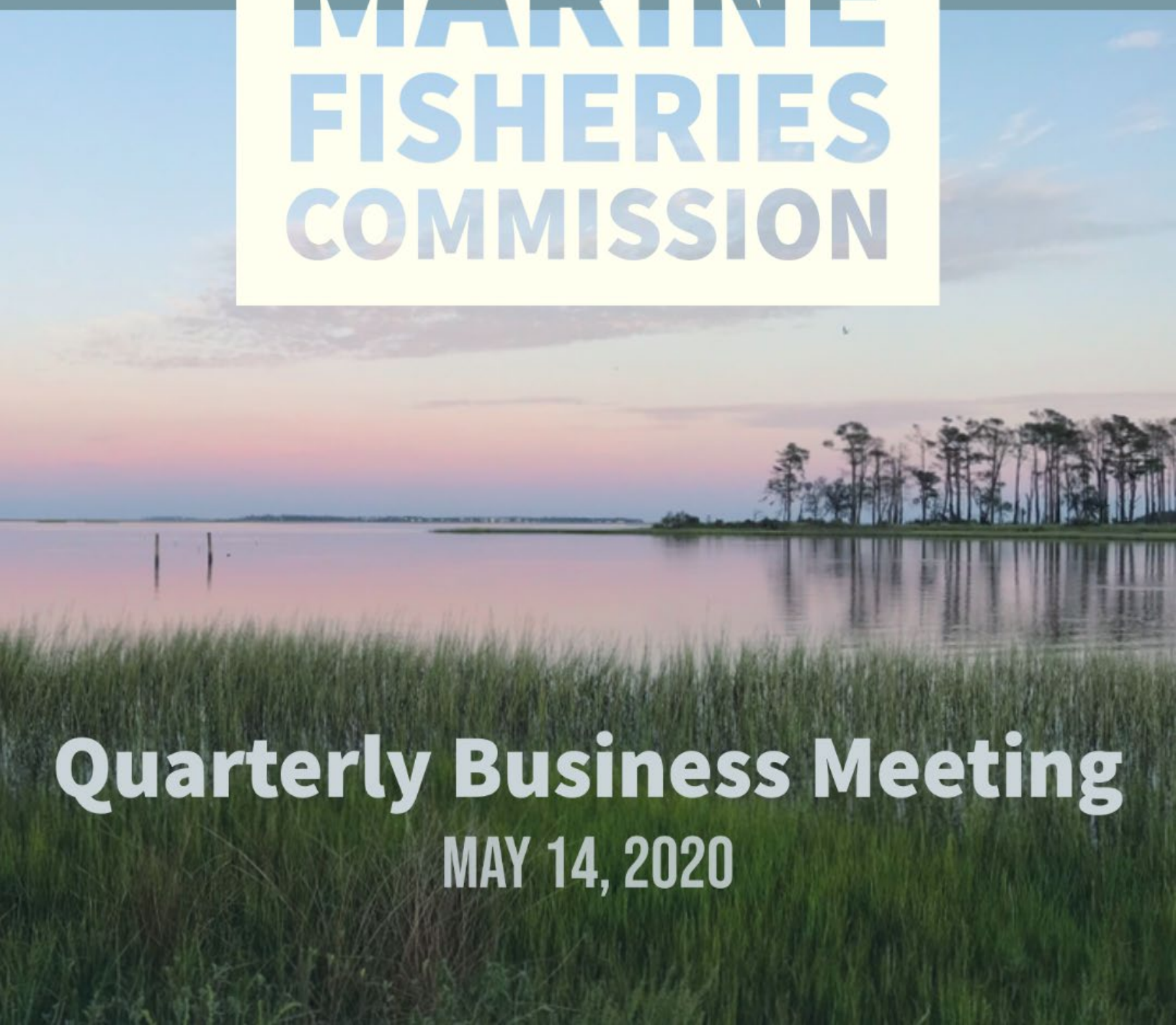
TELECONFERENCE VIA WEBEX

NORTH CAROLINA MARINE FISHERIES COMMISSION



Quarterly Business Meeting

MAY 14, 2020

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Marine Fisheries Commission Business Meeting
AGENDA

Teleconference via WebEx
May 14, 2020

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).

Thursday, May 14

9:00 a.m. Meeting Overview – Lara Klibansky

9:10 a.m. Call to Order*
Conflict of Interest Reminder
Roll Call
Approval of Agenda **
Approval of Meeting Minutes**

9:30 a.m. Chairman's Report
- Letters
- Ethics Training and Statement of Economic Interest Reminder
- 2020 Meeting Schedule
- Commission Committee Assignments
- Committee Reports
  - Southern Regional Advisory Committee

10:00 a.m. Director's Report – Director Steve Murphey
Reports and updates on recent Division of Marine Fisheries activities
- Division of Marine Fisheries Quarterly Update
- **Recreational Hook and Line Modifications – Steve Poland****
- Informational Materials:
  - Atlantic States Marine Fisheries Commission – Chris Batsavage
  - Mid-Atlantic Fishery Management Council Update – Chris Batsavage

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

- Informational Materials continued:
  - South Atlantic Fishery Management Council Update – Steve Poland
  - Highly Migratory Species
  - Protected Resources Update
    - Observer Program
    - Incidental Take Permit Updates
  - Landings Update
    - Red Drum
    - Southern Flounder
  - Tarpon Rule Exemption for Piers

11:15 a.m. Fishery Management Plans

- Status of Ongoing Plans – Catherine Blum
- Blue Crab Fishery Management Plan Amendment 3 –Corrin Flora, Joe Facendola
  - Presentation on proposed Diamondback Terrapin Management Areas
  - Overview of Southern Regional Advisory Committee Recommendations
  - **Vote on final approval of Diamondback Terrapin Management Areas****

12:15 p.m. Lunch Break

1:15 p.m. **Repacking of Foreign Crab Meat in North Carolina– Shannon Jenkins and Shawn Nelson****

2:30 p.m. Rulemaking Update – Catherine Blum

- 2019/2020 rulemaking cycle
- 2020/2021 rulemaking cycle
- **Vote on Notice of Text for readoption of the seven MFC rules in 15A NCAC 18A .3400 (Coastal Recreational Waters Monitoring, Evaluation, and Notification), per G.S. 150B-21.3A ****

3:00 p.m. Rule Suspensions – Kathy Rawls

- **Vote on approval of the continued suspension of NCMFC Rule 15A NCAC 03M .0511 Bluefish.****
- **Vote on approval of the continued suspension of NCMFC Rule 15A NCAC 03J .0103 (h) Gill Nets, Seines, Identification, Restrictions.****
- **Vote on approval of the continued suspension of NCMFC Rule 15A NCAC 03R .0110 (4)(5) Crab Spawning Sanctuaries; 03L .0201 (a)(b) Crab Harvest Restrictions; 03L .0203 (a) Crab Dredging; 03J .0301 (g)(h) Pots.****

3:30 p.m. Issues from Commissioners

3:45 p.m. Meeting Assignments and Preview of Agenda Items for August Meeting – Lara Klibansky

4:00 p.m. Adjourn

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

*****Probable Action Items***

Marine Fisheries Commission Business Meeting Minutes
New Bern Riverfront Convention Center
New Bern, North Carolina
Feb.19-20, 2020

The commission held a business meeting Feb. 19-20 at the New Bern Riverfront Convention Center, New Bern, NC.

The briefing book, presentations and audio from this meeting can be found at http://portal.ncdenr.org/web/mf/02-2020-briefing-book.

Actions and motions from the meeting are listed in **bolded** type.

BUSINESS MEETING - MOTIONS AND ACTIONS

On February 19, a public comment session was held beginning at 6 p.m. Chairman Rob Bizzell called the meeting to order. Chairman Bizzell made a statement regarding the winter storm that was forecast for the area. Chairman Bizzell stated that he was adjusting the agenda so that the meeting could conclude on Thursday evening. The following individuals spoke during the public comment session:

Public Comment Period

Thomas Coltrain, North Carolina Wildlife Federation, stated that while fishing with his father in Bay River, they were forced to move by a net boat. Over 50 years ago, his father told him that due to management, this would be the downfall of fishing and now that day is approaching. He stated that back in 2010, there was a cold stun event that closed trout fishing for recreational, but the season was left open for commercial to sell what didn't die; managing for sale of fish, not sustainability. When a fishery is closed, it should be closed for everyone at the same time.

David Sneed, Executive Director Coastal Conservation Association of North Carolina, stated that CCA supports the small mesh gill net regulation. He stated that the gill net free zone in the Pamlico and Neuse rivers have saved two year classes of stripers. Mild winters and ideal environmental conditions for successful spawns results in a trifecta boom in three species; speckled trout, red drum and striped bass. These net free zones have provided a sanctuary for these fish. Reducing the bag limit and increasing the size limit have played a huge role in the rebound of theses stocks. Consideration should be given to expanding the gill net free zone to the mouth of the Pamlico, Neuse and Bay Rivers. He stated that he supports the tarpon rule change as well.

Stuart Creighton, he stated that he supports every single measure that is being proposed for the management of shrimp. He stated that it is past time to get the trawlers out of the sound. With another year ahead, the recovery in 2020 will be even more impressive. The dramatic success during this first season is clear evidence that not only should the net ban be continued in these areas, but it should be expanded to include all the rivers and creeks of NC.

Greg Judy, stated that a document from CCA regarding small mesh gill nets closure above the ferry lines = sanctuary; this is not true. What it has done is provide a private fishing pond for recreational fishing. Recreational sector has harvested more speckled trout and more red drum than the commercial sector. He stated the proposals put forth by the CCA and NCWF scare him, but what scares him more is the Marine Fisheries Commission backs ruinous proposals.

Chris Elkins, CCA, stated that regarding flounder, the original fishery management plan by the Division of Marine Fisheries put forth conservative recommendations. CCA supported it, but recommendations were not followed. Had they been followed; we might still be fishing for flounder. He stated that he had to give credit for tough measures, but it wasn't quite enough to end overfishing. It was a good start with the closure. He recommends a recreational species-specific management; it is possible to train fishermen to tell the difference between a Gulf and summer flounder. Consider moving forward not relating to this FMP and open inside and outside waters to non-southern flounder species.

Tim Hergenrader, He stated that regarding the striper moratorium, he fishes in the Neuse River and thanked the commission for its action because it was successful, big stripers and spawning females. He stated that Lee's Landing is overflowing with boat trailers; more fishermen than he's ever seen. Confirmation that getting rid of nets equals more angler participation. Keep the moratorium and expand it to include tie down lines. Banish nets in inshore waters.

Donald Willis, Custom Marine Fabrication owner for 30 years, it has a large salter water tackle shop and business has been amazing. With the Pamilco/Tar and Neuse river closures, catches have been up; best years he's seen in almost 40 years. He thanked the commission for their foresight and actions. Regarding trawls, more action is needed. Move the trawls farther out.

Ashley King, Charter captain in New Bern, stated that rules won't work if they are not enforced. Marine Patrol and Wildlife Resources Commission officers need to work together and hold people accountable. Give the commercial fishermen a 75 limit and a mirror lure to use. Few fish die, but overall low discards.

Jeff Martin, stated that regarding Bay River, he and his brother launch the boat in Bayboro and witnessed nets on both sides all the way out to and within Trent Creek not being attended. Does not understand why the set nets don't have to be attended?

Ryan Christopherson, stated that it seems as though we are headed in the right direction, but still have more work to do. He stated he is bothered by some of the things that have been done lately: taking the flounder season away from recreational fishermen, but leaving it open for commercial; I can't go catch a flounder for dinner, but I can go buy one. We can only keep 4 trout a day, but most of them are going to end up in a net anyway. We need to start working together to make things better for both sectors. Common sense laws are needed.

Raymond Britton, Spring Tide Guide Service, Small mesh gill nets, he stated that in the past 40 years, he has never seen fishing like he has this year. Normally his business slows down in Dec, but he was still getting booked in December and January. We set a precedent with flounder this year with the closures. He stated it affected his business, but he was glad to see some action to protect the fishery. Regarding rules on small mesh gill nets, look for some out of the box ideas to

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minimize conflicts. We need to manage equally. Same for trout, lots of problems with gill nets in creeks. There is a way to do it so that both user groups can fish and have a great season.

Judson Brock, charter captain and recreational fisherman, recounted some of the small mesh gill net issues in the areas that he fishes. The schools of redfish are now waning. He stated that the prior week, he caught 12 and pulled gill net chunks off the redfish; all had been targeted. In New River, the spotted seatrout was strong this fall, but the numbers are dropping off. He witnesses injured fish from nets and dead fish floating. Need to figure out what to do with small mesh gill nets; they are killing too many fish

Wyatt Purcell, avid recreational fisherman, stated there is clearly a problem with how our fisheries are being managed. Gill netters in his area are blocking creeks with their nets. He is only seeing smaller fish with gill net scars on them, some with netting still around their gills. Discards by commercial fishermen. The stress and injuries gill nets cause to these fish actually kill more fish after being released from the net.

Ethan Bilderback, charter captain in Topsail, he stated he sees problems with gill netters in his area blocking creeks. Only seeing smaller fish this year with gill net scars on them. Schools of redfish in good size are no longer easy to find. He stated that he loves the fishery and loves his job and the goal is to have a thriving fishery. Topsail depends on tourism for its local economy. The fishing industry has the potential to bring put money into our local economy. It's a win-win situation.

Glenn Skinner, Executive Director at NCFA, stated that the commission has managed to do what no other state has done – close inside waters to trawling. Now we are here talking about gill nets. Dead discards are phenomenal in recreational fishing. They are almost nonexistent in commercial fisheries when it comes to red drum, speckled trout and southern flounder. Start looking at the numbers and talk some common sense. It doesn't matter how a fish is killed, it only matters if it is killed. If you remove more stock than you replace, no matter what gear you use, you will end up with overfishing. That is all we should focus on.

The meeting recessed at 6:50 p.m.

Feb. 20

Chairman Rob Bizzell convened the Marine Fisheries Commission business meeting at 9 a.m. on Aug. 22 and reminded commissioners of their conflict of interest and ethics requirements.

Catherine Blum swore in new Marine Fisheries Commission member, Tom Roller, who replaced Cameron Boltes in the Recreational Seat.

The following commission members were in attendance: Rob Bizzell-Chairman, Mike Blanton, Doug Cross, Tom Hendrickson, James Kornegay, Robert McNeill, Dr. Martin Posey Tom Roller and Sam Romano.

Chairman Bizzell asked to amend the agenda due to the impending inclement weather. A revised and abbreviated agenda was presented to the commissioners. All agenda items not addressed during this meeting were either cancelled or postponed until the May MFC business meeting.

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Motion by Martin Posey to approve the meeting agenda as amended. Seconded by Sam Romano.
Motion carries with no objection.

Motion by Sam Romano to approve the minutes of the November 2019 meeting. Seconded by Doug Cross.
Motion carries with no objection.

Lara Klibansky reviewed evaluations from the State Board of Elections and Ethics Enforcement for actual and potential conflicts of interest for the new commissioners, as follows:

Tom Roller:
Thank you, Mr. Chairman.
I would like to welcome our new commissioner, Tom Roller, who replaces Mr. Cameron Boltes in a recreational seat.

The commission is required by the North Carolina State Ethics Commission to review the evaluation of the Statement of Economic Interest for new commissioners. At this time I will read into the record the evaluation of the Statement of Economic Interest conducted by that commission for Mr. Roller as a prospective appointee to the North Carolina Marine Fisheries Commission.

The State Ethics Commission has received Mr. Thomas N. Roller's 2020 Statement of Economic Interest as a prospective appointee to the North Carolina Marine Fisheries Commission. They have reviewed it for actual and potential conflicts of interest pursuant to Chapter 138A of the North Carolina General Statutes, also known as the State Government Ethics Act.

They did not find an actual conflict of interest, but found the potential for a conflict of interest. The potential conflict identified does not prohibit service on this entity.

The state ethics commission found Mr. Roller fills the role of a member who is actively engaged in the sports fishing industry as demonstrated by deriving at least fifty percent (50%) of annual earned income from selling goods or services in this State. Mr. Roller owns WaterDog Guide Service, a recreational fishing guide charter boat company. In addition, he serves as a board member of the Coastal Conservation Association of North Carolina and the American Saltwater Guides Association. Because he would serve on the authority for members of his own profession, he has the potential for a conflict of interest. Accordingly, Mr. Roller should exercise appropriate caution in the performance of his public duties should issues involving any of these entities come before the Commission for official action. The evaluation of statement of economic interest for each appointee to the commission is kept on record at the Division of Marine Fisheries. And that completes this item.

Public Comment Period:

Danny Rodgers, stated he is originally from southern Louisiana where there is a world class fishery. There were struggles in the 80's due to netting, but in the mid-90's gill nets were removed, and the fishery blossomed. The fishery brings in a lot of revenue to the state of LA. When he and his family moved to NC in 2006, the first thing that caught him off guard was that the limits were lower, didn't catch as many fish, not as plentiful. This past year, for the first time since 2006, nets have been banned, the fishing has been incredible. Stated that his son works at a tackle shop and sees more and more customers, dad's with sons fishing. Speaking for his son who could not attend the meeting, he would say that he just wants his future children enjoy the resource the way that he does. Please remove the nets from the water.

Greg Ludlum, fishing pier owner, stated that the tarpon fishery is a big fishery for his business. They have taken all the cuts they can. A state record tarpon of 193 lbs. was caught on his pier; the fish was donated to research. Few tarpon get gut hooked, byt overall not killing them. Many piers fish for tarpon; the pier fishing is a forgotten thing with the MFC and other councils. Tarpon to him is like the blue marlin. Another hit for the piers is no southern flounder fishing now and a 50 spot limit will be coming soon. He sees over 400,000 pier customers that come to fish. We need a true voice for pier owners.

Bill Gorham, owner of a lure company, stated that when reading through the documents for public comment, he didn't see the tarpon fishery mentioned. Add it and then vote on it. circle hooks are a good thing, but is it measurable? If we do move forward, give the industry notice; manufacturers, educate anglers, etc.

Ron McCoy, a surf, inshore and nearshore fisherman, Has been attending MFC meeting since 2012. To change the result, you must change the process. The Fishery Management Plan process has not changed. It ignores stock status trends until it is too late. The fishery is tainted with politics. Since 2012, membership has changed, but process has not. Remove the politics.

Dave Timpy, charter company owner, has a degree in oceanography. Supports the tarpon rule. Another fellow charter captain, Jot Owens, also supports the rule. Hopes the public comments that were submitted are reviewed. Ban gear for part-time commercial fishermen. Recreational license fees are supposed to enhance fisheries, but have low bag limits. Fish belong to the people; a public trust resource. There have been an alarming number of proclamations since 2000, overwhelmingly due to gill nets. It would reduce work and improve fisheries to ban gill nets.

Jerry Schill, Director of PR NCFA, attended MFC meetings since 1987. Last night and a little bit here this morning during public comment, can hear the wedge being driven deeper the recreational and commercial industries. Regarding todays meeting, he is interested in the presentation on rulemaking. In 1997 the Fisheries Reform Act was passed for a specific process. Keep that in mind when it comes to rulemaking.

Thomas Newman III, commercial fisherman, mostly targets Spanish mackerel in the small mess gill net fishery. Stated that he was attending today's meeting specifically for Director Murphey's presentation on small mesh gill nets. Small mesh gill net fishery is very important to the north east part of the state. There is a lot of federal observer data to be used. They have a 20-25% observed trip target. They collect data such as discards, mesh size, gill net length, etc. Please use that data.

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Bud Abbott, a concerned citizen who has been attending MFC meetings for 17 years, He agrees with Mr. Skinner, it is a time to come together, both sectors, and not fight over the remains of declining stocks. The Neuse and Pam/Tar basins are not a result of closures, but are improved by them. Nursery areas should be left as they are. Regarding the southern flounder problems, the FRA focuses on maximum yield, the MFC failed to act for years, the lawsuit by NCFA to overturn 2015 supplement. Let recreational harvest Gulf and summer flounder.

Greg Sheller, stated he has dealt with gill nets his whole life, they are everywhere. Drag nets all around, pots, too. He stated he works all week and wants to be able to fish on the weekends, but can't. We need to eliminate the problem. The commercial fishermen need to have respect for property and piers. Maybe a 100-200 yard setback from piers.

Chairman's Report

Chairman Bizzell reviewed correspondence that had been sent and received by the commission since the last business meeting

Commissioners were reminded they are required to take ethics training within six months of their appointment and every two years thereafter. Commissioners were also reminded of the annual requirement to submit a Statement of Economic Interest form by April 15 to the State Board of Elections and Ethics Enforcement.

Commissioners were reminded of the 2020 meeting schedule:
Feb. 19-21
May 13-15, Beaufort Hotel
Aug. 19-21, Brownstone, Raleigh
Nov. 18-20

The 2020 committee assignments for commissioners was included in the briefing materials and it was noted that Tom Roller will be taking the place of Cameron Boltes on the Finfish and Nominating committees.

Lara Klibansky provided a Shellfish Lease Aquaculture Review Committee update.

Committee Reports

Chairman Bizzell directed the commissioner to their briefing book for the reports from the Habitat and Water Quality Committee and the Joint Meeting of the MFC Commercial Resources Fund Committee and the Funding Committee for the N. C. Commercial Fishing Resource Fund.

Rulemaking Presentation

Commission counsel, Shawn Maier, gave an informational rulemaking refresher presentation.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=33495785&name=DLFE-142450.pdf

Potential Action to Begin Rulemaking for Small-Mesh Gill Nets

Director Steve Murphey

The director described the initiation of a two-phased approach with respect to the gill nets:

1) A review of existing MFC small-mesh gill net rules and proclamations to identify potential amendments with respect to minimum mesh size, total yardage and attendance requirements; and
2) Issuance of a proclamation during March 2020 to limit yardage for small-mesh gill nets with a reasonable upper limit based on analysis of average, minimum and maximum yardages currently used while evaluation of all potential management strategies can be evaluated. Also, there are hot spot areas that we need to address attendance past the current May – November requirement in some areas.

The director states an anticipated timeline of March 2020 for the issuance of the proclamation and a November 2020 presentation of an issue paper with management options for rulemaking from which the MFC will select its preferred option.

Motion by Martin Posey that the MFC endorse the DMF initiation of the rulemaking process for small mesh gill nets. Seconded by Doug Cross.
Motion carries unanimously.

Fishery Management Plan Update
Catherine Blum, the division's Fishery Management Plan Coordinator, gave the commission an update on the status of North Carolina's ongoing fishery management plans.

Blue Crab Fishery Management Plan Amendment 3
The MFC gave final approval for the Blue Crab Fishery Management Plan Amendment 3. Jason Rock and Corrin Flora, division staff leads for the Blue Crab FMP reviewed the MFC preferred management options that were selected and send for department and legislative review at the November 2019 MFC business meeting.

Two issues were discussed at length, sustainable harvest issue and terrapin excluder device use criteria, and had non-substantial changes made to the adopted final FMP.

Motion by Sam Romano to table the vote on the Blue Crab FMP until the stock assessment is updated with 2019 landings. Second by Doug Cross.
Motion fails.

Motion by Sam Romano to accept the Marine Fisheries Commission recommendation for achieving sustainable harvest and ending overfishing. Seconded by Martin Posey.

> **Motion by Doug Cross to amend the previous motion by removing the 6.75-inch maximum size limit on mature female crabs and replacing it with a 5-inch minimum size limit on female crabs statewide. Seconded by Mike Blanton.**
> **Motion carries with one abstention.**
>
> **Motion by Martin Posey to amend the Romano motion to delete the language stating "update stock assessment with 2019 data." Seconded by Mike Blanton.**
> **Motion carries with no opposition.**

Motion by Sam Romano, as amended, to accept the Marine Fisheries Commission recommendation for achieving sustainable harvest and ending overfishing, removing the

6.75-inch maximum size limit on mature females and adding a 5-inch minimum size limit statewide on mature females and omitting the update of the stock assessment once 2019 data is available. Seconded by Martin Posey.
Motion carries 8-0 with one abstention (Sam Romano).

Motion by Sam Romano to accept the Marine Fisheries Commission recommendation to use science on locally specific pot funnel designs to reduce terrapin interaction and identify individual areas with terrapin hotspots that would be closed to potting unless an excluder is used.
Motion ruled out of order by the chairman.

Motion by Pete Kornegay that the MFC adopt the criteria presented by the DMF for identifying diamondback terrapin management areas, adding a step to bring proposed management areas back to the MFC following committee meetings at the next regularly scheduled meeting for approval. Seconded by Tom Roller.
Motion carries with one dissention and one abstention.

Motion by Martin Posey that the MFC adopt Blue Crab FMP Amendment 3 as amended. Seconded by Robert McNeill.
Motion carries with one dissention.

2020 Recreational Flounder Season
Director Murphey discussed and announced the 2020 recreational flounder season which will be a block season of August 16 through September 30.

Southern Flounder Fishery Management Plan Amendment 3
Mike Loeffler and Anne Markwith, division staff leads for the Southern Flounder Fishery Management Plan gave a presentation which included a summary of public comment received during the scoping period, an overview of potential management strategies and plan timeline and the of draft FMP goals and objectives.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=33495785&name=DLFE-142457.pdf

Motion by Martin Posey to approve the goal and objectives for the Southern Flounder FMP Amendment 3 as presented by DMF. Seconded by Tom Roller.
Motion carries with no objection.

Shrimp Fishery Management Plan Amendment 2
Chris Stewart, Kimberlee Harding and Jason Rock, the division's staff leads for the Shrimp Fishery Management Plan gave a presentation which included a summary of public comment received during the scoping period, an overview of potential management strategies and plan timeline and the of draft FMP goals and objectives.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=33495785&name=DLFE-142458.pdf

Motion by Robert McNeill to approve the goal and objectives for the Shrimp FMP Amendment 2 as presented by DMF. Second by Martin Posey.
Motion carries without objection.

Rulemaking

Catherine Blum, the division's Rulemaking Coordinator, provided the commission with an update on the 2019/2020 rulemaking cycle and an overview of public comments received for two rules up for final approval; Tarpon and License and Commercial Fishing Vessel Registration Transfers.

Motion by Pete Kornegay to approve 15A NCAC 03M .0509 (Tarpon). Seconded by Robert McNeill. Motion carries 5-4.

Motion by Mike Blanton to adopt 03O 0108 (License and Commercial Fishing Vessel Registration Transfers). Seconded by Doug Cross. Motion carries with no objection.

Rulemaking Continued

Chris Stewart, the staff lead for the Shrimp Fishery Management Plan, gave a presentation on Shrimp FMP Amendment 1 Reclassification of Special Secondary Nursery Areas to Permanent Secondary Nursery Areas and an update on the Oyster Sanctuary Rule Change Issue Paper.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=33495785&name=DLFE-142453.pdf

Motion by Pete Kornegay to select Option 2 as the preferred management option for the Shrimp FMP Amendment 1 Special Secondary Nursery Area Issue Paper. Seconded by Robert McNeill.
Motion carries 6-2 with one abstention.

Rule Suspension

Due to inclement weather, the Rule Suspension update was postponed until the May 2020 MFC business meeting.

Shellfish Aquaculture Update

The division's Habitat and Enhancement Section Chief, Jacob Boyd and Shellfish Lease Coordinator, Michael Graven, gave a presentation on the shellfish lease program and a User Conflict Study update.

To view the presentation, go to:
http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=33495785&name=DLFE-142451.pdf

Motion by Tom Hendrickson to approve the recommended language for 15A NCAC 03O .0201, 03O .0202, and 03O .0204 to address user conflicts as required by the Shellfish Aquaculture Bill adding "or a shore based structure" to 15A NCAC 03O .0201(a)(2) following "250 feet to a developed shoreline". Seconded by Mike Blanton.

Motion carries with no opposition.

Issues from Commissioners

Commissioner Cross asked the division's director for a white paper on 18A.0713 amend repackaging to make it unlawful to repack any foreign crab meat in North Carolina in another container.

Commissioner Cross also requested the division examine a possible amendment to the tarpon rule adding an exemption for ocean fishing piers. .

Lara Klibansky reviewed the issues from Commissioners and previewed the May MFC business meeting agenda.

The meeting adjourned at approximately 4:12 p.m.

CHAIRMAN'S REPORT

LETTERS

ETHICS EDUCATION

2020 MEETING SCHEDULE

COMMITTEE ASSIGNMENTS

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LETTERS

GILL NETS

DIAMONDBACK TERRAPIN MANAGEMENT AREAS

MFC AC

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GILL NETS

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Fisheries Conservation
Date: Wednesday, March 4, 2020 4:19:32 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 5:40 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Fisheries Conservation

Another, probably many more to come!
Get Outlook for iOS

From: Andra Halnon [redacted]
Sent: Tuesday, March 3, 2020 3:21 PM
To: Bizzell, Rob
Subject: [External] Fisheries Conservation

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov<mailto:report.spam@nc.gov>

Greetings Rob,

I am a member of the Salt Strong Fishing Community. I also live along the [redacted] Texas. I read today Wyatt Parcel's presentation on North Carolina fishing practices and needless to say, I felt kind of sick after learning that gill nets are still legally acceptable for use within your state. Gill nets are illegal in Texas due to, among other things, the high mortality rate of the bycatch.

As I grow as a recreational fisherman I have become more and more sensitive to taking a life. Even if it happens to be that of a fish. Once hooked, they fight like crazy to escape capture. At the risk of sounding sanctimonious, the fish wants to LIVE and like all God's creatures they have a right to live.

Limits of catches imposed by my state have become more restrictive over the years - one of the most recent has been decreasing the speckled trout haul from 10 (15" - 25") per person to 5 per individual angler for the upper Texas coast. This limit had already been put in place for the lower Texas coast in previous years. I am actually GLAD about this because I hope to see a healthy fish stock in my state for many years to come.

So I guess the points I am trying to make are these... 1) While I don't live in North Carolina and only briefly crossed over into your state while hiking a portion of the Appalachian Trail, I still care about fishery conservation all across the globe. 2) Texas conservation laws are far from perfect but I applaud the efforts made and the thoughts behind them. 3) I readily ACCEPT these laws and am happy to see them in place because as a recreational angler I do worry about the health of Texas fisheries. 4) And perhaps most importantly, I think most anglers have a conservative mindset and I truly believe a majority of North Carolina fishermen will be relieved, if not happy, to see restrictions put in place that will take pressure off the North Carolina fisheries.

My apologies if I have overstepped.

Regards,

Andra Halnon

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From: Klibansky, Lara
To: Bizzell, Rob
Cc: Gillikin, Dana
Subject: RE: [External] Gill nets
Date: Tuesday, March 10, 2020 2:52:41 PM

Thank you, Rob.

From: Bizzell, Rob
Sent: Tuesday, March 10, 2020 2:51 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Gill nets

Another, more to come I am sure!
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From: Bob Chilson [redacted]
Sent: Tuesday, March 10, 2020 1:53 PM
To: Bizzell, Rob
Subject: [External] Gill nets

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Dear Mr. Bizzell please stop the use of gill nets in North Carolina!!! Save the fish!!! What fisherman catch compared to commercial gill netting is minimal. It is ruining the fishing and stopping people from moving to North Carolina who love to fish in the ocean. I was planning on moving to NC this summer, but will now wait until the gill net law hopefully changes. Thank you, Bob Chilson

PS, i am a member of Surfcaster's Journal and Saltstrong and we all respect fishing too much to see the use of gill nets continue!!!

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Thank you for voting YES to "catch and release" tarpon rule
Date: Tuesday, March 10, 2020 11:42:21 AM

From: Bizzell, Rob
Sent: Friday, March 6, 2020 4:10 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Thank you for voting YES to "catch and release" tarpon rule

Another
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From: Chuck Fuller [redacted]
Sent: Friday, March 6, 2020 3:31 PM
To: Kornegay, K; Bizzell, Rob; McNeill, Robert; Posey, Martin H; Roller, Thomas N
Subject: [External] Thank you for voting YES to "catch and release" tarpon rule

North Carolina Marine Fisheries Commission
Chairman Rob Bizzell, and Commissions Pete Kornegay, Robert McNeil, Dr. Martin Posey, and Tom Roller

We have long anticipated the day Tarpon would be a "catch and release" only fishery in North Carolina, and because of you, that day has finally arrived. Your commitment to sustaining our fishery will not go unnoticed, as future generations of anglers enjoy battling Tarpon in our waters. Although they are not caught for the table, Tarpon are always enjoyable on the line. Abundant tarpon in our waters increases economic activity related to the fishing economy for which everyone in Eastern North Carolina benefits.

As the rule (15A NCAC 03M .0509) moves forward through the process, please hold firm and do not compromise. Our coastal fishery and habitats depend on your support.

Thank you for promoting this improvement and allowing Atlantic Tarpon to flourish in North Carolina.

Regards,
Charles F. Fuller
[redacted]

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From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Gill nets and regulations
Date: Thursday, March 5, 2020 3:26:43 PM

From: Bizzell, Rob
Sent: Thursday, March 5, 2020 2:33 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Gill nets and regulations

Another
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From: tCharles carte [redacted]
Sent: Thursday, March 5, 2020 2:21 PM
To: Bizzell, Rob
Subject: [External] Gill nets and regulations

I worked till retiring in in NC looking forward to being able to fish an enjoy what life I have left. What happens then? They shut down flounder fishing, place limits that seem to me will never work. They allow gill nets which anybody whose ever been near one knows they kill fish of any kind. Sure you say well they have holes to only catch certain sizes but I'm sure you know that's not true. Don't believe me, go look! Recreational fishermen pay far more than commercial fisherman but every year our needs an wants go last place. How about doing something for us equally for a change. If you stop us then stop them as well. Its there lively hood sure but we have all made great sacrifices for our families to do whats needed to take care of them. It's a choice! I'd be content to fish an only keep a couple flounder with a size limit of 18". Speckled trout limit 3 with size limit between 18" an 22". EVERYTHING ELSE GOES BACK IN THE WATER. Red drum stays the same. I don't understand the limits on Blue fish. Anyway stop Gill Nets an do something about shrimp by-catch. They kill millions of the fish you're not allowing us to fish for anymore. We have earned a right to fish an I'm fed up useless actions an regulations that are never fair to all! Thank you for your time.

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Gill nets
Date: Wednesday, March 4, 2020 4:19:11 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 9:54 PM
Subject: Fwd: [External] Gill nets

Another
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From: [redacted]
Sent: Tuesday, March 3, 2020 9:44 PM
To: Bizzell, Rob
Subject: [External] Gill nets

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Mr. Bizzell

My name is Jack Dunn and I am a resident of North Carolina. I am writing to encourage additional modifications to fill net regulations. First I would encourage the state to restrict netting within 500 feet of any shore line so that fish estuaries are protected and stocks can build back. Second, ever fish caught in a gill net should be kept and the state should limit total tonnage and prohibit netting in its entirety once appropriate tonnage has been removed from the stock on an annual basis.

Thanks for your service to the state

Jack Dunn

Sent from my iPhone

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Netting fish
Date: Thursday, March 5, 2020 3:27:02 PM

From: Bizzell, Rob
Sent: Thursday, March 5, 2020 2:34 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Netting fish

Another
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From: Joe Baldwin [redacted]
Sent: Thursday, March 5, 2020 1:31 PM
To: Bizzell, Rob
Subject: [External] Netting fish

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To whom it may concern we have to stop the injustice of these random killing devices of fish, and other ocean wildlife. In most of the other states on the east coast a recreational fisherman can keep 15 trout, 5 red drum, 10 flounder and other high limits on other fish. While here in north Carolina we can only keep 1 red drum,4 trout, and 0, flounder. We are also one of the only states on the east coast who allow gill nets and shrimp nets inside the 3 mile zone. I am personally in a wheelchair and it very hard for me to find places I can fish where I can actually have a chance of catching anything and I will say I'm very blessed to have a few places like that. That is until the net boats come in the tiny private marina that is considered a closed area and drop there nets in the cover of darkness. We are doing a injustice to all the hard working men and women who pay the extremely expensive dues for a lifetime license or those who buy them annually. It's just not fair. I remember when I was a kid you could catch fish nonstop 2 at the time. Now your lucky if you get your tiny daily limit at all. Thank you for your time

Sent from my iPhone

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Stop The Insanity Of Gill Nets
Date: Wednesday, March 4, 2020 4:20:25 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 1:50 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Stop The Insanity Of Gill Nets

For the books. Rob
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From: John Lenzmeier [redacted]
Sent: Tuesday, March 3, 2020 12:20 PM
To: Bizzell, Rob
Subject: [External] Stop The Insanity Of Gill Nets

Dear Mr. Bizzell,

You are a leading steward of our coastal water fishery.

I implore you to be courageous and act in what is in the best interest for the fishery, and to not be overly influenced by a single historically powerful constituency.

As a recreational angler I am appalled at the horrific devastation that gill nets impose on our coastal waters.

This resource is under an extensional threat because of the use of gill nets which exacerbates the over fishing by the commercial community. This threat is validated by the closing of the Flounder fishery since September of 2019.

I do not believe it was the intent of the commercial fishing constituency to over fish to the point where the fishery collapses. However, that is what has happened.

In most cases, I believe the commercial fisherman follow the rules and laws as written.

The salient point is that although the laws were followed, the laws are fundamentally flawed.

The statistics of harvest unequivocally prove that gill nets are slaughtering the fishery.

In 2017 gill nets harvested 186,000 lbs of red drum - recreational harvest = 25,000 lbs.

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In 2017 gill nets harvested 1.3 million pounds of flounder vs the recreational harvest of approximately 140,000 lbs.
The decline in the stock lays directly at the feet of the rule makers. Therefore, the opportunity to rebuild the stock is also within your direct purview.

The numbers for speckled trout follow a similar pattern.

It bears repeating - the closure of the flounder fishery in NC is a direct result of the over harvest because of gill nets.

It is past time time to ban gill nets in NC waters.

In fact commercial limits should be dramatically reduced to allow our fishing stock to rebuild.

Sincerely,

John Lenzmeier
[redacted] NC

CC Gov Roy Cooper

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] NC Fisheries
Date: Wednesday, March 4, 2020 4:19:56 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 5:36 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] NC Fisheries

Another
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From: [redacted]
Sent: Tuesday, March 3, 2020 5:23 PM
To: Bizzell, Rob
Subject: [External] NC Fisheries

Please cut out Gill netting and please cut back on commercial Flounder catches.

Sincerely,

Kevin Sikorski
[redacted]
NC [redacted]

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Stop Gill netting
Date: Tuesday, March 10, 2020 8:16:43 AM

From: Bizzell, Rob
Sent: Monday, March 9, 2020 7:06 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Stop Gill netting

Another
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From: Michael Bishop [redacted]
Sent: Monday, March 9, 2020 12:20 PM
To: Bizzell, Rob
Subject: [External] Stop Gill netting

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I have been going to the Outer Banks and inshore locations in North Carolina on fishing vacations for decades. I've also seen gill netting in action. I've often wondered how it makes sense to allow such an indiscriminately destructive commercial fishing method in an environment where the state, and in some cases the Federal government has deemed it necessary to enact regulations to protect wildlife. The steps the state has taken to ensure responsible and sound fishery management are, in most cases, perfectly reasonable, and recreational fishermen, for the most part, understand why these regulations are in place and follow them. But it obviously undermines the state's efforts to allow protected wildlife to perish in gill nets. Please consider banning or at least, enacting reasonable regulations for gill netting that complement your own efforts at fishery management.

Thank you,
Michael Bishop Ph.D

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Gill Net Ban
Date: Wednesday, March 4, 2020 4:20:41 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 1:49 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Gill Net Ban

For the books. Rob
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From: Mickey Johnson [redacted]
Sent: Tuesday, March 3, 2020 1:18 PM
To: Bizzell, Rob
Subject: [External] Gill Net Ban

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Rob,
Living in Florida and fishing before, during and after the gill net bans, I can attest to the dramatic change the ban had on our fisheries. Not only did I see a change in the recreational fishing action, but also the positive effect it has on the marsh coast line we have in the "Big Bend" area of Florida. Before the ban, you would find balls of line left along the shore that effects all the wildlife, not just the fish.

Please allow this email to serve as my support to institute a gill net fish ban in the state of North Carolina.

Mickey Johnson
Director of Operations
[redacted]

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Is The Mission Of The DMF Being Realized?
Date: Tuesday, March 10, 2020 11:41:33 AM

-----Original Message-----
From: Paul Wright [redacted]
Sent: Friday, March 6, 2020 3:47 PM
To: Bizzell, Rob <r.bizzell.mfc@ncdenr.gov>; Roller, Thomas N <Tom.Roller.mfc@ncdenr.gov>; Hendrickson, Tom <t.hendrickson.mfc@ncdenr.gov>; Kornegay, K <j.kornegay.mfc@ncdenr.gov>; Posey, Martin H <Martin.Posey.mfc@ncdenr.gov>; McNeill, Robert <Robert.B.McNeill.mfc@ncdenr.gov>; Blanton, Mike <m.blanton.mfc@ncdenr.gov>; Cross, Doug <d.cross.mfc@ncdenr.gov>; Romano, Sam <s.romano.mfc@ncdenr.gov>
Cc: Murphey, Steve <steve.murphey@ncdenr.gov>; Hamilton, Cindi B <Cindi.Hamilton@ncdenr.gov>; Bianchi, Alan <alan.bianchi@ncdenr.gov>; Klibansky, Lara <Lara.Klibansky@ncdenr.gov>; Lewis, Jennifer R <Jennifer.Lewis@ncdenr.gov>; Lee, Laura <laura.lee@ncdenr.gov>; Stewart, Chris <chris.stewart@ncdenr.gov>; Bryan-Millush, Erin <erin.bryan-millush@ncdenr.gov>; Wilson, Chris <chris.wilson@ncdenr.gov>; Klibansky, Lara <Lara.Klibansky@ncdenr.gov>; Clark, Brenda <brenda.clark@ncdenr.gov>; Paramore, Lee <lee.paramore@ncdenr.gov>; Loeffler, Michael <michael.loeffler@ncdenr.gov>; Bauer, Tracey C <Tracey.Bauer@ncdenr.gov>; VanMiddlesworth, Todd D <Todd.VanMiddlesworth@ncdenr.gov>; Lupton, Dee <dee.lupton@ncdenr.gov>; Poland, Steve <Steve.Poland@ncdenr.gov>; Blum, Catherine <catherine.blum@ncdenr.gov>
Subject: [External] Is The Mission Of The DMF Being Realized?

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To Members of the MFC:

Below is a letter I penned yesterday to the DMF. One of the DMF recipients responded to me and pointed out that it is the MFC's responsibility to regulate. They also mentioned that the DMF was solely responsible for relaying science based information to the MFC. Furthermore that the DMF was not for implementing policy.

The reality is you are all collectively responsible. Substitute the DMF acronym for MFC wherever any of you feel its appropriate in my original letter. However deflecting this crisis from one related party organization to another is unacceptable. Is the MFC aware of the DMF's stated mission? Moreover is the MFC in its responsibility to implement the DMF's stated mission actually doing so?

To learn more I have waded through the MFC board meeting materials. I read agendas, letters, minutes, etc. The ravages of gill net fishing have been raised to the MFC and DMF for years. Yet there is no cohesive thought nor actionable response to address this crisis. Not a single measure whatsoever has been proposed let alone implemented to combat the indiscriminate destruction of marine life from gill net fishing. It appears that the DMF and MFC organizations have categorically ignored the crisis and the public will on these points.

The MFC February meeting materials included a gill net map of the Central Southern Management Area. A picture tells a thousand words. I only came up with one word- nauseating. When the entirety of our coastal fishery is destroyed how will I explain that to my young sons? Do I show them your map?

The DMF/MFC's mission is failing and it doesn't have to. Don't take offense to my words. Instead take action. You are collectively empowered to do so. Do so and all of you will be able to proudly recite the DMF's mission statement. You will be able to recite the mission statement because you actually brought it to realization.

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Yesterday's letter to DMF below. I encourage all of you to read on with an open mind and heart. Evidently only the MFC can institute the change that is needed immediately. That change is a permanent ban on inshore coastal gill net fishing in our state.

All-

By way of introduction I am a native North Carolinian and father of three. Like many in our state I consider our coastal lands and waters to be part of my very heart and soul. In fact I believe its fair to assume that all of you feel this way in some fashion. So let me preface my letter with a strong appreciation for all of the good and challenging work that all of you do for the entirety of our marine fishery everyday.

Your mission statement reads "The Department of Marine Fisheries is dedicated to ensuring sustainable marine and estuarine fisheries and habitats for the benefit and health of the people of North Carolina".

Sadly this stated mission is failing with no clear DMF action in sight. It is failing in the context of our state continuing to allow legal inshore gill net fishing. The indiscriminate destruction of marine life by inshore gill netting has reached catastrophic proportions. Whether its juvenile fish, over slot, 80% + bycatch...the gill net death trap doesn't care. Red drum, trout, sheepshead no species is spared. The gill net kills everything.

Look around. How many other states still allow the indiscriminate destruction of marine life aka unbridled inshore gill net fishing? I know the answer does the DMF? Is NC considered to be a prime locale for destination fishing? Hardly. By comparison South Carolina, Louisiana, Florida, and others have thriving and sustainable fisheries. Furthermore they continue to take sensible measures to grow their fisheries. Those fisheries successfully support both commercial and recreational interests. Our inshore coastal waters should be teeming with fish stock. Instead the DMF had to put a full year moratorium on flounder fishing. Your own flounder stock assessment is beyond saddening. Flounder was once one of our most bountiful species. The DMF's mission is failing.

The only analogy to draw is to have a bunch of hunters enter a rich forest armed with automatic weapons, flame throwers, and grenades. After killing every living animal and destroying the ecosystem they are able to harvest the 3 deer they were "targeting". Then they do it again the very next day.

The commercial fisherman argument that its their heritage and "right" to inshore gill net fish is just ridiculous. It reeks of decades of commercial fishing industry financial lobbyists and political cronyism. That a tiny minority of people in our state singularly benefit economically by the gross exploitation and destruction of public resources should be criminal. At a minimum inshore gill net fishing should be aggressively regulated. Who's accountable for this? The DMF's mission is failing.

The data is increasingly proving the point. We all sensed it. We all felt it in our activities in the coastal waters. Now we all factually know it. Recreational fisherman and guides cant stop talking about it because they experience it everyday of every year. The longevity of our fishery is at a cross roads. A multi billion dollar economic resource for our state is being irrevocably destroyed. Our fishery should be thriving. The DMF's mission is failing.

What are the solutions? Start with banning inshore gill netting full stop. If not an immediate and permanent ban then regulate it for 2 years prior to instituting the permanent ban. I cant believe that any commercial fisherman can just gill net if they choose to. It's insane. Not even a license needed? Is that correct? It's dumbfounding. The DMF should immediately declare a $10,000 annual individual license fee to inshore gill net fish. There should be a $25,000 fine if an individual is caught inshore gill net fishing without a license. If caught twice its revocation of the full commercial fishing license and $50,000 fine. The entirety of the proceeds goes back to funding larval stage marine life stocking to help replenish our depleted fishery. Specify only 1 or 2 days per month of legal inshore gill net fishing. Perhaps shorten the length of legal inshore gill nets themselves. Load the waters with enforcement officers to monitor the new policy on approved gill net days. After the two year grace period is over the permanent ban kicks in. Forever.

Inshore gill netters need to evolve. No one wants to strip away their livelihood without providing alternatives. The DMF should help them. We should help them. They should help themselves and be the strongest stewards of the resource. Pound nets? Retool the flounder gigging regulatory framework? Both are cleaner ways to fish. Have the DMF sponsor a contest for commercial fisherman to develop new methods of cleaner, sustainable targeted inshore fishing. They haven't done it because they have been properly incentivized to do so.

The DMF is accountable to the state's greater good not a narrow commercial lobby.
The DMF is empowered and owns this responsibility.

I implore all of you. Work with haste and purpose. With passion and determination. You have the support of everyone. Let the current DMF succeed in delivering on its own stated mission. Deliver on the DMF'S mission while your predecessors have failed before you. Deliver on it for all current and future North Carolinians.

Maybe then your mission statement will proudly become the lead banner on the front page of the DMF website as opposed to being relegated to the fourth paragraph.

Yours in coastal soulfulness,
Paul Wright

Sent from my iPad

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Gill netting
Date: Wednesday, March 4, 2020 4:19:19 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 7:45 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Gill netting

Another
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From: Robert Johnson III [redacted]
Sent: Tuesday, March 3, 2020 7:43 PM
To: Bizzell, Rob
Subject: [External] Gill netting

Sirs
I am a recreational surf fisherman. I come to the coast several times a year.
I have enjoyed this sport for 50 years.
I am deeply concern about this gill netting problem that goes unaddressed.
There has to be a better alternative to fish with nets.
Thank you
Robert Johnson

From: Bizzell, Rob

Sent: Tuesday, March 3, 2020 1:52 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>

Subject: Fwd: [External] A concerned new coastal resident

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From: Scott Sessomes
Sent: Tuesday, March 3, 2020 11:44 AM
To: Bizzell, Rob
Subject: [External] A concerned new coastal resident

Hello!

After being married and promising my wife of 25 years that we would one day move to the beach from Fayetteville, NC, we finally did so in March of 2019. She and I both love fishing. She is currently experiencing a recurrence of her breast cancer and it is now terminal. She is most happy when I take her to the beach and set her up a rod to do some surf fishing with me. Here she is a few months back…

I am concerned about our fishery. In just under a year, we have caught "keeper" fish only a handful or two of times. And yes, we abide by the laws and regs set forth as well… I caught my two largest flounder of my life in October and threw them promptly back due to the closure. They were caught on a bottom rig with cut mullet 10 feet from the sand. Talk about a sad thing. My wife would have loved to see those for dinner. Haha. In any case, I don't understand why we allow gill netting, trawlers so close to the beach and the bycatch that's allowed that would feed smaller families by way of regular fishing by recreational anglers. Why does North Carolina allow different practices from other states? My wife and I eat bluefish occasionally because it's one of the few things we can consistently catch and now those are being limited federally (I think that's what I've heard).

I COMPLETELY understand that commercial guys have to make a living. I'm guessing they are doing alright given the seafood costs I pay (because I'm simply not great at fishing) and they have so many options to catch fish that I can't try without a commercial license. If I had a preference, I'd outlaw flounder gigging every other season. I know it's typically a recreational angler that participates in gigging but when they load a boat full of guys and multiply their limits as a result, it's just overkill. I'd make our commercial guys do what every other state does, at least our neighboring states. No trawling 3 miles in. No gill nets from anyone. If prices go up at fish markets then that might be a good thing for the commercial guys as a result. We simply shouldn't have a no flounder season. Reduce the numbers on the recreational guys if you must, but I don't think that if we are being honest that the recreational guys are the ones to blame here.

A whole lot of facts here that are hard to ignore…

https://www.saltstrong.com/articles/north-carolina-gill-net-problem/?fbclid=IwAR37bohy90D3Dh3hPdDQayhMhPR8-GmTzKp2Q6kZRT5_6Gr02byqgVxMje0

What is our local economic effects from constantly reducing/closing fish limits? Seems to me like the recreational guys spend more money on gas, food, lodging, bait, boats and everything and that pays a lot of people and keeps a lot of families happy. Commercial guys need their place in the economy too and they can have it, but why not like every other state? Let's let fair be fair. Common sense can be a good approach and let's fall in line with states that have things figured out better than we have.

Scott Sessoms
[redacted], NC

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] Interesting NC made it on Salt Strong
Date: Wednesday, March 4, 2020 4:19:43 PM

From: Bizzell, Rob
Sent: Tuesday, March 3, 2020 5:38 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] Interesting NC made it on Salt Strong

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Another

From: Saltwater [redacted]
Sent: Tuesday, March 3, 2020 4:01 PM
To: Bizzell, Rob
Subject: [External] Interesting NC made it on Salt Strong

FYI Im sire yo have been forwarded the article. The link as posted on the Hull Truth

https://www.thehulltruth.com/carolinas/1064800-state-nc-review-small-mesh-gill-net-regulations-6.html

Post # 106 on state-nc-review-small-mesh-gill-net-regulation

https://www.saltstrong.com/articles/...nfZBlaFZ9Txh0s

Article with proposed solution to the gillnet problem in NC.

https://www.saltstrong.com/articles/north-carolina-gill-net-problem/?fbclid=IwAR3e76c857vciqvR8HXUXfa7UN8t_FLPZqpO2ZtEVFXkKnfZBlaFZ9Txh0s

You probably already seen it but there is a lot of chatter on the forums about this.

SW

From: Klibansky, Lara
To: Gillikin, Dana
Subject: FW: [External] NC Gill Net Problem
Date: Tuesday, March 10, 2020 8:16:48 AM

From: Bizzell, Rob
Sent: Monday, March 9, 2020 9:27 PM
To: Klibansky, Lara <Lara.Klibansky@ncdenr.gov>
Subject: Fwd: [External] NC Gill Net Problem

Another
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From: Wilson McGraw [redacted]
Sent: Monday, March 9, 2020 9:04 PM
To: Bizzell, Rob
Subject: [External] NC Gill Net Problem

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Mr. Bizzell,

I am writing to express my deep concern about our fishery here in NC due to the continued legality of inshore gill nets. In short, our fishery cannot sustain the detrimental practice of using gill nets in our estuaries.

As the only state in the South East that allows gill nets, NC should take immediate steps to discontinue their use. Any other course of action will lead to NC's fishery continuing a down trend towards collapse. If we care about the long term health of our fishery, allowing gill nets is as illogical as if NC had not instituted a slot limit for our state fish, Redfish, in order to better manage the harvest of that species. Like other states in the South East, NC has a slot limit for Redfish, which has had positive benefits to population levels....Now NC needs to follow suit with other states and ban inshore gill nets.

Even our shellfish regulations limit geographic portions of the estuaries to harvest. This creates an area that remains free of harvest to provide a breeding ground that provides sustainability to the resource. Fish need to similarly be protected by limiting the fishing technique of gill netting, since gill nets indiscriminately kill both juvenile and breeder aged fish. Closing the flounder season only has limited value when gill net-caught flounder have a high mortality even if released.

The recreational fishermen in NC provide a greater level of financial input to the economy than the commercial fishermen. I would never propose to outlaw commercial fishing, but the technique of using gill nets is damaging the fishery for all fishermen. Gill nets do not provide a "fair chase" manner of taking fish in our estuaries, thereby creating an unsustainable burden

on our natural resource.

In addition to the over harvest of target species, gill nets also destroy the fishery due to the high levels of by catch. Every non-target fish, undersized target fish, turtle, dolphin, and bird that gets caught in a gill net runs a high risk of mortality while caught in the net or after removal. The cost to the overall resource great outweighs the benefit of the gill net harvest. Gill netters will eventually find themselves without fish in their nets due to the negative impact of their own fishing technique.

I have personally witness the use of gill nets in salt water marshes near where I live in [redacted] In one night, the nets are able to ruin miles of waterways for recreational or charter fishing for a matter of weeks when they are placed at choke points to the marsh and creek system.

Below are two links that I highly encourage you to view. First is a link to a Salt Strong article on NC gill nets. It provides shocking statistics on how gill net use in NC is destroying our fishery in comparison to other states. Second is a link to a CCA NC video on gill nets. Any discussion on the use of gill nets should use this or similar videos to illustrate their negative impact on the environment.

Salt Strong article: https://www.saltstrong.com/articles/north-carolina-gill-net-problem/ [saltstrong.com]
CCA NC video:https://www.youtube.com/watch?v=BCrJFn8wig0 [youtube.com]

I ask you to read this email and show the CCA NC video at the next public meeting.

NC must immediately ban the use of inshore gill nets if we want to stop decimating our fishery, continue benefiting from the large economic impact of recreational fishermen, and provide a sustainable natural resource for future generations.

I also request comment and feedback directly in response to this email.

Thank you for your diligent attention to this issue.

Sincerely,
Wilson McGraw

DIAMONDBACK TERRAPIN MANAGEMENT AREAS

Agenda

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From:	Smith, Tricia
To:	Gillikin, Dana; Klibansky, Lara; Batsavage, Chris; Poland, Steve
Subject:	FW: [External] Re: [DENR.DMF.NewsRelease] Marine Fisheries accepting comments on two diamondback terrapin management areas; Southern Regional Advisory Committee will meet by teleconference on April 8
Date:	Wednesday, March 25, 2020 10:19:03 AM
Attachments:	Patricia Smith.vcf image001.png Patricia Smith2.vcf

Forwarding.

Patricia Smith
Communications Director
Division of Marine Fisheries/Division of Coastal Management
252-808-8025 (Work)
252-342-0642 (Mobile)
Tricia.Smith@ncdenr.gov

http://portal.ncdenr.org/web/mf/
https://deq.nc.gov/about/divisions/coastal-management

From: Smith, Tricia
Sent: Wednesday, March 25, 2020 10:18 AM
To: Dr. Robert Y. George ; Johnson, Jimmy <jimmy.johnson@ncdenr.gov>; ; ;
Subject: RE: [External] Re: [DENR.DMF.NewsRelease] Marine Fisheries accepting comments on two diamondback terrapin management areas; Southern Regional Advisory Committee will meet by teleconference on April 8

Thank you, Dr. George. I will forward your comments.

Patricia Smith
Communications Director
Division of Marine Fisheries/Division of Coastal Management
252-808-8025 (Work)
252-342-0642 (Mobile)
Tricia.Smith@ncdenr.gov

http://portal.ncdenr.org/web/mf/
https://deq.nc.gov/about/divisions/coastal-management

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Dr. Robert Y. George
Sent: Wednesday, March 25, 2020 10:15 AM
To: Smith, Tricia <tricia.smith@ncdenr.gov>; Johnson, Jimmy <jimmy.johnson@ncdenr.gov>; ; ;
Subject: [External] Re: [DENR.DMF.NewsRelease] Marine Fisheries accepting comments on two diamondback terrapin management areas; Southern Regional Advisory Committee will meet by teleconference on April 8

Hi Tricia,

I firmly recommend that we in NC do not indulge in "piece-meal" management. NOAA National Marine Fisheries has been for years exploring to expand MONITOR Sanctuary coastward and I work with Dr Paul Ticco (copied) at the Sanctuaries Office in Norfolk, Virginia.

I am willing to come as a person with concern about our coast, its resilience and conservation of natural resources to speak before the Fisheries Commission. I am afraid I am at age 83, do not wish to come every 2 months as an advisor. My doctor and family,

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despite the present awkward circumstances of coronusvirus threats, ask me to be low-keyed, Please tell folks our best bet is to get the MONITOR Sanctuary established and funded o protect cultural and fisheries resources (Sports fishing and Commercial fishing). Period.

Bob

Robert Y. George, Ph.D

[redacted]

-----Original Message-----
From: Smith, Tricia <tricia.smith@ncdenr.gov>
To: Smith, Tricia <tricia.smith@ncdenr.gov>
Sent: Wed, Mar 25, 2020 9:40 am
Subject: [DENR.DMF.NewsRelease] Marine Fisheries accepting comments on two diamondback terrapin management areas; Southern Regional Advisory Committee will meet by teleconference on April 8

Roy Cooper
Governor

Michael S. Regan
Secretary

Steve Murphey
Director

Release: Immediate	Contact: Patricia Smith
Date: March 25, 2020	Phone: 252-726-7021

Marine Fisheries accepting comments on two diamondback terrapin management areas; Southern Regional Advisory Committee will meet by teleconference on April 8

MOREHEAD CITY – The N.C. Division of Marine Fisheries is accepting public comments on two proposed diamondback terrapin management areas [portal.ncdenr.org] in the southern coastal area of the state, where fishermen will be required to use turtle excluders in crab pots.

The public may provide comment to the division (which will be submitted to the Marine Fisheries Commission) in the following two ways:

1. **Online Comments** – Public comments will be accepted until 5 p.m. April 23 through an online format that can be accessed through a link on the Blue Crab Fishery Management Plan Information webpage [portal.ncdenr.org].
2. **Mailed Comments** – Written comments may be mailed to Diamondback Terrapin Management Area Comments, P.O Box 769, Morehead City, N.C. 28557. Comments must be received by the division by 5 p.m. April 23.

Emailed comments will not be accepted.

The Southern Regional Advisory Committee is scheduled to discuss and vote on the proposed areas at a meeting to be held at 6 p.m., April 8. The proposed areas must receive final approval by the Marine Fisheries Commission before being implemented.

Based on the current guidance to help minimize the spread of COVID-19, the April 8 meeting will be held by teleconference. The public may listen to the committee discussions online. A link to the webcast, as well as information on system requirements and testing, can be found here [portal.ncdenr.org]. Public comment will not be taken during the meeting; however, the public may provide written comments to the advisory committee in the following two ways:

1. **Online Comments** – Public comments will be accepted until 5 p.m. April 6 through an online format by clicking here (online comments may be submitted in both places, for the advisory committee and for the division/Marine Fisheries Commission).

2. **Mailed Comments** – Written comments may be mailed to Southern Regional Advisory Committee Comments, P.O Box 769, Morehead City, N.C. 28557. Comments must be received by the division by 5 p.m. April 6.

Emailed comments will not be accepted.

The proposed management areas are:

1. **The Masonboro Island Diamondback Terrapin Management Area**, which lies entirely within, and shares nearly the entire boundary with, the Masonboro Island Estuarine Research Reserve and Natural Area. This area is also naturally bounded on the east by Masonboro Island, and on the west by the Intracoastal Waterway.
2. **The Bald Head Island Diamondback Terrapin Management Area**, which is comprised of Zeke's Island Estuarine Research Reserve in the northern portion of the management area and the Bald Head Island State Natural Area as the southern portion. This area is also naturally bounded by a barrier island to the east, and Bald Head island to the south. The western boundary of this management area follows "the wall," which is a rock structure that separates the Cape Fear River from Buzzard Bay and serves as the boundary for the Zeke's Island Estuarine Research Reserve. At the end of the wall, the boundary runs on a line southwesterly to the northern tip of Bald Head Island.

A meeting agenda and more specifics on the proposed management areas can be found on the Blue Crab Fishery Management Plan Information webpage [portal.ncdenr.org]. For more information contact division biologists Corrin Flora at 252-264-3911 or Joe Facendola at 910-796-7291.

WHO:	Southern Regional Advisory Committee
WHAT:	Meeting on Diamondback Terrapin Management Areas
WHEN:	April 8 at 6 p.m.
WHERE:	Meeting by Teleconference Click Here for Link and Instructions [portal.ncdenr.org]

###

Website: http://www.ncmarinefisheries.net [ncmarinefisheries.net]
Facebook: http://www.facebook.com/ncdeq [facebook.com]
Twitter: http://www/twitter.com/NCDEQ [www]
RSS Feed: http://portal.ncdenr.org/web/opa/news-releases-rss [portal.ncdenr.org]
P.O. Box 769, 3441 Arendell St., Morehead City N.C. 28557

Patricia Smith
Communications Director
Division of Marine Fisheries/Division of Coastal Management
252-808-8025 (Work)
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Tricia.Smith@ncdenr.gov

http://portal.ncdenr.org/web/mf/ [portal.ncdenr.org]
https://deq.nc.gov/about/divisions/coastal-management

Coastal Management
ENVIRONMENTAL QUALITY

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
BRAXTON C. DAVIS
Director

April 21, 2020

N.C. Division of Marine Fisheries
PO Box 769
Morehead City, NC 28557

Marine Fisheries Staff and Commission Members,

These comments are submitted in support of the proposal to adopt Diamondback Terrapin Management Areas (DTMA) in North Carolina and to reinforce statements contained in the March 23, 2020 issue paper addressing the designation of DMTAs in Masonboro Sound and the Lower Cape Fear River.

The North Carolina Coastal Reserve and National Estuarine Research Reserve (Reserve), a program in the Division of Coastal Management, is supportive of the proposed approach and the initial two locations under consideration for this designation. The Reserve protects ten representative sites along North Carolina's coast for research, education, and compatible traditional uses. In accordance with the Reserve's authorizing legislation, the Coastal Area Management Act, our agency is both supportive of traditional fishing activities that occur within Reserve boundaries and responsible for the ongoing protection of the habitats and organisms found at the sites under our management. We appreciate the efforts of the Division of Marine Fisheries to develop a proactive approach to reduce bycatch and mortality of diamondback terrapins that occur as a result of interactions with the blue crab fishery by establishing DMTAs.

We feel that the proposed approach of utilizing the best available science to identify potential interaction zones is well-founded and will result in meaningful reduction in bycatch by focusing on areas of known terrapin presence, the season of greatest terrapin activity, and areas with habitat characteristics that can support healthy diamondback terrapin populations. In addition, we are supportive of the recommendation to utilize existing natural and demarcated conservation area boundaries to simplify public understanding and enforcement.

We anticipate that implementation of the recommended DMTAs will enhance the Reserve's ability to carry out its mission to protect the natural character of two Reserve sites– the Masonboro Island and Zeke's Island Reserves. These sites, which fall entirely within the proposed Masonboro Island DTMA and the Bald Head Island DTMA are also part of the N.C. National Estuarine Research Reserve and are Dedicated State Nature Preserves.

State of North Carolina | Environmental Quality | Coastal Management
Coastal Reserve Southern Sites Office | UNCW Center for Marine Science | 5600 Marvin Moss Lane | Wilmington, North Carolina 28409
910 962 2998

Designation and management of these DMTAs will complement the protection of these locations under these additional long-term management requirements.

Adoption of this approach will also ensure that valuable research efforts related to diamondback terrapins continue uncompromised at the Masonboro Island site. Multiple independent researchers have conducted research projects at the Masonboro Island Reserve; studies have resulted in publications with implications for management and conservation strategies for this species of concern, including several that are referenced in the Blue Crab Fishery Management Plan Amendment 3, adopted in February 2020. The Reserve has also partnered with the N.C. Wildlife Resources Commission to develop and implement a popular project utilizing citizen science-based surveying methods to address priority goals listed in the N.C. Wildlife Action Plan to collect diamondback terrapin population data to better understand population dynamics.

Establishment of DMTAs will result in reduction of diamondback terrapin bycatch, preservation of study populations, and long-term maintenance of terrapin populations in the state. The Reserve looks forward to working with the Division of Marine Fisheries to balance the shared goals of supporting the blue crab fishery while ensuring the protection of a priority wildlife species.

Sincerely,

Hope Sutton, Stewardship Coordinator & Southern Sites Manager
North Carolina Coastal Reserve and National Estuarine Research Reserve

MFC ADVISORY COMMITTEES

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

March 18, 2020

Cane Faircloth
[redacted]

Dear Mr. Faircloth:

I am pleased to welcome you as a member of the Southern Regional Advisory Committee, which makes recommendations to the N.C. Marine Fisheries Commission on various fisheries issues.

The committee is comprised of 11 members representing the scientific, recreational, commercial, and conservation communities. Meetings usually last two or three hours, and are scheduled only when the commission refers an issue to the committee. Also, please be aware that advisers are required to attend at least 75 percent of the meetings of their committee.

Please find an orientation package enclosed. If you have any questions concerning your orientation to the advisory committee process, feel free to contact Dana Gillikin at Dana.Gillikin@ncdenr.gov or 252-808-8022.

Speaking for the Marine Fisheries Commission, I want to thank you for your interest in managing our state's resources. I look forward to seeing you at a meeting in the near future.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

March 27, 2020

Christopher Matteo
[redacted]

Dear Mr. Matteo:

I am pleased to welcome you as a member of the Shellfish Cultivation Lease Review Committee that will hear appeals of agency decisions regarding shellfish leases.

The three-member committee, authorized by the Shellfish Aquculture Bill (S. L. 2019-37), has been appointed by the chair of the Marine Fisheries Commission and is comprised of one commission member, who will serve as the hearing officer, and two public members. Please be aware, given the nature of the review committee, attendance is required at all meetings. As such, the commission office staff will work with committee members to ensure schedules are planned and noticed well in advance of the meeting date.

Please find an orientation package enclosed. If you have any questions concerning your orientation to the advisory committee process, feel free to contact Dana Gillikin at Dana.Gillikin@ncdenr.gov or 252-808-8022.

Speaking for the Marine Fisheries Commission, I want to thank you for your action in managing our state's resources. I look forward to seeing you at a meeting in the near future.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

March 18, 2020

Pamela Morris
[redacted]

Dear Ms. Morris:

I have reappointed you to the Southern Regional Advisory Committee. Please remember that you are required to attend 75 percent of the meetings of your committee. I would like to thank you for continuing to sacrifice your time and provide your input to help us effectively manage the marine resources of our state.

Sincerely,

W. Robert Bizzell

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/lk

cc: Lara Klibansky, Marine Fisheries Commission Liaison

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

April 13, 2020

Danny Navey
[redacted]

Dear Mr. Navey:

Thank you for your application to serve as a Shellfish Cultivation Lease Review Committee member Unfortunately, I am unable to appoint you to the committee at this time; however, please do not be discouraged from participating in the process as a member of the public. Your input is invaluable, and I encourage you to attend the committee meetings.

Please visit the Division of Marine Fisheries website at www.ncfisheries.net for meeting schedules, proclamations, fisheries hot topics, and various fishing information. You may also contact Dana Gillikin at 252-808-8022 for meeting information.

Again, thank you for your interest in the conservation of our state's resources.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

April 13, 2020

Jason Self
[redacted]

Dear Mr. Self:

Thank you for your application to serve as a Shellfish Cultivation Lease Review Committee member Unfortunately, I am unable to appoint you to the committee at this time; however, please do not be discouraged from participating in the process as a member of the public. Your input is invaluable, and I encourage you to attend the committee meetings.

Please visit the Division of Marine Fisheries website at www.ncfisheries.net for meeting schedules, proclamations, fisheries hot topics, and various fishing information. You may also contact Dana Gillikin at 252-808-8022 for meeting information.

Again, thank you for your interest in the conservation of our state's resources.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

April 13, 2020

Jay Styron
[redacted]

Dear Mr. Styron:

Thank you for your application to serve as a Shellfish Cultivation Lease Review Committee member Unfortunately, I am unable to appoint you to the committee at this time; however, please do not be discouraged from participating in the process as a member of the public. Your input is invaluable, and I encourage you to attend the committee meetings.

Please visit the Division of Marine Fisheries website at www.ncfisheries.net for meeting schedules, proclamations, fisheries hot topics, and various fishing information. You may also contact Dana Gillikin at 252-808-8022 for meeting information.

Again, thank you for your interest in the conservation of our state's resources.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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

NORTH CAROLINA MARINE FISHERIES COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

April 13, 2020

Thomas Todd
[redacted]

Dear Mr. Todd:

Thank you for your application to serve as a Shellfish Cultivation Lease Review Committee member Unfortunately, I am unable to appoint you to the committee at this time; however, please do not be discouraged from participating in the process as a member of the public. Your input is invaluable, and I encourage you to attend the committee meetings.

Please visit the Division of Marine Fisheries website at www.ncfisheries.net for meeting schedules, proclamations, fisheries hot topics, and various fishing information. You may also contact Dana Gillikin at 252-808-8022 for meeting information.

Again, thank you for your interest in the conservation of our state's resources.

Sincerely,

W. Robert Bizzell, Chairman
N.C. Marine Fisheries Commission

WB/dg

cc: Marine Fisheries Commission
Lara Klibansky

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

NORTH CAROLINA
State Board of Elections & Ethics Enforcement

Mailing Address:
P.O. Box 27255
Raleigh, NC 27611-7255

Phone: (919) 814-0700
Fax: (919) 715-0135

Ethics & Lobbying Education

The following information applies to public servants, legislators, legislative employees, and ethics liaisons. For information on lobbying education and awareness presentations for lobbyists and lobbyist principals.

Mandatory Education. The N.C. State Board of Elections and Ethics Enforcement provides mandatory ethics and lobbying education for *public servants*, *legislators*, *legislative employees* and *ethics liaisons*. Topics covered include:

- Filing a Statement of Economic Interest ("SEI")
- Monitoring and avoiding conflicts of interest
- The gift ban and its exceptions
- Prohibition on use of public position for private gain
- Lobbying and how it affects individuals covered by the State Government Ethics Act

Ethics education is the primary way individuals subject to the State Government Ethics Act are made aware of their public duties and responsibilities as well as the consequences for violating the ethics laws.

Who Must Participate

- **Public Servants & Ethics Liaisons.** All public servants and ethics liaisons are required to attend a Commission-approved basic ethics and lobbying education presentation within six (6) months of the person's election appointment, or employment and attend a refresher presentation at least every two (2) years thereafter.

- **Legislators & Legislative Employees.** The Commission, jointly with the Legislative Ethics Committee, makes mandatory ethics education and lobbying presentations to all legislators within two (2) months of the legislator assuming his or her office. Legislative employees must also participate in ethics education within three (3) months of employment and attend a refresher at least every two (2) years.

- **Education Presentations & Schedule.** Ethics and lobbying education presentations for public servants and ethics liaisons are offered online and live at Raleigh-only and distance education sites. Completing an online presentation or attending a live session meets either the basic or refresher mandatory education requirements. Visit https://www.ncsbe.gov/Ethics/Education to access online and live training options.

  Ethics education for **legislators** is conducted in live sessions. Legislative employees may participate in ethics education online through the General Assembly.

- **Consequences for Failure to Attend.** Failure to attend an ethics and lobbying education presentation is a violation of the State Government Ethics Act and may result in the individual being recommended for removal from his or her public position or disciplined in his or her State job.

Contact Information

For education related questions, contact:
NC State Board of Elections and Ethics Enforcement
Phone: (919) 814-3600
E-mail: Education.Ethics@doa.nc.gov

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2019 STATEMENT OF ECONOMIC INTEREST REMINDERS:

Completed SEIs must be filed on or before April 15, 2019. If you have already filed a 2019 SEI, do not refile. The forms and instructions can be found at https://ethics.ncsbe.gov/sei/blankForm.aspx.

If you filed a 2018 SEI ***and*** you have had ***no changes*** since your 2018 filing, you may file a 2019 SEI No Change Form, located on the website.

You must file a 2019 Long Form if any of the following apply to you:

a. You filed a 2018 SEI **but** you have had changes since your 2018 filing;
b. You did not file a 2018 SEI; or
c. You are a first-time filer or have been appointed to a new or additional position/board.

This year, the State Board of Elections and Ethics Enforcement will roll out a new electronic process for filing SEIs. That electronic filing option will be available in **early February**.

You are encouraged to file your SEI electronically. However, if you want to file your SEIs before the updated electronic version is available, hard copies are available for filing now at the link above.

New commissioners will need to file a 2019 SEI; however, if you have not had any changes since you last filed, you can use the No Change Form, which is fairly easy to complete.

Please file by April 15th to avoid fines and other penalties.

SEI HELPFUL TIPS

1. PUBLIC RECORDS. The State Board of Elections and Ethics Enforcement (State Board) is required to collect and maintain disclosures from certain persons covered by the State Elections and Ethics Enforcement Act Government Ethics Act (Elections and Ethics Act). By law, the information requested is public record and available to the public upon request. As public records, Statements of Economic Interest (SEI) are available on the Commission's website. Personal contact information, however, is not.

2. CONTACT INFORMATION PAGE. The Contact Information page, which includes your personal contact information, will not be available on the Commission's website, but is a public **record.**

3. CHILDREN'S INITIALS. Only list minor children's INITIALS on the SEI. List each child's full legal name on the Confidential Unemancipated Children's Form. If you are filing electronically, the form will be generated at the end of the SEI from the information that you provided on your electronic SEI. The Confidential Form is not a public record, and the State Board will not make it available to the public.

4. READ EACH QUESTION CAREFULLY. Read each question carefully and pay close attention to the time periods in each question as they do vary.

5. ANSWER EACH QUESTION. It is important to answer each question, including all applicable subparts. Even if your answer is "no" or "not applicable," make certain you answer each question. Many of the questions have "yes" and "no" boxes to check for your convenience. Incomplete SEIs may cause delays and negatively impact your public service on a covered board or as an employee.

6. WHY ARE YOU FILING. You must list the complete name of the state board or state agency employer for which you are filing the SEI. Without this information, your SEI may be delayed and negatively impact your public service on a covered board or as an employee.

7. HOW TO FILE. The State Board strongly recommends electronical on-line filing as it is secure, allows easy information updates, and gives you access to your electronic SEIs previously filed. Filing your SEI on-line is easy, quick, convenient, and reduces the chance of reporting errors. Getting started is easy. Follow the simple steps to create your own account and get access today: https://EFILE.ncsbe.gov/ To file a paper version of the SEI, you must provide the State Board with a signed, original SEI form. Each SEI includes an "affirmation" and is a legally binding document. Faxed or emailed copies of your SEI CANNOT be accepted.

SEI Helpful Tips, continued

8. INCOME. List each source of income as requested on the SEI. The actual dollar amount is not required. Be sure to list your employer as a source of income in Question # 6 of the SEI.

9. READ CAREFULLY. Read each question carefully, as the Elections and Ethics Act requires that you disclose your financial holdings and obligations, personal property, and real property and may also include your knowledge of the holdings of both your immediate family and your extended family. “Immediate family” and “extended family” are defined terms in the Elections and Ethics Act, and those definitions are included with this document.

10. REFLECT. Think carefully about WHY you are filing, and whether it has any relationship to your position. Does your board or commission license or regulate you? For many of the boards, a subject matter expert like a licensee is needed. Answering “yes” does not prohibit your service on the board, and your perspective is valued.

11. MAKE A COPY. Make a copy of the SEI for your own records, and make a note in your calendar when you submit it, whether on-line or by mail or hand delivery. When you successfully submit your SEI electronically on-line, the final screen will provide a confirmation number and will be proof that you have satisfied your filing obligation. Please print the **confirmation screen for your records.**

12. ETHICS LIAISON. Contact your Ethics Liaison to assist you in your obligations under the Elections and Ethics Act. Your Ethics Liaison is good source of information about how to fill out your SEI.

13. ON-LINE HELP. The State Board has on-line resources to answer questions you may have about your SEI. For more information, please visit the State Board website which has education offerings.

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14. DEFINITIONS. As noted above, certain terms are defined in the Elections and Ethics Act ("immediate family"). These definitions may be helpful to you in completing your SEI. A complete list of all definitions used in the Elections and Ethics Act is available on the State Board's website, under "Ethics". Some of the more common ones are attached to this document.

15. YOUR INTERNET BROWSER. Consider using Internet Explorer or Chrome to submit your SEI. Some users have had trouble using other browsers. 16. WE ARE HERE TO HELP YOU. In addition to on-line resources and written materials, the State Board has expert staff ready to answer any questions you might have and assist you in completing and filing your SEI. Do not hesitate to contact us at sei@ncsbee.gov (919) 814-3600.

2020 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
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March

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April

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May

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31						

June

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28	29	30				

July

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August

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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
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13	14	15	16	17	18	19
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27	28	29	30			

October

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11	12	13	14	15	16	17
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25	26	27	28	29	30	31

November

Su	Mo	Tu	We	Th	Fr	Sa
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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			

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

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2020 Committee Assignments for Marine Fisheries Commissioners

02/26/2020

FINFISH ADVISORY COMMITTEE

Statutorily required standing committee comprised of commissioners and advisers that considers matters related to finfish.

Commissioners: Tom Roller – chair, Sam Romano – vice chair
DMF Staff Lead: Lee Paramore - lee.paramore@ncdenr.gov
Meeting Frequency: Can meet quarterly, depending on assignments from MFC

HABITAT AND WATER QUALITY ADVISORY COMMITTEE & COASTAL HABITAT PROTECTION PLAN STEERING COMMITTEE

Statutorily required standing committee comprised of commissioners and advisers that considers matters concerning habitat and water quality that may affect coastal fisheries resources.

Commissioners: Pete Kornegay – chair, Dr. Martin Posey – vice chair
DMF Staff Lead: Anne Deaton - anne.deaton@ncdenr.gov
Meeting Frequency: Committee can meet quarterly, depending on assignments from MFC. CHPP Steering Committee can meet a couple of times a year.

SHELLFISH/CRUSTACEAN ADVISORY COMMITTEE

Statutorily required standing committee comprised of commissioners and advisers that considers matters concerning oysters, clams, scallops and other molluscan shellfish, shrimp and crabs.

Commissioners: Sam Romano – chair, Pete Kornegay – co-vice chair, Dr. Martin Posey – co-vice chair
DMF Staff Lead: Tina Moore - tina.moore@ncdenr.gov
Meeting Frequency: Can meet quarterly, depending on assignments from MFC

CONSERVATION FUND COMMITTEE

Committee comprised of commissioners that makes recommendations to the MFC for administering funds to be used for marine and estuarine resources management, including education about the importance of conservation.

Commissioners: Sam Romano - chair, Tom Hendrickson and Robert McNeill
DMF Staff Lead: Randy Gregory - randy.gregory@ncdenr.gov
Meeting Frequency: Meets as needed

LAW ENFORCEMENT AND CIVIL PENALTY COMMITTEE

Statutorily required committee comprised of commissioners that makes final agency decisions on civil penalty remission requests.

Commissioners: Rob Bizzell - chair, Doug Cross and Tom Hendrickson
DMF Staff Lead: Col. Carter Witten – carter.witten@ncdenr.gov
Meeting Frequency: Meets as needed

COASTAL RECREATIONAL FISHING LICENSE ADVISORY COMMITTEE

Committee consisting of the three recreational seats and the science seat to provide the DMF advice on the projects and grants issued using Coastal Recreational Fishing License trust funds.

Commissioners: Pete Kornegay – chair, Rob Bizzell, Tom Roller, and Robert McNeill
DMF Staff Lead: Jamie Botinovch - jamie.botinovch@ncdenr.gov
Meeting Frequency: Meets as needed

NOMINATING COMMITTEE

Committee comprised of commissioners that makes recommendations to the MFC on at-large and obligatory nominees for the Mid- and South Atlantic Fishery Management Councils.
Commissioners: Robert McNeill – chair, Pete Kornegay, Tom Roller and Mike Blanton
DMF Staff Lead: Chris Batsavage - chris.batsavage@ncdenr.gov
Meeting Frequency: Typically meets once a year

STANDARD COMMERCIAL FISHING LICENSE ELIGIBILITY BOARD

Statutorily required three-person board consisting of DEQ, DMF and MFC designees who apply eligibility criteria to determine whether an applicant is eligible for a SCFL.
Commission Designee: Mike Blanton
DMF Staff Lead: Marine Patrol Capt. Garland Yopp – garland.yopp@ncdenr.gov
Meeting Frequency: Meets two to three times a year, could need to meet more often depending on volume of applications

N.C. COMMERCIAL FISHING RESOURCE FUND COMMITTEE

Committee comprised of commissioners that the commission has given authority to make funding decisions on projects to develop and support sustainable commercial fishing in the state.
Commissioners: Doug Cross – chair, Mike Blanton and Sam Romano
DMF Staff Lead: William Brantley – william.brantley@ncdenr.gov
Meeting Frequency: Meets two to three times a year

WRC/MFC JOINT COMMITTEE ON DELINEATION OF FISHING WATERS

Committee formed to help integrate the work of the two commissions as they fulfill their statutory responsibilities to jointly determine the boundaries that define North Carolina's Inland, Coastal and Joint Fishing Waters as the agencies go through a statutorily defined periodic review of existing rules.
MFC Commissioners: Rob Bizzell, Dr. Martin Posey and Pete Kornegay
DMF Staff Lead: Anne Deaton - anne.deaton@ncdenr.gov
Meeting Frequency: Meets as needed

COMMITTEE REPORTS

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 24, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission
Southern Regional Advisory Committee

FROM: Tina Moore, Southern District Manager
Chris Stewart, Biologist Supervisor
Fisheries Management Section

SUBJECT: Southern Regional Advisory Committee Meeting and Recommendations for Blue Crab Fishery Management Plan Amendment 3

The Southern Regional Advisory Committee met at 6 p.m. on Wednesday, April 8, 2020. Based on the current guidance to help minimize the spread of COVID-19, the meeting was held by videoconference (WebEx). The public was able to view the staff presentation and listen to the committee discussions online. Public comment was not taken during the meeting; however, the public was able to provide written comments to the advisory committee online or by U.S. mail prior to the meeting with a deadline of 5 p.m. April 6. The following participated in the meeting:

Advisors: Dr. Fred Scharf (Chair), Edwin Bebb, Cane Faircloth, Jason Fowler, Pam Morris, Tom Smith, Adam Tyler

Absent: Jerry James, Ron McCoy, Tim Wilson

Division of Marine Fisheries (DMF) Staff: (leads) Tina Moore, Chris Stewart, Ashley Bishop, Jordan Brookshire, Nico Craig, Joe Facendola, Corrin Flora; (other staff) Alan Bianchi, Jesse Bissette, Catherine Blum, Meghan Gahm, Dana Gillikin, Charlton Godwin, Kim Harding, Morgan Klein, Lara Klibansky, Anne Markwith, Kathy Rawls, Greg Reger, Brandi Salmon, Katy West, Garland Yopp, Dan Zapf

Marine Fisheries Commission (MFC): Rob Bizzell (Chair), Dr. Martin Posey

Others: Wilson Laney

Division staff member Dana Gillikin served as WebEx host for the meeting. She reviewed how the meeting would operate via WebEx. She read the names of the advisors in attendance into the

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252-726-7021

record; a quorum was achieved. Ms. Gillikin introduced Dr. Fred Scharf, chair of the committee, and lead staff.

Dr. Scharf called the meeting to order. The meeting began with each advisor introducing themselves to the committee.

APPROVAL OF AGENDA

Jason Fowler moved to approve the agenda; Cane Faircloth seconded the motion. The motion passed without dissent.

APPROVAL OF MINUTES

Cane Faircloth moved to approve the Sept. 24, 2019 minutes as presented; Jason Fowler seconded the motion. The motion passed without dissent.

PUBLIC COMMENTS RECEIVED THROUGH APRIL 6, 2020 TO THE SOUTHERN REGIONAL ADVISORY COMMITTEE

Four online comments were provided to the advisory committee through April 6, 2020. All online comments supported Diamondback Terrapin Management Areas (DTMAs) and gear modifications in crab pots to reduce interactions with diamondback terrapins. Expansion of DTMAs to other areas of the state beyond what was presented to the advisory committee was also a common subject brought forward online. There were no public comments submitted via U.S. mail. The comments received are provided here.

Andres DelVillar (submitted 3/25/2020): "I am all in for trying to improve gear any way we can to save the turtles and also to stop harvesting female blue crabs of any size in NC."

Bert Owens (submitted 3/26/2020): "The North River in Carteret County should also be added to the list requiring excluders on pots. Above the marshes near the lower end of the river there are diamondback terrapins throughout. I have seen as many as 10 dead ones in a single crab trap that was half exposed at low tide."

Sam Heller (submitted 3/26/20): "I am 110% in favor of the conservation measures proposed to protect diamondback terrapins in our state. I think the establishment of management areas which require turtle excluders in crab pots is sorely needed, as this has been identified as their number one threat, in addition to many other challenges, including development, pollution, habitat loss, predation by non-historical/non-native species, capture for sale and export, road deaths, and sea level rise. Please approve this ruling; acting now could save them, as sometimes we don't act until it's too late."

Wilson Laney (submitted 4/6/2020):
"1) Diamondback terrapins were historically the focus of a substantial and valuable commercial fishery in NC and throughout their range.
2) They are no longer a viable commercial fishery, due largely to historic overfishing, continuing bycatch in commercial gear and habitat alteration (bulkheading of nesting habitat) of this long-

lived, slow-reproducing species. For many decades, there has been a significant bycatch in crab pots, eel pots and gill nets set in habitats the terrapins use, with resultant continuing high mortality, especially of males and juvenile females.
3) Many states throughout the species range, including NC, have elected to designate the species as of conservation concern within their State Wildlife Action Plans.
4) The technology (effective excluder devices designed for crab pots and designed to minimize crab catch loss) to eliminate crab pot bycatch has been available for YEARS and has proven effectiveness, with strong supporting science in the form of dozens of peer-reviewed papers throughout the range of the species in general, but also within NC.
5) While I support the proposed management measures, and management areas, I view them as a minimal measure and see no reason why the NCMFC should not take appropriate Diamondback Terrapin conservation action throughout the range of Diamondback Terrapins within North Carolina."

DIAMONDBACK TERRAPIN MANAGEMENT AREAS

Division staff member Joe Facendola provided a presentation to the committee about proposed DTMAs. The MFC recognized diamondback terrapins as a wildlife resource in need of protection from crab pot fishing activities and sought to proactively implement conservation measures to prevent localized depletion or extirpation in Amendment 2 to the Blue Crab Fishery Management Plan in November 2013. The division was granted proclamation authority to require terrapin excluder devices in crab pots. Prior to use of proclamation authority, the MFC needed to approve a framework for implementation.

In February 2020, the MFC adopted Amendment 3 to the Blue Crab Fishery Management Plan, which established a framework to implement the use of terrapin excluder devices in crab pots. As part of the framework, the division is to present an information paper on proposed DTMAs to the appropriate regional advisory committee for input. The framework also includes final approval of any DTMA by the MFC at their next regularly scheduled MFC meeting.

The purpose of this meeting was for the advisory committee to provide input to the MFC on proposed DTMAs in Masonboro Sound and the lower Cape Fear River, specifically Bald Head Island. These areas were chosen to be the first DTMAs based on known populations of diamondback terrapins, as well as meeting depth and distance from shore criteria identifying them as potential interaction zones. Additional areas meeting criteria laid out in the Amendment 3 framework will be considered for DTMA status in the future.

Mr. Facendola explained the public comment opportunities for this issue. The deadline for submitting comments is 5 p.m. April 23, 2020.

The committee discussed whether other areas should be taken into consideration as DTMAs and noted that this is just a small start in diamondback terrapin protection in North Carolina. They talked about diamondback terrapins in particular locations along the Elizabeth River and Lockwoods Folly behind Davis Island that have declined. The North Carolina blue crab pot fishery has also been listed by seafood watch groups as a product to avoid because of the interactions with terrapin. The cost may be prohibitive to some fishermen to add excluder

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devices to their pots was brought forward by some committee members who asked if some sort of cost sharing could occur to help offset the burden during these hard times.

It was re-iterated the two areas proposed in the issue paper have been well-studied and that the framework that is set up could eventually have a network of DTMAs as well as allow interconnection to diamondback terrapins to South Carolina and beyond.

Questions continued on whether DMF is opposed to other designs and testing to exclude terrapins from pots. Mr. Facendola determined that if a design works and passes testing then the division would consider its use. For example, the reduced throat funnel design has potential, but has not been tested. As long as the design's opening is no larger than the specified dimensions and maintains its structural rigidness, then it would be considered for use. Corrin Flora, blue crab lead, acknowledged that the criteria purposely give fishermen leeway to create new designs and DMF encourages the testing of new designs.

The conversation shifted back to why DMF had not looked into other areas. Diamondback terrapin interactions in pots have been an ongoing issue for many years; Ms. Flora confirmed the longevity of this issue and the DMF will continue to look at other areas that fall under the criteria in the plan. Dr. Scharf noted there have been design issues as well. The new S.C. design is promising and does not show crab loss, and it is considered an approved device for use. While South Carolina has an approved device, it is not required for use. Ms. Flora explained an algorithm was used to study the morphology of blue crabs and terrapins in South Carolina to come up with the design. Mr. Facendola added DMF provided researchers with measurements and there is a student at UNCW that is looking further into a N.C. design. DMF is encouraging voluntary use of the devices as well.

Some committee members suggested that should fishermen try out the devices for a few years to see how they work, possibly in all areas south of the ones presented in the issue paper. Mr. Facendola explained that ongoing monitoring in Masonboro Sound will help identify if they are working or not. There is an ongoing project with National Estuarine Research Reserves (NERR) staff, Wildlife Resources Commission, and UNCW researchers to test a number of the designs. Questions arose about the validity of the data collected by citizen science groups participating in this project. Mr. Facendola explained that the sampling design is used by other researchers in other states and the entire framework is not based just on this data, further noting that the sampling design meets the concerns of the site managers. Ms. Flora went into further detail on the sample design, two trained participants work in pairs to confirm a diamondback terrapin siting. Both individuals must have the siting for it to count and they are trained by seasoned observers.

Further discussion occurred about the cost of the devices and potential funding sources as well as the need to test the effectiveness of other deigns in North Carolina, such as the narrowed throat design. It was further noted by DMF staff that this is a proactive step that allows fishing to continue and opens the door for more DTMAs. Dr. Scharf noted the S.C. design has been proven to minimally impact fishermen and that by adjusting the design by a few millimeters it was shown to keep terrapins out of the pots and crabs in the pots. Dr. Scharf also noted that we should explore designs and promote more areas to be included as DTMAs. Some members stated that if we do not do something now, future mitigation may require the statewide use of excluders in all pots without knowing what works. There were concerns that no commercial fishermen were present on this committee from the Masonboro Sound and Lower Cape Fear River area.

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VOTE ON RECOMMENDATIONS ON DIAMONDBACK TERRAPIN MANAGEMENT AREAS IN MASONBORO SOUND AND THE LOWER CAPE FEAR RIVER

Tom Smith moved to support the Diamondback Terrapin Management Areas in Masonboro Sound and the Lower Cape Fear River, as presented by the division, explore options for funding for offsetting the cost of excluder devices for current fishermen, and to explore options for research on new and additional designs for excluder devices. Jason Fowler seconded the motion. The motion passed unanimously.

MARINE FISHERIES COMMISSION UPDATE

Division staff member Chris Stewart provided an update to the committee via a handout on recent actions of the MFC at its Feb. 19-20, 2020 business meeting. The next MFC meeting will be held via WebEx on May 14, 2020 due to continuing guidance to help minimize the spread of COVID-19. Information about the meeting and how to join will be in a forthcoming news release and on the division's website.

PLAN AGENDA ITEMS FOR NEXT MEETING

The next committee meeting will be upon request of the MFC.

The meeting adjourned at 8:00 p.m.

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DIRECTOR'S REPORT

HOOK-AND-LINE MODIFICATIONS

ASMFC

MAFMC

SAFMC

HMS

PROTECTED RESOURCES UPDATE

LANDINGS UPDATE

TARPON RULE EXPEMPTION

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ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 15, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Steve Poland, Executive Assistant for Councils

SUBJECT: Information on Recreational Hook and Line Modifications

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Issue

Information on the efficacy of circle hook and barbless treble hook requirements in North Carolina coastal waters.

Overview

The following information paper summarizes the most recent scientific information related to hook modifications in the recreational fishery to reduce dead discards from catch-and-release fishing and provides commentary on potential considerations for the implementation of circle and barbless treble hook requirements in North Carolina coastal waters. Summary findings from the information paper include:

- In general, science supports the use of circle hooks as a means to reduce hook trauma and discard mortality
    - Aside from extensive research on red drum, few studies have been conducted in North Carolina that evaluate the effectiveness of circle hooks
    - Studies suggests that off-set circle hooks negate the positive benefits of circle hooks
- Very little research exists on the effects of hook trauma by treble hooks
- No industry standard exists for circle hook style and size
    - If circle hook use is required, a clear definition is needed
- Other management jurisdictions that require the use of circle hooks focus on single species/fisheries or complexes to implement hook requirements
    - Reduces unintended consequences, i.e. live bait trolling, exclusion of species with unique mouth physiologies, etc.
    - Increases the likelihood of compliance and enforcement
- Consider positive and negative social and economic effects
    - Potential decrease in angler satisfaction through decreased catch rates for some species
    - Positive impact to catch rates if population responds to reduced discard mortality
    - Economic impact to anglers and tackle shops

Action Needed

For informational purposes only, no action is needed at this time.

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Information on requiring the use of circle hooks and bent-barbed treble hooks in North Carolina

January 28, 2020

Prepared by the Recreational Hook-and-line Discard Work Group

I. ISSUE

Provide summary scientific information on the efficacy of using circles hooks and bent-barbed treble hooks to reduce discard mortality of captured-and-released fish in North Carolina joint, coastal, and Atlantic Ocean waters out to three nautical miles. Additionally, provide input on the pros and cons of implementation of circle hook and bent barbed requirements including summary information of neighboring states and jurisdictions, expected benefits and limitations, and enforcement applicability.

II. ORIGINATION

At the August 2019 meeting of the Marine Fisheries Commission, the Chairman asked for the consideration of a motion to instruct the Division of Marine Fisheries to initiate rulemaking to require the use of circle hooks larger than 2/0 when fishing with natural bait and that all treble hooks have barbs pinched down. After discussion and a withdrawal of the motion, the Chair asked the Division to provide information on the science supporting the use of circles hooks, bent-barbed treble hooks and input on the efficacy of requiring their use in North Carolina waters.

III. BACKGROUND

Literature Review

The location of hook-related injuries is an important factor in determining catch-and-release mortality. A number of studies have shown the use of circle hooks in marine recreational fisheries reduce deep hooking and release mortality in marine finfish species (Grover et al. 2002; Lukacovic and Uhhoff 2002; Skomal et al. 2002). The first use of circle hooks in modern fisheries were by long line fisherman in the Pacific Ocean in the 1970s. However, the basic style of the hook pre-dates this use by thousands of years, evidenced by the discovery of circle hooks fashioned from shell and bone discovered throughout ancient Polynesia, Japan, and Latin America. The style hook was adopted by commercial fisherman in an effort to increase retention of target species in longline and trot line fisheries and to reduce mortality of bycatch and regulatory discards. The basic mechanics of a circle hook are explained by Johanes (1981). As a fish consumes a baited-circle hook and moves away, the hook naturally slides to the edge of the mouth in an orientation that allows for the gap to position around the jaw (Figure 1). As the pressure begins to increases, the hook point begins to "bite" against the soft flesh around the mandible or hinge. As pressure further increases, the hook rotates fully around and the fish is hooked. The circular design with the hook pointed back towards the shank prevents the hook from backing out completely while steady pressure is applied. Because the orientation of the hook point is not the same as the shank (Figure 1), when pressure is applied to the hook via the fishing line, the point does not catch as it would with a traditional style "J" hook. This reduces the chance of deep hooking when a hook is swallowed past the esophageal sphincter (Kerstetter and Graves 2006).

Hook size, fishing style, fish feeding mode, and mouth morphology are all elements that contribute to the effectiveness of circle hooks. In a study on bluegills, circle hooks permanently impaired vision of up to 22% of the fish, much more than J-hooks (Cooke et al. 2003). Conversely, Graves and Horodysky (2008) state that the post-release survival of white marlin captured using circle hooks is significantly higher than J-hooks. There was no significant difference in survival among different configurations of non-offset circle hooks commonly employed in the white marlin troll fishery (i.e. offset, bite, gap, bend, etc.) suggesting that the use of a non-offset circle hook, regardless of configuration, is better. These varying factors make the implementation of circle hook regulations as a universal solution to reduce release mortality for all fisheries in coastal waters complex. Several studies have recommended that management agencies focus on recommending circle hooks only for instances for which appropriate scientific data exist (Cooke and Suski 2004, Serafy et al. 2012). While the use of circle hooks may present a conservation benefit in some of these fisheries, only the adult red drum fishery in Pamlico Sound has been fully evaluated comparing large J-hooks to circle hooks in our coastal waters (Beckwith and Rand 2005).

Literature for the effects of treble hooks on the survival of captured and released fish is limited and at this time, few studies have been reviewed for species that occur in the state. Studies in Texas, showed no significant differences in release mortality for red drum and spotted seatrout between J-hooks and treble hooks (Matlock et al. 1993; Stunz and McKee 2006). Unfortunately, these studies did not include circle hooks as a gear type for comparison.

Defining a circle hook

A growing body of literature suggests that the use of circle hooks by recreational saltwater anglers reduces discard mortality (Cooke et al. 2012). Despite this general consensus, inconsistency exists regarding the definition of a circle hook among federal, regional, and state management authorities (Table 1). This complicates the implementation of management actions across regulatory jurisdictions. However, an overlapping characteristic across all circle hook definitions include *"the point turned perpendicularly back to the shank"*.

Table 1. Definitions of a Circle Hook across multiple management authorities

National Marine Fisheries Service (NMFS) Highly Migratory Species Division (HMS)*: A circle hook is defined as "A hook with the point turned perpendicularly back to the shank to form a generally circular or oval shape." An offset circle hook is further defined as "a circle hook originally designed and manufactured so that the barbed end of the hook is displaced relative to the parallel plane of the eyed-end, or shank, of the hook when laid on its side."(50 C.F.R. § 635.2)*
Atlantic States Marine Fisheries Commission (ASMFC)*: A circle hook is defined as "Non-offset hook with the point turned perpendicularly back to the shank."*
Gulf of Mexico Fishery Management Council (GMFMC) and South Atlantic Fishery Management Council (SAFMC): *A circle hook is defined as "A fishing hook designed and manufactured so that the point is turned perpendicularly back to the shank to form a generally circular, or oval, shape" (50 C.F.R. § 622.2)*
North Carolina Marine Fisheries Commission (MFC): *A circle hook is defined as "A hook with the point of the hook directed perpendicularly back toward the shank, and with the barb either compressed or removed". (15A NCAC 03J.0306)*

Inconsistency among management authorities is further complicated by non-uniformity in circle hook design among and within major hook manufacturers. While hooks may have the same basic anatomy (Figure 1), extensive combinations of attributes (gap, bite, shank length, total length, gap, eye, barb, bend), and barb orientation (offset or inline) make it almost impossible to adequately classify a hook by the manufacturer sizing.

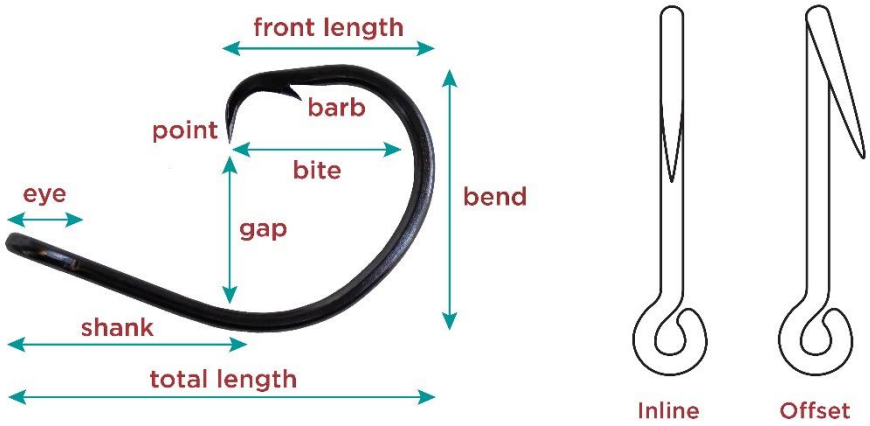

Figure 1. Basic hook anatomy and barb orientation. Reproduced from: www.in-fisherman.com/editorial/all-about-hooks/154924.

Hooks are manufactured from a myriad of metal and alloys (vanadium, high-carbon steel, stainless steel, etc.) and may come with an assortment of coatings for color preference and/or corrosion resistance. Most importantly, there is no size standardization within and among manufacturers. Figure 2 presents 4/0 hooks from three manufacturers (Eagle Claw, Mustad, Owner) with gap measurements ranging from 10mm to 14mm. The largest difference in gap shown is from two separate models of Eagle Claw 4/0 hooks. The same holds true for J-hook sizing as well. Although offerings are limited at this time, most hook manufactures do offer barbless versions of circle hooks and treble hooks.

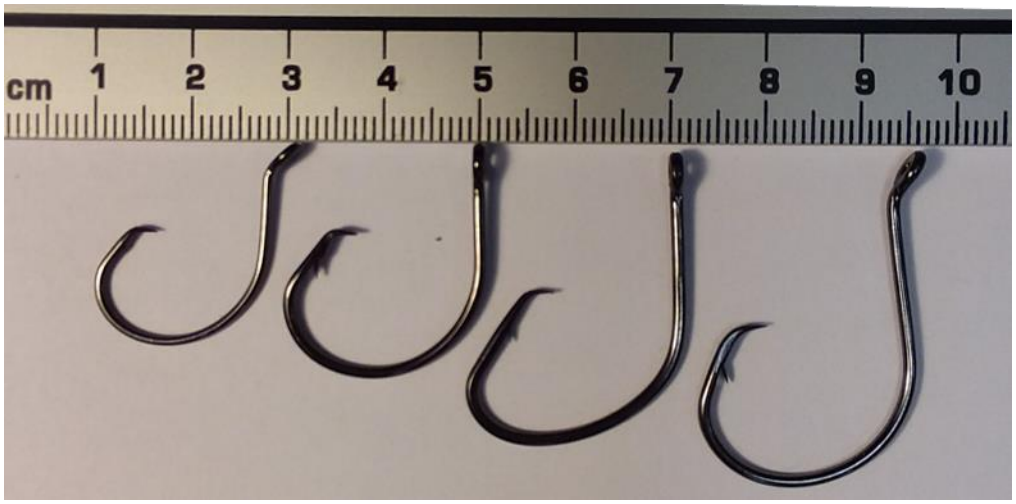

Figure 2. Left to right; Eagle Claw L2004EL, Mustad 3994-BN, Owner 5114T-141, Eagle Claw L7228BPG.

Other Jurisdictions

The Wildlife Resources Commission (WRC) restricts the use of multiple hooks and barbed hooks in the inland waters of the Roanoke River upstream of the U.S. 258 bridge. Only a single barbless hook or a lure with a single barbless hook may be used from April 1 to June 30. "Barbless" means that the hook either does not have a barb or that the barb is bent down. Tandem rigs are prohibited.

Many Atlantic coast states have rules that limit the time and area certain species can be harvested using traditional and/or barbed hooks and restrictions on the style of hooks used. The Florida Fish and Wildlife Commission (FWC) prohibits the harvest of Florida and African pompano, sheepshead, permit, spotted sea trout, snook, tarpon, flounder, and red and black drum with any multiple point hook in conjunction with live or natural bait. Multiple point hooks are defined as a hook with two or more points that share a common shaft. The FWC also requires angler who are shark fishing from shore or private vessel to use non-offset, non-stainless steel circle hooks when using live or dead natural bait. Further, an angler must also have in their possession a device that is capable of quickly cutting the hook or leader, i.e. bolt cutters, lineman pliers, cable cutters, etc.

Maryland Department of Natural Resources require the use of non-offset circle hooks while fishing in the Chesapeake Bay and its tidal tributaries when live-lining or chumming from May 16 to December 15. The use of treble hooks is prohibited when using other natural or processed baits while not live-lining or chumming. Additional restrictions on terminal tackle apply when fishing for striped bass depending on season and area. Some of these restrictions include the prohibition on using "stinger" hooks, use of barbless hooks when trolling, limited to six trolling lines per vessel, and require use of circle and J hooks with less than ½-inch gap.

The New York State Department of Environmental Conservation prohibits the take of sharks by baited hooking except with the use of non-stainless steel, non-offset circle hooks. Additionally, no person shall conduct, sponsor, or participate in any fishing tournament that offers a prize for sharks unless the tournament rules require the exclusive use of non-stainless steel, non-offset circle hooks.

Federal and interstate requirements for the use or restriction of certain types of hooks and terminal gear exist. The South Atlantic Fishery Management Council (SAFMC) requires the use of non-offset, non-stainless steel circle hooks North of 28^{o} latitude when in possession of any snapper-grouper species. The SAFMC recently approved Regulatory Amendment 29 to the Snapper-Grouper Fishery Management Plan which requires the use of non-stainless steel hooks throughout the South Atlantic and possession of a descender device.

For Highly Migratory Species (HMS) managed by NOAA Fisheries Highly Migratory Species Division, anglers aboard federally permitted vessels fishing recreationally for sharks are required to use non-offset, non-stainless steel circle hooks, except when fishing with flies or artificial lures. Anglers participating in Atlantic billfish tournaments must use only non-offset circle hooks when deploying natural bait or natural bait/artificial lure combinations. A billfish tournament is defined as any fishing tournament that awards points or prizes for billfishes, even if billfishes are not the main species targeted in the tournament. Billfish tournament anglers may deploy "J"-hooks only if they are fishing with artificial lures.

The Atlantic States Marine Fisheries Commission requires the use of non-offset, corrodible, non-stainless steel circle hooks when fishing for sharks recreationally, except when fishing with flies or artificial lures in state waters from Maine through the east coast of Florida. States must implement these management measures no later than July 1, 2020. The Atlantic States Marine

Fisheries Commission also requires the use of circle hooks when recreational fishing for striped bass with natural bait from Maine through North Carolina. In North Carolina, this measure only applies to striped bass fishing in ocean waters. States must implement these management measures no later than January 1, 2021.

Current circle hook regulation in North Carolina

Harvest of red drum greater than 27 inches in total length has been prohibited in North Carolina since 1998, however, recreational fishing for adult red drum for catch and release continues to be very popular. Given the popularity, release mortality of adult red drum in the recreational fishery has long been a management concern. Of particular concern is the tendency for a high incidence of deep hooking that occurs in the Pamlico Sound summer fishery where large adult red drum are aggregate prior to spawning. In this fishery, bait fishing on the bottom is a commonly employed method used from boats. This fishery creates somewhat of a unique scenario because the lack of strong currents often results in slack fishing lines and as a result can lead to a high incidence of deep hooking and elevated release mortality.

Each of the two prior FMPs for this species considered how to address this issue. The 2001 North Carolina Red Drum FMP considered various methods to reduce release mortality, but ultimately the plan opted to develop educational information on conservative angling practices for red drum, including the promotion of circle hooks and proper handling methods. Subsequent to the plan, educational information was provided by the Division and North Carolina Sea Grant including educational seminars to recreational fishing clubs, video productions, magazine and newspaper articles, as well as, distributing various types of educational pamphlets and other promotional giveaways. The plan also included research recommendations to characterize the adult red drum fishery and assess the mortality associated with the recreational releases of adult red drum.

In 2002, the Division and North Carolina Sea Grant conducted a survey of 456 anglers who target adult red drum in order to better characterize this fishery (unpublished data, NCDMF). Overall (all areas and modes of fishing), 56% of the respondents indicated that they always use circle hooks when fishing for adult red drum and another 27% occasionally used circle hooks. The results were similar for anglers in Pamlico Sound, with 52% of the respondents using circle hooks exclusively and 16% sometimes using circle for adult red drum.

Specific research was also conducted in the Pamlico Sound adult red drum fishery to estimate recreational release mortality, determine factors contributing to release mortality and determine the differences in deep hooking events between circle hooks and J-style hooks (Aguilar 2003, Beckwith and Rand 2004a, Beckwith and Rand 2004b). Studies by Aguilar (2003) and Beckwith and Rand (2004a) had overall mortality rates ranging from 3.8% to 6.7% based on adult red drum that were held for three days after being caught using either circle hooks or J-style hooks. Considering just fish that were deep hooked mortality rates were much higher (>15%) and all mortalities in the study showed evidence of internal bleeding from being deep hooked (Aguilar 2003, Beckwith and Rand 2004a). Aguilar (2003) found that circle hooks had a significantly lower incidence of deep hooking than J-style hooks when both were fished on standard bottom fishing rigs. Beckwith and Rand (2004b) advanced these findings and found that a large (Mustad 14/0 and 16/0 circle hook style: 39960D) or intermediate (Eagle Claw 8/0 circle hook (Style: L2004EL) sized circle hook combined with a short leader and a fixed weight resulted in the lowest incidence of deep hooking (4%) in the study. This was compared to greater than 50% deep hooking with a 7/0 J-style hook rigged with a standard leader and a slip weight (Beckwith and Rand 2004a).

Amendment 1 to the North Carolina Red Drum FMP reconsidered the issue of targeting adult red drum and the associated release mortality in light of this new research. Management options included hook requirements (size and type), seasonal closures and area closures. The primary focus was in protecting spawning aggregations of red drum in Pamlico Sound where catch rates were high and deep hooking and elevated mortality was known to be an issue. Impacts to other fisheries both in terms of species affected, seasons and areas played a major role in crafting the final rule that was adopted. Also, because the majority of the effort in the adult red drum fishery using bait occurred primarily at night, the final option limited the circle hook requirements to nighttime fishing to avoid conflicts with anglers using J-hooks to target tarpon. A further concern in rule adoption was the enforceability of a specific hook size given the lack of standardization in the tackle industry and the need to specifically define what constituted a circle hook. The benefit to the stock however was given paramount importance over these obstacles at the time the rule was passed. Efforts were made to educate the public on what constituted a legal rig both by giving rigs away at boating access points and by publishing the rig configuration on the Division website. The final rule was worded as follows:

15A NCAC 03J .0306 HOOK-AND-LINE
It is unlawful to use any hook larger than 4/0 from July 1 through September 30 in the internal coastal fishing waters of Pamlico Sound and its tributaries south of the Albemarle Sound Management Area as defined in 15A NCAC 03R .0201 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 while using natural bait from 7:00 p.m. to 7:00 a.m. unless the terminal tackle consists of:

(1) A circle hook defined as a hook with the point of the hook directed perpendicularly back toward the shank, and with the barb either compressed or removed; and
(2) A fixed sinker not less than two ounces in weight, secured not more than six inches from the fixed weight to the circle hook.

History Note: Authority G.S. 113-182; 113-182.1; 143B-289.52;
Eff. April 1, 2009.

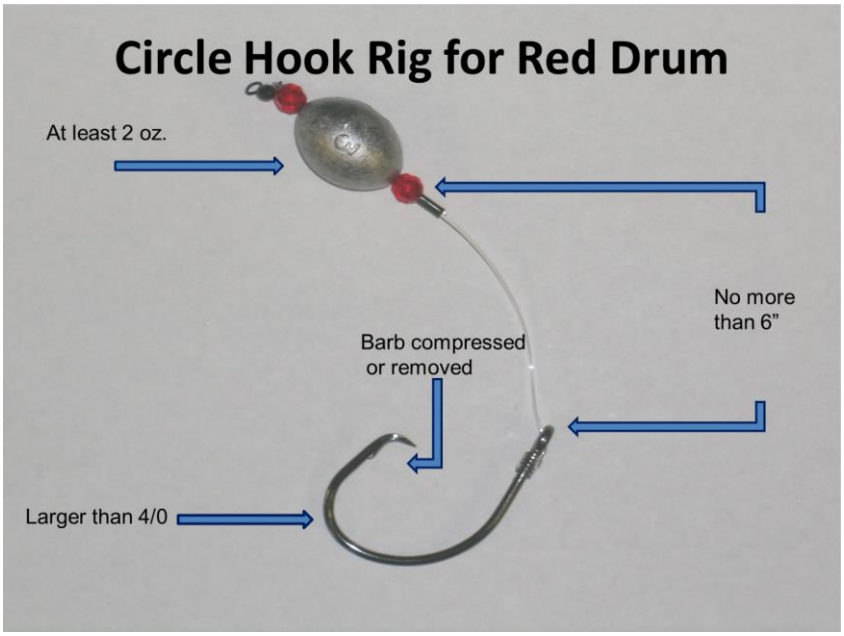

Figure 3. Current configuration of red drum natural bait rig described in Marine Fisheries Commission rule 15A NCAC 03J .0306.

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IV. AUTHORITY

G.S. 113-182. Regulation of fishing and fisheries.

(a) The Marine Fisheries Commission is authorized to authorize, license, regulate, prohibit, prescribe, or restrict all forms of marine and estuarine resources in coastal fishing waters with respect to:
  (1) Time, place, character, or dimensions of any methods or equipment that may be employed in taking fish;
  (2) Seasons for taking fish;
  (3) Size limits on and maximum quantities of fish that may be taken, possessed, bailed to another, transported, bought, sold, or given away.

(b) The Marine Fisheries Commission is authorized to authorize, regulate, prohibit, prescribe, or restrict and the Department is authorized to license:
  (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 within the jurisdiction of the Department; and
  (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 implement the work of the Department in carrying out its duties.
  (3) The possession, transportation, importation, exportation, sale, purchase, acquisition, and disposition of all fish taken in the Atlantic Ocean out to a distance of 200 miles from the State's mean low watermark, consistent with the Magnuson Fishery Conservation and Management Act, 16 U.S.C. § 1801, et seq., as amended. (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, 1251; 1961, c. 1189, s. 1; 1963, c. 1097, s. 1; 1965, c.957, s. 2; 1973, c. 1262, s. 28; 1995, c. 507, s. 26.5(c); 1997-400, s. 6.6.

V. DISCUSSION

Compliance with regulations requiring the use of circle hooks and bent barbs on treble hooks can only be achieved if the following factors are met; 1) enforceable rules for the use and modification of the gear including clear and quantifiable definitions of circle hooks and barbless treble hooks, 2) readily available gear that complies with aforementioned definition, 3) reasonable exclusions for fisheries and activities where catch rates may be disproportionally affected using the new required gear, 4) extensive public education on the proper use of new gear, and 5) clearly articulated benefits relative to current conservation and management strategies employed for our marine resources. Failing to consider or act on these factors will significantly curtail compliance with any regulations prescribing the use of circle hooks and bent barbed treble hooks and potentially undermine the conservation benefits of employing such practices.

To ensure effective and enforceable regulations, a definition of a circle hook including quantifiable metrics must be established. Numerous management agencies, including the NCDMF, already define what a circle hook is in rule with some variation. The circle hook requirements for sharks and striped bass are based on the Atlantic States Marine Fisheries Commission's circle hook definition (Table 1). The current Commission rule (*15A NCAC 03J.0306*) that defines a circle hook does not require the use of a non-offset hook but does require that the barb be pinched down. Research evaluating the effectiveness of circle hooks in reducing deep hooking suggests that the gear loses its intended effectiveness if the point is offset (Prince et al 2002). Additionally, rule *15A*

NCAC 03J.0306 requires the use of hooks larger than 4/0. As described previously, hook manufacturers do not standardize the sizes of their hook offerings. If hook size is to be considered, a definition including "the point turned perpendicularly back to the shank" and establishing discrete measurements for gap and offset should be included. In order for officers to testify in a court of law to the size of a circle hook, a gauge or measuring device will be needed similar to what is currently used for crabs, oysters, clams, and finfish. The current Commission rule defining a circle hook and prescribing its use is considered un-enforceable as written given the aforementioned inconsistencies in hook size. Officers can inspect the tackle relative to rig requirements listed in the rule but are unable to enforce hook size requirements. If the rule was modified to remove the size requirement, essentially making circle hooks a requirement regardless of size, an officer would have more discretion to enforce the regulation.

Circle hooks outperform J-hooks in reducing deep hooking of fish when using natural baits due to the manner in which natural bait is typically fished. These baits are often fished suspended or on the bottom with slack line which allows the fish to swallow the bait and hook without the tension or movement of the line or bait rig spooking or otherwise preventing the fish from consuming the bait. To aid in enforcement and ensure that anglers are using circle hooks when fishing with such bait, a clear definition of what does and does not constitutes natural bait is needed. Natural bait is not currently defined in rule so a definition will need to be developed if required use of circle hooks is subject to natural bait. Other jurisdictions have defined natural and artificial bait for the purpose of requiring or excluding their use in certain fisheries or areas. The Wildlife Resources Commission defines bait in mountain trout waters as "any living or dead organism (plant or animal), or parts thereof, or prepared substances designed to attract fish by the sense of taste or smell" (15A NCAC 10C .0205). Anglers are prohibited from using natural bait in mountain trout waters which includes not only live or dead bait, but also prepared or synthetic baits and attractants. A definition this broad applied to coastal waters could impact access to certain fisheries by limiting certain bait and lure configurations or undermine any conservation benefits to circle hooks by creating unintentional "loop holes" to avoid their use. Additionally, it could go beyond the intent of the rule by prohibiting fishing practices that do not pose a conservation concern. Careful consideration is needed in crafting an appropriate definition for natural bait that allows for its use or prohibition as intended.

Catch rates are another factor to consider with the implementation of circle hook regulations. Depending on the species targeted and style of fishing, rates of hook-up and landings can differ greatly between J- hooks and circle hooks. In a Maryland striped bass study, anglers using J-hooks landed a fish 42% of the time they detected a strike. When using non-offset circle hooks, anglers landed a fish 27% of the time. J-hooks were 52% more efficient than non-offset circle hooks in landing a fish once a strike was detected (Lukacovic and Uphoff 2002). The reduction in catch especially in trolling fisheries may present a significant concern with compliance. Trolling for king mackerel with strip baits or dead ballyhoo requires the use of 7/0 to 9/0 J-hooks. Catch rates for king mackerel using circle hooks while trolling has been shown to be reduced significantly (Rudershausen et al. 2011). Additionally, live bait trolling using barbed and barbless treble hooks have not been evaluated for differences in catch rates. Sheepshead are typically targeted using natural baits and either small, short shanked J-hooks or small treble hooks. Their hard mouth and dentition often require anglers to forcibly set the hook to ensure proper hooks set. A circle hook in this situation would not set. Catch rates may not differ using barbless treble hooks but there has been no research to evaluate the effectiveness of different hook types or the incidence of deep hooking using traditional methods and gear for this species. Another notable species that some anglers target in North Carolina using natural bait are flounder. They can be harvested drifting cut bait, fishing live bait, and with jigs in combination with natural or synthetic baits. Flounder are

ambush predators and engulf baits and prey as they drift or swim by and do not typically swim off after consuming a bait. It is up to the angler to set the hook either actively or passively by drifting by. The effectiveness of circle hooks for flounder fishing will depend on the fishing method with circle hooks likely more effective when anchored or shore fishing than from a drifting boat. No studies have evaluated the efficacy of circle hooks on the capture and survival of flounder in North Carolina. A study conducted on summer flounder in New York and Virginia tested for difference in hook type and survival in the recreational fishery and observed no significant difference between circle hooks and J-hooks (Malchoff and Lucy 1998).

The effective implementation of new gear regulations and best fishing practices will require an extensive public outreach and education campaign to educate anglers on the correct use of the new gear. A Texas study that evaluated hook types as well as rig configurations, bait, and angler experience level found that the only significant predictor of post release mortality was angler skill level with higher mortality associated with beginner/novice fisherman (Stunz and McKee 2006). The NC DMF has long prompted the use of ethical angling practices including the use of circle hooks. NC DMF publishes and distributes a pamphlet titled Ethical Angling: A Guide to Responsible Fishing, which details the use of circle hooks, catch and release, and proper handling of fish. NC DMF also distributes bumper stickers depicting a red drum and circle hook encouraging anglers to fish responsibly. Partnerships with the SAFMC, the FishSmart program supported by the Angler Action Foundation, and others have provided numerous other informational brochures and tackle giveaways to promote the use of circle hooks and other gears, such as fish descending devices, and information on best handling practices. Division staff have distributed over 500 red drum short leader rigs (with circle hook) obtained through its partnership with FishSmart. In addition to efforts by FishSmart, the NMFS Recreational Fisheries Policy Program provide 7,000 circle hooks of various sizes for distribution by the NC DMF. Staff assembled these hooks into "inshore" and "offshore" packages along with informational pamphlets for distribution. Over half of these were distributed during 2019. While it is challenging to quantify the impacts of information campaigns on angler use of circle hooks, anecdotal reports by Marine Patrol indicate that most anglers are using circle hooks while bait fishing in Pamlico Sound for red drum during the day, while regulations only require use at night.

The promotion of barbless treble hooks as a conservation measure has largely been replaced by the use of single inline hooks. The eye of this style of hook is turned inline and is meant to replace treble hooks on topwater and suspending hard baits. Their use has been promoted for a variety of reasons – less damage to fish, ease of unhooking, fish hooked more securely, less likely to collect grass or debris, and angler safety. This trend is gaining ground in the industry. Many manufacturers have started selling lures already rigged with single hooks. A local tackle shop in Eastern North Carolina advertised a promotion in June 2019 where anglers could bring 5 lures and have the trebles swapped out for inline single hooks. This trend is being driven by the tackle industry, retailers, and conservation-minded anglers. A coordinated public information campaign by NCDMF and tackle shops may shift the needle toward the use of single inline hooks in specific fisheries such as artificial lures for speckled trout.

Several North Carolina General Statutes (NCGS) address the authority for and requirements of implementing MFC rules. NCGS 113-134 authorizes the MFC to adopt rules to implement requirements of NCGS 113, Subchapter IV, Conservation of Marine and Estuarine and Wildlife Resources. The N.C. Fisheries Reform Act (FRA) of 1997 restructured the way North Carolina managed its coastal fisheries and enacted general statutes for the MFC, Coastal Habitat Protection Plan, Fishery Management Plans (FMPs), Marine Fisheries Law Enforcement, and Commercial Fishing Licenses. NCGS 143B-289.52 requires the MFC to adopt rules to be

followed in the management, protection, preservation, and enhancement of the marine and estuarine resources within its jurisdiction, including commercial and sports fisheries resources. NCGS 113-182.1 requires the NCDMF to develop FMPs for adoption by the MFC with the goal of the plans to ensure the long-term viability of North Carolina's commercially and recreationally significant species or fisheries. The N.C. Administrative Procedure Act (APA; NCGS 150B) applies to an agency's exercise of its authority to adopt a rule and states a rule is not valid unless it is adopted in substantial compliance with the requirements of the APA.

Currently, there are six species on the state FMP schedule that would be affected by changes in hook requirements. Estuarine Striped Bass, Kingfish, Red Drum, Sheepshead, Southern Flounder and Spotted Seatrout all support significant recreational fisheries and any changes to hook requirements could have potential impacts on the fisheries and associated anglers. Variations in size, location, and fishing techniques as they apply to the above species would require specific considerations when selecting appropriate hook size, shape, materials, etc. These variations make assigning one circle hook requirement across the board for various species problematic. What might work for one species may not be suitable for another. Additionally, given that paucity of research for state managed species and the current and potential future un-quantified metrics of use with circle hooks and barbless treble hooks the NC DMF may be unable to incorporate the positive effects of these management measures into stock assessments. Rather, any conservations gains realized by the required use of these gears will have to indirectly inferred from multiple assessments.

The FMP development process is a slow deliberate process that requires significant public input and legislative review. Considering the significant variability in effectiveness of circle hook requirements, developing this issue within each state FMP may be a more effective approach. This would allow the Division to evaluate existing literature, data, and current management to develop circle hook requirements that are specific to that species and associated fisheries and potentially evaluate their effectiveness directly. Development of FMP Amendments for Spotted Seatrout, Striped Bass, and Southern Flounder are currently underway, and consideration of circle hook and barbless treble hook requirements could be addressed in those upcoming amendments. Addressing hook requirements on a species-specific basis is also consistent with upcoming requirements for sharks and striped bass by the Atlantic States Marine Fisheries Commission and for snapper-grouper complex species by the South Atlantic Fishery Management Council.

VI. SUMMARY OF FINDINGS

- In general, science supports the use of circle hooks as a means to reduce hook trauma and discard mortality
    - Aside from extensive research on red drum, few studies have been conducted in North Carolina that evaluate the effectiveness of circle hooks
    - Studies suggests that off-set circle hooks negate the positive benefits of circle hooks
- Very little research exists on the effects of hook trauma by treble hooks
- No industry standard exists for circle hook style and size
    - If circle hook use is required, a clear definition is needed
- Other management jurisdictions that require the use of circle hooks focus on single species/fisheries or complexes to implement hook requirements
    - Reduces unintended consequences, i.e. live bait trolling, exclusion of species with unique mouth physiologies, etc.
    - Increases the likelihood of compliance and enforcement

- Consider positive and negative social and economic effects
    - Potential decrease in angler satisfaction through decreased catch rates for some species
    - Positive impact to catch rates if population responds to reduced discard mortality
    - Economic impact to anglers and tackle shops

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ASMFC SPRING SUMMARY WILL BE ADDED AS SUPPLEMENTAL MATERIAL PRIOR TO THE MAY MEETING

April 2020 Council Meeting Report

The following summary highlights actions taken and issues considered at the Mid-Atlantic Fishery Management Council's meeting April 2020 Council Meeting. This meeting was conducted by webinar due to the ongoing COVID-19 pandemic. Presentations, briefing materials, and webinar recordings are available at: http://www.mafmc.org/briefing/april-2020.

During this meeting, the Council:

- Adopted golden tilefish specifications for the 2021 and 2022 (interim) fishing years
- Voted to request an emergency action to allow a one-time 5% rollover of the unused 2020 fishing year golden tilefish IFQ allocation to the 2021 fishing year
- Recommended no changes to the previously-approved blueline tilefish specifications for the 2021 fishing year
- Approved a scoping document for the Black Sea Bass Commercial State Allocation Amendment
- Reviewed the 2020 Mid-Atlantic State of the Ecosystem Report
- Discussed climate change scenario planning and plan for potential East Coast/Mid-Atlantic exercise
- Received an update on South Atlantic for-hire reporting requirements

Golden Tilefish 2021 - 2022 Specifications

After reviewing recommendations from its Scientific and Statistical Committee (SSC), Tilefish Monitoring Committee (MC), and Tilefish Advisory Panel (AP), the Council voted to maintain status quo golden tilefish catch and landings limits for the 2021 and 2022 (interim) fishing years, except for the incidental total allowable landings (TAL) which was reduced from the 2020 level by slightly over 2,000 pounds. The Council did not recommend any changes to the current recreational bag limit or commercial/incidental trip limit. These specifications are summarized in the table below.

In addition, the Council discussed options to help mitigate the impacts of the COVID-19 pandemic on the fishery, which has experienced a drastic decrease in prices and low product demand. The Council passed a motion to request that NOAA Fisheries consider an emergency action to allow a one-time 5% rollover of the unused 2020 fishing year golden tilefish individual fishing quota (IFQ) allocation to the 2021 fishing year. This small roll-over of unused quota is intended to help the industry potentially recoup lost earnings due to COVID-19.

Summary of Golden Tilefish 2021 and 2022 (Interim*) Specifications	
Acceptable Biological Catch (ABC)	1,635,830 pounds
Commercial Quota – IFQ Fishery	1,554,038 pounds
Incidental Quota	70,621 pounds
Incidental Trip Limit	500 pounds
Recreational Trip Limit	8 fish per-angler, per-trip

**The 2021 management track assessment will be used to revise the 2022 interim management measures and set 2023 and 2024 specifications.*

Blueline Tilefish 2021 Specifications

The Council reviewed the 2021 blueline tilefish specifications previously set as part of the 2019-2021 specifications package. After reviewing recommendations from the staff, SSC, and MC, the Council determined that no changes to the 2021 specifications and management measures are warranted. These specifications are summarized in the table below.

The Council also reviewed the status of private permitting and reporting for blueline and golden tilefish which was approved with delayed implementation in 2017. Implementation was expected by May 1, 2020 prior to the COVID

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19 pandemic. Now, implementation may be slightly delayed to late spring/early fall. However, public outreach will continue to be provided by the Council and GARFO. Information regarding this action can be accessed here: https://www.mafmc.org/council-events/2020/tilefish-rec-reporting-webinar.

Summary of Blueline Tilefish 2021 Specifications	
ABC	100,520 pounds
Recreational TAL	71,912 pounds
Recreational trip limit	Private Boat: 3 fish USCG uninspected for-hire vessel (e.g., charter boats): 5 fish USCG inspected for-hire vessel (e.g., party boats): 7 fish
Commercial TAL	26,869 pounds
Commercial trip limit	500 pounds (until 70% of quota is met, then reduced to 300 pounds)

Black Sea Bass Commercial State Allocation Amendment

The Council reviewed a draft scoping plan and scoping document for a joint action with the Atlantic States Marine Fisheries Commission which will consider potential changes to the state-by-state allocations of the black sea bass commercial quota. This action will also consider whether these allocations should be added to the Council's FMP. The Council approved the scoping plan and scoping document after agreeing to a few revisions to the document. Two scoping hearing webinars will be held on May 11 and May 14, 2020. Written comments will be accepted through May 31, 2020. Additional details are available at https://www.mafmc.org/newsfeed/2020/bsb-com-state-allocation-scoping.

Mid-Atlantic State of the Ecosystem Report

Dr. Sarah Gaichas (NEFSC) presented a summary of the updates and findings from the 2020 Mid-Atlantic State of the Ecosystem report. The comprehensive report is developed by the NEFSC in collaboration with a number of universities, non-profit organizations, and state agencies. First provided to the Council in 2017, these annual reports provide ecosystem-level indicators that evaluate the status and trends of ecological, environmental, economic, and social components of the Mid-Atlantic ecosystem to help integrate this information and allow the Council to make more informed management decisions. The 2020 report provided a new 2-page summary with infographics and visualizations to highlight key take home messages. The report also included new indicators for recreational fishing, social science information tracking commercial engagement, the spatial overlap of wind lease areas and fisheries habitat, and forage fish energy density. Council members and the public provided feedback and suggestions for continued refinement of future versions of the report. This report and other ecosystem-related resources are available at https://www.mafmc.org/eafm.

Climate Change Scenario Planning

The Council discussed a plan for the climate change scenario planning process identified as a priority in their 2020 Implementation Plan. Scenario planning is a structured process that can be used to strategize in the context of uncontrollable and uncertain environmental and sociopolitical factors. The Council received a presentation on the basics of scenario planning from Diane Borggaard of GARFO's Protected Resources Division, including examples of its marine resource management applications. The Council then discussed a planned coordinated East Coast climate change scenario planning initiative as a way to explore jurisdictional and governance issues related to shifting stock distributions. The Northeast Regional Coordinating Committee (NRCC) has formed a working group to plan for this initiative. The working group will meet this spring to discuss finding a facilitator for this process and forming a core team for the project which should include representatives from all three Council regions on the East Coast.

South Atlantic Electronic Reporting

George LaPointe provided an overview of new South Atlantic for-hire reporting requirements. On February 24, NOAA Fisheries published a final rule which establishes electronic reporting requirements for vessels with a federal charter/headboat permit for Atlantic coastal migratory pelagics, Atlantic dolphin and wahoo, or South Atlantic snapper-grouper. Electronic reports from charter fishermen will be due by Tuesday following the end o

each reporting week, which runs from Monday through Sunday. This action also modifies the reporting deadline for headboats from Sunday to Tuesday following a reporting week. Mr. LaPointe reviewed the data elements that will be required in electronic reports and described how permit requirements for multiple reporting programs will be handled. These requirements will become effective September 1, 2020. A number of outreach and training opportunities have been planned for later this year. More information is available at: https://www.fisheries.noaa.gov/southeast/et.

Next Council Meeting

June 16-18, 2020

Hilton Virginia Beach Oceanfront
3000 Atlantic Avenue, Virginia Beach, VA 23451
Telephone: (757) 213-3000

http://www.mafmc.org/council-events/june-2020-council-meeting

NOTE: We are continuing to closely monitor the COVID-19 (coronavirus) situation. If necessary, this meeting may be conducted by webinar. Please check our website for updates as the June 2020 Council Meeting approaches. The meeting dates are subject to change if this shifts to a webinar-based meeting.

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February 2020 Council Meeting Report

The following summary highlights actions taken and issues considered at the Mid-Atlantic Fishery Management Council's meeting February 11-13, 2020 in Duck, NC. Presentations, briefing materials, and webinar recordings are available at: http://www.mafmc.org/briefing/february-2020.

During this meeting, the Council:

- Appointed four new members to the Scientific and Statistical Committee
- Approved a public hearing document for the Mackerel, Squid, and Butterfish Goals and Objectives and *Illex* Permit Amendment and opted not to select any preferred alternatives
- Received an updated on the *Illex* Working Group
- Approved a 2020 Implementation Plan
- Received a presentation on the NEFSC Survey and Data Collection Programs
- Received a presentation on the Kitty Hawk Offshore Wind Project

New SSC Membership

In 2019, the Council completed a comprehensive review of its Scientific and Statistical Committee (SSC) membership in order to align new membership expertise with the future needs of the Council. Based on that review, the Council solicited applications to fill four vacancies that align with four different Council priority areas. The Council received applications from 11 highly qualified candidates covering a range of expertise and experiences. After reviewing all applications, the Council appointed the following four new members to the SSC:

- **Dr. Geret DePiper**, NMFS Northeast Fisheries Science Center, Social Sciences Branch (Economist/Social Scientist)
- **Dr. Gavin Fay**, University of Massachusetts Dartmouth's School of Marine Science and Technology (Fisheries Biologist/Ecologist)
- **Dr. Jorge Holzer**, University of Maryland, Dept. of Agricultural and Resource Economics (Economist/Social Scientist)
- **Dr. Alexei Sharov**, Maryland Department of Natural Resources, Fisheries Service (Stock Assessment)

The new members will serve a 3-year term beginning March 1, 2020.

Mackerel, Squid, and Butterfish Goals and Objectives and *Illex* Permit Amendment

The Council reviewed a public hearing document for the amendment considering changes to the Mackerel, Squid, Butterfish Fishery Management Plan (FMP) Goals and Objectives as well as changes to permitting for the *Illex* fishery. The Council approved taking the document out for public hearings once final editing is completed by staff. The Council decided not to identify any preliminary preferred alternatives at this time but did simplify the potential *Illex* fishery permitting requalification options by removing several redundant alternatives. Hearings are anticipated in April 2020, with final action considered in June 2020. The status of this action can be tracked at http://www.mafmc.org/actions/illex-permitting-msb-goals-amendment.

Update on *Illex* Working Group

The Council received an update on the Illex Working Group's progress related to analyses for modifying the Illex quota. The Working Group will have several products ready to present to the Council's SSC for the May 2020 SSC meeting. Additional information related to this working group is available at http://www.mafmc.org/actions/illex-working-group.

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2020 Implementation Plan

The Council reviewed and approved its 2020 Implementation Plan. The annual implementation plan is developed each year as a tool for planning and prioritizing activities for the upcoming year within the broader context of the Council's longer-term goals and objectives. The 2020 Implementation Plan identifies the specific activities, amendments, frameworks, specifications, and other projects the Council expects to initiate, continue, or complete during the year. The plan also organizes the Council's planned work for the year within the context of the goals and objectives defined in the 2020-2024 Strategic Plan to ensure that progress is made in each area. During the meeting, the Council also discussed the planned meeting topics for 2020. The strategic plan and implementation plan are both available at www.mafmc.org/strategic-plan.

NEFSC Survey and Data Collection Programs

Dr. Jon Hare presented a comprehensive overview of the Northeast Fisheries Science Fisheries Science Center's (NEFSC) Survey and Data Collection Programs. The presentation included details on the NEFSC's organization, priorities and strategic goals, data collection programs, assessment and modeling programs, other scientific initiatives, and budget structure. Dr. Hare also described the Center's involvement with various MAFMC activities. Council members and members of the public noted that this agenda item was very informative and provided a great opportunity for questions and dialogue. The presentation can be viewed online here.

Kitty Hawk Wind Project

The Council received a presentation on the Kitty Hawk Offshore Wind Project from Brian Benito, the project's permitting manager. Kitty Hawk Wind is being developed by Avangrid Renewables in a lease area located 24 miles off the coasts of Virginia and North Carolina. Mr. Benito's presentation described recent and upcoming planning and assessment activities and fisheries outreach.

Other Business

Omnitracs VMS Units: The Council discussed the recent announcement that the McMurdo 'Omnitracs' VMS operated by vessels with Greater Atlantic Region permits will not be supported by its satellite provider after March 31, 2020. According to GARFO's notice to fishermen (distributed January 15, 2020) the 'Omnitracs' VMS unit will not function with any other satellite provider and must be replaced by April 1, 2020 or risk being out of compliance with VMS regulations in the region. Several stakeholders in the Mid-Atlantic region have voiced their concern with both the cost burden and the short timeframe allowed to complete this transition. The Council agreed to write a letter to the NOAA Office of Law Enforcement addressing these concerns.

Next Council Meeting

April 7-9, 2020

Stockton Seaview Hotel
401 South New York Road, Galloway, NJ 08205
Telephone: 609-652-1800

http://www.mafmc.org/council-events/april-2020-council-meeting

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South Atlantic Fishery Management Council

News Release

FOR IMMEDIATE RELEASE
March 6, 2020

CONTACT: Kim Iverson
Public Information Officer
Toll Free: 866/SAFMC-10 or 843/571-4366
Kim.Iverson@safmc.net

Federal Fisheries Managers Address Broad Range of Issues During Meeting This Week

This week's meeting of the South Atlantic Fishery Management Council in Jekyll Island, Georgia reflected the diversity of issues involved in managing fisheries in federal waters in the Southeast. During the meeting the Council developed recommendations on measures proposed in the Florida Keys National Marine Sanctuary, approved an amendment to modify transit provisions for shrimp vessels during cold-weather closures, addressed designating Special Management Zone areas off the coasts of the Carolinas, and received updates on the 2020 red snapper season, shark depredation, and wind farms.

The Council received presentations from the Florida Fish and Wildlife Conservation Commission (FWC) as well as the Florida Keys National Marine Sanctuary regarding proposed measures in the Sanctuary's *Restoration Blueprint* affecting fishing within the South Atlantic Council's portion of the Sanctuary. The proposed measures include expansion of the Sanctuary boundaries, modifying designated marine zones where fishing would be restricted or prohibited, eliminating baitfish permits, and prohibiting fish feeding activities. FWC held a series of stakeholder workshops in January 2020 and has developed recommendations based on input received at the workshops and other meetings. After reviewing the FWC recommendations, the Council discussed their role in the process and began drafting a letter to provide formal comments to the superintendent of the Florida Keys National Marine Sanctuary by mid-March. A final copy of the letter will be posted on the Council's website as part of the March 2020 meeting materials.

Council members voted to approve Amendment 11 to the Shrimp Fishery Management Plan that would modify current transit provisions for commercial shrimp vessels during cold-weather closures. The Council created the cold-weather closures and associated transit provisions to protect overwintering shrimp. During the most recent cold-weather closure for penaeid shrimp (brown, pink, and white shrimp) in 2018, shrimp fishermen indicated that gear stowage requirements were no longer feasible and asked that they be adjusted. Working together with members of the Council's advisory panels to find a solution, the amendment would modify the gear stowage requirements within the transit provisions. The amendment must undergo Secretarial review before the measures may be implemented.

At the request of state marine resource agencies in North Carolina and South Carolina, the Council is considering designating a series of artificial reef sites within federal waters (3 miles or greater) offshore of each state as Special Management Zones. Amendment 34 to the Snapper Grouper Fishery Management Plan would designate 30 artificial reef sites off of North Carolina and four sites off of South Carolina, where gear restrictions would be put into place for fishermen targeting species in the snapper grouper management complex. The Council approved the amendment for public hearings to be held via webinar prior to the June Council meeting. The hearings will be publicized as details become available.

(Continued)

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Other Items

The Council received an update from NOAA Fisheries regarding a possible recreational season for red snapper in the South Atlantic of three days beginning the second Friday in July. The number of fishing days is determined by NOAA Fisheries each year. The 2020 opening is contingent on changing current regulations that prohibit opening the season for three days or less. The Council approved Snapper Grouper Regulatory Amendment 33 in December 2019 requesting the minimum number of days requirement be eliminated. The amendment is currently under review by NOAA Fisheries. Read more.

The Council also received a presentation from NOAA Fisheries Highly Migratory Species Division addressing concerns about shark depredation. The presentation acknowledged growing concerns about the impacts of shark depredation on fishing activities and outlined the challenges in addressing the concerns, including data needed to quantify shark encounters by fishermen. Council members also received an update on the status of the Kitty Hawk Wind Farm project proposed off the east coast of North Carolina, took action to table proposed changes for commercial Spanish mackerel trip limits in the northern zone, moved forward with developing an amendment to designate bullet mackerel and frigate mackerel as Ecosystem Component Species and began preliminary discussions of allocations. For additional meeting details, view the interactive Story Map for the March Council meeting or visit the Council's website at: https://safmc.net/safmc-meetings/council-meetings/ for committee reports and other meeting materials.

The next meeting of the South Atlantic Fishery Management Council is scheduled for June 8-12, 2020 in Key West, Florida.

The South Atlantic Fishery Management Council, one of eight regional councils, conserves and manages fish stocks from three to 200 miles offshore of North Carolina, South Carolina, Georgia and east Florida.

South Atlantic Fishery Management Council

SUMMARY MOTIONS

March 2 – 5, 2020

Jekyll Island, GA

This is a summary of the motions approved by the Council. Motions addressing actions and alternatives for FMP amendments are followed by text showing the result of the approved motion. Complete details on motions and other committee recommendations are provided in the Committee Reports available on the SAFMC website.

Committee of the Whole

MOTION 1: APPROVE THE DRAFT LETTER TO THE FKNMS AS THE COUNCIL'S COMMENTS REGARDING THE FLORIDA KEYS NATIONAL MARINE SACTUARY RESTORATION BLUEPRINT DRAFT ENVIRONMENTAL IMPACT STATEMENT AS MODIFIED.

APPROVED BY COUNCIL

MOTION 2: COMMITTEE DIRECTED STAFF TO COMPLETE THE FOLLOWING TASKS:

- Prepare a letter to be signed by the Council Chair to the Superintendent of the FKNMS with comments regarding the Restoration Blueprint DEIS.
- Bring back to the Snapper Grouper Committee a white paper regarding ecosystem component species designation for Cubera Snapper, Margate, Sailor's Choice, Coney, Yellowfin Grouper, and Saucereye Porgy.
- Bring back to the Snapper Grouper Committee the information regarding ACLs and allocations for unassessed species as directed above.

APPROVED BY COUNCIL

Habitat Committee

MOTION 1: DIRECT THE HABITAT (AND ECOSYSTEM) AP TO UPDATE OR CREATE AN ADDENDUM TO INTEGRATE AND ADDRESS CLIMATE CHANGE IN THE BEACH DREDGING AND FILLING, BEACH RENOURISHMENT AND LARGE SCALE COASTAL ENGINEERING POLICY STATEMENT.

APPROVED BY COUNCIL

MOTION 2. ADOPT THE FOLLOWING TIMING AND TASK(S):

- Staff support ongoing development of the South Atlantic Ecopath with Ecosim Model and SSC Workgroup review and presentation during June Committee meeting.
- Staff provide guidance and priorities supporting NOAA and partners mapping/characterization of South Atlantic deepwater ecosystem.
- Staff facilitate ongoing Habitat and Ecosystem AP sub-panel input highlighting state activities addressing FEP II Implementation Roadmap.

APPROVED BY COUNCIL

Mackerel Cobia Committee

MOTION 1: DISCONTINUE WORK ON CMP FRAMEWORK AMENDMENT 9 UNTIL THE STOCK ASSESSESSMENT.

APPROVED BY COUNCIL

Shrimp Committee

Amendment 11 Actions -- Motions 1 - 4:

MOTION 1: APPROVE IPT RECOMMENDATIONS TO THE PURPOSE AND NEED.

The *purpose* is to modify cold-weather closed area transit provisions to match current vessel design, reduce the socio-economic impact for fishermen avoiding the cold-weather closed areas if they cannot comply with regulations, and improve safety at sea while maintaining protection for overwintering white shrimp and regulation enforceability.

The *need* is to adjust current regulations because gear cannot be stowed below deck on many vessels.

APPROVED BY COUNCIL

MOTION 2: APPROVE THE IPT RECOMMENDED OPTIONS FOR SHRIMP. AMENDMENT 11

Status Quo. Brown shrimp, pink shrimp, or white shrimp may be possessed on board a fishing vessel in a closed area, provided the vessel is in transit and all trawl nets with a mesh size less than 4 inches (10.2 cm), as measured between the centers of opposite knots when pulled taut, are stowed below deck while transiting the closed area. A vessel is in transit when it is on a direct and continuous course through a closed area.

Option 1. A vessel may transit South Atlantic cold-weather closed areas while possessing brown shrimp, pink shrimp, or white shrimp provided the vessel is in transit and fishing gear appropriately stowed. Transit means non-stop progression through the area with fishing gear appropriately stowed. Gear appropriately stowed means trawl doors and nets out of the water and bag straps removed from the net.

Option 2. A vessel may transit South Atlantic cold-weather closed areas while possessing brown shrimp, pink shrimp, or white shrimp provided the vessel is in transit and fishing gear appropriately stowed. Transit means non-stop progression through the area with fishing gear appropriately stowed. Gear appropriately stowed means trawl doors in the rack (cradle), nets in the rigging and tied down, and try net on the deck.

APPROVED BY COUNCIL

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MOTION 3: RECOMMEND OPTION 2 AS THE PREFERRED OPTION FOR SHRIMP. AMENDMENT 11

Option 2. A vessel may transit South Atlantic cold-weather closed areas while possessing brown shrimp, pink shrimp, or white shrimp provided the vessel is in transit and fishing gear appropriately stowed. Transit means non-stop progression through the area with fishing gear appropriately stowed. Gear appropriately stowed means trawl doors in the rack (cradle), nets in the rigging and tied down, and try net on the deck.

APPROVED BY COUNCIL

MOTION 4: RECOMMEND APPROVAL OF SHRIMP AMENDMENT 11 FOR FORMAL SECRETARIAL REVIEW AND DEEM THE CODIFIED TEXT AS NECESSARY AND APPROPRIATE. GIVE STAFF EDITORIAL LICENSE TO MAKE ANY NECESSARY EDITORIAL CHANGES TO THE DOCUMENT/CODIFIED TEXT AND GIVE THE COUNCIL CHAIR AUTHORITY TO APPROVE THE REVISIONS AND RE-DEEM THE CODIFIED TEXT.

APPROVED BY COUNCIL

MOTION 5. ADOPT THE FOLLOWING TIMING AND TASKS:

- Staff will prepare Shrimp Amendment 11 for Secretarial review and submit in April 2020.

APPROVED BY COUNCIL

Dolphin Wahoo Committee

Amendment 12 Actions -- Motions 1 - 3:

MOTION 1: APPROVE THE IPT'S SUGGESTED PURPOSE AND NEED STATEMENT.

The *purpose* and *need* is to add bullet mackerel and frigate mackerel to the Fishery Management Plan for the Dolphin Wahoo Fishery of the Atlantic as ecosystem component (EC) species to safeguard their ecological role as forage fish for wahoo.

APPROVED BY COUNCIL

MOTION 2: SELECT ALTERNATIVE 2 IN ACTION 1 AS THE PREFERRED ALTERNATIVE IN AMENDMENT 12.

Action 1. Designate bullet mackerel and frigate mackerel as ecosystem component species in the Dolphin Wahoo Fishery Management Plan

PREFERRED Alternative 2. Add bullet mackerel and frigate mackerel to the Dolphin Wahoo Fishery Management Plan and designate the two mackerel species as ecosystem component species.

APPROVED BY COUNCIL

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MOTION 3: DIRECT STAFF TO COMPLETE THE FOLLOWING TASK:

- Continue work on Amendment 12 for review at the June 2020 meeting.

APPROVED BY COUNCIL

SOPPS Committee

MOTION 1: MODIFY THE EXISTING HANDBOOK LANGUAGE FOR THE TRAVEL REIMBURSEMENT SECTION TO REFLECT: ALL AIRLINE RESERVATIONS AND CAR RENTALS MUST BE MADE THROUGH THE COUNCIL'S DESIGNATED TRAVEL PROVIDER. TRAVEL EXPENSE REIMBURSEMENT WILL BE LIMITED TO THE PREVAILING AIRFARE RATE AS DETERMINED BY THE COUNCIL'S DESIGNATED TRAVEL PROVIDER. EFFECTIVE IMMEDIATELY.

APPROVED BY COUNCIL

MOTION 2: APPROVE THE FOLLOWING TASKS:

- Update the Council travel memos and instructions to reflect the new policy.
- Update the SAFMC handbook for future approval.

APPROVED BY COUNCIL

Executive Finance Committee

MOTION 1: ESTABLISH THE SAFMC AWARD OF EXCELLENCE AND GUIDELINES AS MODIFIED.

APPROVED BY COUNCIL

MOTION 2: APPROVE THE COMMITTEE CONSOLIDATION PLAN AS MODIFIED.

APPROVED BY COUNCIL

MOTION 3: APPROVE THE FOLLOWING TIMING AND TASKS:

- Notify Council, SSC, and AP members of the new Award of Excellence and the June 30, 2020 deadline for submitting nominations for the first award.
- Incorporate the committee consolidation plan for the June 2020 meeting and update Council guidance documents as required.
- Submit the NEPA changes comment letter by March 10, 2020.
- Coordinate with the GMFMC to arrange a meeting of the Joint Working Group between April and June 2020.
- Contact the NEFMC, MAFMC, and ASMFC to discuss next steps for addressing management concerns related to species distribution shifts.

APPROVED BY COUNCIL

MOTION 4: APPROVE THE DRAFT LETTER TO THE CEQ AS THE COUNCIL COMMENTS ON THE PROPOSED NEPA MODIFICATIONS.

APPROVED BY COUNCIL

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Snapper Grouper Committee

MOTION 1: APPROVE THE STATEMENT OF WORK FOR THE RED SNAPPER ASSESSMENT AS MODIFIED.

APPROVED BY COUNCIL

Regulatory Amendment 34 Actions -- Motions 2 - 4:

MOTION 2: APPROVE THE PURPOSE AND NEED AS MODIFIED BELOW:

Purpose: Designate artificial reefs sites in the exclusive economic zone off North Carolina and South Carolina as special management zones and restrict fishing gear use within the areas.

Need: Reduce adverse effects to snapper grouper species and optimize fishing opportunities at the artificial reef sites.

APPROVED BY COUNCIL

MOTION 3: ACCEPT IPT'S EDITS TO ALTERNATIVES 1-3 AND SELECT ALTERNATIVE 3 AS PREFERRED UNDER ACTION 1.

Action 1. Designate artificial reefs in the exclusive economic zone off North Carolina as special management zones

Alternative 1 (No Action). There are currently no artificial reef sites in the exclusive economic zone off North Carolina designated as special management zones. The allowable gear for the snapper grouper fishery management plan for the commercial and recreational sectors are handline, rod and reel, spear, bandit gear, powerhead, pot, and longline (the last two are commercial sector only). Do not implement new restrictions on fishing gear used to harvest snapper grouper species from artificial reefs in the exclusive economic zone off North Carolina.

NEW Alternative 2. Designate 30 artificial reef sites in the exclusive economic zone off North Carolina as special management zones. Within the special management zones, harvest of snapper grouper species would only be allowed with handline, rod and reel, and spear. All harvest would be limited to the applicable recreational bag limit.

Alternative 3. Designate 30 artificial reef sites in the exclusive economic zone off North Carolina as special management zones. Within the special management zones, harvest of snapper grouper species would only be allowed with handline, rod and reel, and spear. All harvest by spear would be limited to the applicable recreational bag limit.

APPROVED BY COUNCIL

MOTION 4: ACCEPT SUGGESTED EDITS TO ACTION 2 AND ALTERNATIVES 1-3 AND MAINTAIN ALTERNATIVE 2 AS PREFERRED.

Action 2. Designate additional artificial reefs in the exclusive economic zone off South Carolina as special management zones

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Alternative 1 (No Action). There are currently 28 artificial reef sites in the exclusive economic zone off South Carolina designated as special management zones. The allowable gear for the snapper grouper fishery management plan for the commercial and recreational sectors are handline, rod and reel, spear, bandit gear, pot, and longline (the last two are commercial sector only). Do not implement new restrictions on fishing gear used to harvest snapper grouper species from artificial reefs in the exclusive economic zone off South Carolina.

Preferred Alternative 2. Designate four additional artificial reef sites in the exclusive economic zone off South Carolina as special management zones. Within the special management zones, harvest of snapper grouper species would only be allowed with handline, rod and reel, and spear. All harvest would be limited to the applicable recreational bag limit.

Alternative 3. Designate four additional artificial reef sites in the exclusive economic zone off South Carolina as special management zones. Within the special management zones, harvest of snapper grouper species would only be allowed with handline, rod and reel, and spear. All harvest by spear would be limited to the applicable recreational bag limit.

APPROVED BY COUNCIL

MOTION 5: APPROVE REGULATORY AMENDMENT 34 FOR PUBLIC HEARINGS.

APPROVED BY COUNCIL

MOTION 6: APPROVE THE FOLLOWING TIMING AND TASKS:

- Prepare Regulatory Amendment 34 for public hearings.
- Hold webinar public hearings for Regulatory Amendment 34 prior to the June 2020 Council meeting.
- Begin work on white paper to determine need for conservation and management for the following species: Cubera Snapper, Margate, Sailor's Choice, Coney, Yellowfin Grouper, and Saucereye Porgy. Bring back to Council in June.

APPROVED BY COUNCIL

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ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Randy Gregory, Fisheries Biologist
Fisheries Management Section

SUBJECT: Highly Migratory Species Update

Issue
Highly Migratory Species activity update.

Action Needed
For informational purposes only, **no action is needed at this time.**

Overview
The Highly Migratory Species Advisory Panel meeting scheduled for May 19-21 will instead be an Advisory Panel conference call/webinar on May 19. The Advisory Panel will discuss Highly Migratory Species fishery management plan objectives, draft Amendment 13 to consider options for modifications to bluefin tuna management, and draft Amendment 14 for shark quota management.

Tuna
On Feb. 20, 2020, NOAA Fisheries closed the Atlantic bluefin tuna Angling category (recreational) fishery for large medium and giant "trophy" bluefin tuna (measuring 73 inches or greater) in the southern area. The fishery will remain closed through Dec. 31, 2020. The southern area is the area south of 39° 18' N (off Great Egg Inlet, NJ), outside the Gulf of Mexico. The Angling category (recreational) bluefin tuna daily retention limit is one school, large school, or small medium bluefin tuna (27 to <73 inches curved fork length).

On Feb. 24, 2020, NOAA Fisheries closed the General category (commercial) bluefin tuna fishery. Preliminary commercial landings for the General category January (January – March) sub-quota were 124.1 metric tons of the 100 metric ton adjusted sub-quota. The General category reopens on June 1, 2020 with a quota of 277.9 metric tons available for the June through August sub-quota.

On April 2, 2020, NOAA Fisheries published the final rule that modifies bluefin tuna bycatch management measures in the pelagic longline fishery. The final rule adjusts regulatory measures to manage bluefin tuna bycatch in the pelagic longline fishery for Atlantic highly migratory species. The final rule eliminates the Cape Hatteras Gear Restricted Area. The Individual Bluefin Quota Program limits the bluefin tuna incidental catch using individual vessel accountability and therefore, this restricted area is no longer needed.

State of North Carolina | Division of Marine Fisheries
3441 Arendell Street | P.O. Box 769 | Morehead City, North Carolina 28557
252-726-7021

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: Marine Fisheries Commission

FROM: Barbie Byrd, Biologist Supervisor
Protected Resources Program, Fisheries Management Section

SUBJECT: Protected Resources Program Update

Issue
Annual reports for Atlantic Sturgeon and Sea Turtle Incidental Take Permits (ITPs) are provided from the division's Protected Resources Program. The reports were submitted in April to the National Marine Fisheries Service as required for the 2019 ITP Year (Sept. 1, 2019 - Aug. 31, 2020).

Overview
During the 2019 ITP year, take levels for Atlantic Sturgeon and sea turtles in anchored estuarine gill nets did not reach or exceed allowable thresholds for any combination of species and management unit. Observers documented nine Atlantic Sturgeon and 22 sea turtles in large-mesh gill nets and four Atlantic Sturgeon and zero sea turtles in small-mesh gill nets. Observed sea turtle takes included 15 green, five Kemp's ridley, one loggerhead, and one unidentified sea turtle.

For the Atlantic Sturgeon ITP, state-wide observer coverage across four seasons during the 2019 ITP year met or exceeded the required coverage outlined in the permit (ITP) for anchored large-mesh (7.3%) and small-mesh (4.0%) gill net fisheries. For the sea turtle ITP, required observer coverage levels are at the season and management unit level. As such, observer coverage was below required levels for large-mesh gill nets (< 7%) in Management Units A and B during spring (5.9% and 6.5%) and summer (4.4% and 3.5%), and below required levels for small-mesh gill nets (<1%) in Management Unit D2 during spring (0%) and Management Units B and D1 during summer (0% and 0%). The Observer Program continues to have difficulty getting observed trips. Out of 5,852 phone calls and in-person contacts, observers spoke with a fisherman 43% of the time, but were only successful in scheduling a trip 4% of the time.

Due to concerns regarding COVID-19, the Observer Program received a waiver on 24 March from the National Marine Fisheries Service for maintaining observer coverage until further notice. As such, Protected Resources Program staff have temporary ceased all attempts to obtain onboard or alternative platform observations. Marine Patrol officers, however, continue to

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252-726-7021

conduct alternative platform observations as before. Fishermen are still required to self-report incidental captures in their gear.

The final document can be found at the following links:

2019 Annual Sea Turtle ITP Report
2019 Annual Atlantic Sturgeon ITP Report

Action Needed
For informational purposes only; **no action is needed at this time**.

Annual Sea Turtle Interaction Monitoring of the Anchored Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2019 (1 September 2018 – 31 August 2019)

Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230

Barbie L. Byrd, John K. McConnaughey, Scott A. Smith

North Carolina Department of Environmental Quality
North Carolina Division of Marine Fisheries
Protected Resources Program
3441 Arendell Street
Morehead City, NC 28557

April 2020

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1 INTRODUCTION

The North Carolina Division of Marine Fisheries (NCDMF) has actively addressed the incidental take of sea turtles in commercial estuarine gill nets since 2000. Between 2000 and 2011, the NCDMF had a series of Incidental Take Permits (ITP) from the National Marine Fisheries Service (NMFS) under Section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973 (Public Law 93-205) to "minimize, monitor, and mitigate" sea turtle interactions in anchored gill nets primarily in Pamlico Sound (Boyd 2012, Gearhart 2001, 2002, 2003, Murphey 2011, Price 2004, 2005, 2006, 2007, 2008, 2009, 2010). Five species of sea turtles can occur in North Carolina: green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), loggerhead sea turtle (*Caretta caretta*), hawksbill sea turtle (*Eretmochelys imbricata*), and leatherback sea turtle (*Dermochelys coriacea)*. Anchored gill nets are passive sets deployed with an anchor, stake, or boat at one or both ends of the net string; they do not include run-around, strike, drop, or drift gill nets. For this report, the term "gill net" refers to anchored gill net unless stated otherwise.

Evidence of incidental takes of sea turtles outside of Pamlico Sound was documented in June 2009 by NMFS observations of gill-net fisheries operating in Core Sound and nearby waterbodies (Byrd et al. 2016). These takes resulted in a series of temporary measures to address sea turtle interactions until the NCDMF obtained an ITP for gill-net fisheries state-wide (see McConnaughey et al. 2019). On 11 September 2013, the NCDMF received the Sea Turtle ITP (No. 16230), which expires on 31 August 2023 (McConnaughey et al. 2019, NMFS 2013). In addition to establishing authorized levels of incidental takes, the ITP included a Conservation Plan that consisted of measures the NMFS determined would monitor, minimize, and mitigate incidental takes of sea turtles in otherwise lawful gill net fisheries operating in North Carolina estuarine waters. The Conservation Plan included a continuation of restrictions implemented previously as temporary measures for large-mesh (≥ 4 inch stretched mesh) gill nets. Specifically, these restrictions prohibited gill nets in the deep waters of Pamlico Sound; limited soak times to an hour before sunset to an hour after sunrise; limited days of fishing to Monday evenings through Friday morning; restricted net height to no more than 15 meshes; restricted total net yardage to a maximum of 2,000 yards per vessel; and required net configuration for a string of nets (each net is called a 'shot') be constructed of shots no longer than 100 yards with a 25-yard break between shots. The only exception to these restrictions was that fishermen in Management Units D2 (Figure 1) were allowed to set large-mesh gill nets an extra day (Sunday evenings through Friday mornings), but were restricted to a maximum of 1,000 yards per fishing operation (M-31-2014) (http://portal.ncdenr.org/web/mf/proclamation-m-31-2014). In addition to establishing regulations on how fisheries could be prosecuted, the Conservation Plan included a state-wide estuarine gill-net observer program of estuarine gill nets that would allow for interactions to be counted and where possible extrapolated across the fishery within a given season and area. Observer data also would allow the NCDMF to use an adaptive management approach to mitigate incidental takes by implementing temporary management options using the NCDMF director's Proclamation authority (General Statute 143B-289.52).

In July 2014, the NCDMF also received an ITP (No. 18102) to address incidental takes of Atlantic Sturgeon (*Acipenser oxyrinchus*) in gill-net fisheries operating in estuarine waters across the state (NMFS 2014). Although the ITPs and their Conservation Plans addressed different taxa, the fisheries included therein were the same. Both ITPs were reliant on observer coverage

to document incidental takes, and also to estimate total bycatch. Notably, however, the ITPs defined large mesh differently; the sea turtle ITP defined large-mesh gill nets as ≥ 4 inch stretched mesh and the Atlantic Sturgeon ITP defined them as ≥ 5 inch stretched mesh.

In early September 2018 North Carolina suffered a direct hit by Hurricane Florence, dramatically affecting fishing and observation effort in estuarine gill-net fisheries during the 2019 ITP Year. The effects occurred prior to the storm due to preparation and evacuations, and after the storm due to the catastrophic damage to roads, structures, and electrical infrastructure in many areas. Although the NCDMF Central District Office (CDO), where Observer Program operations were located, reopened 24 September, four observers had significant damage to their homes that delayed their return to work. Three of them were left homeless and had to collect their belongings and secure new housing; the other observer was unable to return to their home until early October. Once commercial fishing resumed, communicating with commercial fishermen and traveling to obtain trips proved to be difficult because of clean-up efforts, power outages, flooding, and storm debris. Additionally, Marine Patrol officers, who usually contribute a considerable amount of gill net observations, were unable to conduct observations for some time because of new storm-related tasks. Not only did Marine Patrol officers rescue over 60 people, they conducted numerous wellness checks, provided meals and supplies to disaster victims, assisted other law enforcement agencies with securing property, and even managed to rescue storm victim's pets.

Two regulations in place during the 2019 ITP Year also greatly affected gill-net fishing effort. First, Proclamation M-19-2017, issued in October 2017 (2018 ITP Year), remained in effect for the entire 2019 ITP Year (http://portal.ncdenr.org/web/mf/proclamation-m-19-2017). This proclamation closed Management Unit D1 to gill nets with a mesh size of ≥ 4 inches as a result of high levels of incidental green sea turtle takes that exceeded authorized levels during the 2018 ITP Year. In an effort to avoid exceeding authorized levels again during the 2019 ITP Year, the decision was made to maintain the partial closure of Management Unit D1. A separate proclamation was issued on 18 March that prohibited the use of all gill nets upstream of the ferry lines from the Bayview Ferry to Aurora Ferry on the Pamlico River and the Minnesott Beach Ferry to Cherry Branch Ferry on the Neuse River (http://portal.ncdenr.org/web/mf/proclamation-m-06-2019). During an emergency meeting, the North Carolina Marine Fisheries Commission directed the NCDMF Director to issue the proclamation with the intent of reducing bycatch of striped bass in gill-net fisheries operating in the affected waters, which are part of Management Unit C.

Per the ITP requirements, the Observer Program provides weekly, seasonal, and annual reports to the NMFS for a given ITP year. As required, weekly progress reports were provided for any week in which a sea turtle interaction occurred. Seasonal reports for the 2019 ITP Year also were provided for fall (September-November 2018) (McConnaughey 2018), spring (March-May 2019) (McConnaughey 2019a), and summer (June-August 2019) (McConnaughey 2019b). The Conservation Plan does not require observer coverage or seasonal reports for winter because sea turtles are less likely to be present in North Carolina during this time. The deadline for annual reports is the last day in February. However, requests were made by the NCDMF to extend the report deadline into April for one year only due to staffing vacancies and changes that delayed the report generation, and also work interruptions from the coronavirus pandemic. This annual report outlines observer activity, fishing activity, and total or estimated takes of sea turtles for the

2019 ITP Year, 1 September 2018 – 31 August 2019. Data for fishing activity, measured in number of trips, are finalized for fall 2018. After the preliminary data for spring and summer 2019 are finalized in May 2020, observer coverage and authorized estimated sea turtle takes will be recalculated and finalized estimates will be provided to the NMFS in the form of an addendum.

2 METHODS

2.1 Observer Activity

Observer activity was distributed across six management units outlined in the Conservation Plan (A, B, C, D1, D2, and E) (Figure 1). Management Unit B is unique in that large-mesh gill nets operating in Pamlico Sound were confined to specific subunits (Shallow Water Gillnet Restricted Area [SGNRA] 1, SNGRA2, SNGRA3, SGNRA4, and Mainland Gillnet Restricted Area [MGNRA]), effectively closing the fishery in the deep waters of Pamlico Sound and in corridors near Ocracoke, Hatteras, and Oregon inlets (Daniel 2013) (Figure 1). Within the management units, observer activity was also distributed across three seasons that cross calendar years: fall, spring, and summer. Per the Conservation Plan, the number of projected observer trips was based on the required 7-10% observer coverage of the total large-mesh (≥ 4 inches stretched mesh) gill-net fishing trips, and 1-2% coverage of the total small-mesh (< 4 inch stretched mesh) gill-net fishing trips per season and management unit. Projected observer trips were stratified across seasons and management units proportional to the NCDMF Trip Ticket Program (TTP) data for large-mesh and small-mesh gill-net trips from the previous five years. It is important to note that for the TTP, data are reported as the large-mesh category for gill nets using ≥ 5-inch webbing, not ≥ 4 inch. It is uncommon, however, for gill nets to have a mesh size between these two sizes; therefore, we assumed effort by mesh categories in the TTP dataset would not be greatly affected by the difference in definitions of mesh size. No coverage of large-mesh trips was assigned to Management Unit D1 because it was closed to ≥ 4-inch mesh gill nets for the entire 2019 ITP Year (M-19-2017). (http://portal.ncdenr.org/web/mf/proclamation-m-19-2017).

Each observer attempted to obtain three to four trips per working week when fishing activity was occurring. Observers were assigned a management unit to work weekly, and the number of observers assigned to a management unit depended upon the season and projected fishing effort. Reports from observers, fishermen, and other NCDMF staff (e.g., fish house samplers) were used to determine if effort was fluctuating between management units. Trends from the previous years' TTP data and current area closures were also assessed to determine if fishing effort was shifting from one management unit to another.

Obtaining observer trips was facilitated by the requirement that fishermen participating in estuarine anchored gill-net fisheries were required to obtain an Estuarine Gill Net Permit (EGNP) (M-24-2014) (http://portal.ncdenr.org/web/mf/proclamation-m-24-2014). The most recent list of permit holders was stratified by management unit and then by geographic area within units. Contact information for these fishermen was then given to observers assigned to specific management units so they could attempt to schedule an onboard trip. Preliminary TTP information was also used to identify individuals who were actively participating in fishing activities. In addition to calling fishermen, observers visited fish houses where they provided

business cards and brochures explaining the Observer Program, giving the fishermen another outlet to allow observers on their vessels. Additionally, the Observer Program used a website (http://portal.ncdenr.org/web/mf/observers-program) to provide outreach to fishermen to facilitate obtaining trips.

The Observer Program employed two methods to obtain trips for documenting protected species interactions. The preferred method has always been onboard observations where observers ride onboard fishermen's vessels. The other method was alternative platform" observations whereby two observers used a state-owned vessel to monitor commercial fishers hauling their gill nets. In addition to traditional observers, Marine Patrol officers also obtained alternative platform trips, following similar data collection protocols. Alternative platform trips were used for areas where fishing effort increased quickly, when a fisherman's vessel was too small to safely accommodate an onboard observer, and when observers are unable to set-up onboard trips due to fisherman avoidance or non-compliance. Coordination of onboard, alternative platform, and Marine Patrol alternative platform trips was done regularly to maximize efficiency, avoid multiple observations of a single trip, and to achieve the maximum amount of observer coverage possible for each management unit. Changes in effort and sea turtle abundance (i.e., observed and reported interactions) were monitored on a daily, weekly, and monthly basis to ensure proper observer coverage was being maintained.

Observers were trained to identify, measure, evaluate condition of, resuscitate, and tag sea turtles (depending on turtle size and accessibility) by experienced NCDMF and NMFS (Beaufort, NC) staff. Data collected on observed sea turtles included: 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), curved carapace length (CCL, mm), and curved carapace width (CCW, mm). Photographs of the turtles and environmental parameters (i.e., salinity, water temperature) were also collected when feasible. Dead and live, debilitated sea turtles were retained by the observer when possible and delivered to the North Carolina Wildlife Resource Commission (NCWRC) sea turtle biologist for necropsy or examination and treatment.

Observers also collected data on location, gear parameters, fish catch and bycatch (including regulatory discards) for each haul depending on the observed trip type (onboard or alternative platform). For onboard observations, the catch was sampled for each trip whereby the observer recorded species, quantities, weights, lengths, disposition (alive or dead), and whether the catch was kept or discarded. Data were coded onto NCDMF data sheets and uploaded to the NCDMF Biological Database for analysis. All observers were debriefed within 24 hours of each trip to obtain data on catch, set locations, gear parameters, and sea turtle interactions to provide running totals and estimates of sea turtle bycatch in near real time.

Ongoing estimates of observer coverage were calculated by comparing the number of observed trips by large-mesh (≥ 4 inch) and small-mesh (< 4 inch) category to the average number of trips from the previous five years' TTP data (2014-2018) (large-mesh = ≥ 5 inch, small-mesh = < 5 inch) by season and management unit. Reduced season dates in each management unit were taken into account by calculating the proportion of actual to possible fishing days. The average, normalized effort was used when estimating fishing trips to account for the fluctuation of fishing effort throughout the years due to closures and other regulations put in place throughout the time series. At the end of the ITP year, observer coverage was calculated similar to above, but using

the actual number of reported trips in the TTP database for the ITP year by season and management unit. The TTP data for 2018 (fall) were finalized, but the data for 2019 (spring and summer) were preliminary. As a result, observer coverage calculated for spring and summer were considered estimates.

Reductions in fishing effort, particularly for large-mesh gill nets was expected due to Hurricane Florence and the regulations for Management Units C and D1. As such, the percent change in fishing effort with large-mesh (≥ 5 inch) and small-mesh (< 5 inch) gill nets, as defined by the TTP, between the 2018 and 2019 ITP Years was calculated by management unit and season.

2.2 Incidental Takes

Authorized levels of annual incidental takes outlined in the ITP were expressed as either estimated total takes based on observer data or counts of observed takes (Tables 1-5). Authorized levels of observed (not estimated) interactions were necessary for some combinations of species, management unit, and gear type due to insufficient data available for modeling predicted estimated takes in the ITP application (Daniel 2013). As a result, authorized levels of annual estimated interactions were only available for green and Kemp's ridley sea turtles in Management Units B, D1, and E in the large-mesh gill net fishery, and for Kemp's ridley sea turtles in D2 in the large-mesh gill net fishery. Authorized levels for all other combinations were based on counts of actual observed (i.e., not estimated) takes. Therefore, comparisons of interactions during the 2019 ITP Year to authorized interactions were based either on annual counts of observed sea turtle takes or annual estimates of sea turtle takes. Also, during summer 2015 a minor modification to the ITP was enacted through the NMFS combining authorized takes for Management Units A (n = 4) and C (n = 4) for a total authorized take limit of eight sea turtles from large-mesh or small-mesh gill nets and any species or disposition (Boyd 2016). Estimates of incidental take as outlined above were calculated using the stratified ratio method where the bycatch rate calculated from observer data (sea turtles caught per observed trip) was multiplied by the total reported fishing trips.

$$\text{Estimated interactions} = \left(\frac{\text{\# of sea turtle interactions observed}}{\text{total gill-net trips observed}}\right) * \text{total gill-net trips reported}$$

Throughout each season, this calculation was employed each time there was an incidental take to determine the estimated number of interactions by date of capture, management unit, species, and disposition. For the real-time estimates, the average number of TTP reported trips for the previous five years was used. Estimated numbers of interactions and running totals of observed interactions were accumulated by interaction date to determine if interactions were approaching authorized take thresholds. The ongoing comparisons allowed for the implementation of management measures to prevent interactions from exceeding authorized levels. The estimated and/or total observed interactions were provided in weekly (when required), monthly, and seasonal reports.

At the end of the ITP year, the estimated number of interactions was recalculated using actual number of trips, albeit preliminary for 2019, reported in the TTP rather than an average from the previous five years. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Davison and Hinkley 1997; Canty and Ripley 2015; R Core Team 2015). Bootstrap replicates were

generated by sampling observer trips with replacement 5,000 times within strata (mesh/season/management unit).

2.3 Compliance

The NCDMF observers and/or Marine Patrol conducted weekly fish house visits, boat patrols, fisherman spot checks, gear checks, and continual outreach to the industry, attempting to facilitate industry compliance and to track gill-net fishing effort in near real time.

The Observer Program used various methods to contact fishermen to schedule trips. The most common method was by phone, due to fishermen leaving from private launches and overall efficiency. For each contact made to obtain a trip (phone call or in-person), observers documented the contact in a log maintained by the Observer Program. For each contact, observers assigned a category of the response and noted any additional information (e.g., fisherman stated he did not fish until October) (Table 6). Data in the contact log was summarized by month and response category to determine what percentage of phone calls resulted in observer trips.

3 RESULTS

3.1 Observer Activity

Overall observer coverage during the 2019 ITP Year was 7.4% of the large-mesh gill-net fishery and 3.1% of the small-mesh gill-net fishery (Tables 7 and 8, Figure 2). This level of coverage was based on 729 large-mesh gill-net trips (243 onboard and 486 alternative platform) and 145 small-mesh gill-net trips (43 onboard and 102 alternative platform) during fall, spring, and summer. Only five out of 874 (<1%) observed trips recorded a mesh size ≥ 4 and < 5 inch; in each case the mesh size was exactly 4 inches. Across all trips, observers documented 22 sea turtles in large-mesh gill nets and zero in small-mesh gill nets (Table 9). A series of proclamations was issued throughout the ITP Year to regulate gill-net fisheries as part of the adaptive management approach to limit sea turtle or Atlantic sturgeon takes and for other management needs unrelated to protected species interactions (Table 10). As a result, changes in fishing activity influenced the Observer Program's efforts to find trips and maintain coverage level.

3.1.1 Fall 2018

During fall 2018 (September – November), the Observer Program achieved 7.6% state-wide coverage of large-mesh gill nets, and exceeded 7% in all management units (Table 7, Figures 3–8; McConnaughey 2018). Although D1 was closed to large-mesh gill nets during the 2019 ITP Year (M-19-2017), there was one observed trip and one reported trip during fall 2018. For small-mesh gill nets, the Observer Program achieved 4.2% state-wide coverage, and exceeded 1% coverage in all management units (Table 8, Figures 3 – 8) (McConnaughey 2018).

There were four observed sea turtle interactions in large-mesh gill nets (Table 9, Figures 3–8) and none observed in small-mesh gill nets during fall (McConnaughey 2018). Three of the four were green sea turtles (n = 3 alive; n = 0 dead) and one was a Kemp's ridley sea turtle (n = 1

alive; n = 0 dead). All four turtles were observed in Management Unit B. No fisherman self-reported sea turtle interactions were reported (Table 11).

3.1.2 Spring 2019

During spring 2019 (March – May), the Observer Program achieved an estimated 7.6% state-wide coverage of large-mesh gill nets, and exceeded 7% in each management unit except Management Units A (5.9%) and B (6.5%) (Table 7, Figures 9 – 14) (McConnaughey 2019a). Management Unit D1 was closed to large-mesh gill nets for the entire season (M-19-2017). For small-mesh gill nets, the Observer Program achieved an estimated 3.4% state-wide coverage, and exceeded 1% in all management units except Management Units D2 where only nine trips were reported and no observed trips occurred (Table 8; Figures 9 – 14) (McConnaughey 2019a).

There were four observed sea turtle interactions in large-mesh gill nets and none observed in small-mesh gill nets during spring (Table 9, Figures 9 – 14). The interactions comprised two green sea turtles (n = 1 alive; n = 1 dead) and two Kemp's ridley sea turtles (n = 2 alive; n = 0 dead). One of the green sea turtles was observed in D2; the remaining sea turtles were observed in E. No fisherman self-reported sea turtle interactions were reported (Table 11).

3.1.3 Summer 2019

During summer 2019 (June – August), the Observer Program achieved an estimated 7.1% state-wide coverage of large-mesh gill nets, and exceeded 7% in each management unit except Management Units A (4.5%) and B (3.4%) (Table 7, Figures 15 – 20) (McConnaughey 2019b). Management Unit D1 was closed to large-mesh gill nets for the entire season (M-19-2017). For small-mesh gill nets, the Observer Program achieved an estimated 1.1% state-wide coverage. Observer coverage exceeded 1% coverage in all management units except Management Units B where no observed trips occurred and 844 fishing trips were reported, as well as in D1 where no observed trips occurred and four fishing trips were reported (Table 8, Figures 15–20) (McConnaughey 2019b).

Fourteen of the 22 (63.6%) observed sea turtle interactions during the 2019 ITP Year occurred during summer. Half (n = 7 of 14) of the observed interactions during summer occurred in Management Unit B, followed by D2 (n = 4), E (n = 2), and A (n = 1). All 22 interactions occurred in large-mesh gill nets (Table 9, Figures 15 – 20) (McConnaughey 2019b). The interactions comprised 10 green sea turtles (n = 9 alive; n = 1 dead), two Kemp's ridley sea turtles (n = 2 alive; n = 0 dead), one loggerhead sea turtle (n = 1 alive; n = 0 dead), and one live turtle that was not identified because the fisherman discarded it. Of the green sea turtles recovered alive, one had significant carapace fractures and was transferred to the Karen Beasley Sea Turtle Rescue and Rehabilitation Center (KBSTRRC) (Figure 21). The fractures were not fresh and, as such, were not a result of the entanglement. After concluding that the turtle could not successfully recover from its injuries, and with authorization through the US Fish and Wildlife Service and NCWRC, the turtle was euthanized the next day under veterinary supervision. Subsequent necropsy confirmed the severe damage to the carapace, the underlying spine and the left lung (Matthew Godfrey, NCWRC, pers. comm.). Additionally, there were three fisherman self-reported sea turtle interactions in large-mesh gill nets; two were reported for Management Unit A and the other for Management Unit C (Table 11).

3.1.4 Changes in Fishing Effort

Overall fishing effort (measured by trips) during the 2019 ITP Year compared to the 2018 ITP Year was 11.8% lower for large-mesh (≥ 5 inch) gill-net trips and 17.1% lower for small-mesh (< 5 inch) gill-net trips. The patterns among seasons and management units showed the effects of Hurricane Florence and regulation changes between years for gill nets in Management Units B, C, and D1 (Figure 22). Large-mesh and small-mesh fishing effort during fall of the 2019 ITP Year (when Hurricane Florence hit) was lower than the 2018 ITP Year for all management units except one. In Management Unit A, small-mesh fishing effort increased slightly from 193 trips during fall 2017 to 239 trips during fall 2018. For large-mesh gill nets, one of the most striking changes between ITP years was during summer in Management Unit B, which was closed during summer 2018 (M-7-2018) to ≥ 4-inch mesh gill nets. As a result, no fishing effort was reported during summer 2018, but effort increased to 974 trips during summer 2019 when the closure was no longer in effect. During spring and summer, reductions in large-mesh fishing effort between the 2018 and 2019 ITP Years in Management Unit C were likely a result of gill-net closures in upstream areas of the Neuse and Pamlico Rivers. The closure of ≥ 4-inch mesh gill nets in Management Unit D1 (implemented during fall 2017) was apparent in the absence of reported large-mesh trips there during spring and summer. Outside of fall, small-mesh fishing effort among management units was more variable, not exhibiting specific trends.

3.2 Incidental Takes

Across seasons, most of the 22 observed sea turtle interactions in large-mesh gill nets were green sea turtles (n = 15) followed by Kemp's ridley sea turtles (n = 5) (Table 9, Figure 2) (McConnaughey 2018, 2019a, 2019b). The majority of observed takes were recovered alive (20 out of 22). However, as mentioned above, the one injured green turtle that was taken to the KBSTRRC was euthanized the following day. Although the carapace fractures were not due to the entanglement, the animal was included in the dead category for estimation of total observed takes. Green sea turtles (n = 15) ranged from 230 to 332 mm CCL (mean = 276.4, SD = 30.2) and 196 to 275 mm CCW (mean = 239.5, SD = 25.0) (Figures 23 and 24). Kemp's ridley sea turtles (n = 5) ranged from 228 to 343 mm CCL (mean = 282.6, SD = 41.8) and from 240 to 323 mm CCW (mean = 279.2, SD = 37.1) (Table 9, Figures 23 and 24). The single loggerhead sea turtle was 640 mm CCL and 650 mm CCW; the unidentified sea turtle could not be measured.

Observed interactions occurred primarily in Management Unit B (50%), followed by Management Unit D2 (23%), Management Unit E (23%), and Management Unit A (5%) (Table 9; Figure 2). Of the 22 observed interactions, the majority (64%) occurred during summer with fall and spring each contributing half of the remaining interactions. No interactions were documented in Management Unit C or in Management Unit D1, which was closed for the entire 2019 ITP Year. All three fisherman self-reported sea turtle interactions occurred in large-mesh gill nets during summer; two in Management Unit A and one in Management Unit C (Table 11).

Observed take levels during the 2019 ITP Year did not reach the thresholds of allowed takes for any species or management unit (Tables 1 – 5) (McConnaughey 2018, 2019a, 2019b). Of the thresholds expressed as counts of observed takes (not estimated), green sea turtle takes during the 2019 ITP Year reached only 16.7% of the threshold and loggerhead takes reached 4.2% of the threshold (Table 5). The one green sea turtle observed in Management Unit A was grouped with the authorized level of eight observed takes of "any species" in Management Units A & C,

equaling 12.5% of the threshold. Of the separate thresholds expressed as estimated totals of observed takes, green sea turtle takes during the 2019 ITP Year reached 41.4% of the live threshold and 6.6% of the dead threshold, and Kemp's ridley sea turtle takes reached 25.2% of the live threshold (no dead takes).

3.3 Compliance

There were 2,217 EGNPs issued during the 2019 ITP Year. Using the list of EGNPs, 4,305 phone calls or in-person contacts were made with 42.6% (n = 1,832) representing categories for which the observer was able to get speak with a fisherman (categories 2-10, and 15) (Figure 25). Of those 1,832 contacts, observers booked a trip 9.8% (n = 180) of the time. The greatest number of calls was in spring and the least number of calls was in summer. Nevertheless, the general pattern of distribution across contact response types was similar across all seasons.

Marine Patrol made 1,431 gill-net checks and issued 74 citations during the 2019 ITP Year (Tables 12 – 13). The number of gill net checks were spread out across seasons. Of the 74 citations, half (50%) were issued during fall 2018. In addition to citations, officers issued 31 Notice of Violations (NOV) for fishermen found to be out of compliance with the EGNP (Table 14).

3.4 Marine Mammals

There was no observed marine mammal interaction during the 2019 ITP Year.

4 DISCUSSION

Incidental takes of sea turtles during the 2019 ITP Year were below authorized levels as a result of a combination of management actions as outlined in the ITP, an adaptive management strategy for sea turtles and Atlantic Sturgeon, management actions for other species, and decreased fishing effort due to Hurricane Florence. The number of observed interactions was less than half of the number for the 2018 ITP Year. The most notable differences were the large decrease in observed interactions during fall 2018 (n = 4) compared to fall 2017 (n = 37), and increase in observed interactions during summer 2018 (n = 14) compared to summer 2019 (n = 2) (McConnaughey et al. 2019). During the 2019 ITP Year, observed sea turtle interactions were primarily green sea turtles during summer in Management Unit B with fewer interactions in other combinations of seasons and management units. It was not possible to identify spatiotemporal patterns of Kemp's ridley takes given that only five were observed. All observed sea turtle takes occurred in large-mesh gill nets. Southern Flounder was the primary target species of large-mesh gill-net fishermen in all open management units. Other target species included American Shad (*Alosa sapidissima*) and the invasive Blue Catfish (*Ictalurus furcatus*), particularly in Management Unit A. During the 2019 ITP Year, the NCDMF issued eleven proclamations that allowed these fisheries to operate during certain times while monitoring and limiting incidental takes of protected sea turtle species using observer data in near real time (Table 10). The NCDMF successfully employed an adaptive management strategy for Management Unit D2 using proclamation M-12-2019 to close the area due to approaching allowable take numbers for Kemp's ridley sea turtles. Management unit D1 remained closed for

the entire 2019 ITP Year due to exceeding allowable green sea turtle take numbers in the fall of 2017 during the 2018 ITP Year.

Overall minimum coverage levels were met or exceeded for large-mesh and small-mesh gill nets when combined across the ITP year and management units. However, for particular combinations of mesh category, season, and individual management unit, minimum levels were not always reached. The observer program actively monitors gill-net fisheries and makes real-time adaptations to shifts in activity due to events such as fishery closures in certain areas or changes in targeted fish species. For the large-mesh gill net fishery, observer coverage was below 7% in Management Units A and B for both spring and summer. During spring and summer, fishing effort is often not as high or geographically concentrated as it is during fall. It can be especially difficult to obtain trips and meet minimum coverage requirements when effort is spread out over a large area, such as Management Units A and B. Observer coverage for small-mesh gill nets was generally above the minimum coverage levels for most combinations of mesh category, seasons, and management unit. Exceptions included combinations that had very little reported fishing effort where observer coverage was 0 percent: spring in D2 (only nine fishing trips reported) and summer in D1 (only four fishing trips reported). The most notable exception was during summer in Management Unit B for which there were no observed trips despite 844 reported fishing trips. The observer program continues to have difficulty getting coverage especially during spring and summer when gill-net activity can be occurring at night or while fishermen are participating in other fisheries. For example, fishermen may tell observers that they are crabbing even though they have set some gill-net gear at the same time. Efforts were made to increase observations during times and in areas of difficulty. The observer program continuously communicated with Marine Patrol, fish house samplers, and industry leaders to increase opportunities for observer coverage. Nonetheless, coverage was also impacted by weather events, staff availability, and compliance issues.

Obtaining observed trips continues to be a challenge for the NC Observer Program, not unlike other observer programs (e.g., Lyssikatos and Garrison 2018). The EGNP is a useful tool to improve fishermen compliance by including specific permit conditions requiring fishermen to allow observers aboard their vessels to monitor catches and by providing contact information of permit holders. Phone calls made using the contact information contribute to observers scheduling trips, but the low success rate of scheduling a trip (9.8%) requires an alternative method of getting trips. Although onboard observations are the preferred method, alternative platform observations play a critical role to achieving the minimal percent coverage. In fact, 67.3% of all observed trips during the 2019 ITP Year were alternative platform observations. Alternate platform observations have several advantages. Primarily, they do not rely on previous contact with fishermen to obtain an observable trip. Alternative platform observations also allow Marine Patrol to conduct observations as part of their daily patrols; their observed trips contribute a substantial portion of the total alternative platform observations. Even for fishermen who would willingly take an observer, many vessels used by gillnetters in estuarine waters are too small to easily accommodate an observer, making alternative platform observations ideal for capturing trips with this size class of vessel (Kolkmeyer et al. 2007). The alternative platform method, however, has several drawbacks. First, it requires two observers, halving observer effort and program efficiency. Also, observers cannot collect the same breadth of biological data for kept catch and discards (e.g., length and weight of individual fish) compared to onboard observer trips. Another drawback is that observers can spend a significant amount of time searching for

fishing activity, sometimes unsuccessfully, when fishing activity is less concentrated. Obtaining alternative platform observations also can be a challenge as some fishermen avoid being observed by retrieving their gear before sunrise or changing fishing locations if observers have been seen in an area. Although refusal of an observed trip by a fisherman can result in a suspension of their EGNP, non-compliance typically does not include such a direct refusal. As such, non-compliance continues to be a hurdle for ensuring the observer coverage requirements for both ITPs are met. Outreach activities are an ongoing necessity to improve fishermen compliance.

The observer program uses a combination of real-time monitoring of sea turtle takes and an adaptive management approach to successfully control the number of interactions in the estuarine gill-net fisheries. Although it is not known what impacts Hurricane Florence had directly on adult and juvenile sea turtle populations in North Carolina, indirectly the hurricane reduced fishing effort and contributed to reduced takes. Management measures implemented for other species also reduced fishing effort. For future ITP years, significant reductions in effort are expected because of regulatory changes for large-mesh gill nets and other gears targeting Southern Flounder. These regulations were included in Amendment 2 of the Southern Flounder Fishery Management Plan (NCDMF 2019) adopted by the North Carolina Marine Fisheries Commission on 23 August 2019. This action was taken because the most recent Southern Flounder stock assessment indicated that the stock is overfished and overfishing is occurring. North Carolina state law requires management actions be taken to end overfishing within two years and recover the stock from an overfished condition within 10 years. To meet these legal requirements, the NCDMF implemented a 62% reduction in harvest for 2019 (2020 ITP Year) and a 72% reduction in 2020 (2021 ITP Year) (NCDMF 2019). In addition to the effects on gill-net fisheries, these changes will require the observer program to incorporate new approaches to project observer coverage rather than relying on the average trips from the previous five years.

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6 TABLES

Table 1. For large-mesh (≥ 4 inch) gill nets, annual estimated authorized and actual takes of sea turtles by species and Management Units B, D1, D2, and E for the 2019 ITP Year. Estimated actual takes were calculated from observer data; 95% confidence intervals are provided in parentheses.

	B				D1				D2			
	Estimated Takes				Estimated Takes				Estimated Takes			
	Authorized		Actual		Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	225	112	129.5 (32.1, 350.3)	0	9	5	0	0	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Kemp's ridley	53	26	7.2 (0, 21.5)	0	15	7	0	0	6	3	6.0 (0, 15.5)	0
Total	278	138	136.7	0	24	12	0	0	6	3	6.0	0

	E				Total			
	Estimated Takes				Estimated Takes			
	Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	96	48	7.2 (0, 21.5)	10.9 (0, 32.8)	330	165	136.7	10.9
Kemp's ridley	24	13	11.5 (0-34.4)	0	98	49	24.7	0
Total	120	61	18.7	10.9	428	214	161.4	10.9

[1] Insufficient observer data existed to model an estimated annual take level for the permit application; therefore, for Management Unit D2, an annual observed take number was identified for green turtles (see Table 2).

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Table 2. For large-mesh (≥ 4 inch) gill nets, annual authorized and actual observed (not estimated) takes of sea turtles by species and Management Units B, D1, D2, and E for the 2019 ITP Year.

	B		D1		D2		E		Total	
	Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)	
Species	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual
Green	n/a [1]	n/a [1]	n/a [1]	n/a [1]	6	3	n/a [1]	n/a [1]	6	3
Kemp's ridley	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Hawksbill	1	0	1	0	1	0	1	0	4	0
Leatherback	1	0	1	0	1	0	1	0	4	0
Loggerhead	3	1	3	0	3	0	3	0	12	1
Total	5	1	5	0	11	3	5	0	26	4

[1] Authorized levels of Kemp's ridley sea turtles in Management Units B, D1, D2, and E and green sea turtles in Management Units B, D1, and E are expressed as estimated takes for the fishery because sufficient observer data existed to model estimated annual take levels in the ITP application (See Table 1).

Table 3. For large-mesh (≥ 4 inch) and small-mesh (< 4 inch) gill nets combined, annual authorized and actual observed (not estimated) takes of sea turtles by Management Unit A and C for the 2019 ITP Year. Authorized levels per management unit are 4 sea turtles of any species.

	A		C		Total	
Species	Authorized (live/dead)	Actual (live/dead)	Authorized (live/dead)	Actual (live/dead)	Authorized (live/dead)	Actual (live/dead)
Green		1		0		1
Kemp's ridley		0		0		0
Hawksbill	4 (any species)	0	4 (any species)	0	8 (any species)	0
Leatherback		0		0		0
Loggerhead		0		0		0

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Table 4. For small mesh (< 4 inch) gill nets, annual authorized and actual observed (not estimated) takes of sea turtles by species and Management Unit B, D1, D2, and E for the 2019 ITP Year.

	B		D1		D2		E		Total	
	Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)		Observed (live/dead)	
Species	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual	Authorized	Actual
Green	3	0	3	0	3	0	3	0	12	0
Hawksbill	1	0	1	0	1	0	1	0	4	0
Kemp's ridley	3	0	3	0	3	0	3	0	12	0
Leatherback	1	0	1	0	1	0	1	0	4	0
Loggerhead	3	0	3	0	3	0	3	0	12	0
Total	11	0	11	0	11	0	11	0	44	0

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Table 5. Total annual authorized and actual takes (observed and estimated) of sea turtles by species and for estimated takes by condition for the 2019 ITP Year. The incidental take of an unidentified sea turtle is not represented in the actual observed counts or estimated totals.

	Observed (live/dead)		Estimated			
	Authorized	Actual	Authorized		Actual	
Species	Live/Dead	Live/Dead	Alive	Dead	Alive	Dead
Green	18	3	330	165	137	11
Hawksbill	8	0	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Kemp's ridley	12	0	98	49	25	0
Leatherback	8	0	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Loggerhead	24	0	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Any Species	8	1 [2]	n/a [1]	n/a [1]	n/a [1]	n/a [1]
Total	78	5	428	214	162	11

[1] Insufficient observer data exist to model an estimated annual take level; therefore, takes are expressed as observed.
[2] Green sea turtle in Management Unit A (see Table 4)

Table 6. Categories and descriptions of fisherman responses for the Observer Program's contact logs.

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
15	Not fishing because of natural disaster (e.g., hurricane)

Table 7. For large-mesh gill nets, observer coverage calculated from observer data (≥ 4 inch) and reported trips from the Trip Ticket Program (≥ 5 inch) by season and management unit for the 2019 ITP Year. Trip Ticket Program data are considered finalized for 2018 (fall) and preliminary for 2019 (spring and summer). Management Unit D1 was closed to large-mesh (≥ 4 inch) gill nets for the entire ITP year; however, one trip was reported and observed during fall.

		Large Mesh		
Season	Management Unit	Reported trips	Observed Trips	Coverage
Fall 2018	A	1,812	131	7.2
	B	955	80	8.4
	C	485	37	7.6
	D1	1 (closed)	1 (closed)	100.0
	D2	374	26	7.0
	E	713	54	7.6
	State-wide	4,340	329	7.6
Spring 2019	A	1,699	100	5.9
	B	448	29	6.5
	C	45	20	44.4
	D1	closed	closed	closed
	D2	61	11	18.0
	E	247	30	12.1
	State-wide	2,500	190	7.6
Summer 2019	A	1,044	46	4.4
	B	974	34	3.5
	C	313	27	8.6
	D1	closed	closed	closed
	D2	124	10	8.1
	E	497	93	18.7
	State-wide	2,952	210	7.1
Overall		9,792	729	7.4

Table 8. For small-mesh gill nets, observer coverage calculated from observer trips (< 4 inch) and reported trips from the Trip Ticket Program (< 5 inch) by season and management unit for the 2019 ITP Year. Trip Ticket Program data are considered finalized for 2018 (fall) and preliminary for 2019 (spring and summer).

		Small Mesh		
Season	Management Unit	Reported trips	Observed Trips	Coverage
Fall 2018	A	239	5	2.1
	B	580	21	3.6
	C	81	9	11.1
	D1	34	4	11.8
	D2	67	9	13.4
	E	261	5	1.9
	State-wide	1,262	53	4.2
Spring 2019	A	727	13	1.8
	B	1,351	39	2.9
	C	97	16	16.5
	D1	39	6	15.4
	D2	9	0	0.0
	E	81	5	6.2
	State-wide	2,304	79	3.4
Summer 2019	A	118	2	1.7
	B	844	0	0.0
	C	45	1	2.2
	D1	4	0	0.0
	D2	19	5	26.3
	E	116	5	4.3
	State-wide	1,146	13	1.1
Overall		4,712	145	3.1

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Table 9. Summary of observed sea turtle interactions in large-mesh (≥ 4 inch, n = 22) and small-mesh (< 4 inch), n = 0) gill nets during the 2019 ITP Year. Tags were applied by observers. PIT = Passive Integrated Transponders [1] Turtle was transferred for rehabilitation based on severe carapace fractures, and was euthanized the next day.

							Applied Tags		Curved Carapace (mm)	
Date	Season	Management Unit	Latitude (N)	Longitude (W)	Species	Disposition	PIT	Inconel	Length	Width
10/3/2018	Fall	B	34.99438	76.28997	Kemp's	alive	n/a	n/a	228	241
10/4/2018	Fall	B	35.36187	75.55748	Green	alive	n/a	n/a	304	267
10/30/2018	Fall	B	35.25243	75.61018	Green	alive	n/a	n/a	290	260
11/8/2018	Fall	B	35.26151	75.62806	Green	alive	982.000362056415 3D6.0015948ADF	n/a	286	247
5/16/2019	Spring	E	33.9702	77.92483	Green	dead	n/a	n/a	332	256
5/16/2019	Spring	E	33.97090	77.92675	Kemp's	alive	982.000364048805 3D6.0015B2F1A5	n/a	274	300
5/16/2019	Spring	E	33.97146	77.92725	Kemp's	alive	982.000363950045 3D6.0015B16FDD	n/a	296	292
5/30/2019	Spring	D2	34.7526	76.69836	Green	alive	n/a	n/a	243	n/a
6/4/2019	Summer	D2	34.69337	76.98663	Kemp's	alive	n/a	n/a	343	323
6/7/2019	Summer	D2	34.68357	77.04107	Green	alive	982.000364297643 3D6.0015BCDAB	n/a	262	210
6/7/2019	Summer	D2	34.68368	77.04096	Green	dead	n/a	n/a	282	251
6/11/2019	Summer	D2	34.68367	76.99529	Kemp's	alive	n/a	n/a	272	240
7/3/2019	Summer	E	34.67980	77.13325	Green	alive	982.000362191618 3D6.0015969B023	n/a	268	244
7/17/2019	Summer	E	33.88800	78.47000	Green	alive [1]	n/a	n/a	n/a	n/a
7/18/2019	Summer	B	34.81551	76.38171	Loggerhead	alive	982.0004106 3D6.001879D717	MMG064/ MMG066	640	650
7/24/2019	Summer	B	34.99500	76.30190	Green	alive	n/a	n/a	303	255
7/29/2019	Summer	A	35.93329	75.78285	Green	alive	n/a	n/a	244	220
8/9/2019	Summer	B	34.90955	76.32888	Green	alive	n/a	n/a	230	196
8/9/2019	Summer	B	34.90952	76.32928	Green	alive	n/a	n/a	250	209
8/14/2019	Summer	B	34.99207	76.17590	Unidentified	alive	n/a	n/a	n/a	n/a
8/15/2019	Summer	B	35.11880	75.96291	Green	alive	n/a	n/a	261	224
8/22/2019	Summer	B	35.04076	76.11522	Green	alive	n/a	n/a	315	275

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Table 10. Regulations for management units by date and regulation change for large-mesh (≥ 4 inch) and small-mesh (< 4 inch) gill nets for the 2019 ITP Year.

Year	Date(s)	Regulation change
2018	September 1	This proclamation opened a previously closed area in the western part of Management Unit A to gill nets with stretched mesh lengths of 5 ½ inches through 6 ½ inches in accordance with the Sea Turtle ITP. It maintained small mesh gill net attendance requirements in Management Unit A. (M-8-2018)
2018	September 3	This proclamation opened Management Unit B Subunit MGNRA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches for the new ITP year (September 1, 2018 through August 31, 2019) in accordance with the Sea Turtle ITP. This proclamation maintained attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B. 1. It maintained openings for Management Units C, D2 and portions of Management Unit E (except those described in Section II.) to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. This proclamation also maintained the closure of Management Unit D1 to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. (M-9-2018)
2018	October 1	This proclamation opened Management Unit B Subunits SGNRA 1-4, and CGNRA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches for the new ITP year (September 1, 2018 through August 31, 2019) in accordance with the Sea Turtle ITP. (M-10-2018)
2018	November 24	This proclamation closed a portion of the lower Chowan River and western Albemarle Sound to all gill nets with stretched mesh lengths of 5 ½ through 6 ½ inches due to dead sturgeon takes nearing the authorized amount for Management Unit A, and maintained additional gill net restrictions in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-13-2018)
2018	December 1	This proclamation implemented the December closed commercial season provision identified in the N.C. Southern Flounder Fishery Management Plan Amendment 1. Commercial flounder harvest in Internal Coastal Waters opened by this proclamation at 12:01 A.M., Tuesday, January 1, 2019. (FF-48-2018)

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Table 10 cont.

Year	Date(s)	Regulation Change
2018	December 1	In Management Unit A, this proclamation closed the Albemarle Sound proper to the use of gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches, limited large-mesh gill net length to 1,000 yards in open areas, and maintained nets must have been set to fish the bottom of the water column and not to have exceeded a vertical height of 48 inches. Anchored small-mesh gill nets (gill nets with a stretched mesh of 3 ¾ inches and smaller) could be unattended but must have been set to fish the bottom of the water column and not to have exceeded a vertical height of 48 inches. This action was taken due to low observer coverage and approaching the take limit of dead Atlantic sturgeon. (M-14-2018)
2019	January 1	In Management Unit A, this proclamation made it unlawful to use gill nets with a stretched mesh length other than 3 ¼ inches, or from 5 ½ inches through 6 ½ inches, EXCEPT IN THE AREAS DESCRIBED IN SECTION IV. It also maintained large-mesh gill net closures and vertical height restrictions for all anchored gill net sets. This action was taken to allow various directed gill net fisheries while minimizing interactions with endangered Atlantic sturgeon and to reduce river herring regulatory discards. (M-17-2018)
2019	February 1	This proclamation superseded proclamation M-17-2018 dated December 21, 2018. In a portion of Management Unit A, it made it lawful to use runaround, strike, and drop gill nets with a stretched mesh length from 5 ½ inches through 6 ½ inches. It also maintained large-mesh gill net closures and vertical height restrictions for all anchored gill net sets. This action was taken to allow a directed fishery for invasive blue catfish and continued to allow other various directed gill net fisheries while minimizing interactions with endangered Atlantic sturgeon and to reduce river herring regulatory discards. (M-2-2019)
2019	February 15	This proclamation implemented gear exemptions for portions of the Internal Coastal Waters south of Management Unit A to allow fishermen to set gill nets for the shad fishery (See Section III.). It opened the remaining portions of Management Unit B to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) in accordance with the Sea Turtle Incidental Take Permit. This proclamation also maintained openings for Management Units C, D2 and portions of Management Unit E (except those described in Section II.) to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. This action was taken to allow directed gill net fisheries for shad while minimizing interactions with threatened and/or endangered species. (M-3-2019)

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Table 10 cont.

Year	Date(s)	Regulation Change
2019	March 2	This proclamation opened all of Management Unit A to the use of gill nets and allowed gill net configurations for harvesting American shad by removing vertical height restrictions for up to 1,000 yards of gill net with stretched mesh lengths of 5 ¼ through 6 ½ inches. This proclamation also implemented additional gill net restrictions for Management Unit A, Subunit A1-South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. Proclamation FF-56-2018 made it unlawful to possess American shad for commercial purposes prior to 12:01 A.M. Sunday, March 3, 2019 and after 12:01 A.M. Sunday, March 24, 2019. (M-4-2019)
2019	March 11	This proclamation implemented tie-down (vertical net height restrictions) and distance from shore restrictions for gill nets with a stretched mesh length five inches or greater in the western Pamlico Sound and rivers in accordance with Supplement A to Amendment 1 to the N.C. Estuarine Striped Bass Fishery Management Plan. (M-5-2019)
2019	March 18	During an emergency meeting on March 13, 2019, the N.C. Marine Fisheries Commission directed the N.C. Division of Marine Fisheries Director to issue this proclamation pursuant to N.C. General Statute 113-221.1 (d). The Director has no legal authority to modify or change a proclamation when the proclamation is specifically directed by the Commission under this statute. This proclamation superseded proclamation M-5-2019, dated March 7, 2019. This proclamation prohibited the use of ALL gill nets upstream of the ferry lines from the Bayview Ferry to Aurora Ferry on the Pamlico River and the Minnesott Beach Ferry to Cherry Branch Ferry on the Neuse River. It maintained tie-down (vertical net height restrictions) and distance from shore restrictions for gill nets with a stretched mesh length 5 inches and greater in the western Pamlico Sound and rivers (excluding the areas described in Section I. B.) in accordance with Supplement A to Amendment 1 to the N.C. Estuarine Striped Bass Fishery Management Plan. (M-6-2019)
2019	March 25	In Management Unit A, this proclamation removed the use of gill nets configured for harvesting American shad by implementing vertical height restrictions for all stationary gill nets. This proclamation also closed portions of Management Unit A to large-mesh stationary gill nets, allowed the use of run-around, strike, and drop nets with a stretched mesh length of 5½ inches through 6½ inches in a portion of Management Unit A, and maintained additional gill net restrictions for Management Unit A, Subunit A1, South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-7-2019)

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Table 10 cont.

Year	Date(s)	Regulation Change
2019	April 8	This proclamation opened additional portions of Management Unit A to the use of stationary large-mesh gill nets with vertical height restrictions. It also maintained the allowance for the use of run-around, strike, and drop nets with a stretched mesh length of 5½ inches through 6½ inches in a portion of Management Unit A, Subunit A2, and maintained additional gill net restrictions for Management Unit A, Subunit A1, South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-9-2019)
2019	May 1	This proclamation implemented attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B.1. It also decreased mesh size allowance for exempted gears in Section III. It maintained openings of Management Units B, C, D2 and E to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. (M-10-2019)
2019	May 1	This proclamation implemented small-mesh gill net attendance requirements in Management Unit A and implemented additional gill net restrictions in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-11-2019)
2019	June 13	This proclamation closed Management Unit D2 to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) in accordance with the Sea Turtle Incidental Take Permit. Take levels for endangered and/or threatened sea turtles for gill nets with a stretched mesh length of 4 inches through 6 ½ inches in Management Unit D2 had been reached and the fishery needed to be closed. This proclamation maintained attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B.1. (M-12-2019)

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Table 11. Summary of self-reported sea turtle interactions in large-mesh (≥ 4 inch) gill nets during the 2019 ITP Year. None were reported for small-mesh (< 4 inch) gill nets.

Date	Management Unit	Latitude (N)	Longitude (W)	Species	Disposition
7/12/2019	C	not reported	not reported	Green	alive
7/14/2019	A	not reported	not reported	Kemp's	unknown
7/28/2019	A	not reported	not reported	Green	alive

Table 12. Number of gill-net checks and citations issued by Marine Patrol for large-mesh (≥ 4 inch) and small-mesh (< 4 inch) gill nets by season during the 2019 ITP Year. See Table 13 for details on individual citations.

Season	# Gill Net Checks	# Citations	Citation Percentage
Fall 2018	513	37	7.2
Spring 2019	487	18	3.7
Summer 2019	431	19	4.4
Total	1,431	74	5.2

Table 13. Citations written by Marine Patrol for large-mesh (≥ 4 inch) and small-mesh (< 4 inch) gill nets by season and violation code during the 2019 ITP Year.

Season	Date	Violation code	Violation description
Fall	9/6/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/6/2018	NETG60	Use gill nets with a mesh size of more than 6.5 inches (stretched mesh) in violation of proclamation M-7-12
	9/6/2018	NETG60	Use gill nets with a mesh size of more than 6.5 inches (stretched mesh) in violation of proclamation M-7-12
	9/23/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/24/2018	NETG03	Using gill net with improper buoys or identification
	9/26/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/26/2018	NETG03	Using gill net with improper buoys or identification
	9/27/2018	NETG38	Use large-mesh gill net in Pamlico Sound later than 1 hour after sunrise in violation of proclamation M-8-10
	9/30/2018	NETG02	Using gill net without buoys or identification
	10/2/2018	NETG02	Using gill net without buoys or identification
	10/2/2018	NETG54	Violate provisions of Proclamation M-30-2011 to wit failed to have 25 yard space between nets
	10/3/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/5/2018	NETG05	Use a stationery gill net in channel of ICWW
	10/5/2018	NETG06	Gill net causing hazard to navigation
	10/9/2018	NETG03	Using gill net with improper buoys or identification
	10/10/2018	NETG37	Leave small-mesh gill nets unattended
	10/10/2018	NETG03	Using gill net with improper buoys or identification
	10/17/2018	NETG48	Having large-mesh gill net set in violation of Proclamation M-14-2010
	10/18/2018	NETG30	Leave RCGL gill net unattended
	10/18/2018	NETG27	Gill net set within 50 yards from shore
	10/19/2018	NETG04	Leave gill net in waters when could not be legally fished
	10/19/2018	NETG53	Use large-mesh gill net with corks or floats on top line
	10/19/2018	NETG03	Using gill net with improper buoys or identification
	10/20/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/22/2018	NETG02	Using gill net without buoys or identification
	10/24/2018	NETG04	Leave gill net in waters when could not be legally fished
	10/24/2018	NETG02	Using gill net without buoys or identification
	10/25/2018	NETG37	Leave small-mesh gill nets unattended

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Table 13 cont.

Season	Date	Violation code	Violation description
Fall	10/25/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/25/2018	NETG30	Leave RCGL gill net unattended
	10/25/2018	NETG29	RCGL gear without proper buoys
	10/31/2018	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	11/7/2018	NETG30	Leave RCGL gill net unattended
	11/7/2018	NETG29	RCGL gear without proper buoys
	11/10/2018	NETG03	Using gill net with improper buoys or identification
	11/10/2018	NETG30	Leave RCGL gill net unattended
	11/13/2018	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
Spring	3/9/2019	NETG03	Using gill net with improper buoys or identification
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	4/6/2019	NETG39	Use large-mesh gill nets more than 15 meshes in height and w/out lead core or leaded bottomline
	5/3/2019	NETG01	Leave gill net in coastal waters unattended
	5/7/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/10/2019	NETG04	Leave gill net in waters when could not be legally fished
	5/11/2019	NETG01	Leave gill net in coastal waters unattended
	5/14/2019	NETG03	Using gill net with improper buoys or identification
	5/22/2019	NETG02	Using gill net without buoys or identification
	5/23/2019	NETG03	Using gill net with improper buoys or identification
	5/23/2019	NETG10	Gill net with illegal mesh size
	5/23/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/23/2019	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	5/29/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/30/2019	NETG04	Leave gill net in waters when could not be legally fished

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Table 13 cont.

Season	Date	Violation code	Violation description
Summer	6/27/2019	NETG22	Improperly set gill net
	6/28/2019	NETG03	Using gill net with improper buoys or identification
	7/4/2019	NETG01	Leave gill net in coastal waters unattended
	7/4/2019	NETG03	Using gill net with improper buoys or identification
	7/6/2019	NETG29	Improperly set gill net
	7/12/2019	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	7/21/2019	NETG03	Using gill net with improper buoys or identification
	7/27/2019	NETG30	Leave RCGL gill net unattended
	7/29/2019	NETG04	Leave gill net in waters when could not be legally fished
	7/31/2019	NETG04	Leave gill net in waters when could not be legally fished
	8/6/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	8/6/2019	NETG29	Improperly set gill net
	8/10/2019	NETG04	Leave gill net in waters when could not be legally fished
	8/11/2019	NETG02	Using gill net without buoys or identification
	8/15/2019	NETG44	Use large-mesh gill nets w/out leaving a space of at least 25 yards between separate lengths of net
	8/17/2019	NETG02	Using gill net without buoys or identification
	8/17/2019	NETG32	Set gill net w/stretched mesh of 5 inches or greater without proper tie downs
	8/30/2019	NETG34	Use unattended gill net w/mesh less than 5" in commercial operation from May 1 through November 30 in coastal waters of the State
	8/31/2019	NETG04	Leave gill net in waters when could not be legally fished

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Table 14. Notice of Violations issued by season, date and violation code for the Estuarine Gill Net Permit (EGNP) during the 2019 ITP Year.

Season	Date	Violation code	Violation description
Fall	10/8/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	10/29/2018	EGNP11	Failure to attend nets
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/5/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/19/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
Spring	4/4/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	4/8/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	4/15/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	4/15/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	4/16/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	5/1/2019	EGNP11	Failure to attend nets
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	5/14/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	5/15/2019	EGNP11	Failure to attend nets
	5/15/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	5/31/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
Summer	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	7/31/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	8/5/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)

7 FIGURES

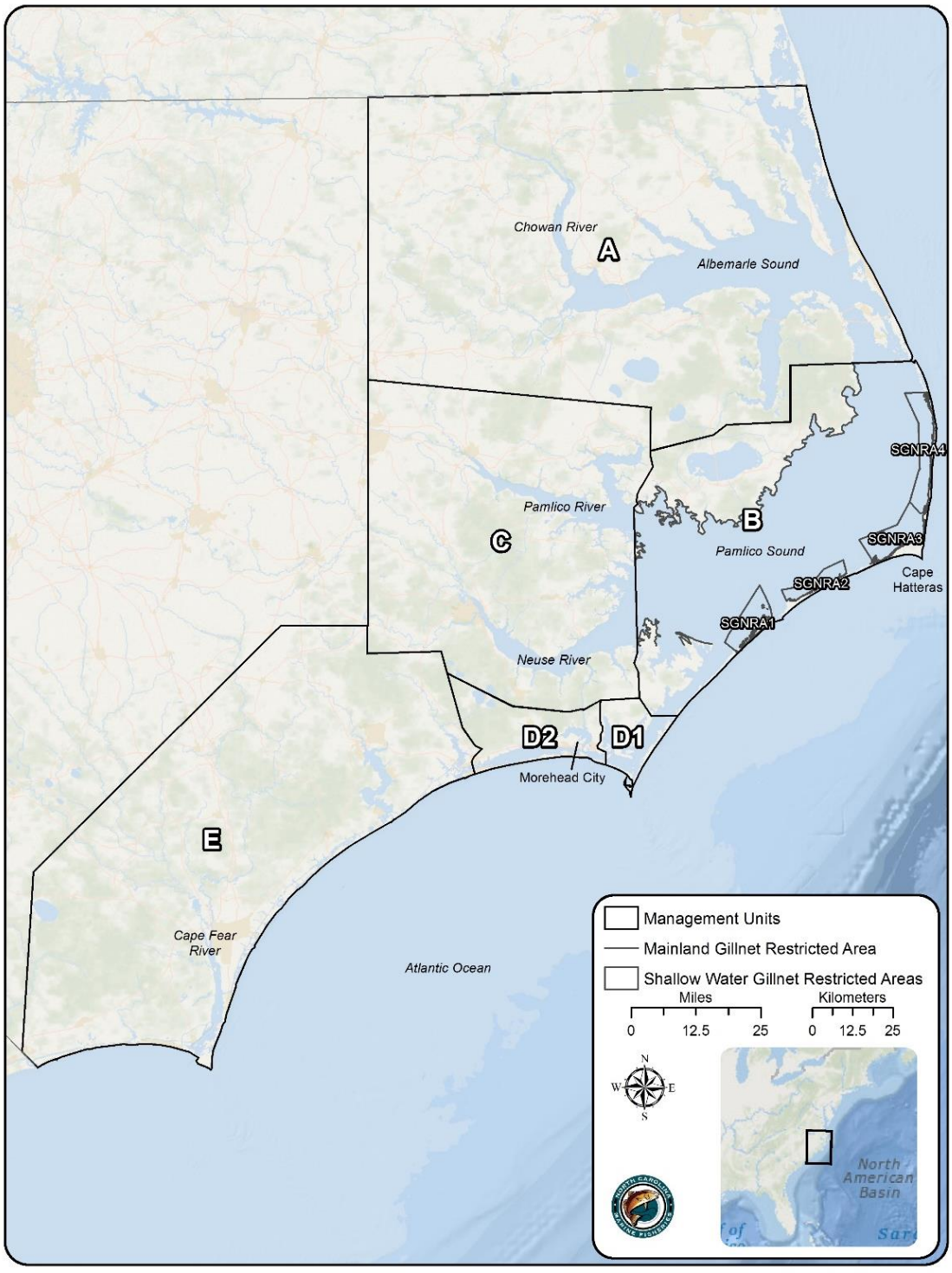

Figure 1. Management units (A, B, C, D1, D2, and E) as outlined in the Conservation Plan and used by the Observer Program for the 2019 ITP Year. In the Pamlico Sound Portion of B, large-mesh gill nets were confined to Shallow Water Gillnet Restricted Areas (SGNRA) 1-4 and the Mainland Gillnet Restricted Area (200 yards from shore).

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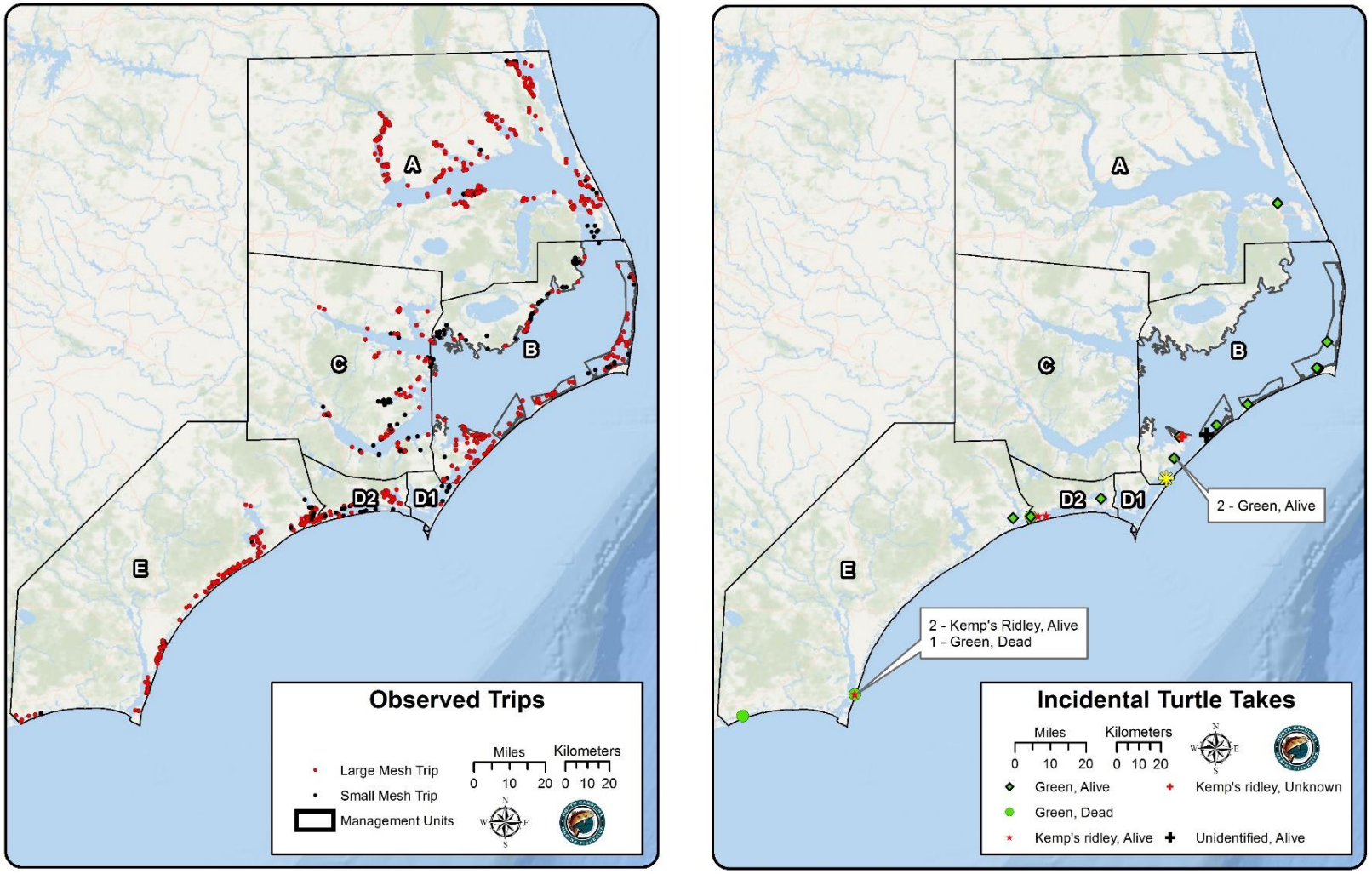

Figure 2. For the entire 2019 ITP Year, observed gill-net trips (left) by mesh-size category (729 large mesh = ≥ 4 inch; 145 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 19; dead, n = 3) across management units. One of the dead takes (green sea turtle) was recovered from the net alive, but was euthanized the next day due to extensive carapace factures not associated with the entanglement. See Figure 21.

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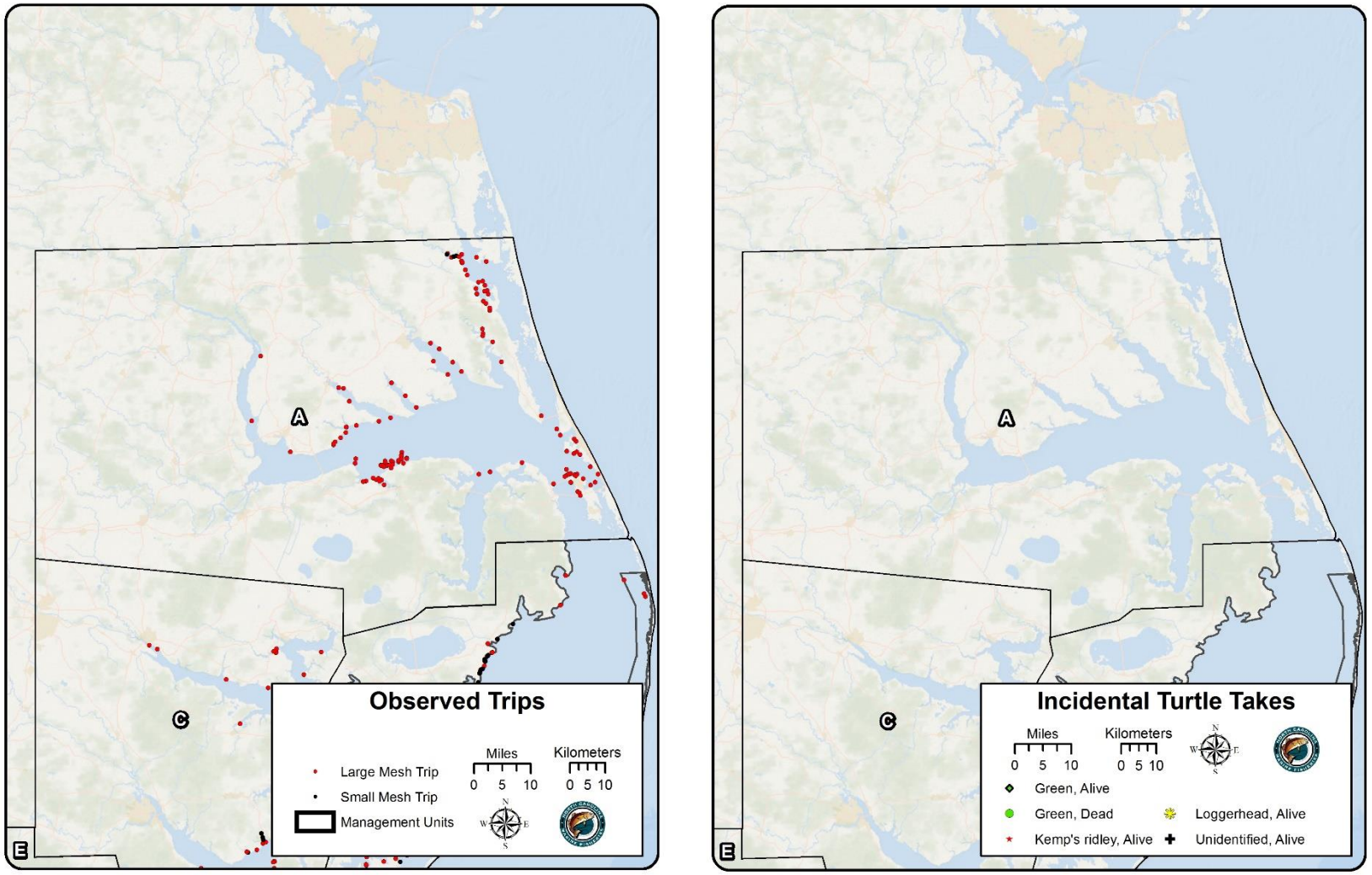

Figure 3. For fall 2018, observed gill-net trips (left) by mesh-size category (131 large mesh = ≥ 4 inch; 5 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit A.

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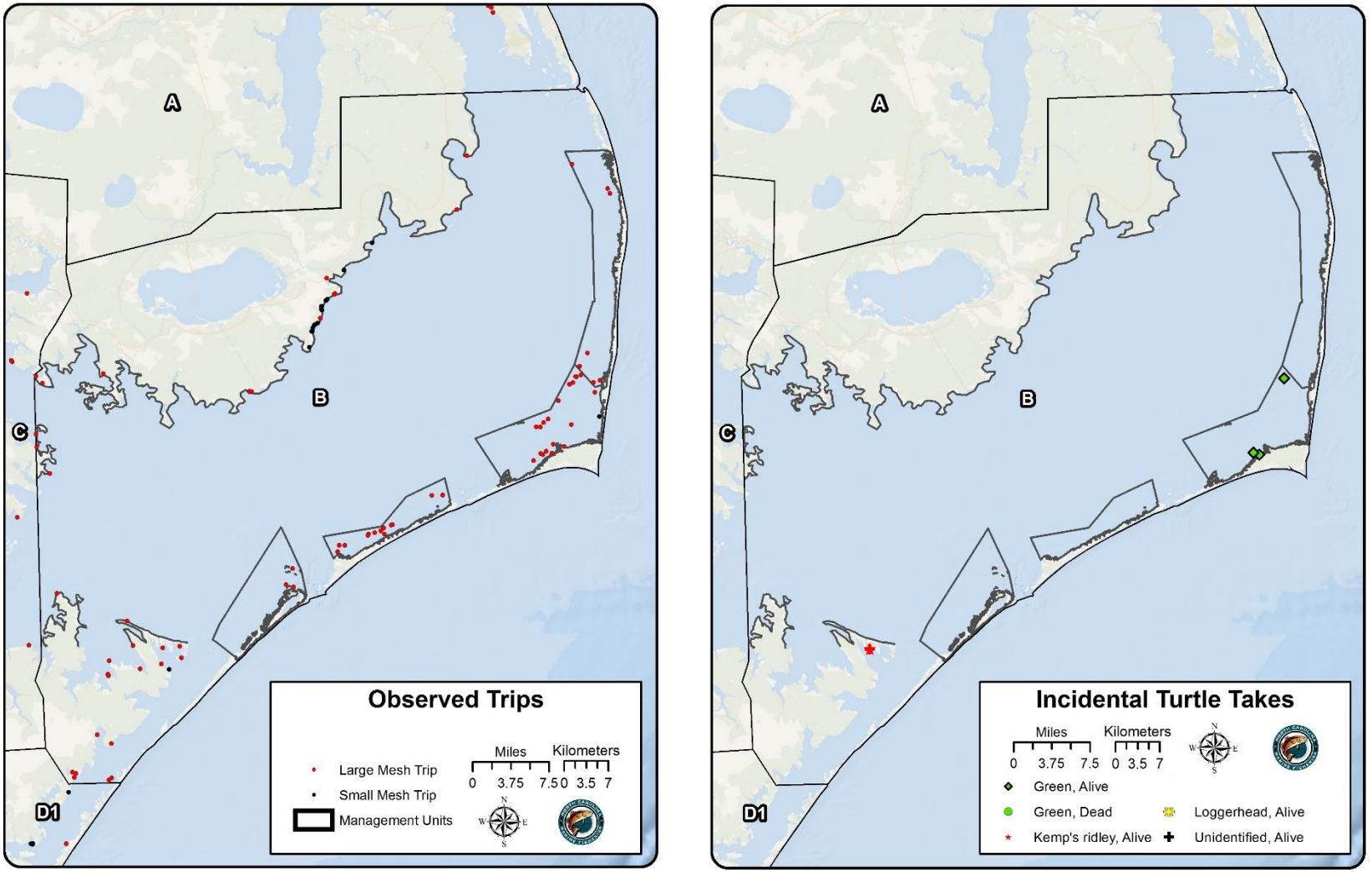

Figure 4. For fall 2018, observed gill-net trips (left) by mesh-size category (80 large mesh = ≥ 4 inch; 21 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 4; dead, n = 0) for Management Unit B.

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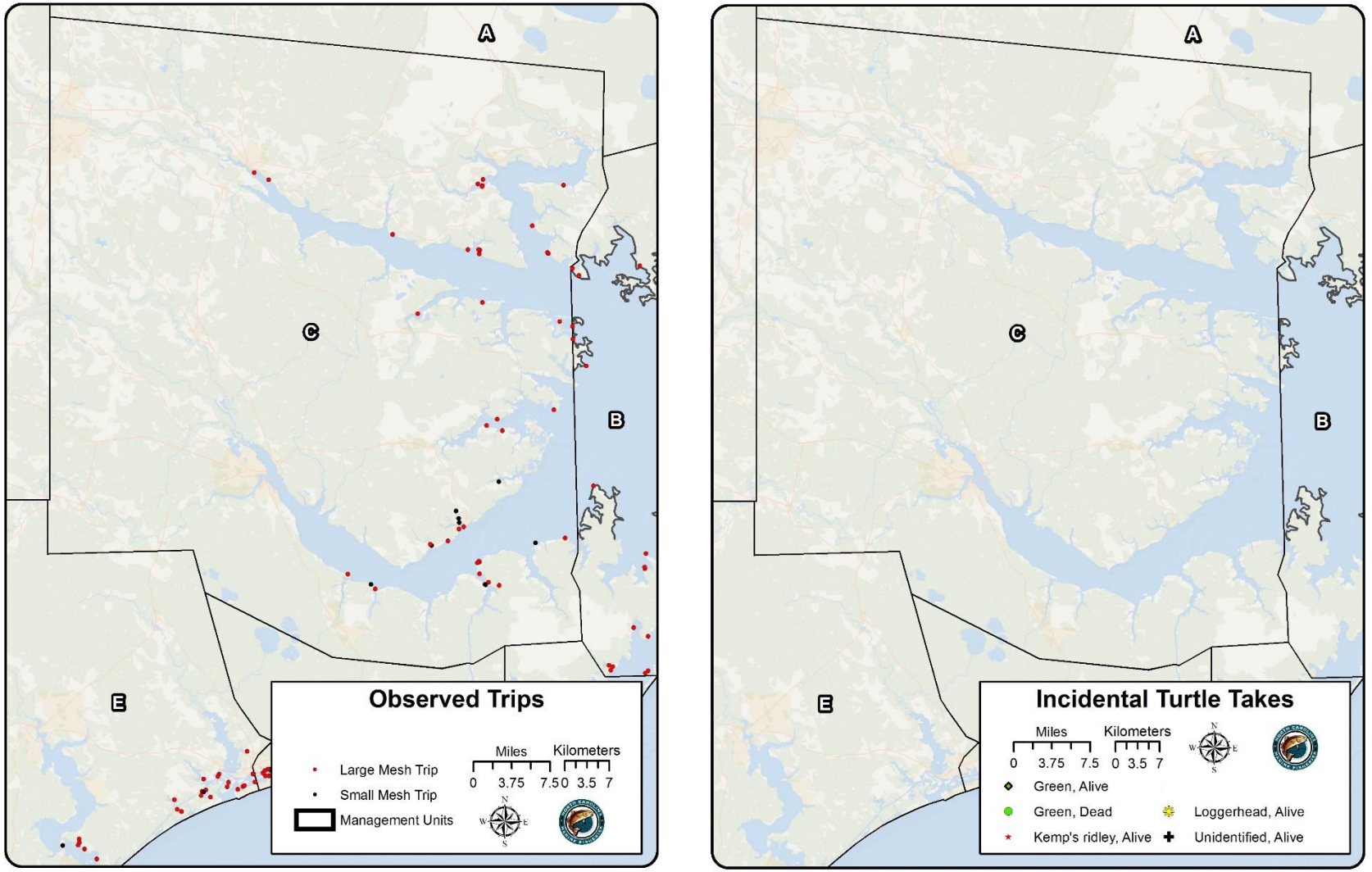

Figure 5. For fall 2018, observed gill-net trips (left) by mesh-size category (37 large mesh = ≥ 4 inch; 9 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit C.

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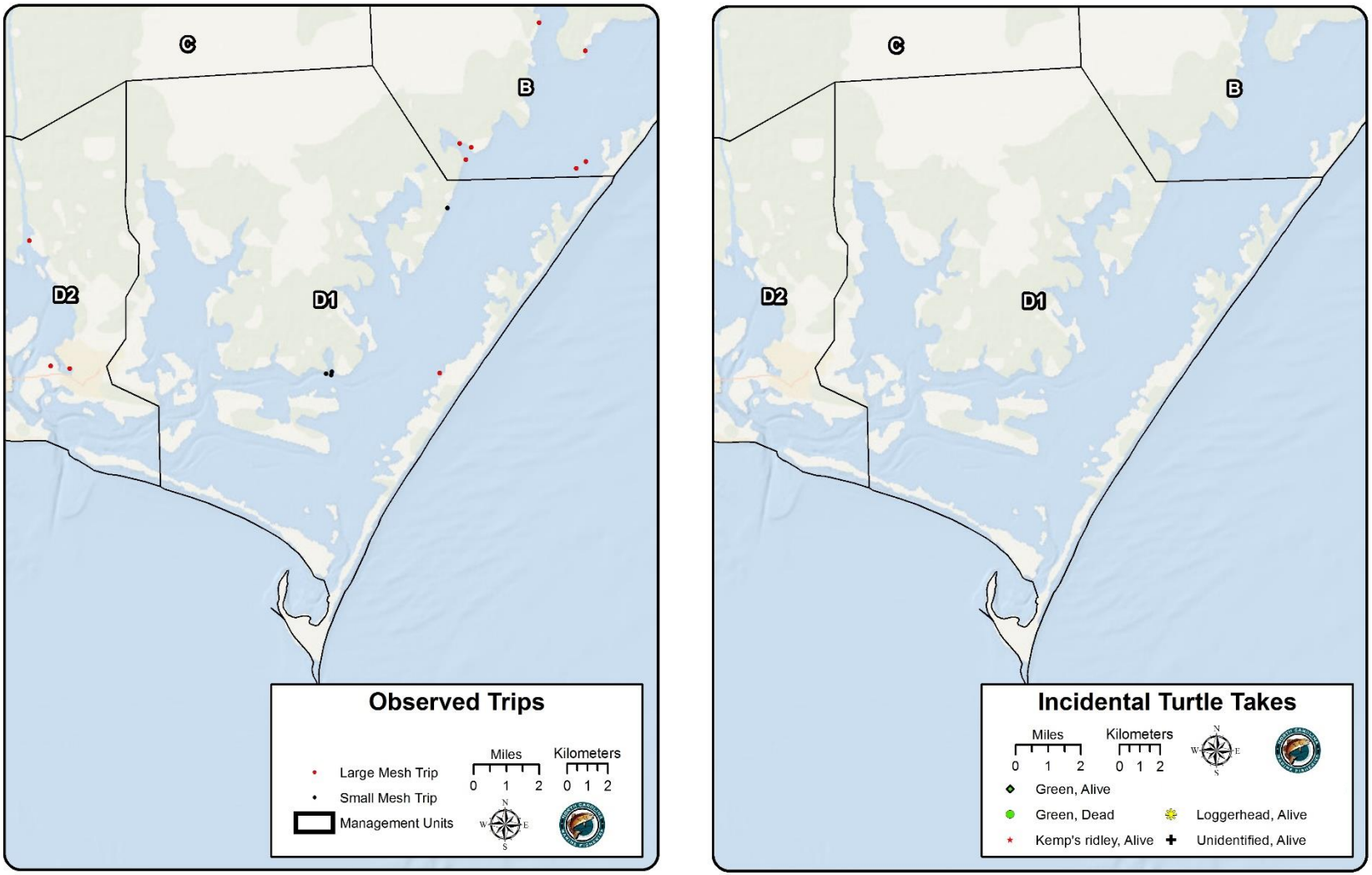

Figure 6. For fall 2018, observed gill-net trips (left) by mesh-size category (1 large mesh = ≥ 4 inch; 4 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit D1. D1 was closed to large-mesh gill nets for the entire 2019 ITP Year.

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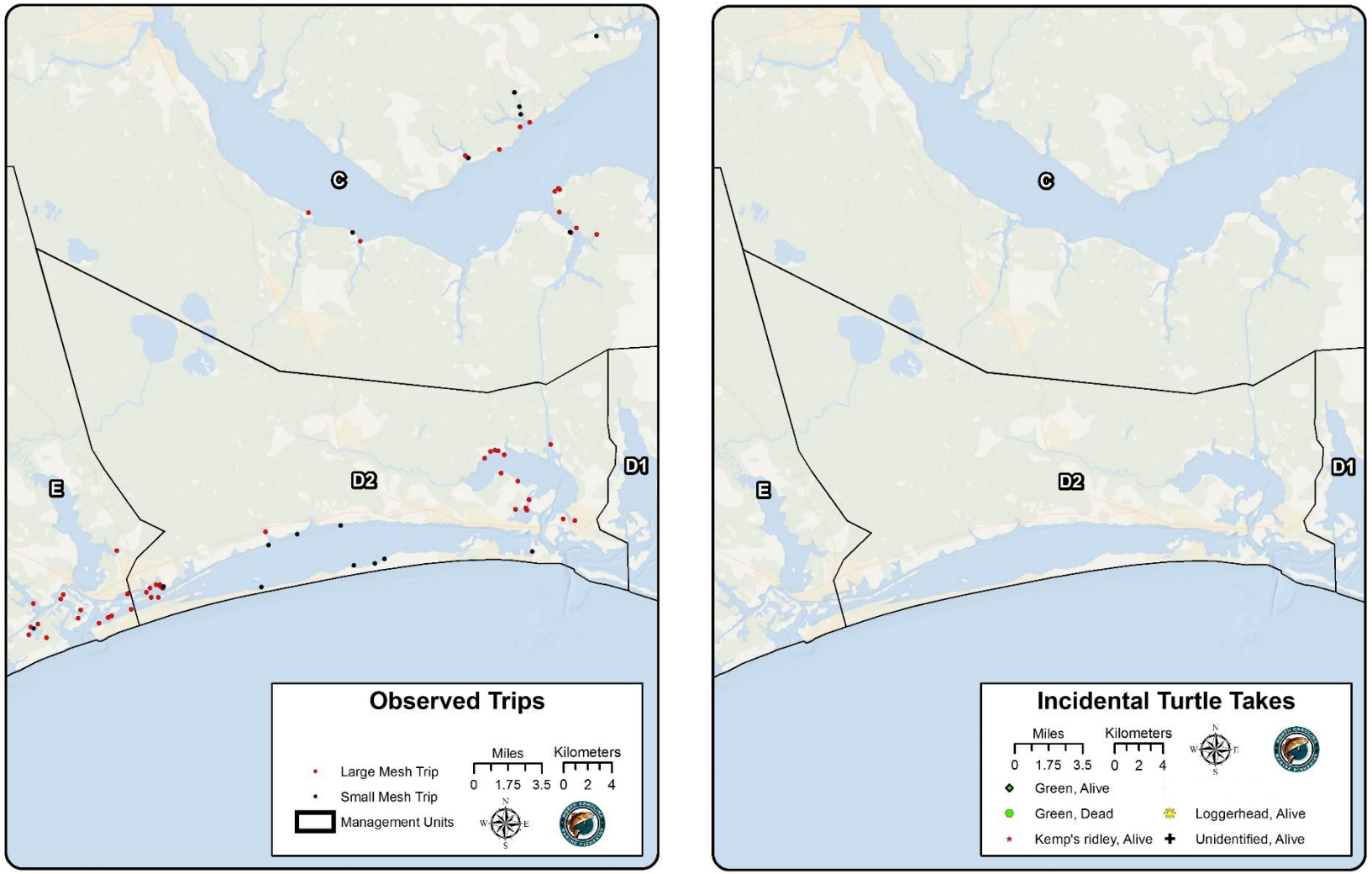

Figure 7. For fall 2018, observed gill-net trips (left) by mesh-size category (26 large mesh = ≥ 4 inch; 9 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit D2.

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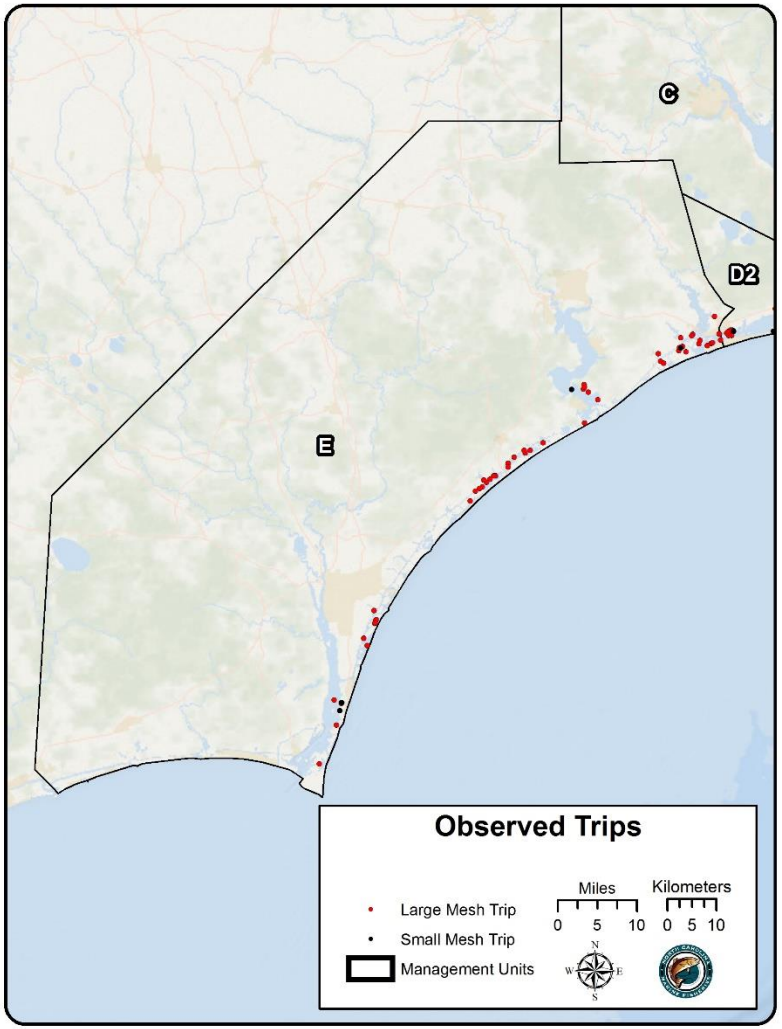

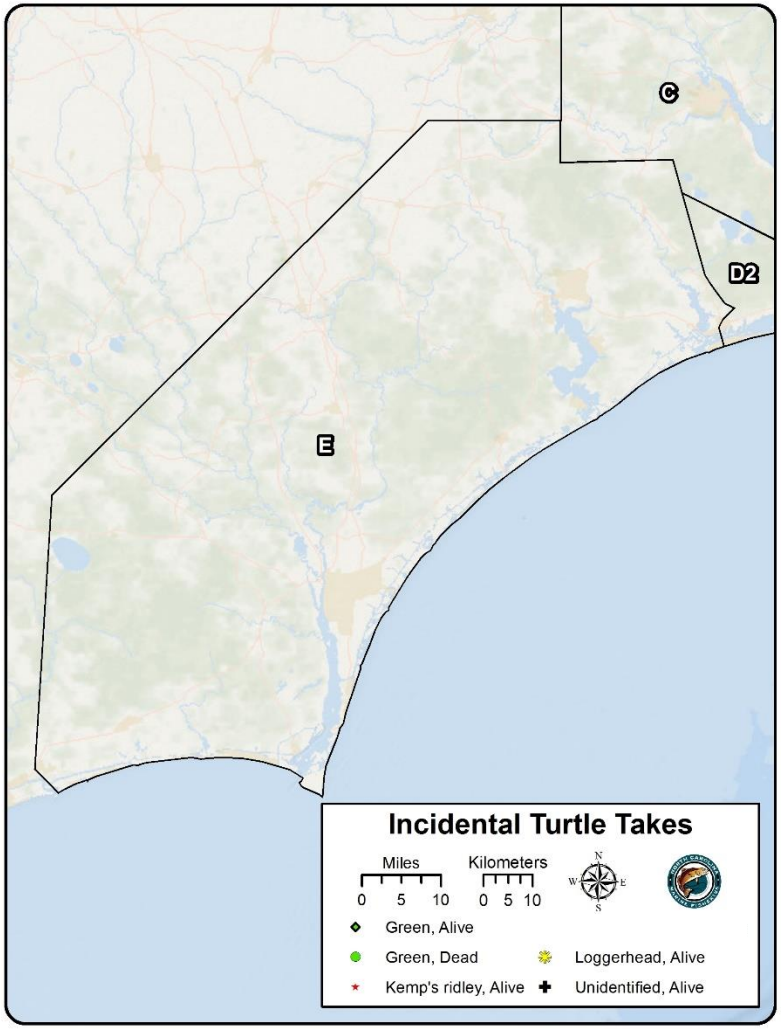

Figure 8. For fall 2018, observed gill-net trips (left) by mesh-size category (54 large mesh = ≥ 4 inch; 5 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit E.

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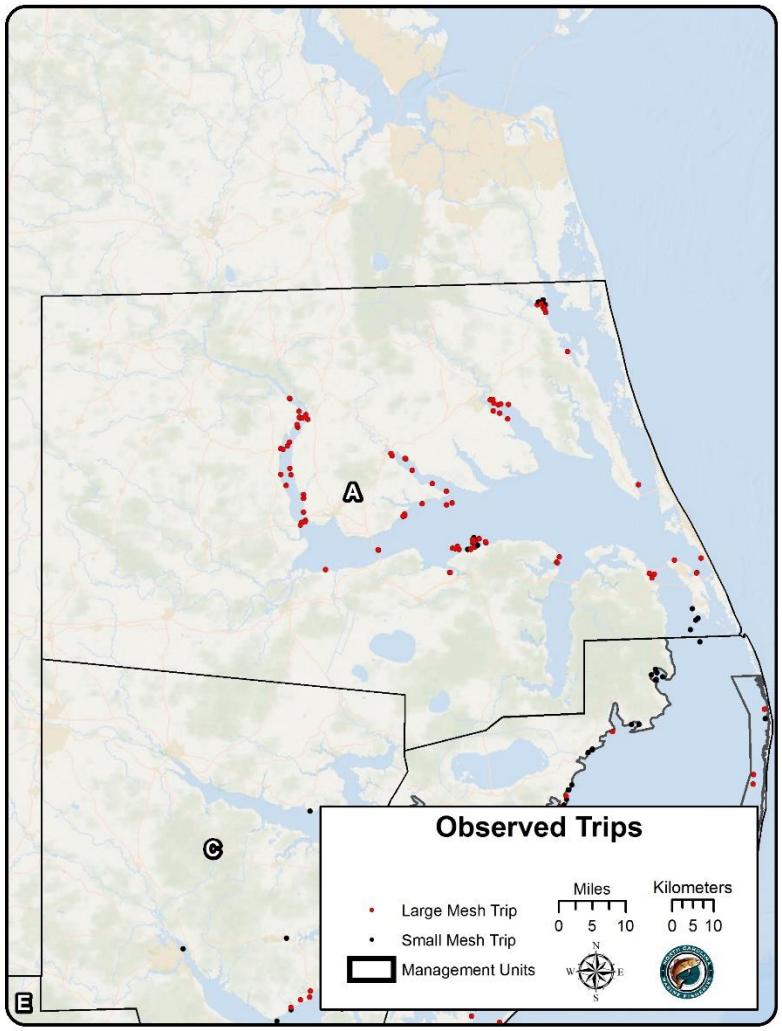

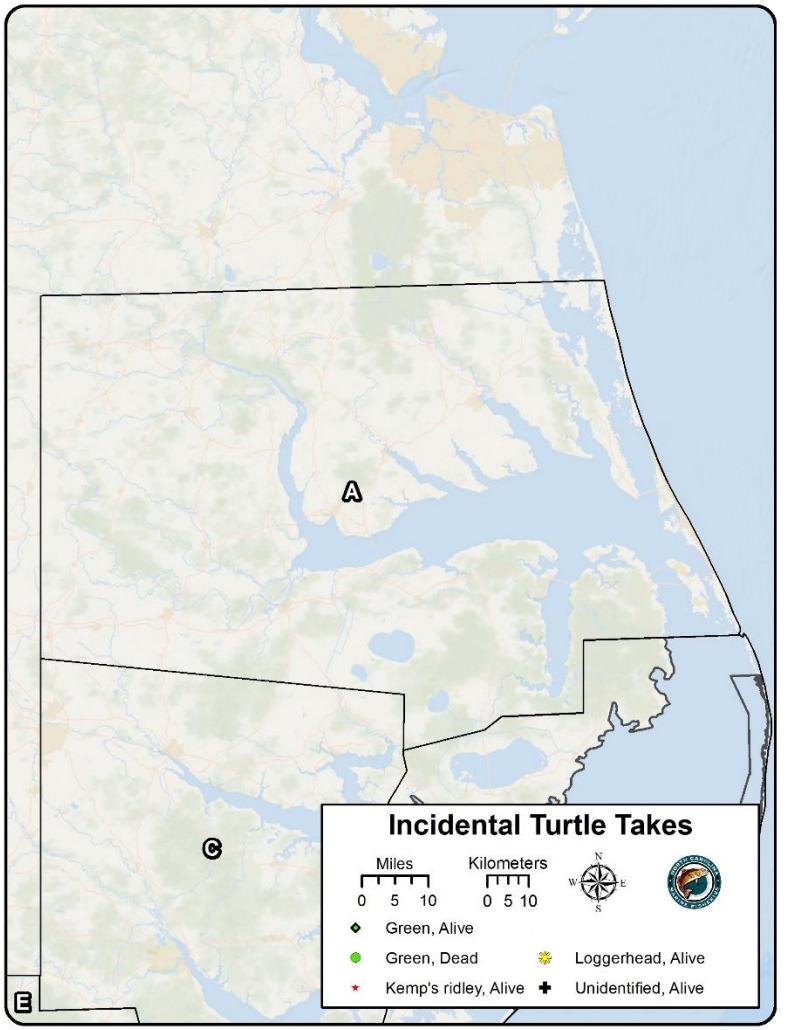

Figure 9. For spring 2019, observed gill-net trips (left) by mesh-size category (100 large mesh = ≥ 4 inch; 13 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit A.

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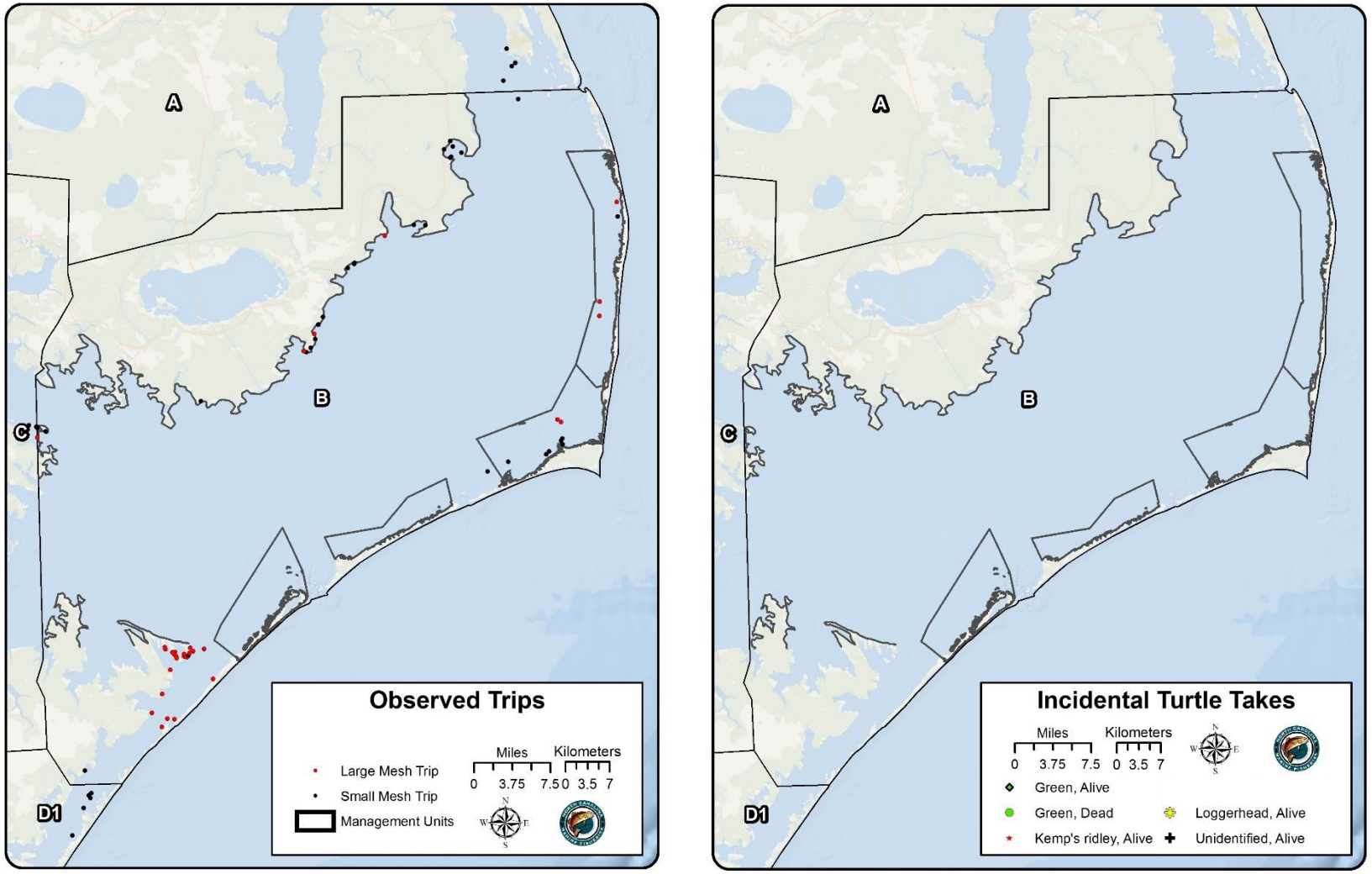

Figure 10. For spring 2019, observed gill-net trips (left) by mesh-size category (29 large mesh = ≥ 4 inch; 39 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit B.

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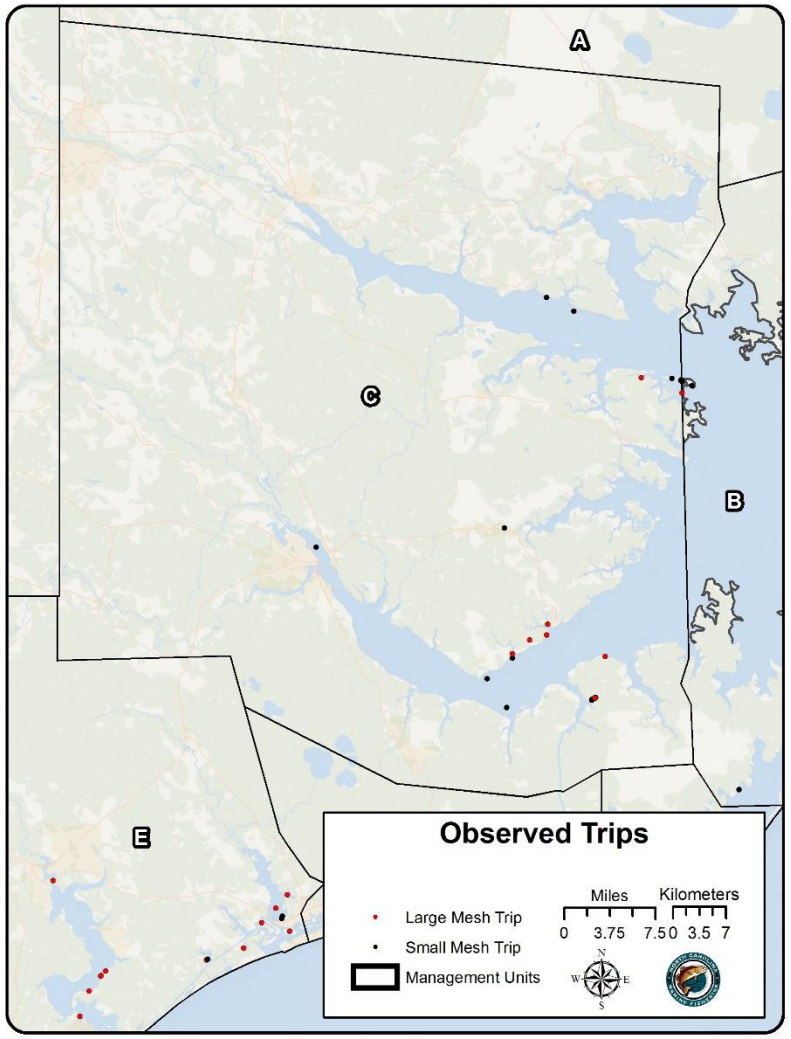

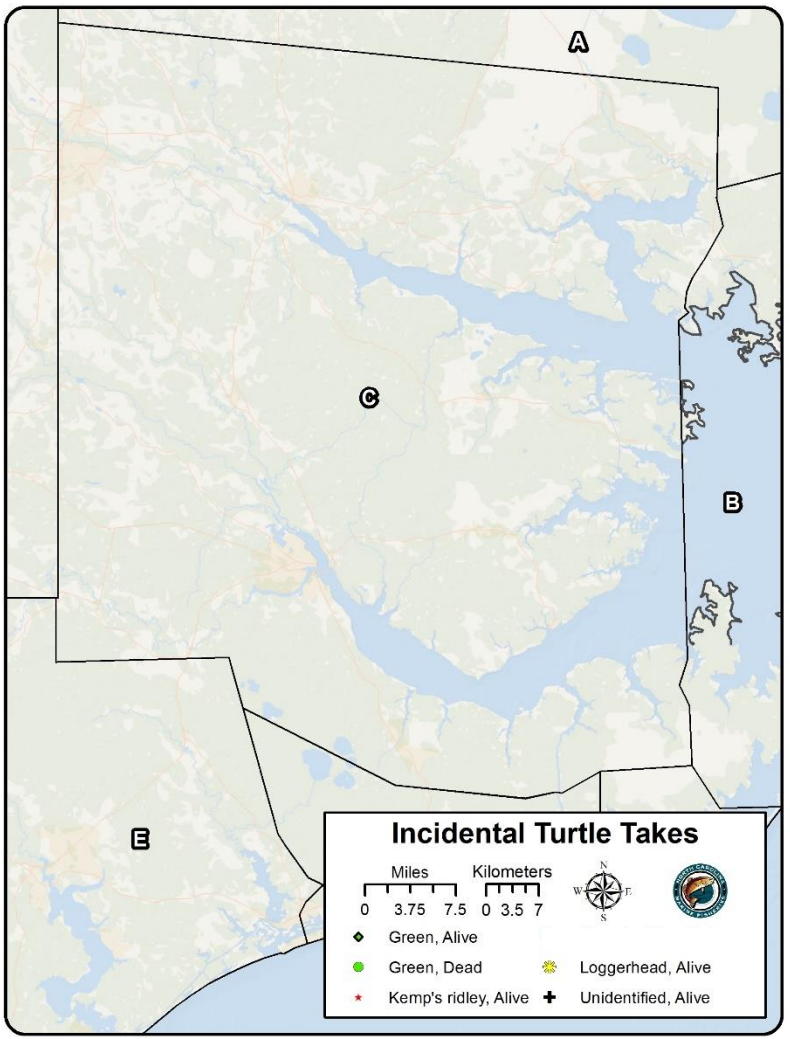

Figure 11. For spring 2019, observed gill-net trips (left) by mesh-size category (20 large mesh = ≥ 4 inch; 16 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit C.

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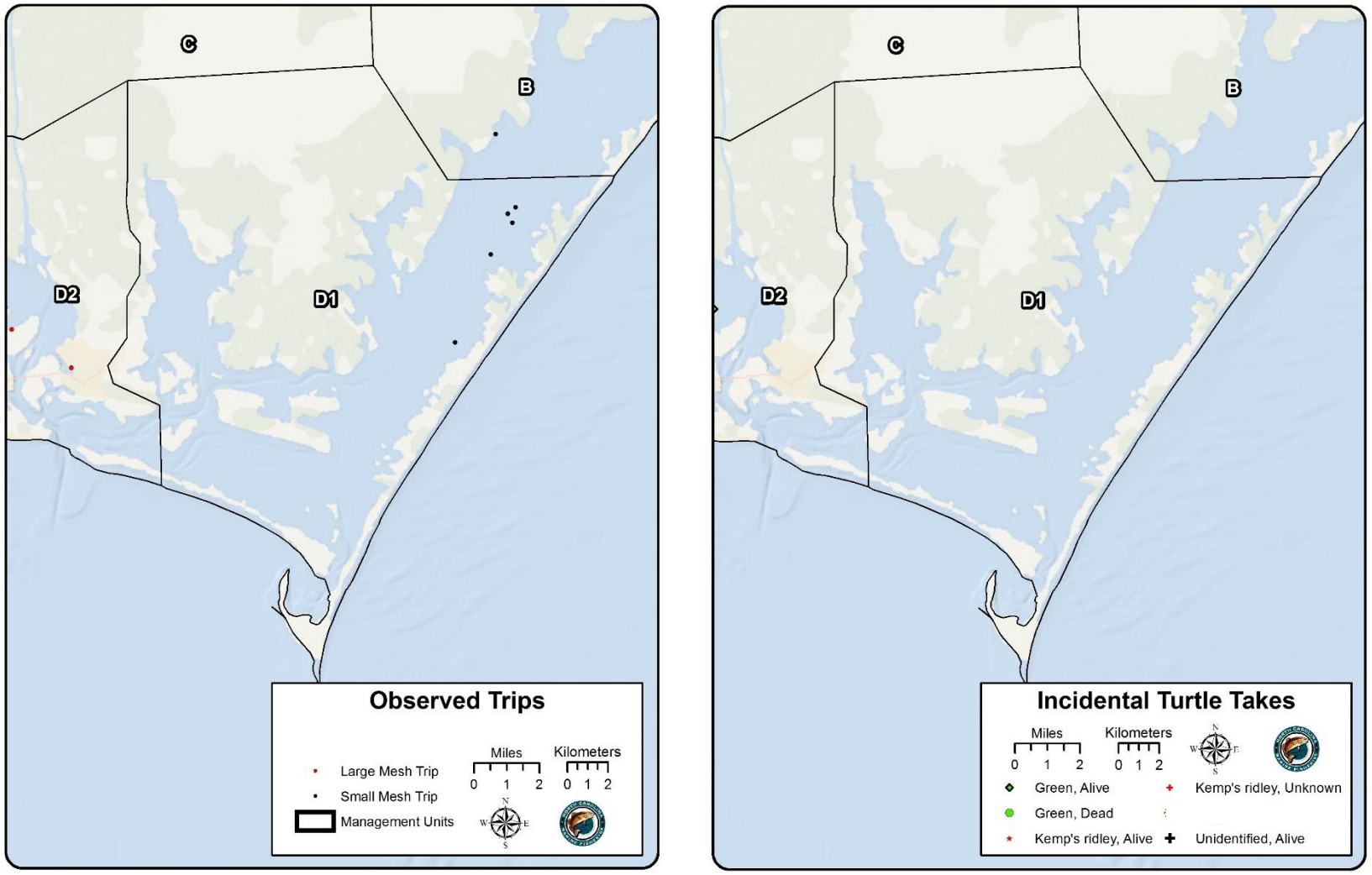

Figure 12. For spring 2019, observed gill-net trips (left) by mesh-size category (0 large mesh = ≥ 4 inch; 6 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit D1. D1 was closed to large-mesh gill nets for the entire 2019 ITP Year.

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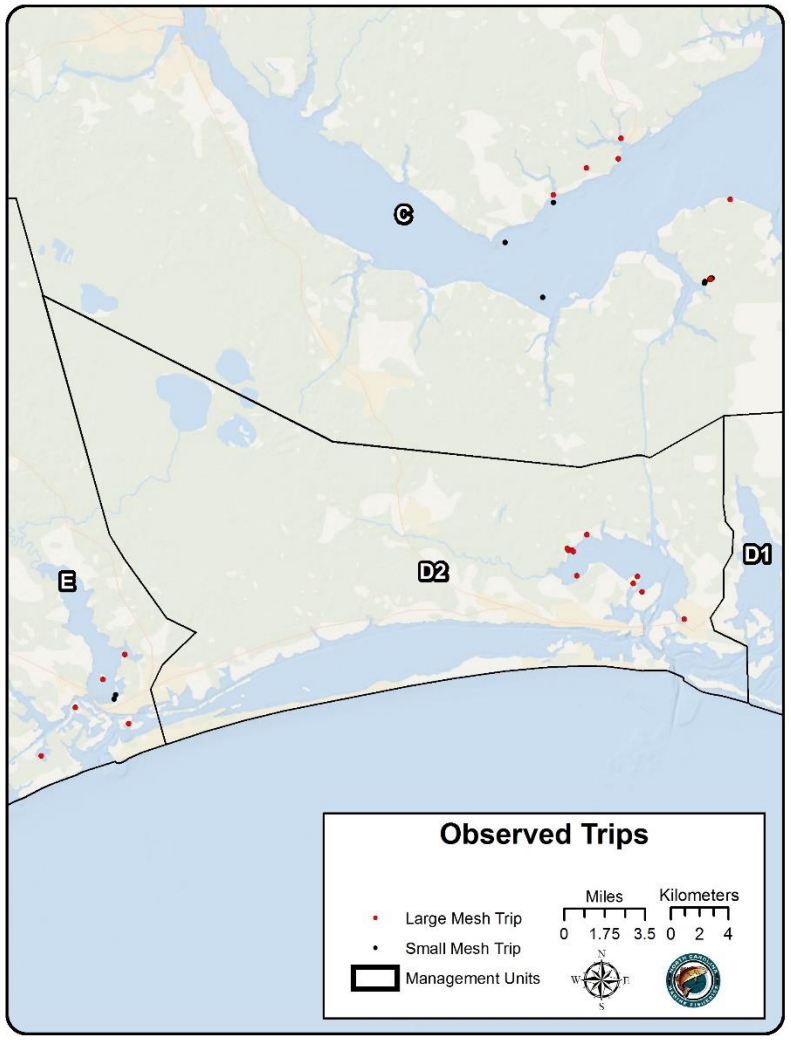

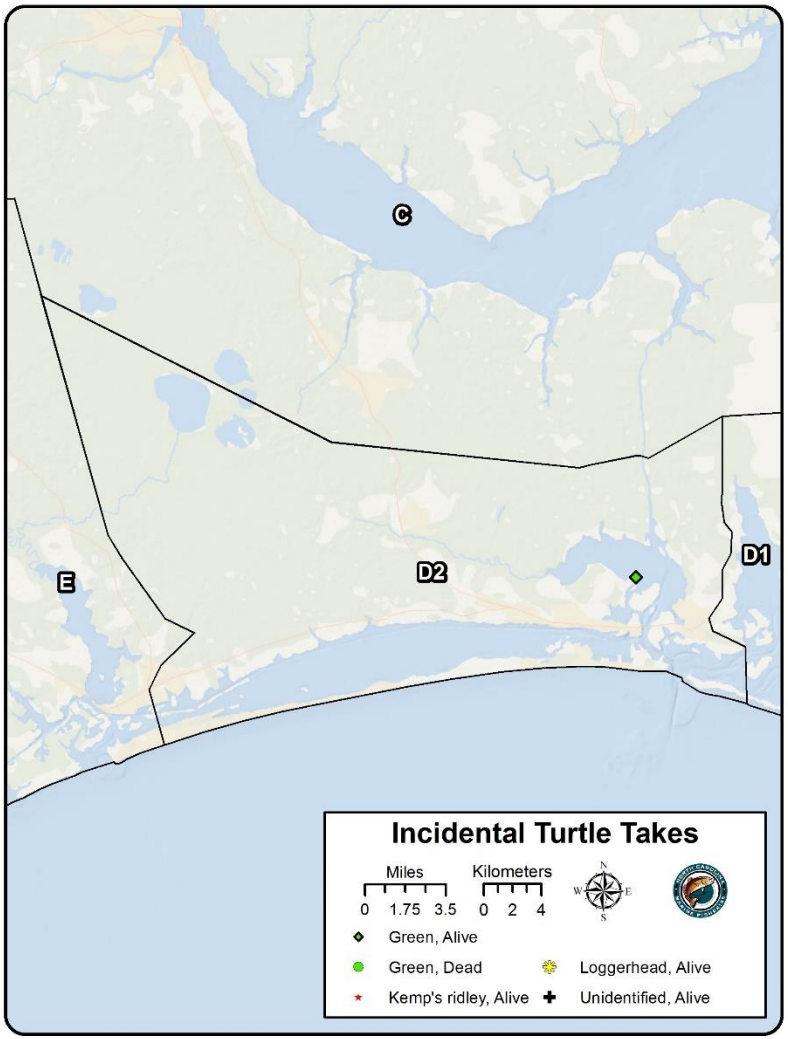

Figure 13. For spring 2019, observed gill-net trips (left) by mesh-size category (11 large mesh = ≥ 4 inch; 0 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 1; dead, n = 0) for Management Unit D2.

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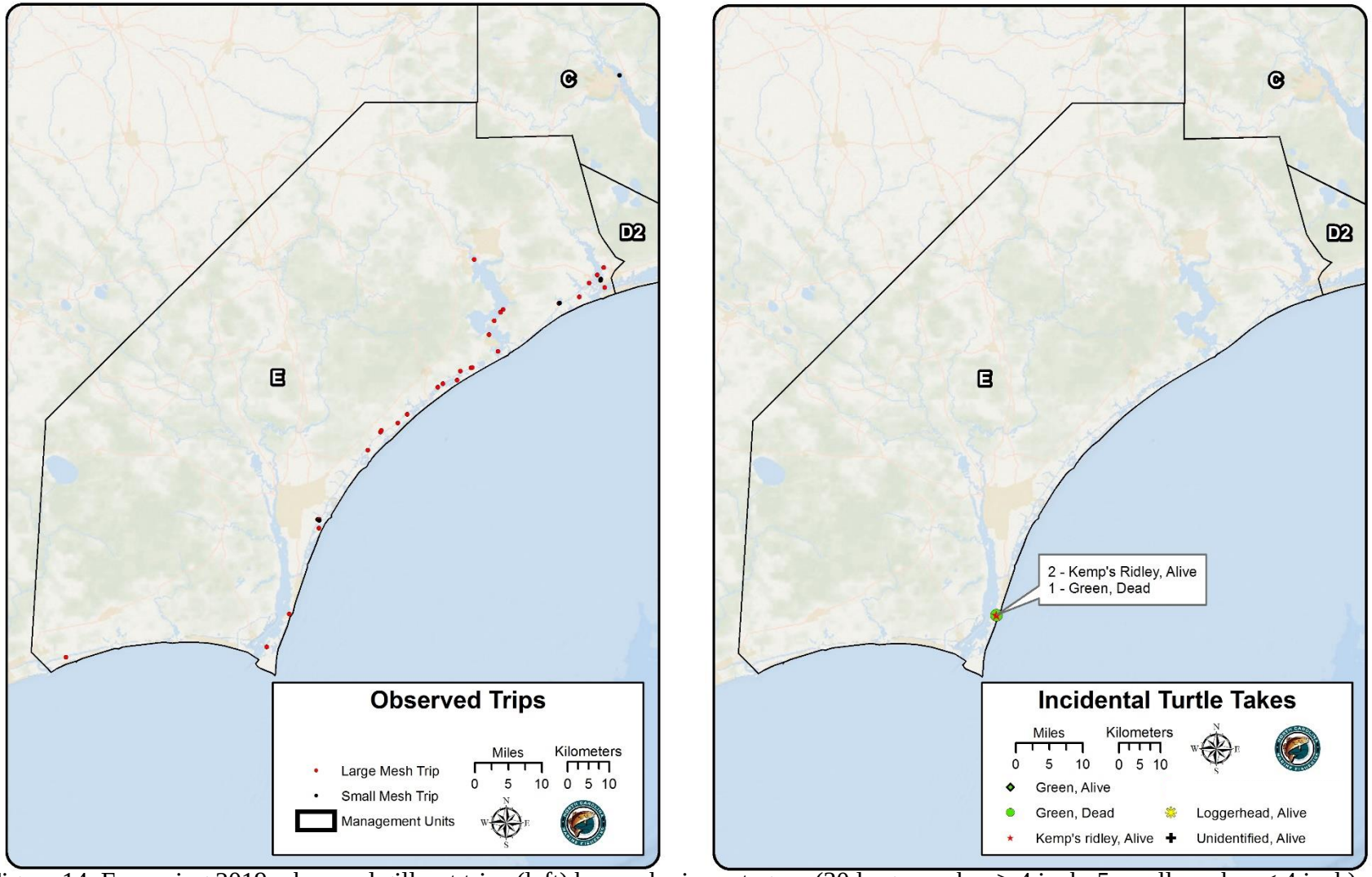

Figure 14. For spring 2019, observed gill-net trips (left) by mesh-size category (30 large mesh = ≥ 4 inch; 5 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 2; dead, n = 1) for Management Unit E.

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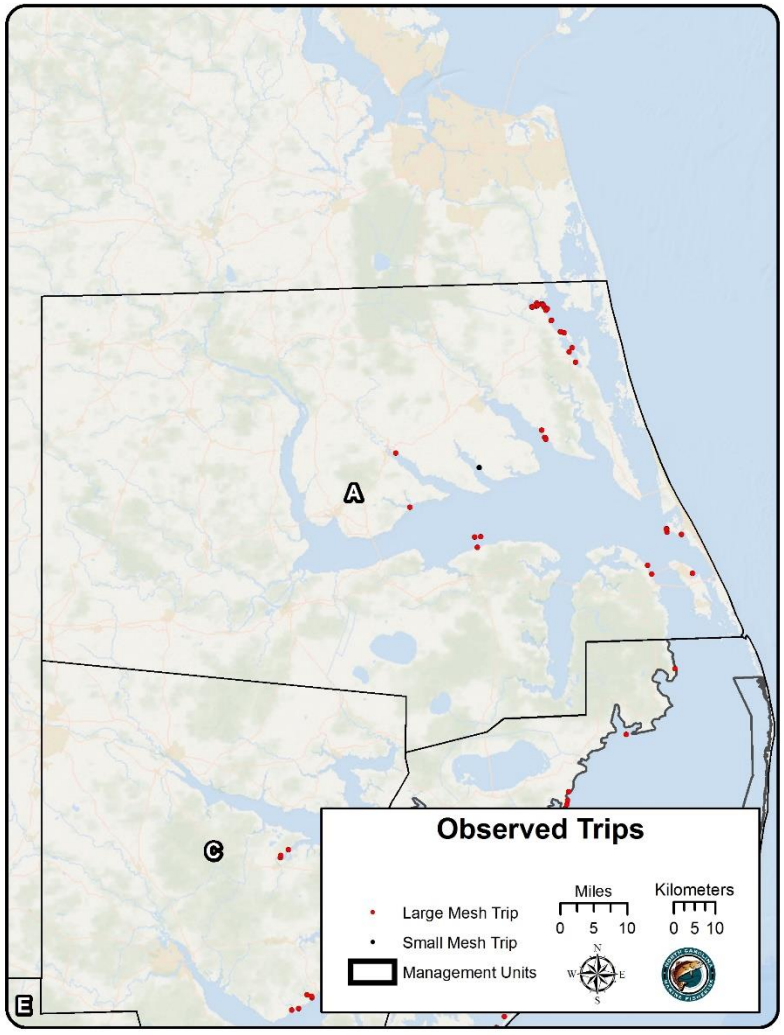

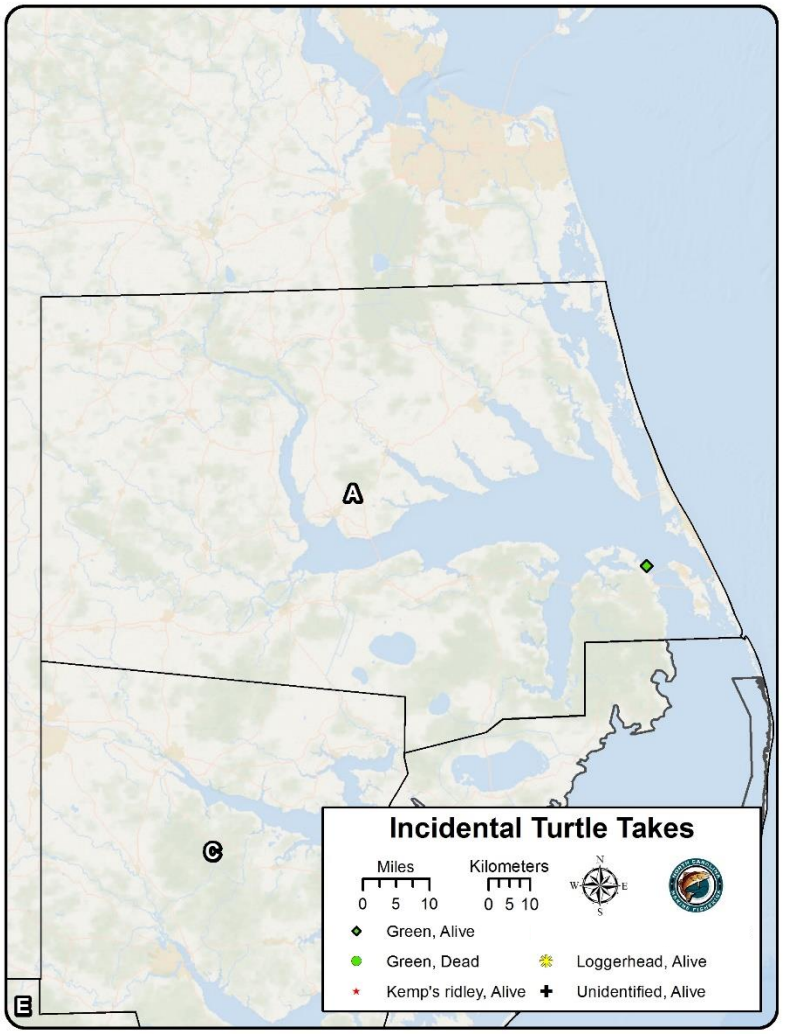

Figure 15. For summer 2019, observed gill-net trips (left) by mesh-size category (46 large mesh = ≥ 4 inch; 2 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 1; dead, n = 0) for Management Unit A.

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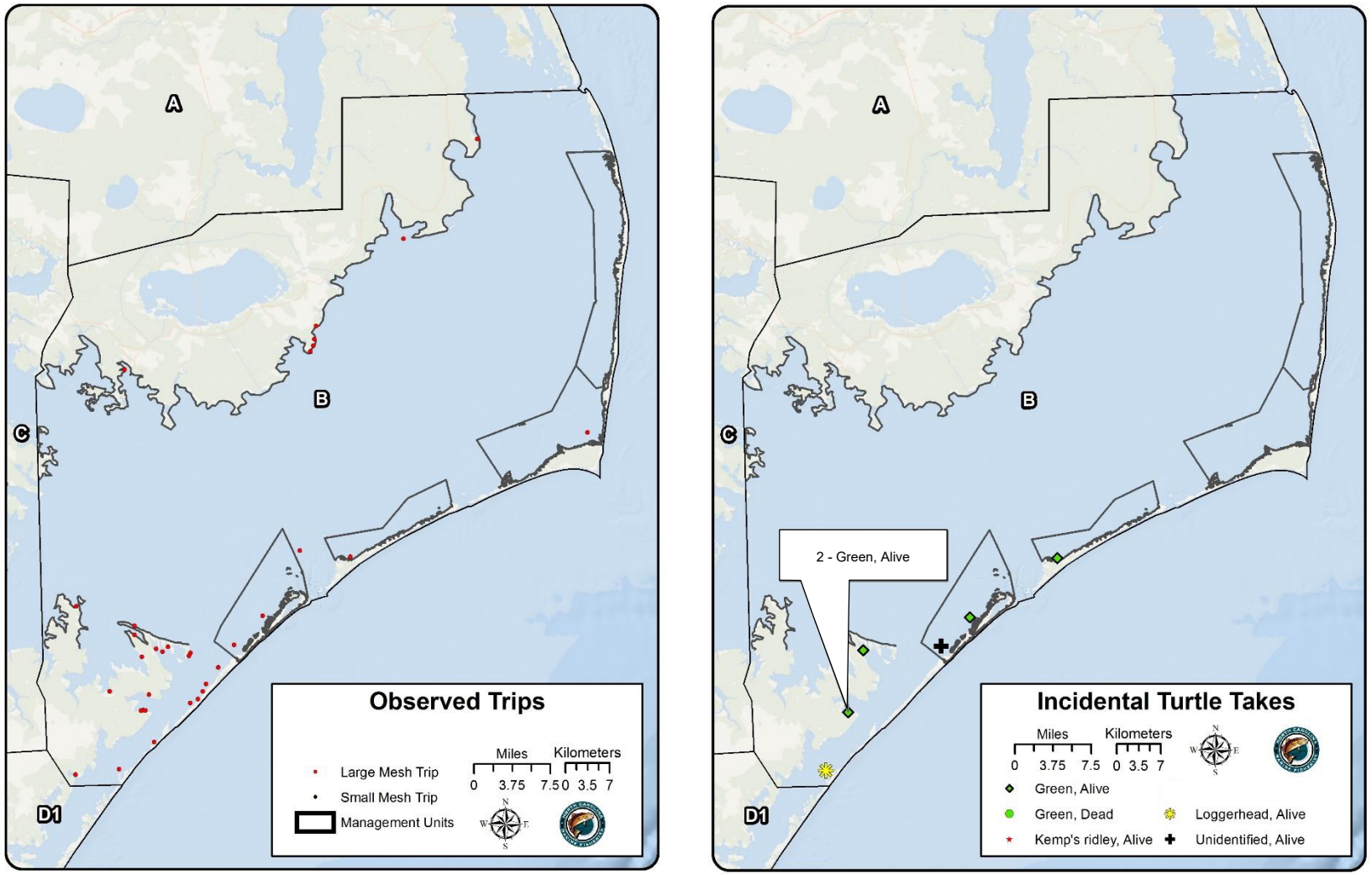

Figure 16. For summer 2019, observed gill-net trips (left) by mesh-size category (34 large mesh = ≥ 4 inch; 0 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 7; dead, n = 0) for Management Unit B.

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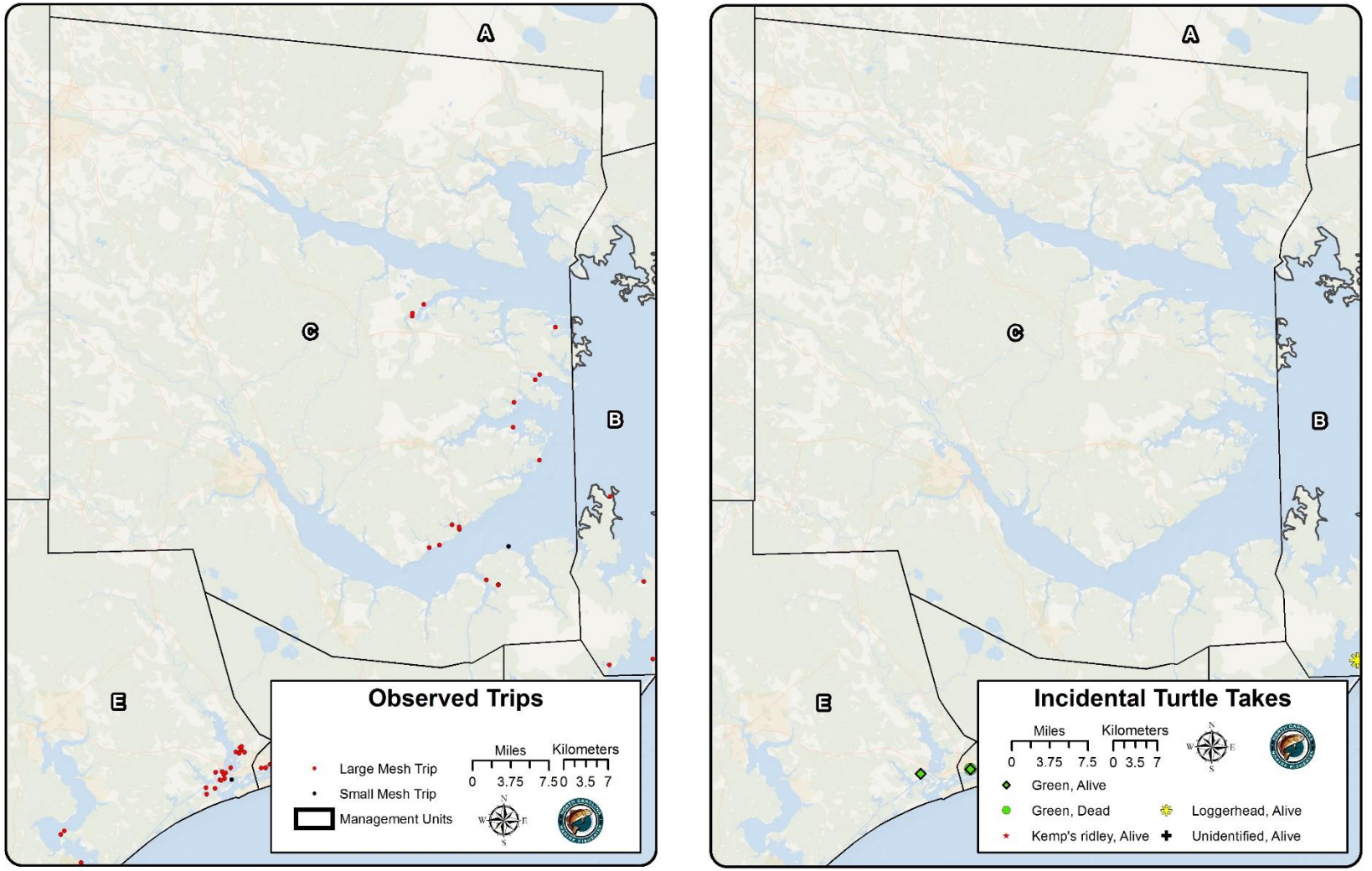

Figure 17. For summer 2019, observed gill-net trips (left) by mesh-size category (27 large mesh = ≥ 4 inch; 1 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit C.

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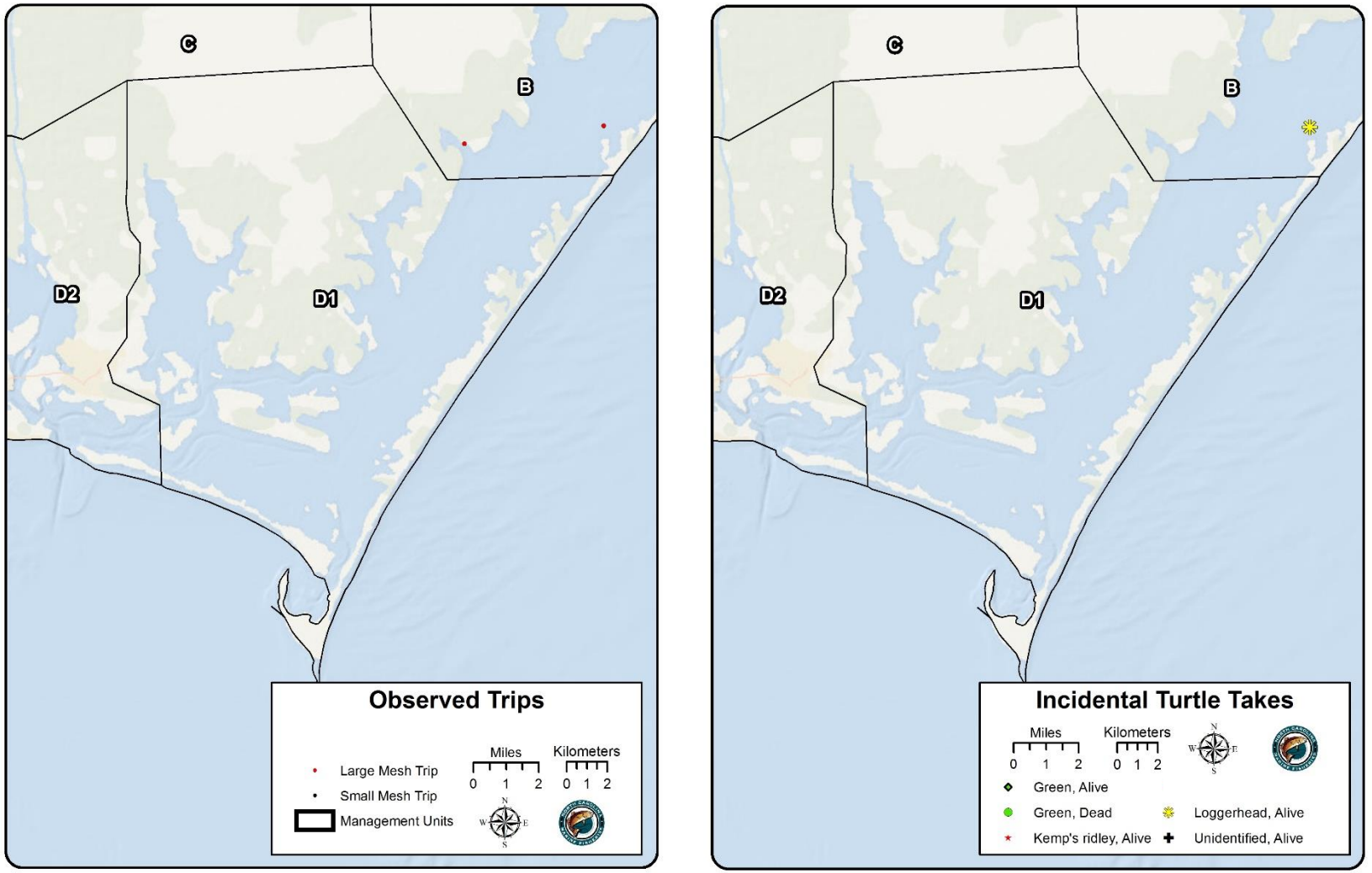

Figure 18. For summer 2019, observed gill-net trips (left) by mesh-size category (0 large mesh = ≥ 4 inch; 0 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 0; dead, n = 0) for Management Unit D1. D1 was closed to large-mesh gill nets for the entire 2019 ITP Year.

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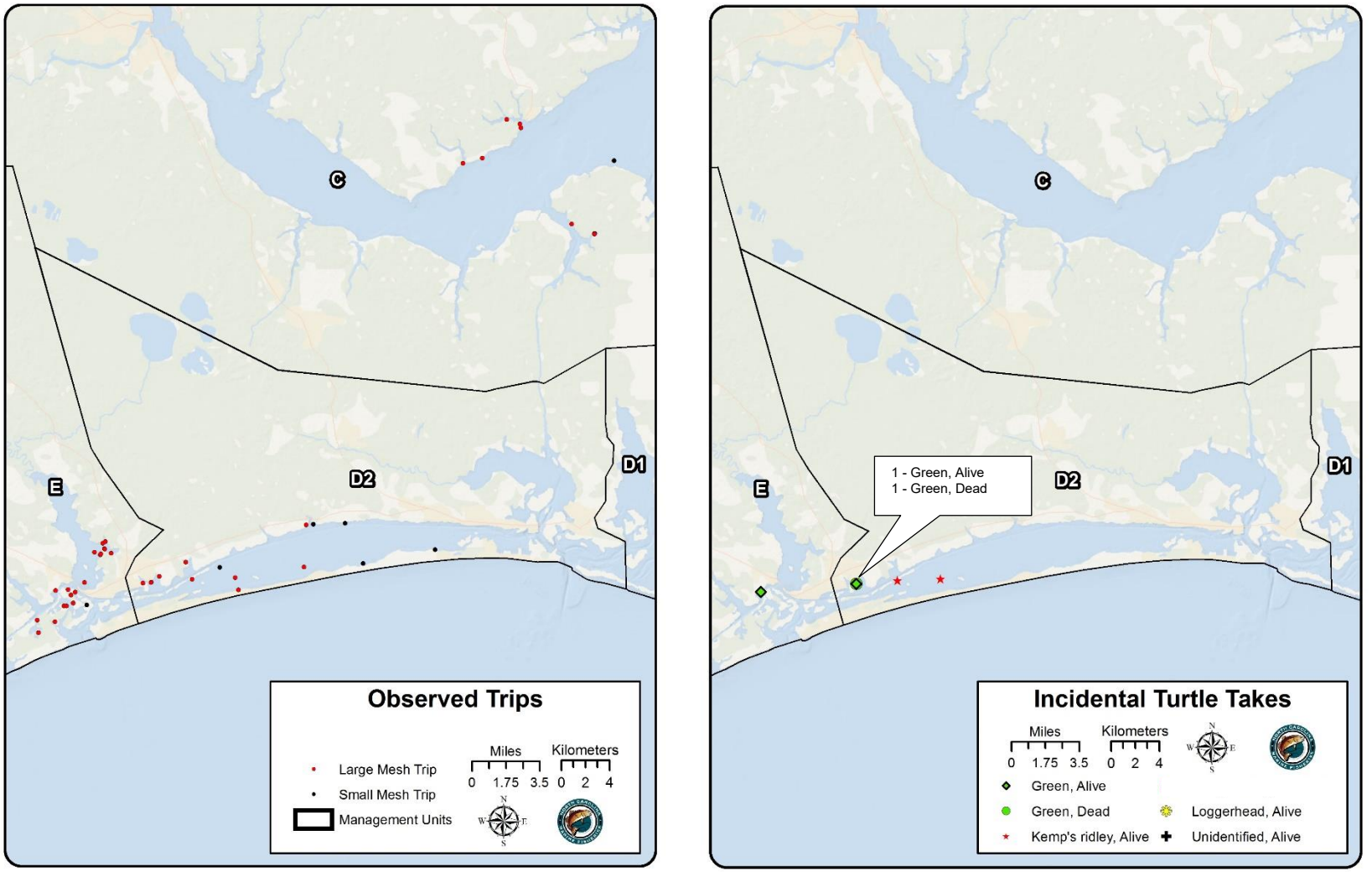

Figure 19. For summer 2019, observed gill-net trips (left) by mesh-size category (10 large mesh = ≥ 4 inch; 5 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 3; dead, n = 1) for Management Unit D2.

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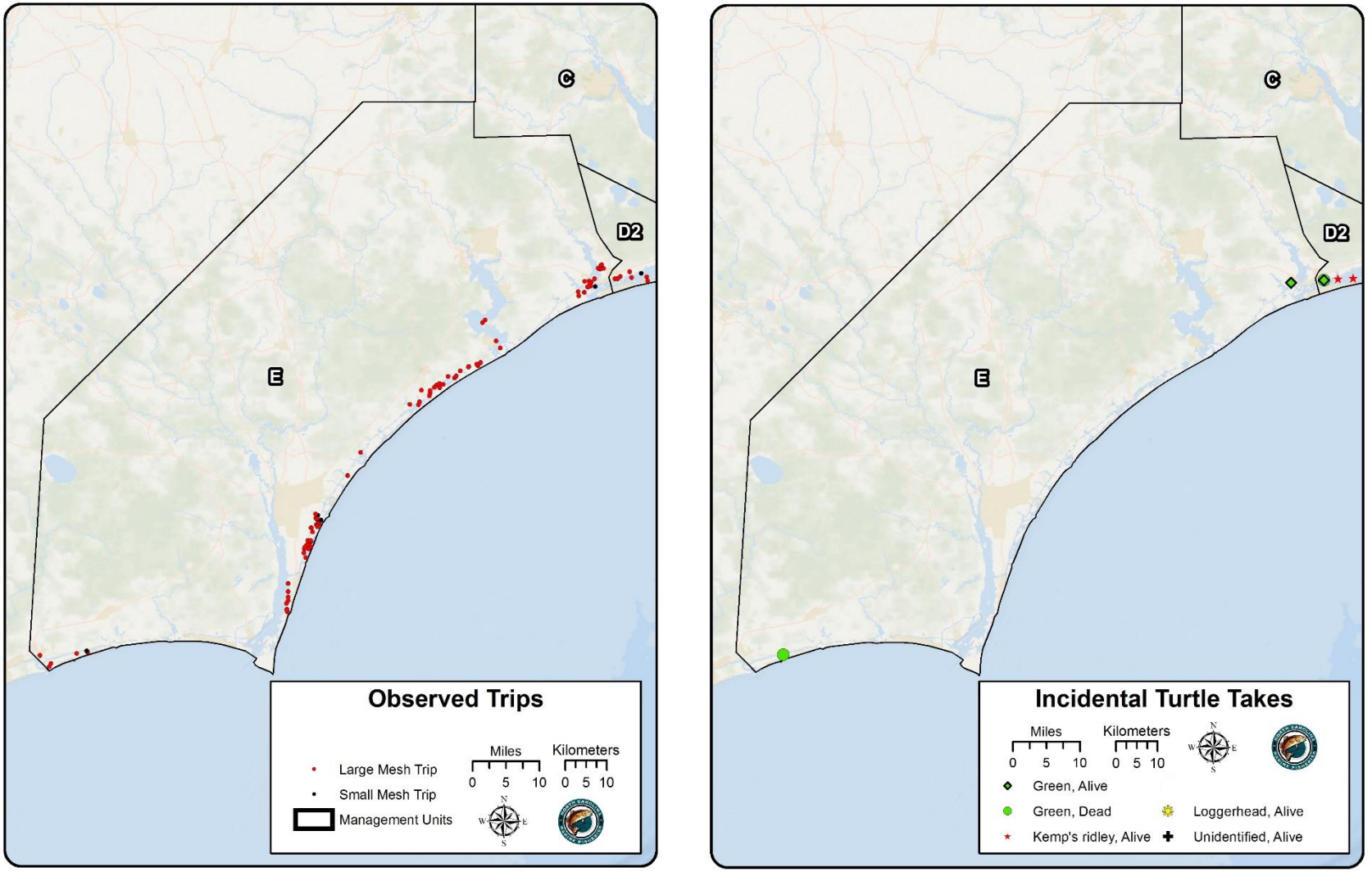

Figure 20. For summer 2019, observed gill-net trips (left) by mesh size category (93 large mesh = ≥ 4 inch; 5 small mesh = < 4 inch) and sea turtle interactions (right) by species and disposition (alive, n = 1; dead, n = 1) for Management Unit E. The dead green turtle was recovered from the net alive, but was euthanized the next day due to extensive carapace factures not associated with the entanglement. See Figure 21.

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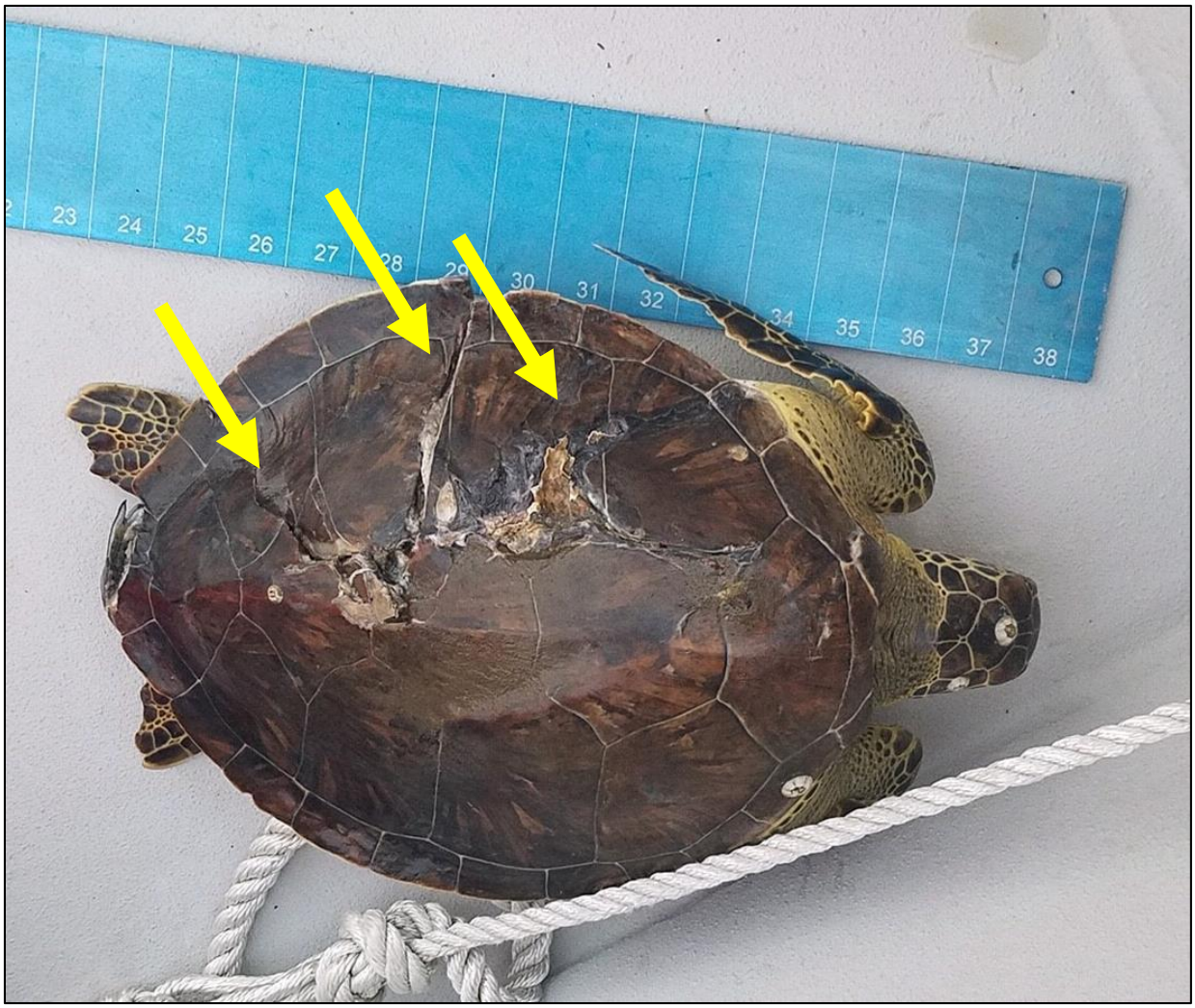

Figure 21. Green sea turtle recovered alive from a large-mesh (6 inch) gill net near Ocean Isle (Management Unit E) during an observed trip conducted by Marine Patrol on 17 July 2019. The turtle was transferred to the Karen Beasley Sea Turtle Rescue and Rehabilitation Center because of significant carapace fractures (yellow arrows). After assessment, the turtle was euthanized the next day because of the severity of the damage to the carapace and underlying spine and left lung. Photo credit: NCDMF.

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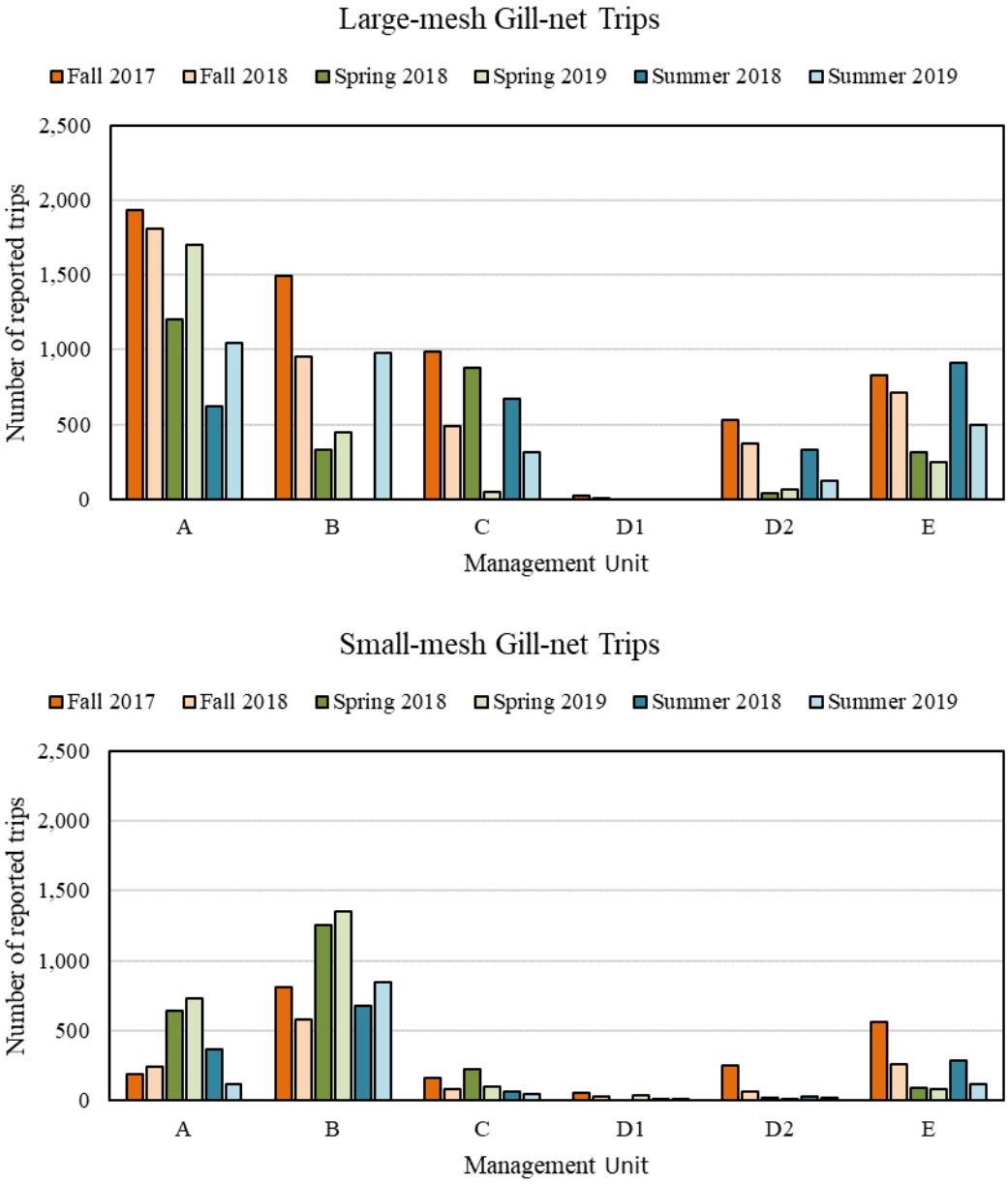

Figure 22. Number of fishing trips using large-mesh (≥ 5 inch, top) and small mesh (< 5 inch, bottom) gill nets reported to the Trip Ticket Program during the 2018 and 2019 ITP Years by season and management unit. Seasons for the 2018 ITP Year (fall 2017, spring 2018, summer 2018) are shown with darker shades that those for the 2019 ITP Year (fall 2018, spring 2019, summer 2019). Management Unit D1 was closed to large-mesh gill nets during fall 2017 and did not re-open during either ITP Year. Management Unit B was closed to large-mesh gill nets during late spring through summer 2018.

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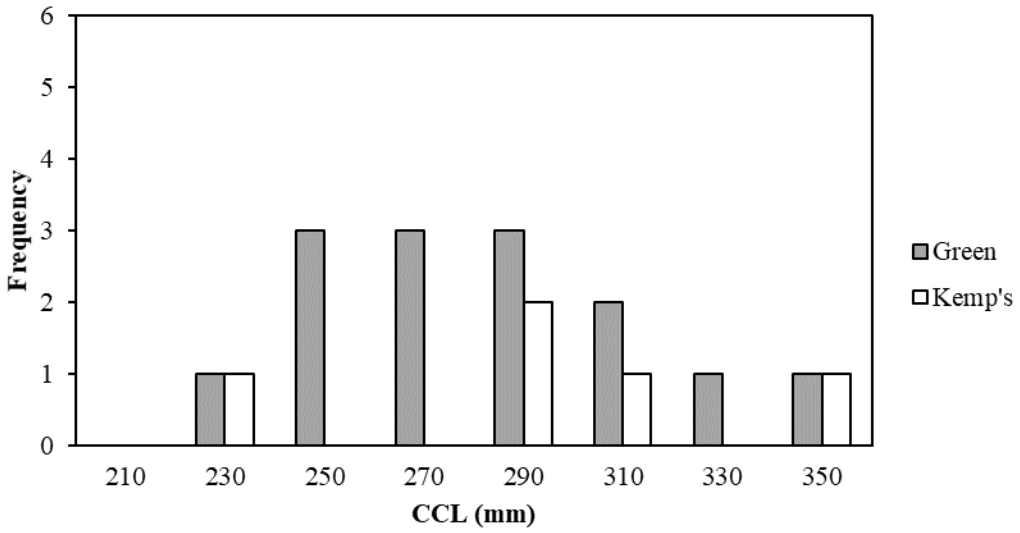

Figure 23. Length-frequency (curved carapace length [CCL], mm) of observed and measured incidental takes of green (n = 14 out of 15 observed) and Kemp's ridley (n = 5 out of 5 observed) sea turtles during the 2019 ITP Year. The measurement from the single observed loggerhead sea turtle (CCL = 640 mm) is not shown.

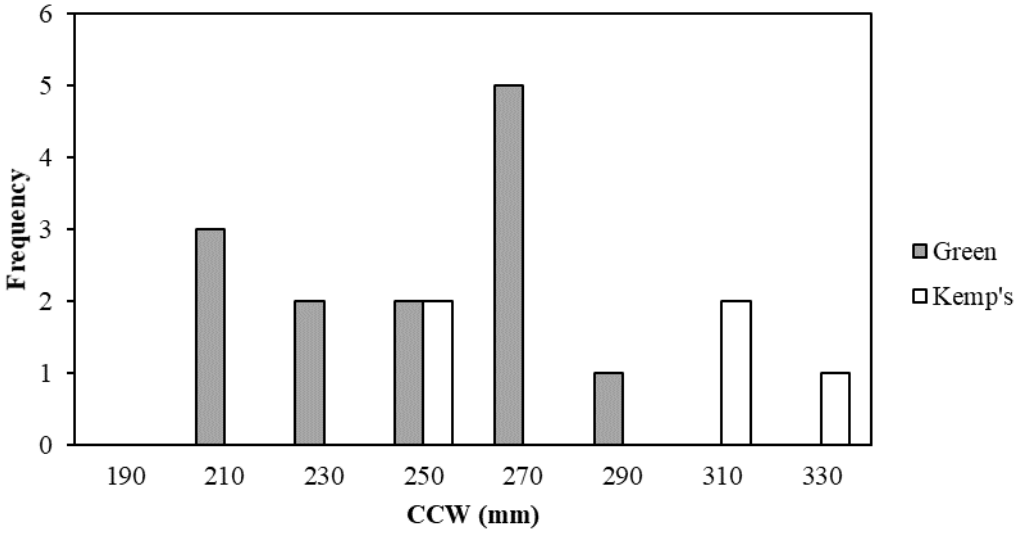

Figure 24. Length-frequency (curved carapace width, mm) of observed and measured incidental takes of green (n = 13 out of 15 observed) and Kemp's ridley (n = 5 out of 5 observed) sea turtles where measurements were obtained during the 2019 ITP Year. The measurement from the single observed loggerhead sea turtle (CCW = 650 mm) is not shown.

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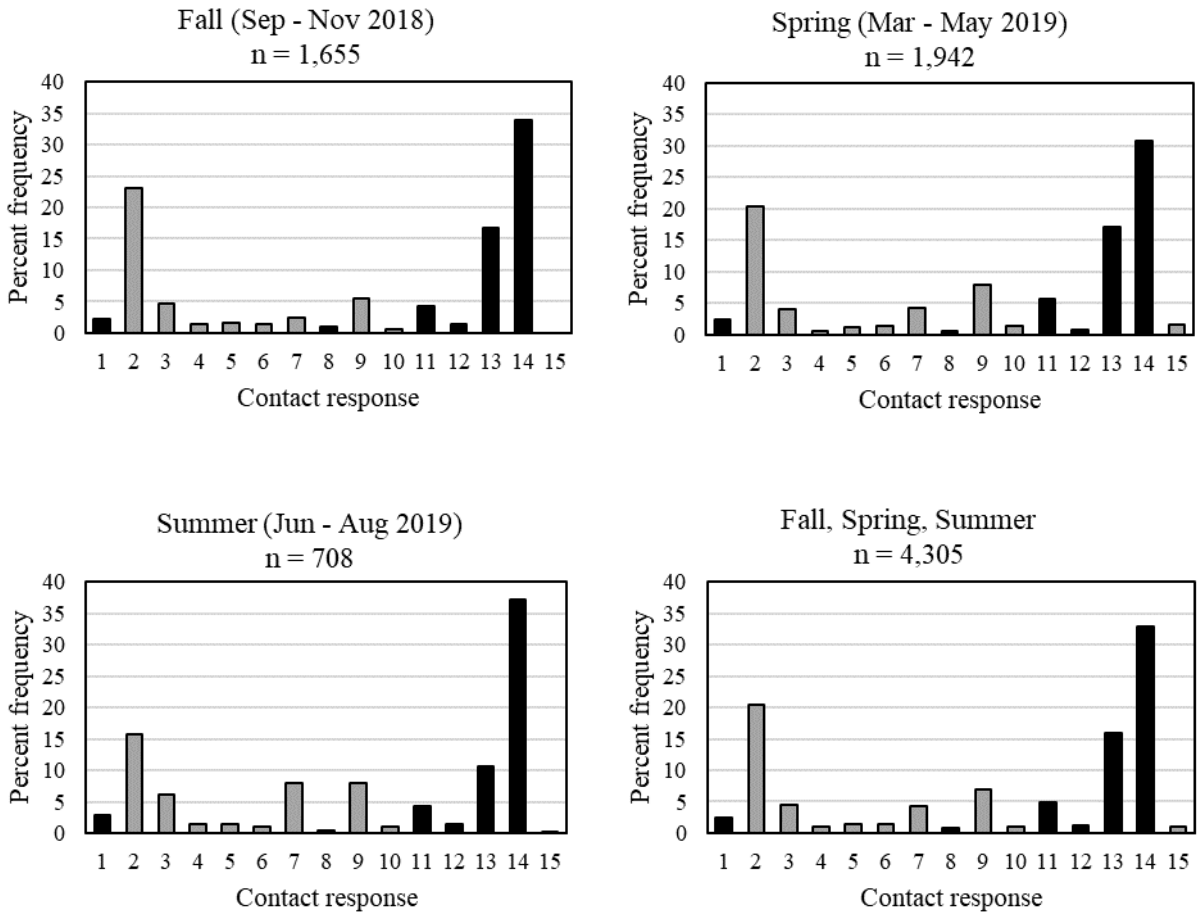

Figure 25. For the 2019 ITP Year, contacts attempted (n = 4,305) by observers to set up trips categorized by contact type (0-15) and presented as a percentage of the total for fall, spring, summer, and all three seasons combined. Contact type categories include the following: 1) Left message with someone 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; 15) Not fishing because of natural disaster (e.g., hurricane). Contact types are shown as those when the observer talked to a fisherman (gray bars) and when the observer did not (black bars).

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Annual Atlantic Sturgeon Interaction Monitoring of Anchored Gill Net Fisheries in North Carolina for Incidental Take Permit Year 2019 (1 September 2018 – 31 August 2019)

Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102

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April 2019

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INTRODUCTION

The North Carolina Division of Marine Fisheries (NCDMF) applied for an Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973 (Public Law 93-205, ESA) on 5 April 2012 for Atlantic Sturgeon *Acipenser oxyrinchus* interactions with anchored gill-net fisheries in North Carolina's estuarine waters. Anchored gill nets are a passive gear deployed with an anchor, stake, or boat at one or both ends of the net string or operation; they do not include run-around, strike, drop, or drift gill nets. The application for the ITP was prompted by notification from the National Marine Fisheries Service (NMFS) in February 2012 indicating the intent to list the Carolina Distinct Population Segment (DPS) of Atlantic Sturgeon as endangered under the ESA. The NCDMF requested an ITP to implement a proposed Conservation Plan that ensured only a reasonable level of authorized Atlantic Sturgeon incidental takes would occur, while allowing North Carolina's estuarine anchored gill-net fisheries to operate. The NCDMF requested NMFS to authorize such takes that are incidental to normal fishing activity. For this report, the term "gill net" refers to anchored gill nets unless stated otherwise.

The NCDMF received the Atlantic Sturgeon ITP (No. 18102) on 22 July 2014 after a series of revisions based on comments by the NMFS and a final application submitted on 2 January 2014 (Daniel 2014, NMFS 2014, McConnaughey et al. 2019). This ITP defined an ITP Year as 1 September through 31 August of the following year and defined large-mesh gill nets as ≥ 5 inch stretched mesh. In addition, the ITP established authorized levels of incidental takes across seven geographic regions (Management Units A1, A2, A3, B, C, D, E) (Figure 1). To maintain incidental takes below authorized levels, the ITP included a Conservation Plan that consisted of a variety of measures the NMFS determined would monitor, minimize, and mitigate incidental takes of ESA-listed Atlantic Sturgeon from the Gulf of Maine, New York Bight, Chesapeake, Carolina, and South Atlantic DPSs. These measures included the continuation of restrictions put in place by the NCDMF sea turtle ITP for gill nets with a mesh size of ≥ 4 inch stretched mesh operating in estuarine waters across the state (NMFS 2013). Specifically, these restrictions prohibited gill nets in the deep waters of Pamlico Sound, limited soak times to between an hour before sunset to an hour after sunrise, limited days of fishing to Monday evenings through Friday mornings, restricted net height to no more than 15 meshes, restricted total net yardage to a maximum of 2,000 yards per vessel; and required net configurations for a string of nets (each net is called a 'shot') be constructed of shots no longer than 100 yards with a 25-yard break between shots. The only exception to these restrictions was that fishermen in the southern portion of the state were allowed to set large-mesh gill nets an extra day (Sunday evenings through Friday mornings), but were restricted to a maximum of 1,000 yards per fishing operation. The reason that these regulations were in place for gill nets ≥ 4 inch stretched mesh was because the sea turtle ITP defined large-mesh gill nets as ≥ 4 inch stretched mesh in contrast to the Atlantic Sturgeon ITP, which defined them as ≥ 5 inch stretched mesh. In addition to establishing regulations on how fisheries could be prosecuted, the Conservation Plans for both ITPs included

a state-wide estuarine gill-net observer program of estuarine gill nets that would allow for interactions to be counted and where possible extrapolated across the fishery within a given season and area. Observer data also would allow the NCDMF to use an adaptive management approach to mitigate incidental takes by implementing temporary management options using the NCDMF director's proclamation authority (General Statute 143B-289.52).

On 13 July 2017, the NCDMF requested a minor modification to the Atlantic Sturgeon ITP's allocation of allowed Atlantic Sturgeon takes in Management Units A and C to be listed as annual takes rather than seasonal takes. The NCDMF explained that annual take thresholds would provide greater flexibility in using adaptive management measures to manage the fishery while minimizing the frequency of full seasonal closures. Further, the NCDMF emphasized that they would actively monitor fisheries and take levels daily to limit takes, particularly dead takes. On 19 July 2017, the NMFS sent a letter to the NCDMF concurring with the NCDMF's request for the minor modification and encouraging staff to incorporate any further anticipated minor modifications into the application process for an updated ITP (Appendix A).

In early September 2018 North Carolina suffered a direct hit by Hurricane Florence, dramatically affecting fishing and observation effort in estuarine gill-net fisheries during the 2019 ITP Year. The effects occurred prior to the storm due to preparation and evacuations, and after the storm due to the catastrophic damage to roads, structures, and electrical infrastructure in many areas. Although the NCDMF Central District Office (CDO), where Observer Program operations were located, reopened 24 September, four observers had significant damage to their homes that delayed their return to work. Three of them were left homeless and had to collect their belongings and secure new housing; the other observer was unable to return to their home until early October. Once commercial fishing resumed, communicating with commercial fishermen and traveling to obtain trips proved to be difficult because of clean-up efforts, power outages, flooding, and storm debris. Additionally, Marine Patrol officers, who usually contribute a considerable amount of gill net observations, were unable to conduct observations for some time because of new storm-related tasks. Not only did Marine Patrol officers rescue over 60 people, they conducted numerous wellness checks, provided meals and supplies to disaster victims, assisted other law enforcement agencies with securing property, and even managed to rescue storm victims' pets.

Two regulations in place during the 2019 ITP Year also greatly affected gill-net fishing effort. First, Proclamation M-19-2017, issued during the 2018 ITP Year, remained in effect for the entire 2019 ITP Year (http://portal.ncdenr.org/web/mf/proclamation-m-19-2017). This proclamation closed the eastern portion of Management Unit D to gill nets with a mesh size of ≥ 4 inches as a result of high levels of incidental green sea turtle takes that exceeded authorized levels during the 2018 ITP Year. In an effort to avoid exceeding authorized levels again during the 2019 ITP Year, the decision was made to maintain the partial closure of Management Unit D. A separate proclamation was issued on 18 March that prohibited the use of all gill nets upstream

of the ferry lines from the Bayview Ferry to Aurora Ferry on the Pamlico River and the Minnesott Beach Ferry to Cherry Branch Ferry on the Neuse River (http://portal.ncdenr.org/web/mf/proclamation-m-06-2019).
During an emergency meeting, the North Carolina Marine Fisheries Commission directed the NCDMF Director to issue the proclamation with the intent of reducing bycatch of Striped Bass *Morone saxatilis* in gill-net fisheries operating in the affected waters, which are part of Management Unit C.

This annual report outlines observer activity, fishing activity, and total or estimated takes of Atlantic Sturgeon for the previous ITP year, 1 September 2018 – 31 August 2019. The deadline for annual reports was originally 31 January per the ITP; however, in January 2017 the deadline was extended to the last day in February following a request by the NCDMF (McConnaughey et al. 2019). Additional requests were made by the NCDMF to extend the report deadline to 14 April for one year only due to staffing vacancies and changes that delayed the report generation, and also work interruptions from the coronavirus pandemic. Data for fishing activity, measured in number of trips, are finalized for 2018 (fall and part of winter). After the preliminary data for 2019 are finalized in May 2020, observer coverage and authorized estimated Atlantic Sturgeon takes will be recalculated and finalized estimates will be provided to the NMFS in the form of an addendum.

METHODS

Observer Activity

Observer activity was distributed across seven management units outlined in the Conservation Plan (A1, A2, A3, B, C, D, and E) (Figure 1). Per the sea turtle ITP, Management Unit B was unique in that large-mesh gill nets operating in Pamlico Sound were confined to specific subunits (Shallow Water Gillnet Restricted Area [SGNRA] 1, SNGRA2, SNGRA3, SGNRA4, and Mainland Gillnet Restricted Area [MGNRA]), effectively closing the fishery in the deep waters of Pamlico Sound and in corridors near the Ocracoke, Hatteras, and Oregon inlets (Daniel 2013) (Figure 1). Within the management units, observer activity was also distributed across four seasons that crossed calendar years: fall (September–November 2018), winter (December 2018-February 2019), spring (March–May 2019), and summer (June–August 2019). Per the Conservation Plan, the number of projected observer trips was based on the required 7-10 % coverage of the total large-mesh (≥5 inch stretched mesh) gill-net fishing trips, and 1-2 % coverage of the total small-mesh (<5 inch) gill-net fishing trips state-wide across all seasons. To meet the overall state-wide requirement of observer coverage levels, the Observer Program made every effort to maintain the necessary level of coverage for each season and management unit. This approach was also consistent with observer coverage requirements for the sea turtle ITP,

which were by each season and management unit. As such, projected observer trips were stratified across seasons and management units proportional to Trip Ticket Program (TTP) data for large-mesh and small-mesh gill net trips from the previous five years (2014-2018).

Each observer attempted to obtain three to four trips per working week when fishing activity was occurring. Observers were assigned a management unit to work weekly, and the number of observers assigned to a management unit depended on the season and projected fishing effort. Reports from observers, fishermen, and other NCDMF staff (e.g., fish house samplers) were used to determine if effort was fluctuating between management units. Trends from the previous years' TTP data and current area closures were also assessed to determine if fishing effort was shifting from one management unit to another.

Obtaining observer trips was facilitated by the requirement that fishermen participating in estuarine anchored gill net fisheries were required to obtain an Estuarine Gill Net Permit (EGNP) (M-24-2014) (http://portal.ncdenr.org/web/mf/proclamation-m-24-2014). The most recent list of permit holders was stratified by management unit and then by geographic area within units. Contact information for these fishermen was then given to observers assigned to specific management units so they could attempt to schedule an onboard trip. Preliminary TTP information was also used to identify individuals who were actively participating in fishing activities. In addition to calling fishermen, observers visited fish houses where they provided business cards and brochures explaining the Observer Program, giving the fishermen another outlet to allow observers on their vessels. Additionally, the Observer Program used a website (http://portal.ncdenr.org/web/mf/observers-program) to provide outreach to fishermen to facilitate obtaining trips.

The Observer Program employed two methods to obtain trips for documenting protected species interactions. The preferred method has always been onboard observations where observers ride onboard fishermen's vessels. The other method was alternative platform observations, whereby two observers used a state-owned vessel to monitor commercial fishers hauling their gill nets. In addition to traditional observers, Marine Patrol officers also obtained alternative platform trips, following similar data collection protocols. Alternative platform trips were used for areas where fishing effort increased quickly, when a fisherman's vessel was too small to safely accommodate an onboard observer, and when observers were unable to set up onboard trips due to fisherman avoidance or non-compliance. Coordination of onboard, alternative platform, and Marine Patrol alternative platform trips was done regularly to achieve the maximum efficiency, avoid multiple observations of a single trip, and to achieve the maximum amount of observer coverage possible for each Management Unit. Changes in effort, Atlantic Sturgeon abundance (i.e., observed and reported interactions), and other protected species interactions were monitored on a daily, weekly, and monthly basis to ensure proper observer coverage was being maintained.

Observers were trained by experienced NCDMF staff to identify, measure, evaluate condition of, and tag (with Passive Integrated Transponders [PIT]) Atlantic Sturgeon. 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), total length (TL mm), and fork length (FL mm) were recorded for each Atlantic Sturgeon observed. Photographs, fin clips (for genetic analyses), and data on environmental parameters (i.e., salinity, water temperature) were also collected when feasible. Dead Atlantic Sturgeon were retained by the observer when possible. Observers also collected data on location, gear parameters, catch, and bycatch for each haul depending on the observed trip type (onboard or alternative platform). For onboard observations, the catch was sampled throughout each onboard trip including species, quantities, weights, lengths, and disposition (alive or dead). All data were coded onto NCDMF data sheets and uploaded to the NCDMF Biological Database for analysis. All observers were debriefed within 24 hours of each trip to obtain data on catch, set locations, gear parameters, and Atlantic Sturgeon interactions to provide total counts and estimates of bycatch in near real time.

Ongoing estimates of observer coverage were calculated for each season in each management unit by estimating fishing trips using an average of the previous five years' TTP data for large-mesh and small-mesh gill nets, while taking reduced season dates in each management unit into account by calculating the proportion of actual to possible fishing days. This estimated fishing effort was compared to the number of observer trips completed throughout the ITP year. The average, normalized effort was used when estimating fishing trips to account for the fluctuation of fishing effort throughout the years due to closures and other regulations put in place throughout the time series.

At the end of the 2019 ITP year, observer coverage was calculated by comparing the number of observed trips to the number of reported trips in the TTP database for each mesh size category, season, and management unit. The TTP data for 2018 were finalized (fall and part of winter), but the data for 2019 were preliminary (part of winter, spring, and summer). As a result, observer coverage calculated for winter, spring, and summer were considered estimates.

Reductions in fishing effort, particularly for large-mesh gill nets, was expected due to Hurricane Florence and the regulations for Management Unit C and part of D. As such, the percent change in fishing effort with large-mesh and small-mesh gill nets between the 2018 and 2019 ITP Years was calculated by management unit and season.

Incidental Takes

Authorized levels of annual incidental takes in the ITP were expressed as either estimated total takes based on observer data (Management Unit A) or counts of observed takes (Management Unit B, C, D, E) (Tables 1 and 2). The difference was based on the amount of data available for modeling predicted takes in the original ITP application (Daniel 2014). To compare annual

numbers of incidental takes of Atlantic Sturgeon during the 2019 ITP year to authorized levels, actual observed takes were counted for Management Units B, C, D, E and estimated for Management Unit A. All Atlantic Sturgeon were assumed to be the Carolina DPS because genetic results were not available. Incidental take estimates for Management Unit A were calculated using the stratified ratio method where the bycatch rate (Atlantic Sturgeon caught per observed trip) calculated from observer data was multiplied by the total reported fishing trips.

$$\text{Estimated Interactions} = \left(\frac{\text{\# of Atlantic Sturgeon interactions observed}}{\text{total gill-net trips observed}}\right) * \text{total gill-net trips}$$

Throughout each season, this calculation was employed each time there was an incidental take to determine the estimated number of interactions in Management Unit A by date of capture and disposition. For the real-time estimates, the average number of TTP reported trips for the previous five years was used. Estimated numbers of interactions were accumulated by interaction date for Management Unit A and running totals of observed interactions were maintained for Management Units B, C, D, and E to determine if interactions were approaching authorized take thresholds. The ongoing comparisons allowed for the implementation of management measures to prevent interactions from exceeding authorized levels. The estimated and/or total observed interactions were provided in weekly (when required) and monthly reports.

At the end of the 2019 ITP year, the estimated number of interactions for Management Unit A was recalculated using actual number of trips, albeit preliminary for 2019, reported in the TTP rather than an average from the previous five years. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Davison and Hinkley 1997, Canty and Ripley 2015, R Core Team 2015). Bootstrap replicates were generated by sampling observer trips with replacement 5,000 times within strata (mesh/Management Unit).

Compliance

The NCDMF observers and Marine Patrol conducted weekly fish-house visits, boat patrols, fisherman spot checks, gear checks, and continual outreach to the industry, attempting to ensure industry compliance and to track gill-net fishing effort in near real time.

The Observer Program used various methods to contact fishermen to schedule trips. The most common method was by phone, due to fishermen leaving from private launches and overall efficiency. For each contact made to obtain a trip (phone call or in-person), observers

documented the contact in a log maintained by the Observer Program. For each contact, observers assigned a category of the response and noted any additional information (e.g., fisherman stated he did not fish until October) (Table 3). Data in the contact log was summarized by month and response category to determine what percentage of phone calls resulted in observer trips.

RESULTS

Observer activity

Overall state-wide observer coverage during the 2019 ITP Year was 7.3 % of the large-mesh gill-net fishery and 4.0 % of the small-mesh gill-net fishery exceeding the minimum requirements outlined in the ITP (Tables 4 and 5, Figure 2). This level of coverage was based on 774 observed large-mesh gill-net trips (261 onboard and 513 alternative platform) and 245 observed small-mesh gill-net trips (90 onboard and 155 alternative platform). During these trips, observers documented nine Atlantic Sturgeon in large-mesh and four in small-mesh gill nets (Table 6, Figure 2). A series of proclamations was issued throughout the ITP year to regulate gill-net fisheries as part of the adaptive management approach to limit Atlantic Sturgeon or sea turtle takes and for other management needs unrelated to protected species interactions (Table 7). As a result, changes in fishing activity influenced the Observer Program's efforts to find trips and maintain coverage levels.

Fall 2018

During fall 2018 (September – November), the Observer Program achieved 7.5 % state-wide coverage of large-mesh gill nets, and exceeded 7 % in all management units except D (6.4 %) (Table 4, Figure 3). For small-mesh gill nets, the Observer Program achieved 4.6 % state-wide coverage, and exceeded 1 % observer coverage in all management units (Table 5, Figure 3).

Nine of the 13 (69.2 %) observed Atlantic Sturgeon interactions during the 2019 ITP Year occurred during fall 2018 (Table 6, Figure 3). Seven Atlantic Sturgeon were live interactions in large-mesh gill nets; six interactions occurred in Management Unit A and one interaction occurred in Management Unit E. The remaining two Atlantic Sturgeon interactions (both live) occurred in small-mesh gill nets in Management Unit E. In addition to observed takes, there was one fisherman self-reported Atlantic Sturgeon interaction (Management Unit C) during fall (Table 8).

Winter 2018-2019

During winter 2018-2019 (December 2018 – February 2019), the Observer Program achieved an estimated 5.9 % state-wide coverage of large-mesh gill nets, and exceeded 7 % in two of five management units (C = 7.4 %, E = 15.0 %) (Table 4, Figure 4). Coverage of large-mesh gill nets was below 7 % in Management Units A (4.8 % of 795 reported trips), B (0 % of reported 13 trips), and D (0 % of 7 reported trips). For small-mesh gill nets, the Observer Program achieved an estimated 6.4 % state-wide coverage during winter 2018-2019, and exceeded 1.0 % in all management units (Table 5, Figure 4).

There was one observed Atlantic Sturgeon interaction in a small-mesh gill net and none in large-mesh gill nets during winter 2018-2019. The single interaction was observed dead in Management Unit C (Table 6, Figure 4). In addition to observed takes, there were two fisherman self-reported Atlantic Sturgeon interactions (one dead, one alive) in large-mesh gill nets during winter, both in Management Unit A (Table 8).

Spring 2019

During spring 2019 (March – May), the Observer Program achieved an estimated 7.6 % state-wide coverage of large-mesh gill nets, and exceeded 7 % in each management unit except A (5.9 %) and B (6.5 %) (Table 4, Figure 5). For small-mesh gill nets, the Observer Program achieved an estimated 3.4 % state-wide coverage, and exceeded 1 % in all management units (Table 5, Figure 5).

There were two observed Atlantic Sturgeon interactions during spring 2019: one in a large-mesh gill net in Management Unit A and one in a small-mesh gill net in Management Unit B (Table 6, Figure 5). Both Atlantic Sturgeon were released alive. In addition to observed takes, there were two fisherman self-reported Atlantic Sturgeon interactions (both dead) in large-mesh gill nets during spring; both interactions were in Management Unit A (Table 8).

Summer 2019

During summer 2019 (June – August), the Observer Program achieved an estimated 7.1 % state-wide coverage of large-mesh gill nets, and exceeded 7 % in each management unit except A (4.4 %) and B (3.5 %) (Table 4, Figure 6). For small-mesh gill nets, the Observer Program achieved an estimated 1.1 % state-wide coverage, and exceeded 1 % in all management units except for B (0 of 844 reported trips) (Table 5, Figure 6).

There was one observed Atlantic Sturgeon interaction in a large-mesh gill net and none in small-mesh gill nets during summer 2019 (Table 6, Figure 6). The single interaction was observed

alive in Management Unit A. There was no fisherman self-reported Atlantic Sturgeon interaction during summer.

Changes in Fishing Effort

Overall fishing effort (measured by trips) during the 2019 ITP Year compared to the 2018 ITP Year was 9.6 % lower for large-mesh gill nets and 13.0 % lower for small-mesh gill nets. The patterns among seasons and management units showed the effects of Hurricane Florence and regulation changes between years for gill nets in Management Units B, C, and part of D (Figure 7). Large-mesh and small-mesh fishing effort during fall of the 2019 ITP Year (when Hurricane Florence hit) was lower than the 2018 ITP Year for all management units except one. In Management Unit A, small-mesh fishing effort increased slightly from 193 trips during fall 2017 to 239 trips during fall 2018. For large-mesh gill nets, one of the most striking changes between ITP years was during summer in Management Unit B, which was closed during summer 2018 (M-7-2018) to ≥ 4-inch mesh gill nets. As a result, no fishing effort was reported during summer 2018, but effort increased to 974 trips during summer 2019 when the closure was no longer in effect. During spring and summer, reductions in large-mesh fishing effort between the 2018 and 2019 ITP Years in Management Unit C were likely a result of gill-net closures in upstream areas of the Neuse and Pamlico Rivers. Similar reductions during spring and summer in Management Unit D were likely a result of the closure of ≥ 4-inch mesh gill nets in the eastern portion of the management unit. Outside of fall, small-mesh fishing effort among management units was more variable, not exhibiting specific trends.

Incidental Takes

Of the 13 Atlantic Sturgeon interactions documented by observers during the 2019 ITP Year, 85 % (n = 11) were alive (Table 6, Figures 2 – 6). Observed interactions occurred primarily in Management Units A (62 %) and E (23 %) with one interaction each in Management Unit B and C. In addition to observed takes, there were five self-reported Atlantic Sturgeon interactions for the 2019 ITP Year: two alive and three dead (Table 8). All but one of the self-reported interactions occurred in Management Unit A. The size range of Atlantic Sturgeon measured by observers was 483 – 1,016 mm TL (n = 11, mean = 755, SD = 148.1) and 554 - 863 mm FL (n = 8, mean = 685, SD = 101.6) (Table 6, Figures 8 and 9).

Observed take levels during the 2019 ITP year did not reach the thresholds of allowed takes for any management unit (Tables 1 and 2). For Management Unit A, 4.4 % of the 2,139 estimated allowable live sturgeon takes and 26.7 % of the 76 estimated allowable dead sturgeon takes were captured in gill nets during the 2019 ITP year. Across all other management units, only one live incidental take out of the 64 authorized and zero dead incidental takes out of the 15 authorized occurred in large-mesh gill nets during the 2019 ITP Year. The observed incidental takes in

small-mesh gill nets represent 0.4 % of the authorized live takes (3 out of 751) and 1.5 % of the authorized dead takes (1 out of 68).

Compliance

There were 2,217 EGNPs issued during the 2019 ITP year. Using the list of EGNPs, 5,852 phone calls or in-person contacts were made with 57.4 % (n = 3,361) representing categories for which the observer was unable to get in touch with fishermen or the fishermen refused a trip (categories 1, 8, 11, 12, 13, and 14) (Figure 10). The greatest number of calls was in spring and the least number of calls was in summer. Nevertheless, the general pattern of distribution across contact response types was similar across all seasons.

Marine Patrol officers made 1,844 gill net checks and issued 91 citations during the 2019 ITP Year (Tables 9 and 10). The number of gill net checks were spread out across seasons. The greatest percentage (7.2 %) of citations occurred during fall 2018. In addition to citations, officers issued 43 Notice of Violations (NOVs) for fishermen found to be out of compliance with the EGNP (Table 11). The NOVs were distributed across seasons as follows: fall, n = 11; spring, n = 13; summer, n = 6; and winter, n = 13.

Marine Mammals

There was no observed marine mammal take during the 2019 ITP year.

DISCUSSION

Incidental takes of Atlantic Sturgeon during the 2019 ITP Year were below authorized levels as a result of a combination of management actions as outlined in the ITP, an adaptive management strategy for Atlantic Sturgeon and sea turtles, and decreased fishing effort due to Hurricane Florence. The number of observed interactions was less than half of the number for the 2018 ITP Year, with the most notable difference being the low number of interactions observed during spring 2019 compared to spring 2018 (McConnaughey et al. 2019). During the 2019 ITP Year, observed Atlantic Sturgeon interactions were primarily (69 %) during fall in Management Units A and E with a few interactions in other combinations of seasons or management units. In addition to Southern Flounder *Paralichthys lethostigma*, large-mesh gill nets were used in Management Unit A to target American Shad *Alosa sapidissima* and the invasive Blue Catfish *Ictalurus furcatus*. During the 2019 ITP year, the NCDMF successfully employed an adaptive management strategy for Management Unit A, issuing nine proclamations that allowed these fisheries to operate during certain times while monitoring and limiting incidental takes of Atlantic Sturgeon using observer data in near real time (Table 7). The Atlantic Sturgeon

interactions that did occur in Management Unit A and elsewhere were primarily alive even for takes in the spring and summer, thereby limiting negative effects of these interactions on the DPS.

Overall minimum coverage levels were met or exceeded for large-mesh and small-mesh gill nets when combined across the ITP year and management units. However, for particular combinations of mesh category, season, and individual management unit, minimum levels were not always reached. The observer program actively monitors gill-net fisheries and makes real-time adaptations to shifts in activity due to events such as fishery closures in certain areas or changes in targeted fish species. For the large-mesh gill-net fishery, observer coverage was below 7 % in Management Units A and B for both spring and summer. During spring and summer, fishing effort is often not as high or geographically concentrated as it is during fall. It can be especially difficult to obtain trips and meet minimum coverage requirements when effort is spread out over a large area, such as Management Units A and B. Observer coverage for small-mesh gill nets was generally above the minimum coverage levels for most combinations of mesh category, seasons, and management unit. The notable exception was during summer in Management Unit B for which there were no observed trips despite 844 reported fishing trips. The observer program continues to have difficulty getting coverage especially during spring and summer when gill-net activity can be occurring at night or while fishermen are participating in other fisheries. For example, fishermen may tell observers that they are crabbing even though they have set some gill-net gear at the same time. Efforts were made to increase observations during times and in areas of difficulty. The observer program continuously communicated with Marine Patrol, fish house samplers, and industry leaders to increase opportunities for observer coverage. Nonetheless, coverage was also impacted by weather events, staff availability, and compliance issues.

Obtaining observed trips continues to be a challenge for the NC Observer Program, not unlike other observer programs (e.g., Lyssikatos and Garrison 2018). The EGNP is a useful tool to improve fishermen compliance by including Specific Permit Conditions requiring fishermen to allow observers aboard their vessels to monitor catches and by providing contact information of permit holders. Phone calls made using the contact information contribute to observers scheduling trips, but the low success rate of observers even talking to a fisherman (<42 %) requires an alternative method of getting trips. Although onboard observations are the preferred method, alternative platform observations play a critical role to achieving the minimal coverage levels. In fact, 66 % of all observed trips during the 2019 ITP Year were alternative platform observations. Alternate platform observations have several advantages. Primarily, they do not rely on previous contact with fishermen to obtain an observable trip. Alternative platform observations also allow Marine Patrol to conduct observations as part of their daily patrols; their observed trips contribute a substantial portion of the total alternative platform observations. Even for fishermen who would willingly take an observer, many vessels used by gillnetters in estuarine waters are too small to easily accommodate an observer, making alternative platform

observations ideal for capturing trips with this size class of vessel (Kolkmeyer et al. 2007). The alternative platform method, however, has several drawbacks. First, it requires two observers, halving observer effort and program efficiency. Also, observers cannot collect the same breadth of biological data for kept catch and discards (e.g., length and weight of individual fish) compared to onboard observer trips. Another drawback is that observers can spend a significant amount of time searching for fishing activity, sometimes unsuccessfully, when fishing activity is less concentrated. Obtaining alternative platform observations also can be a challenge as some fishermen avoid being observed by retrieving their gear before sunrise or changing fishing locations if observers have been seen in an area. Although refusal of an observed trip by a fisherman can result in a suspension of their EGNP, non-compliance typically does not include such a direct refusal. As such, non-compliance continues to be a hurdle for ensuring the observer coverage requirements for both ITPs are met. Outreach activities are an ongoing necessity to improve fishermen compliance.

The observer program uses a combination of real-time monitoring of Atlantic Sturgeon takes and an adaptive management approach to successfully control the number of interactions in estuarine gill-net fisheries. Although it is not known what impacts Hurricane Florence had directly on Atlantic Sturgeon populations in North Carolina, indirectly the hurricane reduced fishing effort and contributed to reduced takes. Management measures implemented for other species also reduced fishing effort. For future ITP years, significant reductions in effort are expected because of regulatory changes for large-mesh gill nets and other gears targeting Southern Flounder. These regulations were included in Amendment 2 of the Southern Flounder Fishery Management Plan (NCDMF 2019) adopted by the North Carolina Marine Fisheries Commission on 23 August 2019. This action was taken because the most recent Southern Flounder stock assessment indicated that the stock is overfished and overfishing is occurring. North Carolina state law requires management actions be taken to end overfishing within two years and recover the stock from an overfished condition within 10 years. To meet these legal requirements, the NCDMF implemented a 62 % reduction in harvest for 2019 (2020 ITP Year) and a 72 % reduction in 2020 (2021 ITP Year) (NCDMF 2019). In addition to the effects on gill-net fisheries, these changes will require the Observer Program to incorporate new approaches to project observer coverage rather than relying on the average number of trips from the previous five years.

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TABLES

Table 1. For large-mesh (≥ 5.0 inch) gill nets, a comparison of actual annual incidental takes of Atlantic Sturgeon by management unit during the 2019 ITP Year to authorized thresholds expressed as either estimated total takes based on observed takes (Management Unit A) or counts of actual observed takes (Management Units B – E). 95% confidence intervals are provided in brackets. Genetic results were not available to determine Distinct Population Segment (DPS) of observed interactions.

		Total Interactions			
		Authorized (Mortality)		Actual All DPS	
Management Unit	Season	Carolina DPS	Other DPS	Alive	Dead
A	Annual	1,604 (65)	535 (21)	93 [35, 204]	23 [0, 70]
B	Annual	24 (6)	9 (0)	0	0
C	Annual	11 (5)	4 (0)	0	0
D	Annual	8 (2)	n/a	0	0
E	Annual	8 (2)	n/a	1	0
Total	Annual	1,655 (80)	548 (21)	94	23

Table 2. For small-mesh (<5.0 inch) gill nets, a comparison of actual annual incidental takes of Atlantic Sturgeon by management unit during the 2019 ITP Year to authorized thresholds expressed as counts of actual observed takes. Genetic results were not available to determine Distinct Population Segment (DPS) of observed interactions.

		Total Interactions			
		Authorized (Mortality)		Actual All DPS	
Management Unit	Season	Carolina DPS	Other DPS	Alive	Dead
A	Annual	596 (45)	114 (10)	0	0
B	Annual	14 (5)	3 (0)	1	0
C	Annual	8 (4)	n/a	0	1
D	Annual	8 (2)	n/a	0	0
E	Annual	8 (2)	n/a	2	0
Total	Annual	634 (58)	117 (10)	3	1

Table 3. Categories and descriptions of fisherman responses for the Observer Program's contact logs.

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
15	Not fishing because of natural disaster (e.g., hurricane)

Table 4. For large-mesh (≥ 5.0 inch) gill nets, observer coverage calculated from observer data and reported trips from the Trip Ticket Program by season and management unit for the 2019 ITP Year. Trip Ticket Program data are considered finalized for 2018 and preliminary for 2019.

		Large Mesh		
Season	Management Unit	Fishing Trips	Observed Trips	Coverage
Fall 2018	A	1,812	131	7.2
	B	955	79	8.3
	C	485	37	7.6
	D	375	24	6.4
	E	713	53	7.4
	Overall	4,340	324	7.5
Winter 2018-2019	A	795	38	4.8
	B	13	0	0.0
	C	19	9	47.4
	D	7	0	0.0
	E	20	3	15.0
	Overall	854	50	5.9
Spring 2019	A	1,699	100	5.9
	B	448	29	6.5
	C	45	20	44.4
	D	61	11	18.0
	E	247	30	12.1
	Overall	2,500	190	7.6
Summer 2019	A	1,044	46	4.4
	B	974	34	3.5
	C	313	27	8.6
	D	124	10	8.1
	E	497	93	18.7
	Overall	2,952	210	7.1
Annual	Overall	10,646	774	7.3

Table 5. For small-mesh (< 5.0 inch) gill nets, observer coverage calculated from observer data and reported trips from the Trip Ticket Program by season and management unit for the 2019 ITP Year. Trip Ticket Program data are considered finalized for 2018 and preliminary for 2019.

		Small Mesh		
Season	Management Unit	Fishing Trips	Observed Trips	Coverage
Fall 2018	A	239	5	2.1
	B	580	22	3.8
	C	81	9	11.1
	D	101	16	15.8
	E	261	6	2.3
	Overall	1,262	58	4.6
Winter 2018-2019	A	572	12	2.1
	B	469	28	6.0
	C	313	40	12.8
	D	52	8	15.4
	E	81	7	8.6
	Overall	1,487	95	6.4
Spring 2019	A	727	13	1.8
	B	1,351	39	2.9
	C	97	16	16.5
	D	48	6	12.5
	E	81	5	6.2
	Overall	2,304	79	3.4
Summer 2019	A	118	2	1.7
	B	844	0	0.0
	C	45	1	2.2
	D	23	5	21.7
	E	116	5	4.3
	Overall	1,146	13	1.1
Annual	Overall	6,199	245	4.0

Table 6. Summary of observed Atlantic Sturgeon interactions in large-mesh (≥ 5.0 inch, n = 9) and small-mesh (< 5.0 inch, n = 4) gill nets during the 2019 ITP Year. PIT = Passive Integrated Transponders

Date	Season	Management Unit	Mesh Size Category	Latitude (N)	Longitude (W)	Disposition	PIT Number	Length (mm)	
								Total	Fork
10/4/2018	Fall	A	large	36.09681	76.21384	Alive	n/a	n/a	n/a
10/15/2018	Fall	E	large	34.00817	77.91715	Alive	989.001001951729	748	700
10/17/2018	Fall	E	small	34.00235	77.92023	Alive	989.001001951681	832	750
10/17/2018	Fall	E	small	34.00243	77.92065	Alive	989.000364048740	848	742
10/17/2018	Fall	A	large	35.99552	76.24012	Alive	n/a	609	554
10/23/2018	Fall	A	large	35.98162	76.26979	Alive	n/a	914	863
11/13/2018	Fall	A	large	35.99198	76.24169	Alive	n/a	787	n/a
11/18/2018	Fall	A	large	36.01470	76.59228	Alive	n/a	483	n/a
11/18/2018	Fall	A	large	36.01738	76.59060	Dead	n/a	1,016	n/a
2/27/2019	Winter	C	small	35.09200	77.01485	Dead	982.000364297068	685	586
4/13/2019	Spring	B	small	35.25760	75.61168	Alive	n/a	660	609
5/25/2019	Spring	A	large	36.49610	76.03364	Alive	n/a	n/a	n/a
7/30/2019	Summer	A	large	36.44310	75.99639	Alive	982.00036231167	723	676

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Table 7. Regulations for Management Units by date and regulation change for large-mesh (≥ 5.0 inch) and small-mesh (< 5.0 inch) gill nets for the 2019 ITP Year.

Year	Date(s)	Regulation change
2018	September 1	This proclamation opened a previously closed area in the western part of Management Unit A to gill nets with stretched mesh lengths of 5 ½ inches through 6 ½ inches in accordance with the Sea Turtle ITP. It maintained small-mesh gill net attendance requirements in Management Unit A. (M-8-2018)
2018	September 3	This proclamation opened Management Unit B Subunit MGNRA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches for the new ITP year (September 1, 2018 through August 31, 2019) in accordance with the Sea Turtle ITP. This proclamation maintained attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B. 1. It maintained openings for Management Units C, D2 and portions of Management Unit E (except those described in Section II.) to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. This proclamation also maintained the closure of Management Unit D1 to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. (M-9-2018)
2018	October 1	This proclamation opened Management Unit B Subunits SGNRA 1-4, and CGNRA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches for the new ITP year (September 1, 2018 through August 31, 2019) in accordance with the Sea Turtle ITP. (M-10-2018)
2018	November 24	This proclamation closed a portion of the lower Chowan River and western Albemarle Sound to all gill nets with stretched mesh lengths of 5 ½ through 6 ½ inches due to dead sturgeon takes nearing the authorized amount for Management Unit A, and maintained additional gill net restrictions in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-13-2018)
2018	December 1	This proclamation implemented the December closed commercial season provision identified in the N.C. Southern Flounder Fishery Management Plan Amendment 1. Commercial flounder harvest in Internal Coastal Waters opened by this proclamation at 12:01 A.M., Tuesday, January 1, 2019. (FF-48-2018)
2018	December 1	In Management Unit A, this proclamation closed the Albemarle Sound proper to the use of gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches, limited large-mesh gill net length to 1,000 yards in open areas, and maintained nets must have been set to fish the bottom of the water column and not to have exceeded a vertical height of 48 inches. Anchored small-mesh gill nets (gill nets with a stretched mesh of 3 ¾ inches and smaller) could be unattended but must have been set to fish the bottom of the water column and not to have exceeded a vertical height of 48 inches. This action was taken due to low observer coverage and approaching the take limit of dead Atlantic Sturgeon. (M-14-2018)

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Year	Date(s)	Regulation change
2019	January 1	In Management Unit A, this proclamation made it unlawful to use gill nets with a stretched mesh length other than 3 ¼ inches, or from 5 ½ inches through 6 ½ inches, EXCEPT IN THE AREAS DESCRIBED IN SECTION IV. It also maintained large-mesh gill net closures and vertical height restrictions for all anchored gill net sets. This action was taken to allow various directed gill net fisheries while minimizing interactions with endangered Atlantic Sturgeon and to reduce river herring regulatory discards. (M-17-2018)
2019	February 1	This proclamation superseded proclamation M-17-2018 dated December 21, 2018. In a portion of Management Unit A, it made it lawful to use runaround, strike, and drop gill nets with a stretched mesh length from 5 ½ inches through 6 ½ inches. It also maintained large-mesh gill net closures and vertical height restrictions for all anchored gill net sets. This action was taken to allow a directed fishery for invasive blue catfish and continued to allow other various directed gill net fisheries while minimizing interactions with endangered Atlantic Sturgeon and to reduce river herring regulatory discards. (M-2-2019)
2019	February 15	This proclamation implemented gear exemptions for portions of the Internal Coastal Waters south of Management Unit A to allow fishermen to set gill nets for the shad fishery (See Section III.). It opened the remaining portions of Management Unit B to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) in accordance with the Sea Turtle Incidental Take Permit. This proclamation also maintained openings for Management Units C, D2 and portions of Management Unit E (except those described in Section II.) to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. This action was taken to allow directed gill net fisheries for shad while minimizing interactions with threatened and/or endangered species. (M-3-2019)
2019	March 2	This proclamation opened all of Management Unit A to the use of gill nets and allowed gill net configurations for harvesting American shad by removing vertical height restrictions for up to 1,000 yards of gill net with stretched mesh lengths of 5 ¼ through 6 ½ inches. This proclamation also implemented additional gill net restrictions for Management Unit A, Subunit A1-South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. Proclamation FF-56-2018 made it unlawful to possess American shad for commercial purposes prior to 12:01 A.M. Sunday, March 3, 2019 and after 12:01 A.M. Sunday, March 24, 2019. (M-4-2019)
2019	March 11	This proclamation implemented tie-down (vertical net height restrictions) and distance from shore restrictions for gill nets with a stretched mesh length five inches or greater in the western Pamlico Sound and rivers in accordance with Supplement A to Amendment 1 to the N.C. Estuarine Striped Bass Fishery Management Plan. (M-5-2019)

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Year	Date(s)	Regulation change
2019	March 18	During an emergency meeting on March 13, 2019, the N.C. Marine Fisheries Commission directed the N.C. Division of Marine Fisheries Director to issue this proclamation pursuant to N.C. General Statute 113-221.1 (d). The Director has no legal authority to modify or change a proclamation when the proclamation is specifically directed by the Commission under this statute. This proclamation superseded proclamation M-5-2019, dated March 7, 2019. This proclamation prohibited the use of ALL gill nets upstream of the ferry lines from the Bayview Ferry to Aurora Ferry on the Pamlico River and the Minnesott Beach Ferry to Cherry Branch Ferry on the Neuse River. It maintained tie-down (vertical net height restrictions) and distance from shore restrictions for gill nets with a stretched mesh length 5 inches and greater in the western Pamlico Sound and rivers (excluding the areas described in Section I. B.) in accordance with Supplement A to Amendment 1 to the N.C. Estuarine Striped Bass Fishery Management Plan. (M-6-2019)
2019	March 25	In Management Unit A, this proclamation removed the use of gill nets configured for harvesting American shad by implementing vertical height restrictions for all stationary gill nets. This proclamation also closed portions of Management Unit A to large-mesh stationary gill nets, allowed the use of run-around, strike, and drop nets with a stretched mesh length of 5½ inches through 6½ inches in a portion of Management Unit A, and maintained additional gill net restrictions for Management Unit A, Subunit A1, South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-7-2019)
2019	April 8	This proclamation opened additional portions of Management Unit A to the use of stationary large-mesh gill nets with vertical height restrictions. It also maintained the allowance for the use of run-around, strike, and drop nets with a stretched mesh length of 5½ inches through 6½ inches in a portion of Management Unit A, Subunit A2, and maintained additional gill net restrictions for Management Unit A, Subunit A1, South of US-64-BYP/US-64, in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-9-2019)
2019	May 1	This proclamation implemented attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B.1. It also decreased mesh size allowance for exempted gears in Section III. It maintained openings of Management Units B, C, D2 and E to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches. (M-10-2019)
2019	May 1	This proclamation implemented small-mesh gill net attendance requirements in Management Unit A and implemented additional gill net restrictions in accordance with the Sea Turtle and Atlantic Sturgeon ITPs. (M-11-2019)

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Year	Date(s)	Regulation change
2019	June 13	This proclamation closed Management Unit D2 to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) in accordance with the Sea Turtle Incidental Take Permit. Take levels for endangered and/or threatened sea turtles for gill nets with a stretched mesh length of 4 inches through 6 ½ inches in Management Unit D2 had been reached and the fishery needed to be closed. This proclamation maintained attendance requirements for gill nets with a stretched mesh length less than 4 inches in Management Subunit B.1. (M-12-2019)

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Table 8. Summary of self-reported Atlantic Sturgeon interactions in anchored large-mesh (≥ 5.0 inch) gill nets during the 2019 ITP Year. None were reported in small-mesh (< 5.0 inch) gill nets.

						Length (mm)	
Date	Season	Management Unit	Latitude (N)	Longitude (W)	Disposition	Total	Fork
10/23/2018	Fall	C	35.49100	77.01850	Alive	546	n/a
2/15/2019	Winter	A	35.97190	76.47887	Dead	457	n/a
2/15/2019	Winter	A	35.97065	76.48342	Alive	813	n/a
5/10/2019	Spring	A	35.94802	76.60299	Dead	914	n/a
5/10/2019	Spring	A	35.94802	76.60299	Dead	n/a	n/a

Table 9. Number of gill-net checks made and citations issued by Marine Patrol for large-mesh (≥ 5.0 inch) and small-mesh (< 5.0 inch) gill nets by season during the 2019 ITP Year. See Table 10 for details on individual citations.

Season	# Gill Net Checks	# Citations	Citation Percentage
Fall 2018	513	37	7.2
Winter 2018-2019	413	17	4.1
Spring 2019	487	18	3.7
Summer 2019	431	19	4.4
Total	1,844	91	4.9

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Table 10. Citations written by Marine Patrol for large-mesh (≥ 5.0 inch) and small-mesh (< 5.0 inch) gill nets by season and violation code during the 2019 ITP Year.

Season	Date	Violation code	Violation description
Fall 2018	9/6/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/6/2018	NETG60	Use gill nets with a mesh size of more than 6.5 inches (stretched mesh) in violation of proclamation M-7-12
	9/12/2018	NETG27	Gill Net set within 50 yards from shore
	9/12/2018	NETG27	Gill Net set within 50 yards from shore
	9/23/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/24/2018	NETG03	Using gill net with improper buoys or identification
	9/26/2018	NETG04	Leave gill net in waters when could not be legally fished
	9/26/2018	NETG03	Using gill net with improper buoys or identification
	9/27/2018	NETG38	Use large-mesh gill net in Pamlico Sound later than 1 hour after sunrise in violation of proclamation M-8-10
	9/30/2018	NETG02	Using gill net without buoys or identification
	10/1/2018	NETG03	Using gill net with improper buoys or identification
	10/2/2018	NETG02	Using gill net without buoys or identification
	10/2/2018	NETG54	Violate provisions of Proclamation M-30-2011 to wit failed to have 25 yard space between nets
	10/3/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/5/2018	NETG05	Use a stationery gill net in channel of ICWW
	10/5/2018	NETG06	Gill net causing hazard to navigation
	10/9/2018	NETG03	Using gill net with improper buoys or identification
	10/10/2018	NETG37	Leave small-mesh gill nets unattended
	10/10/2018	NETG03	Using gill net with improper buoys or identification
	10/17/2018	NETG48	Having large-mesh gill net set in violation of Proclamation M-14-2010
	10/18/2018	NETG30	Leave RCGL gill net unattended
	10/18/2018	NETG27	Gill Net set within 50 yards from shore
	10/19/2018	NETG04	Leave gill net in waters when could not be legally fished
	10/19/2018	NETG53	Use large-mesh gill net with corks or floats on top line
	10/19/2018	NETG03	Using gill net with improper buoys or identification

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Table 10. cont.

Season	Date	Violation code	Violation description
Fall 2018	10/20/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/22/2018	NETG02	Using gill net without buoys or identification
	10/24/2018	NETG04	Leave gill net in waters when could not be legally fished
	10/24/2018	NETG02	Using gill net without buoys or identification
	10/25/2018	NETG37	Leave small-mesh gill nets unattended
	10/25/2018	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	10/25/2018	NETG30	Leave RCGL gill net unattended
	10/25/2018	NETG29	RCGL gear without proper buoys
	10/30/2018	NETG01	Leave gill net in coastal waters unattended
	10/31/2018	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	11/1/2018	NETG03	Using gill net with improper buoys or identification
	11/7/2018	NETG30	Leave RCGL gill net unattended
	11/7/2018	NETG29	RCGL gear without proper buoys
	11/8/2018	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	11/10/2018	NETG03	Using gill net with improper buoys or identification
	11/10/2018	NETG30	Leave RCGL gill net unattended
	11/13/2018	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	11/16/2018	NETG38	Use large-mesh gill net in Pamlico Sound later than 1 hour after sunrise in violation of proclamation M-8-10
Winter 2018-2019	12/1/2018	NETG04	Leave gill net in waters when could not be legally fished
	12/8/2018	NETG03	Using gill net with improper buoys or identification
	12/18/2018	NETG01	Leave gill net in coastal waters unattended
	12/29/2018	NETG02	Using gill net without buoys or identification
	2/6/2019	NETG09	Gill net set too close to bridge
	2/12/2019	NETG22	Improperly set gill net
	2/13/2019	NETG02	Using gill net without buoys or identification

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Table 10 cont.

Season	Date	Violation code	Violation description
Winter	2/15/2019	NETG04	Leave gill net in waters when could not be legally fished
2018-2019	2/15/2019	NETG03	Using gill net with improper buoys or identification
	2/15/2019	NETG09	Gill net set too close to bridge
	2/15/2019	NETG04	Leave gill net in waters when could not be legally fished
	2/17/2019	NETG03	Using gill net with improper buoys or identification
	2/17/2019	NETG09	Gill net set too close to bridge
	2/22/2019	NETG10	Gill net with illegal mesh size
	2/22/2019	NETG08	Gill net within 200 yards of pound net
	2/22/2019	NETG22	Improperly set gill net
	2/22/2019	NETG61	Gill net tie down violation
Spring 2018	3/29/2019	NETG03	Using gill net with improper buoys or identification
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	4/5/2019	NETG22	Improperly set gill net
	5/3/2019	NETG01	Leave gill net in coastal waters unattended
	5/7/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/10/2019	NETG04	Leave gill net in waters when could not be legally fished
	5/11/2019	NETG01	Leave gill net in coastal waters unattended
	5/14/2019	NETG03	Using gill net with improper buoys or identification
	5/22/2019	NETG02	Using gill net without buoys or identification
	5/23/2019	NETG03	Using gill net with improper buoys or identification
	5/23/2019	NETG10	Gill net with illegal mesh size
	5/23/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/23/2019	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	5/23/2019	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday

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Table 10 cont.

Season	Date	Violation code	Violation description
Spring 2018	5/29/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
Summer 2019	5/29/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	5/30/2019	NETG04	Leave gill net in waters when could not be legally fished
	6/27/2019	NETG22	Improperly set gill net
	6/28/2019	NETG03	Using gill net with improper buoys or identification
	7/4/2019	NETG01	Leave gill net in coastal waters unattended
	7/4/2019	NETG03	Using gill net with improper buoys or identification
	7/6/2019	NETG29	Improperly set gill net
	7/12/2019	NETG46	Set or retrieve large-mesh gill nets later than one hour after sunrise on Tuesday through Friday
	7/21/2019	NETG03	Using gill net with improper buoys or identification
	7/27/2019	NETG30	Leave RCGL gill net unattended
	7/29/2019	NETG04	Leave gill net in waters when could not be legally fished
	7/31/2019	NETG04	Leave gill net in waters when could not be legally fished
	8/6/2019	NETG45	Set or retrieve large-mesh gill nets no sooner than one hour before sunset on Monday through Thursday
	8/6/2019	NETG29	Improperly set gill net
	8/10/2019	NETG04	Leave gill net in waters when could not be legally fished
	8/11/2019	NETG02	Using gill net without buoys or identification
	8/15/2019	NETG44	Use large-mesh gill nets w/out leaving a space of at least 25 yards between separate lengths of net
	8/17/2019	NETG02	Using gill net without buoys or identification
	8/17/2019	NETG32	Set gill net w/ stretched mesh of 5 inches or greater without proper tie downs
	8/30/2019	NETG34	Use unattended gill net w/mesh less than 5" in commercial operation from May 1 through November 30 in coastal waters of the State
	8/31/2019	NETG04	Leave gill net in waters when could not be legally fished

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Table 11. Notice of Violations issued by season, date and violation code for the Estuarine Gill Net Permit during the 2019 ITP Year.

Season	Date	Violation code	Violation description
Fall 2018	10/8/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	10/29/2018	EGNP11	Failure to attend nets
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/5/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
	11/6/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	11/19/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
Winter 2018 -2019	12/4/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	12/14/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	12/14/2018	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	12/19/2018	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
	1/3/2019	EGNP11	Failure to attend nets
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
	2/5/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	2/20/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	2/25/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	2/25/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	2/26/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	2/26/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
Spring 2019	4/4/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	4/8/2019	EGNP30	Failure to comply with gill net configurations outlined in proclamation
	4/15/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	4/16/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)

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Table 11 cont.

Season	Date	Violation code	Violation description
Spring 2019	5/1/2019	EGNP11	Failure to attend nets
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	5/14/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	5/15/2019	EGNP11	Failure to attend nets
	5/15/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
		EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)
	5/31/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP09	Failure to set or retrieve nets in accordance with time restrictions
		EGNP30	Failure to comply with gill net configurations outlined in proclamation
Summer 2019	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	6/5/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	7/31/2019	EGNP09	Failure to set or retrieve nets in accordance with time restrictions
	8/5/2019	EGNP99	Failure to comply with statute(s), rule(s), and/or proclamation(s)

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FIGURES

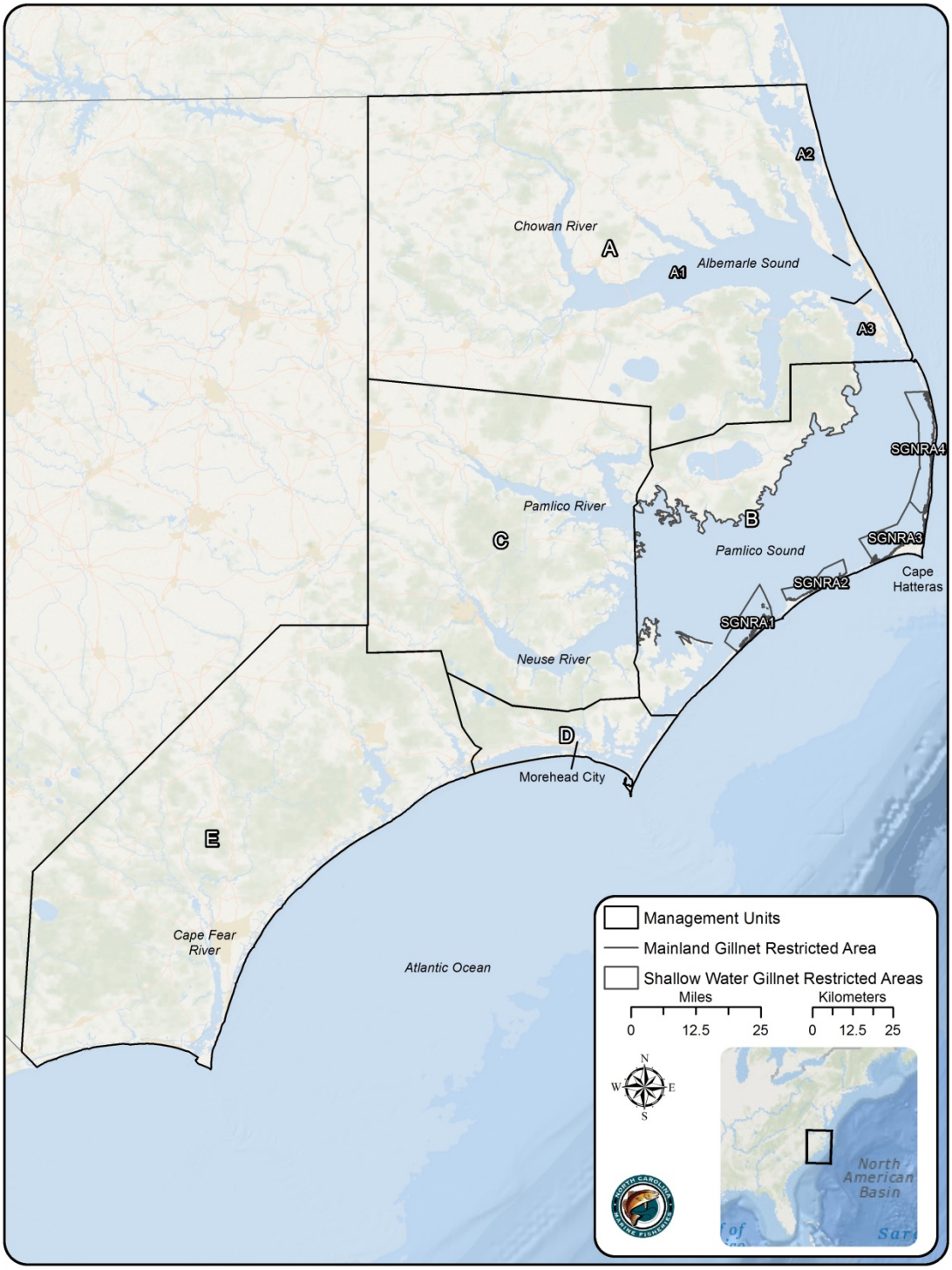

Figure 1. Management units (A1, A2, A3, B, C, D, and E) as outlined in the Incidental Take Permit (ITP) Conservation Plan and used by the Observer Program during the 2019 ITP Year. In the Pamlico Sound portion of B, gill nets with a mesh size of ≥ 4 inches were confined to Shallow Water Gillnet Restricted Areas (SGNRA) 1-4 and the Mainland Gillnet Restricted Area (200 yards from shore).

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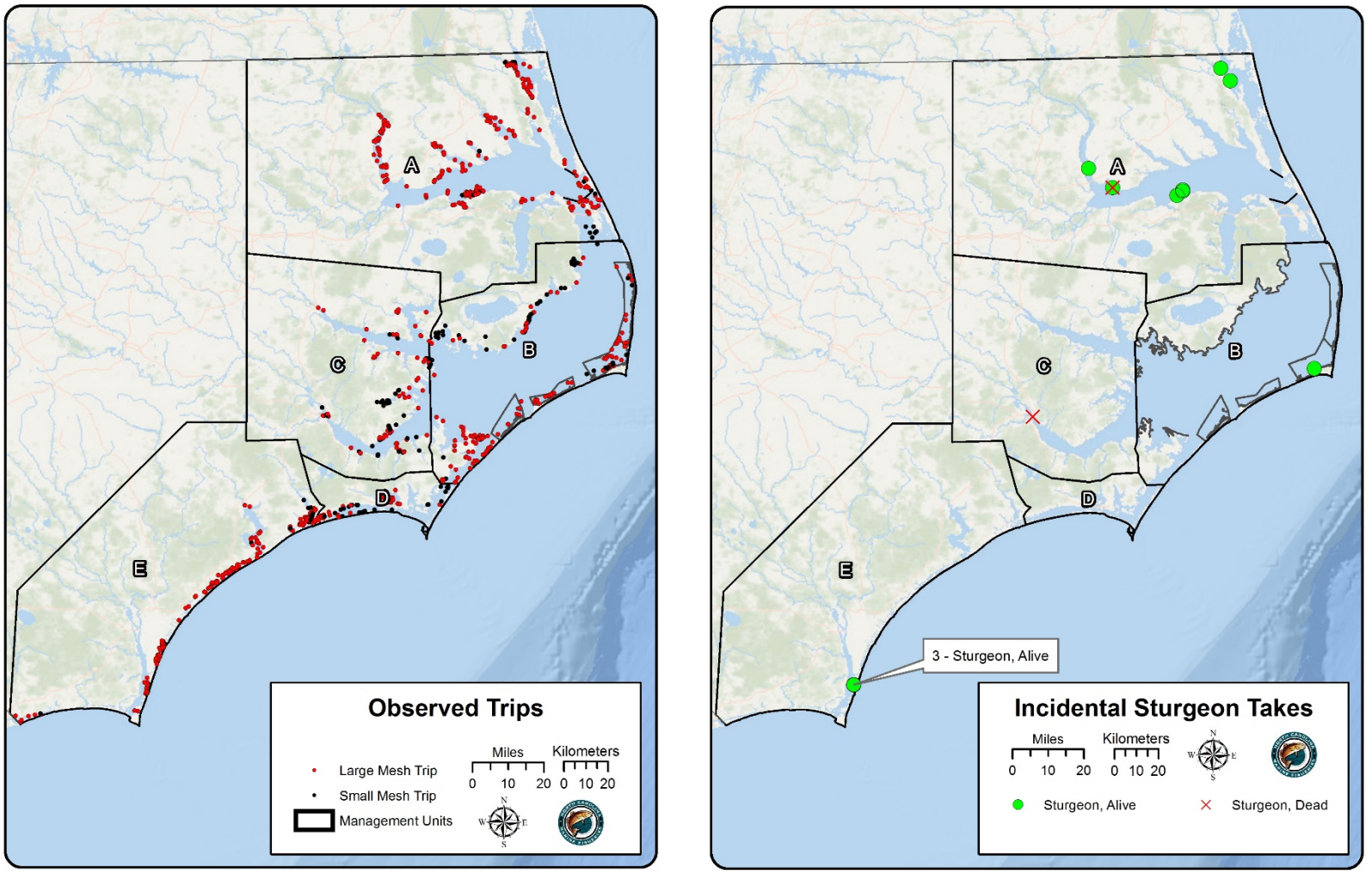

Figure 2. For the entire 2019 ITP Year, observed gill-net trips (left) by mesh-size category (774 large-mesh = ≥ 5 inch; 245 small-mesh = < 5 inch) and Atlantic Sturgeon interactions (right) by disposition (alive, n = 11; dead, n = 2) across management units.

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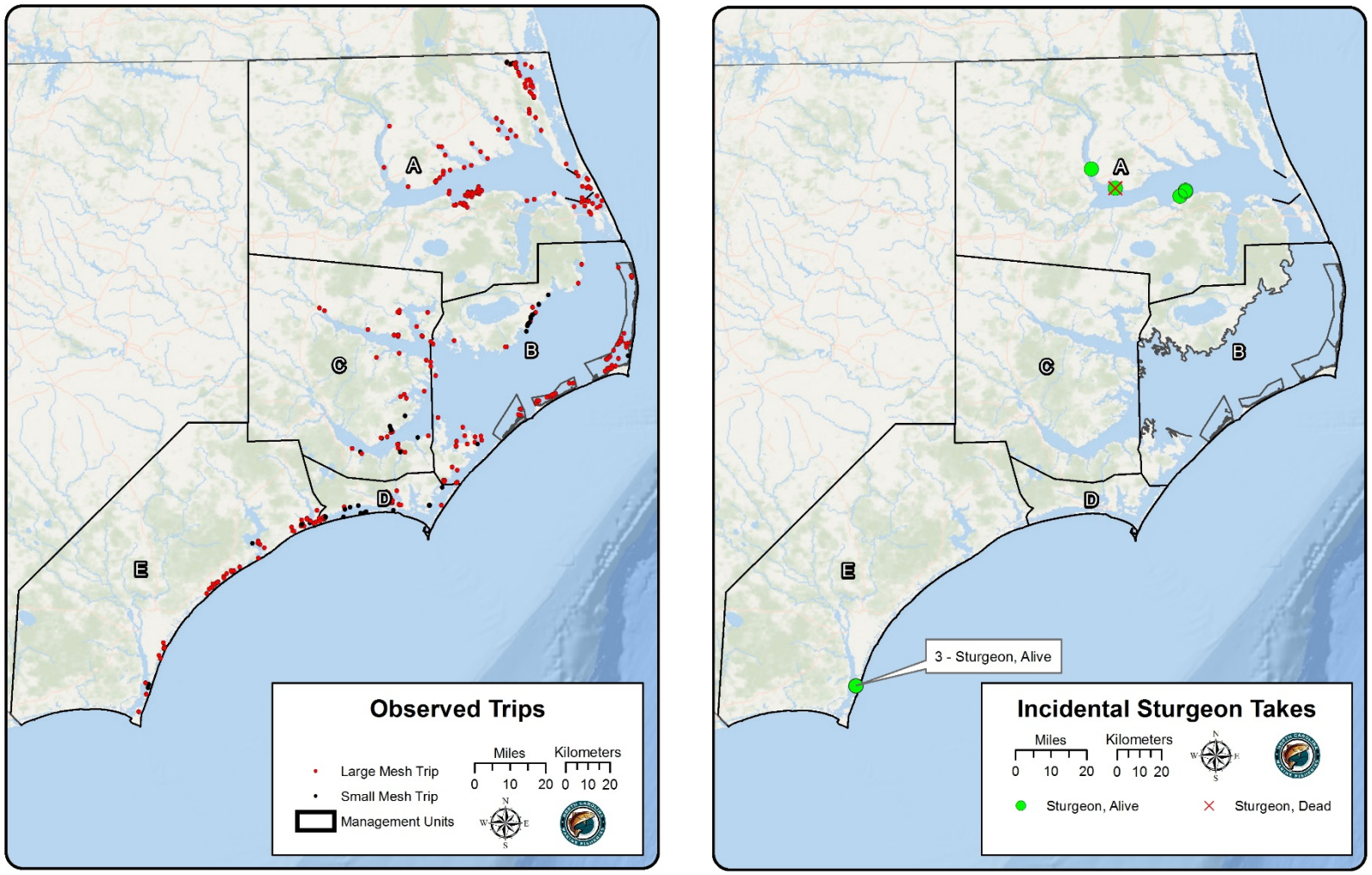

Figure 3. For fall 2018, observed gill-net trips (left) by mesh-size category (324 large-mesh = ≥ 5 inch; 58 small-mesh = < 5 inch) and Atlantic Sturgeon interactions (right) by disposition (alive, n = 8; dead, n = 1) across management units.

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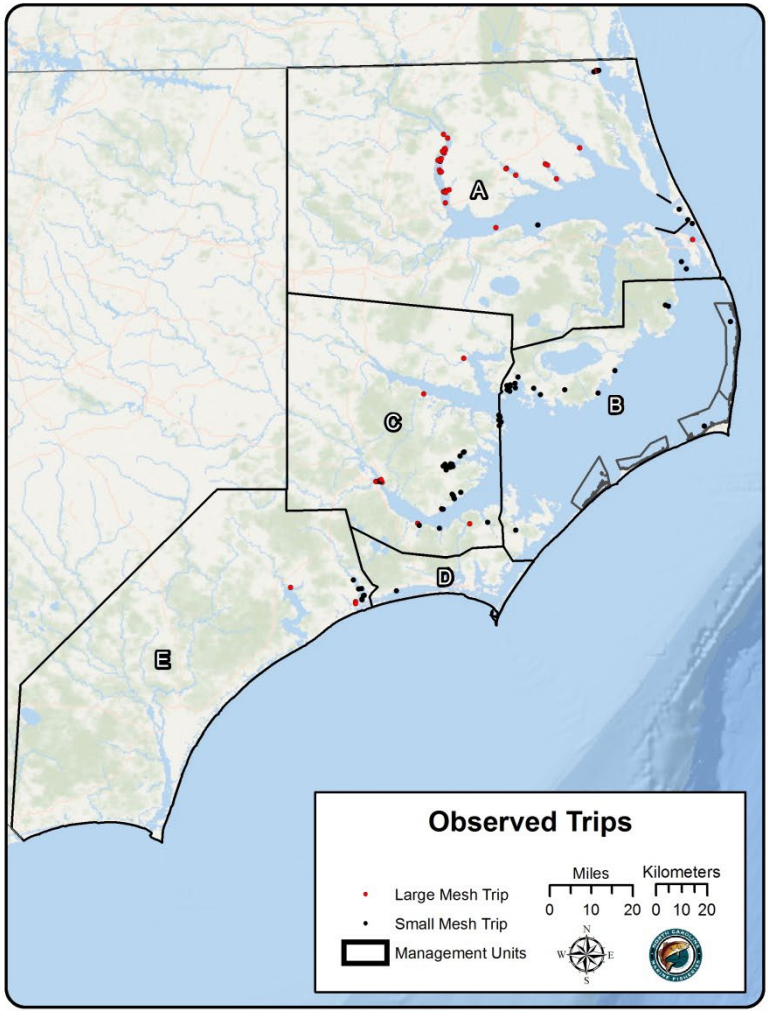

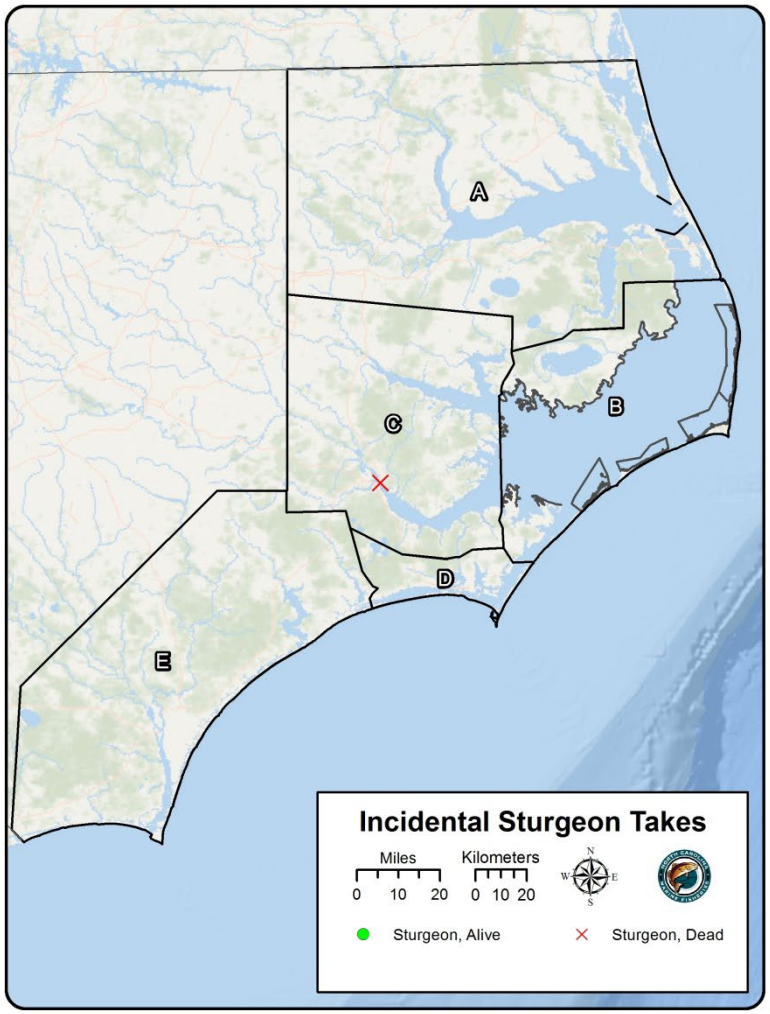

Figure 4. For winter 2018-2019, observed gill-net trips (left) by mesh-size category (50 large-mesh = ≥ 5 inch; 95 small-mesh = < 5 inch) and Atlantic Sturgeon interactions (right) by disposition (alive, n = 0; dead, n = 1) across management units.

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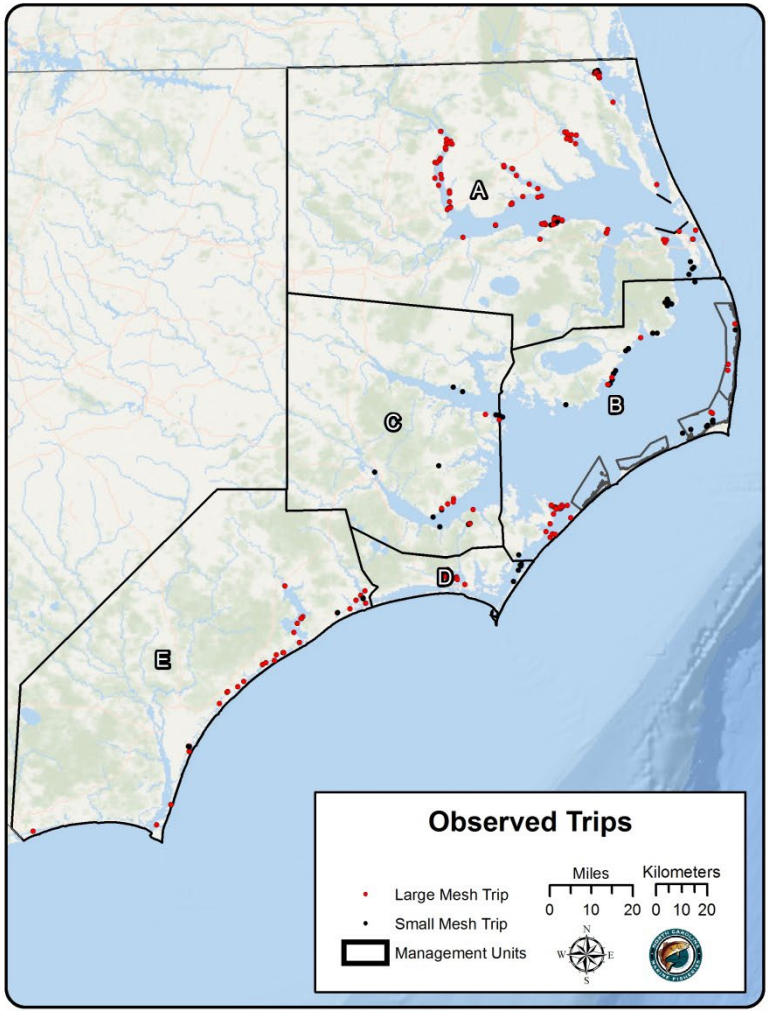

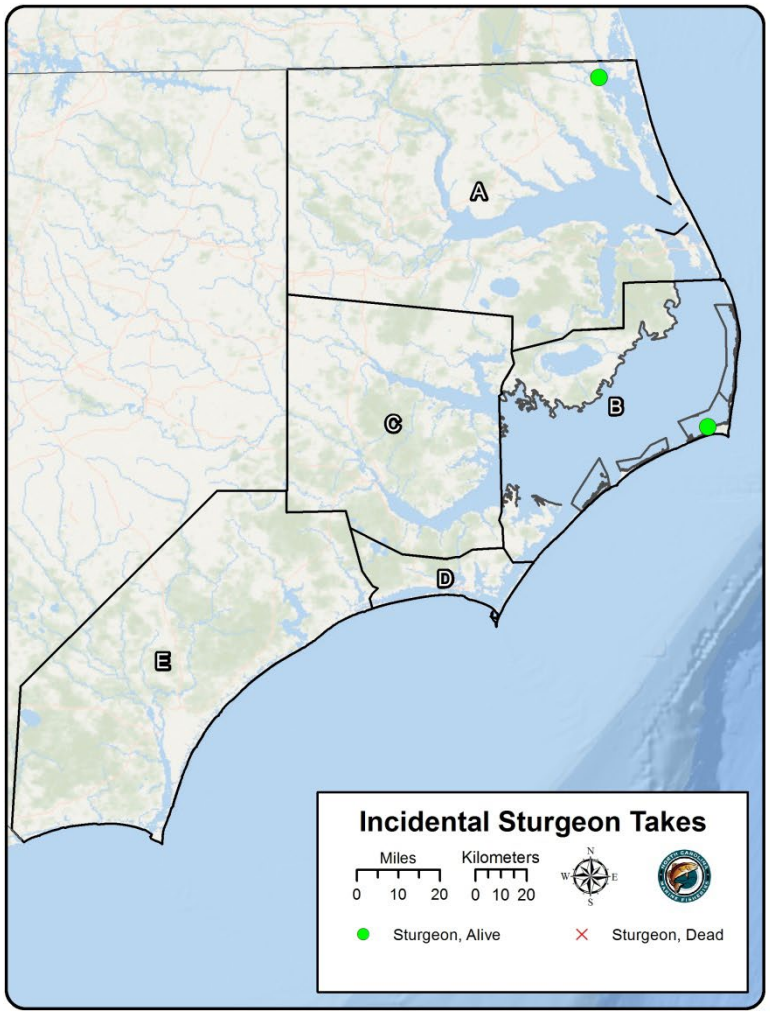

Figure 5. For spring 2019, observed gill-net trips (left) by mesh size-category (190 large-mesh = ≥ 5 inch; 79 small-mesh = < 5 inch) and Atlantic Sturgeon interactions (right) by disposition (alive, n = 2; dead, n = 0) across management units.

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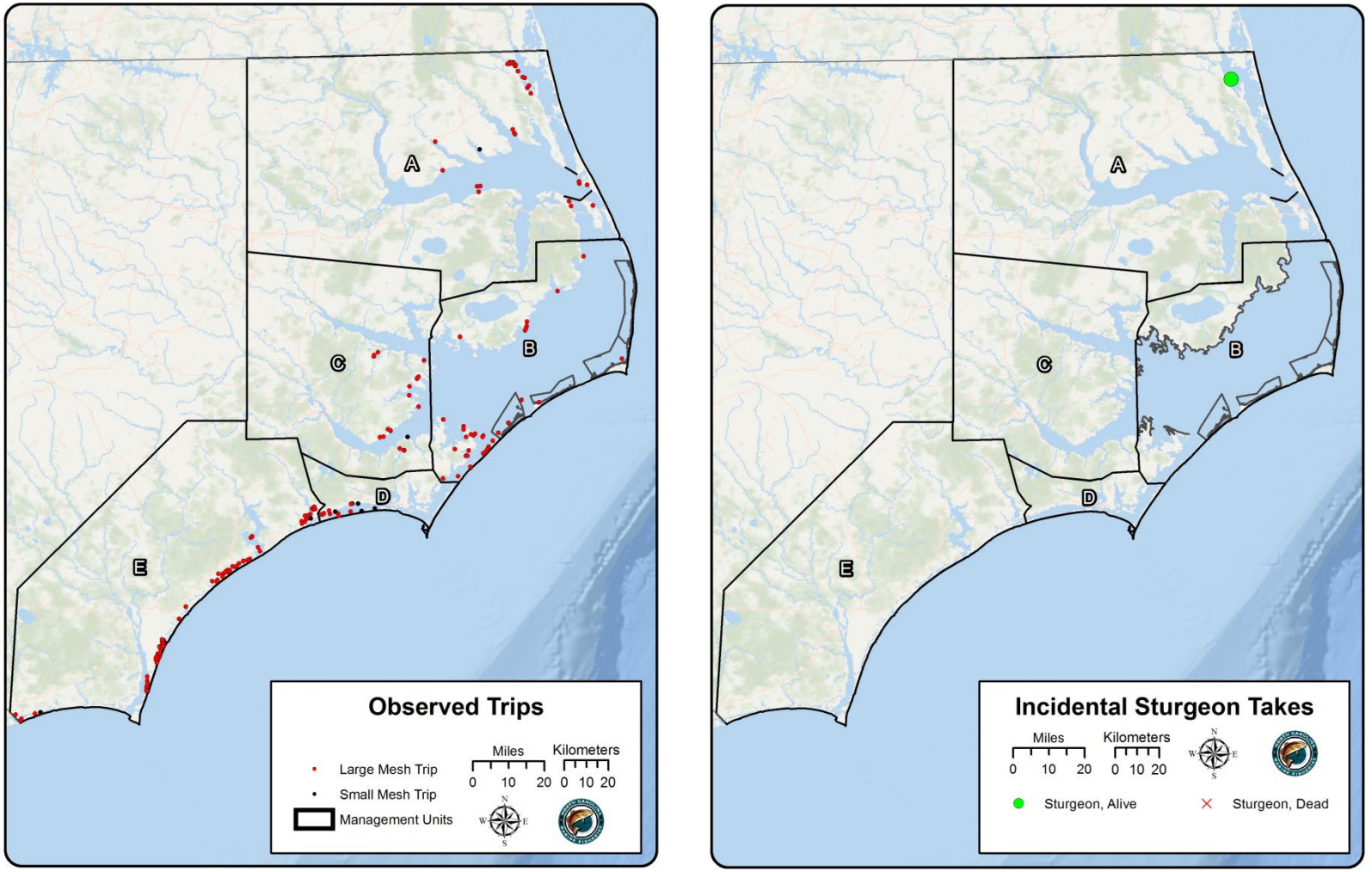

Figure 6. For summer 2019 observed gill-net trips (left) by mesh-size category (210 large-mesh = ≥ 5 inch; 13 small-mesh = < 5 inch) and Atlantic Sturgeon interactions (right) by disposition (alive, n = 1; dead, n = 0) across management units.

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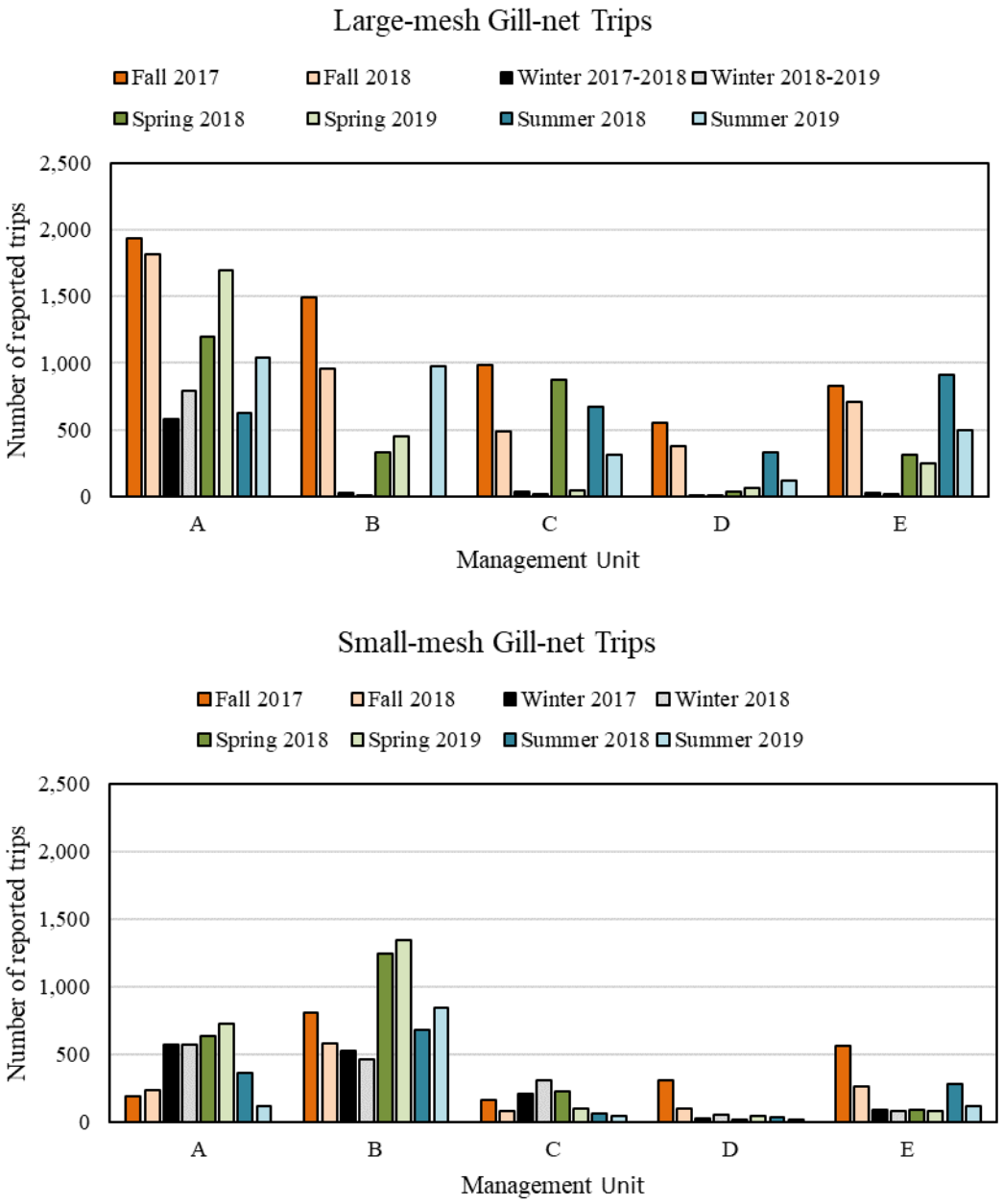

Figure 7. Number of fishing trips using large-mesh (≥ 5 inch, top) and small-mesh (< 5 inch, bottom) gill nets reported to the Trip Ticket Program during the 2018 and 2019 ITP Years by season and management unit. Seasons for the 2018 ITP Year (fall 2017, winter 2017-2018, spring 2018, summer 2018) are shown with darker shades that those for the 2019 ITP Year (fall 2018, winter 2018-2019, spring 2019, summer 2019). The eastern portion of Management Unit D was closed to ≥ 4-inch mesh gill nets during fall 2017 and did not re-open during either ITP Year. Management Unit B was closed to ≥ 4-inch mesh gill nets during late spring through summer 2018.

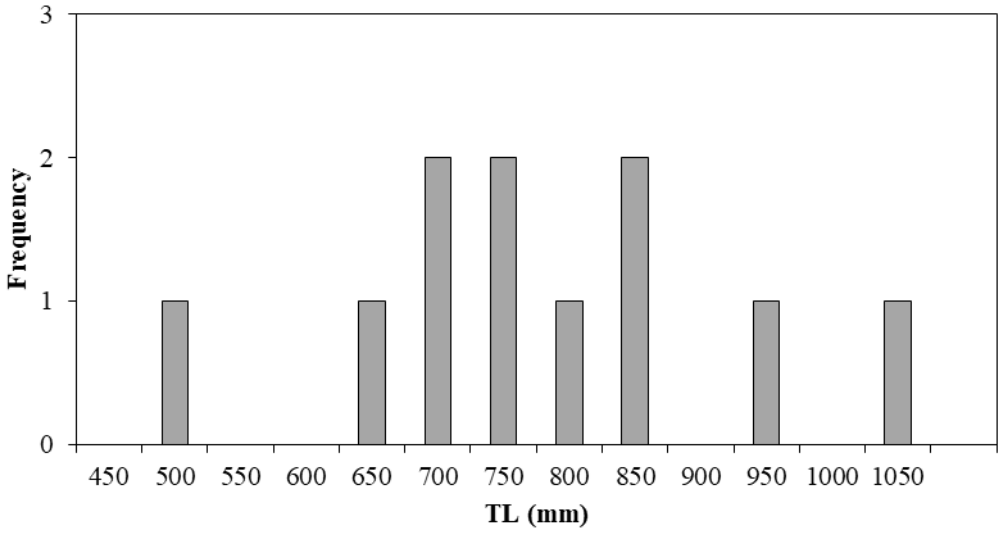

Figure 8. Length-frequency (total length [TL, mm]) of observed and measured incidental takes of Atlantic Sturgeon (n = 11 of 13 observed) during the 2019 ITP Year.

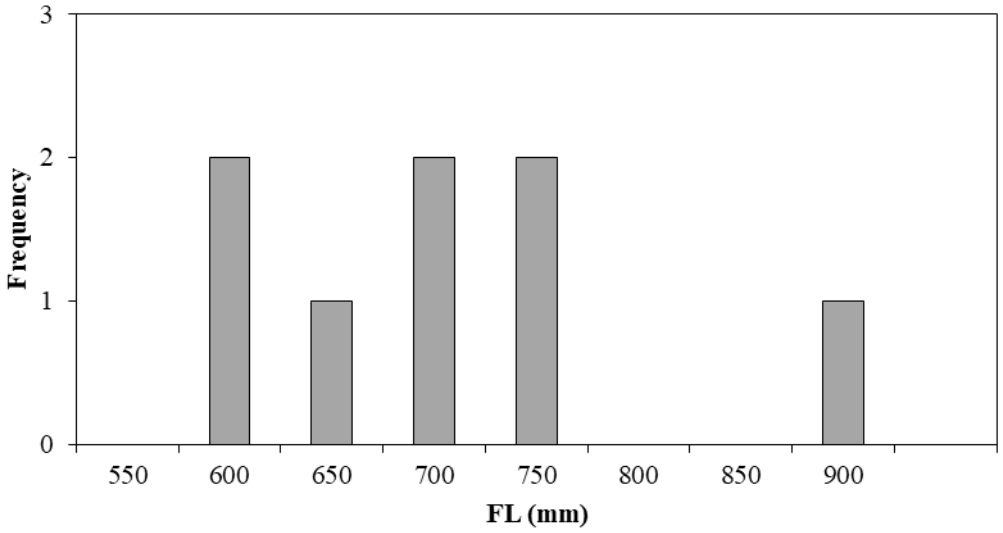

Figure 9. Length-frequency (fork length [FL], mm) of observed and measured incidental takes of Atlantic Sturgeon (n = 8 of 13 observed) during the 2019 ITP Year.

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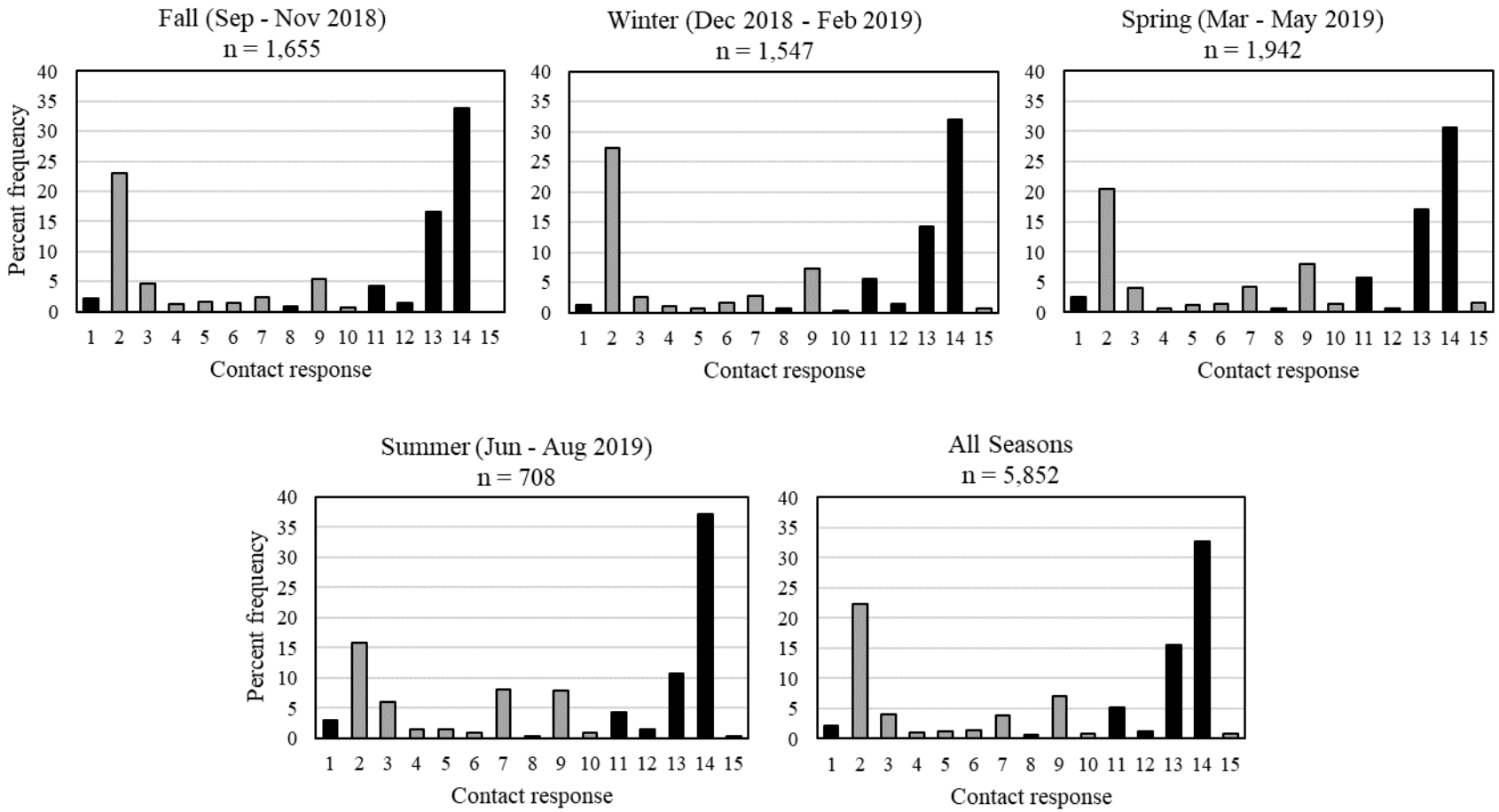

Figure 10. For the 2019 ITP Year, contacts attempted (n = 5,852) by observers to set up trips categorized by contact type (0-15) and presented as a percentage of the total for fall, winter, spring, summer, and all seasons combined. Contact type categories include the following: 1) Left message with someone 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; 15) Not fishing because of natural disaster (e.g., hurricane). Contact types are shown as those when the observer talked to a fisherman (gray bars) and when the observer did not (black bars).

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APPENDIX A

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

JUL 19 2017

Braxton C. Davis
Director, North Carolina Division of Marine Fisheries
3441 Arendell Street
P.O. Box 769
Morehead City, NC 28557

Dear Mr. Davis:

On July 13, 2017, the N.C. Division of Marine Fisheries (NCDMF) requested a minor modification to the Atlantic Sturgeon Incidental Take Permit (ITP) no. 18102 to allocate the takes in management units A – C as annual takes rather than seasonal takes. You note in your request that the number of allowed seasonal takes is very low in some cases, and the seasonal takes have been reached on a few occasions and have resulted in seasonal closures.

In your request, you also address the concern of takes occurring in warmer waters (20°C – 30°C) being correlated with more mortalities by noting that lower fishing effort in the summer season due to increasing water temperatures and fish availability should prevent sturgeon mortalities from exceeding the take limit. In our discussions, your staff also noted that the flexibility gained from this minor modification will allow you to adaptively manage fishing effort for times when the fishery is most productive from the fall through the spring, and that fishing effort in the summer decreases as productivity wanes. You also note that you actively monitor the fisheries and take levels daily to ensure take levels, including mortality levels, are not exceeded.

We have considered this minor modification request and determined it to be reasonable. NMFS therefore concurs with your request for this minor modification.

I appreciate you proactively requesting minor modifications to maximize permit implementation as you identify them. Also, as we have discussed with you previously, we understand that you are in the process of developing an updated ITP application and we look forward to analyzing all aspects of that updated application. I encourage you to incorporate any further anticipated minor modifications into that application process so my staff can more efficiently analyze these requests. Please sign below to acknowledge that you will comply with the minor modifications specified in this letter and send a copy of the signed letter to Ron Dean on my staff at your earliest convenience.

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We look forward to continuing to work with you on Endangered Species conservation in North Carolina.

Sincerely,

for

Donna S. Wieting
Director, Office of Protected Resources

I acknowledge the minor modification specified above to Permit No. 18102 issued under Section 10 (a)(1)(B) of the Endangered Species Act to incidentally take endangered Atlantic Sturgeon in gillnet fisheries operating in inshore waters of North Carolina.

Braxton C. Davis
Director
N.C. Division of Marine Fisheries

7/21/17
Date

Red Drum Landings 2018-2020

Landings are complete through January 31, 2020.
2018 landings are final. 2019 and 2020 landings are preliminary.

Year	Month	Species	Pounds	2009-2011 Average	2013-2015 Average	
2018	9	Red Drum	11,149	28,991	35,003	
2018	10	Red Drum	42,805	43,644	63,662	
2018	11	Red Drum	10,076	14,318	27,643	
2018	12	Red Drum	2,052	3,428	2,197	
2019	1	Red Drum	2,101	5,885	1,699	
2019	2	Red Drum	1,952	3,448	3,996	
2019	3	Red Drum	1,563	5,699	3,971	
2019	4	Red Drum	5,571	7,848	6,528	
2019	5	Red Drum	11,315	13,730	9,664	
2019	6	Red Drum	6,259	12,681	6,985	
2019	7	Red Drum	5,705	13,777	15,618	
2019	8	Red Drum	5,217	21,252	15,846	

Fishing Year (Sept 1, 2018 - Aug 31, 2019) Landings **105,764**

Year	Month	Species	Pounds	2009-2011 Average	2013-2015 Average	
2019	9	Red Drum	1,508	28,991	35,003	
2019	10	Red Drum	8,080	43,644	63,662	
2019	11	Red Drum	5,357	14,318	27,643	
2019	12	Red Drum	1,743	3,428	2,197	
2020	1	Red Drum	1,809	5,885	1,699	
2020	2	Red Drum	1,220	3,448	3,996	*
2020	3	Red Drum	813	5,699	3,971	*

Fishing Year (Sept 1, 2019 - Aug 31, 2020) Landings **20,529**

*partial trip ticket landings only
***landings are confidential

Year	Month	Species	Pounds	Dealers	Trips	Average (2007-2009)
2016	1	SOUTHERN FLOUNDER	2,625	33	264	7,713
2016	2	SOUTHERN FLOUNDER	1,643	31	291	4,617
2016	3	SOUTHERN FLOUNDER	9,260	58	915	23,512
2016	4	SOUTHERN FLOUNDER	10,558	72	628	68,389
2016	5	SOUTHERN FLOUNDER	24,522	90	821	122,514
2016	6	SOUTHERN FLOUNDER	44,952	100	1,242	154,090
2016	7	SOUTHERN FLOUNDER	43,574	102	1,132	170,387
2016	8	SOUTHERN FLOUNDER	53,057	106	1,409	201,862
2016	9	SOUTHERN FLOUNDER	246,269	131	3,011	396,301
2016	10	SOUTHERN FLOUNDER	280,689	117	2,181	781,717
2016	11	SOUTHERN FLOUNDER	182,768	102	1,479	392,150
2016	12	SOUTHERN FLOUNDER	14	5	5	37,303
2017	1	SOUTHERN FLOUNDER	1,677	38	122	7,713
2017	2	SOUTHERN FLOUNDER	2,758	55	215	4,617
2017	3	SOUTHERN FLOUNDER	8,254	67	874	23,512
2017	4	SOUTHERN FLOUNDER	9,591	83	787	68,389
2017	5	SOUTHERN FLOUNDER	33,105	105	1,121	122,514
2017	6	SOUTHERN FLOUNDER	74,785	115	1,904	154,090
2017	7	SOUTHERN FLOUNDER	74,879	108	1,755	170,387
2017	8	SOUTHERN FLOUNDER	102,751	116	2,364	201,862
2017	9	SOUTHERN FLOUNDER	235,915	128	2,849	396,301
2017	10	SOUTHERN FLOUNDER	548,740	142	3,971	781,717
2017	11	SOUTHERN FLOUNDER	302,286	123	2,003	392,150
2017	12	SOUTHERN FLOUNDER	166	7	8	37,303
2018	1	SOUTHERN FLOUNDER	610	14	43	7,713
2018	2	SOUTHERN FLOUNDER	1,833	34	154	4,617
2018	3	SOUTHERN FLOUNDER	2,815	43	387	23,512
2018	4	SOUTHERN FLOUNDER	8,142	74	769	68,389
2018	5	SOUTHERN FLOUNDER	18,342	90	951	122,514
2018	6	SOUTHERN FLOUNDER	42,501	105	1,407	154,090
2018	7	SOUTHERN FLOUNDER	57,273	117	1,495	170,387
2018	8	SOUTHERN FLOUNDER	72,495	121	1,916	201,862
2018	9	SOUTHERN FLOUNDER	109,125	114	1,776	396,301
2018	10	SOUTHERN FLOUNDER	363,339	109	3,062	781,717
2018	11	SOUTHERN FLOUNDER	226,832	89	1,352	392,150
2018	12	SOUTHERN FLOUNDER	471	5	5	37,303
2019	1	SOUTHERN FLOUNDER	524	25	74	7,713
2019	2	SOUTHERN FLOUNDER	558	23	69	4,617
2019	3	SOUTHERN FLOUNDER	1,412	44	216	23,512
2019	4	SOUTHERN FLOUNDER	5,966	66	448	68,389
2019	5	SOUTHERN FLOUNDER	36,666	92	1,038	122,514
2019	6	SOUTHERN FLOUNDER	61,035	109	1,437	154,090
2019	7	SOUTHERN FLOUNDER	59,251	108	1,551	170,387
2019	8	SOUTHERN FLOUNDER	95,588	109	1,778	201,862
2019	9	SOUTHERN FLOUNDER	51,734	59	551	396,301
2019	10	SOUTHERN FLOUNDER	326,946	118	2,329	781,717
2019	11	SOUTHERN FLOUNDER	158,954	57	533	392,150

*2019 and 2020 data are preliminary. Data are complete through January 2020.

***data are confidential

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Lara Klibansky, Marine Fisheries Commission Liaison

SUBJECT: Possible Tarpon Rule Exemption for Fishing Piers and Status of Current Tarpon Rule Amendment

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Issue

At the February MFC Business Meeting the commission heard comment during the public comment period, prior to voting on final approval of rule 15A NCAC 03M .0509, Tarpon, which raised concern over the impact of the tarpon rule on fishing piers. This comment led to a request from Commissioner Cross for the division to further examine the impact of the rule on ocean piers and to explore the possibility of further action to amend the rule to exempt piers. It is important to note that while the vote to approve the current amendment to the tarpon rule represented the final action of the commission, there are two additional steps in the rulemaking process that need to occur before the amended rule becomes effective, one of which is now complete and discussed below. What follows is a clarifying summary of the recreational data collected by and available from the division, as well as a short summary on the progress on the current tarpon rule amendment.

Findings

Division of Marine Fisheries Recreational Data Collection

The primary data collection program for recreational fisheries in North Carolina is the Marine Recreational Information Program (MRIP), which is a partnership with National Oceanic and Atmospheric Administration (NOAA) Fisheries. MRIP collects a large amount of recreational fishing data. Some of the information collected includes the following variables: target species, mode, species caught, if fish are harvested or released and if they are released alive or dead. The mode variable, listed above, is a way to identify how fishermen accessed fish, for example, by private/rented boat or from shore. For most states there are five modes. In North Carolina, however, there are six, because the shore mode is further divided into a beach/bank mode and a man made mode. In other states these two modes are combined into a single shore mode. Having them parsed out allows a more accurate representation of recreational fisheries relative to other states. The man made mode includes ocean piers, bridges, jetties, and breakwaters.

Recreational Tarpon Fishery in North Carolina

State of North Carolina | Division of Marine Fisheries
3441 Arendell Street | P.O. Box 769 | Morehead City, North Carolina 28557
252-726-7021

Tarpon are a rare event species, meaning they seldom occur in recreational catches. In North Carolina from 1982 to 2018 there have been 582,980 marine recreational angler intercepts out of which there have been 24 tarpon reported; this is across all modes of fishing. Due to their rare occurrence, the samplers are unable to intercept enough anglers with these species in their catch to produce precise estimates of catch.

Specific to piers, from 1982 to 2018 there have been 62,743 ocean fishing pier angler intercepts, of which 0.02% targeted tarpon. The species most targeted by ocean pier fishermen intercepted are spot, bluefish, Spanish mackerel, and kingfish. All available data for the recreational tarpon fishery in North Carolina, including the data for piers, were considered and incorporated in the materials provided to the MFC as part of the 2019-2020 rulemaking process to amend the tarpon rule.

Overview and Status of Current Tarpon Rule Amendment
The current rulemaking process amending the tarpon rule began in August 2019, with the MFC approval of the notice of text for rulemaking and the fiscal analysis. This was the culmination of the lengthy preparation to begin rulemaking, which began with an MFC motion in February 2018. During the public comment period for the proposed rule, which occurred from Oct. 15 to Dec. 2, 2019, the division received thirty-four public comments about the tarpon rule change: four oral comments in support; 23 emails in support, six not in support, and one with mixed comments. At its February 2020 meeting prior to final approval of the rule, the MFC received four additional oral comments about the tarpon rule change: two in support and two not in support. The amended tarpon rule was then discussed, in light of the public comment, and approved for readoption by the MFC at its February 2020 meeting.

As with all MFC approved rules, the tarpon rule was then submitted for review, and subsequently approved, by the Rules Review Commission (RRC). The RRC received at least 10 letters of objection to the rule, which is now, per G.S. 150B-21.3, subject to legislative review. In addition, the rule is also subject to legislative review per S.L. 2019-198 and G.S. 14-4.1. For this rule to become effective it must pass the legislative review process. This rule is not expected to be considered until the 2021 legislative session. Any action taken to amend this rule would begin an amendment to a rule that is still in the rulemaking process.

Action Needed
For informational purposes only, **no action is needed at this time.**

For more information, please refer to the following documents:

Proposed Tarpon Rule Change Issue Paper (Feb. 2019)

PROPOSED TARPON RULE CHANGE ISSUE PAPER

Jan. 29, 2019

I. ISSUE

Consider amending N.C. Marine Fisheries Commission Rule 15A NCAC 03M .0509 to remove the daily harvest allowance and make it unlawful to spear or gaff tarpon in N.C. Coastal Fishing Waters.

II. ORIGINATION

N.C. Marine Fisheries Commission

III. BACKGROUND

Anecdotal reports from the public since 2017 expressed concern over the rule 15A NCAC 03M .0509 that allows for the recreational hook and line harvest of tarpon, and that tarpon were being used as cut bait to fish for sharks. An email and a phone conversation with two fishing guides to staff occurred since July 2017, and one public comment was received, on behalf of some recreational guides, during the Marine Fisheries Commission meeting on February 14, 2018, asking the Commission to consider tarpon a no kill species and include no gaffing and no spearing, to improve the survival of the fish. During the public comment it was indicated the recreational guides know that tarpon move into N.C. waters on their migratory run from the south to spawn and they see juveniles, but was unsure if these juveniles survive the winter. A letter was also given to the commission from the Bonefish and Tarpon Trust Foundation further supporting tarpon as a catch and release only species. A motion was introduced and passed by the commission the next day asking the Division of Marine Fisheries to draft rules to make tarpon a no spear, no gaff, and no possession fish. This paper responds to their motion and initiates the division process for considering rule changes.

Tarpon are prized by recreational anglers for their large size and strength in their fight. They are found in warmer waters on both sides of the Atlantic Ocean and in the Gulf of Mexico. Tarpon found in state waters are presumed to have migrated from points south, most likely Florida. They will enter the estuaries and have been found in the brackish or low salinity areas as well during the summer months. The population size of tarpon along the southeastern coast of the United States or in North Carolina is unknown. They are a bony fish and not desirable to eat, so most are released after they are caught. Only two tarpon were observed harvested in the 24 years of the division's recreational sampling program in 1987 and 2010, and although harvest is legal they are rarely encountered. Very little information is known about tarpon and there are no directed sampling programs for tarpon in North Carolina.

Reports on the harvest of tarpon for use as cut bait are undocumented. If used as cut bait, it is required that the angler, while engaged in fishing activities, must retain the carcass with head and tail intact per the Marine Fisheries Commission's mutilated finfish rule, NCAC 15A NCAC 03M .0101. The size of these fish would pose challenges to adhere to this rule. Recreational release mortality information on tarpon is limited to studies from Florida in the Boca Grande Pass and Tampa Bay areas. All release mortality studies are on tarpon caught from boats with fishing guides and not from shore or piers, with acoustic tagging following the fish for no more than 12 hours after release (Edwards 1992; Edwards 1998; Guindon 2011). These studies found low immediate post-release mortality of tarpon from catch and release. The most comprehensive and latest study estimated tarpon immediate post-release mortality at five percent, and factored the mortality to poor handling and irreparable physiological damage from the angling event (Guindon 2011). Use of a gaff or other puncturing tools to facilitate landing the tarpon increases damage to the fish and could decrease their chance of survival. Pier fishing, with their higher elevation from the water and distance from shore, makes it more likely that gaffs are used in order to land the fish. Therefore, the survival of tarpon from this mode may be less likely than from other modes of capture (i.e., boats, shore).

There is no interstate or federal fishery management plan in place for tarpon; management of this species rests solely with each coastal state. Rule 15A NCAC 03M .0509 for tarpon has been in effect since October 1, 1992 in North Carolina and has remained unchanged. The rule limits tarpon to be taken only with hook-and-line, and allows for the harvest of one fish per person per day, with no allowance to sell or offer to sell. South Carolina regulations for

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tarpon are similar to regulations in North Carolina. Georgia also allows the taking of one tarpon per person per day at a minimum size of 68 inches fork length. Details on each state's regulations for tarpon and their website links are found below:

- Florida: http://myfwc.com/fishing/saltwater/recreational/tarpon/
  No minimum size limit, tarpon over 40 inches must remain in the water. It is a catch and release only fishery. One tarpon tag per person per year may be purchased when in pursuit of an International Game Fish Association record. Vessel, transport, and shipment limited to one fish.

- Georgia: http://www.eregulations.com/georgia/fishing/finfish-seasons-limits-sizes/
  Minimum size 68-inch fork length. Allowed one tarpon per person per day.

- South Carolina: http://dnr.sc.gov/marine/species/tarpon.html
  No minimum size limit. Allowed one tarpon per person per day, and may only be taken with rod and reel. Tarpon is designated as a State gamefish and therefore, cannot be sold.

- North Carolina: http://portal.ncdenr.org/web/mf/recreational-fishing-size-and-bag-limits
  No minimum size limit. Allowed one tarpon per person per day and may only be taken with hook and line. Cannot be sold.

- Virginia: https://webapps.mrc.virginia.gov/public/reports/vmrc_regulations_pdf.php
  Release only, with a minimum size release citation at 36 inches.

IV. AUTHORITY

N.C. General Statutes
§ 113-134 Rules
§ 113-182 Regulation of fishing and fisheries
§ 143B-289.52 Marine Fisheries Commission – power and duties

North Carolina Marine Fisheries Commission Rules (May 1, 2015)
15A NCAC 03M .0509 Tarpon

V. DISCUSSION

Rule 15A NCAC 03M .0509 limits tarpon harvest to only one fish per person per day by hook-and-line only with no allowance to sell. This rule has remained unchanged since it was adopted in 1992.

As a management option, the current rule for tarpon minimizes waste if the fish was not to survive a hook-and-line encounter by allowing the fishermen to harvest the fish instead of becoming a dead discard. On the other hand, the current rule may encourage recreational anglers to use puncturing tools to bring in a fish or to facilitate handling the fish during hook removal, which could impact its survival.

Another option as requested by the Marine Fisheries Commission is to make tarpon a no kill species, and specifically allow no gaffing, no spearing, and no puncturing, but still allow for catch-and-release with hook-and-line. The term "possess" is made unlawful in this option and equates to no harvest, but still allows the taking of fish with hook and line, but must be released. This option provides a better chance for the tarpon to survive a hook-and-line encounter when released, but there is the potential for waste if the fish was not to survive after release and would have to be discarded rather than harvested.

An intermediate option for consideration is to amend the rule to prohibit puncturing tarpon, but still allow the daily harvest limit to reduce the discarding of the fish that may not survive after release. Based on more communication available through social media, the pier fishery seems more popular than in the past for catching tarpon. Landing a fish from a pier is more challenging; sometimes the tarpon is pulled alongside the pier and landed on the beach, or the fish is lifted from the water onto the pier with the assistance of nets or puncturing tools to elevate the fish out of the

water. The fight time from a pier is more likely longer than from a vessel or shore, which will likely increase the post-release mortality on the tarpon.

VI. PROPOSED RULE(S)

Option 1: No change, just format updates.

15A NCAC 03M .0509 TARPON
It shall be unlawful to do any of the following:
~~(a) It is unlawful to~~(1) sell or offer for sale ~~tarpon.~~tarpon;
~~(b) It is unlawful to~~(2) possess more than one tarpon per person taken in any one ~~day.~~day; and
~~(c) It is unlawful to~~(3) take tarpon by any method other than hook-and-line.

History Note: *Authority G.S. 113-134; 113-182; ~~113-221;~~ 143B-289.4;*
Eff. October 1, 1992;
Readopted Eff. April 1, 2020.

Option 2: MFC recommendation: no kill, no spear, no gaff, no puncturing, no keeping any tarpon, but catch-and-release still allowed.

15A NCAC 03M .0509 TARPON
It shall be unlawful to do any of the following:
~~(a) It is unlawful to~~(1) possess, ~~sell~~ sell, or offer for sale ~~tarpon.~~tarpon;
~~(b) It is unlawful to possess more than one tarpon per person taken in any one day.~~
~~(c) It is unlawful to~~(2) take tarpon by any method other than ~~hook-and-line.~~hook and line; and
(3) spear, gaff, or puncture a tarpon.

History Note: *Authority G.S. 113-134; 113-182; ~~113-221;~~ 143B-289.4;*
Eff. October 1, 1992;
Readopted Eff. April 1, 2020.

Option 3: Intermediate recommendation, no spear, no gaff, no puncturing, but allow the daily harvest and catch-and-release still allowed.

15A NCAC 03M .0509 TARPON
It shall be unlawful to do any of the following:
~~(a) It is unlawful to~~(1) sell or offer for sale ~~tarpon.~~tarpon;
~~(b) It is unlawful to~~(2) possess more than one tarpon per person ~~taken in any one day.~~per day;
~~(c) It is unlawful to~~(3) take tarpon by any method other than ~~hook-and-line.~~hook and line; and
(4) spear, gaff, or puncture a tarpon.

History Note: *Authority G.S. 113-134; 113-182; ~~113-221;~~ 143B-289.4;*
Eff. October 1, 1992;
Readopted Eff. April 1, 2020.

VII. PROPOSED MANAGEMENT OPTIONS

1. Status Quo, maintain MFC Rule 15A NCAC 03M .0509 which continues to allow puncturing and limited harvest of tarpon.
   + Public familiar with rule that has remained unchanged since 1992.
   + Minimizes waste if the fish does not survive catch and release by it still being able to be harvested.
   – Does not comply with MFC motion
   – Higher potential for mortality.

– Allows puncturing and harvest of a species not common for human consumption.

2. Amend MFC Rule 15A NCAC 03M .0509 to make it unlawful to puncture or harvest tarpon, but catch-and-release still allowed.
   + Complies with MFC motion.
   + Increase chance for survival.
   – Public will need be educated on rule change.
   – May increase waste if the fish does not survive hook-and-line catch and release because it could no longer be harvested.

3. Amend MFC Rule 15A NCAC 03M .0509 to make it unlawful to puncture tarpon, but maintain the daily harvest limit.
   + Minimizes waste if the fish does not survive hook-and-line catch and release by it still being able to be harvested.
   + Improves survival by not allowing puncturing of the fish.
   – Does not comply with MFC motion.
   – Public will need be educated on rule change.
   – Higher potential for mortality.

VIII. RECOMMENDATION

No DMF recommendation is provided. This paper is to offer more information on tarpon and three options for further consideration to this rule.

Marine Fisheries Commission Rule 15A NCAC 03M .0509 is subject to re-adoption under the Periodic Review and Expiration of Existing Rules (G.S. 150B-21.3A) by June 30, 2022.

Prepared by: Tina Moore, Tina.Moore@ncdenr.gov, 252-808-8082
December 3, 2018

Revised: January 11, 2019
January 17, 2019
January 24, 2019
January 29, 2019

IX. LITERATURE CITED

Edwards, R. E. 1992. Tarpon release mortality assessment using acoustic tracking. Final Project Report 6634. Florida Department of Natural Resources. 45 pp. https://dspace.mote.org/bitstream/2075/1290/1/MTR%20259.pdf

Edwards, R. E. 1998. Survival and Movement Patterns of Released Tarpon (*Megalops atlanticus*). Gulf of Mexico Science 16 (1). Retrieved from https://aquila.usm.edu/goms/vol16/iss1/1

Guindon, K. Y. 2011. Evaluating lethal and sub-lethal effects of catch-and-release angling in Florida's Central Gulf Coast recreational Atlantic tarpon (*Megalops atlanticus*) fishery. Graduate Theses and Dissertations. http://scholarcommons.usf.edu/etd/313.

Notice of Text Attachment

15A NCAC 03M .0509 TARPON

Option 1: Proposed amendments make minor format corrections to the rule.

Option 2: Proposed amendments make minor format corrections, add no allowance to spear, gaff, or puncture a tarpon, no longer allows for the daily harvest of tarpon, but continues to allow catch-and-release of tarpon with hook and line.

Option 3: Proposed amendments make minor format corrections and add no allowance to spear, gaff, or puncture a tarpon to the rule.

MFC Rulebook Index Worksheet

Rule	Subject	Index Entry (**Bold** major headings)	Add/Delete/ No Change
03M .0509	tarpon	**species:** tarpon	No change

Ancillary Items:

- Update recreational guide.
- Provide further outreach on the no puncturing and no harvest of tarpon.
- Verify if complementary regulations are needed by the Wildlife Resources Commission in inland waters.
- Provide educational outreach to piers, guides, and tournaments.

FISHERY MANAGEMENT PLANS

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Catherine Blum, Fishery Management Plan and Rulemaking Coordinator
Fisheries Management Section

SUBJECT: Fishery Management Plan Update

Issue
Update the Marine Fisheries Commission (MFC) on the status of ongoing North Carolina fishery management plans (FMPs).

Overview
This memo provides an overview on the status of the North Carolina FMPs for the May 2020 MFC business meeting.

At the MFC 's August 2019 business meeting, staff provided an update on changes being implemented designed to achieve efficiencies in the FMP process. Changes include the timing of the steps in initial development of draft FMPs, how the division works with the FMP advisory committee and how the committee operates, and what the FMP documents look like. Before the initial development of a draft FMP, a scoping period will be held to notice the public that the review of the FMP is underway, inform the public of the stock status (if applicable), solicit input from the public on the list of potential management strategies to be developed, and recruit advisers to serve on the FMP advisory committee. These changes are being incorporated beginning with Amendment 3 to the Southern Flounder FMP and Amendment 2 to the Shrimp FMP.

Blue Crab FMP
The MFC approved measures to end overfishing and achieve sustainable harvest with the adoption of the Blue Crab FMP Amendment 3 at its February 2020 meeting. Management measures are being implemented by proclamation and include a closed season, five-inch minimum size limit for mature female hard crabs, removing all cull ring exempted areas, and expanding and establishing crab spawning sanctuaries, among other management measures.

An additional management measure is to use the framework approved in Amendment 3 for designating Diamondback Terrapin Management Areas (DTMAs) where use of an approved

State of North Carolina | Division of Marine Fisheries
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terrapin excluder device will be required in crab pots. As set forth in the framework, division staff gave a presentation to the Southern Regional Advisory Committee April 8 regarding two proposed DTMAs in the southern coastal area of the state. The framework also includes final approval of any DTMA by the MFC. Staff will give a presentation to the MFC at the May meeting about this action item. For more information, please refer to the Blue Crab FMP section of the briefing materials.

Southern Flounder FMP

The MFC adopted Amendment 2 to the Southern Flounder FMP at its August 2019 business meeting. Amendment 2 moved quickly through the process of development and adoption to address the overfished and overfishing status of the southern flounder stock as determined by the 2019 coast-wide stock assessment. Proclamations were issued that closed the commercial and recreational seasons on Sept. 4, 2019. A separate proclamation was issued for the fall commercial flounder season per Amendment 2. The commercial fishery will reopen by proclamation on a date in 2020 not yet determined. The 2020 recreational flounder season for hook and line and gigs will be Aug. 16 through Sept. 30 for internal and ocean waters of the state. The minimum size limit will remain at 15 inches total length, and the creel limit will remain at four fish per person per day during the open recreational season. Since all species of flounder are managed under the same recreational regulations, the recreational season applies to all recreational flounder fishing.

The season closures implemented under the authority of Amendment 2 were deemed critical to the successful rebuilding of the southern flounder stock, while other, more comprehensive, long-term management strategies are examined and developed in Amendment 3. The primary management strategy for Amendment 3 is long-term sustainable harvest in the southern flounder fishery. Consistent with changes being implemented designed to achieve efficiencies in the FMP process, a scoping document outlining the potential management strategies was developed for the public. Fisheries stakeholders provided comments at three scoping meetings that were held in December 2019, through an online form, and by mail. At its February 2020 meeting, the MFC received a summary of the public comments received, received an overview of the potential management strategies and the FMP timeline, and approved the goal and objectives for Amendment 3. Staff is continuing to develop the first draft of Amendment 3 and will work with the Southern Flounder FMP Advisory Committee to further develop the draft plan later this year.

Shrimp FMP

The 2019 N.C. FMP Review Schedule shows the review of the Shrimp FMP is underway. To begin the development of the Shrimp FMP Amendment 2, the division is examining management strategies to further reduce bycatch of non-target species in the shrimp trawl fishery and potential changes to existing shrimp management strategies adopted in the 2006 FMP, 2015 Amendment 1, and 2018 Revision to Amendment 1. The division also took into consideration input received from the MFC through motions passed at its August 2018 and February 2019 meetings regarding general areas of focus and possible goals and objectives for Amendment 2. Consistent with changes being implemented designed to achieve efficiencies in the FMP process, a scoping document outlining the potential management strategies was developed for the public. Fisheries stakeholders provided comments at three scoping meetings that were held in January 2020, through an online form, and by mail. At its February 2020 meeting, the MFC received a summary of the public comments received, received an overview of the potential management

strategies and the FMP timeline, and approved the goal and objectives for Amendment 2. Staff is continuing to develop the first draft of Amendment 2. The Shrimp FMP Advisory Committee will be appointed later this year to work with the division to further develop the draft plan.

Estuarine Striped Bass FMP
For the review of the Estuarine Striped Bass FMP, the assessment of the Central Southern Management Area (CSMA) stocks (Tar-Pamlico, Neuse, and Cape Fear rivers) and the Albemarle Sound-Roanoke River (A-R) stock that began in 2017 is continuing. The Peer Review Workshop for the A-R stock assessment was held Dec. 2-5, 2019 in New Bern. The peer reviewers felt there was too much uncertainty in stock status determination to recommend the current version of the stock assessment in its existing form for management use at this time. They provided areas of focus to improve the stability of the model. While staff was working on the recommended follow-up tasks, an error in the data was discovered that is also being addressed and evaluated for its overall effect on the model. A new base run of the A-R assessment will be presented to the peer reviewers via desktop review and WebEx meetings in May 2020.

After reviewing available data, life history information, and stock assessment techniques, the Estuarine Striped Bass FMP Plan Development Team determined traditional stock assessment methods would not be appropriate for CSMA stocks because of the high hatchery contribution and lack of natural recruitment in these systems. The plan development team has completed the final draft of the CSMA Assessment Report for internal review, including an evaluation of the stocks using a matrix model for the Tar-Pamlico and Neuse rivers and a tagging model for the Cape Fear River. The assessment of all the estuarine stocks will inform the review of the FMP and development of Amendment 2. This is a joint FMP with the Wildlife Resources Commission, so all updates and reviews are joint efforts by both agencies.

Spotted Seatrout FMP
A benchmark stock assessment for spotted seatrout is underway coinciding with the scheduled Spotted Seatrout FMP review. The prior stock assessment from 2014 indicated that the stock is not overfished and is not experiencing overfishing. The Spotted Seatrout FMP Plan Development Team met in June 2019 for the stock assessment Planning Workshop and in September 2019 for the Data Workshop. The plan development team is completing the working papers from the spotted seatrout Data Workshop and preparing to incorporate data through 2019 to be more reflective of recent fishing activity, as soon as the data are verified and available. A second Data Workshop will be held following this effort.

Action Needed
For informational purposes only; **no action is needed at this time**.

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INFORMATION ON REPACKAGING FOREIGN CRAB MEAT IN NORTH CAROLINA

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ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Shannon Jenkins, Section Chief and Shawn Nelson, Inspections Program Supervisor, Shellfish Sanitation and Recreational Water Quality Section

SUBJECT: Information on Repacking of Foreign Crab Meat in North Carolina

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Issue

Commissioner Doug Cross requested that the Director of the Division of Marine Fisheries develop an information paper to amend N.C. MFC Rule 15A NCAC 18A .0173 regarding the repacking of foreign crab meat. Commissioner Cross requested the DMF to examine the possibility of making it unlawful to repack or possess foreign crab meat in North Carolina unless it remains in the original container.

Findings

- Negative publicity regarding fraud may have an effect on the reputation of the N.C. crab meat industry and decrease consumer confidence in authentic "Product of USA" crab meat.

- A prohibition of foreign crab meat in North Carolina (unless it remains in the original packed container) would have an economic impact on some N.C. crab processors and a significant number of grocery stores and retail outlets that market that type of product.

- A prohibition could result in significant enforcement challenges for DMF Marine Patrol.

- A prohibition may result in legal issues regarding interstate commerce.

- A request for legislative action might be most appropriate for any change in the lawfulness of repacked foreign crab meat in North Carolina. An action taken by the N.C. General Assembly would highlight the importance of strengthening the domestic crab meat market.

- If the MFC considers taking action, 15A NCAC Subchapter 03L Section .0200 (Crabs) would be most appropriate place in the MFC rules for any change in the lawfulness of repacked foreign crab meat in North Carolina.

- If the MFC considers taking action, a more-focused alternative could be to prohibit the repacking of foreign crab meat by N.C. crab processors only, but this would still allow repacked foreign crab meat from other states to be marketed in North Carolina.

Action Needed

For informational purposes only, **no action is needed at this time.**

State of North Carolina | Division of Marine Fisheries
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Information on Repacking of Foreign Crab Meat in North Carolina

April 13, 2020

I. SUBJECT

Provide summary information on the requirements and practice of repacking of foreign crab meat by N.C. permitted crustacea processors and the use of repacked foreign crab meat by N.C. businesses other than permitted processors such as grocery stores and retail outlets.

II. ORIGINATION

During the "Issues from Commissioners" portion of the Feb. 20, 2020 Marine Fisheries Commission (MFC) meeting, Commissioner Doug Cross requested that the Director of the Division of Marine Fisheries (DMF) consider developing an information paper to amend N.C. MFC Rule 15A NCAC 18A .0173 regarding the repacking of foreign crab meat. Commissioner Cross requested the DMF to examine the possibility of making it unlawful to repack or possess foreign crab meat in North Carolina unless it remains in the original container. The Commissioner expressed that recent publicity regarding foreign crab meat being fraudulently represented as local blue crab product hurts North Carolina's crab meat reputation and that the only reason for foreign crab meat to be repacked is to defraud the consumer. The request did not apply to value-added products such as crab cakes or use of foreign crab meat for restaurant use.

III. BACKGROUND

Crab Picking Industry in North Carolina

Blue crab (*Callinectes sapidus*) supports the largest and most valuable commercial fishery in North Carolina (NCDMF 2019). An important part of this fishery involves the harvest of hard-shell crabs from N.C. waters to be sold to DMF certified and permitted crab processors. In North Carolina, the number of crab processors, otherwise known as "crab picking" facilities, has decreased significantly from as many as 43 in 1990 to 14 currently. Potential factors in the reduced numbers include the live crab or "basket" market where dealers in other states pay higher prices for live crabs, the lack of a steady supply of live crabs due to reduced overall landings during some years, and competition from lower cost crab meat imported from overseas or other states (NCDMF 2020).

Crab processors typically cook baskets of live crabs in a steam retort cooker under pressure to eliminate food-borne pathogens such as bacteria, and produce a product that is shelf-stable. After cooking, the whole crabs are air-cooled prior to being stored in refrigeration. Employees then use sanitary techniques to pick the meat of the crab for subsequent packing, typically into individual plastic containers labeled with their particular brand. Although there is no consensus regarding shelf-life, it appears that N.C. crab processors use a range of 10-14 days, if properly stored, with the extremes being as low as 7 days and as high as 21.

The processor may also use pasteurization as an alternative or additional process to further extend the shelf-life of the product by months. Pasteurization involves an additional heating and cooling process after the meat is placed in a hermetically sealed container, typically a metal can.

Repacking

Processors that are certified and permitted by DMF as a crustacea repacker can also repack crab meat that has been previously cooked and packed initially. Processors who repack usually do so in order to market the product in their own branded containers. Repacking involves transferring crustacea product from the original packed container into the repacker's branded container using sanitary techniques in accordance with N.C. MFC rules (15A NCAC 18A Section .0100-.0191, *Handling: Packing: and Shipping of Crustacea Meat*). Examples of required sanitary techniques include maintaining a safe temperature during repacking in order to limit bacterial growth, and taking precautions such as sanitizing utensils, tables, etc. to limit possible contamination from the packing process. The repacker is required to label the repacked container with their name, address, certification number followed by the letters "RP", and a code indicating the repack date.

In addition to repacking domestically sourced crab product, processors can also repack product from foreign sources. Sources include Asia and South America with countries such as Indonesia, Vietnam, China, Mexico, Brazil, and Venezuela. Imports include the meat from two types of "swimming crabs" that are related to blue crab: *Portunidae* (family that includes blue crabs) and *Callinectes* (blue crab genus). Processors who repack meat from foreign sources typically receive pasteurized product in cans and then repack the product directly into their own branded plastic containers. In addition to the labeling requirements for repacked containers described above, containers that are repacked with foreign crab meat are required to be "labeled in accordance with Federal labeling requirements" as directed in MFC rules 15A NCAC 18A .0136 and .0173.

Labeling Requirements

Regarding federal labeling requirements, Section 304 of the Tariff Act of 1930, as amended (19 U.S.C. 1304), requires that, unless excepted, every article of foreign origin, or its container, must be legibly, permanently, and conspicuously marked to indicate the country of origin to an ultimate purchaser in the U.S. The primary purpose of the country of origin marking statute is to "mark the goods so that at the time of purchase the ultimate purchaser may, by knowing where the goods were produced, be able to buy or refuse to buy them, if such marking should influence his will" United States v. Friedlaender & Co., 27 C.C.P.A. 297, 302, C.A.D. 104 (1940).

Further, U.S. Customs and Border Protection Headquarters Ruling Letter #732337 dated Aug. 16, 1989 clarified that repacked crab meat does not substantially transform the product and is therefore subject to the marking requirements of 19 U.S.C. 1304. Internal correspondence with U.S. Customs and Border Protection also confirms that the repacker has the duty to mark the new package with the country of where the product originates. Furthermore, although the product may be exempt from the U.S. Department of Agriculture Country of Origin Labeling (COOL) requirements, this has no bearing on the applicability of the Customs and Border Patrol marking requirements and so the product must be marked with its country of origin.

Virginia and Maryland also have significant blue crab industries via the Chesapeake Bay, and like North Carolina have similar crab processing operations. It should also be noted that both Virginia (*Virginia Administrative Code 12VAC5-165-310. Improper Labeling of Foreign Crab Meat*) and Maryland (*Code of Maryland Regulations Sec. 10.15.02.14. Labeling and Marking of Crab Meat Containers*) also currently allow foreign crustacea meat to be repacked, provided the country of origin is properly indicated on the product container.

Negative Publicity

Two recent high profile federal cases involving seafood fraud have received much media attention, with one involving a N.C. crustacea processor and the other a VA crustacea processor. The owner of the N.C. processor was sentenced to 12 months and one day in prison, followed by three years of supervised release, and is required to pay a $250,000 fine for his role in falsely labeling millions of dollars' worth of foreign crab meat as "Product of USA." The business is also required to pay a fine of $500,000. A U.S. Department of Justice news release stated "Seafood mislabeling is consumer fraud that undermines efforts of hardworking, honest fisherman [*sic*] and the free market by devaluing the price of domestic seafood," said Acting U.S. Attorney General Norman Acker III for the Eastern District of North Carolina. "In this case, the fraudulent scheme artificially deflated the cost of domestic blue crab and gave…an unacceptable economic advantage over law-abiding competitors."

The owner of a VA processor pleaded guilty in federal court to falsely labeling millions of dollars' worth of foreign crab meat as "Product of USA". According to a U.S. Department of Justice news release, "As part of the plea, he admitted that part of the conspiracy was to purchase discounted foreign crab meat, some of which was referred to as "distressed" because it was approaching or beyond its posted "best used by" dates. He admitted to knowing that company employees "re-conditioned" the "distressed" crab meat by re-pasteurizing it, and then packaging the re-conditioned meat into the company's containers" thus passing on a potential health hazard by introducing the seafood of unknown origin.

In both cases, the firms admitted that they were not able to process sufficient quantities of domestic blue crab to meet customer demands. The companies used foreign crab meat to fulfill customer orders to make up for the shortfalls.

IV. AUTHORITY

U.S. Constitution
Article 1, Section 8, Clause 3 "Commerce Clause"

U.S. Code
19 U.S.C. § 1304 Marking of imported articles and containers

N.C. General Statutes
§ 113-134. Rules.
§ 113-182. Regulation of fishing and fisheries
§ 113-221.2. Additional rules to establish sanitation requirements for scallops, shellfish, and crustacea; permits and permit fees authorized
§ 143B-289.52. Marine Fisheries Commission – powers and duties.

N. C. Marine Fisheries Commission Rules (April 1, 2020)
15A NCAC 18A .0136 Applicability of Rules
15A NCAC 18A .0173 Repacking

V. DISCUSSION

The MFC request to examine the possibility of making it unlawful to repack foreign crab meat or possess foreign crab meat in North Carolina that has been repacked brings forward a few issues that need to be evaluated. A change as described would affect a portion of the existing crab meat industry in North Carolina. An informal poll of processors by DMF staff indicates that there are currently three crustacea processing facilities in North Carolina that engage in repacking of foreign crab meat as described above, out of the 14 total permitted processors in the state.

A change as described would also affect grocery stores and retail outlets in North Carolina statewide that market foreign crab meat that has been repacked into a container other than the original. The sheer number of outlets and geographic spread would also create a significant enforcement challenge for DMF Marine Patrol.

It should also be noted that grocers and retail outlets also market foreign crab meat that remains in the original containers as initially packed in the source country, as some firms in other states also own crab picking operations overseas. Although the request would not apply to this situation, enforcement would have to differentiate repacked foreign crab meat vs. foreign crab meat that is in the original container to identify legal vs. unlawful product. Foreign crab meat that has been repacked should be able to be identified as "repacked" product by locating the required state crustacea certification number and "RP" designation on the container.

The fact that Virginia and Maryland would still allow repacked foreign crab meat with import avenues into North Carolina is also an issue to examine. The *Commerce Clause* is a provision of the U.S. Constitution (Article 1, Section 8) that authorizes Congress to regulate commerce "among the several states." The *Commerce Clause* has been viewed as a grant of congressional authority and a limitation on the regulatory authority of the states. With that said, there have been a number of interpretations on the clause and the balance of power between the federal government and the states. One example is the "Dormant Commerce Clause", which is a doctrine inferred from the *Commerce Clause* by the U.S. Supreme Court. The "Dormant Commerce Clause" allows the federal government to prevent economic discrimination between states by protectionist policies. An example would be that a state should not be permitted to pass laws benefiting itself that also burdens another state (interstate commerce).

There appears to be some precedent in N.C. MFC rules and policies regarding commerce between states. An example is the minimum oyster size requirement during the open oyster season. Rule 15A NCAC 03K .0201 allows the DMF Director, via proclamation, to specify a minimum size of oysters that can be possessed. Rule 03K .0207 exempts an oyster Aquaculture Operation from that size limit. This rule prohibits non-Aquaculture Operation oysters from another state that are under the current size limit to be in North Carolina even if legal in the source state. The reasoning behind this requirement is an oyster resource issue, not an issue of public health or commerce. Regardless of applicability, the potential interstate issue for repacked crab meat should be evaluated by legal staff.

If a change in the lawfulness of repacked foreign crab meat in North Carolina is considered, it appears that the Subchapter 18A .0100-.0191 Section of the N.C. MFC rules (Handling: Packing: and Shipping of Crustacea Meat) would not be the most appropriate place to address it. N.C. General Statute 113-221.2 (Additional rules to establish sanitation requirements for scallops, shellfish, and crustacea) gives the MFC the authority to adopt rules establishing sanitation requirements for the harvesting, processing and handling of scallops, shellfish, and crustacea "for the protection of public health". When conducted in accordance with sanitary rules, the repacking of foreign crab meat into another container does not pose a health issue.

Subchapter 03L Section .0200 of the N.C. MFC rules (Crabs) might be more appropriate for this type of restriction if rulemaking is considered. N.C. General Statutes 113-134, 113-182 and 143B-289.52 give N.C. MFC the authority to regulate and adopt rules regarding the marine and estuarine resources within its jurisdiction. With that said, the proposal to restrict foreign crab meat in North Carolina that has been repacked may be a difficult issue to promulgate via rulemaking due to the potential interstate commerce issue.

The most appropriate avenue for a restriction of this type may be a request for a legislative change. A change put in place by the N.C. General Assembly may be a more significant signal about the importance of strengthening the domestic crab meat market.

An alternative change, if any, with less effect would be to only prohibit the repacking of foreign crab meat by NC processors. This could result in unfair competition issues for the NC processors that currently participate in this activity. In this scenario, North Carolina crab processors would be prohibited from repacking foreign crab meat, while repacked foreign crab meat from processors in other states could still be marketed in North Carolina grocery stores and retail outlets. Also, this scenario may not resolve the original concern expressed which was the opinion that foreign crab meat in a container other than the container that it was initially packed in could deceive the customer even if it is labeled with the country of origin.

VI. SUMMARY FINDINGS

- Negative publicity regarding fraud may have an effect on the reputation of the N.C. crab meat industry and decrease consumer confidence in authentic "Product of USA" crab meat.
- A prohibition of foreign crab meat in North Carolina (unless it remains in the original packed container) would have an economic impact on some N.C. crab processors and a significant number of grocery stores and retail outlets that market that type of product.
- A prohibition could result in significant enforcement challenges for DMF Marine Patrol.
- A prohibition may result in legal issues regarding interstate commerce.
- A request for legislative action might be most appropriate for any change in the lawfulness of repacked foreign crab meat in North Carolina. An action taken by the N.C. General Assembly would highlight the importance of strengthening the domestic crab meat market.
- If the MFC considers taking action, 15A NCAC Subchapter 03L Section .0200 (Crabs) would be most appropriate place in the MFC rules for any change in the lawfulness of repacked foreign crab meat in North Carolina.
- If the MFC considers taking action, a more-focused alternative could be to prohibit the repacking of foreign crab meat by N.C. crab processors only, but this would still allow repacked foreign crab meat from other states to be marketed in North Carolina.

VII. REFERENCES CITED

NCDMF. 2019. North Carolina Division of Marine Fisheries License and Statistics Section Annual Report. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Morehead City, NC.

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U.S. Department of Justice (2020, January 9) Seafood Processor and Owner Sentenced for Selling Foreign Crab Meat Falsely Labeled as Product of USA. https://www.justice.gov/usao-ednc/pr/seafood-processor-and-owner-sentenced-selling-foreign-crab-meat-falsely-labeled-product

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Prepared by Shannon Jenkins, shannon.jenkins@ncdenr.gov, 252-808-8148
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March 24, 2020
Revised: April 13, 2020

RULEMAKING UPDATE

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ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Catherine Blum, Fishery Management Plan and Rulemaking Coordinator
Fisheries Management Section

SUBJECT: Rulemaking Update

Issues

Update the Marine Fisheries Commission (MFC) on the status of rulemaking in support of the Periodic Review and Expiration of Existing Rules per G.S. 150B-21.3A and request the MFC vote on approval to begin the rule readoption process for a portion of rules in 15A NCAC 18A.

Findings

- Periodic Review and Readoption of Rules – Requirements
  - North Carolina G.S. 150B-21.3A, adopted in 2013, requires state agencies to review existing rules every 10 years.
  - The initial review comment period on the 164 MFC rules in 15A NCAC 18A was held from Feb. 26 - May 7, 2018; no public comments were received. All rules were determined to be necessary with substantive public interest and must be readopted as though they are new rules.
  - On Jan. 16, 2020, the Rules Review Commission (RRC) approved the readoption schedule for these rules requested by the MFC of June 30, 2024. The MFC must readopt all rules by this deadline or the rules will expire and be removed from the N.C. Administrative Code.
- Recreational Water Quality Program Rules – Changes Needed
  - The first group of rules in 15A NCAC 18A being considered for readoption is found in Section .3400, Coastal Recreational Waters Monitoring, Evaluation, and Notification.
  - These rules were adopted in 2004 and need updating to bring the N.C. Recreational Water Quality (RWQ) Program into compliance with new U.S. Environmental Protection Agency (EPA) criteria and standards and to be more efficient as a program in protecting public health.
  - The intended effective date for readoption of these rules (April 1, 2021) coincides with the start of the 2021 recreational swimming season, creating a smooth transition for the regulated public and division staff in implementing the updated standards.

Recommendation

Staff recommends the MFC vote on approval to begin the rule readoption process for the seven rules in 15A NCAC 18A .3400, Coastal Recreational Waters Monitoring, Evaluation, and Notification. For more information, please refer to the Rulemaking section of the briefing materials.

State of North Carolina | Division of Marine Fisheries
3441 Arendell Street | P.O. Box 769 | Morehead City, North Carolina 28557
252-726-7021

Rulemaking Update

15A NCAC 18A - Sanitation

Periodic Review and Readoption of Rules – Readoption Schedule Update

The process of rule readoption for MFC rules in 15A NCAC 18A is scheduled to begin at the MFC's May 2020 business meeting. Given the large number of rules subject to readoption, the wide variety of issues regulated by these rules, and the generally controversial nature of the rules, this will be the first of four years to readopt rules. On Jan. 16, 2020, the RRC approved the readoption schedule requested by the MFC of June 30, 2024. The MFC is now ready to begin the rule readoption process at its May 2020 business meeting.

2020-2021 Rulemaking Cycle

Recreational Water Quality Program Rules – Changes Needed

The first group of rules in 15A NCAC 18A being considered for readoption is found in Section .3400, Coastal Recreational Waters Monitoring, Evaluation, and Notification. These rules were adopted in 2004 and need updating to bring the RWQ Program into compliance with new EPA criteria and standards and to be more efficient as a program in protecting public health. The purpose of the program is to protect public health by monitoring recreational coastal waters and to notify the public when samples collected exceed the safe swimming standard. The intended effective date for readoption of these rules (April 1, 2021) coincides with the start of the 2021 recreational swimming season, creating a smooth transition for the regulated public and division staff in implementing the updated standards.

In 2014, the EPA updated its regulations on marine recreational water quality standards, known as the National Beach Guidance and Required Performance Criteria for Grants. This not only provides specific rules and criteria related to beach water quality, but also provides a grant-based funding pathway to assist states in ongoing monitoring and reporting. The RWQ Program is already following a portion of this 2014 guidance in terms of monitoring and enforcement.

Additional monitoring requirements and notification requirements need to be implemented in rule to comply with the federal program and remain grant eligible. These new requirements would simply shift the protocols in place for both monitoring recreational waters and notifying the public of swimming alerts. The proposed changes would ensure equal protection for swimmers by requiring that the same bacteriological threshold triggers public health advisories for all swimming locations, regardless of usage frequency. Modifications to the notification processes would also minimize delays and reduce confusion.

Staff recommends the MFC begin the rule readoption process at its May 2020 business meeting for the seven rules in 15A NCAC 18A, Coastal Recreational Waters Monitoring, Evaluation, and Notification, by voting on Notice of Text for Rulemaking for readoption and readoption through repeal of 15A NCAC 18A .3400. For more information, please refer to the 2020-2021 rulemaking cycle and the fiscal analysis of the proposed rules that are in the Rulemaking section of the briefing materials.

Due to protective measures to help prevent the spread of COVID-19 and subsequent impacts to staff workload, rulemaking to begin readoption of additional rules in 15A NCAC 18A is scheduled for the MFC's August 2020 business meeting.

15A NCAC 03 - Marine Fisheries

2019-2020 Rulemaking Cycle

At its February 2020 meeting, the MFC approved final readoption of 15A NCAC 03M .0509, Tarpon, and 03O .0108, License and Commercial Fishing Vessel Registration Transfers, as originally published in the Oct. 1, 2019 issue of the *N.C. Register*. Following the MFC meeting, at least 10 letters that objected to the tarpon rule and requested review of the rule by the legislature were received by the RRC. On April 16, 2020, the RRC approved both rules. The tarpon rule is subject to legislative review per G.S. 150B-21.3, Effective date of rules. Both rules are subject to legislative review per S.L. 2019-198 and G.S. 14-4.1, Legislative review of regulatory crimes. Due to the proximity of the RRC approval of the rules to the start of the 2020 legislative session, these rules will likely not be considered until the 2021 legislative session.

2020-2021 Rulemaking Cycle

Due to protective measures to help prevent the spread of COVID-19 and subsequent impacts to staff workload, rulemaking to begin readoption of additional rules in 15A NCAC 03 is scheduled for the MFC's August 2020 business meeting.

Background Information

Periodic Review and Expiration of Existing Rules per G.S. 150B-21.3A

Session Law 2013-413, the Regulatory Reform Act of 2013, implemented requirements known as the "Periodic Review and Expiration of Existing Rules." These requirements are codified in a new section of Article 2A of Chapter 150B of the General Statutes in G.S. 150B-21.3A. Under the requirements, each agency is responsible for conducting a review of all its rules at least once every 10 years in accordance with a prescribed process.

The review has two parts. The first is a report phase, which has concluded, followed by the readoption of rules. An evaluation of the rules under the authority of the MFC was undertaken in two lots (see Figure 1.) The MFC has 211 rules in Chapter 03 (Marine Fisheries), of which 172 are subject to readoption, and 164 rules in Chapter 18, Subchapter 18A (Sanitation) that are also subject to readoption. The MFC is the body with the authority for the approval steps prescribed in the process.

<table>
<tr><th>Rules</th><th>2017</th><th>2018</th><th>2019</th><th colspan="2">2020</th><th>2021</th><th>2022</th><th>2023</th><th>2024</th></tr>
<tr><td>Chapter 03
(172 rules)</td><td>Report</td><td>41 Rules Readopted</td><td>2 Rules Readopted</td><td colspan="3">Rule Readoption (129)</td><td>6/30/22 deadline</td><td colspan="2"></td></tr>
<tr><td>Subchapter 18A
(164 rules)</td><td colspan="2"></td><td>Report</td><td colspan="5">Rule Readoption (164)</td><td>6/30/24 deadline</td></tr>
</table>

Figure 1. Marine Fisheries Commission rule readoption schedule to comply with G.S. 150B-21.3A, Periodic Review and Expiration of Existing Rules.

Action Needed

The MFC is scheduled to begin the rule readoption process for rules in 15A NCAC 18A by voting on Notice of Text for Rulemaking for readoption and readoption through repeal of 15A NCAC 18A .3400.

N.C. Marine Fisheries Commission
2020-2021 Annual Rulemaking Cycle
Package A

May 2020

Time of Year	Action
February-April 2020	Fiscal analysis of rules prepared by DMF staff and approved by Office of State Budget and Management
May 2020	MFC approves Notice of Text for Rulemaking
August 2020	Publication of proposed rules in the *North Carolina Register*
August-October 2020	Public comment period held
September 2020	Public hearing held (details to be determined)
November 2020	MFC considers approval of permanent rules
January 2021	Rules reviewed by Office of Administrative Hearings Rules Review Commission
April 1, 2021	Proposed effective date of rules
April 1, 2021	Rulebook supplement available online
April 15, 2021	Commercial license sales begin

Fiscal Impact Analysis of Proposed Recreational Water Quality Rule Amendments

Rule Amendments: 15A NCAC 18A .3400

Name of Commission: N.C. Marine Fisheries Commission

Agency Contact: David Dietz, Fisheries Economics Program Manager
N.C. Division of Marine Fisheries
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Impact Summary: State government: Yes
Local government: No
Federal government: No
Substantial impact: No

Authority:

North Carolina General Statutes

G.S. 113-134.	Rules.
G.S. 113-182.	Regulation of fishing and fisheries.
G.S. 113-221.3.	Monitoring program for State coastal fishing and recreation waters; removal or destruction of warning signs.
G.S 143B-289.52.	Marine Fisheries Commission - powers and duties.

Federal Regulations
Beaches Environmental Assessment and Coastal Health Act (BEACH Act) of 2000

I. Necessity:

The proposed amendments readopt and repeal through readoption seven rules in 15A NCAC 18A .3400 pursuant to requirements of G.S. 150B-21.3A. Additionally, North Carolina recreational water quality rules established in 2004 require text amendments to align with federal U.S. Environmental Protection Agency (EPA) criteria and standards that were updated in 2014. These changes ensure equal protection for swimmers by requiring that the same bacteriological threshold triggers public health advisories for all swimming locations, regardless of usage frequency. Notification processes modifications will also reduce delays and confusion, without generating an increased frequency of swimming advisories for the public. Additional changes are proposed to more logically align with new criteria and create more efficient protocols for the program.

II. Summary

These rules have been reviewed to conform to the requirements of G.S. 150B-21.3A, Periodic Review and Expiration of Existing Rules. In 2014, the EPA updated its regulations on marine

recreational water quality standards, known as the National Beach Guidance and Required Performance Criteria for Grants. This not only provides specific rules and criteria related to beach water quality, but also provides a grant-based funding pathway to assist states in ongoing monitoring and reporting. The N.C. Recreational Water Quality (RWQ) Program is already following a portion of this 2014 guidance in terms of monitoring and enforcement. Additional monitoring requirements and notification requirements need to be implemented in rule to comply with the federal program. These new requirements would not incur any additional time or material costs to the state; instead, they simply shift the protocols in place for both monitoring recreational waters and notifying swimming alerts to the public. In tandem with these amendments, other changes are proposed to improve RWQ Program efficiency in relation to these federal requirements and eliminate redundancies within rules to N.C. statutes.

III. Introduction and Purpose of Rule Changes

The purpose of the Marine Fisheries Commission (MFC) is to manage, restore, develop, cultivate, conserve, protect, and regulate the marine and estuarine resources within its jurisdiction, as described in G.S. 113-132, including commercial and recreational fisheries resources (Chapter 143B, Article 7, Part 5D). The MFC is also required to adopt rules to provide for a water quality monitoring program for the coastal recreation waters of the state and to allow the Department of Environmental Quality to implement the federal Beaches Environmental Assessment and Coastal Health Act of 2000 (G.S. 113-221.3). North Carolina G.S. 150B-21.3A, adopted in 2013, requires state agencies to review existing rules every 10 years. Following an initial review, rules will be reviewed on a 10-year review cycle. The initial review comment period on all MFC rules in 15A NCAC 18A was held from Feb. 26 - May 7, 2018; no public comments were received. The MFC subsequently approved the report on the review of the rules at its August 2018 meeting. The final report for rules in 15A NCAC 18A was reviewed and approved by the Rules Review Commission at its January 2019 meeting. The report was forwarded to the Joint Legislative Administrative Procedure Oversight Committee for final determination. The committee met March 24, 2019, completing the review process for these rules.

The final determinations were unchanged from how they were originally submitted. As a result, all 164 rules were determined to be necessary with substantive public interest and must be readopted as though they were new rules. On Jan. 16, 2020, the Rules Review Commission approved the readoption schedule requested by the MFC of June 30, 2024 for these rules. This document addresses the first group of rules in 15A NCAC 18A being considered for readoption.

In July of 1999, North Carolina first began permanently funding recreational water quality monitoring and public notification; these standards at the time were based on the U.S. EPA’s Clean Water Act guidelines. However, one year later the U.S. Congress passed the BEACH Act, which formalized recreational water quality rules, mandating each state have a beach monitoring program in place by 2004, and established a federal grant program for state monitoring. With a successful program already in place, North Carolina applied for and received federal funding in 2002 which was aimed at helping the state meet the new requirements of the BEACH Act.

In that same year, coastal states expressed to the EPA the need for guidance with which to run the beach monitoring programs. In 2002, the first National Beach Guidance and Required Performance Criteria was published, which required all states to implement it in order to remain grant eligible. To comply, North Carolina needed to change the bacteriological indicator and

action levels for which advisories were issued. These amendments were put into rule and adopted in 2004. Adhering to the EPA's guidance document is a necessity because the grant now funds more than half of the RWQ Program, funding items like salaries, equipment, and supplies for day to day operations. Currently, the RWQ Program's rules that were adopted in 2004 reflect the performance criteria published in 2002.

From 2002 to 2014, the EPA and coastal states created a solid foundation that successfully implemented the national and state BEACH Act monitoring and notification programs. This included an increase in consistency among the states as well as the quality, quantity, and timeliness of beach water quality data. These successes prompted the conception of the updated National Beach Guidance and Required Performance Criteria for Grants in 2014. Significant changes were made with the release of this updated document. One of the changes was to ensure the equal protection for swimmers by recommending the same bacteriological threshold for all swimming locations regardless of usage category. These bacteriological limits will primarily impact how the Division of Marine Fisheries issues public notifications when samples collected exceed the safe swimming standard.

These changes need to be addressed in North Carolina rules to remain compliant and grant eligible. Firstly, the state's Tier II and III beaches, defined by usage frequency, would be combined and have their monitoring criteria changed to match Tier I beaches, which are already in compliance with federal standards. This would reclassify all Tier III beaches as Tier II, and conform all monitoring and notification standards to conform with federal standards and generate a more efficient and logical process. Additionally, the state's "Swimming Alert" notification would be changed to a "Pending Swimming Advisory". This would allow for notification immediately following a non-compliant sample via social media, rather than a formal news media release, which would create a faster and more understandable approach for the public. These rule amendments to meet federal standards are found in 15A NCAC 18A .3402, .3403 and .3405.

The idea behind these changes is due to continuous delays in the media reporting on a news release, often a day or two later. The EPA has approved that issuing a social media release is an acceptable form of public notification, which is a requirement under the performance criteria. Once a swimming area exceeds the bacteriological limit, a resample is collected immediately. Statistically, from data compiled between 2013 and 2019, 84% of resamples collected fell below the bacteriological limit. This means alerts typically last for 24 hours and are rescinded the next day. The delay in reporting caused confusion to the public. With the proposed changes to the rules, a news release will be issued only when a "Swimming Advisory" is issued, which will happen after the resample exceeds the bacteriological limit. This will remain in place for a minimum of a week. If the news media is delayed in reporting by a day or two, the swimming advisory will still be active. Removing the language involving the "Swimming Alert" classification from the rules, and adding a "Pending Swimming Advisory" and assigning the same bacteriological standard to all use categories in the rules will meet the necessary requirements for EPA compliance. These proposed changes would also allow the RWQ Program to operate more efficiently in protecting public health. Initially, when the 2014 performance guidance was released, there were concerns that there would be an increase in the number of advisories issued, but in fact there will not be any change based on the RWQ Program statistics of samples and resamples. Therefore, these proposed rule amendments would not produce any significant changes in recreational swimming behavior or access.

Lastly, other rule amendments are proposed to make minor improvements to the operational efficiency of the RWQ Program and eliminate unnecessary redundancies within rules to N.C. statute. Rule .3401 proposes changes to definitions to conform to the other rule changes and increase efficiency and simplicity. Rule .3404 codifies requirements to notify the swimming public about health risks associated with wastewater spills, which the RWQ Program is already implementing. Finally, rules .3406 and .3407 are repealed as those requirements can already be found in G.S. 113-221.3.

In summary, there are seven rules in 15A NCAC 18A .3400. Rules .3402, .3403 and .3405 contain proposed changes to bring the RWQ Program into compliance with new EPA criteria and standards. Additionally, rules .3403 and .3405 are simplified by pointing to the bacteriological limits provided in .3402 instead of repeating the limits in each rule. Rule .3401 proposes changes to definitions to conform to the other rule changes. Proposed changes to Rule .3404 would codify requirements to notify the swimming public about health risks associated with wastewater spills. Finally, Rules .3406 and .3407 are proposed for repeal, as they merely repeat requirements of G.S. 113-221.3. Additional proposed changes to rules make minor and conforming changes, including punctuation, grammar, capitalization, and consistent use of terms.

IV. Fiscal Impact

Benefits

These proposed rule amendments would generate small economic benefits to the state across a range of categories. Specifically, they would lead to benefits to the public in terms of improved information exchange and potential improvements to public health in relation to recreational water access. Additionally, approval of these proposed rule amendments would lead to a guarantee of annual federal grant monies that support half of the RWQ program budget.

The main focus of these amendments is to use the same federal bacteriological threshold for all swimming locations regardless of usage category, which in turn impacts how the Division of Marine Fisheries issues public notifications when samples collected exceed the safe swimming standard. While this will benefit the public by generating a more timely and efficient notification process, it will also not result in an increased frequency of pending swimming advisories. Thus, this proposed rule amendment would likely lead to non-quantifiable, negligible benefits in information timing and access, which can aid public health in terms of recreational water use, without any offsetting costs of decreased recreational activity as notification frequency would remain static.

Additionally, this would also better assure future grant monies from the EPA's National Beach Guidance and Required Performance Criteria for Grants, which currently provides roughly $277,000 annually. This grant package represents approximately 50% of the RWQ Program's budget and is critical towards supporting its activities. The U.S. EPA allows states three years to adopt new federal criteria in rule after it's issued, after which grant eligibility becomes endangered. However, due to the ongoing communication between states and the EPA, a demonstration of action towards rule change has been accepted as enough compliance to be grant eligible annually. The newest EPA criteria was issued in 2014. Since 2017, the RWQ Program has demonstrated an ongoing process of adopting these criteria and forming them into rule. This has allowed the Program to remain grant eligible under the EPA's approval. However, now that these proposed rule amendments have been finalized in the state, they must be approved and codified in order to maintain these federal grants into the future. Lastly, the additional proposed

rule amendments to definition changes, text edits, and rule repeal all contribute to increased efficiency for the RWQ Program as it better aligns itself with federal guidelines.

Costs

These proposed rule amendments do not incur any state costs in terms of enforcement, staff labor, or environmental damage, and therefore should not be considered. Staff already samples the water quality of swimming areas and notifies the public when bacteriological limits are exceeded.

There is a negligible cost component to the amendments proposed in 15A NCAC 18A .3404 related to signage purchasing. Specifically, the RWQ Program estimates that $1,743.50 over the next five years will need to be spent to replace signage due to vandalism or natural degradation, which would align the rule text with current practice. Additionally, proposed rule changes would codify requirements to post signs to alert the public of the health risk associated with swimming in areas impacted by wastewater spills, with an estimated cost of $500. Additional staff labor would not be required as this signage would be posted during ongoing monitoring activities. While these two requirements would incur a small cost to the Program, these are negligible cost components that are required to remain federally compliant, and would also be entirely funded by federal grant monies.

V. Appendix

15A NCAC 18A .3401 is proposed for readoption with substantive changes as follows:

SECTION .3400 - COASTAL RECREATIONAL WATERS MONITORING, EVALUATION, AND NOTIFICATION

15A NCAC 18A .3401 DEFINITIONS

The following definitions shall apply ~~throughout~~ to Section ~~18A~~ .3400 of this Subchapter:

(1) "Division" means the Division of Marine Fisheries or its authorized agent.

~~(1)~~(2) "Enterococcus" means a gram positive coccoid-shaped bacteria that is found in the intestinal tracts of warm-blooded animals that include *Enterococcus faecalis, Enterococcus faecium, Enterococcus avium, and Enterococcus gallinarium.*

~~(2)~~(3) "Geometric mean" means the mean of "n" positive numbers obtained by taking the ~~"n"th~~ "n^{th}" root of the product of the numbers with at least five samples collected within a ~~30-day~~ 30-day period.

(4) "Pending swimming advisory" means a notification to the public that recommends no primary contact with the water in a specific swimming area when bacteriological limits are exceeded but, does not close a swimming area to the public. A pending swimming advisory shall include a public notification via social media release to notify the public of the risks of swimming in the area. A pending swimming advisory is followed by a resample that will determine if a swimming advisory will be issued.

~~(3)~~(5) "Point source discharge" means the discharge of liquids through a pipe, drain, ~~ditch~~ ditch, or other conveyance into a swimming area.

~~(4)~~(6) "Primary contact" means an activity in water in which a person's head is partially or completely submerged.

(7) "Resample" means a water sample that is collected after the results of the initial water sample collected are processed and the results are analyzed.

~~(5)~~(8) "Storm water discharge" means any natural or manmade conveyance of rainwater or the resultant runoff into coastal recreational waters.

~~(6)~~(9) "Swimming advisory" means a notification to the public that recommends no primary contact with the water in a specific swimming area ~~for public health reasons~~ when bacteriological limits are exceeded, but does not close a swimming area to the public. A swimming advisory shall include a sign posted at the site of the advisory and a ~~press release~~ public notification via social media and news release to notify the public of the risks of swimming in the area.

~~(7) "Swimming alert" means a notification to the public by media contact including a press release to warn the public of risks of swimming in an area that exceeds bacteriological swimming area levels.~~

~~(8)~~(10) "Swimming area" means a coastal recreation area that is used for primary contact located within waters classified by the Division of Water ~~Quality~~ Resources as ~~SA, SB, or SC.~~ SC, SA, or SB as set forth in 15A NCAC 02B .0220-.0222.

~~(9)~~(11) "Swimming season" means from April 1 through October 31 of each year.

~~(10)~~(12) "Tier I swimming area" means a swimming area used daily during the swimming season, ~~including any public access swimming area and any other swimming area where people use the water for primary contact,~~ including all oceanfront ~~beaches.~~ beaches that are monitored by the Division.

~~(11)~~(13) "Tier II swimming area" means a swimming area ~~used an average of three days a week~~ that is not used daily during the swimming season.

~~(12) "Tier III swimming area" means a swimming area used an average of four days a month during the swimming season.~~

~~(13)~~(14) "Winter season" means from November 1 through March 31 of each year.

History Note: *Authority G.S. ~~130A-233.1;~~ 113-134; 113-182; 113-221.3; 143B-289.52;*
Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3402 is proposed for readoption with substantive changes as follows:

15A NCAC 18A .3402 BACTERIOLOGICAL LIMITS FOR SWIMMING AREAS

(a) The enterococcus level in a Tier I swimming area shall not equal or exceed either:

(1) ~~A~~ a geometric mean of 35 enterococci per 100 ~~milliliter~~ milliliters of ~~water,~~ water; ~~that includes a minimum of at least five samples collected within 30 days;~~ or

(2) ~~A~~ a single sample of 104 enterococci per 100 ~~milliliter~~ milliliters of water.

(b) The enterococcus level in a Tier II swimming area shall not equal or exceed a single sample of ~~276~~ 104 enterococci per 100 ~~milliliter~~ milliliters of water.

~~(c) The enterococcus level in a Tier III swimming area shall not exceed two consecutive samples of 500 enterococci per 100 milliliter of water.~~

History Note: *Authority G.S. ~~130A-233.1;~~ 113-134; 113-182; 113-221.3; 143B-289.52;*
Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3403 is proposed for readoption with substantive changes as follows:

15A NCAC 18A .3403 PUBLIC NOTICE OF INCREASED HEALTH RISKS IN SWIMMING AREAS

(a) Tier I Swimming areas:

~~(1) A swimming advisory shall be issued by the Division when samples of water from a swimming area exceeds a geometric mean of 35 enterococci per 100 milliliter during the swimming season.~~

~~(2) A swimming alert shall be issued by the Division when a single sample of water from a swimming area exceeds 104 enterococci per 100 milliliter and does not exceed 500 enterococci per 100 milliliter during the swimming season.~~

~~(3) A swimming advisory shall be issued by the Division when a sample of water from a swimming area exceeds a single sample of 500 enterococci per 100 milliliter during the swimming season.~~

~~(4) A swimming advisory shall be issued by the Division when at least two of three concurrent water samples collected at a swimming area exceeds 104 enterococci per 100 milliliter during the swimming season.~~

(1) A pending swimming advisory shall be issued by the Division of Marine Fisheries if a water sample from a swimming area is equal to or exceeds the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section, during the swimming season.

(2) A swimming advisory shall be issued by the Division if either of the following standards are exceeded during the swimming season:

(A) Both the initial water sample and resample collected from a swimming area is equal to or exceeds the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section; or

(B) The most recent five water samples collected within a 30-day period from a swimming area is equal to or exceeds the bacteriological limit set forth in Subparagraph (a)(1) of Rule .3402 of this Section.

(b) Tier II swimming areas:

~~(1) A swimming alert shall be issued by the Division when a single sample of water from a swimming area exceeds 276 enterococci per 100 milliliter and does not exceed 500 enterococci per 100 milliliter during the swimming season.~~

(1) A pending swimming advisory shall be issued by the Division if a water sample from a swimming area is equal to or exceeds the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section during the swimming season.

(2) A swimming advisory shall be issued by the Division ~~when a single sample~~ if both the initial water sample and resample collected ~~of water~~ from a swimming area is equal to or exceeds ~~500 enterococci per 100 milliliter~~ the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section during the swimming season.

~~(c) A Tier III swimming area with a water sample result of 500 enterococci per 100 milliliter or higher on the first sample shall be resampled the following day. If the laboratory results of the second sample exceed 500 enterococci per 100 milliliter a swimming advisory shall be issued by the Division.~~

~~(d)~~(c) Signs posted pursuant to this Section shall be placed or erected in open view where the public may see the ~~sign(s)~~ sign prior to entering the water.

~~(e)~~(d) Signs shall ~~convey~~ state the following:

> ATTENTION: SWIMMING IN THIS AREA IS NOT RECOMMENDED. BACTERIA TESTING INDICATES LEVELS OF CONTAMINATION THAT MAY BE HAZARDOUS TO YOUR HEALTH. THIS ADVISORY AFFECTS WATERS WITHIN 200' OF THIS SIGN. OFFICE OF THE STATE HEALTH DIRECTOR.

History Note: *Authority G.S.* ~~*130A 233.1;*~~ *113-134; 113-182; 113-221.3; 143B-289.52;*
Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3404 is proposed for readoption with substantive changes as follows:

15A NCAC 18A .3404 SWIMMING ADVISORIES FOR POINT SOURCE DISCHARGES INTO SWIMMING AREAS

(a) A wastewater treatment plant that discharges into swimming waters shall be posted by the Division of Marine Fisheries with at least one sign until the discharge is removed. The ~~sign(s)~~ sign for a wastewater treatment plant discharge shall ~~convey~~ state the following:

~~ATTENTION: THESE WATERS MAY BE CONTAMINATED BY HUMAN OR ANIMAL WASTE. SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.~~

WARNING! SEWAGE TREATMENT EFFLUENT DISCHARGE SITE. SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.

(b) A swimming advisory shall be issued by the Division and at least one sign shall be posted at the public access to swimming waters that have been impacted by a wastewater system failure. The sign for waters impacted by a wastewater spill shall state the following:

WARNING! WASTEWATER SPILL. SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.

~~(b)~~(c) A swimming advisory shall be issued by the Division and at least ~~two signs~~ one sign shall be posted at a storm drain or storm water discharge that is ~~actively~~ discharging into a Tier 1 swimming area. ~~Signs~~ A sign shall be placed to advise the public as they enter the area impacted by the ~~drain.~~ storm drain or storm water discharge. For dry weather discharges, ~~The signs~~ the sign ~~for a storm drain or storm water discharge~~ shall ~~convey~~ state the following:

~~SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.~~

WARNING! STORM WATER DISCHARGE AREA. SWIMMING WITHIN 200 YARDS OF THIS SIGN MAY INCREASE THE RISKS OF WATERBORNE ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.

For wet weather discharges, the sign shall state the following:

WARNING! STORM WATER DISCHARGE AREA. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. SWIMMING IS NOT RECOMMENDED WITHIN 200 YARDS OF THIS SIGN DURING ACTIVE DISCHARGE. FOR MORE INFORMATION, CALL 252-726-6827. OFFICE OF THE STATE HEALTH DIRECTOR.

~~(c)~~(d) A swimming advisory shall be issued by the Division and at least two signs shall be posted at a storm drain where flood waters are being pumped into a swimming area. ~~The signs shall remain posted for at least 24 hours after the pumping of flood waters has ceased.~~ The signs shall ~~convey~~ state the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

~~(d)~~(e) A swimming advisory shall be issued by the Division and at least two signs shall be posted at an area receiving dredge material on a swimming beach ~~when~~ if the dredge material is being pumped from an area closed to shellfish harvesting. The signs shall ~~convey~~ state the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

History Note: *Authority G.S. ~~130A-233.1;~~ 113-134; 113-182; 113-221.3; 143B-289.52;*
Eff. January 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3405 is proposed for readoption with substantive changes as follows:

15A NCAC 18A .3405 RESCINDING A PENDING SWIMMING ADVISORY OR SWIMMING ~~ALERT~~ ADVISORY

(a) A pending swimming advisory shall be rescinded by the Division of Marine Fisheries via social media release when the resample collected meets bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section.

~~(a)~~(b) A Tier I swimming area advisory shall be rescinded by the Division via social media and news release, including the removal of signs, when ~~two consecutive weekly water samples and the geometric mean meet the bacteriological limits in Rule 18A .3402(a) of this Section. A swimming alert shall be rescinded within 24 hours of compliance with Rule 18A .3402(a)(2) of this Section.~~ both of the following conditions are met:

(1) The geometric mean has met the bacteriological limit set forth in Subparagraph (a)(1) of Rule .3402 of this Section.

(2) Two consecutive weekly water samples meet the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section.

~~(b)~~(c) A Tier II ~~or Tier III~~ swimming area advisory ~~or alert~~ shall be rescinded by the Division via social media and news release, including the removal of signs, after water samples meet the bacteriological ~~standard in Rule 18A .3402(b) or (c) of this Section.~~ limit set forth in Subparagraph (b) of Rule .3402 of this Section.

~~(c)~~(d) A swimming advisory resulting from a ~~point source~~ flood water discharge or the discharge of dredge material shall be rescinded by the Division via social media and news release 24 hours after the discharge has ~~ceased.~~ ceased, to allow for tidal dispersion.

(e) A swimming advisory resulting from a wastewater system failure shall be rescinded by the Division via social media and news release, including the removal of signs, when failure has been corrected and water samples collected meet the bacteriological limit set forth in Subparagraph (a)(2) of Rule .3402 of this Section.

~~(d) When a swimming advisory or alert has been rescinded, the Division shall issue a press release to announce the lifting of the advisory or the alert and the sign(s) shall be removed immediately by the Division.~~

History Note: *Authority G.S. ~~130A-233.1;~~ 113-134; 113-182; 113-221.3; 143B-289.52;*
Eff. January 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3406 is proposed for repeal as follows:

15A NCAC 18A .3406 DESTRUCTION OF SIGNS

~~A person shall not mutilate, deface, pull down, destroy, hide, or steal any sign posted pursuant to this Section.~~

History Note: *Authority G.S. 130A-233.1;*
Eff. January 1, 2004;
Repealed Eff. April 1, 2021.

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15A NCAC 18A .3407 is proposed for repeal as follows:

15A NCAC 18A .3407 APPLICABILITY OF RULES

~~The rules of this Section shall apply to all marine recreational waters in coastal North Carolina.~~

History Note: *Authority G.S. 130A-233.1;*
Eff. January 1, 2004;
Repealed Eff. April 1, 2021.

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RULE SUSPENSIONS

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

April 27, 2020

MEMORANDUM

TO: N.C. Marine Fisheries Commission

FROM: Kathy Rawls, Fisheries Management Section Chief

SUBJECT: Temporary Rule Suspension

Issue
In accordance with the North Carolina Division of Marine Fisheries Resource Management Policy Number 2014-2, Temporary Rule Suspension, the North Carolina Marine Fisheries Commission will vote on any new rule suspensions that have occurred since the last meeting of the commission.

Overview
The following rule suspensions occurred since the November 2019 meeting, and in accordance with policy are subject to approval by the MFC and are noted as action items on the meeting agenda:

NCMFC RULE 15A NCAC 03M .0511 Bluefish

Suspension of this rule is for an indefinite period of time. Suspension of this rule allows the division to reduce bluefish creel limits in compliance with the requirements of the Mid-Atlantic Fishery Management Council/Atlantic States Marine Fisheries Commission Bluefish Fishery Management Plan to reduce recreational harvest of bluefish. This suspension was implemented in Proclamation FF-1-2020.

NCMFC Rule 15A NCAC 03J .0103 (h) Gill Nets, Seines, Identification, Restrictions

Suspension of portion of this rule is for an indefinite period of time. Suspension of this rule allows the division to implement year around small mesh gill net attendance requirements in certain areas of the Tar, Pamlico and Neuse River systems. This action was taken as part of a department initiative to review existing small mesh gill net rules to limit yardage and address attendance requirements in certain "hot spot" areas of the state. This suspension was implemented in Proclamation M-4-2020.

NCMFC Rule 15A NCAC 03R .0110 (4)(5) Crab Spawning Sanctuaries

Suspension of portions of this rule is for an indefinite period of time. Suspension of this rule allows the division to revise the boundaries for the Drum Inlet and Barden Inlet crab spawning sanctuaries in accordance with Amendment 3 to the N.C. Blue Crab Fishery Management Plan. This suspension was implemented in Proclamation M-7-2020.

State of North Carolina | Division of Marine Fisheries
3441 Arendell Street | P.O. Box 769 | Morehead City, North Carolina 28557
252-726-7021

NCMFC Rules 15A NCAC 03L .0201 (a)(b) Crab Harvest Restrictions, 03L .0203 (a) Crab Dredging and 03J .0301 (g)(h) Pots

Suspension of portions of these rules is for an indefinite period of time. Suspension of these rules allows the division to implement requirements for the blue crab fishery in accordance with Amendment 3 to the N.C. Blue Crab Fishery Management Plan. These suspensions were implemented in Proclamation M-8-2020.

In accordance with policy, the division will report current rule suspensions previously approved by the commission as non-action, items. The current rule suspensions previously approved by the commission are as follows:

NCMFC Rule 15A NCAC 03L .0103 (a)(1) Prohibited Nets, Mesh Lengths and Areas

Continued suspension of portions of this rule is for an indefinite period of time. This allows the division to adjust trawl net minimum mesh size requirements in accordance with the May 2018 Revision to Amendment 1 to the North Carolina Shrimp Fishery Management Plan. This suspension was implemented in proclamation SH-3-2019.

NCMFC 15A NCAC 03M .0516 Cobia

Continued suspension of this rule is for an indefinite period of time. This allows the division to manage the commercial and recreational cobia fisheries in accordance with management actions taken by the commission and in accordance with the Atlantic States Marine Fisheries Commission's Interstate Cobia Fishery Management Plan. This suspension was continued in Proclamation FF-15-2020.

NCMFC Rule 15A NCAC 03J .0501 Definitions and Standards for Pound Nets and Pound Net Sets

Continued suspension of portions of this rule is for an indefinite period of time. This allows the division to increase the minimum mesh size of escape panels for flounder pound nets in accordance with Amendment 2 of the North Carolina Southern Flounder Fishery Management Plan. This suspension was implemented in Proclamation M-34-2015.

NCMFC Rule 15A NCAC 03M .0519 Shad & 03Q .0107 Special Regulations: Joint Waters

Continued suspension of portions of these rules is for an indefinite period of time. This allows the division to change the season and creel limit for American shad under the management framework of the North Carolina American Shad Sustainable Fishery Plan. These suspensions were continued in Proclamation FF-55-2019.

Action Needed

The commission is scheduled to vote on approval of the continued suspension of rule (or portions) of 15A NCAC 03M .0511, 03J .0103 (h), 03R .0110 (4)(5), 03L .0201 (a)(b), 03L .0203 (a), 03J .0301 (g)(h).