

## **APPENDIX 5: THE USE OF HOOK AND LINE AS A COMMERCIAL GEAR IN THE ESTUARINE STRIPED BASS FISHERY**

### **ISSUE**

Establish a framework for allowing the use of hook and line as a gear in the estuarine striped bass commercial fishery.

### **ORIGINATION**

North Carolina Marine Fisheries Commission (MFC) selected management strategy in Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan (FMP).

### **BACKGROUND**

In response to a petition for rulemaking received in 2010, the MFC directed the Division of Marine Fisheries (DMF) to examine the implications of allowing and promoting a commercial hook and line fishery statewide for all finfish species. An information paper was developed and concluded the use of hook and line as a commercial gear was feasible and should be managed on a fishery-by-fishery basis in conjunction with the FMP process (NCDMF 2010).

Amendment 1 to the North Carolina Estuarine Striped Bass FMP recommended not allowing hook and line as a commercial gear for striped bass unless future restrictions on the use of gill nets necessitate alternative commercial gears (NCDMF 2013). To facilitate the adaptive management aspect of the MFC selected management strategy, the portion of rule 15A NCAC 03M .0201 which prohibited the commercial sale of striped bass taken with hook and line gear was repealed. For more information, see the issue paper titled “Estuarine Striped Bass Fishery Commercial Hook-And-Line” in Amendment 1 of the Striped Bass FMP.

Since the adoption of Amendment 1 and subsequent rule change, the Fisheries Director has used proclamation authority granted in MFC Rule 15A NCAC 03M .0202 (4) to prohibit the use of hook and line in the commercial striped bass fisheries when they occur in the Albemarle Sound Management Area (ASMA) and the Central Southern Management Area (CSMA).

The striped bass fisheries in both the ASMA and CSMA are managed through proclamations or rules designed to keep overall harvest levels below the annual Total Allowable Landings (TAL) for each management area, and fishing sector (commercial or recreational). The ASMA commercial striped bass gill net fishery is regulated as a “bycatch fishery”, where striped bass landings cannot exceed 50 percent by weight of all other finfish species landed by trip. Most striped bass gill net harvest in the ASMA occurs in conjunction with the American shad, southern flounder, or the invasive blue catfish gill net fisheries. Increased gill net regulations implemented to meet sustainability objectives in the American shad and southern flounder fisheries has limited the amount of time gill nets can be set and reduced the opportunity to harvest striped bass in gill net fisheries.

The 2020 Albemarle-Roanoke striped bass benchmark stock assessment indicated the stock is overfished and overfishing is occurring (Lee et. al 2020). An evaluation of CSMA stocks indicates the striped bass populations are depressed to a point where no level of fishing mortality is sustainable (Mathes et al. 2020). As a response to poor stock conditions in the CSMA a no harvest provision has been in place for striped bass in the Cape Fear River since 2008, and in the remainder of the management area since 2019.

The only management area currently open to the commercial harvest of striped bass is the ASMA. The 2020 Revision to Amendment 1 reduced the TAL in the ASMA from 275,000 pounds to 51,216 pounds, with the goal of reducing fishing mortality and ending overfishing (DMF 2020). As of January 1, 2021, the commercial TAL for the ASMA was set at 25,608 pounds. The commercial fishery was open for only 16 days in the spring of 2021 and exceeded the TAL by approximately 2,000 pounds (preliminary data NC Quota Monitoring Program).

For more information on the ASMA or CSMA striped bass stocks and fisheries see: Lee et al. 2020, Mathes et al. 2020, as well as Appendices, 2, 3, and 4.

Since the implementation of Amendment 1, management actions resulting in additional restrictions on the use of gill nets (e.g. area closures, shorter seasons) have prompted the need to explore the steps required for the implementation of the previously selected MFC adaptive management strategy to allow hook and line as an alternative commercial gear for striped bass. With the moratorium in the CSMA and the relatively small commercial TAL in the ASMA, commercial striped bass harvesters have not had difficulty landing all of the available striped bass TAL in recent years. However as striped bass stocks recover, harvesters may not be able to take advantage of any future increase in TAL given the increasing restrictions on the use of gill nets. This issue paper establishes the framework that will be used to implement the Amendment 1 adaptive management strategy of allowing hook and line as a commercial gear in the striped bass fishery. The proposed approach enhances the ability of DMF to monitor commercial landings, with the goal of maintaining harvest levels below the TAL needed to recover the stock.

Earlier issue papers have identified conflicts and concerns related to harvest and possession limits which arise when allowing hook and line as a commercial gear (NCDMF 2010; NCDMF 2013). Based on these previously identified concerns, the DMF used the following framework to address each of the management considerations required to allow hook and line gear in the commercial harvest of striped bass:

- Determine licensing requirements
- Determine harvest and possession limits
- Consider simultaneous use of hook and line with other gear types
- Distinguish commercial from recreational or for hire trips
- Tagging, landing, and reporting requirements

## **AUTHORITY**

### North Carolina General Statutes

§ 113-134	RULES
§ 113-182	REGULATION OF FISHING AND FISHERIES
§ 113-182.1	FISHERY MANAGEMENT PLANS
§ 113-221.1	PROCLAMATIONS; EMERGENCY REVIEW
§ 143B-289.52	MARINE FISHERIES COMMISSION – POWERS AND DUTIES

### North Carolina Marine Fisheries Commission Rules

15A NCAC 03H .0103	PROCLAMATIONS, GENERAL
15A NCAC 03M .0201	GENERAL, STRIPED BASS
15A NCAC 03M .0202	SEASON, SIZE AND HARVEST LIMIT: INTERNAL COASTAL WATERS
15A NCAC 03M .0512	COMPLIANCE WITH FISHERY MANAGEMENT PLANS

## **DISCUSSION**

### DETERMINE LICENSING REQUIREMENTS

Standard Commercial Fishing License (SCFL) and Retired Standard Commercial Fishing License (RSCFL) holders are allowed to commercially harvest striped bass by any legal method when the season is opened in each management area. No additional licensing requirements are necessary to use hook and line as a commercial gear. However, DMF recommends the creation and requirement of a no cost Hook and Line Striped Bass Permit for SCFL or RSCFL license holders wanting to participate in this fishery. This permit would be required for the commercial harvest of striped bass by hook and line methods, and allows for the targeted collection of effort and participation data for this gear type.

**Summary:** Require SCFL or RSCFL with Striped Bass Hook and Line Permit.

### DETERMINE HARVEST AND POSSESSION LIMITS

If striped bass TAL is available for commercial harvest in a management area, the Fisheries Director may use proclamation authority to designate hook and line as a legal commercial gear. The hook and line daily individual limit should be at least the same as the daily commercial limit for gill nets, to not disincentivize this gear as a substitute for gill nets. Additionally, the daily individual limit for the commercial harvest of striped bass by hook and line may be set higher than the gill net limit as a means to encourage the use of hook and line as an alternative gear. A vessel should be limited to two daily hook and line commercial limits to align with current gill net limits, both for ease of enforcement and compliance. Having commercial limits which are higher than recreational limits does incentivize latent, or dual recreational and commercial license holders to use hook and line to harvest the higher commercial limits, even if these fish were not to be sold. This concern is addressed in the following sections of this paper.

**Summary:** The Fisheries Director may use proclamation authority to designate hook and line as a legal commercial harvest gear in a management area and set the individual harvest limit to be at least the same for both hook and line and gill net. Commercial hook and line vessels will be restricted to the proclaimed limit of two license holders when two Striped Bass Permit holders are on the vessel.

#### CONSIDER SIMULTANEOUS USE OF HOOK AND LINE WITH OTHER GEAR TYPES

Current restrictions limit the total weight of striped bass landed in a commercial operation to not exceed 50 percent of the combined weight of the total daily catch of all species. The purpose of managing harvest in this manner is to allow commercial gill net operations targeting other species to land striped bass, reducing discards and maintaining landings below the TAL. Any hook and line only commercial trips for striped bass (no other commercial harvest gear onboard) would not be subject to a 50 percent bycatch provision.

If an area is simultaneously open to the use of commercial hook and line and gill net, both gears could be used simultaneously. This makes it challenging for law enforcement to determine which fish were captured by what gear. Any vessel which has a gill net onboard, will be subject to the catch limits and harvest restrictions for gill nets (including requiring the 50 percent bycatch provision), and will be considered a gill net trip regardless of whether the gill net was used.

**Summary:** If an area is open to both commercial hook and line harvest and the use of gill net, and a vessel has a gill net onboard, the vessel is subject to the catch limits and regulations governing the use of gill nets.

#### DISTINGUISH COMMERCIAL FROM RECREATIONAL OR FOR-HIRE TRIPS

Some individuals hold for-hire, commercial, and/or recreational fishing licenses. The use of hook and line has typically been sufficient to delineate commercial participants from recreational and for-hire sectors. A concern of allowing hook and line gear to be used both recreationally and commercially, is latent SCFL or RSCFL holders and for-hire vessel captains who also hold commercial licenses using hook and line gear to land higher commercial trip limits for recreational purposes.

The number of participants landing striped bass in the commercial fishery has steadily declined in the ASMA and CSMA since the late 1990s. The number of participants peaked at 449 in the ASMA in 1999 and declined to 155 in 2020, while the number of participants peaked at 297 in the CSMA in 1997 and fell to 95 in 2018. However, the number of commercial license holders residing in counties surrounding the ASMA and CSMA that could legally participate in the fishery is much higher. In 2020, there were 1,632 SCFL/RSCFL licenses held by individuals residing in counties adjoining the ASMA and 5,282 in counties adjoining the CSMA.

Allowing hook and line as a commercial harvest gear, provides individuals who hold multiple license types the ability to retain commercial limits on what would otherwise be recreational or for-hire hook and line trips. Striped bass harvested in this manner would not be sold and reported in the NC Trip Ticket Program (NC TTP), resulting in an underestimate of commercial harvest

from the stock. To mitigate this scenario, commercial hook and line only trips for striped bass will be restricted to no more than two people per vessel. Appropriately licensed and permitted vessels with two people or less may harvest striped bass commercially in a manner and amount defined by proclamation, and landings concerns will be addressed by reporting requirements.

**Summary:** Commercial hook and line harvest for striped bass will be limited to no more than two persons per vessel.

### LANDING, AND REPORTING REQUIREMENTS

It is a requirement that all striped bass harvested commercially be tagged. The purpose of this tagging requirement is to minimize the illegal harvest and sale of striped bass. North Carolina requires commercially harvested striped bass to be tagged by the dealer at the point of sale. Dealers are required to report to DMF daily the number and pounds of striped bass tagged. This daily reporting requirement allows DMF to monitor harvest in near real-time which aids in ensuring the annual TAL is not exceeded.

An ongoing concern is SCFL or RSCFL holders keeping fish for personal consumption that are not accounted for as landings. Without a record of sale, this harvest would not be captured in the NC TTP leading to an underestimate of total removals from the stock. An accurate estimate of total removals is one of the most important pieces of information for stock assessments to better estimate population abundance and more accurately determine stock status. Because there is no requirement that commercial fishermen sell their catch, this scenario could already be happening, although there is no anecdotal evidence this practice is occurring in any significant amount in the estuarine striped bass fishery. To prevent increases in unreported landings from the striped bass stock, SCFL or RSCFL holders allowed to use hook and line as a commercial gear, could be required to report the disposition of all retained catch (sold or kept for personal use) through the NC TTP. Commercial license holders would be required to submit a Trip Ticket for all retained catch, which would allow all striped bass removed via the commercial sector to count toward the TAL. Establishing a reporting requirement for all catch retained by commercial license holders would require legislative action and a change to the North Carolina General Statutes.

**Summary:** Establish reporting requirements for all commercial license holders on the disposition of all retained catch (sold or kept for personal use) through the NC TTP.

The above framework for allowing hook and line as a means of commercial harvest relies on the establishment of reporting requirements on the disposition of all retained catch by commercial license holders to address concerns associated with the commercial use of this gear. The ASMA is the only management area currently open to the commercial harvest of striped bass, and this stock has been determined to be overfished. To recover this stock, harvest must remain at or below the TAL which has been established. This relatively low TAL was reached and exceeded in only 16 days in 2021, with the amount of effort and participation occurring under the current regulatory structure. Given the potential to draw additional effort into the commercial fishery through allowing the use of hook and line as a gear, as well as the potential for commercial limits of fish being landed for personal consumption without being reported on a trip ticket, rigorous permitting and reporting requirements are necessary in order to not exceed the TAL and meet stock recovery

goals. Allowing hook and line as a means of commercial harvest concurrent with the use of gill nets, is a proactive approach which allows the industry time to adapt to a new means of striped bass harvest.

Implementation of this framework in the ASMA and/or CSMA could be delayed until potential future restrictions or prohibitions on the use of gillnets prevent commercial striped bass harvest with this gear, or the stocks have recovered to a point where increased harvest can be sustained in each of the respective management areas. However, an additional management tool which may be necessary to consider given current stock status and the very low TAL is limited entry. North Carolina General Statute 113-182.1 states the MFC can only recommend the General Assembly limit participation in a fishery if the commission determines sustainable harvest in the fishery cannot otherwise be achieved. In North Carolina General Statute 143B-289.52 (d1) the MFC can already regulate participation in a federal fishery, subject to a federal fishery management plan, if that plan imposes a quota on the State for the harvest and landing of fish in the fishery. As both the ASMA and CSMA striped bass stocks are in poor condition, maintaining sustainable harvest is a concern. Having met the criteria set in statute, the NCMFC may ask the legislature to limit participation in the estuarine striped bass fishery to meet sustainable harvest goals.

#### ADAPTIVE MANAGEMENT

Adaptive management allows managers to pivot and change management strategies when new information or data becomes available. Management options, which are selected during the FMP process, take into account the most up to date data on the biological and environmental factors which affect the stock. After implementation of the FMP, if additional data is available about a fishery or key factors change, adaptive management provides the flexibility to incorporate this new information to inform alternative and/or additional actions needed for sustainable fisheries management. A range of adaptive management actions, as well as criteria for their application can be established within the FMP management framework to improve both short- and long-term management outcomes.

Targeted data collected from the Striped Bass Hook and Line Permit, Marine Patrol enforcement activity, as well as DMF License and Statistics TTP and Quota Monitoring data will be used to evaluate effort, participation, and striped bass hook and line landings

The proposed adaptive management framework for the use of hook and line as a commercial gear in the estuarine striped bass fishery consists of the following:

1. Allow hook and line as a commercial gear for the harvest of striped bass contingent on the adoption of TTP reporting requirements for all catch retained by commercial license holders.
  - a. If hook and line is allowed for the commercial harvest of striped bass, and NC TTP and Quota Monitoring data indicate the TAL will either be quickly exceeded or unable to be met during the potential striped bass season, then management measures may be re-evaluated and adjusted by the proclamation authority granted to the Fisheries Director (as is currently occurring under the existing management strategy).

- b. If hook and line is allowed for the commercial harvest of striped bass, and Marine Patrol enforcement activity or License and Statistics data suggest significant amounts of unreported commercial striped bass catch is occurring, then additional tagging or reporting requirements may be developed and implemented.
2. Management measures which may be adjusted include: means and methods, harvest area, as well as season, size and limit.
3. Implementation of adaptive management measures to enact additional increased tagging or reporting requirements is contingent on evaluation of these measures by the Striped Bass Plan Development Team and consultation with the Marine Fisheries Commission.

### **MANAGEMENT OPTIONS**

- + (Potential positive impact of the action)
  - (Potential negative impact of the action)
1. Do not allow hook and line as a commercial gear in the estuarine striped bass fishery
    - + No incentive for increased effort on overfished/overfishing stock
    - + No additional regulatory burden to harvesters (additional TTP reporting)
    - Does not provide an alternate gear for harvest with increasing regulation on gill nets
    - Does not provide DMF additional harvest data collection (via permits and TTP)
  2. Adopt the outlined framework and allow hook and line as a commercial gear in the estuarine striped bass fishery, and support legislative request for TTP reporting for all retained SCFL/RSCFL catch (sold or kept for personal use).
    - + Provides an alternate gear for harvest with increasing regulation on gill nets
    - + Provides DMF additional harvest data collection (via permits and TTP)
    - Incentive for increased effort on overfished/overfishing stock
    - Additional regulatory burden to harvesters (TTP for catch kept for personal use)
  3. Adaptive Management

### **RECOMMENDATIONS**

### **LITERATURE CITED**

- Lee, L.M., T.D. Tears, Y. Li, S. Darsee, and C. Godwin (editors). 2020. Assessment of the Albemarle Sound-Roanoke River striped bass (*Morone saxatilis*) in North Carolina, 1991–2017. North Carolina Division of Marine Fisheries, NCDMF SAP-SAR-2020-01, Morehead City, North Carolina. 171 p.
- Mathes, T., Y. Li, T. Tears, and L.M. Lee (editors). 2020. Central Southern Management Area striped bass stocks in North Carolina, 2020. North Carolina Division of Marine Fisheries, NCDMF SAP-SAR-2020-02, Morehead City, North Carolina. 161 p. + appendices.

NCDMF. 2010. Development of a Commercial Hook-and-Line Fishery in North Carolina. North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. 32 p.

NCDMF. 2013. Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan. North Carolina Department of Environmental and Natural Resources, Division of Marine Fisheries. Morehead City, NC. 826 p.

NCDMF. 2020. November 2020 Revision to Amendment 1 to the North Carolina Estuarine Striped Bass Fishery Management Plan. North Carolina Department of Environmental and Natural Resources, Division of Marine Fisheries. Morehead City, NC. 12 p.

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