NC Marine Fisheries Commission

Director's Report

May 2024 Business Meeting

Document

- Atlantic States Marine Fisheries Commission Meeting Report
- Mid-Atlantic Fishery Mgmt. Council Meeting Summary Report
- South Atlantic Fishery Mgmt. Council Meeting Report
- Marine Patrol Quarterly Update Memo
- Protected Resource Program Update Documents

Atlantic States Marine Fisheries Commission

ASMFC 2024 Spring Meeting

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

ASMFC Spring Meeting
April 29 – May 2, 2024

For more information, please contact Toni Kerns, ISFMP, Tina Berger, Communications or the identified individual at 703.842.0740

Meeting Summaries, Press Releases and Motions

TABLE OF CONTENTS

ATLANTIC COASTAL COOPERATIVE STATISTICS PROGRAM COORDINATING COUNCIL (APRIL 29, 2024)

Meeting Summary

The Atlantic Coastal Cooperative Statistics Program (ACCSP) Coordinating Council met to review and approve the FY2025 RFP (Request for Proposals) and review project and program updates.

The Council voted to approve the FY2025 RFP as presented by the Operations Committee and Advisory Panel. The Council was presented an update of ACCSP program activities, including software development timelines and projects, major cross-team projects, recreational initiatives, new ACCSP Data Warehouse reports, updates to the recreational sections of the ACCSP website, and the status of ACCSP regional partner coordination.

The Council reviewed the SciFish project that launched April 1, 2024, as the result of a 3-year multi-partner project effort that was funded through the ACCSP RFP. SciFish projects will focus on data collection for marine and/or diadromous fisheries along the Atlantic coast that fill data gaps or data deficiencies, address identified research needs, and clearly articulate how collected data will be used in management and/or stock assessments. The Council received an update on the Atlantic Recreational Discards Pilot Project that has been designed by a subgroup of the Recreational Technical Committee to address counts and lengths of released catch. Eight states plan to participate in the pilot if funding is approved.

ACCSP announced that the public release of 2023 data is scheduled for May 7th. The data will be available in the Data Warehouse and shared with NOAA as the consolidated landings. Highlights include a new American Eel dataset contact/provider for Florida freshwater data, reflection of conversion factor changes in SAFIS in the historical dealer data in the Data Warehouse, and an update from Maine for 2022.

For more information, please contact Geoff White, ACCSP Director, at Geoff.White@accsp.org.

Motions

Move to approve the 2025 ACCSP RFP and funding documents as presented to the Coordinating Council.

Motion made by Mr. Carmichael and seconded by Mr. Gary, Motion passes by unanimous consent.

AMERICAN LOBSTER MANAGEMENT BOARD (APRIL 30, 2024)

Meeting Summary

The American Lobster Management Board met to receive a report from the Lobster Technical Committee (TC) on the lobster resource and fishery on the Northern Edge of Georges Bank, an update from the Plan Development Team (PDT) on its evaluation of the measures of Addendum XXI and XXII and changes in the Southern New England (SNE) fishery, and a progress update on the 2025 benchmark stock assessment.

The TC provided a report to the Board summarizing available information on the lobster population and fishery on the Northern Edge of Georges Bank. The Board tasked the TC with compiling information presence and abundance of lobsters, including ovigerous females, on a seasonal basis, as well as seasonal fishery effort in the area because the New England Fishery Management Council (NEFMC) is considering scallop fishery access on the Northern Edge. The report finds that lobsters are present on top of George's Bank year-round but numbers are much higher in the late summer into fall, especially for large females. Fishery-dependent data show consistently female-skewed sex ratios and catch that is comprised of large lobsters, mostly over 100 mm carapace length. Moderate levels of fishing activity occur from July through November in the area, overlapping with the proposed scallop access options.

The lobster PDT met in April to address the Board task to review the conservation measures originally set in Addenda XXI and XXII and make recommendations for alternate measures to achieve those reductions. Addenda XXI and XXII, approved in 2013, included aggregate ownership caps in in Lobster Conservation Management Areas (LCMAs) 2 and 3 and maximum trap cap reductions in LCMA 3 intended to scale the southern new England fishery to the diminished size of the stock. NOAA fisheries has not implemented the measures from these addenda, but recently published an interim rule to do so on January 1, 2025. The Board and lobster industry have expressed concern that the fishery has changed significantly and therefore implementing the measures in the current context could have unintended impacts. The PDT report showed that there have been reductions since 2023 in allocations and maximum traps fished in LCMAs 2 and 3. The Board agreed the PDT should consider input from both Lobster Conservation Management Teams (LCMTs) for LCMAs 2 and 3 before providing recommendations to the Board for possible alternative management measures.

The Board also heard comments from the public regarding concerns about the implementation of the minimum gauge size increase under Addendum XXVII, which is scheduled to occur January 1, 2025. Industry is concerned that the increase will negatively impact catch and value in the lobster fishery, and put the US market at a disadvantage if Canada's minimum size does not change. The Board plans to send a letter to Canada Department of Fisheries and Oceans and relevant Canadian industry associations urging Canada to increase the minimum size for lobster in the Gulf of Maine on the same schedule established in Addendum XXVII. The public also expressed privacy concerns regarding the requirement of Addendum XXIX for 24/7 vessel monitoring of the federal lobster fleet. The Board tasked the vessel tracking workgroup with investigating possible modifications to allow the trackers to only collect data during lobster fishing trips.

A benchmark stock assessment for American lobster is ongoing and is expected for completion in 2025. The Stock Assessment Subcommittee will meet for the Assessment Methods Workshop in July. The Board also elected Renee Zobel as Vice Chair.

For more information, please contact Caitlin Starks, Senior Fishery Management Plan Coordinator, at cstarks@asmfc.org or 703.842.0740.

Motions

Move to elect Renee Zobel as Vice Chair.

Motion made by Mr. McKiernan and seconded by Mr. Reid. Motion passes by consent.

Move to task the Addendum XXIX vessel tracking implementation workgroup, with input from the LEC, to investigate modifications to the 24/7 vessel tracking requirement which still ensure monitoring of fishing activity while acknowledging that fishermen also use boats for personal/non-fishing reasons. This should include a review of existing processes for when VMS devices can be turned off.

Motion made by Mr. Train and seconded by Mr. Borden. Motion passes by consent.

Motion to draft a formal letter to Canada DFO and relevant Canadian industry associations as identified by the board chair and the executive director. This letter would request Canada increase the minimum size for lobster in the Gulf of Maine on the same schedule as ASMFC or as soon as possible as captured in Addendum XXVII.

Motion made by Mr. McKiernan and seconded by Mr. Borden. Motion passes by consent.

SCIAENIDS MANAGEMENT BOARD (APRIL 30, 2024)

Meeting Summary

The Sciaenids Management Board met to consider several items: the Spot Fishery Management Plan (FMP) Review and state compliance reports; an update on the ongoing benchmark stock assessments for red drum, spot, and Atlantic croaker; direction to the Spot and Atlantic Croaker Technical Committee on updating their respective traffic light analyses; and election of a Vice-Chair.

The Board reviewed and approved the Spot FMP Review and state compliance reports for the 2022 fishing year, as well as *de minimis* status for New Jersey, Delaware, and Georgia. Delaware has exceeded the 1% *de minimis* threshold for three years in a row, ranging between 1.05% and 1.20%. Under Addendum III, any state that exceeds the 1% threshold would be required to implement recreational and commercial regulations. Delaware requested and was granted *de minimis* status by the Board for the 2025 fishing year because landings minimally exceeded the threshold. Delaware will continue to monitor its fishery relative to the FMP's *de minimis* standards.

The Board received an update on the ongoing red drum, spot, and Atlantic croaker benchmark stock assessments. The red drum benchmark stock assessment is scheduled for peer review the week of August 12, 2024, and will be presented to the Board at the 2024 Annual Meeting. After the Board agreed to decouple the spot and Atlantic croaker benchmark stock assessments at its October 2023 meeting, the Spot and Atlantic Croaker Stock Assessment Subcommittee has been conducting modeler calls to develop the Atlantic croaker stock synthesis model. The second assessment workshop and subsequent meetings, including the Peer Review Workshop, will be scheduled once sufficient progress has been made in model development. The spot assessment will be completed approximately one year following the completion of the Atlantic croaker assessment.

Additionally, the Board discussed the potential for updating the spot and Atlantic croaker traffic light analyses this year, after forgoing an update last year. The Board directed the Spot and Atlantic Croaker Technical Committee to conduct abbreviated traffic light analyses for both species this year, focusing only on updating the harvest and abundance composite metrics used to make management decisions.

Finally, the Board approved Shanna Madsen of Virginia as the new Vice-Chair. For more information, please contact Tracey Bauer, FMP Coordinator, at tbauer@asmfc.org.

Motions

Move to approve the Spot FMP Review for the 2022 fishing year, state compliance reports, and *de minimis* status for New Jersey and Georgia.
Motion made by Mr. Woodward and seconded by Mr. Cimino. Motion carries without opposition.

Move to approve *de minimis* status for Delaware.
Motion made by Mr. Woodward and seconded by Mr. Clark. Motion carries (8 in favor, 1 opposed).

Move to nominate Shanna Madsen as Vice-Chair of the Sciaenids Management Board.
Motion made by Mr. Clark and seconded by Mr. Batsavage. Motion passes by consent.

ATLANTIC MENHADEN MANAGEMENT BOARD (APRIL 30, 2024)

Meeting Summary

The Atlantic Menhaden Management Board met to review a report on an acoustic survey of overwintering Atlantic menhaden offshore of New Jersey; receive updates from Maryland and Virginia on work relating to the study and management of menhaden in Chesapeake Bay; and receive progress reports on the ecological reference point (ERP) benchmark stock assessment and single-species stock assessment update.

The Board reviewed the results of an acoustic survey (Nesslage et al., 2024) that aimed to generate estimates of biomass and characterize size, age, and sex, and maturity of the portion of the Atlantic menhaden stock that overwinters off the coast of New Jersey. In addition to confirming that a portion of the adult stock resides overwinter along the shelf in the Mid-Atlantic region, the study demonstrated alternative acoustic survey designs can effectively account for the patchy distribution of large schools across the landscape and may prove useful in future monitoring.

The Board received updates from Maryland and Virginia on recent developments in the study and management of Atlantic menhaden in Chesapeake Bay. Maryland representative Lynn Fegley updated the Board on an upcoming communications tool that synthesizes Maryland data to describe the status of predator-prey balance in the Bay. The communication tool is expected to be released in fall 2024. Virginia representative Pat Geer updated the Board on the proposed and enacted legislative and regulatory changes since 2022; more information can be found here.

The Board received progress reports on the ERP benchmark stock assessment and the single-species stock assessment update. The ERP Workgroup met in October 2023 to conduct a Data and Methods Workshop to review new data sources; discuss high priority updates to the ecosystem models, including identifying potential new predators to add to the model; and discuss ongoing ecosystem indicator work in Maryland and Virginia. The Board also reviewed the needs and timeframes for potential spatial components to the ERP models. The ERP benchmark stock assessment and single-species stock assessment update are both scheduled to be presented to the Board at the 2025 Annual Meeting.

Under other business, the Board requested staff to coordinate a presentation by US Geological Survey staff for the Summer Meeting regarding osprey abundance, spatial and temporal distribution, dietary demands, and timing of fledge in the Chesapeake Bay region.

Additionally, the Board elected John Clark as Vice-Chair. For more information, please contact James Boyle, Fishery Management Plan Coordinator at jboyle@asmfc.org.

Motions
Move to nominate John Clark as Vice-Chair of the Atlantic Menhaden Board.
Motion made by Jeff Kaelin and seconded by Mr. Train. Motion approved by consent.

LAW ENFORCEMENT COMMITTEE (APRIL 30 & MAY 1, 2024)

Meeting Summary
The Law Enforcement Committee (LEC) conducted a hybrid meeting during the 2024 Spring meeting of the Atlantic States Marine Fisheries Commission (ASMFC) in Arlington, VA. The committee welcomed Captain Brian Scott of the NJ Fish and Wildlife as the new LEC representative from New Jersey. Captain Scott Pearce of the Florida Fish and Wildlife Conservation Commission transitioned into the role of the Chair of the LEC and Lt. Delayne Brown from the NH Fish and Game Department was elected to the position of Vice -Chair.

Species Discussion
Atlantic Striped Bass –Staff updated the LEC on the implementation of Addendum II of Amendment 7 of the Atlantic Striped Bass plan. Specific discussion was of the adopted compliance measures found in Section 3.0 of the plan. With special attention given to the public comments on the fillet requirement. The LEC appreciated the opportunity to participate in this addendum development.

Atlantic Cobia – Staff updated the LEC on the Cobia draft Addendum II of Amendment 1 in consideration of Recreational Allocation, Harvest Target Evaluation, and Measures Setting. The LEC will monitor this addendum development and provide comments when appropriate.

Spiny Dogfish – Staff provided an update of actions taken by the MAFMC and NEFMC to reduce sturgeon bycatch in the Federal Large Mesh Gillnet fisheries. The LEC discussed the compliance measures considered by the councils and will support and advise the ASMFC in their deliberations on this issue.

American Lobster – The LEC discussed the status of Addendum XXX of Amendment 3 of the Lobster FMP with staff. Specifically, discussion centered around the "Mitchell Provision" and how this addendum will interface with Addendum XXVII. The LEC will continue to follow the development of Addendum XXX and offer comments as appropriate.

Business Discussion

The LEC members approved the final draft document of the *Guidelines for Resource Managers on the Enforceability of Fishery Management Measures (July 2024)*. Over the past year a sub-committee of six LEC members reviewed this document and made recommendations to the LEC for consideration. With the always evolving strategies to address the development of fishery management plans, the LEC wished to keep this document relevant for the fishery managers of today. The document was updated with the following:

- A new section identifying regulatory language for "Enforcement Tools."
- The addition of a new management measure addressing the tagging, labeling, or marking of marine species.
- An updated survey by committee members on enforceability ratings of defined management measures.
- Clarifying language updates to Section 5, Enforcement Strategies and Recommendations.

This document was presented to the ISFMP Policy Board for approval in the Spring of 2024.

North American Wildlife Law Enforcement Accreditation (NAWLEA) - Colonel John Cobb and Captain Rob Ham III of the Virginia Department of Wildlife Resources provided a presentation on the new wildlife law enforcement accreditation process being implemented through the Southeast Association of Fish and Wildlife Agencies (SEAFWA)**.** Created in 2022 NAWLEA offers a comprehensive accreditation program for wildlife law enforcement agencies. Their team is composed of experts in the field who are dedicated to ensuring the highest standards of professionalism among member agencies. Assessors work with agencies to ensure that they meet rigorous standards for professionalism and effectiveness in protecting our natural resources. They are a credentialing entity that is recognized by the United States, Department of Justice for law enforcement accreditation.

Elver Fishery Enforcement – Representatives from the Maine Marine Patrol and the USFW Service, Office of Law Enforcement presented on the current state of the Elver fishery. Information was shared about the Canadian elver fishery closure and its impacts on our domestic fishery. Success stories were discussed as a deterrent to the illegal trade of this high values resource.

Interstate Wildlife Violators Compact (IWVC) - The committee continued discussions on how best to implement and use the Interstate Wildlife Violators Compact. Specifically, State agencies shared best practices among each state on how to model their respective state programs.

A closed session of our meeting was afforded to openly discuss new and emerging law enforcement issues. Respective agencies were provided with time to highlight their agencies and offer current enforcement efforts. For more information, please contact Kurt Blanchard, LEC Coordinator, kurt.blanchard@verizon.net.

Motions

Motion to approve the revised edition of the *Guidelines for Resource Managers on the Enforceability of Fishery Management Measures* for approval by the ISFMP Board.
Motion made by Scott Pearce (FL) and seconded by Keith Williams (CT). Motion approved by consensus.

Motion to elect Lt. Delayne Brown of New Hampshire Fish and Game Department as Vice-Chair of the Law Enforcement Committee.
Motion made by Keith Williams (CT) and seconded by Rob Beal (ME). Motion approved by consensus.

HORSESHOE CRAB MANAGEMENT BOARD (APRIL 30, 2024)

Press Release

ASMFC Horseshoe Crab Board Approves Coastwide Stock Assessment for Management Use and Responds to Delaware Bay Management External Criticism

Arlington, VA – The Commission's Horseshoe Crab Management Board reviewed the 2024 Horseshoe Crab Stock Assessment Update, which indicates improvements in stock status from the 2019 assessment. The Board also received a response by the Adaptive Resource Management (ARM) Subcommittee to an external review of the ARM Framework.

The 2024 Horseshoe Crab Stock Assessment Update evaluated the stock status of the resource by region, finding the coastwide population to be in a good condition. Regionally, the Delaware Bay and Southeast regions were also in good condition, the Northeast was considered neutral, and the New York region remains in poor condition. While the Southeast region stock status remains good, there are some indices that are trending down in recent years and trends in the Southeast should be monitored in addition to those in the New York region, which has not improved substantially since the last assessment.

The Board also received a report from the ARM Subcommittee responding to the critique of the revised ARM Framework produced by Earthjustice. After conducting a thorough review and technical evaluation of the specific issues raised in the critique, the ARM Subcommittee maintains the red knot and horseshoe crab population models used in the ARM Framework represent the best use of the available data. Further, the trawl surveys and egg density data all indicate an increase in horseshoe crab populations in the region, a result consistent with the stock assessment update. The Subcommittee concluded that the Earthjustice critique was largely unfounded and failed to offer any alternative management approaches. As science and modeling approaches evolve, the Subcommittee will continue to revise and improve the ARM Framework for managing the Delaware Bay horseshoe crab fishery.

A more detailed description of the stock assessment results, the 2024 Horseshoe Crab Stock Assessment Update Report, and the ARM Subcommittee's response to the critique by Earthjustice will be available on the Commission website, www.asmfc.org, on the Horseshoe Crab webpage next week. For more information, please contact Caitlin Starks, Fishery Management Plan Coordinator, at cstarks@asmfc.org or 703.842.0740.

###

PR24-12

Meeting Summary

In addition to accepting the 2024 stock assessment update, and considering the technical response to critiques of the ARM Framework, the Horseshoe Crab Management Board also received a summary of the current demand for horseshoe crabs as bait in the American eel and whelk fisheries. With some states limiting the harvest of horseshoe crabs, the Board requested this information to understand potential impacts of bait harvest restrictions in these fisheries. States indicated that effort trends in the eel and whelk fisheries along the coast have varied, and information is not collected on trends in bait usage.

The Board also received an update on planning for the Delaware Bay stakeholder workshop. The workshop will convene a group of key stakeholders to identify potential management goals the horseshoe crab fishery in the Delaware Bay region to inform future management decisions. The workshop will be held in July near the coast of the Delaware Bay, and a report including recommendations developed during the workshop will be provided to the Board in October.

For more information, please contact Caitlin Starks, Fishery Management Plan Coordinator, at cstarks@asmfc.org or 703.842.0740.

Motions

Move to accept the 2024 Horseshoe Crab Assessment Update for management use.
Motion made by Ms. Madsen and seconded by Mr. McManus. Motion passes by unanimous consent.

CAPTAIN DAVID H. HART AWARD AND ANNUAL AWARDS OF EXCELLENCE RECEPTION (APRIL 30, 2024)

Press Releases

Dr. Michael Armstrong Named 2024 Captain David H. Hart Award Recipient

Arlington, VA – At its 2024 Spring Meeting in Arlington, Virginia, the Atlantic States Marine Fisheries Commission presented Dr. Michael P. Armstrong, Deputy Director of the Massachusetts Division of Marine Fisheries (MA DMF), the Captain David H. Hart Award for 2024 for his many notable scientific and management contributions to the betterment of the fisheries of the Atlantic coast. The Commission instituted the Hart Award in 1991 to recognize individuals who have made outstanding efforts to improve Atlantic coast marine fisheries. The Hart Award is named for one of the Commission's longest

serving members, who dedicated himself to the advancement and protection of marine fishery resources, Captain David H. Hart, from the State of New Jersey.

As Deputy Director at MA DMF, Mike is responsible for overseeing the Division's programs in fish biology, recreational and diadromous fisheries, and stock assessment and surveys, as well as supervising the Cat Cove Marine Laboratory. Over three decades at the Division, he has contributed to numerous Commission technical and stock assessment committees and later began serving on many management boards, including more than a few times as chair.

From Left: ASMFC Chair Joe Cimino, Executive Director Bob Beal, AAE Recipient Mike Armstrong and ASMFC Vice Chair Dan McKiernan

Mike is well-known for his commitment to scientifically justified management decisions, both at home in Massachusetts and around the Commission table. He draws upon his background in fish biology, marine ecology, data analysis, and stock assessments as a foundation for sound management. He's willing to make the hard, sometimes unpopular decisions to safeguard the health of the resource. Examples for northern shrimp, striped bass, and river herring come to mind. To support this philosophy of science-based decision making, he recently reorganized the Division's fisheries managers and stock assessment scientists to be under the same roof to ensure a constant flow of information.

Mike's passion for applied research to address fisheries management questions is evident in a long list of publications in fisheries science and his endless initiatives to tackle knowledge gaps. In recent years, he has set into motion plans to investigate cod stock structure and site fidelity, understand and assess striped bass release mortality, examine black sea bass spawning behavior, and research winter flounder maturity and habitat use, among others. Mike was personally responsible for the creation of the Division's Age & Growth Lab that provides state staff as well as state and federal partners fish ageing data that are critical to stock assessments. This lab has been a major contributor to standardizing and advancing ageing techniques to improve regional stock assessments.

By way of his leadership and encouraging other state staff to engage in research and publish, Mike has grown the Division's contribution to the scientific literature dramatically. He has helped attract and develop some of the best talent in fisheries science at the Division and created partnerships with numerous institutions to increase the Division's productivity and reach. He serves as mentor to fellow

researchers, committee members, and Commission staff, and continues to lecture to university classes to produce the next wave of fact-driven fisheries scientists and managers.

His mark on the management of recreational fisheries in Massachusetts is of particular note. He has elevated the Division's focus on recreational fisheries to equal that of commercial fisheries. Mike has focused attention on improving the quality of recreational data collection and catch estimation, and shaped the Division's use of recreational permit fees to address critical recreational fisheries needs and give back to anglers with public access improvements.

Mike has grown to be a leading voice around the management table in supporting scientific advice for sound, defensible decision-making. He's able to build consensus on actions with this as his beacon. In accepting the award, Mike humbly stated, "I just show up every day and do what I think is right."

###

PR24-11

ASMFC Presents 2024 Annual Awards of Excellence

Arlington, VA – Last evening, the Atlantic States Marine Fisheries Commission presented its Annual Awards of Excellence to a number of individuals for their outstanding contributions to management, scientific, and law enforcement efforts along the Atlantic coast. Specifically, the 2024 award recipients are Phil Edwards for management and policy contributions; Nicole Lengyel Costa and Laura Lee for technical and scientific contributions; and Deputy Chief Jason Snellbaker for law enforcement contributions.

From left: ASMFC Executive Director Bob Beal, AAE Recipients Deputy Chief Jason Snellbaker, Laura Lee, Nicole Lengyel Costa and Phil Edwards, and ASMFC Chair Joe Cimino

"Every year a great many people contribute to the success of fisheries management along the Atlantic coast. The Commission's Annual Awards of Excellence recognize outstanding efforts by professionals who have made a difference in the way we manage and conserve our fisheries," said Awards Committee Chair Spud Woodward of Georgia. "I am humbled by the breadth and extent of accomplishments of the recipients and am grateful for their dedication to Atlantic coast fisheries."

Management and Policy Contributions

Phil Edwards of the Rhode Island Department of Environmental Management

Phil has been an active and integral member on several Commission species management boards over the years, including serving as Chair of the American Eel, and Shad and River Herring Boards. Management of

these diadromous resources is challenging due to data limitations and the various threats they face throughout their extensive range between freshwater and ocean ecosystems. Under his leadership, Phil has been able to deftly guide management of these species. As board chair and member on other boards, Phil has brought a wealth of knowledge and policy acumen to all his Commission endeavors, and the Commission at-large has benefitted from Phil's work ethic, leadership, and expertise.

Phil's strong policy and fisheries management skills are backed by over 20 years of participation on various technical committees and assessment work for Commission species. His extensive knowledge and years of work on fish passage has improved conservation of diadromous fish in Rhode Island, and by extension along the East Coast, and serves as an example of his dedication to these efforts.

Scientific and Technical Contributions

Nicole Lengyel Costa of the Rhode Island Department of Environmental Management

For many years, Nicole has been an engaged and important member of several Commission technical committees, fish ageing projects, and plan development teams, and has served as Chair of the Atlantic Striped Bass Technical Committee for the past few years.

Aside from her technical contributions, Nicole has helped the Commission develop several particularly tricky management actions for striped bass, including recent actions to stop overfishing and aid in stock rebuilding. These actions were structurally complex and Nicole, working closely with her colleagues at the Commission, put together well-crafted documents in order for the public to understand and comment on these complicated proposed measures.

In addition to her efforts with striped bass, Nicole is a long serving member of the ACCSP Operations Committee and has been involved with age and growth work used in stock assessments across Commission species. Nicole brings to all her endeavors a strong scientific skill set and a keen understanding of fisheries management policy. Her efforts not only benefit Rhode Island but fisheries science and management activities along the entire East Coast.

Laura Lee of the US Fish and Wildlife Service and formerly with the North Carolina Division of Marine Fisheries (NC DMF)

Laura has been involved in Commission stock assessments for nearly 25 years, including some of the first stock assessments for species such as Atlantic croaker, American eel, and spot. She has advanced fisheries science through the development of innovative approaches to common issues faced by stock assessments and the contribution of years of expertise and mentorship to numerous stock assessment subcommittees and scientists along the Atlantic coast. There is hardly a coastal Atlantic species Laura has not worked on, having been involved with or serving as chair on technical committees or stock assessment subcommittees for a multitude of species. During her time as a stock assessment scientist

with NC DMF, she developed numerous codes for routine analyses used by the majority of Commission stock assessments today. With her new position as an ecologist at the US Fish and Wildlife Service, Laura will continue her productive fisheries career.

Aside from these professional accomplishments, Laura is an invaluable resource on Atlantic coast fish species and stock assessment methods. She is generous with her time and has mentored several fisheries scientists through complex analyses and approaches. Laura provided advanced statistical analysis and guidance to DMF staff for virtually every FMP adopted during her tenure. Some of these scientists have

gone on serve on Commission technical committees and to further their careers at other state agencies, NOAA Fisheries, and in academia. Despite her formal transition off Commission and Division committees due to her new role, she has continued to show her dedication to Atlantic species by regularly participating in committee meetings and providing valuable feedback to keep science projects moving forward.

Law Enforcement Contributions

Deputy Chief Jason Snellbaker of the New Jersey Department of Environmental Protection's Bureau of Law Enforcement

Since becoming a member of the Commission's Law Enforcement Committee (LEC) in 2014, Jason has promoted the role of law enforcement in fisheries management. He has represented the Committee on a number of species management boards, including tautog; summer flounder, scup, and black sea bass; Atlantic sturgeon; and bluefish. He has been the voice of the LEC on critical topics such as commercial tautog tagging and the summer flounder research set aside program.

During Jason's time with the LEC, he was selected by his peers to serve in a leadership role as Vice-chair and Chair. He accepted these roles during the pandemic, a particularly challenging time for the LEC as members were drawn to other responsibilities in their home states. Jason kept the flow of communication open and provided steady leadership by staying on as Chair for an extended period. At the state level, Jason's exceptional leadership has been recognized by both NOAA's Office of Law Enforcement for his efforts in support of the Cooperative Enforcement Program, and by the Commission for his work as part of a team of officers working in the New Jersey Fish and Wildlife marine region. He has also promoted marine fisheries law enforcement in forums such as the National Association of Conservation Law Enforcement Chiefs where he took on an advisory role and participated in an exchange program with an agency in Belize.

###

PR24-10

EXECUTIVE COMMITTEE (MAY 1, 2024)

Meeting Summary

The Executive Committee (Committee) met to discuss several issues, including the proposed FY25 Budget; a Legislative Committee update and the Executive Director's Performance review. The following action items resulted from the Committee's discussions:

- ASMFC Vice-Chair Dan McKiernan presented the proposed FY25 Commission budget which was reviewed by the Administrative Oversight Committee (AOC).
- Staff reported on the recent activities of Congress, upcoming budget hearings, the appropriations process, and proposed cuts to essential programs within the President's FY25 budget for NOAA. Within the appropriations update, staff discussed three new requests from the Commission to Congress for funding for FY25; 1) An industry-based trawl survey pilot program ($3 million); 2) funding to complete all research outlined in the Virginia Institute of Marine Science Menhaden Report ($2.7 million); and 3) one-time Congressionally-directed spending to retrofit the R/V Lady Lisa ($1 million).
- Staff provided an update on upcoming Annual Meetings, with the 2024 meeting to be held in Annapolis, Maryland. The 2025 meeting will be held in Delaware and the 2026 meeting will be held in South Carolina
- The Executive Committee convened a closed session to discuss the Executive Director's Performance Review.

For more information, please contact Laura Leach, Director of Finance & Administration, at lleach@asmfc.org or 703.842.0740.

Motions

On behalf of the Administrative Oversight Committee, move to approve the FY25 budget.
Motion made by Mr. McKiernan. Motion approved by consent.

COASTAL PELAGICS MANAGEMENT BOARD (MAY 1, 2024)

Press Release

Coastal Pelagics Board Approves Atlantic Cobia Draft Addendum II for Public Comment to Consider Recreational Allocation and Management Process

Arlington, VA – The Commission's Coastal Pelagics Management Board approved for public comment Draft Addendum II to Amendment 1 to the Interstate Fishery Management Plan (FMP) for Atlantic Cobia. The Draft Addendum considers recreational allocation, harvest target evaluation, and the timeline for setting management specifications.

The Board initiated the Draft Addendum to consider updating recreational allocations using harvest data, which reflects increased cobia landings in some Mid-Atlantic states in recent years. Draft Addendum II presents options for Atlantic cobia management, including a framework for recreational allocation, ways

to account for data uncertainty and respond to quota overages, and an extended multi-year specification setting. For the recreational allocation framework, Draft Addendum II considers options for the data timeframe to form the basis for allocations, and options for the geographic scope of allocations (state-by-state, regional, or coastwide).

Public hearings on Draft Addendum II will be conducted in the coming months; the details of which will be released in a subsequent press release. The Draft Addendum will be available on the Commission's website under Public Input at https://asmfc.org/about-us/public-input in late May.

For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@asmfc.org.

###

PR24-14

Meeting Summary

In addition to approving Atlantic Cobia Draft Addendum II for public comment, the Coastal Pelagics Board received two updates regarding Spanish mackerel.

First, the Board received a presentation on the white paper prepared by the Spanish Mackerel Technical Committee (TC) summarizing state Spanish mackerel fisheries. The TC developed the paper in response to the Board's task to better understand current state Spanish mackerel fisheries to inform potential future Board action on Spanish mackerel.

Finally, the Board received an update from the South Atlantic Fishery Management Council (SAFMC) on the ongoing Spanish and king mackerel port meetings along the coast to gather input from mackerel stakeholders on the fishery. The next set of port meetings are webinar meetings for New England states schedule for mid-May.

For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@asmfc.org.

Motions

Move to postpone Draft Addendum II to Amendment I until such time the final MRIP FES Report has been presented to the Commission.

Motion made by Mr. Haymans and seconded by Mr. Clark. Motion fails (2 in favor, 8 opposed, 3 abstentions).

Move to remove the timeframes for the weighted 10-year/3-year averages from Draft Addendum II Section 3.1 (Option B3, C3, C6, C9, and C12).

Motion made by Ms. Madsen and seconded by Ms. Fegley. Motion approved without opposition.

Move to remove any of the options considering 3 regions from section 3.1 C4, C5, C10, C11.

Motion made by Ms. Madsen and seconded by Mr. Hornstein. Motion approved without opposition.

Move to approve Atlantic Cobia Draft Addendum II for public comment as modified today. Motion made by Ms. Fegley and seconded by Mr. Clark. Motion carries with one objection.

ATLANTIC STRIPED BASS MANAGEMENT BOARD (MAY 1, 2024)

Meeting Summary

The Atlantic Striped Bass Management Board met to consider revisions to Addendum II state implementation plans; receive an update on recreational release mortality study results; consider tasks for a Board Work Group on recreational release mortality; consider an Advisory Panel nomination; and elect a Vice Chair.

Three jurisdictions, Pennsylvania, Maryland, and Potomac River Fisheries Commission (PRFC) submitted revised state implementation plans for Addendum II. States are required to implement Addendum II measures by May 1, 2024. In March 2024, the Board approved Addendum II state implementation plans with the following exceptions: 1) Pennsylvania's proposed timeline for implementing its new spring slot and bag limit; 2) Maryland and PRFC's proposed timeline for paying back any potential 2024 commercial quota overage. Pennsylvania's revised implementation plan specifies that it has implemented its new spring slot and bag limit as of May 1, 2024. Maryland and PRFC's revised implementation plans specify that they will monitor 2024 commercial landings and develop projections as needed to estimate whether landings will exceed the 2024 quota to inform 2025 commercial tag and permit distribution. The Board approved the revised implementation plans for all three jurisdictions.

The Board received an overview of a Massachusetts Division of Marine Fisheries (MA DMF) study to characterize striped bass recreational release mortality. The first phase of the study focused on the efficacy of circle hooks and comparing release mortality from J-hooks vs. circle hooks. The second phase of the study focused on comparison of release injury and mortality across various terminal tackle using citizen science data collected by striped bass anglers. Data collection for this phase will continue into 2024 with recruitment of citizen participants from other states. The third phase of the study will focus on a survey of striped bass anglers on terminal tackle use over the next few years. MA DMF noted that additional analysis of collected data and future publication will be pursued in the coming years. Visit https://madmf.shinyapps.io/striper/ for more information.

The Board discussed the establishment of a Board Work Group to discuss release mortality. The Board approved four tasks for the Work Group with an expected progress update from the Work Group at the 2024 Summer Meeting, and a report to the Board at the 2024 Annual Meeting. The first Work Group task is to review existing no-targeting closures (state and federal waters), including any information on impacts to striped bass catch, effort, enforceability, and how anglers may respond to no-targeting closures (i.e., shifting effort). The second task is to review the MA DMF release mortality study and other relevant reports to evaluate the efficacy of potential gear modifications. The third task is to identify stock assessment sensitivity runs to potentially inform Board discussion of release mortality as well as tradeoffs of reducing the release mortality rate vs. reducing the number of releases overall. The fourth task is to consider public scoping (e.g., survey) on potential measures to address release mortality.

The Board approved the nomination of Peter Jenkins, a recreational angler from Rhode Island, to the Atlantic Striped Bass Advisory Panel. Finally, the Board elected Chris Batsavage from North Carolina as Vice Chair.

For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@asmfc.org.

Motions

Move to approve the revised Addendum II implementation plans for Pennsylvania, Potomac River Fisheries Commission, and Maryland.
Motion made by Mr. Armstrong and seconded by Mr. Luisi. Motion passes by unanimous consent.

Move to approve the tasks for the Board Work Group on recreational release mortality as discussed today.
Motion made by Mr. Hasbrouck and seconded by Mr. Luisi. Motion passes by unanimous consent.

Move to approve Peter Jenkins of Rhode Island to the Atlantic Striped Bass Advisory Panel.
Motion made by Dr. McNamee and seconded by Dr. Davis. Motion passes by unanimous consent.

Move to elect Chris Batsavage as Vice-Chair of the Atlantic Striped Bass Management Board.
Motion made by Mr. Gary and seconded by Mr. Geer. Motion passes by unanimous consent.

AMERICAN EEL MANAGEMENT BOARD (MAY 1, 2024)

Press Release

American Eel Board Approves Addenda VI and VII
Addenda Maintain Maine's Glass Eel Quota and Modify Yellow Eel Management

Arlington, VA – The Commission's American Eel Management Board has approved Addenda VI and VII to the Interstate Fishery Management Plan for American Eel. Addendum VI maintains Maine's quota at the current level of 9,688 pounds for three years. Addendum VII reduces the coastwide cap for yellow eel commercial landings to 518,281 pounds, modifies annual young-of-year (YOY) monitoring requirements, and changes the policy for evaluating de minimis status.

Addendum VI

Maine's glass/elver eel quota of 9,688 pounds was established by Addendum IV starting in 2015 and maintained under Addendum V through 2024. The Board initiated Addendum VI to establish a quota for 2025 and beyond. The Board will review the quota before the 2028 fishing year and can extend it via Board action.

Maine commercial glass eel landings have not exceeded the quota since its implementation. The Maine Department of Marine Resources (ME DMR) manages the quota using a program that requires dealers to enter daily landings data and enables ME DMR to analyze those data within 24 hours of

receipt. The quota management program allows ME DMR to track the glass eels from initial purchase to export out of the state.

Maine will continue to maintain daily trip level reporting and require a pound-for-pound payback in the event of quota overages in its glass eel fishery. Additionally, the state will continue to conduct the fishery-independent life cycle survey covering glass, yellow, and silver eels as required by Addendum V.

Addendum VII

Addendum VII responds to the findings of the 2023 Benchmark Stock Assessment and Peer Review Report, which indicated the stock is at or near historically low levels due to a multitude of factors, including historical overfishing, habitat loss, food web alterations, turbine mortality, environmental

changes, contaminants, and disease. The assessment and peer review recommended reducing harvest levels of the yellow eel life stage, while also recognizing that stock status is affected by other factors. The assessment proposed a new index-based tool, called I_{TARGET}, for setting the yellow eel coastwide cap, since there is not a statistical model for estimating the population size of American eel. Addendum VII adopts the use of I_{TARGET} to provide catch limit recommendations based on fishery-independent indices of abundance and catch data with the goal of increasing abundance levels. The new coastwide cap of 518,281 pounds, a reduction from 916,473 pounds, can be updated after three years using the additional years of abundance and catch data.

"In approving Addendum VII and its reduced landings cap, the Board sought to balance responding to the recommendations of the benchmark stock assessment to aid in the recovery of American eel while also allowing for a commercial fishery," stated Board Chair Kris Kuhn of Pennsylvania. "I_{TARGET} provides the Board a much-needed tool for setting the coastwide cap."

The Board slightly modified the requirements of the annual YOY survey by making the biological sampling requirement for YOY surveys optional, as recommended by the assessment and peer review. In addition, Addendum VII establishes use of a three-year average of landings to determine if a state qualifies for de minimis status and can be exempt from implementing fishery regulations and monitoring requirements.

Addenda VI and Addendum VII will be available on the Commission website on the American Eel webpage by mid-May. For more information, please contact Caitlin Starks, Senior Fishery Management Plan Coordinator, at cstarks@asmfc.org.

###

PR24-13

Motions

For Draft Addendum VI, move to select under 3.1 Maine Glass Eel Quota, Option 1: Status Quo (9,688 lbs. quota) and under 3.2 Timeframe for Maine Glass Eel Quota, Option 3 (Three years, with the ability to extend via Board action).

Motion made by Ms. Ware and seconded by Mr. Grout. Motion passes by consent.

Move to approve Addendum VI to the American Eel FMP, as modified today.

Motion made by Ms. Ware and seconded by Mr. Clark. Motion approved by consent.

Main Motion

Move to approve under 3.1 Issue 1 Option 1 status quo.

Motion made by Mr. Clark and seconded by Mr. Dize.

Motion to Substitute

Motion to substitute to replace "under 3.1 Issue 1 Option 1 status quo" with "under 3.1 Issue 1 Option 2 (202,453 lbs.).

Motion made by Dr. Davis and seconded by Mr. Jacobson. Motion fails (3 in favor, 16 opposed).

Motion to Substitute

Motion to substitute to approve under 3.1 Issue 1 Option 3 to set the coastwide cap at 518,281 pounds.

Motion made by Ms. Madsen and seconded by Mr. McKiernan. Motion passes (12 in favor, 6 opposed).

Main Motion as Substituted

Move to approve under 3.1 Issue 1 Option 3 to set the coastwide cap at 518,281 pounds.

Motion to Substitute

Move to substitute to approve under 3.1 Issue 1 Option 5 to set the coastwide cap at 716,497 pounds.

Motion made by Ms. Fegley and seconded by Mr. Train. Motion fails (7 in favor, 12 opposed).

Main Motion as Substituted

Move to approve under 3.1 Issue 1 Option 3 to set the coastwide cap at 518,281 pounds.

Motion passes (15 in favor, 4 opposed).

Move to approve:

- **For Section 3.1, Issue 2, Option 1 [Status Quo, >1% coastwide landings]**
- **For section 3.5, Option 2 (3-year landings average for *de minimis*)**

Motion made by Ms. Fegley and seconded by Mr. Clark. Motion passes (15 in favor, 2 opposed, 2 abstentions).

Move to approve for Section 3.2, Option 1 (three years coastwide cap duration)

Motion made by Ms. Madsen and seconded by Mr. Clark. Motion passes 18 in favor, 1 abstention).

Main Motion
Move to approve:

- **For Section 3.3, Option 1 (Status Quo);**
- **For Section 3.4, Option 1 (mandatory CPUE data collection)**

Motion by made Mr. Kaelin and seconded by Ms. Fegley.

Motion to Amend
Move to amend to replace Option 1 with Option 2 for section 3.3.
Motion made by Mr. Clark and seconded by Mr. Grout. Motion passes (16 in favor, 2 opposed, 1 abstention).

Main Motion as Amended
Move to approve:

- **For Section 3.3, Option 1 (Status Quo);**
- **For Section 3.4, Option 1 (mandatory CPUE data collection)**

Motion passes (18 in favor, 1 opposed).

Move to approve Addendum VII to the American Eel FMP, as modified today.
Motion made by Mr. Hasbrouck and seconded by Mr. Miller. Motion passes by consent.

Move to approve an implementation date of January 1, 2025.
Motion made by Mr. Clark and seconded by Mr. Cimino. Motion passes (18 in favor, 1 opposed).

Move to elect Jesse Hornstein as Vice-Chair.
Motion made by Mr. Cimino and seconded by Ms. Fegley. Motion passes by consent.

COASTAL SHARKS MANAGEMENT BOARD (MAY 2, 2024)

Press Release

Coastal Sharks Board Sets Possession Limits to Zero for Oceanic Whitetip Sharks

Arlington, VA – The Commission's Coastal Sharks Management Board established a zero possession limit for oceanic whitetip sharks for recreational and commercial fisheries. States will begin rulemaking to implement the new possession limit, effective immediately.

NOAA Fisheries issued a final rule in January prohibiting the retention and possession of oceanic whitetip sharks in US waters of the Atlantic Ocean, which became effective February 2, 2024. This rule responds to the 2018 determination that oceanic whitetip sharks warranted listing as a threatened species under the Endangered Species Act throughout its range, and a 2020 Biological Opinion that encouraged the inclusion of the species on the Highly Migratory Species (HMS) list of prohibited sharks for recreational and commercial HMS fisheries.

The Board action closes a potential loophole allowing take of oceanic whitetip in state waters. The Board also indicated it will consider moving oceanic whitetip sharks from the pelagic species group to the

prohibited species group as part of the next addendum or amendment action, as a complementary measure to the NOAA final rule.

For more information, please contact Caitlin Starks, Senior Fishery Management Plan Coordinator, at cstarks@asmfc.org.

###

PR24-15

Meeting Summary

In addition to taking action on oceanic whitetip possession limits, the Board received updates on several ongoing and future actions for NOAA Fisheries Division of Highly Migratory Species (HMS). A final rule on Amendment 15 the 2006 Consolidated HMS FMP is expected in the summer of 2024. Amendment 15 extends the boundary of the Mid-Atlantic shark closed area and shifts the timing of the closed seasons to November 1 - May 31. Last year, NOAA accepted public comments on an advance notice of proposed rulemaking to modify or expand electronic reporting requirements for HMS, and a proposed rule on this action is expected later this year. In May 2023, NOAA released a scoping document for Amendment 16. Amendment 16 could result in substantial changes to the entire commercial and recreational shark fishery, and is necessary to implement the revised framework for establishing quotas and related management measures for Atlantic shark fisheries, as set forth in Amendment 14. Comments were received through mid-August 2023, and the development of Draft Amendment 16 is dependent upon the completion of the SEDAR 77 hammerhead stock assessment, expected end of 2024.

For more information, please contact Caitlin Starks, Senior Fishery Management Plan Coordinator, at cstarks@asmfc.org or 703.842.0740.

Motions

Move to set the state waters commercial and recreational possession limit for oceanic whitetip sharks to zero, effective immediately.
Motion made by Mr. Miller and seconded by Mr. Batsavage. Motion approved by unanimous consent.

Main Motion
Move to initiate an addendum to change the species group for oceanic whitetip sharks to the prohibited species group.
Motion made by Mr. Batsavage and seconded by Dr. McNamee.

Motion to Substitute
Move to substitute to move to include oceanic whitetip on the prohibited species group in the next addendum or amendment action.
Motion made by Mr. Clark and seconded by Ms. Meserve. Motion carries by unanimous consent.

Main Motion as Substituted
Move to include oceanic whitetip on the prohibited species group in the next addendum or amendment action.
Motion carries by unanimous consent.

SPINY DOGFISH MANAGEMENT BOARD (MAY 2, 2024)

Meeting Summary

The Spiny Dogfish Management Board met to review the preferred alternatives recommended to NOAA Fisheries by the Mid-Atlantic and New England Fishery Management Councils in Spiny Dogfish Framework 6 to reduce sturgeon bycatch in the spiny dogfish fishery and consider complementary action.

The Board reviewed the recommended alternatives and discussed the inconsistency between the Interstate Fishery Management Plan for Spiny Dogfish and Spiny Dogfish Framework 6 if it is implemented by NOAA Fisheries. Framework 6 proposes prohibiting overnight soaks for federal spiny dogfish permit holders on gillnets with 5"-10" mesh in November and May for a certain area of state and federal waters off of New Jersey, as well as for gillnets of 5.25"-10" mesh in November through March in specified areas off of Delaware, Maryland, and Virginia.

The Board discussed initiating an addendum to consider maintaining consistency by establishing matching restrictions in state waters for harvesters that possess state spiny dogfish permits but do not have a federal spiny dogfish permit. However, the Board postponed the decision to initiate an addendum until the Commission Summer Meeting after staff can compile more information on the potential impacts on state fisheries, particularly states that issue multispecies gillnet permits vs. a directed dogfish permit similar to the federal permit.

For more information, please contact James Boyle, Fishery Management Plan Coordinator at jboyle@asmfc.org.

Motions

Main Motion

Move to initiate an addendum to maintain consistency between the Spiny Dogfish FMP and the recommended alternatives of Spiny Dogfish Framework Adjustment 6.

Motion made by Ms. Meserve and seconded by Mr. Hasbrouck.

Motion to Postpone

Move to postpone until the next meeting of the Spiny Dogfish Board.

Motion made by Mr. Clark and seconded by Dr. Davis. Motion carries by consent.

INTERSTATE FISHERIES MANAGEMENT PROGRAM POLICY BOARD (MAY 2, 2024)

Meeting Summary

The ISFMP Policy Board met to review the 2024 State of the Ecosystem Reports; receive an update from the Northeast Trawl Advisory Panel on an industry-based survey pilot project; consider approval of the revised *Guidelines for Resource Managers on the Enforceability of Fishery Management Measures*; receive a summary of the Law Enforcement Committee activities (see LEC meeting summary); receive an update on the sturgeon and river herring benchmark stock assessments; and consider two letters from the American Lobster Board.

Dr. Sarah Gaichas (Northeast Fisheries Science Center) presented key findings from the 2024 Mid-Atlantic and New England State of the Ecosystem reports. The reports provide information on the status and trends of relevant ecological, environmental, economic, and social components of the Mid-Atlantic and New England ecosystems. The reports evaluate the performance of different ecosystem indicators relative to management objectives and the potential climate and ecosystem risks to meeting those management objectives.

Highlights from the 2024 reports include:

- Commercial seafood landings and total revenue in the Mid-Atlantic were near historic lows driven by declining landings and price of ocean quahog, Atlantic surf clam, and scallops. Commercial landings within New England show no long-term trend for Georges Bank, and a long-term decline in the Gulf of Maine.
- Recreational harvest remains below the long-term average, but recreational effort (in number of trips) is above the long-term average. Overall, recreational harvest has also declined in New England; however, harvest has rebounded somewhat from the historical low level in 2020.
- Many fish stocks and protected species distributions are changing in the Mid-Atlantic due to increasing temperature, changing oceanographic features, the spatial distribution of suitable habitat, and the availability of prey. In New England, adult fish diversity indices are stable while zooplankton diversity is increasing, indicating potential instability. Several climate and oceanography metrics are changing and should be monitored as warning signs for a potential regime shift or ecosystem restructuring.
- 2023 sea surface temperatures in the North Atlantic were the warmest on record and were linked, along with low oxygen and acidification, to fish and shellfish die-offs off New Jersey and the Elephant Trunk region. However, Northeast US continental shelf temperatures were more variable, with near record highs in winter and near average in other seasons. Northward shifts of the Gulf Stream, including a prolonged shift in the fall, resulted in unusually warm and salty surface waters in the southern Mid-Atlantic. This shift severely constricted the waters between the shelf break and Gulf Stream and inhibited warm core rings.

The Policy Board received an update on the development of an industry-based survey pilot project by the Northeast Trawl Advisory Panel. The goal of the project is to test the viability of an industry-based survey as described in the white paper titled “Draft Proposed Plan for a Novel Industry Based Multispecies Bottom Trawl Survey on the Northeast U.S. Continental Shelf.” The Northeast Trawl Advisory Panel (NTAP) met on February 8, 2024, and the NTAP Bigelow Contingency Plan Working Group met on February 29, 2024, to continue their discussions of the pilot project and develop recommendations for Council consideration. Although the NTAP and NTAP Working Group have made substantial progress, there are still a number of details that need to be further developed at future meetings. The Policy Board continued to emphasize the importance of this project and its continued development.

The Law Enforcement Committee (LEC) presented the updated the *Guidelines for Resource Managers on the Enforceability of Fishery Management Measures* document. The document covers a variety of management strategies that are employed in Commission FMPs. It is intended to help managers to

take into account the enforceability of all management regulations that are developed. The Guidelines are intended to support and strengthen the effectiveness of Commission efforts to conserve fisheries resources.

The Board approved two letters recommended by the American Lobster Management Board (see American Lobster Board meeting summary). The first letter is to the New England Fishery Management Council highlighting key points of the Lobster Technical Committee report on the conduct of the lobster fishery on the Northern Edge of Georges Bank. The second letter is to Fisheries and Oceans Canada and Canadian industry associations, encouraging Canada to raise its lobster minimum size limit to match the upcoming changes in the United States to address potential trade concerns.

Lastly, under other business, the Board approved a letter to the US Ambassador in Canada to encourage Canada to swiftly implement rules and laws to ensure the protection of the American eel resource. The Board was presented with information indicating Canada is becoming a center for the illegal, unregulated, and unreported trafficking of glass eel. This illegal activity could potentially have negative impacts to the resource which is depleted. In addition, there are possible negative impact on eel value in the US, thus causing a loss of revenue to the highly regulated US fishing industry.

For more information, please contact Toni Kerns, Fisheries Policy Director, at tkerns@asmfc.org.

Motions

Move to approve the *Revised Guidelines for Resource Managers on the Enforceability of Fishery Management Measures*.
Motion made by Mr. Keliher and seconded by Mr. Clark. Motion passes by consent

On behalf of the American Lobster Management Board move the Commission to send a letter to Canada DFO and relevant Canadian industry associations as identified by the board chair and the executive director. This letter would request Canada increase the minimum size for lobster on the same schedule as ASMFC or soon as possible as captured in Addendum XXVII.
Motion made by Mr. Keliher. Motion approved by consent.

Move to send a letter to the US Ambassador in Canada encouraging Canada to implement rules and laws as quickly as possible to ensure the protection of the American eel resource.
Motion made by Mr. Keliher and seconded by Ms. Patterson. Motion approved by consent.

April 2024 Council Meeting Summary

The Mid-Atlantic Fishery Management Council met April 9-11, 2024, in Atlantic City, New Jersey. The following is a summary of actions taken and issues considered during the meeting. Presentations, briefing materials, motions, and webinar recordings are available at http://www.mafmc.org/briefing/april-2024.

HIGHLIGHTS

During this meeting, the Council:

- Took final action on a joint framework action with the New England Fishery Management Council to reduce the bycatch of Atlantic sturgeon in the monkfish and spiny dogfish gillnet fisheries
- Approved a modified range of alternatives for the Summer Flounder Commercial Mesh Exemptions Framework, removing one alternative from the draft range for each issue (joint meeting with the ASMFFC Summer Flounder, Scup, and Black Sea Bass Board)
- Reviewed the 2023 Mid-Atlantic State of the Ecosystem Report
- Received an update on the development of the draft 2024 EAFM risk assessment report
- Voted to submit the Golden Tilefish IFQ Program Review package to NMFS
- Received a presentation on the golden tilefish research track assessment
- Discussed recent progress on development of an industry-based survey pilot project
- Received an update from the NOAA Fisheries regional office on habitat and offshore wind activities of interest in the Mid-Atlantic region
- Discussed fisheries compensatory mitigation programs for offshore wind energy development
- Reviewed findings from recent research on the impacts of offshore wind construction sounds on longfin squid and black sea bass
- Agreed to submit comments on proposed changes to the regulations governing confidential information under the Magnuson-Stevens Act.

Framework to Reduce Atlantic Sturgeon Interactions in the Monkfish/Dogfish Gillnet Fisheries

The Council took final action on a joint framework action with the New England Fishery Management Council (NEFMC) to reduce the bycatch of Atlantic sturgeon in the monkfish and spiny dogfish gillnet fisheries. During this meeting, the Council reviewed the recommendations from the FMAT/PDT, Monkfish and Spiny Dogfish Advisory Panels, and the Joint Monkfish and Dogfish Committee. For federal vessels targeting spiny dogfish, the Council approved overnight soak prohibitions during months of high sturgeon interactions within bycatch hotspot polygons in the New Jersey and Delaware, Maryland, and Virginia regions. In addition, they approved an exemption from the overnight soak prohibition for vessels using a mesh size less than 5.25 inches in the Delaware, Maryland, and Virigina hotspot polygons. For federal vessels targeting monkfish in state and federal waters, the Council approved a year-round low-profile gear requirement in the New Jersey bycatch hotspot polygon. The Council also agreed to write a letter to the Northeast Fisheries Science Center (NEFSC) observer program to recommend the development of a sturgeon tagging program for both live discards and dead discards for all the fisheries and gear types where sturgeon interactions occur. The NEFMC approved the same alternatives during their meeting the following week. The Councils will submit the framework to the Secretary of Commerce for review and rulemaking. Visit https://www.mafmc.org/actions/sturgeon-bycatch-framework for additional information and updates.

Summer Flounder Commercial Mesh Exemptions Framework Meeting #1

The Council met jointly with the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Board (Board) to review draft alternatives for a joint framework action/addendum to modify two summer flounder commercial minimum mesh size exemptions. This action considers changes to the exempted area associated with the Small Mesh Exemption Program, as well as updates to the gear definition associated with the flynet exemption to the minimum mesh size requirements. The Council and Board approved a modified range of alternatives, removing one alternative from the draft range for each issue in order to simplify the options under consideration. A revised document with additional analysis will be reviewed by the Council and Board via a webinar meeting in late spring/early summer 2024. As part of this meeting, the Board will approve a draft addendum for public comment, as required under the Commission's process to support a minimum 30-day public comment period with optional public hearings. This public comment period will take place this summer, with final action expected in August 2024.

2024 State of the Ecosystem Report

Dr. Sarah Gaichas (NEFSC) presented the key findings from the 2024 Mid-Atlantic State of the Ecosystem report. This report has been provided annually to the Council since 2017 and gives information on the status and trends of relevant ecological, environmental, economic, and social components of the Mid-Atlantic Bight ecosystem. The report evaluates the performance of different ecosystem indicators relative to management objectives and the potential climate and ecosystem risks to meeting those management objectives. Highlights from the 2024 report include:

- Commercial seafood landings and total revenue were near historic lows driven by declining landings and price of ocean quahog, Atlantic surfclam, and scallops.
- Recreational harvest remains below the long-term average, but recreational effort (in number of trips) is above the long-term average.
- Recreational catch diversity remains stable and above the long-term average and diversity is being driven by southern species.
- Many fish stocks and protected species distributions are changing in the Mid-Atlantic due to increasing temperature, changing oceanographic features, the spatial distribution of suitable habitat, and the availability of prey.
- 2023 sea surface temperatures in the North Atlantic were the warmest on record and were linked, along with low oxygen and acidification, to fish and shellfish die-offs off New Jersey and the Elephant Trunk region.

2024 Ecosystem Approach to Fisheries Management (EAFM) Risk Assessment Report

The Council received an update on the development of the draft 2024 EAFM risk assessment report. The risk assessment is intended to track ecosystem elements that may threaten the Council's ability to achieve the management objectives desired for Council-managed fisheries. In 2023, the Council conducted a comprehensive review of the risk assessment and approved a number of changes, including the development of four new elements and revisions to many of the existing risk element components. Council and NEFSC staff will work with the Council's Ecosystem and Ocean Planning Committee and Advisory Panel to complete the risk assessment and present a final report to the Council later this year for approval.

Golden Tilefish Catch Share Program Review

Council staff presented a summary of public comments received on the Review of the Golden Tilefish Individual Fishing Quota (IFQ) Program Twelve-Year Review. This report was structured around the National Marine Fisheries Service (NMFS) guidance for conducting catch share program reviews; and constitutes the second program review

for this Limited Access Privilege Program. After reviewing public comments, the Council voted to submit the Golden Tilefish Individual Fishing Quota Program Twelve-Year Review package to NMFS. In addition, the Council passed a motion to write a letter to NOAA Fisheries encouraging them to evaluate the possibility of expanding the use of the Fish Online web portal to track golden tilefish IFQ allocation transfers and track current allocation to assist with quota and program management. The full report is available at https://www.mafmc.org/tilefish.

Golden Tilefish Assessment Overview

The Council received a presentation on the golden tilefish research track assessment which was peer reviewed in March 2024. Several improvements were made to the assessment, including transitioning the assessment model from the Age Structured Assessment Program (ASAP) to the state-space Woods Hole Assessment Model framework (WHAM; using 2021 management track data). In addition, the research track assessment developed an ecosystem and socioeconomic profile (ESP), developed a new recreational catch time series, evaluated various data sources that may be used to better understand trends in abundance, and developed method to transition vessel trip report landings (VTR) per unit effort (LPUE) index to newly developed catch accounting and monitoring system (CAMS)-based LPUE index amongst others.

The next steps in the assessment process include a management track assessment in June 2024 (to include data streams up to 2023) to provide updated estimates of stock status and set catch limits for the 2025-2027 fishing years. Future management track assessments will address research recommendations identified by the peer review.

Northeast Trawl Advisory Panel Industry-Based Survey Pilot Project Update

The Council received an update on development of an industry-based survey pilot project by the Northeast Trawl Advisory Panel. The goal of the project is to test the viability of an industry-based survey as described in the white paper titled "Draft Proposed Plan for a Novel Industry Based Multispecies Bottom Trawl Survey on the Northeast U.S. Continental Shelf." The Northeast Trawl Advisory Panel (NTAP) met on February 8, 2024, and the NTAP Bigelow Contingency Plan working group met on February 29, 2024, to continue their discussions of the pilot project and develop recommendations for Council consideration. Staff noted that although the NTAP and NTAP Working Group have made substantial progress, there are still a number of details that need to be further developed at future meetings. Staff also noted that the NTAP Working Group recommended meeting with regional scientific survey staff and vessel owners/operators that may be interested in participating in the pilot project to discuss the topic.

Habitat Activities Update

Jessie Murray, from GARFO Habitat and Ecosystem Services Division (HESD), provided updates on recent habitat consultations related to coastal development, infrastructure, and upcoming federal navigation and civil work projects from the New York and Philadelphia Districts of the Army Corp of Engineers. She shared information on the Historic Area Remediation Site (HARS) and early Environmental Protection Agency (EPA) considerations for an offshore fishery enhancement beneficial use site in the New York Bight. It was noted that EPA will be reaching out for input on HARS in the future. She also updated the Council on the status of NOAA's activities related to the Bipartisan Infrastructure Law and Inflation Reduction Act habitat funding opportunities. Doug Cristel (also of HESD) provided an overview of recent offshore wind consultations and highlighted the socioeconomic impacts reports and other products being utilized to evaluate port specific fishery impacts from offshore wind development.

Offshore Wind Fisheries Compensation Programs

The Council discussed fisheries compensatory mitigation programs for offshore wind energy development. The discussion focused on the Vineyard Wind 1 commercial fisheries compensatory mitigation fund, as it is currently accepting applications with a deadline of June 3, 2024. To qualify for payments from this program, applicants must demonstrate that they fished in the Vineyard Wind 1 lease area in at least three years during 2016-2022 and must provide documentation of total annual revenue from commercial fishing activities (not just from within the Vineyard Wind 1 lease area) for the associated years. Several types of data can be used as evidence of fishing activity within the lease area, including, but not limited to, vessel trip reports, vessel monitoring system data, automatic identification system information, observer information, and other trip-level reporting. Fishermen may need to request some of this information from NOAA Fisheries. Concerns have been raised about the ability of NOAA Fisheries to respond to these data requests in a timely manner to ensure fishermen can apply by the June 3 deadline. However, Vineyard Wind has indicated that applications that are otherwise complete and submitted by June 3 will not be rejected due to outstanding data requests to NOAA Fisheries. More information on the qualification criteria, how to apply, and guidance for data requests can be found at: https://vw1fisheriescomp.com/.

Council members and members of the public expressed several concerns with this program, including that many fishermen who will be impacted by Vineyard Wind 1 are not eligible for compensation because they are not homeported in Massachusetts, Rhode Island, Connecticut, New York, or New Jersey. In addition, this program does not provide compensation for impacts to for-hire or private recreational fishing. The program also does not allow commercial fishing vessel crew to receive direct compensation. Only owner/operators are eligible. The funds do not account for impacts such as devaluation of permits and increased transit times once Vineyard Wind 1 is constructed. It was also noted that before receiving financial compensation, fishermen must sign a waiver stating they will not join future lawsuits against Vineyard Wind 1. The specific language in this waiver is only shared with fishermen after they have submitted applications for compensation. Stakeholders said this is problematic because some fishermen will not want to sign the waiver and they should be aware of that requirement before going through the time-consuming application process and submitting personal fishing and financial information. The Council recommended that Vineyard Wind or NOAA Fisheries do additional targeted outreach to ensure all potentially eligible fishermen are aware of the program, application process, and deadlines.

Impacts of Offshore Wind Energy Construction Sounds on Behavior of Longfin Squid and Black Sea Bass

The Council received a presentation from Dr. Aran Mooney and Nathan Formel with the Woods Hole Oceanographic Institution on multiple studies of the impacts of offshore wind construction sounds on longfin squid and black sea bass. These studies examined the impacts of recorded pile driving sounds from construction of the Block Island Wind Farm replayed in a laboratory setting as well as on the water studies of pile driving in an experimental setting in Woods Hole. The sound levels used in all these studies are less intense than those that will be produced during installation of the larger foundations planned for other offshore wind energy projects off the East Coast. However, similar studies have not been done during construction of these projects. Key findings presented for squid include strong initial alarm responses of resting squid, increased energy usage during alarm responses, and distraction from feeding, but sustained mating behaviors and no significant change in school area during noise. The researchers concluded that longfin squid are generally resilient to pile driving noise. Key findings presented for black sea bass include increased sheltering behavior of adults and reduced juvenile counts during pile driving. The researchers suggested there could be potential displacement and impacts to foraging behavior.

Proposed Rule to Update Regulations Associated with the Magnuson-Stevens Fishery Conservation and Management Act's Confidentiality Requirements

Laura Keeling, from NOAA Fisheries Office of Sustainable Fisheries, provided a briefing on a proposed rule that would modify the regulations governing the confidentiality of information submitted in compliance with requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Ms. Keeling noted that the proposed rule aims to streamline access for the fishing industry as well as Regional Fishery Management Councils, states, commissions, and other entities that need such information for fishery conservation and management purposes. It would bring implementing regulations into compliance with the Congressional amendments and address their application to some more recent issues. The rule would also prohibit unauthorized disclosure of confidential information, clarify exceptions to the MSA that allows for the release of confidential information, and provide a general framework for the handling of confidential information under the MSA. The final rule is expected to be published this summer, and internal control procedures will be developed to guide the implementation of the rule. Following the presentation, the Council agreed to submit comments on the proposed rule. Given the length and complexity of the rule, the Council also directed staff to develop a redline version showing the proposed changes to the existing regulatory text.

Next Meeting

The next Council meeting will be held **June 4-6, 2024, in Riverhead, NY.** A complete list of upcoming meetings can be found at https://www.mafmc.org/council-events.

South Atlantic Fishery Management Council

News Release

FOR IMMEDIATE RELEASE
March 11, 2024

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

Federal Fishery Managers Review Assessment for Black Sea Bass, Red Snapper Projects, and Address Other Issues During March Meeting

Black Sea Bass are managed along the Atlantic coast in federal waters from Cape Hatteras, NC southward along the east coast of Florida by the South Atlantic Fishery Management Council. Based on the recent stock assessment conducted through SEDAR 76, the stock is overfished and declining in abundance. With a current recreational bag limit of 7 fish per person and a 13-inch minimum size limit, the number of undersized fish released by the recreational fishery has increased in recent years while total landings have declined. Black Sea Bass inhabit offshore reef areas as well as nearshore structure and around half of the estimated regulatory discards occur in state waters. The overall discard mortality rate is approximately 14%. In addition, the stock assessment shows continued trends in low recruitment, or the number of new fish entering the population each year.

During its March meeting last week in Jekyll Island, Georgia, the Council reviewed stock projections for Black Sea Bass from NOAA Fisheries, considered recommendations from its Scientific and Statistical Committee, and a management response options presentation from Council staff addressing Population Conditions and Management Challenges for Black Sea Bass. The presentation shows strong evidence the stock is in significant decline. Climate change may be contributing to low recruitment and loss of the stock at the southern end of its range, and there is an urgent need to reduce both discards and landings.

The Council will continue to discuss Black Sea Bass during its June 10-14, 2024 meeting, including options for management to take out to public scoping. Public scoping meetings for Snapper Grouper Amendment 56 addressing measures for Black Sea Bass are tentatively planned for this summer.

Red Snapper Exempted Fishing Projects

Council members received an overview of three projects proposed by the Florida Fish and Wildlife Conservation (FWC) that require Exempted Fishing Permits. The projects are expected to be funded by NOAA Fisheries to explore new and innovative approaches to better understand and reduce Red Snapper discards and increase fishing opportunities in the snapper grouper fishery. A total of five projects are recommended for funding.

The three FWC proposals involve the use of Exempted Fishing Permits to allow harvest of Red Snapper. The individual projects would collaborate with fishermen to obtain catch and discard data, test innovative strategies to reduce discards, and allow additional harvest opportunities. In addition, the projects include a reporting app, an education course, and an angler satisfaction evaluation.

The proposals include both private recreational anglers and for-hire vessels in northeast Florida and private recreational vessels in southeast Florida. Fishermen will be selected to participate and test aggregate bag limits of snapper grouper species, including retention of Red Snapper. The projects could potentially begin in July 2024 and continue for one year, with possible funding available for an additional year. The Council provided comments on the proposals. NOAA Fisheries will also solicit public comment on the Exempted Fishing Permits needed for the three project proposals.

(Continued)

Red Snapper Management

During the meeting, the Council received a letter from NOAA Fisheries stating the agency is considering interim measures to reduce overfishing of Red Snapper during the 2024 fishing year. In the letter, Regional Administrator Andy Strelcheck noted the need to take "expeditious action to meet legal obligations, now and in the long term: including thorough consideration of the benefits and tradeoffs of different management opportunities to increase Red Snapper access, reduce discards, and rebuild other snapper grouper stocks." The Council received notification on July 23, 2021 that the Red Snapper stock was experiencing overfishing, primarily due to release mortality in the recreational fishery.

The Council developed Snapper Grouper Regulatory Amendment 35 to address overfishing for Red Snapper, reduce the number of fish caught and released, and reduce mortality of released fish. However, during its December 2023 meeting, the Council rescinded approval of the amendment, acknowledging that taking additional time to work on the regulatory amendment poses little risk as the Red Snapper stock is rebuilding faster than expected, exhibiting strong recruitment, increasing abundance, and expanding age structure.

The Council is addressing long-term management measures for Red Snapper and other snapper grouper species through development of a Management Strategy Evaluation for the Fishery. To help reduce release mortality, the Council has implemented requirements for descending devices to be onboard and readily available when fishing for snapper grouper species and hook specifications to help ensure released fish survive. The Council has also continued expansion of outreach efforts including the Council's Best Fishing Practices and Citizen Science Programs.

When asked about the 2024 Red Snapper season, Regional Administrator Andy Strelcheck stated they have no season projections to date, and a final decision will be made later this spring. The length of any season is determined by NOAA Fisheries.

For-Hire Reporting

The Council also continued discussing the Southeast For-Hire Integrated Electronic Reporting Program and the need to improve compliance with reporting requirements. To begin identifying needed changes and get feedback from those who are required to report, the Council approved assembling an advisory panel whose charge would be to explore approaches to improve the existing program. The Council established the structure of this advisory body and will solicit applicants this spring with the intent of appointing members at their June 2024 meeting.

Management of the Commercial Snapper Grouper Fishery

The Council continued discussion of the snapper grouper commercial fishery, including the current permit structure and trends in the fishery. The Council will take a focused look at both short-term and long-term changes needed for the fishery. Council members requested additional information on vessels active in the fishery, leasing of permitted vessels, trends in imports, and permit trends. The Council will continue to solicit input from its Snapper Grouper Advisory Panel, scheduled to meet March 26-28, 2024 in Charleston, SC.

Additional Information

Additional information about the March 2024 Council meeting in Jekyll Island, Georgia, including meeting materials and committee reports, is available from the Council's website at: https://safmc.net/events/march-2024-council-meeting/. The next meeting of the South Atlantic Fishery Management Council will be held June 10-14, 2024 in Daytona Beach Shores, 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
Full Council and Committee
SUMMARY MOTIONS
March 4-8, 2024

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.

Full Council Session I

MOTION 1: APPROVE THE FOR-HIRE REPORTING AP STRUCTURE AND MAKE APPOINTMENTS IN JUNE 2024.
****GUIDANCE TO INCLUDE HEADBOAT OPERATORS****

MOTION 2: DIRECT STAFF TO DO THE FOLLOWING:

- ADVERTISE FOR SEATS ON THE FOR-HIRE REPORTING AP FOR REVIEW IN JUNE 2024.
- PREPARE A DISCUSSION DOCUMENT WITH ITEMS TO BEGIN TO IMPROVE SEFHIER COMPLIANCE FOR REVIEW IN JUNE 2024.
- CONTINUE WORK ON FOR-HIRE LIMITED ACCESS AMENDMENT FOR DISCUSSION IN JUNE 2024.

Mackerel Cobia Committee

MOTION 3: APPROVE THE KING AND SPANISH MACKEREL PORT MEETINGS PLAN FOR IMPLEMENTATION.

MOTION 4: ADOPT THE FOLLOWING TIMING AND TASKS:

- Begin conducting port meetings for king and Spanish mackerel. Update the Council on North Carolina and New England port meetings at the June 2024 Council meeting.

SEDAR Committee

MOTION 5: CHANGE SEDAR 90 (RED SNAPPER) TO A BENCMARK ASSESSMENT.

MOTION 6: APPROVE SEDAR 96 (YELLOWTAIL SNAPPER) TERMS OF REFERENCE.

MOTION 7: APPOINT JIM GARTLAND, KAI LORENZEN, STEVE TURNER, BEV SAULS AND TIFFANY CROSS TO THE TOPICAL WORKING GROUP FOR SEDAR 96.

MOTION 8: APPOINT GARLAND YOPP, JESS KELLER, AND RYAN YADEN TO THE SYSTEM MANAGEMENT PLAN WORKGROUP

Snapper Grouper Committee

Amendment 48 (Wreckfish)

MOTION 9: APPROVE THE REVISED LANGUAGE FOR ACTION 13, PREFERRED ALTERNATIVE 2

Action 13. Modify offloading site requirements and establish approved landing locations for wreckfish.

Preferred Alternative 2. Remove the offloading site requirements for wreckfish. Individual transferable quota wreckfish must be landed at an approved landing location. Landing locations must be approved by NMFS Office for Law Enforcement prior to a vessel landing individual transferable wreckfish at these sites. Landing locations must be publicly accessible via freely traversable roads and navigable waters and no other condition may impede free and immediate access to the site by an authorized law enforcement officer.

**Note: the NMFS Office of Law Enforcement may choose to revoke approval of a pre-landing location if it is determined that officers do not have free and immediate access to the site.

MOTION 10: APPROVE ALL MOTIONS AND RECOMMENDATIONS MADE BY THE WRECKFISH SUB-COMMITTEE, AS PRESENTED IN THE FEBRUARY 2024 SUB-COMMITTEE REPORT (APPENDED TO SG COMMITTEE REPORT).

MOTION 11: APPROVE ALL ADDITIONAL WRECKFISH MOTIONS PASSED BY THE SNAPPER GROUPER COMMITTEE AT THE MARCH 2024 COUNCIL MEETING. (MOTIONS 5, 8, 10, AND 11 OF THE WRECKFISH SUBCOMMITTEE REPORT).

Scamp/Yellowmouth Grouper (SG Amendment 55)

MOTION 12: APPROVE THE PURPOSE AND NEED STATEMENT.

Purpose: The purpose of this amendment is to modify the Other South Atlantic Shallow Water Grouper complex by removing yellowmouth grouper from the complex and establishing a new Scamp and Yellowmouth Grouper complex. For the new complex, establish conservation and management measures, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures based on the results of the SEDAR 68 operational assessment (2022) stock assessment. For the South Atlantic Other Shallow Water Grouper complex, modify catch levels.

Need: The need for this amendment is to rebuild the scamp and yellowmouth grouper stock, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effect.

MOTION 13: SELECT ALTERNATIVE 2 AS THE PREFERRED ALTERNATIVE FOR ACTION 5.

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

Alternative 2. Commercial and recreational allocations would change each year from 2025-2029, where they would remain in place until modified, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2018 through 2022. (Split Reduction Method – 5 yrs.)

MOTION 14: MOVE ALTERNATIVES 4 AND 5 FROM ACTION 5 TO CONSIDERED BUT REJECTED.

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

Alternative 4. Allocate 63.40% of the total annual catch limit of Scamp and Yellowmouth Grouper complex to the commercial sector and 36.60% to the recreational sector.

Alternative 5. Allocate 64.90% of the total annual catch limit of Scamp and Yellowmouth Grouper complex to the commercial sector and 35.10% to the recreational sector.

MOTION 15: MOVE ACTION 6 ALTERNATIVE 2, AS MODIFIED, TO CONSIDERED BUT REJECTED APPENDIX

Action 6. Reduce the recreational fishing season for scamp and yellowmouth grouper

Alternative 2. Reduce the recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone to be open May 1 through July 31. The season will be closed January 1 through April 30 (spawning season closure) and August 1 through December 31.

MOTION 16: SELECT ALTERNATIVE 3 AS THE PREFERRED ALTERNATIVE FOR ACTION 6.

Action 6. Reduce the recreational fishing season for scamp and yellowmouth grouper

Alternative 3. Reduce the recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone to be open May 1 through August 31. The season will be closed January 1 through April 30 (spawning season closure) and September 1 through December 31.

MOTION 17: SELECT ALTERNATIVE 3 (300 POUNDS GUTTED WEIGHT), AS MODIFIED, AS THE PREFERRED ALTERNATIVE FOR ACTION 8.

Action 8. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

Alternative 3. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 300 pounds gutted weight.

MOTION 18: SELECT ALTERNATIVE 3 AS THE PREFERRED ALTERNATIVE FOR ACTION 9.

Action 9. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

Alternative 3. If commercial landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex commercial annual catch limit,

commercial harvest of scamp and yellowmouth grouper is closed for the remainder of the fishing year.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the complex commercial annual catch limit, regardless of stock status or whether the total annual catch limit was exceeded the complex commercial annual catch limit for the following fishing year will be reduced by the amount of the complex commercial annual catch limit overage in the prior fishing year.

MOTION 19: SELECT ALTERNATIVE 5 AS THE PREFERRED ALTERNATIVE FOR ACTION 10.

Action 10. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

Alternative 5. If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the recreational annual catch limit for the complex the length of the following year's recreational fishing season for the complex will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year, regardless of stock status.

MOTION 20: SELECT ALTERNATIVE 2 AS THE PREFERRED ALTERNATIVE FOR ACTION 11.

Action 11. Revise the total annual catch limit and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

Alternative 2. The acceptable biological catch for the updated Other South Atlantic Shallow Water Grouper complex is 104,190 pounds whole weight. The total annual catch limit is 100,151 and is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey. The commercial annual catch limit is 53,380 pounds whole weight and the recreational annual catch limit is 46,771 pounds whole weight.

MOTION 21: APPROVE AMENDMENT 46 (RECREATIONAL PERMIT) AND ALL ACTIONS, AS REVISED, FOR FURTHER DEVELOPMENT

MOTION 22: DIRECT STAFF TO DO THE FOLLOWING:

- Continue to develop Snapper Grouper Amendment 48 (Wreckfish) as detailed in the timing and tasks motion from the Wreckfish Sub-Committee report (appended to SG Committee report).
- Continue development of Amendment 46 for review at the June 2024 Council meeting. Prepare the amendment for approval for public hearings for September 2024.
- Convene the Technical AP and Private Angler AP to review Amendment 46.
- Convene the Outreach and Communications AP to request feedback on the education component.
- Convene the Snapper Grouper AP.
- Update commercial permit information and present to the Committee in the latter half of 2024 or early 2025 (depending on availability of updated permit, logbook, and landings data).

- Continue development of Regulatory Amendment 36 for review in June 2024.
- Send letters to black sea bass pot endorsement holders to inform them of the upcoming management changes for black sea bass.
- Compile requested information for Amendment 56 and prepare for review in June 2024.
- Compile requested information on management strategies for red snapper and snapper grouper discard reduction and prepare for review in June 2024.

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

KATHY B. RAWLS
Director

May 22, 2024

MEMORANDUM

TO: N.C. Marine Fisheries Commission
FROM: Col. Carter Witten
SUBJECT: Law Enforcement Report

Issue
Quarterly update on Marine Patrol law enforcement activities.

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

Overview
Marine Patrol officers continue to monitor all fishing activity. Officers Patrick Jones and Adam Gee have been certified and sworn in, and we're continuing to work on filling other vacancies.

There have been an assortment of cases since the last Marine Fisheries Commission business meeting. Some examples of those cases include: officers took out warrants on a commercial fisherman for setting illegal gill nets on two separate occasions; officers charged two fishermen for illegal use of gill nets and having no commercial licenses to sell seafood. Officers also made cases for taking oysters from polluted waters, possessing undersized black sea bass, and taking red porgy out of season. Officers also charged a recreational fisherman for possession of undersized vermilion snapper.

Marine Patrol officers are required to do at least 24 hours of in-service training every year to remain certified with Criminal Justice and Training Standards. Our officers are currently working on getting those training hours completed. Additionally, officers attended the Catawba Flood exercise, the Swiftwater Boat Operator class and various other required and non-required trainings.

In other work, officers participated in Shellfish Relay efforts, assisted with the FDA's peer evaluation for control of harvest, posted new signage for various boundaries, and recovered a missing person from Oregon Inlet.

As always, engaging in education and outreach opportunities throughout the state has been a big focus of the Marine Patrol. One major event that the Marine Patrol was honored to participate in Casting with Cops, which gave 40 underprivileged children the opportunity to fish with officers from the Marine Patrol, the Wildlife Resources Commission, the Beaufort and Martin County Sheriff's Departments, and the Belhaven Police Department. In addition to that, officers have participated in a variety of other outreach events since your last meeting, including the Dixie Deer Classic, events at UNC-W and Fort Fisher, and attended a Career Day at a local middle school.

Lastly, our staff are continuing to work on a Marine Patrol Junior Academy for 12 middle school aged children. This week-long event is slated to begin June 10th of this year, and it will give opportunities for cadets to learn about conservation law enforcement, fish and gear identification, boat handling, water safety, and ethical angling practices.

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

KATHY B. RAWLS
Director

May 1, 2024

MEMORANDUM

TO: N.C. Marine Fisheries Commission

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

SUBJECT: Protected Resources Program Update

Issue

Summary information is provided from the Division's Protected Resources Program for the most recent annual reports for Atlantic Sturgeon and Sea Turtle ESA Section 10 Incidental Take Permits (ITPs). The reports were submitted in February to the National Marine Fisheries Service (NMFS) as required for the 2023 ITP Year (September 1, 2022 – August 31, 2023). Note that the annual reports include preliminary Trip Ticket Program data for 2023, and updates can occur in addendums to these reports submitted to NMFS in June 2024.

The Division did not receive the renewed ITP before the sea turtle ITP expired at the end of August 2023. However, NMFS provided a letter authorizing the Division to continue operating under the sea turtle ITP until a final determination is made on the application. The letter did not reference the Atlantic sturgeon ITP because it does not expire until the end of August 2024. The public comment period for the draft Environmental Assessment of the ITP renewal application closed on September 11th. The NMFS is working through public comments and an Endangered Species Act (ESA) Section 7 consultation, which is an interagency process "..designed to assist federal agencies in fulfilling their duty to ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat" (https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region). The Division has participated with the Section 7 office to answer their directed questions about the application. It is not known at this time when a determination will be made on the ITP application.

The Division continues to coordinate with the NC Department of Information Technology to develop the Observer Trip Scheduling System (OTSS). The OTSS will help ensure that ITP observer coverage requirements are met, and that the observer coverage is distributed evenly among participants and is more representative of the fishery. The Observer Program is currently completing internal testing of the OTSS and has begun to identify and reach out to members of the commercial fishing industry, including those on the Marine Fisheries Commission, to further test the system. An implementation date for requiring participation in the OTSS has not been set but is

expected to occur in 2024. Public information meetings will occur and trainings materials will be provided before the OTSS is fully implemented.

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

Overview of the ITP annual reports
During the 2023 ITP year, take levels of Atlantic Sturgeon and sea turtles in estuarine anchored gill nets did not reach or exceed allowable thresholds for any combination of species and management unit. There were 346 observations of large-mesh (≥5-inch stretched mesh) gill net trips and 134 observations of small-mesh (<5-inch stretched mesh) gill net trips. Required observer coverage was met across all seasons and managements except for the following:

Fall: Management Unit A small-mesh gill nets (0.8% coverage)

Fall: Management Unit C small-mesh gill nets (0% coverage)

Spring: Management Unit D1 small-mesh gill nets (0% coverage)

During the 2023 ITP Year, NCDMF used proclamation authority to close all or partial MUs when there was a risk of not obtaining minimum observer coverage on a MU and seasonal basis as required by the Sea Turtle ITP. In some cases, this resulted in fishers contacting the Division to request for their area to be reopened and agreeing to arrange observer trips. This approach contributed to observer coverage requirements being met at the MU and season level. The Division will continue to consider this option to ensure compliance with the ITP requirements for observer coverage is maintained.

Observers documented 15 Atlantic Sturgeon in large-mesh and three Atlantic Sturgeon in small-mesh gill nets. An additional sturgeon that could not be identified to species was also observed in a large-mesh gill net. No fishers reported sturgeon interactions during the 2023 ITP Year. Most sturgeon takes were released alive (Atlantic Sturgeon 17 out of 18; unidentified sturgeon 1 of 1). Interactions occurred primarily during fall (79%; 15 of 19) and in MU A (84%; 16 of 19).

Observers documented 30 sea turtles (24 Green Sea Turtles, 4 Kemp's Ridley Sea Turtles, 1 Loggerhead Sea Turtle, and 1 unidentified sea turtle) in large-mesh gill nets and two Green Sea Turtles in a small-mesh gill nets. Two self-reported sea turtle interactions were received by the Observer Program. All 32 observed sea turtle interactions occurred during fall. Observed interactions occurred primarily in MU B (n = 21), followed by MU E (n = 7) and MU C (n = 4). Overall, 84% (27 of 32) of observed interactions were alive. Three of the live Green Sea Turtles were in poor condition and were transferred to veterinary care arranged by NCWRC. Two died overnight and one was released on 21 October (Godfrey, NCWRC, personal communication).

The Observer Program continues to have difficulty scheduling observed trips with fishers. Out of 1,876 phone calls and in-person contacts across all seasons, observers spoke with a fisher 42% (n = 795) of the time but were only successful in scheduling a trip 5% (n = 94 trips) out of the 1,876 contact or contact attempts. Observers and Marine Patrol officers made an additional 1,026 (91 and 935, respectively) unsuccessful attempts to find and observe a trip using alternative platform across all seasons.

During the 2023 ITP Year, Marine Patrol officers issued 37 citations (Fall, *n* = 16; Winter, *n* = 6; Spring, *n* = 7; Summer, *n* = 8) and 27 Notice of Violations (Fall, *n* =8; Winter, *n* = 3; Spring, *n* = 11; Summer, *n* = 5).

The final documents can be found at the following links:

2023 Annual Sea Turtle ITP Report

2023 Annual Atlantic Sturgeon ITP Report

Annual Sea Turtle Interaction Monitoring of the Estuarine Anchored Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2023 (1 September 2022–31 August 2023)

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

Matthew R. Doster, Barbie L. Byrd, and Dave Ushakow

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

29 February 2024

Table of Contents

List of Tables

List of Figures

1 INTRODUCTION

The North Carolina Division of Marine Fisheries (NCDMF) has actively addressed the incidental take of sea turtles in commercial estuarine anchored gill nets since 2000. Between 2000 and 2011, the NCDMF had a series of Incidental Take Permits (ITPs) 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 estuarine anchored gill nets primarily in Pamlico Sound (Daniel 2013). These ITPs covered the five species of sea turtles that can occur in North Carolina: the 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 a passive gear 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 estuarine anchored gill nets and mesh sizes are provided as inches stretched mesh (ISM) 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 from NMFS for the estuarine anchored gill-net fishery state-wide (see McConnaughey et al. 2019). On 11 September 2013, the NCDMF received the Sea Turtle ITP (No. 16230), which was set to expire on 31 August 2023 (78 FR 57132[1]). The permit defines an ITP Year as 1 September through 31 August of the following year, defines mesh-size categories as large mesh (≥4 ISM) and small mesh (<4 ISM), and includes three seasons (fall, spring, and summer). The permit also establishes annual authorized levels of incidental takes for the two mesh-size categories and six geographic regions defined as Management Units (MUs) A, B, C, D1, D2, and E (Tables 1–5; Figure 1). The ITP includes a Conservation Plan to monitor, minimize, and mitigate incidental takes of sea turtles in otherwise lawful anchored gill-net fisheries operating in North Carolina estuarine waters. Part of the plan outlines a state-wide estuarine gill-net observer program to monitor interactions that can be counted and, when applicable, extrapolated across the fishery within a given season and MU. Required observer coverage thresholds are set for each MU within each season as a minimum of 7% with a goal of 10% for large-mesh gill nets and a minimum of 1% with a goal of 2% for small-mesh gill nets. The Conservation Plan also incorporated an adaptive management approach to mitigate incidental takes should observer data indicate that takes were approaching or exceeding authorized thresholds; this approach would include implementation of temporary management options when needed using the NCDMF director's proclamation authority (General Statute 143B-289.52; NCGS § 113-221.1).

To maintain incidental takes below authorized levels, the Conservation Plan consisted of a variety of measures for gill nets operating in estuarine waters across the state. These measures primarily included the continuation of restrictions implemented previously as temporary measures to reduce sea turtle takes in the large-mesh gill-net fishery for Southern Flounder (*Paralichthys lethostigma*). These restrictions are implemented annually through proclamation. They include mitigation measures such as restricting soak time and days of the week, limiting net lengths, requiring separations between net shots in a single string, requiring low-profile net configurations, and implementing time and area closures (Table 6). However, not all regulations for nets ≥4 ISM are

[1] https://www.federalregister.gov/documents/2013/09/17/2013-22592/endangered-species-file-no-16230

applied in the same manner in each Management Unit based on historical information for where risk of incidental takes of sea turtles was the greatest. Additionally, the NCDMF mirrors by proclamation the federal deep-water closure in Pamlico Sound during 1 September–15 December (50 C.F.R. § 223.206 (d)(7). The Conservation Plan also requires the continuation of seasonal attendance requirements for anchored small-mesh gill nets that were outlined in the original application.

In May 2020, the NCDMF contacted the NMFS to request clarification regarding sea turtle tagging protocols. Although the ITP requires that incidentally captured sea turtles be tagged, staff at the NMFS Southeast Fisheries Science Center (SEFSC; Beaufort, NC) communicated to the NCDMF that there had been recent changes to their tagging protocols. These changes affected the type of training that NMFS SEFSC staff provided, which meant that observers did not have the training necessary to fulfill the tagging requirement per the ITP. On 1 September 2020, the NMFS provided a notification letter to the NCDMF removing the ITP requirement for observers to apply flipper and Passive Integrated Transponders (PIT) tags to incidentally captured sea turtles (Byrd et al. 2021).

After the issuance of the Sea Turtle ITP in 2013, the NCDMF also received an ITP (No. 18102) in 2014 to address incidental takes of Atlantic Sturgeon (*Acipenser oxyrinchus*) in gill-net fisheries operating in estuarine waters across the state (79 FR 43716[2]). Although the Atlantic Sturgeon and Sea Turtle 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 to estimate total incidental takes where possible. Data from observed trips are used for both ITPs. Notably, however, the ITPs defined large mesh differently; the Sea Turtle ITP defined large-mesh gill nets as ≥4 ISM and the Atlantic Sturgeon ITP defined them as ≥5 ISM. The Atlantic Sturgeon ITP also required observer coverage thresholds to be met across all MUs within a season rather than within each MU within each season. Finally, the Atlantic Sturgeon ITP included required observer coverage and authorized take levels during winter.

In recent years, regulatory changes related to several Fishery Management Plans (FMPs) have significantly reduced fishing effort using estuarine large-mesh gill nets. One such example is the adoption of Amendment 2 of the Southern Flounder FMP on 23 August 2019 by the Marine Fisheries Commission (MFC; NCDMF 2019). Regulatory measures in this amendment were a result of the most recent Southern Flounder stock assessment, which indicated that the stock was overfished and overfishing was occurring. North Carolina state law requires management actions be taken to end overfishing within two years and to recover the stock from an overfished condition within 10 years. To meet these legal requirements, the NCDMF determined a 62% reduction in overall harvest was necessary for 2019 and a 72% harvest reduction would be needed beginning in 2020. Amendment 2 was expedited to begin rebuilding the stock immediately (NCDMF 2022). Due to the shortened time frame for development, Amendment 2 incorporated a seasonal approach to meet reductions while deferring more complex and comprehensive strategies to be developed in Amendment 3. For the commercial gill-net fishery, these regulations severely limited when large-mesh gill nets harvesting flounder were allowed. For example, for fall 2019–2021, the Southern Flounder commercial fisheries were constrained by setting specific dates when fishing was allowed across three Flounder Management Areas (MAs): Northern, Central, and Southern. Prior to fall 2019, the fishery was most active during the fall, but could operate January through

[2] https://www.federalregister.gov/documents/2014/07/28/2014-17645/endangered-species-file-no-18102

November. Amendment 3 was adopted by the MFC on 26 May 2022 to establish new and continued regulations that would facilitate the rebuilding of the Southern Flounder stock. Amendment 3 established a quota-managed fishery for mobile gears (e.g., estuarine anchored large-mesh gill nets and gigs) and pound nets with separate sub-allocations by MA (NCDMF 2022). Estuarine Flounder Dealer Permits were required for any fish dealer to possess, purchase, sell, or offer for sale flounder taken from estuarine waters. As a condition of the permit, dealers were required to report flounder landings from a given day by noon the following day or, for landings on Fridays or Saturdays, by noon the following Monday. Other changes included the consolidation of mobile gear MAs from three areas in Amendment 2 to two areas (Northern MA: ITP MUs A, B, and C; Southern MA: ITP MUs D1, D2 and E; Figure 1) and the gradual reallocation of the fishing quota to 50/50 recreational/commercial by 2026. Some regulations from Amendment 2 were maintained, such as limiting the allowed yardage of gill nets (i.e., 1,500 yards in MUs A, B, and C, and 750 yards in MUs D and E) and limiting gear soak time to overnight soaks state-wide of gill nets targeting flounder.

Regulatory changes related to the management of American Shad (*Alosa sapidissima*) and Striped Bass (*Morone saxatilis*) have also affected large-mesh gill-net fisheries in MUs A and C. The NC American Shad Sustainable Fishery Plan, which set sustainability parameters for the American Shad stock, was approved by the MFC in 2013. Due to sustainability parameters being exceeded in MU A, the allowed season for anchored gill nets configured for harvesting American Shad in MU A was initially limited to 1 February–14 April and then further reduced in 2014 to 3–24 March (NCDMF and North Carolina Wildlife Resources Commission [NCWRC] 2017). The duration of the season has been shortened at times due to the concurrent harvest of Striped Bass. Striped Bass are a desirable bycatch species in the American Shad fishery in MU A. As a quota-managed species, Striped Bass bycatch in the shad fishery can force the fishery to close early if the quota is met before the defined end to the shad season. Striped Bass management has also led to recent regulatory changes due to the adoption of the 2020 Revision of Amendment 1 to the North Carolina Estuarine Striped Bass FMP (NCDMF and NCWRC 2020). As a result of this amendment, Total Allowable Landings (TAL) of Striped Bass were reduced from 275,000 pounds to 51,216 pounds, effective 1 January 2021. Furthermore, midway through the 2021 shad season, the lower Chowan River and western Albemarle Sound were closed to the use of gill nets due to the historical bycatch of Striped Bass in that area (Proclamation M-9-2021; Table 7). This closure was included in the proclamation that opened MU A for the 2023 shad fishery for the same reason (Proclamation M-5-2023; Table 7).

Regulations implemented in MU C have all but ended the large-mesh gill-net shad fishery in that area. Since 15 March 2019, all gill nets have been prohibited in upstream portions of the Pamlico and Neuse rivers, greatly reducing the areas of MU C open to gill nets (Proclamation M-6-2019; Table 7). In accordance with Supplement A to Amendment 1 and Amendment 2 to the Estuarine Striped Bass Fishery Management Plan (NCDMF and NCWRC 2019) commercial harvest of striped bass in MU C has been prohibited since 2019. To that end, tie-down and distance-from-shore restrictions remain in place for large-mesh gill nets in the western Pamlico Sound and associated rivers as an effort to minimize Striped Bass bycatch. These restrictions reportedly make it difficult to successfully catch shad using anchored gill-net gear in MU C. Decreasing trends in reported trips support this anecdotal information as reported large-mesh gill-net trips in MU C went from an average of 966 trips during spring during 2016–2018 to an average of 17 trips during 2019–2021.

Per ITP requirements, the Observer Program provides seasonal and annual reports to NMFS each ITP year. Additionally, weekly progress reports are provided following each week in which an observed sea turtle interaction occurred. During the 2023 ITP Year seasonal reports were provided for fall (September–November 2022), spring (March–May 2023), and summer (June–August 2023). In contrast to the Atlantic Sturgeon ITP, the Sea Turtle ITP does not require observer coverage or seasonal reports for winter because sea turtles are less likely to be present in North Carolina estuarine waters during this time. This annual report outlines observer activity, fishing activity, and total or estimated takes of sea turtles for three seasons during the 2023 ITP Year, 1 September 2022–31 August 2023. Fishing activity (i.e., effort) was measured as the number of reported fishing trips; these data are finalized only for fall 2022. After the preliminary data for 2023 are finalized in May 2024, 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

A sea-day schedule of projected observer trips for each season by month and MU during the 2023 ITP Year was developed during the prior season. The number of projected observer trips was based on the maximum goals for coverage outlined in the Conservation Plan: 10% coverage of total large-mesh gill-net fishing trips and 2% coverage of total small-mesh gill-net fishing trips. Data on commercial fishing effort were sourced from the NCDMF Trip Ticket Program (TTP), whereby fish dealers complete a trip ticket every time a commercial fisher sells finfish and/or shellfish. Trip tickets record information such as gear type, area fished, species harvested, and total weight by species. For anchored gill nets, the TTP defines large-mesh (≥5 ISM) and small-mesh (<5 ISM), which is different than the definitions of mesh-size categories as outlined by the Sea Turtle ITP. It is uncommon, however, for gill nets to have a mesh size between these two sizes and in many cases those mesh sizes are prohibited; therefore, we assumed effort by mesh categories in the TTP dataset would not be greatly affected by the difference in definitions of mesh size. As such, projected observer trips were stratified across each month within three seasons and six MUs proportional to TTP data of reported fishing trips. The seasons crossed calendar years and were defined as follows: fall (September–November 2022), spring (March–May 2023), and summer (June–August 2023). Consistent with federal rule (50 C.F.R. § 223.206 (d)(7)), large-mesh gill nets operating in Pamlico Sound (Management Unit B) during 1 September–15 December were confined to specific subunits (Shallow Water Gill-Net Restricted Areas 1-4, and Mainland Gill-Net Restricted Area). This has effectively closed the fishery in the deep waters of Pamlico Sound and in corridors near Ocracoke, Hatteras, and Oregon inlets (Proclamation M-15-2022; Table 7; Figure 1).

Historically, projecting observer trips for the sea-day schedule was calculated as the average of reported gill-net trips by mesh-size category (large and small), month and MU from the previous five years (e.g., 2017–2021 for the 2022 fall season). Though this approach was used to estimate small-mesh gill-net fishing effort, it was not a viable prediction of large-mesh fishing effort during the 2023 ITP Year due to regulation changes described above. The fall 2022 flounder season was the first to be quota-managed per Amendment 3 and created uncertainty as to how fishers would respond to a fishery that was open until the quota was filled rather than a specific number of days per Amendment 2. With that uncertainty, two approaches to estimate effort were explored. The

first approach evaluated the previous year's landings and selected the week for each MU with the maximum number of participants, and then assumed each person would fish every day the season was open. This provided an estimated number of fishing trips per day. The second approach evaluated landings data during 2019–2021 (post Amendment 2) and selected the year with the greatest number of daily trips unique for each MU. For example, MU A had the greatest number of daily trips during 2020, but MU B had the greatest number of daily trips during 2021. For most MUs, the first approach produced a higher estimate of daily fishing effort. To be risk-averse, this approach was used to plan for the number of observed trips for each MU per day based on 10% of the estimated fishing trips unique to each MU. It was assumed that no fishing effort occurred in MU D1 because it has been closed to anchored large-mesh gill nets since 9 November 2017 when estimated Green Sea Turtle takes exceeded the authorized threshold (McConnaughey et al. 2019, Byrd et al. 2023). Additionally, per the Sea Turtle ITP, MU D1 is closed to large-mesh gill nets annually during 8 May–14 October. In the estuarine large-mesh gill-net fishery for American Shad, the method to estimate fishing effort was also adapted to accommodate recent changes in the management of this fishery. For MUs A and C, only the last three years (2020–2022) of reported fishing trips were used to project observer trips. Outside of these seasons and MUs, projected large-mesh observer trips were set to zero because large-mesh gill nets were not allowed.

The constrained seasons for the large-mesh gill-net fisheries concentrated fishing effort and the required observer effort to sufficiently cover the fisheries. Post-COVID changes to the hiring climate have made it difficult for NCDMF to hire seasonal observers to the extent needed. As a result, other NCDMF programs provided staff to help observe during the fall flounder and spring shad fisheries. The sea-day schedule continued to be shared with Marine Patrol officers, who conducted alternative platform observations as part of their regular duties.

Efforts to observe gill-net trips were facilitated by the continued requirement for fishers that use estuarine anchored gill nets to obtain an Estuarine Gill Net Permit (EGNP; Proclamation M-24-2014; Table 7). Permit holders provide their contact information so that observers can call and schedule observed trips. However, as the permit is free, many fishers get an EGNP but do not report trips using estuarine gill nets (Byrd et al. 2021). To optimize observer efforts to contact fishers, the NCDMF License and Statistics Section provided data on EGNP holders that had reported anchored estuarine fishing trips during the last three years. The dataset included all reported trips, associated mesh-size category, MU, permittee name, and contact information. This dataset was used to create a priority call list that observers used to call permit holders and attempt to schedule trips in advance. Observers also visited boat ramps to intercept fishers and attempt to get onboard trips or follow them out to observe them fishing their gear.

Observers were trained to identify, measure, evaluate the condition of, and resuscitate sea turtles by experienced NCDMF staff and Dr. Matthew Godfrey (NCWRC). Michele Lamping at the NC Aquarium Pine Knoll Shores also provided training sessions for sea turtle handling. Data collected on observed sea turtles included date, time, location (latitude and longitude, when possible), certain gear parameters, condition (e.g., 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 sea turtles and data on environmental parameters (e.g., salinity, water temperature) were also collected when feasible. Dead or debilitated sea turtles were retained by the observer when possible and delivered to the NCWRC sea turtle biologist for either necropsy or rehabilitation. Individual reports of observed interactions were communicated with NMFS and NCWRC within 24 hours.

In addition to data specific to sea turtles, observers also collected data on catch and gear parameters. On alternative platform trips, the catch data were limited when compared to on-board trips. For unsuccessful alternative platform attempts (hereafter termed "No Contact" trips), observers recorded date, MU, and waterbodies surveyed. All data were coded onto NCDMF data sheets and uploaded to the NCDMF Biological Database for storage and analysis. Observers and Marine Patrol officers also logged data into a mobile ArcGIS application, Collector, in real time including set locations, gear parameters, and sea turtle interactions to provide daily total counts of trips and interactions.

Ongoing estimates of observer coverage were calculated by comparing the number of observed trips logged into Collector to the predicted number of fishing trips by mesh-size category, MU, and month. The numbers of No Contact trips were not included in these calculations. At the end of the calendar year, the TTP provided actual numbers of reported fishing trips to calculate observer coverage. The TTP data for 2022 (September–November) were finalized, but the data for 2023 (March–August) were preliminary. As a result, observer coverage calculated for spring and summer may change once finalized data are available in May or June 2024.

2.2 Incidental Takes

The ITP outlines authorized levels of incidental takes expressed as either estimated total takes based on observer data or counts of observed takes (Tables 1–5). Both types (estimated and counted) were necessary in development of authorized levels because there were insufficient data available for modeling predicted estimated takes in the ITP application for some combinations of species, MU, and mesh-size category (Daniel 2013). As a result, authorized levels of annual estimated interactions were only available for Green and Kemp's Ridley Sea Turtles in MUs 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 2023 ITP Year to authorized interactions were based either on annual counts of observed sea turtle takes or annual estimates of sea turtle takes. During summer 2015, a minor modification to the ITP was enacted through the NMFS combining authorized takes for MUs 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.

$$\text{Estimated Takes} = \left(\frac{\text{Observed Sea Turtle Takes}}{\text{Observed Gill-Net Trips}}\right) * \text{Total Reported Gill-Net Trips}$$

This calculation was used each time an incidental take was observed to determine the estimated number of interactions by date of capture, MU, species, and disposition. The predicted number of fishing trips was used to calculate real-time incidental take estimates. Estimated numbers of interactions and running totals of observed interactions were additive across interaction dates to determine if interactions were approaching authorized take thresholds. The ongoing comparisons allowed for the implementation of management measures, if needed, 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 fishing trips, albeit preliminary for 2023, reported in the TTP rather than the estimated

numbers of fishing trips. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Canty and Ripley 2015; Davison and Hinkley 1997; R Core Team 2019). Bootstrap replicates were generated by sampling observer trips with replacement 5,000 times within strata (mesh-size category/MU).

2.3 Compliance

The Observer Program used various methods to contact fishers to schedule trips. The most common method was by phone, due to fishers leaving from private launches and overall efficiency. For each contact attempt made to schedule a trip (phone call, text message, or in-person), observers logged the contact in a database, assigned a category of the response, and noted any additional information (e.g., fisher stated they will not fish until October). Response categories included 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). Observers also documented calls returned from fishers, including the response category and notes. Contact log data were summarized by season and response category to determine the percentage of contacts that resulted in observer trips.

As part of their regular duties, Marine Patrol officers checked gill nets for compliance. Citations and/or Notice of Violations (NOVs) were issued to fishers when gear or fishing practices were out of compliance. A citation is an enforcement action taken by a Marine Patrol officer for person(s) found to be in violation of General Statues, Rules, or Proclamations under the authority of the Marine Fisheries Commission and is considered a proceeding for District Court. An NOV is the NCDMF administrative process to suspend a permit (e.g., EGNP) and is initiated by an officer or NCDMF employee when a permit holder is found to be in violation of general or specific permit conditions. A citation and NOV may both be initiated by the same violation; however, they are two separate actions. In past years, relevant citations and NOVs were compiled based on the codes "EGNP" and "NETG", as they are applicable to the EGNP and gill-net violations. Marine Patrol violation codes have been in the process of being changed from the former codes to the actual MFC rule and General Statue code. With these updates, violation descriptions have been changed to specify the rule or statute language and, where appropriate, proclamation number that was violated. All relevant citations and NOVS were compiled, which consist of old and new codes.

3 RESULTS

3.1 Observer Activity

Overall state-wide observer coverage across the three seasons covered for 2023 ITP Year was 25.9% of the large-mesh gill-net fishery and 2.1% of the small-mesh gill-net fishery (Tables 8 and 9; Figure 2). This level of coverage was based on 346 observed large-mesh gill-net trips and 107 observed small-mesh gill-net trips during fall, spring, and summer. Additionally, there were 683 No Contact trips (Table 10). When anchored gill nets could not be found, occasional observations of drift (n = 4) and runaround (n = 38) gill-net trips occurred (Table 11).

During the 453 observed trips, observers documented 30 sea turtles (24 Green Sea Turtles, 4 Kemp's Ridley Sea Turtles, 1 Loggerhead Sea Turtle, and 1 unidentified sea turtle) in large-mesh gill nets and two Green Sea Turtles in small-mesh gill nets (Table 12; Figure 2). All observed

interactions occurred during fall. See Section 3.2 for further information on these interactions. Two sea turtles were reported by fishers, one Green Sea Turtle in a large-mesh gill net and one unidentified sea turtle in a small-mesh gill net (Table 13).

Proclamations relative to anchored gill-net fisheries are listed in Table 7. Required attendance of anchored small-mesh (<5 ISM) gill nets occurs annually across different spatiotemporal scopes in NC estuarine waters, as a strategy to decrease dead discards of various fish species (e.g., Red Drum [*Sciaenops ocellatus*], Striped Bass). Many of the net attendance requirements are in rule; NCDMF published an interactive map package online that provides visual references for these gill-net attendance regulations in rule (https://deq.nc.gov/about/divisions/marine-fisheries/rules-proclamations-and-size-and-bag-limits/rules/interactive-map-current-rules). Several other net attendance requirements are maintained through proclamations. For example, net attendance was required during December–April in MU A (Proclamations M-26-2022, M-10-2023), year around within 200 yards from shore in most of MU C (Proclamation M-3-2023), and during May–November in an area near Oregon Inlet, MU B (Proclamation M-3-2023; Table 7).

3.1.1 Fall 2022

During fall 2022, the allowed mobile gear (e.g., gill nets, gigs) quota for Southern Flounder was 123,879 pounds in the Northern MA and 62,309 pounds in the Southern MA (Proclamation FF-40-2022; Table 7). The fishery opened state-wide on 15 September 2022 except for D1 (Proclamations M-15-2022, M-17-2022; Table 7). However, 18 sea turtle interactions were observed within the first two days of the season in the southeastern portion of MU B (Figure 4). As a result, a proclamation was issued on the afternoon of 16 September, closing the following MU B subunits to anchored large-mesh gill nets: Core Sound Gill Net Restricted Area, Shallow Water Gill Net Restricted Area (SGNRA) 1, and SGNRA 2 (Proclamation, M-19-2022; Figure 1). On 22 September, the Northern and Southern flounder MAs were closed to mobile gears, including estuarine anchored large-mesh gill nets, based on reported landings compared to the quota (Proclamations FF-46-2022, M-20-2022 and M-21-2022; Table 7).

The small-mesh gill-net fishery opened state-wide at the beginning of fall (Proclamation M-16-2022; Table 7). However, MU B was closed to anchored small-mesh gill nets on 4 November in response to observed Green Sea Turtle interactions approaching authorized levels outlined in the Sea Turtle ITP (Proclamation M-25-2022; Table 7). Observer efforts were adjusted accordingly.

During fall, the Observer Program achieved 28.9% state-wide coverage of large-mesh gill-net trips, exceeding 7% coverage in each MU (Table 8; Figures 3-8). In fact, observer coverage calculations with actual reported fishing effort indicated that coverage levels were much higher in several MUs than anticipated using estimated fishing effort. For small-mesh gill nets, the Observer Program achieved 1.8% state-wide coverage, exceeding 1% observer coverage in each MU except MU A where observer coverage was 0.8% and MU C where observer coverage was 0% (Table 9; Figures 3-8). Of the 266 No Contact trips during fall, 111 of them occurred in MUs A and C primarily looking for small-mesh gill-net effort (Table 10). Occasionally, observations occurred of drift gill nets (n = 1) and runaround gill nets (n = 26; Table 11). Thirteen of the 26 runaround gill-net observations occurred in MU C when no anchored gill-net effort could be found.

All 32 sea turtle interactions were observed during fall, with all but two of them (both Green Sea Turtles) occurring in large-mesh gill nets (Table 12; Figures 4, 5 and 8). As mentioned above, there were also two self-reported interactions during fall. See Section 3.2 for further information on these interactions.

3.1.2 Spring 2023

During spring 2023, MU A was open to anchored large-mesh gill nets during 2-17 March (Proclamations M-5-2023, M-6-2023; Table 7). Management Unit C stayed open from when it was opened during winter (Proclamation M-4-2023). However, scheduling trips and finding effort in MU C continued to be a struggle as it was during winter. After no success of scheduling or finding large-mesh trips to observe during winter and early spring, NCDMF closed MU C to large-mesh gill nets on 31 March (Proclamation M-7-2023; Table 7). Similar to winter, TTP data confirmed that, in fact, no large-mesh gill-net trips were reported during spring (Table 8).

The small-mesh gill-net fishery was open state-wide at the beginning of spring. Observers struggled to find small-mesh gill-net effort in MUs D1, D2, and E. To ensure compliance with the ITP, several management actions were taken. On 28 April, MUs D1 and D2 were closed to anchored gill nets (Proclamation M-9-2023; Table 7). While MU D1 remained closed throughout the rest of spring, three fishers contacted staff about the MU D2 closure and agreed to arrange observed trips if the MU was reopened. Therefore, MU D2 was reopened on 8 May and observers arranged trips with those fishers (Proclamation M-12-2023; Table 7). Though one observed trip was completed in MU E, additional conversations with fishers indicated that effort was sparse to none. As a result, MU E was closed on 26 May (Proclamation M-13-2023; Table 7) and remained closed throughout the rest of spring. Observer efforts were adjusted accordingly. In MU A, the net attendance requirement for small-mesh gill nets was implemented on 30 April (Proclamation M-10-2023; Table 7). Other net attendance requirements came into effect on 1 May (https://deq.nc.gov/about/divisions/marine-fisheries/rules-proclamations-and-size-and-bag-limits/rules/interactive-map-current-rules).

During spring, the Observer Program achieved an estimated 18.4% coverage of the large-mesh gill-net trips in MU A (Table 8; Figure 9). No fishing trips were reported in MU C. For small-mesh gill-net trips, the Observer Program achieved an estimated 2.1% state-wide coverage exceeding 1% observer coverage in each MU except for D1 (Table 9; Figures 9-13). Though D1 was closed mid spring, seven reported fishing trips had already occurred. Of the 186 No Contact trips, 104 of them occurred in MUs D1, D2, and E looking for small-mesh gill-net effort (Table 10). Additionally, there were four observed runaround gill-net trips (Table 11).

There were no observed sea turtle interactions in gill nets during spring.

3.1.3 Summer 2023

During summer 2023, the estuarine anchored large-mesh gill-net fishery remained closed state-wide. However, closures to the estuarine anchored small-mesh gill-net fishery varied by month and MU. At the beginning of summer, MUs D1 and E remained closed from actions during spring. Fishers in MU E contacted staff about the extant closure there and agreed to arrange observed trips if the MU was reopened. Therefore, on 10 August, MU E was reopened (M-14-2023; Table 7). Management Unit D1 remained closed throughout summer. Observers and Marine Patrol officers were unable to locate small-mesh gill-net effort in MU B outside of SNGRA 2 and 4. To ensure continued compliance with the ITP, areas of MU B outside of SGNRA 2 and 4 were closed to anchored gill nets on 10 August (Proclamation M-14-2023; Table 7). This closure remained in effect throughout the remainder of summer.

The Observer Program did not observe any large-mesh gill-net trips during summer as the gear was prohibited state-wide (Table 8). For small-mesh gill-net trips, the Observer Program achieved an estimated 3.3% state-wide coverage, exceeding 1.0% in each open MU (Table 9; Figures 14-

18). In fact, there were two observed trips but only one reported fishing trip in MU D2. There were 231 No Contact trips, three observed drift gill-net trips, and eight observed runaround gill-net trips (Tables 10 and 11).

There were no observed sea turtle interactions in gill nets during summer.

3.2 Incidental Takes

All observed sea turtle interactions occurred during fall and most occurred (30 of 32) in large-mesh gill nets (Table 12; Figures 2, 4, 5, and 8). Most observed interactions were Green Sea Turtles (21 alive; 5 dead), followed by Kemp's Ridley Sea Turtles (4 alive), Loggerhead Sea Turtles (1 alive), and unidentified sea turtles (1 alive). The unidentified sea turtle was released by the fisher before a positive species identification could be made. The observer reminded the fisher of the requirement to give the animal to the observer. Observed interactions occurred primarily in MU B (n = 21), followed by MU E (n = 7) and MU C (n = 4). Overall, 84% (27 of 32) of observed interactions were alive. Three of the live Green Sea Turtles were in poor condition and were transferred to veterinary care arranged by NCWRC. Two died overnight and one was released on 21 October (Godfrey, NCWRC, personal communication).

Measured Green Sea Turtles (n = 17 of 26) ranged from 250 to 360 mm CCL ($\bar{x}$ = 294.7, standard deviation [SD] = 24.5) and 204 to 300 mm CCW ($\bar{x}$ = 251.0, SD = 26.8; Figure 19). Measured Kemp's Ridley Sea Turtles (n = 3 of 4) ranged from 266 to 380 mm CCL ($\bar{x}$= 332.3, SD = 59.2) and 241 to 400 mm CCW ($\bar{x}$ = 334.7, SD = 83.2; Figure 19). The one observed Loggerhead Sea Turtle was 510 mm CCL and 495 mm CCW (Figure 19).

Observed take levels during the 2023 ITP Year did not reach the thresholds of allowed takes for any species or MU (Tables 1–5). Of the 32 observed takes, 25 of them were included in take estimations across the fishery: n = 21 Green Sea Turtles (16 live, 5 dead), large-mesh, MUs B & E; and n = 4 (all live) Kemp's Ridley Sea Turtles, large-mesh, MUs B & E. For Green Sea Turtles, the resulting 48.5 estimated live takes accounted for 15% of the authorized number of 330 and the 12.9 estimated dead takes accounted for 8% of the authorized number of 165 (Table 5). For Kemp's Ridley Sea Turtles, the resulting 12.6 estimated live takes accounted for 13% of the authorized number of 98. The remaining seven of the 32 observed takes were not extrapolated across the fishery: n = 2 Green Sea Turtles, small-mesh, MU B; n = 3 Green Sea Turtles, large-mesh, MU C, n = 1 Loggerhead Sea Turtle, large-mesh, MU B; and n = 1 unidentified sea turtle, large-mesh, MU C. For Green Sea Turtles, the combined five live takes accounted for 28% of the authorized number of 18. The single observed Loggerhead Sea Turtle accounted for 4% of the authorized number of 24.

Two sea turtles were reported by fishers, one Green Sea Turtle in a large-mesh gill net and one unidentified sea turtle in a small-mesh gill net (Table 13).

3.3 Compliance

During the 2023 ITP Year, there were 2,438 fishers with an EGNP; 92% (n = 2,254) of the permit holders also held a Standard Commercial Fishing License (SCFL) or Retired Standard Commercial Fishing License (RSCFL) and 8% (n = 184) held a Recreational Commercial Gear License (RCGL). Of the commercial fishing permit holders, only 630 (28%) reported trips using anchored estuarine gill-net gear.

Using the priority call list of EGNP holders, 1,504 phone calls or in-person contacts were made with 43% (n = 649) representing occasions where observers and fishers spoke to each other. Of

the 649 conversations, 93 of them (14%) were a result of fishers returning observer phone calls. Nevertheless, only 6% (n = 90) of the 1,504 contacts resulted in a booked trip (Figure 20). The greatest number of calls occurred during spring, and the least number of calls occurred in summer.

During the 2023 ITP Year, Marine Patrol officers issued 31 citations (Fall, n =16; Spring, n = 7; Summer, n = 8; Table 14) and 24 NOVs (Fall, n = 8; Spring, n = 11; Summer, n = 5; Table 15).

3.4 Marine Mammals

There were no observed marine mammal interactions during the 2023 ITP Year.

4 DISCUSSION

Incidental takes of sea turtles during the 2023 ITP Year were below authorized levels. The NCDMF Observer Program used a combination of real-time monitoring of sea turtle interactions and an adaptive management approach when necessary to successfully control the number of interactions in estuarine anchored gill-net fisheries. Overall, most observed sea turtles were released alive, thereby limiting negative effects of these interactions. Interactions continue to be more common in anchored large-mesh than small-mesh gill nets. This trend may be a result of differences in interaction rates between the two mesh-size categories and the fact that more than twice as many large-mesh gill nets are observed.

During the 2023 ITP Year, the Observer Program worked with other NCDMF programs and Marine Patrol to leverage assistance in obtaining coverage. For the fall large-mesh fishery, observer coverage in most MUs was 2-3 times greater than the goal of 10% once reported fishing trip data were available. This high level of coverage was a result of the Division's risk-averse approach to estimating effort for the first quota-managed flounder season. Accomplishing this high level of coverage required mobilization of many more Division staff than typical for this fishery. Adjustments to estimating fishing effort in future flounder seasons will be discussed internally and with NMFS to improve this estimate of fishing effort to optimize the use of Division staff.

Minimum levels of required observer coverage of small-mesh gill nets were met in most cases at the seasonal and MU level. Starting in spring 2023, NCDMF began exercising proclamation authority more often to close all or partial MUs when there was a risk of not obtaining minimum observer coverage on a MU and seasonal basis as required by the Sea Turtle ITP. In some cases, this resulted in fishers contacting NCDMF to request for their area to be reopened and agreeing to arrange observer trips. This approach contributed to observer coverage requirements being met at the MU and season level. The NCDMF will continue to consider this option to ensure compliance with the ITP requirements for observer coverage is maintained.

Scheduling observed trips continues to be a challenge for the NCDMF Observer Program, a challenge shared by other observer programs (e.g., Lyssikatos and Garrison 2018). The EGNP is a useful tool to improve compliance by including specific permit conditions requiring fishers to allow observers aboard their vessels to monitor catch and by providing contact information for permit holders. Phone calls made to EGNP holders contributed to observers scheduling some trips, but the success rate of scheduling trips was low (~6%). Although refusal of an observed trip by a fisher can result in a suspension of their EGNP, non-compliance typically does not include such a direct refusal. More often, avoidance of accepting or returning observer phone calls occurs. As such, non-compliance continues to be a hurdle for ensuring the observer coverage requirements of both ITPs are met.

The Division has been coordinating with the NC Department of Information Technology to develop a call-in system, the Observer Trip Scheduling System (OTSS). The OTSS will help ensure that ITP observer coverage requirements are met, and that the observer coverage is distributed evenly among participants and representative of the fishery. During spring 2023, the Observer Program held five public outreach meetings across the state to gather input from fishers on the development of the OTSS and to share information as to the necessity of the system. This input was used to tailor the OTSS as much as possible to the needs of the users and ensure fisher compliance. Currently, the OTSS is in the internal testing phase. Once this testing phase is complete, the Observer Program will reach out to members of the commercial fishing industry, including those on the MFC, to further test the system. An implementation date for requiring participation in the OTSS has not been set, but the target date is early 2024. Public information meetings and trainings will occur before the OTSS is fully implemented.

Although onboard observations are the preferred method, alternative platform observations played a critical role in the continuation of observing gill nets during the 2023 ITP Year. There are several advantages to an alternative platform approach. For example, this approach does not rely on previous contact with fishers to obtain an observable trip. Alternative platform observations also allow Marine Patrol officers to conduct observations as part of daily patrols; their observed trips contribute a substantial portion of the total alternative platform observations. Even for fishers 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). Nevertheless, the alternative platform method has several drawbacks. Alternative platform observations require two observers, halving observer effort and program efficiency. Obtaining alternative platform observations does not always compensate for the difficulty in scheduling trips in advance. Because few observer trips were scheduled in advance, a significant amount of time was spent searching for fishing activity, especially when fishing activity was less concentrated. However, this effort by observers and Marine Patrol officers was sometimes unsuccessful at finding trips to observe. The OTSS should improve the Observer Program's ability to schedule trips in advance and to meet the observer coverage requirements of the ITP.

5 LITERATURE CITED

Boyd, J. B. 2016. North Carolina Division of Marine Fisheries Incidental Take Permit Annual Report for ITP Year 2015 Section 10 ITP # 16230 (September 1, 2014–August 31, 2015). North Carolina Department of Environmental Quality, NCDMF. Annual Report for Incidental Take Permit # 16230, Morehead City, NC.

Byrd, B. L., L. R. Goshe, T. Kolkmeyer, and A. A. Hohn. 2016. Sea turtle bycatch in the large-mesh gillnet flounder fishery in Carteret County, North Carolina, USA, June-November 2009. Journal of the North Carolina Academy of Science, 132(1):10–24.

Byrd, B. L., M. P. Gahm, J. K. McConnaughey, and S. A. Smith. 2021. Annual sea turtle interaction monitoring of the gill-net fisheries in North Carolina for Incidental Take Permit year 2020 (1 September 2019–31 August 2020). Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit # 16230. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC.

Byrd, B. L., M. R. Doster, and D. Ushakow. 2023. Annual sea turtle interaction monitoring of the anchored gill-net fisheries in North Carolina for Incidental Take Permit Year 2022 (1 September 2021–31 August 2022). Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230. North Carolina Department of Environmental Quality, North Carolina Division of Marine Fisheries (NCDMF), Morehead City, NC. 57 p.

Canty, A., and B. Ripley. 2015. Boot: bootstrap R (S-Plus) functions. R package version 1.3-17.

Daniel, L. B. 2013. Application for an Individual Incidental Take Permit under the Endangered Species Act of 1973 for Atlantic sea turtle populations of: loggerhead, *Caretta caretta*, green, *Chelonia mydas*, Kemp's ridley, *Lepidochelys kempii*, leatherback, *Dermochelys coriacea*, hawksbill, *Eretmochelys imbricata*. 13 June 2013. NCDMF, Morehead City, NC. Available (February 2024): https://media.fisheries.noaa.gov/dam-migration/2013north_carolina_sea_turtle_individual_itp_application_-508_opr3.pdf

Davison, A. C., and D. V. Hinkley. 1997. Bootstrap Methods and their Applications. Cambridge University Press, Cambridge.

Efron, B., and R. J. Tibshirani. 1993. An Introduction to the Bootstrap. Chapman and Hall, New York.

Kolkmeyer, T., B. Guthrie, B. L. Byrd, and A. A. Hohn. 2007. Report on the alternative platform observer program in North Carolina: March 2006 to March 2007. NOAA Technical Memorandum. National Marine Fisheries Service (NMFS), NMFS-SEFSC-558, Beaufort, NC. 20 p.

Lyssikatos, M. C., and L. P. Garrison. 2018. Common bottlenose dolphin (*Tursiops truncatus*) gillnet bycatch estimates along the US Mid-Atlantic coast, 2007–2015. NMFS, Northeast Fisheries Science Center Reference Document 18-07. Woods Hole, MA. 37 p.

McConnaughey, J. K., J. Boyd, and L. Klibansky. 2019. Annual sea turtle interaction monitoring of the gill-net fisheries in North Carolina for Incidental Take Permit year 2018. Annual Completion Report for activities under Endangered Species Act Section 10 Incidental Take Permit # 16230. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 58 p.

North Carolina Division of Marine Fisheries (NCDMF). 2019. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan Amendment 2. September 2019. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 62 p. Available (February 2024): https://deq.nc.gov/media/30856/open

NCDMF. 2022. North Carolina Southern Flounder Fishery Management Plan Amendment 3. May 2022. North Carolina Division of Marine Fisheries, NCDMF, Morehead City, NC. 176 p. Available (February 2024): https://www.deq.nc.gov/marine-fisheries/fisheries-management/southern-flounder/southern-flounder-fmp-amendment-3/open

NCDMF and North Carolina Wildlife Resources Commission (NCWRC). 2017. North Carolina American Shad Sustainable Fishery Plan. North Carolina Division of Marine Fisheries. Morehead City, NC. 52 p. Updated 2020.

NCDMF and NCWRC. 2019. Supplement A to Amendment 1 to the North Carolina Estuarine Striped Bass Fishery (NCWRC) Management Plan. Morehead City, NC. 40 p. Available (February 2024): https://deq.nc.gov/media/30767/open

NCDMF and NCWRC. 2020. November 2020 Revision to Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan. Morehead City, NC. 12 p. Available (February 2024): https://deq.nc.gov/media/30772/open.

R Core Team. 2019. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org

6 TABLES

Table 1. For large-mesh (≥4 inches stretched mesh) gill nets, annual estimated authorized and actual takes of sea turtles by species and Management Unit (B, D1, D2, and E) for the 2023 Incidental Take Permit (ITP) Year. Estimated actual takes were calculated from 21 (16 live, 5 dead) observed Green Sea Turtles and four (all live) observed Kemp's Ridley Sea Turtles; 95% confidence intervals are provided in parentheses. Takes of Green Sea Turtles in Management Unit D2 are denoted as not applicable (n/a) because authorized takes in the ITP are expressed as counts observed takes not estimated takes (see Table 2).

	B Estimated Takes				D1 Estimated Takes				D2 Estimated Takes			
	Authorized		Actual		Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	225	112	40.3 [11.6, 122.1]	9.1 [0, 21.2]	9	5	0	0	n/a	n/a	n/a	n/a
Kemp's Ridley	53	26	10.59 [0, 25.0]	0	15	7	0	0	6	3	0	0
Total	278	138	50.92	9.08	24	12	0	0	6	3	0	0

	E Estimated Takes				Total Estimated Takes			
	Authorized		Actual		Authorized		Actual	
Species	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
Green	96	48	8.2 [0, 28.6]	3.8 [0, 11.8]	330	165	48.5	12.9
Kemp's Ridley	24	13	2.1 [0, 6.1]	0	98	49	12.6	0
Total	120	61	10.23	3.84	428	214	61.1	12.9

Table 2. For large-mesh (≥4 inches stretched mesh) gill nets, annual authorized and actual counts of observed (not estimated) takes of sea turtles by species and Management Units (MUs) B, D1, D2, and E for the 2023 Incidental Take Permit Year (ITP). Takes of Kemp's Ridley Sea Turtles and Green Sea Turtles in some MUs are denoted as not applicable (n/a) because authorized takes in the ITP are expressed as estimated takes for the fishery, not counts of observed takes (see Table 1).

	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	n/a	n/a	n/a	6	0	n/a	n/a	6	0
Kemp's Ridley	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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	0	5	0	26	1

Table 3. For large-mesh (≥4 inches stretched mesh) and small-mesh (<4 inches stretched mesh) gill nets combined, annual authorized and actual counts of observed (not estimated) takes of sea turtles by Management Unit (A and C) for the 2023 Incidental Take Permit Year. Authorized levels per management unit are four 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		0		3		3
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

Table 4. For small-mesh (<4 inches stretched mesh) gill nets, annual authorized and actual counts of observed (not estimated) takes of sea turtles by species and Management Units B, D1, D2, and E for the 2023 Incidental Take Permit 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	2	3	0	3	0	3	0	12	2
Kemp's Ridley	3	0	3	0	3	0	3	0	12	0
Hawksbill	1	0	1	0	1	0	1	0	4	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	2	11	0	11	0	11	0	44	2

Table 5. Total annual authorized and actual takes (either counts of observed or estimated) of sea turtles by species and, for estimated takes, by condition for the 2023 Incidental Take Permit (ITP) Year. Takes expressed as estimated numbers are denoted as not applicable (n/a) for species whose authorized takes in the ITP are expressed only as counts. The observed sea turtle interaction that was unidentified (Management Unit C, large-mesh [≥4 inches stretched mesh] gill net, live) is listed under Any Species.

	Observed (live/dead)		Estimated			
	Authorized	Actual	Authorized		Actual	
Species	Live/Dead	Live/Dead	Alive	Dead	Alive	Dead
Green	18	5	330	165	48.5	12.9
Kemp's Ridley	12	0	98	49	12.6	0
Hawksbill	8	0	n/a	n/a	n/a	n/a
Leatherback	8	0	n/a	n/a	n/a	n/a
Loggerhead	24	1	n/a	n/a	n/a	n/a
Any Species	8	1	n/a	n/a	n/a	n/a
Total	78	7	428	214	61.2	12.9

Table 6. Restrictions implemented for estuarine anchored gill nets ≥4 inches stretched mesh included in the current NCDMF Sea Turtle (No. 16230) and Atlantic Sturgeon (No.18102) Incidental Take Permits. Cells highlighted in gray had no restrictions per the ITPs. MU = Management Unit.

MU	Soak time	Days of the week	Net Length	Gear configuration	Low-profile requirements	Area Closure
A north of US Hwy 64 bridge	Must be < 24 hours soak time and fished before noon each day		Maximum net length per fishing operation is 2,000 yd (1.83 km)			Western Albemarle Sound in the vicinity of the mouth of the Roanoke River including the entire Roanoke River up to the dam in Weldon, permanently closed to all gill nets.
A south of US Hwy 64 bridge	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	
B	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	Prohibition of large mesh gillnets in the deep-water portions of the Pamlico Sound and in Oregon, Hatteras, and Ocracoke inlets September 1 through December 15.
C	Must be < 24 hours soak time and fished before noon each day		Maximum net length per fishing operation is 2,000 yd (1.83 km)			
D1	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	Closed May 8 through October 14
D2	One hour before sunset to one hour after sunrise	Sunday night - Friday morning	Maximum net length per fishing operation is 1,000 yd (0.91 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	
E	One hour before sunset to one hour after sunrise	Sunday night - Friday morning	Maximum net length per fishing operation is 1,000 yd (0.91 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	

Table 7. Regulations by effective date for estuarine anchored gill nets during the 2023 Incidental Take Permit (ITP) Year or referenced in the text for previous ITP years. Proclamations occurring during winter months affected fishing effort in subsequent months.

Year	Effective Date	Proclamation Number	Regulation
2014	1-Sep	M-24-2014	This proclamation established the requirement that makes it unlawful for holders of a Standard Commercial Fishing License (SCFL), Retired Standard Commercial Fishing License (RSCFL), or Recreational Commercial Gear License (RCGL) to deploy gill nets in Internal Coastal Waters with an exception for run around, strike, drop or drift gill nets, without possessing a valid Estuarine Gill Net Permit issued by the Division of Marine Fisheries.
2019	18-Mar	M-6-2019	This proclamation supersedes proclamation M-5-2019, dated March 7, 2019. This proclamation prohibits 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 maintains 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.
2021	12-Mar	M-9-2021	This proclamation supersedes proclamation M-7-2021 dated February 25, 2021. It closes a portion of Management Unit A to the use of all gill nets and reduces the maximum amount of yards allowed for gill nets configured for harvesting American shad.
2022	14-Sep	M-15-2022	This proclamation supersedes proclamation M-8-2022 dated April 12, 2022. This proclamation opens Management Units B (subunits only), C, D2, and E 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 Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Federal Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon.
2022	1-Sep	M-16-2022	This proclamation supersedes proclamation M-10-2022 dated April 27, 2022. It opens Management Unit A to the use of small mesh anchored gill nets and implements small mesh gill net attendance requirements in accordance with the Division's Fishery Management Plans for Estuarine Striped Bass and River Herring and the Incidental Take Permits for threatened or endangered sea turtles and endangered Atlantic sturgeon. It keeps open a portion of Management Unit A to the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.

Year	Effective Date	Proclamation Number	Regulation
2022	15-Sep	FF-40-2022	This proclamation supersedes Proclamation FF-40-2021, dated June 28, 2021. It establishes commercial flounder season dates for Internal Coastal Waters by Flounder Management Area and Gear Category. This action is being taken to comply with the requirements of Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and maintain harvest within the total allowable landings.
2022	14-Sep	M-17-2022	This proclamation supersedes proclamation M-16-2022 dated August 26, 2022. It opens Management Unit A to the use of gill nets for the purpose of harvesting flounder in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for threatened or endangered sea turtles and endangered Atlantic sturgeon. It maintains the exempted areas in MUA open to the use of run-around, strike, drop, and trammel gill nets to harvest blue catfish. It also maintains small mesh gill net attendance requirements in the entirety of Management Unit A.
2022	16-Sep	M-19-2022	This proclamation supersedes proclamation M-15-2022 dated August 26, 2022. This proclamation closes Management Unit B subunits SGNRA1, SGNRA2, and CGRNA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon. It maintains openings in Management Units C, D2, and portions of Management Unit E (except those portions described in Section II.)
2022	21-Sep	FF-46-2022	This proclamation supersedes Proclamation FF-40-2022, dated July 8, 2022. It closes the commercial flounder season for the Southern Management Area Wednesday, September 21, 2022, and the Mobile Gear Northern Area Thursday, September 22, 2022, and maintains the season, size, and gear restrictions for the Pound Net Northern, Central, and Southern Management Areas. This proclamation also establishes a 1,000-pound daily trip limit for the commercial pound net fishery in the Pound Net Northern Management Area beginning September 22, 2022. If the division determines quota is available for additional harvest days further proclamations will be released. This action is being taken to comply with the requirements of Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and maintain harvest within the total allowable landings (TAL).
2022	22-Sep	M-20-2022	This proclamation supersedes proclamation M-19-2022 dated September 16, 2022. This proclamation closes Management Units D2 and E at 12:00 P.M. on September 21, 2022, and Management Units B and C at 10:00 A.M. on September 22, 2022, 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 Amendment 3 to the N.C. Southern Flounder Fishery Management Plan.

Year	Effective Date	Proclamation Number	Regulation
2022	22-Sep	M-21-2022	This proclamation supersedes proclamation M-17-2022 dated September 6, 2022. It closes Management Unit A to the use of large mesh anchored gill nets with overnight soaks for harvesting flounder. It maintains small mesh gill net attendance requirements and keeps open a portion of Management Unit A to the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.
2022	4-Nov	M-25-2022	This proclamation supersedes proclamation M-24-2022 dated November 2, 2022. It closes Management Unit B to the use of fixed or stationary gill nets with a stretched mesh length less than 4 inches and maintains exemptions for actively fished gill nets.
2022	1-Dec	M-26-2022	This proclamation supersedes proclamation M-21-2022 dated September 21, 2022. In Management Unit A, it removes attendance requirements and imposes vertical height restrictions for anchored gill nets with a stretched mesh length of 3 inches through 3 ¾ inches. It maintains the exempted portion of Management Unit A that allows the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches to harvest blue catfish.
2023	13-Jan	M-3-2023	This proclamation supersedes proclamation M-25-2022 dated November 4, 2022. It opens Management Unit B to the use of fixed or stationary gill nets with a stretched mesh length less than 4 inches and increases the yardage limits for the small mesh gill net fishery in portions of Management Unit B.
2023	15-Feb	M-4-2023	This proclamation supersedes proclamation M-20-2022, dated September 21, 2022. This proclamation opens Management Unit C to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches and implements gear exemptions for the shad fishery in all areas south of Management Unit A in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan.
2023	2-Mar	M-5-2023	This proclamation supersedes proclamation M-2-2023 dated December 21, 2022. It opens a portion of Management Unit A to the use of floating gill nets configured for harvesting American shad by removing vertical height and setting restrictions for all gill nets with stretched mesh lengths of 5 ¼ through 6 ½ inches.
2023	17-Mar	M-6-2023	This proclamation supersedes proclamation M-5-2023 dated February 28, 2023. In Management Unit A, it removes gill nets configured for harvesting American shad and it remains unlawful to use fixed or stationary gill nets with a stretched mesh length other than 3 ¼ inches. It opens an exempted portion of Management Unit A that allows the use of run-around, strike, and drop gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches to harvest blue catfish.

Year	Effective Date	Proclamation Number	Regulation
2023	31-Mar	M-7-2023	This proclamation supersedes proclamation M-4-2023, dated February 13, 2023. This proclamation closes Management Unit C to the use of set gill nets with a stretched mesh length of 4 inches through 6 ½ inches and maintains gear exemptions for the shad fishery in all areas south of Management Unit A in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon.
2023	28-Apr	M-9-2023	This proclamation supersedes proclamation M-3-2023 dated January 11, 2023. It reduces the yardage limits for gill nets less than 4 inches stretched mesh used in Management Unit B, establishes a drift gill net yardage limit for the Spanish Mackerel fishery that occurs in Management Unit B and closes Management Units D1 and D2 to the use of fixed or stationary gill nets less than 4 inches stretch mesh while allowing an exemption for actively fished nets.
2023	30-Apr	M-10-2023	This proclamation supersedes proclamation M-6-2023 dated March 15, 2023. In Management Unit A, it implements small mesh gill net attendance requirements and keeps open a portion of Management Unit A to the use of run-around, strike, and drop gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.
2023	8-May	M-12-2023	This proclamation supersedes proclamation M-9-2023 dated April 26, 2023. It opens Management Unit D2 to the use of fixed or stationary gill nets less than 4 inches stretch mesh.
2023	26-May	M-13-2023	This proclamation supersedes proclamation M-12-2023 dated May 5, 2023. It closes Management Unit E to the use of fixed or stationary gill nets less than 4 inches stretch mesh.
2023	10-Aug	M-14-2023	This proclamation supersedes proclamation M-13-2023 dated May 24, 2023. It closes portions of Management Unit B and opens Management Unit E to the use of fixed or stationary gill nets less than 4 inches stretched mesh.

Table 8. For large-mesh gill nets, observer coverage (observed trips/fishing trips) calculated from observer data (≥4 inches stretch mesh) and reported trips from the Trip Ticket Program (≥5 inches stretch mesh) by season and management unit (MU) for the 2023 Incidental Take Permit (ITP) Year. Observer coverage was calculated using estimated fishing trips based on the Trip Ticket Program data and actual reported fishing trips from the program for the ITP year. Anchored large-mesh gill nets were prohibited in MU D1 during all seasons and in other MUs during one or more seasons ("closed"). Trip Ticket Program data are considered finalized for 2022 and preliminary for 2023. For MUs with no reporting fishing trips, coverage is not applicable (n/a).

		Large Mesh				
Season	Management Unit	Estimated Fishing Trips	Reported Fishing Trips	Observed Trips	Coverage of Estimated Fishing Trips	Coverage of Reported Fishing Trips
Fall 2022	A	720	368	113	15.7	30.7
	B	365	227	46	12.6	20.3
	C	144	147	50	34.7	34.0
	D1	closed	closed	closed	closed	closed
	D2	36	39	5	13.9	12.8
	E	348	179	63	18.1	35.2
	Overall	1,613	960	277	17.2	28.9
Spring 2022	A	695	374	69	9.9	18.4
	B	closed	closed	closed	closed	closed
	C	6	0	0	0.0	n/a
	D1	closed	closed	closed	closed	closed
	D2	closed	closed	closed	closed	closed
	E	closed	closed	closed	closed	closed
	Overall	701	374	69	9.8	18.4
Summer 2022	A	closed	closed	closed	closed	closed
	B	closed	closed	closed	closed	closed
	C	closed	closed	closed	closed	closed
	D1	closed	closed	closed	closed	closed
	D2	closed	closed	closed	closed	closed
	E	closed	closed	closed	closed	closed
	Overall	closed	closed	closed	closed	closed
Annual		2,314	1,334	346	15.0	25.9

Table 9. For small-mesh gill nets, observer coverage (observed trips/fishing trips) calculated from observer trips (<4 inches stretched mesh) and reported trips from the Trip Ticket Program (<5 inches stretched mesh) by season and management unit (MU) for the 2023 Incidental Take Permit (ITP) Year. Observer coverage was calculated using estimated fishing trips based on the Trip Ticket Program data and actual reported fishing trips from the program for the ITP year. Small-mesh gill nets were prohibited in MU D1 ("closed") during all of summer. See text for description of openings and closings of MUs during part of a season. Trip Ticket Program data are considered finalized for 2022 and preliminary for 2023.

		Small Mesh				
Season	Management Unit	Estimated Fishing Trips	Reported Fishing Trips	Observed Trips	Coverage of Estimated Fishing Trips	Coverage of Reported Fishing Trips
Fall 2022	A	305	363	3	1.0	0.8
	B	733	1,135	19	2.6	1.7
	C	157	321	0	0.0	0.0
	D1	31	42	1	3.2	2.4
	D2	141	31	4	2.8	12.9
	E	384	326	13	3.4	4.0
	Overall	1,751	2,218	40	2.3	1.8
Spring 2023	A	622	725	18	2.9	2.5
	B	1,503	1,267	21	1.4	1.7
	C	172	134	4	2.3	3.0
	D1	24	7	0	0.0	0.0
	D2	12	5	3	25.0	60.0
	E	108	85	1	0.9	1.2
	Overall	2,441	2,223	47	1.9	2.1
Summer 2023	A	191	179	5	2.6	2.8
	B	915	353	8	0.9	2.3
	C	65	58	2	3.1	3.4
	D1	closed	closed	closed	closed	closed
	D2	17	1	2	11.8	200.0
	E	64	18	3	4.7	16.7
	Overall	1,252	609	20	1.6	3.3
Annual		5,444	5,050	107	2.0	2.1

Table 10. Number of "No Contact" trips (n = 683) by season and management unit completed by Marine Patrol officers and observers during the 2023 Incidental Take Permit Year. No Contact refers to unsuccessful attempts to find and observe anchored gill-net effort. Anchored gill nets were prohibited in Management Unit D1 ("closed") during all of summer.

Season	Management Unit	Marine Patrol No Contact Trips	Observer No Contact Trips	Total No Contact Trips
Fall 2022	A	46	3	49
	B	15	2	17
	C	50	12	62
	D1	13	1	14
	D2	2	2	4
	E	120	0	120
	Overall	246	20	266
Spring 2023	A	34	9	43
	B	1	2	3
	C	33	3	36
	D1	3	2	5
	D2	13	6	19
	E	80	0	80
	Overall	164	22	186
Summer 2023	A	70	0	70
	B	27	10	37
	C	56	2	58
	D1	closed	closed	closed
	D2	20	4	24
	E	42	0	42
	Overall	215	16	231
Annual		625	58	683

Table 11. Number of drift and runaround gill-net observations by season and management unit completed during the 2023 Incidental Take Permit Year.

Season	Management Unit	Drift Gill-net Trips	Runaround Gill-net Trips	Total Mobile Gear Trips
Fall	A	0	0	0
2022	B	0	2	2
	C	0	13	13
	D1	0	0	0
	D2	0	1	1
	E	1	10	11
	Overall	1	26	27
Spring	A	0	0	0
2022	B	0	0	0
	C	0	4	4
	D1	0	0	0
	D2	0	0	0
	E	0	0	0
	Overall	0	4	4
Summer	A	0	0	0
2022	B	1	3	4
	C	0	5	5
	D1	0	0	0
	D2	1	0	1
	E	1	0	1
	Overall	3	8	11
Annual		4	38	42

Table 12. Summary of observed sea turtle interactions (n = 30) in large-mesh (≥4 inches stretched mesh) and (n = 2) in small-mesh (<4 inches stretched mesh) gill nets during the 2023 Incidental Take Permit Year. Sea turtles with the same superscripted letter were caught on the same trip. CCL=Curved Carapace Length. CCW=Curved Carapace Width. n/r=not recorded.

Date	Management Unit	Mesh-size Category	Latitude (N)	Longitude (W)	Species	Disposition	CCL (mm)	CCW (mm)
09/15/2022	C	Large	35.06556	76.61701	Green	Alive	300	258
09/15/2022	E	Large	33.91075	77.98346	Green	Dead	n/r	n/r
09/15/2022	B	Large	34.88490	76.29530	Kemp's Ridley[a]	Alive	266	241
09/15/2022	B	Large	34.86522	76.31285	Green[a]	Alive	292	228
09/15/2022	B	Large	34.91255	76.24804	Green	Alive	360	300
09/15/2022	B	Large	35.07167	76.08889	Green[b]	Alive	279	250
09/15/2022	B	Large	35.07000	76.08944	Green[b]	Alive	280	250
09/15/2022	B	Large	35.05861	76.08639	Kemp's Ridley[b]	Alive	351	363
09/15/2022	B	Large	35.07194	76.08639	Loggerhead[b]	Alive	510	495
09/16/2022	E	Large	34.66801	77.13364	Green[c]	Alive	n/r	n/r
09/16/2022	E	Large	34.66558	77.13181	Green[c]	Alive	n/r	n/r
09/16/2022	E	Large	34.67059	77.12879	Green[c]	Alive	n/r	n/r
09/16/2022	E	Large	34.66827	77.13359	Green[c]	Dead	n/r	n/r
09/16/2022	E	Large	34.66512	77.12915	Kemp's Ridley[c]	Alive	n/r	n/r
09/16/2022	B	Large	34.85997	76.31948	Green[d]	Alive	320	260
09/16/2022	B	Large	34.86112	76.31775	Green[d]	Alive	301	280
09/16/2022	B	Large	34.86079	76.31371	Green[d]	Alive	301	260
09/16/2022	B	Large	34.85878	76.32066	Green[d]	Dead	300	204
09/16/2022	B	Large	34.86042	76.31917	Green[d]	Alive	n/r	n/r
09/16/2022	B	Large	34.85997	76.31948	Green[d]	Alive	250	208
09/16/2022	B	Large	34.86180	76.31703	Green[d]	Alive	n/r	n/r
09/16/2022	B	Large	34.85878	76.32066	Green[d]	Alive	301	270
09/16/2022	B	Large	34.85878	76.32066	Kemp's Ridley[d]	Alive	380	400
09/16/2022	E	Large	34.57522	77.36245	Green	Alive	n/r	n/r
09/16/2022	C	Large	35.01076	76.70729	Green	Alive	n/r	n/r

Table 12. continued

Date	Management Unit	Mesh-size Category	Latitude (N)	Longitude (W)	Species	Disposition	CCL (mm)	CCW (mm)
09/16/2022	B	Large	35.13778	75.95694	Green	Dead	303	255
09/16/2022	B	Large	35.32777	75.59721	Green	Dead	287	221
09/20/2022	C	Large	35.00193	76.72851	Unidentified	Alive	n/r	n/r
09/20/2022	B	Large	35.34692	76.13913	Green	Alive	304	290
09/22/2022	C	Large	35.01479	76.70437	Green	Alive	255	240
10/06/2022	B	Small	35.44401	76.01346	Green	Alive	279	262
10/26/2022	B	Small	35.43788	76.01712	Green	Alive	298	231

Table 13. Summary of sea turtle (Green: $n = 1$, Unidentified: $n = 1$) interactions in estuarine gill nets reported by fishers during the 2023 Incidental Take Permit Year. Large-mesh = ≥ 4 inches stretched mesh. Small-mesh = < 4 inches stretched mesh. CCL=Curved Carapace Length. CCW=Curved Carapace Width. No measurements were reported ("-"). An asterisk (*) indicates that the location was approximated based on the provided waterbody description.

Date	Management Unit	Mesh-size Category	Latitude (N)	Longitude (W)	Species	Disposition	CCL (mm)	CCW (mm)
09/19/2022	C	Large	35.39397	76.50329	Green	Dead	-	-
10/29/2022	E	Small	34.67975*	77.12285*	Unidentified	Dead	-	-

Table 14. Citations (n = 31) written by Marine Patrol officers for estuarine anchored gill nets by violation date and code during the 2023 Incidental Take Permit Year.

Season	Violation Date	Code	Description
Fall	09/04/2022	NETG01	Leave gill net in coastal waters unattended
Fall	09/14/2022	NETG45	Set or retrieve large mesh gill nets no sooner than one hour before sunset on Monday through Thursday
Fall	09/15/2022	NETG44	Use large mesh gill nets w/out leaving a space of at least 25 yards between separate lengths of net
Fall	09/15/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	09/16/2022	NETG40	Use cork floats or other buoys except those required for ID on large mesh gill nets
Fall	09/16/2022	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Fall	09/17/2022	NETG02	Using gill net without buoys or identification
Fall	10/09/2022	NETG30	Leave RCGL gill net unattended
Fall	10/24/2022	NETG01	Leave gill net in coastal waters unattended
Fall	10/24/2022	NETG02	Using gill net without buoys or identification
Fall	11/02/2022	NETG01	Leave gill net in coastal waters unattended
Fall	11/02/2022	NETG27	Gill Net set within 50 yards from shore
Fall	11/02/2022	NETG27	Gill Net set within 50 yards from shore
Fall	11/03/2022	EGNP30	Failure to comply with gill net configurations outlined in proclamation
Fall	11/03/2022	EGNP30	Failure to comply with gill net configurations outlined in proclamation
Fall	11/08/2022	NETG02	Using gill net without buoys or identification
Spring	04/26/2023	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Spring	04/26/2023	NETG02	Using gill net without buoys or identification
Spring	05/03/2023	NETG27	Gill Net set within 50 yards from shore
Spring	05/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	05/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	05/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	05/31/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	06/05/2023	EGNP11	Failure to attend nets
Summer	06/05/2023	NETG01	Leave gill net in coastal waters unattended
Summer	06/19/2023	NETG16	Use an unattended gill net in a restricted area

Table 14. continued

Season	Violation Date	Code	Description
Summer	07/01/2023	15A NCAC 03H .0103(a)	Fail to comply with proclamation requirements
Summer	07/11/2023	NETG22	Improperly set gill net
Summer	07/25/2023	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Summer	08/21/2023	NETG01	Leave gill net in coastal waters unattended
Summer	08/21/2023	NETG03	Using gill net with improper buoys or identification

Table 15. Notice of Violations (n = 24) written by Marine Patrol officers for estuarine anchored gill nets by violation date and code during the 2023 Incidental Take Permit Year.

Season	Violation Date	Code	Description
Fall	09/04/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	09/14/2022	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
Fall	09/15/2022	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
Fall	09/15/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	09/17/2022	EGNP25	Refuse to allow fisheries observers onboard or collect data
Fall	11/02/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	110/2/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	11/02/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	03/06/2023	EGNP11	Failure to attend nets
Spring	03/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	03/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	03/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	04/13/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	05/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	06/05/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	06/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	06/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	06/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	06/26/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days

7 FIGURES

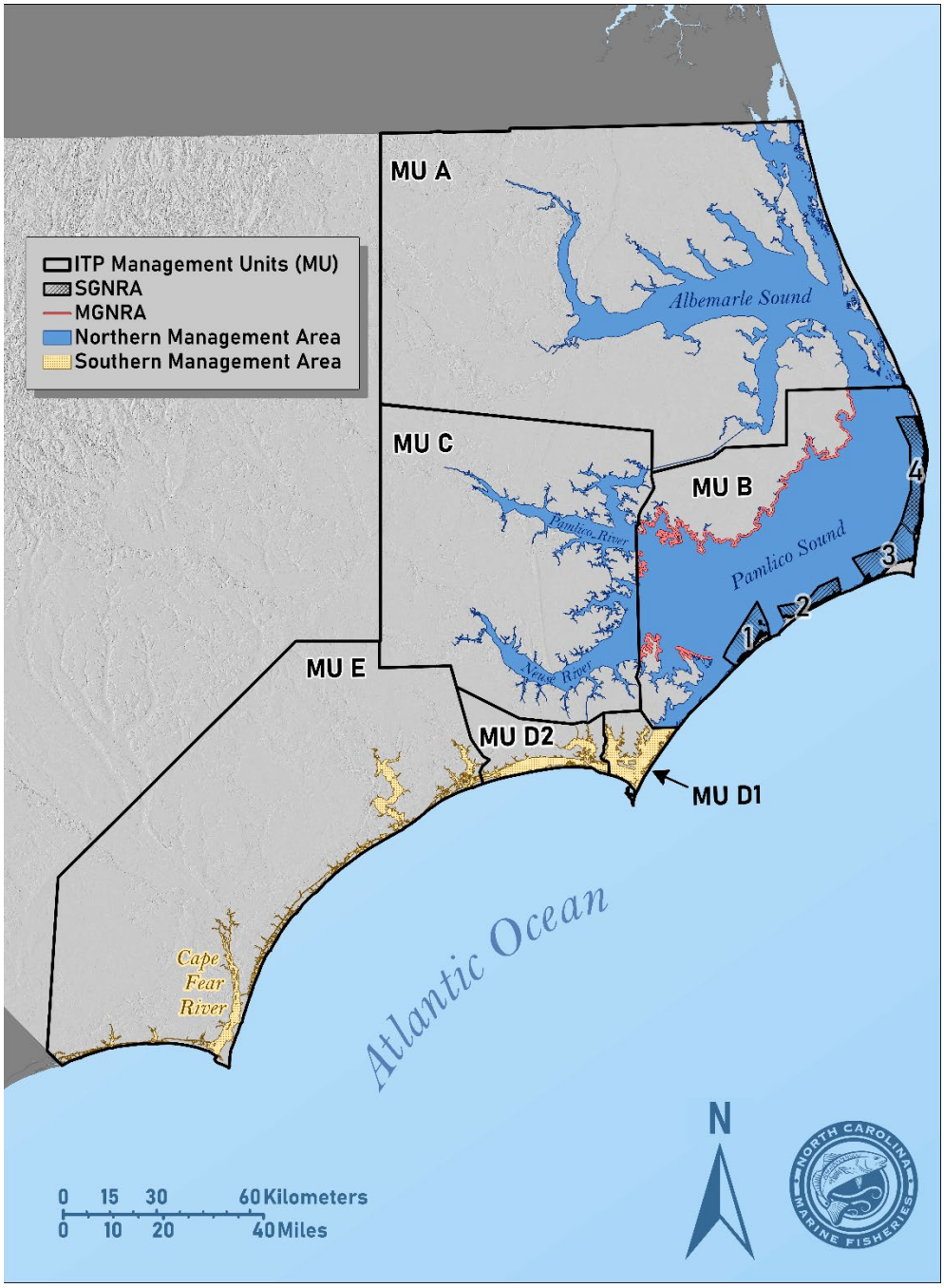

Figure 1. Management Units (A, B, C, D1, D2, and E) as outlined in the Incidental Take Permit (ITP) Conservation Plan and used by the Observer Program for the 2023 ITP Year. In the Pamlico Sound portion of MU B, large-mesh (≥4 inches stretched mesh) gill nets were confined to Shallow Water Gillnet Restricted Areas (SGNRA) 1-4 and the Mainland Gillnet Restricted Area (MGNRA; 200 yards from shore) during 1 September–15 December. The two Southern Flounder Management Areas are differentiated by color: northern (blue) and southern (yellow).

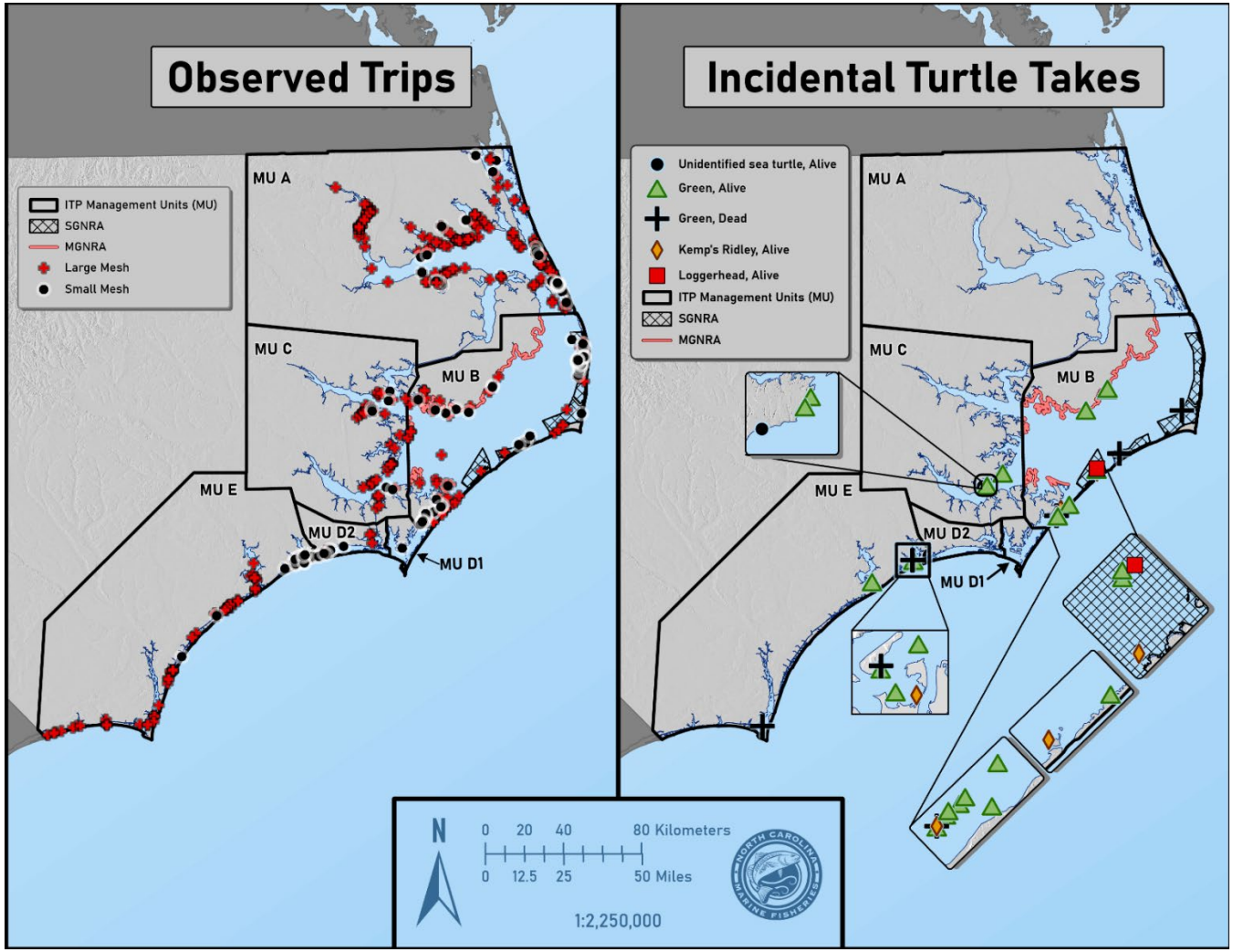

Figure 2. Observed gill-net trips (left) and incidental sea turtle takes (right) that occurred state-wide during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 346 large mesh [≥4 inches stretched mesh]; n = 107 small mesh [<4 inches stretched mesh]). Observed sea turtles are separated by species and disposition (alive, n = 27; dead, n = 5). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

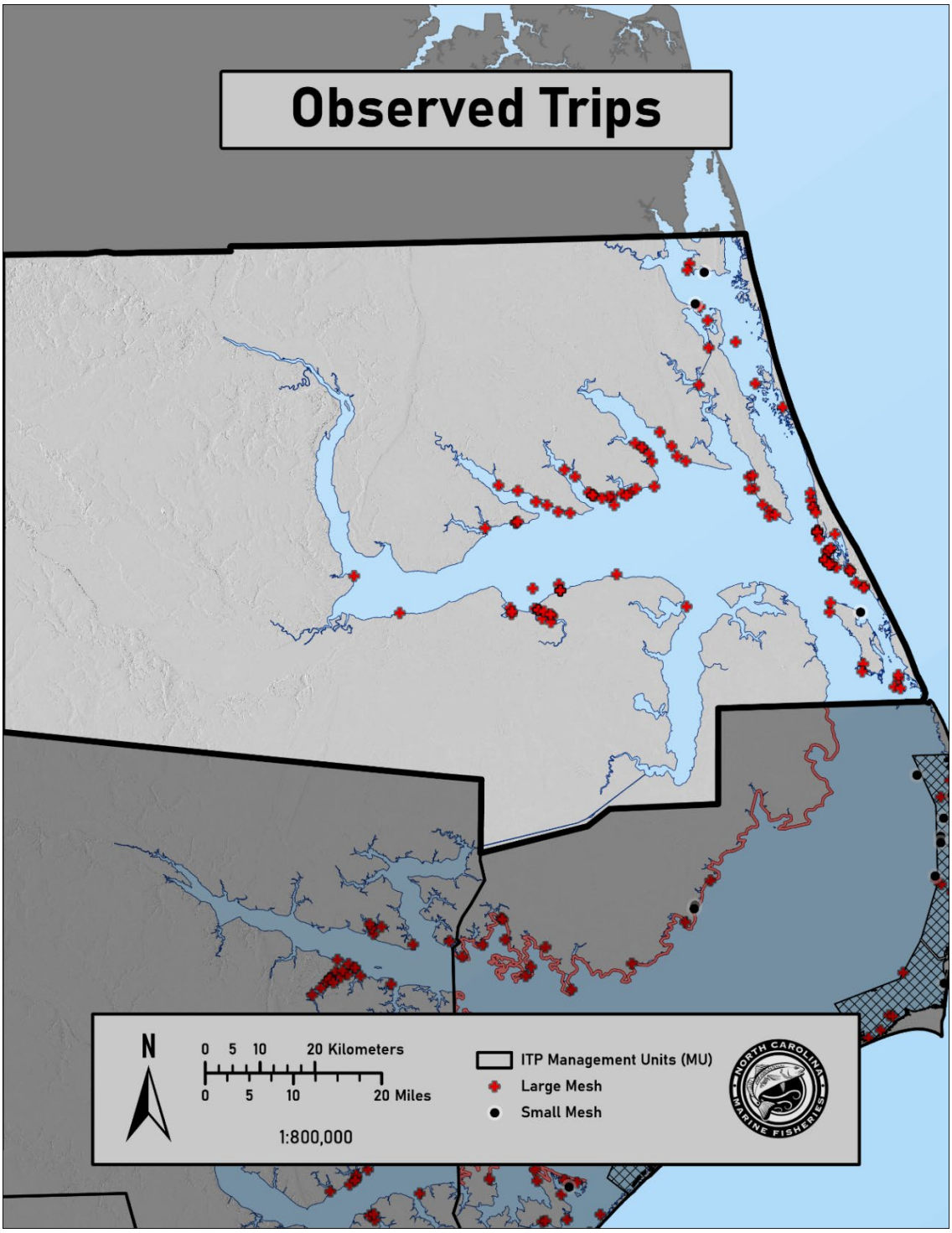

Figure 3. For fall 2022, observed gill-net trips in Management Unit A during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 113 large mesh [≥4 inches stretched mesh]; n = 3 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit A during fall. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

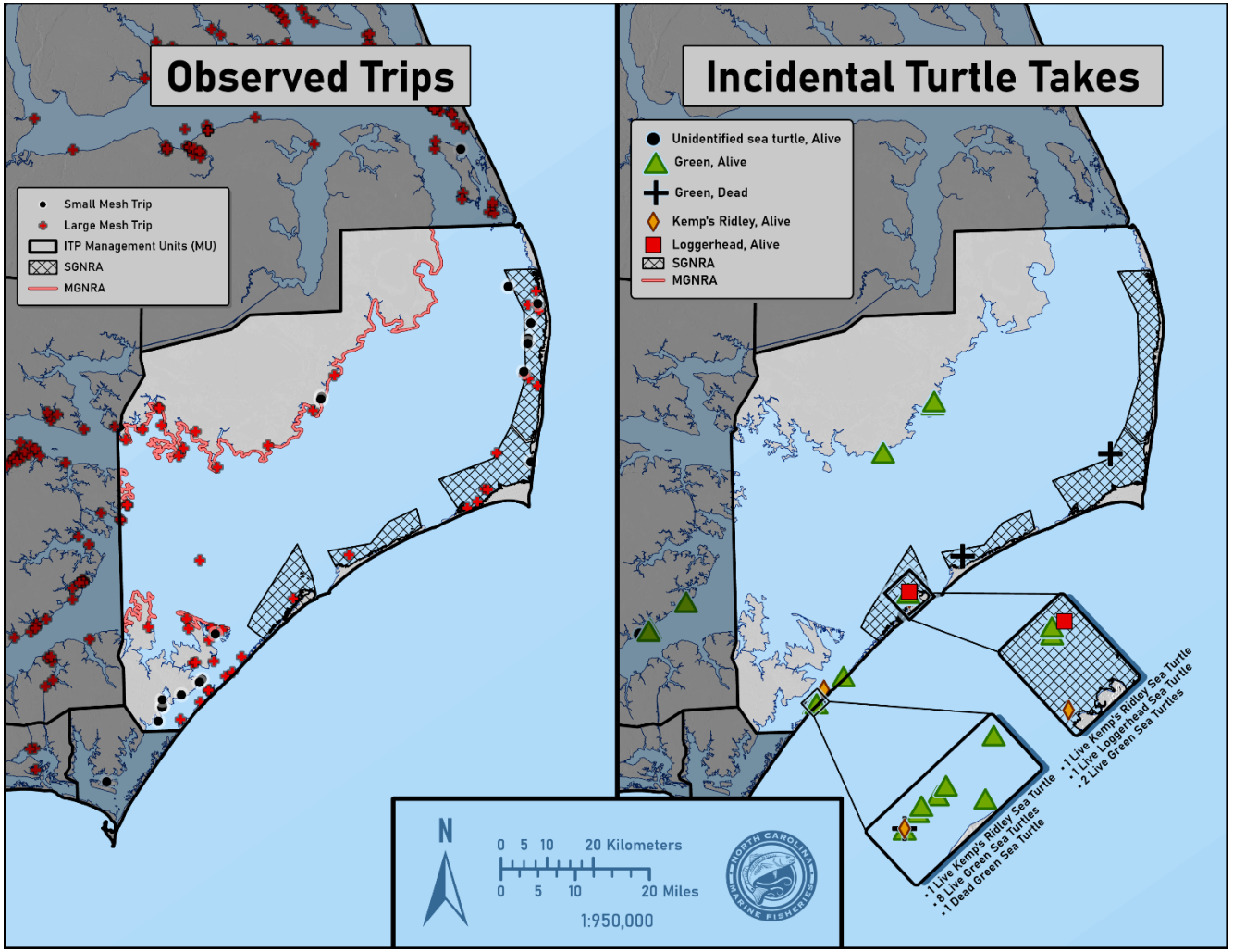

Figure 4. For fall 2022, observed gill-net trips (left) and incidental sea turtle takes (right) in Management Unit B during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 46 large mesh [≥4 inches stretched mesh]; n = 19 small mesh [<4 inches stretched mesh]). Sea turtles are separated by species and disposition (alive, n = 18; dead, n = 3). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

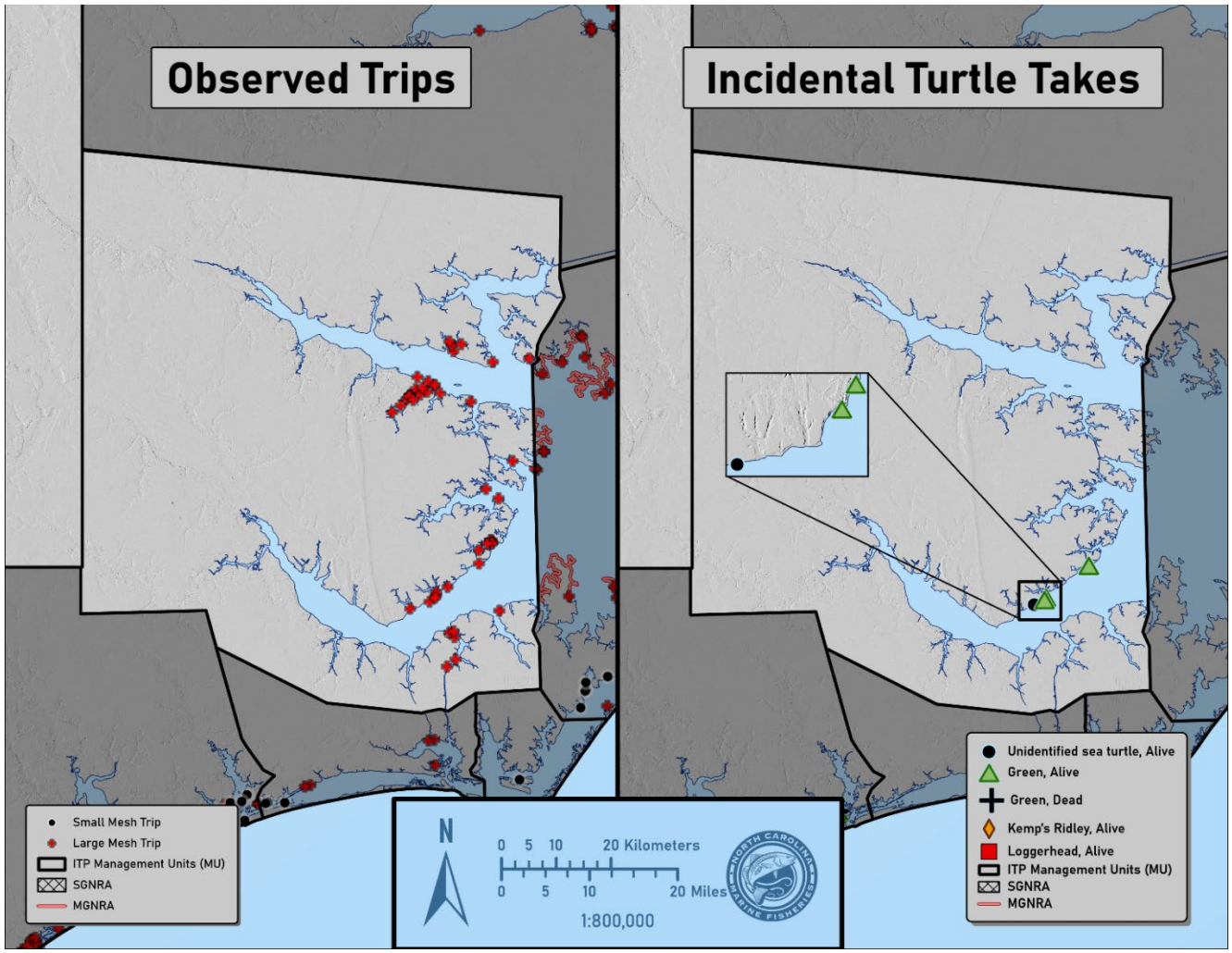

Figure 5. For fall 2022, observed gill-net trips (left) and incidental sea turtle takes (right) in Management Unit C during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 50 large mesh [≥4 inches stretched mesh]; n = 0 small mesh [<4 inches stretched mesh]). Sea turtles are separated by species and disposition (alive, n = 4; dead, n = 0). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

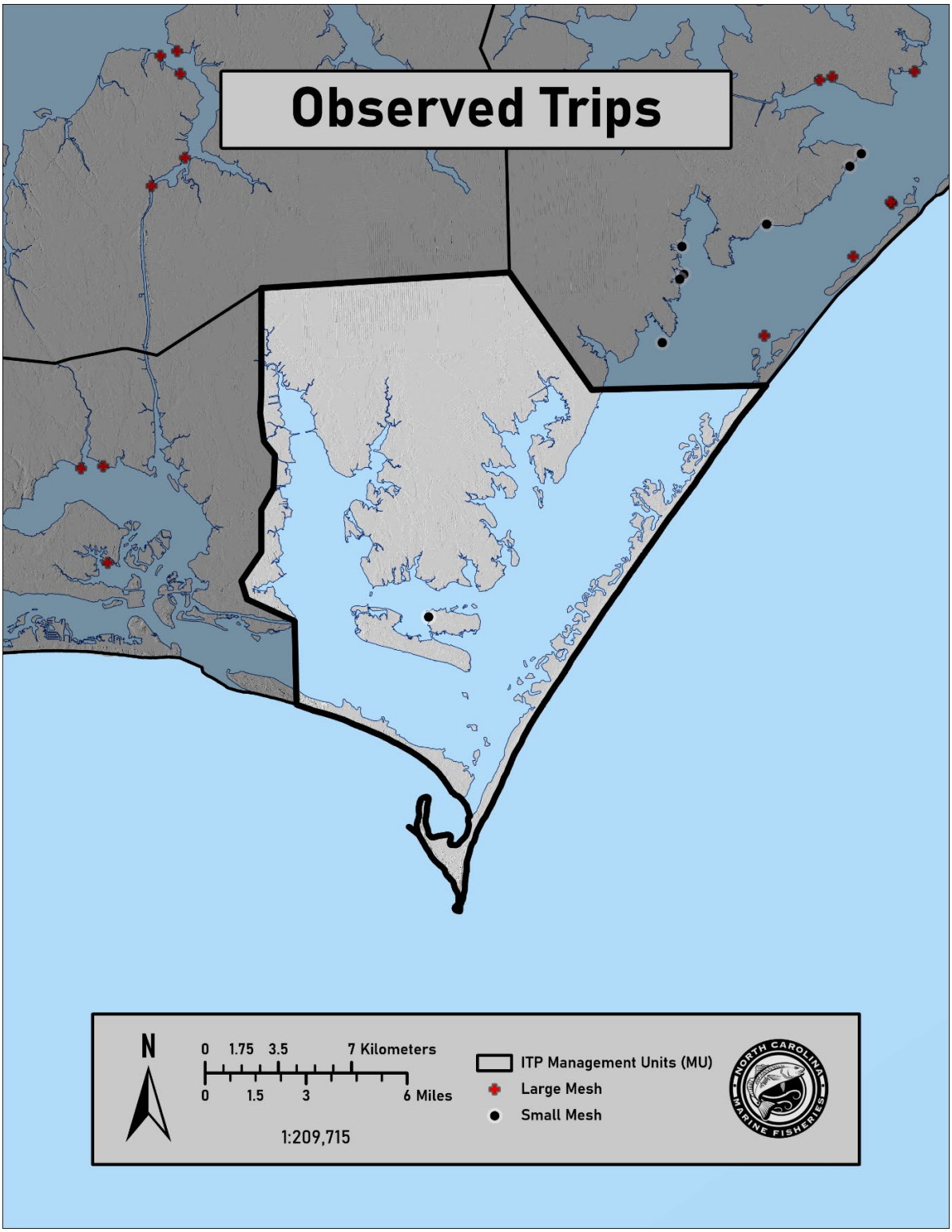

Figure 6. For fall 2022, observed gill-net trips in Management Unit D1 during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 1 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit D1 during fall.

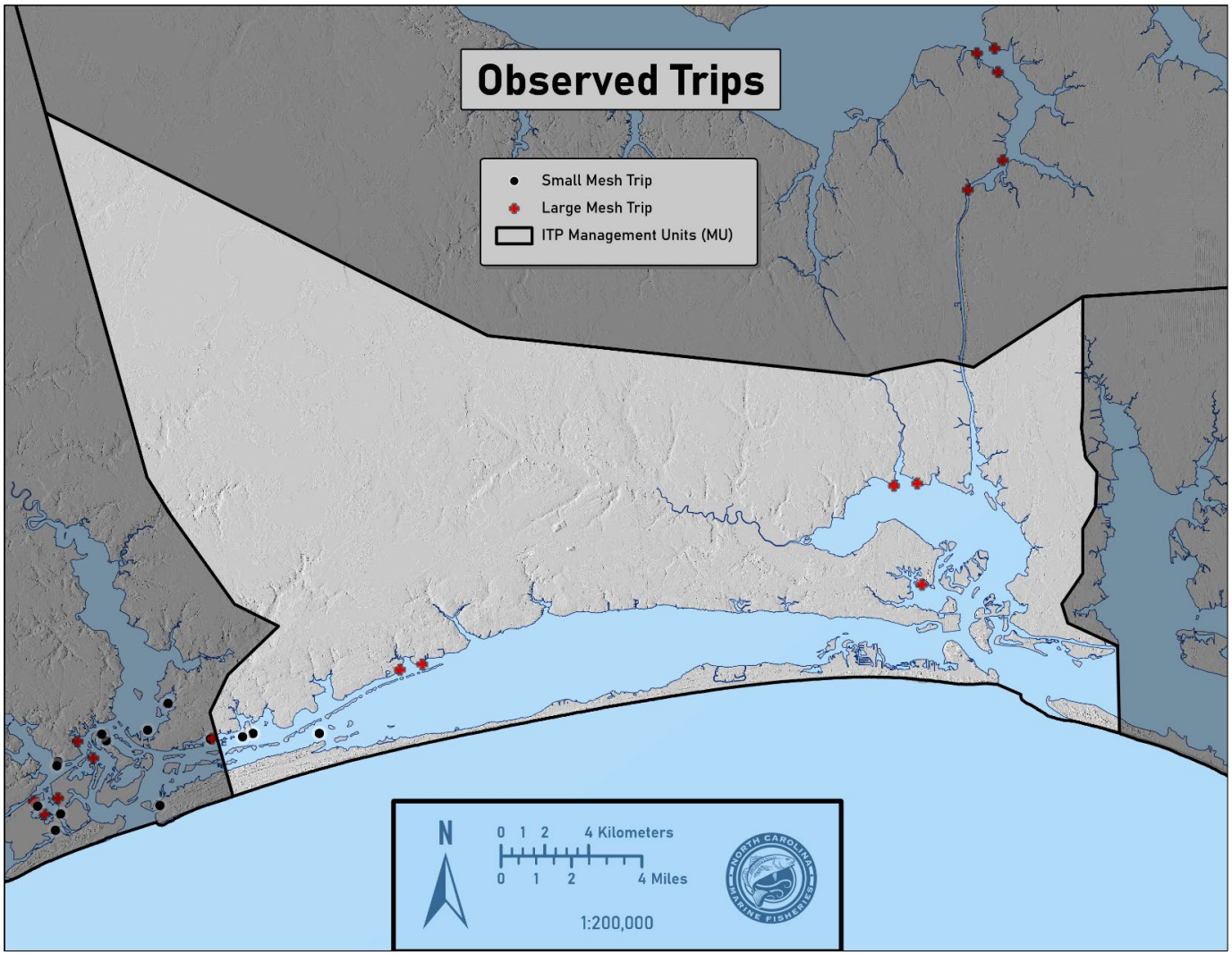

Figure 7. For fall 2022, observed gill-net trips in Management Unit D2 during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 5 large mesh [≥4 inches stretched mesh]; n = 4 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit D2 during fall. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

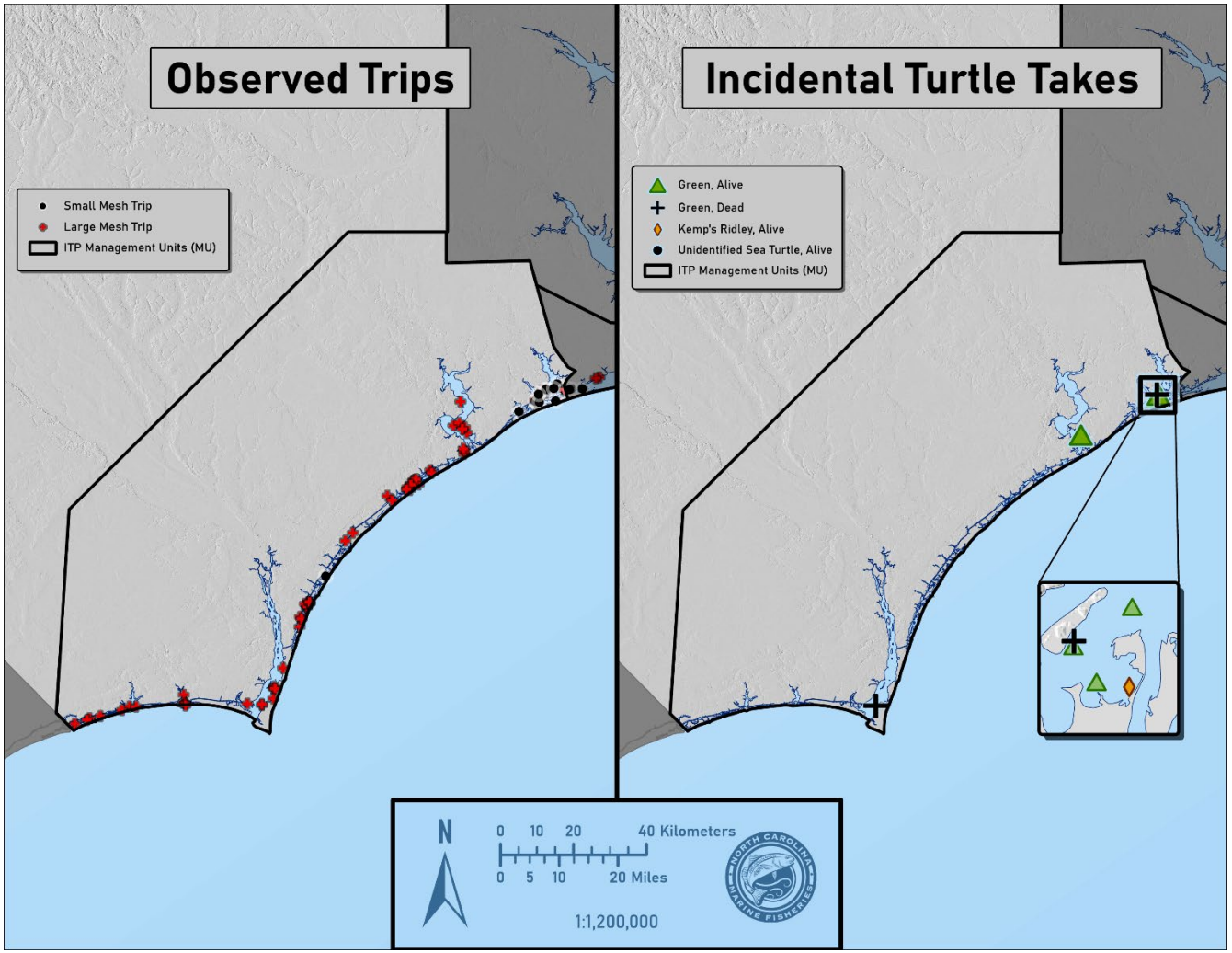

Figure 8. For fall 2022, observed gill-net trips (left) and incidental sea turtle takes (right) in Management Unit E during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 63 large mesh [≥4 inches stretched mesh]; n = 13 small mesh [<4 inches stretched mesh]). Sea turtles are separated by species and disposition (alive, n = 5; dead, n = 2). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

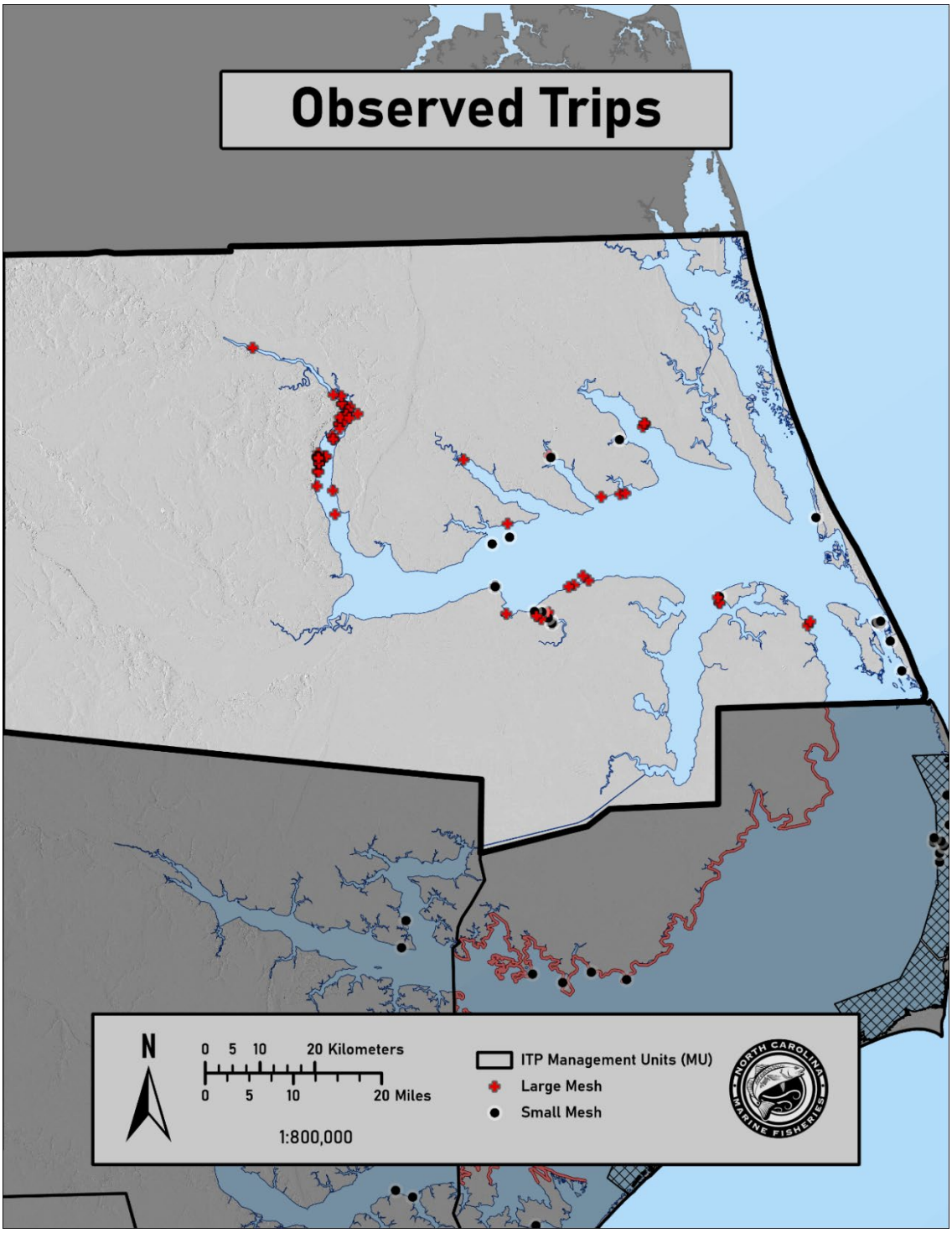

Figure 9. For spring 2023, observed gill-net trips in Management Unit A during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 69 large mesh [≥4 inches stretched mesh]; n = 18 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit A during spring. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

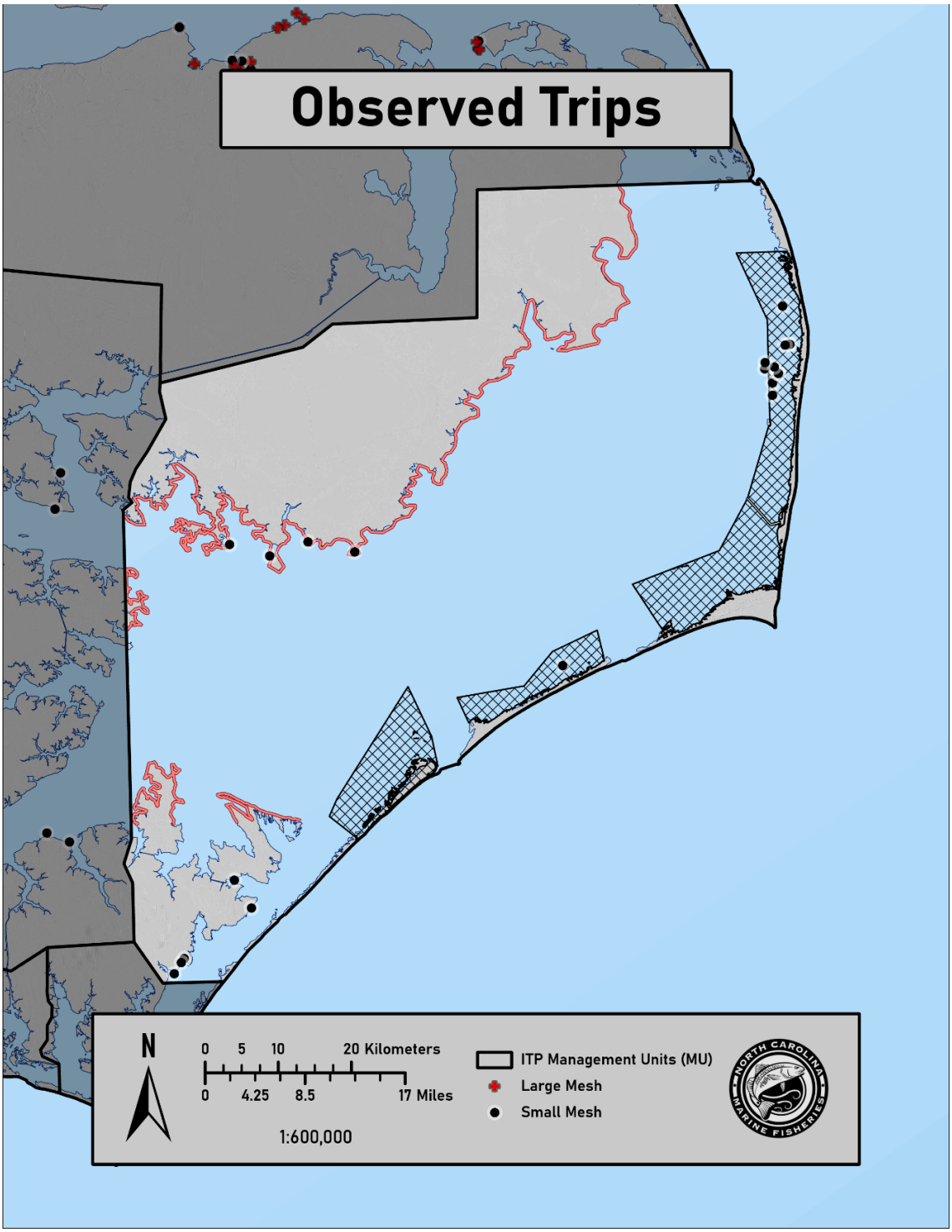

Figure 10. For spring 2023, observed gill-net trips in Management Unit B during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 21 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit B during spring. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

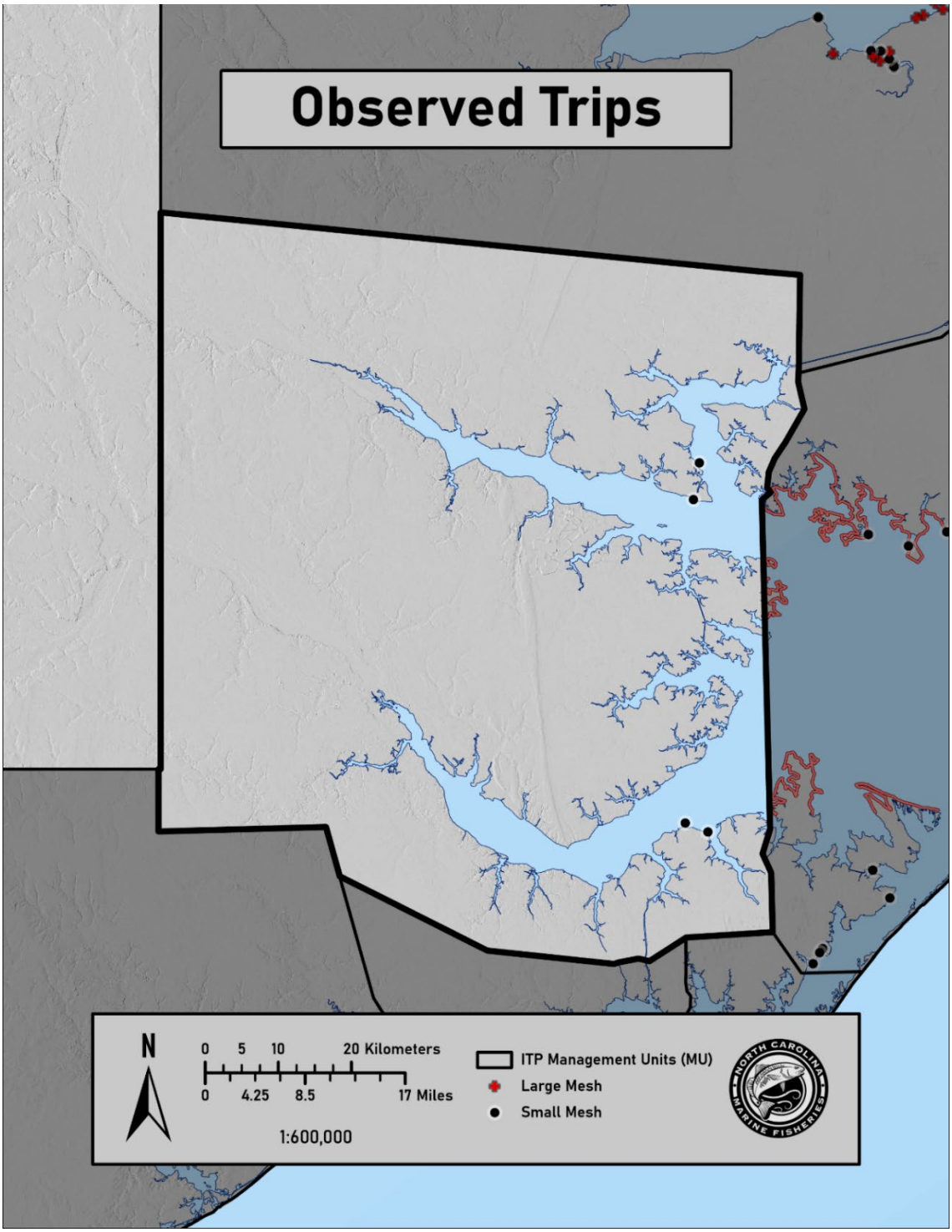

Figure 11. For spring 2023, observed gill-net trips in Management Unit C during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 4 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit C during spring. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

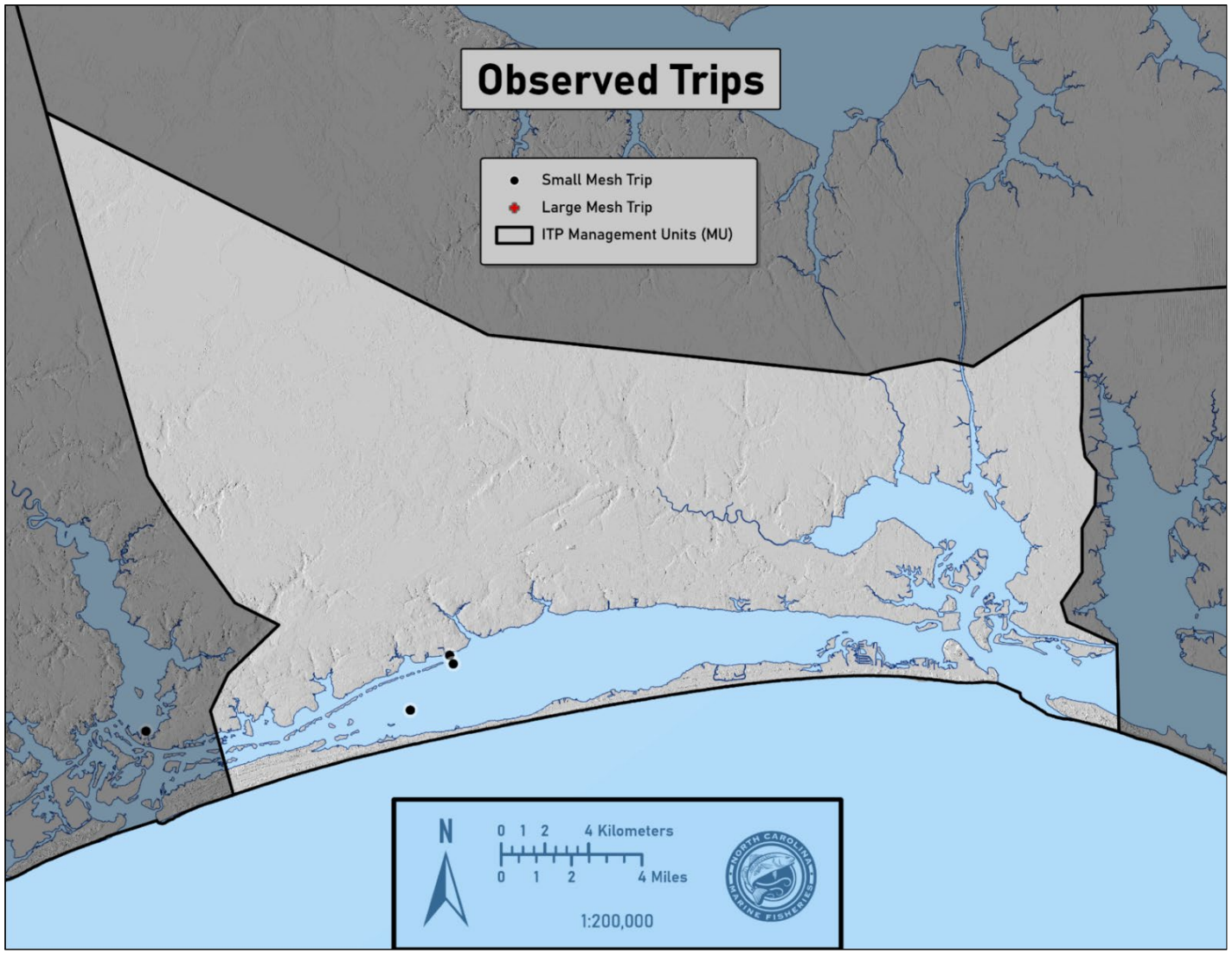

Figure 12. For spring 2023, observed gill-net trips in Management Unit D2 during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 3 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit D2 during spring.

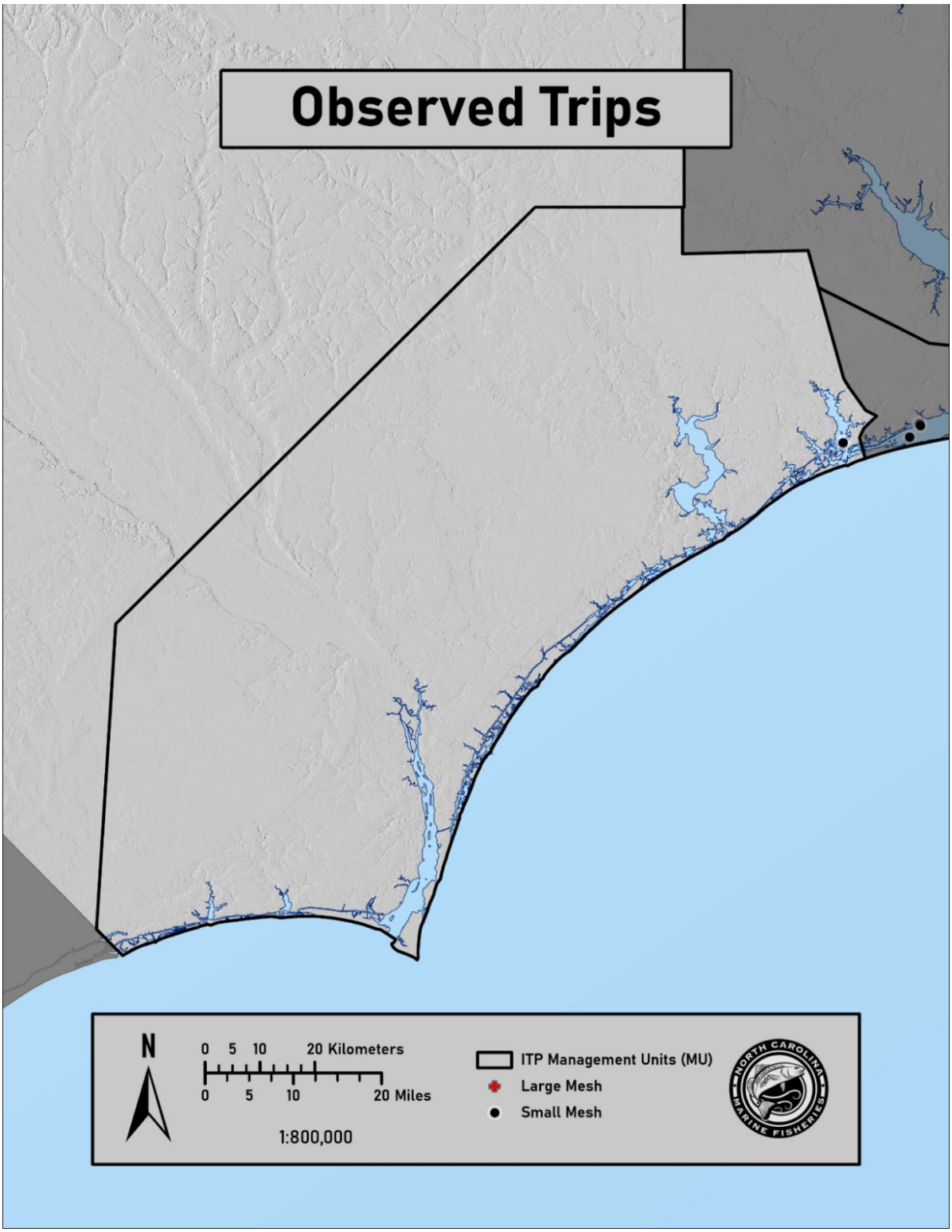

Figure 13. For spring 2023, observed gill-net trips in Management Unit E during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 1 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit E during spring.

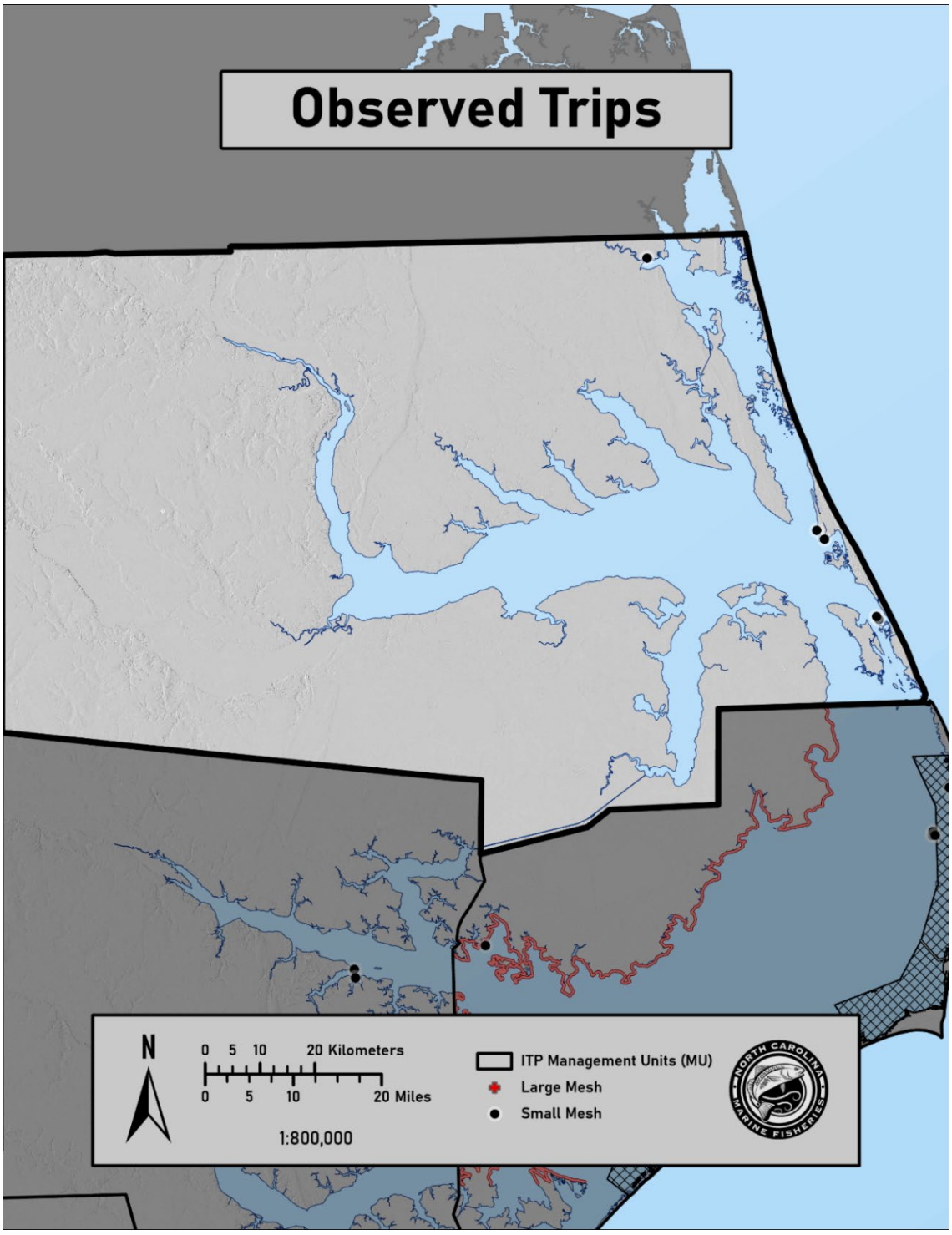

Figure 14. For summer 2023, observed gill-net trips in Management Unit A during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 5 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit A during summer. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

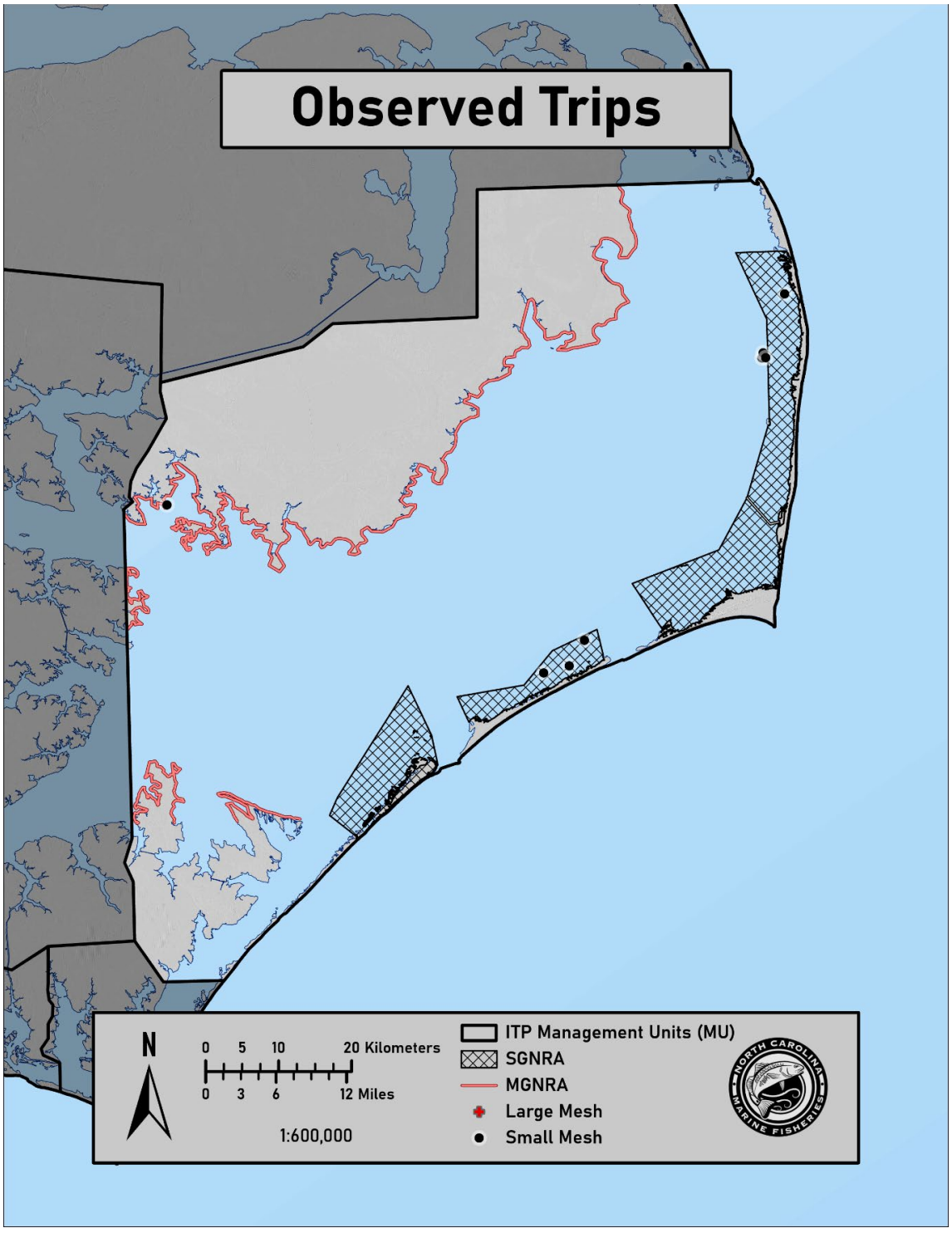

Figure 15. For summer 2023, observed gill-net trips in Management Unit B during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 8 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit B during summer. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

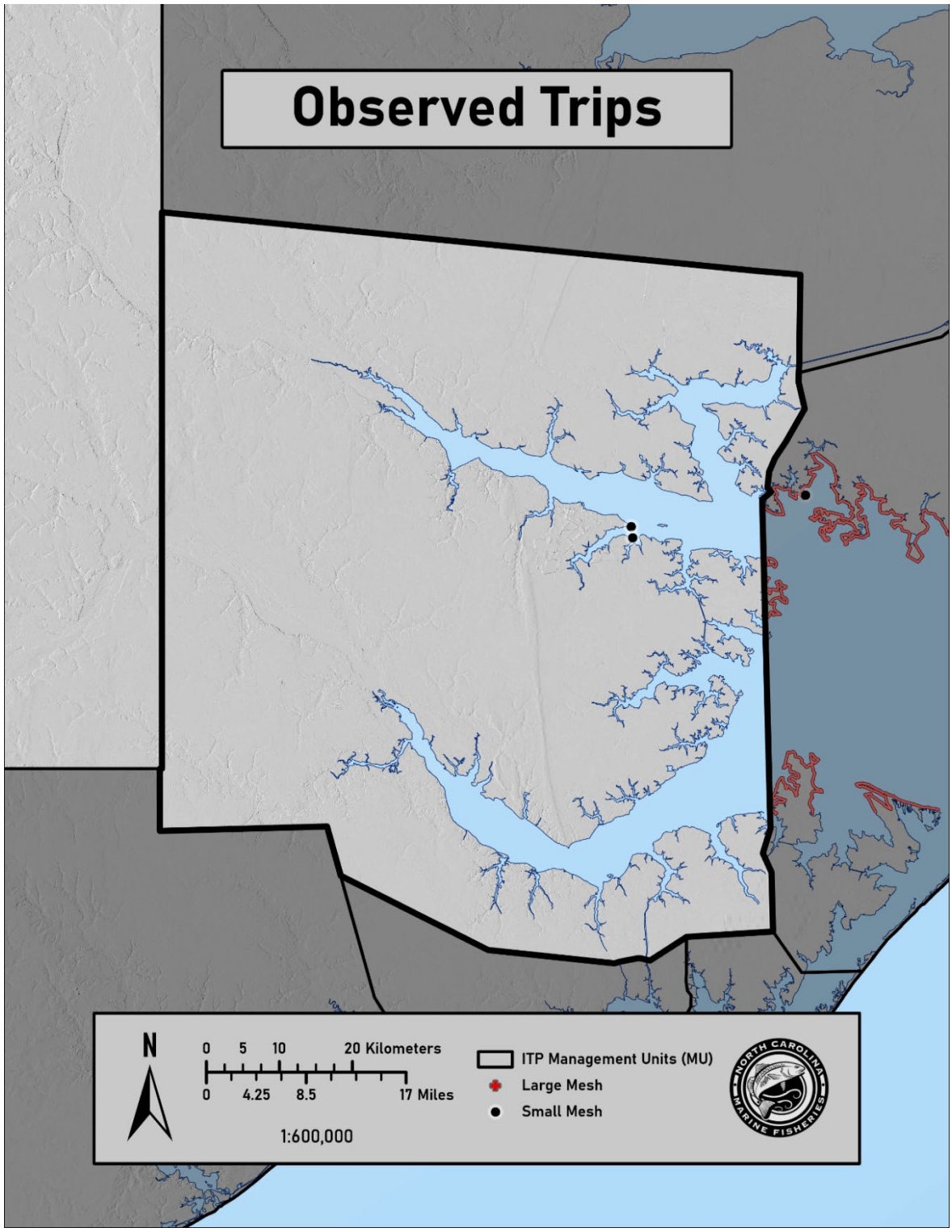

Figure 16. For summer 2023, observed gill-net trips in Management Unit C during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 2 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit C during summer.

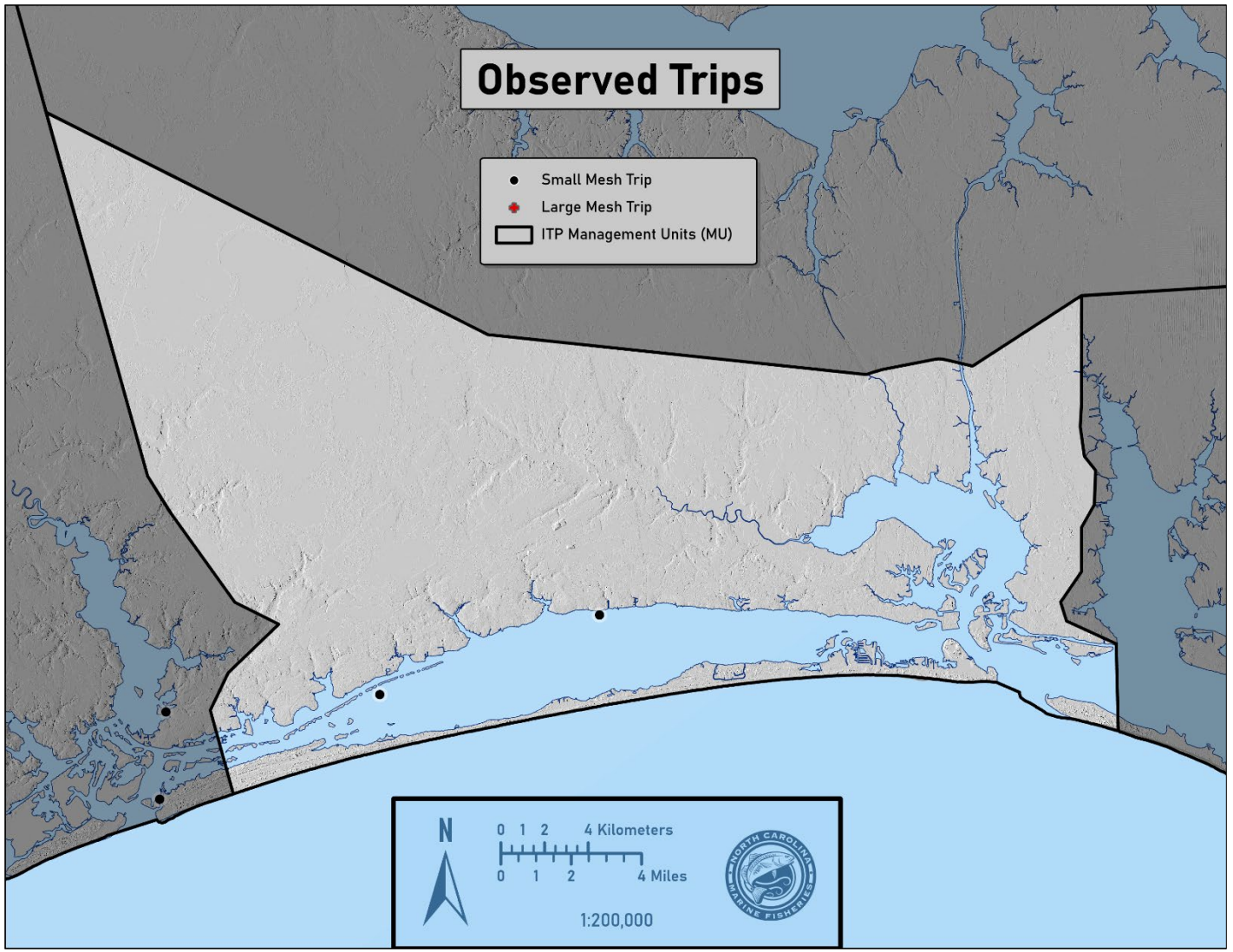

Figure 17. For summer 2023, observed gill-net trips in Management Unit D2 during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 2 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit D2 during summer.

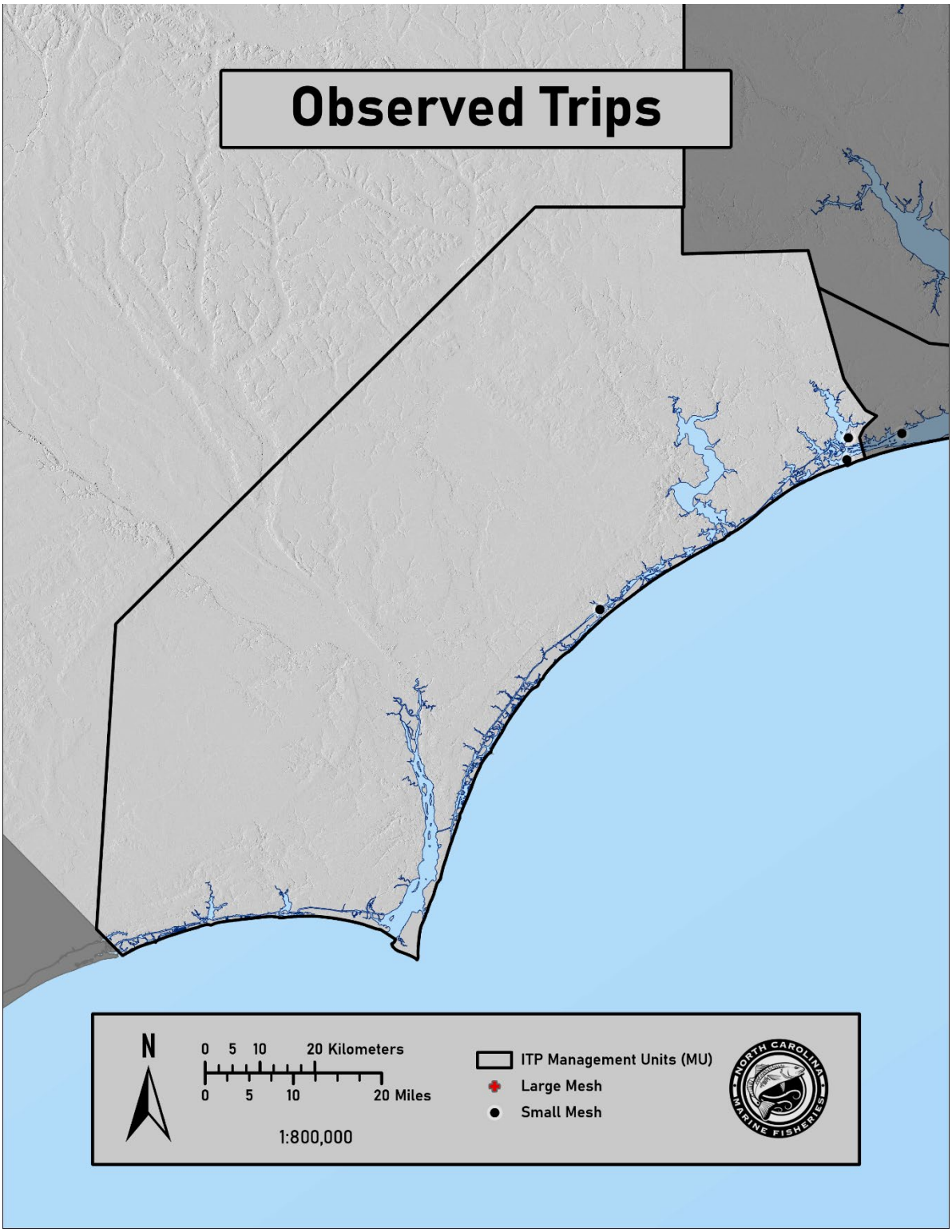

Figure 18. For summer 2023, observed gill-net trips in Management Unit E during the 2023 Incidental Take Permit (ITP) Year. Observed trips are separated by mesh-size category (n = 0 large mesh [≥4 inches stretched mesh]; n = 3 small mesh [<4 inches stretched mesh]). No sea turtles were observed in Management Unit E during summer.

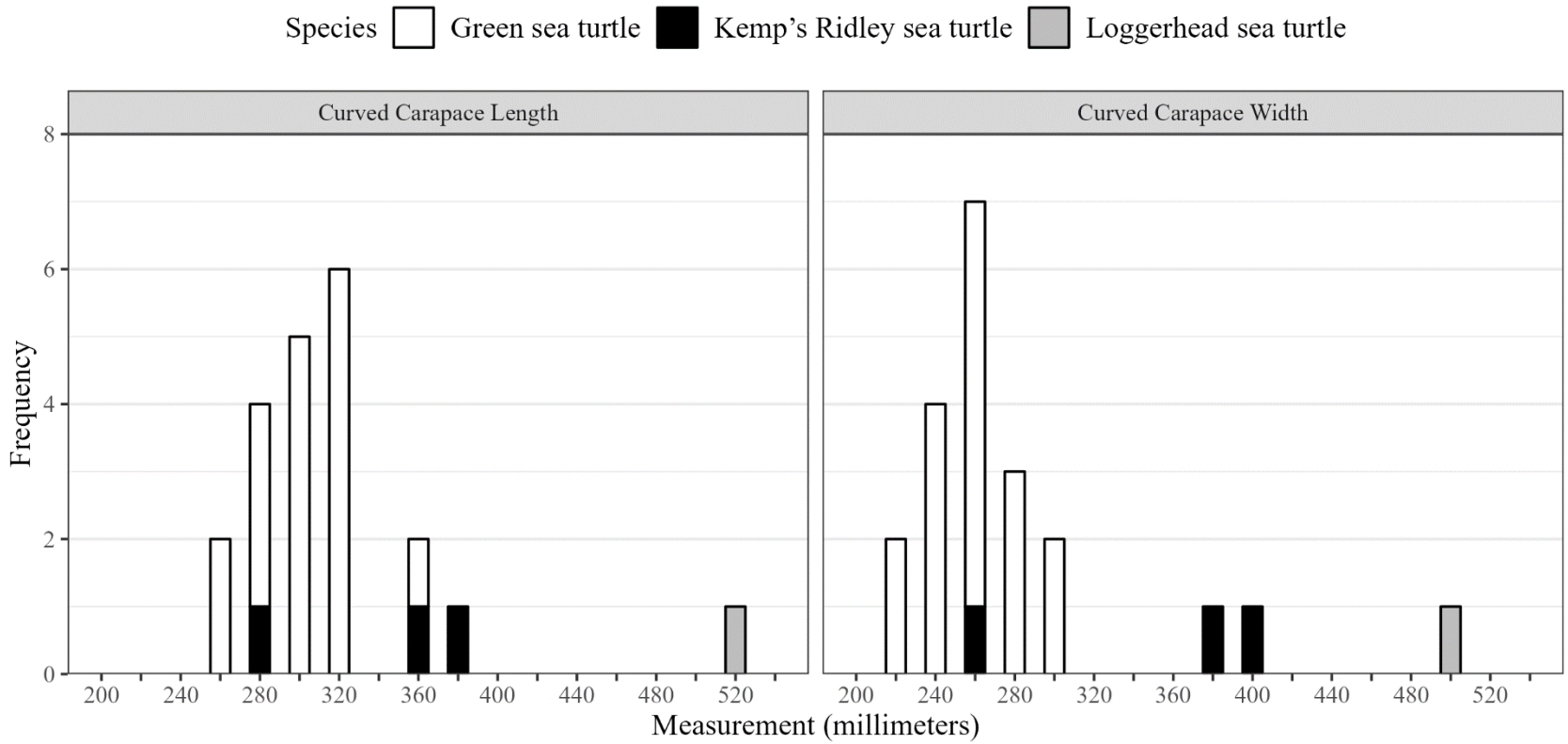

Figure 19. Size distributions for incidental takes of Green (*n* = 17), Kemp's Ridley (*n* = 3), and Loggerhead (*n* = 1) Sea Turtles during the 2023 Incidental Take Permit Year: Curved Carapace Length (left) and Curved Carapace Width (right). Note that not all observed sea turtles were measured.

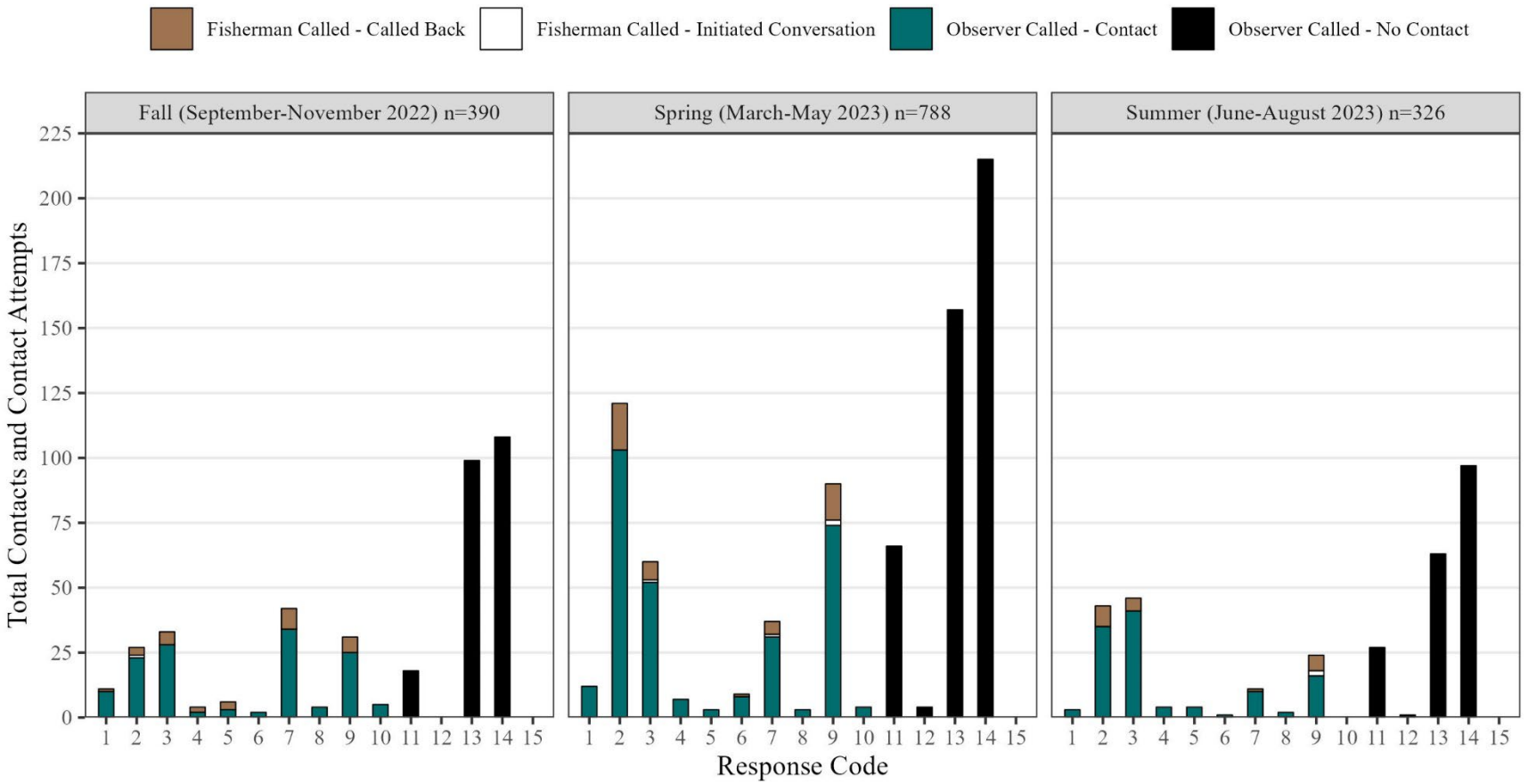

Figure 20. For the 2023 Incidental Take Permit Year, contacts attempted (n = 1,504) by observers to schedule trips categorized by contact type (0-15) and presented as a percentage of the total for fall, spring, and summer. Contact type categories include the following: 1) Left message with someone else; 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 fisher (teal bars), when the observer did not (black bars), when the fisher initiated a conversation (white bars), and when a fisher returned an observer's call (bronze bars).

Annual Atlantic Sturgeon Interaction Monitoring of Estuarine Anchored Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2023
(1 September 2022–31 August 2023)

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

Matthew R. Doster, Barbie L. Byrd, and David J. Ushakow

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

29 February 2024

Table of Contents

List of Tables

List of Figures

1 INTRODUCTION

The North Carolina Division of Marine Fisheries (NCDMF) applied to the National Marine Fisheries Service (NMFS) 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 in anchored gill-net fisheries in North Carolina's estuarine waters. Anchored (i.e., stationary, set) 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 NMFS in February 2012 indicating the intent to list the Carolina Distinct Population Segment (DPS) of Atlantic Sturgeon as endangered under the ESA. The application proposed a Conservation Plan that ensured only an authorized level of Atlantic Sturgeon incidental takes would occur, while allowing North Carolina's estuarine anchored gill-net fisheries to operate. The ITP authorizes such takes that are incidental to otherwise lawful fishing activity. For this report, the term "gill net" refers to estuarine anchored gill nets and mesh sizes are provided as inches stretched mesh (ISM) unless stated otherwise.

The NCDMF received the Atlantic Sturgeon ITP (No. 18102) on 22 July 2014 after a final application was submitted on 2 January 2014, which included revisions of previous versions (79 FR 43716[1]; McConnaughey et al. 2019a). The ITP has similarities with the Section 10 ITP (No. 16230) that NCDMF already had for incidental takes of sea turtles in the estuarine anchored gill-net fishery (78 FR 57132[2]). For example, the Atlantic Sturgeon ITP defines an ITP year as 1 September through 31 August of the following year, establishes annual authorized levels of incidental takes within geographic regions termed Management Units (MU; Tables 1 and 2), and includes a Conservation Plan to monitor, minimize, and mitigate incidental takes of Atlantic Sturgeon DPSs (i.e., of Gulf of Maine, New York Bight, Chesapeake, Carolina, and South Atlantic DPS) in otherwise lawful anchored gill-net fisheries operating in North Carolina estuarine waters. The Conservation Plan in both ITPs includes a state-wide estuarine gill-net observer program to monitor interactions that can be counted or extrapolated, when applicable, across the fishery within a given season and MU. The ITPs required observer coverage thresholds as a minimum of 7% with a goal of 10% for large-mesh gill nets and a minimum of 1% with a goal of 2% for small-mesh gill nets. The Conservation Plan also incorporated an adaptive management approach to mitigate incidental takes should observer data indicate that takes were approaching or exceeding authorized thresholds; this approach would include implementation of temporary management options using the NCDMF director's proclamation authority (143B-289.52; NCGS § 113-221.1).

There were a few differences, however, between the Atlantic Sturgeon and Sea Turtle ITPs. In contrast to the Sea Turtle ITP, the Atlantic Sturgeon ITP defined large-mesh gill nets as ≥5 ISM and small-mesh gill nets as <5 ISM, included the winter season along with spring, summer, and fall, and defined five (A, B, C, D, and E) not six MUs by combining the two MUs D1 and D2 from the Sea Turtle ITP into a single unit (Figure 1). The Atlantic Sturgeon ITP also set observer coverage requirements across MUs for a given season, not within each MU in a season like the Sea Turtle ITP.

To maintain incidental takes below authorized levels, the Conservation Plan consisted of a variety of measures for gill nets operating in estuarine waters across the state. These measures primarily

[1] https://www.federalregister.gov/documents/2014/07/28/2014-17645/endangered-species-file-no-18102
[2] https://www.federalregister.gov/documents/2013/09/17/2013-22592/endangered-species-file-no-16230

included the continuation of restrictions put in place for the anchored large-mesh gill-net fishery for Southern Flounder (*Paralichthys lethostigma)* by the NCDMF Sea Turtle ITP[2]. These restrictions are implemented annually through proclamation. They include mitigation measures such as restricting gear soak time and fishable days of the week, limiting net lengths, requiring separations between net shots in a single string, requiring low-profile net configurations, and implementing time/area closures (Table 3). However, based on historical information on where risk of incidental takes of sea turtles was the greatest, not all regulations for nets ≥4 ISM are applied in the same manner in each MU. Additionally, NCDMF mirrors by proclamation the federal deep-water closure in Pamlico Sound from 1 September through 15 December (50 C.F.R. § 223.206 (d)(7). The Conservation Plan also requires the continuation of seasonal attendance requirements for anchored small-mesh gill nets that were outlined in the original application.

On 13 July 2017, the NCDMF requested a minor modification to the Atlantic Sturgeon ITP allocation of authorized takes in MUs A and C to be listed as annual rather than seasonal takes. The NCDMF explained that annual take thresholds would provide greater flexibility in managing the fishery while minimizing the frequency of full seasonal closures. Furthermore, 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 agreeing with the request for the minor modification but encouraged staff to incorporate any further anticipated minor modifications into the application process for an updated ITP (McConnaughey et al. 2019a).

In recent years, regulatory changes related to several Fishery Management Plans (FMPs) have significantly reduced fishing effort using estuarine large-mesh gill nets. One such example is the adoption of Amendment 2 of the Southern Flounder FMP on 23 August 2019 by the Marine Fisheries Commission (MFC; NCDMF 2019). Regulatory measures in this amendment were a result of the most recent Southern Flounder stock assessment, which indicated the stock was overfished and overfishing was occurring. North Carolina state law requires management actions be taken to end overfishing within two years and to recover the stock from an overfished condition within 10 years. To meet these legal requirements, the NCDMF determined a 62% reduction in overall harvest was necessary for 2019 and a 72% harvest reduction would be needed beginning in 2020. Amendment 2 was expedited to begin rebuilding the stock immediately (NCDMF 2022). Due to the shortened time frame for development, Amendment 2 incorporated a seasonal approach to meet reductions while deferring more complex and comprehensive strategies to be developed in Amendment 3. For the commercial gill-net fishery, these regulations severely limited when large-mesh gill nets harvesting flounder were allowed. For example, for fall 2019–2021, the Southern Flounder commercial fisheries were constrained by setting specific dates when fishing was allowed across three Flounder Management Areas (MAs): Northern, Central, and Southern. Prior to fall 2019, the fishery was most active during the fall, but could operate January through November. Amendment 3 was adopted by the MFC on 26 May 2022 to establish new and continued regulations that would facilitate the rebuilding of the Southern Flounder stock. Amendment 3 established a quota-managed fishery for mobile gears (e.g., estuarine anchored large-mesh gill nets and gigs) and pound nets with separate sub-allocations by MA (NCDMF 2022). Estuarine Flounder Dealer Permits were required for any fish dealer to possess, purchase, sell, or offer for sale flounder taken from estuarine waters. As a condition of the permit, dealers were required to report flounder landings from a given day by noon the following day or, for landings on Fridays or Saturdays, by noon the following Monday. Other changes included the consolidation of mobile gear MAs from three areas in Amendment 2 to two areas (Northern MA: ITP MUs A, B, and C; Southern MA: ITP MUs D1, D2 and E; Figure 1) and the gradual

reallocation of the fishing quota to 50/50 recreational/commercial by 2026. Some regulations from Amendment 2 were maintained, such as limiting the allowed yardage of gill nets (i.e., 1,500 yards in MUs A, B, and C, and 750 yards in MUs D and E) and limiting gear soak time to overnight soaks state-wide for large-mesh gill nets.

Regulatory changes related to the management of American Shad (*Alosa sapidissima*) and Striped Bass (*Morone saxatilis)* have also affected large-mesh gill-net fisheries in MUs A and C. The NC American Shad Sustainable Fishery Plan, which set sustainability parameters for the American Shad stock, was approved by the MFC in 2013. Due to sustainability parameters being exceeded in MU A, the allowed season for anchored gill nets configured for harvesting American Shad in MU A was initially limited to 1 February–14 April and then further reduced in 2014 to 3–24 March (NCDMF and North Carolina Wildlife Resources Commission [NCWRC] 2017). The duration of the season has been shortened at times due to the concurrent harvest of Striped Bass. Striped Bass are a desirable bycatch species in the American Shad fishery in MU A. As a quota-managed species, Striped Bass bycatch in the shad fishery can force the fishery to close early if the quota is met before the defined end to the shad season. Striped Bass management has also led to recent regulatory changes due to the adoption of the 2020 Revision of Amendment 1 to the North Carolina Estuarine Striped Bass FMP (NCDMF and NCWRC 2020). As a result of this amendment, Total Allowable Landings (TAL) of Striped Bass were reduced from 275,000 pounds to 51,216 pounds, effective 1 January 2021. Furthermore, midway through the 2021 shad season, the lower Chowan River and western Albemarle Sound were closed to the use of gill nets due to the historical bycatch of Striped Bass in that area (Proclamation M-9-2021; Table 4). This closure was included in the proclamation that opened MU A for the 2023 shad fishery for the same reason (Proclamation M-5-2023; Table 4).

Regulations implemented in MU C have all but ended the large-mesh gill-net shad fishery in that area. Since 15 March 2019, all gill nets have been prohibited in upstream portions of the Pamlico and Neuse rivers, greatly reducing the areas of MU C open to gill nets (Proclamation M-6-2019; Table 4). In accordance with Supplement A to Amendment 1 and Amendment 2 to the Estuarine Striped Bass Fishery Management Plan, (NCDMF and NCWRC 2019) commercial harvest of striped bass in MU C has been prohibited since 2019. To that end, tie-down and distance-from-shore restrictions remain in place for large-mesh gill nets in the western Pamlico Sound and associated rivers as an effort to minimize Striped Bass bycatch. These restrictions reportedly make it difficult to successfully catch shad using anchored gill-net gear in MU C. Decreasing trends in reported trips support this anecdotal information as reported large-mesh gill-net trips in MU C went from an average of 966 trips during spring between 2016–2018 to an average of 17 trips between 2019–2021.

This annual report outlines observer activity, fishing activity, and total observed or estimated takes of Atlantic Sturgeon for the 2023 ITP Year, 1 September 2022–31 August 2023. The original deadline for annual reports was 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. 2019a). Fishing activity (i.e., effort) was measured as the number of reported fishing trips; these data are finalized only for 2022 (fall and part of winter). After the preliminary data for 2023 are finalized in May 2024, 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.

2 METHODS

2.1 Observer Activity

A sea-day schedule of projected observer trips for each season by month and MU during the 2023 ITP Year was developed during the prior season. The number of projected observer trips was based on the maximum goals for coverage outlined in the Conservation Plan: 10% coverage of total large-mesh gill-net fishing trips and 2% coverage of total small-mesh gill-net fishing trips. Data on commercial fishing effort were sourced from the NCDMF Trip Ticket Program (TTP), whereby fish dealers complete a trip ticket every time a commercial fisher sells finfish and/or shellfish. Trip tickets record information such as gear type, area fished, species harvested, and total weight by species. For anchored gill nets, the TTP defines large-mesh (≥5 ISM) and small-mesh (<5 ISM) gill nets the same as the Atlantic Sturgeon ITP. Projected observer trips were stratified across each month within four seasons and six MUs proportional to the TTP data of reported fishing trips. The seasons crossed calendar years and were defined as follows: fall (September–November 2022), winter (December 2022–February 2023), spring (March–May 2023), and summer (June–August 2023). Although the Conservation Plan outlined in the Atlantic Sturgeon ITP identified five MUs (A, B, C, D, and E), projected observer trips were allocated according to the Conservation Plan in the Sea Turtle ITP, which splits MU D into D1 and D2 (Figure 1). Consistent with federal rule (50 C.F.R. § 223.206 (d)(7)), large-mesh gill nets operating in Pamlico Sound (MU B) from 1 September through 15 December were confined to specific subunits (Shallow Water Gill-Net Restricted Areas 1-4, and the Mainland Gill-Net Restricted Area). This has effectively closed the fishery in the deep waters of Pamlico Sound and in corridors near the Ocracoke, Hatteras, and Oregon inlets (Proclamation M-15-2022; Table 4; Figure 1).

Historically, projecting observer trips for the sea-day schedule was calculated as the average of reported gill-net trips by mesh-size category (large and small), month, and MU from the previous five years (e.g., 2017–2021 for the 2022 fall season). Though this approach was used to estimate small-mesh gill-net fishing effort, it was not a viable prediction of large-mesh fishing effort during the 2023 ITP Year due to regulation changes described above. The fall 2022 flounder season was the first to be quota-managed per Amendment 3 and created uncertainty as to how fishers would respond to a fishery that was open until the quota was filled rather than a specific number of days per Amendment 2. With that uncertainty, two approaches to estimate effort were explored. The first approach evaluated the previous year's landings and selected the week for each MU with the maximum number of participants, and then assumed each person would fish every day the season was open. This provided an estimated number of fishing trips per day. The second approach evaluated landings data during 2019–2021 (post Amendment 2) and selected the year with the greatest number of daily trips unique for each MU. For example, MU A had the greatest number of daily trips during 2020, but MU B had the greatest number of daily trips during 2021. For most MUs, the first approach produced a higher estimate of daily fishing effort. To be risk-averse, this approach was used to plan for the number of observed trips for each MU per day based on 10% of the estimated fishing trips unique to each MU. It was assumed that no fishing effort occurred in MU D1 because it has been closed to anchored large-mesh gill nets since 9 November 2017, when estimated Green Sea Turtle takes exceeded the authorized threshold (McConnaughey et al. 2019b, Byrd et al. 2023). Additionally, per the Sea Turtle ITP, MU D1 is closed to large-mesh gill nets annually during 8 May–14 October. In the estuarine large-mesh gill-net fishery for American Shad, the method to estimate fishing effort was also adapted to accommodate recent changes in the management of this fishery. For MUs A and C, only the last three years (2020–2022) of reported

fishing trips were used to project observer trips. Outside of these seasons and MUs, projected large-mesh observer trips were set to zero because large-mesh gill nets were not allowed.

The constrained seasons for the large-mesh gill-net fisheries concentrated fishing effort and the required observer effort to sufficiently cover the fisheries. Post-COVID changes to the hiring climate have made it difficult for NCDMF to hire seasonal observers to the extent needed. As a result, other NCDMF programs provided staff to help observe during the fall flounder and spring shad fisheries. The sea-day schedule continued to be shared with Marine Patrol officers, who conducted alternative platform observations as part of their regular duties.

Efforts to observe gill-net trips were facilitated by the continued requirement for fishers that use estuarine anchored gill nets to obtain an Estuarine Gill Net Permit (EGNP; Proclamation M-24-2014; Table 4). Permit holders provide their contact information so that observers can call and schedule observed trips. However, as the permit is free, many fishers get an EGNP but do not report trips using estuarine gill nets (Byrd et al. 2021). To optimize observer efforts to contact fishers, the NCDMF License and Statistics Section provided data on EGNP holders that had reported anchored estuarine fishing trips during the last three years. The dataset included all reported trips, associated mesh-size category, MU, permittee name, and contact information. This dataset was used to create a priority call list that observers used to call permit holders and attempt to schedule trips in advance. Observers also visited boat ramps to intercept fishers and attempt to get onboard trips or follow them out to observe them fishing their gear.

Observers were trained by experienced NCDMF staff to identify, measure, evaluate condition of, and tag Atlantic Sturgeon. Tags used by NCDMF include Passive Integrated Transponder (PIT) tags and T-bar tags. Date, time, tag numbers, location (latitude and longitude), condition (e.g., 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 observed Atlantic Sturgeon interactions. Photographs, fin clips (for genetic analyses), and data on environmental parameters (e.g., salinity, water temperature) were also collected when feasible. Observers were instructed to retain any dead Atlantic Sturgeon when possible. Individual reports of observed interactions were provided to NMFS within 24 hours.

In addition to sturgeon-specific data, observers also collected data on catch and gear parameters. On alternative platform trips, catch data were limited when compared to on-board trips. For unsuccessful alternative platform attempts (hereafter termed “No Contact” trips), observers recorded date, MU, and waterbodies surveyed. All data were coded onto NCDMF data sheets and uploaded to the NCDMF Biological Database for storage and analysis. Observers and Marine Patrol officers also logged data into an ArcGIS application, Collector, in real-time including set locations, gear parameters, and Atlantic Sturgeon interactions to provide daily total counts of trips and interactions.

Ongoing estimates of observer coverage were calculated by comparing the number of observed trips logged into Collector to the predicted number of fishing trips by mesh-size category, MU, and month. The numbers of No Contact trips were not included in these calculations. At the end of the calendar year, the TTP provided actual numbers of reported fishing trips to calculate observer coverage. The TTP data for September–December 2022 were finalized, but the data for January–August 2023 were preliminary. As a result, observer coverage calculated for winter, spring, and summer may change once finalized data are available in May or June 2024.

2.2 Incidental Takes

The ITP outlines authorized levels of incidental takes as estimated takes calculated from observed takes in MU A and counts of observed takes in MUs B, C, D, and E (Tables 1 and 2). The use of both estimated takes and counts of takes was necessary in the development of authorized levels because there were insufficient data available for modeling predicted estimated takes in the ITP application for some combinations of MU and mesh-size category (Daniel 2014). To compare numbers of incidental takes of Atlantic Sturgeon during the 2023 ITP Year to authorized levels, actual observed takes were counted for MUs B, C, D, E and estimated for MU A. The DPS of the Atlantic Sturgeon could not be determined because genetic results were not available. Incidental take estimates for MU A were calculated using a stratified ratio method whereas the bycatch rate (Atlantic Sturgeon caught per observed trip) calculated from observer data is multiplied by the total reported fishing trips.

$$\text{Estimated Takes} = \left(\frac{\text{Observed Atlantic Sturgeon Takes}}{\text{Observed Gill-Net Trips}}\right) * \text{Total Reported Gill-Net Trips}$$

This calculation was used each time an incidental take was observed to determine the estimated number of takes in MU A by date of capture and disposition. The predicted number of fishing trips was used to calculate real-time incidental take estimates. Estimated numbers of interactions for MU A and running totals of observed interactions in MUs B, C, D, and E were additive across interaction dates to determine if interactions were approaching authorized take thresholds. The ongoing comparisons allowed for the implementation of management measures, if needed, 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 ITP year, the estimated number of interactions for MU A was recalculated using actual numbers of fishing trips, albeit preliminary for 2023, reported in the TTP rather than the projected numbers of fishing trips. Nonparametric confidence intervals (95%) were calculated using standard bootstrapping techniques (Efron and Tibshirani 1993) using the 'boot' package in R (Canty and Ripley 2015; Davison and Hinkley 1997; R Core Team 2019). Bootstrap replicates were generated by sampling observer trips with replacement 5,000 times within strata (mesh-size category/MU).

2.3 Compliance

The Observer Program used various methods to contact fishers to schedule trips. The most common method was by phone, due to fishers leaving from private launches and overall efficiency. For each contact attempt made to schedule a trip (phone call, text message, or in-person), observers logged the contact in a database, assigned a category of the response, and noted any additional information (e.g., fisher stated they will not fish until October). Response categories included 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). Observers also documented calls returned from fishers, including the response category and notes. Contact log data were summarized by season and response category to determine the percentage of contacts that resulted in observer trips.

As part of their regular duties, Marine Patrol officers checked gill nets for compliance. Citations and/or Notice of Violations (NOVs) were issued to fishers when gear or fishing practices were out of compliance. A citation is an enforcement action taken by a Marine Patrol officer for person(s) found to be in violation of General Statues, Rules, or Proclamations under the authority of the Marine Fisheries Commission and is considered a proceeding for District Court. An NOV is the NCDMF administrative process to suspend a permit (e.g., EGNP) and is initiated by an officer or NCDMF employee when a permit holder is found to be in violation of general or specific permit conditions. A citation and NOV may both be initiated by the same violation; however, they are two separate actions. In past years, relevant citations and NOVs were compiled based on the codes "EGNP" and "NETG", as they are applicable to the EGNP and gill-net violations. Marine Patrol violation codes have been in the process of being changed from the former codes to the actual MFC rule and General Statue code. With these updates, violation descriptions have been changed to specify the rule or statute language and, where appropriate, proclamation number that was violated. All relevant citations and NOVS were compiled, which consist of old and new codes.

3 RESULTS

3.1 Observer Activity

Overall state-wide observer coverage during the 2023 ITP Year was 25.9% of the reported large-mesh gill-net trips and 2.1% of the small-mesh gill-net trips (Tables 5 and 6). This level of coverage was based on 346 observed large-mesh gill-net trips and 134 observed small-mesh gill-net trips (Figure 2). Additionally, there were 1,026 No Contact trips (Table 7). When anchored gill nets could not be found, occasional observations of drift (n = 4) and runaround (n = 43) gill-net trips occurred (Table 8).

During the 480 total observed trips, observers documented 15 Atlantic Sturgeon in large-mesh and three in small-mesh gill nets (Table 9, Figure 2). One sturgeon that could not be identified to species was also observed in a large-mesh gill net.

Proclamations relative to anchored gill-net fisheries are listed in Table 4. Required attendance of anchored small-mesh (<5 ISM) gill nets occurs annually across different spatiotemporal scopes in NC estuarine waters, as a strategy to decrease dead discards of various fish species (e.g., Red Drum [*Sciaenops ocellatus*], Striped Bass). Many of the net attendance requirements are in rule; NCDMF published an interactive map package online that provides visual references for these gill-net attendance regulations in rule (https://deq.nc.gov/about/divisions/marine-fisheries/rules-proclamations-and-size-and-bag-limits/rules/interactive-map-current-rules). Several other net attendance requirements are maintained through proclamations. For example, net attendance was required during December–April in MU A (Proclamations M-26-2022, M-10-2023), year round within 200 yards from shore in most of MU C (Proclamation M-3-2023), and during May–November in an area near Oregon Inlet, MU B (Proclamation M-3-2023; Table 4).

3.1.1 Fall 2022

During fall 2022, the allowed mobile-gear (e.g., gill nets, gigs) quota for Southern Flounder was 123,879 pounds in the Northern MA and 62,309 pounds in the Southern MA (Proclamation FF-40-2022; Table 4). The fishery opened state-wide on 15 September 2022 except for D1 (Proclamations M-15-2022, M-17-2022; Table 4). However, 18 sea turtle interactions were observed within the first two days of the season in the southeastern portion of MU B. As a result, a proclamation was issued on the afternoon of 16 September, closing the following MU B subunits

to anchored large-mesh gill nets: Core Sound Gill Net Restricted Area, Shallow Water Gill Net Restricted Areas (SGNRA) 1, and SGNRA 2 (Proclamation, M-19-2022; Figure 1). On 22 September, the Northern and Southern flounder MAs were closed to mobile gears, including estuarine anchored large-mesh gill nets, based on reported landings compared to the quota (Proclamations FF-46-2022, M-20-2022 and M-21-2022; Table 4).

The small-mesh gill-net fishery opened state-wide at the beginning of fall (Proclamation M-16-2022; Table 4). However, MU B was closed to anchored small-mesh gill nets on 4 November in response to observed Green Sea Turtle interactions approaching authorized levels outlined in the Sea Turtle ITP (Proclamation M-25-2022; Table 4). Observer efforts were adjusted accordingly.

During fall, the Observer Program achieved 28.9% state-wide coverage of large-mesh gill-net trips, exceeding 7% coverage in each MU (Table 5; Figure 3). In fact, observer coverage calculations with actual reported fishing effort indicated coverage levels were much higher in several MUs than anticipated using estimated fishing effort. For small-mesh gill nets, the Observer Program achieved 1.8% state-wide coverage, exceeding 1% observer coverage in each MU except MU A where observer coverage was 0.8% and MU C where observer coverage was 0% (Table 6; Figure 3). Of the 266 No Contact trips during fall, 111 of them occurred in MUs A and C primarily looking for small-mesh gill-net effort (Table 7). Occasionally, observations occurred of drift gill nets (n = 1) and runaround gill nets (n = 26; Table 8). Thirteen of the 26 runaround gill-net observations occurred in MU C when no anchored gill-net effort could be found.

There were 15 observed Atlantic Sturgeon interactions (live) during fall (Table 9; Figure 3). All interactions occurred in large-mesh gill nets set in MU A. See Section 3.2 for further information on these interactions.

3.1.2 Winter 2022-2023

Two MUs that had been closed to anchored gill nets toward the end of fall, reopened during winter 2022–2023. On 13 January, MU B was opened to anchored small-mesh gill nets (Proclamation M-3-2023; Table 4). On 15 February, MU C was opened to anchored large-mesh gill nets targeting American Shad (Proclamations FF-8-2023, M-4-2023; Table 4). Additionally, attendance requirements for small-mesh gill nets in MU A were removed on 1 December (Proclamation M-26-2022; Table 4).

Though the large-mesh gill-net fishery was open in MU C during winter, the Observer Program did not find any large-mesh effort. Once the TTP data were available, they confirmed that, in fact, no large-mesh gill-net trips were reported during this time (Table 5). For small-mesh gill nets, the Observer Program achieved an estimated 1.8% state-wide coverage, exceeding 1% coverage in each MU except MU B (0.9% observer coverage) and MU D (0% observer coverage; Table 6; Figure 4). Of the 343 No Contact trips during winter, 45 of them occurred in MUs B and D primarily looking for small-mesh gill-net effort (Table 7). There also were five observed runaround gill-net trips (Table 8).

There were no observed Atlantic Sturgeon interactions in gill nets during winter.

3.1.3 Spring 2023

During spring 2023, MU A was open to anchored large-mesh gill nets during 2-17 March (Proclamations M-5-2023, M-6-2023; Table 4). Management Unit C stayed open from when it was opened during winter (Proclamation M-4-2023). However, scheduling trips and finding effort in MU C continued to be a struggle as it was during winter. After no success of scheduling or

finding large-mesh trips to observe during winter and early spring, NCDMF closed MU C to large-mesh gill nets on 31 March (Proclamation M-7-2023; Table 4). Similar to winter, TTP data confirmed that, in fact, no large-mesh gill-net trips were reported during spring (Table 5).

The small-mesh gill-net fishery was open state-wide at the beginning of spring. Observers struggled to find small-mesh gill-net effort in MUs D1, D2, and E. To ensure compliance with the ITP, several management actions were taken. On 28 April 2023, MUs D1 and D2 were closed to anchored gill nets (Proclamation M-9-2023; Table 4). While MU D1 remained closed throughout the rest of spring, three fishers contacted staff about the MU D2 closure and agreed to arrange observed trips if the MU was reopened. Therefore, MU D2 was reopened on 8 May and observers arranged trips with those fishers (Proclamation M-12-2023; Table 4). Though one observed trip was completed in MU E, additional conversations with fishers indicated that effort was sparse to none. As a result, MU E was closed on 26 May (Proclamation M-13-2023; Table 4) and remained closed throughout the rest of spring. Observer efforts were adjusted accordingly. In MU A, the net attendance requirement for small-mesh gill nets was implemented on 30 April (Proclamation M-10-2023; Table 4). Other net attendance requirements came into effect on 1 May (https://deq.nc.gov/about/divisions/marine-fisheries/rules-proclamations-and-size-and-bag-limits/rules/interactive-map-current-rules).

During spring, the Observer Program achieved an estimated 18.4% coverage of the large-mesh gill-net trips in MU A (Table 5; Figure 5). No fishing trips were reported in MU C. For small-mesh gill-net trips, the Observer Program achieved an estimated 2.1% state-wide coverage exceeding 1% observer coverage in each MU (Table 6; Figure 5). Of the 186 No Contact trips, 104 of them occurred in MUs D and E looking for small-mesh gill-net effort (Table 7). Additionally, there were four observed runaround gill-net trips (Table 8).

There were three observed Atlantic Sturgeon interactions (two alive and one dead) and one observed unidentified sturgeon interaction (live) during spring (Table 9, Figure 5). All three Atlantic Sturgeon interactions were observed in MU B in small-mesh gill nets. The unidentified sturgeon was observed in MU A in a large-mesh gill net but fell out of the net before the species could be positively identified. See Section 3.2 for further information on these interactions.

3.1.4 Summer 2023

During summer 2023, the estuarine anchored large-mesh gill-net fishery remained closed state-wide. However, closures to the estuarine anchored small-mesh gill-net fishery varied by month and MU. At the beginning of summer, MUs D1 and E remained closed from actions during spring. Fishers in MU E contacted staff about the extant closure there and agreed to arrange observed trips if the MU was reopened. Therefore, on 10 August, MU E was reopened (M-14-2023; Table 4). Management Unit D1 remained closed throughout summer. Observers and Marine Patrol officers were unable to locate small-mesh gill-net effort in MU B outside of SNGRA 2 and 4. To ensure continued compliance with the ITP, areas of MU B outside of SGNRA 2 and 4 were closed to anchored gill nets on 10 August (Proclamation M-14-2023; Table 4). This closure remained in effect throughout the remainder of summer.

The Observer Program did not observe any large-mesh gill-net trips during summer as the gear was prohibited state-wide (Table 5). For small-mesh gill-net trips, the Observer Program achieved an estimated 3.3% state-wide coverage, exceeding 1.0% in each open MU (Table 6; Figure 6). In fact, there were two observed trips but only one reported fishing trip in MU D2. There were 231

No Contact trips, three observed drift gill-net trips, and eight observed runaround gill-net trips (Tables 7 and 8).

There were no observed Atlantic Sturgeon interactions in gill nets during summer.

3.2 Incidental Takes

Of the sturgeon takes during the 2023 ITP Year, all but one were released alive (Atlantic Sturgeon 17 out of 18; unidentified sturgeon 1 of 1; Table 9). Interactions occurred primarily during fall (~79%; 15 of 19) and in MU A (~84%; 16 of 19). Of the 18 Atlantic Sturgeon interactions, most were observed in large-mesh gill nets (~83%; 15 of 18; Table 9). The size range of Atlantic Sturgeon measured by observers was 532–1,194 mm TL (n = 13, $\bar{x}$ =793.7, standard deviation [SD] = 161.2) and 402–1,083 mm FL (n = 15, $\bar{x}$ = 684.5, SD = 163.0; Table 9; Figure 7). Of the three Atlantic Sturgeon that were not measured, one fell out of the net and two (on different trips) were released by the fisher instead of given to the observer on the alternative platform vessel. All three were positively identified as Atlantic Sturgeon by the observers. Additionally, the observers reminded the fishers of the requirement to give the animal to the observer. The one sturgeon that was not identified to species fell out of the net as it was being pulled in. Observers applied PIT tags to five Atlantic Sturgeon. For two of the five, observers also applied T-bar tags and collected fin clips. For another two of the five, observers collected fin clips but did not tag them. No fishers reported sturgeon interactions during the 2023 ITP Year.

Observed take levels during the 2023 ITP Year did not reach the thresholds of allowed takes for any MU (Tables 1 and 2). The 15 observed Atlantic Sturgeon takes (all live) in large-mesh gill nets in MU A resulted in an estimated 43.9 live takes (Table 1). This estimated number of takes represents 2.0% of the 2,203 state-wide authorized takes in large-mesh gill nets across all DPSs. The remaining three observed Atlantic Sturgeon takes (two live, one dead) occurred in small-mesh gill nets in MU B where takes are not extrapolated (Table 2). The two observed live takes represent 0.3% of the 724 state-wide authorized live takes across all DPSs; the single observed dead take represents 0.01% of the 68 authorized takes across all DPSs.

3.3 Compliance

During the 2023 ITP Year, there were 2,438 fishers with an EGNP; 92% (n = 2,254) of the permit holders also held a Standard Commercial Fishing License (SCFL) or Retired Standard Commercial Fishing License (RSCFL) and 8% (n = 184) held a Recreational Commercial Gear License (RCGL). Of the commercial fishing permit holders, only 630 (28%) reported trips using anchored estuarine gill-net gear.

Using the priority call list of EGNP holders, 1,876 phone calls or in-person contacts were made with 42% (n = 795) representing occasions where observers and fishers spoke to each other. Of the 795 conversations, 110 of them (14%) were a result of fishers returning observer phone calls. Nevertheless, only 5% (n = 94) of the 1,876 contacts resulted in a booked trip (Figure 8). The greatest number of calls occurred during spring, and the least number of calls occurred in summer.

During the 2023 ITP Year, Marine Patrol officers issued 37 citations (Fall, n = 16; Winter, n = 6; Spring, n = 7; Summer, n = 8; Table 10) and 27 NOVs (Fall, n =8; Winter, n = 3; Spring, n = 11; Summer, n = 5; Table 11).

3.4 Marine Mammals

There were no observed marine mammal interactions during the 2023 ITP Year.

4 DISCUSSION

Incidental takes of Atlantic Sturgeon during the 2023 ITP Year were below authorized levels. The NCDMF Observer Program used a combination of real-time monitoring of Atlantic Sturgeon interactions and an adaptive management approach to successfully manage takes in estuarine anchored gill-net fisheries. Overall, most observed Atlantic Sturgeon were released alive, thereby limiting negative effects of these interactions on the DPSs. Interactions continue to be more common in anchored large-mesh than small-mesh gill nets. This trend may be a result of differences in interaction rates between the two mesh-size categories and the fact that more than twice as many large-mesh gill nets are observed. The one observed unidentified sturgeon was likely an Atlantic Sturgeon as the Observer Program has only documented two Shortnose Sturgeon, both in 2016 (Boyd 2017, 2018).

During the 2023 ITP Year, the Observer Program worked with other NCDMF programs and Marine Patrol to leverage assistance in obtaining coverage. Overall observer coverage during each season met or exceeded the minimum observer coverage levels outlined in the ITP for both mesh-size categories. For the fall large-mesh fishery, observer coverage in most MUs was 2-3 times greater than the goal of 10%. This high level of coverage was a result of the Division's risk-averse approach to estimating effort for the first quota-managed flounder season. Accomplishing this high level of coverage required mobilization of many more Division staff than typical for this fishery. Adjustments to estimating fishing effort in future flounder seasons will be discussed internally and with NMFS to improve this estimate of fishing effort to optimize the use of Division staff.

When examining observer coverage at the MU and season level, minimum levels were not met in MUs A and C for small-mesh gill nets during fall and in MUs B and D for small-mesh gill nets during winter. Starting in spring 2023, NCDMF began exercising proclamation authority more often to close all or partial MUs when there was a risk of not obtaining minimum observer coverage on a MU and seasonal basis as required by the Sea Turtle ITP. In some cases, this resulted in fishers contacting NCDMF to request for their area to be reopened and agreeing to arrange observer trips. This approach contributed to observer coverage requirements being met at the MU and season level. The NCDMF will continue to consider this option to ensure compliance with the ITP requirements for observer coverage is maintained.

Scheduling observed trips continues to be a challenge for the NCDMF Observer Program, a challenge shared by other observer programs (e.g., Lyssikatos and Garrison 2018). The EGNP is a useful tool to improve compliance by including specific permit conditions requiring fishers to allow observers aboard their vessels to monitor catch and by providing contact information for permit holders. Phone calls made to EGNP holders contributed to observers scheduling some trips, but the success rate of scheduling trips was low (~5%). Although refusal of an observed trip by a fisher can result in a suspension of their EGNP, non-compliance typically does not include such a direct refusal. More often, avoidance of accepting or returning observer phone calls occurs. As such, non-compliance continues to be a hurdle for ensuring the observer coverage requirements of both ITPs are met.

The Division has been coordinating with the NC Department of Information Technology to develop a call-in system, the Observer Trip Scheduling System (OTSS). The OTSS will help ensure that ITP observer coverage requirements are met, and that the observer coverage is distributed evenly among participants and representative of the fishery. During spring 2023, the Observer Program held five public outreach meetings across the state to gather input from fishers on the development of the OTSS and to share information as to the necessity of the system. This

input was used to tailor the OTSS as much as possible to the needs of the users and ensure fisher compliance. Currently, the OTSS is in the internal testing phase. Once this testing phase is complete, the Observer Program will reach out to members of the commercial fishing industry, including those on the MFC, to further test the system. An implementation date for requiring participation in the OTSS has not been set, but the target date is early 2024. Public information meetings and trainings will occur before the OTSS is fully implemented.

Although onboard observations are the preferred method, alternative platform observations played a critical role in the continuation of observing gill nets during the 2023 ITP Year. There are several advantages to an alternative platform approach. For example, this approach does not rely on previous contact with fishers to obtain an observable trip. Alternative platform observations also allow Marine Patrol officers to conduct observations as part of daily patrols; their observed trips contribute a substantial portion of the total alternative platform observations. Even for fishers 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). Nevertheless, the alternative platform method has several drawbacks. Alternative platform observations require two observers, halving observer effort and program efficiency. Obtaining alternative platform observations does not always compensate for the difficulty in scheduling trips in advance. Because few observer trips were scheduled in advance, a significant amount of time was spent searching for fishing activity, especially when fishing activity was less concentrated. However, this effort by observers and Marine Patrol officers was sometimes unsuccessful at finding trips to observe. The OTSS should improve the Observer Program's ability to schedule trips in advance and to meet the observer coverage requirements of the ITP.

5 LITERATURE CITED

Boyd, J. 2017. Annual Atlantic sturgeon interaction monitoring of the anchored gill-net fisheries in North Carolina for Incidental Take Permit Year 2016. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries. Morehead City, NC. 64 p.

Boyd, J. 2018. Annual Atlantic sturgeon interaction monitoring of the anchored gill-net fisheries in North Carolina for Incidental Take Permit Year 2017. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries. Morehead City, NC. 68 p.

Byrd, B. L., J. K. McConnaughey, and S. A. Smith. 2021. Annual Atlantic Sturgeon interaction monitoring of anchored gill-net fisheries in North Carolina for Incidental Take Permit year 2020 (1 September 2019–31 August 2020). Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 41 p.

Byrd, B. L., M. R. Doster, and D. Ushakow. 2023. Annual sea turtle interaction monitoring of the anchored gill-net fisheries in North Carolina for Incidental Take Permit Year 2022 (1 September 2021–31 August 2022). Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230. North Carolina Department of Environmental Quality, North Carolina Division of Marine Fisheries (NCDMF), Morehead City, NC. 57 p.

Canty, A., and B. Ripley. 2015. Boot: bootstrap R (S-Plus) functions. R package version 1.3-17.

Daniel, L. B. 2014. Application for an Individual Incidental Take Permit under the Endangered Species Act of 1973 for Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*). NCDMF. Morehead City, NC. 2 January 2014. 165 p.

Davison, A. C., and D. V. Hinkley. 1997. Bootstrap Methods and their Applications. Cambridge University Press, Cambridge.

Efron, B., and R. J. Tibshirani. 1993. An Introduction to the Bootstrap. Chapman and Hall, New York.

Kolkmeyer, T., B. Guthrie, B. L. Byrd, and A. A. Hohn. 2007. Report on the alternative platform observer program in North Carolina: March 2006 to March 2007. NOAA Technical Memorandum. National Marine Fisheries Service (NMFS), NMFS-SEFSC-558, Beaufort, NC. 20 p.

Lyssikatos, M. C., and L. P. Garrison. 2018. Common bottlenose dolphin (*Tursiops truncatus*) gillnet bycatch estimates along the US Mid-Atlantic coast, 2007-2015. NMFS, Northeast Fisheries Science Center, Reference Document 18-07, Woods Hole, MA. 37 p.

McConnaughey, J. K., J. Boyd, and L. Klibansky. 2019a. Annual Atlantic Sturgeon interaction monitoring of the gill-net fisheries in North Carolina for Incidental Take Permit year 2018. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 62 p.

McConnaughey, J. K., J. Boyd, and L. Klibansky. 2019b. Annual sea turtle interaction monitoring of the gill-net fisheries in North Carolina for Incidental Take Permit year 2018. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 16230. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 58 p.

North Carolina Division of Marine Fisheries (NCDMF). 2019. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan Amendment 2. September 2019. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 62 p. Available (February 2024): https://deq.nc.gov/media/30856/open

NCDMF. 2022. North Carolina Southern Flounder Fishery Management Plan Amendment 3. May 2022. North Carolina Division of Marine Fisheries, NCDMF, Morehead City, NC. 176 p. Available (February 2024): https://www.deq.nc.gov/marine-fisheries/fisheries-management/southern-flounder/southern-flounder-fmp-amendment-3/open

NCDMF and North Carolina Wildlife Resources Commission (NCWRC). 2017. North Carolina American Shad Sustainable Fishery Plan. North Carolina Division of Marine Fisheries. Morehead City, NC. 52 p. Updated 2020.

NCDMF and NCWRC. 2019. Supplement A to Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan. Morehead City, NC. 40 p. Available (February 2024): https://deq.nc.gov/media/30767/open

NCDMF and NCWRC. 2020. November 2020 Revision to Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan. North Carolina Department of Environmental Quality, NCDMF, Morehead City, NC. 12 p. Available (February 2024): https://deq.nc.gov/media/30772/open.

R Core Team. 2019. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org

6 TABLES

Table 1. For large-mesh (≥5 inches stretched mesh) gill nets, a comparison of actual (alive, n = 15; dead, n = 0) annual incidental takes of Atlantic Sturgeon by management unit (MU) during the 2023 Incidental Take Permit Year to authorized thresholds expressed as either estimated total takes based on observed takes (MU A) or counts of observed takes (MUs B–E). Authorized takes in MUs D and E were for the Carolina Distinct Population Segment (DPS) only and listed as not applicable (n/a) for Other DPS. 95% confidence intervals are provided in brackets. Genetic results were not available to determine DPS of observed interactions.

		Authorized				Actual	
		Carolina DPS		Other DPS		All DPS	
Management Unit	Season	Alive	Dead	Alive	Dead	Alive	Dead
A	Annual	1,604	65	535	21	43.9 [16.0, 141.3]	0
B	Annual	24	6	9	0	0	0
C	Annual	11	5	4	0	0	0
D	Annual	8	2	n/a	n/a	0	0
E	Annual	8	2	n/a	n/a	0	0
Total	Annual	1,655	80	548	21	43.9	0

Table 2. For small-mesh (<5 inches stretched mesh) gill nets, a comparison of actual (alive, *n* = 2; dead, *n* = 1) annual incidental takes of Atlantic Sturgeon by management unit (MU) during the 2023 Incidental Take Permit Year to authorized thresholds expressed as either total takes based on observed takes (MU A) or counts of observed takes (MUs B–E). Authorized takes in MUs C, D, and E were for the Carolina Distinct Population Segment (DPS) only and listed as not applicable (n/a) for Other DPS. 95% confidence intervals are provided in brackets. Genetic results were not available to determine DPS of observed interactions.

		Authorized				Actual	
		Carolina DPS		Other DPS		All DPS	
Management Unit	Season	Alive	Dead	Alive	Dead	Alive	Dead
A	Annual	569	45	114	10	0	0
B	Annual	14	5	3	0	2	1
C	Annual	8	4	n/a	n/a	0	0
D	Annual	8	2	n/a	n/a	0	0
E	Annual	8	2	n/a	n/a	0	0
Total	Annual	607	58	117	10	2	1

Table 3. Restrictions implemented for estuarine anchored gill nets ≥4 inches stretched mesh included in the current NCDMF Sea Turtle (No. 16230) and Atlantic Sturgeon (No. 18102) Incidental Take Permits (ITPs). Cells highlighted in gray had no restrictions per the ITPs. MU = Management Unit.

MU	Soak time	Days of the week	Net Length	Gear configuration	Low-profile requirements	Area Closure
A north of US Hwy 64 bridge	Must be < 24 hours soak time and fished before noon each day		Maximum net length per fishing operation is 2,000 yd (1.83 km)			Western Albemarle Sound in the vicinity of the mouth of the Roanoke River including the entire Roanoke River up to the dam in Weldon, permanently closed to all gill nets.
A south of US Hwy 64 bridge	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	
B	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	Prohibition of large mesh gillnets in the deep-water portions of the Pamlico Sound and in Oregon, Hatteras, and Ocracoke inlets September 1 through December 15.
C	Must be < 24 hours soak time and fished before noon each day		Maximum net length per fishing operation is 2,000 yd (1.83 km)			
D1	One hour before sunset to one hour after sunrise	Monday night - Friday morning	Maximum net length per fishing operation is 2,000 yd (1.83 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	Closed May 8 through October 14
D2	One hour before sunset to one hour after sunrise	Sunday night - Friday morning	Maximum net length per fishing operation is 1,000 yd (0.91 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	
E	One hour before sunset to one hour after sunrise	Sunday night - Friday morning	Maximum net length per fishing operation is 1,000 yd (0.91 km)	Net-shot lengths < 100 yd with a 25-yd separation between each net-shot	Nets must not exceed 15 meshes in height and must have a lead core or leaded bottom line. Nets must not have cork, floats, or other buoys except those required for identification.	

Table 4. Regulations by effective date for estuarine anchored gill nets during the 2023 Incidental Take Permit (ITP) Year or referenced in the text for previous ITP years.

Year	Effective Date	Proclamation Number	Regulation
2014	1-Sep	M-24-2014	This proclamation established the requirement that makes it unlawful for holders of a Standard Commercial Fishing License (SCFL), Retired Standard Commercial Fishing License (RSCFL), or Recreational Commercial Gear License (RCGL) to deploy gill nets in Internal Coastal Waters with an exception for run around, strike, drop or drift gill nets, without possessing a valid Estuarine Gill Net Permit issued by the Division of Marine Fisheries.
2019	18-Mar	M-6-2019	This proclamation supersedes proclamation M-5-2019, dated March 7, 2019. This proclamation prohibits 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 maintains 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.
2021	12-Mar	M-9-2021	This proclamation supersedes proclamation M-7-2021 dated February 25, 2021. It closes a portion of Management Unit A to the use of all gill nets and reduces the maximum amount of yards allowed for gill nets configured for harvesting American shad.
2022	14-Sep	M-15-2022	This proclamation supersedes proclamation M-8-2022 dated April 12, 2022. This proclamation opens Management Units B (subunits only), C, D2, and E 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 Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Federal Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon.
2022	1-Sep	M-16-2022	This proclamation supersedes proclamation M-10-2022 dated April 27, 2022. It opens Management Unit A to the use of small mesh anchored gill nets and implements small mesh gill net attendance requirements in accordance with the Division's Fishery Management Plans for Estuarine Striped Bass and River Herring and the Incidental Take Permits for threatened or endangered sea turtles and endangered Atlantic sturgeon. It keeps open a portion of Management Unit A to the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.

Year	Effective Date	Proclamation Number	Regulation
2022	15-Sep	FF-40-2022	This proclamation supersedes Proclamation FF-40-2021, dated June 28, 2021. It establishes commercial flounder season dates for Internal Coastal Waters by Flounder Management Area and Gear Category. This action is being taken to comply with the requirements of Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and maintain harvest within the total allowable landings.
2022	14-Sep	M-17-2022	This proclamation supersedes proclamation M-16-2022 dated August 26, 2022. It opens Management Unit A to the use of gill nets for the purpose of harvesting flounder in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for threatened or endangered sea turtles and endangered Atlantic sturgeon. It maintains the exempted areas in MUA open to the use of run-around, strike, drop, and trammel gill nets to harvest blue catfish. It also maintains small mesh gill net attendance requirements in the entirety of Management Unit A.
2022	16-Sep	M-19-2022	This proclamation supersedes proclamation M-15-2022 dated August 26, 2022. This proclamation closes Management Unit B subunits SGNRA1, SGNRA2, and CGRNA to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches (except as described in Section III.) accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon. It maintains openings in Management Units C, D2, and portions of Management Unit E (except those portions described in Section II.)
2022	21-Sep	FF-46-2022	This proclamation supersedes Proclamation FF-40-2022, dated July 8, 2022. It closes the commercial flounder season for the Southern Management Area Wednesday, September 21, 2022, and the Mobile Gear Northern Area Thursday, September 22, 2022, and maintains the season, size, and gear restrictions for the Pound Net Northern, Central, and Southern Management Areas. This proclamation also establishes a 1,000-pound daily trip limit for the commercial pound net fishery in the Pound Net Northern Management Area beginning September 22, 2022. If the division determines quota is available for additional harvest days further proclamations will be released. This action is being taken to comply with the requirements of Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and maintain harvest within the total allowable landings (TAL).
2022	22-Sep	M-20-2022	This proclamation supersedes proclamation M-19-2022 dated September 16, 2022. This proclamation closes Management Units D2 and E at 12:00 P.M. on September 21, 2022, and Management Units B and C at 10:00 A.M. on September 22, 2022, 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 Amendment 3 to the N.C. Southern Flounder Fishery Management Plan.

Year	Effective Date	Proclamation Number	Regulation
2022	22-Sep	M-21-2022	This proclamation supersedes proclamation M-17-2022 dated September 6, 2022. It closes Management Unit A to the use of large mesh anchored gill nets with overnight soaks for harvesting flounder. It maintains small mesh gill net attendance requirements and keeps open a portion of Management Unit A to the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.
2022	4-Nov	M-25-2022	This proclamation supersedes proclamation M-24-2022 dated November 2, 2022. It closes Management Unit B to the use of fixed or stationary gill nets with a stretched mesh length less than 4 inches and maintains exemptions for actively fished gill nets.
2022	1-Dec	M-26-2022	This proclamation supersedes proclamation M-21-2022 dated September 21, 2022. In Management Unit A, it removes attendance requirements and imposes vertical height restrictions for anchored gill nets with a stretched mesh length of 3 inches through 3 ¾ inches. It maintains the exempted portion of Management Unit A that allows the use of run-around, strike, drop, and trammel gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches to harvest blue catfish.
2023	1-Jan	FF-8-2023	This proclamation sets the 2023 commercial and recreational seasons and harvest restrictions for the taking of American shad and hickory shad in Coastal and Joint Fishing waters.
2023	13-Jan	M-3-2023	This proclamation supersedes proclamation M-25-2022 dated November 4, 2022. It opens Management Unit B to the use of fixed or stationary gill nets with a stretched mesh length less than 4 inches and increases the yardage limits for the small mesh gill net fishery in portions of Management Unit B.
2023	15-Feb	M-4-2023	This proclamation supersedes proclamation M-20-2022, dated September 21, 2022. This proclamation opens Management Unit C to the use of gill nets with a stretched mesh length of 4 inches through 6 ½ inches and implements gear exemptions for the shad fishery in all areas south of Management Unit A in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan.
2023	2-Mar	M-5-2023	This proclamation supersedes proclamation M-2-2023 dated December 21, 2022. It opens a portion of Management Unit A to the use of floating gill nets configured for harvesting American shad by removing vertical height and setting restrictions for all gill nets with stretched mesh lengths of 5 ¼ through 6 ½ inches.

Year	Effective Date	Proclamation Number	Regulation
2023	17-Mar	M-6-2023	This proclamation supersedes proclamation M-5-2023 dated February 28, 2023. In Management Unit A, it removes gill nets configured for harvesting American shad and it remains unlawful to use fixed or stationary gill nets with a stretched mesh length other than 3 ¼ inches. It opens an exempted portion of Management Unit A that allows the use of run-around, strike, and drop gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches to harvest blue catfish.
2023	31-Mar	M-7-2023	This proclamation supersedes proclamation M-4-2023, dated February 13, 2023. This proclamation closes Management Unit C to the use of set gill nets with a stretched mesh length of 4 inches through 6 ½ inches and maintains gear exemptions for the shad fishery in all areas south of Management Unit A in accordance with Amendment 3 to the N.C. Southern Flounder Fishery Management Plan and the Incidental Take Permits for endangered and threatened Sea Turtles and endangered Atlantic sturgeon.
2023	28-Apr	M-9-2023	This proclamation supersedes proclamation M-3-2023 dated January 11, 2023. It reduces the yardage limits for gill nets less than 4 inches stretched mesh used in Management Unit B, establishes a drift gill net yardage limit for the Spanish Mackerel fishery that occurs in Management Unit B and closes Management Units D1 and D2 to the use of fixed or stationary gill nets less than 4 inches stretch mesh while allowing an exemption for actively fished nets.
2023	30-Apr	M-10-2023	This proclamation supersedes proclamation M-6-2023 dated March 15, 2023. In Management Unit A, it implements small mesh gill net attendance requirements and keeps open a portion of Management Unit A to the use of run-around, strike, and drop gill nets with a stretched mesh length of 5 ½ inches through 6 ½ inches for harvesting blue catfish.
2023	8-May	M-12-2023	This proclamation supersedes proclamation M-9-2023 dated April 26, 2023. It opens Management Unit D2 to the use of fixed or stationary gill nets less than 4 inches stretch mesh.
2023	26-May	M-13-2023	This proclamation supersedes proclamation M-12-2023 dated May 5, 2023. It closes Management Unit E to the use of fixed or stationary gill nets less than 4 inches stretch mesh.
2023	10-Aug	M-14-2023	This proclamation supersedes proclamation M-13-2023 dated May 24, 2023. It closes portions of Management Unit B and opens Management Unit E to the use of fixed or stationary gill nets less than 4 inches stretched mesh.

Table 5. For large-mesh (≥5 inches stretched mesh) gill nets, observer coverage (observed trips/fishing trips) calculated by season and management unit (MU) for the 2023 Incidental Take Permit (ITP) Year. Observer coverage was calculated using estimated fishing trips based on the Trip Ticket Program data and actual reported fishing trips from the program for the ITP year. Anchored large-mesh gill nets were prohibited in the eastern portion of MU D during all seasons and were prohibited seasonally in whole MUs during one or more seasons ("closed"). Trip Ticket Program data are considered finalized for 2022 and preliminary for 2023. For MUs with no reporting fishing trips, coverage is not applicable (n/a).

		Large Mesh				
Season	Management Unit	Estimated Fishing Trips	Reported Fishing Trips	Observed Trips	Coverage of Estimated Fishing Trips	Coverage of Reported Fishing Trips
Fall 2022	A	720	368	113	15.7	30.7
	B	365	227	46	12.6	20.3
	C	144	147	50	34.7	34.0
	D	36	39	5	13.9	12.8
	E	348	179	63	18.1	35.2
	Overall	1,613	960	277	17.2	28.9
Winter 2022 - 2023	A	closed	closed	closed	closed	closed
	B	closed	closed	closed	closed	closed
	C	3	0	0	0.0	n/a
	D	closed	closed	closed	closed	closed
	E	closed	closed	closed	closed	closed
	Overall	3	0	0	0.0	n/a
Spring 2023	A	695	374	69	9.9	18.4
	B	closed	closed	closed	closed	closed
	C	6	0	0	0.0	n/a
	D	closed	closed	closed	closed	closed
	E	closed	closed	closed	closed	closed
	Overall	701	374	69	9.8	18.4
Summer 2023	A	closed	closed	closed	closed	closed
	B	closed	closed	closed	closed	closed
	C	closed	closed	closed	closed	closed
	D	closed	closed	closed	closed	closed
	E	closed	closed	closed	closed	closed
	Overall	closed	closed	closed	closed	closed
Annual		2,317	1,334	346	14.9	25.9

Table 6. For small-mesh (<5 inches stretched mesh) gill nets, observer coverage (observed trips/fishing trips) calculated by season and management unit (MU) for the 2023 Incidental Take Permit (ITP) Year. Observer coverage was calculated using estimated fishing trips based on the Trip Ticket Program data and actual reported fishing trips from the program for the ITP year. See text for description of openings and closings of all or partial MUs. Trip Ticket Program data are considered finalized for 2022 and preliminary for 2023.

		Small Mesh				
Season	Management Unit	Estimated Fishing Trips	Reported Fishing Trips	Observed Trips	Coverage of Estimated Fishing Trips	Coverage of Reported Fishing Trips
Fall 2022	A	305	363	3	1.0	0.8
	B	733	1,135	19	2.6	1.7
	C	157	321	0	0.0	0.0
	D	172	73	5	2.9	6.8
	E	384	326	13	3.4	4.0
	Overall	1,751	2,218	40	2.3	1.8
Winter 2022-2023	A	665	828	15	2.3	1.8
	B	381	329	3	0.8	0.9
	C	244	213	5	2.0	2.3
	D	40	5	0	0.0	0.0
	E	105	90	4	3.8	4.4
	Overall	1,435	1,465	27	1.9	1.8
Spring 2023	A	622	725	18	2.9	2.5
	B	1,503	1,267	21	1.4	1.7
	C	172	134	4	2.3	3.0
	D	36	12	3	8.3	25.0
	E	108	85	1	0.9	1.2
	Overall	2,441	2,223	47	1.9	2.1
Summer 2023	A	191	179	5	2.6	2.8
	B	840	353	8	1.0	2.3
	C	65	58	2	3.1	3.4
	D	17	1	2	11.8	200.0
	E	64	18	3	4.7	16.7
	Overall	1,177	609	20	1.7	3.3
Annual		6,804	6,515	134	2.0	2.1

Table 7. Number of "No Contact" trips (n = 1,026) by season and management unit completed by Marine Patrol officers and observers during the 2023 Incidental Take Permit Year. No Contact refers to unsuccessful attempts to find and observe anchored gill-net effort.

Season	Management Unit	Marine Patrol No Contact Trips	Observer No Contact Trips	Total No Contact Trips
Fall 2022	A	46	3	49
	B	15	2	17
	C	50	12	62
	D	15	3	18
	E	120	0	120
	Overall	246	20	266
Winter 2022 - 2023	A	61	3	64
	B	11	3	14
	C	57	15	72
	D	20	11	31
	E	161	1	162
	Overall	310	33	343
Spring 2023	A	34	9	43
	B	1	2	3
	C	33	3	36
	D	16	8	24
	E	80	0	80
	Overall	164	22	186
Summer 2023	A	70	0	70
	B	27	10	37
	C	56	2	58
	D	20	4	24
	E	42	0	42
	Overall	215	16	231
Annual		935	91	1,026

Table 8. Number of drift and runaround gill-net observations by season and management unit completed during the 2023 Incidental Take Permit Year.

Season	Management Unit	Observed Drift Gill-net Trips	Observed Runaround Gill-net Trips	Total Observed Trips
Fall 2022	A	0	0	0
	B	0	2	2
	C	0	13	13
	D	0	1	1
	E	1	10	11
	Overall	1	26	27
Winter 2022 - 2023	A	0	0	0
	B	0	1	1
	C	0	3	3
	D	0	0	0
	E	0	1	1
	Overall	0	5	5
Spring 2023	A	0	0	0
	B	0	0	0
	C	0	4	4
	D	0	0	0
	E	0	0	0
	Overall	0	4	4
Summer 2023	A	0	0	0
	B	1	3	4
	C	0	5	5
	D	1	0	1
	E	1	0	1
	Overall	3	8	11
Annual		4	43	47

Table 9. Summary of observed Atlantic Sturgeon (AS: n = 18) and unidentified sturgeon (US: n = 1) interactions in large-mesh (≥5 inches stretched mesh) and small-mesh (<5 inches stretched mesh) gill nets during the 2023 Incidental Take Permit Year. PIT=Passive Integrated Transponders. n/r=not recorded. Sturgeon with the same superscripted letter were caught on the same trip. MU=Management Unit. Disp.=Disposition. TL=Total Length. FL=Fork Length.

Date	Season	MU	Species	Mesh-size Category	Latitude (N)	Longitude (W)	Disp.	PIT Tag Number	T-Bar Tag Number	Fin clip collected	TL (mm)	FL (mm)
09/15/2022	Fall	A	AS	Large	36.14702	76.38291	Alive				736	660
09/15/2022	Fall	A	AS	Large	36.11771	76.29300	Alive	982.000362192051			532	504
09/16/2022	Fall	A	AS	Large	36.09866	76.23339	Alive	989.001032053608		yes	893	783
09/17/2022	Fall	A	AS	Large	35.93624	76.31359	Alive				914	900
09/20/2022	Fall	A	AS[a]	Large	36.37330	75.89418	Alive	989.001040409744	55102	yes	794	680
09/20/2022	Fall	A	AS[a]	Large	36.38083	75.89656	Alive	989.001040409723	55103	yes	1,194	1,083
09/20/2022	Fall	A	AS	Large	36.21152	76.10441	Alive				n/r	n/r
09/22/2022	Fall	A	AS[b]	Large	36.00445	76.6803	Alive				n/r	n/r
09/22/2022	Fall	A	AS[b]	Large	36.00522	76.68041	Alive				914	812
09/22/2022	Fall	A	AS[b]	Large	35.9954	76.67803	Alive				787	685
09/22/2022	Fall	A	AS[b]	Large	36.00089	76.67941	Alive				660	584
09/22/2022	Fall	A	AS[b]	Large	35.99719	76.67844	Alive				685	609
09/22/2022	Fall	A	AS[b]	Large	36.00507	76.68043	Alive				736	609
09/22/2022	Fall	A	AS[b]	Large	36.00030	76.67924	Alive				711	609
09/22/2022	Fall	A	AS	Large	35.94241	76.31014	Alive				762	660
03/16/2023	Spring	A	US	Large	36.17990	76.74974	Alive				n/r	n/r
03/28/2023	Spring	B	AS	Small	35.50172	75.51722	Dead				n/r	402
04/11/2023	Spring	B	AS	Small	35.52866	75.51001	Alive	982.000410598777		yes	n/r	688
04/12/2023	Spring	B	AS	Small	35.53209	75.50763	Alive				n/r	n/r

Table 10. Citations (n = 37) written by Marine Patrol officers for estuarine anchored gill nets by violation date and code during the 2023 Incidental Take Permit Year.

Season	Violation Date	Code	Description
Fall	9/4/2022	NETG01	Leave gill net in coastal waters unattended
Fall	9/14/2022	NETG45	Set or retrieve large mesh gill nets no sooner than one hour before sunset on Monday through Thursday
Fall	9/15/2022	NETG44	Use large mesh gill nets w/out leaving a space of at least 25 yards between separate lengths of net
Fall	9/15/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	9/16/2022	NETG40	Use cork floats or other buoys except those required for ID on large mesh gill nets
Fall	9/16/2022	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Fall	9/17/2022	NETG02	Using gill net without buoys or identification
Fall	10/9/2022	NETG30	Leave RCGL gill net unattended
Fall	10/24/2022	NETG01	Leave gill net in coastal waters unattended
Fall	10/24/2022	NETG02	Using gill net without buoys or identification
Fall	11/2/2022	NETG01	Leave gill net in coastal waters unattended
Fall	11/2/2022	NETG27	Gill Net set within 50 yards from shore
Fall	11/2/2022	NETG27	Gill Net set within 50 yards from shore
Fall	11/3/2022	EGNP30	Failure to comply with gill net configurations outlined in proclamation
Fall	11/3/2022	EGNP30	Failure to comply with gill net configurations outlined in proclamation
Fall	11/8/2022	NETG02	Using gill net without buoys or identification
Winter	1/18/2023	NETG03	Using gill net with improper buoys or identification
Winter	1/18/2023	NETG22	Improperly set gill net
Winter	2/6/2023	NETG01	Leave gill net in coastal waters unattended
Winter	2/6/2023	NETG02	Using gill net without buoys or identification
Winter	2/23/2023	NETG03	Using gill net with improper buoys or identification
Winter	2/23/2023	NETG22	Improperly set gill net
Spring	4/26/2023	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Spring	4/26/2023	NETG02	Using gill net without buoys or identification
Spring	5/3/2023	NETG27	Gill Net set within 50 yards from shore
Spring	5/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)

Table 10. continued

Season	Violation Date	Code	Description
Spring	5/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	5/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	5/31/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	6/5/2023	EGNP11	Failure to attend nets
Summer	6/5/2023	NETG01	Leave gill net in coastal waters unattended
Summer	6/19/2023	NETG16	Use an unattended gill net in a restricted area
Summer	7/1/2023	15A NCAC 03H .0103(a)	Fail to comply with proclamation requirements
Summer	7/11/2023	NETG22	Improperly set gill net
Summer	7/25/2023	EGNP01	Fishing gill net without a valid Estuarine Gill Net Permit
Summer	8/21/2023	NETG01	Leave gill net in coastal waters unattended
Summer	8/21/2023	NETG03	Using gill net with improper buoys or identification

Table 11. Notice of Violations ($n = 27$) written by Marine Patrol officers for Estuarine Gill Net Permit (EGNP) holders using estuarine anchored gill nets by violation date and code during the 2023 Incidental Take Permit Year.

Season	Violation Date	Code	Description
Fall	9/4/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	9/14/2022	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
Fall	9/15/2022	EGNP09	Failure to set or retrieve nets in accordance with time restrictions.
Fall	9/15/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	9/17/2022	EGNP25	Refuse to allow fisheries observers onboard or collect data
Fall	11/2/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	11/2/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Fall	11/2/2022	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Winter	2/17/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Winter	2/17/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Winter	2/17/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	3/6/2023	EGNP11	Failure to attend nets
Spring	3/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	3/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	3/14/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Spring	4/13/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Spring	5/30/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	6/5/2023	EGNP99	Failure to comply with statutes(s), rules(s), and/or proclamation(s)
Summer	6/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	6/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	6/21/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days
Summer	6/26/2023	EGNP08	Failure to notify DMF of a change in phone number within 14 days

7 FIGURES

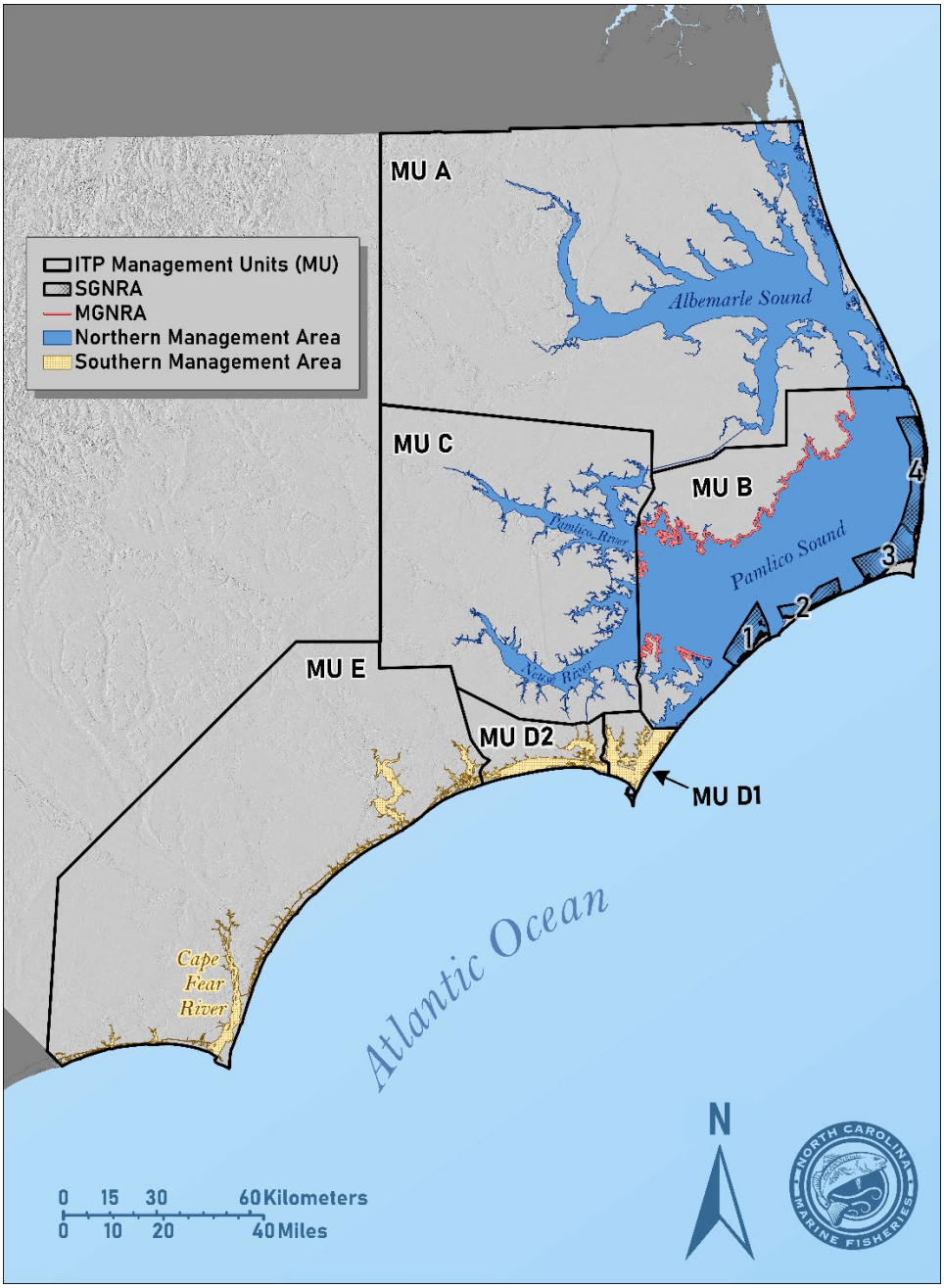

Figure 1. Management Units (A, B, C, D [D1 and D2], and E) as outlined in the Incidental Take Permit (ITP) Conservation Plan and used by the Observer Program for the 2023 ITP Year. In the Pamlico Sound portion of Management Unit B, gill nets with a mesh size of ≥4 inches were confined to Shallow Water Gill-Net Restricted Areas (SGNRA) 1–4 and the Mainland Gill-net Restricted Area (MGNRA; 200 yards from shore) 1 September–December 15. The two flounder Management Areas are differentiated by color: northern (blue) and southern (yellow).

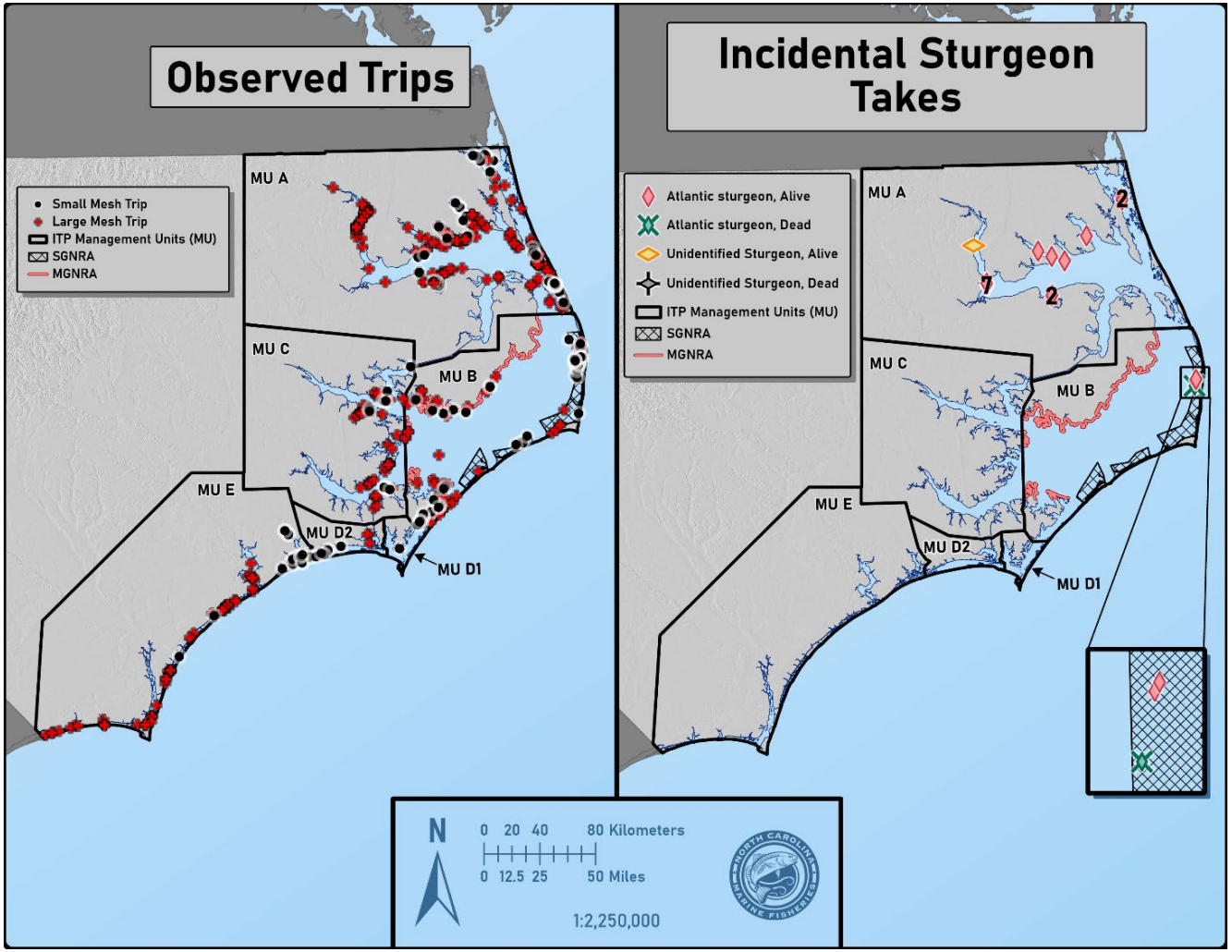

Figure 2. Observed gill-net trips (left) and incidental sturgeon takes (right) that occurred state-wide during the 2023 Incidental Take Permit (ITP) Year. Observed trips are split by mesh-size category (n = 346 large-mesh [≥5 inches stretched mesh]; n = 134 small-mesh [<5 inches stretched mesh]). Observed sturgeon are separated by species and disposition (Atlantic Sturgeon: n = 17 alive, n = 1 dead; unidentified sturgeon: n = 1 alive). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

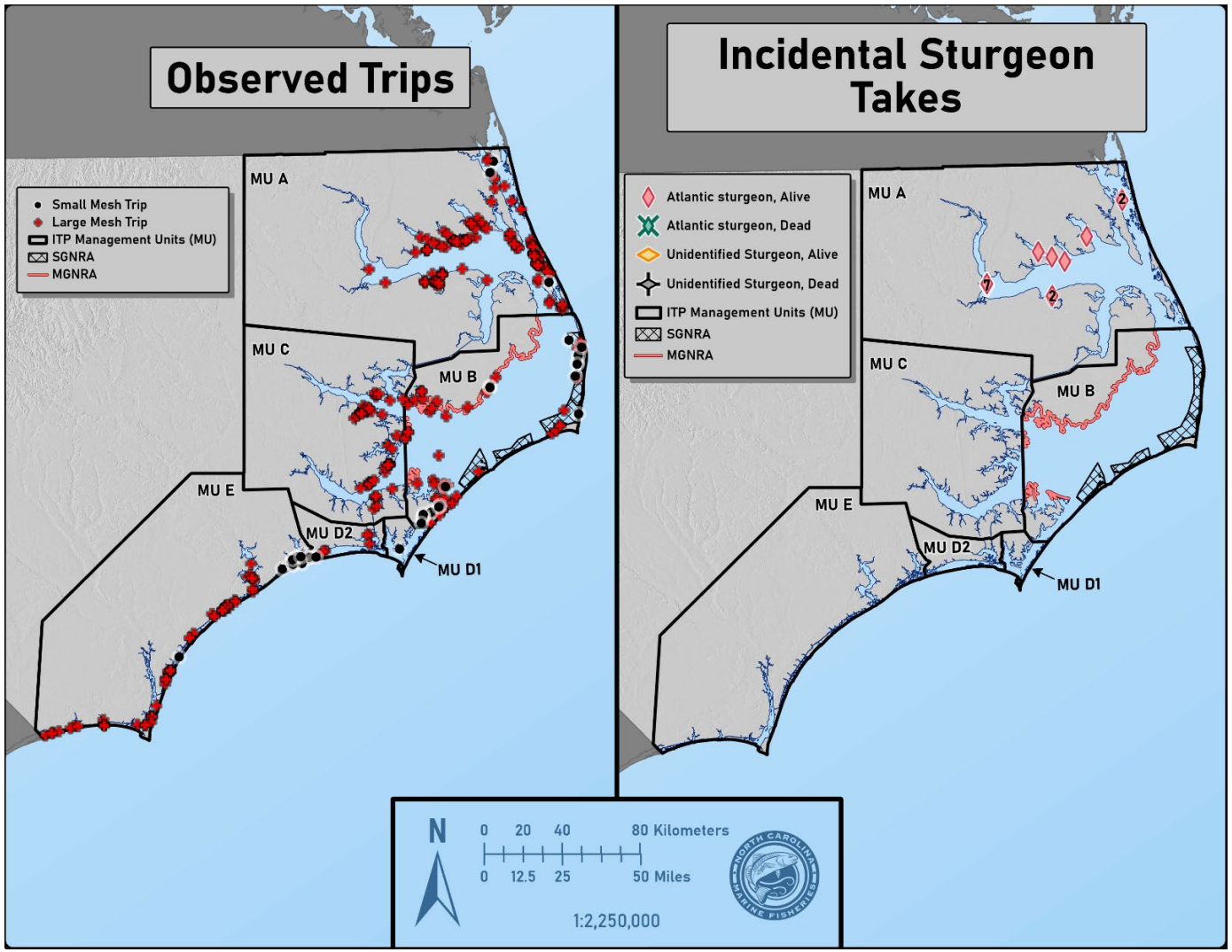

Figure 3. Observed gill-net trips (left) and incidental sturgeon takes (right) that occurred state-wide during fall 2022 of Incidental Take Permit Year 2023. Observed trips are split by mesh-size category (n = 277 large-mesh [≥5 inches stretched mesh]; n = 40 small-mesh [<5 inches stretched mesh]). All 15 Atlantic Sturgeon observed during fall were live. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

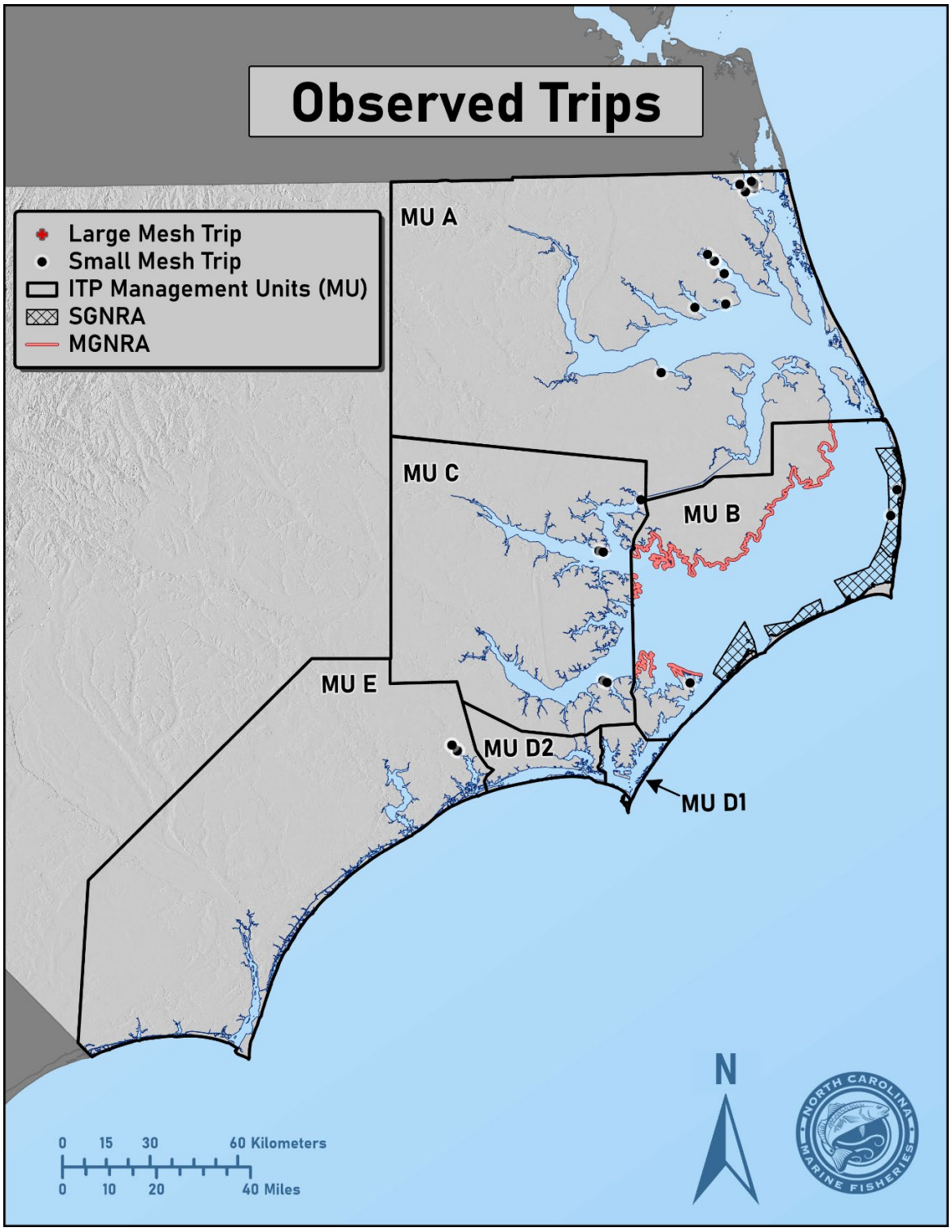

Figure 4. Observed small-mesh gill-net trips (n = 27, <5 inches stretched mesh) that occurred state-wide during winter 2022-2023 of Incidental Take Permit (ITP) Year 2023. No large-mesh gill-net trips and no sturgeon were observed during winter 2022-2023. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

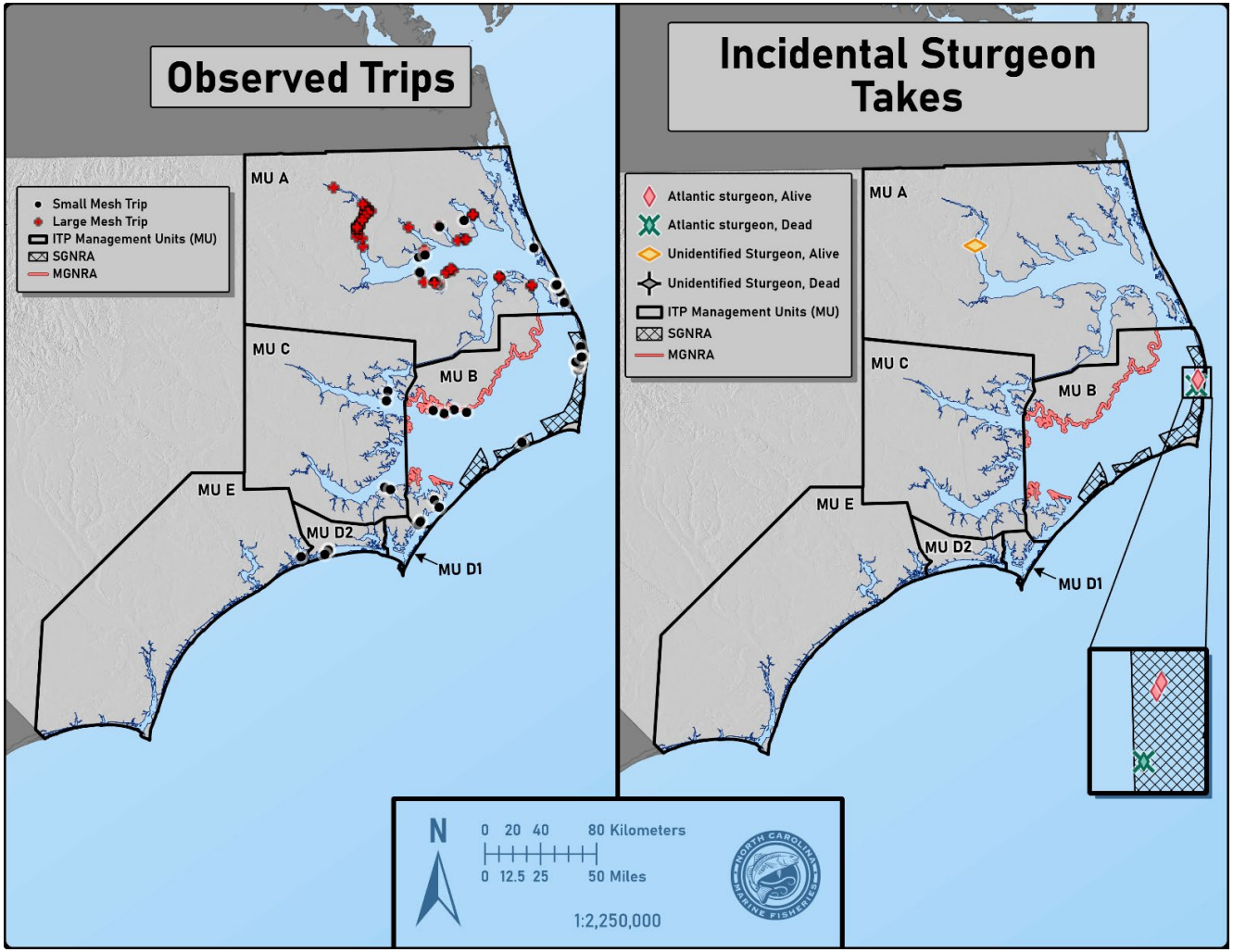

Figure 5. Maps of observed gill-net trips (left) and observed incidental sturgeon takes (right) that occurred state-wide during spring 2023 of the 2023 Incidental Take Permit (ITP) Year. Observed trips are split by mesh-size category (n = 69 large-mesh [≥5 inches stretched mesh]; n = 47 small-mesh [<5 inches stretched mesh]). Observed sturgeon are separated by species and disposition (Atlantic Sturgeon: n = 2 alive, n = 1 dead; unidentified sturgeon: n = 1 alive). Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

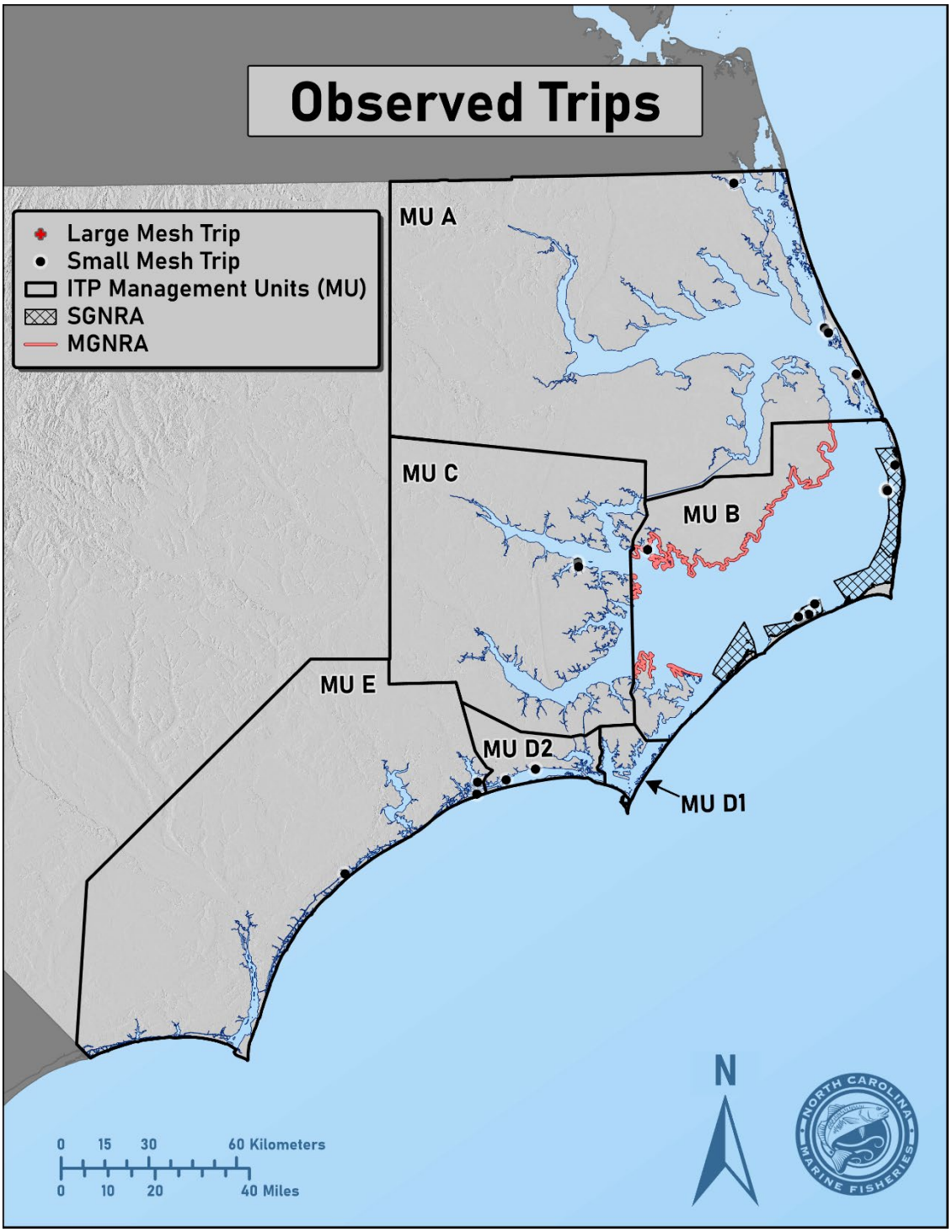

Figure 6. Map of observed small-mesh gill-net trips (n = 20, <5 inches stretched mesh) that occurred state-wide during summer 2023 of the 2023 Incidental Take Permit (ITP) Year across Management Units. No large-mesh gill-net trips and no sturgeon were observed during summer 2023. Note that due to the proximity of observations and the scale of the maps, it may appear that fewer observations are mapped than were observed.

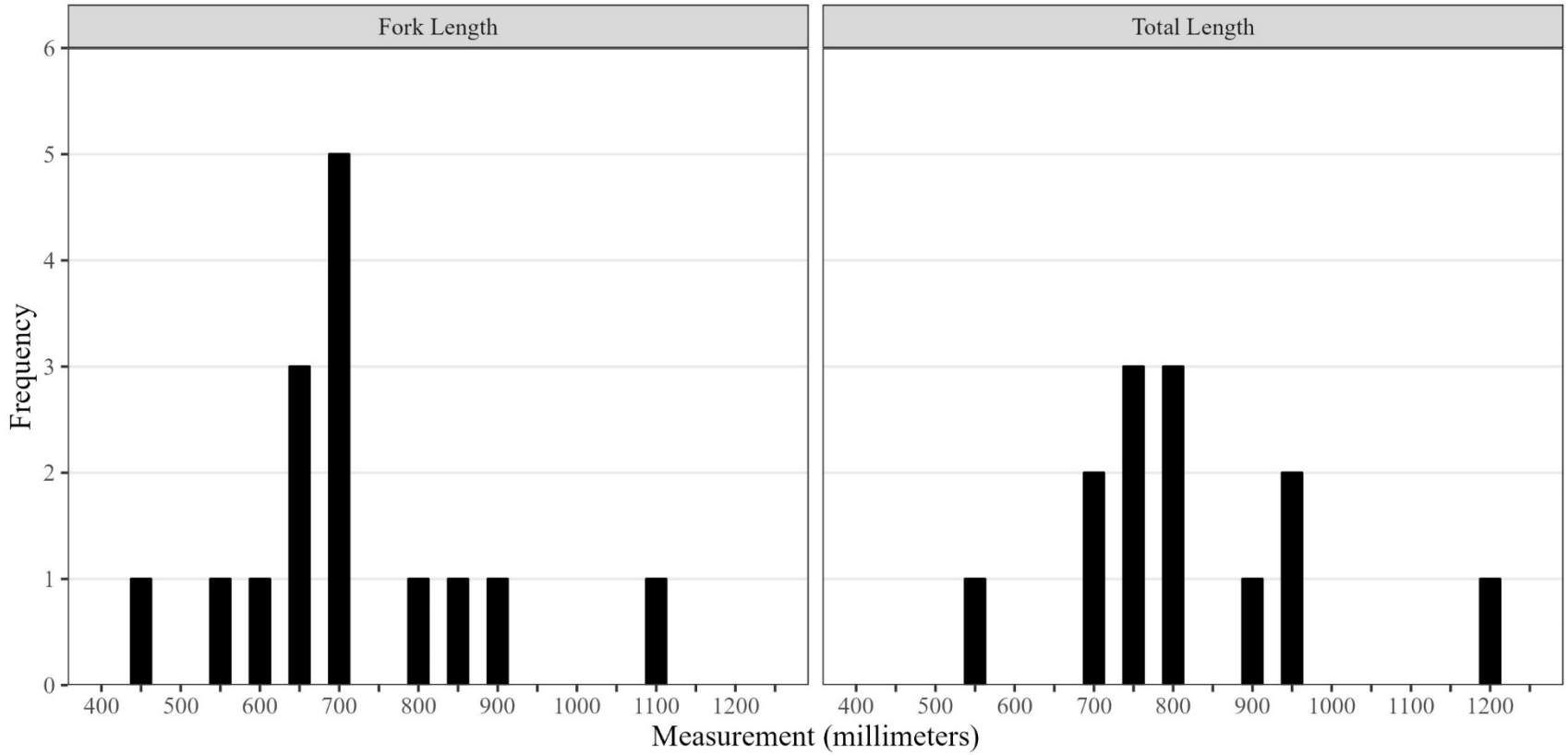

Figure 7. Size distributions for incidental takes of Atlantic Sturgeon during the 2023 Incidental Take Permit Year: Fork Length (left, $n = 15$) and Total Length (right, $n = 13$). Note that not all observed Atlantic Sturgeon were measured**.**

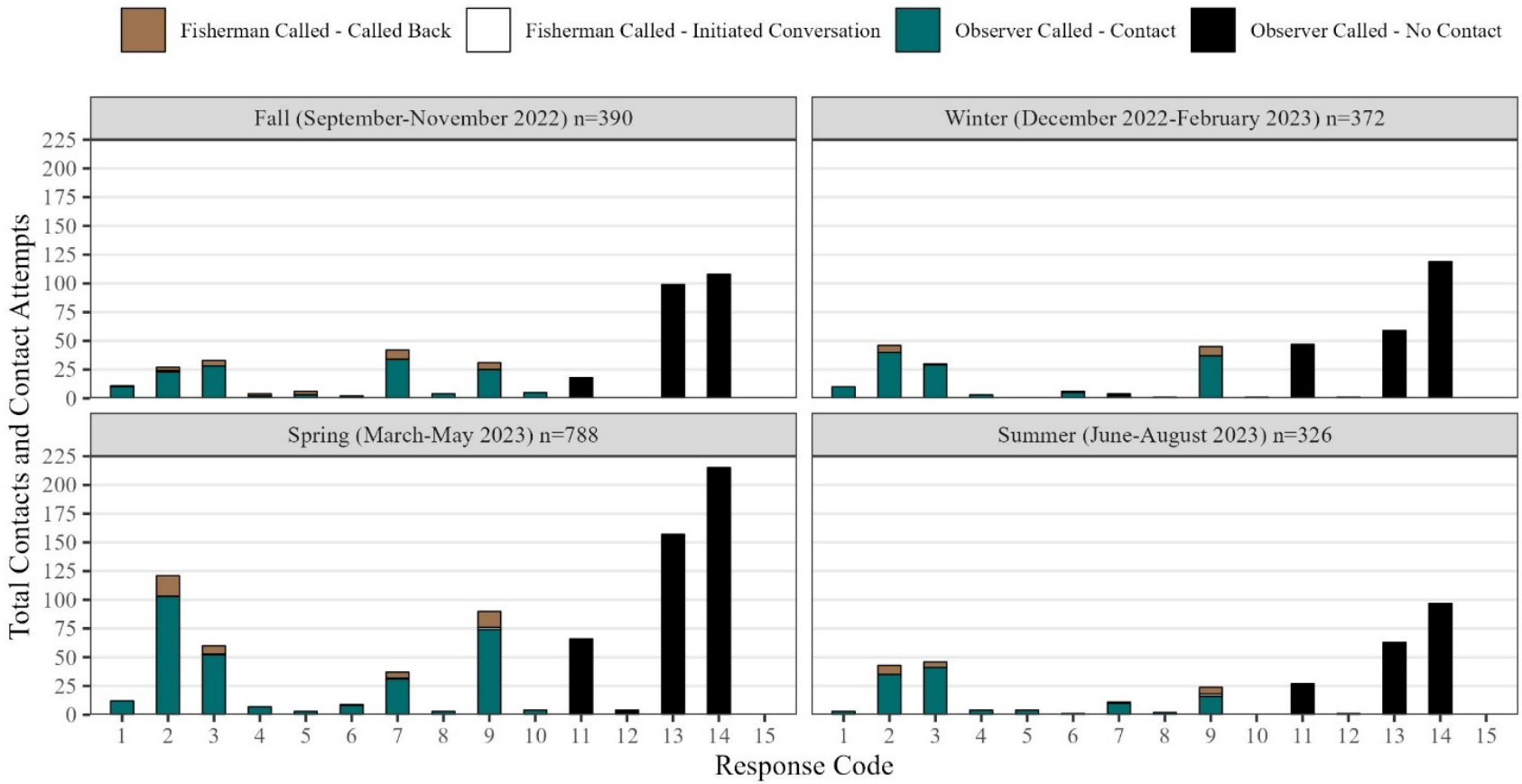

Figure 8. For the 2023 Incidental Take Permit Year, contacts attempted (n = 1,876) by observers to schedule trips categorized by contact type (0-15). Contact type categories include the following: 1) Left message with someone else; 2) Not fishing general; 3) Fishing other gear; 4) Not fishing because 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 fisher (teal bars), when the observer did not (black bars), when the fisher initiated a conversation (white bars), and when a fisher returned an observer's call (bronze bars).