socioeconomic study of the Atlantic menhaden fishery to provide a better understanding of the reduction and bait fisheries. These management decisions struck the difficult balance between differing stakeholder interests and the biological status of these iconic stocks.

2015 was also a noteworthy year for American eel. The U.S. Fish and Wildlife Service made a determination to not list the species under the Endangered Species Act. This decision affirms the efficacy of the Commission's management plan and our ability to handle particularly challenging management issues in a responsible way. However, this does not mean we can become complacent about eel management; this stock will require continued vigilance to ensure the stock rebuilds to healthier levels.

Over at ACCSP, our member states are about to begin conducting the catch estimate portion of MRIP, known as APAIS, where they will oversee and manage field collection of catch data. ACCSP has been working for over a year on this effort and we look forward to increased state involvement and improved stakeholder confidence in the data.

With 2015 behind us, there is a lot in store for 2016. We expect to complete benchmark stock assessments for four South Atlantic species – red drum, weakfish, spot, and Atlantic croaker. Each assessment will provide us new insight in the status of these resources as well as an opportunity to revisit, and adjust as necessary, the species' management programs. One of the biggest challenges for 2016 will be the changing dynamics of the marine environment. Warming waters along our coast are already affecting the black sea bass, northern shrimp, and American lobster fisheries. Commissioners will work to adapt management to this new reality by finding opportunities to protect the resource while also providing new opportunities to meet our stakeholders' needs.

We are grateful for continued congressional support we received this year. Appropriators prevented reductions to the Atlantic Coastal Fisheries Cooperative Management Act and boosted Interjurisdictional Fisheries Act grants by 20%. We are also grateful to Representatives John Carney (D-DE) and Frank LoBiondo (R-NJ), and Senator Chris Coons (D-DE) for successfully including budget language to revive the Mid-Atlantic Horseshoe Crab Survey in 2016. Working with our partners on Capitol Hill requires constant work and thanks are due to all Commissioners who assisted our efforts last year.

While we bid farewell to a number of long-serving Commissioners this year, including Paul Diodati, Tom O'Connell, Senators Robert Venables, Richard Colburn, and Clark Jenkins, Representative Jon Burns, and Bill Cole, we were also impressed with the new faces around the table and know the collective hand on the rudder will remain steady in 2016. This includes new leadership elected at our Annual Meeting in Saint Augustine, Florida. I have no doubt Doug Grout will be an effective and fair Chair and Jim Gilmore will provide strong support as Vice-Chair. A big thank you to Dr. Louis Daniel for his leadership as Chair these past two years.

I would be remiss if I didn't acknowledge the contributions of staff from our member states and federal partners. Their service on our species technical and stock assessment committees is critical to provide the scientific foundation of our management actions.

Finally, I am grateful for the dedication and strong work ethic of the Commission staff. We replaced three FMP coordinators and one stock assessment scientist this year and did not miss a beat. Beyond science and management, our numbers grew significantly this year due to expanding ACCSP for the APAIS transition. New human resources staff also came on board to account for the growth spurt. Our program directors' sound leadership and guidance ensure we are firmly on track to achieve our annual objectives and Vision in 2016 and beyond.

When all's said and done, 2015 was a success because of the people that are part of the Commission. The states, the staff, and our federal partners were all dedicated to manifesting its success. May 2016 be as memorable and productive as 2015.

New Stock Assessment Seeks to Clarify Recent Trends in the Fishery

Introduction

Atlantic croaker, *Micropogonias undulates*, is a bottom-dwelling species which occurs in coastal waters from the Gulf of Maine to Argentina. The fishery is predominately commercial; however, the species supports a sizable recreational fishery, especially in the Mid-Atlantic. The species is managed under Amendment 1 to the Interstate Fishery Management Plan (FMP) and its Addenda (I-II). While Amendment 1 does not establish specific measures restricting the recreational or commercial harvest, it does establish assessment triggers and ensures data collection. Fishery managers are concerned about recent declines in the total catch which may suggest a decrease in abundance. The species is currently undergoing a benchmark stock assessment which seeks to illuminate recent trends in the fishery and provide an update on the stock status. It is expected that the stock assessment will be completed in late 2016.

Life History

Atlantic croaker can be found in U.S. coastal waters from the Gulf of Maine to Florida, although they primarily occur south of New York. Seasonal migrations of croaker have not been well defined, but the fish appear to move northward and inshore during warmer months and southward and into the ocean during late fall or winter. Spawning occurs from July through December with fish located in both the lower Chesapeake Bay and in coastal oceanic waters. The larvae move into estuaries and develop into juveniles in low salinity waters before moving into higher salinity waters in the summer and fall. Croaker grow rapidly during their first year and mature between the ages of one and three. Recent data indicate they may be as small as five inches upon maturity, but the average size at 50% maturity is closer to seven inches, meaning at least half of all seven inch fish in the population are sexually mature. Size at age varies throughout the species' range, although most growth is completed during the first two years. The oldest caught croaker was aged at 17 years. Very young croaker eat small planktonic organisms, while juveniles and adults feed on bottom organisms such as marine worms, mollusks, crustaceans, and occasionally fish. Croaker are eaten by many species, including striped bass, flounder, weakfish, and spotted seatrout.

Species Snapshot

Atlantic Croaker
Micropogonias undulates

Common Names:
- Croaker, hardhead, King Billy, grumbler

Family: Sciaendae (along with weakfish, spot, spotted seatrout, black drum and red drum)

Interesting Facts:
- The characteristic croaking sound is produced by the vibration of the swim bladder and special muscles.
- Croaker's spawning period varies based on latitude, peaking in the fall for fish north of Cape Hatteras and in the winter for fish further south.
- The largest caught croaker, nicknamed "Big Boy" weighed 8 pounds 11 ounces and was 27" inches.

Maximum Age: 5 years

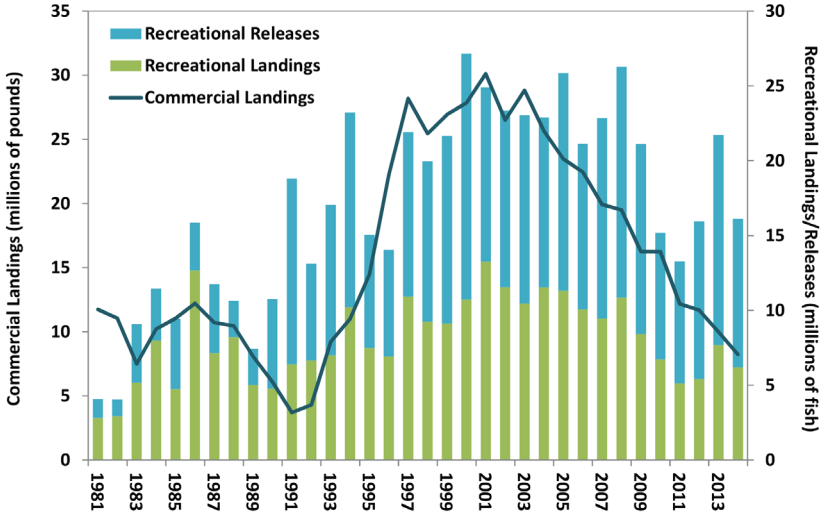
Stock Status: Overfishing is not occurring, overfished status is unknown

Recreational & Commercial Fisheries

Atlantic croaker support commercial and recreational fisheries along the Atlantic coast, particularly in Maryland, Virginia, and North Carolina. The fish have been part of a mixed stock commercial fishery since the 1880s. Commercial landings of croaker exhibit a cyclical trend; in some years the catch is almost 30 million pounds, while in other years it is less than two million pounds. Between 1997 and 2003, commercial croaker landings were at the high end of a cycle, averaging 28 million pounds. Since 2004, commercial landings have declined, falling below 10 million pounds in 2013. Commercial landings of Atlantic croaker in 2014 were just over 7 million pounds. The dominant commercial fishing gears are trawls and gillnets, although haul seines and pound nets also contribute heavily.

Recreational landings of Atlantic croaker similarly increased from 1981 to the early 2000s but have declined in recent years. Recreational landings peaked in 2001 with over 11 million pounds harvested but

Atlantic Croaker Commercial Landings & Recreational Landings/Releases
Source: NMFS Fisheries Statistics Division, Silver Spring, MD, 2015



Timeline of Management Actions: FMP ('87); Amendment 1 ('05); Addendum I ('11); Addendum II ('14)

have slowly declined since, with roughly 3 million pounds harvested in 2014. The majority of these recreational landings came from Virginia (55%) and Maryland (17.5%). The percentage of croaker released in the recreational fishery has approximately doubled, increasing from 31% in 1981 to 62% in 2014.

Status of the Stock

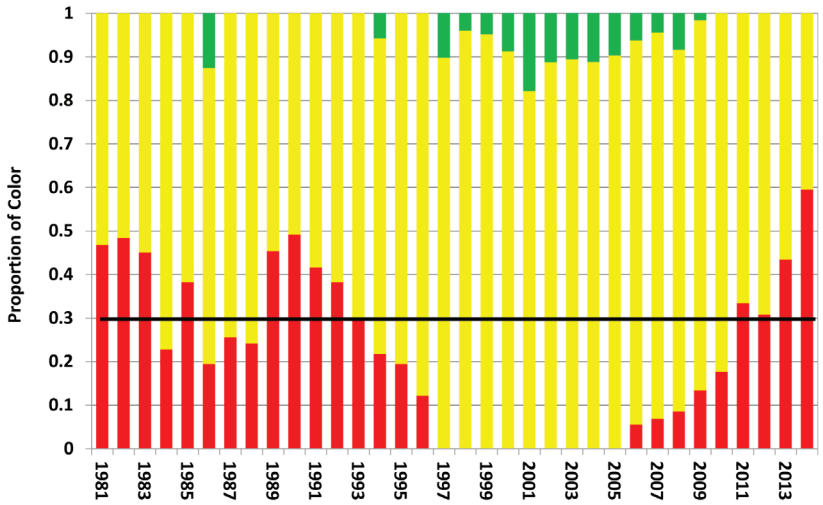
Stock Assessment

The latest stock assessment was completed and peer-reviewed in 2010. Unlike the previous assessment, it evaluates the status of the resource as a single coastwide population. Stock status is based on comparison of model estimates to biological reference points (i.e., spawning stock biomass and fishing mortality targets and thresholds). Revised biological reference points were adopted as part of the assessment. These reference points are ratio-based, and compare estimated fishing mortality and spawning stock biomass to the levels of each needed to produce maximum sustainable yield (F_{MSY}).

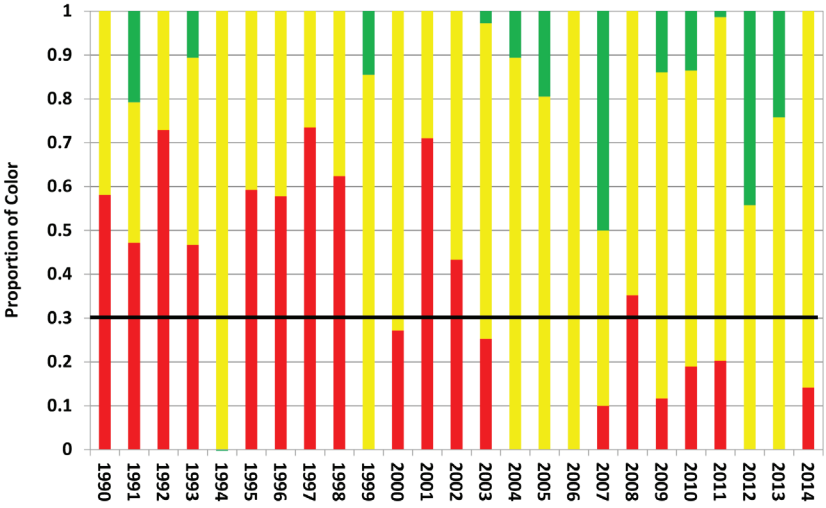
Atlantic croaker is not experiencing overfishing. It is not possible to determine if the stock is overfished based on the model results, but it is unlikely. This statement is based on information from the data compiled for the assessment, namely increasing indices of relative abundance and expanding age structure in the catch and indices. Model estimated values of fishing mortality (F), spawning stock biomass (SSB), and biological reference points are too uncertain to be used to determine stock status. Only the ratio of F to F_{MSY} is considered reliable and can be used to determine that overfishing is not occurring.

Work on a new benchmark stock assessment began in June 2015. The assessment will focus on updated modeling approaches to better estimate Atlantic croaker bycatch in the shrimp trawl fishery, a major source of uncertainty in the last assessment. The stock assessment will also illuminate recent trends in the fishery and update the stock status, including a sound determination of whether the population is overfished. A data workshop was held in September 2015. It is expected that the stock assessment will be completed by late 2016.

Traffic Light Analysis of Atlantic Croaker (Harvest Metric)
Solid line represents 30% threshold



Traffic Light Analysis of Atlantic Croaker (Abundance Metric)
Solid line represents 30% threshold



Management response is triggered when proportion of red exceeds the 30% theshold level for three consequetive years in both fishery characteristics (harvest and abundance metrics).

Traffic Light Approach

In 2014, the South Atlantic State/federal Fisheries Management Board approved the Traffic Light Approach (TLA) as the new precautionary management framework to evaluate fishery trends and develop management actions in the absence of a current stock assessment. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of population indicators. When a population characteristic improves, the proportion of green in the given year increases. Harvest and abundance thresholds of 30% and 60% represent moderate and significant concern for the fishery. If thresholds for both population characteristics achieve or exceed a threshold for a three year period, then management action is enacted.

Results of the 2014 TLA showed declines in the harvest and abundance of Atlantic croaker. The harvest index, which is comprised of fishery dependent data, did surpass the 30% threshold; however the abundance index, which is comprised of fishery-independent data,

continued, see ATLANTIC CROAKER on page 8

Winter Meeting Final Agenda (cont'd)

TUESDAY, FEBRUARY 2

2:45 – 4:15 PM — **Summer Flounder, Scup, and Black Sea Bass Management Board**

- Review 2016 Black Sea Bass Commercial Quotas (*K. Rootes-Murdy*)
- Draft Addendum XXVII for Final Approval **Final Action**
  - Review Options (*K. Rootes-Murdy*)
  - Public Comment Summary (*K. Rootes-Murdy*)
  - Advisory Panel Report (*K. Rootes-Murdy*)
  - Law Enforcement Committee Report (*M. Robson*)
  - Consider Final Approval of Addendum XXVII
- Set Scup 2016 Recreational Fishery Specifications (*K. Rootes-Murdy*) **Final Action**
- Update on Black Sea Bass and Summer Flounder Amendment Process (*K. Rootes-Murdy*)

2:45 – 4:15 PM — **Atlantic Coastal Cooperative Statistics Program (ACCSP) Executive Committee**

(A portion of this meeting may be a closed session for Committee members only)

- Program Status Updates (*M. Cahall*)
  - Program Status
  - APAIS
  - Seafood Traceability
- Governance Update (*C. Patterson*)
- Consider Approval of Executive Committee Standard Operating Procedures (SOP) **Action**
- 2016 Calendar
  - Discuss Executive Committee Meeting Frequency **Action**
- Review Action Items from Previous Meeting
  - Executive Committee SOP Edits Submitted to C. Patterson in January In Progress
- Closed Executive Session

4:30 – 6 PM — **ACCSP Coordinating Council**

- ACCSP Status Report
  - Program Update (*M. Cahall*)
  - APAIS Update (*M. Cahall*)
- Committee Updates (*P. Campfield*)
- Independent Program Review Update (*M. Cahall*)

WEDNESDAY, FEBRUARY 3

8 – 10 AM — **Executive Committee**

(A portion of this meeting may be a closed session for Committee members and Commissioners only)

- Overview of Commission Guidance Documents and Consider Recommendations to the ISFMP Policy Board for Changes
- Discuss ACCSP Governance (*R. Beal*)
- Future Annual Meetings Update (*L. Leach*)
  - 2016-Bar Harbor, Maine
  - 2017-Virginia
  - 2018-New York
  - 2019-New Hampshire

10:15 – 11 AM — **Atlantic Menhaden Management Board**

- Consider Conservation Equivalent Management Proposals from Maryland and the Potomac River Fisheries Commission (*L. Fegley/M. Gary*) **Action**
  - Technical Committee Report (*J. McNamee*)
  - Law Enforcement Committee Report (*M. Robson*)
- Review Draft Amendment 3 Development Timeline (*M. Waine*)
  - Ecosystem Reference Points
  - Revisiting Fishery Allocation and Socioeconomic Analysis
- Discuss Timeline for Setting 2017 Fishery Specifications (*R. Boyles, Jr.*)

11:15 – 11:45 AM — **Atlantic Sturgeon Management Board**

- Update on 2017 Benchmark Stock Assessment (*K. Drew*)
- Review and Populate Stock Assessment Subcommittee Membership (*M. Appelman*) **Action**
- Overview of NOAA Fisheries Critical Habitat Designation Process for Atlantic Sturgeon (*K. Damon-Randall*)
- Elect Vice-Chair (*J. Clark*) **Action**

Noon – 12:30 PM **Spiny Dogfish Management Board**

- Review and Set 2016-2018 Fishery Specifications **Final Action**
  - Review Mid-Atlantic Fishery Management Council 2016-2018 Specifications (*J. Didden*)
  - Review New England Fishery Management Council 2016-2018 Specifications (*A. Harp*)
- Elect Vice-Chair **Action**

1:30 – 2:15 PM **Coastal Sharks Management Board**

- Discuss Differences in State and Federal Smoothhound Catch Composition Regulations for Processing at Sea (*A. Harp*)
- Review and Set the 2016 Smoothhound Quota (*A. Harp*) **Final Action**

2:30 – 3:30 PM **Horseshoe Crab Management Board**

- Review Scope of Work to Consider Changes to the Adaptive Resource Management Framework (*K. Rootes-Murdy*)
- Review Alternative Bait Trial Results (*K. Rootes-Murdy*)
- Review and Populate Advisory Panel Membership (*K. Rootes-Murdy*) **Action**

3:45 – 4:30 PM **South Atlantic State/Federal Fisheries Management Board**

- Progress Update on Red Drum Benchmark Stock Assessment and Desk Review (*J. Kipp*)
- Progress Update on the Spot and Atlantic Croaker Stock Assessments (*J. Kipp*)
- Discuss Recommendation to the ISFMP Policy Board Regarding Spotted Seatrout Management (*L. Daniel*) **Possible Action**
- Consider 2015 FMP Review and State Compliance for Spot (*M. Ware*) **Action**
- Elect Vice-Chair **Action**

4:45 – 5:45 PM **Tautog Management Board**

- Progress Update on Draft Amendment 1 Development (*A. Harp*)
- Progress Update on University of Connecticut Long Island Sound and New York/New Jersey Stock Assessments (*A. Harp*)
- Review the Law Enforcement Subcommittee Commercial Harvest Tagging Program Objectives (*M. Robson*)

THURSDAY, FEBRUARY 4

8 – 9 AM **Atlantic Striped Bass Management Board**

- Consider Tabled Motions from November 2015 (*J. Gilmore*) **Action**
  - *Move to initiate an Addendum to reconsider management options in the Chesapeake Bay from Addendum IV for 2016 based on the stock assessment update in 2015 and retrospective projections*. Motion made by Mr. Luisi and second by Mr. O'Reilly. Motion tabled until February 2016.
  - *Move to amend to remove the words "in the Chesapeake Bay."* Motion made by Mr. Clark and seconded by Mr. Augustine. Motion tabled until February 2016.
- Consider Conservation Equivalent Management Proposals from Maryland and Potomac River Fisheries Commission (*M. Luisi/M. Gary*) **Action**
  - Technical Committee Report (*M. Appelman*)
  - Law Enforcement Committee Report (*M. Robson*)
- Update on 2016 Cooperative Winter Tagging Program (*W. Laney*)
- Elect Vice-Chair **Action**

9:15 – 10:15 AM **Winter Flounder Management Board**

- Technical Committee Report on the Southern New England/Mid-Atlantic Winter Flounder Fishery and Management Program Under Zero Possession Limits (*P. Nitschke*)
- Overview of Federal Management Measures (*J. Cournane*)
- Discuss Future Management of Winter Flounder (*M. Gibson*)
- Review and Set 2016-2018 Specifications (*A. Harp*) **Final Action**

10:30 a.m. – Noon **American Eel Management Board**

- Review and Consider North Carolina's Aquaculture Plan **Action**
  - Technical Committee Report (*S. Eyler*)
  - Advisory Panel Report (*M-B. Delucia*)
  - Law Enforcement Committee Report (*M. Robson*)

continued, see WINTER MEETING FINAL AGENDA on page 12

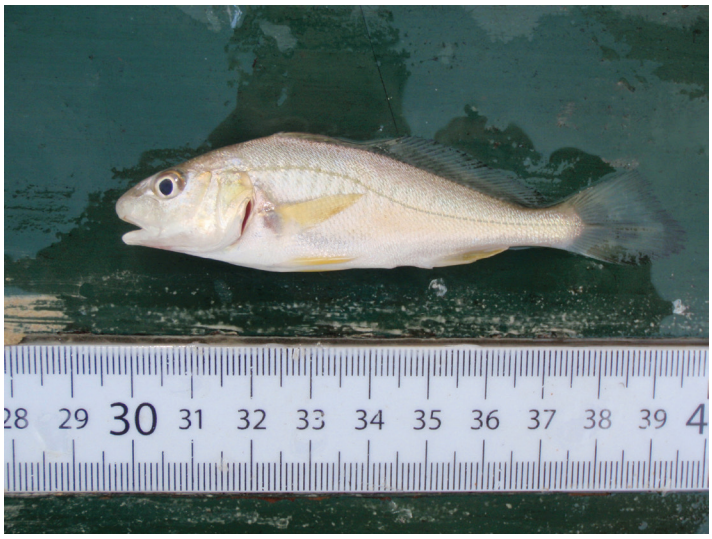
ATLANTIC CROAKER continued from page 5

did not. Overall, management triggers were not tripped in 2014 since both indices were not above the 30% threshold. Nonetheless, the analysis shows declining trends in the fishery.

Atlantic Coastal Management

The original FMP for Atlantic croaker was approved in 1987, with the states of Maryland through Florida participating. In the mid-1990s, the South Atlantic State/ Federal Fisheries Management Board and the ISFMP Policy Board reviewed the FMP and found it to be vague and without any mandatory management measures. Thus, they recommended that an amendment to the FMP be prepared to define a new management program.

Developing an appropriate management program, complete with biological reference points, required a new stock assessment to be completed. After approving the 2004 assessment's findings for use in management decisions, the Management Board initiated the development of an amendment to come into compliance with the Atlantic Coastal Fisheries Cooperative Management Act and perpetuate a sustainable resource to generate the greatest economic and social benefit.



Juvenile Atlantic croaker captured as part of New Jersey's Delaware River Seine Survey. Photo (c) New Jersey Fish and Wildlife.

The Commission approved Amendment 1 to the Interstate FMP for Atlantic Croaker in November 2005. Among other things, the Amendment revises the plan's management goals and objectives, expands the management unit to include the resource off of Delaware and New Jersey, establishes biological reference points to manage the croaker resource, allows for management on a regional basis (Mid-Atlantic and South Atlantic component), and requires states to submit annual compliance reports to the Commission. There are no regulatory or monitoring requirements, although they may be implemented through adaptive management if deemed necessary.

Atlantic croaker commercially harvested as part of the mixed stock fishery. Photo (c) Steve Doctor, MD DNR

Amendment 1 was fully implemented January 2006.

The Board initiated Addendum I following the 2010 stock assessment in order to address the proposed reference points and management unit. The stock assessment evaluated the stock based on a coastwide unit, rather than the two management units established under Amendment 1. In approving Addendum I, the Management Board endorsed the consolidation of the stock into one management unit, as proposed by the stock assessment.

Addendum II, which was approved by the Board in 2014, established the TLA as the new management framework for Atlantic croaker. The TLA framework replaces management triggers stipulated in Amendment I, which were limited in their ability to illustrate long-term trends. In contrast, the TLA approach better illustrates trends in the fishery overtime through changes in the proportion of green, yellow, and red coloring. The TLA framework is to be used between stock assessments so that annual updates on the status of the stock can inform Board decisions.

For more information, please contact Megan Ware, FMP Coordinator, at mware@asmfc.org.

ACCSP Launches Redesigned Website at www.accsp.org

The Atlantic Coastal Cooperative Statistics Program (ACCSP) announces the release of its redesigned website at www.accsp.org. With a completely new look, improved navigation and functionality, and expanded content, the website provides our partners, fishery managers, scientists, fishermen and the public with clear, straightforward access to information on data collection and dissemination on the Atlantic coast. The new website is a launching pad for future Program projects in 2016 such as a redesigned Data Warehouse and SAFIS visioning.

"We are very excited about our new site. It provides live data from our warehouse and makes it so much easier to give access to our users and information to the public, " states ACCSP Director Michael Cahall.

New website features include:

- Clear, straightforward access to information on SAFIS, the Data Warehouse, and partner projects, the three primary focal points of the Program;
- Direct logins to the Public Data Warehouse, Login Data Warehouse and SAFIS through buttons found on every page;
- Expanded pages on the Program partners that include feature on-the-ground projects funded through ACCSP, partner related queries, and the current partner SAFIS implementation status;
- Streamlined Data Warehouse pages that present information on the status of available data, data caveats, FAQs, the data load process, confidentiality, and custom data requests;
- Restructured SAFIS pages provide simplified login to and information on the suite of SAFIS applications in addition to requirements and contacts;
- Real-time charts and graphs that pull from the Data Warehouse and SAFIS; and
- A resource section that provides access to data collection standards, guiding documents, funding information, outreach material and other news.

Visit our redesigned website at *www.accsp.org*.

Sarah Rains

In December, Sarah Rains joined the ACCSP staff as Scan Specialist. In her new position, Sarah is responsible for the capture, processing, and validation of fisheries survey data for the Marine Recreational Information Program Access Point Angler Intercept Survey (MRIP APAIS) from Maine to Georgia.

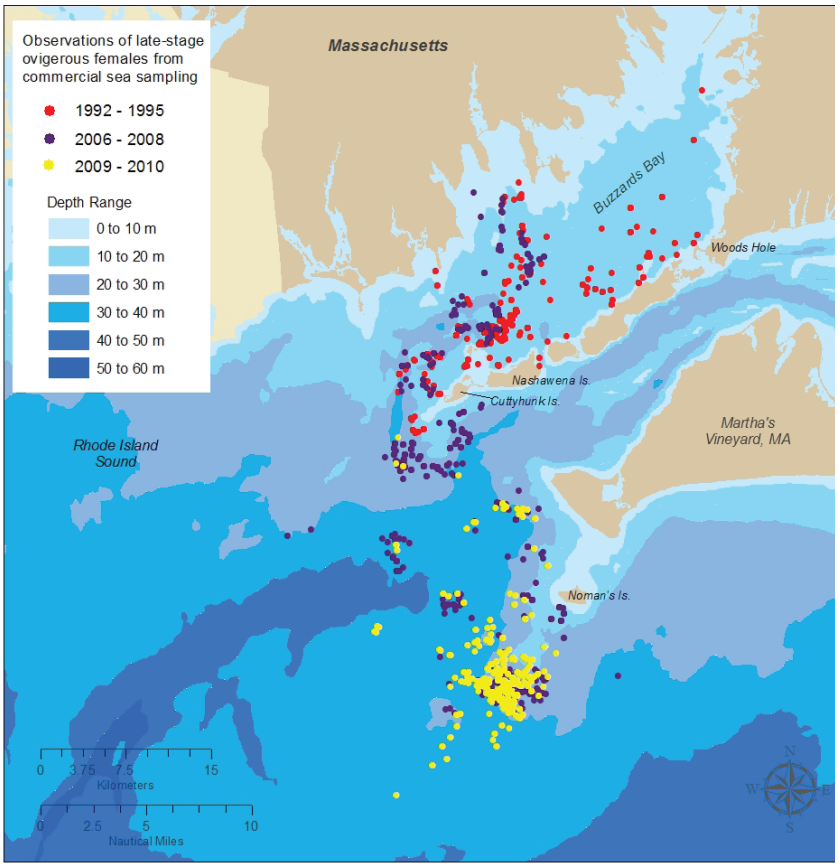
Sarah has previous experience as the ACCSP Maryland State Coordinator and as an Analyst for Environmental Science and Policy at Cadmus Group, Inc.. She earned her Master's degree in Marine Estuarine and Environmental Science from the University of Maryland and a Bachelor's degree in Art Education from Penn State University. Welcome Sarah!

ACCSP
Good Data, Good Decisions

ACCSP is a cooperative state-federal program focused on the design, implementation, and conduct of marine fisheries statistics data collection programs and the integration of those data into a single data management system that will meet the needs of fishery managers, scientists, and fishermen. It is composed of representatives from natural resource management agencies coastwide, including the Atlantic States Marine Fisheries Commission, the three Atlantic fishery management councils, the 15 Atlantic states, the Potomac River Fisheries Commission, the D.C. Fisheries and Wildlife Division, NOAA Fisheries, and the U.S. Fish & Wildlife Service. For further information please visit www.accsp.org.

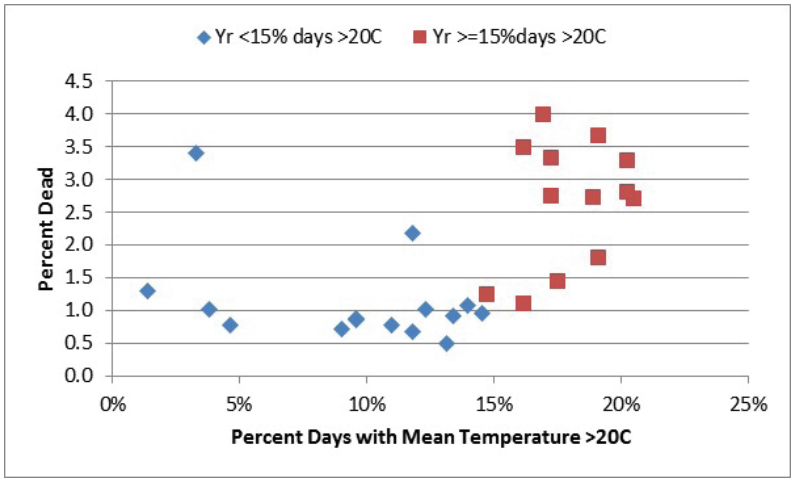
Science Highlight: Habitat Bottlenecks & Fisheries Management

There are many factors that can influence the productivity and resilience of fishery stocks such as harvesting pressure, natural mortality, changes in reproduction and growth rates, and habitat availability. This latter factor, while widely recognized by fishery management scientists, is often difficult to quantify and bottlenecks to critical habitats can have significant impacts on the sustainability of many harvested species. The Habitat Committee has defined a habitat bottleneck as "a constraint on a species' ability to survive, reproduce, or recruit to the next life stage that results from reductions in available habitat extent and/or capacity and reduces the effectiveness of traditional fisheries management options to control mortality and spawning stock biomass." Such constraints can come in the form of either environmental and/or structural bottlenecks. Structural bottlenecks in the form of dams that block access to historical spawning habitat are obvious problems that can seriously affect highly migratory anadromous species such as Atlantic sturgeon. Management efforts to alleviate some of the problems associated with these barriers can include fish passage measures. Environmental bottlenecks, on the other hand, such as temperature changes affecting habitat usage of critical life stages are much more problematic.



Map of distribution shift in late-stage egg bearing female lobsters in Southern New England that has been related to changes in temperature. Image (c) MA DMF

Scientific evidence now indicates that the American lobster is one species being impacted by thermal stresses through direct mortality in some areas and reduction of suitable thermal habitats for certain life stages in other areas. Laboratory studies have demonstrated that lobsters show a distinct and abrupt response to water temperatures above 20^{0}C (Crossin et al. 1998) which field studies have shown can double observed mortality rates, making temperature a true bottleneck for this species. Ventless trap surveys and surface drogue studies carried out in offshore waters (ASMFC 2010) showed displacement of egg-bearing females out of traditional near-shore breeding grounds, which have recently warmed, into deeper water resulting in newly hatched planktonic larvae being carried on currents out to open ocean waters where their survival rate is diminished.



Relationship between the observed annual frequency of dead lobsters in research traps versus the percent of days that year with a mean bottom water temperature above 20^{0}C. Data provided by Millstone Environmental Laboratory, Dominion Nuclear Resources, Waterford, CT.

For more information on habitat bottlenecks, see the latest installment of the Commission's Habitat Management Series, *Habitat Bottlenecks and Fisheries Management*. The report provides examples of environmental and physical bottlenecks facing managed species along the Atlantic coast, highlighting bottlenecks that threaten lobster, horseshoe crab, summer and winter flounder, and Atlantic sturgeon. The report is available at http://www.asmfc.org/files/Habitat/HMS13_Habitat_Bottlenecks2016.pdf.

This article is reprinted from the 2015 issue of *Habitat Hotline Atlantic* and was written by Robert VanDolah (retired), SC Division of Natural Resources and Penny Howell, CT Department of Energy and Evironmental Protection.

Federal Funding for Atlantic States Fisheries Management

Fiscal Year 2016 Appropriations

On December 18th, President Obama signed an omnibus appropriations bill for the remainder of fiscal year 2016 (October 1, 2015 – September 30, 2016). Up until then the federal government was operating under a continuing resolution at fiscal year 2015 levels. The omnibus includes $849 million for NOAA Fisheries Operations, Research, and Facilities, which is $27.4 million above last year's levels. The "Regional Councils & Fishery Commissions" line, which funds the Atlantic Coastal Fisheries Cooperative Management Act, was increased by $732 thousand from last year to $33.47 million. "Interjurisdictional Fisheries Act Grants" are funded at $3 million, or an increase of $500 thousand from last year. The omnibus also contains a policy provision for the Mid-Atlantic Horseshoe Crab Trawl Survey in 2016. The horseshoe crab provision was included at the request of Representatives John Carney (D-DE) and Frank LoBiondo (R-NJ), and Senator Chris Coons (D-DE).

Wallop-Breaux Funding Reauthorized through 2020

On December 4th, President Obama signed into law H.R. 22, Fixing America's Surface Transportation (FAST) Act. The five-year, $305 billion surface transportation bill reauthorizes the Sport Fish Restoration Act through Fiscal Year 2020. The Sport Fish Restoration Act, also known as Dingell-Johnson and Wallop-Breaux, levies an excise tax on sportfishing equipment and motorboat fuels that is distributed to the states for management and restoration of fish. The U.S. Fish and Wildlife Service distributed $625 million under the program in fiscal year 2015. Funds are made available based on a formula which includes land area and number of paid license holders.

For more information, please contact Deke Tompkins, Executive Legislative Assistant, at dtompkins@asmfc.org.

Comings and Goings

Rep. Chad Nimmer

In January, Rep. Chad Nimmer became Georgia's Legislative Commissioner to the ASMFC, replacing Rep. Jon Burns who served in that capacity since 2011. Rep. Nimmer was elected by special election in 2011 and represents Pierce and Brantley counties as well as parts of Wayne and Appling counties in the Georgia House of Representatives. He currently serves on the Natural Resources and Environment, Transportation, and the Information and Audits Committees. He began his professional career in forestry with Georgia Pacific in 1998. In 2001, he joined the family-owned dealership of Pierce Timber Co. as a procurement forester. In 2005, Rep. Nimmer started his own business, Suwannee Forest Products, and currently serves on the board of the Sustainable Forestry Initiative. He is a member of the 2012 Class of Leadership Georgia, the Georgia Forestry Association, Southeast Woods Producers Association, the Georgia Agribusiness Council, and the Georgia Cattlemen's Association. Rep. Nimmer and his wife, Amy, have three children and reside in Blackshear. Welcome aboard, Rep. Nimmer.

Atlantic States Marine Fisheries Commission
1050 North Highland Street
Suite 200 A-N
Arlington, VA 22201

Return Service Requested

WINTER MEETING FINAL AGENDA continued from page 7

THURSDAY, FEBRUARY 4

10:30 a.m. – Noon

American Eel Management Board (continued)

- Consider South Carolina's Survey Sampling Proposal **Action**
- Technical Committee Report (*S. Eyler*)
- Consider Maine's Conservation Equivalent Management Proposal **Action**
  - Technical Committee Report (*S. Eyler*)
- Initiate Discussion to Consider Changes to Addendum IV Yellow Eel Allocations (*J. Gilmore*) **Possible Action**

12:15 – 3:15 p.m.

Interstate Fisheries Management Program Policy Board

- Executive Committee Report (*D. Grout*)
- Review and Discuss 2015 Commissioner Survey Results (*T. Kerns*)
- Review and Consider Revisions to the ASMFC Guidance Documents (*T. Kerns)* **Final Action**
- Discuss Direction of Management when Stocks are not Responding to Management Due to Climate Impacts or Other Reasons (*D. Grout*)
- Atlantic Coastal Fish Habitat Partnership Report (*L. Havel*)
- South Atlantic Board Report (*J. Estes*) **Possible Action**
- Update on the Weakfish Stock Assessment (*K. Drew*)

3:15 – 3:45 p.m.

Business Session

- Consider Final Approval of Amendment 3 to the Atlantic Herring FMP (*R. White*) **Final Action**
- Consider Amending the Commission's Rules and Regulations (*R. Beal*) **Action**
- Review Non-compliance Findings (if necessary)

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Marine Fisheries
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Michelle Duval
Division of Marine Fisheries, DEQ

DATE: Jan. 28, 2016

SUBJECT: South Atlantic Fishery Management Council Meeting (Dec. 7-11, 2015)

The South Atlantic Fishery Management Council (Council) met in Atlantic Beach, North Carolina. The following is a summary of actions taken by the Council. The next meeting will be held in Jekyll Island, Georgia, March 7-11, 2016. The next set of public hearings and webinars are currently underway (see http://safmc.net/meetings/public-hearing-and-scoping-meeting-schedule).

Snapper Grouper Visioning Workshop

The Council adopted the final Vision Blueprint, including an evaluation plan. The Council discussed several approaches for applying the Vision Blueprint and example amendment ideas based on output from October 2015 Visioning Workshop. A council member survey was used to prioritize and rank the various amendment options for work in 2016-2017. Results from the survey indicated the highest priority was an amendment focused on fishery seasonality/retention. The Council will be further prioritizing actions to include in this amendment for scoping during its March meeting.

Southeast Data, Assessment, and Review (SEDAR) Committee

This is the name of the stock assessment process in the southeast, and each Southeast, Data, Assessment and Review, or "SEDAR" is given a number. The Council received updates on the following stock assessment activities:

- The Council received an update on the schedule of revisions to existing stock assessments in order to incorporate changes in the Marine Recreational Information Program effort survey. These revisions will simply update recreational catch estimates through the terminal year of data used in the assessment.
- The Council received a presentation from S.C. Department of Natural Resources staff regarding preliminary results of genetic analysis for blueline tilefish, which currently indicates a single coastwide stock. An additional study being sponsored by the National Marine Fisheries Service (NOAA Fisheries) Southeast Fisheries Science Center and Mid-Atlantic Fishery Management Council will be available in May. A multi-jurisdictional meeting of scientists from both councils and both Northeast and Southeast Fisheries Science Centers is planned to discuss final stock identification. A new benchmark stock assessment is scheduled to begin in the fall of 2016.
- The Council will be receiving an update to the existing golden tilefish assessment, as well as the results of the SEDAR 41 benchmark stock assessments for red snapper and gray triggerfish.

Ecosystem/Habitat Committee

The Council approved a revised Essential Fish Habitat Policy on Energy Exploration and Development, and received an update regarding the revision of the Council's Fishery Ecosystem Plan. The Council also

received a presentation on the activities and anticipated outputs from the Lenfest Oceans Program Ecosystem-Based Fishery Management Task Force.

Snapper Grouper Committee

The committee received updates on the status of the following amendments under review:

- *Comprehensive Accountability Measures/Dolphin-Wahoo Amendment 8*: This amendment would standardize the Council's accountability measures across its managed species. It also establishes a 10 percent commercial/90 percent recreational allocation of the annual catch limit for dolphin. The final rule published Jan. 22, 2016 and will be effective Feb. 22, 2016.
- *Snapper Grouper Amendment 33/Dolphin-Wahoo Amendment 7*: This amendment extends an exemption currently allowed in the snapper grouper fishery to the dolphin-wahoo fishery that allows fish legally harvested in the Bahamas to be transported aboard a recreational fishing vessel as fillets. It also closes loopholes in the existing snapper grouper exemption and establishes consistent rules across both fisheries. The final rule published Dec. 28, 2015 and will be effective Jan. 27, 2016.
- *Amendment 35 (removal of species and golden tilefish longline endorsement)*: This amendment removes mahogany snapper, dog snapper, black snapper and schoolmaster snapper from the fishery management unit and closes a loophole in the regulations regarding golden tilefish commercial longline endorsement holders fishing on the golden tilefish commercial hook-and-line quota. The amendment was submitted to NOAA Fisheries on Sept. 11, 2015.
- *Blueline Tilefish emergency rule request*: The Council received a response to the emergency rule request to extend its existing regulations for blueline tilefish into the Mid-Atlantic region on Oct. 23, 2014. The request was denied due to the actions of the Mid-Atlantic Fishery Management Council to add this species to an existing fishery management plan, as well as the increased catch level recommendation from the South Atlantic Council's Scientific and Statistical Committee.

Amendment 43 (future red snapper management): The Council discussed options for future management of red snapper once the results of the new benchmark stock assessment (SEDAR 41) are received in June. General options included managing for a longer season rather than a higher recreational bag limit; consideration of a 20-inch minimum size limit for both commercial and recreational sectors; the possibility of a recreational boat limit; and consideration of a commercial trip limit.

Regulatory Amendment 25 (blueline tilefish annual catch limit, black sea bass recreational bag limit, yellowtail snapper fishing year): This amendment contains actions to increase the annual catch limit for blueline tilefish; modify the commercial trip limit and recreational bag limit for blueline tilefish; increase the recreational bag limit for black sea bass; and modify the start date of the yellowtail snapper fishing year. The Council selected the following preferred alternatives: an annual catch limit of 174,798 pounds (split 50.07% commercial/49.93% recreational) for blueline tilefish; an increase in the commercial trip limit to 300 pounds (gutted weight); an increase in the recreational daily bag limit to three fish/person/, (within the aggregate grouper bag limit) with harvest allowed only May through August; an increase in the recreational black sea bass daily bag limit from five fish/person to seven fish/person; and a change in the start date of the yellowtail snapper fishing year from January 1 to August 1. The Council approved this amendment for formal secretarial review.

Regulatory Amendment 16 (black sea bass pot closure): This amendment contains a range of alternatives to modify the existing November through April prohibition on the use of black sea bass pots due to concerns regarding risk to right whales. The Council was required to implement this closure in late 2013 in order to double the annual catch limit based on a stock assessment update. The Council's preferred alternative modifies the closure to apply in depths 25 meters and shallower from Nov. 1-30 and April 1-30, and in depths 30 meters and shallower from Dec. 1-March 30. The Council also selected a preferred alternative to enhance line markings specific to sea bass pots. The Council approved this amendment for formal secretarial review. It is hoped that these modifications will be in place by November 2016.

Amendment 36 (spawning Special Management Zones (SMZs)): This amendment contains actions to establish spawning Special Management Zones off North Carolina, South Carolina and Florida. The Council reviewed the draft amendment and modified its existing preferred alternative for a spawning Special Management Zone off Florida to encompass a larger area. The preferred alternatives for the site off North Carolina (five square miles well south of the Big Rock), and the sites off South Carolina (two artificial reef sites, as well as a 3.1 square mile site around Devil's Hole) remained unchanged. The Council also selected a 10-year sunset provision and a no-anchoring provision for all spawning Special Management Zones except the two artificial reef sites, and reviewed an evaluation plan. The Council is scheduled to approve this amendment for formal secretarial review at its March meeting in Georgia.

Amendment 37 (hogfish): This amendment contains actions related to hogfish in response to the recent stock assessment (2014) that determined there were two hogfish stocks: one from Georgia through North Carolina, and a second along the east coast of Florida through the Florida Keys. The Georgia – North Carolina assessment was rejected, while the assessment for the Florida stock indicates it is overfished and overfishing is occurring. The amendment includes actions to establish maximum sustainable yield, annual catch limits and accountability measures for each stock. It also includes actions to modify the minimum size limit and establish a recreational bag limit and commercial trip limit for each stock. It also establishes a rebuilding plan for the East Florida/Florida Keys stock.

The Council selected preferred alternatives for annual catch limits for both stocks and a rebuilding plan for the East Florida/Florida Keys stock. For the Georgia-North Carolina stock, the Council changed its preferred alternative for a minimum size limit from 20 inches to 17 inches fork length (commercial and recreational), and selected a recreational daily bag limit of two fish/person and a 500 pound commercial trip limit as preferred alternatives. For the East Florida/Florida Keys stock, the Council maintained its preferred minimum size limit of 15 inches fork length and selected a recreational daily bag limit of one fish, a recreational fishing season of July through September, and a 50 pound commercial trip limit as preferred alternatives. The Council approved the draft amendment for public hearings in January and February 2016.

The Council received a response to its letter requesting further examination of 2015 recreational harvest estimates off Florida, as well as examination of historic recreational catch estimates from North Carolina that appeared to be pigfish rather than hogfish. The Marine Recreational Information Program determined there was insufficient evidence to modify North Carolina records. They also stated that while 2015 recreational harvest levels were high, and there was imprecision in the estimates, none of the examinations of the data indicated the need to modify either 2014 or 2015 harvest estimates. However, they did suggest several possible alternatives to reduce imprecision in harvest estimates in future years.

Amendment 41 (mutton snapper)
The Council reviewed a draft document containing actions pertaining to management of mutton snapper, in response to the latest stock assessment. While the stock is not overfished and overfishing is not occurring, modifications to the annual catch limits are necessary. Other actions include changes to the commercial and recreational harvest limits both during and outside of the spawning season. The Council approved the draft document for scoping meetings to be held in February 2016 in conjunction with the Florida Fish and Wildlife Conservation Commission.

Other actions
The Council decided to group outstanding actions from Regulatory Amendment 23 (a modification of the fishing year start date for the hook-and-line component of the commercial golden tilefish fishery (currently Jan. 1), and a commercial trip limit for the jacks complex (almaco jack, lesser amberjack,

banded rudderfish)) into items to be considered in the Fishery Seasonality/Retention amendment coming out of the adoption of the Vision Blueprint for the fishery.

Mackerel Committee

Amendment 26 (king mackerel annual catch limits and stock boundary): This amendment would adjust the king mackerel annual catch limits based on the SEDAR 38 stock assessment. It includes actions to adjust the boundary between Gulf and South Atlantic stocks; allow for sale of king mackerel incidentally caught in the shark gill net fishery; maintain a Florida east coast commercial sub-zone, but adjust the boundaries of sub-zone; and establish a quota and trip limits for the Florida east coast subzone.

The Council selected the following preferred alternatives: establish a year-round boundary management boundary between the Gulf and South Atlantic stocks at the Miami-Dade/Monroe county line; establish an annual catch limit of 12.7 million pounds based on equilibrium yield for the next five years; establish an incidental allowance of king mackerel in the shark gill net fishery of three fish in the Northern Zone (North Carolina – New York) and two fish for the Southern Zone (South Carolina – Florida east coast), only for fishermen with both directed commercial shark permits and king mackerel permits; establish commercial split seasons for the Southern Zone; and a commercial trip limit system for the Southern Zone. The Council approved the draft amendment for public hearings to occur in late January and early February 2016.

Dolphin Wahoo Committee

The Council received an update on Dolphin Wahoo Amendment 8/Comprehensive Accountability Measures Amendment. The amendment modifies the commercial/recreational allocation to 90 percent commercial/10 percent recreational. The final rule has been published and will be effective Feb. 22, 2016.

The Council reviewed Dolphin Wahoo Regulatory Amendment 1, which contains one action to establish a trigger for implementing a commercial trip limit. The commercial dolphin fishery was closed for the first time in June 2015 due to the annual catch limit being met, and the intent of the amendment is to prevent future fishery closures. The Council selected a preferred alternative of 75 percent of the annual catch limit having been met as the trigger for implementing a 4,000 pound (whole weight) trip limit. A wide array of public input was received, as the Council manages this fishery for the entire Atlantic coast and many vessels operating in Highly Migratory Species fisheries incidentally harvest dolphin. The Council approved this amendment for formal secretarial review. At its March meeting, the Council will discuss options for temporary, in-season transfers of quota between commercial and recreational sectors.

Data Collection Committee

Commercial Electronic Reporting: The Council received an update on the development of an electronic version of the existing commercial logbook form by the Atlantic Coastal Cooperative Statistics Program that fishermen could voluntarily use to submit catch information. The system should be operational in early 2016. Additionally, the commercial electronic logbook pilot program has been completed, with several commercial fishermen in North Carolina participating in the testing of weatherproof tablets and laptops for recording commercial harvest and discard data onboard vessels. An update will be available at the March council meeting.

South Atlantic For-Hire Electronic Reporting: The Council reviewed the actions and alternatives in the revised draft amendment and selected preferred alternatives. The intent of the amendment is to have charter boats reporting electronically at the same frequency and for similar data elements as headboats (which have had electronic reporting in place since January 2013). The preferred alternatives are to require both headboats and charter boats to report weekly, by midnight of Tuesday following each reporting week; to require charter vessels to report all fish harvested and discarded, regardless of where

fishing activity took place (current headboat requirement); and to require that catch location be reported in degrees longitude and latitude or by clicking on the headboat chard grid squares. The Council approved the draft amendment for public hearings in January 2016. The Council also received funding from the Atlantic Coastal Cooperative Statistics Program to pilot test reporting software using tablets (e.g. iPad) and computers and will be recruiting volunteers to test this technology.

Citizen Science Workshop

The Council held a Citizen Science Design Workshop Jan. 19-21, 2016 in Charleston. The opportunity to contribute to data collection activities was a widely-expressed sentiment during the Snapper Grouper Visioning Process. Workshop invitees included commercial and recreational fishermen, data managers, scientists and researchers from academia as well as state and federal agencies, and citizen science practitioners. The goal of the workshop was to discuss activities appropriate for citizen science, funding, governance and oversight. The intent of a Citizen Science program is not to replace the existing NOAA Fisheries Cooperative Research Fund, but to supplement it by providing information that may be needed quickly and across large spatial or temporal scales. The workshop was well-attended and the Council will receive a report at its March meeting.

Protected Resources Committee

The Council received updates on various protected resources activities, and noted that green sea turtle nesting numbers in 2015 were the highest on record. The Council also discussed the Turtle Excluder Device Compliance Policy. The policy has been updated since the May draft; the final policy will be released mid-December 2015 and will become effective March 1, 2016. The new policy includes three sample periods: Mar-Jun, Jul-Oct, and Nov-Feb. A closure would not occur until compliance falls below an 84% compliance rate for two consecutive periods. The closure would last for 30 days. There was discussion on the reporting form, the use of the law enforcement for monitoring compliance, and impacting the entire fishery for the actions of a few individuals.

The Council also reviewed the latest draft of the Endangered Species Act Integration Agreement between NOAA Fisheries and the Council. The agreement establishes protocols and expectations regarding the level of council involvement in biological opinions. The Council will review a final draft in March.

N.C. Marine Fisheries Commission Rule Suspension Update- As of Jan 22, 2016
(In accordance with N.C. Division of Marine Fisheries Resource Management Policy 2014-2: Temporary Rules Suspensions)

New Suspension-Action Required
The following new suspensions occurred since the commission's November 2015 meeting. This suspensions is an action item on the February 2016 agenda and is subject to approval:

- **The following portion of N.C. Marine Fisheries Commission Rule 15A NCAC 03J .0501 DEFINITIONS AND STANDARDS FOR POUND NETS AND POUND NET SETS is suspended:**
  Section (e)(2), which reads:
  (e) Escape Panels:
  (2) It is unlawful to use flounder pound net sets without four unobstructed escape panels in each pound. The escape panels shall be fastened to the bottom and corner ropes on each wall on the side and back of the pound opposite the heart. The escape panels shall be a minimum mesh size of five and one-half inches, hung on the diamond, and shall be at least six meshes high and eight meshes long.

Suspension of portion of this rule allows the division to increase the minimum mesh size of escape panels for flounder pound nets in accordance with Supplement A to Amendment 1 of the N.C. Southern Flounder Fishery Management Plan.

Continuing Suspensions
The following rule suspensions have been approved on a continuing basis by the commission and no further action is required:

- **The following portion of N.C. Marine Fisheries Commission Rule 15A NCAC 03J .0103 GILL NETS, SEINES, IDENTIFICATION, RESTRICTIONS is suspended:**
  Section (i) (1), which reads:
  (i) For gill nets with a mesh length five inches or greater, it is unlawful:
  (1) To use more than 3,000 yards of gill net per vessel in internal waters regardless of the number of individuals involved.

Suspension of portions of this rule allows the division to decrease the total yardage of gill nets with a mesh length five inches or greater in order to manage the gill net fishery in accordance with the Federal Incidental Take Permits (ITPs) for sea turtles and Atlantic sturgeon. This rule has been approved to be suspended indefinitely.

- **The following portion of N.C. Marine Fisheries Commission Rule 15A NCAC 03M .0519 SHAD is suspended:**
  Paragraphs (a) and (b) which read:
  (a) It is unlawful to take American shad and hickory shad by any method except hook-and-line from April 15 through December 31.
  (b) It is unlawful to possess more than 10 American shad or hickory shad, in the aggregate, per person per day taken by hook-and-line or for recreational purposes.

- **The following portion of N.C. Marine Fisheries Commission Rule 15A NCAC 03Q .0107 SPECIAL REGULATIONS: JOINT WATERS is suspended:**
  Paragraph (4) which reads**:**

(4) Shad: It is unlawful to possess more than 10 American shad or hickory shad, in the aggregate per person per day taken by hook-and-line.

Suspension of portions of these rules allows the division to change the season and creel limit of American shad under the management framework of the N.C. American Shad Sustainable Fishery Plan. These rules have been approved to be suspended indefinitely.

North Carolina Division of Marine Fisheries
Quota Monitoring
Landings Report

North Carolina Quota Monitored Species Reporting

Species currently under a quota monitoring requirement by the North Carolina Division of Marine Fisheries (NCDMF) include summer flounder, striped bass, black sea bass North of Cape Hatteras, spiny dogfish, and river herring. Seasons are opened and closed by proclamation as shown in the table below. Landings reports are updated weekly during the proclamation season.

2016 North Carolina Quota Monitored Landings

Updated 02/01/2016

Species	2016 Total Quota (LBS)	Quota for Winter Fishery	2016 Transfer	2016 Harvest	Winter Quota Remaining	Proclamation	Trip Limit (pounds)	Comments
2016 Summer Flounder	2,229,709	1,783,767	48,905	569,220	1,165,642	FF-06-2016	12,500	**Closes** 02/03/2016 at 6:00pm
2016 Black Sea Bass N of Cape Hatteras	297,315		1,540	40,355	255,420	FF-05-2016	1500	**Closes** 02/03/2016 at 6:00pm
2015/2016 Spiny Dogfish	7,276,052		0	1,359,801	5,916,251	FF-62-2015	per day: 20,000	**Closes** 04/30/2016 at 6:00pm
A.O. Striped Bass	360,360							
TRAWL	120,120		0	0	120,120			
SEINE	120,120		0	0	120,120	FF-57-2015	150 fish/day	Closes 3/31/2016
GILL NET	120,120		0	0	120,120	FF-64-2015	50 fish/day	Closes 02/14/2016
ASMA Striped Bass	137,500		0	14,713	122,787	FF-47-2015	10 fish/day	Closes 04/30/2016
CSMA Striped Bass	25,000							

*** All figures are in pounds unless otherwise noted**

For questions about quota monitoring or to report landings:

Permitted Species	FAX	E-mail Address	Telephone #
Striped Bass, River Herring	**252-264-3723**	LANDINGS@ncdenr.gov	800-338-7805
Summer Flounder, Black Sea Bass North of Cape Hatteras, Spiny Dogfish	**252-726-3903**	FLOUNDER@ncdenr.gov	800-682-2632

Red Drum Landings 2014-2015

Landings are complete through November 30, 2015
2014 Landings are final; 2015 landings are preliminary

Year	Month	Species	Pounds	2009-2011 Average	2012-2014 Average
2014	9	Red Drum	34,775	28,991	35,471
2014	10	Red Drum	36,425	43,644	59,757
2014	11	Red Drum	16,375	14,318	28,619
2014	12	Red Drum	2,995	3,428	3,401
2015	1	Red Drum	1,961	5,885	1,364
2015	2	Red Drum	3,009	3,448	3,176
2015	3	Red Drum	3,913	5,699	2,957
2015	4	Red Drum	12,703	7,848	3,945
2015	5	Red Drum	10,617	13,730	9,222
2015	6	Red Drum	7,640	12,681	7,432
2015	7	Red Drum	5,081	13,777	15,555
2015	8	Red Drum	5,395	21,252	16,910
Fishing Year (Sept 1, 2014 - Aug 31, 2015) Landings			**140,889**		

Year	Month	Species	Pounds	2009-2011 Average	2012-2014 Average
2015	9	Red Drum	4,955	28,991	35,471
2015	10	Red Drum	18,815	43,644	59,757
2015	11	Red Drum	4,770	14,318	28,619
2015	12	Red Drum	1,247*	3,428	3,401
Fishing Year (Sept 1, 2015 - Aug 31, 2016) Landings			**29,786**		

*partial trip ticket landings only
***landings are confidential

Year	Month	Species	Pounds	Dealers	Trips	Average (2007-2009)	Conf
2013	1	SOUTHERN FLOUNDER	2,942	42	276	7,713	
2013	2	SOUTHERN FLOUNDER	896	37	254	4,617	
2013	3	SOUTHERN FLOUNDER	4,387	57	682	23,512	
2013	4	SOUTHERN FLOUNDER	16,697	93	1,177	68,389	
2013	5	SOUTHERN FLOUNDER	49,629	123	1,778	122,514	
2013	6	SOUTHERN FLOUNDER	79,203	137	2,127	154,090	
2013	7	SOUTHERN FLOUNDER	119,720	150	2,839	170,387	
2013	8	SOUTHERN FLOUNDER	124,177	147	2,685	201,862	
2013	9	SOUTHERN FLOUNDER	416,097	161	3,631	396,301	
2013	10	SOUTHERN FLOUNDER	883,476	172	5,512	781,717	
2013	11	SOUTHERN FLOUNDER	483,762	121	2,589	392,150	
2013	12	SOUTHERN FLOUNDER	5,288	12	27	37,303	
2014	1	SOUTHERN FLOUNDER	2,978	29	183	7,713	
2014	2	SOUTHERN FLOUNDER	1,823	29	285	4,617	
2014	3	SOUTHERN FLOUNDER	3,430	43	677	23,512	
2014	4	SOUTHERN FLOUNDER	18,997	71	933	68,389	
2014	5	SOUTHERN FLOUNDER	16,001	93	681	122,514	
2014	6	SOUTHERN FLOUNDER	80,142	123	1,988	154,090	
2014	7	SOUTHERN FLOUNDER	84,702	141	2,148	170,387	
2014	8	SOUTHERN FLOUNDER	105,208	137	2,204	201,862	
2014	9	SOUTHERN FLOUNDER	404,143	153	3,588	396,301	
2014	10	SOUTHERN FLOUNDER	634,514	146	3,436	781,717	
2014	11	SOUTHERN FLOUNDER	320,773	121	1,991	392,150	
2014	12	SOUTHERN FLOUNDER	800	5	7	37,303	
2015	1	SOUTHERN FLOUNDER	1,984	30	237	7,713	
2015	2	SOUTHERN FLOUNDER	495	21	93	4,617	
2015	3	SOUTHERN FLOUNDER	10,750	62	768	23,512	
2015	4	SOUTHERN FLOUNDER	20,824	88	1,074	68,389	
2015	5	SOUTHERN FLOUNDER	42,454	117	1,282	122,514	
2015	6	SOUTHERN FLOUNDER	53,838	116	1,482	154,090	
2015	7	SOUTHERN FLOUNDER	42,805	106	1,144	170,387	
2015	8	SOUTHERN FLOUNDER	43,842	111	1,151	201,862	
2015	9	SOUTHERN FLOUNDER	253,781	121	2,321	396,301	
2015	10	SOUTHERN FLOUNDER	433,315	127	2,552	781,717	
2015	11	SOUTHERN FLOUNDER	297,578	87	1,735	392,150	
2015	12	SOUTHERN FLOUNDER	9,077	6	9	37,303	

**2015 data are preliminary and only complete through November.
***Data are confidential

Marine Fisheries
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: Louis Daniel
Sammy Corbett

FROM: Chris Batsavage, Protected Resources Section Chief/Special Assistant for Councils
Division of Marine Fisheries, NCDEQ

DATE: January 29, 2016

SUBJECT: Protected Resources Section Update

OBSERVER PROGRAM

Tables summarizing observer coverage and protected species interactions from January through December 2015 are found in the briefing book. Observer coverage for the large mesh gill net fishery was 6.2% and coverage for the small mesh gill net fishery was 2.6%. Observer coverage estimates are based on the number of gill net trips from prior years because 2015 trip numbers are preliminary.

Also included in the briefing book are tables summarizing the seasonal observer coverage by management unit. Large mesh gill net observer coverage by management unit in the winter ranged from 0% to 18% and from 0% to 7% for small mesh gill nets. The windy weather combined with very cold temperatures this past winter impacted the number of gill net and observer trips. Large mesh gill net observer coverage by management unit in the spring (March-May) ranged from 0% to 24% and from 2% to 10% for small mesh gill nets. Large mesh gill net observer coverage by management unit in the summer season (June-August) ranged from 0% to 22% and from 0% to 4% for small mesh gill nets. Management units A and C closed during the summer season for large and small mesh anchored gill nets and Management Unit B closed for large mesh anchored gill nets. As such, summer observer coverage estimates based on final 2015 trip numbers could be higher than currently estimated. Large mesh gill net observer coverage by management unit in the fall (September-November) ranged from 4% to 12% and from 1% to 8% for small mesh gill nets. There were numerous closures in the fall due to sea turtle and Atlantic sturgeon interactions, which resulted in fewer gill net trips (based on preliminary 2015 data). As such, the fall large mesh gill net observer coverage should increase once 2015 gill net trip data is finalized.

A total of 47 sea turtles were observed in large mesh gill nets and four were observed in small mesh gill nets in 2015. All but five of the total observed sea turtles and all 10 of the dead

interactions were green sea turtles. At least one sea turtle was observed in each management unit with most of them in Management Unit B (33 in large mesh gill nets and one in small mesh gill nets). No self-reported sea turtle interactions by gill net fishermen occurred in 2015.

A total of 62 Atlantic sturgeon were observed in large mesh gill nets and 10 were observed in small mesh gill nets in 2015. All but four of the total observed Atlantic sturgeon were live interactions. At least one Atlantic sturgeon was observed in each management unit with most of them in Management Unit A (45 in large mesh gill nets and two in small mesh gill nets). A total of seven Atlantic sturgeon interactions were self-reported by fishermen in 2015.

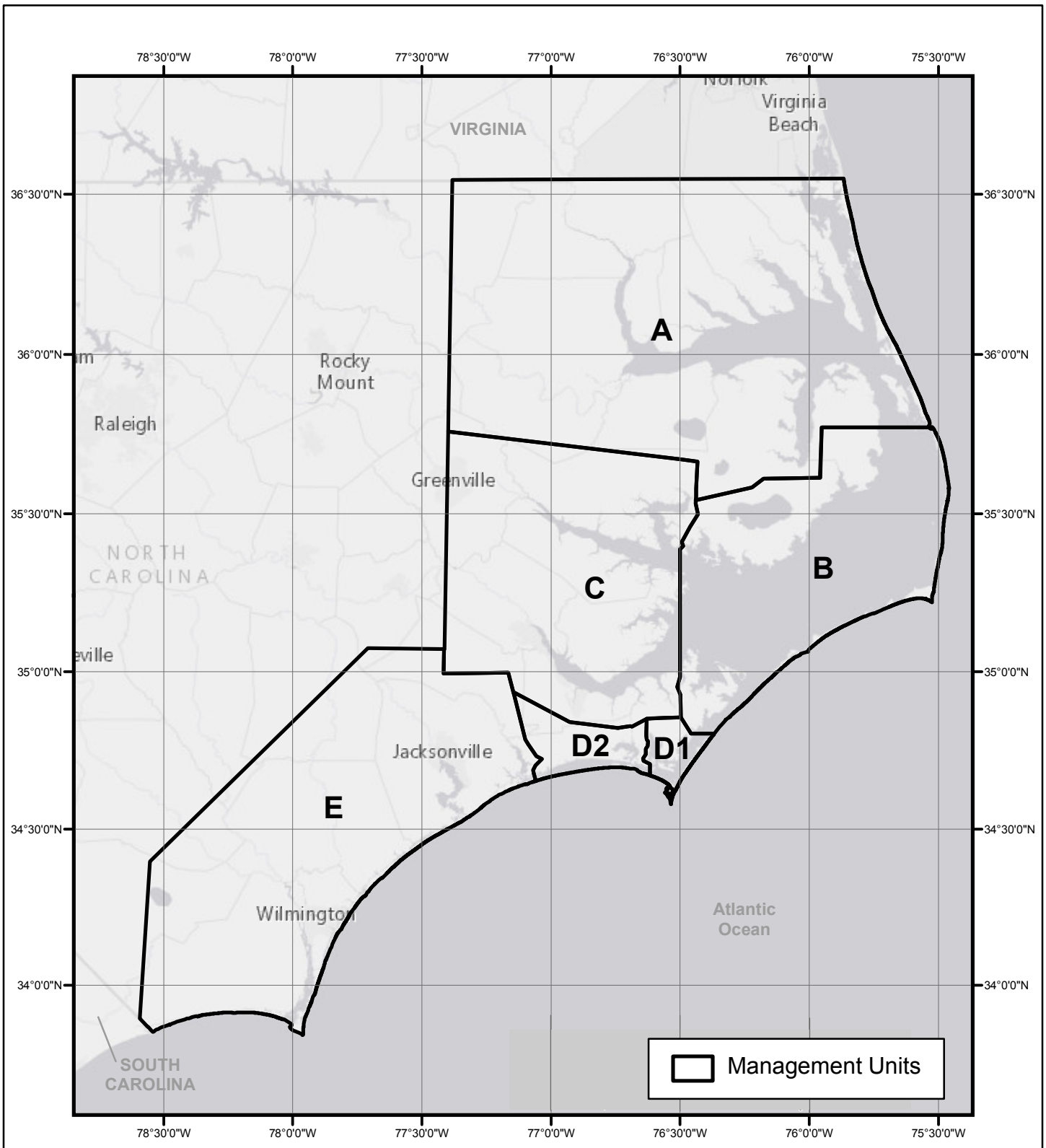
INCIDENTAL TAKE PERMITS

Sea Turtle and Atlantic Sturgeon Incidental Take Permit Annual Reports

Included in the briefing book are the Sea Turtle and Atlantic Sturgeon Incidental Take Permits' annual reports for the 2014-2015 fishing year (September 1, 2014-August 31, 2015). The annual reports provide details on the process of obtaining the incidental take permits from the National Marine Fisheries Service, describes the methodology for monitoring sea turtle and Atlantic sturgeon takes in the fishery, reports the observer program activity and observer coverage by season, provides information on the sea turtle and Atlantic sturgeon interactions from the Observer Program, and reports the estimated total number of sea turtle and Atlantic sturgeon interactions based on percent observer coverage at the time the of the interactions. In addition, the report shows maps where observer trips were conducted and where sea turtle and Atlantic sturgeon interactions occurred.

Sea Turtle Incidental Take Permit Fall Seasonal Progress Report

Included in the briefing book is the 2015 fall seasonal progress report for the Sea Turtle Incidental Take Permit. Based on the number of gill net trips from prior years for large mesh gill nets, the minimum observer coverage was reached or exceeded in all of the management units. Please note that for the purposes of this report, the management unit closures that occurred in the fall were accounted for in the observer coverage estimates. Based on the number of gill net trips from prior years for small mesh gill nets, the minimum observer coverage was exceeded in all of the management units except Management Unit B. Coverage was not met in Management Unit D1 due to the minimal amount of fishing effort that occurred during the summer season.



NCDMF ESTUARINE GILLNET PERMIT MAP

April 2015

0 12.5 25 50 Miles

Table 1. Preliminary data collected for large mesh gill nets by month through the NCDMF Observer Program through December 2015.

	Trips		Observer Large Mesh				Observed Takes By Species								
							Kemp's		Green		Loggerhead		Unknown	A. Sturgeon	
Month	Estimated [1]	Actual [2]	AP Attempts [3]	Trips	Yards	Coverage [4]	Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
January	245	371	85	16	12,600	6.5	0	0	0	0	0	0	0	**2**	0
February	811	383	125	43	24,375	5.3	0	0	0	0	0	0	0	0	0
March	1,871	2,142	135	157	110,740	8.4	0	0	0	0	0	0	0	**9**	0
April	1,227	1,324	140	84	55,458	6.8	0	0	**1**	0	0	0	0	**2**	0
May	952	805	123	101	80,890	10.6	**1**	0	**3**	**3**	0	0	0	**5**	0
June	1,429	743	105	99	57,330	6.9	0	0	**4**	**2**	0	0	0	**1**	0
July	1,429	297	116	50	20,700	3.5	0	0	**3**	0	**1**	0	0	**1**	0
August	1,747	282	113	34	8,856	1.9	0	0	0	0	0	0	0	0	0
September	2,404	1,464	81	170	155,063	7.1	0	0	**1**	0	0	0	0	**19**	**1**
October	2,646	1,382	88	136	105,330	5.1	**1**	**1**	**11**	**3**	0	0	**1**	**4**	0
November	1,178	948	92	90	73,965	7.6	0	0	**10**	**1**	0	0	0	**10**	**1**
December	169	406	57	15	10,190	8.9	0	0	0	0	0	0	0	**7**	0
Total	16,109	10,547	1,260	995	715,497	6.2	2	1	33	9	1	0	1	60	2

[1] Finalized trip ticket data averaged from 2011-2014

[2] Preliminary trip ticket data for 2015

[3] Alternative Platform trips where no fishing activity was found

[4] Based on estimated trips and observer large mesh trips

Table 2. Preliminary data collected for large mesh gill nets by season and management unit through the NCDMF Observer Program through December 2015.

								Observed Takes By Species								
		Trips		Observer Large Mesh				Kemp's		Green		Loggerhead		Unknown	A.Sturgeon	
Season	Unit	Estimated [1]	Actual [2]	AP Attempts [3]	Trips	Yards	Coverage [4]	Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
Winter [5]	A	765	632	56	38	27,800	5.0	0	0	0	0	0	0	0	**2**	0
	B	94	54	37	0	0	0.0	0	0	0	0	0	0	0	0	0
	C	159	47	49	13	7,800	8.2	0	0	0	0	0	0	0	0	0
	D1	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0
	D2	1	5	17	1	200	0.0	0	0	0	0	0	0	0	0	0
	E	38	16	51	7	1,175	18.3	0	0	0	0	0	0	0	0	0
Spring	A	2,254	2,369	110	158	153,925	7.0	0	0	0	0	0	0	0	**14**	0
	B	614	383	79	44	31,700	7.2	**1**	0	**4**	**3**	0	0	0	0	0
	C	839	1,033	57	72	36,318	8.6	0	0	0	0	0	0	0	0	0
	D1	30	5	5	0	0	0.0	0	0	0	0	0	0	0	0	0
	D2	61	92	26	7	5,900	11.4	0	0	0	0	0	0	0	0	0
	E	251	389	121	61	19,245	24.3	0	0	0	0	0	0	0	**2**	0
Summer	A	1,751	115	76	12	11,140	0.7	0	0	**2**	**1**	0	0	0	**1**	0
	B	1,515	109	42	16	4,450	1.1	0	0	**1**	**1**	0	0	0	0	0
	C	735	328	61	40	27,940	5.4	0	0	**1**	0	0	0	0	0	0
	D1	34	0	10	0	0	0.0	0	0	0	0	0	0	0	0	0
	D2	125	123	34	17	8,410	13.6	0	0	**1**	0	0	0	0	0	0
	E	446	647	111	98	34,946	22.0	0	0	**2**	0	**1**	0	0	**1**	0
Fall	A	2,804	2,248	36	205	227,748	7.3	0	**1**	0	0	0	0	**1**	**28**	**1**
	B	1,712	433	29	63	46,080	3.7	**1**	0	**18**	**4**	0	0	0	0	0
	C	918	350	51	58	36,795	6.3	0	0	**1**	0	0	0	0	**4**	**1**
	D1	60	6	22	7	1,900	11.7	0	0	**2**	0	0	0	0	0	0
	D2	288	322	26	27	8,275	9.4	0	0	0	0	0	0	0	**1**	0
	E	446	435	97	36	13,560	8.1	0	0	**1**	0	0	0	0	0	0
Total		15,939	10,141	1,203	980	705,307	6.1	2	1	33	9	1	0	1	53	2

[1] Finalized trip ticket data averaged from 2011-2014

[2] Preliminary trip ticket data for 2015

[3] Alternative Platform trips where no fishing activity was found

[4] Based on estimated trips and observer large mesh trips

[5] Does not include December 2015 as that counts towards the winter 2016 season

Table 3. Preliminary data collected for small mesh gill nets by month through the NCDMF Observer Program through December 2015.

	Trips		Observer Small Mesh			Observed Takes By Species								
						Kemp's		Green		Loggerhead		Unknown	A. Sturgeon	
Month	Estimated [1]	Actual [2]	Trips	Yards	Coverage [3]	Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
January	712	574	15	9,440	2.1	0	0	0	0	0	0	0	0	0
February	819	359	30	16,205	3.7	0	0	0	0	0	0	0	0	0
March	953	875	43	24,290	4.5	0	0	0	0	0	0	0	0	0
April	1,407	1,219	41	27,242	2.9	0	0	0	**1**	0	0	0	**7**	**2**
May	988	663	24	8,725	2.4	0	0	0	0	0	0	0	0	0
June	817	545	14	6,506	1.7	0	0	**1**	0	0	0	0	0	0
July	686	615	10	5,600	1.5	0	0	0	0	0	0	0	0	0
August	854	467	9	7,500	1.1	0	0	0	0	0	0	0	**1**	0
September	917	452	19	4,985	2.1	0	0	0	0	0	0	0	0	0
October	1,223	678	40	9,315	3.3	0	0	**1**	0	0	0	0	0	0
November	787	473	19	7,290	2.4	0	0	**1**	0	0	0	0	0	0
December	576	616	15	7,660	2.6	0	0	0	0	0	0	0	0	0
Total	10,736	7,536	279	134,758	2.6	0	0	3	1	0	0	0	8	2

[1] Finalized trip ticket data averaged from 2013-2014

[2] Preliminary trip ticket data for 2015

[3] Based on estimated trips and observer small mesh trips

Table 4. Preliminary data collected for small mesh gill nets by season and management unit through the NCDMF Observer Program through December 2015.

		Trips		Observer Small Mesh			Observed Takes By Species								
							Kemp's		Green		Loggerhead		Unknown	A.Sturgeon	
Season	Unit	Estimated [1]	Actual [2]	Trips	Yards	Coverage [3]	Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
Winter [4]	A	1,049	538	27	17,945	2.6	0	0	0	0	0	0	0	0	0
	B	312	164	4	4,050	1.3	0	0	0	0	0	0	0	0	0
	C	98	154	10	2,350	10.2	0	0	0	0	0	0	0	0	0
	D1	5	0	0	0	0.0	0	0	0	0	0	0	0	0	0
	D2	36	55	0	0	0.0	0	0	0	0	0	0	0	0	0
	E	33	22	4	1,300	12.1	0	0	0	0	0	0	0	0	0
Spring	A	1,436	1,062	52	24,425	3.6	0	0	0	0	0	0	0	**2**	0
	B	1,337	1,210	23	20,880	1.7	0	0	0	**1**	0	0	0	0	**1**
	C	276	235	12	5,900	4.4	0	0	0	0	0	0	0	0	0
	D1	49	21	5	4,650	10.3	0	0	0	0	0	0	0	**5**	**1**
	D2	42	44	2	600	4.8	0	0	0	0	0	0	0	0	0
	E	209	185	14	3,802	6.7	0	0	0	0	0	0	0	0	0
Summer	A	448	159	3	700	0.7	0	0	0	0	0	0	0	0	0
	B	1,104	890	12	10,800	1.1	0	0	0	0	0	0	0	**1**	0
	C	454	181	6	2,000	1.3	0	0	**1**	0	0	0	0	0	0
	D1	15	6	0	0	0.0	0	0	0	0	0	0	0	0	0
	D2	44	111	1	100	2.3	0	0	0	0	0	0	0	0	0
	E	292	280	11	6,006	3.8	0	0	0	0	0	0	0	0	0
Fall	A	478	202	10	2,860	2.1	0	0	0	0	0	0	0	0	0
	B	1,234	652	9	2,435	0.7	0	0	0	0	0	0	0	0	0
	C	314	91	7	1,875	2.2	0	0	0	0	0	0	0	0	0
	D1	77	23	6	1,360	7.8	0	0	**1**	0	0	0	0	0	0
	D2	263	189	17	3,250	6.5	0	0	0	0	0	0	0	0	0
	E	563	446	29	9,810	5.2	0	0	**1**	0	0	0	0	0	0
Total		10,161	6,920	264	127,098	2.6	0	0	3	1	0	0	0	8	2

[1] Finalized trip ticket data averaged from 2013-2014

[2] Preliminary trip ticket data for 2015

[3] Based on estimated trips and observer small mesh trips

[4] Does not include December 2015 as that counts towards the winter 2016 season

Annual Sea Turtle Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2015

Annual Completion Report for Activities under Endangered Species Act
Section 10 Incidental Take Permit No. 16230

Jacob Boyd

North Carolina Department of Environmental Quality
North Carolina Division of Marine Fisheries
Protected Resources Section
3441 Arendell Street
Morehead City, NC 28557

January 2016

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BACKGROUND

The North Carolina Division of Marine Fisheries (NCDMF) applied for an Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the Endangered Species Act of 1973 (Public Law 93-205) (ESA) on June 14, 2010 to address sea turtle interactions with set gill nets in NC internal coastal waters. Species of sea turtles found in internal coastal waters of North Carolina include green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), loggerhead sea turtle (*Caretta caretta*), hawksbill sea turtle (*Eretmochelys imbricate*), and leatherback sea turtle (*Dermochelys coriacea*). This request was prompted by notification from the National Marine Fisheries Service (NMFS) - Southeast Regional Office (SERO) in July and November 2009 indicating the need for the state of North Carolina to address unauthorized takes of sea turtles occurring in inshore gill-net fisheries. A revised ITP application was submitted on August 17, 2011 based on feedback received from the NMFS on May 12, 2011. Feedback on the revised application from the NMFS was provided again on May 2, 2012 after public and peer review comments had been compiled. In response to requested changes from the NMFS, and considering the public and peer review comments, including the comments made by the NC Sea Turtle Advisory Committee (STAC), the NCDMF made extensive revisions to its application and resubmitted it on September 6, 2012. After another round of public and peer review comments the NMFS requested more information and clarification on certain portions of the application. On November 14, 2012, the response to the information request was discussed via teleconference between the NMFS and the NCDMF and provided to them beforehand. The NMFS recommended that the NCDMF update the current ITP application with an appendix containing all the updated information requested.

During the November 14, 2012 teleconference, the NMFS suggested breaking down the annual requested takes for Kemp's ridley and loggerhead sea turtles cumulatively similar to the previous ITPs for the Pamlico Sound Gill Net Restricted Area (PSGNRA). The NCDMF also suggested annual cumulative requested takes for all species of sea turtles for the exempt areas. A revised application was resubmitted on January 18, 2013.

On April 17, 2013 the NMFS set up a teleconference with the NCDMF to go over the revised ITP application that was submitted on January 18, 2013. Information was provided to the NMFS to clarify issues they had with the application. On April 22, 2013 the NMFS again asked for further clarification on different aspects of the ITP application which the NCDMF promptly responded to. At that time the NCDMF was informed by the NMFS that they hoped to have a draft permit within a month to discuss with the NCDMF. On April 30, 2013 the NCDMF staff were contacted by the NMFS for further explanation on the methodologies of the Observer Program. Explanations were provided and the NMFS did not have any more questions at the time.

On May 20, 2013, the NCDMF had another teleconference with the NMFS concerning the ITP application status and to review the Biological Opinion and Environmental Assessment protocols. At this time the NMFS raised concerns on the number of observed takes requested in the ITP application. During the last teleconference, the NCDMF and the NMFS agreed to

base allowable takes by area on an annual basis instead of a seasonal basis. As such, the number of requested observed takes was reduced by taking the seasonal component out of the equation. The NMFS brought up the idea of having an Implementing Agreement for the Sea Turtle ITP, similar to the Implementing Agreement the NMFS has suggested for the Atlantic Sturgeon ITP. The NMFS explained that an Implementing Agreement would provide more flexibility and could reduce the risk of the permit being suspended due to excessive takes, but it will not allow for additional takes. The NMFS explained that any new information could be provided in another appendix to the existing application. The NCDMF asked the NMFS to provide a copy of a draft Implementing Agreement for consideration.

The NCDMF received the Sea Turtle ITP on September 11, 2013. This ITP authorized the implementation of adaptive management measures to protect threatened and endangered sea turtles and other ESA listed species, while allowing estuarine gill-net fisheries prosecuted by commercial license holders to fish in the internal coastal (estuarine) waters of North Carolina. The Annual Completion report for ITP Year 2014 was submitted January 30, 2015 (Boyd 2015b).

During review of the 2014 Sea Turtle ITP Annual Report, the NMFS requested modifications to certain tables and figures in the annual report. These modifications were addressed in the current report and include: maps for each management unit to include number of gill-net hauls and sea turtle interactions and tables which have all of the estimated/observed takes exactly as portrayed in the permit with 95% confidence intervals included.

METHODS

OBSERVER ACTIVITY

The conservation plan includes managing inshore gill-net fisheries by dividing estuarine waters into six management units (A, B, C, D1, D2, and E; Figure 1). Existing observer data from previous years is used when estimating the amount of trips needed for the current year in each management unit and season. Also, real time trip ticket data is used for areas where effort may be increasing. Each year effort can potentially shift from one management unit to another making it important for the NCDMF to not base the observer effort solely on previous years' trip ticket data, but also on current effort changes. To account for fluctuations in trip ticket data caused by management unit closings, a four year average was used for estimating large mesh gill-net fishing trips and a two year average was used for estimating small mesh gill-net fishing trips for ITP Year 2015. This method of estimating trips proves to more accurately reflect the current fishing effort. Once trip ticket data are finalized in May of 2016, the final observer coverage will be recalculated and the finalized estimates of observer coverage will be provided to the NMFS.

Traditional, onboard trips are the preferred method of obtaining observer data and are used most frequently where observers ride aboard fishermen's vessels. For alternative platform trips, observers and Marine Patrol follow the same protocols using the NCDMF vessels to observe the fishing trip. Each observer attempts to obtain a minimum of three to four trips per working week when fishing activity is occurring. Observers are assigned a management unit to work weekly and the amount of observers assigned to a management unit depends upon the season and fishing effort. Fishing effort is estimated from the previous year's trip ticket data by week and by month and management unit to determine where and how much observer coverage is needed each week and for each management unit by month/season. Reports from observers and other staff are used to determine if effort is fluctuating between management units. Trends from the previous year's trip ticket data are also analyzed to determine if fishing effort is shifting from one management unit to another. Fishermen holding a Standard Commercial Fishing License (SCFL) and landing fish in North Carolina using gill nets in the previous years are pooled by management unit and further split into lists by geographic area within units. The contact information is then given to the observers assigned to that area and the observers contact the fishermen to set up trips from the list of names given. Preliminary trip ticket information is also used when pooling fishermen to contact along with contacting fishermen at fish houses. Observers hand out business cards with their contact information and brochures explaining the Observer Program and giving the fishermen another outlet to allow observers on their vessels. Additionally, the Observer Program utilizes a website (http://portal.ncdenr.org/web/mf/observers-program) to provide outreach to fishermen to obtain trips.

Alternative platform trips are utilized for areas that may be hard to get onboard trips (i.e., fishermen in remote locations that leave from their residence by boat). Alternative platform trips are also utilized in areas where fishing effort may increase quickly or sea turtle abundance is

high. Marine Patrol also conducts alternative platform trips weekly in all management units based on the same methodology as the Observer Program. Coordination of onboard, alternative platform, and Marine Patrol alternative platform trips is done daily, monthly, and yearly to avoid sampling bias and to achieve the maximum amount of observer coverage possible for each management unit. Changes in effort, sea turtle abundance (i.e., observed and reported interactions), and other protected species interactions are monitored on a daily, weekly, and monthly basis to ensure proper observer coverage is being maintained. The ITP requires a minimum of 7% observer coverage with a goal of 10% of the total large mesh gill-net (≥4 inches stretched mesh - ISM) fishing trips and 1% coverage with a goal of 2% of the total small mesh gill-net (<4 ISM) fishing trips per management unit for the spring, summer, and fall seasons.

Each observer is trained to identify, measure, evaluate condition, resuscitate, and tag sea turtles by the NMFS – Beaufort Lab and the NCDMF. Date, time, tag numbers, location (latitude and longitude, when possible), condition (i.e., no apparent harm, injury including a description of the nature of the injury, or mortality), species, sex (if determinable), and curved carapace length (mm) and width (mm) are recorded for each sea turtle observed. Dead sea turtles are retained by the observer when feasible. All live, debilitated sea turtles are retained by the observer and delivered to the North Carolina Sea Turtle Stranding Network for examination and treatment. Observers collect data on location, gear parameters, catch, and bycatch for each haul. The landed catch is sampled throughout each trip including species, weights, lengths, and disposition (alive/dead). Data are coded on the NCDMF data sheets and uploaded to the NCDMF Biological Database for analysis. All observers are debriefed within 24 hours of each trip to obtain data on catch, set locations, gear parameters, and sea turtle interactions to provide estimates of sea turtle bycatch.

The total bycatch of sea turtles for each management unit was estimated using the stratified ratio method (SAS 1989). The bycatch rate (sea turtles caught per fishing trip) estimated from observer data was multiplied by the total fishing trips. To estimate confidence intervals (95%), the bootstrap method was used to sample estimates. Strata consisted of the six management units (A, B, C, D1, D2, and E; Figure 1). Estimates were calculated by date of capture, management unit, species, and disposition. Estimates were accumulated each week to implement necessary management measures if authorized take thresholds were approached.

$$\text{Estimated Interactions} = \frac{\text{\# sea turtle interactions observed}}{\text{total gill-net trips observed}} \times \text{total gill-net trips}$$

Seasons

The Observer Program's activities are reported on a weekly, seasonal, and annual basis. Weekly progress reports are required following a week in which a sea turtle interaction occurred and includes information such as take estimates, cumulative totals, number of observed trips, and observed takes with all associated information. The seasonal progress reports include a summary of the weekly reports, additional management measures if taken, compliance, violations that occurred, and any adaptive management actions taken during the

season. Annual reports include actual and estimated takes including mortality and the level of uncertainty of the estimates (i.e., 95% confidence intervals) by management unit, size composition along with all other interaction information, one or more maps illustrating the geographic distribution of all observed large and small mesh gill-net hauls and the locations of all interactions, and a description of the mitigation activities, adaptive management actions, and enforcement activities conducted during the ITP year.

AUTHORIZED TAKES

Authorized levels of annual incidental take are specified in Tables 1 - 5. The amount of incidental take is expressed as either estimated or observed takes depending on the amount of data available for modeling predicted takes. Extrapolated sea turtle takes were computed by dividing observed interactions by observer coverage. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Canty and Ripley 2015; Davison and Hinkley 1997; R Core Team 2015). Bootstrap replicates were generated by sampling observer trips with replacement 5,000 times within strata (mesh/season/management unit; Tables 1 - 5). Because reaching the estimated or observed level for any category of take for any species would end the incidental take authorization for all species; it is highly unlikely that all five species would be impacted at these full levels. Takes must be incidental to otherwise lawful activities associated with the large and small mesh gill-net fisheries, and as conditioned herein. The permit covers incidental takes from the date of issuance through August 31, 2023.

During the summer 2015 season a minor modification was enacted through the NMFS combining authorized takes for management units A (n = 4) and C (n = 4) for total allowable take limit of eight sea turtles from large or small mesh gill nets and any species or disposition (Boyd 2015d).

COMPLIANCE

The NCDMF observers and Marine Patrol conduct weekly fish house visits, boat patrols, fisherman spot checks, gear checks, aerial surveys, and continued outreach to the industry for the purpose of ensuring industry compliance and communicating efforts throughout the state.

The Observer Program has various ways to contact fishermen to schedule trips. The most common method is by phone due to limited program resources, fishermen leaving from their residence, and efficiency. The Observer Program has a contact log which is filled out for every phone call that is made when attempting to obtain a trip. Beginning in the spring of 2014 each call was put into a specific category and other information was gathered (Table 6). The contact log was analyzed by month and category to determine what percentage of phone calls resulted in positive observer trips.

RESULTS

OBSERVER ACTIVITY

Fall 2014

The fall season for large and small mesh gill nets in North Carolina is September through November as defined in ITP No. 16230. The NCDMF opened large mesh gill nets via proclamation M-25-2014 on September 1, 2014 in management unit A and via proclamation M-29-2014 on September 15, 2014 in management units C and D2 (Table 7; Boyd 2015a). On September 22, 2014 the NCDMF opened management units B and E to large mesh gill nets via proclamation M-30-2014. On September 24, 2014 management unit E was closed via proclamation M-31-2014 due to sea turtle interactions and reopened on November 2, 2014 via proclamation M-39-2014. On October 1, 2014 management unit A was closed via proclamation M-33-2014 due to sea turtle interactions with the western Albemarle Sound and Currituck Sound reopening on October 27, 2014 via proclamation M-36-2014. The remainder of management unit A was reopened on November 6, 2014 via proclamation M-41-2014. The annual management unit D1 opening occurred on October 14, 2014 via proclamation M-34-2014. On October 26, 2014 the eastern portions of management unit B were closed via proclamation M-37-2014 due to sea turtle interactions and was reopened on November 6, 2014 via proclamation M-40-2014 (Table 7; Boyd 2015a). The flounder commercial harvest season in internal coastal waters closed on December 1, 2014 via proclamation FF-72-2014.

There was a total of 33 observed sea turtle interactions from large mesh gill nets and one from small mesh gill nets for the fall season (Table 8; Figures 2 - 7). The species composition consisted of primarily green sea turtles (73.5%; n = 18 alive; n = 7 dead) with Kemp's ridley sea turtles (14.7%; n = 4 alive; n = 1 dead) being the second highest species observed (Table 8; Figures 2 – 7). The remaining species consisted of two loggerhead sea turtles (0.06%) and two unknown sea turtles (0.06%), all of which were alive (Table 8; Figures 2 – 7). The majority of the interactions (73.5%) occurred in management unit B (Table 8; Figures 2 - 7). There were four reported sea turtle interactions during this time period with one coming from illegally set large mesh gill nets reported by Marine Patrol (Table 9; Boyd 2015a).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 637 total trips (Table 10; Figures 2 - 7). The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 95 total trips (Table 11; Figures 2 – 7; Boyd 2015a).

Spring 2015

The spring season for large and small mesh gill nets in North Carolina is March through May as defined in ITP No. 16230. The NCDMF closed anchored large mesh gill nets via proclamation M-6-2015 on May 8, 2015 in management unit D1 through October 14, 2015 as

part of the annual closure (Table 7). All other management units remained open for the duration of the spring season (Boyd 2015c).

There was a total of eight observed sea turtle interactions from large mesh gill nets and one from small mesh gill nets for the spring season (Table 8; Figures 2 - 7). The species composition consisted of primarily green sea turtles (88.9%; n = 4 alive; n = 4 dead) with one live Kemp's ridley sea turtle observed (Table 8; Figures 2 - 7). All of the observed interactions occurred in management unit B (Table 8; Figures 2 - 7). There were no reported sea turtle interactions during this time period (Boyd 2015c).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 342 total trips except in management unit D1 (Table 10; Figures 2 – 7). Coverage was not met in management unit D1 due to the minimal amount of fishing effort that occurred and the closure of 25 days in the management unit. The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 108 total trips (Table 11; Figures 2 - 7; Boyd 2015c).

Summer 2015

The summer season for large and small mesh gill nets in North Carolina is June through August as defined in ITP No. 16230. The NCDMF closed anchored large mesh gill nets via proclamation M-10-2015 on June 8, 2015 in management unit B through the end of ITP Year 2015 (August 31, 2015) due to approaching allowable sea turtle interactions (Table 7; Boyd 2015d). The NCDMF closed anchored large and small mesh gill nets via proclamation M-11-2015 on June 12, 2015 in management unit A through the end of ITP Year 2015 due to reaching allowable sea turtle interactions. The NCDMF closed anchored large and small mesh gill nets via proclamation M-12-2015 on July 23, 2015 in management unit C through the end of ITP Year 2015 due to reaching allowable sea turtle interactions after a minor modification combined the authorized sea turtle interactions in management units A and C. Management unit D1 remained closed to large mesh gill nets through the summer season as part of the annual closure outlined in the ITP (May 8 – October 14; Table 7). All other management units remained open for the duration of the summer season (Boyd 2015d).

There was a total of 11 observed sea turtle interactions from large mesh gill nets and one from small mesh gill nets for the summer season (Table 8; Figures 2 - 7). The species composition consisted of primarily green sea turtles (83.3%; n = 8 alive; n = 2 dead) with two alive loggerhead sea turtles observed (Table 8; Figures 2 - 7). Observed interactions occurred in management unit A (25.0%), management unit B (16.7%), management unit C (16.7%), management unit D2 (16.7%), and management unit E (25.0%; Table 8; Figures 2 – 7). There were two reported sea turtle interactions during this time period with both coming from illegally set large mesh gill nets reported by Marine Patrol (Table 9; Boyd 2015d).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 183 total trips except in management unit A where coverage averaged 5.3% (Table 10; Figures 2 - 7). Coverage was not met in

management unit A due to the minimal amount of fishing effort that occurred prior to the closure of 80 days in the management unit (Table 7). The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 33 total trips except management unit D1 where no observer trips occurred (Table 11; Figures 2 - 7; Boyd 2015d). Coverage was not met in management unit D1 due to the minimal amount of fishing effort that occurred.

AUTHORIZED TAKES

There was a total of 52 observed sea turtle interactions in large mesh gill nets and three in small mesh gill nets for ITP Year 2015 (Table 8; Figures 2 – 7). The species composition consisted of primarily green sea turtles (78.2%; n = 30 alive; n = 13 dead; Table 8; Figures 2 - 7). The remaining species consisted of a Kemp's ridley sea turtle (10.9%; n = 5 alive; n = 1 dead), loggerhead sea turtles (7.3%; n = 4 alive; n = 0 dead) and unknown sea turtles (3.6%; n = 2 alive; n = 0 dead; Table 8; Figures 2 - 7). Observed interactions occurred in management unit A (10.9%), management unit B (65.5%), management unit C (3.6%), management unit D1 (3.6%), management unit D2 (3.6%), and management unit E (12.7%; Table 8; Figures 2 - 7). Of the seven reported sea turtles interactions for ITP Year 2015, four were reported by fishermen and three were reported by Marine Patrol from illegally set gill nets (Table 9; Boyd 2015a, Boyd 2015c, Boyd 2015d).

The size distribution of green sea turtles (n = 30) ranged from a curved carapace length of 236 mm to 362 mm and a curved carapace width of 200 mm to 266 mm (Figure 8). The size distribution of Kemp's ridley sea turtles (n = 6) ranged from a curved carapace length of 240 mm to 318 mm and a curved carapace width of 200 mm to 343 mm (Figure 9).

The cumulative total estimated and observed takes for large and small mesh gill nets did not reach the threshold of allowed takes for any management unit for ITP year 2015 (Tables 1 - 5). For large mesh gill nets, management unit B consisted of live (estimated n = 180, 95% CI [48, 214]) and dead (estimated n = 99, 95% CI [50, 266]) green sea turtles and live (estimated n = 27, 95% CI [0, 35]) and dead (estimated n = 7, 95% CI [0, 60]) Kemp's ridley sea turtles (Table 1). Management unit D1 consisted of live (estimated n = 2, 95% CI [0, 34]) green sea turtles (Table 1). Management unit E consisted of live (estimated n = 9, 95% CI [0, 18]) green sea turtles and live (estimated n = 8, 95% CI [0, 21]) Kemp's ridley sea turtles (Table 1). There were six observed takes from large mesh gill nets in management unit A and two in management unit C (Table 3). A minor modification to the permit in July 2015 combined annual allowed takes in management units A and C for a cumulative total of 8. For observed takes in small mesh gill nets, management units B and E consisted of two green sea turtles each (Table 4).

COMPLIANCE

Marine Patrol made 465 gill-net checks for the fall 2014 season (Table 12). Of these 465 gill-net checks, there were five citations (Tables 12 and 13). Marine Patrol made 512 gill-

net checks for the spring 2015 season (Table 12). Of these 512 gill-net checks, there were 14 citations (Tables 12 and 13). Marine Patrol made 309 gill-net checks for the summer 2015 season (Table 12). Of these 309 gill-net checks, there were 14 citations issued (Tables 12 and 13).

In the fall 2014 season a total of 2,083 phone calls were made with 46.3% being categorized as 1, 8, 11, 12, 13, and 14, which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips (Table 14). In the spring 2015 season, 4,080 phone calls were made with 57.2% being categorized as 1, 8, 11, 12, 13, and 14. In the summer 2015 season, 815 phone calls were made with 50.7% being categorized as 1, 8, 11, 12, 13, and 14 (Table 14). Proclamation M-24-2014 implemented the Estuarine Gill-Net Permit (EGNP) on September 1, 2014 (Table 7). Notices of Violations (NOV) were issued when fishermen were found to be out of compliance with the EGNP with 20 NOVs issued during the fall 2014 season and 14 NOVs issued during the spring 2015 season (Table 15).

DISCUSSION

MANAGEMENT HISTORY

The NCDMF has addressed protected sea turtle issues in the coastal waters since the 1970s. Sea turtle protection has been accomplished by cooperative agreements with the North Carolina Wildlife Resources Commission (NCWRC), establishment of a sea turtle sanctuary, proclamation authority delegated to the Director of the NCDMF, additional queries on recreational surveys, management of the PSGNRA, formation of the NC STAC, implementation of a large and small mesh gill-net observer program, commercial bycatch reduction gear testing projects, outreach to the commercial and recreational fishing industries, and collaboration with the NMFS.

The NCDMF applied and received four ITPs for the PSGNRA from 2000 - 2005 managing the area for sea turtle takes in the fall of each year through 2012 under these permits (Gearhart 2001, 2002, 2003; Price 2004, 2005, 2006, 2007a, 2008, 2009a, 2010a; Murphey 2011; Boyd 2012a, 2013a). Between 2000 and 2012, a number of changes were made in the PSGNRA such as: adjustments to allowable fishing areas, modified restrictions (e.g., state closure and net length restriction), and allowable take levels reduced (Gearhart 2003; Price 2010a; Murphey 2011; Boyd 2012a). These adaptations were made feasible as a result of the extensive monitoring program conducted by the NCDMF in the PSGNRA. The NCDMF also observed limited trips in the large and small mesh gill-net fisheries outside of the PSGNRA from 2004 - 2010 (Brown and Price 2005; Price 2007b, Price 2009b, Price 2010b; Boyd 2012b). The information gathered from these direct observations allowed the NCDMF to generate requested estimated take numbers for observed fisheries and draft a functional Conservation Plan.

In June 2009, the NMFS began an Alternative Platform Observer Program in Core Sound, NC. The NMFS observers documented sea turtle interactions in large mesh gill nets in this area beginning in late-June and notified the NCDMF of their concern for these unauthorized takes. The NCDMF consulted with the NMFS-SERO via conference calls and correspondence to discuss short- and long-term actions to address sea turtle takes in gill nets in Core Sound and throughout the state. In the short term, the agencies agreed for the NCDMF to implement gear restrictions (yardage limits, mesh depth reduction, and net shot reductions) and increased observer coverage in Core Sound and adjacent water bodies (NCDMF Proclamation M-16-2009). For the long-term, the NCDMF continued consultations with the NMFS-SERO concerning the preparation of an ITP application for all internal coastal waters while compiling sea turtle interaction data from gill-net surveys, research projects, and direct observations.

On October 20, 2009, the day that authorized sea turtle takes were reached in the 2009 PSGNRA, a 60-day Notice of Intent (NOI) to sue the NCDMF and the North Carolina Marine Fisheries Commission (NCMFC) was received from the Duke Environmental Law and Policy Clinic on behalf of the Karen Beasley Sea Turtle Rescue and Rehabilitation Center Foundation (Beasley Center). The NOI stated that the NCDMF and the NCMFC violated Section 9 of the

ESA by allowing gear in state waters that had unauthorized takes of threatened or endangered sea turtles.

The NCDMF consulted with the NMFS-SERO concerning this NOI while continuing to work toward the preparation of an application for a statewide ITP for gill-net fisheries in internal coastal waters. In November 2009, the NCDMF received further correspondence from the NMFS-SERO reiterating the need to "satisfy the requirements of the ESA" relative to Core Sound sea turtle interactions. The NCDMF continued to collect sea turtle interaction data while developing an interim plan to address sea turtle interactions in gill-net gear. As a result of discussions and correspondence with the NMFS-SERO, the NCDMF submitted an interim plan in January 2010 to address sea turtle interactions in gill-net fisheries prosecuted in internal coastal waters. The plan proposed to close large mesh gill-net fisheries throughout the majority of the estuarine waters of North Carolina from May to December 2010.

On February 18, 2010 the NCDMF presented the interim proposal to the NCMFC and the public at an emergency NCMFC meeting in New Bern, NC. During the meeting, numerous commercial fishery representatives expressed concern with the proposed closure on the basis of the negative economic impact that would result from such a closure. Representatives from the Coastal Conservation Association (CCA-NC) did not support the interim closure stating the plan was too limited in scope. After thoroughly debating the issue, the NCMFC voted to direct the NCDMF to implement alternative measures that included reductions in the number of days per week that large mesh gill nets were allowed to be fished, restricted soak times, reductions in the length of individual nets (shots), and reductions in total yardage.

On February 23, 2010, the Duke Environmental Law and Policy Clinic filed suit against the NCDMF and the NCMFC on behalf of the Beasley Center. Negotiations between the parties occurred between late February and March 23, 2010, when the NCMFC met again. During the meeting, the NCMFC directed the fisheries director to issue a gill-net proclamation effective May 15, 2010 restricting the number of days during the week that large mesh gill nets would be allowed, limiting soak time, establishing a maximum yardage limit, mandating maximum mesh depth, requiring maximum individual gill-net (shot) lengths, establishing spacing between net shots, and eliminating the use of tie-downs and floats or corks along float lines. The NCDMF Director did not issue the proclamation because, as detailed below, ongoing negotiations with the Beasley Center and the Duke Environmental Law and Policy Clinic produced a settlement agreement which preempted this particular action.

The NCMFC met May 12 through 14, 2010 and discussed the parameters of the final Settlement Agreement between the Beasley Center (plaintiff) and the NCDMF and the NCMFC. At that meeting, the NCMFC reached an agreement concerning restrictions that would be implemented in the large mesh gill-net fishery in NC estuarine waters. As a result of the NCMFC action, the NCDMF issued Proclamation M-8-2010 effective May 15, 2010 implementing the provisions of the Settlement Agreement.

Gill-net restrictions implemented by the proclamation included: a range of 4 ISM to, and including, 6 ½ ISM for large mesh gill nets; soak times limited to overnight soaks an hour before sunset to an hour after sunrise, Monday evenings through Friday mornings; large mesh gill nets were restricted to a height of no more than 15 meshes, constructed with a lead core or leaded bottom line and without corks or floats other than needed for identification; a maximum of 2,000 yards of large mesh gill nets allowed to be used per vessel; and maximum individual net (shot) length of 100 yards with a 25-yard break between shots. Fishermen in the southern portion of the state were allowed to set large mesh gill nets an hour before sunset to an hour after sunrise, Sunday evenings through Friday mornings, and use floats on nets, but were restricted to the use of a maximum of 1,000 yards of large mesh gill net per fishing operation.

The Settlement Agreement included gill nets from 4 ISM to less than 5 ISM in the large mesh category because of observed sea turtle takes in 4 ISM and 4 ½ ISM gill nets in the NCDMF Independent Gill-Net Survey. The measures were modified slightly several times, with the concurrence of the Beasley Center, to improve gear efficiency or adjust fishing area boundaries without compromising the sea turtle conservation provisions of the Settlement Agreement.

OBSERVER ACTIVITY

There was turnover within the Observer Program with positions being filled as quickly as possible to maintain coverage. The Observer Program actively placed observers in areas where fishing effort was high and where known sea turtle interactions occur. During the fall 2014 and summer 2015 seasons during ITP year 2015 there were closures throughout the state due to sea turtle interactions. When a management unit closes for a portion of time the observers are shifted to the open management units to increase coverage in those management units. The contact log, which includes different categories to place each contact that was made to a fisherman, was beneficial for analyzing the type of contact that was being made and to see the number of positive observer trips that were obtained through the calling system.

COMPLIANCE

The previous ITPs (PSGNRA) did not require observer coverage in the northern portion of North Carolina (management unit A). Although ITP Year 2015 is the second year for the statewide ITP, fishermen were still not as familiar with the Observer Program and requirements of the ITP, so more time was needed to educate the industry. Management unit A had compliance issues (i.e., not answering phone calls, not calling back) throughout ITP Year 2015. The NCDMF discussed the situation with industry leads to improve awareness and increase compliance. While overall compliance has improved, difficulties still arose from fishermen compliance in certain areas of the state.

Estuarine Gill Net Permit

As per the ITP the NCDMF established a permit to register all fishermen participating in the large and small mesh gill-net fisheries via proclamation M-24-2014 on September 1, 2014 (Table 7). The ITP's Implementing Agreement states that the NCDMF has two years to implement this permit to serve as a certificate of inclusion for fishermen. However, due to the compliance issues the NCDMF was facing during ITP year 2014, the permit was developed (EGNP) and became effective September 1, 2014 (one year from ITP issuance). This multifaceted permit allows the NCDMF to closely monitor for compliance with the already successful permit system the NCDMF has in place. The EGNP is also used as a tool to improve fishermen compliance by requiring fishermen to allow the NCDMF observers aboard their vessels to monitor catches. Failure to comply with this permit provision results in a permit suspension. This results in more effective regulation and better compliance. There were 2,678 EGNPs issued for Fiscal Year 2015 (July 1, 2014 – June 30, 2015).

An issue that was discovered during the spring season was the appeal process for the NCDMF's permitting system, which includes the EGNP. General Counsel for the North Carolina Department of Environmental Quality (NCDEQ) deliberated the situation during which time NOVs were not issued (i.e., summer 2015 season). Their findings determined that any NOV issued by the NCDMF for permits can be appealed by the fisherman. However, the permit will still be suspended for the duration of the violation (i.e., 10-days, 30-days, 6-months).

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TABLES

Table 1. Authorized and actual annual estimated takes with confidence intervals (95% shown in parenthesis) using a bootstrap resampling method based on observer data for coverage and sea turtle interaction levels in large mesh (≥4 inch stretched mesh) gill nets for ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Management Unit											
	B				D1							
	Estimated Takes				Estimated Takes				Total			
	Authorized		Actual		Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	225	112	180 (87,350)	99 (50,266)	9	5	2 (0,34)	0	234	117	182	99
Kemp's ridley	53	26	27 (0,35)	7 (0,60)	15	7	0	0	68	33	27	7
Total	278	138	207	106	24	12	2	0	302	150	209	106

	Management Unit											
	D2				E							
	Estimated Takes				Estimated Takes				Total			
	Authorized		Actual		Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	n/a [1]	n/a [1]	n/a [1]	n/a [1]	96	48	9 (0,19)	0	96	48	9	0
Kemp's ridley	6	3	0	0	24	13	8 (0,21)	0	30	16	8	0
Total	6	3	0	0	120	61	17	0	126	64	17	0

[1] Insufficient observer data exist to model an estimated annual take level; therefore, for management unit D2, an annual observed take number has been identified for green turtles, and is found in Table 2

Table 2. Authorized and actual annual observed (not estimated) takes in large mesh (≥4 inch stretched mesh) gill nets for ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Management Unit									
	B [1]		D1		D2		E			
	Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Total	
Species	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual
Green	n/a [2]	n/a [2]	n/a [2]	n/a [2]	6	1	n/a [2]	n/a [2]	6	1
Kemp's ridley	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]	n/a [2]
Hawksbill	1	0	1	0	1	0	1	0	4	0
Leatherback	1	0	1	0	1	0	1	0	4	0
Loggerhead	3	1	3	0	3	1	3	2	16	4
Total	5	1	5	0	11	2	5	2	31	5

[1] One sea turtle interaction occurred in management unit B where the species identification was unable to be determined; therefore it was not counted towards actual take levels

[2] Insufficient observer data exist to model an estimated annual take level for Kemp's ridley sea turtles in management units B, D1, D2 and E. See Table 1 for the authorized annual estimated take level

Table 3. Authorized and actual annual observed (not estimated) takes in large mesh (≥4 inch stretched mesh) and small mesh (<4 inch stretched mesh) gill nets combined for ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Management Unit		
	A [1,2]	C [2]	
Species	Observed (live/dead)	Observed (live/dead)	Total
Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead	4 turtles of any species	4 turtles of any species	8
Total	6	2	8

[1] One sea turtle interaction occurred in management unit A where the species identification was unable to be determined; however it was counted towards total observed take levels

[2] A minor modification to the Sea Turtle ITP was implemented in July 2015 combining observed takes in management units A and C for a cumulative total of n = 8

Table 4. Authorized and actual annual observed (not estimated) takes in small mesh (<4 inch stretched mesh-ISM) gill nets for ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Management Unit									
	B		D1		D2		E			
	Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Total	
Species	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual
Green	3	1	3	0	3	0	3	1	12	2
Hawksbill	1	0	1	0	1	0	1	0	4	0
Kemp's ridley	3	0	3	0	3	0	3	0	12	0
Leatherback	1	0	1	0	1	0	1	0	4	0
Loggerhead	3	0	3	0	3	0	3	0	12	0
Total	11	1	11	0	11	0	11	1	44	2

Table 5. Total annual authorized and actual takes (estimated and observed) by species and condition for ITP Year 2015 (September 1, 2014 - August 31, 2015).

			Estimated			
	Observed (live/dead)		Authorized		Actual	
Species	Authorized	Actual	Alive	Dead	Alive	Dead
Green	18	9	330	165	191	99
Hawksbill	8	0	n/a[1]	n/a[1]	n/a[1]	n/a[1]
Kemp's ridley	12	1	98	49	34	7
Leatherback	8	0	n/a[1]	n/a[1]	n/a[1]	n/a[1]
Loggerhead	24	4	n/a[1]	n/a[1]	n/a[1]	n/a[1]
Any Species [2]	8	2	n/a[1]	n/a[1]	n/a[1]	n/a[1]
Total	78	16	428	214	225	106

[1] Insufficient observer data exist to model an estimated annual take level; therefore, takes are expressed as observed

[2] This category was listed in Table 5 of the Sea Turtle ITP No. 16230 to incorporate allowed takes from management units A and C. However, there were two unidentified (unknown) sea turtle interactions during ITP Year 2015 which are now included in this category. All other observed interactions in management units A and C where a positive species identification was obtained are included in the specific species categories.

Table 6. Categories and descriptions of fisherman responses for the Observer Program's contact logs used for analysis.

Categories	Category description
1	Left message with someone else
2	Not fishing general
3	Fishing other gear
4	Not fishing because of weather
5	Not fishing because of boat issues
6	Not fishing because of medical issues
7	Booked trip
8	Hung up, got angry, trip refused
9	Call back later time/date
10	Saw in person
11	Disconnected
12	Wrong number
13	No answer
14	No answer, left voicemail

Table 7. Regulations for management units by date and regulation change for large and small mesh gill nets for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Year	Date(s)	Regulation change
2014	May 5 [1]	Use of large mesh gill nets prohibited in Internal Coastal Waters to avoid discards of red drum. Major portions of management units A and C and the New River were allowed to open Jun 1-Sep 15 (M-16-2014 and M-21-2014).
2014	Sept 1	The remainder of management unit A is reopened from the red drum closure (M-25-2014).
2014	Sept 1	The Estuarine Gill-Net Permit (EGNP) is implemented (M-24-2014).
2014	Sept 15	The remainder of management unit C is reopened and all of management unit D2 is reopened from the red drum closure (M-29-2014).
2014	Sept 22	Management units B and E are opened to large mesh gill nets (M-30-2014).
2014	Sept 24	Management unit E closed to large mesh gill nets due to turtle interactions (M-31-2014).
2014	Oct 1	Management unit A closed to large mesh gill nets due to turtle interactions (M-33-2014).
2014	Oct 15	Management unit D1 open to large mesh gill nets (M-34-2014).
2014	Oct 26	Shallow water portions of area B closed to large mesh gill nets due to turtle interactions (M-37-2014).
2014	Oct 27	Portions of western Albemarle Sound and Currituck (management unit A) reopened (M-36-2014).
2014	Nov 2	Management unit E open to large mesh gill nets (M-39-2014).
2014	Nov 6	Remainder of management unit A reopened (M-41-2014).
2014	Nov 6	Shallow water portions of area B reopened to large mesh gill nets (M-40-2014).
2015	May 8	Management unit D1 closed to large mesh gill nets for annual ITP closure (M-6-2015).
2015	May 18	Established attendance requirements for <5 inches for Subunit B.1 (small portion of management unit B located south and west of Oregon Inlet (M-7-2015).
2015	June 8	Closed management unit B to large mesh gill nets due to approaching allowable sea turtle interactions (M-10-2015).
2015	June 12	Closed management unit A to large and small mesh gill nets due to reaching allowable sea turtle interactions (M-11-2015).
2015	July 23	Closed management unit C to large and small mesh gill nets due to reaching allowable sea turtle interactions because. The division requested a minor modification to the Sea Turtle ITP that combines the authorized takes for management units A and C to provide more flexibility in managing the fishery and ensure that authorized take levels are not exceeded during the ITP year. For management units A and C the number of allowable takes had been reached (n=8; M-12-2015).

[1] Although this regulation change occurred during ITP Year 2014 it was included as reference for other regulatory changes which occurred in the fall season of ITP Year 2015

Table 8. Summary of observed sea turtle interactions in large (n = 52) and small (n = 3) mesh gill nets through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

						Tag		Curved Carapace (mm)	
Date	Management Unit	Latitude	Longitude	Species	Disposition	PIT	Inconel	Length	Width
9/9/2014	E	3357.177	7756.161	loggerhead	alive	n/a	n/a	n/a	n/a
9/16/2014	A	3559.705	7614.192	unknown	alive	n/a	n/a	n/a	n/a
9/23/2014	B	3514.421	7540.129	green	alive	n/a	n/a	330	279
9/23/2014	B	3514.421	7540.129	green	alive	n/a	n/a	336	266
9/23/2014	E	3426.444	7732.555	kemps	alive	n/a	n/a	240	200
9/23/2014	E	3426.491	7732.518	kemps	alive	n/a	n/a	290	280
9/24/2014	B	3507.575	7557.166	green	alive	n/a	n/a	n/a	n/a
9/26/2014	A	3547.304	7533.153	green	alive	989.001001951894	EET810	240	192
10/1/2014	A	3557.824	7545.917	kemps	alive	989.001001952697	UUE046	318	343
10/3/2014	B	3504.484	7604.897	green	dead	n/a	n/a	351	310
10/7/2014	B	3516.398	7541.830	green	alive	989.001001951677	n/a	281	232
10/7/2014	B	3516.227	7541.878	green	alive	989.001001951710	n/a	362	266
10/8/2014	B	3516.227	7534.571	loggerhead	alive	989.001001951907	EET806	584	541
10/8/2014	B	3542.397	7531.306	unknown	alive	n/a	n/a	n/a	n/a
10/10/2014	B	3518.323	7532.758	green	alive	n/a	n/a	n/a	n/a
10/10/2014	E	3439.111	7709.080	green [1]	alive	n/a	n/a	n/a	n/a
10/16/2014	B	3508.558	7555.952	green	dead	n/a	EET820	280	250
10/16/2014	B	n/a	n/a	green	dead	n/a	n/a	n/a	n/a
10/17/2014	D1	3446.637	7636.866	green	alive	989.001001951714	n/a	341	308
10/17/2014	B	3519.899	7534.882	green	alive	989.001001951878	EET804/5	324	278
10/21/2014	B	3521.120	7534.783	green	alive	3DD.003BB892B3	n/a	290	250
10/21/2014	B	3521.048	7534.364	green	alive	3DD.003BB892DB	EET802/3	350	310
10/21/2014	B	n/a	n/a	kemps	alive	989.001002	n/a	250	243
10/21/2014	B	3449.165	7622.689	green	dead	n/a	n/a	241	203
10/21/2014	B	3448.754	7622.859	green	dead	n/a	n/a	292	248
10/21/2014	B	3448.740	7622.873	green	dead	n/a	n/a	305	273
10/22/2014	B	3503.212	7605.637	green	alive	989.001001952679	UUE95/100	340(est)	281(est)
10/22/2014	B	3503.967	7605.268	green	alive	989.001001952761	n/a	295(est)	249(est)
10/22/2014	B	3503.639	7605.206	green	dead	n/a	n/a	313(est)	276(est)

[1] Indicates small mesh gear

Table 8. Cont…

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag		Curved Carapace (mm)	
						PIT	Inconel	Length	Width
10/22/2014	B	3503.517	7605.456	kemps[2]	dead	n/a	n/a	241(est)	264(est)
10/22/2014	D1	3444.704	7630.175	green	alive	4B02465510	UUE078	500(est)	400(est)
11/11/2014	B	3509.678	7553.358	green	alive	989001001952701	n/a	280	230
11/12/2014	B	3506.066	7603.325	green	alive	n/a	n/a	n/a	n/a
11/13/2014	B	3505.551	7603.006	green	alive	9890001001952680	n/a	267	246
4/10/2015	B	3510.924	7549.519	green[1]	dead	n/a	n/a	238	206
4/17/2015	B	3507.242	7557.741	green	alive	989.001001952762	n/a	236	200
5/14/2015	B	3449.196	7622.597	green	alive	n/a	n/a	n/a	n/a
5/14/2015	B	3448.986	7622.668	green	dead	n/a	n/a	289	241
5/14/2015	B	3449.582	7622.140	kemps	alive	989.001001951753	n/a	257	264
5/27/2015	B	3458.360	7622.268	green	dead	n/a	n/a	240	216
5/28/2015	B	3448.900	7622.949	green	alive	989.001001952770	n/a	320	290
5/29/2015	B	3459.148	7614.202	green	alive	989.001001951712	n/a	239	217
5/29/2015	B	3504.129	7625.871	green	dead	n/a	n/a	240	216
6/2/2015	C	3519.423	7632.507	green [1]	alive	989.001001951915	n/a	240	210
6/5/2015	B	3508.589	7555.541	green	alive	n/a	n/a	298	255
6/5/2015	B	3508.575	7555.604	green	dead	n/a	n/a	271	239
6/10/2015	A	3550.834	7535.639	green	alive	982.000364297009	n/a	275	235
6/10/2015	A	3550.579	7535.419	green	alive	982.000364299962	n/a	277	246
6/11/2015	C	3511.202	7639.629	green	alive	n/a	n/a	n/a	n/a
6/12/2015	A	3550.876	7537.263	green	dead	n/a	n/a	260	230
7/1/2015	E	3434.889	7725.502	green	alive	n/a	n/a	n/a	n/a
7/2/2015	E	3424.650	7735.031	green	alive	n/a	n/a	n/a	n/a
7/7/2015	E	3435.420	7722.167	loggerhead	alive	989.001001951676	EEU660	457	340
7/15/2015	D2	3443.559	7642.855	green	alive	989.001001951746	n/a	361	323
8/27/2015	D2	34.68745	76.97218	loggerhead	alive	n/a	n/a	n/a	n/a

[1] Indicates small mesh gear

[2] Turtle died on 11/28/2014 at Karen Beasley Sea Turtle Hospital

Table 9. Summary of reported sea turtle interactions in large mesh gill nets through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Date	Management Unit	Latitude	Longitude	Species	Disposition	Curved Carapace (mm)	
						Length	Width
9/23/2014	E	n/a	n/a	unknown	alive	n/a	n/a
9/24/2014	E	n/a	n/a	unknown	alive	n/a	n/a
9/26/2014 [1]	B	3514.602	7538.192	green	alive	330	279
10/2/2014	B	n/a	n/a	unknown	alive	n/a	n/a
10/22/2014	D1	n/a	n/a	loggerhead	alive	n/a	n/a
6/23/2015 [1]	A	3553.947	7537.567	kemps ridley	dead	300	320
6/25/2015 [1]	B	3521.549	7530.886	kemps ridley	alive	n/a	n/a

[1] Reported sea turtle interactions from illegally set large mesh gill nets and were reported by Marine Patrol

Table 10. Observer coverage calculated from previous year's trip ticket data and observer data for large mesh gill nets by season and management unit through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season	Management Unit	Large Mesh		
		Fishing Trips [2]	Observed Trips	Coverage [3]
Fall 2014	A	2,529	192	7.6
	B	1,448	154	10.6
	C	904	152	16.8
	D1	23	23	100.0
	D2	264	58	22.0
	E	282	58	20.6
Spring 2015 [1]	A	2,254	158	7.0
	B	614	44	7.2
	C	839	72	8.6
	D1	22	0	0.0
	D2	61	7	11.4
	E	251	61	24.3
Summer 2015 [1]	A	228	12	5.3
	B	117	16	13.7
	C	184	40	21.7
	D1	0	0	0.0
	D2	125	17	13.6
	E	446	98	22.0
Total		10,593	1,162	11.0

[1] Number of days management units closed factored into estimated fishing trips for the spring and summer 2015 seasons

[2] Final trip ticket data for 2014 (September - December) and preliminary trip ticket data for 2015 (January - August)

[3] Based on final trips for 2014 (September - December) and estimated trips for 2015 (January - August) compared to observer large mesh trips

Table 11. Observer coverage calculated from previous year's trip ticket data and observer data for small mesh gill nets by season and management unit through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season	Management Unit	Small Mesh		
		Fishing Trips [2]	Observed Trips	Coverage [3]
Fall 2014	A	566	18	3.2
	B	1,381	22	1.6
	C	309	15	4.9
	D1	80	7	8.8
	D2	325	9	2.8
	E	624	24	3.8
Spring 2015 [1]	A	1,436	52	3.6
	B	1,337	23	1.7
	C	276	12	4.4
	D1	49	5	10.3
	D2	42	2	4.8
	E	209	14	6.7
Summer 2015 [1]	A	58	3	5.2
	B	1,104	12	1.1
	C	114	6	5.3
	D1	15	0	0.0
	D2	44	1	2.3
	E	292	11	3.8
Total		8,258	236	2.9

[1] Number of days management units closed factored into estimated fishing trips for the spring and summer 2015 seasons

[2] Final trip ticket data for 2014 (September - December) and preliminary trip ticket data for 2015 (January - August)

[3] Based on final trips for 2014 (September - December) and estimated trips for 2015 (January - August) compared to observer large mesh trips

Table 12. Number of gill-net checks made and citations issued by Marine Patrol for large and small mesh gill nets by season during ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season	# Gill Net Checks	# Citations
Fall 2014	465	5
Spring 2015	512	14
Summer 2015	309	14
Total	1,286	33

Table 13. Citations written by Marine Patrol for large and small mesh gill nets by season and violation code during ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Violation		
Season	Date	Code	Description
Fall 2014	9/14/2014	NETG04	Leave gill nets in waters when could not be legally fished
	9/26/2014	NETG04	Leave gill nets in waters when could not be legally fished
	10/21/2014	NETG03	Using gill net with improper buoys or identification
	10/22/2014	NETG22	Improperly set gill net
	10/25/2014	NETG10	Gill net with illegal mesh size
Spring 2015	3/4/2015	NETG09	Gill net set too close to bridge
	3/9/2015	NETG09	Gill net set too close to bridge
	3/21/2015	NETG22	Improperly set gill net
	3/21/2015	NETG53	Use large mesh gill net with corks or floats on top line
	3/21/2015	NETG38	Use large mesh gill net in Pamlico Sound later than 1 hour after sunrise
	4/2/2015	NETG08	Gill net within 200 yards of pound net
	4/2/2015	NETG12	Net in middle third of marked navigational channel
	4/2/2015	NETG08	Gill net within 200 yards of pound net
	4/2/2015	NETG12	Net in middle third of marked navigational channel
	4/5/2015	NETG10	Gill net with illegal mesh size
	4/10/2015	NETG29	RCGL gear without proper buoys
	5/4/2015	NETG04	Leave gill net in waters when could not be legally fished
	5/5/2015	NETG03	Using gill net with improper buoys or identification
	5/20/2015	NETG01	Leave gill net in coastal waters unattended
Summer 2015	6/2/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	6/8/2015	NETG22	Improperly set gill net
	6/14/2015	NETG10	Gill net with illegal mesh size
	6/24/2015	NETG03	Using gill net with improper buoys or identification
	6/24/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/3/2015	NETG22	Improperly set gill net
	7/4/2015	NETG22	Improperly set gill net
	7/16/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	7/21/2015	NETG01	Leave gill net in coastal waters unattended
	7/21/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/21/2015	NETG29	RCGL gear without proper buoys
	7/22/2015	NETG03	Using gill net with improper buoys or identification
	7/22/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/22/2015	NETG30	Leave RCGL gill net unattended

Table 13. Cont…

Season	Violation		
	Date	Code	Description
	7/22/2015	NETG39	Use large mesh gill nets more than 15 meshes in height and w/out lead core or leaded bottom
	7/30/2015	NETG03	Using gill net with improper buoys or identification
	8/5/2015	NETG29	RCGL gear without proper buoys
	8/8/2015	NETG12	Net in middle third of marked navigational channel
	8/10/2015	NETG03	Using gill net with improper buoys or identification
	8/10/2015	NETG16	Use an unattended gill net in a restricted area
	8/10/2015	NETG37	Leave small mesh gill nets unattended
	8/13/2015	NETG03	Using gill net with improper buoys or identification
	8/14/2015	NETG22	Improperly set gill net
	8/14/2015	NETG30	Leave RCGL gill net unattended
	8/15/2015	NETG22	Improperly set gill net
	8/15/2015	NETG29	RCGL gear without proper buoys
	8/15/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	8/19/2015	NETG03	Using gill net with improper buoys or identification
	8/19/2015	NETG10	Gill net with illegal mesh size
	8/19/2015	NETG22	Improperly set gill net
	8/19/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	8/20/2015	NETG30	Leave RCGL gill net unattended
	8/23/2015	NETG03	Using gill net with improper buoys or identification
	8/23/2015	NETG04	Leave gill net in waters when could not be legally fished
	8/28/2015	NETG04	Leave gill net in waters when could not be legally fished
	8/28/2015	NETG29	RCGL gear without proper buoys

Table 14. The number of calls (n = 6,968) made by the observers trying to set up trips by season and month categorized by call type (0-14) and defined in Table 6 for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Categories (%) [1]														
Season	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Fall 2014	September	0.0	0.3	0.2	0.0	0.0	0.0	1.3	0.0	0.8	0.0	0.1	0.0	0.5	1.2	4.6
	October	1.5	9.8	3.3	1.5	0.9	0.8	6.9	0.1	4.7	0.0	1.2	0.3	5.2	16.0	52.4
	November	1.2	11.0	3.1	1.1	0.8	0.2	3.2	0.1	3.2	0.3	0.9	0.2	4.8	12.9	43.0
	Total	2.8	21.2	6.7	2.6	1.7	1.1	11.4	0.2	8.7	0.3	2.1	0.5	10.5	30.1	100.0
Spring 2015	March	1.3	9.5	2.1	0.6	0.5	0.6	2.5	0.0	2.0	1.3	2.2	0.7	5.7	15.2	44.2
	April	1.3	5.7	2.0	0.2	0.4	0.3	1.4	0.1	2.3	0.3	1.8	0.5	3.5	9.5	29.2
	May	1.0	5.4	2.7	0.1	0.3	0.3	0.8	0.0	1.2	0.4	1.0	0.2	3.0	10.1	26.6
	Total	3.6	20.6	6.8	1.0	1.2	1.2	4.6	0.1	5.4	2.1	5.0	1.4	12.2	34.8	100.0
Summer 2015	June	4.5	21.2	9.0	1.0	1.2	2.0	5.2	0.4	6.5	0.7	3.2	1.8	10.8	27.4	94.8
	July	0.0	0.9	0.1	0.0	0.0	0.1	0.0	0.0	0.5	0.1	0.4	0.1	0.5	1.1	3.8
	August	0.0	0.5	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3
	Total	4.5	22.6	9.1	1.0	1.2	2.1	5.5	0.4	7.0	0.9	3.6	2.0	11.3	29.0	100.0
	Total	3.5	21.0	7.0	1.4	1.4	1.2	6.7	0.2	6.6	1.4	4.0	1.2	11.6	32.7	100.0

[1] Categories as defined in Table 6: 1) Left message with someone else, 2) Not fishing general, 3) Fishing other gear, 4) Not fishing because of weather, 5) Not fishing because of boat issues, 6) Not fishing because of medical issues, 7) Booked trip, 8) Hung up, got angry, trip refused, 9) Call back later time/date, 10) Saw in person, 11) Disconnected, 12) Wrong number, 13) No answer, 14) No answer, left voicemail

Table 15. Notice of Violations issued by season, date and violation code for the Estuarine Gill-Net Permit for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season [1]	Date	Code	Description
Fall 2014	9/13/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/17/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/18/2014	EGNP25	Refuse to allow fisheries observers onboard or collect data
	9/23/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/23/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/24/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/29/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/25/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	10/2/2014	EGNP14	Mislead observers to avoid fishing trip
	10/2/2014	EGNP14	Mislead observers to avoid fishing trip
	10/3/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
	10/3/2014	EGNP11	Failure to attend nets
	10/3/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/3/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
	10/3/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	10/10/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	10/17/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/29/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/23/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	10/31/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
Spring 2015	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/13/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/17/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/17/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/25/2015	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	4/6/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data

[1] Notices of Violation were not issued during the summer 2015 season due to the legal review of the permit appeal process

FIGURES

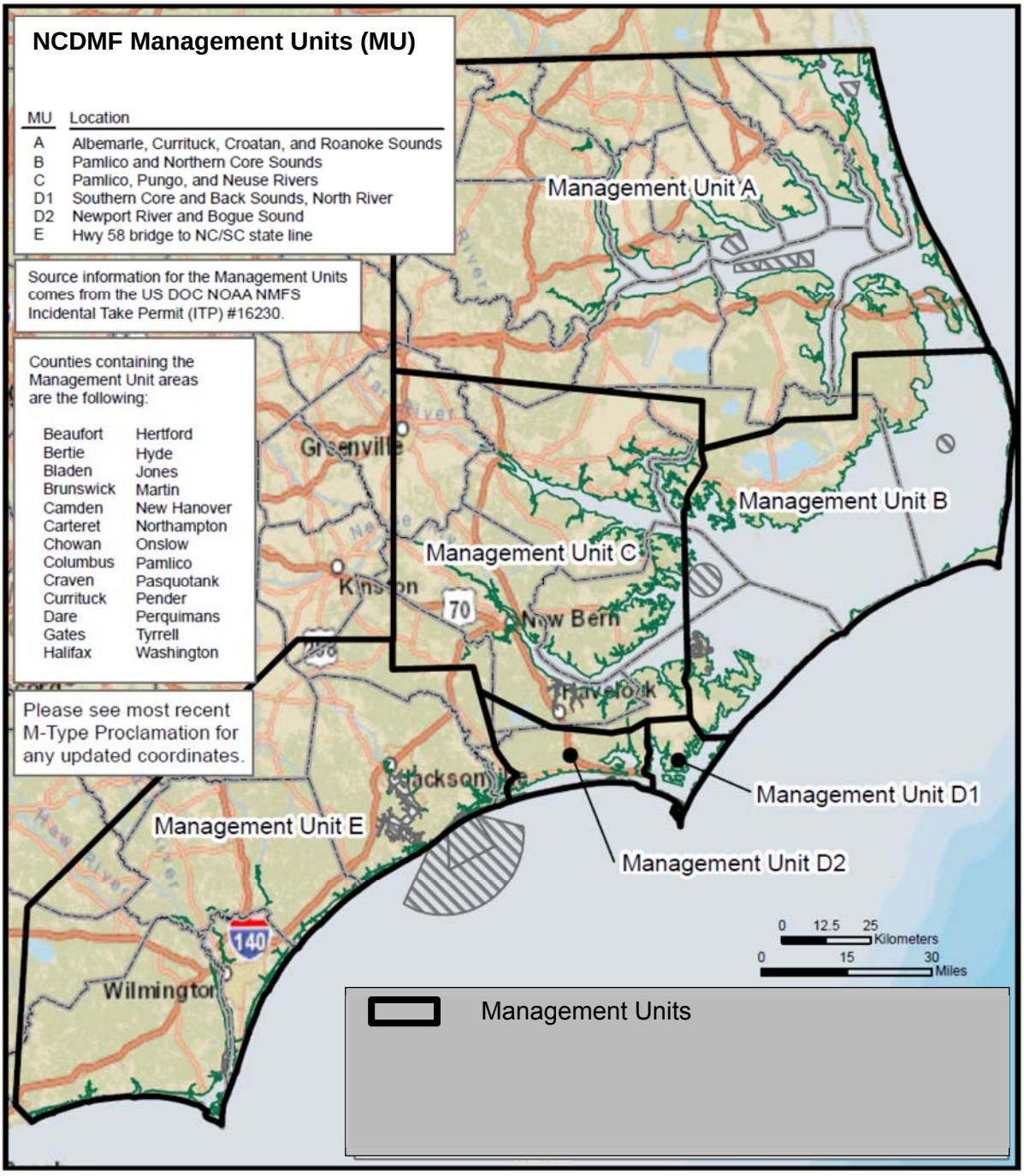

Figure 1. Management units (A, B, C, D1, D2, and E) as outlined in the Conservation Plan and utilized by the Observer Program for ITP Year 2015 (September 1, 2014 – August 31, 2015).

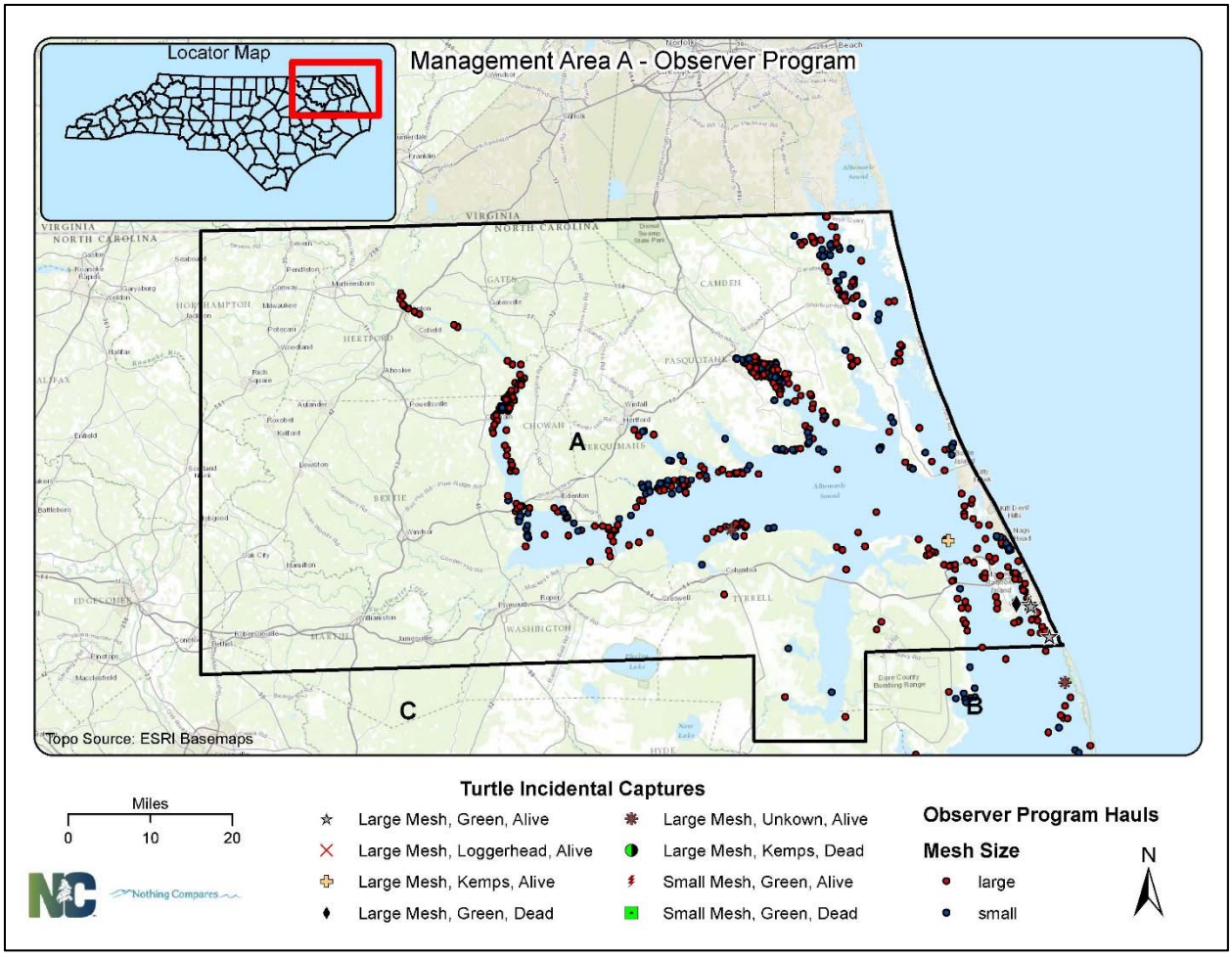

Figure 2. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit A for ITP Year 2015 (September 1, 2014 – August 31, 2015).

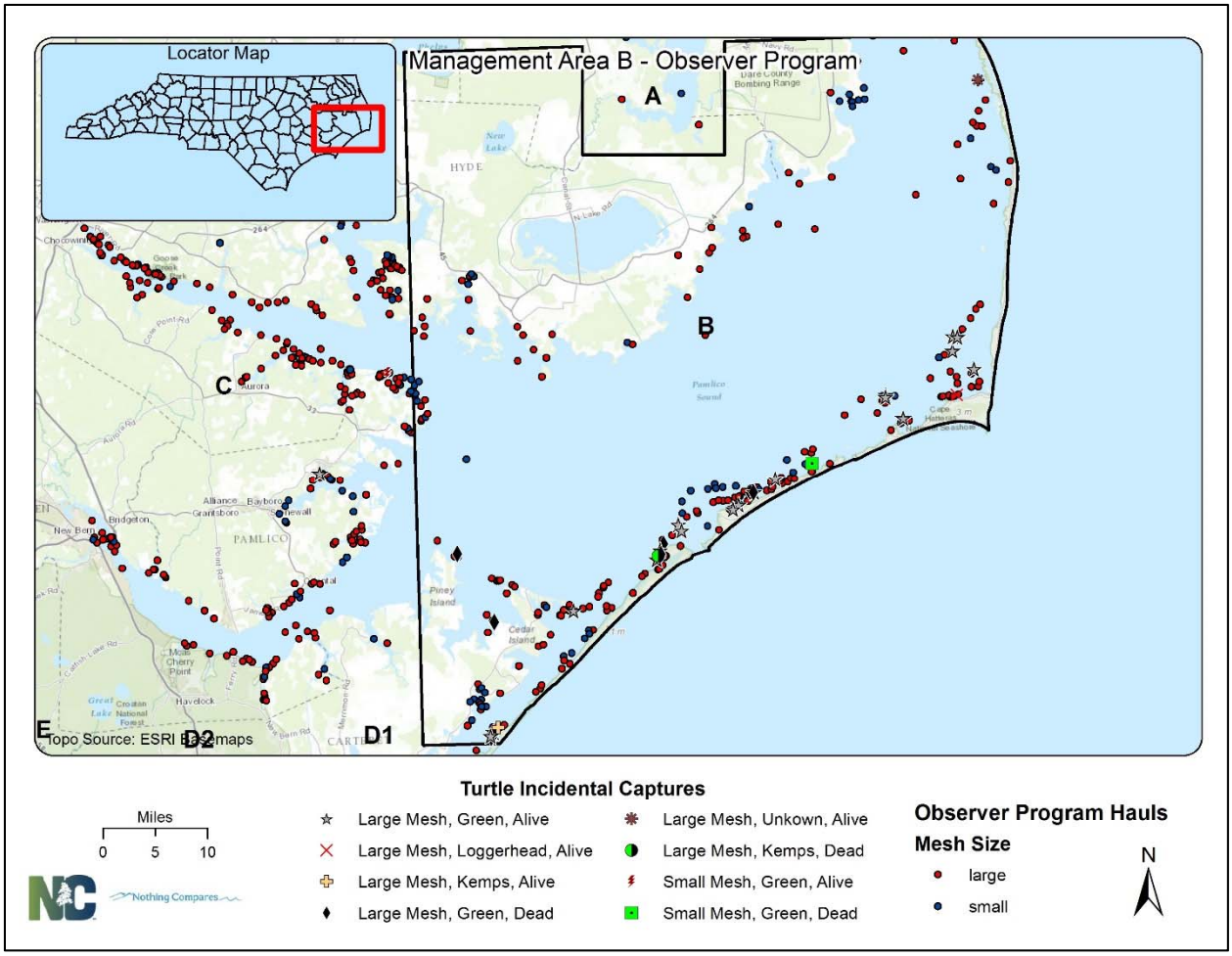

Figure 3. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit B for ITP Year 2015 (September 1, 2014 – August 31, 2015).

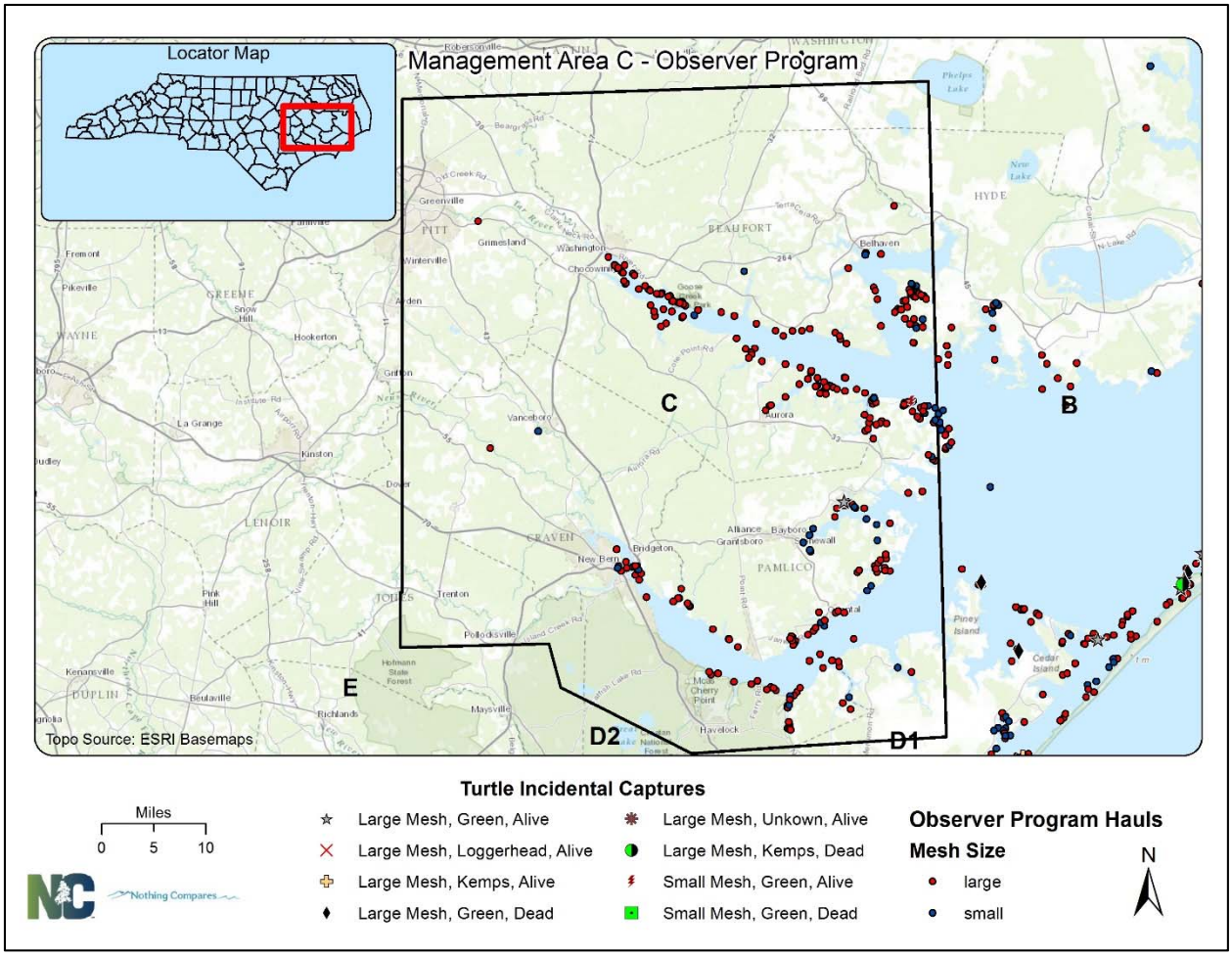

Figure 4. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit C for ITP Year 2015 (September 1, 2014 – August 31, 2015).

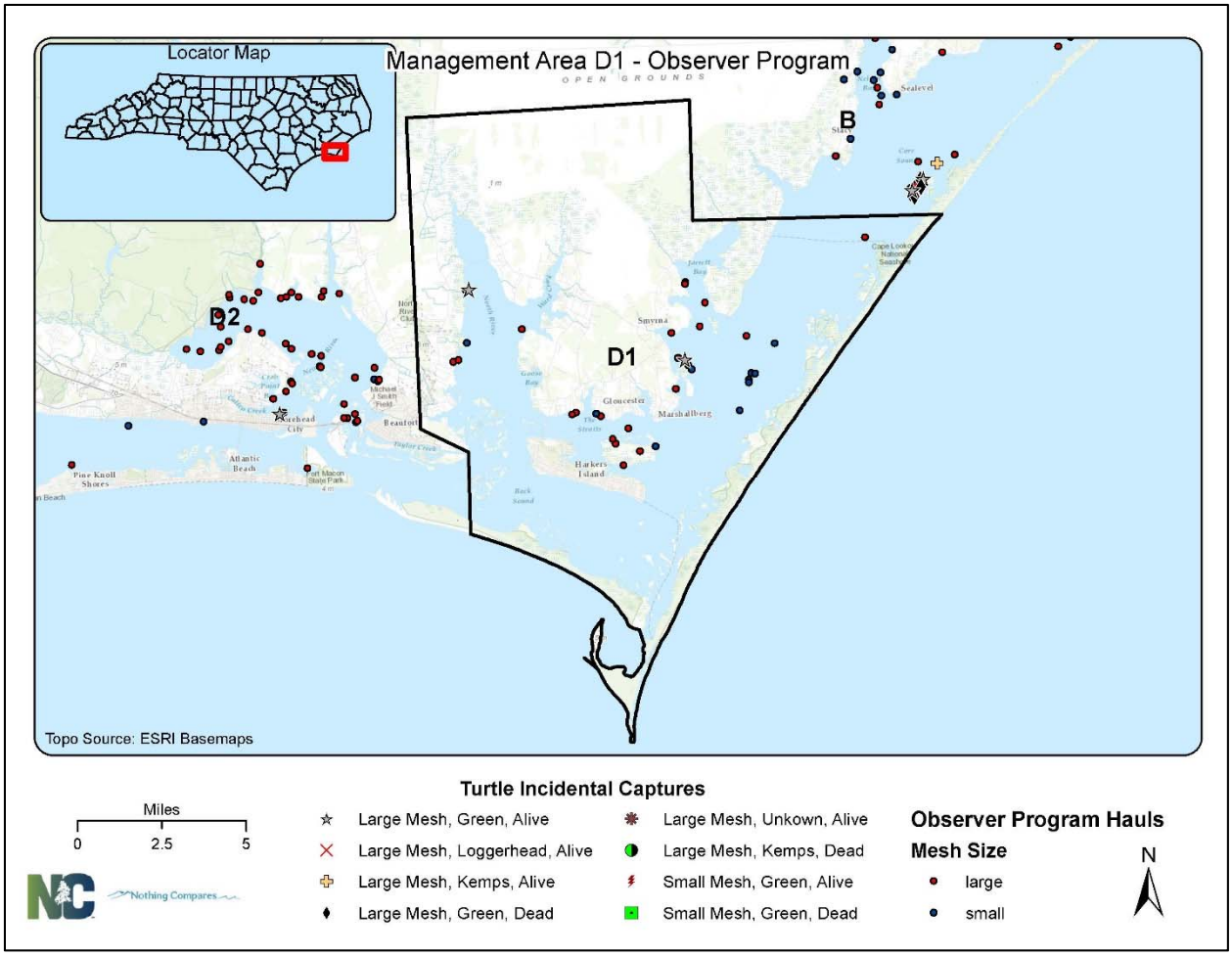

Figure 5. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit D1 for ITP Year 2015 (September 1, 2014 – August 31, 2015).

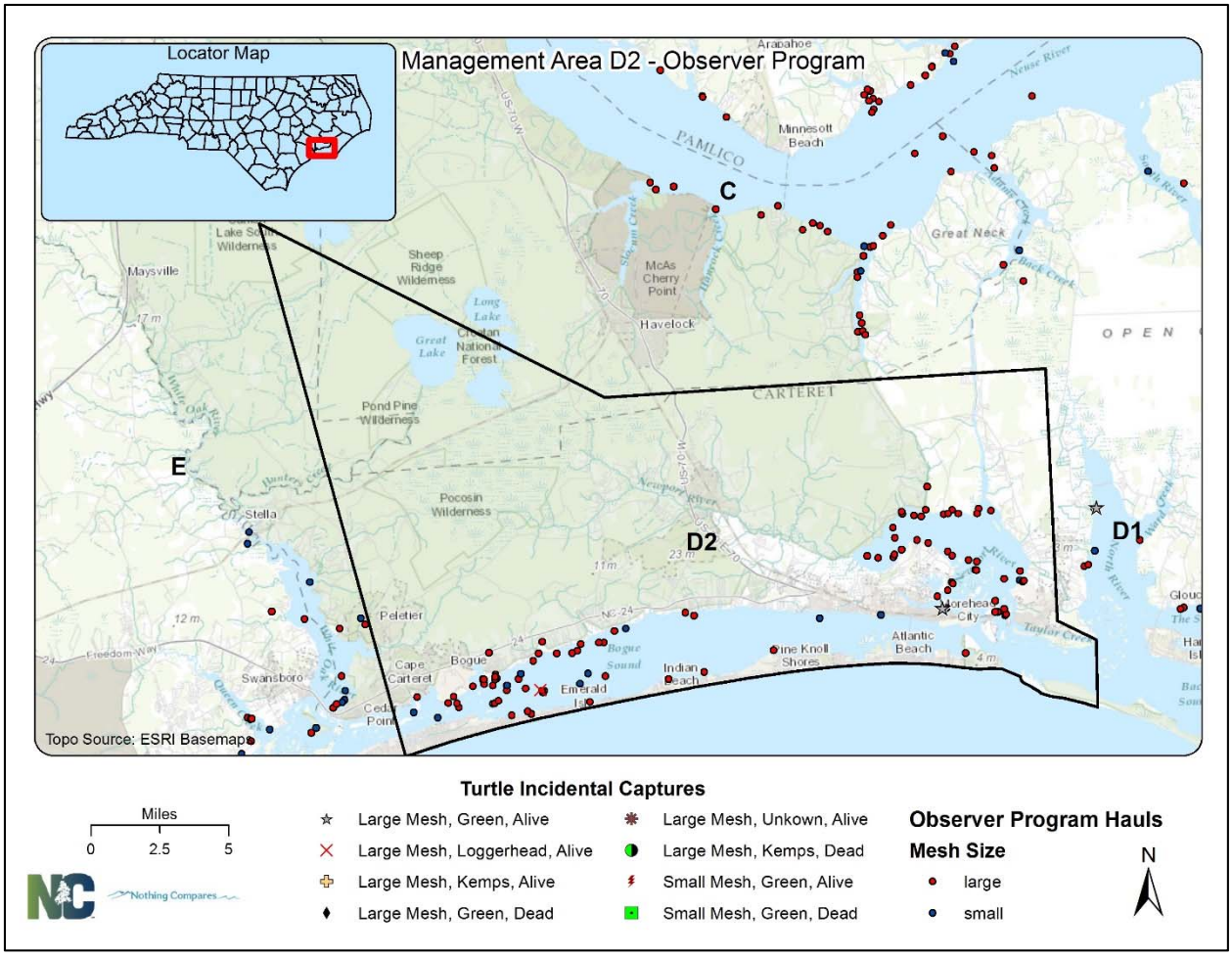

Figure 6. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit D2 for ITP Year 2015 (September 1, 2014 – August 31, 2015).

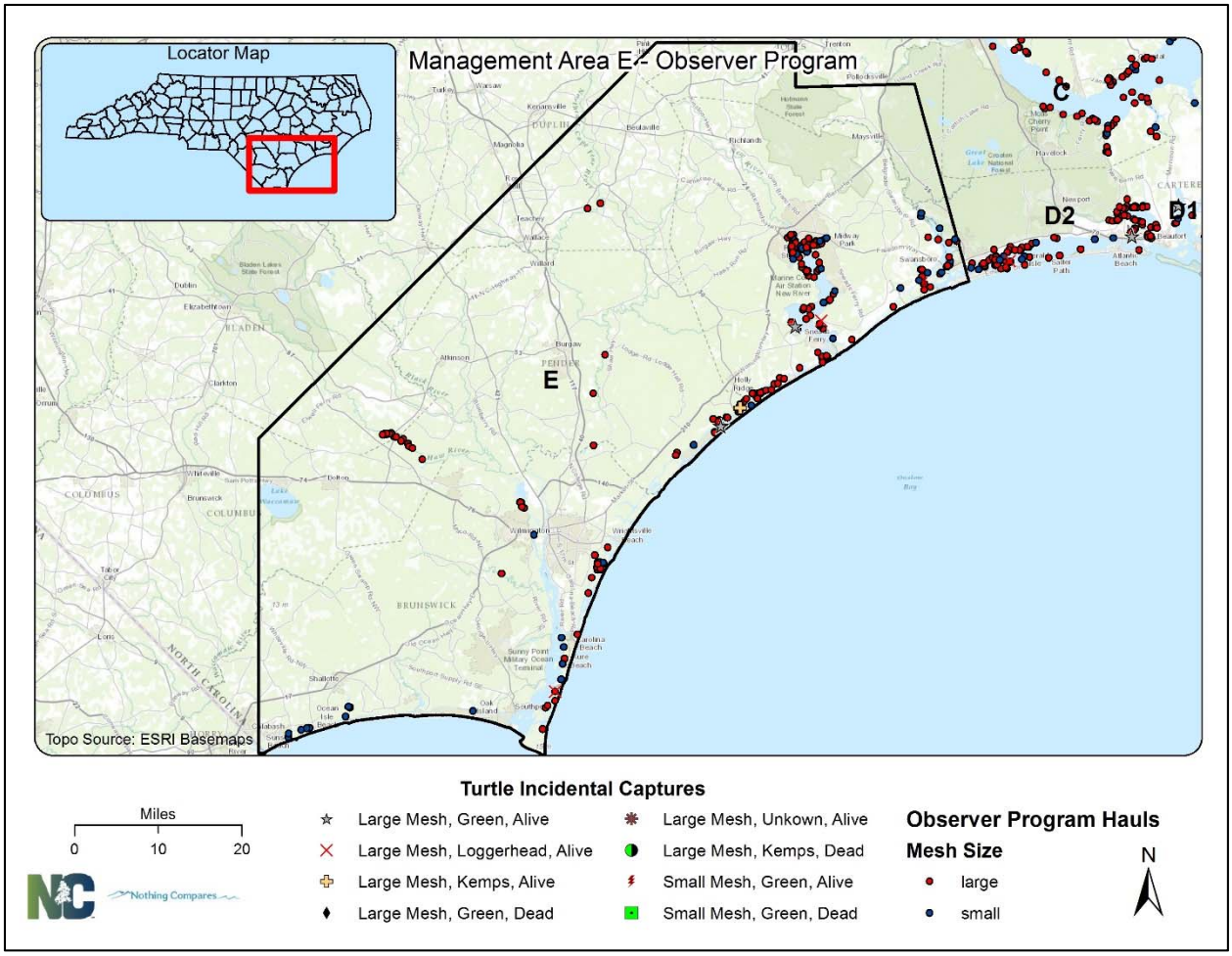

Figure 7. Sea turtle interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit E for ITP Year 2015 (September 1, 2014 – August 31, 2015).

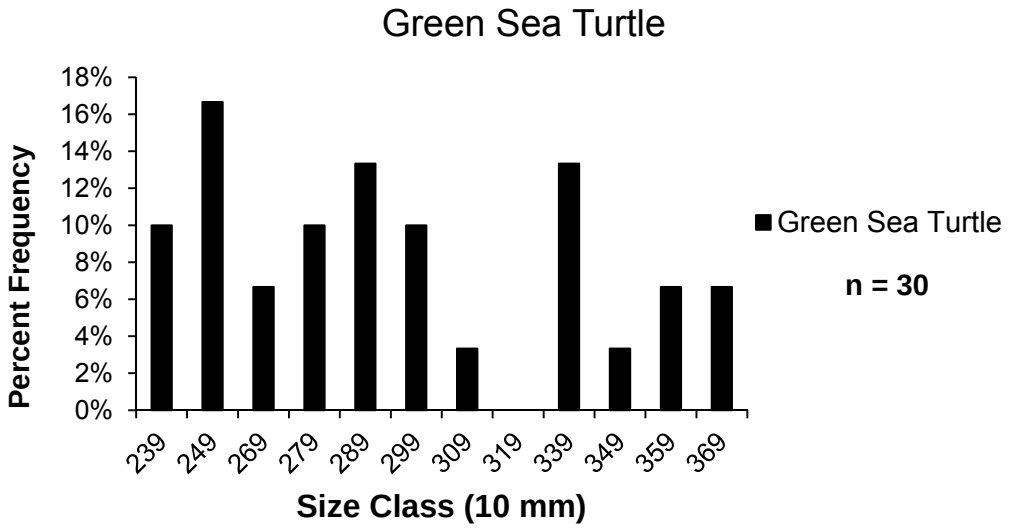

Figure 8. Length-frequency (curved carapace length) from notch to tip of observed incidental captures of green sea turtles where measurements were obtained (n = 30) collected by the Observer Program from onboard and alternative platform observations for ITP Year 2015 (September 1, 2014 – August 31, 2015).

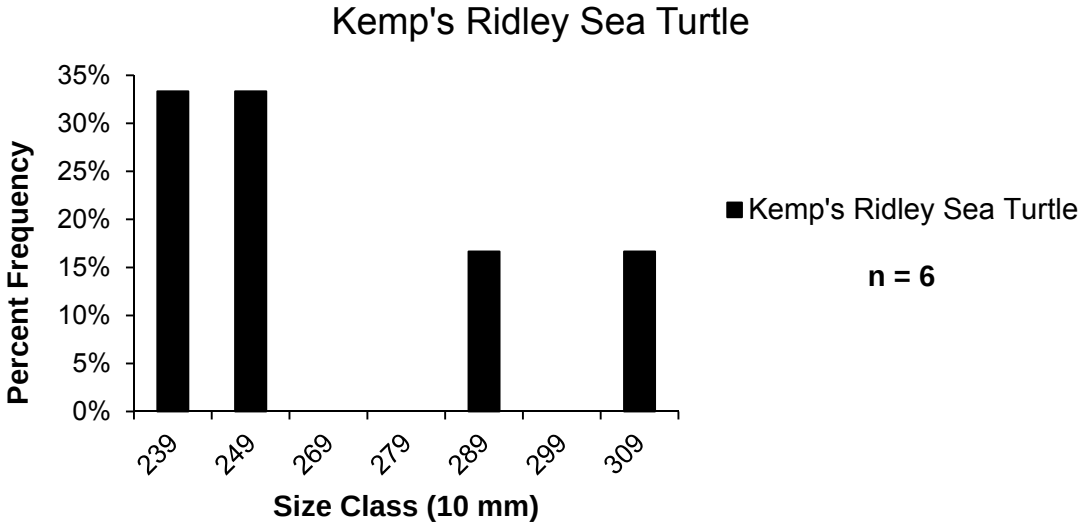

Figure 9. Length-frequency (curved carapace length) from notch to tip of observed incidental captures of Kemp's ridley sea turtles where measurements were obtained (n = 6) collected by the Observer Program from onboard and alternative platform observations for ITP Year 2015 (September 1, 2014 – August 31, 2015).

Annual Atlantic Sturgeon Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2015

Annual Completion Report for Activities under Endangered Species Act
Section 10 Incidental Take Permit No. 18102

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BACKGROUND

The North Carolina Division of Marine Fisheries (NCDMF) applied for an Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973 (Public Law 93-205, ESA) on April 5, 2012 for a 10 year period covering gill-net fisheries in internal coastal waters of North Carolina for Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). This request was prompted by notification from the National Marine Fisheries Service (NMFS) in February indicating the intent to list the Carolina Distinct Population Segment (DPS) of Atlantic sturgeon as endangered under the ESA. The NCDMF requested an ITP to implement a proposed conservation plan that ensured only a reasonable level of authorized Atlantic sturgeon incidental takes will occur, while allowing North Carolina estuarine gill-net fisheries to operate. The NCDMF requested the NMFS to authorize such takes that are incidental to normal fishing activity with increased public outreach by the NCDMF to help fishermen avoid, minimize, and mitigate incidental takes of Atlantic sturgeon.

Feedback on the ITP application was received from the NMFS on May 29, 2012 via a teleconference with the NCDMF and the NMFS staff. After further review, on July 20, 2012 the NMFS requested the NCDMF to submit a revised permit application and Conservation Plan that addressed issues that were provided. In response to requested changes from the NMFS, the NCDMF made extensive revisions and resubmitted the application on December 20, 2012. Upon further review the NMFS provided the NCDMF with a list of questions they had regarding the application. On February 4, 2013 the NMFS and the NCDMF went over questions regarding the ITP application and Conservation Plan. Another revised ITP application was resubmitted to the NMFS on June 28, 2013 encompassing all comments and concerns raised by the NMFS. On July 9, 2013, the NMFS published a notice of receipt of the NCDMF application (File No. 18102) in the Federal Register (78 FR 41034). The comment period ended August 8, 2013. After further deliberation with the NMFS another revision of the Atlantic Sturgeon ITP was resubmitted on January 2, 2014.

The NCDMF received the Atlantic Sturgeon ITP on July 22, 2014. This ITP authorized the implementation of adaptive management measures to protect endangered Atlantic sturgeon and other ESA listed species, while allowing estuarine gill-net fisheries prosecuted by commercial license holders to fish in the internal coastal (estuarine) waters of North Carolina. The Annual Completion report for ITP Year 2014 was submitted January 30, 2015 (Boyd 2015b).

The NCDMF's Conservation Plan specifies further measures, which the NMFS had determined will minimize, monitor, and mitigate the impacts of incidental takes of ESA-listed Atlantic sturgeon from the Gulf of Maine, New York Bight, Chesapeake, Carolina, and South Atlantic DPSs, associated with the otherwise lawful commercial fisheries operating in inshore North Carolina waters and deploying anchored gill nets. Anchored gill nets are passive sets deployed with an anchor, stake, or boat at one or both ends of the net shots or operation. Anchored gill nets do not include the following types of gill nets: run around, strike, drop or drift gill nets.

During review of the 2014 Atlantic Sturgeon ITP Annual Report, the NMFS requested modifications to certain tables in the annual report. These modifications were addressed in the current report and include: tables which have all of the estimated/observed takes exactly as portrayed in the permit with 95% confidence intervals included.

Prior to the federal listing, North Carolina had taken steps to protect Atlantic sturgeon. The NCDMF implemented a statewide moratorium on the possession of Atlantic sturgeon in 1991 (15A NCAC 03M.0508).

METHODS

OBSERVER ACTIVITY

The conservation plan includes managing inshore gill-net fisheries by dividing estuarine waters into seven management units (A1, A2, A3, B, C, D, and E; Figure 1). Existing observer data from previous years is used when estimating the amount of trips needed for the current year in each management unit and season. Also, real time trip ticket data is used for areas where effort may be increasing. Each year effort can potentially shift from one management unit to another, making it important for the NCDMF to not base the observer effort solely on previous years' trip ticket data, but also on current effort changes. To account for fluctuations in trip ticket data caused by management unit closings, a four-year average was used for estimating large mesh gill-net fishing trips and a two year average was used for estimating small mesh gill-net fishing trips for ITP Year 2015. This method of estimating trips proves to more accurately reflect the current fishing effort. Once trip ticket data are finalized in May of 2016, the final observer coverage will be recalculated and the finalized estimates of observer coverage will be provided to the NMFS.

Traditional, onboard trips are the preferred method of obtaining observer data and are used most frequently where observers ride aboard fishermen's vessels. For alternative platform trips, observers and Marine Patrol follow the same protocols using the NCDMF vessels to observe the fishing trip. Each observer attempts to obtain a minimum of three to four trips per working week when fishing activity is occurring. Observers are assigned a management unit to work weekly and the amount of observers assigned to a management unit depends upon the season and fishing effort. Fishing effort is estimated from the previous year's trip ticket data by week and by month and management unit to determine where and how much observer coverage is needed each week and for each management unit by month/season. Reports from observers and other staff are used to determine if effort is fluctuating between management units. Trends from the previous year's trip ticket data are also analyzed to determine if fishing effort is shifting from one management unit to another. Fishermen holding a Standard Commercial Fishing License (SCFL) and landing fish in North Carolina using gill nets in the previous years are pooled by management unit and further split into lists by geographic area within units. The contact information is then given to the observers assigned to that area and the observers contact the fishermen to set up trips from the list of names given. Preliminary trip ticket information is also used when pooling fishermen to contact along with contacting fishermen at fish houses. Observers hand out business cards with their contact information and brochures explaining the Observer Program and giving the fishermen another outlet to allow observers on their vessels. Additionally, the Observer Program utilizes a website (http://portal.ncdenr.org/web/mf/observers-program) to provide outreach to fishermen to obtain trips.

Alternative platform trips are utilized for areas that may be hard to get onboard trips (i.e., fishermen in remote locations that leave from their residence by boat). Alternative platform trips are also utilized in areas where fishing effort may increase quickly or Atlantic sturgeon

abundance is high. Marine Patrol also conducts alternative platform trips weekly in all management units based on the same methodology as the Observer Program. Coordination of onboard, alternative platform, and Marine Patrol alternative platform trips is done daily, monthly, and yearly to avoid sampling bias and to achieve the maximum amount of observer coverage possible for each management unit. Changes in effort, Atlantic sturgeon abundance (i.e., observed and reported interactions), and other protected species interactions are monitored on a daily, weekly, and monthly basis to ensure proper observer coverage is being maintained. The ITP requires a minimum of 7% observer coverage with a goal of 10% of the total large mesh gill-net (≥5 inches stretched mesh-ISM) fishing trips and 1% coverage with a goal of 2% of the total small mesh gill-net (<5 ISM) fishing trips per management unit for the spring, summer, fall, and winter seasons.

Each observer is trained to identify, measure, evaluate condition, and tag Atlantic sturgeon by the NCDMF. Date, time, tag numbers, location (latitude and longitude, when possible), condition (i.e., no apparent harm, injury including a description of the nature of the injury, or mortality), species, Total Length (TL mm), and Fork Length (FL mm) are recorded for each sturgeon observed. Dead Atlantic sturgeon are retained by the observer when feasible. Observers collect data on location, gear parameters, catch, and bycatch for each haul. The landed catch is sampled throughout each trip including weights, lengths, and disposition (alive/dead). Data are coded on the NCDMF data sheets and uploaded to the NCDMF Biological Database for analysis. All observers are debriefed within 24 hours of each trip to obtain data on catch, set locations, gear parameters, and Atlantic sturgeon interactions to provide estimates of Atlantic sturgeon bycatch.

The total bycatch of Atlantic sturgeon for each management unit was estimated using the stratified ratio method (SAS 1989). The bycatch rate (Atlantic sturgeon caught per fishing trip) estimated from observer data was multiplied by the total fishing trips. To estimate confidence intervals (95%), the bootstrap method was used to sample estimates. Strata consisted of five management units (A, B, C, D, and E) where management unit A1-A3 (A) and D1-D2 (D) were combined for analysis (Figure 1). Estimates were calculated by date of capture, management unit, and disposition. Estimates were accumulated each week to implement necessary management measures if authorized take thresholds were approached.

$$\text{Estimated Interactions} = \frac{\text{\# Atlantic sturgeon interactions observed / total gill-net trips observed} \times \text{total gill-net trips}}{}$$

Seasons

The Observer Program's activities are reported on a monthly and annual basis. Monthly progress reports include information such as take estimates, cumulative totals, number of observed trips, and observed takes with all associated. Annual reports include actual and estimated takes including mortality and the level of uncertainty of the estimates (i.e., 95% confidence intervals) by management unit, size composition along with all other interaction information, one or more maps illustrating the geographic distribution of all observed large and small mesh gill-net hauls and the locations of all interactions, and a description of the mitigation

activities, adaptive management actions, and enforcement activities conducted during the ITP year.

AUTHORIZED TAKES

Authorized levels of annual incidental takes are specified in Tables 1 and 2. The amount of incidental takes are expressed as either estimated or observed takes depending on the amount of data available for modeling predicted takes. Management unit A has estimated allowable takes per season for both large and small mesh gill nets due to having robust data sets for the area. All other management units (i.e., B, C, D, E) have observed allowable takes which are actual takes and not estimated due to the lack of data for modeling estimated takes. Extrapolated Atlantic sturgeon takes were computed by dividing observed interactions by observer coverage. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Canty and Ripley 2015; Davison and Hinkley 1997; R Core Team 2015). Bootstrap replicates were generated by sampling observer trips with replacement 5,000 times within strata (mesh/season/management unit; Tables 1 and 2). Takes must be incidental to otherwise lawful activities associated with the large and small mesh gill-net fisheries, and as conditioned herein. The permit covers incidental takes from the date of issuance through July 17, 2024. The NCDMF will use the total number of live and dead takes per unit and season to determine if the NCDMF is approaching or has reached the allowable Atlantic sturgeon takes. However, there is no "real time" method to determine the actual DPS taken. The required genetic sampling will provide the actual take numbers per DPS, but this will not be determined until after genetic samples are processed and if funding allows.

COMPLIANCE

The NCDMF observers and Marine Patrol conduct weekly fish house visits, boat patrols, fisherman spot checks, gear checks, aerial surveys, and continued outreach to the industry for the purpose of ensuring industry compliance and communicating efforts throughout the state.

The Observer Program has various ways to contact fishermen to set up trips. The most common method is by phone due to limited resources, fishermen leaving from their residence, and efficiency. The Observer Program has a contact log which is filled out for every phone call that is made when attempting to obtain a trip. Beginning in the spring of 2014 each call was put into a specific category and other information was gathered (Table 3). The contact log was analyzed by month and category to determine what percentage of phone calls resulted in positive observer trips.

RESULTS

OBSERVER ACTIVITY

Fall 2014

The fall season for large and small mesh gill nets in North Carolina is September through November as defined in ITP No. 18102. The NCDMF opened large mesh gill nets via proclamation M-25-2014 on September 1, 2014 in management unit A and via proclamation M-29-2014 on September 15, 2014 in management units C and D2 (Table 4; Boyd 2015a). On September 22, 2014 the NCDMF opened management units B and E to large mesh gill nets via proclamation M-30-2014. On September 24, 2014 management unit E was closed via proclamation M-31-2014 due to sea turtle interactions and reopened on November 2, 2014 via proclamation M-39-2014. On October 1, 2014 management unit A was closed via proclamation M-33-2014 due to sea turtle interactions with the western Albemarle Sound and Currituck Sound reopening on October 27, 2014 via proclamation M-36-2014. The remainder of management unit A was reopened on November 6, 2014 via proclamation M-41-2014. The annual management unit D1 opening occurred on October 14, 2014 via proclamation M-34-2014. On October 26, 2014 the eastern portions of management unit B were closed via proclamation M-37-2014 due to sea turtle interactions and were reopened on November 6, 2014 via proclamation M-40-2014 (Table 4; Boyd 2015a).

There was a total of 35 observed Atlantic sturgeon interactions from large mesh gill nets for the fall season (Table 5; Figures 2 - 7). Of the 35 interactions, 94.2% were alive (Table 5). The majority of the interactions (94.3%) occurred in management unit A (Table 5; Figures 2 - 7). Management units B and C had one interaction each during this time period (Table 5). There was a total of 9 reported Atlantic sturgeon interactions during this time period (Table 6).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 637 total trips (Table 7; Figures 2 - 7). The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 95 total trips (Table 8; Figures 2 – 7; Boyd 2015a).

Winter 2014-2015

The winter season for large and small mesh gill nets in North Carolina is December through February as defined in ITP No. 18102. The flounder commercial harvest season in internal coastal waters closed on December 1, 2014 via proclamation FF-72-2014 as per Amendment 1 to the Southern Flounder Fishery Management Plan. All management units remained open to large and small mesh gill nets for the duration of the winter season.

There was a total of two observed Atlantic sturgeon interactions from large mesh gill nets for the winter season (Table 5; Figures 2 - 7). Both Atlantic sturgeon interactions were

alive and observed in management unit A (Table 5). There was also one reported Atlantic sturgeon interaction during this time period (Table 6).

The Observer Program exceeded the 7% requirement for coverage for large mesh gill nets in management units C, D, and E with 60 total trips (Table 7; Figures 2 - 7). Coverage was not met in management units A and B due to limited fishing effort (Table 7). The Observer Program exceeded the 1% requirement for coverage for small mesh gill nets in management units A, C, and E with 81 total trips (Table 8; Figures 2 – 7). Coverage was not met in management units B and D due to limited fishing effort throughout much of the season (Table 8).

Spring 2015

The spring season for large and small mesh gill nets in North Carolina is March through May as defined in ITP No. 18102. The NCDMF closed anchored large mesh gill nets via proclamation M-6-2015 on May 8, 2015 in management unit D1 through October 14, 2015 as part of the annual closure from the Sea Turtle ITP (No. 16230; Table 4). All other management units remained open for the duration of the spring season (Boyd 2015c).

There was a total of 25 observed Atlantic sturgeon interactions from large mesh gill nets (n = 16) and from small mesh gill nets (n = 9) for the spring season (Table 5; Figures 2 - 7). Of the 25 interactions, 96.0% were alive (Table 5). The majority of the observed interactions (64.0%) occurred in management unit A with 16.0% in management unit B, 12.0% in management unit D, and 8.0% in management unit E (Table 5; Figures 2 - 7). There was a total of two reported Atlantic sturgeon interactions during this time period (Table 6).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 342 total trips (Table 7; Figures 2 – 7). The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 108 total trips (Table 8; Figures 2 - 7; Boyd 2015c).

Summer 2015

The summer season for large and small mesh gill nets in North Carolina is June through August as defined in ITP No. 18102. The NCDMF closed anchored large mesh gill nets via proclamation M-10-2015 on June 8, 2015 in management unit B through the end of ITP Year 2015 (August 31, 2015) due to approaching allowable sea turtle interactions (Table 4; Boyd 2015d). The NCDMF closed anchored large and small mesh gill nets via proclamation M-11-2015 on June 12, 2015 in management unit A through the end of ITP Year 2015 due to reaching allowable sea turtle interactions. The NCDMF closed anchored large and small mesh gill nets via proclamation M-12-2015 on July 23, 2015 in management unit C through the end of ITP Year 2015 due to reaching allowable sea turtle interactions after a minor modification combined the authorized sea turtle interactions in management units A and C. Management unit D1 remained closed to large mesh gill nets through the summer season as part of the annual

closure outlined in the Sea Turtle ITP (May 8 – October 14; Table 7). All other management units remained open for the duration of the summer season (Boyd 2015d).

There was a total of three observed Atlantic sturgeon interactions from large mesh gill nets (n = 1) and from small mesh gill nets (n = 2) for the summer season (Table 5; Figures 2 - 7). All of the Atlantic sturgeon interactions were alive (Table 5). Observed interactions occurred in management unit A (n = 1), management unit B (n = 1), and management unit C (n = 1) during this time period (Table 5). There were no reported Atlantic sturgeon interactions during this time period (Table 6).

The Observer Program exceeded the 7% requirement for coverage within each of the management units for large mesh gill nets with 183 total trips except in management unit A where coverage averaged 5.3% (Table 7; Figures 2 - 7). Coverage was not met in management unit A due to the minimal amount of fishing effort that occurred prior to the closure of 80 days in the management unit (Table 7). The Observer Program exceeded the 1% requirement for coverage in all management units for small mesh gill nets with 33 total trips (Table 8; Figures 2 - 7; Boyd 2015d).

AUTHORIZED TAKES

There was a total of 65 observed Atlantic sturgeon interactions in large mesh gill nets (n = 54) and in small mesh gill nets (n = 11) for ITP Year 2015 (Table 5; Figures 2 – 7). Of the 65 interactions, 95.4% were alive (Table 5). Observed interactions mostly occurred in management unit A (80.0%), with interactions in management unit B (9.2%), management unit C (1.5%), management unit D (4.6%), and management unit E (4.6%; Table 5; Figures 2 - 7). Of the 12 reported Atlantic sturgeon interactions for ITP Year 2015, 10 were reported by fishermen and two were reported by Marine Patrol from illegally set gill nets (Table 6).

The size distribution of Atlantic sturgeon (n = 49) ranged from a total length (TL) of 405 mm to 1,651 mm (Figure 8).

The cumulative total estimated and observed takes for large and small mesh gill nets did not reach the threshold of allowed takes for any management unit for ITP Year 2015 (Tables 1 and 2). Management unit A consisted of live (estimated n = 21, 95% CI [0, 56]) Atlantic sturgeon in large mesh gill nets for the winter season (Table 1). For the spring season, management unit A consisted of live (estimated n = 171, 95% CI [90, 306]) Atlantic sturgeon in large mesh gill nets and live (estimated n = 124, 95% CI [0, 564]) Atlantic sturgeon in small mesh gill nets (Tables 1 and 2). For the summer season, management unit A consisted of live (estimated n = 29, 95% CI [0, 87]) Atlantic sturgeon in large mesh gill nets (Table 1). For the fall season, management unit A consisted of live (estimated n = 297, 95% CI [167, 439]) and dead (estimated n = 26, 95% CI [0, 75]) Atlantic sturgeon in large mesh gill nets (Table 1). Management unit B consisted of three live (observed) and one dead (observed) Atlantic sturgeon in small mesh gill nets during the spring season (Table 2). For the summer season, management unit B consisted of one live (observed) Atlantic sturgeon in small mesh gill nets (Table 2). For the fall season, management unit B consisted of one live (observed) Atlantic

surgeon in large mesh gill nets (Table 1). Management unit C consisted of one live observed Atlantic sturgeon in large mesh gill nets during the fall season (Table 1). Management unit D consisted of three live (observed) Atlantic sturgeon in small mesh gill nets during ITP Year 2015 (Table 2). Management unit E consisted of two live (observed) Atlantic sturgeon in large mesh gill nets and one live (observed) in small mesh gill nets during ITP Year 2015 (Tables 1 and 2).

COMPLIANCE

Marine Patrol made 465 gill-net checks for the fall 2014 season (Table 9). Of these 465 gill-net checks, there were five citations (Tables 9 and 10). Marine Patrol made 306 gill-net checks for the winter 2014-2015 season (Table 9). Of these 306 gill-net checks, there was one citation (Tables 9 and 10). Marine Patrol made 512 gill-net checks for the spring 2015 season (Table 9). Of these 512 gill-net checks, there were 14 citations (Tables 9 and 10). Marine Patrol made 309 gill-net checks for the summer 2015 season (Table 9). Of these 309 gill-net checks, there were 14 citations issued (Tables 9 and 10).

In the fall 2014 season a total of 2,083 phone calls was made with 46.3% being categorized as 1, 8, 11, 12, 13, and 14, which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips (Table 11). In the winter 2014-2015 season 1,902 phone calls were made with 49.9% being categorized as 1, 8, 11, 12, 13, and 14 which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips. In the spring 2015, 4,080 season phone calls were made with 57.2% being categorized as 1, 8, 11, 12, 13, and 14. In the summer 2015 season, 815 phone calls were made with 50.7% being categorized as 1, 8, 11, 12, 13, and 14 (Table 11). Proclamation M-24-2014 implemented the Estuarine Gill-Net Permit (EGNP) on September 1, 2014 (Table 4). Notices of Violations (NOV) were issued when fishermen were found to be out of compliance with the EGNP with 20 NOVs issued during the fall 2014 season and 14 NOVs issued during the spring 2015 season (Table 12).

DISCUSSION

MANAGEMENT HISTORY

Initial reviews of the Atlantic sturgeon status began in 1977, when the Research Management Division of the NMFS sponsored the preparation of a report on the biology and status of Atlantic sturgeon (Murawski and Pacheco 1977). In 1980 at the request of the NMFS, another document was prepared by Hoff (1980) to assist in making future Atlantic sturgeon fisheries decisions and to determine what action was required, if any, to conserve the species under the ESA. In 1988, the NMFS requested information regarding the status of Atlantic sturgeon. The NMFS added Atlantic sturgeon to its candidate species list published in the Federal Register (FR) in 1997 (62 FR 37560, 14 July 1997, NMFS 1997a). In April 2004, the NMFS published a subsequent notice announcing that the NMFS "candidate species list" was being changed to the "Species of Concern (SOC) list" to better reflect the ESA definition of candidate species while maintaining a separate list of species potentially at risk (69 FR 19975 - 15 April 2004, NMFS 2004a; ASSRT 2007).

On June 2, 1997, a petition dated May 29, 1997 was received by the NMFS from the Biodiversity Legal Foundation. The petitioner requested that the NMFS list Atlantic sturgeon, where it continues to exist in the United States, as threatened or endangered and designate critical habitat. The NMFS reviewed the request and determined that the petition presented substantial information indicating that the petitioned action may be warranted and announced the initiation of a status review (62 FR 54018, 12 October 1997, NMFS 1997b; ASSRT 2007).

The NMFS and United States Fish and Wildlife Service (USFWS) completed their status review in 1998 and concluded at that time Atlantic sturgeon were not threatened or endangered based on any of the five factors (NMFS and USFWS 1998). Concurrently, the Atlantic States Marine Fisheries Commission (ASMFC) completed Amendment 1 to the 1990 Atlantic Sturgeon FMP in 1998 that imposed a 20–40 year moratorium on all Atlantic sturgeon fisheries until the Atlantic Coast spawning stocks could be restored to a level where 20 subsequent year-classes of adult females were protected (ASMFC 1998). The NMFS followed this action by closing the Exclusive Economic Zone (EEZ) to Atlantic sturgeon harvest in 1999. In 2003, a workshop on the "Status and Management of Atlantic Sturgeon" was held to discuss the current status of Atlantic sturgeon along the Atlantic Coast and determine what obstacles, if any, were impeding the recovery of Atlantic sturgeon (Kahnle et al. 2005; ASSRT 2007).

Based on the information gathered from the 2003 workshop on Atlantic sturgeon, the NMFS decided that a second review of Atlantic sturgeon status was needed to determine if listing as threatened or endangered under the ESA was warranted. The 2007 analysis from the Atlantic Sturgeon Status Review Team (ASSRT) determined that at least three (New York Bight, Chesapeake Bay, and Carolina) of the five DPSs should be considered threatened under the ESA, as it was determined that they had a moderately high risk of becoming threatened in the foreseeable future (next 20 years). The ASSRT determined that the remaining two DPSs (Gulf of Maine, South Atlantic) had a moderate risk of becoming extinct, though there were insufficient

data to allow for a full assessment of these subpopulations; thus, a listing recommendation was not provided (ASSRT 2007).

On October 6, 2009, the NMFS received a petition from the Natural Resources Defense Council to list Atlantic sturgeon throughout its range as endangered under the ESA. As an alternative, the petitioner requested that the species be listed as the five DPSs described in the 2007 Atlantic sturgeon status review (ASSRT 2007), with the GOM and South Atlantic DPSs listed as threatened and the remaining three DPSs listed as endangered. The petitioner also requested that critical habitat be designated for Atlantic sturgeon under the ESA. The NMFS published a Notice of 90-Day Finding on January 6, 2010 (75 FR 838, 6 January 2010, NMFS 2010) stating that the petition presented substantial scientific or commercial information indicating that the petitioned actions may be warranted. The NMFS considered the information provided in the status review report, the petition, other new information available since completion of the status review report, and information submitted in response to the Federal Register announcement of the 90-day finding (75 FR 838, 6 January 2010, NMFS 2010). On October 6, 2010, the NMFS published a proposed rule to list the Carolina DPS of Atlantic sturgeon as endangered under the ESA (75 FR 838, 6 January 2010, NMFS 2010). On February 6, 2012 the NMFS issued a final determination to list the Carolina DPS of Atlantic sturgeon as an endangered species under the ESA (77 FR 5914, 6 February 2012, NMFS 2012).

Implementation of management actions such as gear restrictions, fishing seasons, soak times, area closures, mesh size restrictions, FMPs, and ITPs (Sea Turtle ITP No. 16230) for other species have likely had a positive effect on reducing takes and minimizing the mortality associated with the incidental bycatch of Atlantic sturgeon. The North Carolina management system has shown the ability to effectively manage fisheries throughout the state and reduce incidental bycatch of finfish and protected species. Gill-net restrictions implemented by the proclamations for the Sea Turtle ITP included: a range of 4 ISM to, and including, 6 ½ ISM for large mesh gill nets; soak times limited to overnight soaks an hour before sunset to an hour after sunrise, Monday evenings through Friday mornings; large mesh gill nets were restricted to a height of no more than 15 meshes, constructed with a lead core or leaded bottom line and without corks or floats other than needed for identification; a maximum of 2,000 yards of large mesh gill nets allowed to be used per vessel; and maximum individual net (shot) length of 100 yards with a 25-yard break between shots. Fishermen in the southern portion of the state were allowed to set large mesh gill nets an hour before sunset to an hour after sunrise, Sunday evenings through Friday mornings, and use floats on nets but were restricted to the use of a maximum of 1,000 yards of large mesh gill net per fishing operation.

OBSERVER ACTIVITY

There was turnover within the Observer Program with positions being filled as quickly as possible to maintain coverage. The Observer Program actively placed observers in areas where fishing effort was high and where known Atlantic sturgeon interactions occur. During the fall 2014 and summer 2015 seasons during ITP Year 2015 there were closures throughout the

state due to sea turtle interactions. When a management unit closes for a portion of time the observers are shifted to the open management units to increase coverage in those management units. The contact log, which includes different categories to place each contact that was made to a fisherman, was beneficial for analyzing the type of contact that was being made and to see the number of positive observer trips that were obtained through the calling system.

COMPLIANCE

The previous ITPs (PSGNRA) did not require observer coverage in the northern portion of North Carolina (management unit A). Although ITP Year 2015 is the second year for the statewide ITP, fishermen were still not as familiar with the Observer Program and requirements of the ITP, so more time was needed to educate the industry. Management unit A had compliance issues throughout ITP Year 2015. The NCDMF discussed the situation with industry leads to improve awareness and increase compliance (i.e., inform fishermen about the requirements of the Observer Program). While overall compliance has improved, difficulties still arose from fishermen compliance in certain areas of the state.

Estuarine Gill Net Permit

As per the ITP the NCDMF established a permit to register all fishermen participating in the large and small mesh gill-net fisheries via proclamation M-24-2014 on September 1, 2014 (Table 4). The ITP's Implementing Agreement states that the NCDMF has two years to implement this permit to serve as a certificate of inclusion for fishermen. However, due to the compliance issues the NCDMF was facing during ITP Year 2014, the permit was developed (EGNP) and became effective September 1, 2014 (one year from ITP issuance). This multifaceted permit allows the NCDMF to closely monitor for compliance with the already successful permit system the NCDMF has in place. The EGNP is also used as a tool to improve fishermen compliance by requiring fishermen to allow the NCDMF observers aboard their vessels to monitor catches. Failure to comply with this permit provision results in a permit suspension. This results in more effective regulation and better compliance. There were 2,678 EGNPs issued for Fiscal Year 2015 (July 1, 2014 – June 30, 2015).

An issue that was discovered during the spring season was the appeal process for the NCDMF's permitting system, which includes the EGNP. General Counsel for the North Carolina Department of Environmental Quality (NCDEQ) deliberated the situation during which time NOVs were not issued (i.e., summer 2015 season). Their findings determined that any NOV issued by the NCDMF for permits can be appealed by the fisherman. However, the permit will still be suspended for the duration of the violation (i.e., 10-days, 30-days, 6-months).

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TABLES

Table 1. Authorized and actual annual estimated incidental takes per fishing year (for a total of 10 years; the life of the permit) with confidence intervals (95% shown in brackets [ ]) using a bootstrap resampling method based on observer data for coverage and Atlantic sturgeon interaction levels in North Carolina's large mesh (≥5.0 ISM) inshore gill net fishery for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Total Interactions			
		Authorized (Mortality)		Actual All DPS [2]	
Management Unit	Season	Carolina DPS	Other DPS	Alive	Dead
A	Winter	149 (6)	50 (2)	21 [0,56]	0
	Spring	460 (19)	154 (6)	171 [90,306]	0
	Summer	157 (6)	52 (2)	29 [0,87]	0
	Fall	838 (34)	279 (11)	297 [167,439]	26 [0,75]
B	Winter	2 (1)[1]	n/a	0	0
	Spring	1 (1)[1]	1 (0)	0	0
	Summer	4 (2)[1]	2 (0)	0	0
	Fall	17 (2)[1]	6 (0)	1	0
C	Winter	2 (1)[1]	n/a	0	0
	Spring	3 (1)[1]	1 (0)	0	0
	Summer	2 (1)[1]	1 (0)	0	0
	Fall	4 (2)[1]	2 (0)	1	0
D	Annual	8 (2)[1]	n/a	0	0
E	Annual	8 (2)[1]	n/a	1	0
Total		1,655 (80)	548 (21)	521	26

[1] Total interaction number represents actual observed and not estimated based on observer coverage. Mortality estimates could not be completed for management units B-E due to low take; thus, if observed interactions were ≤ 5 mortality was one; if observed interactions were >5 mortality was two.

[2] Fin clip samples have been sent to the lab for genetic analysis. Confidence Intervals (95%) in brackets [ ].

Table 2. Authorized and actual annual estimated incidental takes per fishing year (for a total of 10 years; the life of the permit) with confidence intervals (95% shown in brackets [ ]) using a bootstrap resampling method based on observer data for coverage and Atlantic sturgeon interaction levels in North Carolina's small mesh (<5.0 ISM) inshore gill net fishery for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Total Interactions			
		Authorized (Mortality)		Actual All DPS [2]	
Management Unit	Season	Carolina DPS	Other DPS	Alive	Dead
A	Winter	175 (14)	35 (3)	0	0
	Spring	219 (17)	44 (4)	124 [0,564]	0
	Summer	72 (6)	14 (1)	0	0
	Fall	103 (8)	21 (2)	0	0
B	Winter	2 (1)[1]	n/a	0	0
	Spring	6 (2)[1]	1 (0)	3	1
	Summer	3 (1)[1]	1 (0)	1	0
	Fall	3 (1)[1]	1 (0)	0	0
C	Winter	2 (1)[1]	n/a	0	0
	Spring	2 (1)[1]	n/a	0	0
	Summer	2 (1)[1]	n/a	0	0
	Fall	2 (1)[1]	n/a	0	0
D	Annual	8 (2)[1]	n/a	3	0
E	Annual	8 (2)[1]	n/a	2	0
Total		607 (58)	117 (10)	133	1

[1] Total interaction number represents actual observed and not estimated based on observer coverage. Mortality estimates could not be completed for management units B-E due to low take; thus, if observed interactions were $\leq$ 5 mortality was one; if observed interactions were >5 mortality was two.

[2] Fin clip samples have been sent to the lab for genetic analysis. Confidence Intervals (95%) in brackets [ ].

Table 3. Categories and descriptions of fisherman responses for the Observer Program's contact logs used for analysis.

Categories	Category description
1	Left message with someone else
2	Not fishing general
3	Fishing other gear
4	Not fishing because of weather
5	Not fishing because of boat issues
6	Not fishing because of medical issues
7	Booked trip
8	Hung up, got angry, trip refused
9	Call back later time/date
10	Saw in person
11	Disconnected
12	Wrong number
13	No answer
14	No answer, left voicemail

Table 4. Regulations for management units by date and regulation change for large and small mesh gill nets for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Year	Date(s)	Regulation change
2014	May 5 [1]	Use of large mesh gill nets prohibited in Internal Coastal Waters to avoid discards of red drum. Major portions of management units A and C and the New River were allowed to open Jun 1-Sep 15 (M-16-2014 and M-21-2014).
2014	Sept 1	The remainder of management unit A is reopened from the red drum closure (M-25-2014).
2014	Sept 1	The Estuarine Gill-Net Permit (EGNP) is implemented (M-24-2014).
2014	Sept 15	The remainder of management unit C is reopened and all of management unit D2 is reopened from the red drum closure (M-29-2014).
2014	Sept 22	Management units B and E are opened to large mesh gill nets (M-30-2014).
2014	Sept 24	Management unit E closed to large mesh gill nets due to turtle interactions (M-31-2014).
2014	Oct 1	Management unit A closed to large mesh gill nets due to turtle interactions (M-33-2014).
2014	Oct 15	Management unit D1 open to large mesh gill nets (M-34-2014).
2014	Oct 26	Shallow water portions of area B closed to large mesh gill nets due to turtle interactions (M-37-2014).
2014	Oct 27	Portions of western Albemarle Sound and Currituck (management unit A) reopened (M-36-2014).
2014	Nov 2	Management unit E open to large mesh gill nets (M-39-2014).
2014	Nov 6	Remainder of management unit A reopened (M-41-2014).
2014	Nov 6	Shallow water portions of area B reopened to large mesh gill nets (M-40-2014).
2015	May 8	Management unit D1 closed to large mesh gill nets for annual ITP closure (M-6-2015).
2015	May 18	Established attendance requirements for <5 inches for Subunit B.1 (small portion of management unit B located south and west of Oregon Inlet (M-7-2015).
2015	June 8	Closed management unit B to large mesh gill nets due to approaching allowable sea turtle interactions (M-10-2015).
2015	June 12	Closed management unit A to large and small mesh gill nets due to reaching allowable sea turtle interactions (M-11-2015).
2015	July 23	Closed management unit C to large and small mesh gill nets due to reaching allowable sea turtle interactions because. The NCDMF requested a minor modification to the Sea Turtle ITP that combines the authorized takes for management units A and C to provide more flexibility in managing the fishery and ensure that authorized take levels are not exceeded during the ITP year. For management units A and C the number of allowable takes had been reached (n=8; M-12-2015).

[1] Although this regulation change occurred during ITP Year 2014 it was included as reference for other regulatory changes which occurred in the fall season of ITP Year 2015

Table 5. Summary of observed Atlantic sturgeon interactions in large and small mesh gill nets through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag	Length	
						PIT	Total	Fork
9/16/2014	A	3611.343	7601.684	Atlantic sturgeon	dead	n/a	1,024	931
9/17/2014	A	3600.109	7613.757	Atlantic sturgeon	alive	989.001001951938	817	752
9/20/2014	A	3604.151	7623.711	Atlantic sturgeon	dead	n/a	405	370
9/30/2014	A	3558.208	7628.040	Atlantic sturgeon	alive	980.010007162890	410	380
9/30/2014	A	3558.414	7620.942	Atlantic sturgeon	alive	n/a	1,092	n/a
9/30/2014	A	3558.433	7620.041	Atlantic sturgeon	alive	n/a	n/a	n/a
10/1/2014	A	3604.921	7620.832	Atlantic sturgeon	alive	n/a	n/a	n/a
10/13/2014	C	3506.185	7701.058	Atlantic sturgeon	alive	4A17164A56	720	660
10/28/2014	A	3559.518	7616.578	Atlantic sturgeon	alive	989.001001951908	708	640
10/28/2014	A	3559.281	7616.540	Atlantic sturgeon	alive	n/a	703	658
10/28/2014	A	3559.165	7616.439	Atlantic sturgeon	alive	n/a	717	705
10/28/2014	A	3559.125	7616.437	Atlantic sturgeon	alive	n/a	735	715
10/28/2014	A	3559.030	7616.411	Atlantic sturgeon	alive	n/a	704	666
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	691	596
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	770	667
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	915	793
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	511	437
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	549	474
10/29/2014	A	3558.136	7629.753	Atlantic sturgeon	alive	n/a	917	819
10/29/2014	A	3559.578	7615.452	Atlantic sturgeon	alive	n/a	609	n/a
10/29/2014	A	3558.802	7617.403	Atlantic sturgeon	alive	989.001001951953	n/a	692
10/29/2014	A	3558.689	7617.403	Atlantic sturgeon	alive	n/a	n/a	561
10/30/2014	A	3600.305	7612.800	Atlantic sturgeon	alive	989.001001951931	1,651	1,524
10/30/2014	A	3600.217	7612.681	Atlantic sturgeon	alive	n/a	500	450
11/4/2014	A	3602.103	7636.478	Atlantic sturgeon	alive	3DD.003BA5B7C7	510	442
11/6/2014	A	3605.548	7545.678	Atlantic sturgeon	alive	n/a	n/a	n/a
11/7/2014	A	3600.021	7552.614	Atlantic sturgeon	alive	n/a	737	637
11/9/2014	A	3600.242	7613.124	Atlantic sturgeon	alive	989.001001951682	838	749
11/9/2014	A	3600.089	7613.611	Atlantic sturgeon	alive	n/a	724	n/a
11/10/2014	A	3557.081	7538.810	Atlantic sturgeon	alive	BB89283	875	750
11/12/2014	A	3605.091	7619.898	Atlantic sturgeon	alive	989.001001951716	715	704
11/13/2014	A	3600.257	7630.263	Atlantic sturgeon	alive	n/a	n/a	n/a
11/13/2014	B	3538.954	7531.448	Atlantic sturgeon	alive	n/a	n/a	n/a
11/17/2014	A	3600.048	7612.044	Atlantic sturgeon	alive	989.001001951739	803	703
11/20/2014	A	3555.466	7545.122	Atlantic sturgeon	alive	989.001001951709	709	672

Table 5. Cont…

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag	Length	
						PIT	Total	Fork
1/7/2015	A	3615.883	7607.655	Atlantic sturgeon	alive	3DD.003B9C5DBC	632	551
1/13/2015	A	3602.726	7641.570	Atlantic sturgeon	alive	n/a	n/a	n/a
3/5/2015	A	3604.055	7619.851	Atlantic sturgeon	alive	989.001001951923	n/a	n/a
3/5/2015	A	3603.641	7619.699	Atlantic sturgeon	alive	984.001001951030	684	610
3/7/2015	A	3559.489	7629.750	Atlantic sturgeon	alive	989.001001951756	617	514
3/10/2015	A	3556.893	7632.775	Atlantic sturgeon	alive	989.001001951887	810	730
3/10/2015	A	3556.893	7632.775	Atlantic sturgeon	alive	989.001001951872	760	675
3/12/2015	A	3605.871	7615.675	Atlantic sturgeon	alive	989.001001952680	700	621
3/23/2015	A	3600.281	7629.660	Atlantic sturgeon	alive	989.001001952706	795	685
3/24/2015	A	3559.860	7629.554	Atlantic sturgeon	alive	989.001001951702	791	730
3/27/2015	E	3416.862	7800.352	Atlantic sturgeon	alive	989.001001195268	755	643
4/7/2015	A	3604.490	7620.145	Atlantic sturgeon [1]	alive	989.001001951787	595	510
4/10/2015	E	3416.836	7800.331	Atlantic sturgeon	alive	n/a	n/a	n/a
4/15/2015	D	3444.573	7627.779	Atlantic sturgeon [1]	alive	n/a	n/a	n/a
4/15/2015	D	3444.365	7628.398	Atlantic sturgeon [1]	alive	989.001001951896	n/a	625
4/16/2015	B	3526.334	7600.555	Atlantic sturgeon [1]	alive	989.001001951699	733	660
4/17/2015	B	3451.730	7624.063	Atlantic sturgeon [1]	alive	n/a	n/a	n/a
4/17/2015	B	3451.361	7623.821	Atlantic sturgeon [1]	alive	989.001001952674	n/a	490
4/17/2015	B	3451.447	7623.772	Atlantic sturgeon [1]	dead	n/a	740	764
4/18/2015	A	3557.995	7539.186	Atlantic sturgeon [1]	alive	989.001001951750	650	570
4/20/2015	D	3443.339	7628.483	Atlantic sturgeon [1]	alive	989.001001951705	652	555
4/29/2015	A	3615.694	7606.486	Atlantic sturgeon	alive	n/a	600	530
5/1/2015	A	3613.307	7607.041	Atlantic sturgeon	alive	n/a	n/a	n/a
5/4/2015	A	3604.136	7606.315	Atlantic sturgeon	alive	989.001001952796	810	750
5/5/2015	A	3603.723	7622.863	Atlantic sturgeon	alive	989.001001952857	655	563
5/13/2015	A	3601.387	7543.613	Atlantic sturgeon	alive	90011E001183698	960	876
5/19/2015	A	3610.784	7600.054	Atlantic sturgeon	alive	989.001001951761	722	705
6/12/2015	A	3551.035	7537.413	Atlantic sturgeon	alive	n/a	n/a	n/a
7/23/2015	E	3440.824	7721.825	Atlantic sturgeon [1]	alive	989.001001952829	605	534
8/25/2015	B	3515.603	7629.127	Atlantic sturgeon [1]	alive	989.001001952774	804	703

[1] Indicates small mesh gear

Table 6. Summary of reported Atlantic sturgeon interactions in large mesh gill nets through the NCDMF Observer Program for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Date	Management Unit	Latitude	Longitude	Species	Disposition	Length	
						Total	Fork
10/1/2014	A	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/1/2014	A	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/1/2014	A	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/11/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/11/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/12/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/13/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/13/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
10/22/2014	C	n/a	n/a	Atlantic sturgeon	alive	n/a	813
12/23/2014 [1]	A	n/a	n/a	Atlantic sturgeon	alive	n/a	n/a
3/29/2015 [1]	A	3555.330	7546.622	Atlantic sturgeon	dead	1,016	953
4/9/2015	E	3423.046	7814.588	Atlantic sturgeon	alive	n/a	n/a

[1] Reported Atlantic sturgeon interactions from illegally set large mesh gill nets and were reported by Marine Patrol

Table 7. Observer coverage calculated from previous year's trip ticket data and observer data for large mesh gill nets by season and management unit through the NCDMF Observer Program through August 2015 for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Large Mesh		
Season	Management Unit	Fishing Trips [2]	Observed Trips	Coverage [3]
Fall 2014	A	2,529	192	7.6
	B	1,448	154	10.6
	C	904	152	16.8
	D	287	81	28.2
	E	282	58	20.6
Winter 2014-2015	A	890	38	4.3
	B	125	0	0.0
	C	160	14	8.8
	D	2	1	50.0
	E	39	7	17.8
Spring 2015 [1]	A	2,254	158	7.0
	B	614	44	7.2
	C	839	72	8.6
	D	83	7	8.4
	E	251	61	24.3
Summer 2015 [1]	A	228	12	5.3
	B	117	16	13.7
	C	184	40	21.7
	D	125	17	13.6
	E	446	98	22.0
Total		11,808	1,222	10.3

[1] Number of days management units closed factored into estimated fishing trips for the spring and summer 2015 seasons

[2] Final trip ticket data for 2014 (September - December) and preliminary trip ticket data for 2015 (January - August)

[3] Based on final trips for 2014 (September - December) and estimated trips for 2015 (January - August) compared to observer large mesh trips

Table 8. Observer coverage calculated from previous year's trip ticket data and observer data for small mesh gill nets by season and management unit through the NCDMF Observer Program through August 2015 for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Small Mesh		
Season	Management Unit	Fishing Trips [2]	Observed Trips	Coverage [3]
Fall 2014	A	566	18	3.2
	B	1,381	22	1.6
	C	309	15	4.9
	D	405	16	4.0
	E	624	24	3.8
Winter 2014-2015	A	1,681	55	3.3
	B	703	4	0.6
	C	183	12	6.6
	D	99	0	0.0
	E	117	10	8.6
Spring 2015 [1]	A	1,436	52	3.6
	B	1,337	23	1.7
	C	276	12	4.4
	D	91	7	7.7
	E	209	14	6.7
Summer 2015 [1]	A	58	3	5.2
	B	1,104	12	1.1
	C	114	6	5.3
	D	59	1	1.7
	E	292	11	3.8
Total		11,040	317	2.9

[1] Number of days management units closed factored into estimated fishing trips for the spring and summer 2015 seasons

[2] Final trip ticket data for 2014 (September - December) and preliminary trip ticket data for 2015 (January - August)

[3] Based on final trips for 2014 (September - December) and estimated trips for 2015 (January - August) compared to observer large mesh trips

Table 9. Number of gill-net checks made and citations issued by Marine Patrol for large and small mesh gill nets by season during ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season	# Gill Net Checks	# Citations
Fall 2014	465	5
Winter 2014-2015	306	1
Spring 2015	512	14
Summer 2015	309	14
Total	1,592	33

Table 10. Citations written by Marine Patrol for large and small mesh gill nets by season and violation code during ITP Year 2015 (September 1, 2014 - August 31, 2015).

	Violation		
Season	Date	Code	Description
Fall 2014	9/14/2014	NETG04	Leave gill nets in waters when could not be legally fished
	9/26/2014	NETG04	Leave gill nets in waters when could not be legally fished
	10/21/2014	NETG03	Using gill net with improper buoys or identification
	10/22/2014	NETG22	Improperly set gill net
	10/25/2014	NETG10	Gill net with illegal mesh size
Winter 2014-2015	12/5/2014	NETG26	Use gill net in excess of 800 yards M-2-2008
Spring 2015	3/4/2015	NETG09	Gill net set too close to bridge
	3/9/2015	NETG09	Gill net set too close to bridge
	3/21/2015	NETG22	Improperly set gill net
	3/21/2015	NETG53	Use large mesh gill net with corks or floats on top line
	3/21/2015	NETG38	Use large mesh gill net in Pamlico Sound later than 1 hour after sunrise
	4/2/2015	NETG08	Gill net within 200 yards of pound net
	4/2/2015	NETG12	Net in middle third of marked navigational channel
	4/2/2015	NETG08	Gill net within 200 yards of pound net
	4/2/2015	NETG12	Net in middle third of marked navigational channel
	4/5/2015	NETG10	Gill net with illegal mesh size
	4/10/2015	NETG29	RCGL gear without proper buoys
	5/4/2015	NETG04	Leave gill net in waters when could not be legally fished
	5/5/2015	NETG03	Using gill net with improper buoys or identification
	5/20/2015	NETG01	Leave gill net in coastal waters unattended
Summer 2015	6/2/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	6/8/2015	NETG22	Improperly set gill net
	6/14/2015	NETG10	Gill net with illegal mesh size
	6/24/2015	NETG03	Using gill net with improper buoys or identification
	6/24/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/3/2015	NETG22	Improperly set gill net
	7/4/2015	NETG22	Improperly set gill net
	7/16/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	7/21/2015	NETG01	Leave gill net in coastal waters unattended
	7/21/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/21/2015	NETG29	RCGL gear without proper buoys
	7/22/2015	NETG03	Using gill net with improper buoys or identification
	7/22/2015	NETG04	Leave gill net in waters when could not be legally fished
	7/22/2015	NETG30	Leave RCGL gill net unattended

Table 10. Cont…

	Violation		
Season	Date	Code	Description
Summer 2015	7/22/2015	NETG39	Use large mesh gill nets more than 15 meshes in height and w/out lead core or leaded bottom
	7/30/2015	NETG03	Using gill net with improper buoys or identification
	8/5/2015	NETG29	RCGL gear without proper buoys
	8/8/2015	NETG12	Net in middle third of marked navigational channel
	8/10/2015	NETG03	Using gill net with improper buoys or identification
	8/10/2015	NETG16	Use an unattended gill net in a restricted area
	8/10/2015	NETG37	Leave small mesh gill nets unattended
	8/13/2015	NETG03	Using gill net with improper buoys or identification
	8/14/2015	NETG22	Improperly set gill net
	8/14/2015	NETG30	Leave RCGL gill net unattended
	8/15/2015	NETG22	Improperly set gill net
	8/15/2015	NETG29	RCGL gear without proper buoys
	8/15/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	8/19/2015	NETG03	Using gill net with improper buoys or identification
	8/19/2015	NETG10	Gill net with illegal mesh size
	8/19/2015	NETG22	Improperly set gill net
	8/19/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
	8/20/2015	NETG30	Leave RCGL gill net unattended
	8/23/2015	NETG03	Using gill net with improper buoys or identification
	8/23/2015	NETG04	Leave gill net in waters when could not be legally fished
	8/28/2015	NETG04	Leave gill net in waters when could not be legally fished
	8/28/2015	NETG29	RCGL gear without proper buoys

Table 11. The number of calls (n = 8,870) made by the observers trying to set up trips by season and month categorized by call type (0-14) and defined in Table 3 for ITP Year 2015 (September 1, 2014 - August 31, 2015).

		Categories (%) [1]														
Season	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Fall 2014	September	0.0	0.3	0.2	0.0	0.0	0.0	1.3	0.0	0.8	0.0	0.1	0.0	0.5	1.2	4.6
	October	1.5	9.8	3.3	1.5	0.9	0.8	6.9	0.1	4.7	0.0	1.2	0.3	5.2	16.0	52.4
	November	1.2	11.0	3.1	1.1	0.8	0.2	3.2	0.1	3.2	0.3	0.9	0.2	4.8	12.9	43.0
	Total	2.8	21.2	6.7	2.6	1.7	1.1	11.4	0.2	8.7	0.3	2.1	0.5	10.5	30.1	100.0
Winter 2014-2015	December	1.5	10.5	1.7	0.1	0.5	0.6	1.0	0.1	4.8	0.1	1.9	0.3	3.5	9.9	36.5
	January	1.3	15.6	1.8	2.5	0.5	0.9	1.3	0.1	4.9	0.2	2.6	0.7	9.7	16.5	58.5
	February	0.0	1.6	0.2	0.1	0.1	0.1	0.8	0.0	0.3	0.0	0.1	0.1	0.4	1.4	5.0
	Total	2.8	27.8	3.7	2.6	1.1	1.5	3.2	0.1	10.0	0.3	4.6	1.1	13.6	27.8	100.0
Spring 2015	March	1.3	9.5	2.1	0.6	0.5	0.6	2.5	0.0	2.0	1.3	2.2	0.7	5.7	15.2	44.2
	April	1.3	5.7	2.0	0.2	0.4	0.3	1.4	0.1	2.3	0.3	1.8	0.5	3.5	9.5	29.2
	May	1.0	5.4	2.7	0.1	0.3	0.3	0.8	0.0	1.2	0.4	1.0	0.2	3.0	10.1	26.6
	Total	3.6	20.6	6.8	1.0	1.2	1.2	4.6	0.1	5.4	2.1	5.0	1.4	12.2	34.8	100.0
Summer 2015	June	4.5	21.2	9.0	1.0	1.2	2.0	5.2	0.4	6.5	0.7	3.2	1.8	10.8	27.4	94.8
	July	0.0	0.9	0.1	0.0	0.0	0.1	0.0	0.0	0.5	0.1	0.4	0.1	0.5	1.1	3.8
	August	0.0	0.5	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3
	Total	4.5	22.6	9.1	1.0	1.2	2.1	5.5	0.4	7.0	0.9	3.6	2.0	11.3	29.0	100.0
	Total	3.5	21.0	7.0	1.4	1.4	1.2	6.7	0.2	6.6	1.4	4.0	1.2	11.6	32.7	100.0

[1] Categories as defined in Table 3: 1) Left message with someone else, 2) Not fishing general, 3) Fishing other gear, 4) Not fishing because of weather, 5) Not fishing because of boat issues, 6) Not fishing because of medical issues, 7) Booked trip, 8) Hung up, got angry, trip refused, 9) Call back later time/date, 10) Saw in person, 11) Disconnected, 12) Wrong number, 13) No answer, 14) No answer, left voicemail

Table 12. Notice of Violations issued by season, date and violation code for the Estuarine Gill-Net Permit for ITP Year 2015 (September 1, 2014 - August 31, 2015).

Season [1]	Date	Code	Description
Fall 2014	9/13/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/17/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/18/2014	EGNP25	Refuse to allow fisheries observers onboard or collect data
	9/23/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	9/23/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/24/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/29/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	9/25/2014	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	10/2/2014	EGNP14	Mislead observers to avoid fishing trip
	10/2/2014	EGNP14	Mislead observers to avoid fishing trip
	10/3/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
	10/3/2014	EGNP11	Failure to attend nets
	10/3/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/3/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
	10/3/2014	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	10/10/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	10/17/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/29/2014	EGNP99	Failure to comply with statute(s), rule(s) and/or proclamation(s)
	10/23/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	10/31/2014	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
Spring 2015	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/12/2015	EGNP08	Failure to notify DMF of a change in phone number within 14 days
	3/13/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/17/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/17/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data
	3/25/2015	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	4/6/2015	EGNP25	Refuse to allow fisheries observers onboard or collect data

[1] Notices of Violation were not issued during the summer 2015 season due to the legal review of the permit appeal process

FIGURES

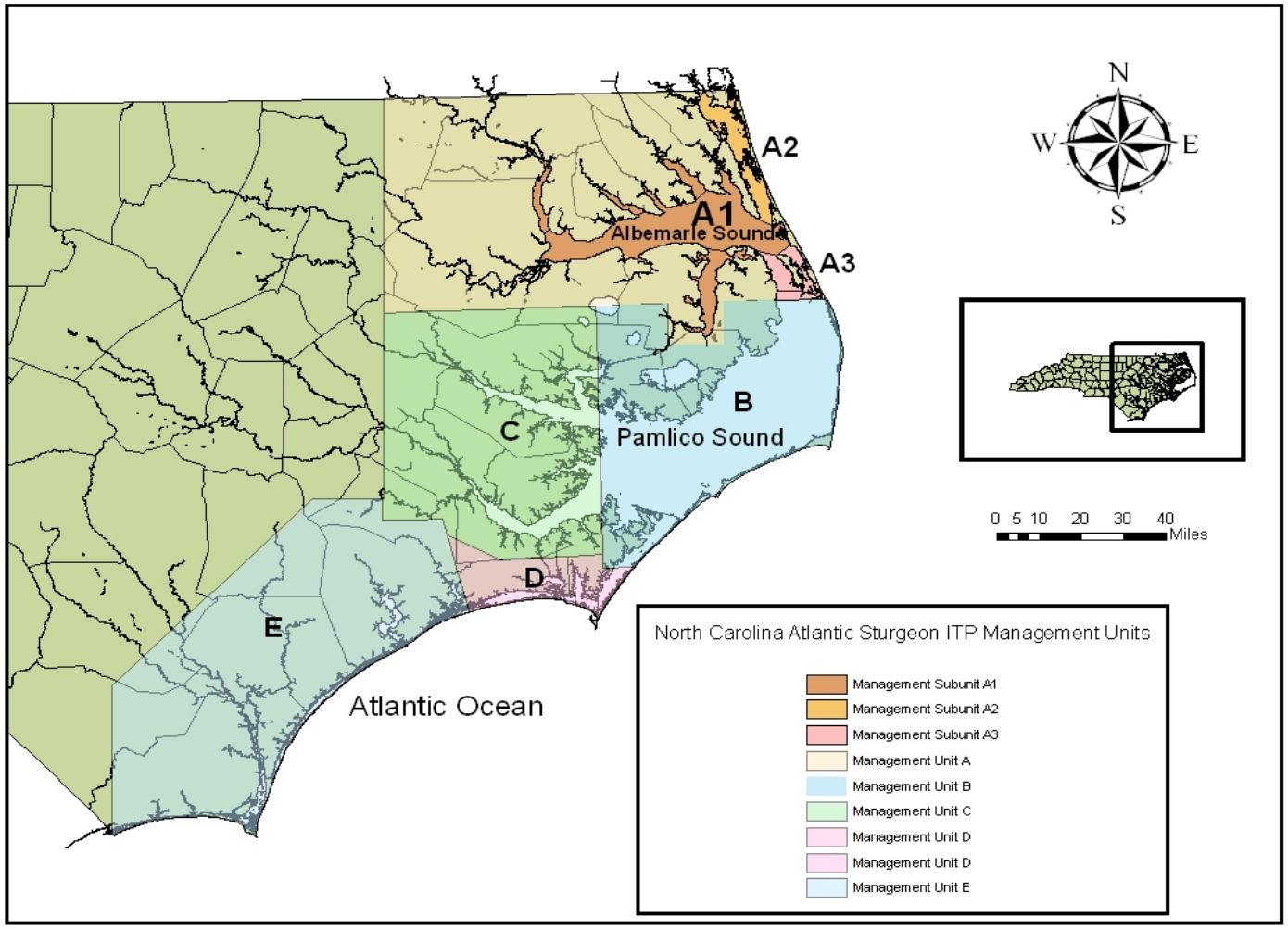

Figure 1. Management units (A1, A2, A3, B, C, D, and E) as outlined in the Conservation Plan and utilized by the Observer Program for ITP Year 2014 (September 1, 2013 – August 31, 2014).

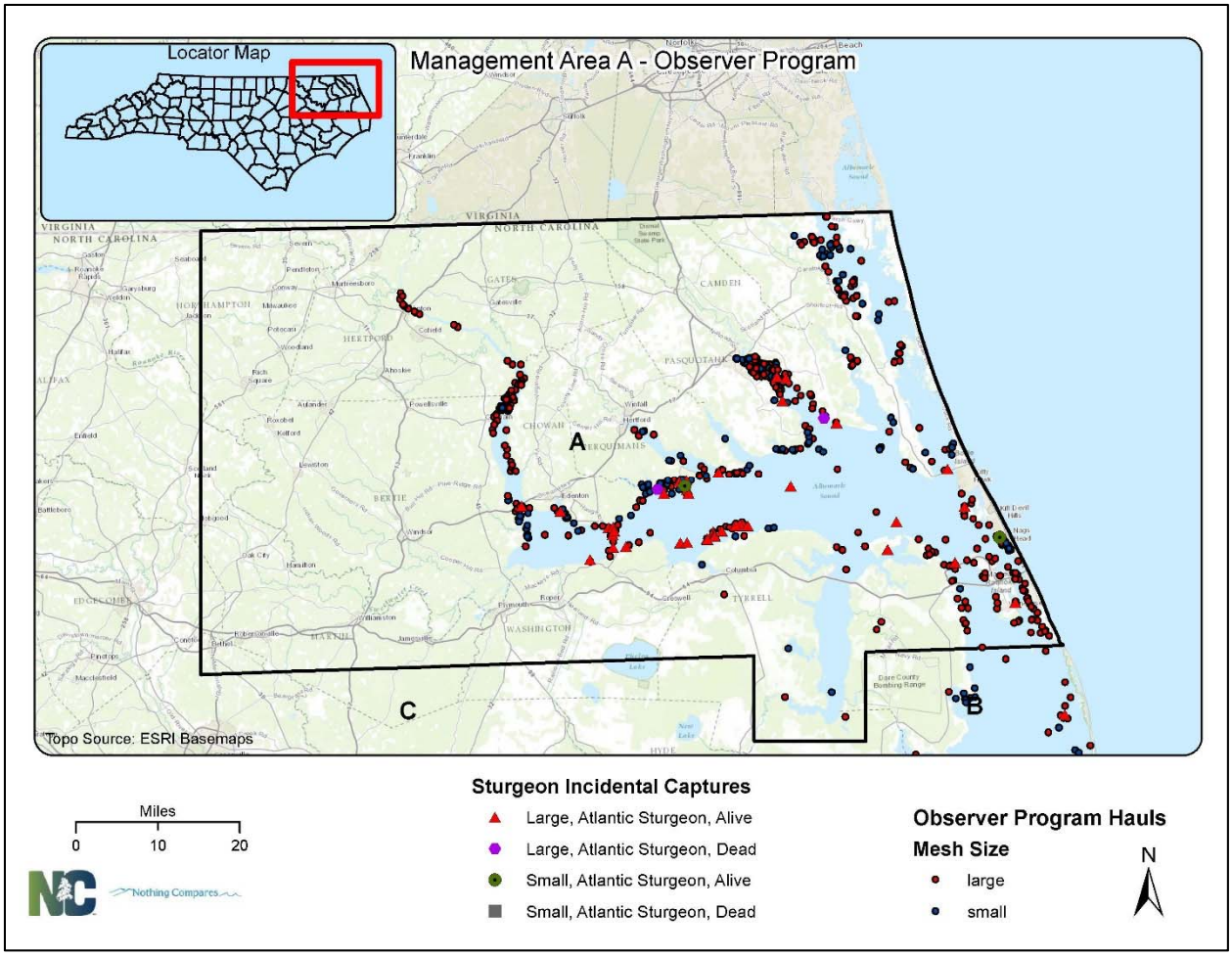

Figure 2. Atlantic sturgeon interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit A for ITP Year 2015 (September 1, 2014 – August 31, 2015).

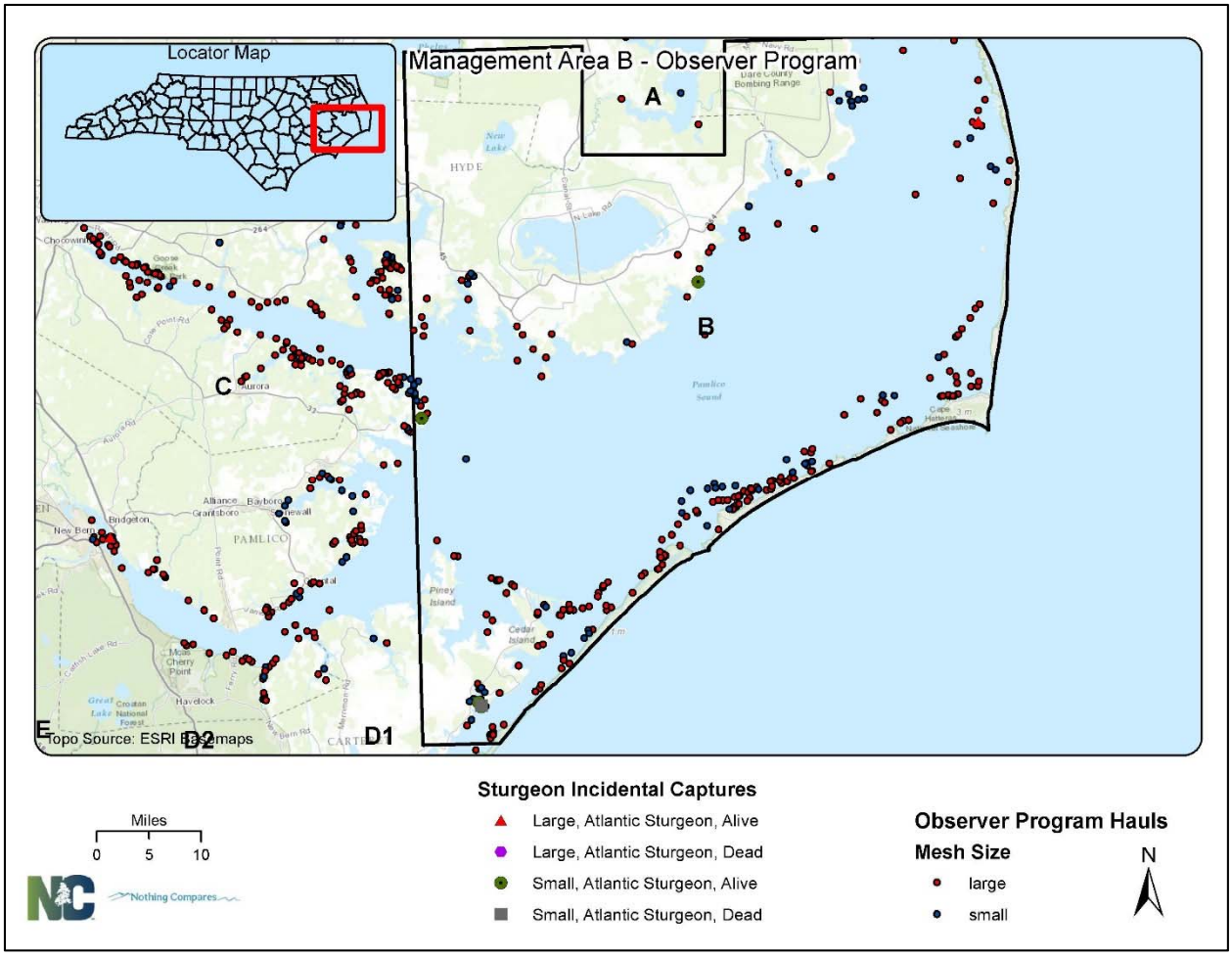

Figure 3. Atlantic sturgeon interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit B for ITP Year 2015 (September 1, 2014 – August 31, 2015).

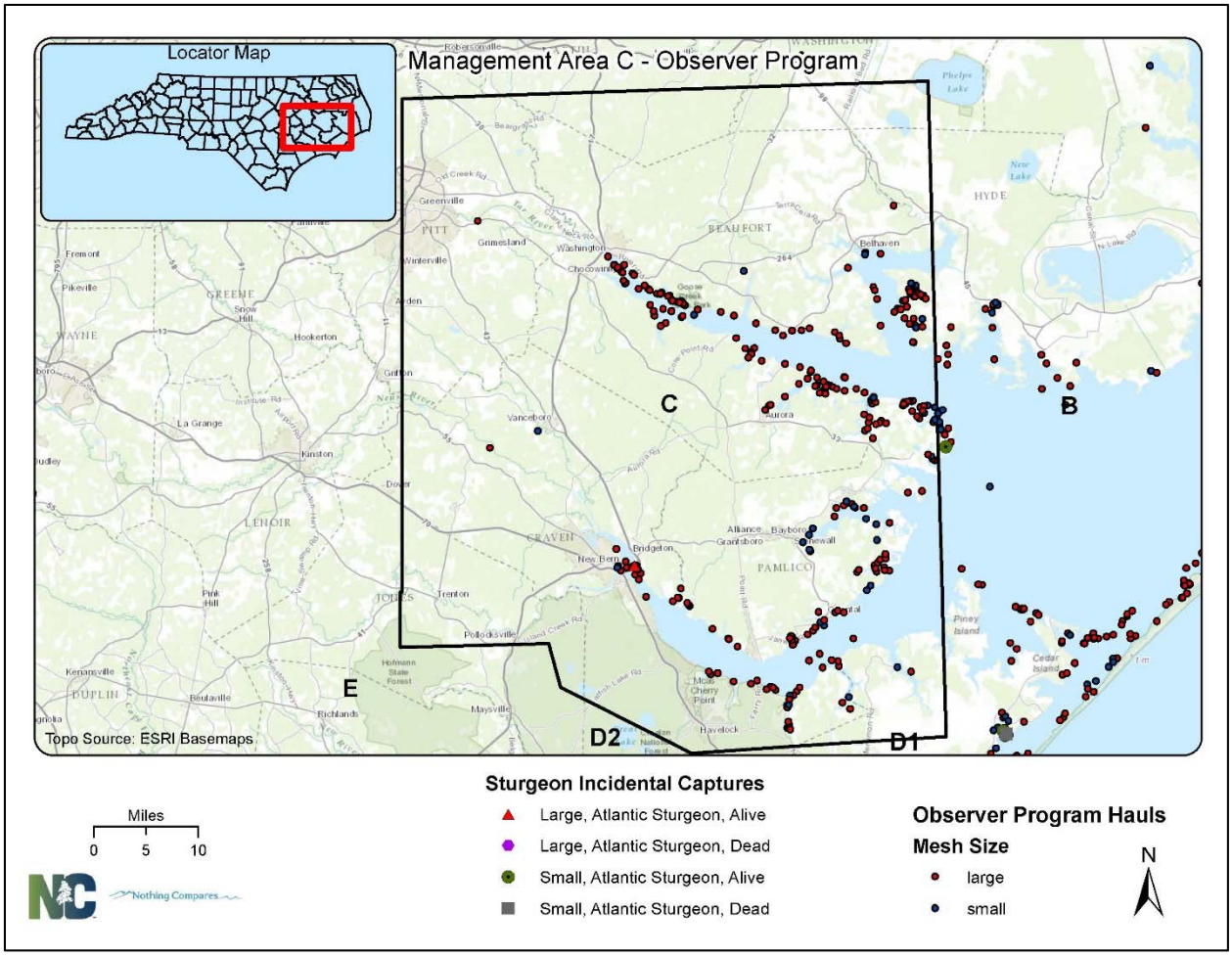

Figure 4. Atlantic sturgeon interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit C for ITP Year 2015 (September 1, 2014 – August 31, 2015).

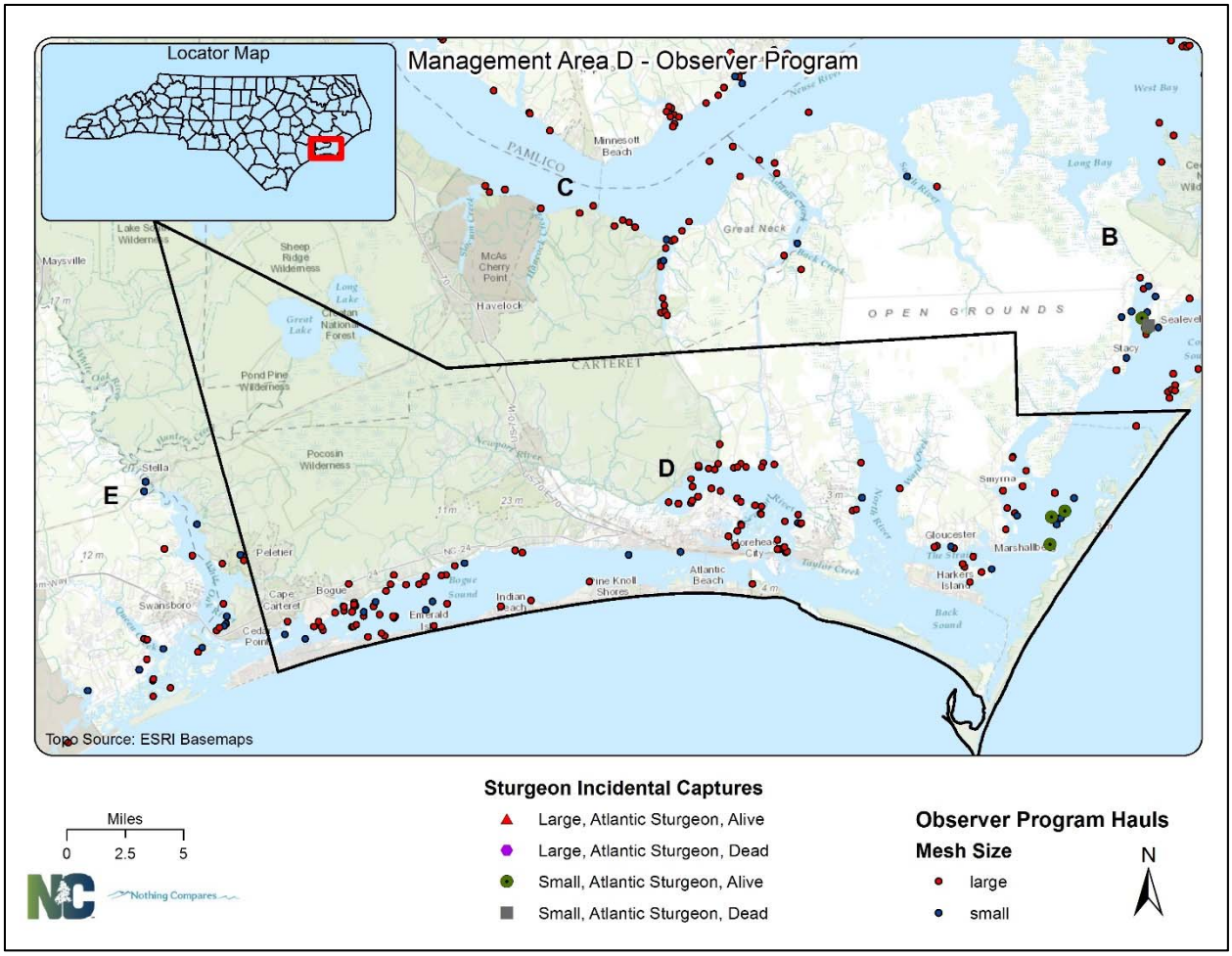

Figure 5. Atlantic sturgeon interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit D for ITP Year 2015 (September 1, 2014 – August 31, 2015).

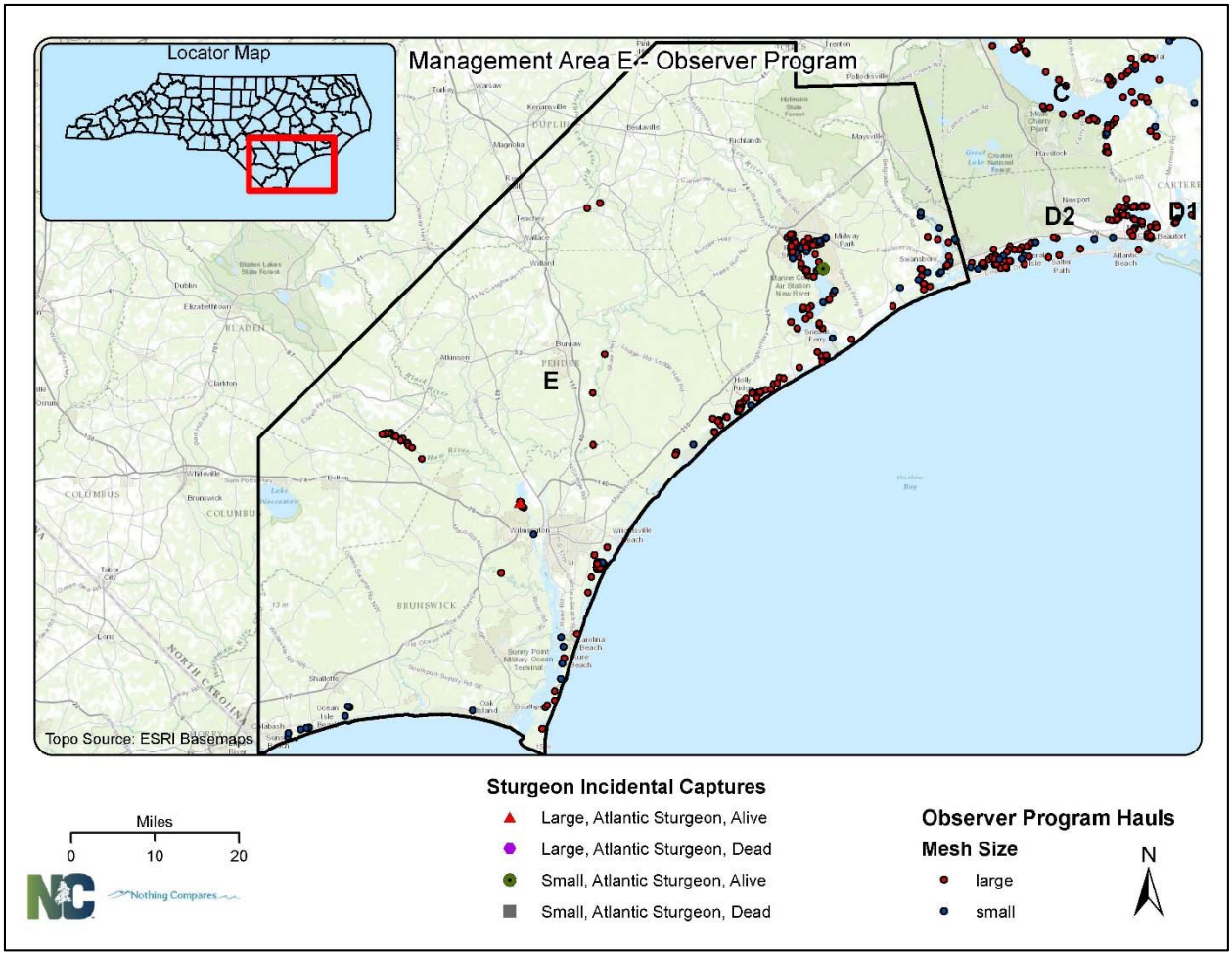

Figure 6. Atlantic sturgeon interaction locations by species, disposition, and gear and observer trips (hauls) by gear in management unit E for ITP Year 2015 (September 1, 2014 – August 31, 2015).

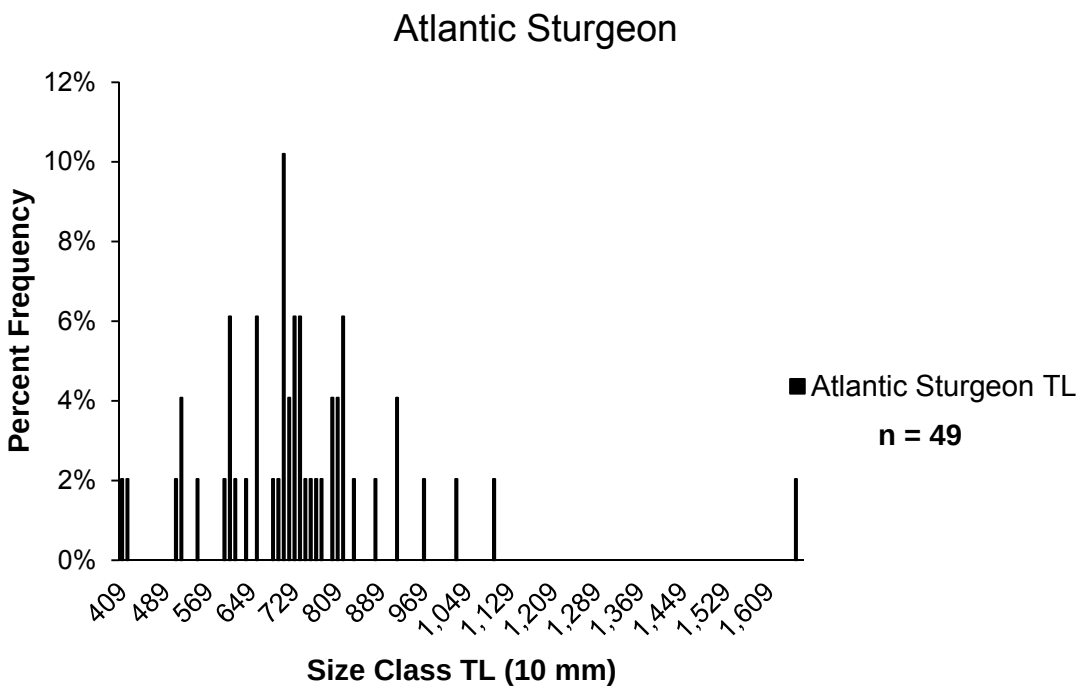

Figure 7. Length-frequency (total length) of observed incidental captures of Atlantic sturgeon where measurements were obtained (n = 49) collected by the Observer Program from onboard and alternative platform observations for ITP Year 2015 (September 1, 2014 – August 31, 2015).

Fall 2015 Seasonal Progress Report
Incidental Take Permit No. 16230
September 1 – November 30, 2015

Jacob Boyd
Protected Species Biologist
North Carolina Division of Marine Fisheries

December 18, 2015

Summary

The fall season for large and small mesh gill nets in North Carolina is September through November for Incidental Take Permit (ITP) Year 2016 (September 1, 2015 – August 31, 2016) as defined in ITP No. 16230. The Division opened anchored large and small mesh gill nets via proclamation M-13-2015 on September 1, 2015 in the western portion of management unit A with the eastern portion of Albemarle Sound including Croatan and Roanoke sounds remaining closed to minimize sea turtle interactions (Table 1). The Division closed anchored large mesh gill nets via proclamation M-14-2015 on September 1, 2015 in management unit E to minimize sea turtle interactions. The Division opened large and small mesh gill nets in management unit C via proclamation M-14-2015 but closed anchored large mesh gill nets via proclamation M-15-2015 on September 24, 2015 in management unit C through the end of the fall season due to approaching allowable Atlantic sturgeon interactions. The Division closed anchored large mesh gill nets via proclamation M-20-2015 on October 17, 2015 in management unit B subunits (SGNRA 1-4, CGNRA) to minimize sea turtle interactions with subunit MGNRA remaining open. The Division closed anchored large and small mesh gill nets via proclamation M-21-2015 on October 17, 2015 in management unit A due to sea turtle interactions but reopened the western portion of the management unit as well as Currituck Sound on October 26 and November 2, 2015 via proclamations M-22-2015 and M-23-2015, respectively. The Division opened management unit D1 and the eastern subunits of management unit B on November 2, 2015 via proclamation M-24-2015 but closed anchored large mesh gill nets via proclamation M-25-2015 on November 5, 2015 in management unit B to due to sea turtle interactions (Table 1).

Observer coverage was calculated for the fall 2015 season in each management unit by estimating fishing trips using an average of the previous four year's trip ticket data (2011-2014) for large mesh gill nets and the average of the previous two year's (2013-2014) trip ticket data for small mesh gill nets, while taking reduced season dates in each management unit into account by calculating the proportion of actual to possible fishing days. This calculated estimated fishing effort was compared to the observer trips completed throughout the fall season. The average, normalized effort was used when estimating fishing trips to account for the fluctuation of fishing effort over the previous four years due to closures and other regulations put in place throughout the time series. The Observer Program achieved an estimated 9.0% overall large mesh gill-net coverage for the fall 2015 season meeting the minimum requirement (n = 7.0%) in all management units based on preliminary data (Table 2). The Observer Program achieved an estimated 2.4% small mesh gill-net coverage for the fall 2015 season meeting the minimum requirement (n = 1.0%) in each management unit except for management unit B based on preliminary data (Table 3). Management unit B was closed to large mesh gill nets for portions of the fall season making it difficult to obtain small mesh trips due to fishermen compliance.

There were 29 observed sea turtle interactions from large mesh gill nets and 2 observed from small mesh gill nets in the fall 2015 season (Table 4). The species composition was made up of primarily green sea turtles (n = 24 alive; n = 4 dead), with 1 alive and 1 dead Kemp's ridley sea turtles, and 1 alive unknown sea turtle (Table 4). The cumulative estimated and/or observed takes for large and small mesh gill nets through the fall 2015 season for ITP Year 2016 are in Tables 5 and 6.

Marine Patrol made 909 gill net checks for the fall 2015 season. Of these 909 gill net checks, there were 38 citations written (Table 7).

As per the ITP, the Division established a permit in September 2014 to register all fishermen participating in the anchored large and small mesh gill-net fisheries (Estuarine Gill Net Permit – EGNP). This multifaceted permit allows the Division to closely monitor for compliance with the permit system the Division already has in place. As of December 14, 2015 there have been 2,719 EGNPs issued for Fiscal Year (FY) 16 (July 1, 2015 - June 30, 2016). Permits are renewed on an annual basis, based on FY for licenses. During the fall 2015 season there were 5 Notice of Violations (NOV) issued for the EGNP.

The Observer Program has various ways to contact fishermen to set up trips (i.e., alternative platform trips, calling the fisherman, waiting at boat ramps). Due to limited resources and fishermen leaving from their residence or private ramps, the most efficient and common way to contact fishermen is by phone. One of the many checks the Program has is a contact log which is filled out for every contact that is made when attempting to obtain a trip. Each contact is put into a specific category and other information is gathered (Table 8). The contact log was analyzed by month and response category to determine what percentage of contacts (n = 4,613) resulted in positive observer trips (Table 9). Of the 4,613 contacts that were made, 49.3% were categorized as 1, 8, 11, 12, 13, and 14 which inclusively represent not being able to get in touch with fishermen or fishermen refusing trips via phone.

Tables

Table 1. Openings and closings of management units by date and regulation change from the fall 2015 season (September - November) for large and small mesh gill nets for ITP Year 2016.

Year	Date(s)	Regulation change
2015	Sept 1	Management unit A to open to large and small mesh gill nets for the new ITP Year 2016 for the western part of the sound. All the eastern/southern areas (south and east of line from Alligator River to 158 Bridge including Croatan and Roanoke Sounds) will remain closed until at least early October to minimize interactions with sea turtles (M-13-2015).
2015	Sept 1	Management unit C to open to large and small mesh gill nets for the new ITP Year 2016 (M-14-2015).
2015	Sept 1	Management unit E closed to large mesh gill nets for the new ITP Year 2016 to minimize interactions with sea turtles (M-14-2015).
2015	Sept 24	Management unit C closed for large mesh gill nets due to approaching Atlantic sturgeon allowed takes for the fall 2015 Season (M-15-2015).
2015	Sept 30	Management unit A to open to large and small mesh gill nets for the new ITP Year 2016 for the western part of the sound. All the eastern/southern areas (south and east of line from Alligator River to 158 Bridge including Croatan and Roanoke Sounds) will open with south of the 64 bridge having sea turtle restrictions (i.e, overnight soaks, 4 day fishing week; M-16-2015).
2015	Sept 30	Management units B and E open to large mesh gill nets (M-17-2015).
2015	Oct 17	Management unit B subunits closed to large mesh gill nets except the MGNRA due to sea turtle interactions (M-20-2015).
2015	Oct 17	Management unit A closed to large and small mesh gill nets due to sea turtle interactions (M-21-2015).
2015	Oct 26	Portions of Management unit A opened to large and small mesh gill nets (west of line from Laurel Point and Drummond Point and Currituck Sound; M-22-2015).
2015	Nov 2	Management unit A open to large and small mesh gill nets the western part of the sound. All the eastern/southern areas (south and east of line from Alligator River to 158 Bridge including Croatan and Roanoke Sounds) will remain closed (M-23-2015).
2015	Nov 2	Management unit D1 and remaining subunits of management unit B open to large mesh gill nets (M-24-2015).
2015	Nov 5	Management unit B closed to large mesh gill nets due to sea turtle interactions (M-25-2015).

Table 2. Observer coverage calculated from an average of the previous four year's trip ticket data, and normalized to the number of actual fishing days in the season in each management unit, compared to observer data from the fall 2015 season (September - November) by management unit for large mesh gill nets for ITP Year 2016.

	Trips		
Management Unit [1]	Estimated (2011-2014) [2]	Observed	Coverage (%)
A	2,527	191	7.6
B	725	63	8.7
C	243	58	23.9
D1	60	7	11.7
D2	288	24	8.3
E	296	28	9.5
Total	4,139	371	9.0

[1] Table 1 contains all of the openings and closings for each management unit

[2] Finalized trip ticket data averaged and normalized from 2011-2014

Table 3. Observer coverage calculated from an average of the previous two year's trip ticket data, and normalized to the number of actual fishing days in the season in each management unit compared to observer data from the fall 2015 season (September - November) by management unit for small mesh gill nets for ITP Year 2016.

	Trips		
Management Unit [1]	Estimated (2013-2014) [2]	Observed	Coverage (%)
A	478	6	1.3
B	1,234	9	0.7
C	314	7	2.2
D1	77	6	7.8
D2	263	17	6.5
E	563	24	4.3
Total	2,927	69	2.4

[1] Table 1 contains all of the openings and closings for each management unit

[2] Finalized trip ticket data averaged and normalized from 2013-2014

Table 4. Summary of observed sea turtle interactions in large and small mesh gill nets from the fall 2015 season (September - November) for ITP Year 2016.

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag		Curved Carapace (mm)	
						PIT	Inconel	Length	Width
9/17/2015	C	35.35521	76.73609	green	alive	982.000364298089	n/a	291	252
10/9/2015	E	33.97131	77.92719	green [1]	alive	989.001001951690	EET849	352	289
10/9/2015	B	34.82598	76.42235	green	dead	n/a	n/a	325	285
10/9/2015	B	34.82598	76.42235	green	dead	n/a	n/a	290	245
10/9/2015	B	34.82598	76.42235	green	dead	n/a	n/a	260	230
10/9/2015	B	34.99605	76.25909	green	alive	989.001001951719	n/a	260	220
10/9/2015	B	34.99605	76.25909	green	alive	989.001001951688	XXP528	360	300
10/9/2015	B	34.82598	76.42235	green	alive	n/a	n/a	n/a	n/a
10/9/2015	B	34.86173	76.38188	green	alive	n/a	n/a	267	241
10/13/2015	B	34.94096	76.22081	green	alive	4B186D0165	n/a	270	225
10/13/2015	E	34.40409	77.59546	green	alive	989.001001951706	EET850/EET848	315	279
10/14/2015	A	36.00106	75.79977	Kemp's	dead	n/a	n/a	355	360
10/15/2015	B	34.86188	76.40993	green	alive	989.001001952804	n/a	302	250
10/15/2015	B	34.85750	76.41089	green	alive	989.001001951696	n/a	281	238
10/15/2015	B	34.85187	76.40974	green	alive	989.001001952771	n/a	310	267
10/15/2015	A	35.99273	76.26373	unknown	alive	n/a	n/a	n/a	n/a
10/16/2015	B	34.95572	76.27612	green	alive	n/a	n/a	n/a	n/a
10/16/2015	B	35.30542	75.55242	Kemp's	alive	989.001001951949	XXP545	310	320
10/28/2015	B	35.03148	76.34999	green	alive	989.001001952717	n/a	295	250
11/4/2015	B	34.99644	76.26168	green	dead	n/a	n/a	330	280
11/4/2015	B	34.99427	76.24520	green	alive	989.001001951697	n/a	260	230
11/4/2015	B	34.99427	76.24520	green	alive	989.001001951935	n/a	280	250
11/4/2015	B	34.99501	76.24482	green	alive	989.001001951764	XXP405	310	270

[1] Indicates small mesh gear

Table 4. Cont…

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag		Curved Carapace (mm)	
						PIT	Inconel	Length	Width
11/4/2015	B	35.28051	75.55285	green	alive	n/a	n/a	n/a	n/a
11/4/2015	B	35.28051	75.55285	green	alive	n/a	n/a	n/a	n/a
11/4/2015	B	35.28051	75.55285	green	alive	n/a	n/a	n/a	n/a
11/4/2015	B	35.28083	75.55405	green	alive	n/a	n/a	n/a	n/a
11/4/2015	B	35.27993	75.55545	green	alive	n/a	n/a	n/a	n/a
11/11/2015	D1	34.69143	76.49080	green [1]	alive	989.001001952698	n/a	301	264
11/12/2015	D1	34.78495	76.42412	green	alive	n/a	n/a	330	279
11/12/2015	D1	34.78495	76.42412	green	alive	n/a	n/a	304	250

[1] Indicates small mesh gear

Table 5. Summary of estimated and/or observed cumulative sea turtle interactions through the fall 2015 season (September - November) by management unit for large mesh gill nets for ITP Year 2016.

Management Unit	Green		Kemp's ridley		Loggerhead		Unknown	
	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
A	0	0	0	*1	0	0	*1	0
B	174.7	48.2	13.9	0	0	0	0	0
C	*1	0	0	0	0	0	0	0
D1	*2	0	0	0	0	0	0	0
D2	0	0	0	0	0	0	0	0
E	24.3	0	0	0	0	0	0	0
Total	202.0	48.2	13.9	1	0	0	1	0

*Indicates observed takes

Table 6. Summary of observed cumulative sea turtle interactions through the fall 2015 season (September - November) by management unit for small mesh gill nets for ITP Year 2016.

	Green	
Management Unit	Alive	Dead
A	0	0
B	0	0
C	0	0
D1	*1	0
D2	0	0
E	*1	0
Total	*2	0

*Indicates observed takes

Table 7. Citations written by Marine Patrol for large and small mesh gill nets by date and violation code during the fall 2015 season (September - November) for ITP Year 2016.

	Violation	
Date	Code	Description
9/7/2015	NETG29	RCGL gear without proper buoys
9/10/2015	NETG01	Leave gill net in coastal waters unattended
9/10/2015	NETG37	Leave small mesh gill nets unattended
9/11/2015	NETG03	Using gill net with improper buoys or identification
9/12/2015	NETG22	Improperly set gill net
9/17/2015	NETG09	Gill net set too close to bridge
9/21/2015	NETG03	Using gill net with improper buoys or identification
9/29/2015	NETG01	Leave gill net in coastal waters unattended
10/7/2015	NETG03	Using gill net with improper buoys or identification
10/7/2015	NETG29	RCGL gear without proper buoys
10/9/2015	NETG22	Improperly set gill net
10/9/2015	NETG39	Use large mesh gill nets more than 15 meshes in height and w/out lead core or leaded bottom
10/9/2015	NETG44	Use large mesh gill nets w/out leaving a space of at least 25 yard between separate lengths
10/10/2015	NETG22	Improperly set gill net
10/13/2015	NETG03	Using gill net with improper buoys or identification
10/13/2015	NETG34	Use unattended gill net w/mesh less than 5" in commercial operation from May 1 through Nov
10/14/2015	NETG29	RCGL gear without proper buoys
10/15/2015	NETG01	Leave gill net in coastal waters unattended
10/15/2015	NETG04	Leave gill net in waters when could not be legally fished
10/17/2015	NETG03	Using gill net with improper buoys or identification
10/18/2015	NETG29	RCGL gear without proper buoys
10/20/2015	NETG03	Using gill net with improper buoys or identification
10/21/2015	NETG01	Leave gill net in coastal waters unattended
10/21/2015	NETG02	Using gill net without buoys or identification
10/23/2015	NETG03	Using gill net with improper buoys or identification
10/23/2015	NETG29	RCGL gear without proper buoys
10/30/2015	NETG03	Using gill net with improper buoys or identification
11/6/2015	NETG03	Using gill net with improper buoys or identification
11/6/2015	NETG05	Use a stationery gill net in channel of ICWW
11/7/2015	NETG01	Leave gill net in coastal waters unattended
11/7/2015	NETG01	Leave gill net in coastal waters unattended
11/11/2015	NETG29	RCGL gear without proper buoys
11/11/2015	NETG46	Set or retrieve large mesh gill nets later than one hour after sunrise on Tuesday through Friday
11/11/2015	NETG53	Use large mesh gill net with corks or floats on top line
11/12/2015	NETG01	Leave gill net in coastal waters unattended
11/14/2015	NETG03	Using gill net with improper buoys or identification
11/23/2015	NETG12	Net in middle third of marked navigational channel
11/24/2015	NETG03	Using gill net with improper buoys or identification

Table 8. Categories and descriptions of fishermen responses for the Observer Program's contact logs used for analysis.

Categories	Category description
1	Left message with someone else
2	Not fishing general
3	Fishing other gear
4	Not fishing because of weather
5	Not fishing because of boat issues
6	Not fishing because of medical issues
7	Booked trip
8	Hung up, got angry, trip refused
9	Call back later time/date
10	Saw in person
11	Disconnected
12	Wrong number
13	No answer
14	No answer, left voicemail

Table 9. The percent of attempted contacts (n = 4,613) made by the observers trying to set up trips by month categorized by response type (0-14) and defined in table 8 for the fall 2015 season (September - November) for ITP Year 2016.

	Categories (%)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
September	1.0	5.3	2.4	0.8	0.4	0.5	2.3	0.1	3.9	0.4	1.0	0.2	3.2	10.6	32.1
October	1.6	7.1	2.5	1.1	0.7	0.9	2.1	0.1	5.4	0.6	1.8	0.4	3.8	11.8	39.8
November	0.8	7.0	1.3	0.5	0.3	0.5	1.4	0.2	3.0	0.4	0.6	0.3	2.8	9.0	28.1
Total	3.4	19.4	6.2	2.5	1.3	1.8	5.7	0.4	12.2	1.5	3.5	0.9	9.8	31.5	100.0

December 2015 Council Meeting Report

December 7 – 10, 2015

Annapolis, MD

The following summary highlights actions taken and issues considered at the Mid-Atlantic Fishery Management Council's December 2015 meeting in Annapolis, MD. Presentations, briefing materials, and audio recordings are available on the Council's website at www.mafmc.org/briefing/december-2015.

2016 – 2018 Spiny Dogfish Specifications

The Council adopted spiny dogfish specifications for 2016-2018. After reviewing advice from its Scientific and Statistical Committee (SSC) and considering input from the public, the Council adopted the following spiny dogfish specifications for the 2016-2018 fishing years:

Year	Acceptable Biological Catch (*pounds*)	Commercial Quota (*pounds*)
2016	52,066,572	40,360,761
2017	50,805,528	39,099,717
2018	49,901,633	38,195,822

The specifications summarized above include revisions to the 2016 specifications previously recommended by the Council. At the October 2015 meeting, the Council recommended substantial reductions in spiny dogfish catch limits for 2016, including a 50% cut in the commercial quota, in response to the findings of the 2015 spiny dogfish stock assessment update. However, the Council expressed concern that the spiny dogfish assessment update did not include any data from 2014 and requested that the SSC work with the Northeast Fisheries Science Center (NEFSC) to evaluate alternative ABC-setting methods that could address this data gap. Using an alternative approach, the SSC recommended and the Council approved a new set of ABCs that resulted in commercial quotas of approximately 40 million pounds for 2016, 39 million pounds for 2017, and 38 million pounds for 2018.

The 2016 quota represents a 20% reduction relative to 2015; however, landings have been below 50% of the commercial quotas for the last two full fishing years, and the reduced quota is unlikely to be constraining. The New England Fishery Management Council also approved similar specifications at its December meeting for this jointly-managed species. If approved by the National Marine Fisheries Service, the new measures will go into effect May 1, 2016.

Summer Flounder, Scup, Black Sea Bass

2016 Recreational Management Measures

The Council and the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Management Board (the Board) met jointly to set recreational management measures for summer flounder, scup, and black sea bass in 2016. Details on the commercial quota and recreational harvest limit (RHL) for each species are available in the final rule published on December 24, 2015.

Summer Flounder: The Council and Board recommended the use of conservation equivalency to achieve the summer flounder RHL of 5.42 million pounds in 2016. Conservation equivalency allows individual states or multi-state regions to develop customized recreational measures that, in combination, will achieve the coastwide harvest limit. The combination of these measures would be equivalent to the non-preferred coastwide alternative approved by the Council and Board, which includes a four fish possession limit, an 18-inch total length (TL) minimum size, and an open season of May 1 – September 30. In addition, a precautionary

default measure of a two fish possession limit, a 20-inch TL minimum size, and an open season of May 1 – September 30 was approved for states or regions that do not develop management measures consistent with the conservation equivalency guidelines. The Commission's Draft Addendum XXVII, which was approved for public comment, includes several options for summer flounder recreational management under conservation equivalency in 2016.

Scup: To achieve the RHL of 6.09 million pounds in 2016, the Council and Board voted to maintain *status quo* federal recreational scup measures in 2016, which include a 9-inch total length minimum size, a 50 fish possession limit, and an open season of January 1 – December 31. The Board voted to continue their regional approach to recreational scup management in state waters. The Board will review and approve proposals for individual state measures at their February 2016 meeting.

Black Sea Bass: The Council and Board recommended recreational management measures to achieve the 2.82 million pound RHL for black sea bass in 2016. Based on information available at the time of the meeting, this will require an approximately 16% reduction in landings, although this amount is subject to change based on evaluation of additional landings data for 2015. The Board voted to approve Addendum XXVII for public comment, which includes options for ad hoc regional management of black sea bass in state waters. If the combination of measures in state waters addresses the required reduction, then federal measures would remain status quo, including a 12.5-inch TL minimum size, a 15 fish possession limit, and an open season May 15 – September 21 and October 22 – December 31. The Council and Board also adopted a set of backup coastwide management measures representing the most restrictive size, possession, and seasonal limit across all states that would be implemented only if the ad hoc regional measures do not address the necessary reduction. These measures include a 14-inch TL minimum size, a 3 fish possession limit, and a season from July 15 – September 15 on a coastwide basis. In addition, the Council and Board voted to initiate an amendment to address accountability and issues in the commercial and recreational black sea bass.

Summary of Proposed 2016 Recreational Management Measures

	Recreational Harvest Limit	Type of Measures	Minimum Fish Size *(TL)*	Possession Limit	2016 Season
Summer Flounder	5.42 million pounds	**State/ Federal**	**Conservation equivalency –** *Regional measures will be developed through the Commission's process and voted on in February.*		
Scup	6.09 million pounds	**State**	**Regional Management Approach –** *State-specific measures will be developed through the Commission's process and voted on in February.*		
		Federal	**9 inch**	**50 fish**	**Jan 1 – Dec 31**
Black Sea Bass	2.82 million pounds	**State**	**Regional management approach -** *State-specific measures will be developed through the Commission's process and voted on in February.*		
		Federal*	**12.5 inch**	**15 fish**	**May 15 – Sept. 21 Oct 22 – Dec 31**

* Subject to the northern states addressing the required reduction.

Commercial Management Measure Review

Each year the Summer Flounder, Scup, and Black Sea Bass Monitoring Committee reviews several commercial measures that can be modified through the annual specifications process, such as minimum fish sizes, gear regulations, commercial possession limits, and other measures. This year, Council leadership tasked the Monitoring Committee with reviewing these measures in more detail and recommending changes where appropriate.

After reviewing the Monitoring Committee's recommendations and Advisory Panel input, the Council voted to increase the scup incidental possession limit for federally-permitted trawl vessels for November – April from

500 to 1000 pounds (trawl vessels that possess more than the incidental limit must abide by the minimum mesh requirements for the directed fishery). The Council also discussed increasing the scup incidental possession limit for May – October but decided against doing so to keep the incidental limits lower than the directed fishery possession limits in state waters during that time of year. The NMFS Greater Atlantic Regional Fisheries Office indicated that they will modify language in the federal regulations regarding evaluation of the Summer Flounder Flynet Exemption Program. The proposed modification will not change current practices regarding evaluation of the exemption, but it will ensure that the wording of the regulations matches the initial intent of the program.

The Council tasked the Monitoring Committee with several additional tasks for 2016, including assessing the feasibility of a common minimum mesh size for all three species, summarizing past studies on mesh sizes and pot/trap configurations, further examining data issues related to trip-level landings for scup, and analyzing the biological and economic impacts of modifying the quota period dates for the scup commercial fishery. The Council indicated that they would consider initiating a framework to modify the scup quota period dates after considering the available data and Monitoring Committee recommendations.

Summer Flounder Amendment Update and Goals and Objectives Workshop

The Council and Board are developing a comprehensive amendment to revisit important elements of the summer flounder fishery management plan (FMP). As part of this process, the Council and Board are revisiting the original FMP objectives and developing a revised set of goals and objectives for summer flounder management. To support this process, the Council contracted with the Fisheries Leadership and Sustainability Forum to solicit feedback from members of the Council's Demersal Committee, the Board, and members of both bodies' advisory panels on the structure, content, and use of the FMP goals and objectives. During the meeting, the Fisheries Forum presented a summary of this feedback and facilitated further discussion of revised goals and objectives for the summer flounder fishery. Based on this discussion, the Summer Flounder Amendment Fishery Management Action Team (FMAT) will refine the draft revisions to the goals and objectives for future review by the Council and Board.

The Council and Board also received an update from Council staff on amendment progress and additional FMAT recommendations. Although the FMAT recommended splitting recreational issues into a separate action due to ongoing changes to the recreational catch estimate methodology, the Council and Board did not take action to separate these issues. The Council and Board did acknowledge that some recreational issues, as well as recreational/commercial allocation issues, will likely need to be pursued later in the amendment process in order to incorporate revised time series of recreational catch. Next steps for the amendment include formation of issue-specific working groups to begin analyzing recreational and commercial issues.

Scup Gear Restricted Areas (GRA) Framework

The Council discussed a framework to modify the scup Gear Restricted Areas (GRAs). The GRAs were first implemented in 2000 and are intended to reduce scup discards in small mesh fisheries during certain times of the year. The GRAs have been modified several times in response to requests from commercial fishermen. In recent years, several advisors have recommended further modification of the GRAs. Additionally, an analysis by the NEFSC suggests that relatively high scup discards have occurred in areas and times outside of the GRAs in recent years. After reviewing discard information, advisor comments, and a proposed range of alternatives, the Council approved a set of alternatives that includes modifications to the boundaries of the northern and southern GRAs, as well as elimination of either or both GRAs. The Council decided not to include alternatives to modify the timing of the GRAs as there were no data or advisor comments to suggest that a change in timing is warranted. The Council will decide which, if any, modifications to implement at a second framework meeting, planned for the February 2016 Council meeting.

Golden Tilefish Framework 2

The first of two meetings was held to consider Framework 2 (FW2) to the Golden Tilefish Fishery Management Plan (FMP). FW2 was initiated to address a range of issues related to the administration and management of the golden tilefish fishery. The Council reviewed a preliminary range of alternatives and selected preferred alternatives for several issues. Staff will continue development of the framework for further consideration at the April 2016 Council meeting.

Blueline Tilefish

The Council reviewed a draft range of alternatives for the Blueline Tilefish Amendment to the Golden Tilefish FMP. The amendment considers adding blueline tilefish as a managed species in the Golden Tilefish FMP, effectively turning that plan into the Golden and Blueline Tilefish FMP. The Council initiated this action in early 2015 in response to recent evidence that commercial and recreational landings of blueline tilefish were increasing rapidly in the Mid-Atlantic. Emergency action had added conservation measures temporarily, but permanent management is still needed. The alternatives address a wide range of management issues, including:

1. Management Unit and Objectives
2. Status Determination Criteria
3. Commercial Permitting and Reporting
4. For-Hire Recreational Permitting and Reporting
5. Monitoring Committee
6. Framework Adjustments
7. Specifications Process and Risk Policy
8. Allocations and Specifications
9. Commercial Trip Limits
10. Recreational Bag/Possession Limits
11. Essential Fish Habitat (EFH) Designation
12. Accountability Measures

Although the amendment is still under development, the Council moved to identify the North Carolina/Virginia border as the preferred management unit for this action. The Council also voted to add a management objective that would reflect blueline tilefish's susceptibility to overfishing and highlight the need for an analytical stock assessment. Finally, the Council added a 750 pound trip limit as an option under the commercial trip limits alternatives.

Staff also provided an update on next steps, including plans to hold a workshop to develop recreational catch estimates for blueline tilefish in the Mid-Atlantic. The workshop will likely be held in January and will include members knowledgeable about the blueline tilefish fishery. Public hearings would be scheduled after the workshop so that the workshop results can be incorporated into the public information document.

Unmanaged Forage Omnibus Amendment

The Council first received a presentation on the Pacific Fishery Management Council's (PFMC) approach to protecting unfished and unmanaged forage fish species through their Ecosystem-Based Management Amendment 1. Rich Lincoln, PFMC Council member, provided an overview of the purpose and need for the amendment, the list of forage species included, development of trip and annual catch limits for unmanaged forage species, and exempted fishing permits for those species, among other topics.

Following a discussion of the PFMC approach, the Council received a presentation on a draft list of forage species developed by the unmanaged forage Fishery Management Action Team (FMAT) for potential inclusion in the Council's Unmanaged Forage Omnibus Amendment. The draft list was based on stomach content data from the NEFSC's biannual bottom trawl surveys, comments received through scoping, and a literature review. The Council requested that the FMAT make several refinements to the list, including (1) adding information on unmanaged forage species that are prey for highly migratory species and marine mammals, (2) focusing the list on low trophic-level species, and (3) grouping species into families where appropriate. The Council also suggested that the FMAT involve additional scientists with expert knowledge of forage species in developing a revised draft list of species.

In addition to providing input on the draft list of forage species for inclusion in the amendment, the Council tasked the FMAT with (1) compiling information on abundance of forage species over time and recent catch information, and (2) drafting options for trip-level catch limits for unmanaged forage species and options for a process to allow new fisheries to develop. Finally, the Council discussed a draft purpose statement and a draft range of alternatives for the amendment. The Council considered modifying the proposed purpose statement, but decided to postpone further discussion on the topic until after upcoming Ecosystem and Ocean Planning Advisory Panel and Committee meetings.

Non-Fishing Activities that Impact Fish Habitat

The Council approved a series of policies that articulate the Council's positions on anthropogenic activities that affect fish habitat. Developed as part of the Council's Habitat Project, the policies are intended to help the Council comment more effectively and collaborate with partners and other agencies to address threats to fish habitat. The policies address five categories of non-anthropogenic activity: wind energy, offshore oil, marine transport, liquefied natural gas, and coastal development. A separate policy is under development to address the impacts of fishing activities on habitat. The final policies and associated background documents are available on the Council's website at www.mafmc.org/habitat.

Additionally, the Council discussed proposed changes to the manner in which the GARFO Habitat Conservation Division (HCD) staff and Council staff communicate on activities that may impact fish habitat. The Council agreed to send a letter endorsing the proposed changes to HCD.

Other Business

Comprehensive 5-year Research Priority Plan: The Council approved a Comprehensive Research Priority Plan for 2016 – 2020. The plan outlines general and species-specific research priorities for the next five years. The Council briefly discussed establishing a working group or steering committee to facilitate implementation of the research plan but agreed to postpone action until the issue could be explored more thoroughly at a later date.

2016 Implementation Plan: The Council reviewed and approved the 2016 Implementation Plan, which details the upcoming year's planned actions and activities.

NEFSC Strategic Plan: The Council received a presentation from Dr. Bill Karp on the Northeast Fisheries Science Center's new strategic plan. Information about the plan is available on the NEFSC website at: http://www.nefsc.noaa.gov/rcb/stratplan/.

GARFO Recreational Implementation Plan: The Council received a presentation on a draft Recreational Fisheries Implementation Plan for the Greater Atlantic Region, which outlines regional strategies for implementing the National Saltwater Recreational Fisheries Policy.

MAFMC Statement of Organization, Practices, and Procedures: The Council approved revisions to its *Statement of Organization, Practices, and Procedures* (SOPP) document. The revisions were proposed to address and clarify issues related to employee benefits, retiree benefits, unused leave, and travel.

Collaborative Research Committee: The Council received a report from the Collaborative Research Committee regarding final research priorities for the 2016/2017 Collaborative Research Program.

Next Meeting

February 9 – 11, 2015: New Bern, NC
DoubleTree by Hilton New Bern-Riverfront
100 Middle Street New Bern, NC 28560
telephone: 252-638-3585

Marine Fisheries
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LOUIS DANIEL
Director

MEMORANDUM

TO: Dr. Louis B. Daniel III, Division of Marine Fisheries Director
Sammy Corbett, Marine Fisheries Commission Chairman

FROM: Randy Gregory
Division of Marine Fisheries, NCDEQ

DATE: January 29, 2016

SUBJECT: Highly Migratory Species Update

The Highly Migratory Species Advisory Panel's spring meeting will be held March 29 - 31, 2016 in Silver Spring, Maryland. The Advisory Panel will discuss Amendments to the 2006 Consolidated Highly Migratory Species Fishery Management Plan 5b on dusky sharks and 10 on Essential Fish Habitat, including lemon shark aggregations off southeast Florida and review implementation of Final Amendment 9 on smoothhound sharks.

Sharks

The Highly Migratory Species Fishery Management Division published the final rule for Amendment 9 on smoothhound sharks on November 23, 2015. This Amendment implements management measures in the shark fisheries and for fishermen fishing for smoothhound sharks (e.g., smooth dogfish, Florida smoothhound, and Gulf smoothhound) and fishermen who fish for sharks with gillnet gear. Management measures beginning March 15, 2016 include: commercial smoothhound shark permit for commercial fishing and retention; permit holders may only sell catch to federally-permitted shark dealers; Atlantic Shark Dealer permit to purchase smoothhound sharks; HMS Angling or HMS Charter/Headboat recreational permit for retention of recreationally-caught smoothhound sharks; commercial quotas for the smoothhound shark fisheries will be 1,201.7 metric tons dressed weight in the Atlantic region; commercial fishermen may remove the fins of smooth dogfish if they meet the criteria consistent with the Shark Conservation Act of 2010; limit soak times to 24 hours when using sink gillnet gear; and conduct a net check at least every two hours when using drift gillnet gear.

In January, National Marine Fisheries Service announced the 90-day finding on a petition to list the oceanic whitetip shark (Carcharhinus longimanus) range-wide, or in the alternative, as one or more distinct population segments identified by the petitioners as endangered or threatened under the U.S. Endangered Species Act.

Bluefin Tuna

As of January 28, 2016, preliminary commercial landings for the General category 2016 fishing year were 0.4 metric tons. The General category 2016 January sub-quota (January 1 through March 31) is 49 metric tons.