

**MARINE FISHERIES COMMISSION BUSINESS MEETING**  
**Hilton Riverside, Wilmington, N.C.**  
**Feb. 18-20, 2015**

*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. 18**

6 p.m.

Public Meeting

*Receive public comment relative to any fisheries management issues*

**Feb. 19**

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*

9:45 a.m.

Chairman's Report

*Review administrative actions and issues from the chair*

- Letters
- Advisory Committee Appointments
- Ethics Training Reminder
- 2015 Meeting Schedule Reminder

10 a.m.

Issues from Commissioners

10:15 a.m.

Committee Reports

*Review and consideration of action items from committee meetings*

- Coastal Recreational Fishing License – Louis Daniel
- Oyster and Hard Clam Fishery Management Plans

10:30 a.m.

Rulemaking Update and Fishery Management Plan Final Approval– Catherine Blum

- 2014/2015 Rulemaking Cycle
- Review public comment, vote on final rules and approval of final fishery management plans.*
- Review of Hearings and Public Comment
  - **Vote on Final Approval of the Shrimp Fishery Management Plan Amendment 1 and Associated Permanent Rules\*\***
  - **Vote on Final Approval of the N.C. Bay Scallop Fishery Management Plan Amendment 2 and Associated Permanent Rules\*\***
  - **Vote on Final Approval of the River Herring Fishery Management Plan Amendment 2 and Associated Permanent Rules\*\***

– **Other Rules**

- **Atlantic States Marine Fisheries Commission Interstate Fishery Management Plan for American Eel Addendum III\*\***
- **For-Hire Licensing and Logbooks\*\***
- **Ocean Pier Licensing Changes\*\***
- **User Conflict Rule Relocation\*\***
- **Queens Creek Coordinate Correction and Brunswick County Canal Name Change\*\***

- 11:30 a.m. Rule Suspensions – Kathy Rawls  
*The commission must vote to continue suspension of the following rules:*
- **Vote on Rule Suspension for Portions of 15A NCAC 03M .0519 Management of shad\*\***
  - **Vote on Rules Suspension for Portions of 15A NCAC 03Q .0107 Management of shad\*\***
- 11:45 a.m. Fishery Management Plans – Catherine Blum
- Status of Ongoing Plans
  - **Vote on sending the Striped Mullet Fishery Management Plan Amendment 1 Forward for Rulemaking\*\***
- Noon Lunch Recess
- 1:30 p.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, LLC 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\*\***
- 2 p.m. Stakeholder Workgroup/Bycatch Reduction Device Testing Update – Kevin Brown
- 2:30 p.m. Southern Flounder Stock Assessment – Will Smith and Tom Wadsworth (Presentation)
- 3:30 p.m. Sheepshead Management – Stephen Taylor (Presentation)
- 4 p.m. FY 2015/2016 Initiative Development – Louis Daniel
- 5 p.m. Tagging Program Overview - Mike Loeffler and Amy Comer (Presentation)
- 5:30 p.m. Recess

**Feb. 20**

- 8:30 a.m. N.C. Commercial Fishing Resource Fund Update – Jerry Schill
- 9 a.m. Director’s Report – Louis Daniel  
*Reports and updates on recent Division of Marine Fisheries activities.*
- Legislative Update
  - Atlantic States Marine Fisheries Commission
  - Quota Update
  - Landings Updates
    - Southern Flounder
    - Red Drum
    - Oyster
  - Protected Resources Update – Chris Batsavage
    - Observer Program
    - Incidental Take Permit Updates
  - Mid-Atlantic Fishery Management Council Update – Chris Batsavage
  - South Atlantic Fishery Management Council Update – Michelle Duval
  - Highly Migratory Species – Randy Gregory
  - Informational Materials
    - Rule Suspension Notices and Cobia Update/No Action Required

- Making Proclamations Easier to Understand
- Minimum Size of Effective Sanctuaries
- Average Trips and Weight of Red Drum
- Personal Consumption Survey

11:30 a.m. Issues from Commissioners

11:45 a.m. Meeting Assignments and Preview of Agenda Items for Upcoming Meeting – Nancy Fish

Noon Adjourn

**2015 Meeting Dates**

**Feb. 18-20 Hilton Riverside, Wilmington**

**May 20-22 Hilton Riverfront, New Bern**

**Aug. 19-21 Hilton Brownstone, Raleigh**

**Nov. 18-20 Jennette’s Pier, Nags Head**

*\* 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**  
**Department of Environment and Natural Resources Regional Office**  
**Washington, North Carolina**  
**Oct. 23, 2014**

The commission held a special called meeting Oct. 23 at the Department of Environment and Natural Resources, in Washington, North Carolina. This meeting was called at the request of commissioners to review various laws and rules that govern the panel's actions.

The briefing book and audio from this meeting can be found at <http://portal.ncdenr.org/web/mf/10-2014-meeting>.

Vice Chairman Anna Beckwith called the meeting to order at 10:30 a.m. and reminded commissioners of their ethics requirements.

The following commission members were in attendance: Anna Beckwith-Vice Chair, Sammy Corbett, Mikey Daniels, Kelly Darden, Mark Gorges, Chuck Laughridge, Joe Shute and Mike Wicker. There was a vacancy on the commission due to the death of Chairman Paul Rose.

There was no public comment period at this meeting.

**Rule Suspensions**

If the division director suspends any fisheries rules by proclamation, the commission must re-suspend those rules at the next meeting. The commission instructed the director to:

- Suspend the 3,000 yard maximum yardage rule for large-mesh gill nets and implement a 2,000-yard maximum yardage rule by proclamation;
- Suspend the Nov. 1 deadline for the striped bass gear permit;
- Suspend the rule for American eel harvest limits; and
- Suspend portions of the rule for flounder harvest limits.

**Motion to suspend portions of 15A NCAC 03J .0103 (gill net yardage restrictions).**

**Motion by Joe Shute and seconded by Mark Gorges.**

**Motion carries 8-0.**

**Motion to suspend portions of 15A NCAC 03O .0501 (Atlantic Ocean Striped Bass Commercial Gear Permit).**

**Motion by Chuck Laughridge and seconded by Kelly Darden.**

**Motion carries 8-0.**

**Motion to suspend 15A NCAC 03M .0510 (American eel harvest limits).**

**Motion by Mike Wicker and seconded by Mark Gorges.**

**Motion carries 8-0.**

**Motion to suspend portions of 15A NCAC 03M .0503 (flounder).  
Motion by Mark Gorges and seconded Joe Shute.  
Motion carries 8-0.**

**Overview of Various Authorities and Processes**

The commission's counsel, Assistant Attorney General Jennie Hauser, discussed the various laws that establish the scope and purpose and duties and powers of the commission. She also reviewed relevant statutes that govern the commission's rulemaking authorities and requirements.

The commission had a working lunch, while division staff reviewed guidelines and authorities pertaining to proclamations, fishery management plans, and the division's rule development processes. Staff also discussed and reviewed examples of actions that could conflict with existing laws, rules or processes.

**Budget Update**

Division Deputy Director Dee Lupton provided an overview of the division's budget situation. Since Fiscal Year 2009-2010, the division has lost 42 percent of state appropriations and 38.5 state-appropriated positions. These reductions limit the division's ability to take on new mandates, while it strives to address core mission functions.

**Initiative Development**

Division Director Louis Daniel asked the commission if there was interest in developing annual initiatives rather than having large number of new issues and assignments being brought up at each meeting. The commission could select three or four priorities that it wants to accomplish annually. The commission felt this concept was worth pursuing. Commissioners were asked to develop initiatives for consideration, with selection of the top three or four initiatives slated for the May business meeting. The initiatives would be developed on a fiscal year basis, beginning July 1, to match the division's Strategic and Annual Operations Plan and the Fishery Management Plan Development Schedule.

Director Daniel announced that Governor McCrory had selected Sammy Corbett as the new chairman of the Marine Fisheries Commission.

**The meeting adjourned.**



**THE MFC ADVISER**  
**Marine Fisheries Commission Business Meeting**  
**Hilton Garden Inn, Kitty Hawk, North Carolina**  
**Nov. 19-21, 2014**

The commission held a public meeting on the evening of Nov. 19, followed by a business meeting Nov. 20-21, at the Hilton Garden Inn Hotel in Kitty Hawk, North Carolina.

The briefing book, presentations and audio from this meeting can be found at <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book>.

**PUBLIC MEETING – Nov. 19**

Chairman Sammy Corbett called the meeting to order at 6 p.m. announcing the session would begin with an informal question and answer period, followed by a public comment period at 6:30 p.m. The following individuals spoke:

**Question and Answer Session**

**Terry Pratt**, president of the Albemarle Fishermen’s Association, asked why North Carolina is the only state that has applied for an incidental take permit for sturgeon, why the state did not obtain an exemption, if the state had tried to have sturgeon delisted as an endangered or threatened species under the federal Endangered Species Act, were habitat implications considered and he pointed out that sturgeon spawning areas were located in inland waters.

Division of Marine Fisheries Director Louis Daniel responded that North Carolina was not the only state to apply for an incidental take permit for sturgeon - that Georgia has applied and received a permit and other states are also applying for a permit. He explained that the National Marine Fisheries Service recommended North Carolina get the permit because of our state’s internal gill net fishery. He said he was not aware of any state allowed to apply for exemptions to the Endangered Species Act and that North Carolina, along with all other East Coast states, have asked for sturgeon to be delisted and for a stock assessment to be conducted. Director Daniel said he was aware of habitat concerns and challenges associated with sturgeon and that the strategic habitat area nominations, which are part of the Coastal Habitat Protection Plan, are being discussed later in this meeting, and they can play an important role in protecting habitat so that we can have sustainable fisheries.

**James Fletcher**, representing the United National Fishermen’s Association, asked when the division was going to ask the Department of Environment and Natural Resources to stop allowing wastewater to be put into our rivers and sounds.

Director Daniel responded that previously the commission had submitted a paper to the General Assembly on endocrine disruptions and their impacts to fisheries. He also said water quality was a focus of the work being done with the Coastal Habitat Protection Plan.

**Brent Fulcher**, chair of the N.C. Fisheries Association, asked if there was any flexibility in modifying the areas (lines) used for sea turtle management in the incidental take permit and who set the management areas.

Director Daniel said the management areas were developed by the division and are based on types of fisheries in that particular area and where sea turtles occur. He pointed out that if the areas are changed, then the number of allowed sea turtle interactions in the individual management areas will change, but that he would not anticipate the total number of sea turtle interactions to increase. He said redrawing the management area lines will require reanalysis and that the issue is being examined and discussed with the National Marine Fisheries Service.

**Asa Gray**, a commercial fisherman from Rodanthe, asked why the management areas under the incidental take permit were different than the old Pamlico Sound Gill Net Restricted Area, if the state was fighting to get the number of allowable sea turtle interactions increased and said he wants smaller management areas. He asked if there could be a night fishery for flounder and said that he had not seen the state do anything to help commercial fishermen for the last two years and that he was worried about the future of commercial fishing. He thinks Pamlico Sound is big enough for sea turtles and fishermen.

Director Daniel explained that the Pamlico Sound Gill Net Restricted Area was in effect prior to the statewide incidental take permit going into effect and that permit was part of a legal settlement agreement. He said the management areas laid out in the incidental take permit were selected because of the way the fisheries operated and that the state did not want to include areas without turtle interactions in areas with turtle interactions. He pointed out that if Pamlico Sound was broken into smaller areas, the numbers of allowed turtle takes would decrease.

Chairman Corbett said he had previously served on the Sea Turtle Advisory Committee and that the state did fight for the fishermen during the deliberations leading up to the settlement agreement and in developing the incidental take permit. He encouraged fishermen to become involved in the commission's advisory committee process.

**Andrew Berry**, commercial fisherman from Manteo, asked about the number of sea turtle interactions allowed under the incidental take permit, how many turtles had been taken and if the management area that encompasses Oregon Inlet could be modified.

Director Daniel said that Chris Batsavage, the head of the division's Protected Resources Section, would be giving a full report on interactions in the various areas later in the meeting. Batsavage explained that there were fewer takes for certain species in different areas and once we hit threshold takes for any specific species in any management area, then that area must shut down.

**Britton Shackelford**, president of the N.C. Waterman United, asked how many dead turtles have to be caught in Management Area A before it is shut down. He asked if the annual review of the incidental take permit included a reassessment of take allowances and then questioned how many sturgeon interactions it would take to shut the state down.

Batsavage explained that in Management Area A it would take four turtles of any species or disposition to close the area and that the annual review will be submitted to the National Marine Fisheries Service in January. Director Daniel said that the sturgeon incidental take permit was different than the turtle permit and there could be a much larger number of live interactions, but

only a small number of dead interactions and that there had already been two dead sturgeons this year and another one could shut the fishery down.

**Joe Wilson**, a commercial fisherman, asked if it is about the nets or is it about the turtles. He also asked if proclamations could be made simpler, if sheepshead and speckled trout could be added as target species for red drum and that he would like to see the state ease up on restrictions on circle nets.

Director Daniel said the incidental take permit restrictions were about sea turtles and the federal Endangered Species Act and a lawsuit filed against the division and the commission by the Duke Environmental Clinic. He said the state was trying to do everything it could to protect sea turtles and maintain our fisheries.

### **Formal Comment Period**

**Jeff Cradle**, a commercial fisherman from Hyde County, asked to restore the shrimp trawl boundaries in Pungo River to what it was prior to 2006 for the small boats and proposed allowing 50-foot head rope length in the area July 1-Nov. 31. He said he had a petition with 140 signatures requesting this change.

**Bobby Sharon**, a commercial fisherman, said there were plenty of shad during the last season and that bycatch on striped bass was minimal, and they could have had a fantastic season if they had been allowed to catch the shad.

**Ernest Dozier**, spoke on behalf of the Ocracoke Working Watermen's Association, saying fishermen relied on the large net gill net fishery in summer when demand was high and in fall when the flounder are running. He encouraged the division to revisit the current level of sea turtle interactions allowed in the incidental take permit. He encouraged commission to act quickly to implement and management changes to red drum that would result from the Atlantic States Marine Fisheries Commission's stock assessment because it was an important species. He said he was seeing a great improvement in gray trout and wants the state to work with the Atlantic States Marine Fisheries Commission to determine why N.C. stocks are rebounding. He closed by saying tourism very important to local economy and it depends on fresh, local seafood.

**Chris McCaffity**, a commercial fisherman from Morehead City, provided more detail about the visioning project he is developing to enhance N.C. fisheries. He advocated allowing license holders to vote to decide how license revenues will be used and how quotas are managed. He wants the state to do more to grow native fish and shellfish in hatcheries and stock them in our state's water bodies to enhance populations, to replant grass beds, lift the river herring moratorium and reduce regulatory discards.

**Earl Ward, Jr.**, a commercial fisherman from the Albemarle Sound, said he had never caught a sea turtle and that there were plenty of shad and he requested a 45-day fishing season for shad to start in February. He said there was not a striped bass bycatch problem this past season.

**James Fletcher**, representing the United National Fishermen's Association, said as stocks improve, regulations do not allow more retention, which creates more regulatory discards. He wants coastal residents to be able to keep two to three large red drum and he advocated using a

total length retention to stop wasting fish. He said he felt it would be financially more beneficial for the state's aquariums to be used as resource centers and set up as hatcheries to stock fish.

**Ron Curtis**, with the N.C. Lions Visually Impaired Fishing Tournament Board, thanked Director Daniel and the division for help with a recent tournament in Dare County.

**Ernie Foster**, who runs the oldest charter operation in the state out of Hatteras, said Dare County has the largest tourism impact in the state and that the county's tourism board has opposed things like game fish status because the county needs a diversified economy. He said the county also has a relatively large commercial fishing impact and that it should not have to fight to maintain this. Dare County should be example to the rest of the state, and the commission and the division should be their champions and not remain mute.

**Andrew Berry**, commercial fisherman from Manteo, said if fishermen were not using large mesh runaround drop nets appropriately they should have been issued citations, but that the gear should not have been restricted. He requested that the shad season in the Pamlico Sound and Albemarle Sound Management Area be opened at the same time in January and run through March. He said there was very limited striped bass bycatch.

**Rom Whittaker**, a charter fisherman from Hatteras, said three minutes was not long enough to address the commission. He said the charter/for-hire fishermen represented a \$700 million industry, yet they do not have a seat on the commission. He feels logbooks are getting stuffed down their throats and that while the state does an excellent job of collecting for-hire data, he thinks logbooks are unnecessary and he is skeptical about what data will do. He talked about the South Atlantic Fishery Management Council's catch limit for tilefish going from 18 per day to 1 per day and said it is ridiculous. Extrapolations and logbooks are why the new catch limits are in place. Commissioner Anna Beckwith said the South Atlantic is hoping to fix some of the problems Whittaker mentioned, but the numbers used for tilefish came from the MRIP program, not logbooks.

**Asa Gray**, a commercial fisherman from Rodanthe, said there should be some kind of night fishery for flounder allowed, at least to provide fish for the restaurants. He requested that speckled trout and shad be allowed to be target species for drum. He said the transportation restrictions for red drum needs to be changed because a lot of fishermen ride together to the fish house and they should be allowed to transport more than one limit of red drum if both fishermen have their targeted species.

**Brent Fulcher**, chair of the N.C. Fisheries Association, thanked the commission for meeting in Dare County. He asked the commission to encourage the division to simplify all rules and proclamations because they can be difficult to understand. He said his organization strongly opposed North Carolina entering into a joint enforcement agreement with the National Marine Fisheries Service and they would like the commission to ask the division to implement a fisherman call-in system for the Observer Program. He asked to maintain status quo on striped mullet, saying there had been no problem with the stock for 14 years and he did not see reason to change management. He encouraged the commission to get the Sea Turtle Advisory Committee to start meeting again and he wants the commission and the division to push the Atlantic States Marine Fisheries Commission to complete its stock assessment of red drum as soon as possible.

**Warren Judge**, chairman of the Dare County Commissioners, thanked the commission for meeting in Dare County and encouraged it to come back on annual basis. He urged the commission to listen to fishermen and include them in the management process to improve the fisheries. He talked about problems with keeping Oregon Inlet open and that people want fresh seafood and it was important to keep fishing jobs. He doesn't want the commission to bow down to the federal government and said we do not need to study things to death. He closed by saying Gov. McCrory has indicated that state agencies will not get in the way of economic development, so let's figure out how to let people fish and let the turtle swim.

**Mark Rablick**, who works with Etheridge Seafood, said he made his living from fishermen and he talked about the challenges the industry has faced over the last 20 years. He said commercial fishing is something we should be proud of and he hates to see this heritage slipping away. He asked if striped bass do show up within state waters this upcoming season, to let the guys fish, and if we go over the quota to take it off the next year.

**Britton Shackelford**, president of N.C. Watermen United, reiterated his organization's opposition to North Carolina entering into a joint enforcement agreement with the National Marine Fisheries Service. He also asked the commission to allow two men to fish together and keep their limits, especially this time of year when it's cold for safety purposes. He said the paid observers have not worked out and that Marine Patrol should handle the observer work and that their back pay issues should be resolved. He closed by saying the commission should be very particular about who it suggests for advisory committees.

**Mike Blanton**, a commercial fisherman from the Albemarle Sound, said he had recently gotten back into commercial fishing and had bought thousands of dollars of gear, but had not made any money because of the restrictions. He said he would like a full shad season and that he opposed the joint enforcement agreement.

**Dennis Cox**, a commercial fisherman, said he would like to be able to catch herring to take pressure off crabbing. He asked the commission to let fishermen catch the fish to make money to provide for their families.

**Phil Ray Haywood**, a retired fisherman, said he thinks Director Daniel tries to do a good job, but the commission does not. He thinks proclamations are hard to read and would like them simplified. He said where he fishes, he doesn't get bluefish or black drum, so if the flounder catch slows down he has to throw his red drum overboard and he asked for more species to be added to the targeted species. He said putting turtles ahead of people, when fishermen are what is feeding this country, is wrong.

#### **BUSINESS MEETING - MOTIONS AND ACTIONS – Nov. 20-21**

Chairman Sammy Corbett convened the Marine Fisheries Commission business meeting at 9 a.m. and reminded commissioners of their ethics requirements.

The following commission members were in attendance: Sammy Corbett-Chairman, Anna Beckwith-Vice Chair, Mikey Daniels, Kelly Darden, Mark Gorges, Chuck Laughridge, Joe Shute, Mike Wicker and Alison Willis.

Commissioner Anna Beckwith announced she would not be deliberating or voting on the South Atlantic Fishery Management Council nominations.

Chairman Corbett reported that Alison Willis had been sworn in as a new commission member earlier that morning and read the Evaluation of Statement of Economic Interest from the State Ethics' Commission for Commissioner Willis. The Ethics' Commission did not find an actual conflict of interest, but found the potential for a conflict of interest, but the potential conflict identified does not prohibit her service on the Marine Fisheries Commission.

The commission recognized Paul Rose, who served as chair from July 30, 2013 until Sept. 24, 2014, when he passed away unexpectedly.

**The agenda approved by consensus.**

**Motion by Mark Gorges to approve minutes from August 2014 meeting. Seconded by Mike Wicker.**

**Motion passes without objection.**

#### **Public Comment**

**Riley Williams**, a commercial fisherman from Chowan County, asked for split shad season for different areas of the Albemarle Sound. He said gill netters had a bad year and that while pound netters may be catching flounder, the gill netters are not. He said he was upset that the commercial sector had a specific total allocation by season for red drum, but the recreational sector did not and therefore that was not fair. He closed by asking the commission to let people catch herring, rather than having to throw them back if they are caught when other species are being targeted.

**Chris Elkins**, speaking for the Coastal Conservation Association - N.C., asked the commission not to consider former division employees as nominees for regional council seats. He asked the commission to reestablish the Coastal Recreational Fishing License Advisory Committee to give the commission needed input from anglers. He said he was disappointed hearing so many fishermen last night ask to fish on stocks listed as depleted or concerned and he asked that the 2014 regulations be re-implemented for shad; that the commission support Option B of the Atlantic States Marine Fisheries Commission's amendment for striped bass and that the commission support the adjustment of spawning potential ratio for striped mullet.

**Jerry Schill**, president of the N.C. Fisheries Association, said his organization opposed North Carolina entering into a joint enforcement agreement with the National Marine Fisheries Service. He asked the commission to encourage the division to adopt a call-in program for gill net observer coverage, to keep striped mullet at status quo, to adopt a Sea Turtle Advisory Committee as soon as possible, and to consider using adaptive management measures for shad. He said there were too many law enforcement officers present at the meeting and that we need to stand together against overbearing regulations at the federal level and find areas of agreement.

**Wally Overman**, a Dare County Commissioner, thanked the commission for meeting in Dare County and asked it to come back annually. He said Dare County stands behind commercial and charter fishermen. He said the state needed to be more supportive of fishermen and that management measures were too controlling and punitive. He said there needed to be a stock assessment for sea turtles and that the state needed to get input from fishermen on management measures and to help with Oregon Inlet.

**David Sneed**, executive director of the Coastal Conservation Association - N.C., said for the Conservation Fund, his organization supports use of circle hooks and thinks the educational proposal is an appropriate use of funds; but they do not think the shrimp trawl bycatch proposal is an appropriate use of the monies. He said they support the Strategic Habitat Area nominations, but they are disappointed about buoys being removed from artificial reefs in the ocean. They are glad the commission has stopped the removal to look for alternative funding and they believe coastal communities are willing to support using Coastal Recreational Fishing License funding for this purpose.

**Dewey Hemilright**, a member of the Mid-Atlantic Council and a commercial fisherman from Dare County, said the blue-line tilefish stock assessment was a debacle and he thanked the division for opposing Amendment 32. He asked the commission to forward letter to legislators and governor about the lack of standards at the federal offices of Highly Migratory Species and Protected Resources. He opposes the joint enforcement agreement and said the Sea Turtle Advisory Committee needed to begin meeting again soon. He asked the commission to help with the Oregon Inlet shoaling issues and thanked the commission for its role in his reappointment to the Mid-Atlantic Council.

**Dave Tempie**, a guide out of Wilmington, said he supports the for-hire logbook provided some of the issues could be worked out and he encouraged the division to get input from other for-hire captains and do more outreach.

**Terry Pratt**, president of the Albemarle Fishermen's Association, asked the commission to continue the discretionary harvest permit on river herring, and suspend the harvest moratorium for three years to undertake more research. He said there needed to be more dedicated effort to preserve habitat. He pointed out that the General Assembly wants to reduce regulatory burden and that the commission, not the division, sets policy and procedure and has the ultimate responsibility for managing fisheries. He asked the commission to maintain status quo on striped mullet, and oppose the joint enforcement agreement. He said we need less government, not more and that meetings should be held in different locations and people should be given more time to speak.

**Lauren Morris**, with the N.C. Fisheries Association, said she hoped there could be more division employees at the State Fair next year and she asked the commission to encourage the division to make sure technical documents were written as clearly as possible, because technical language is not accessible or understandable for fishermen. She suggested that a companion document accompany technical documents explaining things in layman's terms. She supported industry research funding from the Conservation Fund, and felt that was an appropriate use of those monies. She opposed the joint enforcement agreement.

**Jessica Marlies**, said that she wanted to offer remarks as a private citizen and that Nov. 21 would be her last day working with the Department of Environment and Natural Resources. She said she was lucky to work with Director Daniel and that it had been the highlight of her career. She thanked the division staff and said they were among the hardest working people she had ever come across and she also thanked colleagues in the Attorney General's Office and the department.

### **Chairman's Report**

Chairman Corbett reviewed letters that were received and sent on various issues, including:

- A letter to Governor McCrory endorsing legislation to allow Marine Patrol to enter into a Joint Enforcement Agreement with the National Marine Fisheries Service. All the members of the General Assembly and Department of Environment and Natural Resources Secretary John Skvarla were copied on the letter.
- A letter to an adviser who received a citation, suspending him from the Southern Advisory Committee pending the resolution of his case.
- A letter from N.C. Waterman United asking questions about endangered species, incidental take permits and the Observer Program and requesting a meeting with the division.
- A letter from the Coastal Conservation Association of North Carolina commenting on various items the commission will be deliberating on at this meeting.

Commission members were reminded about their mandatory ethics training requirements.

The commission was reminded of its 2015 business meeting schedule:

Feb. 18-20     Hilton Riverside, Wilmington  
May 20-22     Hilton Riverfront, New Bern  
Aug. 19-21     Hilton Brownstone, Raleigh  
Nov. 18-20     Jennette's Pier, Nags Head

**2015 Initiative Development** – Commissioners were asked to provide staff with the top two initiatives they would like to see the commission tackle in FY 2015. The division will give the commission an overview of what it would take to accomplish each suggestion and provide that information at its February meeting. Then at its May meeting, the commission will select the top two or three initiatives it wants to move forward with starting July 1, 2015.

**Joint Enforcement Agreement Letter** – The commission voted to resend a letter to Governor McCrory supporting the joint enforcement agreement, copying the secretary of the Department of Environment and Natural Resources and the newly-elected members of the General Assembly, providing additional information on the timeline for the program and budget information.

**Motion by Chuck Laughridge to send letter to legislators and governor's and secretary's office to support a Joint Enforcement Agreement. Seconded by Mike Wicker.**  
**Motion withdrawn.**

**Motion by Mike Wicker to resend a letter to newly-elected legislators, the governor's and secretary's office in support of the Joint Enforcement Agreement with additional**



**information on the timeliness factor and budget information. Seconded by Chuck Laughridge.  
Motion passes 6-2, with 1 abstention.**

### **Issues from Commissioners**

Commissioner Beckwith said she had met with staff and determined that the only way to make the Oriental Artificial Reef a recreational hook-and-line only reef would be through the rulemaking process. There was discussion about creating sanctuary reefs and possible funding options. Commissioner Laughridge asked staff to put together information about the minimum size a sanctuary would have to be to be effective.

Commissioner Daniels talked about the need to bring the truth to the table and his desire to help people. He discussed wanting to increase the limits for red drum, open the shad season on Jan. 15 and allow river herring to be harvested.

### **Committee Reports**

The commission received minutes from all of the advisory committees that had met since the last commission meeting and received the following reports from advisory committees that had action items:

**Nominating Committee** – Michelle Duval, the division staff lead for the commission's Nominating Committee, explained the council nominating process and reported the committee met on Oct., 1, 2014 and had voted to forward the names of Anna Beckwith, Bernie McCants and Bob Lorenz to the commission for consideration for the at-large seat on the South Atlantic Fishery Management Council. The committee also voted to forward the names of Preston Pate, Sara Winslow, Tom Roller and Roger Rulifson to the commission for consideration for the at-large seat on the Mid-Atlantic Fishery Management.

After deliberations the commission voted to forward the names of Anna Beckwith, Bernie McCants and Bob Lorenz to the governor as nominations for the at-large seat on the South Atlantic Fishery Management Council, and to forward the names of Preston Pate, Sara Winslow and Roger Rulifson to the governor as nominations for the at-large seat on the Mid-Atlantic Fishery Management Council.

Commissioner Beckwith stepped away from the table and did not participate in the discussion on nominations for the South Atlantic Fishery Management Council.

**Motion by Mike Wicker to send forward the names of Anna Beckwith, Bernie McCants and Bob Lorenz to the governor for the at-large seat on the South Atlantic Fishery Management Council. Seconded by Mark Gorges.  
Motion passes without opposition, with 1 abstention.**

**Motion by Mikey Daniels to remove Tom Roller from the names sent forth to the governor for the at-large seat on the Mid-Atlantic Fishery Management Council.  
Motion withdrawn.**

**Motion by Mikey Daniels to send forth the names of Preston Pate, Sara Winslow and Roger Rulifson to the governor for the at-large seat on the Mid-Atlantic Fishery Management Council. Seconded by Alison Willis.  
Motion passes 4-1, with 4 abstentions.**

**Conservation Fund Committee** – Randy Gregory, the division staff lead for the commission’s Conservation Fund Committee, reported the committee met on Oct., 28, 2014 to review two funding proposals from the Division of Marine Fisheries on circle hook education and technical solutions to reduce bycatch in the N.C. Shrimp trawl fishery. The committee recommended funding the circle hook education proposal for \$11,550 and to seek input from the full commission on funding the bycatch reduction proposal.

The commission approved the following grants:

- One grant for \$11,550 was to the division for an outreach and education campaign to promote the use of circle hooks when fishing with natural bait. The campaign will include videos and a brochure (with samples of circle hooks) that focus on proper fishing techniques to prevent release mortality.
- The other grant for \$70,598 was to the N.C. Division of Marine Fisheries to form an industry workgroup and provide for 30 sea days of testing if the commercial fishing industry pays for an additional 30 sea days of testing for a total of 60 sea days. The commercial fishing industry funding may be an in-kind match of fuel, use of vessels, etc. Testing of alternative gears to reduce bycatch in shrimp trawls is one of the management options selected by the commission in the draft Amendment 1 to the Shrimp Fishery Management Plan.

**Motion by Chuck Laughridge to approve the Circle Hook Education Grant for \$11,550 from the Conservation Fund. Seconded by Mikey Daniels.**

**Motion passes unanimously.**

**Motion by Anna Beckwith to approve funding for the proposal for Technical Solutions to Reduce Bycatch in the N.C. Shrimp Fishery with matching support from the commercial fishing industry for an additional 30 sea days and the associated cost in technicians and travel for those 30 sea days. Seconded by Joe Shute.**

**Motion passes 7-1, with 1 abstention.**

**Motion by Anna Beckwith to clarify that the match for the Technical Solutions to Reduce Bycatch in the North Carolina Shrimp Fishery grant may also be in-kind access to the 60 sea days. Seconded by Joe Shute.**

**Motion passes unanimously.**

**Sea Turtle Advisory Committee** – Chris Batsavage, the division staff lead for the commission’s Sea Turtle Advisory Committee, explained the committee was created in 2010 under a lawsuit settlement agreement between the state and the Karen Beasley Sea Turtle Rescue and Rehabilitation Center to assist in protecting threatened and endangered sea turtles. The settlement agreement provisions were incorporated into the Sea Turtle Incidental Take Permit issued to North Carolina by the National Marine Fisheries Service, thereby removing the mandate for the committee. The commission felt there was a need to continue with this committee, and voted to restructure its appointment and operating processes to align with those of other commission advisory committees. However, the division feels a committee charge is needed to facilitate effective operation of the panel. Batsavage requested the commission review the following proposed charge, make any needed changes and then formally adopt this charge.

Proposed Sea Turtle Advisory Committee Charge:

- Provide recommendations on reducing sea turtle interactions in commercial and recreational fisheries;
- Review information on sea turtle strandings and interactions; and
- Assist with public education.

**Motion by Chuck Laughridge to accept the charge of the Sea Turtle Advisory Committee as recommended by the Division of Marine Fisheries. Seconded by Alison Willis.**

**Motion passes unanimously.**

**Recreational Discard Mortality of Red Drum and Spotted Seatrout** – Division biologist Lee Paramore provided the commission with an update on recreational discard mortality for red drum and spotted seatrout.

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the “Presentation” section.

### **Fishery Management Plan Update**

Catherine Blum, the division’s fishery management plan coordinator, reviewed the status of various state and interjurisdictional fishery management plans.

Update on Shrimp FMP – Division biologist Kevin Brown updated the commission on the status of securing funding for bycatch reduction testing and forming a stakeholder group.

**Striped Mullet Fishery Management Plan** – Division biologist Jason Rock reviewed the public and advisory committee comment on Amendment 1 to the Striped Mullet Fishery Management Plan and then reviewed the management options. The commission chose its preferred management options for a draft amendment that included increasing the target fishing mortality reference point in recognition of striped mullet’s importance as prey species to many important finfish species.

The draft amendment also proposes prohibiting runaround, drift or other non-stationary gill nets from blocking more than two-thirds of a waterway or interfering with navigation (similar to the current rule for fixed or stationary gill nets).

Additionally, the amendment proposes removing the gill net attendance requirement from Oct. 1 through Nov. 30 in the Newport River Trawl Nets Prohibited Area while leaving it subject to an attendance requirement from May 1 through Sept. 30.

The commission approved sending the draft amendment for review by the secretary of the Department of Environment and Natural Resources and by the Joint Legislative Commission on Governmental Operations.

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the “Presentation” section.

**Motion by Mikey Daniels for status quo on the gill net attendance in the Newport River Trawl Nets Prohibited Area.**

**Motion fails for lack of second.**

**Motion by Chuck Laughridge to accept the division recommendation on Gill Net Attendance in the Newport River Trawl Nets Prohibited Area. Seconded by Kelly Darden. Motion passes 6-2, with 1 abstention.**

**Motion by Joe Shute to continue to handle conflicts in the striped mullet runaround gill net fishery on a case-by-case basis. Seconded by Mikey Daniels. Motion withdrawn.**

**Motion by Anna Beckwith to support the division recommendation for user conflict in the striped mullet runaround gill net fishery. Seconded by Chuck Laughridge. Motion passes 8-1.**

**Motion by Chuck Laughridge to update commercial landing triggers, change fishing mortality target from F30% to F35% spawning potential ratio and implement adaptive management for striped mullet. Seconded by Mark Gorges. Motion passes 5-3, with 1 abstention.**

**Motion by Mike Wicker to approve the draft amendment. Seconded by Chuck Laughridge. Motion passes 8-1.**

**Motion by Joe Shute to send the draft amendment for review by the secretary of the Department of Environment and Natural Resources and the Joint Legislative Commission on Governmental Operations. Seconded by Kelly Darden. Motion passes 8-1.**

### **Rulemaking**

Catherine Blum, the division's rulemaking coordinator, reviewed the 2014/2015 rulemaking cycle and updated the commission on hearings on proposed rules that were held on Oct. 28 in Washington and Oct. 29 in Wilmington. The commission will vote on these proposed rules at its February 2015 business meeting.

### **New Rule Suspension Policy**

Director Daniel reviewed a new policy for rule suspensions, explaining that the purpose of the new policy was to make the process more efficient. The rule for temporary suspension of rules requires that, when the division director implements a temporary rule suspension by proclamation, that the commission receives notification of the suspension at the next meeting following the rule suspension. This notification alerts the commission of the temporary rule suspension, provides them with information about the reason for the suspension, and allows them to take appropriate action at that meeting. In practice, the division has put every rule suspension to the commission as an agenda item at every meeting subsequent to the first suspension, and asked the commission to vote on continuing suspension. Following every meeting, the division goes through the notification process of the continued suspension (including drafting a new proclamation, posting it on the web site, and distributing it via email and U.S. mail.) This process has become burdensome to the division and the commission, taking meeting time and causing significant additional staff time and expense.

Going forward, when a rule suspension is first presented to the commission, assuming the commission agrees with the suspension, the commission will be asked to vote on whether to delegate to the director the authority to suspend the rule

- (a) indefinitely (continuing suspensions),
- (b) for a fixed time period (suspensions to a date certain) or
- (c) until external conditions/triggers occur (indefinite suspensions until trigger events or conditions.)

Following that initial vote, the commission will be kept informed as follows:

Continuing Suspensions will be reported by inclusion as a non-action, non-discussion informational item at every meeting by providing a copy of the suspensions in every commission briefing book and will reference that inclusion by notation on the agenda. In addition, the division will provide a verbal reminder and specific agenda reference of all current rule suspensions annually at every November meeting of the commission.

Suspensions to a Date Certain will be reversed by proclamation effective on the date certain and, while in effect, will be reported to the commission as if it were a continuing suspension. The division will report the end of the suspension as an agenda item at the next commission meeting following that date certain.

Indefinite Suspensions until Trigger Events or Conditions will be continued until the triggering event/condition occurs and will be reported to the commission while ongoing as if it were a continuing suspension. The division will report the change in conditions/tripping of a trigger as an agenda item at the next commission meeting following the occurrence of the condition/trigger.

Director Daniel explained this policy will not prohibit reconsideration of a prior rule suspension in accordance with G.S. 113-221.1 (d), it will simply eliminate the additional time and effort where continuing suspensions are agreed upon. New commissioners will receive a copy of this policy, along with a copy of all current rule suspensions at the time that they join the commission so that they will have specific notice that these rule suspensions are in effect. New suspensions will continue to be presented to the commission at its next meeting following the initial suspension.

### **Rule Suspensions**

The commission instructed the director to:

- Suspend the 3,000 yard maximum yardage rule for large-mesh gill nets and implement a 2,000-yard maximum yardage rule by proclamation;
- Suspend the Nov. 1 deadline for the striped bass gear permit; and
- Suspend the rule for American eel harvest limits.

**Motion by Chuck Laughridge to suspend portions of 15A NCAC 03J.0103 Gill Net Yardage Restrictions indefinitely. Seconded by Joe Shute.**

**Motion passes unanimously.**

**Motion by Kelly Darden to suspend portions of 15A NCAC 03O .0501 Atlantic Ocean Striped Bass Gear Permit to the effective date of the current rule package. Seconded by Mark Gorges.**

**Motion passes unanimously.**

**Motion by Chuck Laughridge to suspend 15A NCAC 03M .0510 American Eel Harvest Limits until the effective date of the current rule package. Seconded by Mike Wicker. Motion passes unanimously.**

### **For-Hire Logbook Update**

Doug Mumford, the division's recreational statistics coordinator, presented information on a proposed for-hire logbook.

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the "Presentation" section.

### **Region 3 Strategic Habitat Area Nominations**

Division biologist Anne Deaton reviewed advisory committee and public comments on nominations for Region 3 strategic habitat area nominations. Strategic habitat areas are a subset of coastal waters. The areas collectively contain diverse, high quality fish habitats that have been identified to provide exceptional habitat function to regionally important species, or are at risk due to rarity, vulnerability or an imminent threat. The N.C. Coastal Habitat Protection Plan recommended identifying strategic habitat areas to prioritize aquatic habitats for protection, enhancement and restoration. Region 3 encompasses areas in the White Oak system, from Ocracoke Inlet to Stump Sound, where strategic habitat areas were identified through a scientifically-based process. No regulatory changes are proposed for strategic habitat areas. Resource managers from various agencies will work together to develop non regulatory conservation measures to address the specific concerns for each strategic habitat area.

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the "Presentation" section.

The commission approved the nominations for Strategic Habitat Area Nominations for Region 3 for inclusion in the Coastal Habitat Protection Plan.

**Motion by Mike Wicker to approve Region 3 Strategic Habitat Area nominations. Seconded by Mikey Daniels. Motion passes unanimously.**

**American Shad Sustainable Fishery Plan** – Division biologist Lindsey Staszak reported that no thresholds were exceeded for any of the sustainability parameters that had been established for the 2014 commercial shad season. She then reviewed the commercial seasons for 2015 for the following areas:

Albemarle/Roanoke System: March 3 – March 24  
Neuse: Feb. 15 – April 14  
Tar/Pamlico: Feb. 15 – April 14  
Cape Fear: Feb. 20 – April 11

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the “Presentation” section.

**Motion by Mikey Daniels to change American shad season back to 2013 season.  
Motion fails for lack of second.**

**Estuarine Striped Bass Adaptive Management Measures** – Division biologist Charlton Godwin reported that the 2013 stock assessment indicated that fishing mortality was over the established target and that a reduction in the total allowable landing is needed to remain in compliance with Addendum IV to the Atlantic States Marine Fisheries Commission’s Interstate Fishery Management Plan for Atlantic Striped Bass. Therefore, Amendment 1 to the N.C. Striped bass Fishery Management Plan would be revised to implement a new total allowable landings of 275,000 pounds for the Albemarle/Roanoke striped bass stock effective Jan.1, 2015.

To view the presentation, go to <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book> and scroll down to the “Presentation” section.

**Issues from Commissioners**

The following concerns were brought forward regarding southern flounder and red drum:

**Southern Flounder**

**Motion by Mikey Daniels to open southern flounder to gill nets in December.  
Motion fails for lack of a second.**

**Red Drum**

**Motion by Mikey Daniels to allow two limits of red drum to be transported in a vehicle from the boat to the market by two license holders, so long as appropriate targeted catch is transported with the red drum. Seconded by Alison Willis.  
Motion passes 6-1, with 2 abstentions.**

**Motion by Chuck Laughridge to table the discussion regarding the previous motion until the February 2015 meeting.  
Motion fails for lack of second.**

**The meeting adjourned.**

The briefing book, presentations and audio from this meeting can be found at <http://portal.ncdenr.org/web/mf/nov-2014-briefing-book>.





# Chairman's Report







**NORTH CAROLINA MARINE FISHERIES COMMISSION  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

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Harkers Island

January 6, 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. 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.

<b><u>Project Title</u></b>	<b><u>FY 2015-16 Funding</u></b>
Take a Kid Fishing	\$25,000
Improving Fish Production of Artificial Reefs	\$137,434
Marine Patrol Education Team	\$28,650
N.C. Saltwater Fishing Tournament	\$21,500
N.C. Recreational Fishing Digest	\$36,750
Wright's Creek Boating Access Area	\$400,000
Step by Step: Encouraging Ethical Angling	\$11,692
Improving Water Temp Data Recording	\$17,675
Full Time Law Enforcement Officer	\$204,600
Temporary Tele-Communication Employee	\$40,499

Cooperative Winter Tagging Cruise 2016	\$105,918
Marine Fisheries Fellowship Program	\$50,822
Evaluations of Changes in Available Spawning for River Herring	\$42,947
Linking Water Quality to Determine Strategic Habitat Area Quality	\$81,371
Quantifying Fish Enhancement and Erosion Protection by Marsh Sills	\$89,908
Prediction Frequency and Duration of Hypoxic Exposure	\$98,488
Refining Reef-Restoration Techniques	\$106,937
Mapping Surveys in Low-Salinity Habitats	\$51,432
<b>Total</b>	<b>\$1,551,623</b>

Jeannie Betts, Controller for N.C. Department of Environment and Natural Resources (DENR) will process these disbursements from the cash available in the fund. The Division of Marine Fisheries assigned coordinator for these projects is Beth Govoni and can be reached at (252) 808-8004 with any questions.

Sincerely,




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Sammy Corbett, Chairman  
Marine Fisheries Commission

cc: Mercidee Benton, OSBM Budget Analyst  
Louis Daniel, DMF Director  
Doug Lewis, DENR Director BP&A  
Jeannie Betts, DENR Controller



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Jan. 12, 2015

Mr. Preston P. Pate  
1391 Highway 24  
Newport, NC 28570

Dear Mr. Pate,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an at-large appointment to the Mid-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. 19-21, 2014 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. 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](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. 9, 2015 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, 2015.

I wish to congratulate you on your selection by the commission as a nominee for an at-large appointment to the Mid-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](mailto:michelle.duval@ncdenr.gov) if you need additional information concerning the nomination process.

Sincerely,

A handwritten signature in black ink that reads "Sammy Corbett". The signature is written in a cursive, flowing style.

Sammy Corbett, Chairman  
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Ives            Louis Daniel  
    Neal Robbins        Nancy Fish  
    Carr McLamb        Michelle Duval  
    Cecilia Holden





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Jan. 12, 2015

Dr. Roger A. Rulifson  
110 Field Street  
Greenville, NC 27858

Dear Dr. Rulifson,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an at-large appointment to the Mid-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. 19-21, 2014 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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MD/nf

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Jan. 12, 2015

Ms. Sara E. Winslow  
442 Sutton Road  
Merry Hill, NC 27957

Dear Ms. Winslow,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an at-large appointment to the Mid-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. 19-21, 2014 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,

A handwritten signature in cursive script that reads "Sammy Corbett".

Sammy Corbett, Chairman  
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Ives                      Louis Daniel  
Neal Robbins                      Nancy Fish  
Carr McLamb                      Michelle Duval  
Cecilia Holden





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Jan. 12, 2015

Ms. Anna B. Beckwith  
1907 Paulette Road  
Morehead City, NC 28557

Dear Ms. Beckwith,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an at-large 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. 19-21, 2014 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,

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Sammy Corbett, Chairman  
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Ives            Louis Daniel  
Neal Robbins        Nancy Fish  
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Cecilia Holden





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Raleigh  
**ALISON WILLIS**  
Harkers Island

Jan. 12, 2015

Mr. Robert J. Lorenz  
1509 Meridian Terrace  
Wilmington, NC 28411

Dear Mr. Lorenz,

The U.S. Secretary of Commerce has requested that Governor McCrory submit the names of qualified candidates to be considered for an at-large 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. 19-21, 2014 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. 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](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. 9, 2015 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, 2015.

I wish to congratulate you on your selection by the commission as a nominee for an at-large 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](mailto:michelle.duval@ncdenr.gov) if you need additional information concerning the nomination process.

Sincerely,

A handwritten signature in cursive script that reads "Sammy Corbett".

Sammy Corbett, Chairman  
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Ives            Louis Daniel  
Neal Robbins           Nancy Fish  
Carr McLamb          Michelle Duval  
Cecilia Holden





**NORTH CAROLINA MARINE FISHERIES COMMISSION  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

**COMMISSIONERS**

**PAT MCCRORY**  
Governor

**DONALD VAN DER VAART**  
Secretary

**SAMMY CORBETT**  
Chairman

**ANNA BECKWITH**  
Morehead City  
**MIKEY DANIELS**  
Wanchese  
**KELLY DARDEN**  
Greenville  
**MARK GORGES**  
Wrightsville Beach

**CHUCK LAUGHRIDGE**  
Harkers Island  
**JOE SHUTE**  
Morehead City  
**MIKE WICKER**  
Raleigh  
**ALISON WILLIS**  
Harkers Island

Jan. 12, 2015

Mr. Charles "Bernie" McCants  
2325 Windy Woods Dr.  
Raleigh, NC 27607

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 at-large 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. 19-21, 2014 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. 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](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. 9, 2015 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, 2015.

I wish to congratulate you on your selection by the commission as a nominee for an at-large 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](mailto:michelle.duval@ncdenr.gov) if you need additional information concerning the nomination process.

Sincerely,

A handwritten signature in black ink that reads "Sammy Corbett".

Sammy Corbett, Chairman  
N.C. Marine Fisheries Commission

MD/nf

Cc: Brad Ives            Louis Daniel  
Neal Robbins        Nancy Fish  
Carr McLamb        Michelle Duval  
Cecilia Holden





**N.C. MARINE FISHERIES COMMISSION**  
**NORTHERN REGIONAL ADVISORY COMMITTEE**  
*Co-chairs: Frank Folb and Sara Winslow*

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Sara Winslow, Merry Hill	<a href="mailto:fishsqueezeers@yahoo.com">fishsqueezeers@yahoo.com</a> 252-482-7152	01/01/17
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Capt. Steve Anthony Marine Patrol, Central District	<a href="mailto:steve.anthony@ncdenr.gov">steve.anthony@ncdenr.gov</a> 252-808-8134	
Sgt. Brian Long Marine Patrol, Northeast District	<a href="mailto:cbrian.long@ncdenr.gov">cbrian.long@ncdenr.gov</a> 252-808-8138	



**N.C. MARINE FISHERIES COMMISSION**  
**SOUTHERN REGIONAL ADVISORY COMMITTEE**

*Chair: Fred Scharf Co-Chair: Pam Morris*

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Christopher Hunt, Wilmington	<a href="mailto:chris.c.hunt28405@live.com">chris.c.hunt28405@live.com</a> 910-508-8708	01/01/18
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Bob Lorenz, Wilmington	<a href="mailto:rjlorenz@ec.rr.com">rjlorenz@ec.rr.com</a> 910-232-4755	01/01/17
Ron McPherson, Atlantic Beach	<a href="mailto:mcp221ab@earthlink.net">mcp221ab@earthlink.net</a> 252-723-8616	01/01/18
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Randy Proctor, Raleigh	<a href="mailto:rwpjrnc@yahoo.com">rwpjrnc@yahoo.com</a> 252-422-0293	01/01/16
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Tom Smith, Matthews	<a href="mailto:tjpjs1@gmail.com">tjpjs1@gmail.com</a> 704-877-8825	01/01/17
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Stephen Taylor Biologist Supervisor	<a href="mailto:stephen.taylor@ncdenr.gov">stephen.taylor@ncdenr.gov</a> 910-796-7289	
Capt. Jason Walker Marine Patrol, Southern District	<a href="mailto:jason.walker@ncdenr.gov">jason.walker@ncdenr.gov</a> 910-796-7215	
Sgt. Curt Woolston Marine Patrol, Central District	<a href="mailto:curtis.woolston@ncdenr.gov">curtis.woolston@ncdenr.gov</a> 252-808-8138	



**N.C. MARINE FISHERIES COMMISSION**  
**SHELLFISH/CRUSTACEAN ADVISORY COMMITTEE**

*Co-Chairs: Anna Beckwith, Alison Willis*

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Major Dean Nelson Marine Patrol	<a href="mailto:forrest.nelson@ncdenr.gov">forrest.nelson@ncdenr.gov</a> 252-808-8133	



**N.C. MARINE FISHERIES COMMISSION**  
**HABITAT AND WATER QUALITY ADVISORY COMMITTEE**

*Co-Chairs: Chuck Laughridge and Mike Wicker*

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David Duane, New Bern	<a href="mailto:heathnh@centurylink.net">heathnh@centurylink.net</a> 252-636-5638	01/01/18
Joel Fodrie, Smyrna	<a href="mailto:jfodrie@unc.edu">jfodrie@unc.edu</a> 252-726-6841	01/01/16
David Glenn, Newport	<a href="mailto:David.glenn@noaa.gov">David.glenn@noaa.gov</a> 910-352-7968	01/01/18
Chuck Laughridge, Harkers Island	<a href="mailto:sobxl1@gmail.com">sobxl1@gmail.com</a> 252-728-6639	06/30/16
Terry Pratt, Merry Hill	<a href="mailto:e6i4j8bt@coastalnet.com">e6i4j8bt@coastalnet.com</a> 252-339-7431	01/01/18
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Shelby White, Hertford	<a href="mailto:Sbwhite6762@hotmail.com">Sbwhite6762@hotmail.com</a> 252-339-7192	01/01/18
Mike Wicker, Raleigh	<a href="mailto:amikewicker@gmail.com">amikewicker@gmail.com</a> 919-881-0791	06/30/17
Thomas Willis II, Edenton	<a href="mailto:cwsalmoncreek@gmail.com">cwsalmoncreek@gmail.com</a> 252-312-3692	01/01/18
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Katy West Northern District Manager	<a href="mailto:Katy.West@ncdenr.gov">Katy.West@ncdenr.gov</a> 252-946-6481	





**N.C. MARINE FISHERIES COMMISSION**  
**FINFISH ADVISORY COMMITTEE**  
*Co-Chairs: Sammy Corbett and Mike Wicker*

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Kathy Rawls Fisheries Management Chief	<a href="mailto:kathy.rawls@ncdenr.gov">kathy.rawls@ncdenr.gov</a> 252-808-8074	
Sgt. Carter Witten Marine Patrol, Central District	<a href="mailto:carter.witten@ncdenr.gov">carter.witten@ncdenr.gov</a> 252-808-8138	



**N.C. MARINE FISHERIES COMMISSION  
SEA TURTLE ADVISORY COMMITTEE**

*Chairs: Bob Lorenz, Adam Tyler*

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Brent Fulcher, New Bern	<a href="mailto:bjseafood@earthlink.net">bjseafood@earthlink.net</a> 252-514-7003	01/01/18
Matthew Godfrey, Beaufort	<a href="mailto:Matt.godfrey@ncwildlife.org">Matt.godfrey@ncwildlife.org</a> 252-241-7322	01/01/18
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Troy Outland, Manteo	<a href="mailto:outlandseafood@yahoo.com">outlandseafood@yahoo.com</a> 252-473-8685	01/01/18
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<b><i>Committee Staff:</i></b>		
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# REMINDER

## MANDATORY EDUCATION REQUIREMENTS

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### 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](mailto: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](http://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](http://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](mailto: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](mailto: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.

# 2015 Meeting Planning Calendar

January						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

- 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





# Committee Reports







North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**To: Marine Fisheries Commission**

**From: Beth Govoni**

**Subject: Coastal Recreational Fishing License Committee Meeting**

**Date: Dec. 19, 2014**

The Marine Fisheries Commission Coastal Recreational Fishing License Committee met at the Division of Marine Fisheries Central District Office on Dec. 19, 2014. The following attended:

Committee: Kelly Darden, Mark Gorges, Joe Shute, Dr. Louis Daniel

Staff: Dee Lupton, Suzanne Guthrie, Don Hesselman, Anne Deaton, Nancy Fish, Stephanie McInerny, and Beth Govoni

**APPROVAL OF AGENDA AND MINUTES**

Louis Daniel called the meeting to order. Beth Govoni called roll.

**The meeting agenda was approved by consensus with no modifications.**

**The minutes from the April 16, 2014 meeting was approved by consensus with no modifications.**

**PUBLIC COMMENT**

No one provided public comment

**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 6/30/2014**

<b>Source</b>	<b>Net Funds (\$)</b>
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
<b>Total</b>	<b>33,433,175</b>

**Actual spending through 6/30/2014**

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
Paid to WRC for Implementation	821,516
<b>Total</b>	<b>23,858,811</b>

**FY 2014 Obligations**

DMF Projects:

FY14 Five-Year Plan	2,347,033
Citation Program NCE (P003)	4,446
AR Guide NCE (P014)	120,000
Angler's Guide NCE (P015)	32,052
CSMA Stiped Bass Discards NCE (2F37)	19,840
Anadromous Fish Telemetry NCE (F013)	82,560
Striped Bass Study NCE (F010)	27,224
Oyster Shell Recycling NCE (H017)	28,155

WRC Projects:

Jacksonville NCE	433,306
ADA NCE	184,278
2014 RFP Projects Funded for FY15	1,767,246
Multi-Year Projects Approved for FY15 Funding	2,208,169
Invoices paid after 6/30/14	116,313
NCE carried over from previous RFP projects	249,994
<b>Total</b>	<b>7,620,617</b>

**Total Spent & Obligations** 31,479,428

**Balance less obligations as of 6/30/2014** 1,953,747

## **REVIEW/APPROVE 2015 PROPOSALS**

The committee then considered proposals that had been submitted for the 2014 Coastal Recreational Fishing License grant cycle. The proposals were divided into three categories – people, fish, and habitat.

### **PEOPLE PROPOSALS**

- **Wildlife Resources Commission Wright's Creek Boating Access Area - \$400,000**  
One year grant that provides much needed boating and fishing access in Beaufort County.
- **Take a Kid Fishing Foundation - \$25,000**  
Three year grant to provide disabled and disadvantaged youth an opportunity to go saltwater fishing while teaching them about ethical fishing practices, conservation and the ocean environment.
- **N.C. Division of Marine Fisheries Marine Patrol Education Team - \$28,650**  
One year grant to provide educational equipment and resources to the Marine Patrol.
- **N.C. Aquarium Step by Step: Encouraging Ethical Angling - \$11,682**  
One year grant to provide ethical angling programs at the Aquarium on Roanoke Island and Jennette's Pier.
- **N.C. Division of Marine Fisheries Saltwater Fishing Tournament - \$21,500**  
Four year grant to continue and improve this program which recognizes recreational anglers for exceptional catches of marine finfish.
- **N.C. Division of Marine Fisheries Fishing Digest - \$36,750**  
Two year grant to continue the annual publication for the Recreational Fishing Digest.
- **University of North Carolina at Chapel Hill Improving the Fish Production of Artificial Reefs by Testing the Most Widely Recognized and Pressing Questions About Reef Design and Function - \$137,434**  
Two year grant to assess how artificial reefs function to help the Division of Marine Fisheries continue to enhance, restore, manage, protect, and develop these reefs.

**Motion by Commissioner Joe Shute to approve funding as indicated for all seven recommended people proposals; second Commissioner Kelly Darden – motion passed unanimously.**

### **FISH PROPOSALS**

- **N.C. Division of Marine Fisheries Full Time Law Enforcement Officer - \$204,600**  
Two year grant to fund salary and purchase equipment for a law enforcement officer.
- **N.C. Division of Marine Fisheries Improving Water Temperature Data Recording for Monitoring Spotted Seatrout Cold Stun Events - \$17,675**  
Three year grant to begin a statewide water temperature logging program.
- **N.C. State University Marine Fisheries Fellowship Program - \$50,822**  
Five year grant which pairs M.S., Ph.D. students or recent graduates with biologists at N.C. Division of Marine Fisheries.
- **N.C. State University Evaluation of Changes in Available Spawning and Nursery Habitats for River Herring- \$42,947**  
Two year grant to track population growth of river herring.
- **N.C. Division of Marine Fisheries Temporary Tele-Communication Position - \$40,499**  
Two year grant to fund temporary tele-communication employee.
- **East Carolina University Cooperative Winter Tagging Cruise - \$105,918**  
One year grant to continue tagging program.

**Motion by Commissioner Mark Gorges to approve funding as indicated for all six recommended fish proposals; seconded by Commissioner Joe Shute – motion passed unanimously.**

### **HABITAT PROPOSALS**

- **East Carolina University Submerged Aquatic Vegetation SONAR Mapping Surveys in Low-Salinity Habitats - \$51,432**  
One year grant to use long-shore rapid assessment survey techniques to obtain maps in areas of SAV.
- **University of North Carolina at Chapel Hill Understanding and Predicting Salinity Variability and Hypoxic Exposure in Fish Habitats in the Lower Neuse River Estuary- \$98,488**  
Two year grant to quantify and develop predictive models for salinity variability and the frequency and duration of hypoxic conditions.
- **East Carolina University Linking Water Quality, Food Quality, and Larval Fish Condition to Determine Strategic Habitat Area Quality - \$81,371**  
Four year grant to determine strategic habitat area contribution to increased fish production.
- **University of North Carolina at Chapel Hill Quantifying Fish Enhancement and Erosion Protection Provided by Marsh Sills: A Living Shoreline Alternative to Bulkheads and Revetments - \$89,908**  
Two year grant to provide a comprehensive evaluation of the recreational fish habitat services and erosion protection provided by marsh sills in comparison to revetments, bulkheads, and naturally occurring marshes
- **University of North Carolina at Chapel Hill Enhancing the Quality of Fish Habitat and Quantity of Oysters by Refining Reef-Restoration Techniques - \$106,937**  
Three year grant to provide important guidelines for intertidal and subtidal reef restoration that will maximize the quality of the fish habitat.

**Motion by Commissioner Kelly Darden to approve funding as indicated for all five recommended habitat proposals; seconded by Commissioner Mark Gorges – motion passed unanimously.**

The committee has agreed to fund 18 proposals in year one totaling \$1,551,623 leaving an unobligated balance in the Marine Resources Fund of approximately \$402,124.

### **ADDITIONAL ITEMS**

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 2007-2014 with division status reports, grantees semi-annual progress reports and technical monitor reviews.

**The meeting adjourned at 2:03 pm.**



## N.C. Department of Environment and Natural Resources

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 Release: Immediate

Date: Jan. 16, 2015

Contact: Patricia Smith

Phone: 252-726-7021

### Fisheries commission approves 18 Coastal Recreational Fishing License grants

**MOREHEAD CITY** – Revenues from the N.C. Coastal Recreational Fishing License will pay \$1.5 million in the coming year toward projects to help provide coastal fishing access and fisheries and habitat research.

The N.C. Marine Fisheries Commission approved 18 grants, totaling \$1,551,613, for the 2015 cycle. The grants are funded from the N.C. Marine Resources Fund, which receives revenues from the sale of the 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.

Seven grants in the People Focus Area totaled \$661,016. Details on the awards are as follows:

- **N.C. Wildlife Resources Commission, Wrights Creek Boating Access Area – \$400,000**  
One-year grant to renovate an old boat ramp off Wilkins Road on Wrights Creek in Beaufort County.
- **Take a Kid Fishing Foundation – \$25,000**  
Three-year grant to provide disabled and disadvantaged youth an opportunity to go saltwater fishing while teaching them about ethical fishing practices, conservation and the ocean environment.
- **N.C. Division of Marine Fisheries, Marine Patrol Education Team – \$28,650**  
One-year grant to provide educational equipment and resources to the Marine Patrol.
- **N.C. Aquariums, Step by Step: Encouraging Ethical Angling – \$11,682**  
One-year grant to provide ethical angling programs at the N.C. Aquarium on Roanoke Island and Jennette's Pier.
- **N.C. Division of Marine Fisheries, Saltwater Fishing Tournament – \$21,500**  
Four-year grant to improve this program, which recognizes recreational anglers for exceptional catches of marine finfish.
- **N.C. Division of Marine Fisheries, Fishing Digest – \$36,750**  
Two-year grant to continue the annual publication for the Coastal Recreational Fishing Digest.
- **University of North Carolina at Chapel Hill, Improving the Fish Production of Artificial Reefs by Testing the Most Widely Recognized and Pressing Questions About Reef Design and Function -- \$137,434**  
Two-year grant to assess how artificial reefs function to help the N.C. Division of Marine Fisheries continue enhancing, restoring, managing, protecting, and developing these reefs.

– More –

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Six grants in the Fish Focus Area totaled \$462,461. Details on the awards are as follows:

- **N.C. Division of Marine Fisheries, Full Time Law Enforcement Officer – \$204,600**  
Two-year grant to fund salary and purchase equipment for a law enforcement officer.
- **N.C. Division of Marine Fisheries, Improving Water Temperature Data Recording for Monitoring Spotted Seatrout Cold Stun Events – \$17,675**  
Three-year grant to begin a statewide water temperature logging program.
- **N.C. State University, Marine Fisheries Fellowship Program – \$50,822**  
Five-year grant that pairs master’s and doctorate degree students or recent graduates with biologists at the N.C. Division of Marine Fisheries.
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Two-year grant to track population growth of river herring.
- **N.C. Division of Marine Fisheries, Temporary Telecommunication Position – \$40,499**  
Two-year grant to fund temporary telecommunication employee.
- **East Carolina University, Cooperative Winter Tagging Cruise – \$105,918**  
One-year grant to continue tagging program.

Five grants in the Habitat Focus Area totaled \$428,136. Details on the awards are as follows:

- **East Carolina University Submerged Aquatic Vegetation SONAR Mapping Surveys in Low-Salinity Habitats – \$51,432**  
One-year grant to use long-shore rapid assessment survey techniques to obtain maps in areas of submerged aquatic vegetation.
- **University of North Carolina at Chapel Hill Understanding and Predicting Salinity Variability and Hypoxic Exposure in Fish Habitats in the Lower Neuse River Estuary – \$98,488**  
Two-year grant to quantify and develop predictive models for salinity variability and the frequency and duration of hypoxic conditions.
- **East Carolina University Linking Water Quality, Food Quality, and Larval Fish Condition to Determine Strategic Habitat Area Quality – \$81,371**  
Four-year grant to determine strategic habitat area contribution to increased fish production.
- **University of North Carolina at Chapel Hill Quantifying Fish Enhancement and Erosion Protection Provided by Marsh Sills: A Living Shoreline Alternative to Bulkheads and Revetments – \$89,908**  
Two-year grant to provide a comprehensive evaluation of the recreational fish habitat services and erosion protection provided by marsh sills in comparison to revetments, bulkheads, and naturally occurring marshes
- **University of North Carolina at Chapel Hill Enhancing the Quality of Fish Habitat and Quantity of Oysters by Refining Reef-Restoration Techniques – \$106,937**  
Three-year grant to provide important guidelines for intertidal and subtidal reef restoration that will maximize the quality of the fish habitat.

For more information on these grants or the Coastal Recreational Fishing License grant program, contact Beth

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Twitter: <http://twitter.com/NCDENR>



Govoni, Coastal Recreational Fishing License grants coordinator, at 252-808-8004 or [Beth.Govoni@ncdenr.gov](mailto:Beth.Govoni@ncdenr.gov).

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North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

**MEMORANDUM**

TO: N.C. Marine Fisheries Commission  
Oyster and Hard Clam Advisory Committee

FROM: Tina Moore  
Stephen Taylor  
Division of Marine Fisheries, NCDENR

DATE: Nov. 4, 2014

SUBJECT: Oyster and Hard Clam Fishery Management Plan Advisory Committee Meeting

The Oyster and Hard Clam Fishery Management Plan Advisory Committee met Monday, November 3, 2014 at the Department of Environment and Natural Resources Regional Office, 943 Washington Square Mall, Hwy. 17, Washington, N.C. The following attended:

Advisers: Dell Newman, Ami Wilbur, Joey Daniels, Bob Cummings, Howard Setkowsky

Absent: Nancy Edens, Niels Lindquist, Stephen Swanson, Jeff Taylor, Adam Tyler, Ted Wilgis

Staff: Laura Lee, Mike Marshall, Joe Facendola, Garry Wright, Trish Murphey, Craig Hardy, Dean Nelson, Tina Moore, Stephen Taylor, Clay Caroon, Catherine Blum

Public: None

Bob Cummings, serving as chair, called the meeting to order. No quorum was present.

**MODIFICATIONS TO THE AGENDA**

**The agenda was approved by consensus.**

**APPROVAL OF MINUTES FROM SEPT. 8, 2014**

**The minutes were approved by consensus**

**PUBLIC COMMENT**

No public attended.

**OVERVIEW OF THE STATUS OF THE STOCK OF OYSTERS**

Laura Lee, Division Stock Assessment Scientist reported to the committee that due to the number of trips equal to and greater than the trip limit, she was unable to model oysters. Howard

Setkowsky asked if there were any theories on establishing base lines. Lee commented that we need to establish some surveys but funding is an issue.

Dell Newman inquired with his concern of having a meeting with no quorum. Tina Moore, plan co-lead explained that the committee can discuss issues again at a later date. Mike Marshall, Southern District Manager and plan mentor explained that this committee could not have a committee position but their opinions would be used as public input. Moore explained that there would be two other opportunities to review and make recommendations on the issues.

### **REVIEW OF THE ISSUE PAPER: RE-OPEN SHALLOW BAYS (LESS THAN 6 FEET) OF PAMLICO SOUND TO MECHANICAL HARVEST**

Trish Murphey, plan co-lead, presented the issue of reopening the shallow water bays to mechanical harvest and also presented the issue of the restricted mechanical harvest season in the deep bays. She reviewed the list of options and presented the plan development team's recommendation of status quo for reopening the bays and to change the timeframe for opening the deep water bays to allow for flexibility in the fishery.

Setkowsky asked what metrics were the division using to determine if the rules are working. Murphey explained that the division does not sample the bays, only cultch plantings within some of the bays. Craig Hardy, Habitat Enhancement Section Chief explained that cultch planting sites are sampled three years after planting. The first year provides recruitment information and the second and third year provides survival information. We do not compare the hand harvest areas to the mechanical harvest areas.

Marshall explained that we try to collect data, however there is not always a means to measure changes in habitat due to funding and personnel limitations. We have to rely on what we learned from the dredge impact study and what we know about reef height impacts from harvest impacts in other areas such as Chesapeake Bay. Based on what we know through literature and management practices, we now have management that works.

Chairman Cummings asked Dell Newman if the shallow water bays are being used. Newman explained that they were not being used and the hand harvesters have not made their limits yet this year. Other areas are not being used at all. He has offered to take DMF staff out to see the bays. He stated that the Division needs to continue to sample beyond just three years, but to five or seven years. There are no spat settling in these shallow bay areas. It was a good idea, however it did not work. Murphey explained that this was a habitat protection issue, not a production issue. Ami Wilbur added that pulling a dredge in these areas eliminates habitat for other species. Newman explained that the areas used to be full of recreational fishermen and loads of speckled trout. Now, there are no crabs and shrimp move out before they grow. Marshall added that there is a similar impression about production in the dredge areas as well. Newman explained that the commission will do whatever it wants. He offered to take division staff and committee members out to the areas. He has seen places die. He further commented that there are plantings in Swanquarter but they look clean and that he doubted it was supplying habitat.

Setkowsky commented that he had talked to the old timers in Hatteras and that they say the rocks have silted over and have died. Newman explained that with siltation, there is no connection for the spat. Chairman Cummings added that as a clam digger, he did not want to go into an area behind a dredger; but if it is not being used, then it should be opened. Newman stated that there are 40 to 50 people ready to go dredging and that he had purchased tong oysters by only four tongers. The dredge boats will increase production.

Murphey asked if the committee had a consensus recommendation. Newman stated he wanted to consider opening some of the bays. Chairman Cummings said that we can open a few. Murphey asked if they would like to consider any criteria changes. Joey Daniels stated to open them all up to dredging. Wilbur commented that we should not open any of the areas. Setkowsky asked what about the criteria. Newman expressed that over the past 100 years, the number of people dredging has decreased, pollution has increased, and motor power has increased. Newman further commented that the division should sample through five to 10 years of cultch sampling. Discussion continued about sedimentation as criteria, dredging impacts causing sedimentation and that there has been little sedimentation in the shallow water areas.

Newman further commented that there is a general decline in all areas that were productive. Daniels added that water quality is one variable that is probably coming into play. Marshall commented that this is not unlike trawling in primary nursery areas. It is not the trawling that is causing the issues but upland growth.

Co-Chairman Cummings called for consensus for the issue of reopening shallow water bays to dredging. There was no consensus by the group. However there was consensus for support of the Plan Development Team's recommendation of changing the timeframe for opening the deep bays to allow flexibility.

## **REVIEW THE ISSUE PAPER DIFFERENCES IN HAND HARVEST LIMITS STATEWIDE**

Stephen Taylor, plan co-lead, presented the issue of differences in hand harvest limits statewide. He reviewed the list of options and presented the Plan Development Team's recommendation of status quo, which is to maintain the 15 bushel limit in the deep areas, 10 bushel mechanical limit in the bays/10 bushel limit for hand harvest in the bays and along the mechanical methods prohibited areas.

Newman stated that he thought the hand and mechanical limits should be the same. Chairman Cummings asked if five bushels keeps the stock sustainable, Newman asked if the fishermen were happy with 5-bushels. Taylor explained that the average harvest was 4.5-bushels. Chairman Cummings commented that if it is 10-bushels in the north, it should be the same in the south, but added that a lot of guys do not catch the limit because it depends on water clarity. Wilbur questioned whether the resource could handle any increases with area closures in the south. She did not see the rationale to increase limits if it undermines what seems to be sustainable. Taylor stated that oysters are not spat limited in the southern areas; however the stock could not take any substantial increase. Discussion continued on whether the fishermen participating in the fishery in the south were full time or part time fishermen and concerns of the \$25 shellfish license and input from the public concerning too much effort. However the number

of bushels per trip is declining. Taylor also added that with the geographical differences and the lack of open water as compared to the northern area, increasing the bushel limit would devastate the southern area.

Commissioner Cummings called for a consensus. Newman stated that he did not know the area in the south; Wilbur commented that the limits should stay low, while Setkowsky and Daniels had no opinion. Therefore the group did not come to consensus on hand harvest differences statewide.

### **REVIEW MANAGEMENT REVIEW TEAM LIST OF ISSUES**

Moore reviewed with the group the revised list of issues from the Management Review Team. There were 19 issues. The Plan Development Team will be making responses to those members of the public who sent in their input. The list included the clam recreational daily limits and the shading issue brought forward by the Advisory Committee. Moore also pointed out a new issue that came from public input to look at effort impacts on oyster resources because of concerns in the southern areas that the oyster resource could not handle any more harvest effort.

Newman asked about marking leases. If leases are not marked, the public can go on that lease. The signs can be pulled down and then the lease is “fair game”. He would like to look at changing the marking requirements and doing something similar to the Wildlife Resource Commission where you can “ring trees” with purple to mark land. PVC posts would be required with the majority of signs up (3 out of 4). Hardy explained that this has already been addressed through the last fishery management plan. Signs with names on them are required or the required information can be put on the post instead of using a sign. There is also language in the rule that if signs are moved, you can be cited. Newman believed there should be a standard color for lease markers, just not hot pink.

### **OTHER BUSINESS**

There was no other business brought forward by the committee

### **PLAN AGENDA ITEMS FOR THE NEXT MEETING**

Moore reviewed topics for the next meeting to be held Dec. 8. The group will discuss the two issues covered tonight so that recommendations can be made.

Chairman Cummings adjourned the meeting.

/plm

Cc:	Catherine Blum	Jess Hawkins	Gerry Smith
	Mike Bulleri	Jennie Hauser	District Managers
	Scott Conklin	Dee Lupton	Committee Staff Members
	Dick Brame	Jessica Marlies	Marine Patrol Captains
	Louis Daniel	Nancy Marlette	Section Chiefs
	Charlotte Dexter	Jerry Schill	



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

**MEMORANDUM**

**TO:** N.C. Marine Fisheries Commission  
Oyster and Hard Clam Advisory Committee

**FROM:** Tina Moore  
Stephen Taylor  
Division of Marine Fisheries, NCDENR

**DATE:** Dec. 12, 2014

**SUBJECT:** Oyster and Hard Clam Fishery Management Plan Advisory Committee Meeting

The Oyster and Hard Clam Fishery Management Plan Advisory Committee met Monday, Dec. 8, 2014 at the Department of Environment and Natural Resources Regional Office, 943 Washington Square Mall, Hwy. 17, Washington, N.C. The following attended:

Advisers: Joey Daniels, Bob Cummings, Nancy Edens, Niels Lindquist, Stephen Swanson, Jeff Taylor, Adam Tyler,

Absent: Dell Newman, Ami Wilbur, Howard Setkowsky, Ted Wilgis

Staff: Mike Marshall, Joe Facendola, Garry Wright, Trish Murphey, Craig Hardy, Dean Nelson, Tina Moore, Stephen Taylor, Clay Caroon, Catherine Blum, Greg Allen

Public: Ken Riley, David Cerino, James Morris

Bob Cummings, serving as chair, called the meeting to order.

Tina Moore, plan co-lead provided an update to the committee. Committee member Ted Wilgis is the father of a brand new baby girl and should be back for the January meeting. Moore also updated the committee about the appointment of Marine Fisheries Commissioner Alison Willis. The next Marine Fisheries Commission meeting will be in Wilmington, Feb. 18-20, 2015.

Mike Marshall, Southern District Manager provided an update on the oyster season. Hand harvest is low with reports of mortality. Carteret County fishermen are going north to hand harvest. Mechanical harvest is occurring in the Pamlico River and in northern Dare County. It seems to be going well. We are seeing around 30 to 40 percent legal sized oysters. There is a concern of lack of spat in the samples from Pamlico River, making us concerned about lack of recruitment for next year. We are seeing spat in Northern Dare. The season should make it through Christmas.

Niels Lindquist asked if we knew the source of mortality in the oysters in the south. Marshall discussed the possibility of Dermo, or heavy rains, though he explained that he did not think that was the case. Lindquist commented that he believed the source of the mortality was due to the boring sponge. Salinity data from the Shellfish Sanitation Section show increases, resulting in increases in the boring sponge. Stephen Swanson also commented that he is seeing less oyster crabs this year.

#### **MODIFICATIONS TO THE AGENDA**

**Adam Tyler made a motion to approve the agenda. Jeff Taylor seconded the motion. The motion passed unanimously.**

#### **APPROVAL OF MINUTES FROM SEPTEMBER 8, 2014**

**Joey Daniels made a motion to approve the agenda. Niels Lindquist seconded the motion. The motion passed with one abstention.**

#### **PUBLIC COMMENT**

No public comment.

#### **REVIEW OF THE ISSUE PAPER; PROTECTION OF SHELLFISH LEASE AND FRANCHISE RIGHTS**

Major Dean Nelson, Marine Patrol, discussed the number of leases with water column amendments have increased over time. Culture of shellfish is very expensive and the main issue is theft from these leases. He detailed the statutes and rules and the protections they provide. Statutes would require a legislative change while rules may be changed by the Marine Fisheries Commission. Although fines can be issued by a judge up to \$5,000, the average fines have averaged around \$25. This does not provide a very good deterrent to those that comment thefts off leases. Major Nelson reviewed the four options to address this issue. The PDT supported options 2-4. These options make changes to the minimum fines, and modifications to the statute to remove the requirement of having a water column amendment, and revocation of a license for a period of one year.

Swanson commented that it make not take long to change a rule then to change a statute. Marshall stated that the division does have a good track record regarding statute changes from fishery management plans. Lindquist commented that this appears to be a very serious issue and lease holders need this protection. Chairman Cummings asked if these recommendations include both rule and statute changes. Major Nelson stated that it includes both. Swanson asked about an incentive program to turn people seen stealing into Marine Patrol.

**Jeff Taylor made a motion to support the PDT recommendations. Joey Daniels seconded the motion. The motion passed unanimously.**

#### **REVIEW OF THE ISSUE PAPER; ADOPTING SUPPLEMENT A INTO AMENDMENT 2 TO THE NC OYSTER FISHERY MANAGEMENT PLAN**

Marshal gave an explanation of what a supplement consists of and explained that this supplement was put in place in 2010 and provided measures for establishing a trigger for closing if less than 26 percent of oysters were of legal size. He also explained that the supplement set the maximum



limit of 20 bushels per operation that the director may open. He explained that the origination of this issue came from a petition requesting a change in harvest limits. Marshall provided a summary of the past oyster seasons where the trigger was in place. The supplement is really a habitat protection measure. Marshall reviewed the different management options considered by the Plan Development Team, whose recommendation was to adopt the provisions of Supplement A-setting a flexible harvest limit up to no more than 20 bushels and to continue to use the trigger of 26 percent for closing an area. Cummings asked if the season would close if there were not enough division staff to sample. Marshall replied no, it would not close the season, but it would be difficult to sample enough to protect the habitat. The threat is impacting the habitat. Adam Tyler asked about the survivability of spat less than 25 mm. Marshall explained that the box (dead oyster) distribution is similar to the live oyster distribution. The caveat is that with those small spat, it is easy to knock off the top of those shells. Linquist asked about the sampling methods. Marshall explained that sampling occurs where the fishermen are working. We sample 100 oysters per site and collect boxes. We try to take 10 samples but we are unable to collect a catch per unit of effort.

**Niels Lindquist made a motion to support the PDT recommendation of Option B. Jeff Taylor seconded the motion. The motion passed unanimously.**

#### **REVIEW OF THE ISSUE PAPER: RE-OPEN SHALLOW BAYS (LESS THAN 6 FEET) OF PAMLICO SOUND TO MECHANICAL HARVEST**

Trish Murphey, plan co-lead, revisited the issue of reopening the shallow water bays to mechanical harvest because of a lack of a quorum during the meeting in November. She provided the group with the Plan Development Team's recommendations and asked that the group continue the conversation.

Daniels suggested that a few of the bays could be reopened. Murphey suggested that the group may want to consider changing criteria. Cummings asked if trip ticket data could provide landings in the different bays. Murphey explained that the trip ticket data are not tied to each bay but to Pamlico Sound. Cummings suggested flexibility with some areas and to not open all areas. Lindquist asked about the criteria. Murphey explained that habitat criteria were considered and is listed in the issue paper. It considered seagrasses, oyster, and concerns of sedimentation. Marshall added that the idea was to use the least impactful gear in these areas. Marshall also noted that if you want to change some of the areas from being prohibited, it would require a rule change which would take a few years. Swanson commented that there are other methods to fish oysters; you do not have to take everything. Tyler had concerns of places that cannot be worked by hand. Murphey explained that these areas are shallow and can be worked with tongs. Marshall explained that the original depth was 10 feet but was changed to 6 feet. Cummings stated if there are areas that are not being used, then she should be opened to dredging. Swanson stated that we need to protect the habitat. Murphey explained that some of these areas are secondary nursery areas. J. Taylor asked if mechanical harvesters needed these areas and that these areas are important to fish like spotted sea trout.

Lindquist commented that there is an opportunity to do research through a Coastal Recreational Fishing License Grant to look at small areas. It may help get to an answer of dredge impacts in

these closed areas. Marshall commented that it would be possible to get something done with proper permits.

**Niels Lindquist made a motion to support the PDT recommendation of status quo. Steve Swanson seconded the motion. The motion passed unanimously.**

**Niels Lindquist made a motion to recommend a controlled study of dredge impacts on areas currently closed to mechanical harvest within the next few years. Nancy Edens seconded the motion. The motion passed unanimously.**

Trish also discussed the need for 6-week season for the deep bays. The Plan Development Team's recommendation was to allow flexibility in the season. Right now, the deep bays are only open for a 6-week period from November to December. Marshall explained that the fishermen would fish in the deep bays first and then move to the sound. Recently, they have started in the sound first because of the increase in oysters in the sound. This would allow the opportunity to be flexible in the season based on the needs of the fishery.

**Adam Tyler made a motion to support the PDT recommendation of changing the time frame for opening the deep bays to allow flexibility within the season. Jeff Taylor seconded the motion. The motion passed unanimously.**

### **REVIEW THE ISSUE PAPER DIFFERENCES IN HAND HARVEST LIMITS STATEWIDE**

Stephen Taylor, plan co-lead, revisited the issue of differences in hand harvest limits statewide. He reviewed the list of options and presented the Plan Development Team's recommendation of status quo, which is to maintain the 15 bushel limit in the deep areas, 10 bushel mechanical limit in the bays/10 bushel limit for hand harvest in the bays and along the mechanical methods prohibited areas.

Tyler commented that being from Core Sound, he thought that increasing the limits would be devastating to Core Sound and those areas south. Swanson concurred with Tyler.

**Jeff Taylor made a motion to support the PDT recommendation of status quo. Adam Tyler seconded the motion. The motion passed unanimously.**

### **OTHER BUSINESS**

Tyler inquired about asking the Marine Fisheries Commission to request the legislature to impose a \$2 sure charge for retail sales of oysters to go to cultch planting material. Swanson commented that he does not see a lot of cultch planting his way. Marshall gave a brief history of how oysters were taxed on dockside sale. These taxes went to the oyster rehabilitation program. People were hiding their sales. After the tax was removed, oyster landings increased. S. Taylor commented that funding for the recycling program was dropped but we still have drop-off sites and are still collecting some shell. Lindquist asked about the cost effectiveness of the program. Hardy commented that the division was collecting around 30, bushels. It may not have been cost effective but it provided a lot of opportunity for public outreach.

**PLAN AGENDA ITEMS FOR THE NEXT MEETING**

Moore reviewed topics for the next meeting to be held Jan. 7. The group will discuss three or four issues at the next meeting

Chairman Cummings adjourned the meeting.

/plm

Cc: Catherine Blum  
Mike Bulleri  
Scott Conklin  
Dick Brame  
Louis Daniel  
Charlotte Dexter

Jess Hawkins  
Jennie Hauser  
Dee Lupton  
Jessica Marlies  
Nancy Marlette  
Jerry Schill

Gerry Smith  
District Managers  
Committee Staff Members  
Marine Patrol Captains  
Section Chiefs





North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** N.C. Marine Fisheries Commission  
Oyster and Hard Clam Advisory Committee

**FROM:** Tina Moore  
Stephen Taylor  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 14, 2014

**SUBJECT:** Oyster and Hard Clam Fishery Management Plan Advisory Committee Meeting

The Oyster and Hard Clam Fishery Management Plan Advisory Committee met Monday, Jan. 5, 2015 at the Department of Environment and Natural Resources Regional Office, 943 Washington Square Mall, Hwy. 17, Washington, N.C. The following attended:

Advisers: Ted Wilgis, Jeff Taylor, Lee Setkowsky, Joey Daniels, Ami Wilbur, Dell Newman, Adam Tyler, Bobby Cummings, Nancy Edens

Absent: Niels Lindquist, Stephen Swanson

Staff: Tina Moore, Stephen Taylor, Clay Caroon, Steve Murphey, Trish Murphey, Joe Facendola, Garry Wright, Craig Hardy, Dean Nelson

Public: Ken Riley, Chuck Weirch

Ted Wilgis, serving as chair, called the meeting to order.

**MODIFICATIONS TO THE AGENDA**

**Jeff Taylor made a motion to approve the agenda. Bobby Cummings seconded the motion. The motion passed unanimously.**

**APPROVAL OF MINUTES**

**Joey Daniels made a motion to approve the agenda. Nancy Edens seconded the motion. The motion passed unanimously.**

**PUBLIC COMMENT**

No public comments were offered.

Trish Murphey Fishery Management Plan Co-lead provided an update on oyster dredging season. She stated that sampling in the Neuse and Pamlico River in December still has oysters over the 26% trigger to close. Neuse River was at 36 percent and Pamlico River was at 34 percent. We are not seeing a lot of small oysters and the fishermen are only getting around four or five bushels a trip. The fleet has moved into the Stumpy Point area in northern Dare County. Sampling in that area is below the trigger. Dare County is 22 percent and Hyde County is 21 percent. All areas will be sampled this week. If Dare and Hyde County are below the 26 percent trigger during this sampling period, the areas will be required to close.

### **REVIEW OF THE ISSUE PAPER REQUIREMENTS FOR SHADING MOLLUSCAN SHELLSTOCK**

Steve Murphey, Plan Development Team member presented the issue of shading clams and oysters while harvesting and transporting. He discussed heat stress, cold shock, bacterial growth, and vibrios. He explained the benefits of shading and the downside such as cost and burden to the fishermen. He explained the time to temperature requirements and the practice of slowly cooling clam product down, prior to refrigeration also known as tempering. He reviewed the different options and the plan development team's preferred option #5 implement shading of clams during transport to a dealer or storage on a dock from June to September.

The committee discussed the challenges of shading, such as what is appropriate, enforcement, and cost. Adam Tyler commented that while in Florida, he saw oysters coming out of the water immediately and questioned why this is not the same in North Carolina. S. Murphey explained that Florida is under a Interstate Shellfish Sanitation Committee *Vibrio parahaemolyticus* plan and must comply with that plan to remove product quickly. North Carolina is not required to have a *Vibrio* plan, only the 12 hour requirement. He also said that we do see problems with heat abuse of clams while transporting them in the back of a truck. Bobby Cummings commented that there is also a problem on boats. Clams will sit on a hot deck, with no breeze and are not taken care of before getting to shore. A tarp is a cheap fix. He suggested that clams should be shaded in both the boat and the truck. Dell Newman stated that he did not want to see anything on the oyster boats. S. Murphey clarified this is only in the summer and for clams. Ted Wilgis asked if this could be carried out through proclamation. S. Murphey stated that it could. Tyler commented that you still have the small boat guys, and that maybe a white bed sheet would be sufficient. It would be inexpensive and not very difficult. Cummings also talked about the use of tubs, and that you can use wet sacks over the tub. S Murphey suggested that some sort of criteria be developed that would be enforceable. Lee Setkowsky commented that he thought the legal definition is a separate topic versus the discussion now. He suggested that the committee vote on something and come up with simple criteria. Moore said that we have a rule subcommittee that can get into the details on how to define shading. S. Murphey explained that it can be considered a health issue and that is tied to the proclamation authority. The Interstate Shellfish Sanitation Committee only said that if the state decides shading is necessary then it shall be required. That is the only guidance.

**Bobby Cumming made a motion to adopt option #2 require shading for clams only during June through September on vessel and transport vehicle to dealer. Jeff Taylor seconded the motion. The motion passed unanimously.**

**Lee Setkowsky made a motion to work with the Advisory Committee to develop shading requirements. Adam Tyler seconded the motion. The motion passed unanimously.**

Moore commented that the only issue is that you need to develop these requirements within the next year because this Advisory Committee ends with the adoption of the plan. There should be time to do so, by the end of the year. Stephen Taylor Plan Development Co-lead also stated that if you have any ideas, to send them to staff.

### **REVIEW OF THE ISSUE PAPER DEFINING ADVERSE IMPACTS TO SUBMERGED AQUATIC VEGETATION**

Craig Hardy, Habitat and Enhancement Section Chief presented the background information regarding permit requirements of the Army Corp of Engineers. If there is any seagrass observed on site of a potential lease, the division may not issue the lease. If seagrass is known to have occurred in an area, then the division may not issue the lease. Hardy described the sampling methodology for determining the presence or absence of seagrass. He also stated that the division is working with National Marine Fisheries Service to facilitate and provide input concerning this issue. The plan development team recommendation was status quo (adhere to the regional conditions of the Army Corp permit with zero tolerance/no adverse effect to seagrasses from shellfish leases). Newman asked if the Corp was not moving forward on this. Hardy stated that the permit will not be reviewed until 2017. Cummings asked if lease applicants could apply for individual permits. Hardy commented that applicants may apply for individual permits but it is a long process. Joey Daniels asked if the division had changed our sampling methodology for sampling seagrass. It used to be 10 samples an acre and now it is 50 samples an acre. Why not go back to 10 samples. We should not have to wait until 2017. Cummings asked why the difference in sample size. Hardy said that he did not know why but the Corp may have looked at our sampling protocol and based on that protocol, determined that is was sufficient for the permit. Daniels told the committee that back in 2011, he had a ten acre site and only 100 samples were taken. Last year there were 500 samples taken on a ten acre site. Craig stated that while sampling a site and seagrass is found, staff will continue to sample for seagrass in order to determine the extent of it and provide information for relocating the proposed lease. Setkowsky clarified the options by stating that option #1 is to wait until 2017 and gather information until then, and option #2 is to evaluate the efficacy of the sampling. Hardy stated that staff will be evaluating the sampling anyway. Daniels commented that both option #1 and option #3 were unacceptable. He asked how did we increase sampling from 10 samples per acre to 50 samples per acre. Hardy said that he would have Brian Conrad, Plan Development Team member provide a history of the sampling protocol at the next meeting. Newman commented that we need some leeway. He stated that we need more flexibility in fishery management plans.

**Adam Tyler made a motion to table the seagrass issue until there was more information provide on the sampling methodology. Lee Setkowsky seconded the motion. The motion passed unanimously.**

### **REVIEW OF THE ISSUE PAPER CONSIDER INCREASING THE RECREATIONAL MAXIMUM DAILY HARVEST FOR HARD CLAMS**

Moore provided background information on the for-hire industry, concerns of depletion and the ability of fishermen getting their recreational hard clam daily limits. She reviewed the options with the committee and gave the plan development team recommendation of option #2, increase the daily vessel maximum recreational clam harvest limit to 400 clams and maintain the personal harvest limit of 100 clams per person per day for all recreational participants. Cummings asked if that meant 100 per person not to exceed 200. Officer Dean Nelson clarified that it was 100 per person with the restriction of 400 per vessel. You would have to have four or more participants in a vessel for 400. Setkowsky stated that

was helpful for the for-hire industry but he felt 100 per person was better since boats do not take more than six people, so he would argue to have 100 per person up to six people (600). Moore explained the concerns as far as depleting areas.

**Lee Setkowsky made a motion to adopt increase the daily vessel maximum recreational clam harvest limit to 500 clams and maintain the personal harvest limit of 100 clams per person per day for all recreational participants. Adam Tyler seconded the motion. The motion passed 8-1.**

### **REVIEW OF THE ISSUE PAPER BRUNSWICK COUNTY LEASE MORATORIUM**

Hardy provided background concerning the lease moratorium in Brunswick County. There are no records of why the moratorium exists. He discussed the increased development and increase in shellfish closures in the county due to bacteria. He then provided the list of management options and the Plan Development Team's preferred option of status quo (continue with the moratorium).

Tyler asked if this is a legislative change. Hardy stated that it is. Cummings commented that if no one is using the bottom, there is nothing to catch. The bottom should be put into production. Hardy stated they could try and find out what led to the legislation. He had heard that commercial shellfishermen in the 1940s went to the county and requested no leases, the county made a request to the legislators. Ami Wilbur commented that she understood the reasoning of the Plan Development Team's recommendation of status quo, but we want to build a statewide aquaculture industry, not county by county. S. Murphey commented that although a lot of the area is open, but most of the area available is conditional approved open or closed. Water quality is not good enough to keep open. Taylor added that from marker # 84 to the South Carolina line closes on 1-inch of rain. Effort is also down. Newman stated that we really need to go back to the county commissioners and ask why there is a moratorium. S. Murphey also reminded the group that there is a rule concerning the amount a time an area is closed is 50 percent or more, a lease cannot be issued. Wilgis stated that providing the opportunity to have a lease in Brunswick County may make people more aware and become advocates for better water quality. Newman stated we need to investigate why shellfish leases are not allowed in Brunswick County

**Lee Setkowsky made a motion to informally investigate why leases are not allowed in Brunswick County. Jeff Taylor seconded the motion. The motion passed unanimously.**

### **OTHER BUSINESS**

Tyler asked about clarifying some guidelines on the time and tagging product. Cummings explained that you are to record the time of at the beginning of your first harvest. That time is your starting time for the 12-hour rule. Moore added that if you have any questions, to not hesitate to call the division. Setkowsky also asked for a rule clarification regarding fishing gill nets and license requirements.

Wilgis congratulated Craig Hardy and Mike Marshall on their retirement from the state and thanked them for their services.

Moore reviewed the remaining issues and upcoming topics for the February meeting.

Co-chair Wilgis adjourned the meeting

/pm



Cc: Catherine Blum  
Mike Bulleri  
Scott Conklin  
Dick Brame  
Louis Daniel  
Charlotte Dexter

Jess Hawkins  
Jennie Hauser  
Dee Lupton  
Jessica Marlies  
Nancy Marlette  
Jerry Schill

Gerry Smith  
District Managers  
Committee Staff Members  
Marine Patrol Captains  
Section Chiefs



# Issues/Reports





## N.C. Marine Fisheries Commission 2014-2015 Annual Rulemaking Cycle

February 2015

Time of Year	Action
January 2014	Last opportunity for a new issue to be presented to DMF Rules Advisory Team
February 2014	Second review by DMF Rules Advisory Team
January-July 2014	Fiscal analysis of rules prepared by DMF staff and approved by Office of State Budget and Management
August 2014	MFC considers approval of Notice of Text for Rulemaking
October 2014	Publication of proposed rules in the North Carolina Register
October 2014	Public hearing(s) held
(January)	(Last opportunity for a new issue to be presented to DMF Rules Advisory Team)
(February)	(Second review by DMF Rules Advisory Team)
February 2015	MFC considers approval of permanent rules
March/April 2015	New rulebook formatted
April 15, 2015	Commercial license sales begin
April 16, 2015	Rules reviewed by Office of Administrative Hearings Rules Review Commission
Late April	New rulebook published
May 1, 2015	New rulebook available online and for distribution
May or June 1, 2015	Effective date of new rules





## N.C. Department of Environment and Natural Resources

Release: Immediate  
Date: Oct. 1, 2014

Contact: Patricia Smith  
Phone: 252-726-7021

### Public comment sought on proposed rules

**MOREHEAD CITY** – The N.C. Marine Fisheries Commission is accepting public comment on a slate of proposed rule changes that pertain to various issues to the shrimp, river herring, eel and bay scallop fishery management plans and to establish a for-hire logbook requirement.

The commission will hold the following public hearings on the proposed rule changes:

Oct. 28 at 6 p.m.

N.C. Department of Environment and Natural Resources Washington Regional Office  
943 Washington Square Mall, U.S. 17, Washington

Oct. 29 at 6 p.m.

N.C. Department of Environment and Natural Resources Wilmington Regional Office  
127 Cardinal Drive Extension, Wilmington

The public may also comment on the proposed rules in writing to Catherine Blum, Rulemaking Coordinator, N.C. Division of Marine Fisheries, P.O. Box 769, Morehead City, N.C. 28557 or send comments by email to [Catherine.Blum@ncdenr.gov](mailto:Catherine.Blum@ncdenr.gov) or fax to 252-726-0254. The public comment period will close at 5 p.m. Dec. 1.

Proposed rules impacting for-hire fishing operations and ocean fishing piers include:

- Eliminating the current For-Hire Permit and Coastal Recreational Fishing License blanket licenses and replacing them with a captain's for-hire license, a blanket for-hire vessel license, and a non-blanket for-hire vessel license.
- Implementing a for-hire endorsement on the commercial fishing vessel registration and requiring weekly logbook reporting from for-hire licensees.
- Combining two separate ocean pier licenses into one Ocean Fishing Pier License with the same net cost.

Proposed rules implementing a draft amendment to the shrimp plan include:

- Modifying the definition of mesh length to apply to diamond-mesh nets, as well as square-mesh nets in support of a management strategy to require an additional bycatch reduction device in all skimmer and otter trawls, which can include a square-mesh T-90 panel.
- Codifying an existing management strategy that prohibits the use of trawl nets, except skimmer trawls, upstream of the N.C. 172 Bridge over the New River in Onslow County.
- Clarifying the Division of Marine Fisheries director's proclamation authority for shrimp harvest restrictions;
- Establishing a maximum combined headrope length of 220 feet in all internal coastal waters where there are no existing maximum combined headrope requirements, allowing for a phase-out period until Jan. 1, 2017.
- Allowing cast-netting of shrimp in all areas otherwise closed to shrimping and increase the harvest limit to 4 quarts, heads-on, or 2 ½ quarts, heads-off.
- Prohibiting shrimp trawling in the Intracoastal Waterway channel from the Sunset Beach Bridge to the South Carolina line, including Shallotte River, Eastern Channel and lower Calabash River, to protect small shrimp.

- More -

Proposed rules implementing a draft amendment to the river herring plan include:

- Eliminating the discretionary harvest and season.
- Removing blueback herring and alewife from the exemption for possession of mutilated finfish.
- Limiting possession of river herring from sources other than North Carolina coastal fishing waters to less than or equal to 6 inches while fishing or boating.
- Changing the boundary coordinates of the Anadromous Fish Spawning Area to reflect companion changes previously made to the Albemarle Sound and Roanoke River management areas.
- Relocating the description and boundaries of the Albemarle Sound and Chowan River River Herring Management Areas from Subchapter 03J to Subchapter 03R in the rulebook for improved organization and public clarity.

Proposed rules implementing Addendum III to the Atlantic States Marine Fisheries Commission Fishery Management Plan for American Eel include:

- Implementing a minimum mesh length requirement of one-half by one-half inch mesh for eel pots, allowing for a phase-in period until Jan. 1, 2017.
- Increasing the American eel size limit to 9 inches, decreasing the recreational bag limit to 25 fish and implementing a Sept. 1 - Dec. 31 season closure, unless the eels are taken with baited pots.

Proposed rules to implement a draft amendment to the bay scallop plan include:

- Changes in support of a management strategy to encourage the cultivation of bay scallops consistent with other shellfish species grown on private bottom that:
  - Exempt leaseholders and aquaculture operations from the public bottom commercial season, gear, and harvest limits for cultured bay scallops.
  - Allow the sale of cultured bay scallops for further grow out.
- Elimination of the Aug. 1 through Sept. 15 bay scallop season and lowering the maximum daily commercial harvest possession limit to be consistent with adaptive management trip limit measures.

Other proposed rules include:

- Updating and relocating a rule that provides the Division of Marine Fisheries director's authority to issue proclamations to resolve user conflicts concerning public trust resources.
- Updating the name of a canal in Brunswick County.
- Removing the permit fee for the Atlantic Ocean Striped Bass Commercial Gear Permit, which is now provided in statute, and eliminating the Nov. 1 deadline to purchase the annual permit.
- Correcting an error in the inland/coastal waters boundary line in Queens Creek, Onslow County.
- Correcting grammatical errors and spacing in several rules.
- Modifying rules pertaining to the Division of Marine Fisheries director's proclamation authority for consistency.

The Marine Fisheries Commission is scheduled to vote on the proposed rules at its Feb. 18-20 meeting. If approved, the rules could take effect as early as May 1.

For more information on the proposed rules, go to <http://portal.ncdenr.org/web/mf/mfc-proposed-rules-links> or contact Blum at 252-808-8014 or [Catherine.Blum@ncdenr.gov](mailto:Catherine.Blum@ncdenr.gov).

###



**MARINE FISHERIES COMMISSION  
SUMMARY OF PUBLIC HEARING FOR PROPOSED RULES  
DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES  
WASHINGTON REGIONAL OFFICE  
WASHINGTON, N.C.  
OCT. 28, 2014, 6 PM**

**Marine Fisheries Commission**

Kelly Darden

**Division of Marine Fisheries Staff**

Catherine Blum

Daniel Ipock

Doug Mumford

Katy West

**Public**

None

**Media**

None

Commissioner Kelly Darden opened the public hearing for Marine Fisheries Commission proposed rules at 6 p.m. No one from the public was in attendance. He closed the hearing at 6:10 p.m.

/cb



**MARINE FISHERIES COMMISSION  
SUMMARY OF PUBLIC HEARING FOR PROPOSED RULES  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
WILMINGTON REGIONAL OFFICE  
WILMINGTON, N.C.  
OCT. 29, 2014, 6 PM**

**Marine Fisheries Commission**

Sammy Corbett

**Division of Marine Fisheries Staff**

Catherine Blum

Nancy Fish

Jack Holland

Simon Sabella

Chris Stewart

Stephen Taylor

**Public**

Debbie Hamrick

Bob Lorenz

Donald Whitney

**Media**

None

Commissioner Sammy Corbett opened the public hearing for Marine Fisheries Commission proposed rules at 6 p.m. He reviewed guidelines of the public hearing process and explained the hearing is a formal process to receive public comments only about the proposed rules as published in the *N.C. Register*. Commissioner Corbett explained the proposed rules have an intended effective date of May 1, 2015. He said public comments on the proposed rules will be presented to the Marine Fisheries Commission at its February 18-20 meeting prior to its vote on final approval of the rules.

Division staff member Catherine Blum reviewed the proposed rules by explaining the reason for proposed action for each of the 29 rules in the package.

Commissioner Corbett opened the floor for the public to provide comments.

None of the members of the public in attendance had comments on the proposed rules. One person had questions about other fisheries issues.

Hearing no comments on the proposed rules, Commissioner Corbett closed the hearing at 6:25 p.m. After the hearing, staff addressed the questions.

/cb



**From:** [Hesselman, Don](#)  
**To:** [Wavelength charters](#)  
**Cc:** [Mumford, Doug](#); [Blum, Catherine](#)  
**Subject:** RE: For-Hire Logbook Comments  
**Date:** Wednesday, November 19, 2014 8:07:46 AM  
**Attachments:** [Timpy\\_Response-111914.pdf](#)

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Morning Captain Dave,

Attached is a response to your comments from the Division's perspective. The Marine Fisheries Commission will be receiving your written comments and will certainly take them into consideration. I'll keep in mind your comment about commercial and for-hire reporting on different platforms and see if I can push this suggestion to the South Atlantic Council.

Don

---

**From:** Blum, Catherine  
**Sent:** Monday, November 17, 2014 9:16 AM  
**To:** Wavelength charters  
**Cc:** Mumford, Doug; Hesselman, Don  
**Subject:** RE: For-Hire Logbook Comments

Dear Capt. Timpy,

Thank you for submitting comments on the proposed for-hire logbook. Your comments will be forwarded to the Marine Fisheries Commission for its consideration prior to voting on final approval of rules. This action is scheduled for the Commission's Feb. 18-20 meeting at the Hilton Riverside in Wilmington.

By way of this email I am also forwarding your comments to our License and Statistics Section Chief Don Hesselman. Don and Doug will provide you additional information related to your individual comments.

If you have any questions about the timing of the current package of proposed Marine Fisheries Commission rules please let me know. Thank you for taking the time to participate in the rulemaking process.

Catherine Blum

Catherine Blum  
Fishery Management Plan & Rulemaking Coordinator  
N.C. Division of Marine Fisheries  
P.O. Box 769 / 3441 Arendell Street  
Morehead City, NC 28557-0769  
[catherine.blum@ncdenr.gov](mailto:catherine.blum@ncdenr.gov)  
252-808-8014 (phone)  
252-726-0254 (fax)

E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third

parties unless the content is exempt by statute or other regulation.

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**From:** Wavelength charters [<mailto:captdave@wavelengthcharters.com>]  
**Sent:** Monday, November 17, 2014 6:40 AM  
**To:** Blum, Catherine  
**Cc:** Mumford, Doug  
**Subject:** For-Hire Logbook Comments

Attached are my comments on the proposed for-hire logbook.

Capt Dave Timpy  
910-620-1784  
[www.wavelengthcharters.com](http://www.wavelengthcharters.com)

Sent from my iPhone.

Re: Proposed NCDMF For-Hire Logbook Requirement.

Please reference the NCDMF public release dated 10-6-14 regarding the proposed For-Hire log book requirement and the public meeting held at the Wilmington DENR office on 11-4-14.

My comments on the proposed For-Hire log book are as follows:

- (1) Education. Some charter captains do not have a full understanding on why the log book may be required and what this data will be used for. It is recommended that NCDMF offer free fishery management workshops to for-hire charter captains. This type of information/technology transfer is an excellent way of bringing charter captains on-board with the requirements of the NC state rules and the Magnuson Stevens Act and may result in more accurate data submittal.
- (2) Optional Data. The proposed log book is requiring a substantial amount of data. A large number of charter captains are not computer savvy. Some still use their flip phones for mostly everything. Thus, requiring large volumes of data would likely lead to a high risk for error and inaccurate data. Previous comments on the log book by captains have repeatedly requested to "keep it simple". It is apparent, however, that a simple log book would not meet the data needs of our fishery managers. One remedy could be "optional data". The log book could require a minimum amount of data, including regionally broad location data, and provide an option to submit additional data. Optional data could include data such as specific location of catch/release, time of catch/release, sea and weather conditions, time stamped photos, water clarity estimates, lizard fish caught/released, menhaden, turtle sightings, sharks, etc. Optional data could be confidential. Incentives could be offered by NCDMF and/or NOAA Fisheries to increase optional data participation; for example reduced license fees, free advertising, reduced taxes, grants, tuition discounts, etc.
- (3) Consistent Data Requirement. Log book requirements should maintain data consistency among For-Hire Captains, Head Boat Captains, and Commercial Captains. For example, by-catch data required of all captains must be of the same level of detail. Log books for recreational fisherman should also be considered.
- (4) Federal For-Hire log book. It is likely that NOAA Fisheries, through the federal fishery commissions, will require a federal for-hire log book for all USCG licensed captains. If this is the case, then states (including NC), may not need to require a duplicate log book. In the event that both state and federal for-hire log books are required, it is recommended that streamlining and duplicate data submittal is addressed.
- (5) Marine Technology. All USCG licensed captains have electronics on their vessels. This equipment usually consist of GPS chart plotters, fish finders, etc. Today's chart plotters contain sophisticated software used for navigation, waypoints, routes, tracks, photos, videos, wifi, bluetooth, data recording, and data transfer. It is suggested that consideration be given to working with private industry, such as Furuno, Garmin, Simrad, etc, to imbed a federal/state (selectable) log book option in the software of a GPS Chart Plotter. This option would also provide an easy way to submit reports. And provide equipment discounts to licensed captains that are required to submit log books.
- (6) Joint Enforcement Agreement. The required log book should be addressed in the JEA.

Thanks.

Captain Dave Timpy, MS  
Wavelength Charters  
www.wavelengthcharters.com







North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

November 18, 2014

Dear Captain Dave,

Catherine Blum forwarded your written comments to me and will also forward them to the Marine Fisheries Commission. Later this week, the commission will be hearing the same presentation you received in Wilmington as well as a verbal summary of the results of the for-hire stakeholders meetings. They will make a final determination on the proposed logbook rule at their February meeting being held in Wilmington.

I thought I would take the time to respond to your comments from the Division's perspective as its unlikely the Commission will respond directly to you.

1. Education- It was apparent from comments made at all four stakeholders meetings that the industry is not fully knowledgeable on the purpose of the logbooks; that is my fault. We have an implementation plan and an issue paper for the Marine Fisheries Commission that was distributed to the public in association with the steps of the rulemaking process. But, in the next few days I will draft up a policy statement clearly outlining the reasons for the regulatory action.
2. Optional data- We realize that there is a need for paper logbooks for those captains who are not computer savvy. We also realize a large percentage of your industry is technologically savvy and for that reason will also be developing a website, tablet and mobile apps for their use. It is fully our intention to allow the industry to report using any one of these methods. Your request for "optional" data was suggested more than once, but mostly as a request for optional data for personal use of the captain. The optional data you describe would fall into that category as we do not have a need for most of that data. Rest assured we are only asking for minimal data elements to meet our needs and the needs of any federal logbook reporting requirements, some of which are delineated in the Code of Federal Regulations with no room for negotiation. By capturing all these data elements we can avoid any redundant reporting requirements while satisfying the data needs of all the various regulatory agencies.
3. Consistent data requirements- We have designed the for-hire logbook to meet the needs for data from the for-hire sector of the industry. The Division also realizes the need for and the importance of discard data from all resource users, but has elected to use different methodologies to capture discard/release data. For the commercial industry, which releases many more fish than the for-hire industry, we have chosen to use observer data and in some cases, logbooks from the commercial fisherman. The commercial trip ticket program is a dealer reporting program and is not designed to capture discards or releases for obvious reasons. The only commercial logbook the Division has is one for eels which has few discards. A state-wide all-encompassing commercial logbook would cost the state nearly what the entire trip ticket program costs, which is unlikely in the current economic

climate. The National Marine Fisheries Service (NMFS) has logbooks for most of its commercial fisheries occurring in federal waters and in some cases does require reporting of discards. We do not consider logbooks from 1.5 million recreational fishermen feasible. Instead, we use interview data conducted via the Marine Recreational Information Program to estimate fish released both dead and alive.

4. Federal for-hire logbook- We have addressed for-hire reporting redundancy with the NMFS Northeast and NMFS Southeast offices and there will be no duplicate reporting from the N.C. for-hire industry. However, and as you pointed out at the meeting, there may be two different systems depending on whether you are reporting a commercial or a for-hire trip. That is a valid point which we will work towards alleviating in the future if at all possible. I realize a demo of the tablet app developed in Rhode Island was unsuccessful, but if it had been successful, you would have seen that it was developed so that the user could select either a commercial or a for-hire trip. Some of the data elements may differ, but this should not be a problem for the developers. Your comment is worthy and one of the reasons we hold these meetings.
5. Marine Technology- I am familiar with the equipment the industry uses, but I do not see the Division working with the all the various makers of marine electronic equipment to provide this service. It would be cost and time prohibitive. If the industry chooses to make this recommendation to the marine electronics industry we would be open to allowing specific data files meeting our specifications to be imported into our system.
6. Joint Enforcement Agreement- We do not see a need to specifically address a for-hire logbook into the JEA as the state has adequate statutory and rule authorities to enforce it as a state regulation. In addition, we have determined that any funds received from a JEA can only be used for equipment for our Marine Patrol.

Thank you very much for your comments, your interest, and for your attendance at the stakeholders meeting in Wilmington. Feedback we receive from the public and members of the industry are invaluable to our resource management endeavors. If you would like to discuss any of these issues in more detail please feel free to call or write.

Sincerely,

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

**From:** Blum, Catherine  
**To:** ["Blakely Hildebrand"](#)  
**Cc:** [Sierra Weaver](#); [Tim Gestwicki](#); [David Knight](#)  
**Subject:** RE: public comments - proposed rules implementing Amendment 1 to NC Shrimp FMP  
**Date:** Tuesday, December 02, 2014 9:22:00 AM

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Dear Ms. Hildebrand,

Thank you for sending the Southern Environmental Law Center's comments on behalf of the North Carolina Wildlife Federation regarding the Marine Fisheries Commission's proposed rules implementing Amendment 1 to the N.C. Shrimp Fishery Management Plan. The comments will be forwarded to the commission for its consideration prior to its vote on permanent approval of the rules. This is scheduled to occur at the commission's Feb. 18-20 business meeting at the Hilton Riverside in Wilmington.

Sincerely,  
Catherine Blum

Catherine Blum  
Fishery Management Plan & Rulemaking Coordinator  
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**From:** Blakely Hildebrand [mailto:[bhildebrand@selcnc.org](mailto:bhildebrand@selcnc.org)]  
**Sent:** Monday, December 01, 2014 5:00 PM  
**To:** Blum, Catherine  
**Cc:** Sierra Weaver; Tim Gestwicki; David Knight  
**Subject:** public comments - proposed rules implementing Amendment 1 to NC Shrimp FMP

Ms. Blum,

Please find comments on the Marine Fisheries Commission's proposed rules implementing Amendment 1 to the North Carolina Shrimp Fisheries Management Plan attached. The Southern Environmental Law Center submits these comments on behalf of the North Carolina Wildlife Federation.

Thank you for your consideration of these comments.

Sincerely,  
Blakely Hildebrand

Blakely Elizabeth Hildebrand  
Associate Attorney | [Southern Environmental Law Center](#)

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December 1, 2014

## **VIA EMAIL**

Ms. Catherine Blum  
Rulemaking Coordinator, N.C. Division of Marine Fisheries  
N.C. Department of Environment and Natural Resources  
P.O. Box 769  
Morehead City, NC 28557  
[Catherine.blum@ncdenr.gov](mailto:Catherine.blum@ncdenr.gov)

**Re: Comments on the proposed rules implementing Amendment 1 to the North Carolina Shrimp Fishery Management Plan**

Dear Ms. Blum,

The Southern Environmental Law Center (“SELC”) submits these comments on the Marine Fisheries Commission (“MFC”) proposed rules implementing Amendment 1 to the North Carolina Shrimp Fishery Management Plan (“Amendment 1”) on behalf of the North Carolina Wildlife Federation (“NCWF”).

NCWF is a statewide, nonprofit conservation organization established in 1945 and dedicated to the sound, scientific management of North Carolina’s fish, wildlife, and habitat resources. NCWF is the state affiliate of the National Wildlife Federation and has offices in Charlotte and Raleigh plus thirteen chapters, thirty eight affiliates and thousands of members across the state. NCWF believes that North Carolina’s marine resources are a public trust resource, and as such must be protected and sustained for use and enjoyment by all citizens. NCWF holds firmly to the position that North Carolina must change its approaches to the protection, management, and conservation of its marine resources.

NCWF urges the MFC to adopt regulations implementing Amendment 1 that put in place meaningful protections for the millions of juvenile finfish that are caught and discarded every year in North Carolina’s shrimp trawl fishery, while allowing a sustainable shrimp harvest and ensuring the conservation of important marine species. NCWF is concerned that Amendment 1 and its proposed implementing regulations do not go far enough in establishing adequate protections for juvenile finfish or their habitat from destructive trawl nets used to harvest shrimp in our state’s inshore waters. NCWF’s specific objections are described in detail below.

*The Problem: Substantial Bycatch in North Carolina's Shrimp Trawl Fishery*

In 2012, North Carolina commercial fisherman harvested over six million pounds of pink, brown, and white shrimp using large trawl nets in inshore waters.<sup>1</sup> For every pound of shrimp harvested in the state, approximately four pounds of juvenile finfish, including spot, Atlantic croaker, and weakfish and other organisms were caught by trawl nets and discarded into the state waters.<sup>2</sup> In 2012, nearly twenty four million pounds of juvenile finfish and other organisms were caught by trawl nets and thrown back overboard.<sup>3</sup> These juvenile finfish and other organisms constitute bycatch, defined by the Atlantic States Marine Fisheries Commission as “unintended or non-targeted catch of a particular species or size.”<sup>4</sup>

North Carolina's inshore waters are important spawning and nursery grounds for many finfish, including juvenile Atlantic croaker, spot, and weakfish.<sup>5</sup> Primary, secondary, and special

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<sup>1</sup> See *Fish Dealer Report:2012*, N.C. DIV. MARINE FISHERIES (April 2013), at 1, available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=7b19d0c1-1a7a-44f4-97bd-9aefc038c5e3&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=7b19d0c1-1a7a-44f4-97bd-9aefc038c5e3&groupId=38337) (reporting that N.C. commercial fisherman landed 6.1 million pounds of shrimp in 2012, which amounted to a 19 percent increase over 2011 landings). See also *Unintended Consequences*, N.C. WILDLIFE FED'N JOURNAL (Spring 2014), at 2.

<sup>2</sup> The majority of shrimp harvested in North Carolina waters are harvested in the Pamlico Sound. In 2009, in the Pamlico Sound, pink, white, and brown shrimp represented only 23 percent of shrimp trawl net catch, while Atlantic croaker, spot, and weakfish accounted for 33 percent, 13 percent, and 6 percent of the catch, respectively. See Kevin Brown, *Characterization of the inshore commercial shrimp trawl fishery in Pamlico Sound and its tributaries, North Carolina: Documentation and Reduction of Bycatch in North Carolina Fisheries*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN. (June 2010) at 26 [hereinafter *2010 NC Bycatch Study*] (outlining the findings of the study of bycatch in the Pamlico Sound, which accounted for 68 percent of the total harvest of shrimp in North Carolina in 2009). In North Carolina waters between Carteret County and the South Carolina line, shrimp accounted for only 21 percent of the catch for all shrimp trawls studied, while Atlantic croaker, spot, and weakfish accounted for 25 percent, 7 percent, and 2 percent of the catch, respectively. See Kevin Brown, *Characterization of the inshore commercial shrimp trawl fishery from Carteret County to Brunswick County, North Carolina: Documentation and Reduction of Bycatch in North Carolina Fisheries*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN. (April 2009) at 27 [hereinafter *2009 NC Bycatch Study*]. See also *Unintended Consequences*, *supra* note 1, at 2 (estimating that 4.5 pounds of bycatch are caught in trawl nets for every pound of shrimp caught in N.C. inshore waters).

<sup>3</sup> Based on 2012 harvest numbers cited above, see *Fish Dealer Report: 2012*, *supra* note 1, and bycatch estimates, see, e.g., *2010 NC Bycatch Study*, *supra* note 2, nearly twenty four million pounds of bycatch were caught and discarded in 2012. See also *Unintended Consequences*, *supra* note 1, at 4 (estimating twenty eight million pounds of bycatch were caught in 2012).

<sup>4</sup> *Special Report No. 78: Summer Flounder Bycatch Regulatory Discards Workshop*, ATLANTIC STATES MARINE FISHERIES COMM'N (July 2003), at 5, available at <http://www.asmfc.org/uploads/file/sr78SummerFlounderBycatchRegulatoryDiscardsReport.pdf>.

<sup>5</sup> See *Atlantic Croaker*, ATLANTIC STATES MARINE FISHERIES COMM'N, <http://www.asmfc.org/species/atlantic-croaker> (last visited Nov. 25, 2014) (noting that Atlantic croaker “spawn in warm pelagic waters during the fall and winter months, and the larvae and juveniles settle in estuaries to mature”); *Atlantic Croaker – 2014*, N.C. DIV. MARINE FISHERIES, <http://portal.ncdenr.org/web/mf/08-atlantic-croaker-ssr-2014> (last visited Nov. 25, 2014) (indicating that Atlantic croaker spawning season peaks in October in N.C. waters). See also *Weakfish (Gray Trout) – 2014*, N.C. DIV. MARINE FISHERIES, <http://portal.ncdenr.org/web/mf/33-weakfish-ssr-2014> (last visited Nov. 25, 2014) (indicating that the weakfish is “dependent on estuarine habitat as critical nursery areas”). See also *Spot – 2014*, N.C. DIV. MARINE FISHERIES, <http://portal.ncdenr.org/web/mf/30-spot-ssr-2014> (last visited Nov. 25, 2014) (discussing the migration of juvenile spot to the “upper reaches of the estuaries” and of adult spot between the estuarine and near-shore ocean).

secondary nursery areas are fragile estuarine and marine areas supporting juvenile finfish and shrimp. Trawling in these areas results in a substantial level of bycatch, and has a damaging impact on juvenile finfish populations in state waters. The North Carolina Division of Marine Fisheries (“DMF”) has listed the Atlantic croaker as “concerned,” spot as “concerned,” and weakfish as “depleted” in its annual Stock Status Report.<sup>6</sup> These species are important sources of food and forage, and are often target catch for commercial and recreational fishermen.<sup>7</sup> The MFC acknowledges that bycatch is a substantial problem in the state shrimp trawl fishery, and committed its 2014 revision of the shrimp FMP to examining and adopting strategies to mitigate bycatch in the state’s shrimp trawl fishery.<sup>8</sup>

*Available Tools to Reduce Bycatch: North Carolina Fishery Management Plans*

The MFC is required to adopt fishery management plans for “all commercially or recreationally significant species or fisheries” in the state with the stated goal of “ensur[ing] long-term viability” of such species.<sup>9</sup> Fishery management plans must include “conservation and management measures that will provide . . . [for] the protection of marine ecosystems, and that will produce a sustainable harvest.”<sup>10</sup> The development of these plans requires input from advisory committees consisting of commercial fishermen, recreational fishermen, and scientists with expertise in fishery management.<sup>11</sup> Fishery management plans must be reviewed every five years.<sup>12</sup> The fishery management plan itself is not binding; the MFC must adopt rules to implement the plan in accordance with the North Carolina Administrative Procedures Act.<sup>13</sup> Additionally, the Fisheries Director has the authority to issue proclamations on a range of issues relating to fisheries management; compliance with proclamations is mandatory.<sup>14</sup> In these plans and through proclamations, the MFC may regulate fishing times, areas open to fishing, fishing gear, seasons, size limits, allowable quantities of fish harvested and possessed by fishermen.<sup>15</sup>

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<sup>6</sup> See *Stock Status Report: 2014*, N.C. DIV. OF MARINE FISHERIES, <http://portal.ncdenr.org/web/mf/2014-stock-status-report> (last visited Nov. 18, 2014).

<sup>7</sup> See, e.g., *Atlantic Croaker*, *supra* note 5 (indicating that commercial and recreational fisherman seek out Atlantic croaker and that recreational landings of this species have increased over time). See also *Atlantic Croaker*, CHESAPEAKE BAY PROGRAM, [http://www.chesapeakebay.net/fieldguide/critter/atlantic\\_croaker](http://www.chesapeakebay.net/fieldguide/critter/atlantic_croaker) (last visited Nov. 25, 2014) (noting that the Atlantic croaker’s predators include bluefish and striped bass).

<sup>8</sup> Existing protections against bycatch include minimal gear restrictions, limited areas closed to trawling, and minimal reporting requirements See, e.g., 15A. N.C. ADMIN. CODE. 03L.0103 (2014) (limiting the type of gear used in trawling), 03R.0114 (2014) (prohibiting shrimp trawling in certain areas).

<sup>9</sup> N.C. GEN. STAT. § 113-182.1 (2014).

<sup>10</sup> N.C. GEN. STAT. § 113-182.1(b)(3).

<sup>11</sup> *Id.* at (c).

<sup>12</sup> *Id.* at (d).

<sup>13</sup> *Id.* at (f).

<sup>14</sup> See 15A N.C. ADMIN. CODE 03H.0103 (2014) (“It is unlawful to violate the provisions of any proclamation issued by the authority of the Marine Fisheries Commission Rule. . . variable conditions triggering the use of the Fisheries Director’s proclamation authority may include any of the following . . . (2) biological impacts; (3) environmental conditions; (4) compliance with Fishery Management Plans . . . [and] (6) bycatch issues.”).

<sup>15</sup> N.C. GEN. STAT. §§ 113-182 (a)-(b) (2014).

The original shrimp fishery management plan was adopted in April 2006 (“2006 shrimp FMP”), and was up for review under the five-year review requirement in 2011.<sup>16</sup> Based on public concern regarding the substantial level of bycatch in the state’s shrimp trawl fishery, the MFC limited the scope of the revision of the 2006 shrimp FMP to bycatch issues.<sup>17</sup> In so doing, the MFC articulated numerous objectives in revising the 2006 shrimp FMP, including “minimiz[ing] waste . . . minimiz[ing] the harvest of non-target species of finfish . . . and promot[ing] the protection restoration and enhancement of habitats and environmental quality necessary for enhancing the shrimp resource.”<sup>18</sup> MFC’s six regional committees met to review the 2006 shrimp FMP, MFC regulations, and existing MFC proclamations to propose recommendations for updates to the 2006 shrimp FMP and its implementing rules. After a one-year review of the 2006 shrimp FMP, the MFC proposed Amendment 1 and several proposed amendments to existing rules that implement Amendment 1 on which NCWF provides comments today.

*Inadequate Solutions: Proposed Rules Implementing Amendment 1 to the Shrimp Fishery Management Plan*

The MFC has proposed amendments to numerous rules implementing Amendment 1 to the 2006 shrimp FMP.<sup>19</sup> While NCWF supports several amendments to the rules proposed by the Commission, the MFC has fallen short of proposing adequate requirements and restrictions on allowable gear, bycatch reduction devices, and areas open to trawling.

The MFC proposes an excessive phase-in period for new restrictions on the maximum combined length of trawl nets used to harvest shrimp in state waters.<sup>20</sup> NCWF strongly opposes these amendments, and encourages MFC to adopt a much shorter phase-in period for the required combined headrope length and a shorter allowable maximum combined headrope length on shrimp trawls. Notably, the MFC focused its multi-year review and revision of the 2006 shrimp FMP exclusively on adopting strategies to reduce bycatch. Delaying the adoption of gear restrictions for an additional two years is unacceptable. While NCWF has advocated for a reduced maximum headrope length and supports the Commission’s efforts to impose a restriction in areas where no restriction exists, the MFC’s proposed restriction and the timeframe within which the restriction will be imposed are inadequate to address substantial bycatch resulting from large shrimp trawl nets.

MFC’s proposed rule allows an unreasonably long phase-in period for compliance with the limit on headrope length; the proposed rule requires all shrimp trawlers to comply with the

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<sup>16</sup> See *North Carolina Shrimp Fishery Management Plan*, N.C. DIV. OF MARINE FISHERIES (April 2006), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=7dc55c67-c6df-4a39-9ffc-32471c055c23&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=7dc55c67-c6df-4a39-9ffc-32471c055c23&groupId=38337) [hereinafter *2006 Shrimp FMP*].

<sup>17</sup> *North Carolina Shrimp Fishery Management Plan, Draft Amendment 1*, N.C. DIV. OF MARINE FISHERIES (February 2014), at 20, available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=a7825b9a-14ae-4e0b-8795-bfb16fd6ed2a&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=a7825b9a-14ae-4e0b-8795-bfb16fd6ed2a&groupId=38337) [hereinafter *Amendment 1*].

<sup>18</sup> *Id.*

<sup>19</sup> See 29:07 N.C. Reg. 735-738 (Oct. 1, 2014).

<sup>20</sup> 29:07 N.C. Reg. 735-738 (Oct. 1, 2014) (proposing an amendment to 15A N.C. ADMIN. CODE 03L.0103).



220 foot limit by January 1, 2017.<sup>21</sup> Under current regulatory conditions, almost twenty four million pounds of bycatch, including juvenile finfish, are caught and discarded in inshore waters each year.<sup>22</sup> With no meaningful restrictions in place for another two years, the level of bycatch caught and discarded will amount to almost fifty million pounds.<sup>23</sup> This is unacceptable. The North Carolina General Assembly entrusted the protection and conservation of the state's marine resources to the MFC, and the General Assembly specifically requires that the fishery management plans adopted and implemented by MFC include conservation and management measures that provide for the "protection of marine ecosystems and that will produce a sustainable harvest."<sup>24</sup> Allowing fishermen to continue to use trawl nets unabated for two more years is in direct conflict with these legislative requirements. NCWF proposes that all fishermen be required to comply with MFC's proposed restriction on combined headrope length by July 1, 2015. This timeframe provides fishermen with advance notice of the rule change and adequate time to comply with the new requirements.

In addition to the timeline for phase-in, the MFC's proposal is also substantively inadequate. The excessive maximum headrope length allowed under the proposed rules will continue to result in substantial bycatch in the state's shrimp trawl fishery. A combined headrope length of 220 feet allows for the continued use of large trawl nets that are responsible for habitat destruction and significant bycatch. NCWF advocated for a combined maximum headrope length of 110 feet in its January 2014 letter to the Commission. After further review and research, NCWF now recommends that the MFC adopt a ninety foot combined maximum headrope length on all shrimp trawl nets. As NCWF noted in their comments on Amendment 1, not only do large trawl nets result in substantial bycatch, these nets also limit trawling activities by small shrimping operations. Reducing the combined maximum headrope length to ninety feet would benefit all shrimpers in the state while protecting juvenile finfish and other organisms caught in large trawl nets.<sup>25</sup> Further, the MFC proposes a ninety foot combined headrope length for internal waters in designated areas.<sup>26</sup> A consistent limitation on the combined maximum headrope length in all inshore waters will provide clarity for fishermen and result in more efficient fishing practices in state waters. Additionally, a consistent limitation on combined headrope length supports a shorter phase-in period for compliance with the MFC's proposed rules.

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<sup>21</sup> *Id.* at 736, 748 (proposing an amendment to 15A N.C. ADMIN. CODE 03L.0103(d)).

<sup>22</sup> See text and notes accompanying *supra* notes 2-3.

<sup>23</sup> See 2010 NC Bycatch Study, *supra* note 2, at 26 (estimating that approximately one-quarter of catch in trawl nets is targeted shrimp, while the remaining approximately 75 percent of the catch is non-targeted bycatch). If these statistics are applied the total shrimp harvest numbers in 2012, see *Fish Dealer Report: 2012 supra* note 1, the bycatch estimated over the two year phase-in period amounts to approximately 50 million pounds of bycatch.

<sup>24</sup> N.C. GEN. STAT. §§ 113-131, 182.1(b)(3).

<sup>25</sup> Other states with significant shrimp fisheries have established combined headrope length limits well below the 220 feet proposed by MFC. For example, the maximum combined headrope length for shrimp trawls allowed in Mississippi waters is 100 feet. See 21-1 MISS. CODE. R. § 15:05 (restricting individual trawl net sizes in different coastal areas to twelve, twenty five, and fifty feet and placing limitations on the size of trawl doors). In Alabama, recreational shrimp trawl nets cannot exceed sixteen feet (only one net per boat) and commercial trawl nets cannot exceed a combined fifty feet in length (limit of two nets per boat). See ALA. ADMIN CODE. R. 220-3-.01(8) (2014).

<sup>26</sup> See 29:07 N.C. Reg. at 748 (proposing an amendment to 15 15A N.C. ADMIN. CODE 03L.0103(c)).

Additionally, the MFC proposes to amend the definition of “mesh length” so that the definition may be applied to square- and diamond-mesh nets.<sup>27</sup> The description of this rule change suggests that this proposed amendment supports “a management strategy to require one additional bycatch reduction device in all skimmer and otter trawls.”<sup>28</sup> NCWF notes that the proposed rules themselves do not require the use of an additional bycatch reduction device (“BRD”). In fact, no North Carolina statute, regulation, or proposed regulation requires the use of BRDs by shrimp trawlers in inshore waters other than turtle excluder devices (“TEDs”).<sup>29</sup> NCWF encourages the MFC to amend its rules to require all fishermen to use a BRD when trawling in state waters. The Fisheries Director may, but is not required to, issue a proclamation mandating the use of BRDs to reduce the number of finfish caught by shrimp trawl nets.<sup>30</sup> The Fisheries Director must have the consent of the MFC to issue such a proclamation; the MFC meets only four times each year.<sup>31</sup> The current Fisheries Director Dr. Louis B. Daniel, III, issued a proclamation requiring one of three BRDs beginning June 1, 2012.<sup>32</sup> While proclamations issued by the Fisheries Director are binding on all fishermen fishing in North Carolina waters,<sup>33</sup> and NCWF is pleased that the current Fisheries Director has issued such a proclamation, a rule requiring BRDs would put in place a permanent and consistent requirement for the use of BRDs and signal to fishermen MFC’s commitment to reducing bycatch in the state’s shrimp trawl fishery.

In Amendment 1, the DMF suggests that adopting certain gear restrictions and requirements for BRDs may violate state law prohibiting the adoption of a state regulation that is more strict than any existing federal regulation.<sup>34</sup> This provision of state law may not be applicable to state fishery management plans because federal law likely does not apply in this context. Even if federal law does apply, however, federal regulations require the use of BRDs on shrimp trawls. The Magnuson-Stevens Act (“MSA”) governs fishery management plans for fishery resources in the federal exclusive economic zone (“EEZ”) and in certain areas beyond the EEZ.<sup>35</sup> The MSA requires that conservation and management measures adopted through fishery management plans developed under the Act “minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.”<sup>36</sup> Federal regulations implementing the MSA require the use of bycatch reduction devices for shrimp fisheries operating in the South

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<sup>27</sup> See 29:07 N.C. Reg. at 735, 741 (proposing an amendment to 15A N.C. ADMIN. CODE 03I.0101(3)(n)).

<sup>28</sup> *Id.* at 735.

<sup>29</sup> 15A N.C. ADMIN. CODE 03L.0103(g) (2014).

<sup>30</sup> 15 N.C. ADMIN. CODE 3J.0104(d) (2014).

<sup>31</sup> See N.C. GEN. STAT. § 153B-289.56(a) (2014) (requiring the Commission to meet at least once each quarter). See also 15A N.C. ADMIN. CODE 03J.0104(d) (requiring that the Fisheries Director get consent from the Commission to issue proclamations).

<sup>32</sup> See *Proclamation Re: Shrimp Trawling N.C. Bycatch Reduction Device (BRD) Specifications (SH-3-2012)*, N.C. DIV. MARINE FISHERIES (May 24, 2012), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=79d27a57-6b0b-4664-b6ae-2df70a3ca132&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=79d27a57-6b0b-4664-b6ae-2df70a3ca132&groupId=38337).

<sup>33</sup> 15 N.C. ADMIN. CODE 3H.0103(a) (2014).

<sup>34</sup> See *Amendment 1*, *supra* note 17, at 284 (referring to N.C. GEN. STAT. 150B-19.3 (2014)).

<sup>35</sup> See 16 U.S.C. § 1811 (2012).

<sup>36</sup> 16 U.S.C. § 1851(a)(9) (2012).

Atlantic EEZ.<sup>37</sup> Generally speaking, the MSA does not pre-empt state fishery management plans that regulate fishing activity in state territorial waters only.<sup>38</sup> Further, the MSA preserves states' jurisdiction to develop fishery management plans for fisheries in state waters.<sup>39</sup> A state's waters include waters within three miles of its coast line.<sup>40</sup> The State of North Carolina has the authority to regulate fishing activities within its waters. The North Carolina General Assembly delegated all regulatory authority over marine resources "to the extent of the State jurisdiction over the resources" to the MFC.<sup>41</sup> In sum, the MFC and DMF should re-consider its position requiring the use BRDs and adopt a rule requiring the use of such devices in North Carolina waters.<sup>42</sup>

The MFC further proposes closing certain areas to trawling. Specifically, the MFC proposes closing the New River to trawl nets except skimmer trawls upstream from the N.C. Highway 172 Bridge.<sup>43</sup> The 2006 shrimp FMP proposed closing these areas to otter trawls over a four-year period because this area includes fragile nursery areas.<sup>44</sup> In furtherance of that recommendation in the 2006 shrimp FMP, this area has been closed to trawling for many years by proclamation by the Fisheries Director.<sup>45</sup> This proposed rule follows through on the 2006 shrimp FMP recommendation and permanently closes this special secondary nursery area to

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<sup>37</sup> See 50 C.F.R. § 622.207(a) (2014). See also 50 C.F.R. Part 622, Appendix D (outlining specifications for certified BRDs).

<sup>38</sup> See, e.g., *Louisiana Seafood Management Council, Inc. v. Foster*, 917 F.Supp. 439, 443-34 (E.D.La. 1996) (upholding a Louisiana law that attempted to regulate fishing activity in state territorial waters and finding that the law was not pre-empted by MSA because the state did not attempt to enforce the state law in the exclusive economic zone).

<sup>39</sup> See 16 U.S.C. § 1856(a) ("Except as provided in subsection (b) of this section, nothing in this chapter shall be construed as extending or diminishing the jurisdiction or authority of any State within its boundaries.").

<sup>40</sup> See 43 U.S.C. § 1312 (2012).

<sup>41</sup> N.C. GEN. STAT. § 113-134.1 (2014).

<sup>42</sup> Under Amendment 1, the MFC has proposed only to convene a stakeholder group to test BRDs, including minimum tail bag mesh sizes, T-90 panels, skylight panels, and reduced bar spacing in TEDs to reduce finfish bycatch. See *Amendment 1*, *supra* note 17, at 27 (outlining all of the Commission's preferred management strategies under Amendment 1 and listing the convening of a stakeholder group to initiate industry testing of multiple BRDs with a 40 percent bycatch reduction target). As discussed above, the MFC should adopt a BRD requirement as part of the current proposed changes to MFC rules and enforce such a requirement. At the very least, however, NCWF encourages the MFC to expedite the work of the stakeholder group and provide the public progress reports on the status of the group's study of BRDs.

<sup>43</sup> 29:07 N.C. Reg. at 735, 744 (proposing an amendment to 15A N.C. ADMIN. CODE 03J.0208).

<sup>44</sup> 2006 *Shrimp FMP*, *supra* note 16, at 97. See also 15A N.C. ADMIN. CODE 03R.0105(7) (2014) (designating all waters upstream of the N.C. Highway 172 Bridge over the New River as special secondary nursery areas).

<sup>45</sup> See *Proclamation Re: 2011 Shrimping and Crab Trawling* (SH-10-2011), N.C. DIV. MARINE FISHERIES (Aug. 15, 2011), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=4432d317-88ba-4092-b757-278577c32614&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=4432d317-88ba-4092-b757-278577c32614&groupId=38337) (prohibiting the use of otter trawls upstream of Highway 172 Bridge over the New River after August 17, 2013); *Proclamation Re: Shrimp and Crab Trawling* (SH-2-2012), N.C. DIV. OF MARINE FISHERIES (Apr. 27, 2012), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=24650202-b862-444d-b9c3-945051fde4a9&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=24650202-b862-444d-b9c3-945051fde4a9&groupId=38337) (prohibiting otter trawls upstream of the Highway 172 Bridge over the New River after May 1, 2012); *Proclamation Re: 2013 Shrimping and Crab Trawling* (SH-7-2013), N.C. DIV. MARINE FISHERIES (Aug. 26, 2013), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=a51a305f-954d-43d7-bc5a-ab0848fdb561&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=a51a305f-954d-43d7-bc5a-ab0848fdb561&groupId=38337) (prohibiting the use of otter trawls upstream of the Highway 172 Bridge over the New River after Aug. 30, 2013).

damaging otter trawling. MFC also proposes closing the Intracoastal Waterway channel from the Sunset Beach Bridge south to the South Carolina line, including the Shallotte River, Eastern Channel, and lower Calabash River to trawling.<sup>46</sup> This change was also contemplated during the development of the 2006 shrimp FMP.<sup>47</sup> Much of the area covered by this rule has been closed to trawling by proclamation.<sup>48</sup> The areas covered by this proposed rule are important habitat for young and small shrimp and juvenile finfish, and should be protected from destructive shrimp trawls.<sup>49</sup> NCWF strongly supports these changes to existing MFC rules. NCWF encourages the MFC to limit trawling in additional inshore waters, as well. Specifically, NCWF asks the MFC to re-designate nursery areas to take into consideration all economically beneficial species to the commercial and recreational fishing industries. Primary, secondary, and special secondary nursery areas are fragile estuarine and marine areas supporting juvenile finfish, and these areas should be permanently closed under MFC regulations.<sup>50</sup>

The MFC proposes restructuring the rule granting the Fisheries Director authority to “impose . . . restrictions” on time, area, means and methods, season, size, and quantity for the taking of shrimp.<sup>51</sup> The language of this proposed rule broadens the Fisheries Director’s discretion to impose restrictions without providing any criteria guiding the imposition of such restrictions, including, notably, the Director’s discretion to restrict areas open to the taking of shrimp. Despite language in the regulation indicating that this proclamation power is only to “impose . . . restrictions,” NCWF is concerned that the lack of language limiting the proclamation power may be read to allow the Fisheries Director to open protected areas to shrimp trawling. The exercise of proclamation power described in this section must be limited by existing MFC rules permanently closing primary, secondary, and special secondary nursery areas and other designated areas to trawling. As noted above, designated nursery areas are important spawning grounds for juvenile finfish and are protected under MFC rules.<sup>52</sup> The Director should be guided by conservation principles in exercising proclamation authority under this proposed rule.

Finally, the MFC proposes restricting the taking of shrimp until the Director opens the season;<sup>53</sup> allowing hand cast netting of shrimp in areas currently closed to the taking of shrimp<sup>54</sup>;

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<sup>46</sup> 29:07 N.C. Reg. at 737, 795 (proposing an amendment to 15A N.C. ADMIN. CODE 03R.0114).

<sup>47</sup> See *Amendment 1*, *supra* note 17, at 342. See also *2006 Shrimp FMP*, *supra* note 16, at 102.

<sup>48</sup> See, e.g. *Proclamation Re: Crab Trawling and Taking Shrimp With Nets* (SH-10-2014), N.C. DIV. MARINE FISHERIES (Sept. 17, 2014), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=43d0c8ca-47c1-4491-80b1-c648234f9c5e&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=43d0c8ca-47c1-4491-80b1-c648234f9c5e&groupId=38337) (closing the Intracoastal Waterway west of Sunset Beach High Rise Bridge to the South Carolina line to shrimp trawls). But see *Proclamation Re: Crab Trawling and Taking Shrimp with Nets* (SH-14-2014), N.C. DIV. OF MARINE FISHERIES (Oct. 28, 2014), available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=7fa5d873-3178-4cf9-a14f-dee81551a392&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=7fa5d873-3178-4cf9-a14f-dee81551a392&groupId=38337) (opening only the main channel of the Intracoastal Waterway from Sunset Beach High Rise Bridge to the South Carolina line to shrimp nets).

<sup>49</sup> See text and notes accompanying *supra* note 5.

<sup>50</sup> 15A N.C. ADMIN. CODE 3N.0101 – 0105 (2014).

<sup>51</sup> 29:07 N.C. Reg. at 736, 747-48 (proposing an amendment to 15A N.C. ADMIN. CODE 03L.0101(a)-(b)).

<sup>52</sup> See text accompanying *supra* note 4.

<sup>53</sup> *Id.* at 736, 747 (proposing an amendment to 15A N.C. ADMIN. CODE 03L.0101(a)).

<sup>54</sup> *Id.* at 736, 748 (proposing an amendment to 15A N.C. ADMIN. CODE 03L.0105 (1)-(2)).

and increasing the amount of shrimp that may be taken from these areas.<sup>55</sup> NCWF does not oppose these amendments.

### *Conclusion*

Moving forward, NCWF encourages the MFC to establish rational and sustainable goals for bycatch reduction in the shrimp trawl fishery, adopt meaningful management strategies to achieve those goals, set a timetable for implementing management strategies, enforce the implementation of these strategies, evaluate the status of the management strategies, and update management strategies as needed. To this end, MFC should consider limiting tow times, creating seasons for shrimping, requiring monitoring and reporting of bycatch from all commercial and recreational fishermen, and establishing a goal of reducing finfish bycatch by 40 percent.<sup>56</sup> Further, the MFC should incorporate the findings and goals of the Coastal Habitat Protection Plan into the 2006 shrimp FMP.<sup>57</sup>

In sum, the MFC had an opportunity to meaningfully address issues associated with bycatch, taking into account the overwhelming evidence that the level of bycatch in inshore waters is unacceptably high and the public call for efforts to reduce bycatch. The MFC's proposed rules fall short of implementing meaningful strategies to reduce the level of bycatch in North Carolina inshore waters, protecting juvenile finfish and their habitat, and ensuring sustainable fisheries resources management. NCWF encourages MFC to consider the recommendations discussed herein when adopting rules implementing Amendment 1 to the 2006 shrimp FMP.

Thank you in advance for your consideration of these comments.

Sincerely,



Sierra B. Weaver  
Blakely E. Hildebrand

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<sup>55</sup> *Id.*

<sup>56</sup> See *Amendment 1*, *supra* note 17, at 356 (outlining MFC's preferred management strategies).

<sup>57</sup> See *North Carolina Coastal Habitat Protection Plan*, N.C. DEP'T. OF ENV'T AND NATURAL RES. (Dec. 2010), available at <http://portal.ncdenr.org/web/mf/59>.



# **Division of Marine Fisheries' Overview of Amendment 1 to the Shrimp Fishery Management Plan March 2014**



The goal of the N.C. Shrimp Fishery Management Plan is to utilize a management strategy that provides adequate resource protection, optimizes the long-term commercial harvest, maximizes social and economic value, provides sufficient opportunity for recreational shrimpers, and considers the needs of all user groups. At the outset of the most recent review of the plan, the division concluded the current management strategies in the plan were continuing to meet the goal and objectives and recommended proceeding with a revision, or simple update of the plan. Review of the draft revision by several advisory committees of the N.C. Marine Fisheries Commission yielded an overwhelming number of concerns from the public about bycatch in the shrimp trawl fishery. As a result, the N.C. Division of Marine Fisheries recommended proceeding with an amendment to the plan. The Marine Fisheries Commission concurred, and limited the scope of the amendment to bycatch issues in the commercial and recreational fisheries.

Shrimp trawling is a controversial topic and has been the subject of much debate. In the original 2006 plan, management strategies were developed to address the issues of trawling, specifically focusing on bycatch and habitat. The plan also addressed the issues of insufficient bycatch data and competition among shrimp fishermen and with other user groups. These strategies will remain in place in Amendment 1. Gear studies and shrimp trawl characterization studies have also been carried out and will continue to be addressed in the future.

For Amendment 1, the division presented 29 management options to the Shrimp Fishery Management Plan Advisory Committee to address eight different issues. The Marine Fisheries Commission's preferred management strategies addressing bycatch issues in the shrimp fisheries include:

- Convene a stakeholder group to initiate industry testing of minimum tail bag mesh size, T-90 panels, skylight panels, and reduced bar spacing in turtle excluder devices to reduce bycatch to the extent practicable with a target of 40-percent reduction;
- Require either a T-90 panel, square-mesh tailbag or other applications of square mesh panel, reduced bar spacing in a turtle excluder device, or another federal or state certified bycatch reduction device in addition to existing required devices in all skimmer and otter trawls;
- In order to put a cap on fleet capacity as a management tool, establish a maximum combined headrope length of 220 feet in all internal coastal waters where there are no existing maximum combined headrope requirements, allowing a two-year phase-out period; and
- Prohibit shrimp trawling in the Intracoastal Waterway channel from the Sunset Beach Bridge to the South Carolina line, including Eastern Channel, lower Calabash River and Shallotte River.

Amendment 1 also includes prioritized lists of research and data needs.

Following the review of Amendment 1 by the Department of Environment and Natural Resources secretary and the Joint Legislative Commission on Governmental Operations, the draft plan will be presented to the Marine Fisheries Commission for procedural approval and to begin the rulemaking process. The Marine Fisheries Commission will consider final approval of Amendment 1 and the implementing rules in November 2014.





## FISCAL IMPACTS OF PROPOSED AMENDMENTS TO THE SHRIMP FISHERY MANAGEMENT PLAN

**Rule Amendments:** 15A NCAC 03I .0101 DEFINITIONS  
 15A NCAC 03J .0208 NEW RIVER  
 15A NCAC 03L .0101 SHRIMP HARVEST RESTRICTIONS  
 15A NCAC 03L .0103 PROHIBITED NETS, MESH SIZES AND AREAS  
 15A NCAC 03L .0105 RECREATIONAL SHRIMP LIMITS  
 15A NCAC 03R .0114 SHRIMP TRAWL PROHIBITED AREAS

**Name of Commission:** N.C. Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
 N.C. Division of Marine Fisheries  
 3441 Arendell Street  
 Morehead City, NC 28557  
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**Impact Summary:** State government: Yes  
 Local government: No  
 Federal government: No  
 Substantial impact: No

**Authority:** 113-134. Rules.  
 113-182. Regulation of Fishing and Fisheries.  
 113-221.1. Proclamations; Emergency Review.  
 143B-289.52. Marine Fisheries Commission – Powers and Duties.

**Necessity:** In accordance with G.S. 113-182.1 (b) and (d), the proposed rule changes (see proposed rule text in the appendix) are necessary to amend and update the N.C. Shrimp Fishery Management Plan to ensure adequate management of the shrimp resource and shrimp fisheries in state waters. Specifically, the rule changes address six separate issues and propose to:

- 1) Modify 15A NCAC 03I .0101 to improve the existing definition of net mesh length to more clearly define how a mesh length is measured;
- 2) Modify 15A NCAC 03J .0208 to provide clarity on trawling in the special secondary nursery area in the New River above the NC 172 Bridge and remove proclamation authority to open and close shrimping between August 16 and November 30;
- 3) Amend 15A NCAC 03L .0101 to clarify proclamation authority for shrimp harvest restrictions and standardize rule language for proclamation authority to match other similar rules;
- 4) Amend 15A NCAC 03L .0103 to create a 220-foot maximum headrope length for trawl gear used in internal waters where no headrope length limit currently exists;
- 5) Modify 15A NCAC 03L .0105 to clarify recreational shrimp harvest limits in areas open and otherwise closed to the taking of shrimp as well as increase the

**Fiscal Note for Proposed Rule Changes to 15A NCAC 03I .0101, 15A NCAC 03J .0208, 15A NCAC 03L .0101, 15A NCAC 03L .0103, 15A NCAC 03L .0105, 15A NCAC 03R .0114**

- recreational shrimp limit in areas otherwise closed to the taking of shrimp from two quarts to four quarts heads-on or two and one half quarts heads-off;
- 6) Amend 15A NCAC 03R .0114 to permanently close Shallotte River, lower Calabash River, and the Intracoastal Waterway between the Sunset Beach Bridge and the South Carolina state line to shrimp trawling due to consistently low abundance of shrimp that are of marketable size and to reduce shrimp trawl bycatch.

The anticipated effective date of the proposed rule changes is April 1, 2015.

## **1. Improve the Definition of Net Mesh Length (15A NCAC 03I .0101)**

### **I. Summary**

A rule change is needed in the legal definition of a mesh length to maintain consistency and clarity in the enforcement of rules related to mesh-length specifications. North Carolina Division of Marine Fisheries (NCDMF) staff determined that the current rule does not provide enough detail in how to measure mesh length. Therefore, NCDMF is proposing clarifications to the rule defining mesh length.

### **II. Introduction and Purpose of Rule Changes**

During the amendment process of the Shrimp Fishery Management Plan Amendment I, NCDMF staff reviewed several rules related to the shrimp fisheries in North Carolina. As part of this review, staff determined that the rule defining mesh length needed clarification. Multiple fishery regulations involve maximum and/or minimum mesh lengths, and the current definition of a mesh length does not adequately describe how a mesh length is measured. Both the public and law enforcement would benefit from clarification of this definition to more easily and consistently follow mesh length-related fishery management measures.

### **III. Costs**

There are no costs associated with the proposed rule change. The practice of using mesh length as a fisheries management tool nor the implementation of mesh-length rules will not change in a significant way.

### **IV. Benefits**

Both the public and law enforcement will benefit from the proposed rule change, as the rule defining how mesh length is measured will be more clearly stated and will provide a consistent way to measure mesh length.

## **2. Trawling in the New River Special Secondary Nursery Area Above the NC 172 Bridge (15A NCAC 03J .0208)**

### **I. Summary**

The proposed rule change seeks to clarify the rule used for the management of trawling above the NC 172 Bridge in the New River (Onslow County).

## II. Introduction and Purpose of Rule Changes

The waters upstream of the NC 172 Bridge in the New River were designated by rule as a Special Secondary Nursery Area (SSNA) in 1996. For information purposes, Primary Nursery Areas are those areas in the estuarine system where initial post-larval development takes place and Secondary Nursery Areas are those areas in the estuarine system where later juvenile development takes place (15A NCAC 03I .0101 (4)(f)). Special Secondary Nursery Areas are Secondary Nursery Areas that can be conditionally opened certain times of the year for shrimp and crab trawling at the discretion of the fisheries director.

For this issue, the portion of the SSNA impacted by trawl openings includes the portion of the New River above the NC 172 Bridge up to the marked closure line running from Grey's Point to the opposite bank of the river. The use of otter trawls in the SSNA of the New River was phased out in 2010 as was specified in the 2006 Shrimp Fishery Management Plan, however skimmer trawls may still be used. Those who wished to continue to harvest shrimp in the SSNA with otter trawl gear were allowed a four-year grace period to convert to skimmer trawl gear. Currently skimmer trawl gear is the only shrimp trawl gear allowed in the New River SSNA. While reviewing rules related to shrimp fishing for the Shrimp Fishery Management Plan Amendment I, NCDMF staff determined that the rule for the use of trawl nets in the SSNA in the New River needed to be amended to address the current management of skimmer trawls by proclamation. The proposed rule changes seek to improve the terms of use for trawl nets in the New River SSNA for improved public clarity.

For clarification, otter trawls are nets which have otter boards or doors fastened to the sides. When the net is in motion underwater, the boards pull away from each other resulting in the net opening up. Skimmer trawls are effective in relatively shallow water and are held in place by a frame on three sides and mounted on the vessel just behind the bow. Skimmer trawls are pushed through the water instead of towed behind the vessel like otter trawls.

## III. Costs

There are no costs associated with the proposed rule change. Management of the shrimp fishery in the SSNA of the New River above the NC 172 Bridge will remain unchanged.

## IV. Benefits

There are no quantifiable economic benefits to the proposed rule change, but both the public and law enforcement will benefit from clarification of the rule used for the management of trawling in the SSNA of the New River above the NC 172 Bridge.

## **3. Address Clarity and Consistency in Proclamation Authority of Shrimp Season and Harvest Restrictions (15A NCAC 03L .0101)**

### I. Summary

The proposed rule change seeks to clarify proclamation authority for shrimp seasons and harvest restrictions. This rule change is proposed to address rule clarity and improve consistency with other marine fisheries-related rules for proclamation authority and does not change the intent or application of the current rule.

## **II. Introduction and Purpose of Rule Changes**

The proposed rule change has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority across North Carolina Marine Fisheries Commission (NCMFC) rules. NCDMF staff has identified that proclamation authority across several rules is often similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. The rule change is not intended to change the scope of the proclamation authority, nor is it being proposed with the intention of changing current management.

## **III. Costs**

There are no expected costs associated with this proposed rule change. The proposed rule change is for the purposes of clarity and consistency and does not represent a change in authority or current management of shrimping.

## **IV. Benefits**

This rule change reflects the current proclamation authority to manage shrimping and makes this rule language consistent with other rules granting proclamation authority. This consistency among rules granting proclamation authority aids in public awareness in what type of fisheries management measures may be specified by proclamation.

## **4. Capping Shrimp Trawl Headrope Length in Internal Waters (15A NCAC 03L .0103)**

### **I. Summary**

In order to put a cap on gear capacity as a management tool, the NCMFC seeks to establish a maximum combined headrope length of 220 feet in all internal coastal waters where there are no existing maximum combined headrope requirements (i.e., 90-foot requirement). A two-year phase-out period will be implemented to mitigate the impact on any trawl operations that may be affected by the proposed rule change.

### **II. Introduction and Purpose of Rule Changes**

The North Carolina shrimp fleet consists of vessels of various sizes and configurations. Roughly 92-percent of North Carolina's commercial shrimp harvest is caught using otter trawls. In North Carolina, the size of a trawl is based on its headrope length. Headrope length is defined as the support structure for the mesh or webbing of a trawl that is nearest to the water surface when in use. Headrope length is measured from the outermost mesh knot at one end of the headrope following along the line to the outermost mesh knot at the opposite end of the headrope (15A NCAC 03I .0101(i)). Currently, it is unlawful to use trawls that have a combined headrope greater than 90 feet in the internal coastal waters of North Carolina, except in the Pamlico Sound and at the mouths of the Pamlico and Neuse rivers (15A NCAC 03L .0103(c)).

In order to put a cap on gear capacity as a management tool, the NCMFC has selected as a preferred management option establishing a maximum combined headrope length of 220 feet per vessel in all internal coastal waters where there are no existing maximum combined headrope requirements (i.e., 90-foot requirement). A phase-out period of two years will be implemented for any vessels that may be using more than 220 feet of combined head rope in internal coastal waters.

### **III. Costs**

An analysis performed by NCDMF in 2013 examining reported trawl headrope lengths shows there were no fishing operations using more than 220 feet of headrope while trawling in internal waters in North Carolina. Based on this information, there will be no cost related to the proposed rule change for current commercial fishing operations that fish in North Carolina's internal waters.

There has been some anecdotal, unverified information brought forth by a member of the public that one fishing operation has made plans to or has purchased otter trawl gear that will exceed 220 feet in combined headrope length when fished. This may be indicative of increased interest in using trawl gear in excess of 220 feet of combined headrope length in internal waters. Based on this information, there may be some future costs associated with this rule change for other fishing operations that would have utilized gear exceeding 220 feet of headrope length in the absence of the proposed rule change. Additionally, there may be some costs to the fishing operation that has purchased or planned to purchase trawl gear that will exceed 220 feet of combined headrope length. However, under the proposed rule changes, there is a two-year phase-out period to allow this operation to obtain a return on their gear investment by allowing the gear to be used for all or almost all of the expected usable lifespan of the gear. Furthermore, this gear will still be allowed for use in Atlantic Ocean shrimp trawling operations and may be modified to be fished in internal waters under the proposed rule change. Finally, future benefits in the form of reduced risk of overharvesting or altering the current shrimp resource allocation will rise in proportion to costs associated with curbing future growth in the use of gear in excess of the proposed limits. For these reasons, the expected potential costs that may occur from the proposed rule change are expected to be minimal.

### **IV. Benefits**

The proposed rule change will serve as a management tool to cap the capacity of shrimp fishing operations that use otter trawl gear in internal waters. Since larger amounts of gear are able to harvest more of the shrimp resource, capping the capacity at or near current levels will help reduce the risk of overharvest as well as maintain the equity of allocation of shrimp harvest among current participants in the shrimp trawl fishery that occurs in North Carolina's internal waters.

## **5. Increasing the Recreational Shrimp Limit in Areas Closed to the Taking of Shrimp (15A NCAC 03L .0105)**

### **I. Summary**

The proposed rule change seeks to increase the recreational shrimp limit in areas otherwise closed to the taking of shrimp from two quarts to four quarts, heads-on or two and one half

quarts heads-off per person when using a cast net. The rule change also seeks to clarify the recreational limit of shrimp in areas open to the taking of shrimp.

## **II. Introduction and Purpose of Rule Changes**

Cast netting for shrimp is a popular method to catch shrimp for bait and for personal consumption. In addition, fishermen are allowed to use cast nets in areas otherwise closed to the taking of shrimp, such as nursery areas, areas closed due to small shrimp size and areas closed due to habitat concerns. The NCMFC changed the limit for cast netted shrimp from closed areas from 100 shrimp per person to two quarts of shrimp per person as of June 1, 2013, to enable law enforcement to more safely and efficiently measure a fisherman's catch and enforce this rule.

In response to requests from the public as well as members of the NCMFC, the proposed rule change seeks to increase the recreational shrimp limit in closed areas from two quarts to four quarts heads-on or two and one half courts heads-off per person when using a cast net. The rule change also seeks to clarify the wording for the higher recreational limit of shrimp that is allowed in areas open to the taking of shrimp.

## **III. Costs**

Costs associated with the proposed rule changes are expected to be minor and unquantifiable. There may be additional shrimp removed from certain waterbodies that would have otherwise been caught by other users of the resource at a later date in commercial or other recreational fishing activities. Additionally, there may be a decrease in sales of shrimp at some seafood retailers and fishing tackle shops, as recreational shrimp fishermen will be able to harvest more shrimp for themselves that otherwise they would have had to purchase. However, there are currently no estimates of how many shrimp are recreationally caught with cast nets in areas otherwise closed to the taking of shrimp, nor are the costs to other users expected to be noteworthy or noticeable.

## **III. Benefits**

There will be benefits to some recreational shrimpers, as the recreational limit of shrimp in closed areas will increase. This will allow fishermen using cast nets to keep more shrimp for personal consumption or for use as bait, thereby offsetting the cost of purchasing additional quantities of shrimp. Additionally, the proposed rule change will clarify the recreational limit of shrimp in areas open to the taking of shrimp.

## **6. Area Restrictions to Reduce Shrimp Trawl Bycatch in North Carolina's Internal Coastal Waters (15A NCAC 03R .0114)**

### **I. Summary**

The proposed rule change seeks to permanently close shrimp trawling in the lower Calabash River, Shallotte River, and Intracoastal Waterway from the Sunset Beach Bridge to the South Carolina state line. These areas are relatively small in size. While the Intracoastal Waterway does open every year to shrimp trawling, the lower Calabash River and Shallotte River have not been opened to shrimp trawling in recent years due to low abundance of shrimp of marketable

size. The proposed rule change will still allow shrimp trawling in adjacent waters and remove the need for NCDMF to sample these areas for shrimp count size.

## **II. Introduction and Purpose of Rule Changes**

The Brunswick County coastline stretches for approximately 33 miles and is bound by the Cape Fear River Inlet on the east end and by the Little River Inlet on the west end. Four barrier islands, all of which are densely developed, are separated by five inlets along the coastline. Within this area, the lower Calabash River, Shallotte River, and Intracoastal Waterway from Sunset Beach Bridge to the South Carolina state line may be opened to shrimp trawling if shrimp of marketable size are present. NCDMF periodically samples these areas for shrimp count size to assess if these areas warrant opening for trawling. Lower Calabash and Shallotte rivers have remained closed due to small shrimp size and minimal requests to open these waterbodies by fishermen (one request in the past five years). The Intracoastal Waterway from Sunset Beach Bridge to the South Carolina state line has opened every year but is typically the last area to open in Brunswick County due to the small size of shrimp.

The proposed rule change seeks to permanently close these areas to shrimp trawling. This will remove the need for NCDMF to sample these areas for shrimp, thereby allocating staff time to other biological sampling activities. Additionally, bycatch of unwanted species from shrimp trawls will be permanently reduced in these areas.

## **III. Costs**

The proposed rule change is expected to create some costs; however, these costs are expected to be minimal and may be offset by fishing activities in waters adjacent to the areas proposed for closure. The areas that are proposed for closure to shrimp trawling make up a minority of the total fishable area in the Intracoastal Waterway along the southern edge of Brunswick County. Furthermore, some of the specified areas often do not open to trawling as shrimp in these areas rarely reach a size large enough to warrant the opening of shrimp trawling (40-50 count shrimp in Brunswick County).

According to the NCDMF trip ticket program, there have been no landings of trawl-caught shrimp recorded from the Shallotte River over the past ten years (2004-2013), as this water body has remained closed due to inadequate abundance of shrimp of marketable size. The NCDMF trip ticket program does not have a water body code specifically for the section of the Intracoastal Waterway from the Sunset Beach Bridge to the South Carolina state line or the lower Calabash River; however, landings may be estimated based on the total landings of shrimp from the Intracoastal Waterway in Brunswick County. The area being proposed for closure to shrimp trawling makes up approximately 17 percent of the entire area included in the trip ticket water body of the "Inland Waterway-Brunswick County". Over the past ten years (2004-2013), trawl-caught shrimp landings from the "Inland Waterway-Brunswick County" have had an annual ex-vessel value that ranged from \$9,356 to \$34,789, with a 10-year average value of \$22,332. Applying the approximate coverage of the water bodies being examined (17%) to this average value, the estimated annual landings in this area are \$3,796 when opened to shrimp trawling.

The estimated average annual cost of the proposed rule change to commercial shrimp fishermen is approximately \$3,800. This should be viewed as a conservatively high estimate, as some of the waters proposed for permanent closure often do not open for shrimp trawling each

year due to lack of shrimp of adequate marketable size. Additionally, adjacent waters will still be open to trawling, which is likely to partially offset some of this cost. There are no expected changes in enforcement costs due to the proposed rule change, as the areas will still need to be regularly patrolled to enforce laws in other fisheries.

#### **IV. Benefits**

Prohibiting the use of otter trawl gear is expected to incur an unquantifiable benefit in the specified areas from a reduction in bycatch that is associated with otter trawl gear. Additionally, there will be some opportunity-cost savings for the state through decreased sampling efforts in the areas proposed for permanent closure to shrimp trawling. These areas may currently be opened when NCDMF sampling indicates the presence of shrimp that are of marketable size. Based on sampling effort over the past 12 years, there has been an average of 6 sampling trips to the east of the Sunset Beach Bridge per year and 4 sampling trips to the west of the Sunset Beach Bridge taken per year to test for adequate quantities of marketable-sized shrimp. The area to the west of the Sunset Beach Bridge is proposed for permanent closure and will no longer need to be sampled. Each sampling trip requires three NCDMF staff (one Marine Fisheries Biologist II and two Marine Fisheries Technicians II) to adequately complete and takes approximately four hours. There is an additional one hour of staff time (Marine Fisheries Technician II) required for data processing to log the results of the trip. Therefore each trip takes approximately 13 hours of total staff time. Assuming the midpoint wage of a Marine Fisheries Biologist II with benefits included of \$36.03 per hour and Marine Fisheries Technician II with benefits included of \$26.71 per hour, it is estimated that opportunity cost of sampling these areas for shrimp is approximately \$1,500 per year on average.<sup>1</sup> While this savings will not be fully received monetarily by the state, as staff time will be dedicated elsewhere, the proposed rule change will allow staff to dedicate time to other biological sampling programs and thereby incur a savings in opportunity costs.

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<sup>1</sup> Hourly compensation estimates based on the midpoints of the salary ranges for the relevant positions published in the *State of North Carolina Salary Plan* for FY 2013-14 (<http://www.oshr.nc.gov/Guide/CompWebSite/Current%20Salary%20Plan%20Book.pdf>) and the Employee Total Compensation Calculator on the website of the North Carolina Office of State Human Resources (<http://www.oshr.nc.gov/Reward/benefits/Compensation%20Calculator.htm>). The total-compensation calculations assume five years of service in state government for relevant employees working a 2080-hour work year, and the total dollar amount is rounded to the nearest hundred dollars.



## V. Comprehensive Statement of Costs and Benefits

Rule changes associated with the Shrimp Fishery Management Plan Amendment I are expected to have a combined cost and benefit that is relatively low and will not meet the impact threshold of \$1 million in aggregate costs and benefits to be considered rule change with a substantial economic impact. Specifically:

- 1) Modification to 15A NCAC 03I .0101 will improve the existing definition of net mesh length to more clearly define how a mesh length is measured. This rule change will benefit the public and law enforcement by providing a better definition of how mesh length is measure and is not expected to impose any noticeable costs.
- 2) Modification to 15A NCAC 03J .0208 will improve clarity on trawling specifications in the special secondary nursery area in the New River above the NC 172 Bridge. This rule change will benefit the public and law enforcement through more clear and consistent rule language regarding the management of trawling in the SSNA in the New River and is not expected to impose any noticeable costs.
- 3) Amendment to 15A NCAC 03L .0101 will benefit the public by clarifying proclamation authority for shrimp harvest restrictions and standardizing rule language for proclamation authority to match other similar rules. This rule change is not expected to impose any noticeable costs, as there is no intended change in authority when compared to current rule.
- 4) Amendment to 15A NCAC 03L .0103 will create a 220-foot maximum headrope length for trawl gear used in internal waters where no headrope length limit currently exists. This rule change is expected to benefit the public by capping the capacity of current shrimp trawl operations, which will help to preserve the equitable allocation of the shrimp resource among current users and reduce the risk of overharvest of the shrimp resource.

Costs associated with this rule change are expected to be minimal. An analysis of NCDMF commercial license and trip ticket data indicate that there were no fishing operations using in excess of 220 feet of headrope in internal waters. Anecdotal information suggests that one shrimp trawling operation may have purchased or may intend to purchase gear that would be affected by this rule change; however, a phase-out period of two years is being implemented to minimize costs that may occur to this operation. Furthermore, this gear may still be used in the Atlantic Ocean and can be modified to fall within the 220-foot headrope limit, thereby mitigating the impact of any possible costs that the rule may impose. Should this be an indication of increased interest in using gear with a combined headrope length of more than 220 feet in internal waters, there may be some future costs to fishing operations that would have used gear in excess of the proposed limits in the absence of the rule change. Future benefits in the form of reduced risk of overharvesting or altering the current shrimp resource allocation will rise in proportion to costs associated with curbing future growth in the use of gear in excess of the proposed limits.

- 5) Modification to 15A NCAC 03L .0105 will clarify recreational shrimp harvest limits in areas open and closed to the taking of shrimp as well as increase the recreational shrimp limit in areas otherwise closed to the taking of shrimp from two quarts to four quarts heads-on or two and one half quarts heads-off. This will benefit the participants of this fishery by increasing the

allowed harvest in closed areas, thereby potentially reducing some expenses that may be incurred in otherwise having to purchase shrimp. Participants will also benefit from the improved clarity of the limit of recreational shrimp harvest in areas open to the taking of shrimp. This rule change will incur some costs to other users of the shrimp resource, such as commercial fishermen as well as some seafood retailers and fishing tackle shops that sell shrimp; however, the costs is unquantifiable and is expected to be minimal.

6) Amendment to 15A NCAC 03R .0114 will permanently close Shallotte River, lower Calabash River, and the Intracoastal Waterway between the Sunset Beach Bridge and the South Carolina state line to shrimp trawling due to consistently low abundance of shrimp that are of marketable size and to reduce shrimp-trawl bycatch. The benefits of this rule change will be a permanent reduction in shrimp-trawl bycatch in the specified areas as well as a reduction in opportunity costs to the State due to fewer sampling trips being required in these areas to test the abundance of shrimp of marketable size. The benefit from the reduction in shrimp trawl bycatch is unmeasurable, but the expected reduction in opportunity costs is estimated to be \$1,500 annually on average. Costs associated with this rule change are expected to be minimal, as shrimp size in the specified areas is often below that of marketable size. Much of the specified area does not open at all to shrimp trawling for this reason. Based on NCDMF trip ticket data, the annual landings in the areas that are opened to shrimp trawling are estimated to be approximately \$3,800. Therefore, the measurable cost associated with this rule change is up to \$3,800 annually; however, some of this cost may be offset through increased fishing activity in adjacent waters that will remain open to shrimp trawling.

Table 1. Summary of estimated annual costs and benefits from proposed rule changes.

<b>Rule</b>	<b>Annual Estimated Cost</b>	<b>Annual Estimated Benefit</b>
15A NCAC 03I .0101	None	Unquantified
15A NCAC 03J .0208	None	Unquantified
15A NCAC 03L .0101	None	Unquantified
15A NCAC 03L .0103	Unquantified	Unquantified
15A NCAC 03L .0105	Unquantified	Unquantified
15A NCAC 03R .0114	\$3,800 (private)	\$1,500 (State)

## Appendix: Proposed Rule Changes

NOTE: CHANGES TO 15A NCAC 03I .0101 INCLUDE BOTH CHANGES FOR THE MANAGEMENT OF SHRIMP AND CHANGES TO FOR-HIRE LICENSE STRUCTURE WHICH ARE COVERED IN A SEPARATE ANALYSIS.

### 15A NCAC 03I .0101 DEFINITIONS

All definitions set out in G.S. 113, Subchapter IV and the following additional terms apply to this Chapter:

- (1) Enforcement and management terms:
  - (a) Commercial Quota. Total quantity of fish allocated for harvest by commercial fishing operations.
  - (b) Educational Institution. A college, university or community college accredited by an accrediting agency recognized by the U.S. Department of Education; an Environmental Education Center certified by the N.C. Department of Environment and Natural Resources Office of Environmental Education and Public Affairs; or a zoo or aquarium certified by the Association of Zoos and Aquariums.
  - (c) Internal Coastal Waters or Internal Waters. All Coastal Fishing Waters except the Atlantic Ocean.
  - (d) Length of finfish.
    - (i) Curved fork length. A length determined by measuring along a line tracing the contour of the body from the tip of the upper jaw to the middle of the fork in the caudal (tail) fin.
    - (ii) Fork length. A length determined by measuring along a straight line the distance from the tip of the snout with the mouth closed to the middle of the fork in the caudal (tail) fin, except that fork length for billfish is measured from the tip of the lower jaw to the middle of the fork of the caudal (tail) fin.
    - (iii) Pectoral fin curved fork length. A length of a beheaded fish from the dorsal insertion of the pectoral fin to the fork of the tail measured along the contour of the body in a line that runs along the top of the pectoral fin and the top of the caudal keel.
    - (iv) Total length. A length determined by measuring along a straight line the distance from the tip of the snout with the mouth closed to the tip of the compressed caudal (tail) fin.
  - (e) Recreational Possession Limit. Restrictions on size, quantity, season, time period, area, means, and methods where take or possession is for a recreational purpose.
  - (f) Recreational Quota. Total quantity of fish allocated for harvest for a recreational purpose.
  - (g) Regular Closed Oyster Season. March 31 through October 15, unless amended by the Fisheries Director through proclamation authority.
  - (h) Scientific Institution. One of the following entities:

- (i) An educational institution as defined in this Item;
  - (ii) A state or federal agency charged with the management of marine or estuarine resources; or
  - (iii) A professional organization or secondary school working under the direction of, or in compliance with mandates from, the entities listed in Subitems (h)(i) and (ii) of this Item.
- (i) Seed Oyster Management Area. An open harvest area that, by reason of poor growth characteristics, predation rates, overcrowding or other factors, experiences poor utilization of oyster populations for direct harvest and sale to licensed dealers and is designated by the Marine Fisheries Commission as a source of seed for public and private oyster culture.
- (2) Fishing Activities:
- (a) Aquaculture operation. An operation that produces artificially propagated stocks of marine or estuarine resources or obtains such stocks from permitted sources for the purpose of rearing in a controlled environment. A controlled environment provides and maintains throughout the rearing process one or more of the following:
    - (i) food;
    - (ii) predator protection;
    - (iii) salinity;
    - (iv) temperature controls; or
    - (v) water circulation,
 utilizing technology not found in the natural environment.
  - (b) Attended. Being in a vessel, in the water or on the shore, and immediately available to work the gear and be within 100 yards of any gear in use by that person at all times. Attended does not include being in a building or structure.
  - (c) Blue Crab Shedding. The process whereby a blue crab emerges soft from its former hard exoskeleton. A shedding operation is any operation that holds peeler crabs in a controlled environment. A controlled environment provides and maintains throughout the shedding process one or more of the following:
    - (i) food;
    - (ii) predator protection;
    - (iii) salinity;
    - (iv) temperature controls; or
    - (v) water circulation,
 utilizing technology not found in the natural environment. A shedding operation does not include transporting pink or red-line peeler crabs to a permitted shedding operation.

- (d) Depuration. Purification or the removal of adulteration from live oysters, clams, or mussels by any natural or artificially controlled means.
  - (e) Long Haul Operations. Fishing a seine towed between two vessels.
  - (f) Peeler Crab. A blue crab that has a soft shell developing under a hard shell and having a white, pink, or red-line or rim on the outer edge of the back fin or flipper.
  - (g) Possess. Any actual or constructive holding whether under claim of ownership or not.
  - (h) Recreational Purpose. A fishing activity that is not a commercial fishing operation as defined in G.S. 113-168.
  - (i) Shellfish marketing from leases and franchises. The harvest of oysters, clams, scallops, or mussels from privately held shellfish bottoms and lawful sale of those shellfish to the public at large or to a licensed shellfish dealer.
  - (j) Shellfish planting effort on leases and franchises. The process of obtaining authorized cultch materials, seed shellfish, and polluted shellfish stocks and the placement of those materials on privately held shellfish bottoms for increased shellfish production.
  - (k) Shellfish production on leases and franchises:
    - (i) The culture of oysters, clams, scallops, or mussels on shellfish leases and franchises from a sublegal harvest size to a marketable size.
    - (ii) The transplanting (relay) of oysters, clams, scallops or mussels from areas closed due to pollution to shellfish leases and franchises in open waters and the natural cleansing of those shellfish.
  - (l) Swipe Net Operations. Fishing a seine towed by one vessel.
  - (m) Transport. Ship, carry, or cause to be carried or moved by public or private carrier by land, sea, or air.
  - (n) Use. Employ, set, operate, or permit to be operated or employed.
- (3) Gear:
- (a) Bunt Net. The last encircling net of a long haul or swipe net operation constructed of small mesh webbing. The bunt net is used to form a pen or pound from which the catch is dipped or bailed.
  - (b) Channel Net. A net used to take shrimp that is anchored or attached to the bottom at both ends or with one end anchored or attached to the bottom and the other end attached to a vessel.
  - (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 that propel pointed implements by mechanical means, including elastic tubing or bands, pressurized gas, or similar means.
- (d) Corkline. The support structure a net is attached to that is nearest to the water surface when in use. Corkline length is measured from the outer most mesh knot at one end of the corkline following along the line to the outer most mesh knot at the opposite end of the corkline.
  - (e) Dredge. A device towed by engine power consisting of a frame, tooth bar or smooth bar, and catchbag used in the harvest of oysters, clams, crabs, scallops, or conchs.
  - (f) Fixed or stationary net. A net anchored or staked to the bottom, or some structure attached to the bottom, at both ends of the net.
  - (g) Fyke Net. An entrapment net supported by a series of internal or external hoops or frames, with one or more lead or leaders that guide fish to the net mouth. The net has one or more internal funnel-shaped openings with tapered ends directed inward from the mouth, through which fish enter the enclosure. The portion of the net designed to hold or trap fish is completely enclosed in mesh or webbing, except for the openings for fish passage into or out of the net (funnel area).
  - (h) Gill Net. A net set vertically in the water to capture fish by entanglement of the gills in its mesh as a result of net design, construction, mesh ~~size~~length, webbing diameter, or method in which it is used.
  - (i) Headrope. The support structure for the mesh or webbing of a trawl that is nearest to the water surface when in use. Headrope length is measured from the outer most mesh knot

- at one end of the headrope following along the line to the outer most mesh knot at the opposite end of the headrope.
- (j) Hoop Net. An entrapment net supported by a series of internal or external hoops or frames. The net has one or more internal funnel-shaped openings with tapered ends directed inward from the mouth, through which fish enter the enclosure. The portion of the net designed to hold or trap the fish is completely enclosed in mesh or webbing, except for the openings for fish passage into or out of the net (funnel area).
  - (k) Lead. A mesh or webbing structure consisting of nylon, monofilament, plastic, wire, or similar material set vertically in the water and held in place by stakes or anchors to guide fish into an enclosure. Lead length is measured from the outer most end of the lead along the top or bottom line, whichever is longer, to the opposite end of the lead.
  - (l) Mechanical methods for clamming. Dredges, hydraulic clam dredges, stick rakes and other rakes when towed by engine power, patent tongs, kicking with propellers or deflector plates with or without trawls, and any other method that utilizes mechanical means to harvest clams.
  - (m) Mechanical methods for oystering. Dredges, patent tongs, stick rakes and other rakes when towed by engine power, and any other method that utilizes mechanical means to harvest oysters.
  - (n) Mesh Length. The ~~diagonal~~ distance from the inside of one knot to the outside of the ~~other opposite~~ knot, when the net is stretched ~~hand-tight, hand-tight~~ in a manner that closes the mesh opening.
  - (o) Pound Net Set. A fish trap consisting of a holding pen, one or more enclosures, lead or leaders, and stakes or anchors used to support the trap. The holding pen, enclosures, and lead(s) are not conical, nor are they supported by hoops or frames.
  - (p) Purse Gill Nets. Any gill net used to encircle fish when the net is closed by the use of a purse line through rings located along the top or bottom line or elsewhere on such net.
  - (q) Seine. A net set vertically in the water and pulled by hand or power to capture fish by encirclement and confining fish within itself or against another net, the shore or bank as a result of net design, construction, mesh ~~size,~~ length, webbing diameter, or method in which it is used.
- (4) Fish habitat areas. The estuarine and marine areas that support juvenile and adult populations of fish species, as well as forage species utilized in the food chain. Fish habitats as used in this definition, are vital for portions of the entire life cycle, including the early growth and development of fish species. Fish habitats in all Coastal Fishing Waters, as determined through marine and estuarine survey sampling, include:
- (a) Anadromous fish nursery areas. Those areas in the riverine and estuarine systems utilized by post-larval and later juvenile anadromous fish.

- (b) Anadromous fish spawning areas. Those areas where evidence of spawning of anadromous fish has been documented in Division sampling records through direct observation of spawning, capture of running ripe females, or capture of eggs or early larvae.
- (c) Coral:
  - (i) Fire corals and hydrocorals (Class Hydrozoa);
  - (ii) Stony corals and black corals (Class Anthozoa, Subclass Scleractinia); or
  - (iii) Octocorals; Gorgonian corals (Class Anthozoa, Subclass Octocorallia), which include sea fans (*Gorgonia* sp.), sea whips (*Leptogorgia* sp. and *Lophogorgia* sp.), and sea pansies (*Renilla* sp.).
- (d) Intertidal Oyster Bed. A formation, regardless of size or shape, formed of shell and live oysters of varying density.
- (e) Live rock. Living marine organisms or an assemblage thereof attached to a hard substrate, excluding mollusk shells, but including dead coral or rock. Living marine organisms associated with hard bottoms, banks, reefs, and live rock include:
  - (i) Coralline algae (Division Rhodophyta);
  - (ii) *Acetabularia* sp., mermaid's fan and cups (*Udotea* sp.), watercress (*Halimeda* sp.), green feather, green grape algae (*Caulerpa* sp.) (Division Chlorophyta);
  - (iii) *Sargassum* sp., *Dictyopteris* sp., *Zonaria* sp. (Division Phaeophyta);
  - (iv) Sponges (Phylum Porifera);
  - (v) Hard and soft corals, sea anemones (Phylum Cnidaria), including fire corals (Class Hydrozoa), and Gorgonians, whip corals, sea pansies, anemones, *Solenastrea* (Class Anthozoa);
  - (vi) Bryozoans (Phylum Bryozoa);
  - (vii) Tube worms (Phylum Annelida), fan worms (*Sabellidae*), feather duster and Christmas treeworms (*Serpulidae*), and sand castle worms (*Sabellaridae*);
  - (viii) Mussel banks (Phylum Mollusca: Gastropoda); and
  - (ix) Acorn barnacles (Arthropoda: Crustacea: *Semibalanus* sp.).
- (f) Nursery areas. Areas that for reasons such as food, cover, bottom type, salinity, temperature, and other factors, young finfish and crustaceans spend the major portion of their initial growing season. Primary nursery areas are those areas in the estuarine system where initial post-larval development takes place. These are areas where populations are uniformly early juveniles. Secondary nursery areas are those areas in the estuarine system where later juvenile development takes place. Populations are composed of developing sub-adults of similar size which have migrated from an upstream primary nursery area to the secondary nursery area located in the middle portion of the estuarine system.



- (g) Shellfish producing habitats. Historic or existing areas that shellfish, such as clams, oysters, scallops, mussels, and whelks use to reproduce and survive because of such favorable conditions as bottom type, salinity, currents, cover, and cultch. Included are those shellfish producing areas closed to shellfish harvest due to pollution.
- (h) Strategic Habitat Areas. Locations of individual fish habitats or systems of habitats that provide exceptional habitat functions or that are particularly at risk due to imminent threats, vulnerability, or rarity.
- (i) Submerged aquatic vegetation (SAV) habitat. Submerged lands that:
  - (i) are vegetated with one or more species of submerged aquatic vegetation including bushy pondweed or southern naiad (*Najas guadalupensis*), coontail (*Ceratophyllum demersum*), eelgrass (*Zostera marina*), horned pondweed (*Zannichellia palustris*), naiads (*Najas* spp.), redhead grass (*Potamogeton perfoliatus*), sago pondweed (*Stuckenia pectinata*, formerly *Potamogeton pectinatus*), shoalgrass (*Halodule wrightii*), slender pondweed (*Potamogeton pusillus*), water stargrass (*Heteranthera dubia*), water starwort (*Callitriche heterophylla*), waterweeds (*Elodea* spp.), widgeongrass (*Ruppia maritima*), and wild celery (*Vallisneria americana*). These areas may be identified by the presence of above-ground leaves, below-ground rhizomes, or reproductive structures associated with one or more SAV species and include the sediment within these areas; or
  - (ii) have been vegetated by one or more of the species identified in Sub-item (4)(i)(i) of this Rule within the past 10 annual growing seasons and that meet the average physical requirements of water depth (six feet or less), average light availability (secchi depth of one foot or more), and limited wave exposure that characterize the environment suitable for growth of SAV. The past presence of SAV may be demonstrated by aerial photography, SAV survey, map, or other documentation. An extension of the past 10 annual growing seasons criteria may be considered when average environmental conditions are altered by drought, rainfall, or storm force winds.

This habitat occurs in both subtidal and intertidal zones and may occur in isolated patches or cover extensive areas. In defining SAV habitat, the Marine Fisheries Commission recognizes the Aquatic Weed Control Act of 1991 (G.S. 113A-220 et. seq.) and does not intend the submerged aquatic vegetation definition, or this Rule or Rules 03K .0304 and .0404, to apply to or conflict with the non-development control activities authorized by that Act.

- (5) Licenses, permits, leases and franchises, and record keeping:

- (a) Assignment. Temporary transferal to another person of privileges under a license for which assignment is permitted. The person assigning the license delegates the privileges permitted under the license to be exercised by the assignee, but retains the power to revoke the assignment at any time, and is still the responsible party for the license.
- (b) Designee. Any person who is under the direct control of the permittee or who is employed by or under contract to the permittee for the purposes authorized by the permit.
- (c) For Hire Vessel. As defined by G.S. 113-174, when the vessel is fishing in state waters or when the vessel originates from or returns to a North Carolina port.
- (d) Logbook. Paper forms provided by the Division and electronic data files generated from software provided by the Division for the reporting of fisheries statistics by persons engaged in commercial or recreational fishing or for-hire operators.
- ~~(d)~~(e) Holder. A person who has been lawfully issued in his or her name a license, permit, franchise, lease, or assignment.
- ~~(e)~~(f) Land:
  - (i) For commercial fishing operations, when fish reach the shore or a structure connected to the shore.
  - (ii) For purposes of trip tickets, when fish reach a licensed seafood dealer, or where the fisherman is the dealer, when the fish reaches the shore or a structure connected to the shore.
  - (iii) For recreational fishing operations, when fish are retained in possession by the fisherman.
- ~~(f)~~(g) Licensee. Any person holding a valid license from the Department to take or deal in marine fisheries resources.
- ~~(g)~~(h) Master. Captain of a vessel or one who commands and has control, authority, or power over a vessel.
- ~~(h)~~(i) New fish dealer. Any fish dealer making application for a fish dealer license who did not possess a valid dealer license for the previous license year in that name. For purposes of license issuance, adding new categories to an existing fish dealers license does not constitute a new dealer.
- ~~(i)~~ ~~North Carolina Trip Ticket. Paper forms provided by the Division, and electronic data files generated from software provided by the Division, for the reporting of fisheries statistics that include quantity, method, and location of harvest.~~
- (j) Office of the Division. Physical locations of the Division conducting license and permit transactions in Wilmington, Washington, Morehead City, Roanoke Island and Elizabeth City, North Carolina. Other businesses or entities designated by the Secretary to issue Recreational Commercial Gear Licenses or Coastal Recreational Fishing Licenses are not considered Offices of the Division.

- (k) Responsible party. 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 the person responsible for use of the issued license in compliance with applicable statutes and rules.
- (l) Tournament Organizer. The person who coordinates, supervises, or otherwise directs a recreational fishing tournament and is the holder of the Recreational Fishing Tournament License.
- (m) Transaction. Act of doing business such that fish are sold, offered for sale, exchanged, bartered, distributed, or landed.
- (n) Transfer. Permanent transferal to another person of privileges under a license for which transfer is permitted. The person transferring the license retains no rights or interest under the license transferred.
- (o) Trip Ticket. Paper forms provided by the Division and electronic data files generated from software provided by the Division for the reporting of fisheries statistics by licensed fish dealers.

*Authority G.S. 113-134; 113-174; 143B-289.52*

**15A NCAC 03J .0208 NEW RIVER**

- (a) It is unlawful to use trawl nets except skimmer trawls upstream of the Highway 172 Bridge over New River.
- (b) It is unlawful to use ~~trawl nets~~ skimmer trawls upstream of the Highway 172 Bridge over New River from 9:00 P.M. through 5:00 A.M. when opened by proclamation from August 16 through November 30.

*Authority G.S. 113-134; 113-182; 143B-289.52*

**15A NCAC 03L .0101 ~~SEASON~~ SHRIMP HARVEST RESTRICTIONS**

- (a) It is unlawful to take shrimp ~~with nets~~ until the Fisheries Director, by proclamation, opens the ~~season~~ ~~season~~ in various waters. Proclamations may specify any hours of day or night or both and any other conditions appropriate to management of the fishery. If sampling indicates primarily undersized shrimp or juveniles of any other species of major economic importance, the Fisheries Director may close such waters to shrimping and prohibit the use of nets for any purpose except cast nets as provided in 15A NCAC 3L .0102. Prominent landmarks or other permanent type markers shall be considered when establishing closure lines even if such lines extend beyond the area of concern.
- (b) The Fisheries Director may, by proclamation, impose any or all of the following restrictions on the taking of shrimp:

- (1) specify time;
- (2) specify area;
- (3) specify means and methods;
- (4) specify season;

**Fiscal Note for Proposed Rule Changes to 15A NCAC 03I .0101, 15A NCAC 03J .0208, 15A NCAC 03L .0101, 15A NCAC 03L .0103, 15A NCAC 03L .0105, 15A NCAC 03R .0114**

(5) specify size; and

(6) specify quantity.

*Authority G.S. 113-134; 113-182; 113-221; 143B-289.52*

**15A NCAC 03L .0103 PROHIBITED NETS, MESH SIZES-LENGTHS AND AREAS**

(a) It is unlawful to take shrimp with nets with mesh lengths less than the following:

- (1) Trawl net - one and one-half inches;
- (2) Fixed nets, channel nets, float nets, butterfly nets, and hand seines - one and one-fourth inches; and
- (3) Cast net - no restriction.

(b) It is unlawful to take shrimp with a net constructed in such a manner as to contain an inner or outer liner of any mesh ~~size-length~~. Net material used as chafing gear shall be no less than four inches mesh length except that chafing gear with smaller mesh may be used only on the bottom one-half of the tailbag. Such chafing gear shall not be tied in a manner that forms an additional tailbag.

(c) It is unlawful to take shrimp with trawls which have a combined headrope of greater than 90 feet in ~~internal coastal waters except~~ Internal Coastal Waters in the following areas:

- (1) ~~Pamlico Sound;~~ North of the 35° 46.3000' N latitude line;
- (2) Core Sound south of a line beginning at a point 34° 59.7942' N - 76° 14.6514' W on Camp Point; running easterly to a point 34° 58.7853' N - 76° 09.8922' W on Core Banks; to the South Carolina State Line;
- ~~(2)~~(3) Pamlico River ~~downstream~~ upstream of a line from a point 35° 18.5882' N - 76° 28.9625' W at Pamlico Point; running northerly to a point 35° 22.3741' N - 76° 28.6905' W at Willow Point; and
- ~~(3)~~(4) Neuse River ~~northeast~~ southwest of a line from a point 34° 58.2000' N - 76° 40.5167' W at Winthrop Point on the eastern shore of the entrance to ~~Adam's Creek~~ Adams Creek; running northerly to a point 35° 01.0744' N - 76° 42.1550' W at Windmill Point at the entrance of Greens Creek at Oriental.

(d) Effective January 1, 2017 it is unlawful to take shrimp with trawls which have a combined headrope of greater than 220 feet in Internal Coastal Waters in the following areas:

- (1) Pamlico Sound south of the 35° 46.3000' N latitude line and north of a line beginning at a point 34° 59.7942' N - 76° 14.6514' W on Camp Point; running easterly to a point 34° 58.7853' N - 76° 09.8922' W on Core Banks;
- (2) Pamlico River downstream of a line from a point 35° 18.5882' N - 76° 28.9625' W at Pamlico Point; running northerly to a point 35° 22.3741' N - 76° 28.6905' W at Willow Point; and

- (3) Neuse River northeast of a line from a point 34° 58.2000' N - 76° 40.5167' W at Winthrop Point on the eastern shore of the entrance to Adams Creek; running northerly to a point 35° 01.0744' N - 76° 42.1550' W at Windmill Point at the entrance of Greens Creek at Oriental.

~~(d)~~(e) It is unlawful to use a shrimp trawl in the areas described in 15A NCAC 03R .0114.

~~(e)~~(f) It is unlawful to use channel nets except as provided in 15A NCAC 03J .0106.

~~(f)~~(g) It is unlawful to use shrimp pots except as provided in 15A NCAC 03J .0301.

~~(g)~~(h) It is unlawful to use a shrimp trawl that does not conform with the federal rule requirements for Turtle Excluder Devices (TED) as specified in 50 CFR Part 222.102 Definitions, 50 CFR Part 223.205 (a) and Part 223.206 (d) Gear Requirements for Trawlers, and 50 CFR Part 223.207 Approved TEDs. Copies of these rules are available via the Code of Federal Regulations posted on the Internet at <http://www.gpoaccess.gov/cfr/index.html> and at the Division of Marine Fisheries, P.O. Box 769, Morehead City, North Carolina 28557 at no cost.

*Authority G.S. 113-134; 113-182; 143B-289.52*

#### **15A NCAC 03L .0105 RECREATIONAL SHRIMP LIMITS**

It is unlawful to:

- (1) Possess from areas open to the harvest of shrimp more than 48 quarts, heads on or 30 quarts, heads off, of shrimp per person per day or if a vessel is used, per vessel per day for recreational purposes except as provided in 15A NCAC 03O .0303 (e) and (f).
- ~~(2) Take or possess shrimp from areas closed to the taking of shrimp except two quarts of shrimp per person per day may be taken while fishing in a closed area with a cast net.~~
- (2) Take or possess more than four quarts, heads on or two and one-half quarts, heads off, of shrimp per person per day with a cast net from areas closed to the taking of shrimp in accordance with 15A NCAC 03L .0101.

*Authority G.S. 113-134; 113-182; 143B-289.52*

#### **15A NCAC 03R .0114 SHRIMP TRAWL PROHIBITED AREAS**

The shrimp trawl prohibited areas referenced in ~~15A NCAC 03L .0103(d)~~ 15A NCAC 03L .0103(e) are delineated in the following coastal water areas:

- (1) Pungo River - all waters upstream of a line from a point 35° 23.3166' N - 76° 34.4833' W at Wades Point; running ~~westerly~~ easterly to a point 35° 23.6463' N - 76° 31.0003' W on the north shore of the entrance to Abels Bay.
- (2) Pamlico River - all waters upstream of a line from a point 35° 20.5108' N - 76° 37.7218' W on the western shore of the entrance to Goose Creek; running northeasterly to a point 35° 23.3166' N - 76° 34.4833' W at Wades Point.

- (3) Neuse River - all waters upstream of a line from a point  $34^{\circ} 56.3658' N - 76^{\circ} 48.7110' W$  at Cherry Point; running northerly to a point  $34^{\circ} 57.9116' N - 76^{\circ} 48.2240' W$  at ~~Wilkerson~~ Wilkinson Point.
- (4) Shalotte River - all waters upstream of a line beginning at a point  $33^{\circ} 54.8285' N - 78^{\circ} 22.3657' W$  on the west side of Shalotte River; running southeasterly to a point  $33^{\circ} 54.6276' N - 78^{\circ} 21.7882' W$  on the east side of the river.
- (5) Eastern Channel - all waters of Eastern Channel east and north of a line beginning at a point  $33^{\circ} 52.6734' N - 78^{\circ} 28.7339' W$  at Jinks Creek; running southerly to a point  $33^{\circ} 52.5942' N - 78^{\circ} 28.6759' W$  at Tubbs Inlet; and south and west of a line beginning at a point  $33^{\circ} 53.6266' N - 78^{\circ} 26.6262' W$ ; running easterly to a point  $33^{\circ} 53.6501' N - 78^{\circ} 26.5635' W$ .
- (6) Sunset Beach - all waters of the IWW west of a line beginning at a point  $33^{\circ} 52.9247' N - 78^{\circ} 30.7041' W$  on the north end of the Highway 1172 Bridge; running southerly to a point  $33^{\circ} 52.8417' N - 78^{\circ} 30.6490' W$  at the south end of the bridge.
- (7) Calabash River - all waters west of a line beginning at a point  $33^{\circ} 53.4368' N - 78^{\circ} 32.9720' W$  on the north end of the Highway 1164 Bridge; running southerly to a point  $33^{\circ} 53.3534' N - 78^{\circ} 32.9720' W$  at the south end of the bridge.

*Authority G.S. 113-134; 113-182; 143B-289.52*

## **Division of Marine Fisheries' Overview of Amendment 2 to the Bay Scallop Fishery Management Plan March 2014**

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The goal of the N.C. Bay Scallop Fishery Management Plan is to implement a management strategy that restores the stock, maintains sustainable harvest, maximizes the social and economic value, and considers the needs of all user groups. Bay scallops are considered an annual crop because of their short life span. Their populations are more affected by environmental conditions such as temperature, salinity, habitat, and water quality than fishing pressure. Although fishing does reduce the population size over a fishing season, fishing would not normally reduce year class strength for the following year unless the spawning stock has been reduced below some minimum threshold.

Maintenance and improvement of suitable estuarine habitat and water quality are important factors in providing a sustainable bay scallop stock. In recent years, harvest has decreased to essentially no landings because of recruitment limitations resulting from a red tide event in 1987, several hurricanes in the 1990's and predation. Improving data collection on the biology, harvest, environment, enhancement, and socioeconomic aspects relative to bay scallops is recommended throughout Amendment 2 to provide more comprehensive information for assisting in future management decisions. The statutory obligation to manage bay scallops according to sustainable harvest cannot be met until the appropriate data are collected.

The N.C. Marine Fisheries Commission's preferred management strategy for bay scallops is to allow the N.C. Division of Marine Fisheries director to open a region to limited bay scallop harvesting when sampling indicates bay scallop abundance is at 50 percent of the target set specifically to a region. Trip limits and fishing days will progressively increase if sampling shows bay scallop abundance improves. The open season may only occur from the last Monday in January through April 1 to ensure spawning is complete before harvest and the economic yield is at an optimum for fishermen.

Issues addressed in formulating the fishery management plan for North Carolina's bay scallop population include:

- Expand sampling for estimating annual abundance;
- Implement stock enhancement measures;
- Allow harvest of bay scallops on aquaculture operations during closed public seasons and at greater daily quantities (this is currently allowed for clams and oysters on leases); and
- Maintain and improve habitat and water quality conditions for bay scallops.

The plan also includes a prioritized list of research recommendations.

Following the review of Amendment 2 by the Department of Environment and Natural Resources secretary and the Joint Legislative Commission on Governmental Operations, the draft plan will be presented to the Marine Fisheries Commission for procedural approval and to begin the rulemaking process. The Marine Fisheries Commission will consider final approval of Amendment 2 and the implementing rules in November 2014.





## FISCAL IMPACTS OF PROPOSED AMENDMENTS TO THE N.C. BAY SCALLOP FISHERY MANAGEMENT PLAN

**Rule Amendments:** 15A NCAC 03K .0111 PERMITS TO USE MECHANICAL METHODS FOR SHELLFISH ON SHELLFISH LEASES OR FRANCHISES  
 15A NCAC 03K .0206 PERMITS TO USE MECHANICAL METHODS FOR OYSTERS OR CLAMS ON SHELLFISH LEASES OR FRANCHISES  
 15A NCAC 03K .0303 PERMITS TO USE MECHANICAL METHODS FOR OYSTERS OR CLAMS ON SHELLFISH LEASES OR FRANCHISES REQUIREMENT  
 15A NCAC 03K .0501 BAY SCALLOP HARVEST MANAGEMENT  
 15A NCAC 03K .0502 TAKING BAY SCALLOPS AT NIGHT AND ON WEEKENDS  
 15A NCAC 03K .0507 MARKETING SCALLOPS TAKEN FROM SHELLFISH LEASES OR FRANCHISES  
 15A NCAC 03K .0508 SCALLOP SEASON AND HARVEST LIMIT EXEMPTION  
 15A NCAC 03O .0501 PROCEDURES AND REQUIREMENTS TO OBTAIN PERMITS

**Name of Commission:** N.C. Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
 N.C. Division of Marine Fisheries  
 3441 Arendell Street  
 Morehead City, NC 28557  
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**Impact Summary:** State government: No  
 Local government: No  
 Federal government: No  
 Substantial impact: No

**Authority:** North Carolina General Statutes 113-134 (Rules); 113-168.4 (Sale of Fish); 113-169.1 (Permits for Gear, Equipment, and Other Specialized Activities Authorized); 113-182 (Regulation of Fishing and Fisheries); 113-201 (Legislative Findings and Declaration of Policy; Authority of Marine Fisheries Commission); 143B-289.52 (Marine Fisheries Commission – Powers and Duties); North Carolina Marine Fisheries Commission Rules 15A NCAC 03I .0101 (Definitions); 03K .0102 (Prohibited Rakes); 03K .0105 (Recreational Harvest of Shellfish); 03K .0501 (Bay Scallop Harvest Management); 03K .0502 Taking Bay Scallops at Night and on Weekends); 03K .0503 (Prohibited Bay Scallop Dredge); 03O .0501 (Procedures and Requirements to Obtain Permits); 03O .0502 (Permit Conditions; General)

**Necessity:** In accordance with G.S. 113-182.1 (b) and (d), the proposed rule changes (see proposed rule text in the appendix) are necessary to amend and update the N.C. Bay Scallop Fishery Management Plan (FMP) to ensure adequate management of the bay scallop resource in state waters. Specifically, the rule changes address two separate issues and propose to:

- 1) Modify 15A NCAC 03K .0501 to eliminate the open season for bay scallops from August 1 through September 15, adjust the maximum daily commercial harvest possession limit to be consistent with the adaptive management trip limit measures, and clarify proclamation authority of the Fisheries Director to manage bay scallop harvest.
- 2) Modify 15A NCAC 03K .0501, 03K .0502, and 03O .0501; adopt 03K .0111, 03K .0507, and 03K .0508; and repeal 03K .0206 as well as 03K .0303 to encourage bay scallop aquaculture in North Carolina. Specifically, these rule changes provide exemption for leaseholders and aquaculture operations from the public bottom commercial season, gear, and harvest limits for cultured bay scallops and allow the sale of bay scallops for further grow out.

The anticipated effective date of the proposed rule changes is May 1, 2015.

## **1. Bay Scallop Harvest Management (15A NCAC 03K .0501)**

### **I. Summary**

The proposed rule change seeks to improve the management of the bay scallop fishery and population by removing the August 1 through September 15 season, adjusting the daily commercial harvest possession limit to be consistent with adaptive management trip limit measures, and clarifying proclamation authority in regards to the management of the bay scallop fishery. These measures will help improve public clarity of proclamation authority for the bay scallop fishery, may improve scallop yields and extend the scallop harvest throughout the season in years when the commercial season is opened, and help wild bay scallop populations recover. NCDMF expects costs associated with the rule change to vary from year to year but remain far below the \$1 million per year substantial economic impact threshold (potential impacts discussed below).

### **II. Introduction and Purpose of Rule Changes**

North Carolina's bay scallops are listed as a species of concern in the annual Stock Status Report due to population declines<sup>1</sup>. The current management of the commercial and recreational fisheries for bay scallops includes an adaptive management strategy that opens by region (Pamlico Sound, Core Sound, Back Sound, and Bogue Sound to the state-line with South Carolina). The adaptive management strategy determines whether the season will open, sets the allowable gears, days of the week that the fishery is open, and length of the season based on target abundance levels of bay scallops according to N.C. Division of Marine Fisheries (NCDMF) field sampling (Table 1 and Table 2.)

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<sup>1</sup> NCDMF Stock Status Report 2014. <http://portal.ncdenr.org/web/mf/2014-stock-status-report>.

Table 1. Current adaptive management measures for opening the bay scallop commercial fishery based on progressive triggers derived from NCDMF field sampling.

Progressive triggers and target	Trip limit	Days open in the week	Allowed gears	Season
Less than 50% of target	No allowed harvest			
50% or greater and less than 75% of target	10 bushels per person per day not to exceed 20 bushels per fishing operation	Mon and Wed	By hand, hand rakes, hand tongs, dip net, and scoops	Last Monday in January to April 1st
75% or greater and less than 125% of target	10 bushels per person per day not to exceed 20 bushels per fishing operation	Mon, Tues, Wed, and Thurs	By hand, hand rakes, hand tongs, dip net, and scoops	Last Monday in January to April 1st
125% or greater of target	10 bushels per person per day not to exceed 20 bushels per fishing operation	Mon, Tues, Wed, and Thurs	By hand, hand rakes, hand tongs, dip net, and scoops	Last Monday in January to April 1st
	15 bushels per person per day not to exceed 30 bushels per fishing operation	Mon and Wed	Bay scallop dredges as described by rule 15A NCAC 03K. 0503	Delay opening until first full week in March after hand harvest removes scallops from shallow waters to April 1st

Table 2. Current adaptive management measures for opening the bay scallop recreational fishery based on progressive triggers derived from NCDMF field sampling.

Progressive triggers and target	Trip limit	Days open in week	Allowed gears	Season
Less than 50% target	No allowed harvest			
50% or greater of target	1 bushel per person per day not to exceed 1 bushel per recreational fishing operation	Thurs, Fri, Sat, and Sun	By hand, hand rakes, hand tongs, dip net, and scoops	Last Monday in January to April 1st

Seasonal closures for bay scallops are intended to protect a portion of the stock in order to increase biomass and/or potential spawning for the next generation with the least impact to fishermen. This management measure has also been used by NCDMF for bay scallops in order to improve the economic yield to fishermen by opening the season when meat counts (number of scallop adductor meats/pound) are increasing. In bay scallops, adductor meat is the part of the bay scallop that is sold and consumed. Adductor meat weights tend to be lowest during the fall when gonad development is high<sup>2</sup>.

<sup>2</sup> Kellogg, R. L. and D. Spitsbergen. 1983. Predicative growth model for the meat weight (adductor muscle) of bay scallops in North Carolina. Grant Number NA81AA-D-00026. Office of Sea Grant, NOAA. U. S. Department of Commerce and North Carolina Department of Administration. UNC Sea Grant Publication UNC-SG-83-6. Raleigh, NC. 44 pp.

Part of the modifications to rule 15A NCAC 03K .0501 will eliminate the August 1 to September 15 commercial and recreational bay scallop season that is allowable under certain circumstances under the current rule . NCDMF has not opened this late-summer bay scallop season since 2003 as a means to improve the yield of the fishery by delaying the harvest to a time when adductor meat yields are higher. The winter-to-early-spring season allows for the completion of spawning and an increase in meat size in order to obtain the highest yield. For this reason, the proposed rule would eliminate the late-summer season and restrict the opening of the bay scallop fishery to the winter-and-early-spring season only.

NCDMF also proposes lowering the commercial harvest limit from a maximum of 20 bushels per person per day or 40 bushels per commercial fishing operation to 15 bushels per person per day or 30 bushels per commercial fishing operation to be consistent with the N.C. Marine Fisheries Commission (NCMFC) selected adaptive management trip limit measures. The proposed rule change regarding bay scallop trip limits does not necessarily change the current management of the bay scallop fishery, but aligns with the selected management of the fishery and removes the ability to raise limits beyond what is being proposed in rule. These measures are designed to help preserve the bay scallop resource as well as prolong the commercial season for bay scallops by helping to extract the bay scallop resource at a slower pace in years of high bay scallop abundance, thereby helping to reduce the diminishing harvest of bay scallops often observed as the season progresses.

Additional rule changes to the proclamation authority for the management of the bay scallop fishery are put forth as part of an ongoing attempt to standardize rule language granting proclamation authority across NCMFC rules. NCDMF staff has identified that proclamation authority across several rules is often similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible.

### **III. Costs**

The proposed rule changes are expected to have variable – but minimal – costs. In many recent years, the bay scallop season has not opened at all due to populations being too low for harvest. In seven of the past ten years (2005 to 2014), no commercial bay scallop landings have been recorded. In two of the three years that the commercial bay scallop season was opened, recorded annual landings were valued at \$124,296 and \$9,506. In the third year, the landings value is not available for release due to confidentiality requirements as a result of the low number of participants or dealers in the fishery that year.<sup>3</sup> Based on the high variability of landings in the commercial bay scallop fishery, it is very difficult to predict costs stemming from the proposed rule changes with any confidence.

The proposed rules could impose some costs on fishermen in years that the fishery is opened and bay scallops are abundant due to the proposed limits restricting fishermen to five fewer bushels of bay scallops per person per day or 10 fewer bushels of bay scallops per commercial fishing operation per day. The yield of adductor meat per bushel varies, as does the quality of

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<sup>3</sup> When the number of participants or dealers in a fishery or area being examined is less than three, landings and value information may not be provided to the general public in order to maintain compliance with N.C. General Statute § 113-170.3.

the meat; however, assuming each bushel of scallops yields five pounds of adductor meat<sup>4</sup> that has an ex-vessel value of approximately \$7 per pound<sup>5</sup>, each bushel of bay scallops has an ex-vessel value of approximately \$35. Based on these estimates, fishermen may face up to \$175 per trip in reduced bay scallop landings and/or each fishing operation may face up to \$350 per trip in reduced bay scallop landings. This should be viewed as an upper-bound cost estimate, as the season for bay scallops is not opened every year, and when the season is opened, the trip limit has not often been set above 15 bushels per fisherman or 30 bushels per fishing operation. Also, some of these costs may be offset from an extended harvest for commercial bay scallop fishermen and/or by improved prices for bay scallops due to less likelihood of flooding the bay scallop market.

The elimination of the fall season for bay scallops may impose some costs for both commercial and recreational participants by prohibiting fishermen from earning income from bay scallops or recreating by taking bay scallops during this season. While participants in the commercial and recreational fishery may face some costs from the permanent closure of the fall fishery, these costs are expected to be offset by increases in the adductor meat yield per scallop from bay scallops harvested later during the winter season.

#### **IV. Benefits**

This proposed rule change will help improve public clarity of proclamation authority for the bay scallop fishery. Additionally this rule change may improve bay scallop yields and price, extend the bay scallop harvest throughout the season in years when the season is opened, and help wild bay scallop populations recover.

### **2. Private Culture Exemptions for Bay Scallops (15A NCAC 03K .0111, 03K .0206, 03K .0303, 03K .0501, 03K .0502, 03K .0507, 03K .0508, and 03O .0501)**

#### **I. Summary**

The proposed rule changes are to modify 15A NCAC 03K .0501, 03K .0502, and 03O .0501; adopt 03K .0111, 03K .0507, and 03K .0508; and repeal 03K .0206 as well as 03K .0303 to introduce new shellfish leaseholder rules to exempt bay scallop harvest from the public commercial season and daily harvest limits, and allow the sale of bay scallop seed for further grow out. NCDMF is proposing these rule changes to promote the aquaculture of bay scallops.

#### **II. Introduction and Purpose of Rule Changes**

NCDMF has observed an increased interest in bay scallop culture in North Carolina in recent years. With wild bay scallop populations being consistently low, fishermen are seeking alternative methods to harvest bay scallops. Commercial culture of bay scallops is administered through the shellfish lease program; however, commercial bay scallop culture is not currently practiced on any North Carolina shellfish leases.

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<sup>4</sup> MacKenzie, Jr. , C. 2008. The Bay Scallop, *Argopecten irradians*, Massachusetts Through North Carolina: Its Biology and the History of Its Habitats and Fisheries. *Marine Fisheries Review*, 70(3-4), pp. 5-79.

<sup>5</sup> 2013 NCDMF Trip Ticket Program Data.

N.C. Marine Fisheries Commission rules are in place that exempt oysters and clams from season and harvest restrictions in oyster and clam aquaculture operations. Bay scallop aquaculture operations are not exempt from the regular commercial season and daily harvest limits. The lack of exemption limits shellfish leaseholders and franchise owners to only the open commercial public harvest period, which does not open in some years due to low populations of wild bay scallops. One pilot study to culture bay scallops in Core Sound found that bay scallops would likely expire naturally before the harvest season could be opened due to their short lifespan<sup>6</sup>. Shellfish leases and franchises are able to apply for permits to harvest oysters and clams by mechanical harvest methods, but existing rules do not authorize the use of mechanical methods for the harvest of bay scallops.

To address the issue of utilizing mechanical harvest methods on shellfish leases and franchises with bay scallops, NCDMF proposes repealing 15A NCAC 03K .0206 and 03K .0303 and replacing those rules with 03K .0111 and rule changes in 03O .0501 to be inclusive of all shellfish leases and franchises, not just those for oysters and clams. Additionally, NCDMF is proposing to adopt 03K .0508 and amend 03K .0501 and 03K .0502 to exempt bay scallops grown on private bottom from provisions implemented to protect wild bay scallop populations. These rule changes will allow shellfish lease and franchise holders to possess bay scallops outside of the commercial wild-harvest season, on weekends, and in numbers above the wild-harvest commercial limits for both adult and seed specimens. As an additional measure for these exemptions, NCDMF is proposing to adopt 15A NCAC 03K .0507 to require proper documentation of grown bay scallops for law enforcement purposes. It is worth noting that in the absence of the proposed rule changes, bay scallop aquaculture will likely not occur on a commercial scale, as provisions are needed to exempt these cultured scallops from regulations aimed at regulating wild harvest.

### III. Costs

NCDMF expects costs stemming from the proposed rule changes to be minimal. There is little risk to the wild bay scallop population from the cultivation of bay scallops, as there are disease assessment protocols in place for importation of seed shellfish to prevent the spread of disease to both cultivated and wild shellfish populations. Furthermore, NCDMF staff is not aware of incidences of cultivated native species of shellfish in North Carolina or surrounding states negatively impacting wild shellfish populations.

There are currently no commercial aquaculture operations that grow bay scallops outside of experimental test plots. Therefore, rule changes will not affect or impose costs on current shellfish growers. The proposed rule changes do require reporting and documentation for operations that may be interested in commercial-scale growing of bay scallops; however, these requirements are identical to those required for the growing of clams and oysters. Consequently, NCDMF expects the incremental costs of the reporting requirements within the proposed rules to be minor, and shellfish growers will likely be familiar with the process.

For shellfish lease or franchise reporting requirements, upon annual payment for leased public water column or bottom, a lease holder must report the amount of shellfish harvested from a lease as well as the amount of cultch planted if applicable. Additionally, lease holders must

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<sup>6</sup> Hooper, M. 2011. Pilot project to investigate the feasibility of bay scallop (*Argopecten irradians*) mariculture in coastal North Carolina. North Carolina Fishery Resource Grant.06-AM-08. North Carolina Sea Grant. Raleigh, NC. 11 pp.

provide buyers of their product with certification that the shellfish were harvested from their lease. The amount of time needed and resulting opportunity cost to meet this reporting requirement will vary among individuals depending on recordkeeping efforts. NCDMF estimates that these reporting requirements will require 10 or fewer hours per year per lease. As an upper estimate of the opportunity cost per operation due to reporting requirements within the proposed rule language, a shellfish grower would incur approximately \$195 in opportunity costs per year per lease, assuming only bay scallops were grown on a shellfish lease. This estimate is based on the US Bureau of Labor Statistics 2013 mean hourly wage for farming, fishing, and forestry workers of \$13.09 per hour<sup>7</sup> and benefits equivalent to approximately 33% of total compensation<sup>8</sup>.

There are currently 242 active public bottom or water column leases in North Carolina. NCDMF expects that the extent to which the aquaculture of bay scallops will be carried out will likely be relatively low in the first five years after implementation, as it will likely take several years to achieve bay scallop growing practices that provide an adequate return on investment for growers. Additionally, bay scallops will likely be grown on leases with other shellfish. Therefore, reporting requirements may be for shellfish other than bay scallops and would fall outside the scope of the proposed rule changes. Therefore, it is difficult to estimate with certainty the total opportunity costs that may be imposed by reporting requirements specifically for cultured bay scallops. The sensitivity analysis presented in Table 3, however, provides what NCDMF expects to be a reasonable range for these opportunity costs. Overall opportunity costs from meeting reporting requirements for leases due to the proposed rule changes are not expected to be above \$7,100 annually.

Table 3. Sensitivity analysis of estimated opportunity costs being imposed by reporting requirements in proposed rule changes for the culture of bay scallops.

<b>Percent of Total Reporting Requirement Stemming from Cultured Bay Scallops</b>	<b>Estimated Opportunity Cost</b>
5%	\$2,360
7.5%	\$3,539
10%	\$4,719
12.5%	\$5,899
15%	\$7,079

#### **IV. Benefits**

Allowing bay scallops to be harvested on shellfish leases and franchises outside of the public open season, above the daily harvest limits, and with mechanical gear, may benefit shellfish growers economically, encourage production for markets outside of the regular season, take some pressure off the wild stock, and will make the management practice of growing bay scallops consistent with other shellfish species grown on shellfish leases and franchises. It is difficult to quantify the benefits of the proposed rule changes, as commercial bay scallop aquaculture is currently not occurring in North Carolina. NCDMF staff estimate that with the proposed rule changes in place and improved growing practices, it is feasible that bay scallop

<sup>7</sup> United States Department of Labor Bureau of Labor Statistics. May 2013 State Occupational Employment and Wage Estimates North Carolina. [http://www.bls.gov/oes/current/oes\\_nc.htm#45-0000](http://www.bls.gov/oes/current/oes_nc.htm#45-0000).

<sup>8</sup> United States Department of Labor Bureau of Labor Statistics. Employer Costs for Employee Compensation- March 2014. <http://www.bls.gov/news.release/pdf/ecec.pdf>.

aquaculture in the state could produce a bay scallop harvest worth tens of thousands of dollars or more annually.

### **3. Comprehensive Statement of Costs and Benefits**

Rule changes associated with the Bay Scallop Fishery Management Plan are expected to have aggregate costs and benefits below the impact threshold of \$1 million in aggregate costs and benefits considered a rule change with a substantial economic impact. Specifically:

- 1) Modification of 15A NCAC 03K .0501 helps improve public clarity of proclamation authority for the bay scallop fishery. Additionally this rule change may improve scallop yields and price, extend the bay scallop harvest when the season is opened, and help bay scallop populations recover. Costs associated with this rule change are expected to be variable but relatively minor. Some costs will be imposed in years that the fishery is opened due to fishermen being limited up to five fewer bushels of bay scallops per person per day or 10 fewer bushels of bay scallops per commercial fishing operation, should these bay scallops be caught or able to be caught on commercial trips.
- 2) Modification of 15A NCAC 03K .0501, 03K .0502, and 03O .0501; adoption of 03K .0111, 03K .0507, and 03K .0508; and repeal of 03K .0206 and 03K .0303 will help encourage the cultivation of bay scallops in North Carolina. This will benefit leaseholders economically, encourage production for markets outside of the regular season, may take some pressure off the wild stock, and will make the management practice of growing bay scallops consistent with other shellfish species grown on shellfish leases and franchises. While the extent to which bay scallops will be cultured after the rule changes are in place is unknown, it is feasible that bay scallop aquaculture in the state could produce bay scallop meat worth tens of thousands of dollars or more annually. There will be no immediate costs incurred by the proposed rule changes, as there are no commercial shellfish production operations currently growing bay scallops. Growers would incur some costs in the future due to reporting requirements for operations growing bay scallops; however, these requirements are identical to those required for the growing of clams and oysters. NCDMF expects overall costs to be \$7,100 or less annually.

Table 1. Summary of estimated costs and benefits from proposed rule changes.

<b>Rule</b>	<b>Estimated Cost</b>	<b>Estimated Benefit</b>
15A NCAC 03K .0111	Unquantified	Unquantified
15A NCAC 03K .0206	Unquantified	Unquantified
15A NCAC 03K .0303	Unquantified	Unquantified
15A NCAC 03K .0501	Unquantified	Unquantified
15A NCAC 03K .0502	Unquantified	Unquantified
15A NCAC 03K .0507	Unquantified	Unquantified
15A NCAC 03K .0508	Up to \$7,100 annually	Unquantified
15A NCAC 03O .0501	Unquantified	Unquantified



## Appendix: Proposed Rule Changes

### 15A NCAC 03K .0111 PERMITS TO USE MECHANICAL METHODS FOR SHELLFISH ON SHELLFISH LEASES OR FRANCHISES

- (a) Permits to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises shall be issued in compliance with the general rules governing all permits in 15A NCAC 03O .0500. The procedures and requirements for obtaining permits are also found in 15A NCAC 03O .0500.
- (b) It is unlawful to harvest shellfish by the use of mechanical methods from shellfish leases or franchises without first obtaining a Permit to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises.

*Authority G.S. 113-134; 113-169.1; 113-182; 143B-289.52*

15A NCAC 03K .0206 is proposed for repeal as follows:

### 15A NCAC 03K .0206 PERMITS TO USE MECHANICAL METHODS FOR OYSTERS OR CLAMS ON SHELLFISH LEASES OR FRANCHISES

- ~~(a) Permits to Use Mechanical Methods for Oysters or Clams on Shellfish Leases or Franchises shall be issued in compliance with the general rules governing all permits in 15A NCAC 03O .0500. The procedures and requirements for obtaining permits are also found in 15A NCAC 03O .0500.~~
- ~~(b) It is unlawful to harvest oysters by the use of mechanical methods from shellfish leases or franchises without first obtaining a Permit to Use Mechanical Methods for Oysters or Clams on Shellfish Leases or Franchises.~~

*Authority G.S. 113-134; 113-182; 143B-289.52*

15A NCAC 03K .0303 is proposed for repeal as follows:

### 15A NCAC 03K .0303 PERMITS TO USE MECHANICAL METHODS FOR OYSTERS OR CLAMS ON SHELLFISH LEASES OR FRANCHISES REQUIREMENT

- ~~(a) Permits to Use Mechanical Methods for Oysters or Clams on Shellfish Leases or Franchises shall be issued in compliance with the general rules governing all permits in 15A NCAC 03O .0500. The procedures and requirements for obtaining permits are also found in 15A NCAC 03O .0500.~~
- ~~(b) It is unlawful to harvest hard clams by the use of mechanical methods from shellfish leases or franchises without first obtaining a Permit to Use Mechanical Methods for Oysters or Clams on Shellfish Leases or Franchises.~~

*Authority G.S. 113-134; 113-182; 143B-289.52*

### 15A NCAC 03K .0501 ~~BAY SCALLOPS – SEASONS AND SCALLOP HARVEST LIMITS~~ MANAGEMENT

- ~~(a) The Fisheries Director may, by proclamation, specify open seasons and methods for the taking of bay scallops during the following periods:~~

Fiscal Note for Proposed Rule Changes to 15A NCAC 03K .0111, 03K .0206, 03K .0303, 03K .0501, 03K .0502, 03K .0507, 03K .0508, 03O .0501

~~(1) From the last Monday in January through the last Friday in May; and~~

~~(2) From August 1 through September 15 by hand harvest methods only as described by proclamation.~~

~~(b) The Fisheries Director may, by proclamation, impose any or all of the following restrictions for any commercial or recreational ~~open season~~ bay scallop harvest from public bottom:~~

~~(1) Specify number of days; specify time;~~

~~(2) Specify areas; specify area;~~

~~(3) Specify means and methods which may be employed in the taking; specify means and methods;~~

~~(4) Specify time period; and specify open seasons for the taking of bay scallops during the period beginning the last Monday in January and ending the last Friday in May;~~

~~(5) specify size; and~~

~~(5)(6) Specify the specify quantity, but shall not exceed possession of more than 20-15 standard U.S. bushels per person per day or a total of 40-30 standard U.S. bushels in any combined commercial fishing operation per day.~~

*Authority G.S. 113-134; 113-182; ~~113-221~~; 113-201; 113-221.1; 143B-289.52*

#### **15A NCAC 03K .0502 TAKING BAY SCALLOPS AT NIGHT AND ON WEEKENDS**

(a) It is unlawful to take bay scallops between sunset and sunrise, or on Saturdays or Sundays, except as provided in 15A NCAC 03K .0105.

(b) Bay scallops taken on Saturdays or Sundays from shellfish leases or franchises in accordance with G.S. 113-208 are exempt from this Rule.

*Authority G.S. 113-134; 113-182; ~~113-221~~; 143B-289.52*

#### **15A NCAC 03K .0507 MARKETING SCALLOPS TAKEN FROM ~~PRIVATE SHELLFISH BOTTOM LEASES OR FRANCHISES~~**

(a) It is unlawful to sell, purchase or possess scallops during the closed season without the lease or franchise holder delivering to the purchaser or other recipient a certification, on a form provided by the Division, that the scallops were taken from a valid shellfish lease or franchise. Certification forms shall be furnished by the Division to lease and franchise holders upon request.

(b) It is unlawful for lease or franchise holders or their designees to take or possess scallops from public bottom while possessing aboard a vessel scallops taken from shellfish leases or franchises.

*Authority G.S. 113-134; 113-182; 113-201; 143B-289.52*

### **15A NCAC 03K .0508 SCALLOP SEASON AND HARVEST LIMIT EXEMPTION**

The following exemptions and restrictions shall apply to the possession, sale, purchase or transport of scallops produced in an aquaculture operation:

- (1) Possession and sale of scallops by a scallop aquaculture operation shall be exempt from restrictions set under 15A NCAC 03K .0501, .0504, and .0505.
- (2) Purchase and possession of scallops from a scallop aquaculture operation shall be exempt from restrictions set under 15A NCAC 03K .0501, .0504, and .0505.
- (3) It is unlawful for a person to possess, sell, purchase, or transport scallops described in Sub-Items (1) and (2) of this Rule unless in compliance with all conditions of the Aquaculture Operation Permit.

*Authority G.S. 113-134; 113-182; 143B-289.52*

### **15A NCAC 03O .0501 PROCEDURES AND REQUIREMENTS TO OBTAIN PERMITS**

(a) To obtain any Marine Fisheries permit, the following information is required for proper application from the applicant, a responsible party or person holding a power of attorney:

- (1) Full name, physical address, mailing address, date of birth, and signature of the applicant on the application. If the applicant is not appearing before a license agent or the designated Division contact, the applicant's signature on the application shall be notarized;
- (2) Unexpired picture identification of applicant, responsible party and, when applicable, person holding a power of attorney. Acceptable forms of picture identification are driver's license, North Carolina Identification card issued by the North Carolina Division of Motor Vehicles, military identification card, resident alien card (green card) or passport or if applying by mail, a copy thereof;
- (3) Full names and dates of birth of designees of the applicant who will be acting under the requested permit where that type permit requires listing of designees;
- (4) Certification that the applicant and his designees do not have four or more marine or estuarine resource convictions during the previous three years;
- (5) For permit applications from business entities:
  - (A) Business Name;
  - (B) Type of Business Entity: Corporation, partnership, or sole proprietorship;
  - (C) Name, address and phone number of responsible party and other identifying information required by this Subchapter or rules related to a specific permit;
  - (D) For a corporation, current articles of incorporation and a current list of corporate officers when applying for a permit in a corporate name;
  - (E) For a partnership, if the partnership is established by a written partnership agreement, a current copy of such agreement shall be provided when applying for a permit; and

- (F) For business entities, other than corporations, copies of current assumed name statements if filed and copies of current business privilege tax certificates, if applicable; and
- (6) Additional information as required for specific permits.
- (b) A permittee shall hold a valid Standard or Retired Standard Commercial Fishing License in order to hold a:
- (1) Pound Net Permit;
  - (2) Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean; or
  - (3) Atlantic Ocean Striped Bass Commercial Gear Permit.
- (c) A permittee and his designees shall hold a valid Standard or Retired Standard Commercial Fishing License with a Shellfish Endorsement or a Shellfish License in order to hold a:
- (1) Permit to Transplant Prohibited (Polluted) Shellfish;
  - (2) Permit to Transplant Oysters from Seed Oyster Management Areas;
  - (3) Permit to Use Mechanical Methods for ~~Oysters or Clams~~ Shellfish on Shellfish Leases or Franchises;
  - (4) Permit to Harvest Rangia Clams from Prohibited (Polluted) Areas; or
  - (5) Depuration Permit.
- (d) A permittee shall hold a valid:
- (1) Fish Dealer License in the proper category in order to hold Dealer Permits for Monitoring Fisheries Under a Quota/Allocation for that category; and
  - (2) Standard Commercial Fishing License with a Shellfish Endorsement, Retired Standard Commercial Fishing License with a Shellfish Endorsement or a Shellfish License in order to harvest clams or oysters for depuration.
- (e) Aquaculture Operations/Collection Permits:
- (1) A permittee shall hold a valid Aquaculture Operation Permit issued by the Fisheries Director to hold an Aquaculture Collection Permit.
  - (2) The permittee or designees shall hold appropriate licenses from the Division of Marine Fisheries for the species harvested and the gear used under the Aquaculture Collection Permit.
- (f) Atlantic Ocean Striped Bass Commercial Gear Permit:
- (1) ~~Application for an Atlantic Ocean Striped Bass Commercial Gear Permit must be made prior to November 1 of each year. A person shall declare one of the following gears for an initial Atlantic Ocean Striped Bass Commercial Gear Permit~~ Upon application for an Atlantic Ocean Striped Bass Commercial Gear Permit, a person shall declare one of the following gears for an initial permit and at intervals of three consecutive license years thereafter:
    - (A) gill net;
    - (B) trawl; or
    - (C) beach seine.

For the purpose of this Rule, a beach seine is defined as a swipe net constructed of multi-filament or multi-fiber webbing fished from the ocean beach that is deployed from a vessel launched from the ocean beach where the fishing operation takes place.

Gear declarations are binding on the permittee for three consecutive license years without regard to subsequent annual permit issuance.

(2) A person is not eligible for more than one Atlantic Ocean Striped Bass Commercial Gear Permit regardless of the number of Standard Commercial Fishing Licenses, Retired Standard Commercial Fishing Licenses or assignments held by the person.

~~(3) The annual, nonrefundable permit fee is ten dollars (\$10.00).~~

~~(g) For Hire Fishing Permit:~~

~~(1) The permittee shall hold a valid certification from the United States Coast Guard (USCG) that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers;~~

~~(2) The permittee shall provide valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.~~

~~(h)(g)~~ Applications submitted without complete and required information shall not be processed until all required information has been submitted. Incomplete applications shall be returned to the applicant with deficiency in the application so noted.

~~(h)(h)~~ A permit shall be issued only after the application has been deemed complete by the Division of Marine Fisheries and the applicant certifies to abide by the permit general and specific conditions established under ~~15A NCAC 03J .0501, 03J .0505, 03K .0103, 03K .0104, 03K .0107, 03K .0206, 03K .0303, 03K .0401, 03O .0502, and 03O .0503~~ 15A NCAC 03J .0501, .0505, 03K .0103, .0104, .0107, .0111, .0401, 03O .0502, and .0503 as applicable to the requested permit.

~~(i)(i)~~ The Fisheries Director, or his agent may evaluate the following in determining whether to issue, modify or renew a permit:

- (1) Potential threats to public health or marine and estuarine resources regulated by the Marine Fisheries Commission;
- (2) Applicant's demonstration of a valid justification for the permit and a showing of responsibility as determined by the Fisheries Director;
- (3) Applicant's history of habitual fisheries violations evidenced by eight or more violations in 10 years.

~~(j)(j)~~ The Division of Marine Fisheries shall notify the applicant in writing of the denial or modification of any permit request and the reasons therefor. The applicant may submit further information, or reasons why the permit should not be denied or modified.

~~(k)(k)~~ Permits are valid from the date of issuance through the expiration date printed on the permit. Unless otherwise established by rule, the Fisheries Director may establish the issuance timeframe for specific types and categories of

permits based on season, calendar year, or other period based upon the nature of the activity permitted, the duration of the activity, compliance with federal or state fishery management plans or implementing rules, conflicts with other fisheries or gear usage, or seasons for the species involved. The expiration date shall be specified on the permit.

~~(m)~~(l) For permit renewals, the permittee's signature on the application shall certify all information as true and accurate. Notarization of signature on renewal applications is not required.

~~(m)~~(m) For initial or renewal permits, processing time for permits may be up to 30 days unless otherwise specified in this Chapter.

~~(n)~~(n) It is unlawful for a permit holder to fail to notify the Division of Marine Fisheries within 30 days of a change of name or address.

~~(o)~~(o) It is unlawful for a permit holder to fail to notify the Division of Marine Fisheries of a change of designee prior to use of the permit by that designee.

~~(p)~~(p) Permit applications are available at all Division Offices.

*Authority G.S. 113-134; 113-169.1; 113-169.3; 113-182; 113-210; 143B-289.52*

## **Division of Marine Fisheries' Overview of Amendment 2 to the River Herring Fishery Management Plan March 2014**



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The N.C. River Herring Fishery Management Plan is a joint plan with the N.C. Marine Fisheries Commission and the N.C. Wildlife Resources Commission. The goal of the plan is to restore the long-term viability of the river herring population. The coast-wide stock assessment completed by the Atlantic States Marine Fisheries Commission in 2012 found river herring to be depleted throughout their range. Despite a no-harvest provision implemented in Amendment 1 to the plan, populations in North Carolina continue to be depleted. Considerable problems exist in the areas of habitat and water quality. Amendment 1 to the plan contained recommendations to address these problems and these strategies will remain in place in Amendment 2. Extensive monitoring and research recommendations are included in the plan, which are paramount to achieving the goal.

Due to the current no-harvest provision, Amendment 2 addresses only two primary management issues. The no-harvest provision implemented in the previous amendment prohibited commercial and recreational harvest of river herring in North Carolina, with the exception of a 7,500-pound limited research set-aside season that takes place four days around Easter each year, administered at the discretion of the fisheries director. The purpose of this discretionary harvest season is for data collection and to provide local product to herring festivals and local restaurants. The discretionary harvest season is not serving the intended purposes and the N.C. river herring stocks continue to be depleted and remain well below recovery goals. As a result, the Marine Fisheries Commission's and Wildlife Resources Commission's preferred management strategy for this issue is to eliminate the discretionary harvest season.

Shortly after the completion of Amendment 1, the N.C. Wildlife Resources Commission and N.C. Marine Fisheries Commission developed an agreement to allow possession of river herring purchased from bait and tackle shops, so long as a fisherman held a receipt. Due to fishermen abusing this agreement, the Wildlife Resources Commission implemented a rule that prohibits the possession of river herring greater than six inches in inland waters while fishing or boating. This created a discrepancy with Marine Fisheries Commission rules. To align the rules and provide for consistent enforcement, the Marine Fisheries Commission's and Wildlife Resources Commission's preferred management strategy for this issue is to prohibit possession of river herring greater than six inches aboard a vessel or while engaged in fishing from the shore or a pier and remove river herring as an exception in the Marine Fisheries Commission's mutilated finfish rule governing the use of cut bait. This will allow the use of stunted river herring found in the Piedmont reservoirs for bait while protecting the migrating blueback herring and alewife that are found in coastal and joint fishing waters.

Following the review of Amendment 2 by the Department of Environment and Natural Resources secretary and the Joint Legislative Commission on Governmental Operations, the draft plan will be presented to the Marine Fisheries Commission for procedural approval and to begin the rulemaking process. The Marine Fisheries Commission will consider final approval of Amendment 2 and the implementing rules in November 2014. Similar steps will occur with the Wildlife Resources Commission.





## FISCAL IMPACTS OF PROPOSED AMENDMENTS TO THE N.C. RIVER HERRING FISHERY MANAGEMENT PLAN

**Rule Amendments:** 15A NCAC 03J .0209 ALBEMARLE SOUND/CHOWAN RIVER RIVER HERRING MANAGEMENT AREAS  
 15A NCAC 03O .0503 PERMIT CONDITIONS; SPECIFIC  
 15A NCAC 03M .0101 MUTILATED FINFISH  
 15A NCAC 03M .0513 RIVER HERRING  
 15A NCAC 03R .0115 ANADROMOUS FISH SPAWNING AREAS  
 15A NCAC 03R .0202 RIVER HERRING MANAGEMENT AREAS

**Name of Commission:** N.C. Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
 N.C. Division of Marine Fisheries  
 3441 Arendell Street  
 Morehead City, NC 28557  
 (252) 808-8107  
 john.hadley@ncdenr.gov

**Impact Summary:** State government: No  
 Local government: No  
 Federal government: No  
 Substantial impact: No

**Authority:** North Carolina General Statutes 113-134 (Rules); 113-182 (Regulation of Fishing and Fisheries); 113-221 (Rules)113-221.1 (Proclamations; Emergency Review); 143B-289.52 (Marine Fisheries Commission – Powers and Duties); North Carolina Marine Fisheries Commission Rules 15A NCAC 03O .0501 (Procedures and Requirements to Obtain Permits); 15A NCAC 03O .0502 (Permit Conditions; General); 15A NCAC 03O .0506 (Special Permit Required for Specific Management Purposes); 15A NCAC 03M . 0512 (Compliance with Fishery Management Plans); 15A NCAC .0513 (River Herring)

**Necessity:** In accordance with G.S. 113-182.1 (b) and (d), the proposed rule changes (see proposed rule text in the appendix) are necessary to amend and update the N.C. River Herring Fishery Management Plan (FMP) to ensure adequate management of the river herring resource in state waters. Specifically, the rule changes address two separate issues and propose to:

- 1) Modify 15A NCAC 03M .0101 and 03M .0513 to prohibit the possession of river herring (alewife and blueback herring) greater than six inches in length aboard a vessel or while engaged in fishing and remove river herring from the Mutilated Finfish rule;
- 2) Modify 15A NCAC 03J .0209, 03O .0503, and 03R .0115 as well as adopt 03R .0202 to reorganize rule placement for river herring management and address a change in the Anadromous Fish Spawning Areas.

The anticipated effective date of the proposed rule changes is May 1, 2015.

## **1. Possession of River Herring in Coastal Waters (15A NCAC 03M .0101 and 03M .0513)**

### **I. Summary**

The proposed rule changes prohibit the possession of river herring (alewife and blueback herring) greater than six inches in length aboard a vessel or while engaged in fishing and remove river herring from the Mutilated Finfish rule. These rule changes aid in the enforcement of regulations regarding the use of river herring as bait in recreational fishing as well as align rules for river herring possession in coastal and joint waters with those of inland waters. While not quantified, the expected costs created by the proposed rule changes are expected to be minimal.

### **II. Introduction and Purpose of Rule Changes**

In response to declining populations of river herring (alewife and blue back herring), Amendment 1 to the N.C. River Herring FMP in 2007 implemented a commercial and recreational no-harvest provision in the joint and coastal waters of the state, with a limited discretionary harvest season for commercial fishermen in the spring of each year of up to 7,500 pounds. Both the N.C. Division of Marine Fisheries (NCDMF) and the N.C. Wildlife Resources Commission (NCWRC) have allowed anglers to continue to possess river herring for use as bait as long as they have a receipt from the bait/seafood dealer or tackle shop where purchased. Most, if not all of the river herring legally used for bait comes from other states, but some may be legally harvested during the discretionary harvest season and sold by licensed river herring dealers.

Law enforcement from both agencies indicated that possible enforcement loopholes have been created with the allowance of possession of river herring for bait. These loopholes may include anglers replacing legally purchased river herring with those taken illegally and falsifying receipts to include names of dealers that do not exist or inaccurate amounts purchased. Marine Patrol indicated that although these loopholes may exist in all waters of the state, the majority of the issues likely occur in areas where river herring are more abundant such as the Roanoke and Chowan rivers. In response, the NCWRC adopted two rule amendments that became effective Aug. 1, 2013 prohibiting the possession of river herring greater than six inches while boating on or fishing in inland waters.

The use of live river herring as bait to catch striped bass is popular in the upper portions of the Roanoke River Management Area and the taking of river herring less than six inches was implemented to allow for the use of stunted river herring found in Piedmont reservoirs while protecting anadromous blueback herring and alewife that exceed six inches in length. Stunted reservoir populations of river herring are present in John H. Kerr, Gaston, and Roanoke Rapids reservoirs. Anglers will often use cast nets to capture river herring from these Piedmont reservoirs prior to their fishing trips to use as live bait. The six-inch provision allows stunted river herring to be kept and used by anglers. In addition, a current regulation (15A NCAC 10C .0401 (c)) allows for the sale of river herring less than six inches collected from John H. Kerr Reservoir.

River herring are used as cut-bait in the striped bass fishery in the lower Roanoke River and to a lesser extent in some of the other river systems in the state. In inland waters it is unlawful, while fishing, to change the appearance of fish subject to size limits or daily creel limits or remove the head and/or tail from fish that are regulated by a size limit so that they may not be measured and/or identified. In joint and coastal waters, it is unlawful to possess aboard a

vessel, or while engaged in fishing from the shore or a pier, any species of finfish that is subject to a size or harvest restriction without having head and tail attached (except that mullet, hickory shad, blueback herring, or alewife, when used for bait, can be cut). Allowing river herring to be cut for bait is problematic as it makes it difficult for enforcement to determine the original length of the fish.

The proposed rule changes aim to protect adult anadromous river herring, while still allowing recreational fishermen the flexibility to use river herring for bait that are caught from healthy populations present in the Piedmont reservoirs. In doing so, a loophole is closed that currently facilitates the illegal use of anadromous river herring by allowing possession of such fish with a receipt. Additionally, when fish are cut into pieces for bait, it is very difficult to measure the size or quantity of baitfish in an angler's possession, thereby making it problematic to enforce bag or size limits. Removing river herring from the mutilated finfish rule (15A NCAC 03M .0101) provides law enforcement the ability to better account for size and possession of river herring being used as bait by requiring the fish to remain in a whole condition. Furthermore, the proposed rule changes align the N.C. Marine Fisheries Commission (NCMFC) rules with NCWRC rules for river herring to create a more uniform set of regulations for river herring throughout the coastal, joint, and inland waters of coastal river systems. Also, the proposed rule changes only prohibit the possession of river herring while fishing, thereby not prohibiting the personal consumption of legally harvested river herring regardless of size.

### III. Costs

NCDMF anticipates that costs from the proposed rule changes will be minor. The amount of large river herring that are sold as bait is unknown. However, a 2010 NCDMF survey found that anglers spend an average of \$12 on bait per inshore fishing trip<sup>1</sup>. The use of river herring that are larger than six inches or for cut bait mostly occurs in the lower section of the Roanoke River Management Area (RRMA) during the spring striped bass harvest season<sup>2</sup>. In 2009, approximately 25,000 recreational fishing trips landing striped bass occurred in the entire RRMA, with a minor portion of these trips likely occurring in the lower section and using river herring as bait<sup>3</sup>. River herring is the preferred bait of some striped bass anglers, but several substitutes are readily available and used, including hickory and gizzard shad as well as artificial lures. There may be some costs to tackle shops and other bait retailers that sell river herring that are larger than six inches or for cut bait, but bait retailers will still be able to sell river herring six inches or less as well as other types of bait of similar cost, such as hickory shad, gizzard shad, and artificial lures, to anglers. It is likely that anglers will still purchase substitute bait, thereby mitigating any costs that may be imposed to anglers or bait retailers by the proposed rule changes.

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<sup>1</sup>Crosson, Scott (July 2010). *A Social and Economic Survey of Recreational Saltwater Anglers in North Carolina*. North Carolina Department of Environment and Natural Resources. Division of Marine Fisheries. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=b7469160-d5e9-458a-9d16-a5e7b76d7f31&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=b7469160-d5e9-458a-9d16-a5e7b76d7f31&groupId=38337)

<sup>2,3</sup> North Carolina Department of Environment and Natural Resources (May 2013). *North Carolina Division of Marine Fisheries. North Carolina Estuarine Striped Bass Fishery Management Plan Amendment I*. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=d3fdf967-82d5-4653-8b79-20247c5ed5ad&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=d3fdf967-82d5-4653-8b79-20247c5ed5ad&groupId=38337)

## **IV. Benefits**

The proposed rule changes are designed to help maintain and rebuild depleted anadromous river herring populations. These changes will eliminate a legal loophole and aid law enforcement in enforcing river herring regulations while still allowing anglers to use river herring under six inches as bait. Additionally, the public will benefit from uniform river herring-possession rules in coastal, joint, and inland waters of coastal river systems in the state that fall under the jurisdiction of NCMFC and/or NCWRC. These rule changes will also maintain the possession of legally obtained river herring of any size for personal consumption.

### **2. River Herring Fishery Management Plan Rule Organization and Boundary Change (15A NCAC 03J .0209, 03O .0503, 03R .0115, and 03R. 0202)**

#### **I. Summary**

NCDMF proposes moving the regulations defining the location of the Albemarle Sound/Chowan River River Herring Management Areas from Subchapter 03J to Subchapter 03R within Title 15A of the N.C. Administrative Code for improved organization and public clarity. Additionally, a change to the boundary of the Anadromous Fish Spawning Areas of the Cashie River is needed for rule consistency with boundary changes previously made in a separate fishery management plan.

#### **II. Introduction and Purpose of Rule Changes**

The description and boundaries of the Albemarle Sound/Chowan River River Herring Management Areas were originally placed in 15A NCAC 03J .0209 in 2001. Subchapter 03J of the N.C. Administrative Code contains rules for nets, pots, dredges, and other fishing devices for specific areas. NCDMF staff has identified a more appropriate subchapter for this rule in Subchapter 03R, Section .0200, which contains descriptive boundaries for fishery management areas and already includes the Striped Bass Management Areas, which coincide with River Herring Management Areas. Relocating the description and boundaries of the Albemarle Sound/Chowan River River Herring Management Areas to Subchapter 03R will maintain consistency with how fishery management area rules are organized. All of these areas will be listed together, making them easier for the public to find. The proposed rules also update a cross reference to this rule found in 15A NCAC 03O .0503.

Additionally, NCDMF made a change in the boundary between the Albemarle Sound Management Area and Roanoke River Management Area in the Cashie River for the management of striped bass that became effective June 1, 2013. This change was included in the N.C. Estuarine Striped Bass Fishery Management Plan Amendment 1 as part of an effort to make it easier for the public to identify the boundaries of the two different management areas that have different striped bass regulations. This point is also a boundary for the Anadromous Fish Spawning Areas, which include river herring. Therefore a rule change is needed to maintain consistency among rules but will not result in a change to the management of river herring.

### III. Costs

There are no expected costs associated with the proposed rule changes. NCDMF is proposing these rule changes to improve clarity to the public of the location and content of rules managing river herring. Management of the fishery will not change.

### IV. Benefits

While there are no quantifiable economic benefits to the proposed rule changes, rules for the management of river herring will be better placed, thereby making the rules easier to locate. Additionally, maintaining consistency among rules aids in rule clarity for the benefit of both the public and law enforcement.

### 3. Comprehensive Statement of Costs and Benefits

Rule changes associated with the River Herring Fishery Management Plan are expected to have aggregate costs and benefits well below the impact threshold of \$1 million in aggregate costs and benefits meeting the statutory definition of a rule change with a substantial economic impact. Specifically:

1) Modification of 15A NCAC 03M .0101 and 03M .0513 will help maintain and rebuild depleted anadromous river herring populations by eliminating a legal loophole in the possession of adult anadromous river herring as bait and will aid law enforcement in enforcing river herring regulations while still allowing anglers to use river herring under six inches as bait. Additionally, the public will benefit from uniform river herring possession rules in coastal, joint, and inland waters of coastal river systems in the state that fall under the jurisdiction of NCMFC and/or NCWRC.

There may be some costs to tackle shops and other bait retailers that sell river herring larger than six inches or dead river herring to be used as cut bait. The use of river herring as cut bait and/or larger than six inches mostly occurs in the lower section of the Roanoke River Management Area (RRMA) during the spring striped bass harvest season<sup>4</sup>. In 2009, approximately 25,000 recreational fishing trips landing striped bass occurred in the entire RRMA, with a minor portion of these trips likely occurring in the lower section and using river herring bait<sup>5</sup>. The amount of river herring that are sold as bait is unknown, but a 2010 NCDMF survey found that anglers spend an average of \$12 on bait per inshore fishing trip<sup>6</sup>. River herring is the preferred bait of some striped bass anglers, however several substitutes are readily available and used, including hickory and gizzard shad as well as artificial lures. There may be some costs to tackle shops and other bait retailers that sell river herring that are larger than six inches or for cut bait, but bait retailers will still be able to sell river herring six inches or

<sup>4,5</sup> North Carolina Department of Environment and Natural Resources (May 2013). North Carolina Division of Marine Fisheries. *North Carolina Estuarine Striped Bass Fishery Management Plan Amendment I*. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=d3fdf967-82d5-4653-8b79-20247c5ed5ad&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=d3fdf967-82d5-4653-8b79-20247c5ed5ad&groupId=38337)

<sup>6</sup>Crosson, Scott (July 2010). *A Social and Economic Survey of Recreational Saltwater Anglers in North Carolina*. North Carolina Department of Environment and Natural Resources. Division of Marine Fisheries. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=b7469160-d5e9-458a-9d16-a5e7b76d7f31&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=b7469160-d5e9-458a-9d16-a5e7b76d7f31&groupId=38337)

less, as well as other types of bait of similar cost, such as hickory shad, gizzard shad, and artificial lures, to anglers. It is likely that anglers will still purchase substitute bait, thereby mitigating any costs to anglers or bait retailers that may be imposed by the proposed rule changes.

2) Modification of 15A NCAC 03J .0209, 03O .0503, 03R .0115, and 03R. 0202 will make rules for the management of river herring better placed, thereby making the rules easier to locate. Additionally, maintaining consistency among rules aids in rule clarity for the benefit of both the public and law enforcement. There are no estimated costs for these proposed rule changes.

Table 1. Summary of estimated costs and benefits from proposed rule changes.

<b>Rule</b>	<b>Estimated Cost</b>	<b>Estimated Benefit</b>
15A NCAC 03M .0101	Unquantified	Unquantified
15A NCAC 03M .0513	Unquantified	Unquantified
15A NCAC 03J .0209	None	Unquantified
15A NCAC 03O .0503	None	Unquantified
15A NCAC 03R .0115	None	Unquantified
15A NCAC 03R .0202	None	Unquantified

## Appendix: Proposed Rule Changes

### 15A NCAC 03J .0209 ALBEMARLE SOUND/CHOWAN RIVER RIVER HERRING MANAGEMENT AREAS

(a) ~~The Albemarle Sound Herring Management Area is defined as Albemarle Sound and all its joint water tributaries; Currituck Sound; Roanoke and Croatan sounds and all their joint water tributaries, including Oregon Inlet, north of a line beginning on the west shore at a point 35° 48.5015' N—75° 44.1228' W on Roanoke Marshes Point; running southeasterly to the east shore to a point 35° 44.1710' N—75° 31.0520' W on the north point of Eagles Nest Bay.~~

(b) ~~The Chowan River Herring Management Area is defined as that area northwest of a line beginning on the west shore at a point 35° 59.9267' N—76° 41.0313' W on Black Walnut Point; running northeasterly to the east shore to a point 36° 02.2140' N—76° 39.3240' W on Reedy Point, to the North Carolina/Virginia state line; including the Meherrin River.~~

(c) ~~It is unlawful to use drift gill nets in the Albemarle Sound and Chowan River river herring management areas with a mesh length less than three inches from January 1 through May 15.15 in the Albemarle Sound and Chowan River river herring management areas defined in 15A NCAC 03R .0202.~~

*Authority G.S. 113-134; 113-182; 143B-289.52*

### 15A NCAC 03M .0101 MUTILATED FINFISH

It is unlawful to possess aboard a vessel or while engaged in fishing ~~from the shore or a pier~~ any species of finfish that is subject to a size or harvest restriction without having head and tail attached, except:

- (1) mullet when used for bait;
- (2) ~~blueback herring, hickory shad and alewife~~ when used for bait provided that not more than two ~~fish hickory shad~~ per ~~boat vessel~~ or fishing operation may be cut for bait at any one time; and
- (3) tuna possessed in a commercial fishing operation as provided in 15A NCAC 03M .0520.

*Authority G.S. 113-134; 113-182; 143B-289.52*

### 15A NCAC 03M .0513 RIVER HERRING

It is unlawful to take or possess river herring taken from coastal fishing waters unless the river herring season is open from North Carolina Coastal Fishing Waters. Possession of river herring from sources other than North Carolina Coastal Fishing Waters shall be limited to fish less than or equal to six inches total length aboard a vessel or while engaged in fishing.

*Authority G.S. 113-134; 113-182; 113-221; 143B-289.52*

**15A NCAC 03O .0503 PERMIT CONDITIONS; SPECIFIC**

NOTE: CHANGES TO 15A NCAC 03O .0503 INCLUDE CHANGES FOR THE MANAGEMENT OF RIVER HERRING AND CHANGES TO FOR HIRE LICENSING WHICH ARE COVERED IN A SEPARATE ANALYSIS.

(a) Horseshoe Crab Biomedical Use Permit:

- (1) It is unlawful to use horseshoe crabs for biomedical purposes without first obtaining a permit.
- (2) It is unlawful for persons who have been issued a Horseshoe Crab Biomedical Use Permit to fail to submit a report on the use of horseshoe crabs to the Division of Marine Fisheries due on February 1 of each year. Such reports shall be filed on forms provided by the Division and shall include a monthly account of the number of crabs harvested, statement of percent mortality up to the point of release, and a certification that harvested horseshoe crabs are solely used by the biomedical facility and not for other purposes.
- (3) It is unlawful for persons who have been issued a Horseshoe Crab Biomedical Use Permit to fail to comply with the Atlantic States Marine Fisheries Commission Interstate Fishery Management Plan for Horseshoe Crab monitoring and tagging requirements for horseshoe crabs. Copies of this plan are available from the Atlantic States Marine Fisheries Commission or the Division of Marine Fisheries' Morehead City Headquarters Office, P.O. Box 769, 3441 Arendell St., Morehead City, North Carolina 28557-0769.

(b) Dealers Permits for Monitoring Fisheries under a Quota/Allocation:

- (1) During the commercial season opened by proclamation or rule for the fishery for which a Dealers Permit for Monitoring Fisheries under a Quota/Allocation permit is issued, it is unlawful for the fish dealers issued such permit to fail to:
  - (A) fax or send via electronic mail by noon daily, on forms provided by the Division, the previous day's landings for the permitted fishery to the dealer contact designated on the permit. Landings for Fridays or Saturdays shall be submitted on the following Monday. If the dealer is unable to fax or electronic mail the required information, the permittee shall call in the previous day's landings to the dealer contact designated on the permit but shall maintain a log furnished by the Division;
  - (B) submit the required log to the Division upon request or no later than five days after the close of the season for the fishery permitted;
  - (C) maintain faxes and other related documentation in accordance with 15A NCAC 03I .0114;
  - (D) contact the dealer contact designated on the permit daily regardless of whether or not a transaction for the fishery for which a dealer is permitted occurred; and



- (E) record the permanent dealer identification number on the bill of lading or receipt for each transaction or shipment from the permitted fishery.
- (2) Striped Bass Dealer Permit:
- (A) It is unlawful for a fish dealer to possess, buy, sell, or offer for sale striped bass taken from the following areas without first obtaining a Striped Bass Dealer Permit validated for the applicable harvest area:
    - (i) Atlantic Ocean;
    - (ii) Albemarle Sound Management Area as designated in 15A NCAC 03R .0201; and
    - (iii) the Joint and Coastal Fishing Waters of the Central/Southern Management Area as designated in 15A NCAC 03R .0201.
  - (B) No permittee shall possess, buy, sell, or offer for sale striped bass taken from the harvest areas opened by proclamation without having a North Carolina Division of Marine Fisheries issued valid tag for the applicable area affixed through the mouth and gill cover, or, in the case of striped bass imported from other states, a similar tag that is issued for striped bass in the state of origin. North Carolina Division of Marine Fisheries striped bass tags shall not be bought, sold, offered for sale, or transferred. Tags shall be obtained at the North Carolina Division of Marine Fisheries Offices. The Division of Marine Fisheries shall specify the quantity of tags to be issued based on historical striped bass landings. It is unlawful for the permittee to fail to surrender unused tags to the Division upon request.
- (3) Albemarle Sound Management Area for River Herring Dealer Permit: It is unlawful to possess, buy, sell, or offer for sale river herring taken from the following area without first obtaining an Albemarle Sound Management Area for River Herring Dealer Permit: Albemarle Sound Management Area for River Herring as defined in ~~15A NCAC 03J .0209~~ 15A NCAC 03R .0202.
- (4) Atlantic Ocean Flounder Dealer Permit:
- (A) It is unlawful for a fish dealer to allow vessels holding a valid License to Land Flounder from the Atlantic Ocean to land more than 100 pounds of flounder from a single transaction at their licensed location during the open season without first obtaining an Atlantic Ocean Flounder Dealer Permit. The licensed location shall be specified on the Atlantic Ocean Flounder Dealer Permit and only one location per permit shall be allowed.
  - (B) It is unlawful for a fish dealer to possess, buy, sell, or offer for sale more than 100 pounds of flounder from a single transaction from the Atlantic Ocean without first obtaining an Atlantic Ocean Flounder Dealer Permit.
- (5) Black Sea Bass North of Cape Hatteras Dealer Permit. It is unlawful for a fish dealer to purchase or possess more than 100 pounds of black sea bass taken from the Atlantic Ocean north of Cape

Hatteras (35° 15.0321' N) per day per commercial fishing operation during the open season unless the dealer has a Black Sea Bass North of Cape Hatteras Dealer Permit.

(c) Blue Crab Shedding Permit: It is unlawful to possess more than 50 blue crabs in a shedding operation without first obtaining a Blue Crab Shedding Permit from the Division of Marine Fisheries.

(d) Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean:

- (1) It is unlawful to trawl for shrimp in the Atlantic Ocean without Turtle Excluder Devices installed in trawls within one nautical mile of the shore from Browns Inlet (34° 35.7000' N latitude) to Rich's Inlet (34° 17.6000' N latitude) without a valid Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean when allowed by proclamation from April 1 through November 30.
- (2) It is unlawful to tow for more than 55 minutes from April 1 through October 31 and 75 minutes from November 1 through November 30 in this area when working under this permit. Tow time begins when the doors enter the water and ends when the doors exit the water.
- (3) It is unlawful to fail to empty the contents of each net at the end of each tow.
- (4) It is unlawful to refuse to take observers upon request by the Division of Marine Fisheries or the National Marine Fisheries Service.
- (5) It is unlawful to fail to report any sea turtle captured. Reports shall be made within 24 hours of the capture to the Marine Patrol Communications Center by phone. All turtles taken incidental to trawling shall be handled and resuscitated in accordance with requirements specified in 50 CFR 223.206, copies of which are available via the Internet at [www.nmfs.gov](http://www.nmfs.gov) and at the Division of Marine Fisheries, 127 Cardinal Drive Extension, Wilmington, North Carolina 28405.

(e) Pound Net Set Permits. Rule 15A NCAC 03J .0505 sets forth the specific conditions for pound net set permits.

(f) Aquaculture Operations/Collection Permits:

- (1) It is unlawful to conduct aquaculture operations utilizing marine and estuarine resources without first securing an Aquaculture Operation Permit from the Fisheries Director.
- (2) It is unlawful:
  - (A) to take marine and estuarine resources from Coastal Fishing Waters for aquaculture purposes without first obtaining an Aquaculture Collection Permit from the Fisheries Director.
  - (B) to sell, or use for any purpose not related to North Carolina aquaculture, marine and estuarine resources taken under an Aquaculture Collection Permit.
  - (C) to fail to submit to the Fisheries Director an annual report due on December 1 of each year on the form provided by the Division the amount and disposition of marine and estuarine resources collected under authority of this permit.
- (3) Lawfully permitted shellfish relaying activities authorized by 15A NCAC 03K .0103 and .0104 are exempt from requirements to have an Aquaculture Operation or Collection Permit issued by the Fisheries Director.

- (4) Aquaculture Operations/Collection Permits shall be issued or renewed on a calendar year basis.
- (5) It is unlawful to fail to provide the Division of Marine Fisheries with a listing of all designees acting under an Aquaculture Collection Permit at the time of application.

(g) Scientific or Educational Activity Permit:

- (1) It is unlawful for institutions or agencies seeking exemptions from license, rule, proclamation or statutory requirements to collect, hold, culture or exhibit for scientific or educational purposes any marine or estuarine species without first obtaining a Scientific or Educational Activity Permit.
- (2) The Scientific or Educational Activity Permit shall only be issued for scientific or educational purposes and for collection methods and possession allowances approved by the Division of Marine Fisheries.
- (3) The Scientific or Educational Activity Permit shall only be issued for approved activities conducted by or under the direction of Scientific or Educational institutions as defined in Rule 15A NCAC 03I .0101.
- (4) It is unlawful for the responsible party issued a Scientific or Educational Activity Permit to fail to submit a report on collections and, if authorized, sales to the Division of Marine Fisheries due on December 1 of each year unless otherwise specified on the permit. The reports shall be filed on forms provided by the Division. Scientific or Educational Activity permits shall be issued on a calendar year basis.
- (5) It is unlawful to sell marine or estuarine species taken under a Scientific or Educational Activity Permit without:
  - (A) the required license(s) for such sale;
  - (B) authorization stated on the permit for such sale; and
  - (C) providing the information required in Rule 15A NCAC 03I .0114 if the sale is to a licensed fish dealer.
- (6) It is unlawful to fail to provide the Division of Marine Fisheries a listing of all designees acting under a Scientific or Educational Activity Permit at the time of application.
- (7) The permittee or designees utilizing the permit shall call the Division of Marine Fisheries Communications Center at 800-682-2632 or 252-726-7021 not later than 24 hours prior to use of the permit, specifying activities and location.

(h) Under Dock Oyster Culture Permit:

- (1) It is unlawful to cultivate oysters in containers under docks for personal consumption without first obtaining an Under Dock Oyster Culture Permit.
- (2) An Under Dock Oyster Culture Permit shall be issued only in accordance with provisions set forth in G.S. 113-210(c).
- (3) The applicant shall complete and submit an examination, with a minimum of 70 percent correct answers, based on an educational package provided by the Division of Marine Fisheries pursuant to G.S. 113-210(j). The examination demonstrates the applicant's knowledge of:

- (A) the application process;
  - (B) permit criteria;
  - (C) basic oyster biology and culture techniques;
  - (D) shellfish harvest area closures due to pollution;
  - (E) safe handling practices;
  - (F) permit conditions; and
  - (G) permit revocation criteria.
- (4) Action by an Under Dock Oyster Culture Permit holder to encroach on or usurp the legal rights of the public to access public trust resources in Coastal Fishing Waters shall result in permit revocation.
- (i) Atlantic Ocean Striped Bass Commercial Gear Permit:
- (1) It is unlawful to take striped bass from the Atlantic Ocean in a commercial fishing operation without first obtaining an Atlantic Ocean Striped Bass Commercial Gear Permit.
  - (2) It is unlawful to use a single Standard Commercial Fishing License, including assignments, to obtain more than one Atlantic Ocean Striped Bass Commercial Gear Permit during a license year.
- (j) Coastal Recreational Fishing License Exemption Permit:
- (1) It is unlawful for the responsible party seeking exemption from recreational fishing license requirements for eligible individuals to conduct an organized fishing event held in Joint or Coastal Fishing Waters without first obtaining a Coastal Recreational Fishing License Exemption Permit.
  - (2) The Coastal Recreational Fishing License Exemption Permit shall only be issued for recreational fishing activity conducted solely for the participation and benefit of one of the following groups of eligible individuals:
    - (A) individuals with physical or mental limitations;
    - (B) members of the United States Armed Forces and their dependents, upon presentation of a valid military identification card, for military appreciation;
    - (C) individuals receiving instruction on recreational fishing techniques and conservation practices from employees of state or federal marine or estuarine resource management agencies, or instructors affiliated with educational institutions; and
    - (D) disadvantaged youths.

For purposes of this Paragraph, educational institutions include high schools and other secondary educational institutions.
  - (3) The Coastal Recreational Fishing License Exemption Permit is valid for the date(s), time and physical location of the organized fishing event for which the exemption is granted and the time period shall not exceed one year from the date of issuance.
  - (4) The Coastal Recreational Fishing License Exemption Permit shall only be issued when all of the following, in addition to the information required in 15A NCAC 03O .0501, is submitted to the Fisheries Director in writing a minimum of 30 days prior to the event:

- (A) the name, date(s), time and physical location of the event;
- (B) documentation that substantiates local, state, or federal involvement in the organized fishing event, if applicable;
- (C) the cost or requirements, if any, for an individual to participate in the event; and
- (D) an estimate of the number of participants.

~~(k) For Hire Fishing Permit:~~

- ~~(1) It is unlawful to operate a For Hire Vessel unless the vessel operator possesses either the For Hire Blanket Coastal Recreational Fishing License (CRFL) for the vessel as provided in 15A NCAC 03O .0112 or a Division of Marine Fisheries For Hire Fishing Permit for the vessel.~~
- ~~(2) It is unlawful for a For Hire vessel operator to operate under the For Hire Fishing Permit without:~~
  - ~~(A) holding the USCG certification required in 15A NCAC 03O .0501(g)(1);~~
  - ~~(B) having the For Hire Fishing Permit for the vessel or copy thereof in possession and ready at hand for inspection; and~~
  - ~~(C) having current picture identification in possession and ready at hand for inspection.~~
- ~~(3) It is unlawful for the permittee to fail to notify the Division within five days of any changes to information provided on the permit.~~
- ~~(4) It is unlawful to fail to display a current For Hire Fishing Permit decal mounted on an exterior surface of the vessel so as to be visible when viewed from the port side while engaged in for hire recreational fishing.~~
- ~~(5) The For Hire Fishing Permit is valid for one year from the date of issuance.~~

*Authority G.S. 113-134; 113-169.1; 113-169.3; 113-182; 113-210; 143B-289.52*

### **15A NCAC 03R .0115 ANADROMOUS FISH SPAWNING AREAS**

The anadromous fish spawning areas as defined in 15A NCAC 03I .0101 and referenced in 15A NCAC 03N .0106 are delineated in the following ~~coastal waters~~: Coastal Fishing Waters:

- (1) Currituck Sound Area:
  - (a) Northwest River - all waters of the Northwest River and its tributaries east of a line beginning on the north shore at a point 36° 30.8374' N - 76° 04.8770' W; running southerly to the south shore to a point 36° 30.7061' N - 76° 04.8916' W.
  - (b) Tull Bay/Tull Creek - all waters of Tull Bay and its tributaries northeast of a line beginning on the north shore at a point 36° 30.0991' N - 76° 04.8587' W; running southeasterly to the south shore to a point 36° 29.9599' N - 76° 04.7126' W; and south of a line beginning on the west shore at a point 36° 30.9867' N - 76° 02.5868' W; running easterly to the east shore to a point 36° 31.0045' N - 76° 02.3780' W; and west of a line beginning on the north shore at a point 36° 30.8291' N - 76° 02.1329' W; running southwesterly to the south shore to a point 36° 30.1512' N - 76° 02.4982' W.

- (2) Albemarle Sound Area:
- (a) Big Flatty Creek - all waters of Big Flatty Creek and its tributaries east of a line beginning on the north shore at a point  $36^{\circ} 09.3267' N - 76^{\circ} 08.2562' W$ ; running southerly to the south shore to a point  $36^{\circ} 08.9730' N - 76^{\circ} 08.3175' W$  and north of a line beginning on the west shore at a point  $36^{\circ} 07.9621' N - 76^{\circ} 07.1818' W$ ; running easterly to the east shore to a point  $36^{\circ} 08.2706' N - 76^{\circ} 06.2525' W$ .
  - (b) Batchelor Bay - west of a line beginning on the north shore at a point  $35^{\circ} 58.2070' N - 76^{\circ} 42.7267' W$ ; running southeasterly to the south shore to a point  $35^{\circ} 56.5622' N - 76^{\circ} 41.5506' W$ .
  - (c) Bull Bay - southwest of a line beginning on the northwest shore at a point  $35^{\circ} 58.9002' N - 76^{\circ} 23.9965' W$ ; running southeasterly to the southeast shore at a point  $35^{\circ} 56.7198' N - 76^{\circ} 18.8964' W$ .
- (3) North River - all waters of the North River and its tributaries east of a line beginning on the north shore at a point  $36^{\circ} 18.7703' N - 75^{\circ} 58.7384' W$ ; running southerly to the south shore to a point  $36^{\circ} 18.4130' N - 75^{\circ} 58.7228' W$ ; and north of a line beginning on the west shore at a point  $36^{\circ} 16.9952' N - 75^{\circ} 57.0758' W$ ; running easterly to the east shore to a point  $36^{\circ} 16.9801' N - 75^{\circ} 56.6820' W$ .
- (4) Pasquotank River - all waters of the Pasquotank River and its tributaries south of a line beginning on the west shore at a point  $36^{\circ} 18.0768' N - 76^{\circ} 13.0979' W$ ; running easterly to the east shore along the south side of the Highway 158 Bridge to a point  $36^{\circ} 18.0594' N - 76^{\circ} 12.9620' W$ ; and northwest of a line beginning on the northeast shore at a point  $36^{\circ} 14.3294' N - 76^{\circ} 04.7866' W$ ; running southwesterly to the southwest shore to a point  $36^{\circ} 12.8147' N - 76^{\circ} 07.0465' W$ .
- (5) Pasquotank River Area:
- (a) Charles Creek - north of a line beginning on the west shore at a point  $36^{\circ} 17.8090' N - 76^{\circ} 13.0732' W$ ; running easterly to the east shore to a point  $36^{\circ} 17.8024' N - 76^{\circ} 13.0407' W$ .
  - (b) New Begun Creek - east of a line beginning on the north shore at a point  $36^{\circ} 13.3298' N - 76^{\circ} 08.2878' W$ ; running southerly to the south shore to a point  $36^{\circ} 13.0286' N - 76^{\circ} 08.1820' W$ .
- (6) Little River - all waters of the Little River and its tributaries southeast of a line beginning on the west shore at a point  $36^{\circ} 12.5237' N - 76^{\circ} 16.9418' W$ ; running southeasterly to the east shore to a point  $36^{\circ} 12.2950' N - 76^{\circ} 17.1405' W$ ; and north of a line beginning on the west shore at a point  $36^{\circ} 09.6537' N - 76^{\circ} 15.0689' W$ ; running northeast to the east shore to a point  $36^{\circ} 10.2112' N - 76^{\circ} 14.0287' W$ .
- (7) Perquimans River - all waters of the Perquimans River and its tributaries northeast of a line beginning on the west shore at a point  $36^{\circ} 11.6569' N - 76^{\circ} 28.0055' W$ ; running southeasterly to the east shore to a point  $36^{\circ} 11.6123' N - 76^{\circ} 27.9382' W$ ; and northwest of a line beginning on the

southwest shore at a point 36° 11.1512' N - 76° 27.4424' W; running northeasterly to the northeast shore to a point 36° 11.5124' N - 76° 26.7298' W.

- (8) Perquimans River Area:
- (a) Walter's Creek - northeast of a line beginning on the north shore at a point 36° 11.1305' N - 76° 27.9185' W; running southeasterly to the south shore to a point 36° 11.0224' N - 76° 27.6626' W.
  - (b) Mill Creek - south of a line beginning on the west shore at a point 36° 11.9766' N - 76° 27.2511' W; running easterly to the east shore to a point 36° 11.9757' N - 76° 27.5752' W.
- (9) Yeopim River - all waters of the Yeopim River and its tributaries east of a line beginning on the north shore at a point 36° 05.4526' N - 76° 27.7651' W; running southerly to the south shore to a point on Norcum Point 36° 05.1029' N - 76° 27.7120' W; and west of a line beginning on the north shore at a point 36° 04.7426' N - 76° 24.2537' W; running southwesterly to the south shore to a point 36° 04.1137' N - 76° 24.5366' W.
- (10) Yeopim River Area, Yeopim Creek - south of a line beginning on the west shore at a point 36° 04.7206' N - 76° 24.8396' W; running easterly to the east shore to a point 36° 04.7426' N - 76° 24.2536' W.
- (11) Edenton Bay - all waters of Edenton Bay and its tributaries west of a line beginning on the north shore at a point 36° 03.3757' N - 76° 36.3629' W; running southerly to the south shore to a point 36° 03.3551' N - 76° 36.3574' W; and north of a line beginning on the west shore at a point 36° 02.1767' N - 76° 38.4058' W; running easterly to the east shore to a point 36° 02.0299' N - 76° 36.0445' W; and east of a line beginning on the west shore at a point 36° 03.2819' N - 76° 37.0138' W; running northeasterly to the east shore to a point 36° 03.4185' N - 76° 36.6783' W.
- (12) Chowan River - all waters of the Chowan River and tributaries northwest of a line beginning on the west shore at a point 36° 02.3162' N - 76° 42.4896' W; running northeasterly to the east shore to a point 36° 03.1013' N - 76° 40.8732' W; and south of a line beginning on the west shore at a point 36° 32.6293' N - 76° 55.3564' W; and running to the east shore to a point 36° 32.6284' N - 76° 55.1757' W.
- (13) Chowan River Area, Meherrin River - all waters of the Meherrin River and tributaries west of a line beginning on the north shore at a point 36° 25.9937' N - 76° 56.8884' W; running southerly to the south shore to a point 36° 25.7926' N - 76° 56.8966' W; and south of a line beginning on the west shore at a point 36° 32.7867' N - 77° 09.8885' W; running easterly to the east shore to a point 36° 32.7807' N - 77° 09.8565' W.
- (14) Cashie River - all waters of the Cashie River and tributaries east of a line beginning on the north shore at a point 35° 54.7865' N - 76° 49.0521' W; running southerly to the south shore at a point 35° 54.6691' N - 76° 49.0553' W; west of a line beginning on the ~~north-west~~ shore at a point ~~35° 56.4598' N - 76° 43.8093' W;~~ 35° 56.2934' N - 76° 44.1769' W; running ~~southerly~~ easterly to the north shore to a point on the north shore of an island in the mouth of the river 35° 56.2250' N - 76°

- 43.9265' W; west of a line beginning on the south shore at a point of an island in the mouth of the river 35° 56.1254' N - 76° 43.9846' W; running southerly to the south shore to a point 35° 56.0650' N - 76° 43.9599' W.
- (15) Middle River - all waters of the Middle River southwest of a line beginning on the west shore at a point 35° 55.4000' N - 76° 43.8259' W; running southeasterly to the east shore to a point 35° 55.3977' N - 76° 43.6797' W.
- (16) Eastmost River - all waters of the Eastmost River and its tributaries south of a line beginning on the west shore at a point 35° 56.5024' N - 76° 42.4877' W; running westerly to the east shore to a point 35° 56.4070' N - 76° 42.7647' W.
- (17) Roanoke River - all waters of the Roanoke River and tributaries south of a line beginning on the west shore at a point 35° 56.5068' N - 76° 41.8858' W; running easterly to the east shore to a point 35° 56.5324' N - 76° 41.5896' W; and southeast of a line beginning on the west shore at a point 36° 12.5264' N - 77° 23.0223' W; running northeasterly to the east shore along the south side of the Highway 258 Bridge to a point 36° 12.5674' N - 77° 22.9724' W.
- (18) Roanoke River Area:
- (a) Warren Neck Creek - all waters of Warren Neck Creek and its tributaries west of a line beginning on the northwest shore at a point 35° 52.1820' N - 76° 47.4855' W; running southerly to the southeast shore to a point 35° 52.1448' N - 76° 47.4237' W.
- (b) Thoroughfare - all waters of the Thoroughfare south of a line beginning on the west shore at a point 35° 54.0510' N - 76° 48.1206' W; running easterly to the east shore to a point 35° 54.0684' N - 76° 48.0613' W; and north of a line beginning on the west shore at a point 35° 53.2842' N - 76° 48.8650' W; running easterly to the east shore to a point 35° 55.2800' N - 76° 48.8077' W.
- (c) Devils Gut - all waters of Devils Gut and its tributaries northwest of a line beginning on the west shore at a point 35° 49.5300' N - 76° 54.2209' W; running easterly to the east shore to a point 35° 49.5486' N - 76° 54.1703' W.
- (d) Conine Creek - all waters of Conine Creek and its tributaries west of a line beginning on the north shore at a point 35° 52.9752' N - 76° 58.0474' W; running southwesterly to the south shore to a point 35° 52.9776' N - 76° 57.9958' W.
- (19) Scuppernong River - all waters of the Scuppernong River and tributaries southeast of a line beginning on the northeast shore at a point 35° 56.7196' N - 76° 18.8964' W; running southwesterly to the southwest shore to a point 35° 56.3351' N - 76° 19.6609' W; and north of a line beginning on the west shore at a point 35° 54.0158' N - 76° 15.4605' W; running easterly to the east shore to a point 35° 54.0406' N - 76° 15.3007' W.
- (20) Alligator River - all waters of the Alligator River and tributaries east of a line beginning on the north shore at Cherry Ridge Landing at a point 35° 42.2172' N - 76° 08.4686' W; running southerly to the south shore to a point 35° 42.1327' N - 76° 08.5002' W; and south of a line beginning on the



- west shore at a point  $35^{\circ} 57.4252' N - 76^{\circ} 00.8704' W$ ; running easterly to the east shore to a point  $35^{\circ} 57.5494' N - 75^{\circ} 56.8268' W$ .
- (21) Alligator River Area, the Frying Pan - all waters of the Frying Pan and its tributaries west of a line beginning on the north shore at a point  $35^{\circ} 46.0777' N - 76^{\circ} 03.3439' W$ ; running southerly to the south shore to a point  $35^{\circ} 45.6011' N - 76^{\circ} 03.3692' W$ .
- (22) Neuse River - all waters of the Neuse River and its tributaries northwest of a line beginning on the west shore at a point  $35^{\circ} 08.8723' N - 77^{\circ} 04.6700' W$ ; running northeasterly to the east shore to a point  $35^{\circ} 09.1032' N - 77^{\circ} 04.3355' W$  and southeast of a line at Pitch Kettle Creek beginning on the north shore at a point  $35^{\circ} 16.9793' N - 77^{\circ} 15.5529' W$ ; running south to the south shore to a point  $35^{\circ} 16.9237' N - 77^{\circ} 15.5461' W$ .
- (23) Neuse River Area:
- (a) Smith Creek - north of a line beginning on the west shore at a point  $35^{\circ} 02.2439' N - 76^{\circ} 42.3035' W$ ; running easterly to the east shore to a point  $35^{\circ} 02.2392' N - 76^{\circ} 42.1910' W$ .
- (b) Kershaw Creek - north of a line beginning on the west shore at a point  $35^{\circ} 02.4197' N - 76^{\circ} 43.7886' W$ ; running easterly to the east shore to a point  $35^{\circ} 02.4218' N - 76^{\circ} 43.7367' W$ .
- (24) White Oak River - all waters north of a line beginning at a point on the west shore  $34^{\circ} 46.0728' N - 77^{\circ} 08.9657' W$ ; running easterly to a point on the east shore  $34^{\circ} 46.1431' N - 77^{\circ} 08.8907' W$ ; running north to the Coastal - Inland ~~waters~~ Fishing Waters boundary line beginning at a point on the west shore  $34^{\circ} 48.1466' N - 77^{\circ} 11.4711' W$ ; running northeasterly to a point on the east shore  $34^{\circ} 48.1620' N - 77^{\circ} 11.4244' W$ .
- (25) Cape Fear River - all waters north of a line beginning at a point on the west shore  $34^{\circ} 07.7034' N - 77^{\circ} 57.3431' W$ ; running easterly to a point on the east shore  $34^{\circ} 08.0518' N - 77^{\circ} 55.7626' W$ ; running north to the Joint - Inland ~~waters~~ Fishing Waters boundary on the following rivers:
- (a) Cape Fear River - at a line beginning at a point on the west shore  $34^{\circ} 24.2628' N - 78^{\circ} 17.6390' W$ ; running northeasterly along the Lock and Dam ~~#1~~ No. 1 to a point on the east shore  $34^{\circ} 24.2958' N - 78^{\circ} 17.5634' W$ .
- (b) Black River - at a line beginning at a point on the north shore  $34^{\circ} 22.0783' N - 78^{\circ} 04.4123' W$ ; running southeasterly to a point on the south shore  $34^{\circ} 21.9950' N - 78^{\circ} 04.2864' W$ .
- (c) Northeast Cape Fear River - at a line beginning at a point on the west side  $34^{\circ} 26.5658' N - 77^{\circ} 50.0871' W$ ; running northeasterly along the southern side of the ~~NC~~ Highway 210 Bridge to a point on the east side  $34^{\circ} 26.6065' N - 77^{\circ} 49.9955' W$ .

*Authority G.S. 113-134; 113-182; 113-221; 143B-289.52*

**15A NCAC 03R .0202 RIVER HERRING MANAGEMENT AREAS**

(a) The Albemarle Sound River Herring Management Area referenced in 15A NCAC 03J .0209 is defined as the Coastal and Joint Fishing Waters of Albemarle, Currituck, Roanoke, Croatan and Pamlico sounds and all their joint water tributaries north of a line beginning on the west shore at a point 35° 48.5015' N - 75° 44.1228' W on Roanoke Marshes Point; running southeasterly to the east shore to a point 35° 44.1710' N - 75° 31.0520' W on the north point of Eagles Nest Bay.

(b) The Chowan River River Herring Management Area referenced in 15A NCAC 03J .0209 is defined as the area northwest of a line beginning on the west shore at a point 35° 59.9267' N - 76° 41.0313' W on Black Walnut Point; running northeasterly to the east shore to a point 36° 02.2140' N - 76° 39.3240' W on Reedy Point, to the North Carolina/Virginia state line; including the Meherrin River.

*Authority G.S. 113-134; 113-182; 143B-289.52*

## **Fiscal Impacts of Proposed Rule Changes to the American Eel Fishery Under the NC Interjurisdictional Fishery Management Plan**

**Rule Amendments:** 15A NCAC 03J .0301 POTS  
15A NCAC 03M .0510 AMERICAN EEL

**Name of Commission:** NC Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
NC Division of Marine Fisheries  
3441 Arendell Street  
Morehead City, NC 28557  
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**Impact Summary:** State government: No  
Local government: No  
Federal government: No  
Substantial impact: No

**Authority:** G. S. 113-134 (Rules); G.S. 113-173 (Recreational Commercial Gear License); G.S. 113-182 (Regulation of fishing and fisheries); G.S. 113-221.1 (Proclamations; emergency review); G.S. 143B-289.52 (Marine Fisheries Commission – powers and duties)

**Necessity:** As required under the North Carolina Interjurisdictional Fishery Management Plan and in accordance with Addendum III to the Atlantic States Marine Fisheries Commission Fishery Management Plan for American Eel, the proposed rule changes implement a nine-inch minimum size limit, a 25-fish recreational possession limit, and a no-take provision for American eels from September 1 to December 31 unless they are taken with baited pots. Additionally, there will be a minimum mesh size requirement of one-half by one-half-inch mesh for eel pots, allowing for a phase in period until January 1, 2017. Rule changes are proposed to allow state law to align with federal mandates and maintain consistency with rules regulating the American eel fishery in inland waters. Additionally, part of the proposed rule change regarding proclamation authority has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules.

### **I. Summary**

The proposed rule changes comply with the North Carolina Interjurisdictional Fishery Management Plan by adopting the required measures in Addendum III to the Atlantic States Marine Fisheries Commission Fishery Management Plan for American Eel and are expected to help rebuild depleted eel stocks as well as clarify proclamation authority. These rule changes are not expected to incur costs independent from federal requirements, as these changes conform to what is required by federal law. These rule changes will initially generate some costs to both the commercial and recreational fishing sectors; however, the commercial sector is expected to experience the majority of these costs. The cost to the recreational fishing sector is not quantified but is likely to be

minor. The upper bound of the estimated cost to the commercial fishing sector is between \$374,500 and \$409,500 in the first year, however the realized costs from the rule changes is likely to be lower. The rule changes allow the North Carolina commercial and recreational fisheries involving American eels to maintain federal compliance and continue to take place. Over the past five years (2009 to 2013), an average of approximately 70,000 pounds of American eels with an ex-vessel value of \$177,000 has been commercially landed annually in North Carolina.

## **II. Introduction and Purpose of Rule Changes**

American eels are managed by the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for American Eel, adopted initially in 2000. The 2012 Benchmark Stock Assessment found that the American eel population in U.S. waters is depleted. The assessment concluded that “[t]he stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease.” (ASMFC, 2013)

Federal law requires the conservation management actions approved through an ASMFC FMP be implemented by the state of North Carolina (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS)<sup>1</sup>. From the North Carolina perspective, the Fisheries Reform Act of 1997 (S.L. 1997-400) mandates development of state FMPs. American eel is included in the NC Interjurisdictional FMP (IJ FMP). The goal of the IJ FMP is to adopt federal FMPs, consistent with North Carolina law, by reference and implement corresponding fishery regulations in North Carolina in order to maintain compliance or compatibility with approved federal FMPs and amendments, now and in the future. In the case of the American eel fishery, should the state of North Carolina choose to go out of federal compliance, the US Secretary of Commerce may declare a moratorium on the state’s fishery (US CODE TITLE 16 CHAPTER 71 § 5106 – SECRETARIAL ACTION)<sup>2</sup>.

Addendum III to the ASMFC American Eel FMP was approved for management at the ASMFC American Eel Management Board’s August 2013 meeting. This addendum had as its basis a peer-reviewed and board-approved stock assessment. The 2012 American Eel Benchmark Stock Assessment found the stock status of American eel to be depleted and recommended reducing mortality at all life stages, noting that fishing of young-of-the-year (glass eels) and out-migrating silver eels could be particularly detrimental. Addendum III incorporated management measures for each life stage -- glass eel, elver, yellow, and silver eel -- and must be implemented by January 1, 2014.

Addendum III is currently being implemented through temporary suspension of current rules and issuance of proclamation (via rule 15A NCAC 03I .0102 TEMPORARY SUSPENSION OF RULES and 03M .0512 COMPLIANCE WITH FISHERY MANAGEMENT PLANS) for compliance of North Carolina eel fisheries with federal requirements. In addition to meeting federal requirements, rule changes are proposed instead of addressing the management of the eel fishery completely through

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<sup>1,2</sup> Text available in the NC Interjurisdictional Fisheries Management Plan at ([http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337))

proclamation in order to maintain consistency with rule changes for eel pots in inland waters under the jurisdiction of the North Carolina Wildlife Resources Commission (15A NCAC 10C .0404). Also, NCDMF expects that proposed measures in the ASMFC Interstate FMP for American eels will remain in place for several years. Putting long-standing measures into rule benefits the public through improved accessibility and greater awareness of requirements among the regulated community.

Several considerations for rule changes exist. Addendum III requires eel pots to be constructed of one-half by one-half-inch or larger mesh with a three-year phase-in period allowed, during which a four-inch square escape panel of one-half by one-half-inch or larger mesh may be used. North Carolina currently requires this four-inch square escape panel constructed of one-half by one-inch-mesh. Previously, pots could be constructed of any mesh size as long as they had the required escape panel. To comply with ASMFC rules, eel pots must be constructed entirely of one-half by one-half-inch mesh by January 1, 2017. In conjunction with the mesh size requirement, the ASMFC implemented a nine-inch minimum size limit for American eel. This requires North Carolina to raise its minimum size limit from six inches to nine inches and reduce the recreational bag limit from 50 to 25 American eels per person per day effective January 1, 2014. However, party/charter boats are allowed to continue to possess 50 American eels per crew/captain for the purpose of transporting bait and participating in charter operations.

Addendum III also requires a harvest moratorium on eels from gear types other than baited traps and pots or spears annually from September 1 through December 31. Thus, eels cannot be retained from gear types such as fyke nets, pound nets, gill nets, trawls, or any other type of commercial fishing gear during these months. These gear types may still be used for fishing, but the retention of eels from these gear types is not allowed.

Additionally, part of the proposed rule change regarding proclamation authority has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules. NC Division of Marine Fisheries (NCDMF) staff has identified that proclamation authority across several rules is generally similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. These general rule changes are not intended to alter the scope of the proclamation authority, nor are they being proposed with the intention of changing current management.

### **III. Costs**

Eel fishermen will face costs from the federally mandated requirements; however, NCDMF does not expect the related proposed rule changes to create costs outside of meeting the minimum federal requirements, as these changes conform to what is required by federal law. The proposed rule change clarifying proclamation authority is not expected to incur any costs, as it not intended to alter the scope of the proclamation authority or management practices.

The annual harvest moratorium on eels from gear types other than baited traps and pots or spears from September 1 through December 31 may incur some minimal costs. This

measure will cause less than a 0.001-percent reduction in eel landings during these months based on commercial landings data; therefore, NCDMF expects these costs to be negligible. These gear types may still be fished but the retention of eels from these gear types would not be allowed.

The increased size limit for eels will generate costs for fishermen, as a larger percentage of the catch will be discarded. The precise extent to which the catch will be decreased is unknown. However NCDMF has estimated the cost based on the value of the entire commercial catch. The commercial eel fishery in North Carolina has incurred landings worth an average of \$175,155 over the past five years (2009-2013). Assuming a 10-percent to 30-percent reduction in landings due to the increased size limit, which is seen as a reasonable range by NCDMF staff, the cost to commercial fishermen is estimated to be approximately \$17,500 to \$52,500 annually.

Decreasing the recreational bag limit from 50 eels to 25 eels is expected to incur minor costs. Some recreational fisheries such as the cobia and striped bass fisheries do utilize eels for bait. The bag limit of 25 eels per person will still allow the use of eels as bait to continue in these fisheries. Additionally, for-hire operations will still be allowed to possess 50 eels per person for the captain and crew.

The majority of the cost of the proposed rule change stems from the new mesh requirement for an eel pot. All pots that have a mesh size of less than one-half by one-half-inch will need to be replaced by January 1, 2017. While the actual number of pots to be replaced is unknown, eel logbook data indicates that the average number of eel pots fished per person from 2009 to 2013 was 204 pots. Over this same time frame there was an average of 25 participants in the eel pot fishery annually. It is estimated that a fully rigged eel pot costs approximately \$70 per pot. Assuming that all participants had to replace all eel pots due to the proposed rule change, the estimated cost would be approximately \$357,000. This is an upper-bound estimate of cost to fishermen, as it is likely that some of the eel pots will need to be replaced due to damage to the gear in the absence of the proposed rule changes. The rule changes may accelerate the cost of gear replacement forward several years for some industry participants, but it is not likely that all gear will need to be replaced solely to meet the new mesh size requirements. Furthermore, some eel pots may already meet the mesh-size requirements and eel pots that need to be replaced before the required implementation date of January 1, 2017 will likely meet the new mesh standards as fishermen will have had several years of advanced notice of the new mesh size requirements.

#### **IV. Benefits**

The proposed rule changes may help maintain and rebuild American eel populations and improve public clarity of eel regulations by allowing rules to comply with the updated federal requirements as mandated by the ASMFC, which in turn allows North Carolina to maintain compliance with federal mandates (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS). Aligning rules with federally mandated requirements as well as the eel management rule for inland waters helps the regulated public more clearly understand eel fishery management regulations as well as allows the fishery to continue to take place (US CODE TITLE 16 CHAPTER § 5106 – SECRETARIAL ACTION). Over the past five years (2009 to 2013) an average of approximately 70,000 pounds of American eels with an ex-

vessel value of \$177,000 has been commercially landed annually in North Carolina. This fishery along with the use of eels as bait in recreational fisheries could potentially be put in jeopardy should the fisheries management measures outlined in Addendum III to the ASMFC American Eel FMP not be implemented. This is an upper-bound estimate of the benefits of the rule changes, as fishermen could switch to other fisheries if the eel fishery were closed and because there is the possibility that the federal government would not shut down North Carolina's eel fishery in the absence of the proposed rule changes. Also, the clarification of proclamation authority makes this rule language consistent with other rules granting proclamation authority. This consistency among rules granting proclamation authority aids in public awareness of what type of fisheries management measures may be specified by proclamation.

## V. Comprehensive Statement of Costs and Benefits

Rule changes associated with the ASMFC Interstate FMP for American Eel are expected to have a combined cost and benefit that will not meet the statutory threshold for a substantial economic impact of \$1 million in aggregate costs and benefits in any given 12-month period.

NCDMF's estimates of the total costs and benefits of the proposed rule changes include:

1) Modification of 15A NCAC 03J .0301 and 15A NCAC 03M .0510 will not impose costs beyond what is required by federal law. The upper-bound estimate of these costs is \$374,500 to \$409,500 in a single 12-month period. The rule change made outside of federal requirements in 15A NCAC 03J .0301 that clarifies proclamation authority will not impose any costs, as this rule change is not intended to alter the scope of the proclamation authority or management practices. Implementing the proposed rule changes will continue consistency with rules regulating American eel fishing in inland waters as well as maintain federal compliance of the North Carolina American eel fishery, thereby allowing this fishery to continue to occur. This fishery has accounted for an average of approximately 70,000 pounds of American eels with an ex-vessel value of \$177,000 annually over the past five years (2009-2013). This is the upper-bound estimate of the benefit of the rule changes. Finally, clarifying rule language aimed at proclamation authority aids in public awareness of what type of fisheries management measures may be specified by proclamation.

Table 1. Summary of estimated costs and benefits from proposed rule changes.

<b>Rule</b>	<b>Estimated Cost</b>	<b>Estimated Benefit</b>
15A NCAC 03J .0301 and 15A NCAC 03M .0510	\$357,000 (upper-bound of cost occurring one time) \$17,500 to \$52,500 (annual)	\$177,000 (upper-bound of benefit occurring annually)
Total	\$374,500 to \$409,500 (upper-bound of cost in a single 12-month period)	\$177,000 (upper-bound of benefit occurring annually)

## VI. Certificate of Federal Requirement

In accordance with requirements outlined in G.S. § 150B-19.1. (g), the proposed rule changes in 15A NCAC 03J .0301 and 15A NCAC 03M .0510 are being put forth to maintain compliance with the ASMFC Interstate FMP for American Eel Addendum III. Federal law requires the conservation management actions approved through an ASMFC FMP be implemented by the state of North Carolina (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS).

All proposed rule changes regarding the management of the American eel fishery are being put forth as part of this federal requirement other than a change to rule language clarifying proclamation authority in the eel fishery. This measure is not specified in the ASMFC Interstate FMP for American Eel Addendum III. This proposed rule change is being put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules. NC Division of Marine Fisheries (NCDMF) staff has identified that proclamation authority across several rules is generally similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. These general rule changes are not intended to alter the scope of the proclamation authority or current management.

## VII. Works Cited

Atlantic States Marine Fisheries Commission (August 2013). *Addendum III to the Fishery Management Plan for American Eel*.

[http://www.asmfc.org/uploads/file//amEelAddendum\\_III\\_Aug2013.pdf](http://www.asmfc.org/uploads/file//amEelAddendum_III_Aug2013.pdf).

North Carolina Department of Environment and Natural Resources (June 2008). North Carolina Division of Marine Fisheries. *North Carolina Interjurisdictional Fisheries Management Plan*. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337).



## Appendix: Proposed Rule Changes

NOTE: CHANGES TO 15A NCAC 03J .0301 INCLUDE CHANGES FOR EEL POTS AND CHANGES TO THE MANAGEMENT OF USER CONFLICTS WHICH ARE COVERED IN A SEPARATE ANALYSIS.

### 15A NCAC 03J .0301 POTS

(a) It is unlawful to use pots except during time periods and in areas specified herein:

- (1) In Coastal Fishing Waters from December 1 through May 31, except that all pots shall be removed from ~~internal waters~~ Internal Waters from January 15 through February 7. Fish pots upstream of U.S. 17 Bridge across Chowan River and upstream of a line across the mouth of Roanoke, Cashie, Middle and Eastmost Rivers to the Highway 258 Bridge are exempt from the January 15 through February 7 removal requirement. The Fisheries Director may, by proclamation, reopen various waters to the use of pots after January 19 if it is determined that such waters are free of pots.
- (2) From June 1 through November 30, north and east of the Highway 58 Bridge at Emerald Isle:
  - (A) In areas described in 15A NCAC 03R .0107(a);
  - (B) To allow for the variable spatial distribution of crustacea and finfish, the Fisheries Director may, by proclamation, specify time periods for or designate the areas described in 15A NCAC 03R .0107(b); or any part thereof, for the use of pots.
- (3) From May 1 through November 30 in the Atlantic Ocean and west and south of the Highway 58 Bridge at Emerald Isle in areas and during time periods designated by the Fisheries Director by proclamation.

The Fisheries Director may, by proclamation authority established in 15A NCAC 03L .0201, further restrict the use of pots to take blue crabs.

(b) It is unlawful to use pots:

- (1) in any navigation channel marked by State or Federal agencies; or
- (2) in any turning basin maintained and marked by the North Carolina Ferry Division.

(c) It is unlawful to use pots in a commercial fishing operation unless each pot is marked by attaching a floating buoy which shall be of solid foam or other solid buoyant material and no less than five inches in diameter and no less than five inches in length. Buoys may be of any color except yellow or hot pink or any combination of colors that include yellow or hot pink. The owner shall always be identified on the attached buoy by using engraved buoys or by engraved metal or plastic tags attached to the buoy. Such identification shall include one of the following:

- (1) gear owner's current motorboat registration number; or
- (2) gear owner's U.S. vessel documentation name; or

**Fiscal Note for Proposed Rule Changes 15A NCAC 03J .0301 and 03M .0510**

- (3) gear owner's last name and initials.
- (d) Pots attached to shore or a pier shall be exempt from Subparagraphs (a)(2) and (a)(3) of this Rule.
- (e) It is unlawful to use shrimp pots with mesh lengths smaller than one and one-fourth inches stretch or five-eighths-inch bar.
- (f) It is unlawful to use ~~eel pots~~ to take eels with mesh ~~sizes-lengths~~ smaller than ~~one inch by one-half inch~~ unless such pots contain one-half inch by one-half inch, except until January 1, 2017 eel pots of any mesh length with an escape panel that is at least four inches square with a mesh size-length of one inch by one-half inch located in the outside panel of the upper chamber of rectangular pots and in the rear portion of cylindrical pots, except that not more than two eel pots per fishing operation with a mesh of any size may be used to take eels for bait. pots are allowed.
- (g) It is unlawful to use crab pots in ~~coastal fishing waters~~ Coastal Fishing Waters unless each pot contains no less than two unobstructed escape rings that are at least two and five-sixteenths inches inside diameter and located in the opposite outside panels of the upper chamber of the pot, except the following are exempt from the escape ring requirements:
- (1) unbaited pots;
  - (2) pots baited with a male crab; and
  - (3) pots set in areas and during time periods described in 15A NCAC 03R .0118.
- (h) The Fisheries Director may, by proclamation, exempt the escape ring requirements described in Paragraph (g) of this Rule in order to allow the harvest of mature female crabs and may impose any or all of the following restrictions:
- (1) ~~specify areas;~~
  - (2) ~~specify time periods; and~~
  - (3) ~~specify means and methods.~~
  - (1) specify time;
  - (2) specify areas;
  - (3) specify means and methods;
  - (4) specify seasons; and
  - (5) specify quantity.
- (i) It is unlawful to use more than 150 crab pots per vessel in Newport River.
- (j) It is unlawful to remove crab pots from the water or remove crabs from crab pots between one hour after sunset and one hour before sunrise.
- ~~(k) User Conflicts:~~
- (1) ~~In order to address user conflicts, the Fisheries Director may by proclamation impose any or all of the following restrictions:~~
    - (A) ~~specify areas;~~
    - (B) ~~specify time periods; and~~
    - (C) ~~specify means and methods.~~

~~The Fisheries Director shall hold a public meeting in the affected area before issuance of such proclamation.~~

- ~~(2) Any person(s) desiring user conflict resolution may make such request in writing addressed to the Director of the Division of Marine Fisheries, P.O. Box 769, 3441 Arendell St., Morehead City, North Carolina 28557-0769. Such requests shall contain the following information:~~
- ~~(A) a map of the affected area including an inset vicinity map showing the location of the area with detail sufficient to permit on-site identification and location;~~
  - ~~(B) identification of the user conflict causing a need for user conflict resolution;~~
  - ~~(C) recommended solution for resolving user conflict; and~~
  - ~~(D) name and address of the person(s) requesting user conflict resolution.~~
- ~~(3) Upon the requestor's demonstration of a user conflict to the Fisheries Director and within 90 days of the receipt of the information required in Subparagraph (k)(2) of this Rule, the Fisheries Director shall issue a public notice of intent to address a user conflict. A public meeting shall be held in the area of the user conflict. The requestor shall present his or her request at the public meeting, and other parties affected may participate.~~
- ~~(4) The Fisheries Director shall deny the request or submit a proclamation that addresses the results of the public meeting to the Marine Fisheries Commission for their approval.~~
- ~~(5) Proclamations issued under Subparagraph (k)(1) of this Rule shall suspend appropriate rules or portions of rules under 15A NCAC 03R .0107 as specified in the proclamation. The provisions of 15A NCAC 03I .0102 terminating suspension of a rule pending the next Marine Fisheries Commission meeting and requiring review by the Marine Fisheries Commission at the next meeting shall not apply to proclamations issued under Subparagraph (k)(1) of this Rule.~~

~~(k)~~ It is unlawful to use pots to take crabs unless the line connecting the pot to the buoy is non-floating.

~~(l)~~ It is unlawful to use pots with leads or leaders to take shrimp. For the purpose of this Rule, leads or leaders are defined as any fixed or stationary net or device used to direct fish into any gear used to capture fish. Any device with leads or leaders used to capture fish is not a pot.

*Authority G. S. 113-134; 113-173; 113-182; 113-221.1; 143B-289.52*

#### **15A NCAC 03M .0510 AMERICAN EEL**

It is unlawful to:

- (1) Possess, sell or take American eels less than six-nine inches in length; ~~and~~
- (2) Possess more than 50-25 American eels per person per day for recreational ~~purposes~~, purposes, except the master and each mate of for-hire vessels that hold a valid for-hire license may possess 50 eels each per day; and

**Fiscal Note for Proposed Rule Changes 15A NCAC 03J .0301 and 03M .0510**

- (3) Possess American eels from September 1 through December 31 except when taken by baited pots.

*Authority G.S. 113-134; 113-182; 143B-289.52*

**Fiscal Impacts of Proposed Rule Changes to the For-Hire Licensing and Logbook Requirements and to the Atlantic Ocean Striped Bass Commercial Gear Permit Authorized by Statutory Changes in Session Law 2013-360**

**Rule Amendments:** 15A NCAC 03I .0101 DEFINITIONS  
 15A NCAC 03O .0101 PROCEDURES AND REQUIREMENTS TO OBTAIN LICENSES, ENDORSEMENTS AND COMMERCIAL FISHING VESSEL REGISTRATIONS  
 15A NCAC 03O .0106 DISPLAY OF LICENSES AND REGISTRATIONS  
 15A NCAC 03O .0112 FOR HIRE COASTAL RECREATIONAL FISHING  
 15A NCAC 03O .0501 PROCEDURES AND REQUIREMENTS TO OBTAIN PERMITS  
 15A NCAC 03O .0503 PERMIT CONDITIONS; SPECIFIC

**Name of Commission:** NC Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
 NC Division of Marine Fisheries  
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 Morehead City, NC 28557  
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**Impact Summary:** State government: Yes  
 Local government: No  
 Federal government: No  
 Substantial impact: No

**Authority:** Session Law 2013-360, Section 14.8(e), Section 14.8(f) and 14.8(o) [See Appendix 2]

**Necessity:** In accordance with Session Law 2013-360, the proposed rule amendments [See Appendix 1] reflect recent statutory changes affecting for-hire licensing and the Atlantic Ocean Striped Bass Commercial Gear Permit. In order to broaden options for licensees and improve the North Carolina Division of Marine Fisheries (NCDMF) fisheries statistics, these rules propose to eliminate the current For-Hire Permit and blanket licenses and replace them with a captain's for-hire license, a blanket for-hire vessel license, and a non-blanket for-hire vessel license. The proposed rules also implement a for-hire endorsement on the commercial fishing vessel registration, require affirmation of liability coverage and knowledge of U.S. Coast Guard (USCG) safety requirements, and require weekly logbook reporting from for-hire licensees. Additionally, the permit fee for the Atlantic Ocean Striped Bass Commercial Gear Permit is removed from rule and the November 1 deadline to purchase the annual permit is eliminated.

The anticipated effective date of the proposed rule changes is May 1, 2015.

## I. Summary

In an effort to address deficiencies and inequities in the current for-hire licensing structure, the North Carolina General Assembly (NCGA) enacted changes to the state's marine recreational for-hire license to include a Blanket Captains License, a Blanket Vessel License, and a Non-blanket Vessel License. The NCGA incorporated these three new licenses into G.S. 113-168.6 and G.S. 113-174.3 through Session Law 2013-360. Also, statutory changes included the addition of a required affirmation of liability coverage and knowledge of USCG safety requirements by for-hire license holders as well as a weekly logbook requirement to improve recreational catch and effort statistics for the for-hire industry. Rule changes are required to align Marine Fisheries Commission rules with the statutory changes, accommodate weekly logbook reporting, and remove the November 1 deadline for purchasing the annual Atlantic Ocean Striped Bass Commercial Gear Permit. These rule changes are expected to incur a cost of \$265,500 initially and \$245,500 annually thereafter.

## II. Introduction and Purpose of Rule Changes

In order to establish a system to provide management tools for monitoring the for-hire industry, the Marine Fisheries Commission utilized rule-making authority to establish a provisional no-cost For-Hire Fishery Permit in 2003. Several years after the commission established the permit requirement, the NCGA enacted new laws creating a Coastal Recreational Fishing License (CRFL). The NCGA enacted the new laws, in part, to provide management tools for monitoring recreational anglers. During the 2003 Session, the General Assembly of North Carolina passed a CRFL requirement (G.S. 113-174 *et. seq.*), which became effective January 1, 2007. One of the new laws, G.S. 113-174.3, pertained directly to the optional Blanket For-Hire CRFL, which established fees and removed responsibility for licensure of angling customers from the individual and placed it on the owner or operator of the vessel. Having a database of for-hire participants allowed NCDMF to survey the industry for effort information as part of the For-Hire Survey that NCDMF conducts as a contractor to the National Marine Fisheries Service. The CRFL also satisfied requirements of the National Angler Registry as put forth in the federal Magnusson-Stevens Reauthorization Act of 2006<sup>1</sup> (NOAA, 2007).

A component of the CRFL offered an optional for-hire blanket license covering anglers' licensing requirements as long as they were aboard a properly licensed for-hire boat. The for-hire blanket license was available to USCG-licensed captains who carried six or fewer passengers (guides and charter boats) as well as a separate license for USCG-certified vessels carrying more than six passengers (headboats) and operated by a USCG-licensed captain. The price was \$250 for six or fewer passengers and \$350 for more than six passengers since the creation of the CRFL in 2007, with nonresidents paying the same fee as residents.

In March of 2011, the NCDMF held three meetings throughout coastal North Carolina with members of the for-hire industry in an effort to get industry feedback on changes to the license structure, logbooks, and other issues the industry may have. Stakeholders informed NCDMF of inequities and inefficiencies in the license design during these for-hire stakeholders meetings. For example, many inshore guides who use more than one vessel in their operation reported that they pay almost twice as much as much-larger headboat operations. This inequity was due to their need to purchase two blanket licenses, one for each vessel, even though they only used

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<sup>1</sup> Magunson-Stevens Fishery Conservation and Management Act. As Amended Through January 12, 2007. May 2007. National Oceanic and Atmospheric Administration. National Marine Fisheries Service. [http://www.nmfs.noaa.gov/msa2005/docs/MSA\\_amended\\_msa%20\\_20070112\\_FINAL.pdf](http://www.nmfs.noaa.gov/msa2005/docs/MSA_amended_msa%20_20070112_FINAL.pdf)

one vessel at a time. The inshore guide operations take out far fewer anglers each trip and in most cases fewer anglers per year, thereby creating an inequity due to the higher angler licensing costs. Some guides also reported limitations in operating other vessels either for a colleague or in the event of a breakdown of their primary vessel. These circumstances created additional costs for guides and/or clients involved in both small and large fishing operations and serve as an example of the inefficiencies inherent in the past structure. There was also general consensus at the stakeholder meetings that nonresidents should pay a higher fee than residents since they do not pay into the state system in ways residents do (property taxes, boat registrations, etc.).

NCDMF drafted recommendations from the series of meetings in the *Summary of the 2011 For-Hire Stakeholders Meetings Report to the Marine Fisheries Commission*<sup>2</sup>. The NC Marine Fisheries Commission (NCMFC) agreed with the recommendations, which were then incorporated into NCDMF's request for statutory revisions to the NC General Assembly. The General Assembly adopted these recommendations during the 2013 session in Session Law 2013-360.

Session Law 2013-360 made statutory changes to G.S. 113-168.6 and G.S. 113-174.3 that alter the way for-hire licenses are structured, require certain for-hire operations to obtain Commercial Fishing Vessel Registrations with for-hire endorsements for their vessels, obligate for-hire operators to affirm liability coverage and knowledge of USCG safety requirements, and require participants in the for-hire industry to begin submitting weekly logbooks of catch and effort data.

In an effort to address the deficiencies and inequities in the current for-hire licensing structure, NCDMF proposed changes to the license structure to include a Blanket Captain's License, a Blanket Vessel License, and a Non-blanket Vessel License (Table 1). These three new licenses are incorporated into G.S. 113-174.3. NCDMF recommended eliminating the original For-Hire Blanket CRFL's within the statute. The proposal also included higher nonresident fees. The new licenses are:

1. The Blanket For-Hire Captain's CRFL allows the holder to use any properly licensed vessel in his/her operation while covering the licensing requirements of the anglers. All vessels operated by the holder of a Blanket For-Hire Captain's CRFL must have a Commercial Fishing Vessel Registration with a for-hire endorsement. The Blanket For-Hire Captain's CRFL is intended primarily for the inshore guides who operate multiple vessels. The fee is the same as the former For-Hire Blanket CRFL, but should result in a cost savings to resident guides who operate multiple vessels. Nonresidents will pay more than residents.
2. The Blanket For-Hire Vessel CRFL is very similar to the current Blanket For-Hire CRFL wherein the vessel is licensed and must be operated by a USCG-licensed captain. This license is intended primarily for the headboat industry. There should not be any cost differences to resident headboat owners, but nonresidents will pay more.
3. The Non-Blanket For-Hire Vessel License (note: not a CRFL) is very similar to the current, free for-hire permit, but there is a cost for this license. This license is intended primarily for the dive boat industry that infrequently has divers who wish to spear fish.

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<sup>2</sup> Available at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=a1055e24-5169-4ddb-aa9d-c8cd422ecf9d&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=a1055e24-5169-4ddb-aa9d-c8cd422ecf9d&groupId=38337)

Spear fishermen on a dive boat will have to obtain their own individual CRFL to legally take fish. Guides may seek to purchase this license if they do not wish to cover their anglers' licensing requirements, as is achieved by the other two types of licenses.

Table 1. Summary of the new for-hire licenses, intended use, comments, and fees.

New License	Intended For	Comments	Resident Fees	Nonresident Fees
Blanket For-Hire Captain's CRFL	Guides and charter boat owners with more than one vessel	Allows holder to conduct for-hire operations on any vessel with a CFVR and for-hire endorsement	\$250 (<=six passengers) \$350 (>six passengers)	\$312.50 (<=six passengers) \$437.50 (>six passengers)
Blanket For-Hire Vessel CRFL	Guides, charter boats and head boats with only one vessel	Allows any USCG-licensed captain to operate a vessel	\$250 (<=six passengers) \$350 (>six passengers)	\$312.50 (<=six passengers) \$437.50 (>six passengers)
Non-blanket Vessel License	Dive boats	Low-cost license for operators who do not wish to cover their passengers' licensing requirements	\$25	\$37.50

In order to incorporate new weekly logbook requirements, NCDMF staff felt it necessary to amend 15A NCAC 03I .0101 to define a logbook as well as amend the definition of a trip ticket to clarify the difference between the two forms of documentation. Additionally, a rule change is needed in 15A NCAC 03O .0112 to implement weekly reporting of fishing activity by for-hire licensees. Weekly reporting will lead to more accurate catch, effort, and release information required for finfish stock assessments, allow NCDMF to better monitor catch quotas, and alleviate many of the uncertainties associated with survey and extrapolation data. NCDMF chose weekly reporting as the preferred reporting period over biweekly or monthly reporting, as it will provide more timely catch information and reduce issues associated with recalling catch information of previous trips for captains that may not keep a personal daily catch log. Also, the current federal logbook reporting period is weekly. The improved and timelier catch data offered by weekly reporting will benefit the regulated public by aligning reporting periods for for-hire operations that are involved in both federal- and state-managed fisheries and may help extend the season in fisheries that have allocated recreational fishing quotas, where fisheries may be shut down early due to large uncertainties or long reporting periods for landings data. NCDMF is making efforts to allow flexible reporting methods with the development of paper forms, web reporting, and mobile reporting apps for both tablets and smart phones. NCDMF staff are working to remove any redundancy that may exist with federal reporting requirements.

Other changes to 15A NCAC 03O .0112, as well as to 03O .0101, .0106, .0112, .0501, and .0503, bring rules in line with statutory changes and/or eliminate references to for-hire licenses that no longer exist. Additionally, 15A NCAC 03O .0501 contains changes to the Atlantic Ocean Striped Bass Commercial Gear Permit. These changes remove the cost of the permit fee from rule, as it is now set in statute, and eliminate the November 1 deadline for the purchase of the annual permit. The elimination of the November 1 deadline is intended to allow fishermen more



flexibility in entering the commercial Atlantic Ocean striped bass fishery at any time during the year.

### III. Costs

Rule changes that strictly implement statutory requirements are not expected to incur any costs independent from statute, as these changes simply conform to what is required by law. NCDMF does not expect the proposed rule changes to affect operational costs for issuing a for-hire license or for applicants purchasing a for-hire license. NCDMF will incur operational costs and both NCDMF as well as for-hire operations will incur opportunity costs due to the weekly logbook reporting requirements for for-hire operations. Based on the NCDMF for-hire license records, there were 598 individual for-hire licensees in 2013. Of these licensees, 13 currently undertake weekly logbook reporting due to federal logbook requirements for headboat operations and will be exempt from the NCDMF weekly reporting requirement. Therefore, the proposed rule change requiring weekly reporting will affect 585 individuals. NCDMF estimates that reporting requirements will take approximately thirty minutes a week per for-hire license holder. There will be provisions where a license holder will not need to report should they expect to not partake in for-hire fishing trips for an extended period; therefore, reporting will not be required year-round for all for-hire licensees. This analysis assumes that weekly reporting for approximately eight months of the year leads to an estimated total time expense of 9,360 person-hours annually (16 hours for each affected individual.) Based on the Bureau of Labor Statistics 2013 mean hourly wage for farming, fishing, and forestry workers of \$13.09 per hour<sup>3</sup> and benefits equivalent to approximately 33% of total compensation,<sup>4</sup> the estimated opportunity cost stemming from the weekly logbook reporting requirement is approximately \$182,500 annually (Table 2).

NCDMF will incur direct costs to implement and run the for-hire logbook program. While not yet in place, NCDMF estimates that additional annual operational costs will include \$5,000 for logbook printing, \$3,000 for travel and transportation, \$10,000 for supplies and postage, and \$5,000 for computer and database expenses. In the first year, there will be a one-time cost of \$25,000 for web-interface development to implement an online and mobile version of the logbook, along with an annual cost of \$5,000 for web-interface maintenance. Additionally, NCDMF will hire a program administrator and data entry clerk to oversee and run the program. The expected cost of these positions (salary with benefits included) is \$55,000 for the program administrator and \$40,000 for the data entry clerk. Overall, NCDMF estimates the estimated operational costs for the logbook program to be \$143,000 the first year and \$123,000 annually thereafter. Funding for this program will come from the NCDMF Coastal Angling Program, which is funded through the sales of recreational fishing licenses in the state. Other state or federal funding sources may supplement or supplant funding from the Coastal Angling Program in the future; however, the for-hire logbook program is currently fully funded for the foreseeable future.

The extent to which law enforcement will incur direct or opportunity costs is unknown, as such a program has yet to be implemented in the state on a large scale in for-hire fisheries. This makes estimating costs for law enforcement very difficult to quantify with any certainty. NCDMF expects law enforcement to address initial non-compliance through a written letter to those out of compliance with reporting requirements.

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<sup>3</sup> United States Department of Labor Bureau of Labor Statistics. May 2013 State Occupational Employment and Wage Estimates North Carolina. [http://www.bls.gov/oes/current/oes\\_nc.htm#45-0000](http://www.bls.gov/oes/current/oes_nc.htm#45-0000).

<sup>4</sup> United States Department of Labor Bureau of Labor Statistics. Employer Costs for Employee Compensation- March 2014. <http://www.bls.gov/news.release/pdf/ecec.pdf>.



Table 2. Estimated cost of weekly logbook reporting requirements.

<b>Direct Costs</b>	<b>Initial</b>	<b>Recurring</b>
Logbook Printing	\$5,000	\$5,000
Travel	\$3,000	\$3,000
Supplies and Postage	\$10,000	\$10,000
Computer and Database	\$5,000	\$5,000
Web Interface Development	\$25,000	\$5,000
Program Administrator	\$55,000	\$55,000
Data Entry Clerk	\$40,000	\$40,000
Enforcement Costs	Unquantified	Unquantified
<b>Total Direct Costs</b>	<b>\$143,000</b>	<b>\$123,000</b>
<b>Opportunity Costs</b>		
Opportunity Cost to Licensees	\$182,500	\$182,500
Enforcement Costs	Unquantified	Unquantified
<b>Total Opportunity Costs</b>	<b>\$182,500</b>	<b>\$182,500</b>
<b>Total Costs</b>	<b>\$325,500</b>	<b>\$305,500</b>

#### IV. Benefits

The proposed rule changes implement changes in statute and are expected to improve the licensing process for for-hire fishing operations. They are designed to increase equity of licensing costs between large and small operations as well as provide flexibility to allow for-hire operations to purchase the most suitable license for their business. Furthermore, removing references in rule to the previous for-hire licenses will maintain rule clarity, as statutory changes already eliminated these licenses.

Additionally, the for-hire logbook will improve recreational fishing statistics. NCDMF expects that improved statistical monitoring of for-hire fishing operations will lead to more accurate catch, effort, and release information required for finfish stock assessments, allow NCDMF to better monitor catch quotas, and alleviate many of the areas of uncertainty associated with current survey- and extrapolation-based data. In some years this improved catch information may help extend the fishing season for some species. Additionally, for-hire captains will be able to have access to their personal catch data, which may be used for advertising, business-planning, or personal information purposes.

Finally, removing the fee for the Atlantic Ocean Striped Bass Commercial Gear Permit from rule will reduce redundant rule language as the fee is set and stated in statute. Eliminating the November 1 deadline for purchasing the annual permit will add flexibility for fishermen to participate in the Atlantic Ocean commercial striped bass fishery at any time during the year.

## Appendix 1: Proposed Rule Changes

### 15A NCAC 03I .0101 DEFINITIONS

NOTE: CHANGES TO 15A NCAC 03I .0101 INCLUDE CHANGES FOR THE FOR-HIRE LICENSE AND CHANGES TO THE MANAGEMENT OF SHRIMP WHICH ARE COVERED IN A SEPARATE ANALYSIS.

All definitions set out in G.S. 113, Subchapter IV and the following additional terms apply to this Chapter:

- (1) Enforcement and management terms:
  - (a) Commercial Quota. Total quantity of fish allocated for harvest by commercial fishing operations.
  - (b) Educational Institution. A college, university or community college accredited by an accrediting agency recognized by the U.S. Department of Education; an Environmental Education Center certified by the NC Department of Environment and Natural Resources Office of Environmental Education and Public Affairs; or a zoo or aquarium certified by the Association of Zoos and Aquariums.
  - (c) Internal Coastal Waters or Internal Waters. All Coastal Fishing Waters except the Atlantic Ocean.
  - (d) Length of finfish.
    - (i) Curved fork length. A length determined by measuring along a line tracing the contour of the body from the tip of the upper jaw to the middle of the fork in the caudal (tail) fin.
    - (ii) Fork length. A length determined by measuring along a straight line the distance from the tip of the snout with the mouth closed to the middle of the fork in the caudal (tail) fin, except that fork length for billfish is measured from the tip of the lower jaw to the middle of the fork of the caudal (tail) fin.
    - (iii) Pectoral fin curved fork length. A length of a beheaded fish from the dorsal insertion of the pectoral fin to the fork of the tail measured along the contour of the body in a line that runs along the top of the pectoral fin and the top of the caudal keel.
    - (iv) Total length. A length determined by measuring along a straight line the distance from the tip of the snout with the mouth closed to the tip of the compressed caudal (tail) fin.
  - (e) Recreational Possession Limit. Restrictions on size, quantity, season, time period, area, means, and methods where take or possession is for a recreational purpose.
  - (f) Recreational Quota. Total quantity of fish allocated for harvest for a recreational purpose.
  - (g) Regular Closed Oyster Season. March 31 through October 15, unless amended by the Fisheries Director through proclamation authority.

- (h) Scientific Institution. One of the following entities:
    - (i) An educational institution as defined in this Item;
    - (ii) A state or federal agency charged with the management of marine or estuarine resources; or
    - (iii) A professional organization or secondary school working under the direction of, or in compliance with mandates from, the entities listed in Subitems (h)(i) and (ii) of this Item.
  - (i) Seed Oyster Management Area. An open harvest area that, by reason of poor growth characteristics, predation rates, overcrowding or other factors, experiences poor utilization of oyster populations for direct harvest and sale to licensed dealers and is designated by the Marine Fisheries Commission as a source of seed for public and private oyster culture.
- (2) Fishing Activities:
- (a) Aquaculture operation. An operation that produces artificially propagated stocks of marine or estuarine resources or obtains such stocks from permitted sources for the purpose of rearing in a controlled environment. A controlled environment provides and maintains throughout the rearing process one or more of the following:
    - (i) food;
    - (ii) predator protection;
    - (iii) salinity;
    - (iv) temperature controls; or
    - (v) water circulation,
 utilizing technology not found in the natural environment.
  - (b) Attended. Being in a vessel, in the water or on the shore, and immediately available to work the gear and be within 100 yards of any gear in use by that person at all times. Attended does not include being in a building or structure.
  - (c) Blue Crab Shedding. The process whereby a blue crab emerges soft from its former hard exoskeleton. A shedding operation is any operation that holds peeler crabs in a controlled environment. A controlled environment provides and maintains throughout the shedding process one or more of the following:
    - (i) food;
    - (ii) predator protection;
    - (iii) salinity;
    - (iv) temperature controls; or
    - (v) water circulation,
 utilizing technology not found in the natural environment. A shedding operation does not include transporting pink or red-line peeler crabs to a permitted shedding operation.

- (d) Depuration. Purification or the removal of adulteration from live oysters, clams, or mussels by any natural or artificially controlled means.
  - (e) Long Haul Operations. Fishing a seine towed between two vessels.
  - (f) Peeler Crab. A blue crab that has a soft shell developing under a hard shell and having a white, pink, or red-line or rim on the outer edge of the back fin or flipper.
  - (g) Possess. Any actual or constructive holding whether under claim of ownership or not.
  - (h) Recreational Purpose. A fishing activity that is not a commercial fishing operation as defined in G.S. 113-168.
  - (i) Shellfish marketing from leases and franchises. The harvest of oysters, clams, scallops, or mussels from privately held shellfish bottoms and lawful sale of those shellfish to the public at large or to a licensed shellfish dealer.
  - (j) Shellfish planting effort on leases and franchises. The process of obtaining authorized cultch materials, seed shellfish, and polluted shellfish stocks and the placement of those materials on privately held shellfish bottoms for increased shellfish production.
  - (k) Shellfish production on leases and franchises:
    - (i) The culture of oysters, clams, scallops, or mussels on shellfish leases and franchises from a sublegal harvest size to a marketable size.
    - (ii) The transplanting (relay) of oysters, clams, scallops or mussels from areas closed due to pollution to shellfish leases and franchises in open waters and the natural cleansing of those shellfish.
  - (l) Swipe Net Operations. Fishing a seine towed by one vessel.
  - (m) Transport. Ship, carry, or cause to be carried or moved by public or private carrier by land, sea, or air.
  - (n) Use. Employ, set, operate, or permit to be operated or employed.
- (3) Gear:
- (a) Bunt Net. The last encircling net of a long haul or swipe net operation constructed of small mesh webbing. The bunt net is used to form a pen or pound from which the catch is dipped or bailed.
  - (b) Channel Net. A net used to take shrimp that is anchored or attached to the bottom at both ends or with one end anchored or attached to the bottom and the other end attached to a vessel.
  - (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 that propel pointed implements by mechanical means, including elastic tubing or bands, pressurized gas, or similar means.
- (d) Corkline. The support structure a net is attached to that is nearest to the water surface when in use. Corkline length is measured from the outer most mesh knot at one end of the corkline following along the line to the outer most mesh knot at the opposite end of the corkline.
  - (e) Dredge. A device towed by engine power consisting of a frame, tooth bar or smooth bar, and catchbag used in the harvest of oysters, clams, crabs, scallops, or conchs.
  - (f) Fixed or stationary net. A net anchored or staked to the bottom, or some structure attached to the bottom, at both ends of the net.
  - (g) Fyke Net. An entrapment net supported by a series of internal or external hoops or frames, with one or more lead or leaders that guide fish to the net mouth. The net has one or more internal funnel-shaped openings with tapered ends directed inward from the mouth, through which fish enter the enclosure. The portion of the net designed to hold or trap fish is completely enclosed in mesh or webbing, except for the openings for fish passage into or out of the net (funnel area).
  - (h) Gill Net. A net set vertically in the water to capture fish by entanglement of the gills in its mesh as a result of net design, construction, mesh ~~size~~length, webbing diameter, or method in which it is used.
  - (i) Headrope. The support structure for the mesh or webbing of a trawl that is nearest to the water surface when in use. Headrope length is measured from the outer most mesh knot

- at one end of the headrope following along the line to the outer most mesh knot at the opposite end of the headrope.
- (j) Hoop Net. An entrapment net supported by a series of internal or external hoops or frames. The net has one or more internal funnel-shaped openings with tapered ends directed inward from the mouth, through which fish enter the enclosure. The portion of the net designed to hold or trap the fish is completely enclosed in mesh or webbing, except for the openings for fish passage into or out of the net (funnel area).
  - (k) Lead. A mesh or webbing structure consisting of nylon, monofilament, plastic, wire, or similar material set vertically in the water and held in place by stakes or anchors to guide fish into an enclosure. Lead length is measured from the outer most end of the lead along the top or bottom line, whichever is longer, to the opposite end of the lead.
  - (l) Mechanical methods for clamming. Dredges, hydraulic clam dredges, stick rakes and other rakes when towed by engine power, patent tongs, kicking with propellers or deflector plates with or without trawls, and any other method that utilizes mechanical means to harvest clams.
  - (m) Mechanical methods for oystering. Dredges, patent tongs, stick rakes and other rakes when towed by engine power, and any other method that utilizes mechanical means to harvest oysters.
  - (n) Mesh Length. The ~~diagonal~~ distance from the inside of one knot to the outside of the ~~other opposite~~ knot, when the net is stretched ~~hand-tight, hand-tight~~ in a manner that closes the mesh opening.
  - (o) Pound Net Set. A fish trap consisting of a holding pen, one or more enclosures, lead or leaders, and stakes or anchors used to support the trap. The holding pen, enclosures, and lead(s) are not conical, nor are they supported by hoops or frames.
  - (p) Purse Gill Nets. Any gill net used to encircle fish when the net is closed by the use of a purse line through rings located along the top or bottom line or elsewhere on such net.
  - (q) Seine. A net set vertically in the water and pulled by hand or power to capture fish by encirclement and confining fish within itself or against another net, the shore or bank as a result of net design, construction, mesh ~~size,~~ length, webbing diameter, or method in which it is used.
- (4) Fish habitat areas. The estuarine and marine areas that support juvenile and adult populations of fish species, as well as forage species utilized in the food chain. Fish habitats as used in this definition, are vital for portions of the entire life cycle, including the early growth and development of fish species. Fish habitats in all Coastal Fishing Waters, as determined through marine and estuarine survey sampling, include:
- (a) Anadromous fish nursery areas. Those areas in the riverine and estuarine systems utilized by post-larval and later juvenile anadromous fish.



- (b) Anadromous fish spawning areas. Those areas where evidence of spawning of anadromous fish has been documented in Division sampling records through direct observation of spawning, capture of running ripe females, or capture of eggs or early larvae.
- (c) Coral:
  - (i) Fire corals and hydrocorals (Class Hydrozoa);
  - (ii) Stony corals and black corals (Class Anthozoa, Subclass Scleractinia); or
  - (iii) Octocorals; Gorgonian corals (Class Anthozoa, Subclass Octocorallia), which include sea fans (*Gorgonia* sp.), sea whips (*Leptogorgia* sp. and *Lophogorgia* sp.), and sea pansies (*Renilla* sp.).
- (d) Intertidal Oyster Bed. A formation, regardless of size or shape, formed of shell and live oysters of varying density.
- (e) Live rock. Living marine organisms or an assemblage thereof attached to a hard substrate, excluding mollusk shells, but including dead coral or rock. Living marine organisms associated with hard bottoms, banks, reefs, and live rock include:
  - (i) Coralline algae (Division Rhodophyta);
  - (ii) *Acetabularia* sp., mermaid's fan and cups (*Udotea* sp.), watercress (*Halimeda* sp.), green feather, green grape algae (*Caulerpa* sp.) (Division Chlorophyta);
  - (iii) *Sargassum* sp., *Dictyopteris* sp., *Zonaria* sp. (Division Phaeophyta);
  - (iv) Sponges (Phylum Porifera);
  - (v) Hard and soft corals, sea anemones (Phylum Cnidaria), including fire corals (Class Hydrozoa), and Gorgonians, whip corals, sea pansies, anemones, *Solenastrea* (Class Anthozoa);
  - (vi) Bryozoans (Phylum Bryozoa);
  - (vii) Tube worms (Phylum Annelida), fan worms (*Sabellidae*), feather duster and Christmas treeworms (*Serpulidae*), and sand castle worms (*Sabellaridae*);
  - (viii) Mussel banks (Phylum Mollusca: Gastropoda); and
  - (ix) Acorn barnacles (Arthropoda: Crustacea: *Semibalanus* sp.).
- (f) Nursery areas. Areas that for reasons such as food, cover, bottom type, salinity, temperature, and other factors, young finfish and crustaceans spend the major portion of their initial growing season. Primary nursery areas are those areas in the estuarine system where initial post-larval development takes place. These are areas where populations are uniformly early juveniles. Secondary nursery areas are those areas in the estuarine system where later juvenile development takes place. Populations are composed of developing sub-adults of similar size which have migrated from an upstream primary nursery area to the secondary nursery area located in the middle portion of the estuarine system.

- (g) Shellfish producing habitats. Historic or existing areas that shellfish, such as clams, oysters, scallops, mussels, and whelks use to reproduce and survive because of such favorable conditions as bottom type, salinity, currents, cover, and cultch. Included are those shellfish producing areas closed to shellfish harvest due to pollution.
- (h) Strategic Habitat Areas. Locations of individual fish habitats or systems of habitats that provide exceptional habitat functions or that are particularly at risk due to imminent threats, vulnerability, or rarity.
- (i) Submerged aquatic vegetation (SAV) habitat. Submerged lands that:
  - (i) are vegetated with one or more species of submerged aquatic vegetation including bushy pondweed or southern naiad (*Najas guadalupensis*), coontail (*Ceratophyllum demersum*), eelgrass (*Zostera marina*), horned pondweed (*Zannichellia palustris*), naiads (*Najas* spp.), redhead grass (*Potamogeton perfoliatus*), sago pondweed (*Stuckenia pectinata*, formerly *Potamogeton pectinatus*), shoalgrass (*Halodule wrightii*), slender pondweed (*Potamogeton pusillus*), water stargrass (*Heteranthera dubia*), water starwort (*Callitriche heterophylla*), waterweeds (*Elodea* spp.), widgeongrass (*Ruppia maritima*), and wild celery (*Vallisneria americana*). These areas may be identified by the presence of above-ground leaves, below-ground rhizomes, or reproductive structures associated with one or more SAV species and include the sediment within these areas; or
  - (ii) have been vegetated by one or more of the species identified in Sub-item (4)(i)(i) of this Rule within the past 10 annual growing seasons and that meet the average physical requirements of water depth (six feet or less), average light availability (secchi depth of one foot or more), and limited wave exposure that characterize the environment suitable for growth of SAV. The past presence of SAV may be demonstrated by aerial photography, SAV survey, map, or other documentation. An extension of the past 10 annual growing seasons criteria may be considered when average environmental conditions are altered by drought, rainfall, or storm force winds.

This habitat occurs in both subtidal and intertidal zones and may occur in isolated patches or cover extensive areas. In defining SAV habitat, the Marine Fisheries Commission recognizes the Aquatic Weed Control Act of 1991 (G.S. 113A-220 et. seq.) and does not intend the submerged aquatic vegetation definition, or this Rule or Rules 03K .0304 and .0404, to apply to or conflict with the non-development control activities authorized by that Act.

- (5) Licenses, permits, leases and franchises, and record keeping:

- (a) Assignment. Temporary transferal to another person of privileges under a license for which assignment is permitted. The person assigning the license delegates the privileges permitted under the license to be exercised by the assignee, but retains the power to revoke the assignment at any time, and is still the responsible party for the license.
- (b) Designee. Any person who is under the direct control of the permittee or who is employed by or under contract to the permittee for the purposes authorized by the permit.
- (c) For Hire Vessel. As defined by G.S. 113-174, when the vessel is fishing in state waters or when the vessel originates from or returns to a North Carolina port.
- (d) Logbook. Paper forms provided by the Division and electronic data files generated from software provided by the Division for the reporting of fisheries statistics by persons engaged in commercial or recreational fishing or for-hire operators.
- ~~(d)~~(e) Holder. A person who has been lawfully issued in his or her name a license, permit, franchise, lease, or assignment.
- ~~(e)~~(f) Land:
  - (i) For commercial fishing operations, when fish reach the shore or a structure connected to the shore.
  - (ii) For purposes of trip tickets, when fish reach a licensed seafood dealer, or where the fisherman is the dealer, when the fish reaches the shore or a structure connected to the shore.
  - (iii) For recreational fishing operations, when fish are retained in possession by the fisherman.
- ~~(f)~~(g) Licensee. Any person holding a valid license from the Department to take or deal in marine fisheries resources.
- ~~(g)~~(h) Master. Captain of a vessel or one who commands and has control, authority, or power over a vessel.
- ~~(h)~~(i) New fish dealer. Any fish dealer making application for a fish dealer license who did not possess a valid dealer license for the previous license year in that name. For purposes of license issuance, adding new categories to an existing fish dealers license does not constitute a new dealer.
- ~~(i)~~ ~~North Carolina Trip Ticket. Paper forms provided by the Division, and electronic data files generated from software provided by the Division, for the reporting of fisheries statistics that include quantity, method, and location of harvest.~~
- (j) Office of the Division. Physical locations of the Division conducting license and permit transactions in Wilmington, Washington, Morehead City, Roanoke Island and Elizabeth City, North Carolina. Other businesses or entities designated by the Secretary to issue Recreational Commercial Gear Licenses or Coastal Recreational Fishing Licenses are not considered Offices of the Division.

- (k) Responsible party. 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 the person responsible for use of the issued license in compliance with applicable statutes and rules.
- (l) Tournament Organizer. The person who coordinates, supervises, or otherwise directs a recreational fishing tournament and is the holder of the Recreational Fishing Tournament License.
- (m) Transaction. Act of doing business such that fish are sold, offered for sale, exchanged, bartered, distributed, or landed.
- (n) Transfer. Permanent transferal to another person of privileges under a license for which transfer is permitted. The person transferring the license retains no rights or interest under the license transferred.
- (o) Trip Ticket. Paper forms provided by the Division and electronic data files generated from software provided by the Division for the reporting of fisheries statistics by licensed fish dealers.

*Authority G.S. 113-134; 113-174; 143B-289.52*

**15A NCAC 030 .0101 PROCEDURES AND REQUIREMENTS TO OBTAIN LICENSES, ENDORSEMENTS AND COMMERCIAL FISHING VESSEL REGISTRATIONS**

NOTE: CHANGES TO 15A NCAC 030 .0101 INCLUDE CHANGES FOR THE FOR-HIRE LICENSE AND CHANGES IN OCEAN FISHING PIER LICENSING WHICH ARE COVERED IN A SEPARATE ANALYSIS.

- (a) To obtain any Marine Fisheries licenses, endorsements, commercial fishing vessel registrations except Recreational Fishing Tournament Licenses to Sell Fish and Land or Sell Licenses, the following information is required for the application by the licensee, a responsible party or person holding a power of attorney:
  - (1) Full name, physical address, mailing address, date of birth, and signature of the licensee on the application. If the licensee is not appearing before a license agent or a representative of the Division, the licensee's signature on the application shall be notarized;
  - (2) Current picture identification of licensee or responsible party; acceptable forms of picture identification are driver's license, state identification card, military identification card, resident alien card (green card) or passport or if purchased by mail, a copy thereof;
  - (3) Certification that the applicant does not have four or more marine or estuarine resource violations during the previous three years, except Blanket Coastal Recreational Fishing Licenses;
  - (4) Valid documentation papers or current motor boat registration or copy thereof when purchasing a commercial fishing vessel registration. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted;

- (5) Current articles of incorporation and a current list of corporate officers when purchasing a license or commercial fishing vessel registration in a corporate name. In the case of incorporation of an individual fishing vessel, the name of the master of that vessel shall also be specified. It is unlawful to fail to notify the Morehead City Office of the Division of Marine Fisheries within five days of change of the master specified for that vessel;
- ~~(6)~~ An affirmation of liability insurance and that the operator is knowledgeable of United States Coast Guard (USCG) safety requirements for the vessel(s) used in the operation in accordance with G.S. 113-168.6 when purchasing a commercial fishing vessel registration with a for-hire endorsement.
- ~~(6)(7)~~ If a partnership is established by a written partnership agreement, a current copy of such agreement shall be provided when purchasing a license, endorsement or commercial fishing vessel registration in a partnership name;
- ~~(7)(8)~~ For nonresidents, certification of the state of residency;
- ~~(8)(9)~~ In addition to the information required in G.S. 113-169.4, linear length of pier when purchasing an Ocean Fishing Pier License;
- ~~(9)(10)~~ In addition to the information required in G.S. 113-171.1, current aircraft registration and list of operator(s) when purchasing a Spotter Plane License;
- ~~(10)(11)~~ In addition, for fish dealers licenses, the physical address of the established location where business is conducted and, if different, the address where records are kept;
- ~~(11)(12)~~ When purchasing a Fish Dealer License with clam or oyster categories or a consolidated license, the applicant shall provide valid certification as a North Carolina certified shellfish dealer;
- ~~(12)~~ In addition, for the Ocean Fishing Pier Blanket Coastal Recreation Fishing License, a valid Ocean Fishing Pier License issued in the name of the applicant or copy thereof.
- (13) In addition, for the ~~For Hire~~ Blanket For-Hire Captain's Coastal Recreational Fishing License, License (CRFL), the applicant shall ~~provide~~ provide a valid certification from the USCG that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers; and
- (A) ~~A valid certification from the United States Coast Guard (USCG) that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers; and~~
- (B) ~~Valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.~~
- ~~(14)~~ In addition, for the Blanket For-Hire Vessel CRFL or the Non-Blanket For-Hire Vessel License, valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for-hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.

(b) License to Land Flounder from the Atlantic Ocean.

- (1) To qualify for a License to Land Flounder from the Atlantic Ocean, the applicant shall:
    - (A) have landed in North Carolina at least 1,000 pounds of flounder from a single vessel each year from the Atlantic Ocean during any two of the 1992-93, 1993-94, 1994-95 license years for which the person had a vessel that was licensed to land in North Carolina; and
    - (B) have been licensed under G.S. 113-152 or 113-153 during any two of the 1992-93, 1993-94, or 1994-95 license years; and
    - (C) hold a valid Standard or Retired Standard Commercial Fishing License or valid Land or Sell License.
  - (2) It is lawful for a person to hold Licenses to Land Flounder from the Atlantic Ocean equal to the number of vessels that he owns that individually met the eligibility requirements of Parts (b)(1)(A) and (b)(1)(B) of this Rule.
  - (3) The License to Land Flounder from the Atlantic Ocean is only valid when used on the vessel specified at the time of license issuance.
  - (4) At the time of issuance, the applicant for the License to Land Flounder from the Atlantic Ocean shall specify the name of the master of the vessel for each License to Land Flounder from the Atlantic Ocean issued.
  - (5) Applicants for a License to Land Flounder from the Atlantic Ocean shall complete an application form provided by the Division of Marine Fisheries and submit it to the Morehead City Office of the Division of Marine Fisheries for processing.
  - (6) It is unlawful for the holder of the License to Land Flounder from the Atlantic Ocean to fail to notify the Morehead Office of the Division of Marine Fisheries within five days of change as to the master identified on the license.
  - (7) Licenses to Land Flounder from the Atlantic Ocean are issued for the current license year and expire on June 30.
- (c) To obtain a Recreational Fishing Tournament License to Sell Fish, the tournament organizer shall apply with the Division of Marine Fisheries at least 30 days prior to the starting date of the tournament with the following required information:
- (1) Full name, physical address, mailing address, date of birth, signature of the tournament organizer, name of tournament, and dates of tournament on the license application. If the licensee is not appearing before a representative of the Division, the licensee's signature shall be notarized on the application.
  - (2) Current picture identification of tournament organizer; acceptable forms of picture identification are driver's license, state identification card, military identification card, or passport, or if purchased by mail, a copy thereof.
- (d) To obtain a Land or Sell License, the following information is required for a proper application:
- (1) Full name, physical address, mailing address, date of birth, and signature of the responsible party or master for the vessel on the license application. If the licensee is not appearing before a

representative of the Division, the licensee's signature on the application shall be notarized on the application;

- (2) Current picture identification of responsible party or master; acceptable forms of picture identification are driver's license, state identification card, military identification card, or passport or if applying by mail, a copy thereof;
- (3) Valid documentation papers or current motor boat registration or copy thereof when purchasing a commercial fishing vessel registration. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.

Fees shall be based on the vessel's homeport as it appears on the U.S. Coast Guard documentation papers or the State in which the vessel is registered.

(e) Proof of residency in North Carolina for:

- (1) Standard Commercial Fishing License or Retired Standard Commercial Fishing License shall require a notarized certification from the applicant that the applicant is a resident of the State of North Carolina as defined by G.S. 113-130(4); and
  - (A) a notarized certification from the applicant that a North Carolina State Income Tax Return was filed for the previous calendar or tax year as a North Carolina resident; or
  - (B) a notarized certification that the applicant was not required to file a North Carolina State Income Tax Return for the previous calendar or tax year; or
  - (C) military identification, military dependent identification and permanent change of station orders or assignment orders substantiating individual's active duty assignment at a military facility in North Carolina.
- (2) All other types of licenses:
  - (A) North Carolina voter registration card; or
  - (B) Current North Carolina Driver's License; or
  - (C) Current North Carolina Certificate of Domicile; or
  - (D) Current North Carolina Identification Card issued by the North Carolina Division of Motor Vehicles; or
  - (E) Military identification, military dependent identification and permanent change of station orders or assignment orders substantiating individual's active duty assignment at a military facility in North Carolina.

(f) Applications submitted without complete and required information shall be deemed incomplete and shall not be considered further until resubmitted with all required information.

(g) It is unlawful for a license or registration holder to fail to notify the Division of Marine Fisheries within 30 days of a change of address.

(h) Licenses are available at Offices of the Division or by mail from the Morehead City Office, unless otherwise specified. In addition, Recreational Commercial Gear Licenses are available at Wildlife Service Agents who have been designated as agents of the Department.

(i) To renew any Marine Fisheries licenses, endorsements, and commercial fishing vessel registration, except Recreational Commercial Gear Licenses, the following is required for the renewal application by the licensee, a responsible party or person holding a power of attorney;

- (1) The information required in Subparagraphs (a)(4), (a)(5), and (a)(6) of this Rule are only required if a change has occurred since the last issuance of license, endorsement or commercial fishing vessel registration.
- (2) Certification that articles of incorporation and list of corporate officers, if incorporated, written partnership agreement, if written partnership, or documentation papers or motor boat registration previously provided for initial license purchase are still valid and current for renewal.
- (3) Current and valid state driver's license or state identification picture identification numbers and expiration dates shall be verified on mail license renewal applications or any other electronic license renewal process, otherwise the licensee shall provide a photocopy for renewal by mail or visit a Division License Office and present a current and valid picture identification pursuant to Subparagraph (a)(2) of this Rule.
- (4) The licensee's or responsible party's signature on the application shall certify all information as true and accurate. Notarization of signature on renewal applications is not required.
- (5) The Division of Marine Fisheries may require current copies of documentation for licenses, endorsements, commercial fishing vessel registration on renewal when necessary to verify inconsistent information or the information cannot be verified by independent sources.
- (6) If the linear length of the pier has not changed for the Ocean Fishing Pier License renewal, the responsible party shall certify that the length is accurate; otherwise, a Marine Patrol Officer's signature is required to certify the linear length before the license can be renewed.
- (7) Certification that shellfish dealer certification by North Carolina previously provided for issuance of Fish Dealer License with clam or oyster categories or consolidated license is still valid and current for renewal.

*Authority G.S. 113-134; 113-168; 113-168.1-6; 113-169; 113-169.2-5; 113-171.1; 113-174.3; ~~113-174.4; 143B-289.52~~*

#### **15A NCAC 030 .0106 DISPLAY OF LICENSES AND REGISTRATIONS**

NOTE: CHANGES TO 15A NCAC 030 .0106 INCLUDE CHANGES FOR THE FOR-HIRE LICENSE AND CHANGES IN OCEAN FISHING PIER LICENSING WHICH ARE COVERED IN A SEPARATE ANALYSIS.

(a) It is unlawful:

- (1) For any person to use a vessel required to be registered under the provisions of G.S. 113-168.6 in a commercial fishing operation without a current commercial fishing vessel registration decal mounted on an exterior surface so as to be plainly visible when viewed from the port side; and

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- (2) To display any commercial fishing vessel registration decal not issued for the vessel displaying it.
- (b) It is unlawful to fail to display any fish dealer's licenses required by G.S. 113-169.3, ocean fishing pier license required by ~~G.S. 113-169.4~~, or ~~Ocean Fishing Pier Blanket Coastal Recreational Fishing License (CRFL) pursuant to G.S. 113-174.4~~G.S. 113-169.4 in prominent public view in each location subject to licensing.
- (c) It is unlawful to fail to display a current For-Hire License decal on the exterior surface of the vessel so as to be visible when viewed from the port side while engaged in for-hire recreational fishing.

*Authority G.S. 113-168.6; 113-169.3; 113-169.4; ~~113-174.4~~; 143B-289.52*

#### **15A NCAC 030 .0112 FOR HIRE COASTAL RECREATIONAL FISHING**

- ~~(a) It is unlawful to operate a For Hire Vessel unless the vessel operator possesses either the For Hire Blanket Coastal Recreational Fishing License (CRFL) for the vessel or a Division of Marine Fisheries For Hire Fishing Permit for the vessel as provided in 15A NCAC 030 .0503(k).~~
- ~~(b)(a) It is unlawful for a For Hire Vessel for-hire operator to operate under the For Hire Blanket CRFL without:~~
- ~~(1) Holding the USCG-United States Coast Guard certification required in 15A NCAC 030 .0101(a)(13);~~
  - ~~(2) Having the For Hire Blanket CRFL for the vessel or copy thereof a copy of the for-hire license in possession and ready at hand for inspection; and~~
  - ~~(3) Having current picture identification in possession and ready at hand for inspection.~~
- ~~(c) It is unlawful for the holder of the For Hire Blanket CRFL to fail to participate in and provide accurate information as requested by the Division for biological sampling and survey programs.~~
- ~~(d) It is unlawful to fail to display a current For Hire Blanket CRFL decal mounted on an exterior surface of the vessel so as to be visible when viewed from the port side while engaged in for hire recreational fishing.~~
- (b) It is unlawful to operate a vessel in a for-hire operation without the vessel having a valid Commercial Fishing Vessel Registration with a for-hire endorsement, a Blanket For-Hire Vessel Coastal Recreational Fishing License or a Non-Blanket For-Hire Vessel License.
- (c) It is unlawful for the responsible party of a for-hire license to fail to provide to the Division of Marine Fisheries by Monday of each week a completed for-hire logbook detailing the fishing activity, or a no-activity report, for the previous week. For the purposes of this Paragraph, week is defined as Sunday through Saturday.

*Authority G.S. 113-134; 113-174.3; 143B-289.52*

**15A NCAC 030 .0501 PROCEDURES AND REQUIREMENTS TO OBTAIN PERMITS**

NOTE: CHANGES TO 15A NCAC 030 .0501 INCLUDE CHANGES FOR THE FOR-HIRE LICENSE AND CHANGES IN THE MANAGEMENT OF BAY SCALLOPS WHICH ARE COVERED IN A SEPARATE ANALYSIS.

(a) To obtain any Marine Fisheries permit, the following information is required for proper application from the applicant, a responsible party or person holding a power of attorney:

- (1) Full name, physical address, mailing address, date of birth, and signature of the applicant on the application. If the applicant is not appearing before a license agent or the designated Division contact, the applicant's signature on the application shall be notarized;
- (2) Unexpired picture identification of applicant, responsible party and, when applicable, person holding a power of attorney. Acceptable forms of picture identification are driver's license, North Carolina Identification card issued by the North Carolina Division of Motor Vehicles, military identification card, resident alien card (green card) or passport or if applying by mail, a copy thereof;
- (3) Full names and dates of birth of designees of the applicant who will be acting under the requested permit where that type permit requires listing of designees;
- (4) Certification that the applicant and his designees do not have four or more marine or estuarine resource convictions during the previous three years;
- (5) For permit applications from business entities:
  - (A) Business Name;
  - (B) Type of Business Entity: Corporation, partnership, or sole proprietorship;
  - (C) Name, address and phone number of responsible party and other identifying information required by this Subchapter or rules related to a specific permit;
  - (D) For a corporation, current articles of incorporation and a current list of corporate officers when applying for a permit in a corporate name;
  - (E) For a partnership, if the partnership is established by a written partnership agreement, a current copy of such agreement shall be provided when applying for a permit; and
  - (F) For business entities, other than corporations, copies of current assumed name statements if filed and copies of current business privilege tax certificates, if applicable; and
- (6) Additional information as required for specific permits.

(b) A permittee shall hold a valid Standard or Retired Standard Commercial Fishing License in order to hold a:

- (1) Pound Net Permit;
- (2) Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean; or
- (3) Atlantic Ocean Striped Bass Commercial Gear Permit.

(c) A permittee and his designees shall hold a valid Standard or Retired Standard Commercial Fishing License with a Shellfish Endorsement or a Shellfish License in order to hold a:

- (1) Permit to Transplant Prohibited (Polluted) Shellfish;
- (2) Permit to Transplant Oysters from Seed Oyster Management Areas;

- (3) Permit to Use Mechanical Methods for ~~Oysters or Clams~~ Shellfish on Shellfish Leases or Franchises;
- (4) Permit to Harvest Rangia Clams from Prohibited (Polluted) Areas; or
- (5) Depuration Permit.

(d) A permittee shall hold a valid:

- (1) Fish Dealer License in the proper category in order to hold Dealer Permits for Monitoring Fisheries Under a Quota/Allocation for that category; and
- (2) Standard Commercial Fishing License with a Shellfish Endorsement, Retired Standard Commercial Fishing License with a Shellfish Endorsement or a Shellfish License in order to harvest clams or oysters for depuration.

(e) Aquaculture Operations/Collection Permits:

- (1) A permittee shall hold a valid Aquaculture Operation Permit issued by the Fisheries Director to hold an Aquaculture Collection Permit.
- (2) The permittee or designees shall hold appropriate licenses from the Division of Marine Fisheries for the species harvested and the gear used under the Aquaculture Collection Permit.

(f) Atlantic Ocean Striped Bass Commercial Gear Permit:

- (1) ~~Application for an Atlantic Ocean Striped Bass Commercial Gear Permit must be made prior to November 1 of each year. A person shall declare one of the following gears for an initial Atlantic Ocean Striped Bass Commercial Gear Permit~~ Upon application for an Atlantic Ocean Striped Bass Commercial Gear Permit, a person shall declare one of the following gears for an initial permit and at intervals of three consecutive license years thereafter:

- (A) gill net;
- (B) trawl; or
- (C) beach seine.

For the purpose of this Rule, a beach seine is defined as a swipe net constructed of multi-filament or multi-fiber webbing fished from the ocean beach that is deployed from a vessel launched from the ocean beach where the fishing operation takes place.

Gear declarations are binding on the permittee for three consecutive license years without regard to subsequent annual permit issuance.

- (2) A person is not eligible for more than one Atlantic Ocean Striped Bass Commercial Gear Permit regardless of the number of Standard Commercial Fishing Licenses, Retired Standard Commercial Fishing Licenses or assignments held by the person.

~~(3) The annual, nonrefundable permit fee is ten dollars (\$10.00).~~

~~(g) For Hire Fishing Permit:~~

- ~~(1) The permittee shall hold a valid certification from the United States Coast Guard (USCG) that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers;~~

~~(2)~~ The permittee shall provide valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.

~~(h)~~(g) Applications submitted without complete and required information shall not be processed until all required information has been submitted. Incomplete applications shall be returned to the applicant with deficiency in the application so noted.

~~(i)~~(h) A permit shall be issued only after the application has been deemed complete by the Division of Marine Fisheries and the applicant certifies to abide by the permit general and specific conditions established under ~~15A NCAC 03J .0501, 03J .0505, 03K .0103, 03K .0104, 03K .0107, 03K .0206, 03K .0303, 03K .0401, 03O .0502, and 03O .0503~~ 15A NCAC 03J .0501, .0505, 03K .0103, .0104, .0107, .0111, .0401, 03O .0502, and .0503 as applicable to the requested permit.

~~(j)~~(i) The Fisheries Director, or his agent may evaluate the following in determining whether to issue, modify or renew a permit:

- (1) Potential threats to public health or marine and estuarine resources regulated by the Marine Fisheries Commission;
- (2) Applicant's demonstration of a valid justification for the permit and a showing of responsibility as determined by the Fisheries Director;
- (3) Applicant's history of habitual fisheries violations evidenced by eight or more violations in 10 years.

~~(k)~~(j) The Division of Marine Fisheries shall notify the applicant in writing of the denial or modification of any permit request and the reasons therefor. The applicant may submit further information, or reasons why the permit should not be denied or modified.

~~(l)~~(k) Permits are valid from the date of issuance through the expiration date printed on the permit. Unless otherwise established by rule, the Fisheries Director may establish the issuance timeframe for specific types and categories of permits based on season, calendar year, or other period based upon the nature of the activity permitted, the duration of the activity, compliance with federal or state fishery management plans or implementing rules, conflicts with other fisheries or gear usage, or seasons for the species involved. The expiration date shall be specified on the permit.

~~(m)~~(l) For permit renewals, the permittee's signature on the application shall certify all information as true and accurate. Notarization of signature on renewal applications is not required.

~~(n)~~(m) For initial or renewal permits, processing time for permits may be up to 30 days unless otherwise specified in this Chapter.

~~(o)~~(n) It is unlawful for a permit holder to fail to notify the Division of Marine Fisheries within 30 days of a change of name or address.

~~(p)~~(o) It is unlawful for a permit holder to fail to notify the Division of Marine Fisheries of a change of designee prior to use of the permit by that designee.

~~(q)~~(p) Permit applications are available at all Division Offices.

*Authority G.S. 113-134; 113-169.1; 113-169.3; 113-182; 113-210; 143B-289.52*

**15A NCAC 030 .0503 PERMIT CONDITIONS; SPECIFIC**

NOTE: CHANGES TO 15A NCAC 030 .0503 INCLUDE CHANGES FOR THE FOR-HIRE LICENSE AND CHANGES IN THE MANAGEMENT OF RIVER HERRING WHICH ARE COVERED IN A SEPARATE ANALYSIS.

(a) Horseshoe Crab Biomedical Use Permit:

- (1) It is unlawful to use horseshoe crabs for biomedical purposes without first obtaining a permit.
- (2) It is unlawful for persons who have been issued a Horseshoe Crab Biomedical Use Permit to fail to submit a report on the use of horseshoe crabs to the Division of Marine Fisheries due on February 1 of each year. Such reports shall be filed on forms provided by the Division and shall include a monthly account of the number of crabs harvested, statement of percent mortality up to the point of release, and a certification that harvested horseshoe crabs are solely used by the biomedical facility and not for other purposes.
- (3) It is unlawful for persons who have been issued a Horseshoe Crab Biomedical Use Permit to fail to comply with the Atlantic States Marine Fisheries Commission Interstate Fishery Management Plan for Horseshoe Crab monitoring and tagging requirements for horseshoe crabs. Copies of this plan are available from the Atlantic States Marine Fisheries Commission or the Division of Marine Fisheries' Morehead City Headquarters Office, P.O. Box 769, 3441 Arendell St., Morehead City, North Carolina 28557-0769.

(b) Dealers Permits for Monitoring Fisheries under a Quota/Allocation:

- (1) During the commercial season opened by proclamation or rule for the fishery for which a Dealers Permit for Monitoring Fisheries under a Quota/Allocation permit is issued, it is unlawful for the fish dealers issued such permit to fail to:
  - (A) fax or send via electronic mail by noon daily, on forms provided by the Division, the previous day's landings for the permitted fishery to the dealer contact designated on the permit. Landings for Fridays or Saturdays shall be submitted on the following Monday. If the dealer is unable to fax or electronic mail the required information, the permittee shall call in the previous day's landings to the dealer contact designated on the permit but shall maintain a log furnished by the Division;
  - (B) submit the required log to the Division upon request or no later than five days after the close of the season for the fishery permitted;
  - (C) maintain faxes and other related documentation in accordance with 15A NCAC 03I .0114;
  - (D) contact the dealer contact designated on the permit daily regardless of whether or not a transaction for the fishery for which a dealer is permitted occurred; and

Fiscal Note for Proposed Rule Changes to 15A NCAC 03I .0101, 03O .0101, .0106, .0112, .0501, and .0503

- (E) record the permanent dealer identification number on the bill of lading or receipt for each transaction or shipment from the permitted fishery.
- (2) Striped Bass Dealer Permit:
- (A) It is unlawful for a fish dealer to possess, buy, sell, or offer for sale striped bass taken from the following areas without first obtaining a Striped Bass Dealer Permit validated for the applicable harvest area:
    - (i) Atlantic Ocean;
    - (ii) Albemarle Sound Management Area as designated in 15A NCAC 03R .0201; and
    - (iii) the Joint and Coastal Fishing Waters of the Central/Southern Management Area as designated in 15A NCAC 03R .0201.
  - (B) No permittee shall possess, buy, sell, or offer for sale striped bass taken from the harvest areas opened by proclamation without having a North Carolina Division of Marine Fisheries issued valid tag for the applicable area affixed through the mouth and gill cover, or, in the case of striped bass imported from other states, a similar tag that is issued for striped bass in the state of origin. North Carolina Division of Marine Fisheries striped bass tags shall not be bought, sold, offered for sale, or transferred. Tags shall be obtained at the North Carolina Division of Marine Fisheries Offices. The Division of Marine Fisheries shall specify the quantity of tags to be issued based on historical striped bass landings. It is unlawful for the permittee to fail to surrender unused tags to the Division upon request.
- (3) Albemarle Sound Management Area for River Herring Dealer Permit: It is unlawful to possess, buy, sell, or offer for sale river herring taken from the following area without first obtaining an Albemarle Sound Management Area for River Herring Dealer Permit: Albemarle Sound Management Area for River Herring as defined in ~~15A NCAC 03J .0209~~ 15A NCAC 03R .0202.
- (4) Atlantic Ocean Flounder Dealer Permit:
- (A) It is unlawful for a fish dealer to allow vessels holding a valid License to Land Flounder from the Atlantic Ocean to land more than 100 pounds of flounder from a single transaction at their licensed location during the open season without first obtaining an Atlantic Ocean Flounder Dealer Permit. The licensed location shall be specified on the Atlantic Ocean Flounder Dealer Permit and only one location per permit shall be allowed.
  - (B) It is unlawful for a fish dealer to possess, buy, sell, or offer for sale more than 100 pounds of flounder from a single transaction from the Atlantic Ocean without first obtaining an Atlantic Ocean Flounder Dealer Permit.
- (5) Black Sea Bass North of Cape Hatteras Dealer Permit. It is unlawful for a fish dealer to purchase or possess more than 100 pounds of black sea bass taken from the Atlantic Ocean north of Cape

Hatteras (35° 15.0321' N) per day per commercial fishing operation during the open season unless the dealer has a Black Sea Bass North of Cape Hatteras Dealer Permit.

(c) Blue Crab Shedding Permit: It is unlawful to possess more than 50 blue crabs in a shedding operation without first obtaining a Blue Crab Shedding Permit from the Division of Marine Fisheries.

(d) Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean:

- (1) It is unlawful to trawl for shrimp in the Atlantic Ocean without Turtle Excluder Devices installed in trawls within one nautical mile of the shore from Browns Inlet (34° 35.7000' N latitude) to Rich's Inlet (34° 17.6000' N latitude) without a valid Permit to Waive the Requirement to Use Turtle Excluder Devices in the Atlantic Ocean when allowed by proclamation from April 1 through November 30.
- (2) It is unlawful to tow for more than 55 minutes from April 1 through October 31 and 75 minutes from November 1 through November 30 in this area when working under this permit. Tow time begins when the doors enter the water and ends when the doors exit the water.
- (3) It is unlawful to fail to empty the contents of each net at the end of each tow.
- (4) It is unlawful to refuse to take observers upon request by the Division of Marine Fisheries or the National Marine Fisheries Service.
- (5) It is unlawful to fail to report any sea turtle captured. Reports shall be made within 24 hours of the capture to the Marine Patrol Communications Center by phone. All turtles taken incidental to trawling shall be handled and resuscitated in accordance with requirements specified in 50 CFR 223.206, copies of which are available via the Internet at [www.nmfs.gov](http://www.nmfs.gov) and at the Division of Marine Fisheries, 127 Cardinal Drive Extension, Wilmington, North Carolina 28405.

(e) Pound Net Set Permits. Rule 15A NCAC 03J .0505 sets forth the specific conditions for pound net set permits.

(f) Aquaculture Operations/Collection Permits:

- (1) It is unlawful to conduct aquaculture operations utilizing marine and estuarine resources without first securing an Aquaculture Operation Permit from the Fisheries Director.
- (2) It is unlawful:
  - (A) to take marine and estuarine resources from Coastal Fishing Waters for aquaculture purposes without first obtaining an Aquaculture Collection Permit from the Fisheries Director.
  - (B) to sell, or use for any purpose not related to North Carolina aquaculture, marine and estuarine resources taken under an Aquaculture Collection Permit.
  - (C) to fail to submit to the Fisheries Director an annual report due on December 1 of each year on the form provided by the Division the amount and disposition of marine and estuarine resources collected under authority of this permit.
- (3) Lawfully permitted shellfish relaying activities authorized by 15A NCAC 03K .0103 and .0104 are exempt from requirements to have an Aquaculture Operation or Collection Permit issued by the Fisheries Director.

- (4) Aquaculture Operations/Collection Permits shall be issued or renewed on a calendar year basis.
- (5) It is unlawful to fail to provide the Division of Marine Fisheries with a listing of all designees acting under an Aquaculture Collection Permit at the time of application.

(g) Scientific or Educational Activity Permit:

- (1) It is unlawful for institutions or agencies seeking exemptions from license, rule, proclamation or statutory requirements to collect, hold, culture or exhibit for scientific or educational purposes any marine or estuarine species without first obtaining a Scientific or Educational Activity Permit.
- (2) The Scientific or Educational Activity Permit shall only be issued for scientific or educational purposes and for collection methods and possession allowances approved by the Division of Marine Fisheries.
- (3) The Scientific or Educational Activity Permit shall only be issued for approved activities conducted by or under the direction of Scientific or Educational institutions as defined in Rule 15A NCAC 03I .0101.
- (4) It is unlawful for the responsible party issued a Scientific or Educational Activity Permit to fail to submit a report on collections and, if authorized, sales to the Division of Marine Fisheries due on December 1 of each year unless otherwise specified on the permit. The reports shall be filed on forms provided by the Division. Scientific or Educational Activity permits shall be issued on a calendar year basis.
- (5) It is unlawful to sell marine or estuarine species taken under a Scientific or Educational Activity Permit without:
  - (A) the required license(s) for such sale;
  - (B) authorization stated on the permit for such sale; and
  - (C) providing the information required in Rule 15A NCAC 03I .0114 if the sale is to a licensed fish dealer.
- (6) It is unlawful to fail to provide the Division of Marine Fisheries a listing of all designees acting under a Scientific or Educational Activity Permit at the time of application.
- (7) The permittee or designees utilizing the permit shall call the Division of Marine Fisheries Communications Center at 800-682-2632 or 252-726-7021 not later than 24 hours prior to use of the permit, specifying activities and location.

(h) Under Dock Oyster Culture Permit:

- (1) It is unlawful to cultivate oysters in containers under docks for personal consumption without first obtaining an Under Dock Oyster Culture Permit.
- (2) An Under Dock Oyster Culture Permit shall be issued only in accordance with provisions set forth in G.S. 113-210(c).
- (3) The applicant shall complete and submit an examination, with a minimum of 70 percent correct answers, based on an educational package provided by the Division of Marine Fisheries pursuant to G.S. 113-210(j). The examination demonstrates the applicant's knowledge of:



- (A) the application process;
  - (B) permit criteria;
  - (C) basic oyster biology and culture techniques;
  - (D) shellfish harvest area closures due to pollution;
  - (E) safe handling practices;
  - (F) permit conditions; and
  - (G) permit revocation criteria.
- (4) Action by an Under Dock Oyster Culture Permit holder to encroach on or usurp the legal rights of the public to access public trust resources in Coastal Fishing Waters shall result in permit revocation.
- (i) Atlantic Ocean Striped Bass Commercial Gear Permit:
- (1) It is unlawful to take striped bass from the Atlantic Ocean in a commercial fishing operation without first obtaining an Atlantic Ocean Striped Bass Commercial Gear Permit.
  - (2) It is unlawful to use a single Standard Commercial Fishing License, including assignments, to obtain more than one Atlantic Ocean Striped Bass Commercial Gear Permit during a license year.
- (j) Coastal Recreational Fishing License Exemption Permit:
- (1) It is unlawful for the responsible party seeking exemption from recreational fishing license requirements for eligible individuals to conduct an organized fishing event held in Joint or Coastal Fishing Waters without first obtaining a Coastal Recreational Fishing License Exemption Permit.
  - (2) The Coastal Recreational Fishing License Exemption Permit shall only be issued for recreational fishing activity conducted solely for the participation and benefit of one of the following groups of eligible individuals:
    - (A) individuals with physical or mental limitations;
    - (B) members of the United States Armed Forces and their dependents, upon presentation of a valid military identification card, for military appreciation;
    - (C) individuals receiving instruction on recreational fishing techniques and conservation practices from employees of state or federal marine or estuarine resource management agencies, or instructors affiliated with educational institutions; and
    - (D) disadvantaged youths.

For purposes of this Paragraph, educational institutions include high schools and other secondary educational institutions.
  - (3) The Coastal Recreational Fishing License Exemption Permit is valid for the date(s), time and physical location of the organized fishing event for which the exemption is granted and the time period shall not exceed one year from the date of issuance.
  - (4) The Coastal Recreational Fishing License Exemption Permit shall only be issued when all of the following, in addition to the information required in 15A NCAC 03O .0501, is submitted to the Fisheries Director in writing a minimum of 30 days prior to the event:

- (A) the name, date(s), time and physical location of the event;
- (B) documentation that substantiates local, state, or federal involvement in the organized fishing event, if applicable;
- (C) the cost or requirements, if any, for an individual to participate in the event; and
- (D) an estimate of the number of participants.

~~(k) For Hire Fishing Permit:~~

- ~~(1) — It is unlawful to operate a For Hire Vessel unless the vessel operator possesses either the For Hire Blanket Coastal Recreational Fishing License (CRFL) for the vessel as provided in 15A NCAC 03O .0112 or a Division of Marine Fisheries For Hire Fishing Permit for the vessel.~~
- ~~(2) — It is unlawful for a For Hire vessel operator to operate under the For Hire Fishing Permit without:~~
  - ~~(A) — holding the USCG certification required in 15A NCAC 03O .0501(g)(1);~~
  - ~~(B) — having the For Hire Fishing Permit for the vessel or copy thereof in possession and ready at hand for inspection; and~~
  - ~~(C) — having current picture identification in possession and ready at hand for inspection.~~
- ~~(3) — It is unlawful for the permittee to fail to notify the Division within five days of any changes to information provided on the permit.~~
- ~~(4) — It is unlawful to fail to display a current For Hire Fishing Permit decal mounted on an exterior surface of the vessel so as to be visible when viewed from the port side while engaged in for hire recreational fishing.~~
- ~~(5) — The For Hire Fishing Permit is valid for one year from the date of issuance.~~

*Authority G.S. 113-134; 113-169.1; 113-169.3; 113-182; 113-210; 143B-289.52*

## Appendix 2: Excerpts from Session Law 2013-360, Section 14.8 (f), 14.8 (e), and 14.8 (o)

### "§ 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. 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 one hundred dollars (\$100.00) per permit.

(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)~~thirty dollars (\$30.00) per permit.

(c) To ensure an orderly transition from one permit year to the next, the Division may issue a permit prior to July 1 of the permit year for which the permit is valid. Revenue that the Division receives for the issuance of a permit prior to the beginning of a permit year shall not revert at the end of the fiscal year in which the revenue is received and shall be credited and available to the Division for the permit year in which the permit is valid."

### "§ 113-174.3. ~~For Hire Blanket CRFL.~~For-Hire Licenses.

(a) ~~License.— A person who operates a for hire boat may purchase a For Hire Blanket CRFL issued by the Division for the for hire boat. A For Hire Blanket CRFL authorizes all individuals on the for hire boat who do not hold a license issued under this Article or Article 25A of this Chapter to engage in recreational fishing in coastal fishing waters that are not joint fishing waters. A For Hire Blanket CRFL does not authorize individuals to engage in recreational fishing in joint fishing waters or inland fishing waters. A For Hire Blanket CRFL is valid for a period of one year from the date of issuance. The fee for a For Hire Blanket CRFL is:~~

- ~~(1) Two hundred fifty dollars (\$250.00) for a vessel that will carry six or fewer passengers.~~
- ~~(2) Three hundred fifty dollars (\$350.00) for a vessel that will carry greater than six passengers.~~

(b) ~~Implementation.— Except as provided in this section and G.S. 113-174.2(d), each individual on board a for hire boat engaged in recreational fishing, other than crew members who do not engage in recreational fishing, must hold a license issued under this Article or Article 25A of this Chapter. An owner, operator, or crew member of a for hire boat is not responsible for the licensure of a customer fishing from the boat.~~

(c) License. – It is unlawful for a person to engage in a for-hire operation without having obtained one of the following licenses issued by the Division:

- (1) Blanket For-Hire Captain's CRFL. – This license allows individuals properly licensed by the United States Coast Guard to carry passengers on any vessel with a commercial vessel registration with a for-hire endorsement. A Blanket For-Hire Captain's CRFL authorizes all individuals on the for-hire vessel who do not hold a license issued under this Article or Article 25A of this Chapter to engage in recreational fishing in coastal fishing waters that are not joint fishing waters. The resident fees for a Blanket For-Hire Captain's CRFL are two hundred fifty dollars (\$250.00) for a vessel carrying six or fewer passengers and three hundred fifty dollars (\$350.00) for a vessel carrying more than six passengers. The nonresident fees for a Blanket For-Hire Captain's CRFL are three hundred twelve dollars and fifty cents (\$312.50) for a vessel carrying six or fewer passengers and four hundred thirty-seven dollars and fifty cents (\$437.50) for a vessel carrying more than six passengers. Any vessel whose operator is licensed under this subdivision and that is engaged in for-hire fishing must obtain a Commercial Fishing Vessel Registration with a for-hire endorsement.
- (2) Blanket For-Hire Vessel CRFL. – This license allows any United States Coast Guard licensed operator to carry passengers aboard the licensed vessel. A Blanket For-Hire Vessel CRFL authorizes all individuals on the for-hire vessel who do not hold a license issued under this Article or Article 25A of this Chapter to engage in recreational fishing in coastal fishing waters that are not joint fishing waters. The resident fees for a Blanket For-Hire Vessel CRFL are two hundred fifty dollars (\$250.00) for a vessel carrying six or fewer passengers and three

hundred fifty dollars (\$350.00) for a vessel carrying more than six passengers. The nonresident fees for a Blanket For-Hire Vessel CRFL are three hundred twelve dollars and fifty cents (\$312.50) for a vessel carrying six or fewer passengers and four hundred thirty-seven dollars and fifty cents (\$437.50) for a vessel carrying more than six passengers. Any vessel whose operator is licensed under this subdivision and that is engaged in for-hire fishing is not required to obtain a Commercial Fishing Vessel Registration with a for-hire endorsement.

- (3) Non-Blanket For-Hire Vessel License. – This license allows any United States Coast Guard licensed operator to carry passengers aboard the licensed vessel. This license does not authorize individuals aboard the vessel to engage in recreational fishing unless they hold an individual CRFL issued under this Article or Article 25A of this Chapter. The fee for the Non-Blanket For-Hire Vessel License is twenty-five dollars (\$25.00) for a vessel operated by a resident operator and thirty-seven dollars and fifty cents (\$37.50) for a vessel operated by a nonresident operator. Any vessel whose operator is licensed under this subdivision and that is engaged in for-hire fishing is not required to obtain a Commercial Fishing Vessel Registration with a for-hire endorsement.

(d) A license issued under this section does not authorize individuals to engage in recreational fishing in joint fishing waters or inland fishing waters. All for-hire licenses expire on the last day of the license year.

(e) Each individual who obtains a for-hire license shall submit to the Division logbooks summarizing catch and effort statistical data to the Division. The Commission may adopt rules that determine the means and methods to satisfy the requirements of this subsection."

#### **"§ 113-168.6. Commercial fishing vessel registration.**

(a) As used in this subsection, a North Carolina vessel is a vessel that has its primary situs in the State. A vessel has its primary situs in the State if:

- (1) A certificate of number has been issued for the vessel under Article 1 of Chapter 75A of the General Statutes;
- (2) A certificate of title has been issued for the vessel under Article 4 of Chapter 75A of the General Statutes; or
- (3) A certification of documentation has been issued for the vessel that lists a home port in the State under 46 U.S.C. § 12101, et seq., as amended.

(b) The owner of a vessel used in a commercial fishing operation in the coastal fishing waters of the State or a North Carolina vessel used to land or sell fish in the State shall register the vessel with the Division. It is unlawful to use a vessel that is not registered with the Division in a commercial fishing operation or a for-hire operation in the coastal fishing waters of the State. It is unlawful to use a North Carolina vessel that is not registered with the Division to land or sell fish in the State. No registration is required for a vessel of any length that does not have a motor if the vessel is used only in connection with another vessel that is properly registered.

(b1) The vessel owner at the time of application for registration under subsection (b) of this section shall obtain either a commercial vessel endorsement if the vessel is intended to be used primarily for the harvest of fish for sale, a for-hire endorsement if the vessel is intended to be used primarily for for-hire activities, or both endorsements if the vessel is intended to be engaged in both activities. The owner of a vessel applying for a commercial fishing vessel registration with a for-hire endorsement must affirm liability coverage and knowledge of applicable United States Coast Guard safety requirements.

(c) The annual fee for a commercial fishing vessel registration shall be determined by the length of the vessel and shall be in addition to the fee for other licenses issued under this Article. The length of a vessel shall be determined by measuring the distance between the ends of the vessel along the deck and through the cabin, excluding the sheer. The annual fee for a commercial fishing vessel registration is:

- (1) ~~One dollar (\$1.00)~~ One dollar and twenty-five cents (\$1.25) per foot for a vessel not over 18 feet in length.
- (2) ~~One dollar and fifty cents (\$1.50)~~ One dollar and ninety cents (\$1.90) per foot for a vessel over 18 feet but not over 38 feet in length.
- (3) ~~Three dollars (\$3.00)~~ Three dollars and seventy-five cents (\$3.75) per foot for a vessel over 38 feet but not over 50 feet in length.

(4) ~~Six dollars (\$6.00)~~ Seven dollars and fifty cents (\$7.50) per foot for a vessel over 50 feet in length.

(d) A vessel may be registered at any office of the Division. A commercial fishing vessel registration expires on the last day of the license year.

(e) Within 30 days of the date on which the owner of a registered vessel transfers ownership of the vessel, the new owner of the vessel shall notify the Division of the change in ownership and apply for a replacement commercial fishing vessel registration. An application for a replacement commercial fishing vessel registration shall be accompanied by proof of the transfer of the vessel. The provisions of G.S. 113-168.1(h) apply to a replacement commercial fishing vessel registration."



**Fiscal Impacts of Proposed Rule Changes to the Ocean Fishing Pier License and Ocean Fishing Pier Blanket Coastal Recreational Fishing License to Reflect Statutory Changes Implemented in Session Law 2013-360**

**Rule Amendments:** 15A NCAC 03O .0101 PROCEDURES AND REQUIREMENTS TO OBTAIN LICENSES, ENDORSEMENTS AND COMMERCIAL FISHING VESSEL REGISTRATIONS  
15A NCAC 03O .0106 DISPLAY OF LICENSES AND REGISTRATIONS  
15A NCAC 03O .0113 OCEAN FISHING PIER BLANKET COASTAL RECREATIONAL FISHING LICENSE

**Name of Commission:** N.C. Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
N.C. Division of Marine Fisheries  
3441 Arendell Street  
Morehead City, NC 28557  
(252) 808-8107  
john.hadley@ncdenr.gov

**Impact Summary:** State government: No  
Local government: No  
Federal government: No  
Substantial impact: No

**Authority:** Session Law 2013-360, Section 14.8(j); § 113-169.4.

**Necessity:** In accordance with Session Law 2013-360, the proposed rule changes combine two separate ocean pier licenses into one Ocean Fishing Pier License with the same net cost as the previous two licenses combined. The rule changes are necessary to remove rule references to the Ocean Fishing Pier Coastal Recreational Fishing License (CRFL), which was eliminated by the recent statutory changes.

## **I. Summary**

The proposed rule changes eliminate rule references to the Ocean Fishing Pier CRFL to reflect recent legislation and statutory changes combining the Ocean Fishing Pier License with the Ocean Fishing Pier Blanket CRFL into one license at the same net cost of the two previous licenses. These changes are expected to streamline the licensing process for ocean fishing pier operations.

## **II. Introduction and Purpose of Rule Changes**

Ocean fishing piers open to the public have been required to obtain a license from the North Carolina Division of Marine Fisheries (NCDMF) since the 1997 Fisheries Reform Act. The fee for an Ocean Fishing Pier License was initially set and has remained at

**Fiscal Note for Proposed Rule Changes 15A NCAC 03O .0101, 15A NCAC 03O .0106, and 15A NCAC 03O .0113**

\$0.50 per foot of linear length of the pier. Legislation authorizing the CRFL enacted on January 1, 2007 provided for a voluntary Ocean Fishing Pier Blanket CRFL for a cost of \$4.00 per foot of linear length of the pier. This license authorized any patron of the pier who did not hold a CRFL to engage in recreational fishing while on the pier. If a pier owner opted not to purchase this license, each patron would need to hold his or her own individual Coastal Recreational Fishing License.

Currently, there are approximately 20 ocean fishing piers along the North Carolina coast open to the public. Each of these piers has been purchasing both the Ocean Fishing Pier License and the Ocean Fishing Pier Blanket CRFL each year, for a combined cost of \$4.50 per foot of linear length. The Ocean Fishing Pier License is based on a fiscal year, while the Ocean Fishing Pier Blanket CRFL is effective for one year from date of purchase. The new Ocean Fishing Pier License, authorizing all pier patrons to engage in recreational fishing, will remain on a fiscal year cycle and cost \$4.50 per foot of linear length of the pier. Combining these two licenses makes administrative sense as it eliminates one license and aligns the date for renewal. The proposed rule changes reflect the recent statutory changes combining the two pier licenses by eliminating references to the Ocean Fishing Pier Blanket CRFL.

### **III. Costs**

There are no expected costs associated with the proposed rule changes. The rule changes remove references to the Ocean Fishing Pier Blanket CRFL, which was eliminated as part of Session Law 2013-360. The new Ocean Fishing Pier License combines the privileges and costs associated with the two licenses into one license.

### **IV. Benefits**

The proposed rule changes are expected to streamline the licensing process for ocean fishing pier operations. Ocean fishing pier operations will need to obtain one license from NCDMF instead of two licenses for their pier. Furthermore, removing references in rule to the Ocean Fishing Pier Blanket CRFL will maintain rule clarity, as this license was eliminated via a statutory change and no longer exists.



## Appendix I: Proposed Rule Changes

NOTE: CHANGES TO 15A NCAC 03O .0101 INCLUDE BOTH CHANGES FOR OCEAN FISHING PIER LICENSING AND CHANGES FOR FOR-HIRE LICENSING WHICH IS COVERED IN A SEPARATE ANALYSIS.

### 15A NCAC 03O .0101 PROCEDURES AND REQUIREMENTS TO OBTAIN LICENSES, ENDORSEMENTS AND COMMERCIAL FISHING VESSEL REGISTRATIONS

(a) To obtain any Marine Fisheries licenses, endorsements, commercial fishing vessel registrations except Recreational Fishing Tournament Licenses to Sell Fish and Land or Sell Licenses, the following information is required for the application by the licensee, a responsible party or person holding a power of attorney:

- (1) Full name, physical address, mailing address, date of birth, and signature of the licensee on the application. If the licensee is not appearing before a license agent or a representative of the Division, the licensee's signature on the application shall be notarized;
- (2) Current picture identification of licensee or responsible party; acceptable forms of picture identification are driver's license, state identification card, military identification card, resident alien card (green card) or passport or if purchased by mail, a copy thereof;
- (3) Certification that the applicant does not have four or more marine or estuarine resource violations during the previous three years, except Blanket Coastal Recreational Fishing Licenses;
- (4) Valid documentation papers or current motor boat registration or copy thereof when purchasing a commercial fishing vessel registration. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted;
- (5) Current articles of incorporation and a current list of corporate officers when purchasing a license or commercial fishing vessel registration in a corporate name. In the case of incorporation of an individual fishing vessel, the name of the master of that vessel shall also be specified. It is unlawful to fail to notify the Morehead City Office of the Division of Marine Fisheries within five days of change of the master specified for that vessel;
- (6) An affirmation of liability insurance and that the operator is knowledgeable of United States Coast Guard (USCG) safety requirements for the vessel(s) used in the operation in accordance with G.S. 113-168.6 when purchasing a commercial fishing vessel registration with a for-hire endorsement.
- ~~(6)~~(7) If a partnership is established by a written partnership agreement, a current copy of such agreement shall be provided when purchasing a license, endorsement or commercial fishing vessel registration in a partnership name;

**Fiscal Note for Proposed Rule Changes 15A NCAC 03O .0101, 15A NCAC 03O .0106, and 15A NCAC 03O .0113**

- ~~(7)~~(8) For nonresidents, certification of the state of residency;
- ~~(8)~~(9) In addition to the information required in G.S. 113-169.4, linear length of pier when purchasing an Ocean Fishing Pier License;
- ~~(9)~~(10) In addition to the information required in G.S. 113-171.1, current aircraft registration and list of operator(s) when purchasing a Spotter Plane License;
- ~~(10)~~(11) In addition, for fish dealers licenses, the physical address of the established location where business is conducted and, if different, the address where records are kept;
- ~~(11)~~(12) When purchasing a Fish Dealer License with clam or oyster categories or a consolidated license, the applicant shall provide valid certification as a North Carolina certified shellfish dealer;
- ~~(12)~~ In addition, for the ~~Ocean Fishing Pier Blanket Coastal Recreation Fishing License~~, a valid ~~Ocean Fishing Pier License~~ issued in the name of the applicant or copy thereof.
- (13) In addition, for the ~~For Hire Blanket~~ For-Hire Captain's Coastal Recreational Fishing License, License (CRFL), the applicant shall ~~provide~~provide a valid certification from the USCG that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers; and
- ~~(A)~~ A valid ~~certification from the United States Coast Guard (USCG) that allows carrying six or fewer passengers or a certification from the USCG that allows carrying more than six passengers; and~~
- ~~(B)~~ Valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.
- ~~(14)~~ In addition, for the Blanket For-Hire Vessel CRFL or the Non-Blanket For-Hire Vessel License, valid documentation papers or current motor boat registration or copies thereof for the vessel engaged as for-hire. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.
- (b) License to Land Flounder from the Atlantic Ocean.
- (1) To qualify for a License to Land Flounder from the Atlantic Ocean, the applicant shall:
- (A) have landed in North Carolina at least 1,000 pounds of flounder from a single vessel each year from the Atlantic Ocean during any two of the 1992-93, 1993-94, 1994-95 license years for which the person had a vessel that was licensed to land in North Carolina; and
- (B) have been licensed under G.S. 113-152 or 113-153 during any two of the 1992-93, 1993-94, or 1994-95 license years; and

(C) hold a valid Standard or Retired Standard Commercial Fishing License or valid Land or Sell License.

- (2) It is lawful for a person to hold Licenses to Land Flounder from the Atlantic Ocean equal to the number of vessels that he owns that individually met the eligibility requirements of Parts (b)(1)(A) and (b)(1)(B) of this Rule.
- (3) The License to Land Flounder from the Atlantic Ocean is only valid when used on the vessel specified at the time of license issuance.
- (4) At the time of issuance, the applicant for the License to Land Flounder from the Atlantic Ocean shall specify the name of the master of the vessel for each License to Land Flounder from the Atlantic Ocean issued.
- (5) Applicants for a License to Land Flounder from the Atlantic Ocean shall complete an application form provided by the Division of Marine Fisheries and submit it to the Morehead City Office of the Division of Marine Fisheries for processing.
- (6) It is unlawful for the holder of the License to Land Flounder from the Atlantic Ocean to fail to notify the Morehead Office of the Division of Marine Fisheries within five days of change as to the master identified on the license.
- (7) Licenses to Land Flounder from the Atlantic Ocean are issued for the current license year and expire on June 30.

(c) To obtain a Recreational Fishing Tournament License to Sell Fish, the tournament organizer shall apply with the Division of Marine Fisheries at least 30 days prior to the starting date of the tournament with the following required information:

- (1) Full name, physical address, mailing address, date of birth, signature of the tournament organizer, name of tournament, and dates of tournament on the license application. If the licensee is not appearing before a representative of the Division, the licensee's signature shall be notarized on the application.
- (2) Current picture identification of tournament organizer; acceptable forms of picture identification are driver's license, state identification card, military identification card, or passport, or if purchased by mail, a copy thereof.

(d) To obtain a Land or Sell License, the following information is required for a proper application:

- (1) Full name, physical address, mailing address, date of birth, and signature of the responsible party or master for the vessel on the license application. If the licensee is not appearing before a representative of the Division, the licensee's signature on the application shall be notarized on the application;
- (2) Current picture identification of responsible party or master; acceptable forms of picture identification are driver's license, state identification card, military identification card, or passport or if applying by mail, a copy thereof;

- (3) Valid documentation papers or current motor boat registration or copy thereof when purchasing a commercial fishing vessel registration. If an application for transfer of documentation is pending, a copy of the pending application and a notarized bill of sale may be submitted.

Fees shall be based on the vessel's homeport as it appears on the U.S. Coast Guard documentation papers or the State in which the vessel is registered.

(e) Proof of residency in North Carolina for:

- (1) Standard Commercial Fishing License or Retired Standard Commercial Fishing License shall require a notarized certification from the applicant that the applicant is a resident of the State of North Carolina as defined by G.S. 113-130(4); and
- (A) a notarized certification from the applicant that a North Carolina State Income Tax Return was filed for the previous calendar or tax year as a North Carolina resident; or
- (B) a notarized certification that the applicant was not required to file a North Carolina State Income Tax Return for the previous calendar or tax year; or
- (C) military identification, military dependent identification and permanent change of station orders or assignment orders substantiating individual's active duty assignment at a military facility in North Carolina.
- (2) All other types of licenses:
- (A) North Carolina voter registration card; or
- (B) Current North Carolina Driver's License; or
- (C) Current North Carolina Certificate of Domicile; or
- (D) Current North Carolina Identification Card issued by the North Carolina Division of Motor Vehicles; or
- (E) Military identification, military dependent identification and permanent change of station orders or assignment orders substantiating individual's active duty assignment at a military facility in North Carolina.

(f) Applications submitted without complete and required information shall be deemed incomplete and shall not be considered further until resubmitted with all required information.

(g) It is unlawful for a license or registration holder to fail to notify the Division of Marine Fisheries within 30 days of a change of address.

(h) Licenses are available at Offices of the Division or by mail from the Morehead City Office, unless otherwise specified. In addition, Recreational Commercial Gear Licenses are available at Wildlife Service Agents who have been designated as agents of the Department.

(i) To renew any Marine Fisheries licenses, endorsements, and commercial fishing vessel registration, except Recreational Commercial Gear Licenses, the following is required for the renewal application by the licensee, a responsible party or person holding a power of attorney;

- (1) The information required in Subparagraphs (a)(4), (a)(5), and (a)(6) of this Rule are only required if a change has occurred since the last issuance of license, endorsement or commercial fishing vessel registration.
- (2) Certification that articles of incorporation and list of corporate officers, if incorporated, written partnership agreement, if written partnership, or documentation papers or motor boat registration previously provided for initial license purchase are still valid and current for renewal.
- (3) Current and valid state driver's license or state identification picture identification numbers and expiration dates shall be verified on mail license renewal applications or any other electronic license renewal process, otherwise the licensee shall provide a photocopy for renewal by mail or visit a Division License Office and present a current and valid picture identification pursuant to Subparagraph (a)(2) of this Rule.
- (4) The licensee's or responsible party's signature on the application shall certify all information as true and accurate. Notarization of signature on renewal applications is not required.
- (5) The Division of Marine Fisheries may require current copies of documentation for licenses, endorsements, commercial fishing vessel registration on renewal when necessary to verify inconsistent information or the information cannot be verified by independent sources.
- (6) If the linear length of the pier has not changed for the Ocean Fishing Pier License renewal, the responsible party shall certify that the length is accurate; otherwise, a Marine Patrol Officer's signature is required to certify the linear length before the license can be renewed.
- (7) Certification that shellfish dealer certification by North Carolina previously provided for issuance of Fish Dealer License with clam or oyster categories or consolidated license is still valid and current for renewal.

*Authority G.S. 113-134; 113-168; 113-168.1-6; 113-169; 113-169.2-5; 113-171.1; 113-174.3; ~~113-174.4;~~  
143B-289.52*

NOTE: CHANGES TO 15A NCAC 030 .0106 INCLUDE BOTH CHANGES FOR OCEAN FISHING PIER LICENSING AND CHANGES FOR FOR-HIRE LICENSING WHICH IS COVERED IN A SEPARATE ANALYSIS.

**15A NCAC 030 .0106 DISPLAY OF LICENSES AND REGISTRATIONS**

**Fiscal Note for Proposed Rule Changes 15A NCAC 030 .0101, 15A NCAC 030 .0106, and 15A NCAC 030 .0113**

(a) It is unlawful:

- (1) For any person to use a vessel required to be registered under the provisions of G.S. 113-168.6 in a commercial fishing operation without a current commercial fishing vessel registration decal mounted on an exterior surface so as to be plainly visible when viewed from the port side; and
- (2) To display any commercial fishing vessel registration decal not issued for the vessel displaying it.

(b) It is unlawful to fail to display any fish dealer's licenses required by G.S. 113-169.3, ocean fishing pier license required by ~~G.S. 113-169.4, or Ocean Fishing Pier Blanket Coastal Recreational Fishing License (CRFL) pursuant to G.S. 113-174.4~~ G.S. 113-169.4 in prominent public view in each location subject to licensing.

(c) It is unlawful to fail to display a current For-Hire License decal on the exterior surface of the vessel so as to be visible when viewed from the port side while engaged in for-hire recreational fishing.

*Authority G.S. 113-168.6; 113-169.3; 113-169.4; ~~113-174.4~~; 143B-289.52*

**15A NCAC 030 .0113 OCEAN FISHING PIER ~~BLANKET COASTAL RECREATIONAL FISHING-LICENSE~~ REPORTING REQUIREMENTS**

~~(a) The length of the pier used to determine the license fee for an Ocean Fishing Pier Blanket Coastal Recreational Fishing License shall be obtained from the Ocean Fishing Pier License.~~

~~(b) It is unlawful for the responsible party of the Ocean Fishing Pier ~~Blanket Coastal Recreational Fishing License~~ to fail to provide to the Division by the 10th of each month a daily count of anglers fishing from the licensed pier from the previous month, including a daily count of zero for days when anglers did not fish. The information shall be submitted on a paper form provided by the Division or via electronic mail.~~

*Authority G.S. 113-134; 113-169.4; 113-174.1; ~~113-174.4~~; 143B-289.52*

**Appendix II: Excerpt from Session Law 2013-360, Section 14.8 (j):****"§ 113-169.4. Licensing of ocean fishing piers; fees.**

(a) The owner or operator of an ocean fishing pier within the coastal fishing waters who charges the public a fee to fish in any manner from the pier shall secure a current and valid pier license from the Division. An application for a pier license shall disclose the names of all parties involved in the pier operations, including the owner of the property, owner of the pier if different, and all leasehold or other corporate arrangements, and all persons with a substantial financial interest in the pier.

(b) Within 30 days following a change of ownership of a pier, or a change as to the manager, the manager or new manager shall secure a replacement pier license as provided in G.S. 113-168.1(h).

(c) Pier licenses are issued upon payment of ~~fifty cents (50¢)~~ four dollars and fifty cents (\$4.50) per linear foot, to the nearest foot, that the pier extends into coastal fishing waters beyond the mean high waterline. The length of the pier shall be measured to include all extensions of the pier.

(d) The manager who secures the pier license shall be the individual with the duty of executive-level supervision of pier operations.

(e) The pier license issued under this section authorizes any individual who does not hold a Coastal Recreational Fishing License under Article 14B or Article 25A of this Chapter to engage in recreational fishing while on the pier."





**Fiscal Impacts of Proposed Rule Changes to 15A NCAC 03J .0301 POTS and 15A NCAC 03I .0122 USER CONFLICT RESOLUTION**

**Name of Commission:** N.C. Marine Fisheries Commission

**Agency Contact:** John Hadley, Fisheries Economics Program Manager  
N.C. Division of Marine Fisheries  
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**Impact Summary:** *De minimis* rule change  
State government: No  
Local government: No  
Federal government: No  
Substantial impact: No

**Authority:** G.S. 113-133 (Abolition of Local Coastal Fishing Laws); 113-134 (Rules); 113-181 (Duties and Powers of Department); 113-182 (Regulation of Fishing and Fisheries); 113-221.1 (Proclamations; Emergency Review); 143B-289.52 (Marine Fisheries Commission – Powers and Duties)

**Necessity:** The current user conflict rule in 15 NCAC 03J .0301(j) arose in the context of conflict involving crab pots and has been located in the pots section of that subchapter of the N.C. Administrative Code since it was originally adopted. In practice, the rule is now being used for a variety of user conflicts, involving several different types of gears. Division staff is concerned that the location of the user conflict rule in a section on pots is not the most logical or visible place for the public to locate general information related to user conflicts. The continuing need to use 15A NCAC 03J .0301(j) to address all types of user conflicts validates the relocation of this paragraph of the rule to the General Rules subchapter for improved rule clarity.

## **I. Summary**

Recent use of the rule addressing user conflict resolution 15A NCAC 03J .0301(j) for a user conflict that did not involve the use of pots has revealed the need to move this paragraph of the rule from the section dealing with pots, dredges, and other fishing devices to the General Rules subchapter of the N.C. Marine Fisheries Commission rules for improved clarity and improved access by the public. The proposed rule changes do not have an anticipated quantifiable cost or benefit. Rule changes are anticipated to become effective April 1, 2015.

## II. Introduction and Purpose of Rule Changes

Managing conflicts between users of public trust resources is a part of managing the resource. The N.C. Department of Environment and Natural Resources is charged with administering the governing statutes and adopting rules in a manner to reconcile as equitably as possible the various competing interests of the people as regards these resources, considering the interests of those whose livelihood depends upon full and wise use of renewable and nonrenewable resources and also the interests of the many whose approach is recreational (G.S. 113-133). The department (G.S. 113-181) and the N.C. Marine Fisheries Commission (G.S. 143B-289.52) are also charged with regulating placement of nets and other sports or commercial fishing apparatus in coastal fishing waters with regard to navigational and recreational safety as well as from a conservational standpoint. Additionally, the inclusion of information on user conflicts is considered necessary for the management of commercially and recreationally important marine or estuarine species of fisheries in the state, and the department is required to provide that information in its fishery management plans (G.S. 113-182.1). As the N.C. Division of Marine Fisheries (NCDMF) is primarily responsible for management of marine and estuarine resources, both in the department and as staff to the commission, the division is the agency primarily responsible for carrying out these mandates concerning fishing activities in coastal fishing waters.

Perhaps the most persistent and ubiquitous gear involved in user conflict issues is crab pots. The N.C. Blue Crab Fishery Management Plan states that crab pot landings have been recorded in North Carolina since 1952 and efforts to resolve user conflicts concerning crab pots have been in place since 1955. The unusually high effort in the crab pot fishery coupled with increases in coastal residency and boat ownership contributed to many conflicts between user groups. These factors led to the delegation of proclamation authority from the N.C. Marine Fisheries Commission to the Fisheries Director to address user conflict issues as a management strategy contained in the N.C. Blue Crab Fishery Management Plan. The regulation was added to the section of the N.C. Administrative Code designated for pots, dredges, and other fishing devices, effective Aug. 1, 2000. Use of this proclamation authority provides a much faster mechanism for implementing measures to alleviate user conflicts. As a result, 15A NCAC 03J .0301 was amended effective Sept. 1, 2005 to make the wording more generic so it could be used to address non-crab pot types of user conflicts. This rule continues to be used today to address user conflicts stemming from the use of multiple types of gear.

As the rule is actually being used for a variety of user conflicts, clarity will be better served by moving the user conflict part of the rule to the General Rules subchapter. User conflicts in general and user conflicts between fishermen and adjacent landowners in particular appear to be increasing. Relatively recent episodes in Carteret County indicate that these fisherman-landowner conflicts may become more frequent. The requirements and procedures set out in the user conflict rule and the Marine Fisheries Commission Mediation Standard Operating Procedure provide specific guidance for careful and deliberate handling of these conflicts. These requirements and procedures are designed to manage disputes in a way that achieves lasting resolution amenable to all parties. The overall goal is to promote cooperation and understanding among user groups, and strengthen North Carolina's commitment to maintaining user diversity and public access to fishing opportunities and fisheries resources. Use of the proposed adopted user

conflict rule including the mediation policy will be the first priority for resolving user conflicts and should be readily accessible to the public.

Additionally, part of the proposed rule change regarding proclamation authority has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority across North Carolina Marine Fisheries Commission (NCMFC) rules. NCDMF staff has identified that proclamation authority across several rules is often similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. The rule change is not intended to alter the scope of the proclamation authority, nor is it being proposed with the intention of changing current management.

### **III. Costs**

There are no expected costs associated with the proposed rule changes. These changes are being sought to improve clarity to the public of the location and intended use of rules related to user conflict resolution.

### **IV. Benefits**

While there are no quantifiable economic benefits to the proposed rule changes, the public is expected to benefit from changes, as the rules related to user conflict resolution will be more easily recognized and clearly stated, especially for conflicts not involving pots.

## Appendix 1: Proposed Amendments

### 15A NCAC 03I .0122 USER CONFLICTS

(a) In order to address user conflicts, the Fisheries Director may, by proclamation, impose any or all of the following restrictions:

- (1) specify time;
- (2) specify areas;
- (3) specify means and methods;
- (4) specify seasons; and
- (5) specify quantity.

This authority may be used based on the Fisheries Director's own findings or on the basis of a valid request in accordance with Paragraph (b) of this Rule. The Fisheries Director shall hold a public meeting in the area of the user conflict prior to issuance of a proclamation based on his or her own findings.

(b) Request for user conflict resolution:

- (1) Any person(s) desiring user conflict resolution may make such request in writing addressed to the Director of the Division of Marine Fisheries, P.O. Box 769, 3441 Arendell St., Morehead City, NC 28557-0769. Such requests shall contain the following information:
  - (A) a map of the affected area including an inset vicinity map showing the location of the area with detail sufficient to permit on-site identification and location;
  - (B) identification of the user conflict causing a need for user conflict resolution;
  - (C) recommended solution for resolving user conflict; and
  - (D) name and address of the person(s) requesting user conflict resolution.
- (2) Within 90 days of the receipt of the information required in Subparagraph (b)(1) of this Rule, the Fisheries Director shall review the information and determine if user conflict resolution is necessary. If user conflict resolution is not necessary, the Fisheries Director shall deny the request. If user conflict resolution is necessary, the Fisheries Director or designee shall hold a public meeting in the area of the user conflict. The requestor shall present his or her request at the public meeting. Other parties affected may participate at the discretion of the Fisheries Director.
- (3) Following the public meeting as described in Subparagraph (b)(2), the Fisheries Director shall refer the users in the conflict for mediation or deny the request. If the user conflict cannot be resolved through mediation, the Fisheries Director shall submit for approval a proclamation to the Marine Fisheries Commission that addresses the conflict.
- (4) Proclamations issued under this Rule shall suspend appropriate rules or portions of rules under the authority of the Marine Fisheries Commission as specified in the proclamation. The provisions of 15A NCAC 03I .0102 terminating suspension of a rule pending the

next Marine Fisheries Commission meeting and requiring review by the Marine Fisheries Commission at the next meeting shall not apply to proclamations issued under this Rule.

*Authority G. S. 113-134; 113-181; 113-182; 113-221.1; 143B-289.52*

NOTE: CHANGES TO 15A NCAC 03J .0301 INCLUDE BOTH CHANGES FOR USER CONFLICT ISSUES AND CHANGES TO THE MANAGEMENT OF AMERICAN EEL WHICH IS COVERED IN A SEPARATE ANALYSIS.

**15A NCAC 03J .0301 POTS**

(a) It is unlawful to use pots except during time periods and in areas specified herein:

- (1) In Coastal Fishing Waters from December 1 through May 31, except that all pots shall be removed from ~~internal waters~~ Internal Waters from January 15 through February 7. Fish pots upstream of U.S. 17 Bridge across Chowan River and upstream of a line across the mouth of Roanoke, Cashie, Middle and Eastmost Rivers to the Highway 258 Bridge are exempt from the January 15 through February 7 removal requirement. The Fisheries Director may, by proclamation, reopen various waters to the use of pots after January 19 if it is determined that such waters are free of pots.
- (2) From June 1 through November 30, north and east of the Highway 58 Bridge at Emerald Isle:
  - (A) In areas described in 15A NCAC 03R .0107(a);
  - (B) To allow for the variable spatial distribution of crustacea and finfish, the Fisheries Director may, by proclamation, specify time periods for or designate the areas described in 15A NCAC 03R .0107(b); or any part thereof, for the use of pots.
- (3) From May 1 through November 30 in the Atlantic Ocean and west and south of the Highway 58 Bridge at Emerald Isle in areas and during time periods designated by the Fisheries Director by proclamation.

The Fisheries Director may, by proclamation authority established in 15A NCAC 03L .0201, further restrict the use of pots to take blue crabs.

(b) It is unlawful to use pots:

- (1) in any navigation channel marked by State or Federal agencies; or
- (2) in any turning basin maintained and marked by the North Carolina Ferry Division.

(c) It is unlawful to use pots in a commercial fishing operation unless each pot is marked by attaching a floating buoy which shall be of solid foam or other solid buoyant material and no less than five inches in diameter and no less than five inches in length. Buoys may be of any color except yellow or hot pink or any combination of colors that include yellow or hot pink. The owner shall always be identified on the attached

**Fiscal Note for Proposed Rule Changes 15A NCAC 03I .0122 and 15A NCAC 03J .0301**

buoy by using engraved buoys or by engraved metal or plastic tags attached to the buoy. Such identification shall include one of the following:

- (1) gear owner's current motorboat registration number; or
- (2) gear owner's U.S. vessel documentation name; or
- (3) gear owner's last name and initials.

(d) Pots attached to shore or a pier shall be exempt from Subparagraphs (a)(2) and (a)(3) of this Rule.

(e) It is unlawful to use shrimp pots with mesh lengths smaller than one and one-fourth inches stretch or five-eighths-inch bar.

(f) It is unlawful to use ~~eel-pots to take eels~~ with mesh ~~sizes-lengths~~ smaller than ~~one inch by one-half inch unless such pots contain one-half inch by one-half inch, except until January 1, 2017 eel pots of any mesh length with~~ an escape panel that is at least four inches square with a mesh ~~size-length~~ of one inch by one-half inch located in the outside panel of the upper chamber of rectangular pots and in the rear portion of cylindrical pots, ~~except that not more than two eel-pots per fishing operation with a mesh of any size may be used to take eels for bait-pots are allowed.~~

(g) It is unlawful to use crab pots in ~~coastal fishing waters~~ Coastal Fishing Waters unless each pot contains no less than two unobstructed escape rings that are at least two and five-sixteenths inches inside diameter and located in the opposite outside panels of the upper chamber of the pot, except the following are exempt from the escape ring requirements:

- (1) unbaited pots;
- (2) pots baited with a male crab; and
- (3) pots set in areas and during time periods described in 15A NCAC 03R .0118.

(h) The Fisheries Director may, by proclamation, exempt the escape ring requirements described in Paragraph (g) of this Rule in order to allow the harvest of mature female crabs and may impose any or all of the following restrictions:

- ~~(1) specify areas;~~
- ~~(2) specify time periods; and~~
- ~~(3) specify means and methods.~~
- (1) specify time;
- (2) specify areas;
- (3) specify means and methods;
- (4) specify seasons; and
- (5) specify quantity.

(i) It is unlawful to use more than 150 crab pots per vessel in Newport River.

(j) It is unlawful to remove crab pots from the water or remove crabs from crab pots between one hour after sunset and one hour before sunrise.

~~(k) User Conflicts:~~

- ~~(1) In order to address user conflicts, the Fisheries Director may by proclamation impose any or all of the following restrictions:~~
- ~~(A) specify areas;~~
  - ~~(B) specify time periods; and~~
  - ~~(C) specify means and methods.~~
- ~~The Fisheries Director shall hold a public meeting in the affected area before issuance of such proclamation.~~
- ~~(2) Any person(s) desiring user conflict resolution may make such request in writing addressed to the Director of the Division of Marine Fisheries, P.O. Box 769, 3441 Arendell St., Morehead City, North Carolina 28557-0769. Such requests shall contain the following information:~~
- ~~(A) a map of the affected area including an inset vicinity map showing the location of the area with detail sufficient to permit on-site identification and location;~~
  - ~~(B) identification of the user conflict causing a need for user conflict resolution;~~
  - ~~(C) recommended solution for resolving user conflict; and~~
  - ~~(D) name and address of the person(s) requesting user conflict resolution.~~
- ~~(3) Upon the requestor's demonstration of a user conflict to the Fisheries Director and within 90 days of the receipt of the information required in Subparagraph (k)(2) of this Rule, the Fisheries Director shall issue a public notice of intent to address a user conflict. A public meeting shall be held in the area of the user conflict. The requestor shall present his or her request at the public meeting, and other parties affected may participate.~~
- ~~(4) The Fisheries Director shall deny the request or submit a proclamation that addresses the results of the public meeting to the Marine Fisheries Commission for their approval.~~
- ~~(5) Proclamations issued under Subparagraph (k)(1) of this Rule shall suspend appropriate rules or portions of rules under 15A NCAC 03R .0107 as specified in the proclamation. The provisions of 15A NCAC 03I .0102 terminating suspension of a rule pending the next Marine Fisheries Commission meeting and requiring review by the Marine Fisheries Commission at the next meeting shall not apply to proclamations issued under Subparagraph (k)(1) of this Rule.~~

~~(k)~~ It is unlawful to use pots to take crabs unless the line connecting the pot to the buoy is non-floating.

~~(m)~~ It is unlawful to use pots with leads or leaders to take shrimp. For the purpose of this Rule, leads or leaders are defined as any fixed or stationary net or device used to direct fish into any gear used to capture fish. Any device with leads or leaders used to capture fish is not a pot.

*Authority G. S. 113-134; 113-173; 113-182; 113-221.1; 143B-289.52*





**FISCAL IMPACTS OF PROPOSED AMENDMENTS TO RULE 15A NCAC 03J .0207 AND 15A NCAC 03Q .0202**

**CORRECTION OF QUEENS CREEK INLAND/COASTAL BOUNDARY AND NAME UPDATE FOR DUKE ENERGY PROGRESS BRUNSWICK NUCLEAR PLANT INTAKE CANAL**

**Name of Commission:** N.C. Marine Fisheries Commission (MFC)

**Agency Contact:** John Hadley, Socioeconomics Program Manager  
N.C. Division of Marine Fisheries (DMF)  
3441 Arendell Street  
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(252) 808-8107  
john.hadley@ncdenr.gov

**Impact Summary:** *De minimis* rule change  
State Government: No  
Local Government: No  
Private Impact: No  
Substantial Impact: No

**Authority:** G.S. 113-134 (Rules); G.S. 113-182 (Regulation of Fishing and Fisheries); G.S. 143B-289.52 (Marine Fisheries Commission-Powers and Duties); 15 NCAC 03Q .0201 (Specific Classification of Waters); 15 NCAC 03Q .0202 (Descriptive Boundaries for Coastal-Joint-Inland Waters)

**Necessity:** The proposed rule changes seek to correct a set of coordinates delineating Coastal and Inland waters in Queens Creek, Onslow County, as well as an outdated name reference for the Duke Energy Progress Brunswick Nuclear Plant Intake Canal in Brunswick County. It is in the public's and law enforcement's best interest for the N.C. Administrative Code to contain correct rule references and reflect actual DMF operations. Additional changes address an extensive technical change request from the N.C. Rules Review Commission.

## **I. Summary**

The primary purpose of the rule changes is to correct a set of coordinates delineating Coastal and Inland waters in Queens Creek, Onslow County. The coordinates currently in rule do not properly represent the intended boundary between Coastal and Inland waters at Frazier's Landing within the creek. Thus, the proposed rule changes seek to move the boundary line currently in rule to the intended location at Frazier's Landing. Additionally, with the merger of Progress Energy and Duke Energy utility companies, the formerly named Carolina Power and Light Intake Canal at the Brunswick Nuclear Plant is now named Duke Energy Progress Brunswick Nuclear Plant Intake Canal. Therefore, there is an out of date reference to this canal in rule 15A NCAC 03J .0207 and 03Q .0202. The name of the plant needs to be updated for public clarity purposes. Additional changes address an extensive technical change request from the Rules Review Commission that DMF received when the MFC pursued the above-described rule changes last year. The agency withdrew the rule from the Rules Review Commission's consideration due to inadequate time to address the technical changes. The proposed effective date of these rule changes is April 1, 2015.

## **II. Introduction and Purpose of Rule Change**

The DMF initiated an effort in the late 1990s to replace the Inland, Joint, and Coastal boundary descriptions in the N.C. Marine Fisheries Commission rule with actual coordinates to better identify and describe the location of those lines. The N.C. Wildlife Resources Commission (WRC) adopted those changes by reference. DMF staff from the fisheries management section worked with geographical information systems (GIS) staff to identify locations of these lines on maps and place the coordinates in rule language. Most of the coordinates were confirmed by field observations of Marine Patrol officers, WRC inspectors, and biological staff from both DMF and WRC. The amended rule with coordinate-based descriptions of the boundary lines became effective Aug. 1, 2004.

A fisherman brought to the attention of DMF that the current coordinates listed in rule do not accurately represent the historical and intended boundary of Coastal and Inland waters in Queens Creek, which are meant to be at Frazier's Landing. The line described in rule is approximately one river mile south of Frazier's Landing. All MFC rulebooks prior to 2004 listed Frazier's Landing as the correct boundary point. Marine Patrol was consulted and it was determined that the Coastal/Inland boundary line had always been at Frazier's Landing and had not been moved when the coordinate-based descriptions were added to the rule in 2004. Therefore, as a practical matter, the line has always been at Frazier's Landing and correcting the coordinates will constitute no change in the intention of the rule or current enforcement practices.

Additionally, with the recent merger of Progress Energy and Duke Energy, the name of the Brunswick Nuclear Plant changed. The old name of the intake canal, Carolina Power and Light Intake Canal, is out of date as referenced in rule 15A NCAC 03J .0207 and 03Q .0202. Rule changes are sought to update the plant's referenced name to Duke Energy Progress Brunswick Nuclear Plant Intake Canal.

Finally, the DMF received an extensive request for technical change to 15A NCAC 03Q .0202 when the MFC pursued the above-described rule changes last year (see Appendix 2.) The agency withdrew the rule from the Rules Review Commission's consideration due to inadequate time to address the technical changes. The requested technical changes include individual items as well as comprehensive changes to bring wording consistency throughout the lengthy rule. The agency did not want to jeopardize the final approval of the other rules in its annual rulemaking cycle due to insufficient time to satisfy all requests of the Rules Review Commission for this individual rule. The agency intends to file notice of text for rulemaking for both rules described in this note as part of its 2014-2015 annual rulemaking cycle. The proposed changes will address the coordinate correction, canal name change and technical request at one time.

### **I. Costs**

There are no costs associated with the proposed rule changes.

### **II. Benefits**

While there are no quantifiable economic benefits to the proposed rule change, both the public and law enforcement will benefit from the coordinates listed in rule representing the intended boundary of Coastal and Inland waters in Queens Creek. Additionally, clarity to the public and

law enforcement will be gained by updating the name of the power plant intake canal referenced in rule 15A NCAC 03J .0207 and 03Q .0202.

## Appendix 1: Proposed Amendments

**15A NCAC 03J .0207 ~~CAROLINA POWER AND LIGHT DUKE ENERGY PROGRESS BRUNSWICK~~  
NUCLEAR PLANT INTAKE CANAL**

It is unlawful to use any commercial fishing equipment in the ~~Carolina Power and Light Duke Energy Progress Brunswick Nuclear Plant Intake Canal~~ between the fish diversion screen and the ~~Carolina Power and Light Duke Energy Progress Brunswick nuclear power plant.~~Nuclear Plant.

*Authority G.S. 113-134; 113-182; 143B-289.52*

NOTE: DUE TO THE LENGTH OF RULE 15A NCAC 03Q .0202, ONLY THE PORTIONS SHOWING THE CANAL NAME CHANGE (BRUNSWICK COUNTY) AND THE COORDINATE CORRECTION (ONslow COUNTY) ARE SHOWN HERE. PLEASE SEE THE DMF WEB SITE FOR THE FULL TEXT OF THE PROPOSED RULE, INCLUDING ALL TECHNICAL CHANGES.

**15A NCAC 03Q .0202 ~~DESCRIPTIVE BOUNDARIES FOR COASTAL-JOINT-INLAND WATERS~~**

Descriptive boundaries for Coastal-Joint-Inland Waters referenced in 15A NCAC 03Q .0201 are as follows:

- (1) Beaufort County
  - (a) Pamlico -Tar River - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore 35° 32.2167' N - 77° 02.8701' W; running southwesterly along the east side of the railroad bridge to a point on the south shore 35° 32.0267' N - 77° 03.5179' W.

...

- (4) Brunswick County:
  - (a) Calabash River And Tributaries - All waters within this waterbody in Brunswick County are designated as Coastal.
  - (b) Saucepan Creek - All waters within this waterbody are designated as Coastal.
  - (c) Shallotte River - Inland Waters northwest and Coastal Waters southeast of a line beginning at a point on the south shore 33° 58.3412' N - 78° 23.1948' W; running northeasterly to a point on the north shore 33° 58.3518' N - 78° 23.1816' W.
    - (i) Mill Dam Branch - All waters within this waterbody are designated as Coastal.
    - (ii) Squash Creek - All waters within this waterbody are designated as Coastal.
    - (iii) Mill Pond - All waters within this waterbody are designated as Coastal.
    - (iv) Charles Branch - Inland Waters north and Coastal Waters south of a line beginning at a point on the west shore 33° 58.6276' N - 78° 21.2919' W; running easterly to a point on the east shore 33° 58.6257' N - 78° 21.2841' W.
    - (v) Grisset Swamp - All waters within this waterbody are designated as Coastal.
    - (vi) Little Shallotte River And Tributaries - All waters within this waterbody are designated as Coastal.

- (d) Lockwood Folly River - Inland Waters northeast and Coastal Waters southwest of a line beginning at a point on the north shore  $34^{\circ} 00.6550' N - 78^{\circ} 15.8134' W$ ; running southeasterly along the south side of NC Hwy 211 bridge to a point on the south shore  $34^{\circ} 00.6285' N - 78^{\circ} 15.7928' W$ .
- (i) Stanberry Creek - All waters within this waterbody are designated as Coastal.
  - (ii) Pompeys Creek - All waters within this waterbody are designated as Coastal.
  - (iii) Maple Creek - All waters within this waterbody are designated as Coastal.
  - (iv) Rubys Creek - All waters within this waterbody are designated as Coastal.
  - (v) Big Doe Creek - All waters within this waterbody are designated as Coastal.
  - (vi) Lennons Creek - All waters within this waterbody are designated as Coastal.
  - (vii) Mercers Mill Pond Creek - Inland Waters north and Coastal Waters south of a line beginning at a point on the west shore  $33^{\circ} 57.7498' N - 78^{\circ} 12.3532' W$ ; running southeasterly to a point on the east shore  $33^{\circ} 57.7439' N - 78^{\circ} 12.3440' W$ .
- (e) Elizabeth River - All waters within this waterbody are designated as Coastal.
- (i) Ash Creek - All waters within this waterbody are designated as Coastal.
- (f) Beaverdam Creek - All waters within this waterbody are designated as Coastal.
- (g) Dutchman Creek - All waters within this waterbody are designated as Coastal.
- (i) Calf Gully Creek - All waters within this waterbody are designated as Coastal.
  - (ii) Jumpin Run - All waters within this waterbody are designated as Coastal.
  - (iii) Fiddlers Creek - All waters within this waterbody are designated as Coastal.
- (h) Cape Fear River - Joint Waters north and Coastal Waters south of a line beginning at a point on the western side  $34^{\circ} 13.6953' N - 77^{\circ} 57.2396' W$ ; running southeasterly along the southern side of US 17-74-76 bridge to a point on the eastern side  $34^{\circ} 13.6214' N - 77^{\circ} 57.0341' W$ .
- (i) ~~Carolina Power And Light~~ Duke Energy Progress Brunswick Nuclear Plant Intake Canal - All waters within this waterbody are designated as Coastal.
  - (ii) Walden Creek - All waters within this waterbody are designated as Coastal.
  - (iii) Orton Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore  $34^{\circ} 02.8436' N - 77^{\circ} 56.7498' W$ ; running southerly to a point on the south shore  $34^{\circ} 02.8221' N - 77^{\circ} 56.7439' W$ .
  - (iv) Lilliput Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore  $34^{\circ} 04.1924' N - 77^{\circ} 56.5361' W$ ; running southerly to a point on the south shore  $34^{\circ} 04.1487' N - 77^{\circ} 56.5447' W$ .
  - (v) Sandhill Creek - Inland Waters southwest and Coastal Waters northeast of a line beginning at a point on the north shore  $34^{\circ} 06.9584' N - 77^{\circ} 57.0085' W$ ;

- running southeasterly to a point on the south shore  $34^{\circ} 06.9371' N - 77^{\circ} 56.9943' W$ .
- (vi) Town Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore  $34^{\circ} 07.7492' N - 77^{\circ} 57.3445' W$ ; running southerly to a point on the south shore  $34^{\circ} 07.7034' N - 77^{\circ} 57.3431' W$ .
  - (vii) Mallory Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore  $34^{\circ} 09.9868' N - 77^{\circ} 58.2023' W$ ; running southerly to a point on the south shore  $34^{\circ} 09.9618' N - 77^{\circ} 58.2133' W$ .
  - (viii) Brunswick River - Joint Waters northwest and Coastal Waters southeast of a line beginning at a point on the south shore  $34^{\circ} 10.7281' N - 77^{\circ} 57.7793' W$ ; running northeasterly to a point on the north shore  $34^{\circ} 10.9581' N - 77^{\circ} 57.6452' W$ .
    - (A) Alligator Creek - For the southernmost entrance into the Brunswick River: Inland Waters east and Joint Waters west of a line beginning at a point on the south shore  $34^{\circ} 13.5040' N - 77^{\circ} 58.6331' W$ ; running northwesterly to a point on the north shore  $34^{\circ} 13.5472' N - 77^{\circ} 58.6628' W$ . For the northernmost entrance into the Brunswick River: Inland Waters east and Joint Waters west of a line beginning at a point on the south shore  $34^{\circ} 14.4300' N - 77^{\circ} 59.2346' W$ ; running northerly to a point on the north shore  $34^{\circ} 14.4618' N - 77^{\circ} 59.2300' W$ .
    - (B) Jackeys Creek - Inland Waters west and Joint Waters east of a line beginning at a point on the south shore  $34^{\circ} 11.9400' N - 77^{\circ} 58.5859' W$ ; running northerly to a point on the north shore  $34^{\circ} 11.9565' N - 77^{\circ} 58.5859' W$ .
    - (C) Sturgeon Creek - Inland Waters west and Joint Waters east of a line beginning at a point on the north shore  $34^{\circ} 14.6761' N - 77^{\circ} 59.4145' W$ ; running southerly to a point on the south shore  $34^{\circ} 14.6404' N - 77^{\circ} 59.4058' W$ .
  - (ix) Cartwheel Creek - Inland Waters west and Joint Waters east of a line beginning at a point on the north shore  $34^{\circ} 15.7781' N - 77^{\circ} 59.3852' W$ ; running southerly to a point on the south shore  $34^{\circ} 15.7564' N - 77^{\circ} 59.3898' W$ .
  - (x) Indian Creek - Inland Waters west and Joint Waters east of a line beginning at a point on the north shore  $34^{\circ} 17.0441' N - 78^{\circ} 00.3662' W$ ; running southwesterly to a point on the south shore  $34^{\circ} 17.0006' N - 78^{\circ} 00.3977' W$ .
  - (xi) Hood Creek - Inland Waters west and Joint Waters east of a line beginning at a point on the north shore  $34^{\circ} 20.3713' N - 78^{\circ} 04.7492' W$ ; running southwesterly to a point on the south shore  $34^{\circ} 20.3393' N - 78^{\circ} 04.7373' W$ .

(xii) Northwest Creek - All waters within this waterbody are designated as Inland.

...

(20) Onslow County

- (a) Beasleys Creek (Barlow Creek) - All waters within this waterbody are designated as Coastal.
- (b) Kings Creek - All waters within this waterbody are designated as Coastal.
- (c) Turkey Creek - All waters within this waterbody are designated as Coastal.
- (d) Mill Creek - All waters within this waterbody are designated as Coastal.
- (e) New River - Inland Waters north and Coastal Waters south of a line beginning at a point on the west shore 34° 45.1654' N - 77° 26.1222' W; running easterly along the southern side of the US Hwy 17 bridge to a point on the east shore 34° 45.2007' N - 77° 25.9790' W.
- (i) Wheeler Creek - All waters within this waterbody are designated as Coastal.
- (ii) Everett Creek - All waters within this waterbody are designated as Coastal.
- (iii) Stones Creek - All waters within this waterbody are designated as Coastal.
- (iv) Muddy Creek - All waters within this waterbody are designated as Coastal.
- (v) Mill Creek - All waters within this waterbody are designated as Coastal.
- (vi) Lewis Creek - All waters within this waterbody are designated as Coastal.
- (vii) Southwest Creek - Inland Waters north and Coastal Waters south of a line beginning at a point on the west shore 34° 40.8723' N - 77° 26.2399' W; running northeasterly to a point on the east shore 34° 40.9112' N - 77° 26.1758' W.
- (viii) Brinson Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore 34° 44.0945' N - 77° 26.4335' W; running southerly to a point on the south shore 34° 44.0654' N - 77° 26.4239' W.
- (ix) Northeast Creek - Inland Waters northeast and Coastal Waters southwest of a line beginning at a point on the west shore 34° 44.0778' N - 77° 21.2640' W; running southeasterly along the southern side of the railroad bridge to a point on the east shore 34° 44.0446' N - 77° 21.2126' W.
- (x) Wallace Creek - Inland Waters east and Coastal Waters west of a line beginning at a point on the north shore 34° 40.9604' N - 77° 21.5698' W; running southwesterly along the western side of the first bridge upstream from the mouth, to a point on the south shore 34° 40.8576' N - 77° 21.4787' W.
- (xi) Codels Creek - Inland Waters east and Coastal Waters west of a line beginning at a point on the north shore 34° 38.8845' N - 77° 20.4533' W; running southerly to a point on the south shore 34° 38.8691' N - 77° 20.4515' W.

- (xii) French Creek – Inland Waters east and Coastal Waters west of a line beginning at a point on the north shore 34° 38.4059' N - 77° 20.2619' W; running southerly to a point on the south shore 34° 38.2566' N - 77° 20.3233' W.
- (xiii) Duck Creek - Inland Waters southwest and Coastal Waters northeast of a line beginning at a point on the north shore 34° 38.0179' N - 77° 20.5169' W; running southwesterly to a point on the south shore 34° 37.9172' N - 77° 20.6520' W.
- (f) Freeman (Browns) Creek - All waters within this waterbody are designated as Coastal.
- (g) Bear Creek - All waters within this waterbody are designated as Coastal.
- (h) Queens Creek - Inland Waters ~~north-west~~ and Coastal Waters ~~south-east~~ of a line beginning at a point on the ~~west-north~~ shore ~~34° 42.1815' N - 77° 11.5690' W~~; 34° 42.5696' N - 77° 11.8550' W; running ~~easterly-southerly~~ to a point on the ~~east-south~~ shore ~~34° 42.2273' N - 77° 11.4193' W~~; 34° 42.4238' N - 77° 11.8550' W.
- (i) Parrotts Swamp - All waters within this waterbody are designated as Coastal.
- (i) White Oak River - Inland Waters north and Coastal Waters south of a line beginning at a point on the west shore 34° 48.1466' N - 77° 11.4711' W; running northeasterly to a point on the east shore 34° 48.1620' N - 77° 11.4244' W.
  - (i) Stevens Creek - All waters within this waterbody are designated as Coastal.
  - (ii) Holland Mill (Mill Pond) Creek - All waters within this waterbody are designated as Coastal.
  - (iii) Webbs Creek - Inland Waters northwest and Coastal Waters southeast of a line beginning at a point on the north shore 34° 45.7559' N - 77° 10.1321' W; running southwesterly to a point on the south shore 34° 45.7404' N - 77° 10.1486' W.
  - (iv) Freemans Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore 34° 46.9791' N - 77° 10.3935' W; running southerly to a point on the south shore 34° 46.9663' N - 77° 10.3999' W.
  - (v) Calebs Creek - Inland Waters west and Coastal Waters east of a line beginning at a point on the north shore 34° 48.1354' N - 77° 11.4688' W; running southeasterly to a point on the south shore 34° 48.1192' N - 77° 11.4546' W.
  - (vi) Grants Creek - All waters within this waterbody are designated as Inland.
- (21) Pamlico County
  - (a) Pamlico River - All waters within this waterbody are designated as Coastal.

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*Authority G.S. 113-132; 113-134; 143B-289.52*



# N.C. FISHERY MANAGEMENT PLANS

February 2015

- Administrative steps for the Kingfishes plan review are underway.





# Division of Marine Fisheries' Overview of Amendment 1 to the Striped Mullet Fishery Management Plan December 2014



The goal of the N.C. Striped Mullet Fishery Management Plan is to manage the striped mullet fishery to preserve the long-term viability of the resource that maintains sustainable harvest, maximizes the social and economic value, and considers the needs of all user groups. Striped mullet are of considerable economic importance both commercially and recreationally. In North Carolina, striped mullet are typically targeted for bait and roe. Besides being an economically important species, striped mullet are ecologically significant as a forage species. The August 2013 population assessment of striped mullet in North Carolina waters indicates the stock is not undergoing overfishing. Sufficient data are not available to determine if the stock is currently overfished; however, the fishery management plan establishes minimum and maximum landings thresholds to monitor the fishery. If landings fall outside of this range, the Division of Marine Fisheries will initiate further analysis of the data to determine if a new stock assessment and/or interim management action is needed.

The Marine Fisheries Commission's preferred management strategy for the striped mullet fisheries in North Carolina is to: 1) optimize resource utilization over the long-term; 2) reduce user group conflicts; and 3) promote public education. The first component of the strategy will continue to be accomplished by protecting critical habitats and monitoring stock status. To address user conflicts generally, a rule change is proposed under Amendment 1 to limit the portion of a waterway that may be blocked by runaround, drift and other non-stationary gill nets consistent with similar regulations for stationary nets. Specific user conflict issues will continue to be addressed on a case-by-case basis and management actions will be implemented to address specific fishery-related problems. The Division of Marine Fisheries will also work to enhance public information and education.

Specific issues addressed in the development of Amendment 1 to the N.C. Striped Mullet Fishery Management Plan include:

- Resolution of Newport River gill net attendance requirements;
- User group conflicts; and
- Updating the management framework for the N.C. striped mullet stock.

Management framework updates include increasing the fishing mortality target to prevent too many fish from being removed from the population by fishing activities for the stock to be sustainable. Raising the target is important for several reasons, including targeting female fish during the spawning season, the potential importance of striped mullet as a forage species in the ecosystem, and because the small size of the buffer between the target and threshold values could result in rebuilding plans with more restrictive harvest that may otherwise be premature or unnecessary. Adaptive management will be used if a trigger in the management framework is activated and review of the data indicates additional management measures are needed to maintain sustainable harvest. Amendment 1 also includes a list of research recommendations.

Following the review of Amendment 1 by the Department of Environment and Natural Resources secretary and the Joint Legislative Commission on Governmental Operations, the draft plan will be presented to the Marine Fisheries Commission for procedural approval and to begin the rulemaking process. The Marine Fisheries Commission will consider final approval of Amendment 1 and the implementing rules in November 2015.





## North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

### MEMORANDUM

**TO:** N.C. Marine Fisheries Commission

**FROM:** Will Smith, Stock Assessment Scientist  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 30, 2015

**SUBJECT:** 2014 southern flounder stock assessment executive summary and summary of peer reviews

### EXECUTIVE SUMMARY

The N.C. Fisheries Reform Act requires that fishery management plans be developed for the state's commercially and recreationally important species to achieve sustainable levels of harvest. Stock assessments are the primary tools used by managers to assist in determining the status of stocks and developing appropriate management measures to ensure the long-term viability of stocks.

The 2014 N.C. Division of Marine Fisheries southern flounder stock assessment was developed after a thorough review of available data and current southern flounder research as well as careful deliberation by the Southern Flounder Plan Development Team. The stock assessment represented the best science and data available for the N.C. stock, while maintaining continuity with earlier assessments of the N.C. stock. For consistency with the previous 2009 southern flounder stock assessment, the same statistical catch-at-age model was used; however, a more robust program capable of handling a wider range of data sources was selected, Stock Synthesis. Several updates to the assessment data were also incorporated, based on new southern flounder research.

The assessment model used catch data from five fisheries—gill nets, pound nets, all other commercial fisheries, inshore recreational, and ocean recreational. The model was length-based, and all inshore fisheries and surveys were allowed to have declining selectivity for larger fish, to account for possible emigration from inshore waters as fish mature. The ocean recreational fishery was assumed to have asymptotic selectivity. Two fishery-independent indices of juvenile abundance were developed from the Estuarine Trawl Survey (Program 120) and Pamlico Sound Survey (Program 195), and two fishery-independent indices of general abundance were developed from Pamlico Sound Independent Gill-Net Survey (Program 915) and Albemarle Sound Independent Gill-Net Survey (Program 135). Natural mortality ( $M$ ) was age- and sex-specific and was estimated by scaling a growth-based natural mortality model to age-1 estimates,  $M_{female} = 0.36$  and  $M_{male} = 0.45$ .

The stock assessment was reviewed by a panel of three independent reviewers, representing experts in stock assessment or southern flounder biology. The peer review process assures that data and methodologies used to assess N.C. stocks represent the best possible science and information.

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Reviewers indicated that all appropriate data sources were considered and that the model selection was appropriate for the available data; however, reviewers also noted that the biology of the species and available data did not permit the use of traditional stock assessment models for determining stock status of southern flounder in N.C. waters. Most importantly, each reviewer noted recent evidence for stock mixing throughout the South Atlantic and unknown movement rates. The use of traditional stock assessment models requires that all losses from the stock be accounted for, but emigration rates from N.C. waters have not been quantified; furthermore, the fraction of N.C. recruits originating from South Carolina, Georgia, or Florida waters is unknown. These concerns cannot be addressed with a stock assessment that only includes southern flounder in N.C. waters and would require a regional assessment approach. Another significant problem was that fishery-independent indices of abundance showed no trend over the time period assessed, 1991–2013, and some indices appeared to show conflicting patterns. Since traditional stock assessment models rely on fishery-independent indices of abundance to track population status over time, conflicting survey information and low data contrast made it difficult to accurately fit a traditional model. The 2014 southern flounder stock assessment was not accepted for management by the N.C. Division of Marine Fisheries due to legitimate and substantial concerns raised by the peer reviewers, concerns with which the division agreed.

The full draft stock assessment is available upon request.

#### SUMMARY OF PEER REVIEWS

The stock assessment was reviewed by a panel of three independent reviewers, representing experts in stock assessment or southern flounder biology. The peer review process assures that data and methodologies used to assess North Carolina stocks represent the best possible science and information. Three experts reviewed the 2014 southern flounder stock assessment, Drs. Steve Midway (assistant professor, Coastal Carolina University), Erik Williams (chief, Sustainable Fisheries Branch, National Marine Fisheries Service, Beaufort), and Genny Nessler (senior stock assessment scientist, Atlantic States Marine Fisheries Commission). After carefully considering the results of the peer review, the North Carolina Southern Flounder Plan Development Team and Management Review Team decided that the stock assessment could not be approved for management.

##### *Dr. Steven Midway Review*

Dr. Midway evaluated the stock assessment on the merits of the treatment of biological information and deferred to comment on the quantitative aspects of the stock assessment. Since Dr. Midway is an ecologist and expert in southern flounder biology, not a stock assessment scientist, this was an appropriate role. Dr. Midway approved of the data used in the assessment and noted that the diversity of data sources used in the assessment was a strength. He also noted that the stock assessment represented an improvement over previous N.C. stock assessments both in terms of biological and quantitative considerations. Although he recommended that the assessment be used for management based on biological considerations, Dr. Midway was concerned that important model outputs did not appear to respond to changes in the fishery, noting high sustained fishing mortality and little corresponding change in stock biomass, and he was concerned that the migratory dynamics of the southern flounder stock were as of yet unquantified. In spite of these concerns, Dr. Midway recommended that the assessment be used for management.

*Dr. Erik Williams Review*

Dr. Williams identified several weaknesses in the description of the data used in the stock assessment, noting that several important graphs and tables were missing and that some aspects of the use of the data in the stock assessment were not clearly described in the text. He speculated that age-based selectivity might also provide useful information for the assessment model due to the highly variable size at age that characterize southern flounder populations, although the assessment only fit length-based selectivities. He suggested an alternate approach to estimating natural mortality, and suggested that two aggregate indices be used to track juvenile and general abundance rather than four. Most importantly, Dr. Williams identified the lack of model fit to survey data and the high level of mixing of the South Atlantic stock as major issues for fitting a traditional stock assessment model to N.C. data alone.

While Dr. Williams did indicate that the assessment was useful for management, he suggested that the data were useful, not the assessment output. Furthermore, he suggested that alternate assessment approaches be explored, such as trend analysis.

*Dr. Genevieve Nesslage Review*

Dr. Nesslage commented that appropriate data sources were used and treatment of the data within the model was correct given the biology of southern flounder. Many of Dr. Nesslage's comments corresponded to Dr. Williams' comments. She noted that further details regarding model structure and justification for model parameterization were needed, recommended that aggregate survey indices be used rather than individual indices of abundance, and suggested an alternate method to estimate natural mortality. In addition to comments corresponding to Dr. Williams', Dr. Nesslage also suggested a different treatment of uncertainty in the indices of abundance in order to achieve a better model fit and testing a different selectivity model. Finally, Dr. Nesslage concluded that the assessment was not useful for management because trends in data did not seem to be informative, model outputs did not appear to respond to changes in the fishery, and the stock was not limited to N.C. waters. She recommended that a longer time period be considered and that the stock be assessed on a regional level.







North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** Marine Fisheries Commission

**FROM:** Dr. Louis Daniel  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 22, 2015

**SUBJECT:** 2014 Southern Flounder Stock Assessment

The 2014 southern flounder stock assessment was developed after a thorough review of available data and current southern flounder research as well as careful deliberation by the division's Southern Flounder Plan Development Team. The stock assessment represented the best science and data available for the N.C. stock, while maintaining continuity with earlier assessments of that stock. For consistency with the previous southern flounder stock assessment, the same statistical catch-at-age model was used; however, a more robust program capable of handling a wider range of data sources was selected. Several updates to the assessment data were also incorporated, based on new southern flounder research related to reproductive ecology, and data (genetic, otolith morphology, and tagging information) that show significant mixing throughout the South Atlantic population that likely occurs during spawning and recruitment. Available modelling approaches could account for stock mixing during recruitment, but no satisfactory approach was found to account for adult mixing during spawning, as adult movement rates are unknown.

Division stock assessments are reviewed by a panel of three independent reviewers. These reviewers are each experts in stock assessment or the biology of the species in question, and the peer review process assures that data and methodologies used to assess N.C. stocks represent the best possible science and information. Three experts reviewed the 2014 southern flounder stock assessment: Drs. Steve Midway (assistant professor, Coastal Carolina University), Erik Williams (chief, Sustainable Fisheries Branch, National Marine Fisheries Service, Beaufort), and Genny Nesslage (senior stock assessment scientist, Atlantic States Marine Fisheries Commission). Dr. Midway accepted the assessment for management based on the treatment of the species' biology; however, he noted that he was unable to evaluate the stock assessment model itself because he is not a stock assessment scientist. Reviewers indicated that all appropriate data sources were considered and that the model selection was appropriate for the available data; however, Drs. Williams and Nesslage noted that the biology of the species and available data did not permit the use of traditional stock assessment models for determining stock status of southern flounder in N.C. waters. Most importantly, each reviewer noted the recent evidence for stock mixing throughout the South Atlantic and unknown movement rates. The use of traditional stock assessment models requires that all losses from the stock be accounted for, but migration rates to and from N.C. waters

have not been quantified; furthermore, the fraction of N.C. recruits originating from South Carolina, Georgia, or Florida waters is unknown. These concerns cannot be addressed with a stock assessment that only includes southern flounder in N.C. waters and would require a regional assessment approach. Another significant problem noted by Drs. Williams and Nessler was that fishery-independent indices of abundance showed no trend over the time period assessed, 1991–2013, and some indices appeared to show conflicting patterns. Since traditional stock assessment models rely on fishery-independent indices of abundance to track population status over time, conflicting survey information and low data contrast made it difficult to accurately fit a traditional model. Therefore, the 2014 southern flounder stock assessment was not accepted for management by the division due to legitimate and substantial concerns raised by the peer reviewers, concerns with which the division agrees.

The original Southern Flounder Fishery Management Plan was adopted in 2005 to end overfishing and rebuild the stock. The purpose of the 2014 stock assessment was to determine if those goals had been met in the set time frame. The fact that the stock assessment was not accepted for management provides no answer as to whether those 2005 goals were appropriate or met. Consequently, in the absence of a quantified estimate of the overfished and overfishing condition, N.C. Division of Marine Fisheries Management Policy 2014-1, “Rebuilding Schedules, implementing G.S. 113-182.1 (b)5) and (b)(6)” does not apply. This policy addresses the statutory requirements to set a time period to end overfishing within two years and to set a time period to rebuild the stock within 10 years from the time a fishery management plan is adopted.

While the current southern flounder stock assessment model cannot be used for management and timelines cannot apply, much information exists to manage southern flounder in North Carolina, and some of that information is troublesome. Of particular concern is the combination of large numbers of immature fish in the catch and evidence of declining recruitment since the 1990s that may result in the need for further management measures.

Given the importance of the southern flounder fishery, alternate approaches will be developed in lieu of a traditional stock assessment. The division’s Southern Flounder Plan Development Team is currently developing an analysis of trends in fishery performance, abundance, and stock productivity. The trend analysis will employ the Traffic Light approach, used in the current Blue Crab Fishery Management Plan, to provide guidance for management of southern flounder in N.C. waters.

## **NCDMF Stock Assessment Program External Peer Review**

### **Assessment Information**

Assessment Species: Southern flounder (*Paralichthys lethostigma*)  
Stock Assessment Report: Stock Assessment of Southern Flounder, *Paralichthys lethostigma*,  
in North Carolina Waters—2014  
Date Sent: November 10, 2014

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Please return this form, the terms of reference report, and any additional comments to [laura.lee@ncdenr.gov](mailto:laura.lee@ncdenr.gov). We would like to have your review by December 5, 2014. A copy of the final report will be provided after it has been presented to the North Carolina Marine Fisheries Commission.

Thank you,

Laura M. Lee  
*Senior Stock Assessment Scientist*  
North Carolina Division of Marine Fisheries

## TERMS OF REFERENCE REPORT FOR EXTERNAL PEER REVIEW

### Reviewer Information

Reviewer Name: Genevieve Nesslage  
Business Mailing Address: ASMFC 1050 N. Highland St, Suite 200A-N  
Arlington, VA 22201  
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Business Phone: 703-842-0727

1) Evaluate the thoroughness of data evaluation and presentation including:

a) Justification for inclusion or elimination of available data sources

To the extent of my knowledge, all available, reliable sources of landings, biosamples, and survey data were included in the assessment. There was no mention of SEAMAP, but I assume that is because that program's surveys do not catch southern flounder.

The analytical team was well justified in their decisions to use fishery-independent juvenile and adult survey data sources in place of the Beaufort Bridgenet ichthyoplankton survey and fishery-dependent CPUE indices.

The assessment report notes (page 48) that there is little correlation and possibly some conflict among surveys used in the assessment. Unless movement rates between regions within NC waters can be obtained to support a spatially explicit assessment model, the analytical team may want to consider more careful inclusion/exclusion criteria or a model-based combination of indices into stock-wide indices to provide the model with more coherent information about what the trends in overall stock abundance might be.

b) Consideration of survey and data strengths and weaknesses (e.g., temporal and spatial scale, gear selectivities, sample size)

Description of data collection was thorough and transparent with regard to both strengths and weaknesses.

c) Calculation and standardization of indices and other statistics

The methodology described was appropriate for the treatment of surveys not designed to target southern flounder. No diagnostics were provided to evaluate GLM performance. Without additional information, this portion of the TOR cannot be evaluated thoroughly.

A plot of all JAI and adult surveys in the same (respective) figures would have been useful for comparing trends.

Also, an overall description and visualization of landings trends (both total and by fleet) would have been helpful to include in the report as well.

2) Evaluate the adequacy, appropriateness, and application of data used in the assessment.

Focusing on the use of lengths (the most reliable type of data widely available for this species) was appropriate. The calculation/estimation of length-based maturity and selectivity curves was the best approach given the data.

Instead of averaging natural mortality estimates across all available approaches, would careful consideration of the assumptions of each model in relation to southern flounder biology help eliminate some of the options? Incorporating expert judgment into the selection of natural mortality estimators may result in values more suitable for the species.

As mentioned above, it might be worthwhile considering the application of a set of specific, explicit inclusion/exclusion criteria when selecting indices. Alternatively, a model-based combination of regional indices into stock-wide indices might provide the assessment model with more coherent information about what the trends in overall stock abundance might be. The model is likely struggling to make sense of differences among what may be (in some cases) sound- or river-specific trends.

Overall, I found description of the data and data treatment outside the model to be outstanding; however, details regarding how data were treated in the model were lacking. Much of this information is obtainable in the Stock Synthesis dat and control files, but justification for the values chosen is not outlined in the report. For example, the SEs applied to fishery catch and the errors assigned to annual index values were not discussed. How were effective sample sizes determined? Also, justification for fishery selectivity time blocks was not apparent. These are important decisions that affect model performance and results. More extensive description and justification is needed.

3) Evaluate the adequacy, appropriateness, and application of method(s) used to assess the stocks.

The analytical team should be applauded for adopting a modern, sophisticated (yet not overly complicated) approach to assessing this stock. Continued development and use of an integrated model is encouraged. Additional comments on methods by subtopic are provided below.

Model fit:

Plots of model fit to fleet landings were not provided. I assume they fit well; otherwise, the model should have been deemed highly unreliable and not used. However, I was surprised that such standard output was missing from the report. I suggest including the core, standard r4SS figures in future assessments that utilize SS as a modeling platform.

Poor fits to the Program 915 and 135 surveys were not surprising given they were highly constrained by the small specified SEs (<0.2) shown in the SS data file. The model should not be expected to be able to fit the high values for Program 135's index in the 1990s unless the SEs are loosened up. Even if annual SEs from GLM models were used (which I am assuming...a description is not in the report), it is almost impossible to believe that those indices track stock trends that well. Using a higher, ad hoc level of variance would allow the model the freedom to balance all the data sources in the model better and still try to fit those higher data points if at all possible.

As the report states, the model produced poor fits to indices and length composition fits were not stellar. The magnitude of retrospective pattern was disconcerting as well. Again, it is unclear

how well the model fit total landings. In general, the model does not appear to be performing well given the data and current configuration.

Migration and selectivity:

The issue of emigration outside NC waters is troubling. However, the analytical team expertly included several structural decisions to account for the movement and emigration of larger/older fish as best they could, including the use of dome-shaped selectivity for inshore fisheries and the use of annual recruitment deviations in place of a stock recruitment function. These model configuration decisions allowed for a more realistic portrayal of stock dynamics and avoided overestimation of fishing mortality on larger/older fish for inshore fisheries that target smaller/younger fish.

I question, though, the forcing of ocean fleet selectivities to be asymptotic given known emigration. If length data are available from the returned tagged fish, could they be used in some way to inform specification or partial estimation of the descending limb of the selectivity curve for this fleet?

Ultimately, these issues and others raised in the report (e.g., recruitment potentially being subsidized by SC/GA/FL spawners) cannot be addressed well or at all by the available data. In the absence of better tagging and migration studies, a regional assessment approach is recommended.

General selectivity:

In the interest of reducing the number of parameters, could the inshore recreational and commercial time blocks be dropped from the assessment? Figures 27 and 28 indicate they are not changing fishery selectivity that much. Perhaps I missed the justification for these time blocks and the need for them. If so, please disregard this comment.

The shift in ocean fleet selectivity to larger fish made sense given regulation changes; however, that issue should be discussed and used to bolster time block decisions in the report.

An alternative selectivity function that is more flexible in shape may improve model fit. The double normal forces the curve to adopt a particular shape and that may be causing some of the apparent length composition fitting issues. Although it requires more parameters, I suggest trying the spline option if you have not done so already.

Growth:

On page 43, the report states that conditional ages at length are used, but the control file has -1s in the Low and High Bin columns for the first fleet (commercial gill net?). The explanation for this was not clear.

To help improve fit to length composition data, I highly recommend loosening up (increasing) the specified CVs on your vonB parameters. These CVs may not be large enough to accommodate the true variation in the observed data. This may lead to overestimation of fishing mortality and patterning in the length composition fits.

Model components:

A table of likelihood components showing the relative contribution of each data source for the base and alternate models would have been helpful for comparison with the text in Sections 3.2.7 and 3.3.

4) Evaluate the methods used to estimate stock status determination criteria. Evaluate the adequacy and appropriateness of recommended stock status determination criteria.

The justification for a management target and threshold of 25–35% SPR was not provided and alternate reference points were not recommended. It is unclear to me why southern flounder management would differ from summer flounder which (unless I am mistaken) uses a threshold of  $F_{35\%}$  and target  $SSB_{35\%}$ . Why a lower %MSP for a similar fish that grows and matures quite rapidly and displays relatively low variability in recruitment for a finfish?

5) Does the stock assessment provide a valid basis for management for at least the next five years given the available data and current knowledge of the species stock dynamics and fisheries?

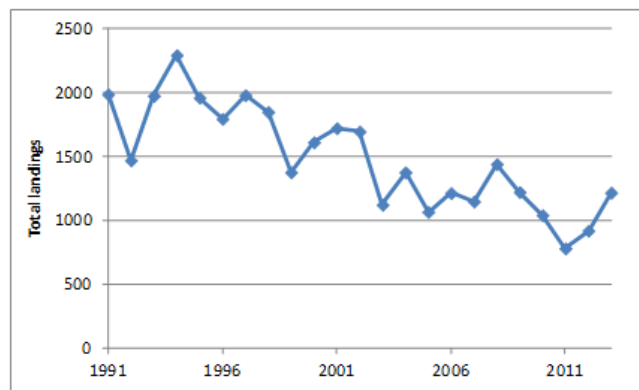
Yes

No

Comment on response.

Despite the outstanding efforts of the analytical team, this assessment suffers from either uninformative data or too short a time series to detect trends in the stock. The model has great difficulty fitting contradictory and/or trendless data. It is quite possible that the data sources are actually informative but there have been no major changes (large declines or increases) in the stock since 1991.

My concern with stock status stems from counterintuitive data and results. If I interpreted Table 12 correctly, estimated landings have halved since 1991, but there has been no marked increase in survey trends or expansion of length or age structure in the catch. [Note: population length structure was not plotted, but the report did not make note of an estimated expansion in length structure of the stock so I assume none was noticeable.] Estimated discards have risen, but most discards appear to come from the recreational fishery which is still a small percentage of the overall catch.

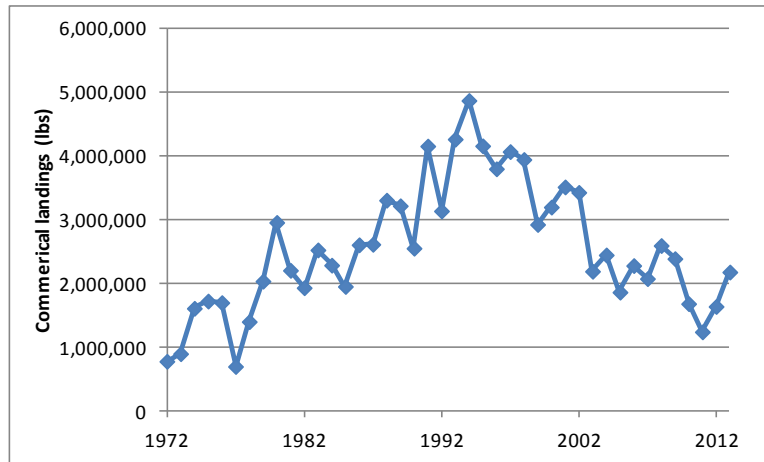


Estimated recruitment has declined, but I worry that is an artifact of the model trying to maintain some fit to stable length composition data in the face of halved landings and largely trendless surveys.

In short, it does not make sense that the stock has been experiencing overfishing across the entire time series if there has been no marked response to halving the catch. I think the model simply

cannot construct a coherent story about how the stock is responding to fishing mortality without a longer time series, more informative surveys trends, and more informative length structure changes.

I suggest placing the 1991+ data in the context of the history of the fishery to the maximum extent possible. A quick plot of total commercial landings of southern flounder since the 1970s (<http://portal.ncdenr.org/web/mf/statistics/comstat/floundersou>) indicates there has been significant contrast in the landings data if the time series could be extended back farther.



My naïve interpretation is that regulations limiting the gillnet fishery (particularly in Pamlico Sound) in the late 1990s and early 2000s may have contributed to a decline landings (Table 10). However, NC fisheries biologists and the analytical team would know best how to interpret these data.

I suggest the analysts consider supplementing their current SS model runs with alternate configurations that incorporate historical catch data and the statewide Program 120 survey extended back to the early 1980s (if the survey data can be standardized for changes in design and implementation). Estimates of total commercial and recreational harvest statistics appear to be available that far back as well. Use of the Program 120 survey would provide the model with information on recruitment without having to specify (or estimate) a stock-recruitment relationship. I am not familiar enough with the data to know if this is feasible, but, if it is, it might be worth trying and comparing with results from the 1991+ base run.

It is also possible that the NC portion of the stock is at the northernmost tip of the species' range and it may not be possible to assess this stock with confidence without adopting a more regional approach. At a broader spatial scale, trends in indices and stock responses to fishing and environmental influences may become apparent.

Given my reservations about the model's interpretation of the available data, I am concerned that the stock status determinations made in the assessment may be poorly informed by the short time series of available data relative to the history of the fishery. I suggest more exploration of historical data and growth parameterization be conducted before a final stock status determination be made and used for management.



- 6) Evaluate appropriateness of research recommendations. Suggest additional recommendations warranted, clearly denoting research and monitoring needs that may appreciably improve the reliability of future assessments.

Research recommendations are appropriate given the monitoring and modeling challenges presented by this stock. I am particularly concerned with recommendation #2 given application of gill net discard frequencies to recreational data may not be appropriate (especially for the offshore recreational fishery). If post-release mortality for some of these fisheries/gears is truly at or near 100%, this is an important recommendation to address.

I suggest the following addition to *Analysis* recommendations:

- Develop additional model runs in SS using all available historical catch and survey time series, if possible.

- 7) Are you aware of any reference material not cited in this report that should be included?

No.

- 8) Would you be willing to act as an external peer reviewer for a future NCDMF stock assessment?

Yes

No

- 9) Do you have any additional comments?

Please consult tracked edits and comments in the document for additional (minor) content and editorial comments.



## **NCDMF Stock Assessment Program External Peer Review**

### **Assessment Information**

Assessment Species: Southern flounder (*Paralichthys lethostigma*)  
Stock Assessment Report: Stock Assessment of Southern Flounder, *Paralichthys lethostigma*,  
in North Carolina Waters—2014  
Date Sent: November 10, 2014

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Thank you,

Laura M. Lee  
*Senior Stock Assessment Scientist*  
North Carolina Division of Marine Fisheries

## TERMS OF REFERENCE REPORT FOR EXTERNAL PEER REVIEW

### Reviewer Information

Reviewer Name: Steve Midway  
Business Mailing Address: Bio Dept., Coastal Carolina University, Conway, SC 29528  
Business E-Mail: smidway@coastal.edu  
Business Phone: Office 843-349-6404; Cell 919-793-5386

1) Evaluate the thoroughness of data evaluation and presentation including:

a) Justification for inclusion or elimination of available data sources

Overall I thought the use of data was well presented and all efforts were made to include relevant data. Obviously when merging several data sources into one assessment there will be questions, but I have no major comments on the data sources and refer to my minor comments and questions in the text.

b) Consideration of survey and data strengths and weaknesses (e.g., temporal and spatial scale, gear selectivities, sample size)

The main strength I see is the diversity of sampling programs that capture southern flounder, which not only helps describe a wider size/age range, but also permits increased inference (even when some programs, like larval sampling, are excluded). Obviously a weakness is the lack of (survey) data for offshore adults who have either moved offshore seasonally or are permanent offshore residents (and the distinction is important, too). Clearly this demographic will need future efforts toward description to address major questions about life history, habitat use, and spatial dynamics beyond the unit stock.

c) Calculation and standardization of indices and other statistics

I'm less familiar with standard methods for calculation of indices, and would defer to the comments of other reviewers. However, I have made some minor comments throughout the text where I was unclear or uncertain about a specific aspect of estimation or statistical procedures.

2) Evaluate the adequacy, appropriateness, and application of data used in the assessment.

Again, the offshore adults is a lingering question for this species; however, I was impressed with the changes made from the previous assessment. I think based on the existing sampling programs used and substantial improvements made in this assessment, the data are adequate and appropriate for an improved assessment of southern flounder.

3) Evaluate the adequacy, appropriateness, and application of method(s) used to assess the stocks.

Coming into this review I was unfamiliar with Stock Synthesis. However, based on the description of this method (both in the assessment text and from the citations) it appears to be

a good choice for this species, namely in its generation of uncertainty and accommodation of selectivity patterns for multiple sampling programs, which is clearly the case. The flexibility of Stock Synthesis (i.e., use with varying amounts and types of data) also would appear to be something that is a strength as southern flounder assessment could potentially stay with this model in future assessments (as opposed to changing assessment models each assessment).

- 4) Evaluate the methods used to estimate stock status determination criteria. Evaluate the adequacy and appropriateness of recommended stock status determination criteria.

Obviously based on the information and rates presented in Section 4, the designation of overfished with overfishing occurring makes sense. However, I would like to see more effort made to reconcile the historically high  $F$  values and extremely low SPR with the fact that biomass has not appreciably varied over 2 decades. For at least 10 years,  $F$  was 2–3x the threshold value, yet biomass did not perceptibly respond (decline), nor has it in the most recent decade of continued overfishing. (And most of the abundance indices are variable, but not strongly declining.) I have thought about this before, and would direct you to Chapter 4 (<http://sites.psu.edu/fishresearch/wp-content/uploads/sites/10599/2014/03/Midway-Dissertation.pdf>). I don't think the answer is explicit in this chapter, but without a reliable stock-recruit relationship some type of larval subsidy is perhaps the most parsimonious answer regarding the persistence and stability of biomass in the face of very high harvest. (I will also note that this chapter is in preparation for submission to a peer-reviewed journal, and I should soon be able to provide a revised version of the population modeling presented in the dissertation.) So, to circle back to the question, I think the stock status determination is analytically defensible, but needs continued thought.

- 5) Does the stock assessment provide a valid basis for management for at least the next five years given the available data and current knowledge of the species stock dynamics and fisheries?

Yes

No

Comment on response.

I have selected Yes, but the circle does not fill in electronically. While questions remain, I see this assessment as both the best available information for managing the NC unit stock of southern flounder, as well as advancement from previous assessments.

- 6) Evaluate appropriateness of research recommendations. Suggest additional recommendations warranted, clearly denoting research and monitoring needs that may appreciably improve the reliability of future assessments.

Overall, the research recommendations are comprehensive and appropriate. One minor recommendation I might put forth would be to consider the squash-mount maturity preparations/slides that were extremely precise in classifying maturity stages in southern flounder (see Midway et al. 2013). In addition to the utility of the method presented in the paper, I have had discussions with multiple biologists at SCDNR who are successfully

exploring this approach for other species. This method does not rely on histology, yet produces near-histological quality data with minimal effort.

Continuing to elucidate patterns of inshore habitat use, demographics, and harvest (and discards, etc.) is important, but I think that focusing on recommendations 7–9 will serve the critical mission of completing the understanding of the southern flounder life cycle and inform the assessment process more than other areas. (That being said, I know these are likely the most difficult research objectives in addition to the fact that they have been recently worked on.) I would also encourage you to reference the dissertation chapter linked above for my attempt at your Analysis recommendation. In the coming weeks/months as I prepare this chapter for submission, I would be happy to have a discussion with NCDMF for your thoughts on my approach, and how it might be improved and potentially used in this assessment document.

7) Are you aware of any reference material not cited in this report that should be included?

References seem comprehensive and largely match the literature I have used for southern flounder.

8) Would you be willing to act as an external peer reviewer for a future NCDMF stock assessment?

Yes

No

Again, Yes, but the bubble is not active.

9) Do you have any additional comments?

Overall, I wish I were able to comment more thoroughly on the assessment model; however, my knowledge of assessment models is more academic than practical. I trust other reviews are more assessment-minded and have provided good comments. I do feel qualified to comment on the biology of the species, and in general this assessment, to me, presents a significant step forward with respect to integrating biology into the assessment.

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Laura M. Lee  
*Senior Stock Assessment Scientist*  
North Carolina Division of Marine Fisheries

## TERMS OF REFERENCE REPORT FOR EXTERNAL PEER REVIEW

### Reviewer Information

Reviewer Name: Dr. Erik H. Williams  
Business Mailing Address: NOAA/NMFS, 101 Pivers Island Road, Beaufort, NC 28516  
Business E-Mail: Erik.Williams@noaa.gov  
Business Phone: 252-728-8603

1) Evaluate the thoroughness of data evaluation and presentation including:

a) Justification for inclusion or elimination of available data sources

The report seems to focus on data that were included, with not much being considered, but ultimately rejected. It is not clear how the age data are being used in the assessment model. It seems this whole document relies on a person with some experience with Stock Synthesis. The document says the age data are entered into the model, yet the growth parameters are fixed and the selectivity curves are estimated as functions of length, not age. This leaves me wondering if the age data is being used for anything in the assessment model. Are there annual age composition fits? None are shown in the document. This is a major weakness of this document and potentially the stock assessment.

Generally the justification for including data seems appropriate. Aside from the concerns mentioned above about the age data, there are some concerns about the index data being used (see below).

b) Consideration of survey and data strengths and weaknesses (e.g., temporal and spatial scale, gear selectivities, sample size)

Stock Definition:

The documentation for the stock definition is clear. The limited tagging data are presented and used in an appropriate manner. The issue remains that this is clearly an open population being modeled in this stock assessment.

Movement and Migration:

Section 1.2.2 in the report should include more detail. The 15% emigration rate is mentioned later in the report, but not in this section, where it clearly belongs. This is a critical issue for this stock assessment and I would expect the write-up to reflect that with much more detail and discussion of available data, alternate hypotheses, anecdotal information, etc.

Age, Size, Growth:

The age and length data for this species seems fairly extensive based on the sample size tables presented in the document, yet it is completely unclear how all this data is being used or not used in the assessment. There is extensive discussion about stratifying the length data into six month periods, but only one overall growth curve is presented for



each sex. Were six month growth curves fit? The model uses two seasons, but the same growth curve for each season? It appears that the growth curves were fixed in the model.

The sampling design, or lack of sampling design for collecting length and age samples could use some more detail. Are the age data useless because of the biased sampling design? I am not clear on this. Are the lengths biased in some way? How exactly were the fishery specific length composition data put together? Are there fishery specific age composition data available? I realize later in the report that there is a statement about the age sampling being non-random. But, were there any attempts to correct the data for use in the assessment?

#### Maturity:

The maturity data seems fairly well documented and one of the few sections of the report that was actually clear and concise.

#### Mortality:

The choice of natural mortality values for an assessment is usually one of the most important choices made. In this report a single paragraph is devoted to this topic. That is woefully inadequate. The choice of M estimators needs to be discussed and justified. It looks as if the analyst just picked a few formulae off the shelf and then averaged them all, without regard to their utility for this species. For instance, the Ralston estimator is almost never used and should be discarded. The Jensen estimator is just one estimator and should not appear twice in the averaging. Basically these M estimators should be cast into categories of estimators, such as max age based (Hoenig), life-history invariant (Jensen, Charnov), and size based (Lorenzen). The strengths and weaknesses of each should be discussed, with particular note to the species at hand. Which methods may have more utility for Southern Flounder? Why?

#### Habitat:

It seems clear from the document that the knowledge about movement and habitat is limiting, as it can be for many fish species. However, it would have been nice to see a little more data from GA and SC to see if anything from those regions can be gleaned for this assessment. Perhaps that was done and it is not clear to me. There is mention of tagging studies from GA and SC, but not much detail about what is known in those areas about Southern Flounder.

#### Descriptions of Fisheries:

This is very clear and understandable. It seems that getting better discard estimates should be a high priority for research.

#### Fishery-Independent Data:

It would have been nice to see a summary table comparing the Program 120, 135, 195, and 915 data side by side. Perhaps indicating months of data collection, amount of area covered, number of stations, etc. In any event, the documentation seems clear enough to understand the data, but what is unclear is why the choices were made for inclusion or exclusion of the data, and why the data was subset in the ways that it was for Southern Flounder. For example, Program 120 seems inferior to Program 195, which seems to cover more time and space, yet two indices, carrying equal weight in the model are used

from these programs. Why? And, May and June months were used for Program 120 data, yet the Program 195 data was limited to September. They are both measuring age-0 Southern Flounder. Why the discrepancy in months used?

The Program 135 and 915 data are both measuring adult Southern Flounder, but I see no length composition data. This leaves me wondering how this data is being treated in the model. Maybe if I was able to read Stock Synthesis input files I might be able to find it, but if that was an expectation for this review, then you called upon the wrong reviewer. More discussion of the indices is below.

c) Calculation and standardization of indices and other statistics

There are several issues with the indices that were produced for this assessment that warrant further consideration or explanation. The document is limiting in its description of why index data were subset and ultimately selected. For instance, there is no clear linkage between the months chosen for modeling index data and the months during which one would expect to see Southern Flounder. There is discussion of taking the months with the highest catch rates, but how high and what percentage of the catch is excluded in the months that were dropped? This point obviously does not apply to all the index data, because some of the fishery-independent sampling was already limited by design.

The potential biases and uncertainties sections of the index reports are incomplete and border on the useless. Saying that a survey is not designed for the species in question and not explaining how that might affect the relationship between survey abundance and true abundance is a dereliction of duty. I would guess that 95% of surveys used in fisheries are never designed for the species index that is being calculated. What is more important is to discuss the spatial and temporal overlap of the species and survey. This is not done very effectively in this assessment.

The justification for choice of indices to be put into the model is not clear. These indices should be compared in two ways, (1) relative to each other and (2) based on the properties of how well they capture abundance. Having more than one index that measures the same thing should not be put into the model. The model does not have a good means to sort out the differences, especially when no age data is being used. I do not understand the reason for including both program 120 and 195 data since they both are measuring age-0 Southern Flounder. Either combine them into a single index or select the better one. Because the length and age composition data is not presented for any of the indices, I am not sure whether the same goes for program 135 and 915 index data. If they have the same selectivity (or even roughly the same), then combine them or select the best.

The documentation and diagnostics for the indices is too little for me to offer any advice about how reflective they are of abundance. The Mann-Kendall analysis in section 2.3 is pointless. The pairwise correlation analysis is good, but those results showing very little correlation are the very results you are looking for to question the choice of indices for inclusion in the model, yet none of that is done in this report. Lack of correlation among your indices (assuming they are lagged appropriately) should be a big red flag and warrants further investigation, discussion, and justification than what is in this report.

- 2) Evaluate the adequacy, appropriateness, and application of data used in the assessment.

A stock assessment relies on the accuracy of each input data source. In order to have a useful model you must at a bare minimum have an understanding of the total removals from the stock. In the case of Southern Flounder, there is a good set of landings estimates, but the discards are highly uncertain, or even ignored in the case of shrimp trawl bycatch. Nonetheless, that is a common problem for many stock assessments. The best way to address this is through sensitivity runs and uncertainty estimates.

The next critical piece of information for a size/age-structured model is size and age structured data. In this case length composition data is being used and it remains unclear to this reviewer what is being done with the age data. In any event this data needs to be plotted and visually examined to determine if (1) year class strengths/weaknesses can be observed moving through the data, (2) if shifts in the smaller ages/sizes correspond to changes in minimum size regulations, and (3) if there are notable shifts in the maximum size/age of fish over time. None of this appears to have been done in this assessment. It should have been noted upon examination of the length composition data that there is no sign of year classes and that there seems to be little response in the data to changes in the minimum size limit. These are concerns when going forward with a size/age-structured model like Stock Synthesis. It may have suggested that a surplus-production model was more appropriate, but I caveat that statement with the issue of not being able to adequately evaluate the age data. The age data may have been more valuable in this case. It is often the case that age data contains far more important population dynamic information in it compared to length data, especially when the variation in size at age is as great as it seems to be for Southern Flounder.

Of course a very critical piece of information for any assessment, especially one that seeks to provide long-term, equilibrium benchmarks is abundance data, usually in the form of relative CPUE indices. In this case there appears to be both juvenile (age-0) and adult (age range not documented) indices. Unfortunately there are two of each and they appear to conflict. This is a problem for any stock assessment and usually needs to be resolved by the analyst by either combining the data or eliminating an index. Forcing the model to choose between the indices just adds noise and potential bias to the model and results.

- 3) Evaluate the adequacy, appropriateness, and application of method(s) used to assess the stocks.

The stock synthesis assessment model is a powerful model that must be applied with care and full understanding of the underlying processes. For the set of data, which includes landings, discards, size composition, age composition (???), and indices, this model is appropriate. Unfortunately the way this report is written, determining more precisely how various settings were structured for this model is near impossible without being able to read stock synthesis input files, which I cannot read. Some details that I am left wondering about include: how are the discard selectivity curves (retention curves) being estimated? What selectivity function is being used for all the curves? What selectivity is being used for the adult indices? How is the age data being fit in the model? What are the likelihood components being estimated? What are the values of those likelihood components? What are the sample size inputs for the multinomial components? What are the CV values being used in the lognormal

likelihood components? There is a lot left unknown to me because of poor documentation and the inability to interact with the analyst during a desk review.

If I could read stock synthesis input files I might be able to find some of this information, but I cannot do that.

The choice of dome-shaped selectivity curves is a tricky one. In all assessment models like this one there is a confounding between the degree of doming in the curve (the descending limb of the selectivity curve) and the fishing mortality rate. I would have liked to see sensitivity runs with alternate hypotheses about selectivity shape and form.

The likelihood components are very poorly documented in this report, more specifically the error levels assumed for each data set. What are the multinomial n's and the index and landings CV's? The model is set with all likelihood multipliers at 1.0. This assumes that all error levels are specified correctly, which is almost never the case. Recent trends in the literature (see Francis 2011) suggest that likelihoods should be re-weighted such that residuals conform to assumptions of  $N(0,1)$ . At a minimum some other likelihood weighting scheme should have been explored. The typical pattern seen in these models is that the multinomial composition components are over-weighted, which by the looks of the index fits, seems to be the case in this model. But, again the poor documentation makes this insight difficult.

Uncertainty is characterized through sensitivity runs. This is inadequate, especially if the range of sensitivity values is not directly tied to the amount of uncertainty in the input data. What is the uncertainty in the F level that corresponds to  $F_{35\%}$ ? This is probably the most critical output, yet there is no specified level of uncertainty. Sensitivity analyses are really meant to determine behavior of the model to different assumptions, not characterize uncertainty. The author(s) should look into delta-method, bootstrap, Monte Carlo, and MCMC approaches to characterizing uncertainty.

- 4) Evaluate the methods used to estimate stock status determination criteria. Evaluate the adequacy and appropriateness of recommended stock status determination criteria.

Because of the open nature of this stock assessment, equilibrium based stock status criteria are not appropriate. The SPR rates are useful, but the uncertainty about selectivity, natural mortality, and even maturity should be factored into this calculation.

- 5) Does the stock assessment provide a valid basis for management for at least the next five years given the available data and current knowledge of the species stock dynamics and fisheries?

Yes

No

Comment on response.

Although this stock assessment has its issues, as almost any stock assessment does, it is important to realize that like most stock assessments it represents a compilation of all available data for the fishery and species. Because it is a compilation of all information, it is ultimately useful for management. The question and concern is what type of management

can be justified with this assessment? As a scientist and reviewer of this assessment, I do not want to offer management advice, as it clearly is not my place. Instead what I will try to do is highlight some of the important results and data that reflect on the population dynamics/sustainability of the stock, while keeping an eye on the associated level of uncertainty with each. The best way to think of this is as indicators of stock condition, with some being clearer than others.

First, it should be clear that the first major shortcoming of this stock assessment is the modeling of an open population, which means there is uncertainty in the feedback between spawning stock, recruitment, and ultimately fishing mortality rates. The assessment assumes there is no stock-recruit relationship, which means that it assumes recruitment is essentially constant (with some environmental noise around it). Of course that is never the case because ultimately a stock must have some level of spawning to produce some recruits, they don't just appear out of thin air. So, we know that at some low levels of spawning stock, recruitment must become impaired. The question is how low? Because of the open population we have of Southern Flounder in NC, another layer of uncertainty is added to the whole system. Certainly this type of situation is not conducive to estimating long term sustainability benchmarks, and managers should take note of that.

In the absence of long term sustainable benchmarks there are some things that managers can continue to keep an eye on for sustainability issues. For instance what are recent trends in the abundance indices, what are the recent trends in recruitment and fishing mortality, what are the recent trends in age/length composition? Downward trends in abundance indices, downward trends in recruitment, increases in fishing mortality, and truncation of the older/bigger fish from the age/length composition should trigger concern from managers. Other changes in the data should be noted as well, like shifts in maturity or size-at-age.

What I am suggesting here is that this assessment is not going to help with any traditional benchmarks because the open population renders them useless. But, the recent trends in the data and assessment model output are useful. In evaluating these trends it is important to try and understand the root cause if possible. For instance, if recruitment is declining, we must ask why? Is there increased fishing from the other areas? Is there increased fishing in NC? Is there a change in the environment? Find the most credible explanation and this will help in deciding what can be controlled and what is uncontrollable. But recognize that controllable or uncontrollable signals may still require action on the part of managers.

What do I see in these results? Fishing mortality is showing an overall long term decline, with a recent upturn in the last few years. This is largely a reflection of the landings trend, which means any direct actions on landings levels should result in changes in fishing mortality. SPR and F are directly inversely related. Recruitment is showing a general long term decline, with a recent upturn. This could be concerning, especially since the most recent estimates of recruitment are the most uncertain. The total biomass trend is essentially flat which suggests things are fairly sustainable, but recognize that the flat trend in biomass came during a period of decreasing landings. If the decreased landings were having really positive results, we should have seen biomass trend upward. Of course recruitment has been trending downward, hence it balances out into a seemingly flat biomass time series.

The length frequency (composition) data is amazingly consistent over time, showing very few shifts or modes due to year classes. This is likely a result of the apparent large variation

in size-at-age in the growth curve data. Unfortunately this also points out a severe limitation in the utility of the length data. It does not reflect any year classes moving through the population and does not show any shifts in structure due to changes in fishing mortality or even due to changes in regulations. I would expect to see a little more shift in the small fish being kept, reflecting the increase in minimum size limits over time. It almost appears that the minimum size limits are simply being ignored.

However, the most unexpected and concerning trend in the data is the apparent shift in the age data toward younger fish. This is during a time of increasing size limits (which seem to be ignored) and stable length compositions. The catch since 2008 seems to be predominated by age-1 fish, with an increasing fraction of age-0 fish. This is of concern from a long term sustainability perspective. The reason for this needs to be explored and management measures should attempt to reverse this trend.

- 6) Evaluate appropriateness of research recommendations. Suggest additional recommendations warranted, clearly denoting research and monitoring needs that may appreciably improve the reliability of future assessments.

The research recommendations seem appropriate.

- 7) Are you aware of any reference material not cited in this report that should be included?

No references that should have been cited, but plenty of material that should have been considered, applied, and possible cited. Without looking up the exact references, I would direct the author(s) to work on selectivity estimation (Sampson, Legault, and a recent Fish Res issue), adjusting age comps for biased sampling (Chih), likelihood re-weighting (Francis), and index selection (Hilborn, Walters).

- 8) Would you be willing to act as an external peer reviewer for a future NCDMF stock assessment?

Yes

No

- 9) Do you have any additional comments?

Because the review of this stock assessment is being conducted as a desk review, which does not allow for interaction between the reviewers and stock assessment analyst, it is incumbent that the documentation be very thorough and inclusive. I find that not to be the case for this assessment. It is a major shortcoming of this assessment and severely impinges my ability to adequately review it. Half the document is attachments of Stock Synthesis (SS) files. By themselves they serve no utility for non-SS users. Therefore I am left to rely on the Tables and Figures alone, which are very incomplete. For future reviews, consider a face-to-face review, or have a much more thorough set of documents. I appreciate the need to keep a stock assessment report that is readable and understandable, but there are many supplemental things that are needed for a good technical review.

For instance, almost all input data should appear in Table form, with some appearing in Figure form as well. Consider actually including a spreadsheet of the assessment input data and even the files and software for running the model. Or provide some digital copies of the

input and output files, not just copy and pasted versions in the report. Diagnostics and more details are needed for index GLM analyses and data subsetting.

It is amazing that this assessment report has a single equation in it for maturity and nothing else. I recognize that the SS documentation is referenced, but at the same time that does not provide enough information to know how preliminary data may have been processed, nor does it allow the reviewer the details necessary to know exactly which equations are being used for selectivity, how F's are being estimated, and other important details.





**Draft Issue Paper**  
**Determine Need For and Impacts of Sheepshead Size, Creel, and Trip Limits in North Carolina**

**Jan. 30, 2015**

**I. ISSUE**

Determining if management measures are needed for sheepshead and how to evaluate options without traditional stock assessment reference points.

**II. ORIGINATION**

At its July 2014 North Carolina Division of Marine Fisheries (NCDMF) Management Review Team (MRT) meeting, the committee requested that staff update the existing issue paper on the implementation of the proclamation authority and investigate potential management measures that may or may not be implemented as safeguards for the North Carolina sheepshead population.

**III. BACKGROUND**

Management History:

The initial 2004 North Carolina Interjurisdictional Fishery Management Plan (IJFMP) incorporated reef fish, including sheepshead, in the plan management unit which was defined as fish stocks managed by the federal fishery management councils or the Atlantic States Marine Fisheries Commission (ASMFC). Under the IJFMP, sheepshead was incorporated as a species managed by the South Atlantic Fishery Management Council (SAFMC) within its Snapper Grouper Fishery Management Plan. Possession was restricted to the aggregate 20 fish creel limit and this measure was implemented by proclamation (via rule 15A NCAC 03M .0512), in accordance with the IJFMP policy to comply with regulations developed through federal fishery management plans. On April 16, 2012, sheepshead was formally removed from the SAFMC's Snapper-Grouper Fishery Management Unit in the Comprehensive Annual Catch Limit (Comp ACL) Amendment. Subsequently, North Carolina's proclamation authority for the management of sheepshead was invalidated because the species was no longer part of the IJFMP, nor was there a standalone state FMP for sheepshead.

At a November 2012 business meeting, the North Carolina Marine Fisheries Commission (NCMFC) requested that division staff develop an issue paper on providing proclamation authority for implementing size, bag limits, and trip limits for sheepshead. Staff prepared an issue paper for the regional and Finfish Advisory Committees that described the current trends in the fishery as well as the species life history. The regional and Finfish committees all recommended the same management option: proclamation authority allowing the full list of management tools stated in the proposed rule. Additional committee advice included more detailed analysis of existing biological data, conducting a stock assessment if possible, and soliciting public input on future management measures. The NCDMF recommended establishing proclamation authority for gear, time, season, area, size, bag, and trip to manage sheepshead and present the issue to Finfish and regional advisory committees to solicit public comment on specific management measures. At the November 13-15, 2013 Marine Fisheries Commission Business meeting, the commission approved Rule 15A NCAC 03M .0521 which specifies the Director's proclamation authority for sheepshead, including the ability to restrict time, area, means and methods, season, size, and quantity.

In May 2014 the ASMFC South Atlantic State/Federal Fisheries Management Board considered whether to manage sheepshead through the Interstate Fisheries Management Program. The board concluded it was best to let each state come up with their own management options due it being unclear whether sheepshead are a true migratory species and given the ASMFC limited resources and budget constraints. To date there is no plan for a coastwide stock assessment by the ASMFC and any formal stock assessment would have to come from each state agency, none of which appeared to have sufficient data sets to complete one. While the stock status of sheepshead is unknown, the stock appears to be healthy; however, there have been concerns that increased fishing pressure due to more restrictive regulations on other species may negatively impact the stock.

This paper serves to review the status of the sheepshead fishery in North Carolina and presents several management options for NCMFC's consideration.

### Life History

Sheepshead (*Archosargus probatocephalus*) is a relatively large and long-lived member of the family Sparidae (Porgies). The species is greenish-gray to silvery in color, with five to seven distinct vertical black bars and an oval shaped laterally compressed, deep body. Sheepshead commonly attain a length of 20 -25 inches and a weight ranging from 5 to 15 pounds. Fish in the 20 to 25 pound range are occasionally landed in North Carolina (Manooch 1984). Sheepshead are generally found from inshore brackish waters to offshore around rock and hard substrate, like jetties, pilings, and other structure covered with barnacles, mussels, and oysters. They have medium sized mouths with strong incisors and molars for picking up and crushing shellfish and sea urchins. Sheepshead are found in coastal waters of the eastern United States year-round based on recreational catches. Their range is from Nova Scotia to Florida along the east coast of North America continuing on to the Gulf of Mexico southward to the south Atlantic waters off Rio de Janeiro. Recreational landings of sheepshead in North Carolina are typically lower during the late fall through early spring (November-April). The decrease in landings might represent a spawning migration to oceanic waters as the temperature cools in the fall (Tremain et al. 2001). While in coastal offshore waters during the winter and spring, adults spawn on reefs (McDonough et al. 2011). They are found in coastal waters, bays and estuaries, and are tolerant of low salinity brackish waters as well. The current world record is 21 pounds, 4 ounces and was caught in New Orleans, Louisiana on April 16, 1982 (IGFA 2014). The North Carolina state record is 19 pound, 6 ounces and was caught off Oregon Inlet in 1999.

Sheepshead exhibit rapid growth from ages zero to six and have been reported to reach up to 29 inches TL in North Carolina (~28 FL; Schwartz 1990). However, less than 50 percent of the individuals are sexually mature at age one (10 inches FL). At age two (12 inches FL) most females are mature, with all sheepshead being mature at age four (14-25 inches FL). A recent study in the Chesapeake Bay found that the age at which half of the individuals could spawn (L50) was 1.51 for males (~11 inches FL), and 1.62 for females (~10 inches FL; Ballenger 2011). Both males and females were 100 percent mature at approximately 13 and 14 inches FL, respectively. Ballenger (2011) also noted that on average sheepshead in the Chesapeake Bay region attained a larger maximum size and age as compared to their more southern counterparts; reaching a maximum age of 35, living 12 to 21 years longer than previously reported. Ballenger (2011) concluded that differences in the age and growth of sheepshead found in the Chesapeake Bay region and that of sheepshead south of Cape Hatteras suggest two distinct populations in Mid-Atlantic Bight.

In South Carolina there is evidence of earlier maturation as compared to sheepshead found in North Carolina and those in the Chesapeake Bay region, with 50 percent of males and females being mature by age one (~9 inches FL) and greater than 80 percent by age three (~12 inches FL; McDonough et al. 2011). All males were mature by age four (~15 inches FL) and all females by age five (~16 inches FL). In Louisiana sheepshead also appear to mature earlier with the majority of both sexes being mature by age two; with all males and females being mature by ages three and four, respectively (Render and Wilson 1992).

In addition to differences in regional growth and maturity, migration is thought to be limited. Migration patterns based on mark recapture studies have not documented large scale movements. One study in Florida documented movement towards inlets during the fall and winter showing a more east-west offshore flow pattern than a north-south migration (Tremain et al. 2001). A Georgia study documented a maximum distance travelled of 70 miles (Woodward et al. 2000).

### Description of the Fishery (Coastwide)

Sheepshead are a highly sought after in both the recreational and commercial fishery along the Atlantic Coast (Figure 1). From 1981 to 2013, the average landings of sheepshead from the East Coast of the United States were 1.89 million pounds per year. The majority of the landings occurred in the recreational fishery, which averaged 84 percent of the total harvest or 1.34 million pounds. Since 2002, the commercial harvest has ranged from 182,894 pounds in 2013 to a high of 318,061 pounds in 2009.

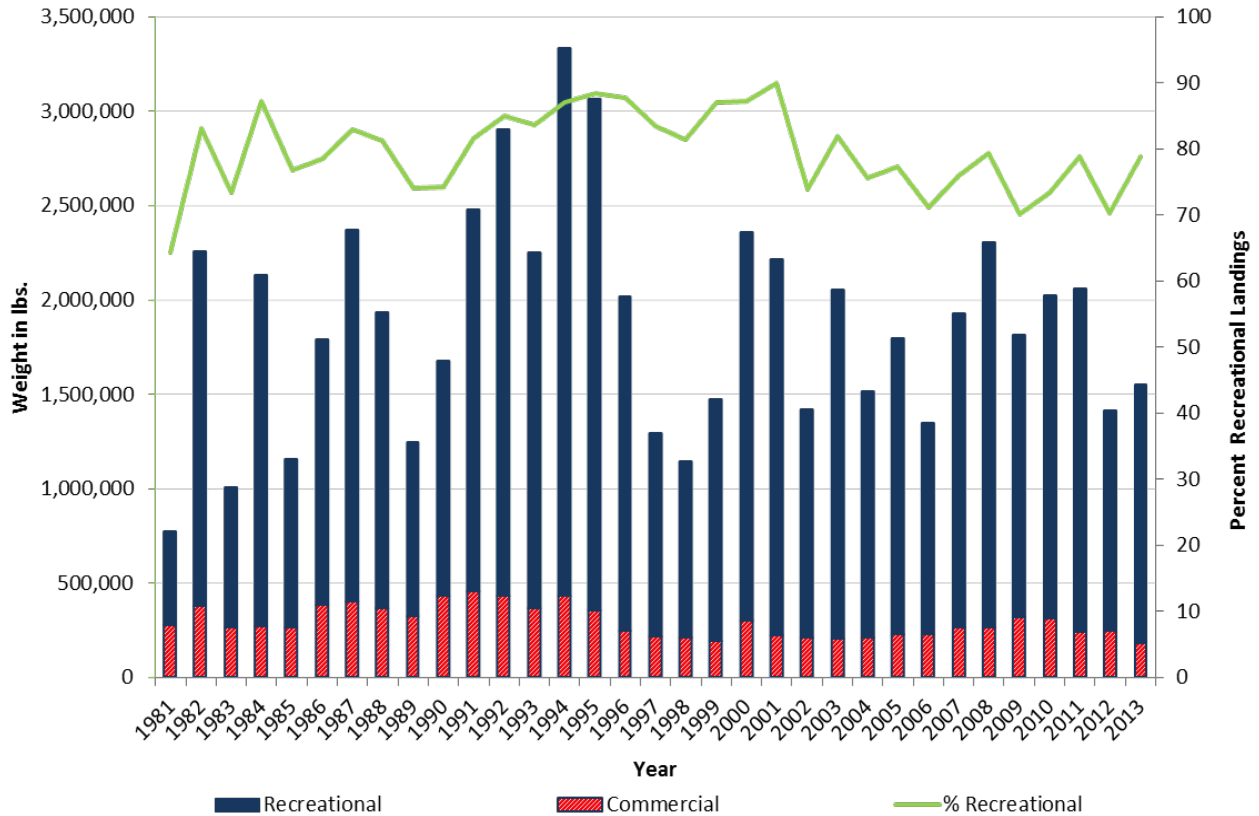


Figure 1. Recreational and commercial landings of sheepshead from the Atlantic Coast from 1980 to 2013.

Florida, South Carolina and North Carolina fisheries comprise the majority of sheepshead harvested recreationally along the Atlantic Coast. From 2002 to 2013, over 97 percent of the recreational harvest occurred in the South Atlantic (North Carolina, South Carolina, Georgia, and Florida). The recreational catch in Florida was highest on the East Coast every year except from 2007 to 2009 (Figure 2). On average, Florida harvests just below 50 percent of the recreational landings, accounting for 27 percent to as much 68 percent of the coastwide harvest annually. South Carolina ranked second in the highest total recreational landings from the South Atlantic from 2002 to 2013. Recreational landings in North Carolina have been highly variable, ranging from a low of 148,454 pounds in 2006 to high of 725,623 pounds in 2007. North Carolina is the only state that saw an increase in the recreational landings in 2012 and 2013. Proportional standard errors (PSEs) for all years were below 15.5 except for in 2008 when the PSE was 21.1. The PSE expresses the standard error of an estimate as a percentage of the estimate and is a measure of precision. Catch estimates for commonly caught species, like sheepshead, often are more precise than for rare event or pulse fisheries. PSE values greater than 50 indicate a very imprecise estimate.

The commercial harvest of sheepshead along the Atlantic Coast is primarily from two states overall: Florida (54 percent) and North Carolina (31 percent)(Figure 3). Virginia, Georgia and South Carolina accounted for 3.5 percent of the total Atlantic Coast commercial harvest. The northern states provide less than 0.1 percent of the sheepshead catch for the 12 year average. Florida has consistently harvested over 100,000 pounds for that same time period, averaging 152,349 pounds a year. Their four primary gears are cast nets, hook and line, diving spears and haul seines. From 2002 through 2008, North Carolina’s landings varied averaging only 67,223 pounds a year, but since 2009, that average has increased to 140,239 pounds a year, a 73,000 pound or greater than 100 percent increase (Figure 3). The popularity of sheepshead has grown in North Carolina in the last five years, especially looking at specific gears used commercially to land sheepshead. North Carolina’s leading commercial harvest gears have been gill nets, pound nets and haul seines. Use of gigs and spear fishing gear are also increasing.

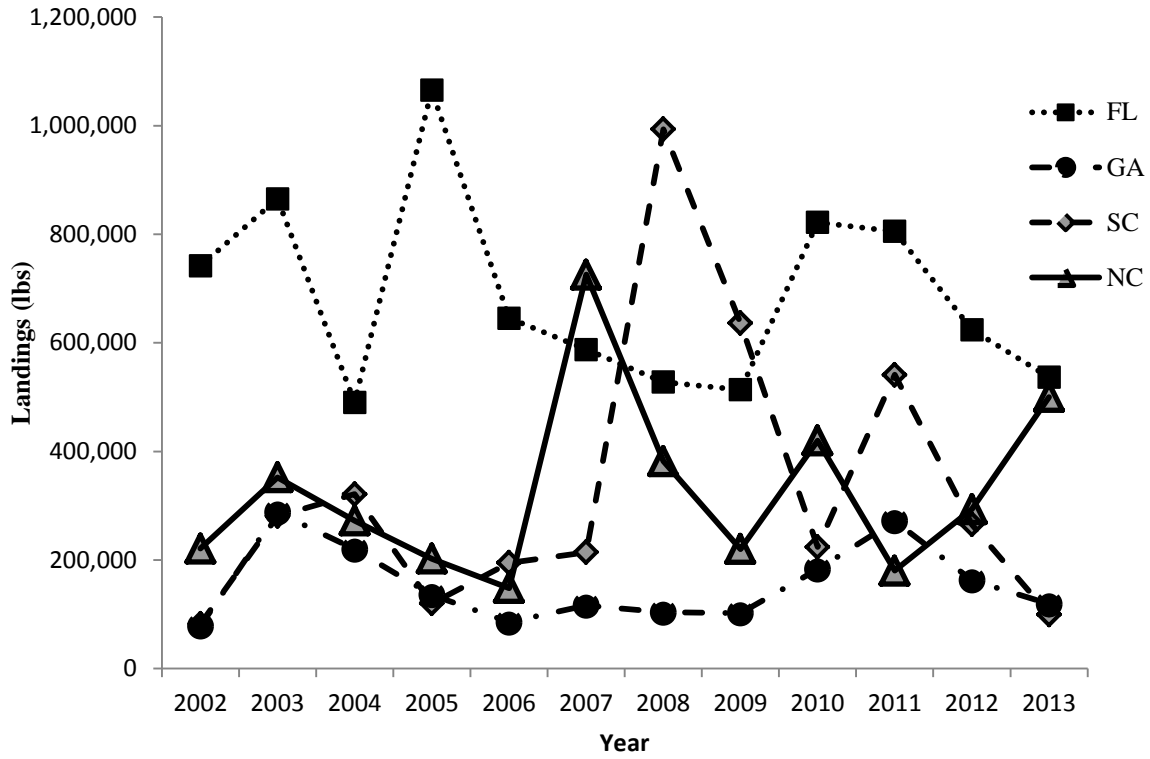


Figure 2. Recreational landings by state in the South Atlantic from 2002 to 2013.

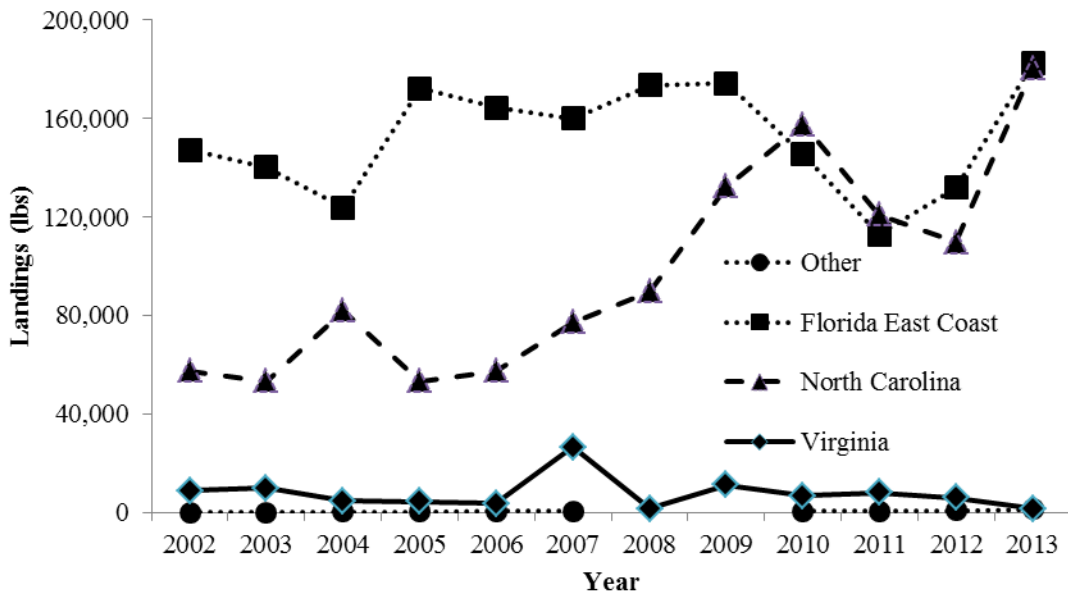


Figure 3. Commercial landings of sheephead by state along the Atlantic Coast from 2002 to 2013

### Description of the Fishery (North Carolina)

Sheepshead is a very popular recreational and commercial species in North Carolina. Seemingly, their popularity has increased in the last few years as have their landings. Sheepshead have become a favorite food fish due to their mild taste and are becoming more targeted in the recreational fishery. They are excellent baked, fried or broiled, their meat is white and dry and large bones are easily avoided (Manooch 1984). They are caught recreationally and commercially statewide, mostly from April through November. While fish are present in the fishery every month of the year, there is a peak in landings in the fall months. The highest harvest in the commercial fishery occurs in (Figure 4a). Recreational harvest peaks fluctuate among waves 3-5 (May through October), and in 2013, most sheepshead were caught in the wave 4 (July/August; Figure 4b). Harvest from recreational fishermen using hook-and-line peaked in 2007 at 725,623 pounds. In 2013, over 500,096 pounds of sheepshead were landed by recreational hook-and-line, almost tripling what was harvested in 2011 (180,319 lbs.). While the recreational hook and line landings appear to have increased over the last two years, preliminary data for 2014 indicates that approximately 129,000 pounds have been harvested since October 2014. It seems that landings continue to fluctuate between the years without trend.

Sheepshead are primarily caught as bycatch in several of North Carolina's commercial fisheries, with the majority of the landings coming from gill nets, pound nets, and haul seines (Table 1). As with the recreational fishery, landings fluctuate from year to year. Gill net landings show that in 2011, 42,374 pounds of sheepshead were harvested, with 36,924 pounds in 2012, increasing to 63,667 pounds in 2013. Haul seines landed 12,539, 7,494, and 12,389 pounds in 2011-2013, respectively. Pound nets were the most variable with 55,600, 43,847, and 82,360 pounds harvested in those same three years. Commercial sheepshead landings for the last 12 years have ranged from 53,232 pounds in 2005 to the 180,225 pounds harvested in 2013, generally increasing since 2009.

Table 1. NC commercial landings of sheepshead by gear from 2002 through 2013.

<b>Gear</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Other	199	189	78	48	92	152	168	523	190	94	940	1,840
Dive	558	442	408	2,369	812	2,442	2,912	3,180	3,003	361	9,987	10,975
Gill Nets	16,923	24,187	23,287	16,482	18,819	21,209	28,813	58,797	60,601	42,391	36,924	63,667
Haul Seines	6,081	8,091	4,924	4,567	11,988	7,868	10,728	16,060	38,597	13,143	9,473	12,350
Hook and Line	485	214		394	103	175	143	378	476	1,689	642	810
Trawls	5,185	8,450	43,885	17,235	11,886	29,416	5,564	4,237	5,478	1,992	2,140	3,940
Pound Nets	27,961	11,766	9,055	12,137	13,793	15,912	41,107	49,164	49,207	55,601	43,847	82,360
Gigs										5,585	5,929	4,285
Total	57,392	53,339	81,637	53,232	57,493	77,174	89,435	132,339	157,552	120,856	109,881	180,225

In 2013, pound nets comprised 45.7 percent, gill nets comprised 35.3 percent and spear fishing landings comprised 6.1 percent of the total commercial landings. Those three gears alone comprised 87.1 percent of all the commercial landings for 2013 (Figure 5). Sheepshead popularity among divers has increased greatly in recent years with spear-fishermen landing over 10,975 pounds of sheepshead in 2013. While only 6 percent of the total commercial landings were harvested by divers in 2013, harvest increased dramatically from the 361 pounds landed in 2011 to the almost 11,000 pounds, two years later. The majority of the dive trips harvesting sheepshead occurred in the Masonboro Sound area in New Hanover County; they averaged approximately 107 pounds per trip, within the last three years as compared to the 10 year average of only 40 pounds.

In North Carolina, both the recreational and commercial landings have fluctuated in the last 12 years, although the commercial landings have stayed more consistent than the recreational landings (Figure 6). One difference between the commercial and recreational landings is most of the commercial landings are incidental to targeting other species while recreational landings tend to be more of a targeted fishery. Other variables play into these landings such as weather, effort, and availability.

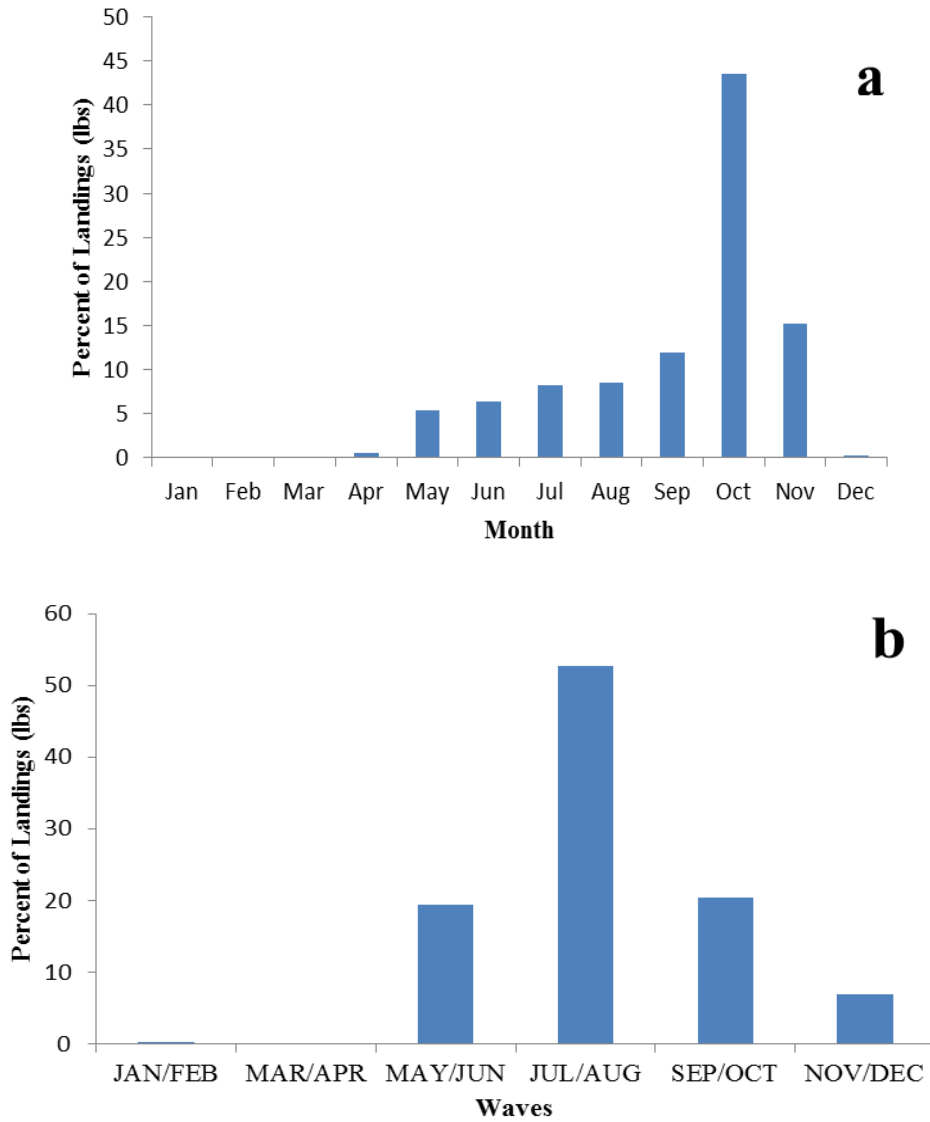


Figure 4. Percent of total landings (pounds) harvested by month for NC sheephead, a.) commercially, 2011 – 2013 and b.) recreationally by wave from the Marine Recreational Information (MRIP) for 2013.

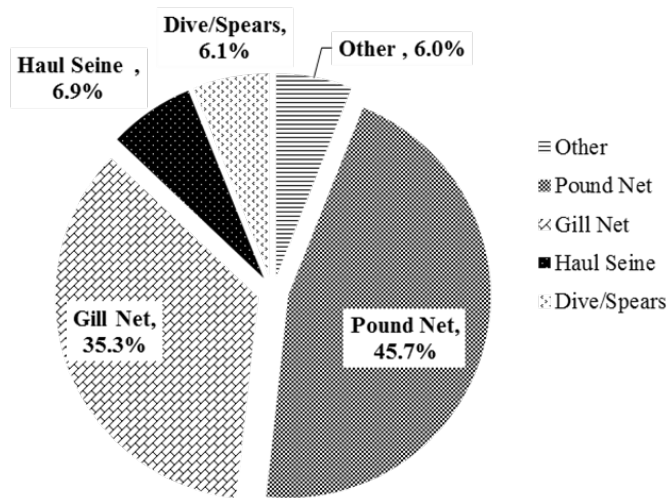


Figure 5. Percentages of North Carolina commercial landings by gear for 2013

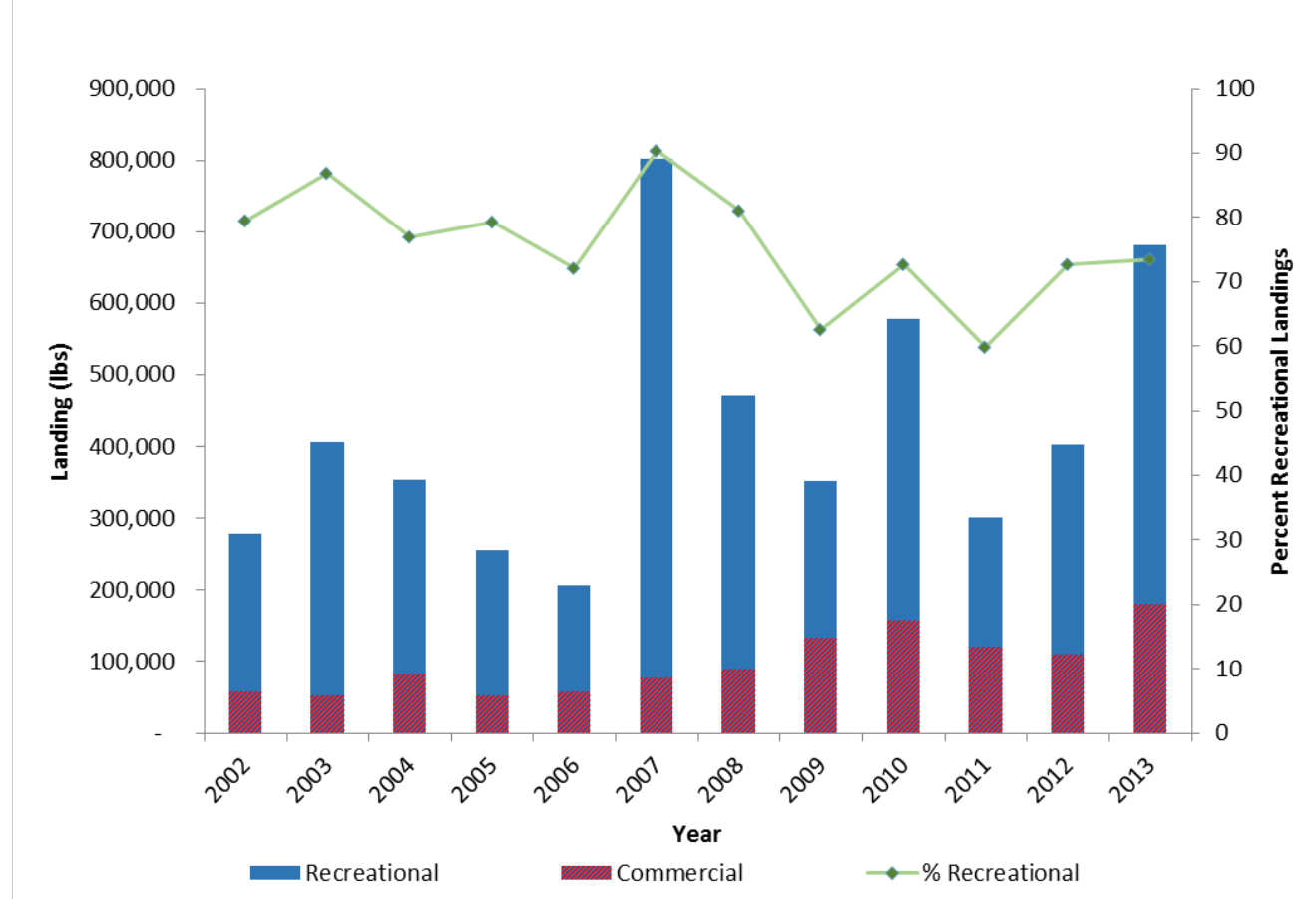


Figure 6. North Carolina sheephead recreational and commercial landings from 2002-13 (recreational landings courtesy of Program MRIP, commercial landings courtesy of North Carolina Division of Marine Fisheries Trip Ticket Program).

#### **IV. AUTHORITY**

G.S. 113-134, 113-182, 113-221.1, 143B-289.52  
15A NCAC 03M .0521

#### **V. SUMMARY FINDINGS**

Until a stock assessment can be done, there are several management measures that could be used to limit the harvest of sheepshead and address any concerns of overfishing or exploitation of juvenile sheepshead. The focus of this information paper is to provide potential management options for sheepshead. This paper provides information to determine how effective minimum size limits, slot limits and/or creel and trip limits would be as management measures for reducing the overall harvest of sheepshead. The harvest reductions provided are estimates calculated based on several assumptions about the data, gear selectivity, gear efficiency, and size class strength. Violations of any or all of these assumptions can affect the precision and accuracy of these numbers. Harvest reductions based on length frequency distributions also have the potential to be biased when the sample size is low and may not be a true indicator of relative fish abundance, thus overestimating harvest reductions. All data presented in this paper is only informational and does not suggest any comprehensive analyses was performed that would be produced with a formal stock assessment.

##### Recreational Options

To determine what effect a minimum size limit and/or a slot size limit as well as creel limit would have on the recreational landings of sheepshead, length frequency and catch per angler trip data was obtained from the Marine Recreational Information Program (MRIP). MRIP is the primary survey used to collect data on angler harvest from ocean and inside waters along the entire North Carolina coast. MRIP consists of two components, the Access-Point Angler Intercept Survey (APAIS) and the Coastal Household Telephone Survey (CHTS). The CHTS utilizes a random digit dialing (RDD) telephone survey approach to collect marine recreational fishing effort information from residential households located in coastal counties. APAIS, an onsite intercept survey conducted at fishing access-sites, is used for collection of individual catch and discard data for calculation of catch rate at the species level. Creel clerks collect intercept data from January through December (in two-month waves) by interviewing anglers completing fishing trips in one of the four fishing modes (man-made structures, beaches, private boats, and for-hire vessels). Individual lengths (mm-FL) and weights (kilograms) are recorded for each individual species sampled. To calculate length frequencies, millimeters (mm) were converted to inches for this paper and most lengths are in fork length and not total length. Results from both component surveys are combined at the state, area, fishing mode and wave level to provide estimates of the total number of fish caught, released, and harvested; the weight of the harvest; the total number of trips; and total participation in marine recreational fishing.

A modal length frequency distribution was observed for sheepshead caught recreationally from 2002-2013 (Figure 7). These lengths ranged from 6 inches to 25 inches FL, with no particular size dominating the catch. The length frequency for sheepshead varied from year to year, which could be due to variability in the availability of various size sheepshead from year to year or could possibly due to low sample sizes in the recreational fisheries. On average, 22.56 percent of the sheepshead measured from the recreational fishery were 10 inches FL or less (~ size of 50 percent maturity), 40.4 percent were 12 inches FL or less, and 57.5 percent were 14 inches or less. Below are the options of size limits alone with their related reductions and then reductions occurring from a combination of both, size and bag limits.

##### Size Limits

Listed below are the recreational options of various minimum size limits. Table 2 provides the annual percent harvest reductions based on a 10, 12 and 14 inch minimum fork length size limit and a 12 – 20 inch fork length slot limit for each year from 2002 through 2013, as well as an overall 12-year average. The reduction from a 10 inch minimum size limit ranged from a low of 4.1 percent in 2002 to a high of 40.2 percent in 2013. The overall average reduction across years was 18.3 percent. For a 14 inch minimum size limit, where the majority of fish are mature, higher reduction percentages occur (Average reduction was 33.7 percent across all years). Recreational landings increased considerably in both 2012 and 2013, resulting in higher percent reductions for those two years in all calculations of minimum size limits. It is important to note that the harvest increased as a result of small fish as



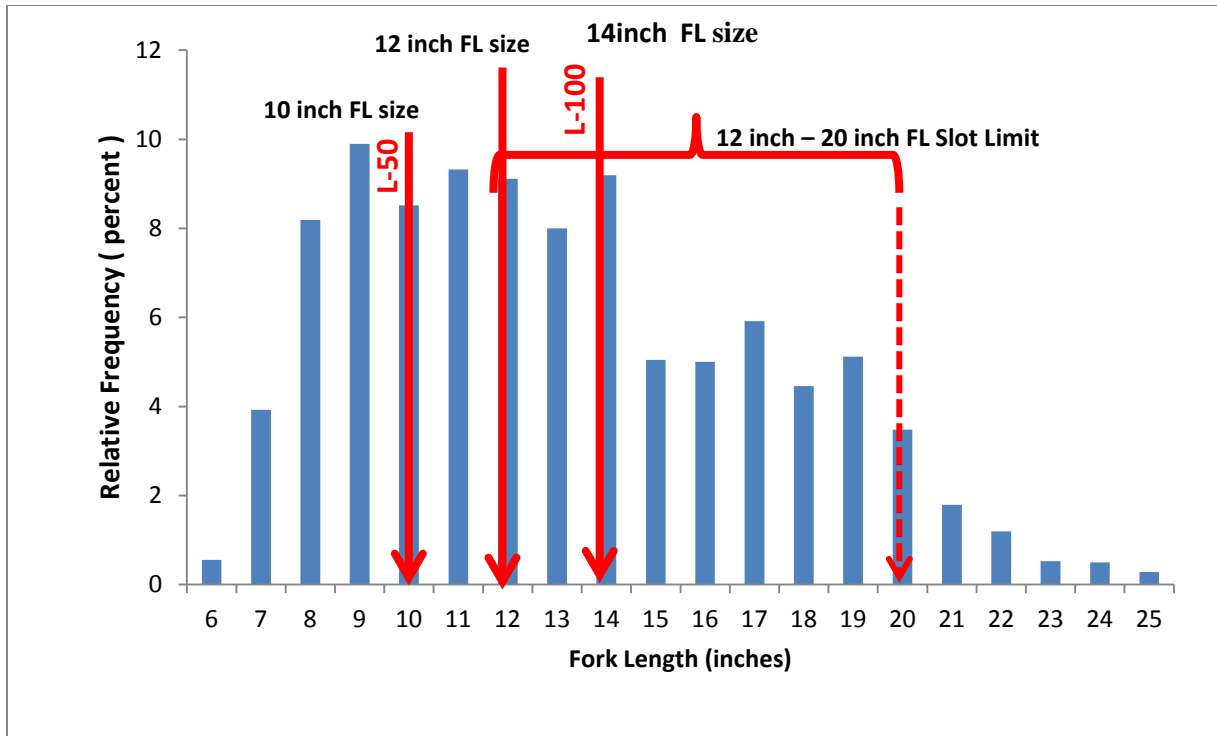


Figure 7. A length frequency distribution of sheephead landed recreationally, 2002- 2013. Arrows indicate potential size and slot limits considered for management. L-50 and L-100 represent the lengths at 50% and 100% maturity.

opposed to a proportional increase in harvest across all size classes. With the large amount of fish harvested in 2013, a 76 percent reduction would have occurred in that year, but only be a 52 percent reduction over all 12 years. Even with a 14 inch limit, there are still 42.5 percent of fish greater than 14 inches (up to 25 inches) left to catch (Figure 7). None of the size bins from this range (6 to 25 inches) contain more than 9.8 percent of fish by number for any one inch size group, demonstrating that anglers are catching sheephead from all size and age classes.

A slot limit of 12 inches to 20 inches would incorporate allowable fish within these sizes where 80 to 100 percent are mature and all other fish smaller or larger would have to be released. Again, these reductions are greater than those of the 10 inch and 12 inch minimum size limits, but that would be expected. However, the 12 year overall reduction would be less (44.4 percent) than the overall 14 inch minimum size limit reduction of 51.6 percent (Table 2).

Table 2. Percent recreational reductions in numbers based on a 10,12, 14 inch (Fork Length) minimum size limit and a 12 inch to 20 inch (FL) slot limit for sheephead in NC.

Minimum Size Limit (FL)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average Reduction
10" min	4.1	25.1	8.8	6.8	16.6	9.6	29.1	35.7	5.9	4.3	33.4	40.2	18.3
12" min	21.2	42.5	17.2	8.3	30.0	15.6	45.0	67.2	31.1	17.9	38.5	70.5	33.7
14" min	49.0	52.0	25.8	16.1	46.2	37.5	75.6	79.1	47.1	59.8	54.7	76.4	51.6
12"-20" slot	33.2	52.4	48.0	41.3	37.2	30.5	46.5	69.5	36.7	22.4	41.7	73.4	44.4

### **Size Limits with Bag Limits**

Bag limit analysis indicated most recreational trips caught five fish or less (87 percent of trips) from 2006 to 2013 (Table 3). Greater than 95 percent of the trips had 10 fish or less from 2006 to 2013. No trips have been observed to exceed the past bag limit of 20 fish (included in the SAFMC 20 fish aggregate limit).

Table 3. The cumulative percent of recreational trips with five fish or less, 10 fish or less, 15 fish or less, and 20 fish or less for NC sheepshead.

Number of fish	2006	2007	2008	2009	2010	2011	2012	2013	Combined
5 fish	96	79	86	86	87	97	89	81	87
10 fish	100	91	94	95	97	99	98	95	96
15 fish	100	98	99	100	100	100	100	98	99
20 fish	100	100	100	100	100	100	100	100	100

10 inch FL Minimum Size Limit with bag limit

A 10-inch fork length sheepshead is the approximate size where 50 percent of females are mature while males are around 11 inches at 50 percent maturity, based on a Virginia study. In South Carolina, males are 100 percent mature at age 4 or 14.8 inches FL and females at age 5 or 15.75 inches FL, respectively. If a 10-inch FL size limit and a one-fish bag limit were implemented, there would be a reduction in catch of approximately 74 percent of the sheepshead landed based on the average from 2004 to 2013 (Table 4). A bag limit of five fish would result in a reduction of 39.7 percent, whereas a 10-fish bag limit would yield an overall 28 percent reduction, based on the last 10 years of landings (Table 4). A bag limit going from 5 fish to 1 fish has a much greater harvest reduction than does a reduction going from 10 fish to 5 fish because angler success at maxing out the bag limit is much greater at the lower values. However, if the stock status is sustainable, a 10-fish bag limit would not seem unreasonable and could always be reduced in the future.

Table 4. Annual estimated recreational harvest reductions in numbers of fish based on 10inch FL size limit and up to a ten fish bag limit, 2004 – 2013 for NC sheepshead.

Size	Bag	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average Reductions
10	1	51.6	52.2	50.4	75.5	78.1	80.9	67.9	56.7	74.5	83.9	74.3
	2	30.3	30.8	30.1	61.0	67.4	69.0	47.8	31.2	62.0	72.9	59.8
	3	17.8	16.9	22.4	51.0	60.3	60.1	35.3	16.8	54.3	65.5	50.5
	4	12.6	12.5	20.5	43.9	54.6	54.2	26.5	11.3	48.9	59.9	44.2
	5	10.6	10.2	19.5	38.1	50.8	50.5	20.3	9.6	44.9	55.2	39.7
	6	9.4	7.9	18.6	32.3	47.4	47.0	16.0	8.2	41.9	52.1	36.1
	7	8.8	6.8	17.6	28.1	44.3	43.8	13.0	7.3	39.8	49.5	33.3
	8	8.8	6.8	16.6	34.3	41.2	41.7	10.4	6.9	38.2	47.8	31.1
	9	8.8	6.8	16.6	21.9	38.5	39.7	8.8	6.5	37.3	46.7	29.5
	10	8.8	6.8	16.6	19.4	36.4	38.2	8.0	6.0	36.5	45.7	28.2

12inch FL Minimum Size Limit with bag limit

Most 12 inch FL sheepshead in North Carolina are mature by this length and are about two years of age. A 12-inch FL minimum size limit with a one fish bag limit would yield an 80.3 percent overall reduction. A bag limit of five fish would result in a 53.8 percent reduction. In 2005, that yearly reduction would have been 11.7 percent and in 2013, that reduction would have jumped to 77.9 percent. Going from 10 to one fish provided a range of 45 percent to 80 percent reductions.

Table 5. Annual estimated recreational harvest reductions in numbers of fish based on 12 inch FL size limit and up to a ten fish bag limit, 2004 – 2013 for sheepshead in NC.

Size	Bag	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average Reductions
12	1	56.0	53.0	58.4	77.2	83.0	90.2	76.5	62.9	76.5	92.0	80.3
	2	36.6	31.9	41.3	63.6	74.7	84.2	61.8	40.9	64.9	86.6	69.2
	3	25.3	18.3	34.9	54.3	69.2	79.6	52.7	28.6	57.8	82.9	62.0
	4	20.6	14.0	33.3	47.6	64.8	76.6	46.2	23.9	52.8	80.2	57.2
	5	18.8	11.7	32.4	42.2	61.8	74.7	41.7	22.4	49.0	77.9	53.8
	6	17.7	9.5	31.6	36.8	59.2	72.9	38.5	21.2	46.3	76.3	51.0
	7	17.2	8.3	30.8	32.9	56.8	71.3	36.3	20.5	44.3	75.1	48.8
	8	17.2	8.3	30.0	38.7	54.4	70.2	34.4	20.1	42.9	74.2	47.2
	9	17.2	8.3	30.0	27.1	52.3	69.2	33.3	19.7	42.0	73.7	45.9
	10	17.2	8.3	30.0	24.8	50.7	68.4	32.6	19.4	41.3	73.2	44.9

14inch FL Minimum Size Limit with bag limit

At fourteen inches (FL) in length, both sexes of sheepshead have reached 100 percent maturity and are either three or four years of age. Below, Table 6 shows the annual estimated recreational harvest reductions based on a 14-inch FL minimum size for each year since 2004 through 2013. Calculations with various bag limits are shown. A five-fish bag limit would have a 67.4 percent reduction. A 10-fish bag limit would have a 61.1 percent reduction.

Table 6. Annual estimated recreational harvest reductions in numbers of fish based on 14 inch FL size limit and up to a ten fish bag limit, 2004 – 2013 for NC sheepshead.

Size	Bag	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average Reductions
14	1	60.6	56.9	68.0	83.1	92.5	93.8	81.9	81.8	82.7	93.6	86.1
	2	43.3	37.7	55.0	73.0	88.8	89.9	70.6	71.1	74.1	89.3	78.2
	3	33.1	25.2	50.0	66.1	86.3	87.0	63.6	65.0	68.9	86.4	73.2
	4	28.9	21.2	48.8	61.2	84.4	85.1	58.7	62.7	65.2	84.2	69.8
	5	27.3	19.2	48.2	57.2	83.1	83.9	55.2	62.0	62.5	82.3	67.4
	6	26.3	17.1	47.5	53.2	81.9	82.8	52.8	61.4	60.4	81.1	65.4
	7	25.8	16.1	46.9	50.3	80.8	81.8	51.1	61.0	59.0	80.1	63.9
	8	25.8	16.1	46.2	54.5	79.8	81.0	49.6	60.8	57.9	79.4	62.7
	9	25.8	16.1	46.2	46.0	78.8	80.4	48.7	60.7	57.3	79.0	61.8
	10	25.8	16.1	46.2	44.2	78.1	79.9	48.2	60.5	56.8	78.6	61.1

Recreational Slot Limit

Based on the length frequency distribution, 51.8 percent of the sheepshead landed were between 12 inches and 20 inches FL. Annual estimated harvest reductions based on a 12 to 20 inch (FL) slot limit with any bag limit range from 51 percent up to 83 percent (Table 7). A slot limit with a five fish bag limit would reduce catch of sheepshead by 59.6 percent overall, while a 10 fish bag limit would provide a 51.8 percent reduction.

Table 7. Annual estimated recreational harvest reductions in numbers of fish based on a 12 inch to 20 inch FL slot limit size limit and up to a ten fish bag limit, 2004 – 2013 for NC sheepshead.

Size	Bag	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average Reductions
12" through 20"	1	72.4	69.9	62.6	81.2	83.5	90.9	78.4	64.9	77.7	92.8	82.8
	2	60.3	56.4	47.4	70.0	75.4	85.3	64.9	44.2	66.7	87.9	73.0
	3	53.1	47.7	41.6	62.3	70.1	81.1	56.5	32.5	60.0	84.6	66.8
	4	50.2	44.9	40.1	56.9	65.8	78.3	50.5	28.1	55.3	82.2	62.6
	5	49.1	43.5	39.4	52.4	62.9	76.5	46.4	26.6	51.7	80.1	59.6
	6	48.4	42.0	38.7	48.0	60.3	74.9	43.5	25.5	49.1	78.7	57.2
	7	48.0	41.3	37.9	44.7	58.0	73.3	41.5	24.8	47.3	77.6	55.3
	8	48.0	41.3	37.2	49.5	55.7	72.3	39.7	24.5	45.9	76.8	53.8
	9	48.0	41.3	37.2	39.9	53.6	71.4	38.7	24.1	45.1	76.3	52.7
	10	48.0	41.3	37.2	38.0	52.0	70.7	38.1	23.8	44.4	75.8	51.8

## **Commercial Options**

Length frequencies and the number of trips landing sheepshead obtained from the NCDMF commercial fisheries dependent sampling programs (Program 400s) were used to determine the impacts of a minimum size limit and/or a slot size limit and commercial trip limits on commercial landings of sheepshead. Length frequencies of sheepshead caught and the number of trips landing sheepshead were examined for the estuarine gill net, ocean gill net, gig, pound net, long haul seine, and ocean trawl fisheries. Sheepshead lengths were collected at local fish houses or on the water at the net when possible. At the fish house random samples of the graded catch (cartons from each market category) were taken. Individual fish were measured (mm, fork length-FL) and total weight (0.1 kg) of all fish measured in aggregate was obtained. Fork lengths are the standard lengths by protocol of the Division's sampling methods for this species. All lengths unless otherwise stated are in FL and any size limit proposed would be in fork length. Currently there is no conversion from FL to total length (TL) for North Carolina; however, Georgia converted its 10-inch FL minimum size limit to a 10.7-inch TL. For this information paper, millimeters (mm) were converted to inches. Subsequent to sampling a portion of the catch, the total weight of the catch by species and market grade was obtained for each trip, either by using the trip ticket weights or some other reliable estimate (i.e., fish house receipts). The number of individuals, aggregate weight, and length frequencies of each species in a sample were expanded to represent the species quantities in the sampled catch (trip ticket). Expansion was accomplished by matching at the market grade level biological fish house sample data (mean weight or length data) to the corresponding North Carolina Trip Ticket Program market grade harvest. For example, the total length frequency of a species within a catch was derived by expanding the length frequency of the individuals measured in the subsample of a market grade (culled samples) to the total market category weight of that species in the sampled trip.

From 2002 to 2013, the major commercial gears used were estuarine gill nets, gigs, spearfishing while diving, long haul, ocean gill nets, ocean trawl, and pound nets (both flounder and sciaenid combined). The percentages of landings harvested by these various gears have already been mentioned (Figure 5). Below are the length frequency graphs of sheepshead harvested from specific gears (Figures 8 and 9). Commercial reductions based on size limits and trip limits are presented in two separate sections. The first section describes harvest reductions from implementation of size limits of 10, 12, and 14-inches (FL) and a slot of 12 to 20 inch FL (Table 8). The other section discusses harvest reductions calculated from trip limits of 100 to 500 pounds. These are all associated with the different gears used in N. C. coastal waters. The reductions are for all years combined from 2002 through 2013.

### **Reductions using size limits by gear**

Overall estimated harvest reductions based on size limit options vary by fishery and range from 4.2 percent to 73.6 percent (Table 8). The largest overall reductions (73.6 percent) would occur in the gig fishery. All gears with the exception of the ocean trawl fishery would experience harvest reductions of 64.2 percent to 73.6 percent if a 14-inch FL minimum size limit were imposed. The overall estuarine gill net harvest would be reduced by as little as 6 percent with a 10-inch FL size limit and as much as 65 percent with a 14-inch FL size limit. Annual reductions in the pound net fishery would range from 21.2 percent to 69 percent.

### **Estuarine Gill Nets**

A uni-modal length frequency distribution was observed for sheepshead caught in this gear from 2002-2013 (Figure 8a). The percentage of sheepshead landed in gill nets between 11 and 14 inches FL was 64.6 percent. The overall harvest reduction with a 10 inch minimum size limit is 6.0 percent, for a 12 inch size limit the reduction would be 28.3 percent, a 14 inch size limit would reduce catch by 64.9 percent and a 12-inch to 20-inch slot limit would reduce harvest by 28.9 percent (Table 8).

### **Pound Nets**

Sixty-seven point two percent of the fish harvested in this gear were from 8 to 13 inches FL (Figure 9g). This demonstrates the wider size selection of sheepshead caught in this gear. The estimated harvest reduction with a 10 inch minimum size limit is 21.2 percent. The overall harvest reduction with a 12-inch minimum size limit is 47.5 percent. A 14 inch size limit would result in a 69 percent reduction and a slot limit between 12 and 20 inches would reduce catch by an overall 49.5 percent (Table 8).

### Gig

A modal length frequency distribution was observed for the sheepshead caught in the gig fishery from 2002 -2013 (Figure 8b). Forty-five percent of the gig fishery is comprised of 11-inch to 14-inch FL sheepshead. The overall harvest reduction for years 2002 through 2013 in the gig fishery is 20.1 percent for a 10-inch size limit, 39.8 percent for a 12-inch size limit, 73.6 percent for a 14-inch size limit and 41.7 percent with the 12 to 20 inch slot limit (all FL, Table 8).

### Long Haul

Approximately 61.2 percent of the sheepshead landed in the long haul fishery from 2002 to 2013 were between 10 and 13 inches FL, with one large fish being caught at 37 inches FL. Long haul gear was the third largest harvester of sheepshead with 12.1 percent or ~ 59,660 fish caught in this gear (Figure 9d). With just minimum size limits imposed, weighted average reduction percentages range from 9.7 percent (10-inch FL), 39.7 percent (12-inch FL), and 70.9 percent (14-inch FL). Adding a 12 to 20 inch FL slot limit would yield a 41 percent overall combined reduction (Table 8).

### Ocean Gill Net

The length frequency distribution of the ocean gill net fishery demonstrates high abundance of nine-inch sheepshead (32.2 percent). Additionally, 84.5 percent of the landing are comprised of 8-inch to 15-inch FL sheepshead, representing a wide range of sizes (Figure 9e). Table 8 depicts the overall harvest reductions from size limits of 10, 12, and 14 inch sizes of 40.9, 55.5, and 70.5 percent, respectively. The slot limit of 12 to 20 inches FL would reduce harvest from the ocean gill net fishery by 59.4 percent.

### Ocean Trawl

The ocean trawl fishery captured 92,094 (7.9 percent) fish from 192 trips. There is no data for this fishery for 2012 and 2013 (i.e., all data are from the years 2002 through 2011). Of these fish, 14,426 (64.1 percent) were comprised of 18 to 21-inch FL size classes (Figure 7f). Smaller sheepshead from six to 16-inches FL comprised 21.7 percent of the length-frequency distribution, whereas the majority was larger sized sheepshead within the 19 to 21 inch FL size group or 54.4 percent (Figure 9f). A 10-inch FL size limit would yield overall a 4.2 percent reduction, a 12-inch FL size limit would yield an 8.3 percent reduction, a 14-inch FL size limit would yield a 15.8 percent reduction and the 12 to 20 inch FL slot limit would yield a 48.4 percent reduction in harvest.

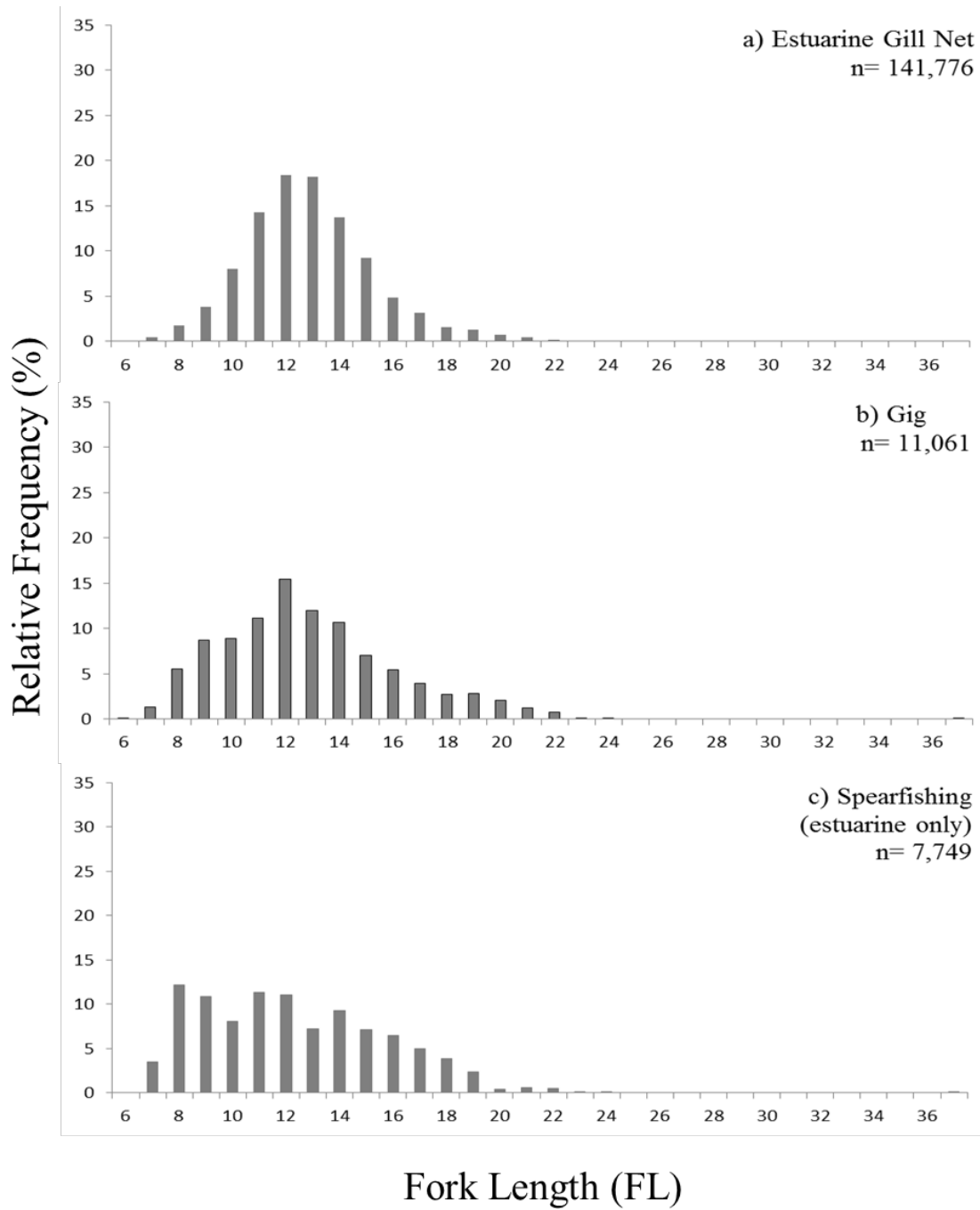


Figure 8. Weighted length-frequencies for estuarine gill nets, gigs, and spearfishing commercial gears from 2002-2013 in North Carolina.

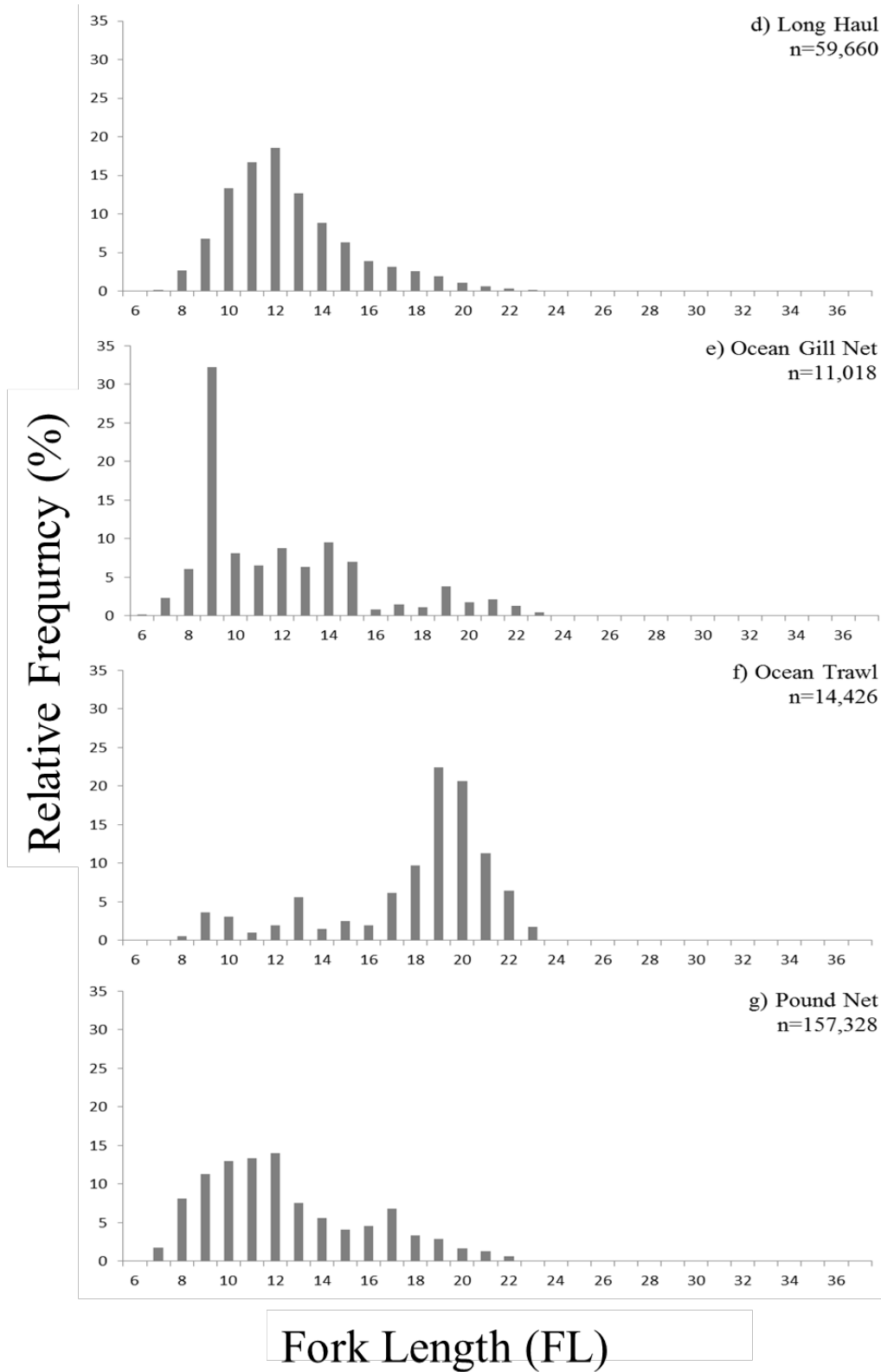


Figure 9. Weighted length frequencies of fish harvested from commercial gear of the long haul, ocean gill net, ocean trawl, and pound net fisheries from 2002-2013 in North Carolina.

Table 8. Percent reductions in harvest numbers for commercial gears based on various options of size limits of 10-inch, 12-inch, 14-inch FL and a slot limit of 12 inches to 20 inches FL for NC sheepshead. Reductions are based on number of pounds landed per year with the last column showing all years combined.

Option	Fishery	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	All years combined (2002-2013)
10" Size Limit	Estuarine Gill Net	5.2	1.0	1.1	0.0	1.4	6.1	8.2	7.2	2.0	0.4	24.2	7.6	6.0
	Pound Net	27.7	5.9	0.0	1.3	11.3	40.6	27.3	18.0	2.0	1.7	79.6	10.1	21.2
	Gig	13.5	15.4	0.3	14.0	5.8	14.9	15.4	15.1	4.5	0.7	47.4	12.4	20.1
	Long Haul	5.9	15.4	0.0	9.8	1.9	11.9	15.9	12.4	2.4	0.0	34.2	25.5	9.7
	Ocean Gill Net	12.1	0.0	0.0	9.6	3.4	8.1	10.0	86.5	67.2	0.0	44.8	72.7	40.9
	Ocean Trawl	59.7	4.7	0.2	11.4	0.0	0.0	50.0	13.4	0.1	0.3			4.2
	Spear/Diving			0.3		7.1	13.1	17.4	14.0	4.7	0.9	48.1	12.8	26.5
12" Size Limit	Estuarine Gill Net	17.1	37.0	4.2	7.2	9.7	32.1	39.0	45.6	18.3	7.4	26.9	40.9	28.3
	Pound Net	78.8	35.1	1.8	3.4	21.3	54.4	63.6	48.0	21.2	2.7	85.2	49.5	47.5
	Gig	39.8	42.5	1.6	23.5	20.5	33.1	47.0	48.9	27.7	7.3	53.1	41.4	39.8
	Long Haul	7.4	51.4	4.8	12.8	19.0	37.8	45.4	65.9	29.9	9.6	34.6	69.3	39.7
	Ocean Gill Net	33.3	0.0	0.0	16.0	6.7	22.0	32.5	92.1	97.1	0.0	49.0	85.3	55.5
	Ocean Trawl	59.7	9.7	0.4	22.8	0.0	0.1	50.0	46.0	0.6	5.2			8.3
	Spear/Diving			2.0		14.0	30.3	54.1	47.0	27.7	8.2	53.4	42.3	45.8
14" Size Limit	Estuarine Gill Net	33.7	73.2	45.3	38.1	33.9	68.1	73.8	85.4	69.7	51.1	51.5	67.3	64.9
	Pound Net	81.2	63.0	16.1	11.3	34.0	69.5	77.0	79.2	58.2	16.4	86.0	83.8	69.0
	Gig	47.0	57.9	6.4	37.4	34.0	55.3	77.7	83.1	71.8	41.9	62.5	67.0	73.6
	Long Haul	13.7	65.3	37.8	15.8	31.8	49.9	76.6	98.2	78.3	58.3	36.4	69.8	70.9
	Ocean Gill Net	34.9	41.9	1.0	25.0	29.8	54.0	85.5	92.1	97.1	40.1	53.6	88.8	70.5
	Ocean Trawl	59.7	20.7	1.6	22.8	0.0	15.4	50.0	82.1	28.5	33.1			15.8
	Spear/Diving			7.6		26.0	54.8	72.6	82.4	71.3	45.9	60.6	67.4	64.2
12"-20" Slot Limit	Estuarine Gill Net	17.1	38.0	5.2	8.8	11.8	33.1	39.8	46.2	18.5	8.0	27.5	41.3	28.9
	Pound Net	79.9	37.9	11.7	13.2	28.3	59.5	66.1	48.8	23.2	6.0	85.5	50.8	49.5
	Gig	44.6	48.1	25.7	28.5	25.4	38.9	48.7	49.7	28.4	9.4	53.6	43.3	41.7
	Long Haul	8.4	53.4	4.8	27.2	28.3	44.8	46.5	65.9	30.1	10.1	35.3	69.3	40.9
	Ocean Gill Net	33.7	0.0	13.1	16.0	26.8	30.8	33.0	97.0	100.1	0.0	75.6	85.3	59.4
	Ocean Trawl	62.6	25.0	27.8	38.7	0.8	15.3	50.0	46.7	71.8	7.8			27.8
	Spear/Diving			51.7		33.1	43.6	58.7	48.7	29.5	11.2	53.9	44.7	47.5

### Spears/Diving

The length frequency distribution of the spear/dive fishery was made up of 7,749 sheepshead, of which 4,189 or 53.4 percent were all between 8 and 12 inches FL. Percentages of overall harvest reductions by size limits (10, 12 and 14 inches FL) would be 26.5, 45.8, and 64.2 percent and the slot limit size limit of 12 to 20 inches FL would yield a 47.5 percent reduction (Table 8).

Previously mentioned was the increase in landings from the spears/diving fishery. When looking at the landings from 2011 through 2013, spearing for sheepshead took place from Bogue Sound south to Brunswick County. In 2011, a total of only 361 pounds was harvested from Masonboro Sound and the ocean, both in state and federal waters. In 2012, that number jumped to 9,987 total pounds harvested, with less than 500 pounds coming from Bogue Sound, and approximately 35 pounds, from the Cape Fear River. The remaining 9,483 pounds came from Masonboro Sound and the ocean, south of Cape Hatteras. The number of pounds speared from Masonboro Sound was 9,099 pounds or 94 percent of the years catch. In 2013, the total landings were 10,975 pounds, of which approximately 500 pounds came from the Cape Fear and Brunswick County Intracoastal Waterway (ICWW); the remaining 95 percent or 10,433 pounds were harvested from the same three locations of Masonboro Sound, and the ocean both inshore and outside three miles. The effort in this fishery has increased substantially in the last three years and preliminary landings from 2014 (through September) are approximately 15,000 pounds. While this may not be significant when looking at overall commercial landings, it should at least be mentioned. Gigs harvested 4,285 pounds or 2.4 percent in 2013, and 5,929 pounds (5.4 percent) of 2012 landings.

### **Commercial Trip Limits by Gear**

#### Estuarine Gill Nets

A total of 99.3 percent of the estuarine gill net trips sampled landed from one to 100 pounds of sheepshead from 2002-2013 (Table 9). An average of nine pounds of sheepshead was landed per trip (Table 10). Less than one percent of the trips (n=11) landed more than 500 pounds of sheepshead, of these trips an average of 1,023 pounds was landed per trip (Table 10). The overall estimated harvest reduction with a 500 pound trip limit is 1.48 percent, whereas a 200 pound trip limit would yield a four percent reduction (Table 11). This is due to the small amount of sheepshead harvested from 300 to 500 pound trips and emphasizes the large amount of sheepshead commercially harvested in the 1 to 100 pound trip range, where 38,838 trips were taken from a total of 39,101 trips (Table 9).



Except for the 181 trips or 0.5 percent catching fish in the 101 to 200 pound range, there were very few other trips catching sheepshead.

#### Pound Nets

Approximately 87 percent of the pound net trips landed 100 pounds or less of sheepshead with an average of 19 pounds per trip (Tables 9 and 10). Trips landing 101 to 200 pounds (6 percent) harvested an average of 144 pounds of sheepshead per trip (Table 10). Trips landing more than 500 pounds per trip (2.5 percent) landed an average of 1,048 pounds of sheepshead. The overall estimated harvest reduction with a 500 pound trip limit is 20.89 percent, the smallest reduction compared to a 55.3 percent reduction with a 100 pound trip limit (Table 11).

#### Gig

Over 1,855 or 98 percent of gig trips harvesting sheepshead landed 100 pounds or less. Each trip caught on average, 14 pounds of sheepshead. Tables 9 and 10 show the majority of trips taken harvested between one to 200 pounds. Other than the 29 trips catching 101 to 200 pounds (average pounds; 137), only 6 trips caught between 200 and 300 pounds and only one trip each captured the 300 to >500 pound trips. Table 11 shows the largest reduction of 8.2 percent would be seen in the gig fishery when a 100 pound trip limit was implemented.

Table 9. Percent of commercial trips landing sheepshead by gear over a range of weight categories for pounds landed per trip, 2002 – 2013 in NC.

Fishery	1-100 lbs.		101-200 lbs.		201-300 lbs.		301-400 lbs.		401-500 lbs.		> 500 lbs.		Total trips
	#	%	#	%	#	%	#	%	#	%	#	%	#
Estuarine Gill Net	38,838	99.3	181	0.5	48	0.1	14	0.0	9	0.0	11	0.0	39,101
Pound Net	5,289	87.2	359	5.9	133	2.2	73	1.2	63	1.0	151	2.5	6,068
Gig	1,855	98.0	29	1.5	6	0.3	1	0.1	-	0.0	1	0.1	1,892
Long Haul	1,521	80.9	190	10.1	62	3.3	44	2.3	23	1.2	41	2.2	1,881
Ocean Gill Net	1,711	99.2	9	0.5	2	0.1	2	0.1	-	0.0	1	0.1	1,725
Ocean Trawl	122	63.5	17	8.9	13	6.8	5	2.6	3	1.6	32	16.7	192
Spear/Diving	138	61.9	57	25.6	19	8.5	6	2.7	3	1.3	-	-	223

#### Long Haul

The majority of reductions in the long haul fishery would occur under a 100 or 200 pound trip limit with a 47.0 and 29.4 percent reduction, respectively (Table 11). Out of a total of 1,881 trips, 1,521 trips landed on average 26 pounds of sheepshead per trip and 190 trips made up the 101 to 200 pound range where the average trip harvested 139 pounds (Tables 9 and 10). The remaining 9 percent of the trips comprised the 200 to over 500 pounds per trip level (Table 9).

#### Ocean Gill Net

One thousand seven hundred and eleven trips or 99.2 percent of fishermen caught 100 pounds or less of sheepshead per trip, with an average of 11 pounds per trip. Any trip limit higher than 100 pounds would result in very few reductions, because the majority of fish were landed from trips in the 1- 100 pound range. That percentage of reduction would only be 8.1 percent in the 100 pound range and a 1.3 to 4.3 percent range with a 500 to 200 pound trip limit range (Table 11).

#### Ocean Trawl

The ocean trawl fishery had 122 trips (63.5 percent) with 100 pounds or less of sheepshead caught per trip. Of those trips, the average amount landed per trip was 25 pounds. This fishery had 16.7 percent or 32 trips taken where over 500 pounds were caught. Surprisingly, the average catch per trip was 2,509 pounds (Tables 9 and 10). No data was provided for 2012 and 2013, but the 10 years of annual reductions show that this fishery would have the largest reductions of all gears with a range of 89.1 percent with a 100 pound trip limit decreasing to a 69.79 percent reduction with a 500 pound trip limit (Table 11).

#### Spears/Diving

The majority (62 percent) of the spear/diving trips landed one to 100 pounds of sheepshead (Table 9), with an average of 40 pounds per trip (Table 10). The average pounds landed for trips between 201-300 pounds was 235

Table 10. Average sheephead landings (pounds) per commercial trip by specified weight categories, 2002 – 2013 in NC.

Fishery	1-100 lbs.	101-200 lbs.	201-300 lbs.	301-400 lbs.	401-500 lbs.	>500 lbs.
Estuarine Gill Net	9	137	244	351	455	1,023
Pound Net	19	144	248	352	449	1,048
Gig	14	137	232	322	-	>500
Long Haul	26	142	245	346	457	849
Ocean Gill Net	11	139	228	354	-	796
Ocean Trawl	25	146	254	341	438	2,509
Spear/Diving	40	145	235	350	420	-

pounds. Spear/dive trips landing between 301 and 500 pounds of sheephead averaged 350 and 420 pounds per trip, respectively. There were no spear/dive trips landing more than 500 pounds. The largest overall estimated harvest reduction is 35 percent and would occur with a 100 pound trip limit. Only a three percent reduction with a 300 pound trip limit, less than one percent with a 400 pound trip limit and no reductions would be seen with a 500 pound trip limit (Table 11).

Table 11. Percent reductions in harvest numbers for commercial gears based on a 100 through 500 pound trip limit, 2002 - 2013.

Options	Fishery	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	All years combined (2002-2013)
100 lb. Trip Limit	Estuarine Gill Net	0.4	0.7	0.3	0.9	2.1	2.4	6.7	9.6	13.8	3.9	6.7	16.1	7.8
	Pound Net	40.2	18.3	15.7	42.0	47.3	35.2	49.2	67.2	55.5	62.3	57.6	67.3	55.3
	Gig	0.0	0.0	0.0	12.2	18.7	22.9	8.0	1.5	1.1	15.1	4.9	4.3	8.2
	Long Haul	42.1	24.4	5.7	17.9	39.7	29.5	38.4	48.8	69.1	52.4	39.8	45.1	47.0
	Ocean Gill Net	6.5	1.5	26.4	0.0	2.3	0.0	8.6	0.0	0.0	0.0	0.0	26.7	8.1
	Ocean Trawl	7.0	74.8	97.2	88.9	87.3	84.6	0.0	59.8	84.7	64.8	0.0	89.1	89.1
	Spears/Diving			0.0		0.0	0.0	0.0	0.0	0.0	0.0	39.8	33.3	35.1
	200 lb. Trip Limit	Estuarine Gill Net	0.0	0.0	0.0	0.0	0.3	0.2	3.0	4.6	5.6	1.4	4.1	11.1
Pound Net		23.2	8.9	4.4	24.7	30.0	20.7	30.2	54.3	41.0	48.5	41.4	54.9	40.7
Gig		0.0	0.0	0.0	0.0	6.2	17.5	0.3	0.0	0.0	3.7	0.1	0.9	2.3
Long Haul		19.4	14.4	0.1	9.4	23.6	14.7	22.7	29.0	51.6	34.7	15.9	19.9	29.4
Ocean Gill Net		0.0	0.0	14.3	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	20.0	4.3
Ocean Trawl		0.0	57.0	95.1	81.6	79.1	75.1	0.0	32.6	79.0	37.1			82.5
Spears/Diving				0.0		0.0	0.0	0.0	0.0	0.0	0.0	13.5	8.0	10.3
300 lb. Trip Limit		Estuarine Gill Net	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.0	2.7	0.3	3.4	8.3
	Pound Net	13.7	5.8	0.0	13.9	19.4	13.3	20.1	46.4	31.7	40.7	29.4	46.6	31.8
	Gig	0.0	0.0	0.0	0.0	0.0	13.2	0.0	0.0	0.0	0.4	0.0	0.0	1.0
	Long Haul	4.7	9.5	0.0	5.0	16.9	5.9	15.0	16.5	39.6	27.5	5.9	8.2	19.8
	Ocean Gill Net	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	2.7
	Ocean Trawl	0.0	45.9	93.5	75.2	72.6	67.0	0.0	17.1	74.1	14.0			77.4
	Spears/Diving			0.0		0.0	0.0	0.0	0.0	0.0	0.0	4.6	1.8	3.0
	400 lb. Trip Limit	Estuarine Gill Net	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.3	1.5	0.1	2.9	6.7
Pound Net		9.0	4.0	0.0	5.6	12.8	6.9	13.4	40.0	24.5	34.5	21.0	40.3	25.5
Gig		0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Long Haul		1.3	5.2	0.0	1.9	11.9	1.9	10.0	8.9	31.1	22.7	1.6	1.5	13.9
Ocean Gill Net		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	1.8
Ocean Trawl		0.0	37.3	92.0	69.4	67.8	61.1	0.0	10.8	69.2	1.3			73.4
Spears/Diving				0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.3
500 lb. Trip Limit		Estuarine Gill Net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.7	0.0	2.5	5.6
	Pound Net	6.8	2.2	0.0	1.7	8.1	3.3	8.6	34.9	19.7	29.4	15.4	35.2	20.9
	Gig	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	Long Haul	0.0	2.7	0.0	0.0	8.2	0.0	6.6	4.8	24.3	18.4	0.0	0.0	10.1
	Ocean Gill Net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	1.3
	Ocean Trawl	0.0	28.7	90.6	64.6	63.0	55.6	0.0	4.4	64.3	0.0			69.8
	Spears/Diving			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Summary

Table 12 depicts the overall estimated commercial harvest reduction percentages by gear type based on a 100 to 500 pound trip limit range. The greatest reductions occur in ocean trawl gear. Smaller reductions are seen throughout the commercial gears in general with exceptions in the pound net and ocean trawl gears. For all fisheries, the largest reduction (36.6 percent) would occur with a 100 pound commercial trip limit implemented.

Table 12. Summary of percent reductions with associated 100 to 500 pound trip limits by gear for 2002 through 2013.

Fishery	Commercial Trip Limit (LBS)				
	100	200	300	400	500
Estuarine Gill Net	7.8	4.0	2.6	1.9	1.5
Pound Nets	55.3	40.7	31.8	25.5	20.9
Gigs	8.2	2.3	1.0	0.7	0.3
Long Haul	47.0	29.4	19.8	13.9	10.1
Ocean Gill Net	8.1	4.3	2.7	1.8	1.3
Ocean Trawl	89.1	82.5	77.4	73.4	69.8
Spears/Diving	35.1	10.3	3.0	0.3	0.0
All Fisheries	36.6	26.5	21.0	17.3	14.7

## **VI. DISCUSSION**

Management options include: status quo until a stock assessment can be done, establish a minimum size limit, establish a recreational creel limit, and a commercial trip limit:

- The least restrictive of these options would be Status quo, as North Carolina does not currently have any recreational or commercial regulations for this species.
- Establishing a minimum size limit is a common management measure used to allow a greater portion of fish the opportunity to spawn before they can be harvested. The short term effects of a minimum size limit increase would diminish the pool of younger and smaller fish immediately available for harvest, which in turn would decrease the overall catch. Protecting fish so that they can reach spawning size is a common practice in fisheries management. Currently, there are no regulations to prevent overfishing from occurring in the sheepshead fisheries; however, little is known about their population biomass.
- Establishing a maximum size limit is a management measure used to expand the age structure of a stock. Maximum size limits have successfully been used to manage red drum, which are a long lived species. Sheepshead are also long lived, but mature relatively early, unlike the red drum. When over-exploitation occurs, there is a decline in the number of age classes represented in the fishery. The absence of a diverse age structure compromises the ability of any fish stock to recover. Because adult sheepshead are large and highly fecund they are extremely valuable to the stock's reproductive potential and excessive harvest could increase the chance of recruitment failure.
- By establishing a slot limit, limited harvest of juvenile sheepshead would be permitted to continue and a reasonable level of survival and escapement is provided. Slot limits also provide for the maximum possible protection of the adult spawning stock.
- Another management measure used to reduce the current harvest rate of a stock is to establish a recreational creel or bag limit that limits the number of fish allowed to be kept during a trip by an individual or boat. Commercial trip limits can also be established to reduce harvest rates. Both bag limits and trip limits reduce fishing mortality, further allowing a stock to recover. However, restricting trip limits could result in increased discards in both the gill net and pound net fisheries on days when large catches occur. Creel limits tend to work better in the recreational fishery because catches are often less variable than the commercial fishery.

A combination of recreational and commercial size limits, a slot limit, creel limits, and trips limits can be used to reduce the harvest of sheepshead in North Carolina if needed.

Determining the need to constrain harvest and devise an effective management strategy is never a simple task, but is confounded when the status of the stock is unknown. According to the N.C. Fisheries Reform Act, stock status is determined by the stock's ability to achieve sustainable harvest. Such an approach reflects stock biomass, and is typically used to determine whether a stock is overfished. A stock is also evaluated based on the rate of removals, e.g. the F rate, which determines whether overfishing is occurring. These parameters (benchmarks) for the N.C. sheepshead stock have not been determined and for this reason sheepshead are listed as unknown in the NCDMF's 2014 stock status report. While the rule granting the Fisheries Director proclamation authority has been adopted, it is still uncertain what foundation the NCDMF has to base the need/level for management actions. As noted in the comments from the regional advisory committees during the 2013 rule development, they did not support more regulations without additional data to support such restrictions.

While critical data are lacking and the NCDMF is not able to provide quantitative evaluations of reductions in F or increases to spawning stock biomass from possible management options, this does not eliminate the need to evaluate if there is a management approach that provides for a reasonable level of protection, guarding against expansion of fisheries that may negatively impact the stock. When managed under the SAFMC, possession limited to the aggregate 20-fish creel limit was the sole management action. Discussion on future actions will need to balance uncertainty about the need for further protection with the magnitude of the socioeconomic consequences.

Another consideration is operating within the intent of N.C. General Statute 113-182.1 that requires adoption of fishery management plans for all commercially or recreationally significant species or fisheries that comprise state marine or estuarine resources. The NCDMF is developing a policy to address what constitutes a significant species or fishery, necessitating development and approval of a fishery management plan for management. Guidance is also needed about when management measures are appropriate to implement if a species or fishery falls outside of the determination of "significant." There is overwhelming agreement that there is a need for consistency in how the NCDMF and NCMFC manage all species, not just sheepshead. With that said, further discussion of management options is presented.

The implementation of a recreational 10-inch FL minimum size limit and a 10-fish creel limit would reduce harvest by 28.2 percent in the recreational sector. A 12-inch minimum size limit would reduce the commercial sheepshead fisheries by as much as 8 to 56 percent throughout various gears. A variety of combinations of options are possible. An out-of-the-box option of mixing a smaller size limit with a specific creel limit and a larger size limit with a smaller creel limit may be a possibility.

Establishing a minimum size limit or a slot limit in conjunction with a recreational creel limit and commercial trip limit should allow limited recreational and commercial harvest of juvenile sheepshead to continue and provide protection to the adult spawning stock. However, these management measures have the potential to increase discards. To minimize potential discards, larger creel and trip limits could be implemented. The magnitude of discards as a result of the management measures presented in this paper should be further examined prior to establishing minimum size, slot, creel, and trip limits.

One option from the 2013 sheepshead issue paper was to manage harvest of sheepshead with a 10-inch (FL) size limit, 10-fish bag limit, and 500-pound trip limit. The size limit is based on the length at which 50 percent of sheepshead reach sexual maturity. This size would reduce the recreational harvest by approximately 18 percent based on landings from 2002 to 2013, but could be as high as 40 percent. The 10-fish bag limit for recreational fishermen would, on average, result in a 5 percent reduction. The 500-pound commercial trip limit would, on average, result in a 25 percent reduction in harvest. There would be some reduction in the impact of the bag limit and trip limit due to the size limit. These management measures will have a negative economic impact in the short term. If the stock is overfished and management measures are sufficient to enable the stock to rebuild, then the future harvest levels will increase and economic losses could be recouped.

### Other State Regulations for Sheepshead

Sheepshead are currently managed on a state-by-state basis. The minimum size requirements in effect range from 10 inches FL (or 11 inches TL) in Georgia to 14 inches TL in South Carolina with some states currently not having any size limits (Table 13). Creel limits range from 10 to 20 per person/day. In South Carolina anglers additionally are limited to 30 fish per boat. Commercial trip limits range from 50 pounds as bycatch in a shrimp trawl in Florida to 500 pounds per trip in Virginia. Currently, in North Carolina there are no regulations specific to sheepshead. North Carolina is the only state from New Jersey through Florida with no commercial or recreational regulations for this species.

Table 13. Current state regulations for sheepshead.

<b>State</b>	<b>Size Limit</b>	<b>Recreational Limit</b>	<b>Commercial Limit</b>
New Jersey	None	15 fish Aggregate	None
Delaware	None	None	None
Maryland	None	20 fish Aggregate*	None
Virginia	None	4/person	500 lb.
North Carolina	None	None	None
South Carolina	13inch FL	10/person; 30/boat	None
Georgia	10inch FL**	15/person	None
Florida	11inch FL	15/person	50 lb.***

\* SAFMC 20 fish Aggregate Bag Limit for Snapper Grouper Complex

\*\* 10 inch FL converts to 10.7 inch TL

\*\*\* Shrimp trawls only

### **VII. PROPOSED RULE(S)**

None

### **VIII. PROPOSED MANAGEMENT OPTIONS**

- A. Status Quo – have no management measures in place at present time – Director was given proclamation authority via Marine Fisheries Commission Rule 15A NCAC 03M .0521. Continue to sample and monitor the species and landings
  - + No rule changes for management of sheepshead
  - Potential for overfishing stock since no regulations are protecting sheepshead
  
- B. Establish a 10 inch FL minimum size limit with a 10 fish/day bag limit (recreational) and a 500 pound/day/commercial trip limit (28 percent reduction; recreational, 0-70 percent reduction; commercial)
  - + Can protect ~50 percent of juvenile fish from harvest
  - + Establishes management measures for partial protection of spawning stock
  - + Process in place to change regulations for management of sheepshead; Director now has proclamation authority
  - Economic impact on recreational and commercial fisheries
  
- C. Establish a 12 inch FL minimum size limit with a 10 fish/day bag limit (44.9 percent reduction)
  - + Can protect ~80 percent of juvenile fish from harvest
  - + Establishes management measures for protection of the majority of spawning stock
  - + Process in place to change regulations for management of sheepshead
  - Economic impact on recreational and commercial fisheries

- D. Establish a 14 inch FL minimum size limit with a 10 fish/day bag recreational limit (61.1 percent reduction –largest reduction)
  - + Can protect ~100 percent of juvenile fish from harvest
  - + Establishes management measures for protection of the spawning stock
  - + Process in place to change regulations for management of sheepshead
  - Economic impact on recreational and commercial fisheries
  
- E. Establish a 12 inch to 20 inch FL recreational slot limit with a 500 pound commercial trip limit (~40 to 60 percent reduction)
  - + Can protect ~80 percent of juvenile fish from harvest
  - + Protects larger and older sheepshead outside of slot limit for spawning
  - + Establishes management measures for protection of the spawning stock
  - + Process in place to change regulations for management of sheepshead
  - Economic impact on recreational and commercial fisheries
  - State could implement regulations that may not be optimal for fishermen
  - Discards of fish over the maximum size limit
  
- F. Recommend Division develop a fishery management plan for sheepshead.
  - + Stock assessment could be completed
  - + More time to collect and review data on NC sheepshead
  - + Migration study could be done to see if stock is localized
  - Data would not be collected from all states where harvest occurs
  - Localized depletions could still occur
  - State could implement regulations that may not be optimal for fishermen

Any of the above options can add a trip limit for the commercial sector.

Any other suggested management options may follow.

## IX. RECOMMENDATION

**N.C. Division of Marine Fisheries**-The Division recommends that the commission refer this issue to its pertinent standing and regional advisory committees for public input during the spring 2015 scheduled meetings.

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 Jan. 20, 2015

Revised: Jan. 30, 2015

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INFORMATION  
WILL BE  
PROVIDED AT  
THE MEETING.





North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

TO: N.C. Marine Fisheries Commission

FROM: Louis Daniel III, Director  
Division of Marine Fisheries, NCDENR

DATE: Feb. 4, 2015

SUBJECT: Fiscal Year 2015-2016 Initiative Development

As discussed at your Nov. 2014 business meeting, attached are overviews providing information on all of the proposed ideas that commissioners put forward for consideration for initiatives for the upcoming fiscal year.

Just to recap, at its October meeting, the commission decided to develop initiatives on a fiscal year basis (July 1 – June 30) to complement the division's Strategic and Annual Operations Plan and the development of the annual fishery management plan schedule. Below is the timeline for development:

- By Dec. 31, 2014, commissioners put forward two proposals each for consideration as initiatives;
- For the Feb. 18-20, 2015 business meeting, division staff will prepare a paper on each proposal outlining the background, previous actions, summarizing pertinent points and what it would take to implement that proposal (see attached);
- For the May 20-22, 2015 business meeting, the commission selects three or four of the proposals as its Fiscal Year 2015/2016 initiatives; and
- Beginning July 1, 2015, division staff begins implementation of the agreed upon initiatives.



# Marine Fisheries Commission

## Fiscal Year 2015-2016 Preliminary Initiatives List

### Initiatives put forward by three commissioners:

- Reduce regulatory discards in both the recreational and commercial fisheries.....page 3

### Initiatives put forward by two commissioners:

- Eliminate sponge crab harvest.....page 5
- Continue to investigate whether trawling in water bodies where sedimentation has occurred could have a positive impact on reducing the sedimentation and improving water quality.....page 7

### Initiatives put forward by one commissioner only:

- Reduce the culling tolerance for oysters from 10 percent to 5 percent.....page 9
- Develop hook-and-line, recreational-only artificial reefs that can be used to promote local communities and tourism (or other positive recreationally oriented initiatives).....page 10
- Develop a dedicated recreational position within the Division of Marine Fisheries (funded through Coastal Recreational Fishing License grant program) to serve as a recreational liaison, that would:
  - Be the contact person for recreational fishermen;
  - Liaison for the for hire industry;
  - Work with tourism boards;
  - Promote recreational fishing; and
  - Help council/ASFMC/HMS folks acquire recreational input on amendments and other actions.....page 12
- Reduce bycatch in the shrimp trawl fishery by 30-40 percent and revisit annually to ensure compliance with these reduction levels and continuously look for ways to further reduce bycatch.....page 14
- Increase habitat in state waters.....page 16
- Define full/part-time commercial fishermen and the purpose of the Standard Commercial Fishing License.....page 18
- Remove speckled trout from the fishery management plan.....page 21
- Establish a two season fishing period for large mesh gill nets; one in the spring and the other in late fall to help with cost of the observer program, as well as other obvious savings to the division.....page 23
- Investigate implementing an automated, user friendly & mutually beneficial observer "call-in" system for the gill-net fishery. Fishermen should be required to "call-in" if they are going to "fish" each week. The automated system should issue "confirmation numbers" to commercial fishermen who "call-in." Fishermen who fail to "call in" and report intended fishing activities should lose their permit indefinitely. Violators should be punished on a more severe, graduating scale. Furthermore, fishermen who hold a gill-net permit should be required to sign an agreement with their annual license renewal paperwork, which clearly explains the call-in process including the appropriate phone numbers.....page 25

# Proposed Initiative: Reduce regulatory discards in both the recreational and commercial fisheries

## Background

- Regulatory discards are those fish harvested in a fishery that fishermen are required by regulation (i.e. size limit, bag limit, trip limit) to discard.
- Reauthorization of Magnuson-Stevens Fishery Conservation and Management Act contains a National Standard (#9) requiring bycatch minimization. National Standard 9 states: “Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.”
- Discards are addressed in all state fishery management plans.

## Previous Actions or Considerations

- In 1998, the division required the use of escape panels in flounder pound nets, effectively reducing regulatory discards of undersized flounder.
- In 2011, the division implemented regulatory changes to address discards of striped bass in the commercial trawl fishery. A 2,000 pound per day trip limit replaced a 50 fish per day limit.
- In 2011, the division formed a Recreational Discards Workgroup that produced a guide to ethical angling.
  - Ethical angling information was printed in four publications for public distribution:
    - Ethical Angling: A Guide to Responsible Fishing
    - North Carolina Guide to Recreational Saltwater Fishing
    - North Carolina Coastal Recreational Fishing Digest
    - North Carolina Coastal Recreational Angler’s Guide
  - Ethical angling information also found on the division’s website (<http://portal.ncdenr.org/web/mf/edu/ethical-angling> )
- Culling panels are required in long haul seines and swipe nets in the Pamlico Sound west of Bluff Shoal.
- **Southern Flounder FMP (2005)**
  - Minimum large mesh gill net mesh size increased to 5.5 inches and prohibited the use of gill nets from 5 inches to less than 5.5 inches in internal waters from April 15 through Dec. 15 to reduce undersized southern flounder discards.
  - Minimum mesh sizes implemented for crab trawls in the Pamlico Sound to reduce undersized southern flounder discards.
- **Shrimp FMP (2006)**
  - Shrimp trawling was prohibited in most of the Neuse, Pamlico, and Pungo rivers to reduce shrimp trawl bycatch of undersized southern flounder.
- **Red Drum FMP (2001) and Amendment 1(2008)**
  - Steps were taken to reduce the mortality associated with regulatory discards including requiring circle hooks (i.e. Owen Lupton Rig) in some of the adult red drum recreational fisheries.
  - Small mesh gill net attendance rules established from the Pamlico Sound to the S.C. border from late spring to fall to reduce undersized red drum discards (attendance requirements for small mesh gill nets expanded in 2008 through Amendment 1).
  - Required large mesh gill nets be set greater than 10 feet from shore from June to October to reduce red drum discards.
- **Estuarine Striped Bass FMP (2004) and Amendment (2013)**
  - Maintained gill net restrictions in the Albemarle Sound Management Area (ex. allowable mesh sizes, yardage limits attendance requirements, season/area closures) to reduce discards of undersized striped bass and striped bass during closed seasons.

- Required the use of a 3-foot tie down in large mesh (5-inch stretch mesh and greater) gill nets and the maintenance of a minimum distance from shore of 50 yards for these nets, except Recreational Commercial Gear License large mesh nets may be set within 50 yards of shore if attended at all times for internal fishing waters west of the 76° 28.0000' W longitude line.
- Open harvest seasons for commercial and recreational fisheries during cooler months (fall, winter, and spring) to reduce discard mortality of striped bass.

### **Summary**

- The division and the commission have implemented management measures to reduce regulatory discards in several commercial and recreational fisheries and continue to address discards in other fisheries.
- Regulatory discards can be minimized by converting discarded bycatch to landed catch through the development of new markets, processing techniques, and changing regulatory limits and requirements to land all catch.
- Regulations designed to reduce vessel efficiency including gear restrictions and trip limits may encourage bycatch (i.e. regulatory discards).
- Selective fishing gear is an essential element to bycatch reduction. The development of more selective gear can be a long process. The use of more selective gear is less effective when implemented through regulations only. Incentives to continually improve selectivity and disincentives for high levels of bycatch are more effective.
- Management programs designed to reduce regulatory discards need to be adaptive, making continuous improvements rather than fixed regulations.
- When gear modifications are made, efforts should be taken to ensure that they are effective.

# Proposed Initiative: Eliminate Sponge Crab Harvest

## Background

- There was a N.C. law prohibiting sponge crab harvest from the early 1920s through 1964.
- The underlying hypothesis of a sponge crab law is that protection of the spawning stock will lead to more recruits, which assumes a direct relationship between the size of the spawning stock and number of recruits.
- In 1964, the sponge crab prohibition law was repealed and Crab Spawning Sanctuaries were established.
- Landings of hard crabs showed some fluctuations before and after the sponge crab law was repealed.
- The blue crab spawning stock is composed of all mature females, not just sponge crabs.
- The sponge only present for approximately 14 days.

## Previous Actions or Considerations

### **1989 Position Paper:**

- Several questions would have to be answered if the sale or possession of sponge crabs is prohibited
  - Will there be a tolerance?
  - At what point will culling have to take place?
  - What are the effects of stress on the viability of the eggs?
  - Should the ban include all mature females?
- Studies in South Carolina showed over 98 percent of all mature females are fertile, which means they are carrying sperm plug.
- Two viable options to protect the spawning stock of blue crabs were discussed:
  - Prohibit the sale or possession of all mature females, or
  - Keep the current sanctuary system in place.
- It was felt removing the spawning sanctuaries and replacing them with a prohibition on sponge crabs would result in less protection to the spawning stock.

### **1993 Briefing Paper:**

- The reproductive potential of fertile mature female blue crabs is the same whether or not there is a visible egg mass (sponge).
- To provide complete protection it was recommended there should be no harvest of mature females.

### **1998 Blue Crab Fishery Management Plan:**

- An issue paper examined spawning stock protections.
- The use of spawning sanctuaries and prohibiting harvest of sponge crabs was discussed.
- The commission decided to keep current rules in place, conduct a survey to examine other potential sanctuary areas, and prohibited all commercial gear (except attended gill nets) from March 1 – August 31 in existing spawning sanctuaries.

### **2004 Blue Crab Fishery Management Plan Amendment 1:**

- The sanctuary rule was modified to include commercial gear prohibitions from 1998 fishery management plan.
- No additional sanctuaries were identified, as recommended in 1998 fishery management plan.
- An issue paper reexamined spawning stock protections.
- Research showed sponge crabs will destroy the egg mass once captured in pots (Rittschof 2004).
- Trawl-caught sponge crabs were observed with damaged egg masses.
- Eggleston (2003) found no significant difference in mature female catch rates within the sanctuaries and an area 5 km outside the sanctuaries.



- The commission decided to use the division's Program 195 (Pamlico Sound Survey) as an indicator of spawning stock health, implement a seasonal maximum size of 6.75 inches for mature females and 5.25 inches for female peeler blue crabs (implemented when trigger from Program 195 is reached), and to modify the current sanctuary boundaries.

### **2013 Blue Crab Fishery Management Plan Amendment 2:**

- Seasonal size limit for mature females and female peeler blue crabs were implemented in January 2006 and remained in effect through April 2014.
- Sanctuary boundaries were not modified as recommended in Amendment 1.
- The commission decided to repeal management triggers established in Amendment 1 and adopt adaptive management framework using the Traffic Light method as an indicator of the stock condition.
- Under the moderate management level (production characteristic 50 percent red for three consecutive years) the following measures go into effect: sponge crab harvest may be restricted, minimum and/or maximum size for mature females would be implemented, and spawning sanctuaries may be closed and further restrictions imposed.
- Under elevated management level (production characteristic 75 percent red for three consecutive years) a prohibition on sponge crab harvest and/or require use of sponge crab excluders would be implemented and may expand or designate new crab spawning sanctuaries.

### **Summary**

- The current fishery management plan will implement limits on sponge crab and mature female harvest and allow additional management of the spawning sanctuaries if management triggers are activated under the adaptive management framework.
- North Carolina replaced the sponge law with spawning sanctuaries in 1964.
- The egg mass, or sponge, is only present for approximately 14 days.
- Over 98 percent of all mature females are fertile, which means they are carrying a sperm plug.
- Since the sponge is only present for a short period, any prohibition on sale or possession should include all mature females, not just sponge crabs.
- Studies indicate that after capture the sponge is damaged and/or shed.
- The current sanctuary system protects all spawners in the area, not just sponge crabs.
- There are some questions about boundaries of Crab Spawning Sanctuaries and their effectiveness in protecting the female spawning stock.
- Limiting sponge crab harvest would protect the crabs outside of the sanctuaries.

## **Proposed Initiative: Continue to investigate whether trawling in waterbodies where sedimentation has occurred could have a positive impact on reducing the sedimentation and improving water quality**

### **Background**

- In August 2013, the Marine Fisheries Commission passed motion for the Division of Marine Fisheries to design a study comparing closed trawling areas, specifically Newport River, to open trawling areas to determine the effect of trawling on sedimentation in primary and secondary nursery areas.
- Since the 1980s fishermen have stated that waterbodies closed to trawling are silting in and declining in productivity.
- The intent of the motion was to test if trawling could be a tool to flush out sediment and improve fishery productivity.
- Other waterbodies that have been mentioned by other entities as having sedimentation problems include Futch Creek, White Oak River, Bradley Creek and Lockwood Folly River.
- Upper portions of many tidal creeks were closed to trawling and dredging by Marine Fisheries Commission nursery area rules in 1977 to protect shallow nursery habitat.
- Division staff decided to compile an information paper on the subject to provide direction regarding future studies on sedimentation and trawling.

### **Previous Actions or Considerations**

#### **1999 Trawling Report:**

- At the request of the Marine Fisheries Commission, division staff compiled a report, Shrimp and Crab Trawling in North Carolina's Estuarine Waters (N.C. Division of Marine Fisheries 1999) to determine the effects of trawling on habitat and bycatch.
- The report concluded that research in North Carolina was needed to determine this, and due to the high variability of N.C.'s estuaries, would cost \$1million to \$2 million a year to fund. No funding was allocated.
- Several short term research projects developed out of this effort specific to the effect of trawling on turbidity, sedimentation, and some aspect of productivity and are summarized in the 2014 information paper.

#### **2005/2010 Coastal Habitat Protection Plan:**

- Summarized the effects of trawling on bottom habitat.
- Summarized the effects of sedimentation and turbidity on fish habitat and known sources of sedimentation.
- Sources were reported to be from land disturbance, particularly non-point runoff from agriculture, forestry, and development, as well as wastewater discharges, navigational dredging, and bottom disturbing fishing activities.
- Includes several recommendations to reduce point and non-point source pollution, including sediment, as well as recommendations to protect fish habitat functions from damage associated with dredging and to restore shallow nursery habitat.

#### **2014 Information Paper:**

- Summarized research done in North Carolina and elsewhere on effect of sedimentation on productivity and effectiveness of trawling as a tool to flush out excessive sediment.
- Studies have documented the rate and source of sedimentation in Newport River, Slocum Creek, and Hancock Creek. Rates were considered relatively high and related to land disturbance from development and forestry.
- Studies on the effect of trawling on sediment dynamics were done in South Creek, Texas, and Florida. Results found that turbidity increased one to three times greater than background. Under conditions of sandy sediments or low currents, resuspended sediment settled fairly quickly and

close to the point of disturbance; conversely, sediments were resuspended longer and transported further when currents were strong and sediment was muddy. Fate of resuspended sediment (whether it is flushed out of a creek, carried further upstream, or redeposited nearby) will depend on many factors, such as tide range, currents, orientation of waterbody to prevailing wind direction, fetch, and sediment type.

- Studies on the effects of trawling on primary productivity in North Carolina found no clear trend. In terms of secondary productivity, trawling had no significant effect on secondary productivity (benthic infauna) in North Carolina, Texas, and South Carolina. None of the studies found a negative effect on larger macroinvertebrates and one study in North Carolina found a positive effect.
- Limited information is available on whether juvenile fish productivity has declined over time in North Carolina.
- The information paper concluded that a conservative approach was needed since 1) the literature review did not reveal strong indication that trawling would effectively flush out sediment or improve productivity and 2) there could be implications to other habitat protection rules if trawling was allowed in Primary Nursery Areas.
- The paper recommended that prior to conducting trawling experiments, further research is needed to:
  - 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.
- The paper recommended that any resulting trawling study:
  - Design the study with academia and have process to include peer development/review.
  - Develop a clear testable hypothesis.
  - Develop a statistically valid sampling design that represents North Carolina's variable waterbody characteristics and accounts for temporal and spatial variability.
  - Assess effects of trawling at effort levels similar to typical fishery conditions.
  - Track the transport of sediment over multiple tide cycles.
  - Monitor transport of bacteria and toxins due to sediment resuspension.
  - Locate study areas in Secondary Nursery Areas or Special Secondary Nursery Areas that have not been open for multiple years.

### **Summary**

- Division staff agrees that sedimentation is an issue to assess and address and will take steps this year to address information gaps.
- The division plans to work with university researchers to develop a phased Coastal Recreational Fishing License grant proposal that will address information gaps, and pending those results, a trawling experiment study.
- Division staff plans to further analyze juvenile fish data to assess trends in juvenile fish abundance.
- The Coastal Habitat Protection Plan Steering Committee selected sedimentation as a priority issue to address in the 2015 Coastal Habitat Protection Plan.
- This issue will be added to the division's Biological Review Team's Research Priority List.

## **Proposed Initiative: Reduce the culling tolerance for oysters from 10 percent to 5 percent**

### **Background**

- 15 A NCAC 03K. 202 requires a 10 percent tolerance by volume.
- The culling tolerance has been incorporated in rule at least since 1927.
- During the early years it was set at 5 percent. Between 1931 and 1934 the culling tolerance changed to 10 percent around the same time as the change in size limit from 2 ½ inches to 3 inches.
- Between 1971 and 1975, the culling tolerance for the 2 1/2 inch coon oysters was 15 percent. Prior to 1971 there was no size limit on coon oysters and therefore no culling tolerance on coon oysters.
- Law enforcement officers inspect fishermen for exceeding the tolerance limit by using a certified metric bushel tub and a keeler which is 10 percent of the tub by volume. A bushel of oysters is dumped into the metric bushel tub. The officer culls sub-legal oysters from the bushel and places them into the 10 percent keeler. If the keeler becomes full before the metric bushel is empty the catch is over the 10 percent tolerance. The officers will dump the keeler into another container and continue grading the rest of the oyster to find the total percent of undersized product.
- If the product exceeds 10 percent the officers will judge the level of oysters in the second keeler to figure the overage.

### **Previous Actions or Considerations**

- Was not an issue in previous Oyster Fishery Management Plans, amendments, or supplements.
- Changing from 10 percent tolerance to 5 percent tolerance will require a change in keeler size to reflect 5 percent tolerance.
- Keelers are made of galvanized steel and cost approximately \$25.
- Difficult in the south to change from 10 percent to 5 percent because of the intertidal nature of the southern coastal oysters.
- Intertidal oysters are in the form of clusters. Changing from the 10 percent tolerance to the 5 percent tolerance will result in finer separation of sub-legal from legal more difficult and would result in higher mortality of sub-legal oysters because of increased damage to the shell.
- May be possible to lower culling tolerance to 5 percent north of the Highway 58 Bridge. Oysters occur more subtidal as single oysters. Therefore less difficult to separate sublegal from legal oysters

### **Summary**

- Concerns over increased effort in the south causing damage to cultch plantings and oyster rocks.
- Bushel limit changes are also an issue under consideration under Amendment 4 of the Oyster Fishery Management Plan.
- In the southern area bushel limits are currently five bushels per person/10 bushel per vessel.
- This has lead to concerns of the implications of a \$31.25 shellfish license and the availability of this license to any N.C. resident.
- Culling tolerance will be addressed in an issue paper discussing harvest and effort issues in the southern coastal area.

## **Proposed Initiative: Develop hook-and-line, recreational-only, artificial reefs that can be used to promote local communities and tourism (or other positive recreationally oriented initiatives)**

### **Background**

- In late winter of 2007 an interaction between a recreational fisherman and gill nets occurred on AR-425 (Yaupon Beach Reef) and AR-420 (Tom McGlammery Reef). This resulted in the introduction of House Bill 2153 entitled: An Act to Prohibit Commercial Fishing Near Artificial Reefs within Three Nautical Miles of the Shoreline of Brunswick County. In response, the Fisheries Director issued proclamation M-23-2008 prohibiting the use of gill nets or trawls in the area of AR-425. This proclamation has been issued annually since.
- In 2013, Ron Zielinski submitted a Petition for Rulemaking to the N.C. Marine Fisheries Commission. This petition entailed restricting the use of commercial fishing gear and additional gear (i.e. minnow traps, collapsible crab traps, cast nets, gigs or pointed implements, hand operated rakes, seines less than 30 feet in length, manual or mechanically propelled spears and trotlines) on and around AR-396.
- On Aug. 29, 2013, at a commission meeting, a motion to approve the Ron Zielinski petition for rulemaking was made because of the following reasons: 1) to support beneficial economic impact to the surrounding community; 2) to improve angler access to dedicated accessible and quality fishing opportunities; and 3) to be proactive in avoidance of future conflicts. The motion carried 6-2, with 1 abstention.
- On May 22, 2014, at a commission meeting, a motion was made to accept Ron Zielinski's request to withdraw his petition for rulemaking regarding the Oriental artificial reef and to stop further rulemaking on the issue. The motion carried 9-0.

### **Authority**

- Sufficient authority for the commission to develop recreational, hook-and-line-only artificial reefs does not currently exist in rule, but there is sufficient statutory authority for the commission to adopt rules "to regulate the location and utilization of artificial reefs in coastal waters." [G.S. 143B-289.52(b)(10)]
- The rule making process, as set forth in G.S. 150B (Administrative Procedure Act) includes completing an economic analysis of the proposed rule change, publishing the proposed rule in the *N.C. Register*, providing a public comment period, and ensuring compliance with the rulemaking principles in G.S. 150B-19.1(a).

### **Considerations**

- In addition to considering the requirements of the rulemaking process, other factors such as funding sources, traditional fishing areas, impacts to local economies, impacts to commercial fishermen and access should be considered.
- Artificial reefs have been funded using a variety of funds including but not limited to, state appropriated money, sport fish restoration funds and grants from both state and federal agencies.
- Declaring an artificial reef hook-and-line, recreational-only, will exclude user groups, both recreational and commercial, from access to a public trust resource.
- Recreational fishermen will not be able to use gears such as gill nets, crab pots, spears and gigs to harvest their recreational limit.
- Funding sources should be considered when planning and developing hook-and-line, recreational-only, artificial reefs since use by user groups will be limited.
- Interest could be sparked from other user groups to construct reefs for sole usage by their respective user groups.
- Partnering with the N.C. Division of Marine Fisheries is a requirement since Coastal Area Management Act, United States Army Corps of Engineers and Coast Guard (Private Aids to Navigation) permits for artificial reefs are issued to the N.C. Division of Marine Fisheries.

- The process to site, permit, obtain materials, construct and monitor an artificial reef site is costly and time consuming.
- From previous experience, total inshore artificial reef construction cost ranges from \$31,000 and \$50,000 per acre depending on complexity, reef structures and location.

**Summary**

- Developing hook-and-line, recreational only, artificial reefs will require the commission to develop rules through the rulemaking process.
- There is the possibility of other user groups requesting to build artificial reefs for their exclusive use, which would exclude other user groups from a public trust resource.

## **Proposed Initiative: Develop a dedicated recreational position within the Division of Marine Fisheries**

Develop a dedicated recreational position within the Division of Marine Fisheries (funded through Coastal Recreational Fishing License grant program) to serve as a recreational liaison that would:

- Be the contact person for recreational fishermen;
- Liaison for the for hire industry;
- Work with tourism boards;
- Promote recreational fishing; and
- Help council/Atlantic States Marine Fisheries Commission/Highly Migratory Species folks acquire recreational input on amendments and other actions.

### **Background**

- Coastal Recreational Fishing License Grant submitted in FY2011 (not selected for funding); internal pre-proposal submitted in FY2012 (not selected for full proposal).
- Previous proposals focused on several areas: providing technical/policy guidance regarding recreational fisheries; development and coordination of data collection programs for recreational fisheries; promote conservation-based fishing practices; and development of positive relationships with the recreational fishing community.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries has a similar national policy position that is responsible for coordination of regional recreational fisheries policy staff and oversight of NOAA Fisheries Recreational Initiative (launched 2009).

### **Previous Considerations/Actions**

- Division currently has a five-year federal aid grant (Marine Fisheries Education and Outreach) that provides support for classroom education programs, development and printing of educational brochures/materials (e.g., ethical angling, Angler's Guide, etc.), exhibits at festivals, expanding/improving educational web pages.
- Governor's Cup Billfishing Series and N.C. Saltwater Fishing Tournament (Citation Program) provide informal outreach to private anglers and for-hire sector.
- Coastal Angling Program (recreational harvest data collection program) staff provide informal (dockside sampling) and formal (for-hire constituent outreach and logbook public meetings) outreach to private anglers and for-hire sector, as well as weekly regional fishing reports throughout the season.

### **Potential Activities**

#### **Policy**

- Coordinate development of a comprehensive strategic plan for N.C. recreational fisheries across all division sections with the goal of proactively identifying recreational fishery issues of importance and initiating guidance/policy to address these issues (outreach, communication, education, technology).
- Provide guidance/input on recreational fishery characterization for all state fishery management plans in conjunction with fishery management plans and species leads.
- Serve as the division point-of-contact for:
  - Recreational fishing information for anglers, recreational fishing organizations, for-hire industry, tournaments, tourism, etc.
  - Federal efforts related to NOAA Fisheries National Recreational Fishing Policy ([http://www.nmfs.noaa.gov/sfa/management/recreational/documents/recfish\\_policy\\_public\\_comment\\_draft.pdf](http://www.nmfs.noaa.gov/sfa/management/recreational/documents/recfish_policy_public_comment_draft.pdf)), and provide NC perspective regarding implementation of the Southeast Regional Recreational Fisheries Action Agenda ([http://www.nmfs.noaa.gov/sfa/management/recreational/documents/noaa\\_rfaa\\_ser.pdf](http://www.nmfs.noaa.gov/sfa/management/recreational/documents/noaa_rfaa_ser.pdf)).

- Provide policy level guidance on interstate and federal fishery management issues in coordination with federal council and interstate commission liaisons.

### Communication

- Coordinate public input from recreational constituents (anglers, organizations, for-hire) on state, interstate and federal fishery management decisions.
- Improve communication with all recreational constituencies through organized workshops, seminars, and invited speaking engagements on management issues, conservation-based fishing practices, habitat enhancement/protection, etc.
- Develop a regular “on the docks” schedule of informal interaction with private anglers, for-hire captains, tackle shop owners, tourism operators, etc.
- Coordinate with other agencies, local governments and recreational fishermen to identify, enhance, conserve and develop recreational fishing access.

### Outreach

- Assess the use and effectiveness of the current recreational compliance guides and recreational outreach materials in conjunction with public affairs staff.
- Develop a distribution system of recreational compliance guides and recreational outreach materials with input from anglers, the for-hire industry, and tourism.
- Coordinate with other state partners (N.C. Sea Grant, academic researchers, and other state agencies) to disseminate results of the Coastal Recreational Fishing License grant program and provide a conduit for input into the program’s strategic plan.

### Education

- Enhance education of fishermen and the public concerning fish habitats, how they function, and what people can do to protect them.
- Assist in cross-section initiatives to develop and disseminate gear and methodology for reducing release mortality and to reduce protected species interactions.
- Work with stock assessment scientists to develop outreach materials (similar to Marine Resource Education Program in southeast) to ensure a clear understanding of the stock assessment process for state-managed fisheries.
- Enhance education of fishermen and advise them of the public health and safety concerns surrounding naturally occurring bacteria with consumption of raw shellfish and swimming or water contact activities.

### Summary

- Ultimate goal is that recreational constituents who understand the fishery management process, data collection, habitat function, conservation techniques and practices will be more informed and feel a sense of inclusion in the management process.
- Previous attempts to fund such a position have not met with success (ultimate approval of new positions typically occurs at department level)
- Division currently has a variety of recreationally-oriented education/outreach initiatives and should evaluate effectiveness of funded activities; re-program existing staff and resources towards more effective efforts based on review and constituent input.
- Potential benefits: Coordination with federal initiatives, other agencies, local governments and recreational fishermen to identify, enhance, conserve and develop recreational fishing opportunities; comprehensive plan for all division efforts related to recreational fisheries; increased understanding and improved communication between commission, division and recreational sectors.
- Potential challenges: Representing the diverse opinions of the recreational fishery; commercial sector opposition to creating a recreational liaison without creating a commercial liaison; stock management goals may differ between recreational sectors; communication with the widely dispersed and diverse recreational fishery.



**Proposed Initiative: Reduce bycatch in the shrimp fishery by 30-40 percent and revisit annually to ensure compliance with these reduction levels and continuously look for ways to further reduce bycatch.**

**Background**

- Reauthorization of Magnuson-Stevens Fishery Conservation and Management Act contains a National Standard (#9) requiring bycatch minimization (USDOC 1996). National Standard 9 states: “Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.” The act was amended in 1990 to include bycatch research.
- In 1990, Congress mandated that the U.S. Secretary of Commerce conduct a three year research program to assess the impact of the incidental harvest by the shrimp trawl fishery on fishery resources in the South Atlantic and the Gulf of Mexico areas.
- The National Marine Fisheries Service, along with the Gulf and South Atlantic Fisheries Development Foundation, began a cooperative bycatch research program to: (1) update and expand bycatch estimates temporally and spatially; (2) identify, develop and evaluate gear options for reducing bycatch; (3) develop an information transfer and education program on bycatch; and (4) develop and operate a standardized data management system for centralized dissemination and access.
- Starting in 1992, observers were placed aboard cooperating vessels to characterize bycatch and to test bycatch reduction devices during normal commercial shrimp trawling through a NOAA program.

**Previous Actions or Considerations**

- During the 1960s and early 1970s, there was a primary bycatch concern was from directed ocean finfish trawling for bait and pet food.
- During the 1970s through the 1990s, rules were established to prohibit directed scrap fishing. Nursery area designation also began during this time.
- During the late 1980s, the division initiated gear testing to reduce bycatch in the shrimp trawl fishery.
- In cooperation with personnel from the North Carolina Sea Grant, an industry advisory committee was established in 1989 to act as consultants throughout the design and testing phase of a gear development project to reduce bycatch in N.C. trawl fisheries. The committee suggested two finfish excluding techniques: skylight panels and large mesh tailbags.
- Since 1972, the commission regulates the minimum mesh size for a shrimp trawl, including the tailbag at 1.5 inches (15A NCAC 03L.0103(1)).
- The division conducted preliminary tests on diamond tailbag mesh sizes in 1991, square mesh tailbags in 2000, and conducted follow up work in 2010.
- The commission required all shrimp trawlers working in state waters to equip their nets with functional fish excluders in October 1992, becoming the first state to do so.
- From 1992-1996 the division worked with fishermen to develop and test several bycatch reduction devices to reduce finfish bycatch. These tests led to the commission approving four bycatch reduction devices for use in state waters in 1996 (Proclamation SH-9-97).
- Currently the division allows five bycatch reduction devices for use in state waters (Proclamation SH-3-2012).
- Several gear evaluation studies have also been conducted in N.C. waters to document bycatch in shrimp trawls (McKenna and Monaghan 1993; Coale et al. 1994; Murray et al. 1995; McKenna et al. 1996, Brown 2010).
- In 2009, the division tested various bycatch reduction devices aboard the R/V Carolina Coast (Brown 2010).

- In 2012, the commission directed the division to amend the Shrimp Fishery Management Plan, but to limit the scope of the amendment to bycatch issues. Twenty-nine different management options were brought forward to the Shrimp Fishery Management Plan Advisory Committee to address eight different issues. The commission's preferred management strategies to reduce bycatch included:
  - Allowing any federally certified bycatch reduction devices in all N.C. internal and offshore waters;
  - Update the scientific testing protocol for the state Bycatch Reduction Device Certification Program;
  - Convene a stakeholder group to initiate industry testing of various bycatch reduction devices to reduce bycatch to the extent practicable with a 40 percent target reduction;
  - Require either a T-90/square mesh tailbag or other applications of square mesh panels, reduced bar spacing in a turtle excluder device, or another federal or state certified bycatch reduction device in addition to existing turtle excluder device and bycatch reduction device requirements; and
  - Cap fleet capacity by establishing a maximum combined headrope of 220 feet in all internal coastal waters where there are no existing maximum combined headrope requirements with a two-year phase in period.

### **Summary**

- Policies at both the state and federal level have been adopted as conservation and management measures to minimize bycatch and bycatch mortality and incorporate that goal into management considerations.
- The control of net selectivity is a preferred management tool in lieu of other more stringent regulations such as temporal or spatial closures, quotas, or limited entry.
- The division has tested various bycatch reduction device designs since the 1980s. Testing has been sporadic based on funding.
- Development of bycatch reduction devices must be tested in many areas and over several seasons, since there is considerable variation in conditions both spatially and temporally.
- It is important to understand that the development of bycatch reduction devices is a long process, and is dependent on a number of factors.
- There is no one gear design or modification that will work in every situation. What works during the summer brown shrimp fishery may not be effective in the fall white shrimp fishery. The goal of gear researchers is to give the industry additional tools and techniques to use under various real life field situations.
- Funding is often a limiting factor for gear development programs. The division has very limited resources to conduct bycatch reduction device development testing.
- The division has and will continue to seek outside funding to conduct this type of research.
- The division has and will continue to seek outside funding to conduct characterization studies which can be used to ensure compliance with reduction levels.

## **Proposed Initiative: Increase Habitat**

### **Background**

There are six categories of coastal fish habitat in North Carolina – wetlands, shell bottom (oyster reef), submerged aquatic vegetation, ocean hard bottom, soft bottom, and the water column. Much of the work the division does deals with restoring and enhancing shell bottom habitat. The type, magnitude and location of created shell bottom habitat varies annually based on available funding. The division's restoration and enhancement work helps to fulfill recommendations of the Coastal Habitat Protection Plan, which was mandated by the 1997 Fisheries Reform Act. The Act contains the directive to protect and enhance habitats supporting coastal fisheries through the development and implementation of the Coastal Habitat Protection Plan. The law requires cooperation among three rule-making commissions: Environmental Management Commission, Coastal Resources Commission, and Marine Fisheries Commission. The commissions work together to develop, adopt, and implement the plan to protect and restore fish habitats through efforts of an interagency staff team and a steering committee consisting of a subset of the associated commissioners. While restoration of shell bottom habitat is addressed primarily by the Division of Marine Fisheries, restoration of other habitats is addressed by others or through mitigation or projects by conservation groups or universities. For example, the Division of Water Resources and the Ecosystem Enhancement Program are the primary groups that address wetland restoration. Through the Coastal Habitat Protection Plan process, encouragement of greater restoration of certain habitats can be discussed and recommended.

### **Previous Actions or Considerations**

Specific Coastal Habitat Protection Plan recommendations that address increasing habitat and reducing sediment from entering coastal waters (sediment can enter through point and non-point sources), include:

- Expand habitat restoration in accordance with ecosystem restoration plans, including:
  - a. Creation of subtidal oyster reef no-take sanctuaries.
  - b. Re-establishment of riparian wetlands and stream hydrology.
  - c. Restoration of submerged aquatic vegetation habitat and shallow soft bottom nurseries.
  - d. Developing compensatory mitigation process to restore lost fish habitat functions.
- Prevent additional shellfish and swimming closures through targeted water quality restoration and prohibit new or expanded stormwater outfalls to coastal beaches and to coastal shellfishing waters (Environmental Management Commission's surface water classifications SA and SB) except during times of emergency (as defined by the Division of Water Quality's Stormwater Flooding Relief Discharge Policy) when public safety and health are threatened, and continue to phase-out existing outfalls by implementing alternative stormwater management strategies.
- Enhance coordination with, and financial/technical support for, local government actions to better manage stormwater and wastewater.
- Improve strategies throughout the river basins to reduce non-point pollution and minimize cumulative losses of fish habitats through voluntary actions, assistance, and incentives, including:
  - a. Improved methods to reduce pollution from construction sites, agriculture, and forestry.
  - b. Increased on-site infiltration of stormwater.
  - c. Documentation and monitoring of small but cumulative impacts to fish habitats from approved, un-mitigated activities.
  - d. Encouraging and providing incentives for low impact development.
  - e. Increased inspections of onsite wastewater treatment facilities.
  - f. Increased water re-use and recycling.
- Improve strategies throughout the river basins to reduce non-point pollution and minimize cumulative losses of fish habitats through rule making, including:
  - a. Increased use of effective vegetated buffers,
  - b. Implementing and assessing coastal stormwater rules and modify if justified.
  - c. Modified water quality standards that are adequate to support submerged aquatic vegetation habitat.

## **Summary**

- The initial Coastal Habitat Protection Plan was completed and approved in 2005 and updated in 2010. As the next five-year update is scheduled for completion in 2015, there is an opportunity to modify plan recommendations and implementation actions related to creating additional coastal fish habitat.

# **Proposed Initiative: Defining Full-Time and Part-Time Commercial Fishermen and the Purpose of the Standard Commercial Fishing License (SCFL)**

## **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 (SCFL)
- 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 SCFL 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 feels 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 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.
    - 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 SCFL 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 SCFL’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. SCFL 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 SCFL through the Eligibility Board.

- The issue of recreational fishermen obtaining SCFL's 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, clambers and oystermen who may not have qualified for a SCFL 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 SCFLs in the Eligibility Pool
  - Limit license transfers
  - Limit license assignments
  - Address inequities in licensing costs between residents and nonresidents (especially with Land or Sell license privileges)
- Changes to the following authorities will require legislative changes to existing statutes:
  - Limiting renewals of existing SCFLs
  - Further increases in license fees
  - Adjustments to nonresident fees
- Fee increases beginning in fiscal year 2016 will impact the number of licenses issued, especially those SCFLs 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.

## **Proposed Initiative: Remove Spotted Seatrout from the Fishery Management Plan**

### **Clarify intent of initiative**

Intent of the initiative is to change management strategy for spotted seatrout outlined in the 2012 N.C. Spotted Seatrout Fishery Management Plan, which is based on the threshold biological reference point of a spawning potential ratio of 20 percent to managing spotted seatrout based on environmental factors.

### **Background**

- The Atlantic States Marine Fisheries Commission Fishery Management Plan for Spotted Seatrout was adopted in 1984 and was updated with Amendment 1 in 1991 and Amendment 2 in 2011.
- Amendment 1 developed a list of goals for spotted seatrout management, but allowed interested states to manage their stocks independently.
- Amendment 2 required states to comply with the Atlantic Coastal Fisheries Cooperative Management Act and the Atlantic States Marine Fisheries Commission Interstate Fishery Management Program Charter, adopt a 12-inch total length minimum size limit for both recreational and commercial sectors and recommended states establish management measures to reach a 20 percent spawning potential ratio.
- Spotted seatrout was included in both the 2002 and 2008 N.C. Interjurisdictional Fishery Management Plan.
- The N.C. Marine Fisheries Commission adopted the fishery management plan schedule that provided for the development of a state spotted seatrout plan as a means to evaluate if regulations were sufficient to provide a sustainable harvest. Initial plan development began in 2007.
- The N.C. Spotted Seatrout Stock Assessment was completed in January 2009. The stock was considered overfished and overfishing had been occurring all but one year during the entire time series of the assessment (1991 – 2008) using a threshold biological reference point of 20 percent spawning potential ratio.
- The N.C. Marine Fisheries Commission adopted the N.C. Spotted Seatrout Fishery Management Plan in February 2012.
- The N.C. Marine Fisheries Commission adopted Supplement A to the 2012 Spotted Seatrout Fishery Management Plan in March 2014.

### **Previous Actions or Considerations**

- Supplement A to the 2012 N.C. Spotted Seatrout Fishery Management Plan implemented the following measures:
  - Maintain short-term management measures in the spotted seatrout fishery (Proclamation FF-13-2012: 14-inch minimum size, 75-fish commercial trip limit with weekend closures in joint waters except in Albemarle and Currituck sounds; Proclamation FF-12-2012: 14-inch minimum size, four-fish recreational bag limit).
  - If cold stun occurs: close spotted seatrout harvest through June 15 and retain four fish recreational bag limit and 75 fish commercial trip limit. Also more extensive research on cold stun events by the division, universities, etc...
  - Revisit the Spotted Seatrout Fishery Management Plan in three years to determine if sustainable harvest measures are working.
  - Development of a mutual aid agreement between Marine Patrol and Wildlife Enforcement Officers for Inland Fishing Waters.
- December 2014 an updated 2014 N.C. Spotted Seatrout Stock Assessment was sent for external peer review.
- The commission's fishery management plan review schedule, adopted in August 2014, has the next spotted seatrout review scheduled to begin in July 2015.
- The N.C. Fisheries Reform Act states "The Department shall prepare proposed Fishery Management Plans for adoption by the Marine Fisheries Commission for all commercially or recreationally significant species...." [G.S. 113-182.1].



- The N.C. Fisheries Reform Act states that if overfishing is occurring the fishery management plan must “specify a time period, not to exceed two years from the date of adoption of the plan, to end overfishing.” and if a fishery is considered overfished, the fishery management plan must “specify a time period, not to exceed 10 years from the date of the adoption of the plan, for achieving sustainable harvest.” The statute provides that these requirements shall not apply “if the Fisheries Director determines that the biology of the fish, environmental conditions, or lack of sufficient data make implementing the requirements of this subdivision incompatible with professional standards for fisheries management.” [G.S. 113-182.1].
- These provisions exempt a species from the two year period to end overfishing and the 10-year rebuilding period, not from the requirement to have a fishery management plan.
- Any adaptive management strategy designed to manage spotted seatrout based on environmental factors would likely need to be reviewed periodically. The best vehicle for this process is the species-specific state fishery management plan.

### **Summary**

- North Carolina is currently in compliance with the minimum size limit for both recreational and commercial sectors and has adopted the 20 percent spawning potential ratio threshold recommended by the Atlantic States Marine Fisheries Commission.
- A new stock assessment covering the 1991-2013 time period will be presented to the N.C. Marine Fisheries Commission at its May 2015 business meeting.
- This initiative would require an amendment to the N.C. Spotted Seatrout Fishery Management Plan.
- Spotted seatrout would still be part of the N.C. Interjurisdictional Fishery Management Plan if the species specific state plan was retired.
- Any adaptive management strategy designed to manage spotted seatrout based on environmental factors should be part of a state fishery management plan subject to periodic review.

## **Proposed Initiative: Establish a two season fishing period for large mesh gill nets; one in the spring and the other in late fall to help with cost of the observer program, as well as other obvious savings to the division**

### **Background**

- Session Law 2013-360 (Senate Bill 402) provided a one-time appropriation of \$1.1 million to the Observer Program in fiscal year 2014 and increased the commercial license fees by 25 percent to fund the Observer Program moving forward.
- This law also required public hearings for input on additional sources of funding for the Observer Program. The division submitted its plan for additional funding to the Marine Fisheries Commission, and the commission submitted its funding recommendations to the General Assembly.
- Session Law 2014-100 (Senate Bill 744) increased the commercial license fees by an additional 75 percent for a Commercial Fishing Resource Fund (G.S. 113-173.1). The purpose of the fund is to fund the Observer Program and to designate any surplus funds to projects that develop sustainable commercial fishing.
- The Sea Turtle and Atlantic Sturgeon Incidental Take permits require year-round monitoring of the small mesh and large mesh gill net fisheries.
- The Sea Turtle and Atlantic Sturgeon Incidental Take permits require adequate funding to ensure the permit's obligations are met, and the license fee increases for the Commercial Fishing Resource Fund are expected to meet these obligations.

### **Previous Actions or Considerations**

#### **Observer Program**

- The Observer Program Funding report submitted to the General Assembly by the Marine Fisheries Commission suggested management options for the estuarine gill net fishery if adequate funding was not available and if no improvements were made to program efficiencies.
  - Only allow the use of unattended large and small mesh anchored gill nets in estuarine waters from Oct. 1 through April 30
    - The open season for anchored gill net fishing would occur when landings and fishing effort are high, and when sea turtle abundance is lower in estuarine waters.
    - The open season would also coincide with existing small mesh gill net attendance rules (attendance not required from late fall to spring in most estuarine waters).
  - Operate the Observer Program without any set open and closed seasons, but close the estuarine gill net fishery when annual funding runs out.
- The financial audit of the Observer Program by the State Auditor's Office conducted in 2014 identified areas where the Observer Program could be enhanced such as improved documentation of missed trips and other activities associated with observer trips, and the division has already taken these steps.
- In addition, the division's Observer Program regularly reviews its procedures to improve efficiency and save money.
  - Recent examples include improvements to the call logs, establishing target numbers of observer trips needed for each management unit (by season) for meeting the required observer coverage, and an increased proportion of positive alternative platform trips.
  - The Estuarine Gill Net Permit established in September 2014 enhanced Observer Program efficiency through improved identification of active participants and improved contact information, which has reduced the time the observers spend acquiring trips.
- The Observer Program would still be required to monitor the small mesh gill net fishery year-round as required in the Sea Turtle and Atlantic Sturgeon Incidental Take permits.

#### **Commercial Large Mesh Gill Net Fishery (gill nets 5 inches stretched mesh and greater)**

- Seasonality of large mesh gill net fishery (all data for 2007-2011)

- Seasonal commercial landings:
  - Dec.-Feb.: 7 percent of landings
  - March-May: 27 percent of landings
  - June-Aug.: 21 percent of landings
  - Sept.-Nov.: 45 percent of landings
- Cumulative landings for all months with 10 percent or more of total landings:
  - Albemarle Sound: 73 percent of landings occur March-April and Sept.-Nov.
  - Pamlico Sound: 74 percent of landings occur July-Oct.
  - Pamlico, Pungo, Bay, and Neuse rivers: 52 percent of landings occur March and Sept.-Oct.
  - Core and Bogue Sound, and the North, Newport, and White Oak rivers: 81 percent of landings occur May-June and Aug.-Oct.
  - South of White Oak River to the S.C. line: 62 percent of landings occur March-April and Aug.-Oct.
- Seasonality of species in large mesh gill net landings:
  - Spring: striped bass, American shad, hickory shad, bluefish, red drum
  - Summer: southern flounder
  - Fall: striped bass, red drum, southern flounder, black drum
  - Winter: striped bass

### **Summary**

- Efforts to improve Observer Program efficiency and to save money are already underway and are a continuous process.
- Adaptive management through the incidental take permits provides management flexibility for monitoring the estuarine gill net under budgetary constraints and to avoid exceeding allowable takes of sea turtles and Atlantic sturgeon.
- Observer Program funding established by Session Law 2014-100 (Senate Bill 744) is expected to be sufficient.
- Fisheries vary seasonally and by area making one size fits all seasons difficult to implement.
- Tailoring open seasons for reasons other than stock health is precedent setting.

**Proposed Initiative: Investigate implementing an automated, user friendly & mutually beneficial observer "call-in" system for the gill-net fishery. Fishermen should be required to "call-in" if they are going to "fish" each week. The automated system should issue "confirmation numbers" to commercial fishermen who "call-in." Fishermen who fail to "call in" and report intended fishing activities should lose their permit indefinitely. Violators should be punished on a more severe, graduating scale. Furthermore, fishermen who hold a gill-net permit should be required to sign an agreement with their annual license renewal paperwork, which clearly explains the call-in process including the appropriate phone numbers.**

### **Background**

- The Estuarine Gill Net Permit was established on Sept. 1, 2014 to meet the incidental take permits' requirement to identify the participants in the estuarine gill net fishery using anchored gill nets.
  - The Estuarine Gill Net Permit was also designed to improve the efficiency of the Observer Program (ex. accurate contact information for the fishermen), to improve fishermen compliance with the incidental take permits, and create a clear definition and outcome for refusing observer trips.
- During the development of the Estuarine Gill Net Permit, some industry members requested the division implement a call-in system similar to what is used in other federal observer programs.
  - Fishermen would be required to contact the division when they intended to fish estuarine anchored gill nets.
  - Some industry members believe a call-in system would be more effective than the system the division currently employs for the Estuarine Gill Net Permit.
  - Some industry members also believe the division already has the resources to implement a call-in system using various resources such as Marine Patrol Communications staff.
- Division was not prepared to implement a call-in system on such short notice but advised industry members that staff would research other call-in systems to understand the cost and infrastructure required.
- In response to industry's request, staff has begun researching other observer program call-in systems.
  - Staff can provide more information once research on this topic is complete.

### **Previous Actions or Considerations**

#### **Systems used by other observer programs:**

- The Atlantic sea scallop fishery has an industry-funded observer program with a pre-trip notification (automated call-in) system.
  - Scallop vessel operators must call in to an automated call-in system no later than three days and no sooner than 10 days prior to sailing.
  - A confirmation number is received after calling in.
  - National Marine Fisheries Service sends an email within 24 hours to either issue a waiver (if no observers are available) or assign an observer to that trip.
  - The vessel operator must provide 48 hours notice to the observer provider prior to leaving the dock.
- The Northeast Federal Observer Program uses a web based pre-trip notification system with an optional call in system.
  - Fishermen login to the system with their permit number and personal identification number.

- Information entered includes departure time and date, trip duration, port of departure, gear type and fishing type.
- A pre-trip notification system for the estuarine gill net fishery would require fishermen to anticipate when and where they will be fishing in order to stay in compliance.
  - This system would decrease the flexibility gill net fishermen currently have for making fishing decisions.

### **Considerations for a call-in system**

- Number of participants
  - Atlantic sea scallop fishery has less than 400 participants (Limited Entry and Limited Entry General Category permit vessels combined).
  - Fisheries observed by the Northeast Fisheries Observer Program that are subject to the web based pre-trip notification system (ex. squid, Atlantic mackerel, butterfish fishery, Atlantic herring fishery, Northeast groundfish fishery) are also limited entry fisheries with relatively small numbers of participants.
  - Over 50 percent of the fishermen used the web based pre-trip notification making the number of phone calls even less for this fishery.
  - In contrast, over 2,300 Estuarine Gill Net Permits were issued for the estuarine anchored gill net fishery with over 80 percent of these issued to commercial fishermen.
  - Previous analysis by License and Statistics staff determined there are approximately 800 to 1,000 active commercial participants in the estuarine anchored gill net fishery.
- Fishing Effort (numbers of trips)
  - Atlantic sea scallop fishery is limited by day at-sea allocations to permitted vessels.
  - Fishing trips for Atlantic sea scallops and the fisheries subject to the web based pre-trip notification system tend to be multiple days in duration and therefore, fewer trips are made than in fisheries where “day trips” are more common (ex. N.C.’s estuarine gill net fishery).
  - In 2013, over 14,000 commercial anchored large mesh gill net trips and nearly 9,000 small mesh anchored gill net trips occurred in N.C. estuarine waters.
  - Based on 2013 N.C. gill net trips, nearly 1,600 observer trips for large and small mesh gill nets combined would be necessary to meet the target observer coverage for these gears (2 percent for small mesh and 10 percent for large mesh).
- Infrastructure
  - Marine Patrol Communications is unable to handle the volume of phone calls for a call-in system for the N.C. estuarine anchored gill net fishery, even if only a small fraction of Estuarine Gill Net Permit holders are actively fishing.
  - The Protected Resources section would need to hire staff to handle phone calls, which would draw resources (money) away from conducting at-sea observer trips.
  - A web based or automated call-in system would likely require dedicated staff to administer but would not rely on staff to answer the phone (or receive a message left by the fisherman) to collect the information.
  - However, an automated call-in system or a web-based system might be more than the division can afford and more than industry is willing to fund through license fees.
  - In addition, staff would need to consult with Information Technology support staff to ensure any system used is compatible with the existing network, computer infrastructures, and databases.
- Compliance
  - After fishermen call in to notify staff that they plan to fish, observers still need to contact the fisherman to arrange a trip, which they already do.
  - Under this system, a fisherman who fishes without notifying the division would be in violation.
  - The proposed initiative states “Fishermen who fail to “call in” and report intended fishing activities should lose their permit indefinitely,” but the rule authority for permits (15A

03O .0506) does not allow the division to revoke a permit indefinitely, rather it has graduated suspension structure of 10 days, 30 days and six months.

- In contrast Rule15A 03O .0114 bases license suspensions and revocations on the number of convictions and the severity of the conviction with a graduated suspension structure of 30 days, 60 days, and one year.
- Marine Patrol and Protected Resources sections would need to monitor fishing activity (ex. on-the-water checks, checking trip tickets at the fish house, etc.) for compliance, which draws staff away from other responsibilities such as ensuring proper observer coverage for the gill net fisheries to stay in compliance with the incidental take permits.

### **Summary**

- The division is agreeable to continue investigating this option.
- System currently in place for the Estuarine Gill Net Permit since Sept. 1, 2014, so it is still relatively new and future modifications are likely.
- Pre-trip notification systems for other observer programs are for fisheries with fewer participants taking fewer trips.
- More research by staff is needed to determine if these systems are affordable and if they are compatible with existing network and computer infrastructures.
- Compliance issues would still exist and more compliance monitoring by the division would be necessary.
- A call in system will require more forethought on the part of permit holders if they have to call in a week ahead of time.
- Permit holders will lose some flexibility.

INFORMATION  
WILL BE  
PROVIDED AT  
THE MEETING.





**"§ 113-173.1. North Carolina Commercial Fishing Resource Fund.**

(a) Establishment. – There is hereby established the North Carolina Commercial Fishing Resources Fund (Fund) as a nonreverting special revenue fund in the office of the State Treasurer. The purpose of the Fund is to provide funding for the development of sustainable commercial fishing in the State. The principal of the Fund shall consist of all of the following:

(1) Two hundred dollars (\$200.00) from each Standard Commercial Fishing License issued pursuant to G.S. 113-168.2.

(2) One hundred dollars (\$100.00) from each Retired Standard Commercial Fishing License issued pursuant to G.S. 113-168.3.

(3) Twenty-five dollars (\$25.00) from each shellfish license issued pursuant to G.S. 113-169.2.

(4) Fifty dollars (\$50.00) from each fish dealer license issued pursuant to G.S. 113-169.3.

(5) Two hundred dollars (\$200.00) from each land or sell license issued pursuant to G.S. 113-169.5.

(6) Thirty-five dollars (\$35.00) from each Recreational Commercial Gear License issued pursuant to G.S. 113-173. The State Treasurer shall hold the Fund separate and apart from all other moneys, funds, and accounts. The State Treasurer shall invest the assets of the Fund in accordance with the provisions of G.S. 147-69.2, except that interest and other income received on the fund balance shall be treated as set forth in G.S. 147-69.1(d).

(b) Use of Funds. – The North Carolina Commercial Fishing Resource Fund created by this section shall be used only for the following purposes, in order of priority:

(1) First, the Fund shall fully fund the State's incidental take permits for the commercial fishing industry under the federal Endangered Species Act of 1973 (Public Law 93-205) or the federal Marine Mammal Protection Act of 1972 (Public Law 92-522).

(2) After the priority set forth in subdivision (1) of this section has been fully funded, the Fund may be used for other projects to develop and support sustainable commercial fishing in the State.

(c) Procedure for Fund Disbursements. – With respect to funds used pursuant to subdivision (b)(1) of this section, the State Treasurer shall disburse the principal of the Fund only upon the written direction of the Director of the Division. With respect to funds used pursuant to subdivision (b)(2) of this section, the State Treasurer shall disburse the principal of the Fund only upon the written direction of both the Marine Fisheries Commission and the Funding Committee established by subsection (d) of this section following the procedures set forth in the memorandum of understanding developed under subsection (f) of this section. In the event of a disagreement between the Commission and the Committee, the Secretary of the Department of Environment and Natural Resources shall decide between the directions proposed by the Commission and by the Committee.

(d) Funding Committee. – The Funding Committee for the North Carolina Commercial Fishing Resource Fund (Committee) is established and shall consist of six members who shall serve staggered terms. Each of the following commercial fishing organizations shall appoint one member for an initial term as indicated and provide notice of that appointment in the manner set forth in G.S. 143-47.6:

- (1) North Carolina Fisheries Association, Inc., for a term of three years.
- (2) North Carolina Watermen United, Inc., for a term of two years.
- (3) Ocracoke Working Watermen's Association, for a term of one year.
- (4) Brunswick County Fishermen's Association, for a term of three years.
- (5) Carteret County Fishermen's Association, for a term of two years.
- (6) Albemarle Fishermen's Association, for a term of one year.

Upon the expiration of the terms of the initial Committee members, each member shall be appointed by the appointing organizations designated in subdivisions (1) through (6) of this subsection for a three-year term and shall serve until a successor is appointed and qualified. Members may be reappointed, but no member may serve more than two consecutive full terms. The Committee shall elect annually a chair and other officers as it deems necessary to carry out the purposes of this section, who shall serve a term of one year corresponding to the calendar year.

(e) Vacancies, Meetings, Quorum. – Vacancies in the Committee shall be filled in the same manner as the original appointment. The Committee may meet at any time upon the call of the chair. A quorum of the group shall consist of four members.

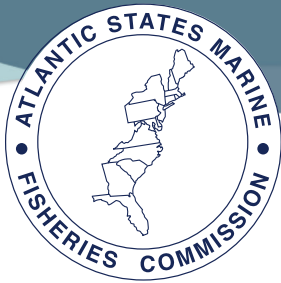
(f) Memorandum of Understanding. – The Marine Fisheries Commission and the Committee shall develop and implement a memorandum of understanding setting forth the procedures for agreeing to and authorizing the disbursements from the Fund created in this section for the purposes described by subdivision (b)(2) of this section.

(g) Ethics. – Members of the Committee are public servants as defined in sub-subdivision i. of subdivision (30) of G.S. 138A-3."

# Director's Report







ASMFC

# FISHERIES *focus*

Vision: Sustainably Managing Atlantic Coastal Fisheries

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## ASMFC Winter Meeting

February 3-5, 2015

The Westin Alexandria  
400 Courthouse Square  
Alexandria, VA  
703.253.8600

### Preliminary Agenda

*Please note: The agenda is subject to change. Bulleted items represent the anticipated major issues to be discussed or acted upon at the meeting. 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 3

- |                     |   |
|---------------------|---|
| 8 – 8:45 AM         | <b>Winter Flounder Management Board</b> <ul style="list-style-type: none"><li>• Set Specifications for the 2015 Fishing Season</li><li>• Review and Consider Approval of the 2014 FMP Review and State Compliance Report</li></ul>  |
| 9 – 10:30 AM        | <b>Atlantic Herring Section</b> <ul style="list-style-type: none"><li>• Review and Consider Approval of Draft Amendment 3 for Public Comment</li><li>• Review and Consider Approval of the 2014 FMP Review and State Compliance Report</li></ul>  |
| 10:45 AM – 12:45 PM | <b>American Lobster Management Board</b> <ul style="list-style-type: none"><li>• Review and Consider Approval of Draft Addendum XXIV for Public Comment</li><li>• Review Preliminary Draft of Jonah Crab Fishery Management Plan</li><li>• Review and Consider Approval of Nominations to the Jonah Crab Advisory Panel</li></ul>   |
| 1:45 – 5:15 PM      | <b>Atlantic Menhaden Management Board</b> <ul style="list-style-type: none"><li>• Review and Consider Acceptance of 2015 Benchmark Stock Assessment and Peer Review Panel Reports</li><li>• Discuss Ecological Reference Points (ERP) Term of Reference</li><li>• Discuss Management Objectives Moving Forward Based on Results of the Benchmark Assessment/ERP Term of Reference</li></ul> |

*continued, see WINTER MEETING AGENDA on page 6*

## Upcoming Meetings

*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.*

### Atlantic States Marine Fisheries Commission

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Douglas E. Grout (NH)  
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Robert E. Beal  
Executive Director

Patrick A. Campfield  
Science Director

Toni Kerns  
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Director of Finance & Administration

Tina L. Berger, Editor  
Director of Communications  
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#### **January 8 - 9**

SEAMAP & NEAMAP Catch Processing Workshop, SC DNR, 217 Ft. Johnson Road, Charleston, SC.

#### **January 8 - 9**

ASMFC Atlantic Striped Bass Technical Committee, The Hotel at Arundel Preserve, 7795 Arundel Mills Boulevard, Hanover, MD.

#### **January 13 - 14**

Atlantic Coast Fisheries Communications Working Group, ASMFC, 1050 N. Highland, Street, Arlington, VA.

#### **January 13 - 16**

2015 Florida Artificial Reef Summit, Clearwater Beach Marriott on Sand Key Clearwater Beach, FL.

#### **January 20 - 23**

ASMFC Biological Review Panel and Bycatch Prioritization Committee, Holiday Inn Tampa Westshore - Airport Area, 700 N. Westshore Boulevard, Tampa, FL

#### **January 27 - 29**

New England Fishery Management Council, Sheraton Harborside, Portsmouth, NH.

#### **February 3 - 5**

ASMFC Winter Meeting, The Westin Alexandria, 400 Courthouse Square, Alexandria, VA (see preliminary agenda on page 1).

#### **February 10 - 12**

Mid-Atlantic Fishery Management Council, Doubletree by Hilton, Raleigh Brownstone University, 1707 Hillsborough Street, Raleigh, NC.

#### **February 18 - 20**

ASMFC Bluefish Stock Assessment Data Workshop, The Providence Biltmore Hotel 11 Dorrance Street, Providence, RI.

#### **March 3 - 6**

South Atlantic Fishery Management Council, The King and Prince Resort, 201 Arnold Road, St. Simons Island, GA.

#### **April 14 - 16**

Mid-Atlantic Fishery Management Council, Ocean Place Resort, 1 Ocean Boulevard, Long Branch, NJ.

#### **April 21 - 23**

New England Fishery Management Council, Hilton Hotel, Mystic, CT.

#### **May 4 - 7**

ASMFC Spring Meeting, The Westin Alexandria, 400 Courthouse Square, Alexandria, VA.

#### **June 2**

Bluefish Stock Assessment Review Workshop, NMFS Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA.

#### **June 8 - 12**

South Atlantic Fishery Management Council, Doubletree Grand Key Resort, 3990 S. Roosevelt Boulevard, Key West, FL.

#### **June 9 - 11**

Mid-Atlantic Fishery Management Council, Doubletree by Hilton, Raleigh Brownstone University, 1707 Hillsborough Street, Raleigh, NC.



### In Gratitude

With the year coming to a close and the holiday season upon us, I find myself reflecting back on 2014 – our accomplishments, challenges and opportunities – all of which remind me of the many things I am grateful for as Executive Director of the Atlantic States Marine Fisheries Commission. I am grateful for the dedication and strong work ethic of the Commission staff, from the administrative staff who allow us to seamlessly conduct the day-to-day operations of the Commission, to the technical staff who ensure our Commissioners are provided the best scientific and management information to support their decision making, to our program directors whose sound leadership and guidance ensure we are firmly on track to achieve our annual goals and objectives as well as our vision of sustainably managing Atlantic coastal fisheries.

I am indebted to our Commissioners for their talents, wisdom and sustained commitment to the Commission and its programs. Two-thirds of our Commissioners serve without compensation, devoting their personal time and energies to fully engage in the Commission processes. The Commission is a stronger organization because of their investments and their close connections to their stakeholders. Their involvement, along with our Administrative Commissioners, ensures the broadest range of representation at the state level as well as a balanced discourse on the issues at hand. Our Commissioners made some difficult decisions this year, from management actions on American eel and Atlantic striped bass to committing to full disclosure of their conflicts of interest as it pertains to their involvement on species management boards. They did so in the spirit of cooperation, committed to fully understanding the issues before them and the needs of their sister states and their stakeholders. By doing so, they were able to identify areas of compromise that maintained our vision of sustainable management while also addressing the states' economic interests. Next year will offer additional challenges as Commissioners seek management responses to new benchmark assessments for Atlantic menhaden, black drum, tautog, American lobster, scup and bluefish. I am confident in their ability to successfully navigate these challenges and uphold their collective stewardship responsibilities.

I would also like to acknowledge the significant contributions of the staff of our member states and federal partners who serve on our species technical and stock assessment committees. They provide the solid scientific underpinning for our management actions. Without their hard work and dedication, Commissioners would not have robust science

to support sound management decisions. Their efforts are particularly noteworthy because they are provided in addition to their already full plates back at their state and federal agencies.

I am grateful for the continued support we receive from Congress and our federal partners. In 2014, appropriators recognized the importance of the Commission's work and prevented large-scale budget cuts during another tough budget cycle. And though the committees with jurisdiction over marine fisheries policy were unsuccessful in reauthorizing the Magnuson-Stevens Act, we appreciate their efforts to include the Commission's input throughout the entire process and are hopeful progress can be made next year. With the 114th Congress set to convene on January 3rd, the Commission will continue to build on its relationships in the U.S. Congress. That process begins with forging relationships with the 26 newly elected members of Congress from our member states. Not to be forgotten are the multitude of Members who keep in close contact with us and are open to hearing about our needs and ways to improve Atlantic coast fisheries management.

2014 was a year of greater engagement with our federal partners. There were three events in 2014 which clearly demonstrated NOAA Fisheries renewed commitment to state/federal partnerships. In September, state directors from the coastal states met with NOAA leadership to seek improvements to state/federal coordination. The issues discussed included budget and management priorities, Endangered Species Act findings and responses to listings, habitat conservation and management, joint law enforcement activities, and the national recreational fishing policy. Discussion on these issues was further reinforced when the regional leadership of NOAA Fisheries met with our Administrative Directors in October at the Commission's Annual Meeting in Mystic, Connecticut, and when the Executive Directors from the three interstate commissions were invited for the first time to meet with the NOAA Leadership Council this November. All involved parties are committed to continuing dialogue to better integrate state and federal science and management activities. This coordination is essential given funding constraints and our shared stewardship responsibilities.

2014 was a great year because of the outstanding people that make up the Commission family. I extend to you all best wishes for a safe and happy holiday season. I look forward to working with you in 2015.

### Managers Initiate Development of Fishery Management Plan on Emerging New England Fishery

#### Introduction

Jonah crab (*Cancer borealis*), a marine crustacean harvested for its inexpensive meat, has gained popularity on the East Coast in recent years. Historically, Jonah crab was considered a bycatch of the New England lobster fishery. However, over the past 15 years market demand has more than quadrupled, increasing targeted fishing pressure on this species. Due to this increased fishing pressure, the Commission, working closely with the New England Fishery Management Council, has moved forward with the development of a fishery management plan (FMP) to monitor fishing pressure and preserve the sustainability of this species.

#### Life History

Jonah crab is a red marine crab identified by its rough edged carapace with small white to yellow spots. Its claws have distinctively tinted black-brown tips. It ranges from Newfoundland to Florida in depths up to 2500 feet, and is commonly found on rocky ocean substrates in coastal New England or soft silt floors nearing the continental slope. Snails and blue mussels are primary prey items for the Jonah crab, which uses its strong claws to crush mollusk shells. Jonah crab are preyed on by gulls and lobster, and by many fish species, such as tautog, cunner, and cod.

Average size and age at maturity is unclear, owing to differences in growth and maturation rates throughout its geographic range. It is believed male maturation occurs when the width of the carapace (CW) is around 3.5 – 4 inches across, with males larger than females. The largest recorded crab was a male measuring almost 9 inches CW. Female size at 50% maturity is thought to be roughly 3.5 inches CW, and females reach a maximum size of about 6 inches CW. The smallest known egg-bearing female measured 2.6 inches CW, found on the Scotian Shelf (continental shelf southwest of Nova Scotia). Large females can produce over one million eggs per clutch.

Jonah crab are known to migrate seasonally; they have been observed moving into Narragansett Bay in the spring and retreating into deeper water in the winter. Females presumably use warmer water temperatures in the bay to molt and mate in the summer and early fall. Scientists have had difficulty finding larval and juvenile Jonah crab within its known geographic range. Some scientists suggest that Jonah crab larvae are settling elsewhere and migrating into coastal waters later. This is supported by laboratory findings, which conclude that early stage larvae prefer water at 15°C, while latter stage larvae prefer 20°C water.

#### Commercial & Recreational Fisheries

Taken in conjunction with lobster, Jonah crab is primarily harvested with trap gear. Historically, Jonah crab was treated as a bycatch fishery, with crabs usually discarded, sold to help cover fuel and operational costs, or used as bait. In recent years, the popularity of Jonah crab as a seafood item has increased the ex-vessel value of this species throughout New England, with 2013 landings valued at nearly \$12.8 million.

The increasing popularity of Jonah crab among consumers has driven commercial landings to skyrocket over the past 10 years. Throughout the 1990s, landings fluctuated between 2 and 3 million pounds per year. Landings jumped to 7 million pounds in 2005 and again to 10 million pounds in 2010. In 2013, landings totaled over 15 million pounds. Harvest of this species occurs primarily in Massachusetts and Rhode Island. In 2013, these states landed 66% and 29% of the total harvest, respectively, the majority of which was caught in federal waters (3 – 200 miles from shore). The magnitude of recreational harvest is unknown due to identification issues and confusion with other Cancer crab species.

#### Species Snapshot

**Jonah Crab**  
*Cancer borealis*

**Common Names:**  
Jonah crab, Atlantic dungeness

**Species Range:**  
Atlantic coast of North America from Newfoundland to Florida and into the Caribbean Sea, with the highest population concentration found from Georges Bank to North Carolina

**Interesting Facts:**

- Females can produce over 1 million eggs per clutch.
- Managed in Canada by the Department of Fisheries and Oceans
- Have complex population structures, with migrating and residential populations

**Largest Recorded:**  
Male at 8.74 inches CW

**Life Span:** Unknown

**Stock Status:** Coastwide status unknown; RI assessment indicates local population not overfished but overfishing occurring

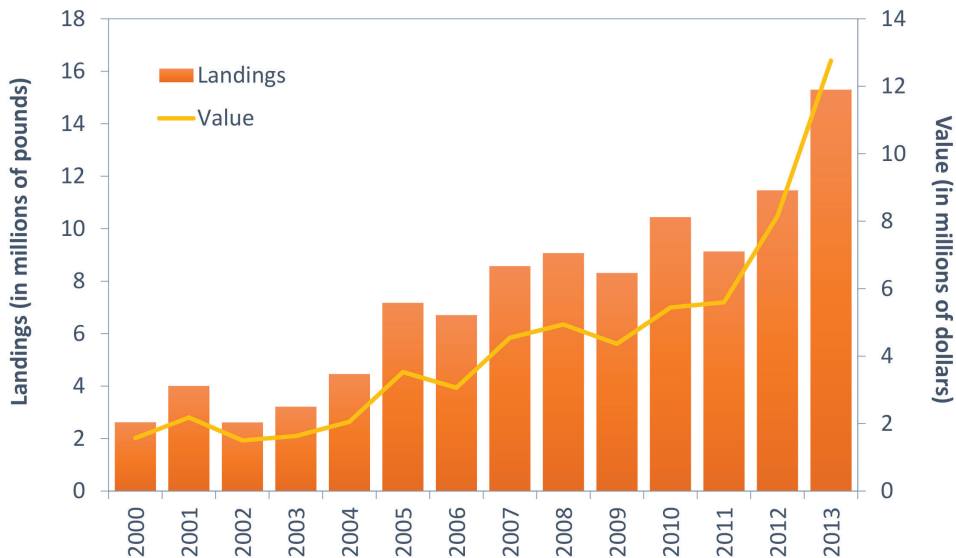


Photo © MA DMF



## Jonah Crab Landings & Value along the Atlantic Coast

Source: NMFS Fisheries Statistics Division, 2014



Note: Misidentification between Jonah and rock crab is common. Species-specific landings may be inaccurate.

### Stock Status

As there is no coastwide stock assessment for Jonah crab, the status of the resource is relatively unknown. The only available assessment was conducted by the Rhode Island Department of Environmental Management in 2012. The assessment, which addressed local populations of both Jonah and rock crab, found biomass to be above maximum sustainable yield for both species, however, fishing pressure exceeded acceptable limits. The assessment concluded that while the stocks were not overfished, they were experiencing overfishing.

Other sources of data come from inshore state water trawl surveys conducted by Massachusetts, Maine, and New Hampshire, which infrequently encounter Jonah crab and, therefore, provide only minimal data. NOAA Fisheries conducts a trawl survey in federal waters which collects data on Jonah crab abundance and distribution, but this data has not yet been fully analyzed. Stock assessment strategies will be developed in conjunction with the anticipated interstate FMP, with the goal of better understanding this species' stock condition.

### Atlantic Coastal Management

Jonah crab management varies from state to state, due to the lack of an existing coastwide FMP. Commercial regulations consist of minimum size limits, permit requirements, closed seasons, and harvest limits. While commercial harvest reporting is required by all states, misidentification of Jonah crab with the related species of rock crab is a prevailing complication that skews catch estimates. In federal waters, commercial harvest of Jonah crab is unregulated.

Recreational harvest is legal in all states, from Maine through Florida. Massachusetts, New York, New Jersey, and Maryland are the only states with recreational possession limits. Limits on recreational traps and licensing requirements also vary by state.

An earnest push toward Jonah crab management began when Delhaize America, a grocery chain, realized its Jonah crab products did not meet its standards for sustainability. Delhaize initiated a Jonah Crab Fishery Improvement Project (FIP), a group of stakeholders including retailers, dealers, processors, fishermen, and academic, state, and federal scientists, who began to work together to promote sustainable use of Jonah crab.

The FIP presented the Jonah crab fishery to state and federal agencies as an issue of urgent importance. They explained that this emerging, unmanaged fishery has grown significantly in the past few years and has the potential to expand further. Fishery managers agreed the recent expansion of the fishery and resulting increased targeted fishing pressure may be compromising the sustainability of the resource. This concern prompted the Commission to initiate the development of a Jonah Crab FMP through its American Lobster Management Board. The Draft FMP will consider management objectives, proposed regulations to the commercial and recreational fishery, monitoring requirements, and recommendations for federal waters fisheries.

Due to the high percentage of Jonah crab caught in federal waters, the Commission will be working closely with the New England Fishery Management Council to develop a plan that will manage both state and federal harvest. The Board will review the first draft of the FMP at the Commission's Winter Meeting in February 2015. For more information, please contact Marin Hawk, FMP Coordinator, at 703.842.0740 or [mhawk@asmfc.org](mailto:mhawk@asmfc.org).

### ASMFC Seeks Advisors for Jonah Crab Advisory Panel

As part of the development of the FMP, the Commission will be forming a Jonah Crab Advisory Panel. Commission advisory panels are typically comprised of commercial and recreational fishermen, processors/dealers, and other stakeholders who are concerned about fisheries conservation and management and have expertise in the respective fishery. The Jonah Crab Advisory Panel will provide the Board with advice concerning fishery practices and management activities. Those interested in becoming a member should contact their state Commissioners.

# Winter Meeting Agenda (continued)

## WEDNESDAY, FEBRUARY 4

- 8 – 9 AM **Executive Committee**  
*(A portion of this meeting may be a closed session for Executive Committee members only)*
- Discuss Staff Tenure and Workload
  - Review Suggested Changes to Commission Guidance Documents
  - Update on 2015 Annual Meeting
- 9:15 – 11:15 AM **Interstate Fisheries Management Program (ISFMP) Policy Board**
- American Eel Fish Passage Update
  - Review and Discuss 2014 Commissioner Survey Results
  - Discuss Updating the Roles and Responsibilities of the Committee on Economics and Social Science
  - Review and Consider Revisions to the ASMFC Committee Guidance and Assessment Process Document
- 11:30 AM – 12:15 PM **Weakfish Management Board**
- Review and Consider Approval of the Terms of Reference for the 2015 Benchmark Stock Assessment
  - Review Abbreviated Stock Status Update
- 12:30 – 3:30 PM **Northeast Area Monitoring and Assessment Program (NEAMAP) Board**
- Review NEAMAP Survey Reports
  - Review Reports and Recommendations from NEAMAP Committees
  - Review and Approve NEAMAP 2015 Operations Plan
  - Discuss Creation of NEAMAP Industry Advisory Panel
  - Elect Vice-Chair
- 1:15 – 3:15 PM **South Atlantic State-Federal Fisheries Management Board**
- Review and Consider Acceptance of 2014 Black Drum Benchmark Stock Assessment and Peer Review Panel Reports
  - Discuss Need for Management Response to the Benchmark Assessment
  - Review and Consider Approval of 2014 FMP Reviews and State Compliance Reports for Spanish Mackerel, Spot, and Spotted Seatrout
- 3:30 – 6:30 PM **Summer Flounder, Scup, and Black Sea Bass Management Board**
- Review and Consider Final Approval of Addendum XXVI
  - Set 2015 Black Sea Bass & Scup Recreational Management Measures

## THURSDAY, FEBRUARY 5

- 8 AM – Noon **Atlantic Striped Bass Management Board**
- Review and Consider Approval of Addendum IV Conservation Equivalency Proposals and Implementation Plans
- 12:30 – 2:30 PM **Tautog Management Board**
- Review and Consider Acceptance of 2015 Benchmark Stock Assessment and Peer Review Panel Reports
  - Discuss Need for Management Response to Benchmark Assessment

*continued, see WINTER MEETING AGENDA on page 7*

## Public Comment Guidelines

With the intent of developing policies in the Commission's procedures for public participation that result in a fair opportunity for public input, the ISFMP Policy Board has approved the following guidelines for use at management board meetings:

For issues that are not on the agenda, management boards will continue to provide opportunity to the public to bring matters of concern to the board's attention at the start of each board meeting. Board chairs will use a speaker sign-up list in deciding how to allocate the available time on the agenda (typically 10 minutes) to the number of people who want to speak.

For topics that are on the agenda, but have not gone out for public comment, board chairs will provide limited opportunity for comment, taking into account the time allotted on the agenda for the topic. Chairs will have flexibility in deciding how to allocate comment opportunities; this could include hearing one comment in favor and one in opposition until the chair is satisfied further comment will not provide additional insight to the board.

For agenda action items that have already gone out for public comment, it is the Policy Board's intent to end the occasional practice of allowing extensive and lengthy public comments. Currently, board chairs have the discretion to decide what public comment to allow in these circumstances.

In addition, the following timeline has been established for the submission of written comment for issues for which the Commission has NOT established a specific public comment period (i.e., in response to proposed management action).

1. Comments received 3 weeks prior to the start of a meeting week will be included with the main meeting materials.
2. Comments received by 5:00 PM on the Tuesday immediately preceding the scheduled ASMFC Meeting (in this case, the Tuesday deadline will be **January 27, 2015**) will be distributed electronically to Commissioners/ Board members prior to the meeting and a limited number of copies will be provided at the meeting.
3. Following the Tuesday, January 27, 2015 5:00 PM deadline, the commenter will be responsible for distributing the information to the management board prior to the board meeting or providing enough copies for the management board consideration at the meeting (a minimum of 50 copies).

The submitted comments must clearly indicate the commenter's expectation from the ASMFC staff regarding distribution. As with other public comment, it will be accepted via mail, fax, and email.

## Draft Addendum XXVI Released for Public Comment: Addendum Proposes Management Options for the 2015 Summer Flounder Recreational Fishery

The Summer Flounder, Scup and Black Sea Bass Management Board approved Draft Addendum XXVI for public comment at the Joint Commission/Mid-Atlantic Fishery Management Council meeting in Baltimore, Maryland earlier this month. Draft Addendum XXVI proposes alternate management approaches for the 2015 summer flounder recreational fishery, including adaptive regional management options that are intended to provide more equity in recreational harvest opportunities along the coast. The states of Massachusetts through Virginia will be conducting public hearings on the Draft Addendum throughout January. The details of those hearings follow:

### Massachusetts Division of Marine Fisheries

January 8, 2015 at 6 PM  
Bourne Fire Station #3, Meeting Room  
53 Meetinghouse Lane  
Sagamore Beach, MA  
Contact: David Pierce at 617.626.1532

### Rhode Island Division of Fish & Wildlife

January 7, 2015 at 6 PM  
University of Rhode Island,  
Corliss Auditorium  
South Ferry Road  
Narragansett, RI  
Contact: Jason McNamee at 401.423.1943

*continued, see SUMMER FLOUNDER on page 8*

WINTER MEETING AGENDA continued from page 6

- 12:30 – 2:30 PM **Tautog Management Board (continued)**
- Review and Consider Approval of the 2014 FMP Review and State Compliance Report
- 12:45 – 2:15 PM **Atlantic Coastal Cooperative Statistics Program (ACCSP) Executive Committee**
- Status Updates on the Program and MRIP-APAIS Transition
  - Review Action Items from Previous Meeting
- 2:45 – 4 PM **Shad & River Herring Management Board**
- Review and Consider Approval of 2014 FMP Reviews and State Compliance Reports for Shad & River Herring
  - Review New Hampshire Proposal for the Removal of Taylor River Monitoring
  - Update on Shad and River Herring Related Activities of the Mid-Atlantic and New England Fishery Management Councils
- 4:15 – 5:45 PM **ACCSP Coordinating Council**
- ACCSP Status Reports on the Program, MRIP-APAIS Transition, Committee Activities, and Independent Program Review
  - Discussion on Providing Operations Committee with More Authority to Recommend Different Funding Split than the 75/25 When Necessary



## Preparations Begin for 2015 Bluefish Benchmark Stock Assessment

The Commission has scheduled the Data Workshop for the upcoming bluefish benchmark stock assessment. The assessment will evaluate the health of the bluefish population and inform the management of the species. The Commission's stock assessment process and meetings are open to the public (with the exception of discussion of confidential data).

The Commission welcomes the submission of data sets that will improve the accuracy of the assessment. These include, but are not limited to data on growth, maturation, migration, genetics, stock enhancement, tagging, recruitment, natural mortality, and abundance/biomass. An essential need is information on the adult component of the stock as well as spawning stock condition. For data sets to be considered, the data must be sent in the required format, with accompanying methods description, to the Commission by **January 16, 2015**.

For those interested in submitting data, including the appropriate format, and/or attending the Bluefish Data Workshop, please contact Katie Drew, Senior Stock Assessment Scientist, at [kdrew@asmfc.org](mailto:kdrew@asmfc.org) or 703.842.0740. The deadline for data submission is January 16, 2015. All available data will be reviewed and vetted by the Commission's Bluefish Technical Committee and Stock Assessment Working Group for possible use in the assessment.

The Data Workshop will be conducted February 18-20, 2015 in Providence, Rhode Island. A subsequent press release will announce the specific location of the Data Workshop. The Assessment Workshop will be conducted in spring 2015, with the peer review being conducted through NOAA Northeast Fisheries Science Center Stock Assessment Review Committee from June 2-5, 2015. For more information on the bluefish stock assessment process, please contact Kirby Rootes-Murdy, Fishery Management Plan Coordinator, at [krootes-murdy@asmfc.org](mailto:krootes-murdy@asmfc.org) or 703.842.0740.

## Upcoming Science & Management Activities (cont'd)

SUMMER FLOUNDER  
continued from page 7

### **Connecticut Dept. of Energy and Environmental Protection**

January 6, 2015 at 7 PM  
Marine Headquarters  
Boating Education  
Center, Building 3  
333 Ferry Road  
Old Lyme, CT  
Contact: David Simpson  
at 860.434.6043

### **New York State Dept. of Environmental Conservation**

January 22, 2015 at 6:30 PM  
Bureau of Marine Resources  
205 North Belle Mead Road, Suite 1  
East Setauket, NY  
Contact: John Maniscalco at 631.444.0437

### **New Jersey Division of Fish and Wildlife**

January 12, 2015 at 7 PM  
Toms River Township Administrative  
Building, L.M. Hirshblond Room  
33 Washington Street  
Toms River, New Jersey  
Contact: Tom Baum at 609.748.2020

### **Delaware Dept. of Natural Resources and Environmental Control**

January 15, 2015 at 6 PM  
DNREC Auditorium  
89 Kings Highway  
Dover, DE  
Contact: Stewart Michels at 302.739.9914

### **Maryland Dept. of Natural Resources**

January 13, 2015 at 5:30 PM  
Ocean Pines Library  
11107 Cathell Road  
Berlin, MD  
Contact: Steve Doctor at 410.213.1531

### **Virginia Marine Resources Commission**

January 14, 2015 at 6 PM  
2600 Washington Avenue  
4th Floor Conference Room  
Newport News, VA  
Contact: Rob O'Reilly at 757.247.2247



Photo © Open Boat Laura Lee

Draft Addendum XXVI was initiated to consider the continuation of the adaptive regional management approach for the recreational summer flounder as established in Addendum XXV, which allowed for the use of regional management for the 2014 fishing season only. Regional management measures required states within a region to utilize the same size limit, bag limit, and season length. Addendum XXV was developed to address a growing concern that summer flounder management measures prior to 2014 were not providing recreational fishermen along the coast with equitable harvest opportunities to the resource. Its adaptive regional management approach was designed to allow the management program to adjust to past, current, and future changes to the resource and the fishery.

Under the provisions of Addendum XXV, the Board also approved the continuation of ad-hoc regional management approaches for the 2015 recreational black sea bass fishery. Addendum XXV allowed for the Board to extend the ad-hoc regional management measures by northern (Massachusetts-New Jersey) and southern regions (Delaware-North Carolina (north of Hatteras)) utilized in 2014 for up to one year. This approach has been used since 2011 and offers some advantages over coastwide regulations, which can disproportionately impact states within the management unit. The Technical Committee will work with the states to develop regional management measures

for Board consideration and approval at the Commission's Winter Meeting in early February. Under the stipulation that the northern region states implement management measures to account for overages in previous years and constrain harvest to 2015 recreational harvest limit, the Board and Council approved federal waters management measures for recreational black sea bass that include a 12.5-inch TL minimum size, a 15 fish possession limit, and an open season of May 15-September 21 and October 22-December 31.

Fishermen and other interested groups are encouraged to provide input on Draft Addendum XXVI either by attending state public hearings or providing written comment. The Draft Addendum is available at [http://www.asmfc.org/files/PublicInput/SFlounderDraftAddendumXXVI\\_PublicComment\\_Dec2014.pdf](http://www.asmfc.org/files/PublicInput/SFlounderDraftAddendumXXVI_PublicComment_Dec2014.pdf) and can also be accessed on the Commission website ([www.asmfc.org](http://www.asmfc.org)) under Public Input. Public comment will be accepted until 5:00 PM (EST) on **January 23, 2015** and should be forwarded to Kirby Rootes-Murdy, Fishery Management Plan Coordinator, 1050 N. Highland Street, Suite 200 A-N, Arlington, Virginia 22201; 703.842.0741 (fax) or at [krootes-murdy@asmfc.org](mailto:krootes-murdy@asmfc.org) (Subject line: Draft Addendum XXVI). For more information, please contact Kirby Rootes-Murdy at [krootes-murdy@asmfc.org](mailto:krootes-murdy@asmfc.org) or 703.842.0740.

### Want to Go Paperless?

Please help us reduce printing and mailing costs, and minimize paper waste by receiving our information via email. Contact us at [info@asmfc.org](mailto:info@asmfc.org) (Subject line: Subscribe to Email) to sign up to receive ASMFC Fisheries Focus, meeting announcements, and press releases electronically.

## Moving Forward on Understanding Shrimp Trawl Bycatch

The South Atlantic shrimp fishery is a valuable and economically important fishery that operates in state and federal waters from North Carolina to the Florida Keys. Target species include Penaeid shrimp (brown, white, and pink) and rock shrimp.

However, observer data indicate that on average, only 20-25% of the biomass caught by a South Atlantic shrimp trawl consists of Penaeid shrimp. The rest of it is made up of fish (mostly juveniles) and other invertebrates that are not targeted. This bycatch is generally discarded at sea. Rock shrimp trawls are somewhat cleaner, but even then, the majority of the catch (58%) is made up of species other than shrimp. Regulations require the use of turtle excluder devices and bycatch reduction devices, but these have not completely eliminated the problem.

Many of the species most commonly encountered in shrimp trawl bycatch are commercially and recreationally important: Atlantic croaker, Spanish mackerel, red snapper, weakfish, and spot, among others. Because bycatch of these species isn't reported, it has been difficult to estimate how much bycatch happens every year, and what the impact of that bycatch is on the health of these populations. Several recent stock assessments of these species have emphasized the importance of developing good estimates of removals due to bycatch. This uncertainty can hinder management; for example, estimates of Atlantic croaker biomass from the 2010 assessment were rejected due to uncertainty in levels of shrimp trawl bycatch, so overfished status could not be determined.

The SouthEast Data, Assessment, and Review process (SEDAR) convened a workshop in July to help address this issue. The workshop had two goals: to assemble and evaluate the available datasets relating to shrimp trawl bycatch and shrimp life history, and to



Photo © Kim Iverson, SAFMC

develop a set of best practices for the estimation of shrimp trawl bycatch and the assessment of shrimp stocks.

Prior to the workshop, SEDAR reached out to the Commission, state and federal agencies, as well as academic and non-governmental organizations to put together an exhaustive list of available datasets on shrimp biology and life history, shrimp trawl bycatch rates, and environmental conditions. At the workshop, fisheries biologists, stock assessment scientists, and data program managers evaluated the available datasets and discussed how those data could best be used to estimate shrimp trawl bycatch and to assess shrimp populations.

The core dataset for estimating shrimp trawl bycatch is NOAA Fisheries Southeast Fisheries Science Center's (SEFSC) Observer Program, which operates in the Gulf and South Atlantic. The Observer Program has operated since the early 1990s and has been mandatory since 2008. Although this program only covers ~1% of shrimp trawl trips, it represents the longest time series and the most areas

covered out of the datasets examined. Workshop participants recommended that the SEFSC database be supplemented with state-level observer studies, fishery-independent data, and effort data to develop estimates of shrimp trawl bycatch.

Workshop participants acknowledged the limitations of the available data, and made recommendations for additional data collection. There will always be uncertainty in these estimates, particularly for the historical periods, but bringing these datasets together and developing recommendations for best practices – both for working with the existing data and how to improve those datasets in the future – will ensure assessments at the state, federal, and Commission levels are working with the best available data and methods to deal with this difficult issue.

The workshop report (SEDAR PW 6: South Atlantic Shrimp Data Evaluation) and the data inventories (SEDAR PW6: Environmental Inventory and SEDAR PW6: Shrimp Inventory) are available for download at the SEDAR website ([http://www.sefsc.noaa.gov/sedar/Sedar\\_Workshops](http://www.sefsc.noaa.gov/sedar/Sedar_Workshops)).

### US Fish & Wildlife Service Protects Red Knot as Threatened Under the Endangered Species Act

On December 9<sup>th</sup>, the U.S. Fish and Wildlife Service announced federal protection for the rufa subspecies of the red knot, a robin-sized shorebird, designating it as threatened under the Endangered Species Act. A “threatened” designation means a species is at risk of becoming endangered throughout all or a significant portion of its range.

“The red knot is a remarkable and resilient bird known to migrate thousands of miles a year from the Canadian Arctic to the southern tip of South America,” said Service Director Dan Ashe. “Unfortunately, this hearty shorebird is no match for the widespread effects of emerging challenges like climate change and coastal development, coupled with the historic impacts of horseshoe crab overharvesting, which have sharply reduced its population in recent decades.”



Photo © Gregory Breese, USFWS

Since the 1980s, the knot’s population has fallen by about 75 percent in some key areas, largely due to declines in one of its primary food resources – horseshoe crab eggs in Delaware Bay, an important migratory stopover site. Although this threat is now being addressed by extensive state and federal management actions, other threats, including sea-level rise, some shoreline projects and coastal development, continue to shrink the shorebird’s wintering and migratory habitat.

Changing climate conditions are also altering the bird’s breeding habitat in the Arctic and affecting its food supply across its range, in particular through climate-driven mismatches in migration timing that affect the peak periods of food availability. The bird must arrive at Delaware Bay at exactly the time when horseshoe crabs are laying their eggs.

“Although historic threats in the Delaware Bay area have been ameliorated thanks to the actions of federal and state partners, our changing climate is posing new and complex challenges to the red knot’s habitat and food supply,” Ashe said. “It has never been more critical that we take positive action to save this bird.”

One of the longest distance migrants in the animal kingdom, some rufa red knots fly more than 18,000 miles each year between breeding grounds in the Canadian Arctic and wintering grounds along the Gulf Coast, southeast United States and South America. One bird, banded by biologists in 1995 in Argentina, has been nicknamed Moonbird because he has flown the equivalent of a trip to the moon and at least halfway back in his 21 or more years of migrations.

Along its epic migration, the red knot, which can be identified by its rufous breast, belly and flanks during breeding season, can be found across 27 countries and 40 U.S.

states in flocks ranging from a few individuals to several thousand. Although rufa red knots mainly occur along the Atlantic and Gulf coasts, small groups regularly use some interior areas of the United States during migration. The largest concentration of rufa red knots is found in May in Delaware Bay, where the birds stop to gorge themselves on the eggs of spawning horseshoe crabs; a spectacle drawing thousands of birdwatchers to the area. In just a few days, the birds nearly double their weight to prepare for the

final leg of their long journey to the Arctic. International, state and local governments, the conservation community, beachgoers and land managers are helping ensure red knots have safe areas to winter, rest and feed during their long migrations. These partners help knots in a variety of ways, including managing the harvest of horseshoe crabs (which are caught for use as bait in conch and eel pots), managing disturbance in key habitats, improving management of hunting outside the United States, and collecting data to better understand these birds.

In making its decision, the Service analyzed the best available data in more than 1,700 scientific documents, and considered issues raised in more than 17,400 comments provided during 130 days of public comment periods and three public hearings. Protections under the ESA will take effect 30 days after publication in the Federal Register.

As required by the ESA, the Service is also reviewing the U.S. range of the rufa red knot to identify areas that are essential for its conservation, known as critical habitat. The Service expects to propose critical habitat for the rufa red knot for public review and comment in 2015 after completing the required review of economic considerations.

Visit <http://www.fws.gov/northeast/red-knot/> to read the final rule and response to comments; view and download video, photos and maps; and explore more resources, such as an interactive timeline and infographic. The rule is available at [www.regulations.gov](http://www.regulations.gov) under docket number FWS-R5-ES-2013-0097.

### NOAA Fisheries Seeks Participation in River Herring Harvest Survey

Through the end of January, NOAA Fisheries is conducting a voluntary survey of individuals who have harvested river herring (alewives and blueback herring) commercially, recreationally, or for personal use at any point in time over

*continued on next page*

the past 20 years. The goal of this survey is to gather first-hand observations to inform our understanding of alewife and blueback population trends and help our efforts to restore these fish populations along the U.S. east coast. Commercial, recreational, and personal use harvesters have detailed knowledge of the fish in their local areas, such as changes in fish run timing, distribution, and individual fish size and species composition. NOAA wants to document some of this local knowledge in order to better understand river herring and their habitat.

NOAA intends to use the information obtained from this survey to cross-reference scientifically collected data to better understand trends and changes in river herring populations coast-wide. This information can help NOAA identify opportunities for additional research and restoration.

Learn more: <http://www.greateratlantic.fisheries.noaa.gov/stories/2014/surveykickoffonRiverHerringinaugust.html>

To learn more about the survey or to participate, please contact Dan Kircheis ([dan.kircheis@noaa.gov](mailto:dan.kircheis@noaa.gov)) or Julia Beaty ([julia.beaty@maine.edu](mailto:julia.beaty@maine.edu), 207-866-7262).



Migrating river herring. Photo © Greg Wells, Herring Alliance

## Illegal, Unreported and Unregulated Fishing and Seafood Fraud

On December 17<sup>th</sup>, the Presidential Task Force on Combating Illegal, Unreported and Unregulated (IUU) Fishing and Seafood Fraud released recommendations to crack down on global pirate fishing and seafood fraud.

IUU fishing, known colloquially as pirate fishing along with seafood fraud through intentional seafood mislabeling, exerts a high level of unregulated pressure on global fish stocks. Worldwide losses from pirate fishing are estimated to range from \$10 billion to \$23 billion annually. Although the U.S. is a world-leader in fisheries management and conservation, an estimated 90% of American seafood is imported and operates outside domestic fisheries laws. The task force's recommendations send a message that the U.S. takes pirate fishing and seafood fraud seriously and will be an active participant in reducing the harmful economic and ecological impacts of the practices.

The task force was established by President Obama in June 2014 at a global oceans conference hosted by Secretary of State John Kerry. At the time, President Obama instructed the Departments of State and Commerce to develop joint recommendations to combat seafood fraud and pirate fishing, and report out recommendations in six months. The task force released 15 specific recommendations, a majority of which can be implemented by President Obama and his administration. A few of the recommendations would need congressional approval, such as one that recommends implementing the Port State Measures Agreement, for example. The 15 recommendations fall into four general themes: international pirate fishing; enforcement; domestic partnerships with state/local governments, the private

sector, and nongovernmental organizations; and seafood traceability.

A 30-day comment period on the recommendations began on December 18, and the task force is aiming to release an action plan early in 2015. The report and instructions for submitting comments can be viewed at <https://www.federalregister.gov/articles/2014/12/18/2014-29628/recommendations-of-the-presidential-task-force-on-combating-illegal-unreported-and-unregulated>.

## GARFO Seeks Comments on Draft Strategic Plan

NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO), which is responsible for the stewardship of the federal living marine resources from Maine to North Carolina, including the Great Lakes, has released its Draft Strategic Plan for Public Comment.

The plan is part of a national effort by NOAA Fisheries. All regional offices and science centers are drafting strategic plans that contain region-specific goals and priorities. However, it is important that these plans align with the agency's overall mission and goals, and are developed in an open and transparent manner.

GARFO's draft plan identifies objectives associated with seven primary strategic goals: sustainable fisheries; protected resources; habitat conservation; community resiliency; aquaculture; organizational excellence; and customer service. GARFO welcomes feedback on its draft plan to ensure that its strategic objectives are addressing stakeholder needs while achieving its federal mandates.

The draft plan is available at <http://tinyurl.com/ppmmo5b>. Comments can be submitted through **January 15<sup>th</sup>** to [nmfs.gar.strategicplan@noaa.gov](mailto:nmfs.gar.strategicplan@noaa.gov).

# ASMFC Comings & Goings

December was a bittersweet month for Commission staff as we said good-bye to two longtime employees -- Genny Nesslage and Kate Taylor. Both employees brought to their jobs a deep commitment to the Commission's mission, vision and activities, and an outstanding work ethic that was reflected in the successful completion of numerous benchmark stock assessments, amendments, and addenda. Their accomplishments were coupled with the energetic and positive attitudes they brought to the workplace and all of their committee activities. While they both will be sorely missed, we are excited about the new opportunities that await them and wish them the very best in all of their future endeavors. Below is a recap of their major accomplishments while at the Commission.



## Kate Taylor

In the 6 years Kate was at the Commission, first as an FMP Coordinator and later as Senior FMP Coordinator, she made substantial contributions to the Commission's fisheries management program. Over that time, she coordinated management programs for six species, including American eel, American lobster, Atlantic sturgeon, Atlantic striped bass, and shad & river herring. She oversaw the completion of benchmark assessments for 3 of the Commission's most complex species due to their extensive geographic range and multiple threats to the populations -- American shad, river herring, and American eel. She led the development of major plan amendments for shad and river herring, both of which established commercial and recreational fishing moratoria, with exceptions for sustainable systems. She also worked closely with the American Eel Plan Development Team and Management Board to respond to the findings of the American eel benchmark, seeking to reduce overall mortality across all eel life stages. At the end of December, Kate will be the NMFS Program Coordinator within the Office of the Undersecretary.

## Genny Nesslage

As the Commission's Senior Stock Assessment Scientist for the past 8 years, Genny played a key role in advancing the quality



and understanding of fisheries science and stock assessments through her involvement in various stock assessments, development of the American lobster database, and stock assessment training. She was a lead assessment scientist for 2 American lobster and 2 Atlantic menhaden benchmark stock assessments, as well as the first coastwide benchmark stock assessment for American eel. She provided critical support in the development of the American lobster database, a fundamental component of the lobster assessment. She also worked closely with the Commission's Multispecies Technical Committee in developing and updating its multispecies assessment models that evaluate the relationships of several key predator/prey species, such as striped bass, weakfish, bluefish and Atlantic menhaden. Results from the multispecies models were used in both the 2010 and 2014 Atlantic menhaden assessments, and laid the groundwork for the development of ecological reference points. Genny also led the initial data gathering and analysis efforts to determine the feasibility of a black drum stock assessment, and then advised the black drum assessment team through its completion of the first ever coastwide assessment in 2014.

Genny was also a lead contributor to the evolution of the Commission's stock assessment training program, which not only enhanced our Commissioners' understanding of fisheries stock assessment concepts and models but also greatly expanded the stock assessment expertise of state technical committee members. In January, Genny will be joining the University of Maryland's Chesapeake Biological Laboratory as a Visiting Research Assistant Professor.



## Roy W. Miller 2014 Delaware Maritime Hall of Fame Inductee

Earlier this year, Roy W. Miller, who served 34 years as fishery biologist, supervisor, manager, and administrator for the Division of Fish and Wildlife within Delaware's Department of Natural Resources and Environmental Control (DNREC), was inducted into the Delaware Maritime Hall of Fame for his many contributions to maintaining healthy fisheries in Delaware's estuaries. Atlantic striped bass, American shad, river herring, weakfish and horseshoe crab are among the fish species that have benefited from Roy's service. As a charter member of the Commission's Atlantic Striped Bass Technical Committee beginning in 1978 and later its Atlantic Striped Bass Management Board, Roy played a significant role in restoring this keystone species in the Delaware River and Bay. His leadership on the Horseshoe Crab Board came at a critical time as decisions were made to reduce fishing pressure on horseshoe crab.

Roy's achievements also include coordinating fish kill investigations for the state, helping to design an accessible fishing pier for disabled anglers at the Ted Harvey Wildlife Area, supervising the completion of Lewes' public boat ramp, negotiating settlement agreements with a utility that brought \$15.5 million to DNREC for public works, and helping to design the DuPont Nature Center at Mispillion Harbor.

Since retirement, Roy has worked as policy coordinator for the Delaware Center for Inland Bays, drafted the 2013 shellfish aquaculture legislation, and serves as Delaware's Governor Appointee to the Commission. Congratulations, Roy!





The Atlantic Coastal Cooperative Statistics Program (ACCSP) with the support of the Marine Recreational Information Program (MRIP), a recreational fisheries data collection and reporting effort through NOAA Fisheries, convened a workshop on recreational percent standard error (PSE) on September 23 & 24, 2014. The focus was to evaluate levels of recreational data precision that would best support stock assessment results and fisheries management actions. More than 50 individuals from state and federal fisheries agencies participated either in-person or via webinar. Presentations reviewed a simulation model developed for this project, and supporting information on the current use of precision measures by the Councils, Commissions, and states. Dr. John Weidenmann of Rutgers University developed a Management Strategy Evaluation (MSE) model using simulated data to investigate the effect of varying input PSE levels (0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0) on three generalized species having slow, medium, and fast growth over various exploitation histories.

The surprising feedback from participants was that stock assessments appear to be capable of utilizing data with a higher PSE than previously considered. The group supported developing broad guidance on using data within ranges of PSE for stock assessments. There was also general agreement that management actions should be aligned with the precision of the data and the ability to measure the outcome of fishery management actions. Several avenues were identified to further clarify the issues and recommendations. These ranged from additional modeling efforts, vetting the workshop proceedings and guidance to larger audiences, and addressing the guidance to management in a separate venue. Over the next several months, ACCSP will be working with the workshop steering committee and MRIP to complete the workshop proceedings and determine the appropriate process to expand on the feedback received at the PSE workshop.

**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](http://www.accsp.org).**

## ACCSP Seeks Nominations for Advisory Committee

The ACCSP is seeking nominations to its Advisory Committee. These suggestions are formally appointed by the Coordinating Council upon a recommendation from the Operations Committee state representative. The Coordinating Council members from each partner state designate one commercial and one recreational and/or for-hire representative to the ACCSP Advisory Committee. The Advisory Committee is expected to provide perspectives from a variety of fishing experiences. Members evaluate technical recommendations and advise on developments and implementation of the Program. To learn more on the advisory process, please review the Guidelines for ACCSP Advisors found here:

[http://www.accsp.org/documents/ACCSPAdvisorGuidelines\\_May2013.pdf](http://www.accsp.org/documents/ACCSPAdvisorGuidelines_May2013.pdf).

If you are interested in becoming an advisor, please send a letter of interest to the ACCSP Operations Committee member from your state. A list of Operations Committee members can be found at <http://www.accsp.org/opercommittee>.

Rick Bellavance, Chair of the ACCSP Advisory Committee, has this to say about his work on the committee, "Working in conjunction with dedicated industry representatives from other states along the East Coast in an effort to improve fisheries-dependent data collection is both fun and rewarding. Improved stock assessments is on the minds of both fishermen and fisheries managers and I have always felt, if given the choice, it is better to participate in the process of making things work better. The Advisory Committee to the ACCSP is one way that participation is possible and I recommend the Committee to anyone interested in learning more about data collection."

# On the Legislative Front: Fiscal Year 2015 Funding

On December 16<sup>th</sup>, the President signed legislation into law funding most of the federal government through October 30, 2015. Overall funding for Operations, Research, and Facilities for NOAA Fisheries is up \$9.5 million to \$822.1 million from Fiscal Year 2014. Within that account, funding for Regional Councils and Fisheries Commissions was increased by \$738 thousand to \$32,738 million, and the Interjurisdictional Fisheries Act Grants line was level funded at \$2.5 million. Report language accompanying the appropriations bill contains a number of policy riders addressing a multitude of marine fisheries issues including observer coverage; Atlantic salmon habitat; Saltonstall-Kennedy Act funds; augmenting MRIP data with data collected from electronic reporting programs; the use of charter vessels for research and surveys; third party sustainability certifications; marine debris; and the Hollings Marine Laboratory in South Carolina and NOAA's Beaufort Lab in North Carolina.

**Fisheries Science and Management Appropriations (in thousands \$)**

	2015 House	2015 Senate	2015 Enacted	2014 Enacted	% Change
<b>Protected Species Research and Management</b>					
Protected Species Research and Management Programs Base	39,000	39,200	39,000	39,000	0.00%
Species Recovery Grants	7,000	5,000	5,000	5,000	0.00%
Marine Mammals	47,000	49,000	49,000	49,000	0.00%
Marine Turtles	11,000	12,200	12,200	12,200	0.00%
Other Protected Species (marine fish, plants and invertebrates)	10,000	10,200	8,000	7,000	14.29%
<b>Fisheries Research and Management</b>					
Fisheries Research and Management Programs Base	176,725	177,000	175,500	175,000	0.29%
National Catch Share Program	20,000	25,000	25,000	25,000	0.00%
Expand Annual Stock Assessments - Improve Data Collection	72,000	72,000	70,000	69,000	1.45%
Economics and Social Sciences Research	7,300	7,417	7,300	7,300	0.00%
Regional Councils and Fisheries Commissions	32,000	32,738	32,738	32,000	2.31%
Fisheries Statistics	22,000	22,000	22,000	22,000	0.00%
Fish Information Networks	22,000	22,000	22,000	22,000	0.00%
Survey and Monitoring Projects	24,000	24,200	24,000	24,000	0.00%
Fisheries Oceanography	2,100	2,179	2,100	2,160	-2.78%
Interjurisdictional Fisheries Grants	2,500	2,502	2,500	2,500	0.00%
National Standard 8 (Consider fishing communities to provide for sustained participation and minimize adverse economic impacts)	0	1,001	1,000	1,000	0.00%
Reducing Bycatch	3,500	3,508	3,500	3,500	0.00%
<b>Enforcement and Observers/Training</b>					
Enforcement	65,000	65,350	65,000	65,000	0.00%
Observers/Training	43,000	43,100	43,000	43,000	0.00%
<b>Habitat Conservation and Restoration</b>					
Total, Habitat Conservation and Restoration	25,000	52,190	47,000	41,700	12.71%
<b>Other Activities Supporting Fisheries</b>					
Aquaculture	5,600	6,000	5,700	5,600	1.79%
Climate Regimes and Ecosystem Productivity	2,000	2,500	2,000	2,000	0.00%
Cooperative Research	12,000	12,080	12,000	12,000	0.00%
Marine Resources Monitoring, Assessment and Prediction	800	801	800	800	0.00%
Regional Studies (fishery-independent data collection and research)	5,000	10,286	10,200	10,200	0.00%

For more information, please contact Deke Tompkins at [dtompkins@asmfc.org](mailto:dtompkins@asmfc.org) or 703.842.0740

# Jeff Kipp & Kirby Rootes-Murdy Named Employees of the Quarter

While this space in the newsletter is usually devoted to recognizing the contributions of one employee to achieving the Commission's vision of sustainably managing Atlantic coastal fisheries, in this issue we acknowledge the individual and collective efforts of two employees -- Jeff Kipp and Kirby Rootes-Murdy. As Stock Assessment Scientist for the past two and a half years, Jeff Kipp has made outstanding and numerous contributions to the Commission's Fisheries Science Program. This includes his work as lead assessment scientist on the recently completed and first coastwide benchmark stock assessment for black drum, as well as his efforts on upcoming benchmark stock assessments for red drum and Atlantic sturgeon. With each assessment, Jeff's ability to collaborate with fellow committee members and his proficiency in developing new modeling approaches has elevated the quality of Commission stock assessments. Jeff has also provided critical support to a diversity of science initiatives, including fish ageing, fish tagging, and fish passage.

In a little over a year and half as the Commission's Fishery Management Plan Coordinator for a number of species including summer flounder, scup, black sea bass, bluefish, Atlantic croaker, black drum, red drum, spot, spotted seatrout, Spanish mackerel, Kirby Rootes-Murdy has proved he is a critical contributor to the Commission's fisheries management program. Over the past year, he worked closely with members of the Atlantic Croaker Technical Committee and Spot Plan Development Team



Employees of the Quarter Jeff Kipp (left) and Kirby Rootes-Murdy (right) with ASMFC Executive Director Bob Beal.

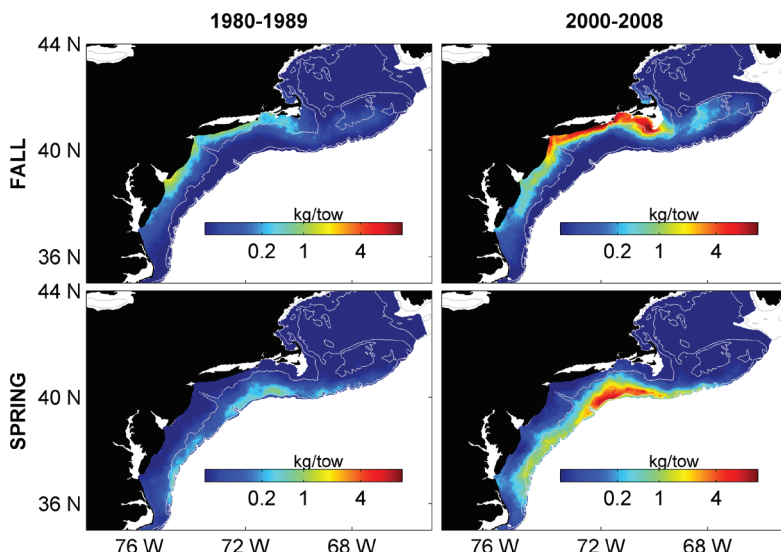
to develop a new traffic light approach to evaluate fisheries trends and develop state-specified management actions for both croaker and spot (i.e., bag limits, size restrictions, time & area closures, and gear restrictions) when harvest and abundance thresholds are exceeded. He facilitated the development and implementation of regional management approaches for both the black sea bass and summer flounder recreational fisheries and has collaborated with committee members and

Mid-Atlantic Fishery Management Council staff on new management approaches for summer flounder. Working in close coordination with Jeff, Kirby played an important role in the successful completion of the black drum benchmark as well as providing assistance on the upcoming benchmark assessment for red drum.

Jeff's and Kirby's ability to effectively collaborate with each other, and with representatives from the states, Mid-Atlantic Council and NOAA Fisheries are terrific examples of what can be achieved when scientists and managers commit to teamwork and strong partnerships. Their strong initiative, responsibility, quality of work, positive attitudes, and dedication to teamwork truly epitomize the attributes for which the award was created. As Employees of the Quarter for the fourth quarter of 2014, Jeff and Kirby received a cash award and small gift, a letter of appreciation for their personnel folder, and their names engraved on a plaque displayed in the Commission's lobby. Congratulations Jeff and Kirby!

## Summer Flounder Biomass Graphs Revisited

In the August/September issue of *ASMFC Fisheries Focus* we illustrated some of the climate change tools the Commission is using to evaluate changes in fish stocks. The graphic associated with this article was taken from Bell et al. 2014 and visually depicts summer flounder distribution. These data were from the fall Northeast Fisheries Science Center Bottom Trawl Survey. Many of our readers expressed concern that the graphic used in this article did not reflect the same scale over time. The author of the report to ASMFC has provided this updated graphic placed on the same scale over time to address these concerns.



A comparison of changes in summer flounder biomass and distribution over time (red denotes areas of higher biomass, while dark blue reflects areas of no biomass). Source: R. Bell, NEFSC.

**Atlantic States Marine  
Fisheries Commission**

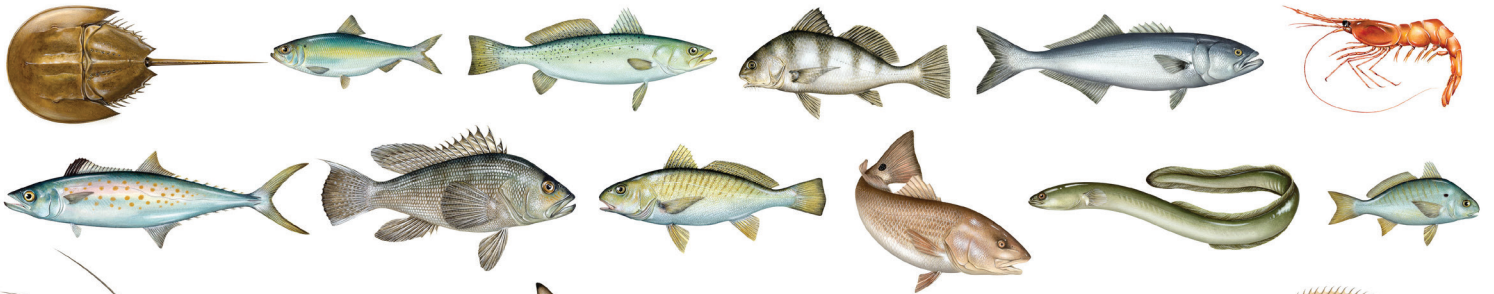
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**Happy Holidays!**



**ACCSP**



# 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.

## 2015 North Carolina Quota Monitored Landings

### Updated 01/29/2015

Species	2015 Total Quota (LBS)	80% of quota for Winter Fishery	2015 Transfer	2015 Harvest	Total Quota Remaining for 2015	Proclamation	Trip Limit (pounds)	Comments
2015 Summer Flounder	3,038,093	2,430,474	23,480	895,654	1,511,340	FF-86-2014	15,000	Closes 01/31/2015 at 6:00pm
2015 Black Sea Bass N of Cape Hatteras	243,422		109	100,897	142,416	FF-85-2014	3000 trawl, hook & line, fish pot	Closes 01/31/2015 at 6:00pm
2014/2015 Spiny Dogfish	7,276,052			2,215,309	5,060,743	FF-87-2014	per day: 10,000	Closes 04/30/2015 at 6:00pm
A.O. Striped Bass	360,360							
TRAWL	120,120			0	120,120	FF-1-2015	100 fish/day	Closes 3/31/15
SEINE	120,120			0	120,120	FF-77-2014	150 fish/day	Closes 3/31/15
GILL NET	120,120			0	120,120	FF-91-14	50 fish/day	Closes 02/14/2015
ASMA Striped Bass	137,500			5,309	132,741	FF-90-14	10 fish/day	Closes 04/30/2015
CSMA Striped Bass	25,000			22,845		FF-13-14	10 fish/day	Closed 04/20/2014

\* 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	<a href="mailto:LANDINGS@ncdenr.gov">LANDINGS@ncdenr.gov</a>	800-338-7805
Summer Flounder, Black Sea Bass North of Cape Hatteras, Spiny Dogfish	252-726-3903	<a href="mailto:FLOUNDER@ncdenr.gov">FLOUNDER@ncdenr.gov</a>	800-682-2632



YEAR	Month	SPECIES	POUNDS	DEALERS	TRIPS	AVERAGE (2007-2009)	CONF
2012	1	SOUTHERN FLOUNDER	3,334	36	200	7,713	
2012	2	SOUTHERN FLOUNDER	3,283	49	273	4,617	
2012	3	SOUTHERN FLOUNDER	10,997	89	956	23,512	
2012	4	SOUTHERN FLOUNDER	23,391	118	890	68,389	
2012	5	SOUTHERN FLOUNDER	62,439	131	1,741	122,514	
2012	6	SOUTHERN FLOUNDER	121,115	141	2,507	154,090	
2012	7	SOUTHERN FLOUNDER	101,806	154	2,138	170,387	
2012	8	SOUTHERN FLOUNDER	171,106	145	3,085	201,862	
2012	9	SOUTHERN FLOUNDER	375,651	163	3,879	396,301	
2012	10	SOUTHERN FLOUNDER	601,854	155	3,576	781,717	
2012	11	SOUTHERN FLOUNDER	171,047	110	1,670	392,150	
2012	12	SOUTHERN FLOUNDER	48	8	10	37,303	
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	80,129	123	1,985	154,090	
2014	7	SOUTHERN FLOUNDER	84,771	141	2,141	170,387	
2014	8	SOUTHERN FLOUNDER	106,389	137	2,201	201,862	
2014	9	SOUTHERN FLOUNDER	403,976	153	3,572	396,301	
2014	10	SOUTHERN FLOUNDER	633,167	141	3,386	781,717	
2014	11	SOUTHERN FLOUNDER	287,121	52	1,587	392,150	
2014	12	SOUTHERN FLOUNDER	***	1	1	37,303 *	

\*\*\*2014 data are preliminary and only complete through October.





## Red Drum Landings 2013-2014

Landings are complete through October 31, 2014

2013 landings are final; 2014 landings are preliminary

Year	Month	Species	Pounds	Conf	2009-2011 Average	2011-2013 Average
2013	9	Red Drum	65,273		28,991	30,735
2013	10	Red Drum	135,745		43,644	56,121
2013	11	Red Drum	61,658		14,318	25,338
2013	12	Red Drum	0		3,428	2,036
2014	1	Red Drum	***		5,885	2,755
2014	2	Red Drum	0		3,448	2,832
2014	3	Red Drum	0		5,699	2,425
2014	4	Red Drum	***		7,848	4,643
2014	5	Red Drum	0		13,730	7,687
2014	6	Red Drum	***		12,681	9,304
2014	7	Red Drum	0		13,777	13,152
2014	8	Red Drum	***		21,252	20,467
<b>Fishing Year (Sept 1, 2013 - Aug 31, 2014) Landings</b>			<b>262,753</b>			

Year	Month	Species	Pounds	Conf	2009-2011 Average	2011-2013 Average
2014	9	Red Drum	34,749		28,991	30,735
2014	10	Red Drum	36,239		43,644	56,121
2014	11	Red Drum	13,018*		14,318	25,338
2014	12	Red Drum	1,978*		3,428	2,036
<b>Fishing Year (Sept 1, 2014 - Aug 31, 2015) Landings</b>			<b>85,983</b>			

\*partial trip ticket landings only

\*\*\*landings are confidential





North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**To: N.C. Marine Fisheries Commission**

**From: Trish Murphey, Interim Southern District Manager**

**Date: Jan. 30, 2015**

**Re: Mechanical Oyster Season Update**

**Background**

The harvest of oysters by mechanical methods is managed under Supplement A to Amendment 2 to the N.C. Oyster Fishery Management Plan. Mechanical methods for harvesting oysters are prohibited in areas designated in 15A NCAC 03R .0108. The director has proclamation authority to further restrict all aspects of the fishery and is guided in the use of that authority by management strategies in Amendment 2 and Supplement A.

The mechanical harvest of oysters is managed under separate strategies for the smaller bay areas that remain open to the use of mechanical gear and the larger area of sounds and rivers. The areas where mechanical harvest is allowed in the bays are limited to a six-week season with a harvest limit of 10 bushels per fishing operation. This harvest limit coincides with the hand harvest limit in the same area. Mechanical harvest season in these bays closed on Dec. 19, 2014. The remaining mechanical harvest areas are open to harvest until the percentage of legal oysters in samples collected from an area drop below 26 percent for two consecutive sampling periods. Harvest limits in these areas are set by the director up to a maximum of 20 bushels. The mechanical harvest season in all mechanical harvest areas opened Nov. 10, 2014.

Western Pamlico Sound oyster resources were impacted by Hurricane Irene in August 2011 and by low dissolved oxygen in bottom waters in late summer 2012, greatly reducing productivity. The deep water portions of the lower Neuse River have not produced any oysters since 2012 due to mortality from low dissolved oxygen events and slow recovery in the Pamlico River Area from Hurricane Irene. Landings in the mechanical harvest fishery increased to 64,137 bushels during the 2013/14 season (Figure 1). Mechanical harvest was closed in the Neuse River Area on Feb. 28, 2014 but there were few boats working and harvesting was confined to a limited area spared from the low dissolved oxygen mortality event. Mechanical harvest was closed in the western Pamlico Sound Area on March 24, 2014 but most of the boats working this area had already moved to the Northern Dare Area to finish out the season. Both closures were made due to failure to meet the 26 percent legal sized oyster criterion. The Northern Dare Area remained open until the oyster season closed by rule. The available oyster season runs until March 31 each year.

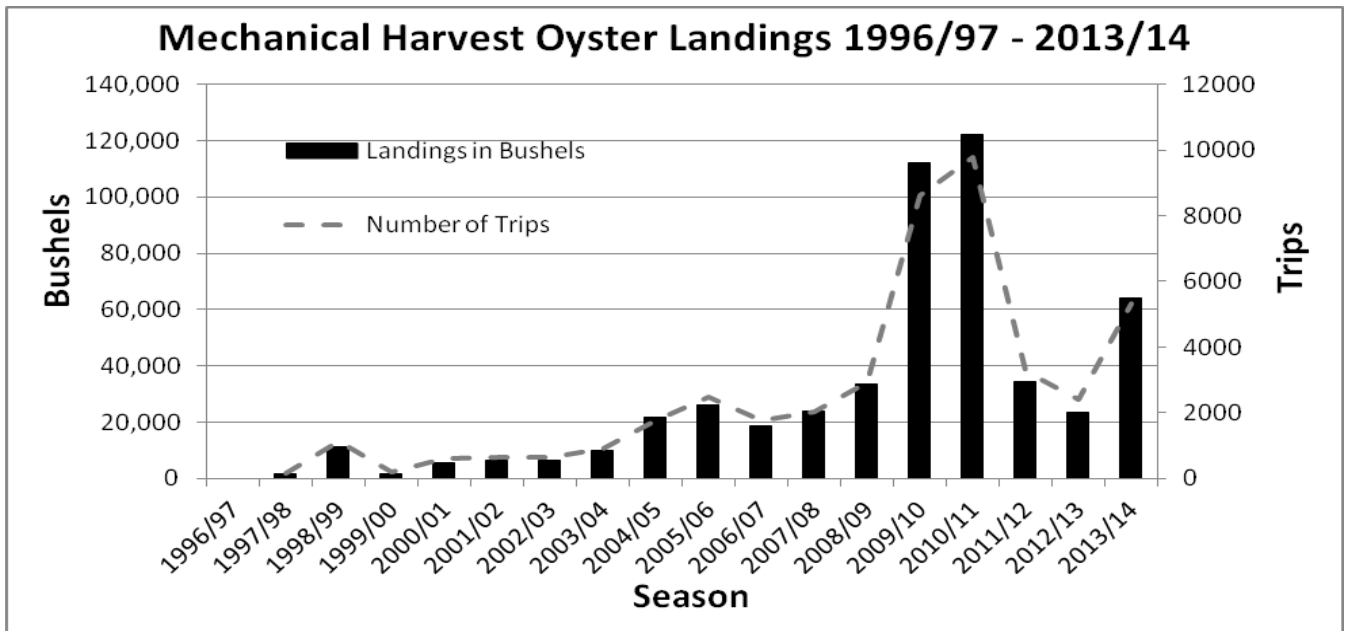


Figure 1. Mechanical harvest oyster landings by season 1996/97 through 2013/14. (DMF Trip Ticket Program)



Oyster FMP Supplement A Management Areas



- Boundaries
- Military Danger Zone and Restricted Areas (MDZRA)

Datum: NAD83  
 Projection: NC State Plane  
 Map Date: October 2014



Figure 2. Areas used for management under the provisions of Supplement A.

## 2014/15 Oyster Sampling

Mechanical harvest of oysters is managed in four areas (Figure 2). Preseason sampling for the Neuse River Area was confined to the limited area worked in 2013/14. Samples in this area indicated oyster sizes were above the 26 percent trigger when the mechanical harvest season opened. Effort has been consistently low in the Neuse River due to oystermen having to work all day (no later than 4:00 p.m.) to harvest five to seven bushels, which is lower than the 15-bushel limit. Sampling results in the Neuse River has been above the trigger, however low numbers of small oysters have influenced the percentages (Table 1). This is likely due to impacts from Hurricane Irene and low dissolved oxygen impacts to the area over the past several years, resulting in low recruitment. On Jan. 21, 2014 sampling results fell below 26 percent legal-size oysters (Table 1). Additional sampling of Neuse River took place on Jan. 29 with the resulting percentage above the trigger (Table 1). This area remains open and will be sampled again the week of Feb. 9, 2015.

Preseason sampling in the Pamlico River Area also showed the initial percentage of legal-size oysters were above the 26 percent trigger when the mechanical harvest season opened. Additionally, the oysters showed signs of growth and significant numbers of sublegal sizes that should attain the 3-inch minimum size during the season. Fishing effort is higher in the Pamlico River area than the Neuse River with much of the fleet scattered from the mouth of the river to Brant Island.

The Northern Hyde and Northern Dare areas were also above the percentage of legal-size oysters during preseason sampling. Sampling of these areas before Christmas resulted in percentages below the trigger (Table 1). The number of small oysters in the samples influenced the percent of legal oysters sampled. Effort in Northern Hyde was mostly in Wysocking Bay while effort in Dare County was from Sandy Point to the Crab Hole. After Christmas, more effort shifted into the Crab Hole area off of Stumpy Point Bay due to Hyde County boats joining the Northern Dare fishery. Dealers reported that fishermen were bringing in their limits by mid-day. Unfortunately after the shift to Northern Dare, sampling resulted in less than 26 percent legal-size oysters for two consecutive sampling trips in both Dare and Hyde Counties (Table 1). This resulted in a closure of these areas on Jan. 12, at sunrise. Sampling of these areas commenced again the week of Jan. 26 to determine if oysters grew enough to reopen but as of Jan. 30, these areas remain below the trigger (Table 1). An area may reopen after two consecutive sampling trips results in meeting the trigger.

Table 1. 2014-2015 Percentage of legal sized oysters by area.

2014-2015 Trigger Sample Results							
Neuse River		Pamlico River		Northern Hyde County		Northern Dare County	
Date	Percentage	Date	Percentage	Date	Percentage	Date	Percentage
Sep. 22, 2014	25	Sep. 22, 2014	24	Oct. 1, 2014	31	Sep. 16, 2014	28
Nov. 5, 2014	32	Oct. 20, 2014	37	Dec. 1 2014	30	Dec. 3, 2014	34
Dec. 3, 2014	31	Nov. 5, 2014	33	Dec. 15, 2014	21	Dec. 16, 2014	23
Dec. 15, 2014	36	Nov. 19, 2014	35	Jan. 5, 2015	25	Jan. 6, 2015	22
Jan. 6, 2015	32	Dec. 3, 2014	40	Jan. 29, 2015	22	Jan. 26, 2015	24
Jan. 21, 2015	23	Dec. 15, 2014	34				
Jan. 29, 2015	29	Jan. 6, 2015	30				
		Jan. 21, 2015	30				



Preliminary data collected by month through the NCDMF Observer Program through December 2014.

Month	Trips		Observer Large Mesh				Observed Takes By Species								
	Estimated <sup>1</sup>	Actual <sup>2</sup>	AP Attempts <sup>3</sup>	Trips	Yards	Coverage <sup>4</sup>	Kemp's		Green		Loggerhead		Unknown	A. Sturgeon	
							Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
WINTER															
January	206	244	76	3	800	1.5									
February	774	594	14	45	26,415	5.8								1	
SPRING															
March	1,694	1,850	5	93	62,462	5.5									15
April	1,669	1,036	100	38	18,780	2.3								1	
May	1,468	308	29	2	3,400	0.1									
SUMMER															
June	1,679	944	41	83	85,315	4.9									5
July	2,042	856	55	90	79,932	4.4									
August	2,119	1,048	67	109	116,214	5.1									
FALL															
September	2,618	2,366	49	276	224,893	10.5	2		4		1		1	4	2
October	4,283	1,958	96	249	201,310	5.8	3		10	7	1		1	18	
November	1,858	1,042	109	112	91,915	6.0			3					11	
WINTER															
December	159	278	108	1	300	0.6									
<b>Total</b>	<b>20,569</b>	<b>12,524</b>	<b>749</b>	<b>1,101</b>	<b>911,736</b>	<b>5.4</b>	<b>5</b>	<b>0</b>	<b>17</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>55</b>	<b>2</b>

<sup>1</sup> Finalized trip ticket data from 2013

<sup>2</sup> Preliminary trip ticket data for 2014

<sup>3</sup> Alternative Platform trips where no fishing activity was found

<sup>4</sup> Based on estimated trips and observer large mesh trips





Preliminary data collected by month through the NCDMF Observer Program through December 2014.

Month	Trips		Observer Small Mesh			Kemp's		Green		Loggerhead		Unknown	A. Sturgeon	
	Estimated <sup>1</sup>	Actual <sup>2</sup>	Trips	Yards	Coverage <sup>3</sup>	Live	Dead	Live	Dead	Live	Dead	Live	Live	Dead
WINTER														
January	743	681	11	7,750	1.5									
February	856	782	20	11,430	2.3								1	
SPRING														
March	1,344	561	6	2,130	0.4									
April	1,672	1,141	26	39,255	1.6								1	
May	1,197	778	13	15,600	1.1									
SUMMER														
June	841	792	4	5,000	0.5									
July	714	635	10	16,020	1.4									
August	818	840	19	22,540	2.3									
FALL														
September	811	774	24	14,390	3.0									
October	1,210	1,168	34	12,240	2.8			1						
November	877	521	37	15,920	4.2									
WINTER														
December	674	373	34	19,550	5.0									
<b>Total</b>	<b>11,757</b>	<b>9,046</b>	<b>238</b>	<b>181,825</b>	<b>2.0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>

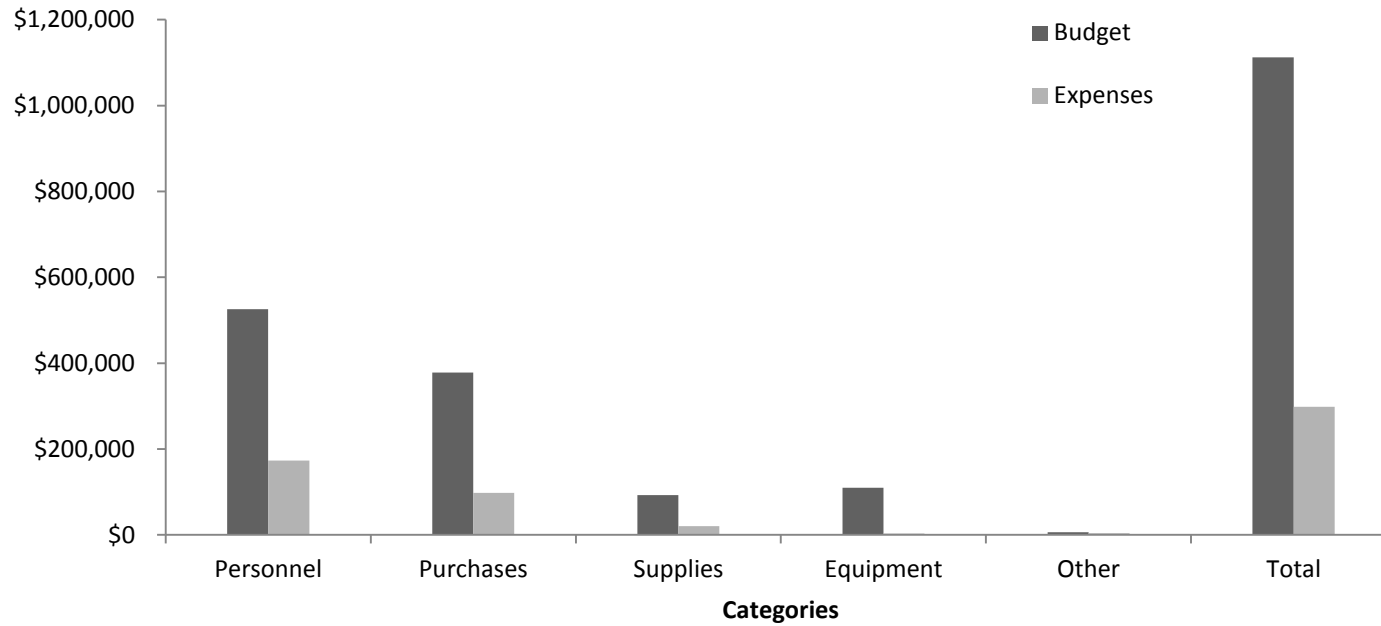
<sup>1</sup> Finalized trip ticket data from 2013

<sup>2</sup> Preliminary trip ticket data for 2014

<sup>3</sup> Based on estimated trips and observer small mesh trips



### 2014-2015 At-Sea Observer Program Budget and Expenses (Through Dec. 2014)



**Personnel** includes salaries and benefits for permanent staff

**Purchases** include temporary observer wages, vehicle repairs, travel expenses (lodging, meals), phones, postage, and vehicle insurance

**Supplies** include office, sampling, and safety supplies, vehicle/boat fuel, fluids, and parts

**Equipment** includes trucks, boats, motors, trailers, computers and software, and office furniture and equipment

**Other** includes tort claims and regional office space expenses



Fall 2014 Seasonal Progress Report  
Incidental Take Permit No. 16230  
September 1 – November 30, 2014

Jacob Boyd  
Protected Species Biologist  
North Carolina Division of Marine Fisheries

December 17, 2014

## Summary

The fall season for large and small mesh gill nets in North Carolina is September through November as defined in Incidental Take Permit (ITP) No. 16230. The Division 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. On September 22, 2014 the Division 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 was done on October 14, 2014 via proclamation M-34-2014. On October 26, 2014 the shallow water portions of management unit B (PSGNRA) was closed via proclamation M-37-2014 due to sea turtle interactions and was reopened on November 6, 2014 via proclamation M-40-2014.

Observer coverage was calculated for the fall 2014 season by management unit by estimating fishing trips using the previous year's trip ticket data compared to the observer trips completed throughout the fall season. The Observer Program achieved 9% large mesh gill-net coverage for the fall season meeting the minimum requirement ( $n = 7\%$ ) in each management unit except in management unit A (Table 1). Coverage was not met in management unit A due to several factors including the lack of fishermen compliance and the closure of 25 days. Overall, fishermen compliance has improved. Another factor that may have led to the 1.3% deficit of coverage in management unit A was inflated numbers from last year's fishing effort. Last year's effort in management unit A was unusually high and may not reflect what the effort will be for 2014. Once the finalized trip ticket data is analyzed, the 7% minimum coverage in management unit A may be met by the Observer Program. To illustrate such a difference 2014 observer trip data was applied to trip ticket data (fishing effort) from 2012 (Table 2). The Observer Program achieved 3.3% small mesh gill-net coverage for the fall season meeting the minimum requirement ( $n = 1\%$ ) in each management unit (Table 3).

There were  $n = 33$  sea turtle interactions from large mesh gill nets and  $n = 1$  from small mesh gill nets in the fall 2014 season (Table 4). The species composition was made up of primarily green sea turtles ( $n = 73.5\%$ ;  $n = 18$  alive;  $n = 7$  dead) with Kemp's ridley sea turtles ( $n = 14.7\%$ ;  $n = 4$  alive;  $n = 1$  dead) being the second highest species observed (Table 4). There were also  $n = 2$  loggerhead sea turtles and  $n = 2$  unknown sea turtles observed all of which were alive (Table 4). There were  $n = 3$  reported sea turtle interactions during this time period (Table 5). The cumulative takes for large and small mesh gill nets from the fall 2014 season are in Tables 6 and 7.

Marine Patrol made 465 gill net checks for the fall 2014 season. Of these 465 gill net checks, there were five citations written (Table 8).

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. One of the many checks the Program has is a call log which is filled out for every phone call that is made when attempting to obtain a trip. Each call is put into a specific category and other information is gathered (Table 9). The phone log was analyzed by month and category to determine what percentage of phone calls ( $n = 2,803$ ) resulted in positive observer trips (Table 10). Of the 2,803 calls that were made 46.1% were categorized as 1, 11, 12, 13, and 14 which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips. Fishermen compliance improved by 4% from the

summer season with observers making  $n = 1,367$  more phone calls in the fall season. Improvements were made to the contact log with more categories being added to further detail interactions with fishermen.

As per the ITP, the Division established a permit to register all fishermen participating in the large and small mesh gill-net fisheries. The ITP's Implementing Agreement states that the Division has two years to implement this permit to serve as a certificate of inclusion for fishermen. However, due to the compliance issues the Division was facing, the permit was developed (Estuarine Gill Net Permit-EGNP) and became effective September 1, 2014 (1 year from ITP issuance). This multifaceted permit allows the Division to closely monitor for compliance with the already successful permit system the Division has in place. This resulted in more effective regulation and better compliance for the fall 2014 season. As of December 16, 2014 there have been 2,368 EGNPs issued.

Tables

Table 1. Observer coverage calculated from the previous year's trip ticket data and observer data from the fall 2014 season (September - November) by management unit for large mesh gill nets.

Management Unit <sup>1</sup>	Trips		Coverage (%)
	Estimated (2013)	Observed	
A	3,336	191	5.7
B	1,732	154	8.9
C	1,282	152	11.9
D1	59	23	39.0
D2	311	58	18.6
E	80	58	72.5
Total	7,089	636	9.4

<sup>1</sup> Management units A, B, and E were closed during portions of the fall 2014 season.

Table 2. Observer coverage calculated from 2012 trip ticket data and observer data from the fall 2014 season (September - November) by management unit for large mesh gill nets.

Management Unit	Trips		Coverage (%)
	Estimated (2012)	Observer	
A	2,744	191	7.0
B	1,406	154	11.0
C	809	152	18.8
D1	63	23	36.5
D2	277	58	20.9
E	641	58	9.0
Total	5,940	636	10.7



Table 3. Observer coverage calculated from the previous year's trip ticket data and observer data from the fall 2014 season (September - November) by management unit for small mesh gill nets.

Management Unit	Trips		Coverage (%)
	Estimated (2013)	Observed	
A	575	18	3.1
B	1,223	22	1.8
C	321	15	4.7
D1	74	7	9.5
D2	203	9	4.4
E	502	24	4.8
Total	2,898	95	3.3

Table 4. Summary of observed sea turtle interactions in large and small mesh gill nets from the fall 2014 season (September - November).

Date	Management Unit	Latitude	Longitude	Species	Disposition	Tag		Curved Carapace (mm)	
						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 <sup>1</sup>	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	989.001001951673	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)
10/22/2014	B	3503.517	7605.456	kemps <sup>2</sup>	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	989.001001952701	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

<sup>1</sup>Indicates small mesh gear

<sup>2</sup>Turtle died on 11/28/2014 at the Karen Beasley Sea Turtle Hospital

Table 5. Summary of reported sea turtle interactions in large and small mesh gill nets from the fall 2014 season (September - November).

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
10/22/2014	D1	n/a	n/a	Loggerhead <sup>1</sup>	alive	n/a	n/a

<sup>1</sup>Indicates small mesh gear

Table 6. Summary of estimated and/or observed cumulative sea turtle interactions from the fall 2014 season (September - November) by management unit for large mesh gill nets.

Management Unit	Green		Kemp's ridley		Loggerhead		Unknown	
	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
A	*1	0	*1	0	0	0	*1	0
B	127.8	61.5	9.0	9.2	*1	0	*1	0
C	0	0	0	0	0	0	0	0
D1	5.6	0	0	0	0	0	0	0
D2	0	0	0	0	0	0	0	0
E	0	0	9	0	*1	0	0	0
Total	134.4	61.5	9.0	9.2	2	0	2	0

\*Indicates observed takes

Table 7. Summary of observed cumulative sea turtle interactions from the fall 2014 season (September - November) by management unit for small mesh gill nets.

Management Unit	Green	
	Alive	Dead
E	*1	0
Total	*1	0

\*Indicates observed takes

Table 8. Citations written by Marine Patrol for large and small mesh gill nets by violation code during the fall 2014 season (September - November).

Violation		
Date	Code	Description
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

Table 9. Categories and descriptions for the Observer Program's call 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 10. The number of calls (n = 2,083) made by the observers trying to set up trips by month categorized by call type (0-14) and defined in table 9 for the fall 2014 season (September - November).

	Categories (%)														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
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





Annual Sea Turtle Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental  
Take Permit Year 2014

Annual Completion Report for Activities under Endangered Species Act  
Section 10 Incidental Take Permit No. 1630

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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. 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 NMFS on May 12, 2011. Feedback on the revised application from NMFS was provided again on May 2, 2012 after public and peer review comments had been compiled. In response to requested changes from NMFS, and considering the public and peer review comments, including the comments made by the NC Sea Turtle Advisory Committee (STAC), NCDMF made extensive revisions to its application and resubmitted it on September 6, 2012. After another round of public and peer review comments 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 NMFS and NCDMF and provided to them beforehand. NMFS recommended that NCDMF update the current ITP application with an appendix containing all the updated information requested.

During the November 14, 2012 teleconference, 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). 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 NMFS set up a teleconference with NCDMF to go over the revised ITP application that was submitted on January 18, 2013. Information was provided to NMFS to clarify issues they had with the application. On April 22, 2013 NMFS again asked for further clarification on different aspects of the ITP application which NCDMF promptly responded to. At that time NCDMF was informed by NMFS that they hoped to have a draft permit within a month to discuss with NCDMF. On April 30, 2013 staff was called by NMFS for further explanation on the methodologies of the Observer Program. Explanations were provided and NMFS did not have any more questions at the time.

After the last phone call between staff of NCDMF and NMFS, it was decided that another teleconference was in order. On May 20, 2013, the NCDMF had a teleconference with NMFS concerning the ITP application status and to review the Biological Opinion and Environmental Assessment protocols. At this time NMFS raised concerns on the number of observed takes requested in the ITP application. During the last teleconference, NCDMF and 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. NMFS brought up the idea of having an Implementing Agreement for the Sea Turtle ITP, much like the Implementing Agreement NMFS has suggested for the Atlantic Sturgeon ITP. NCDMF asked NMFS to provide a copy of a draft Implementing Agreement for consideration.

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. NMFS explained that any new information could be provided in another appendix to the existing application.

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.

## METHODS

### OBSERVER ACTIVITY

The conservation plan includes managing inshore gill-net fisheries by dividing estuarine waters into 6 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 NCDMF to not base the observer effort solely on previous years' trip ticket data, but also on current effort changes.

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 NCDMF vessels to observe the fishing trip. Each observer attempts to obtain a minimum of three to four trips per working week. 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. The contact information is then given to the observer assigned to that area and the observer contacts the fishermen randomly 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, 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 ( $\geq 4$  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, resuscitate, and tag sea turtles by NMFS – Beaufort Lab and 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 turtle observed. Dead sea turtles are brought to shore when feasible. All live, debilitated sea turtles are brought to shore 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 and total flounder weights (kg) are obtained. Data are coded on NCDMF data sheets and uploaded to NCDMF Biological Database for analysis. All observers are debriefed within 24 hours of each trip to obtain data on flounder 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. 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.

$$\text{Estimated Interactions} = \frac{\# \text{ sea turtle interactions observed} / \text{total gill-net trips observed} \times \text{total gill-net trips}}{\text{total gill-net trips}}$$

## 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, and all information on observed takes. The seasonal progress reports include a summary of the weekly reports, any additional management measures taken, compliance, any 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. 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.

## **COMPLIANCE**

NCDMF observers and NCDMF 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 call 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 phone log was analyzed by month and category to determine what percentage of phone calls resulted in positive observer trips.

## RESULTS

### OBSERVER ACTIVITY

#### Fall 2013

The fall season for large and small mesh gill nets in North Carolina is September through November as defined in Incidental Take Permit (ITP) No. 16230. Management unit E closed on July 14, 2013 via proclamation M-20-2-13 and management unit B closed on July 24, 2013 via proclamation M-21-2013 due to sea turtle interactions. Management unit D1 has an annual closure from May 8 through October 14. On September 1, 2013 the federal closure of the Pamlico Sound went into effect and NCDMF released a proclamation (M-23-2013) keeping management units B and E closed until the ITP application was approved. The ITP was approved on September 11, 2013 and NCDMF opened management units B and E to large mesh gill nets on September 30, 2013 via proclamations M-30-2013 and M-31-2013. Proclamation M-33-2013 opened management unit D1 on October 15, 2013 to large mesh gill nets. The flounder commercial harvest season in internal coastal waters closed on December 1, 2013 via proclamation FF-60-2013 (Boyd 2013b).

There were sea turtle interactions observed in large mesh gill nets ( $n = 16$ ) and in small mesh gill nets ( $n = 1$ ) for the fall season (Table 7; Figure 2). The species composition was made up of primarily green sea turtles (73.5%;  $n = 11$  alive;  $n = 4$  dead; Table 7; Figure 2). The remaining species consisted of a Kemp's ridley sea turtle ( $n = 1$ ) and an unknown sea turtle ( $n = 1$ ) all of which were alive (Table 6; Figure 2). The majority of the interactions (82.3%) occurred in management unit B (Table 7; Figure 2). There was a reported sea turtle interaction ( $n = 1$ ) during this time period. (Boyd 2013b).

The Observer Program exceeded the 7.0% requirement for coverage within each of the management units for large mesh gill-nets with 358 total trips except in management unit A where coverage averaged 3.5% (Table 8; Figure 3). The Observer Program exceeded the 1.0% requirement for coverage in all management units for small mesh gill-nets with 40 total trips except management unit D2 where no observer trips occurred (Table 9; Figure 3; Boyd 2013b).

#### Spring 2014

The spring season for large and small mesh gill nets in North Carolina is March through May as defined in Incidental Take Permit (ITP) No. 16230. In April, the NCDMF received a letter from the North Carolina Fisheries Association (NCFA) asking to the NCDMF to close anchored large mesh gill nets statewide May 1, 2014 due to red drum bycatch with some areas exempted starting June 1, 2014. The NCDMF closed large mesh gill nets via proclamation M-16-2014 from May 5, 2014 through May 31, 2014 statewide to give the Marine Fisheries Commission (MFC) time to assess the situation at their May meeting (Boyd 2014a). At the May MFC meeting it was decided to keep large mesh gill-net fishing closed in areas except major



portions in management units A and C and a portion of management unit E in the New River (Proclamation M-21-2014; Figure 1).

There were no observed or reported sea turtle interactions in the spring 2014 season (Boyd 2014a).

The Observer Program averaged 4.0% large mesh gill-net coverage throughout all management units with 133 total trips (Table 8; Figure 3). The coverage was not met for all management units except management unit E due to many factors including a statewide closure in May when fishing effort is typically at its peak for the spring, weather, and compliance. The American shad season was shortened in management unit A in 2014 compared to effort levels from 2013 due to the adoption of the Shad Sustainability Plan. The Observer Program exceeded the 1.0% requirement for coverage in all management units for small mesh gill-nets with 45 total trips (Table 9; Figure 3; Boyd 2014a).

### **Summer 2014**

The summer season for large and small mesh gill nets in North Carolina is June through August as defined in Incidental Take Permit (ITP) No. 16230. The large mesh gill-net closure enacted in the spring season remained in effect throughout the entire summer season (Boyd 2014b).

There were no observed or reported sea turtle interactions in the summer 2014 season (Boyd 2014b).

The Observer Program exceeded the 7.0% requirement for coverage within each of the management units for large mesh gill-nets with 281 total trips except in management unit A where coverage averaged 4.8% (Table 8; Figure 3). Coverage was not met in management unit A due to several factors most prominently being the lack of fishermen compliance. The Observer Program exceeded the 1.0% requirement for coverage in all management units for small mesh gill-nets with 43 total trips except management unit D2 where no observer trips occurred (Table 9; Figure 3; Boyd 2014b).

### **AUTHORIZED TAKES**

There were sea turtle interactions observed in large mesh gill nets ( $n = 16$ ) and in small mesh gill nets ( $n = 1$ ) for the fall season (Table 7; Figure 2). The species composition was made up of primarily green sea turtles (73.5%;  $n = 11$  alive;  $n = 4$  dead; Table 7; Figure 2). The remaining species consisted of a Kemp's ridley sea turtle ( $n = 1$ ) and an unknown sea turtle ( $n = 1$ ) all of which were alive (Table 6; Figure 2). The majority of the interactions (82.3%) occurred in management unit B (Table 7; Figure 2). There was a reported sea turtle interaction ( $n = 1$ ) during this time period. (Boyd 2013b).

The size distribution of green sea turtles ranged from a curved carapace length of 230 mm to 342 mm and a curved carapace width of 200 mm to 297 mm (Figure 4).

There were no sea turtle interactions in the spring or summer 2014 seasons. 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 2014 (Tables 10 and 11). Confidence intervals (95%) were estimated for management units and species where estimated takes are used using a bootstrap method (Table 12). Estimated confidence-intervals (95%) for live green sea turtles in management unit B (estimated n = 108) were (48 - 214) and for deceased in management unit B (estimated n = 52) were (14 - 139). Estimated confidence-intervals (95%) for deceased green turtles in management unit E (estimated n = 4) were (0 - 12) and for live Kemp's ridley sea turtles in management unit B (estimated n = 15) were (0 - 45; Table 12).

## **COMPLIANCE**

Marine Patrol made 445 gill-net checks for the fall 2013 season (Table 13). Of these 445 gill-net checks, there were eight citations (Table 13). Marine Patrol made 59 gill-net checks for the spring 2014 season (Table 13). Of these 59 gill-net checks, there were no violations (Table 13). Marine Patrol made 194 gill-net checks for the summer 2014 season (Table 13). Of these 194 gill-net checks, there were seven citations issued (Table 13).

In the spring 2014 season phone calls (n = 972) were made with 65.2% being categorized as 1, 2, 3, and 8 which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips (Table 14). In the summer 2014 season phone calls (n = 1,436) were made with 50.0% being categorized as 1, 2, 3, and 8 which inclusively represents not being able to get in touch with fishermen or fishermen refusing trips (Table 14).

## DISCUSSION

### MANAGEMENT HISTORY

The NCDMF has addressed protected sea turtle issues in the coastal waters since the 1970s. This 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 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 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, 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 (Boyd 2012b; Brown and Price 2005; Price 2007b, Price 2009b, Price 2010b). The information gathered from these direct observations allowed 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 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 economic devastation 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 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 2013 season during ITP year 2014 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. With ITP year 2014 being the first full statewide ITP year the Observer Program did run into some irregularities. Due to the number of phone calls the observers make and the different types of responses that are gathered from the fishermen, the Observer Program created a new call log for the spring 2014 season which included different categories to place each contact that was made to a fisherman in (Table 6). This 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). Because of this, fishermen were 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 2014. NCDMF discussed the situation with industry leads to improve awareness and increase compliance. NCDMF followed up with NMFS to explain the situation and then NCDMF put in a mandatory overnight soak time on July 25, 2014 via proclamation M-22-2014 for management unit A to increase observer coverage. While overall compliance improved with these measures, the minimum coverage was still not met.

An issue that was discovered during the summer season was fishermen using large mesh anchored gill nets as if they were strike or runaround nets in closed areas. Once discovered, this situation was dealt with via proclamation M-29-2014 closing the loopholes that allowed this fishery to continue.

## **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. 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 (Estuarine Gill Net Permit-EGNP) and became effective September 1, 2014 (1 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 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. As of December 16, 2014 there have been 2,368 EGNPs issued.

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## TABLES

Table 1. Authorized annual estimated takes in large mesh ( $\geq 4$  inch stretched mesh-ISM) gill nets by management unit for ITP year 2014 (September 1, 2013 - August 31, 2014).

Species	Management Unit								Total	
	B		D1		D2		E			
	Estimated Takes		Estimated Takes		Estimated Takes		Estimated Takes			
	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead		
Green	225	112	9	5	n/a <sup>1</sup>	n/a <sup>1</sup>	96	48	330	165
Kemp's ridley	53	26	15	7	6	3	24	13	98	49
Total	278	138	24	12	6	3	120	61	428	214

<sup>1</sup>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 annual observed takes (live and dead combined) in large mesh ( $\geq 4$  inch stretched mesh-ISM) gill nets by management unit for ITP year 2014 (September 1, 2013 - August 31, 2014).

Species	Management Unit				Total
	B	D1	D2	E	
	Observed (live/dead)	Observed (live/dead)	Observed (live/dead)	Observed (live/dead)	
Green	n/a <sup>1</sup>	n/a <sup>1</sup>	6	n/a <sup>1</sup>	6
Kemp's ridley	n/a <sup>1</sup>	n/a <sup>1</sup>	n/a <sup>1</sup>	n/a <sup>1</sup>	n/a <sup>1</sup>
Hawksbill	1	1	1	1	4
Leatherback	1	1	1	1	4
Loggerhead	3	3	3	3	12
Total	5	5	11	5	26

<sup>1</sup>Sufficient observer data exist to model an estimated annual take level for Kemp's ridley sea turtles in all management units and green sea turtles in all management units except D2. See Table 1 for the authorized annual estimated take level.

Table 3. Authorized annual observed takes in small mesh (<4 inch stretched mesh-ISM) gill nets by management unit for ITP year 2014 (September 1, 2013 - August 31, 2014).

Species	Management Unit				Total
	B	D1	D2	E	
	Observed (live/dead)	Observed (live/dead)	Observed (live/dead)	Observed (live/dead)	
Green	3	3	3	3	12
Hawksbill	1	1	1	1	4
Kemp's ridley	3	3	3	3	12
Leatherback	1	1	1	1	4
Loggerhead	3	3	3	3	12
Total	11	11	11	11	44

Table 4. Authorized annual observed takes (live and dead combined) in large mesh ( $\geq 4$  inch stretched mesh-ISM) and small mesh ( $< 4$  inch stretched mesh-ISM) gill nets for management units A and C combined for ITP year 2014 (September 1, 2013 - August 31, 2014).

Species	Management Unit		Total
	A	C	
	Observed (live/dead)	Observed (live/dead)	
Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead	4 turtles of any species	4 turtles of any species	8
Total	4	4	8

Table 5. Total annual authorized takes (estimated and observed) by species and condition for ITP year 2014 (September 1, 2013 - August 31, 2014).

Species	Observed (live/dead)	Estimated		Total
		live	dead	
Green	18	330	165	513
Hawksbill	8	n/a <sup>1</sup>	n/a <sup>1</sup>	8
Kemp's ridley	12	98	49	159
Leatherback	8	n/a <sup>1</sup>	n/a <sup>1</sup>	8
Loggerhead	24	n/a <sup>1</sup>	n/a <sup>1</sup>	24
Any Species	8	n/a <sup>1</sup>	n/a <sup>1</sup>	8
Total	78	428	214	720

<sup>1</sup>Insufficient observer data exist to model an estimated annual take level; therefore, takes are expressed as observed.

Table 6. Categories and descriptions for the Observer Program's call logs used for analysis.

Categories	Category description
1	Disconnected/Wrong Number
2	No answer no voicemail/Voicemail full
3	No answer left voicemail/Left message
4	Not fishing/Fishing other fishery
5	Not fishing because weather/Environmental
6	Booked trip
7	Not fishing medical
8	Hung up
9	Call back later today/Next week/Next month etc.
0	Other

Table 7. Summary of observed sea turtle interactions (n = 17) in large and small mesh gill nets for the 2014 ITP year (September 1, 2013 – August 31, 2014).

Date	Management Unit	Mesh Size	Latitude	Longitude	Species	Disposition	Tag		Curved Carapace (mm)	
							PIT	Inconel	Length	Width
9/25/2013	C	Large	3505.231	7635.639	Green	Alive	n/a	n/a	290	270
10/2/2013	B	Large	3449.768	7625.274	Green	Alive	n/a	n/a	n/a	n/a
10/3/2013	B	Large	3508.706	7555.816	Green	Alive	4A0A701430	n/a	342	297
10/7/2013	D2	Large	3441.207	7658.277	Green	Alive	4A0A70402D	n/a	320	290
10/8/2013	B	Large	3452.35	7624.344	Unknown	Alive	n/a	n/a	n/a	n/a
10/8/2013	B	Large	3452.606	7624.428	Green	Alive	4A717A300C	n/a	284	247
10/8/2013	B	Large	3504.179	7604.672	Green	Alive	4A0A7C177C	n/a	322	256
10/11/2013	B	Large	3450.444	7624.751	Kemps	Alive	989.001001951698	n/a	240	250
10/16/2013	B	Large	3503.174	7605.06	Green	Dead	n/a	n/a	275	240
10/17/2013	B	Large	3510.205	7549.584	Green	Alive	4A0C033B3A	n/a	309	276
10/18/2013	B	Large	3452.23	7622.275	Green	Dead	n/a	n/a	230	200
10/22/2013	B	Large	3452.477	7623.505	Green	Dead	n/a	n/a	280	242
10/22/2013	B	Large	3515.713	7542.198	Green	Alive	4A630E750B	UUE021	250	230
10/22/2013	B	Small	3451.441	7623.008	Green	Alive	989.001001951762	n/a	265	221
10/24/2013	E	Large	3410.619	7750.615	Green	Dead	n/a	n/a	273	230
10/29/2013	B	Large	3522.583	7532.78	Green	Alive	n/a	n/a	275	225
11/12/2013	B	Large	3509.884	7552.715	Green	Alive	4B0309136A	n/a	297	245

Table 8 Observer coverage calculated from the previous year's trip ticket data and observer data from each season (spring, summer, and fall) for ITP year 2014 (September 1, 2013 - August 31, 2014) by management unit for large mesh gill nets.

Management Unit	Coverage (%)		
	Fall 2013	Spring 2014 <sup>1</sup>	Summer 2014 <sup>2</sup>
A	3.5	2.5	4.8
B	7.3	0.4	0.0
C	7.2	4.8	8.0
D1	36.5	0.0	0.0
D2	8.3	0.0	0.0
E	8.9	30.9	15.1
Total	6.0	4.0	4.8

<sup>1</sup> Management unit D1 was closed during a portion of the spring 2014 season.

<sup>2</sup> Management unit's B, D1, and D2 were closed during the summer 2014 season.

Table 9. Observer coverage calculated from the previous year's trip ticket data and observer data from each season (spring, summer, and fall) for ITP year 2014 (September 1, 2013 - August 31, 2014) by management unit for small mesh gill nets.

Management Unit	Coverage (%)		
	Fall 2013	Spring 2014	Summer 2014
A	1.2	0.4	1.5
B	1.2	1.2	1.0
C	1.2	1.2	3.8
D1	23.5	21.2	37.5
D2	0.0	0.0	2.7
E	1.0	1.3	1.8
Total	1.5	1.1	1.8

Table 10. Summary of cumulative estimated sea turtle interactions through August 2014 by management unit and disposition for large mesh gill nets during ITP year 2014 (September 1, 2013 - August 31, 2014).

Management Unit	Green		Kemp's ridley	
	Alive	Dead	Alive	Dead
B	108	52	15	0
C	*1	0	0	0
D2	*1	0	0	0
E	0	4	0	0
Total	110	56	15	0

\*Indicates observed takes

Table 11. Summary of cumulative sea turtle interactions by management unit and disposition for small mesh gill nets during ITP year 2014 (September 1, 2013 - August 31, 2014).

Management Unit	Green	
	Alive	Dead
B	*1	0
Total	*1	0

\*Indicates observed takes



Table 12. Estimated confidence intervals (95%) for estimated takes using a bootstrap method based on observer data for coverage and sea turtle interaction levels by management unit and season for ITP year 2014 (September 1, 2013 - August 31, 2014).

Management Unit <sup>1</sup>	Green		Green		Kemp's	
	Alive	95% CI	Dead	95% CI	Alive	95% CI
A	0		0		0	
B	108	48 - 214	51	14 - 139	15	0 - 45
C	0		0		0	
D1	0		0		0	
D2	0		0		0	
E	0		4	0 - 12	0	

<sup>1</sup>Estimated confidence intervals were not applied for management units, gears, or species where observed takes are allowed and estimated takes are not used.

Table 13. Number of gill-net checks made and citations issued by Marine Patrol for large and small mesh gill nets by season during ITP year 2014 (September 1, 2013 - August 31, 2014).

Season	# Gill Net Checks	# Citations
Fall 2013	445	8
Spring 2014	59	0
Summer 2014	194	7

Table 14. The percentage of calls made (n = 2,408) by the observers trying to set up trips by season categorized by call type (0-9) as defined in Table 6 for ITP year 2014 (September 1, 2013 - August 31, 2014).

Season	Categories (%)										Total
	0	1	2	3	4	5	6	7	8	9	
Spring 2014	3.2	36.3	11.8	16.4	16.2	1.3	7.7	1.0	0.7	5.4	100
Summer 2014	6.2	13.1	10.9	25.4	15.2	1.6	12.3	1.7	0.6	13.0	100
Total	9.4	49.4	22.7	41.8	31.4	2.9	20.0	2.7	1.3	18.4	

<sup>1</sup>The categories for the contact log were developed prior to the spring 2014 season.

## FIGURES

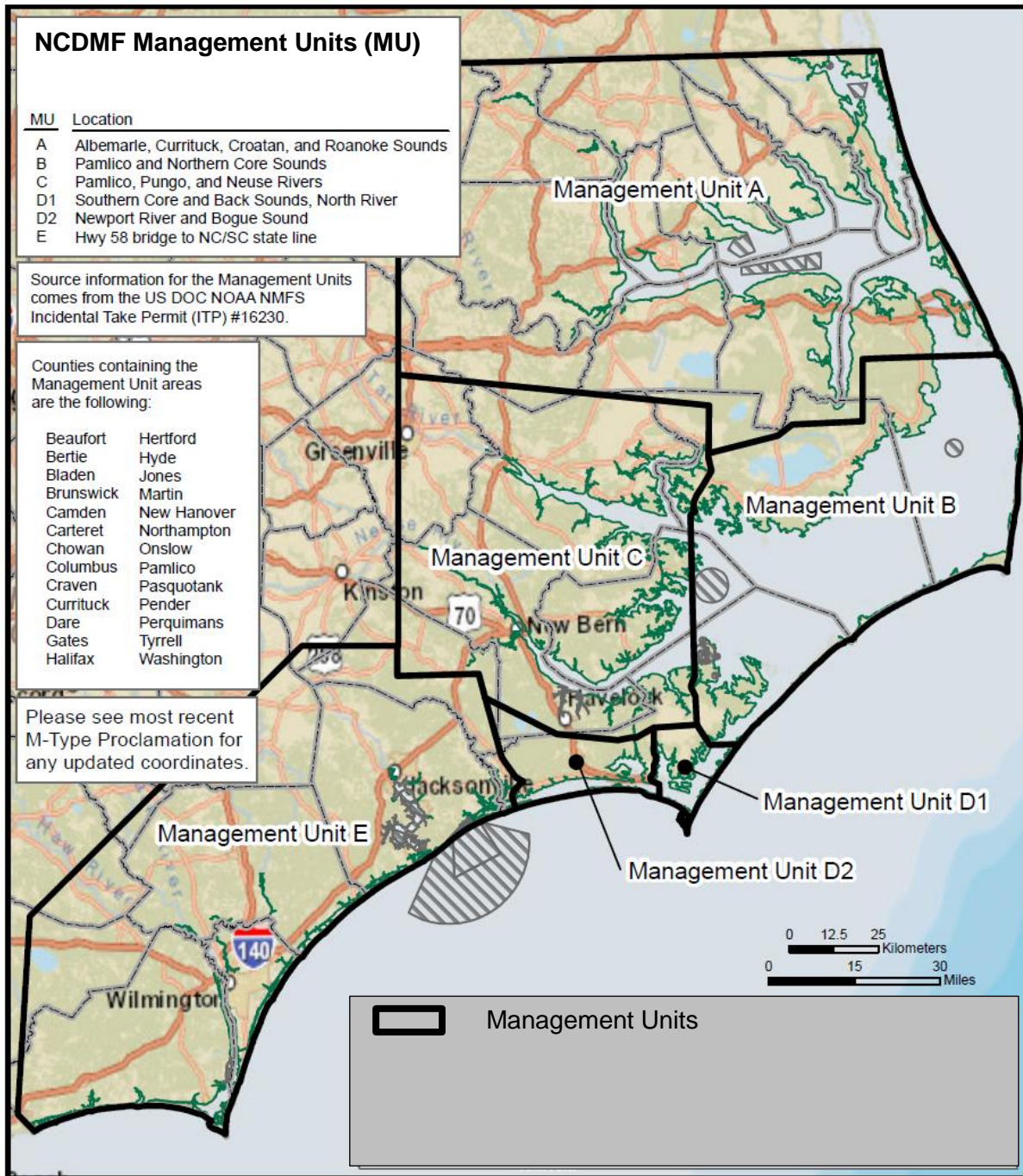


Figure 1. Management units (A, B, C, D1, D2, and E) as outlined in the Conservation Plan and utilized by the Observer Program for ITP year 2014 (September 1, 2013 – August 31, 2014).

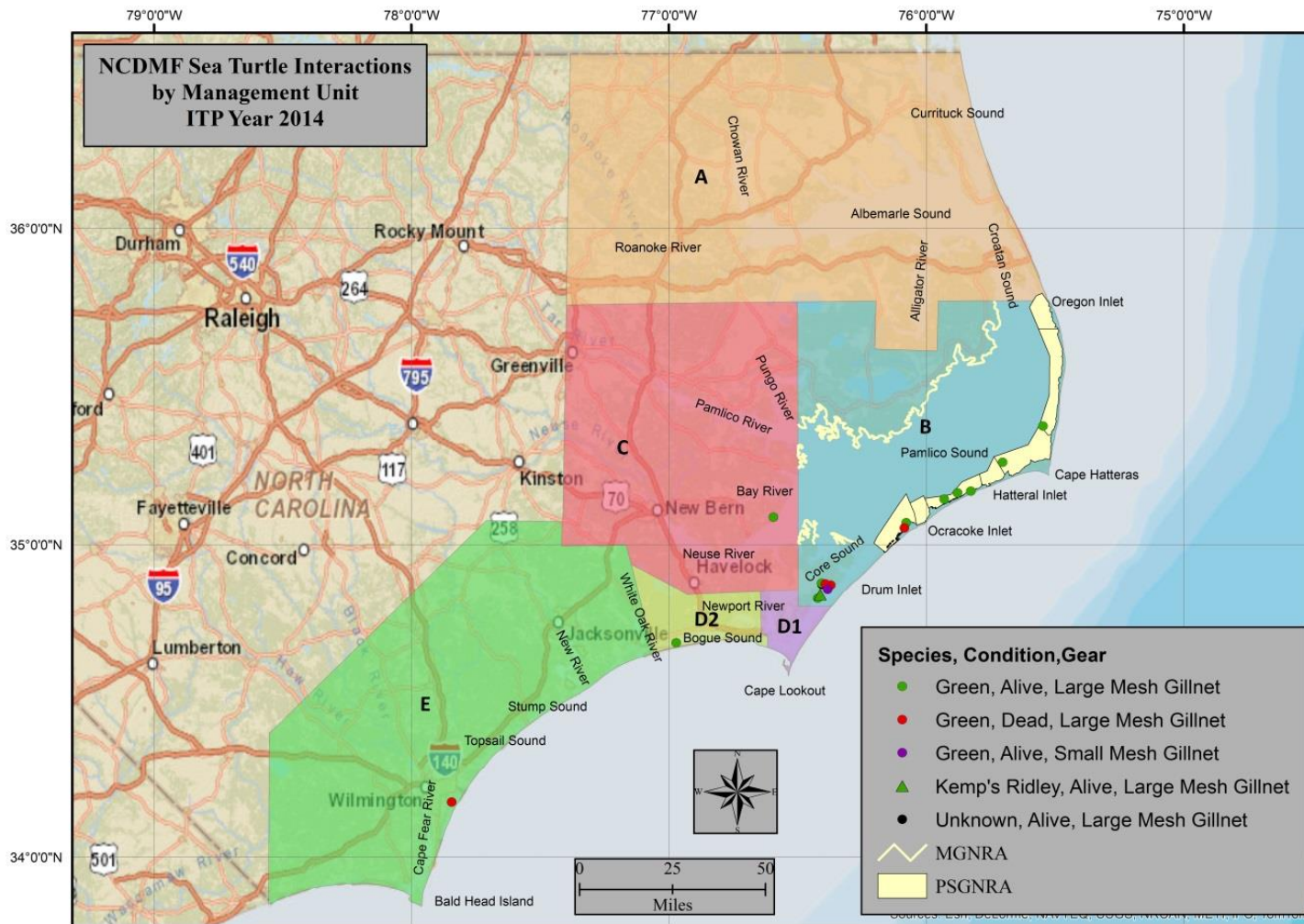


Figure 2. Sea turtle interaction locations (n = 17) by species, disposition, and gear for ITP year 2014 (September 1, 2013 – August 31, 2014).

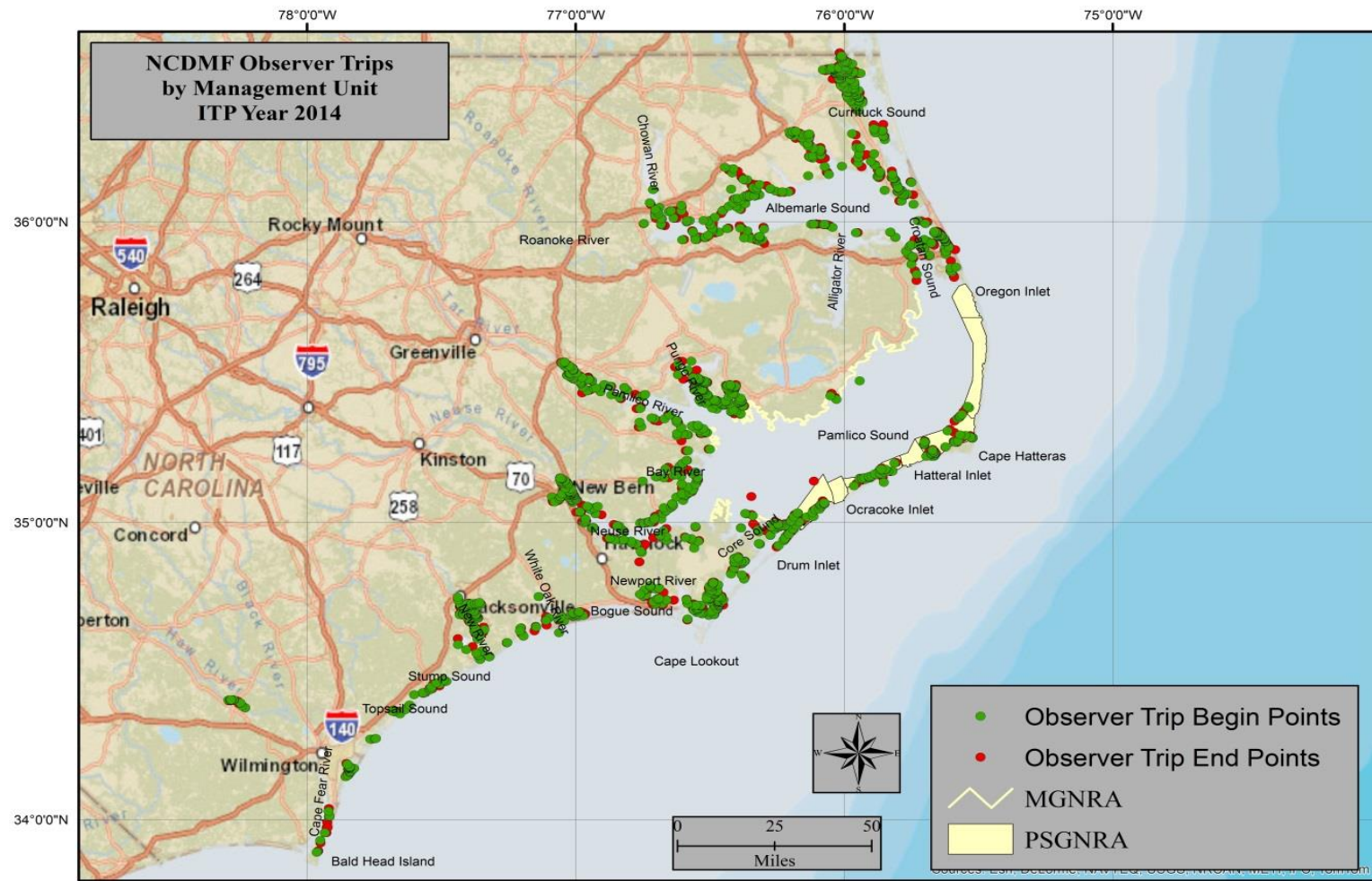


Figure 3. Starting and ending locations of observer trips (n = 900) conducted by the Observer Program for ITP year 2014 (September 1, 2013 – August 31, 2014).

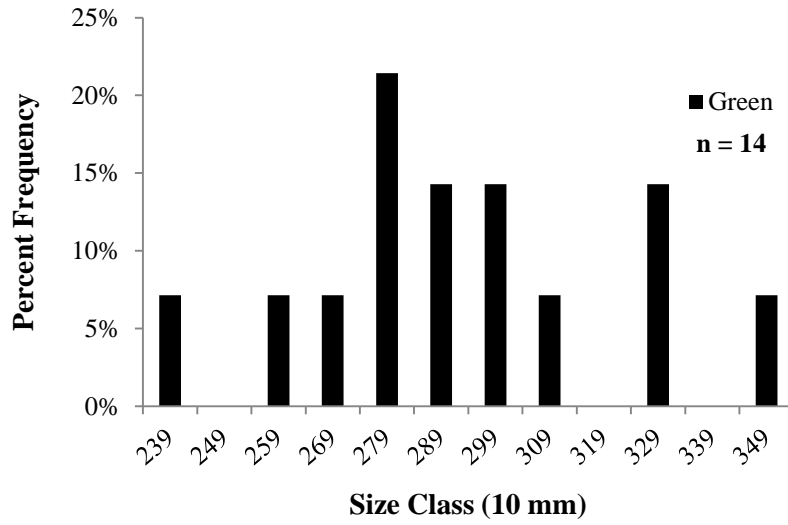


Figure 4. Length-frequency (curved carapace length) from notch to tip of observed incidental captures of green sea turtles (n = 14) collected by the Observer Program from onboard and alternative platform observations for ITP year 2014 (September 1, 2013 – August 31, 2014).



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** Louis Daniel, Division of Marine Fisheries Director  
Sammy Corbett, Marine Fisheries Commission Chairman

**FROM:** Chris Batsavage, Protected Resources Section Chief/Special Assistant for  
Councils  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 30, 2015

**SUBJECT:** Mid-Atlantic Fishery Management Council Meeting—December 8-11, 2014

The Mid-Atlantic Fishery Management Council met on Dec. 8-11, 2014 in Baltimore, MD. Management actions taken by the council are discussed below and are summarized in the attached Council Meeting Summary.

**SUMMER FLOUNDER FISHERY MANAGEMENT PLAN AMENDMENT**

The Atlantic States Marine Fisheries Commission's Summer Flounder, Scup and Black Sea Bass Management Board met jointly with the council to review the comments from the Summer Flounder Fishery Management Plan Amendment Scoping Hearings and to decide which issues to address in the amendment. A total of 14 scoping hearings were held from Massachusetts to North Carolina drawing over 200 attendees. In addition, written comments were received from over 100 individuals and groups. Based on the input received, the council and commission decided to address four issues in the amendment: (1) Fishery management plan goals and objectives, (2) quota allocation between the commercial and recreational sectors, (3) commercial management measures and strategies, and (4) recreational management measures and strategies. Issues such as discards, catch monitoring, and ecosystems will be addressed under the issues identified above. The Fishery Management Action Team will meet and issue-specific work groups will be formed in early 2015.

**SUMMER FLOUNDER RECREATIONAL SPECIFICATIONS**

The council and board recommended conservation equivalency (state or region-specific) management measures for the 2015 recreational summer flounder fishery. The coast wide (Massachusetts—North Carolina) recreational harvest limit for 2015 is 7.38 million pounds, which is an increase from the 2014 recreational harvest limit of 7.01 million pounds. The commission's Draft Addendum XXVI includes several options for conservation equivalency, including regional management similar to what was implemented in 2014. The board will meet in early February to recommend 2015 specific conservation equivalency measures.

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As a non-preferred alternative, the council and board recommended a coastwide minimum size limit of 18 inches, a 4-fish possession limit, and an open season from May 1 through Sept. 30. If a state fails implement conservation equivalency management measures, their summer flounder fishery must be managed under precautionary default management measures comprised of a 20-inch minimum size, 2-fish possession limit and an open season from May 1 through Sept. 30.

### **SCUP RECREATIONAL SPECIFICATIONS**

The coast wide [Massachusetts to North Carolina (north of Cape Hatteras)] recreational harvest limit for scup in 2015 is 6.80 million pounds, which is a decrease from 7.03 million pounds in 2014. Projected harvest estimates indicate that the 2014 harvest is below the harvest limit, so no harvest reduction is necessary in 2015. The council recommended a 9-inch minimum size limit, a 50-fish possession limit, and no closed season for federal waters in 2015. The federal waters possession limit in 2014 was 30 fish. For state waters, the board voted for conservation equivalency in 2015, and the states will develop state-specific management measures for approval at the Board's February meeting. Over 90 percent of the harvest occurs from Massachusetts through New York, and most of the harvest from these states is in state waters. Therefore, the harvest in federal waters and from New Jersey through North Carolina (north of Cape Hatteras) is of minor importance. Scup are rarely caught or harvested by anglers in North Carolina fishing north of Cape Hatteras.

### **BLACK SEA BASS RECREATIONAL SPECIFICATIONS**

The coast wide [Massachusetts to North Carolina (north of Cape Hatteras)] recreational harvest limit for black sea bass in 2015 is 2.33 million pounds, but the council and board recommended a 28% harvest reduction due to the 2014 projected harvest exceeding the harvest limit. The commission's Summer Flounder, Scup and Black Sea Bass Management Board voted to continue the provisions of Addendum XXV, which includes options for ad hoc regional management of black sea bass in state waters. If the state waters measures address the required reduction, the council and board recommended that federal waters measures include a 12.5-inch TL minimum size, a 15 fish possession limit, and open seasons from May 15 – Sept. 21 and Oct. 22 – Dec. 31. If the state management measures do not address the required reduction, then coastwide measures for both state and federal waters would be set at a 14-inch Total Length minimum size limit, a 3-fish possession limit, and a July 15-Sept. 15 season.

### **FORAGE SPECIES MANAGEMENT**

The executive committee received a presentation on a forage fish white paper that was developed to inform the council's ongoing development of an Ecosystem Approaches to Fisheries Management (EAFM) guidance document. The council voted to initiate an action that would protect unmanaged species of forage fish in the Mid-Atlantic by placing restrictions on the development or expansion of directed fisheries on these fish.



## **BLUELINE TILEFISH**

In response to the drastic increase in commercial blueline tilefish landings in the mid-Atlantic region, the council voted to send a letter to mid-Atlantic and Southern New England states requesting the states adopt consistent incidental commercial trip limits and recreational bag limits for blueline tilefish to prevent the expansion of this fishery. The South Atlantic Fishery Management Council manages blueline tilefish from North Carolina to Florida, but there is no comprehensive management in the mid-Atlantic or in New England.

## **UPCOMING MEETING**

The next meeting of the Mid-Atlantic Fishery Management Council will be Feb. 10-12, 2015 at the Doubletree by Hilton Raleigh Brownstone University in Raleigh, N.C.





## December 2014 Council Meeting Report

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**December 8 – 11, 2014**

*Baltimore, Maryland*

The following summary highlights Council actions and issues considered at the December 2014 Council Meeting in Baltimore, MD. Presentations, briefing materials, and audio recordings are linked from the relevant sections below. Additional information about the meeting is available at [www.mafmc.org/briefing/december-2014](http://www.mafmc.org/briefing/december-2014).

- [Agenda](#)
- [Complete Briefing book](#)
- [Meeting Motions](#)

### Summer Flounder, Scup, Black Sea Bass

The Council and the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Board (Board) met jointly to discuss the [Comprehensive Summer Flounder Amendment](#) and to set 2015 recreational management measures for Summer Flounder, Scup, and Black Sea Bass.

#### ***Comprehensive Summer Flounder Amendment***

Council and Commission staff presented a summary of public input provided during scoping for the Comprehensive Summer Flounder Amendment. Comments were provided by more than 200 individuals at fourteen scoping hearings and 100 individuals and groups who submitted written comments. After considering this input, the Council and Board identified four categories of issues to be addressed in the amendment: (1) Fishery Management Plan (FMP) goals and objectives, (2) quota allocation between the commercial and recreational sectors, (3) commercial management measures and strategies, and (4) recreational management measures and strategies. In addition, the Council and Board agreed to address issues related to discards, ecosystems, and catch monitoring under the umbrella of the categories listed above. Next steps for the amendment will include a Fishery Management Action Team (FMAT) meeting early next year and establishment of issue-specific working groups. Additional information, updates, and background documents about the amendment are available at <http://www.mafmc.org/actions/summer-flounder-amendment>.

- [Briefing Materials](#)
- [Presentation](#)
- [Webinar Recording](#)

#### ***2015 Recreational Management Measures***

In August 2014, the Council and Board reviewed previously implemented commercial quotas and recreational harvest limits for summer flounder, scup, and black sea bass for the 2015 fishing year. At the August 2014 meeting, the Council and Board recommended no changes to the current 2015 specifications. However, the Council also voted to suspend the Research Set-Aside (RSA) program in 2015 and redistribute the 3% portion of the quota normally withheld from each species' quotas, resulting in adjustments to the previously specified recreational harvest limits (RHL) for 2015. Details on the commercial quota and RHL for each species are available in the [final rule](#) published May 22, 2014.

**Summer Flounder:** The Council and Board recommended the use of conservation equivalency to achieve the 2015 summer flounder RHL of 7.38 million pounds. 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 from May 1 through 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 XXVI](#) includes several options for summer flounder recreational management under conservation equivalency in 2015.

- [Briefing Materials](#)
- [Presentation](#)
- [Webinar Recording](#)

**Scup:** To achieve the 2015 scup RHL of 6.80 million pounds, the Board voted to continue using a regional management approach, and the Council and Board recommended a 9-inch minimum fish size (TL), a 50 fish possession limit, and an open season from January 1 through December 31 in federal waters.

- [Briefing Materials](#)
- [Advisory Panel meeting summary](#)
- [Presentation](#)

**Black Sea Bass:** The Council and Board recommended recreational management measures to achieve the 2.33 million pound RHL for black sea bass in 2015. Based on projected 2014 landings, this will require a 28% reduction in landings. The Board voted to continue the provisions of Addendum XXV, 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 include a 15 fish possession limit, a 12.5-inch TL minimum fish size, and an open season from May 15 through September 21, and October 22 through 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 an open season from July 15-September 15 in both state and federal waters.

- [Briefing Materials](#)
- [Advisory Panel meeting summary](#)
- [Presentation](#)

**Summary of Proposed 2015 Recreational Management Measures**

	Recreational Harvest Limit	Type of Measures	Minimum Fish Size (TL)	Possession Limit	2015 Season
<b>Summer Flounder</b>	7.38 million pounds	<b>State/ Federal</b>	<b>Conservation equivalency - Measures will be developed by state or region and approved at the Commission's February meeting</b>		
<b>Scup</b>	6.80 million pounds	<b>State</b>	<b>Regional Management Approach – State-specific measures will be developed through the Commission's process and voted on in February.</b>		
		<b>Federal</b>	<b>9 inch</b>	<b>50 fish</b>	<b>Jan 1 – Dec 31</b>
<b>Black Sea Bass</b>	2.33 million pounds	<b>State</b>	<b>Regional management approach - State-specific measures will be developed through the Commission's process and voted on in February.</b>		
		<b>Federal<sup>1</sup></b>	<b>12.5 inch</b>	<b>15 fish</b>	<b>May 15 – Sept. 21 Oct 22 – Dec 31</b>

**Forage Management**

The Executive Committee received a presentation on a forage fish white paper that was developed to inform the Council’s ongoing development of an Ecosystem Approaches to Fisheries Management (EAFM) guidance document. After discussion by the Executive Committee and the full Council, the Council voted to initiate a

<sup>1</sup> Subject to the northern states addressing the required reduction.

regulatory action to prohibit the development of new, or expansion of existing, directed fisheries on unmanaged forage species until adequate scientific information is available to promote ecosystem sustainability.

- [Briefing Materials](#)
- [Presentation: Forage Fish White Paper](#)
- [Webinar Recording](#)

## Ecosystem and Ocean Planning Committee

### **Habitat Project Update**

Council staff provided an update on the Habitat Pilot Project and other Committee Priority Activities. The Habitat Pilot Project is intended to support the development of overarching fish habitat objectives for the EAFM Document. The project involves several elements, including production of a report on current practices and objectives used in the identification of critical habitat areas in the US and abroad, the development of policy statements on anthropogenic impacts on fish habitat, and the development of multi-species Habitat Areas of Particular Concern (HAPCs). Since the last update, an Oversight Team has been formed and a contractor has been selected. The Habitat Practices Report and background/policy documents are currently under development. This phase of the project is expected to wrap up in spring 2015.

- [Briefing Materials](#)
- [Webinar Recording](#) (Habitat Project Updates)
- [Presentation: Habitat Project Update](#)

### **New England Fishery Management Council Public Hearing – Omnibus EFH Amendment 2**

New England Council staff conducted a public hearing on its draft Omnibus Essential Fish Habitat (EFH) Amendment 2. Following the public hearing, the Council developed comments focused on the EFH and Habitat Area of Particular Concern (HAPC) Alternatives, and Spatial Management Alternatives proposed within the Amendment. The Council agreed to send a letter with these comments to the NEFMC.

- [Presentation: EFH Amendment 2 Hearing](#)
- [Webinar Recording](#) (Part 1 – Presentation and Public Comments)
- [Webinar Recording](#) (Part 2 - Ecosystem Committee Comments)

## GARFO Strategic Plan

Harry Mears, Assistant Regional Administrator of NOAA Fisheries' Greater Atlantic Regional Fisheries Office (GARFO), presented a draft of [GARFO's 2015-2019 strategic plan](#). The plan identifies objectives associated with seven primary strategic goals: sustainable fisheries; protected resources; habitat conservation; community resiliency; aquaculture; organizational excellence; and customer service. The Council provided comments on the draft and agreed to submit additional input in a letter later this month.

- [Briefing Materials](#)
- [Presentation](#)
- [Webinar Recording](#)

## Tilefish White Paper

The Council discussed a number of issues presented in the Tilefish White Paper developed by staff. The Council passed a motion to include the following items in the Framework 2 to the Tilefish FMP: 1) change the specification process to account for separate discards in the IFQ and incidental portions of the fishery; 2) deal with possible elimination of the IVR system; 3) require tilefish be landed with head attached (i.e., head-on gutted or whole); 4) prohibit vessels from fishing for more than one IFQ allocation at a time; and, 5) prohibit the use of mini-long lines in the recreational fishery.

- [Briefing Materials](#)
- [Presentation](#)
- [Webinar Recording](#)

## Other Business

**Listening Session:** The topic of the listening session was deep sea corals in the Mid-Atlantic. Dr. Martha Nizinski, a zoologist with NOAA Fisheries National Systematics Lab, gave a presentation on recent explorations of deep sea habitats in the Northeast. Her presentation was followed by an informal discussion with Council members and the public.

- [Briefing Materials](#)
- [Webinar Recording](#)

**2015 Implementation Plan:** The Council reviewed and approved the 2015 Implementation Plan, which was revised to incorporate input from the Executive committee at the October meeting. The implementation plan will guide the Council's activities and priorities through 2015 and beyond.

**Blueline Tilefish:** The Council voted to send a letter to mid-Atlantic and Southern New England states requesting the states adopt consistent incidental commercial trip limits and recreational bag limits for blueline tilefish to prevent the unmanaged expansion of this data-poor fishery.

## 2015 Council Meeting Schedule

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**February 10-12, 2015: Raleigh, North Carolina**

Doubletree by Hilton Raleigh Brownstone University  
1707 Hillsborough St.  
Raleigh, NC 27605  
919-828-0811

**April 14-16, 2015: Long Branch, New Jersey**

Ocean Place Resort  
1 Ocean Blvd.  
Long Branch, NJ 07740  
732-571-4000

**June 9-11, 2015: Virginia Beach, Virginia**

Hilton Virginia Beach Oceanfront  
3001 Atlantic Ave.  
Virginia Beach, VA 23451  
757-213-3000

**August 11-13, 2015: New York City, New York**

Holiday Inn Midtown  
440 West 57th Street  
New York City, New York 10019  
212-581-8100

**October 6-8, 2015: Philadelphia, Pennsylvania**

Doubletree Philadelphia Center City  
237 S. Broad St.  
Philadelphia, PA 19107  
215-893-1600

**December 8-10, 2015: Annapolis, Maryland**

The Westin Annapolis  
100 Westgate Circle  
Annapolis, MD 21401  
410-972-4300



## North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

### MEMORANDUM

TO: Sammy Corbett, Marine Fisheries Commission Chairman  
Dr. Louis B. Daniel III, Director, Division of Marine Fisheries

FROM: Michelle Duval

DATE: Jan. 30, 2015

SUBJECT: South Atlantic Fishery Management Council Meeting (Dec. 1-5, 2014)

The South Atlantic Fishery Management Council (Council) met in New Bern, North Carolina. Following is a summary of actions taken by the Council. The next meeting will be held in St. Simon's Island, Georgia, March 2-6, 2015.

#### **Snapper Grouper Visioning Workshop**

The Council continued its work developing a vision for the future of the snapper grouper fishery. The outcomes of the special October 2014 Visioning Meeting for council members were reviewed, and draft blueprints of the "Management" and "Communication" strategic goals were discussed. Each blueprint incorporates action strategies suggested by the public during the March 2014 port meetings held throughout the region, as well as suggestions from Council members. The Council will review drafts of the "Science" and "Governance" blueprints at its upcoming meeting in Georgia. The Council is expected to approve a complete draft blueprint of all four goals for public input at its June 2015 meeting.

#### **Protected Resources Committee**

The committee received an update on the Atlantic sturgeon Section 7 consultation for the Coastal Migratory Pelagics fishery (mackerels, cobia), which should be completed by March 2015. The committee received a presentation from the National Marine Fisheries Service regarding the Atlantic Large Whale Take Reduction Plan and the requirements under the new vertical line rule. These include modifications to line-marking requirements and a new nearshore trap/pot restricted area off South Carolina, Georgia and northern Florida.

#### **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:

- *SEDAR 41 (gray triggerfish and red snapper)*: The Council approved an updated schedule for the assessment, which was delayed due to concerns regarding the accuracy of headboat reporting from north Florida. To resolve the issue, historic experts were consulted to review the approaches developed by the Southeast Fisheries Science Center to address the data deficiencies. Quality assurance practices that were in place during the 1970's and 1980's will be reviewed and biases in the data evaluated.
- *SEDAR 37 (hogfish)*: The assessment concluded there are two stocks of hogfish – one from Georgia to North Carolina, and a second stock off Florida through the Keys. However, the assessment for the Georgia-North Carolina stock was deemed insufficient to determine stock status and based management decisions upon. The southeast/Florida stock was determined to be overfished with overfishing occurring.
- *SEDAR 38 (king mackerel)*: The stock is not overfished and overfishing is not occurring. While the annual catch limits will increase, the Council's Scientific and Statistical Committee recommended caution in setting those limits due to uncertainty in future recruitment. One of the more notable outcomes of the assessment is a change in the boundaries of the "mixing zone" between the Gulf and South Atlantic stocks. The mixing zone was determined to

be much smaller than in previous assessments; the end result is that Florida east coast harvest of king mackerel will all be attributed all to the Atlantic stock, rather than split evenly between Gulf and Atlantic stocks.

### **Snapper Grouper Committee**

The committee received updates on the status of the following amendments under review:

- Regulatory Amendment 14: The final rule published Nov. 7, 2014 and became effective Dec. 7, 2014. This amendment changes the start of both the commercial and recreational fishing years for black sea bass and greater amberjack, modifies commercial black sea bass trip limits, and establishes a commercial trip limit stepdown for gag grouper when 75 percent of the annual catch limit is reached (to 500 pounds).
- Amendment 29 (Only Reliable Catch Stocks and gray triggerfish): The proposed rule Dec. 7, 2014 with comments due by Jan. 7, 2015. The amendment updates the Council's Allowable Biological Catch control rule to include the use of a data-limited approach, establishes a minimum size limit for gray triggerfish (12 inches fork length), a commercial split season and a commercial trip limit of 1,000 pounds.
- Amendment 32 (blueline tilefish): The amendment is under review; comments on the amendment are due Feb. 17, 2015. The proposed rule published Jan. 23, 2015 with comments due by Feb. 23, 2015. It establishes a several reduced annual catch limit, a commercial trip limit of 100 pounds and a recreational bag limit of one fish per vessel per day (harvest allowed May-August).
- Regulatory Amendment 20 (snowy grouper): The amendment is under review in the region and has not been noticed for comment, nor has the proposed rule been published. It would increase the annual catch limit for snowy grouper, increase the commercial trip limit from 100 to 200 pounds (gutted weight), maintain the existing one fish per vessel per day recreational bag limit and restrict harvest to May through August.

Regulatory Amendment 16 (black sea bass pot closure): The Council spent a significant amount of time discussing this amendment, which 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. Staff from the National Marine Fisheries Service Protected Resources Division gave presentations on regulations regarding the triggering and development of a biological opinion, as well as right whale biology and new information since the 2006 biological opinion. Council staff also provided analyses regarding reductions in pot effort as a result of the actions taken in Amendment 18A, which established the pot endorsement program that limits participation to 32 endorsement holders, with a maximum of 35 pots per endorsement holder, a trip limit of 1,000 pounds (gutted weight) and a requirement to bring all pots back in at the end of a trip.

Modifications of several existing alternatives were added to the amendment for analysis. All alternatives consider spatial and temporal modification to the pot closure to more closely target the time of year and depth ranges where right whales occur during the calving and migration season. An action was also added to require additional gear markings specific to the sea bass pot fishery. The Council was original scheduled to approve the amendment for public hearings in December, but addition of extra alternatives pushed this schedule back; instead, the Council will select preferred alternatives in March 2015 and approve for public hearings in June 2015.

Regulatory Amendment 22 (gag grouper and wreckfish): This amendment updates the annual catch limits for gag grouper and wreckfish based on updated stock assessments, and considered a modification to the gag recreational bag limit (currently at one fish within the three-fish grouper aggregate). While gag is not overfished, there was debate regarding whether or not overfishing was occurring, and the Council selected a slightly lower annual catch limit for gag based on comments of concern from the public and chose to leave the bag limit at one fish. The amendment was submitted for formal secretarial review.

Amendment 22 (recreational harvest tags): This amendment would establish a systems to distribute tags to track recreational harvest of species with very low annual catch limits that the Marine Recreational Information Program was not designed for. The amendment was postponed while the Council received legal guidance regarding whether or not the use of a lottery-based system to distribute tags constituted a limited access privilege program. In order to provide the Council with other options for tracking of "rare-catch" species, N.C. Division of Marine Fisheries staff member Doug Mumford provided an overview of the state's catch card program for billfish and bluefin tuna. The Council discussed the program as a possible option, but took no further action.



Amendment 36 (spawning Special Management Zones (SMZs)): The Council received a presentation from Dr. Will Heymans, an ecologist who has been conducting cooperative research with snapper grouper fishermen off South Carolina to identify spawning areas for snapper and grouper species, focusing on “elbow-shaped” bathymetric features. Dr. Heymans also made a brief trip to North Carolina to examine a few areas, and is interested in transferring his survey methods to fishermen. The Council requested staff examine the bottom topography and biomass within the areas identified off each state as possible alternatives for spawning special management zones, and bring back a range of configurations for consideration in March. The Council will review the draft amendment and likely select preferred alternatives for public comment in June 2015.

Amendment 35 (removal of species and golden tilefish endorsements): This amendment contains actions to remove species from the fishery that are primarily caught in south Florida (black snapper, mahogany snapper, dog snapper and schoolmaster snapper), and address a loophole in the golden tilefish longline endorsement that has allowed endorsement holders to fish on the 25 percent of the annual catch limit set aside for hook-and-line fishermen that did not receive endorsements. The Council approved this document for public hearings in January 2015.

### **Joint Dolphin/Wahoo and Snapper Grouper Committee**

The committee took final action on the following amendments:

- Dolphin/Wahoo Amendment 7/Snapper Grouper Amendment 33 (fillets from Bahamas): This amendment provides an exemption for dolphin and wahoo legally harvested in the Bahamas to be transported back to the U.S. as fillets, similar to an existing exemption for snapper grouper species. Fillets of any species must have the skin intact, and fishermen must abide by both U.S. and Bahamian possession limits (whichever is more restrictive) when in U.S. waters. The amendment was approved for formal secretarial review.
- Dolphin/Wahoo Allocation/Generic Accountability Measures Amendment: This amendment establishes an allocation of 90 percent recreational/10 percent commercial for the dolphin annual catch limit (based on the average landings from 2008-2012), and adjusts accountability measures for remaining Council-managed species to provide consistency across all fishery management plans. The amendment was approved for formal secretarial review.

### **Mackerel Committee**

The committee received updates on the following amendments under review:

- Amendment 20B (zones and transit provisions): This amendment creates northern and southern zones for king and Spanish mackerel (boundary at North Carolina/South Carolina border), and a Florida east coast sub-zone for cobia. The final rule published Jan. 21, 2015 and will be effective March 1, 2015.
- Framework Action 2013 (Spanish mackerel transfer-at-sea): This amendment allows for transfer-at-sea of Spanish mackerel harvested by gill net in excess of the trip limit to another federally-permitted vessel with certain restrictions. The final rule became effective Dec. 19, 2014.
- Framework Amendment 1 (Spanish mackerel ACLs): This amendment adjusts the ACLs for Spanish mackerel based on the latest stock assessment. The final rule became effective Dec. 22, 2014.
- Framework Amendment 2 (Atlantic Spanish mackerel trip limits): This amendment adjusts the trip limit stepdowns in the southern zone for Spanish mackerel when 75 percent and 100 percent of the adjusted quota has been met. The amendment is still under review in the region.

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 (refer to results on page 2). 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; and considers a separate quota for the mixing zone between the Gulf and South Atlantic stocks (the area off the Florida Keys). The amendment was approved for scoping.

Amendment 24 (Atlantic Spanish mackerel allocation shift): This amendment contains a range of alternatives for temporary, in-season shifts of allocation between commercial and recreational sectors. Based on input from the advisory panels, and workload issues the Council decided to postpone consideration of this amendment until 2016.

Finally, the Council discussed separation of the fishery management plan. Currently, the species in the plan are managed jointly with the Gulf of Mexico Fishery Management Council and each council must approve the others actions. This was done originally due to the mixing between Gulf and South Atlantic stocks along the east coast of Florida. However, this is an extremely cumbersome process and has led to some disagreement between the councils. With the revisions to the mixing zone, the Council is interested in re-examining this and directed staff to bring back information for the March 2015 council meeting regarding all components that would need to be addressed.

#### **Data Collection Committee**

*Status of Bycatch Reporting in the Southeast:* A workgroup comprised of staff from the National Marine Fisheries Service Regional Office and Southeast Fisheries Science Center has been formed to address the status of bycatch reporting in the southeast. Federal law requires each council to establish a standardized bycatch reporting system. The council will receive an update in March regarding past and current efforts to track bycatch and how best to meet the legal requirements.

*Electronic Technology Implementation Plan:* The Council received an update on the draft Electronic Technologies Implementation Plan for the Southeast Region from the National Marine Fisheries Service. There is a national directive to develop and implement electronic means of reporting and monitoring of fisheries. The Council provided comments on the draft plan, emphasizing its focus on electronic reporting. The draft plan was released on Jan. 9, 2015 for public input. Comments are due by Feb. 9, 2015.

*Commercial Electronic Reporting:* The Council received an update on the development of an electronic version of the existing commercial logbook form that fishermen could voluntarily use to submit catch information. The Atlantic Coastal Cooperative Statistics Program is working with the Southeast Fisheries Science Center to implement this product. The intent is for the form to be operational in early 2015. Additionally, the Council received an update on the status of the commercial electronic logbook pilot program. Fishermen throughout the region have been selected for pilot testing of a variety of platforms (tablet computers, onboard laptops, etc.). The infrastructure and software changes should be complete by August 2015 for testing to begin.

*Joint Gulf/South Atlantic Charterboat Electronic Reporting:* Council staff provided an overview of the final report and recommendations from the joint Gulf and South Atlantic workgroup tasked with examining electronic reporting for charter vessels in both regions. The Council directed staff to begin work on a joint amendment in 2015 that incorporates workgroup recommendations and is patterned after the Joint Electronic Headboat Reporting Amendment.

Finally, the Council received an update on changes to the Marine Recreational Information Program effort survey. The program will be transitioning to a paper-based mail survey, which was demonstrated to have higher response rates than the phone survey. A dual-frame survey will be conducted for the next two years that employs both methods. Annual catch limits will continue to be tracked using the existing phone survey until such time as a full transition is complete and data can be recalibrated for use in stock assessments.



North Carolina Department of Environment and Natural Resources

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Secretary

**MEMORANDUM**

**TO:** Dr. Louis B. Daniel III, Division of Marine Fisheries Director  
Sammy Corbett, Marine Fisheries Commission Chairman

**FROM:** Randy Gregory  
Holly White  
Division of Marine Fisheries, NC DENR

**DATE:** Jan. 30, 2015

**SUBJECT:** Highly Migratory Species Update

The Highly Migratory Species Advisory Panel's spring meeting will be held March 10 - 12, 2015 in Bethesda, Maryland. The National Marine Fisheries Service Highly Migratory Species Fishery Management Division staff will discuss the Draft Amendment 6 to the 2006 Consolidated Highly Migratory Species Fishery Management Plan on the future of shark fishery, providing updates on Amendment 5b on dusky shark management and Amendment 9 on smoothhound shark management and ongoing stock assessment, reviewing Final Amendment 7 on bluefin tuna management measures, and discussing the Highly Migratory Species Essential Fish Habitat 5-Year Review. The meeting will also include discussion of the Electronic Technologies Implementation Plan for Atlantic Highly Migratory Species, implementation of 2014 International Commission for the Conservation of Atlantic Tunas recommendations, and Highly Migratory Species Management-Based Research Priorities document.

Bluefin Tuna

National Marine Fisheries Service published the final rule to implement Amendment 7 on Dec. 2, 2014. Final measures are meant to meet the main objectives of Amendment 7, i.e., they would prevent overfishing and rebuild Atlantic bluefin tuna; minimize bluefin bycatch to the extent practicable; reduce and account for bluefin dead discards in all categories; and enhance reporting and monitoring. The final rule implements measures applicable to the pelagic longline fishery, including Individual Bluefin Quotas, two new Gear Restricted Areas (Cape Hatteras Pelagic Longline Gear Restricted Area), closure of the pelagic longline fishery when annual bluefin tuna quota is reached, elimination of target catch requirements associated with retention of incidental bluefin tuna in the pelagic longline fishery, mandatory retention of legal-sized bluefin tuna caught as bycatch, expanded monitoring requirements, including electronic monitoring via cameras and bluefin tuna catch reporting via Vessel Monitoring System (VMS), and transiting provisions for pelagic and bottom longline vessels. In the General category, an Automated Catch Reporting System will be required and inseason adjustments of the General category time-period subquota allocations would be allowed. For the 2015 fishing year, National Marine Fisheries Service transferred 21 metric tons forward from the General category December period to the January period resulting in a subquota of 42.4 metric tons. The January General category period ends March 31<sup>st</sup>. In the Angling category (recreational), the Trophy South subquota allocation was reduced and the Trophy subquota is now split evenly between North, South, and the Gulf of Mexico.

## Sharks

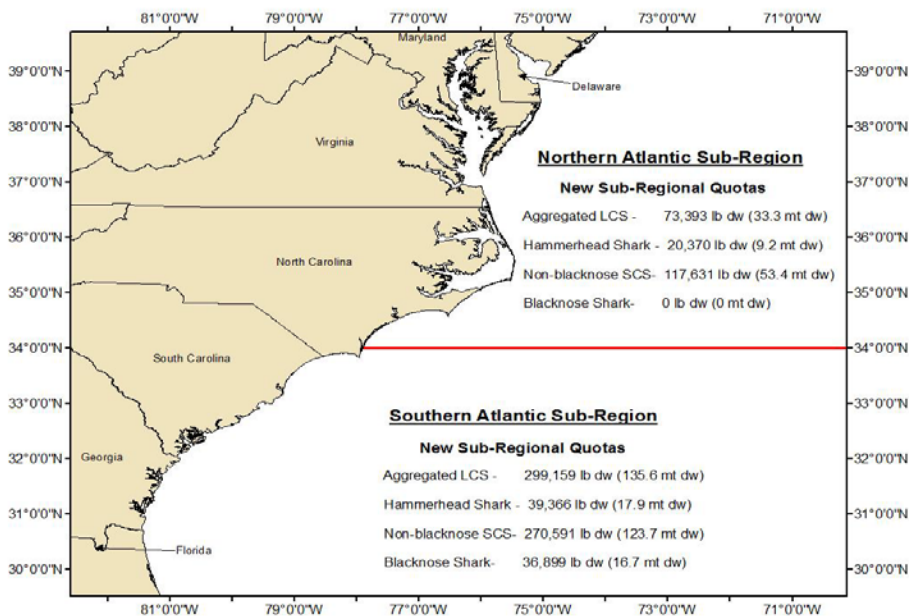
On Jan. 16, 2015, National Marine Fisheries Service released Draft Amendment 6 to the Consolidated Highly Migratory Species Fishery Management Plan and proposes a range of management measures for the commercial shark fisheries. National Marine Fisheries Service considers options for permit stacking, adjusting the large coastal sharks (LCS) trip limit for shark directed limited access permit holders, creating sub-regional quotas in the Atlantic and Gulf of Mexico regions for large coastal sharks and small coastal sharks (SCS), modifying the large coastal sharks and small coastal sharks quota linkages, implementing total allowable catches and adjusting the non-blacknose small coastal sharks commercial quotas in the Atlantic and Gulf of Mexico regions based on the 2013 Atlantic sharpnose and bonnethead sharks stock assessments, and modifying upgrading restrictions for shark permit holders.

Preferred alternatives include:

- Permit Stacking: Do not implement permit stacking (No Action).
- Commercial Retention Limits: Increase the large coastal shark retention limit for directed permit holders from 36 to 55 large coastal sharks other than sandbar sharks per trip and establish a new (reduced) sandbar shark research fishery quota.
- Atlantic Regional and Sub-Regional Quotas (Figure 1): Split the Atlantic regional commercial quotas for certain large coastal shark and small coastal sharks management groups along 34° 00' N Lat.; maintain small coastal sharks quota linkages in the southern sub-region; remove the small coastal sharks quota linkages in the northern sub-region and prohibit the harvest and landing of blacknose sharks in that sub-region; and establish a non-blacknose small coastal sharks total allowable catches and maintain the current commercial base annual quota of 176.1 metric tons dressed weight.
- Commercial Vessel Upgrading Restrictions: Remove current upgrading restrictions for shark limited access permit holders.

National Marine Fisheries Service is currently recalculating the large coastal shark and small coastal shark annual percentages and sub-regional quotas due to calculation errors. Potentially, the Northern Atlantic sub-region could receive more quota for both large coastal shark and small coastal shark. The N.C. Division of Marine Fisheries is working with National Marine Fisheries Service to properly account for research fishery landings and correctly proportion out unclassified sharks landings.

Figure 1: Map of proposed Amendment 6 Atlantic sub-regional quotas



## **N.C. Marine Fisheries Commission Rules Suspension Update- As of Jan. 30, 2015**

(In accordance with N.C. Division of Marine Fisheries Resource Management Policy 2014-2)

### **New Suspensions-Action Required**

The following new suspensions occurred since the commission's November 2014 meeting. These suspensions are action items on the February 2015 agenda and are subject to approval:

- 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. It is requested that the portions of these rules be suspended indefinitely.

### **New Suspensions-No Action Required**

The following rule suspension occurred since the commission's November 2014 meeting. The rule is currently in effect and no action is required by the commission.

- N.C. Marine Fisheries Commission Rule 15A NCAC 03M .0516 COBIA was suspended in its entirety from December 11, 2014 until January 1, 2015.  
(a) It is unlawful to possess cobia less than 33 inches fork length.  
(b) It is unlawful to possess more than two cobia per person per day.

This suspension was implemented in proclamation FF-79-2014 in order to allow the division to comply with NOAA Fisheries FB14-092 that initiated a closure for the commercial harvest of cobia in south Atlantic waters on December 11, 2014 due to the Annual Catch Limits being met. Proclamation FF-79-2014 was rescinded, effective January 1, 2015 and cobia harvest was allowed in accordance with 15A NCAC 03M. 0516.

### **Continuing Suspensions**

- 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 is suspended indefinitely.

### **Suspensions to a Date Certain**

- The following portion of N.C. Marine Fisheries Commission Rule 15A NCAC 03O .0501 PROCEDURES AND REQUIREMENTS TO OBTAIN PERMITS is suspended:  
Section (f) (1) is modified by the suspension of the following wording: “prior to November 1 of”.  
Section (f) (1) of North Carolina Marine Fisheries Commission Rule 15A NCAC 03O .0501 as modified will read as follows:  
(f) Atlantic Ocean Striped Bass Commercial Gear Permit:  
(1) Application for an Atlantic Ocean Striped Bass Commercial Gear Permit must be made each year. A person shall declare one of the following gears for an initial Atlantic Ocean Striped Bass Commercial Gear Permit and at intervals of three consecutive license years thereafter:  
(A) gill net;  
(B) trawl; or  
(C) beach seine.

Suspension of this rule allows the division to remove the Nov. 1 requirement for obtaining an Atlantic Ocean Striped Bass Commercial Gear Permit which will allow fishermen additional time to decide which gear they want to declare. This rule suspension approval is to the effective date of the current rule package, anticipated to be as early as May 1, 2015.

- N.C. Marine Fisheries Commission Rule 15A NCAC 03M .0510 AMERICAN EEL is suspended in its entirety.  
It is unlawful to:  
(1) Possess, sell or take eels less than six inches in length; and  
(2) Possess more than 50 eels per person per day for recreational purposes.

Suspension of this rule allows the division to reduce the size and harvest limits of American eel in compliance with Addendum III to the Atlantic States Marine Fisheries Commission American Eel Fishery Management Plan. This rule suspension approval is to the effective date of the current rule package, anticipated to be as early as May 1, 2015.

## **N.C. Division of Marine Fisheries Resource Management Policy Number 2014-2**

**Title: Temporary Rule Suspension** [Efficient Process for Implementation of G.S. 143B-289.52 and Rule 15A NCAC 03I .0102 <sup>1</sup>]

Date: Nov. 4, 2014

### **Background:**

The rule for temporary suspension of rules (Appendix A) requires that, when the Division of Marine Fisheries (“DMF” or “Division”) Director implements a temporary rule suspension by proclamation, that the Marine Fisheries Commission (“MFC” or “Commission”) receive notification of the suspension at the next meeting following rule suspension. This notification alerts the MFC of the temporary rule suspension, provides them with information about the reason for the suspension, and allows them to take appropriate action at that meeting. In practice, DMF has put every<sup>2</sup> rule suspension to the MFC as an agenda item at every meeting subsequent to the first suspension, and asked the MFC to vote on continuing suspension. Following every meeting, DMF goes through the notification process of the continued suspension (including drafting a new proclamation, posting it on the web site, and distributing it via email and U.S. mail.) This process has become burdensome to both the Division and the Commission, taking meeting time and causing significant additional staff time and expense.

### **Policy for Temporary Suspension of Rules by the Director and Notification of the Marine Fisheries Commission of Such Suspension:**

Going forward, when a rule suspension is first presented to the MFC, assuming the MFC agrees with the suspension, the MFC will be asked to vote on whether to delegate to the Director the authority to suspend the rule (a) indefinitely (continuing suspensions), (b) for a fixed time period (suspensions to a date certain) or (c) until external conditions/triggers occur (indefinite suspensions until trigger events or conditions.) Following that initial vote, the MFC will be kept informed as follows:

Continuing Suspensions will be reported by inclusion as a non-action, non-discussion informational item at every meeting by providing a copy of the suspensions in every MFC briefing book and will reference that inclusion by notation on the agenda. In addition, the Division will provide verbal reminder and specific agenda reference of all current rule suspensions annually at every November meeting of the Commission.

Suspensions to a Date Certain will be reversed by proclamation effective on the date certain and, while in effect, will be reported to the Commission as if it were a continuing suspension. The Division will report the end of the suspension as an agenda item at the next MFC meeting following that date certain.

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<sup>1</sup> Legal authorities include N.C. Gen. Stat. §§ 143B-289.52 & 113-221.1, and 15A NCAC 03I .0102, TEMPORARY SUSPENSION OF RULES, 15A NCAC 03H .0103, PROCLAMATION AUTHORITY OF FISHERIES DIRECTOR. (See Appendix A)

<sup>2</sup> The division has put every rule suspension to the MFC as an agenda item at every meeting subsequent to the first suspension except for those rule suspensions otherwise exempted from this requirement as stated in other MFC rules. Note that certain rules such as 15A NCAC 03J .0301(k) (proposed for adoption as 03I .0122 in 2015) and 15A NCAC 03K .0110 provide exemptions to the review requirement.

Indefinite Suspensions until Trigger Events or Conditions will be continued until the triggering event/condition occurs and will be reported to the Commission while ongoing as if it were a continuing suspension. The Division will report the change in conditions/tripping of a trigger as an agenda item at the next MFC meeting following the occurrence of the condition/trigger.

**This policy will not prohibit reconsideration of a prior rule suspension in accordance with G.S. 113-221.1 (d), it will simply eliminate the additional time and effort where continuing suspensions are agreed upon.** New Commissioners will receive a copy of this policy, along with a copy of all current rule suspensions at the time that they join the Commission so that they will have specific notice that these rule suspensions are in effect. New suspensions will continue to be presented to the Commission at its next meeting following the initial suspension.



## Appendix A

### 15A NCAC 03H .0103 PROCLAMATION AUTHORITY OF FISHERIES DIRECTOR

(a) It is unlawful to violate the provisions of any proclamation issued by the authority of Marine Fisheries Commission Rule.

(b) Unless specific variable conditions are set forth in a rule granting proclamation authority to the Fisheries Director, variable conditions triggering the use of the Fisheries Director's proclamation authority may include any of the following:

- (1) compliance with changes mandated by the Fisheries Reform Act and its amendments;
- (2) biological impacts;
- (3) environmental conditions;
- (4) compliance with Fishery Management Plans;
- (5) user conflicts;
- (6) bycatch issues; and
- (7) variable spatial distributions.

*History Note:* Authority G.S. 113-134; 113-135; 113-182; 113-221.1; 143B-289.52;  
Eff. January 1, 1991;  
Amended Eff. March 1, 1994; September 1, 1991;  
Temporary Amendment Eff. July 1, 1999;  
Amended Eff. April 1, 2011; August 1, 2000.

### 15A NCAC 03I .0102 TEMPORARY SUSPENSION OF RULES

The Fisheries Director is authorized to suspend, in whole or in part, until the next meeting of the Marine Fisheries Commission, or for a lesser period, the operation of any rule of the Marine Fisheries Commission regarding coastal fisheries which may be affected by variable conditions.

*History Note:* Authority G.S. 113-134; 143B-289.52;  
Eff. January 1, 1991;  
Recodified from 15A NCAC 3I .0002 Eff. December 17, 1996.

### § 113-221.1. Proclamations; emergency review.

(a) Chapter 150B of the General Statutes does not apply to proclamations issued under this Article.

(b) The Marine Fisheries Commission may delegate to the Fisheries Director the authority to issue proclamations suspending or implementing, in whole or in part, particular rules of the Commission that may be affected by variable conditions. These proclamations shall be issued by the Fisheries Director or by a person designated by the Fisheries Director. Except as provided in this subsection, all proclamations shall state the hour and date upon which they become effective and shall be issued at least 48 hours in advance of the effective date and time. A proclamation that prohibits the taking of certain fisheries resources for reasons of public health or that governs a quota-managed fishery may be made effective immediately upon issuance. A proclamation to reopen the taking of certain fisheries resources closed for reasons of public health shall be issued at least 12 hours in advance of the effective date and time of the reopening. A person who violates a proclamation that is made effective immediately upon issuance shall not be charged with a criminal offense for the violation if the violation occurred between the time of issuance and 48 hours after the issuance and the person did not have actual notice of the issuance of the proclamation. Fisheries resources taken or possessed by any person in violation of any proclamation may be seized regardless of whether the person had actual notice of the proclamation. A permanent file of the text of all proclamations shall be maintained in the office of the Fisheries Director. Certified copies of proclamations are entitled to judicial notice in any civil or criminal proceeding. The Fisheries Director shall make every reasonable effort to give actual notice of the terms of any proclamation to persons who may be affected by the proclamation. Reasonable effort includes a press release to communications media, posting of a notice at docks and other places where persons affected may gather, personal communication by inspectors and other agents of the Fisheries Director, and other measures designed to reach the persons who may be affected. It is a defense to an enforcement action for a violation of a proclamation that a person was prevented from receiving notice of the proclamation due to a natural disaster or other act of God occasioned exclusively by violence of nature without interference of any human agency and that could not have been prevented or avoided by the exercise of due care or foresight.

(c) All persons who may be affected by proclamations issued by the Fisheries Director are under a duty to keep themselves informed of current proclamations. It is no defense in any criminal prosecution for the defendant to show that the defendant in fact received no notice of a particular proclamation. In any prosecution for violation of a proclamation, or in which proof of matter contained in a proclamation is involved, the Department is deemed to have complied with publication procedures; and the burden is on the defendant to show, by the greater weight of the evidence, substantial failure of compliance by the Department with the required publication procedures.

(d) Pursuant to the request of five or more members of the Marine Fisheries Commission, the Chair of the Marine Fisheries Commission may call an emergency meeting of the Commission to review an issuance or proposed issuance of proclamations under the authority delegated to the Fisheries Director pursuant to subsection (b) of this section or to review the desirability of directing the Fisheries Director to issue a proclamation to prohibit or allow the taking of certain fisheries resources. At least 48 hours prior to any emergency meeting called pursuant to this subsection, a public announcement of the meeting shall be issued that describes the action requested by the members of the Marine Fisheries Commission. The Department shall make every reasonable effort to give actual notice of the meeting to persons who may be affected. After its review is complete, the Marine Fisheries Commission, consistent with its duty to protect, preserve, and enhance the commercial and sports fisheries resources of the State, may approve, cancel, or modify the previously issued or proposed proclamation under review or may direct the Fisheries Director to issue a proclamation that prohibits or allows the taking of certain fisheries resources. An emergency meeting called pursuant to this subsection and any resulting orders issued by the Marine Fisheries Commission are exempt from the provisions of Article 2A of Chapter 150B of the General Statutes. The decisions of the Marine Fisheries Commission shall be the final decision of the State and shall not be set aside on judicial review unless found to be arbitrary and capricious. (1915, c. 84, s. 21; 1917, c. 290, s. 7; C.S., s. 1878; 1925, c. 168, s. 2; 1935, c. 35; 1945, c. 776; 1953, cc. 774, 1134, 1251; 1963, c. 1097, s. 1; 1965, c. 957, s. 2; 1973, c. 1262, ss. 28, 86; c. 1331, s. 3; 1975, 2nd Sess., c. 983, s. 70; 1979, c. 388, s. 6; 1983, cc. 221, 619, 620; 1987, c. 641, ss. 7, 19; c. 827, s. 7; 1997-400, s. 4.3; 1998-225, s. 3.8; 2000-189, s. 9; 2003-154, s. 2.)

**§ 143B-289.52. Marine Fisheries Commission - powers and duties.**

(a) The Marine Fisheries Commission shall adopt rules to be followed in the management, protection, preservation, and enhancement of the marine and estuarine resources within its jurisdiction, as described in G.S. 113-132, including commercial and sports fisheries resources. The Marine Fisheries Commission shall have the power and duty:

- (1) To authorize, license, regulate, prohibit, prescribe, or restrict all forms of marine and estuarine resources in coastal fishing waters with respect to:
  - a. Time, place, character, or dimensions of any methods or equipment that may be employed in taking fish.
  - b. Seasons for taking fish.
  - c. Size limits on and maximum quantities of fish that may be taken, possessed, bailed to another, transported, bought, sold, or given away.
- (2) To provide fair regulation of commercial and recreational fishing groups in the interest of the public.
- (3) To adopt rules and take all steps necessary to develop and improve mariculture, including the cultivation, harvesting, and marketing of shellfish and other marine resources in the State, involving the use of public grounds and private beds as provided in G.S. 113-201.
- (4) To close areas of public bottoms under coastal fishing waters for such time as may be necessary in any program of propagation of shellfish as provided in G.S. 113-204.
- (5) In the interest of conservation of the marine and estuarine resources of the State, to institute an action in the superior court to contest the claim of title or claimed right of fishery in any navigable waters of the State registered with the Department as provided in G.S. 113-206(d).
- (6) To make reciprocal agreements with other jurisdictions respecting any of the matters governed in this Subchapter as provided by G.S. 113-223.
- (7) To adopt relevant provisions of federal laws and regulations as State rules pursuant to G.S. 113-228.
- (8) To delegate to the Fisheries Director the authority by proclamation to suspend or implement, in whole or in part, a particular rule of the Commission that may be affected by variable conditions as provided in G.S. 113-221.1.
- (9) To comment on and otherwise participate in the determination of permit applications received by State agencies that may have an effect on the marine and estuarine resources of the State.

- (10) To adopt Fishery Management Plans as provided in G.S. 113-182.1, to establish a Priority List to determine the order in which Fishery Management Plans are developed, to establish a Schedule for the development and adoption of each Fishery Management Plan, and to establish guidance criteria as to the contents of Fishery Management Plans.
- (11) To approve Coastal Habitat Protection Plans as provided in G.S. 143B-279.8.
- (12) Except as may otherwise be provided, to make the final agency decision in all contested cases involving matters within the jurisdiction of the Commission.
- (13) To adopt rules to define fishing gear as either recreational gear or commercial gear.
- (b) The Marine Fisheries Commission shall have the power and duty to establish standards and adopt rules:
  - (1) To implement the provisions of Subchapter IV of Chapter 113 as provided in G.S. 113-134.
  - (2) To manage the disposition of confiscated property as set forth in G.S. 113-137.
  - (3) To govern all license requirements prescribed in Article 14A of Chapter 113 of the General Statutes.
  - (4) To regulate the importation and exportation of fish, and equipment that may be used in taking or processing fish, as necessary to enhance the conservation of marine and estuarine resources of the State as provided in G.S. 113-170.
  - (5) To regulate the possession, transportation, and disposition of seafood, as provided in G.S. 113-170.4.
  - (6) To regulate the disposition of the young of edible fish, as provided by G.S. 113-185.
  - (7) To manage the leasing of public grounds for mariculture, including oysters and clam production, as provided in G.S. 113-202.
  - (8) To govern the utilization of private fisheries, as provided in G.S. 113-205.
  - (9) To impose further restrictions upon the throwing of fish offal in any coastal fishing waters, as provided in G.S. 113-265.
  - (10) To regulate the location and utilization of artificial reefs in coastal waters.
  - (11) To regulate the placement of nets and other sports or commercial fishing apparatus in coastal fishing waters with regard to navigational or recreational safety as well as from a conservation standpoint.
- (c) The Commission is authorized to authorize, license, prohibit, prescribe, or restrict:
  - (1) The opening and closing of coastal fishing waters, except as to inland game fish, whether entirely or only as to the taking of particular classes of fish, use of particular equipment, or as to other activities.
  - (2) The possession, cultivation, transportation, importation, exportation, sale, purchase, acquisition, and disposition of all marine and estuarine resources and all related equipment, implements, vessels, and conveyances as necessary to carry out its duties.
- (d) The Commission may adopt rules required by the federal government for grants-in-aid for coastal resource purposes that may be made available to the State by the federal government. This section is to be liberally construed in order that the State and its citizens may benefit from federal grants-in-aid.
  - (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. The Commission may use any additional criteria aside from holding a Standard Commercial Fishing License to develop limited-entry fisheries. The Commission may establish a fee for each license established pursuant to this subsection in an amount that does not exceed five hundred dollars (\$500.00).
  - (d2) To ensure an orderly transition from one permit year to the next, the Division may issue a permit prior to July 1 of the permit year for which the permit is valid. Revenue that the Division receives for the issuance of a permit prior to the beginning of a permit year shall not revert at the end of the fiscal year in which the revenue is received and shall be credited and available to the Division for the permit year in which the permit is valid.
- (e) The Commission may adopt rules to implement or comply with a fishery management plan adopted by the Atlantic States Marine Fisheries Commission or adopted by the United States Secretary of Commerce pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801, et seq. Notwithstanding G.S. 150B-21.1(a), the Commission may adopt temporary rules under this subsection at any time within six months of the adoption or amendment of a fishery management plan or the notification of a change in management measures needed to remain in compliance with a fishery management plan.
  - (e1) A supermajority of the Commission shall be six members. A supermajority shall be necessary to override recommendations from the Division of Marine Fisheries regarding measures needed to end overfishing or to rebuild overfished stocks.

(f) The Commission shall adopt rules as provided in this Chapter. All rules adopted by the Commission shall be enforced by the Department of Environment and Natural Resources.

(g) As a quasi-judicial agency, the Commission, in accordance with Article IV, Section 3 of the Constitution of North Carolina, has those judicial powers reasonably necessary to accomplish the purposes for which it was created.

(h) Social security numbers and identifying information obtained by the Commission or the Division of Marine Fisheries shall be treated as provided in G.S. 132-1.10. For purposes of this subsection, "identifying information" also includes a person's mailing address, residence address, date of birth, and telephone number.

(i) The Commission may adopt rules to exempt individuals who participate in organized fishing events held in coastal or joint fishing waters from recreational fishing license requirements for the specified time and place of the event when the purpose of the event is consistent with the conservation objectives of the Commission. (1997-400, ss. 2.1, 2.2; 1997-443, s. 11A.123; 1998-217, s. 18(a); 1998-225, ss. 1.3, 1.4, 1.5; 2001-474, s. 32; 2003-154, s. 3; 2004-187, ss. 7, 8; 2006-255, ss. 11.2, 12; 2012-190, s. 5; 2012-200, s. 17; 2013-360, ss. 14.8(v), (w).)



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** N.C. Marine Fisheries Commission

**FROM:** Kathy Rawls, Fisheries Management Section Chief  
Division of Marine Fisheries, NCDENR

Patti Fowler, Shellfish Sanitation and Recreational Water Quality Section Chief  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 30, 2015

**SUBJECT:** Proclamation Review Process

The division has received comments from the public and the commission that proclamations are difficult to understand. This memorandum reviews the recent efforts by the division to improve the process of drafting, reviewing and issuing proclamations. These efforts have resulted in improvements that hopefully address most of the concerns expressed.

In the summer of 2014, the division implemented a new proclamation process that covered all aspects of proclamations from drafting and reviewing to issuance of the documents. The division issues as many as 300 proclamations each year. A significant number of these are reissued seasonally each year. The previous year's version of a proclamation is the starting point for drafting new ones. Over time, many of the documents did not capture changes in rules, authority and processes and became increasingly difficult for fishermen to understand as a result. The initial steps that led to the most recent improvements in consistent content and format of each proclamation included establishing a proclamation review team. This team consists of division staff from various sections and is charged with reviewing each draft proclamation prior to issuance to ensure the proclamations are clear, concise and enforceable. The full benefit of the team's increased scrutiny will be realized when a full year's worth of proclamations have been reviewed. A proclamation calendar was created to track and plan when proclamations should be issued. "Old" proclamations (those issued a number of years ago but still in effect) have been identified and are being reissued at the appropriate time to make them more accessible.

Recent changes include more descriptive proclamation titles, which provide increased clarity for the reader. This added detail helps fishermen determine exactly what the proclamation is pertaining to, i.e. Striped Bass Season - Commercial Trawl: Atlantic Ocean. This title informs fishermen of the species, gear and waterbody to which this particular proclamation pertains. The review team has also increased the level of detail and focus of the various section headings as well as a standard format for these across proclamations to help the reader separate and more easily follow the

information contained in the proclamation. A sample proclamation is attached for your reference to illustrate this.

Another focus of the review team has been ensuring management measures implemented by proclamations are accurate, specific and distinct from any measure contained in existing proclamations, rules or general statutes. Management measures of the proclamation are contained in the sections leading up to the General Information section and are often referred to as the “body” of the proclamation. This is the part of the proclamation that describes the specific action(s) the proclamation is taking and outlines what is or is not allowed. The review team makes an effort to keep the language precise and easy to understand. The review team also considers if two distinct proclamations should be combined into one or a single one split into two proclamations. This is to improve the understanding of the parties and hence, compliance. An example of this is the restructuring of the single snapper grouper proclamation into two: one for recreational measures and the other for commercial.

The General Information section of the proclamation contains any references to existing proclamations, rules and statutes and other information that is not part of the specific action of the proclamation, but provides valuable information to the reader. It also contains the division’s contact information, making it easily accessible in case the reader has a question or needs clarification. This section also contains the intent of the proclamation which provides the reader the necessary detail on why the proclamation is being issued. In addition, the final sentence in the section is bolded and specifically states what action is being taken. This provides the reader with a precise, one sentence explanation that is easy to find and understand. In addition, proclamations distributed via email contain this same bolded sentence at the top of the email, announcing to the reader in advance about the subject of the attached proclamation.

The review team is also evaluating proclamations on an individual basis to determine when/if maps should be included. Although fishermen should not rely on the maps alone and must reference the proclamation in its entirety, maps are a helpful tool to guide the reader to the specific areas affected by the proclamation. The team focuses on developing maps that are specific only to the areas and restrictions included in the proclamation.

The division has made other efforts to simplify proclamations beyond the efforts of the proclamation review team. A division management policy was put in place with the concurrence of the commission in November 2014 regarding temporary rule suspensions, which are implemented by proclamation. Prior to implementing the policy, the division would bring all rule suspensions before the commission for re-suspension of each rule at each commission meeting. This necessitated issuance of new proclamations following each meeting even though, in most instances, there was no change to the requirements, but only changes to the effective date of the proclamation. Fishermen did not experience any tangible changes from the re-suspension of rules; however, it was confusing to receive what seemed like identical proclamations. The new policy eliminates this redundancy, streamlines the process, and reduces confusion to all affected stakeholders.

Another effort the division is undertaking is development of an improved search engine on the division web site to search for specific proclamations. This effort is in its infancy and the division will provide updates to the commission as it progresses.

It is important to remember that each proclamation is a legally binding document that must be clear, concise and enforceable. The division has formed the proclamation review team and implemented improvements in the process over the last several months to make proclamations more easily understandable for the public, yet maintain the enforceability necessary for effective management.





**PROCLAMATION**

**RE: HORSESHOE CRABS – COMMERCIAL FISHING OPERATIONS**

Dr. Louis B. Daniel III, Director, Division of Marine Fisheries, hereby announces that the commercial horseshoe crab fishery **will open effective 12:01 A.M, Thursday, January 1, 2015 and close effective 11:59 P.M., Sunday, May 31, 2015**, and the following restrictions will apply:

**HARVEST RESTRICTIONS**

- A. During the period beginning at 12:01 A.M., Thursday, January 1, 2015 and ending at 11:59 P.M. Sunday, May 31, 2015 it is unlawful to take or possess more than 50 horseshoe crabs per fishing operation per day, regardless of the number of persons or vessels involved.
- B. Effective June 1, 2015 it is unlawful to possess horseshoe crabs taken in a commercial fishing operation.

**GENERAL INFORMATION**

- A. This proclamation is issued under the authority of N.C.G.S. 113-170.4; 113-170.5; 113-182; 113-221.1; 143B-289.52 and NC Marine Fisheries Commission Rules 15A NCAC 03H .0103 and 15A NCAC 03L .0207.
- B. It is unlawful to violate the provisions of any proclamation issued by the N.C. Fisheries Director under his delegated authority pursuant to N.C. Marine Fisheries Commission Rule 15A NCAC 03H .0103.
- C. The intent of this proclamation is to allow North Carolina to comply with the requirements of the Atlantic States Marine Fisheries Commission Interstate Fisheries Management Plan for Horseshoe Crab. North Carolina is operating under a state quota and these trip limits and harvest periods are meant to constrain the harvest of horseshoe crabs to the quota.
- D. Contact N.C. Division of Marine Fisheries, P. O. Box 769, Morehead City, NC 28557 252-726-7021 or 800-682-2632 for more information or visit the division website at <http://portal.ncdenr.gov/web/mf/>.
- E. **This proclamation opens the commercial horseshoe crab fishery and establishes the daily harvest limit.**

BY: \_\_\_\_\_  
Dr. Louis B. Daniel III, Director  
DIVISION OF MARINE FISHERIES

December 3, 2014  
10:30 A.M.  
M-47-2014  
/sab





North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** N.C. Marine Fisheries Commission

**FROM:** Garry Wright, Jason Peters and Curt Weychert  
Division of Marine Fisheries, NCDENR

**THROUGH:** Dr. Louis B. Daniel, III and Nancy Fish  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 15, 2015

**SUBJECT:** Minimum Size of an Effective “Sanctuary”

In 1995, the Blue Ribbon Advisory Council on Oysters recommended the development of oyster sanctuaries in N.C. waters. Construction began in 1996 and was initially administered by the N.C. Division of Marine Fisheries Artificial Reef and Oyster Rehabilitation programs. Since then, the Oyster Sanctuary Program has expanded to consist of 15 permitted sites, including 12 developed sanctuaries, two under construction, and one in design phase. To supplement, the U.S. Army Corps of Engineers is constructing four sanctuaries as environmental mitigation. Total sanctuary area, including U.S. Army Corps of Engineers projects, will be approximately 322.5 acres.

Oyster sanctuaries in North Carolina range from 4.6 to 40 acres in size. As a strategic plan to withstand catastrophic events (e.g. hurricane or anoxic event), a network of small oyster sanctuaries was established in lieu of a few larger ones. This strategy should prevent catastrophic events from damaging or causing mass mortalities throughout the oyster sanctuary network. Additionally, a network of oyster reefs is necessary to ensure reef connectivity through larval supply. Since spat do not usually recruit to the same reef on which they were spawned, larval connectivity is essential to maintain oyster populations (Gerald et al. 2013). Connectivity is largely attributed to reef location, larval supply, and system hydrodynamics. System hydrodynamics play an important role in larval dispersal through transport. Each oyster reef and oyster sanctuary relies on currents or tides to disperse larvae throughout coastal waters. In the absence of these currents oyster larvae would not be transferred from reef to reef for settlement. In many instances, natural oyster reefs provide larvae to oyster sanctuaries, especially for initial spat sets. In turn, the oyster sanctuaries provide an unfished biomass of oysters which provide larvae to both natural reefs and other sanctuaries.

In addition to system hydrodynamics, connectivity is driven by larval supply. Oyster population density and population size structure are essential factors in determining the potential reproductive production of a reef. These data are necessary to guide decisions on effective sanctuary size within a network.

The effective size of an oyster sanctuary is largely unknown and subjective as the knowledge necessary to maximize the effectiveness is limited (Geraldi et al. 2013). However, Powers et al. (2009) established a threshold of 10 oysters per meter squared as an indicator for a functional reef. Other factors, such as the size of the waterbody a sanctuary is constructed in, may play an important role in its effectiveness. Networks of smaller sanctuaries (approximately 5 acres or less) may be more suitable for smaller waterbodies (e.g. Newport River, Core Sound, Bogue Sound) and larger sanctuaries (up to 40 acres) may be more suited to larger waterbodies like the Pamlico Sound.

Research in Pamlico Sound has indicated that the existing network of sanctuaries is not self-sustaining, though oyster densities within sanctuaries overall are increasing over time (Puckett and Eggleston 2012). This suggests sanctuary sustenance is reliant on larval subsidies from non-protected reefs in the system, including natural and enhanced (cultch-planted) reefs. In Pamlico Sound, population density is considerably lower at non-protected reefs versus sanctuaries; however, the expansive total area of non-protected reefs far surpasses that of sanctuaries. Oyster size is directly related to gamete and larval production, with larger individuals producing a higher number of gametes (Mroch et al. 2012). Relative to non-protected reefs, sanctuaries exhibit approximately 72-times greater oyster densities and a size structure favoring larger oysters. Therefore, reproductive potential of sanctuaries is estimated to be approximately 30-times greater than non-protected reefs (Peters 2014). Peters et al. (in prep) noted that due to areal coverage of natural reefs compared to oyster sanctuaries that the potential larval output was similar. This is attributed to the approximately two orders of magnitude difference in natural reefs areal coverage compared to oyster sanctuaries.

North Carolina's smallest oyster sanctuary (4.6 acres) exceeds the 10 oysters per meter squared threshold which classifies them as a functional oyster reefs according to standard set forth by Powers et al. (2009). North Carolina's larger sanctuary sites meet the thresholds and have more potential to produce oysters and larvae, based on surface area alone. North Carolina has not built oyster sanctuaries smaller than 4.6 acres in size. However, the N.C. Division of Marine Fisheries Cultch Planting Program began planting cultch material in 1970s with sites ranging from approximately 0.5 – 30 acres in size. Most, if not all, cultch planting sites exceed and maintain the threshold of 10 oysters per meter squared with the exceptions being due to low spat fall, catastrophic events or depletion. Peters et al., (in prep) found mean production on these small scale cultch planting sites to be 247 oysters per meter squared. In contrast, Peters et al. (in prep) documented mean production on, high relief, oyster sanctuaries to be 1,936 per meter squared. Therefore, on average, all of North Carolina's oyster restoration efforts exceed the 10 oysters per meter squared threshold for functional oyster reefs by approximately 25 to 193-times. According to recent research, sites as small as 0.5 acres may be classified as functional reefs; thus, sites as small as 0.5 acres should be effective as sanctuaries.

## Literature Cited

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Table 1. Summary of North Carolina red drum harvest and trips for 2013 and 2014 providing information on average weights for individual red drum harvested by month from NCDMF fish house sampling.

Year	Month	Species	Harvested (lb)**	Trips with Red Drum**	Average lb/trip	Average Individual Weight (lb)***	Average Individuals/trip
2013	1	Red Drum	3,129	216	14.5	3.6	4.0
2013	2	Red Drum	4,984	304	16.4	2.7	6.1
2013	3	Red Drum	4,030	303	13.3	2.9	4.5
2013	4	Red Drum	6,876	627	11.0	2.4	4.5
2013	5	Red Drum	8,710	766	11.4	2.5	4.6
2013	6	Red Drum	13,310	1,067	12.5	2.8	4.4
2013	7	Red Drum	26,154	1,575	16.6	2.7	6.1
2013	8	Red Drum	42,081	1,899	22.2	3.3	6.8
2013	9	Red Drum	65,273	2,618	24.9	4.1	6.1
2013	10	Red Drum	135,745	4,433	30.6	4.7	6.6
2013	11	Red Drum	61,658	2,064	29.9	4.7	6.3
2013	11	Red Drum	*	*	*	*	*
2014	1	Red Drum	*	*	*	*	*
2014	2	Red Drum	*	*	*	*	*
2014	3	Red Drum	*	*	*	*	*
2014	4	Red Drum	*	*	*	*	*
2014	5	Red Drum	*	*	*	*	*
2014	6	Red Drum	*	*	*	*	*
2014	7	Red Drum	*	*	*	*	*
2014	8	Red Drum	*	*	*	*	*
2014	9	Red Drum	34,749	1,463	23.8	5.8	4.1
2014	10	Red Drum	36,239	1,552	23.3	5.6	4.2
2014	11	Red Drum	13,018	635	20.5	4.4	4.7
2014	12	Red Drum	1,978	86	-	-	-

\*Red drum harvest closed

\*\*NCDMF Trip Ticket Program

\*\*\*NCDMF Fish House Sampling Program







North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

**MEMORANDUM**

**TO:** N.C. Marine Fisheries Commission

**FROM:** John Hadley  
Division of Marine Fisheries, NCDENR

**DATE:** Jan. 30, 2015

**SUBJECT:** Commercial License Holder Personal Consumption and Donation Survey Update

The division has undertaken a mail-based pilot survey of commercial fishing license holders as part of an effort to gather information on fish and shellfish that are landed with commercial fishing gear and kept for personal consumption or donation. Being a pilot survey to gauge if more effort is needed to investigate the extent of unsold catch, the survey is designed to be brief and contains five questions on fishing behavior as well as final disposition of fish and shellfish harvested with commercial gear or in commercial quantities. A copy of the survey is included as part of this memo.

The first mail out of the survey took place in the third week of January 2015 and included 1,000 randomly selected Standard Commercial Fishing License, Retired Standard Commercial Fishing License, and Shellfish License holders from the North Carolina Division of Marine Fisheries commercial license database. As of the writing of this memo, over 200 survey responses have been received. Given a response rate that is above 20 percent, a second mailing of the survey will take place in early February to another 1,000 commercial license holders to gather additional responses. A verbal update on the progress of this survey will be given during the N.C. Marine Fisheries Commission's February 2015 meeting. In the meantime, feel free to contact me with any questions on the survey at [john.hadley@ncdenr.gov](mailto:john.hadley@ncdenr.gov) or 252- 808-8107.



1) What is your main purpose for owning a commercial fishing license?

PID:#####

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2) Did you fish with commercial gear or harvest fish/shellfish in commercial quantities in 2014?

- Yes (If "yes" please continue with the survey)  
 No (if "no" please disregard the following questions and mail this survey back to NCDMF)

3) Which commercial gear(s) did you use in 2014? (Please check all that apply)

Crab Pot  Gig  Trawl  Gill Net  Rod and Reel  By Hand/Rake/Tong  Other: \_\_\_\_\_

4) When fishing with commercial gear, what do you usually do with your harvest?

- Sell all of your catch  Yes  No
- Do not sell any of your catch  Yes  No
- Sell part of your catch and keep the other portion for personal consumption or for donation  
 Yes  No

5) When fishing with commercial gear please estimate how many pounds of the following seafood categories that you kept this year and did not sell?

**Category**

**Please circle correct measure**

Finfish (flounder, spot, jumping mullet, etc.)	_____	pounds
Shellfish (oysters, clams, bay scallops, etc.)	_____	bushels / numbers
Crabs	_____	bushels
Shrimp	_____	pounds

**Thank you for participating in this survey! Please drop this survey card in the most convenient U.S. Postal Service mailbox for return to NCDMF. (Please note that no postage is necessary)**