

Scoping Document

Photo By: Buzz Bryson
Striped bass spawning in the
Roanoke River, Weldon, NC



Management Strategies for Amendment 2 to the North Carolina Estuarine Striped Bass Fishery Management Plan



October 2020



Photo By: Jesse Bissette

Can't attend but want to submit comments? Here's how!

Written comments can be submitted by online form or by U.S. mail. Comments sent by U.S. mail must be received by Nov. 15, 2020 to be accepted. The division will not accept public comment through email.

To comment by online form:

The online form can be accessed through the N.C. Estuarine Striped Bass Amendment 2 Information Page (<http://portal.ncdenr.org/web/mf/striped-bass-amendment-topic>). Please use the link at the bottom of the information page.

To comment by U.S. mail, please submit written comments to:

N.C. Division of Marine Fisheries
N.C. Estuarine Striped Bass
FMP Amendment 2
Scoping Comments
P.O. Box 769
Morehead City, NC 28557

The N.C. Division of Marine Fisheries seeks your input on management strategies for the Estuarine Striped Bass Fishery Management Plan.

A scoping period for public comment begins
Nov. 2, 2020 and ends Nov. 15, 2020.

Comments must be received by
5 p.m. (EST) on Nov. 15, 2020.

Scoping Meetings

DMF staff will provide information about Amendment 2 to the N.C. Estuarine Striped Bass FMP. A public comment period will follow.

The public may participate in the meeting online or by telephone. To facilitate comments, the division is asking those who wish to speak during the meeting to pre-register.

Links to scoping information, including registration to speak, webinar instructions, the call-in telephone number, and other references, can be found through the N.C. Estuarine Striped Bass Amendment 2 Information Page (<http://portal.ncdenr.org/web/mf/striped-bass-amendment-topic>).

Thursday, Nov. 5, 2020: 6 p.m. to 8 p.m.

[https://ncdenrits.webex.com/ncdenrits/onstage/g.php?](https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=e4fc435aebfcdedafed56b82e7def8173)
[MTID=e4fc435aebfcdedafed56b82e7def8173](https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=e4fc435aebfcdedafed56b82e7def8173)

Event number 171 493 2224

Event password 1234

Join by audio only +1-415-655-0003 US TOLL

Monday, Nov. 9, 2020: 6 p.m. to 8 p.m.

[https://ncdenrits.webex.com/ncdenrits/onstage/g.php?](https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=ebedeb5306d80ed62d46c9b0db81f9783)
[MTID=ebedeb5306d80ed62d46c9b0db81f9783](https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=ebedeb5306d80ed62d46c9b0db81f9783)

Event number 171 937 9432

Event password 1234

Join by audio only +1-415-655-0003 US TOLL

Questions about the estuarine striped bass stocks, fisheries, or Amendment 2 to the North Carolina Estuarine Striped Bass Fishery Management Plan?

Pictured: Brent Griffin



Contact the leads:

Charlton Godwin

Fisheries Biologist DMF, Elizabeth City

252-264-3911

Co-lead

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Fisheries Biologist DMF, Washington

252-948-3872

Co-lead

Jeremy McCargo

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Questions about the FMP Process?

Kathy Rawls

Fisheries Management Section Chief, Morehead City

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Corrin Flora

Fisheries Management Plan Coordinator, Morehead City

252-726-7021

Purpose of the Scoping Document

The purpose of this document is to inform the public the review of the N.C. Estuarine Striped Bass Fishery Management Plan (FMP) is underway and to provide an opportunity for the public to comment on identified management strategies or identify other relevant strategies in the management of the estuarine striped bass fishery. Striped bass in North Carolina are jointly-managed by the N.C. Marine Fisheries Commission (MFC) and N.C. Wildlife Resources Commission (WRC). Input received at the start of the FMP review process may shape the final amendment and its management measures (solutions). To help focus the input received from the public, this document provides an overview of initially identified strategies, as well as background information on the fisheries and the stocks. A series of questions about each strategy is also provided for the public to consider when thinking about the strategies; in general: What should estuarine striped bass management be? Are changes needed and, if so, what changes are needed?

Additional management strategies may be considered in Amendment 2 dependent on statutory requirements, available data, research needs, and the degree of impact the management strategy would have and how effective the solution would be. If the division determines a management strategy raised during the scoping period might have positive impacts on the stocks, additional examination of the strategy may be undertaken in the development of the FMP.

Scoping provides an opportunity for the public to comment on strategies identified by the division as well as any additional relevant strategies for possible consideration for the development of the FMP.

What is Scoping?

Scoping is the first stage of the process to determine the appropriate contents of an FMP. Scoping serves many purposes including: (1) to provide notice to the public that a formal review of the FMP is underway by the N.C. Division of Marine Fisheries (DMF or division), (2) inform the public of the stock status of the species (3) solicit stakeholder input on a list of strategies identified by the DMF and identify other relevant strategies that may need to be addressed, and (4) recruit potential advisors to serve on the advisory committee (AC) for the FMP that is appointed by the MFC. The public will have more opportunity to provide comments as the amendment is developed; however, scoping is the first and best opportunity to provide input on potential strategies for DMF to consider before an amendment is developed.

FISHERY MANAGEMENT PLANS - A TIERED APPROACH

Fishery Management



Management PLANS are implemented to achieve specified management goals for a fishery, such as sustainable harvest, and include background information, data analyses, fishery habitat and water quality considerations consistent with Coastal Habitat Protection Plans, research recommendations, and management strategies.

Management STRATEGIES are adopted to help reach the goal and objectives of the plan. They are the sum of all the management measures selected to achieve the biological, ecological, economic, and social objectives of the fishery.

Management MEASURES are the actions implemented to help control the fishery as stipulated in the management strategies.

Developing an amendment

Annually, the DMF reviews all species for which there are FMPs for North Carolina and provides an update to the MFC. This review includes any recommended changes to the schedule for FMP review and amendment development. Per N.C. law, any changes to the schedule must be approved by the N.C. Department of Environmental Quality (N.C. DEQ) Secretary.

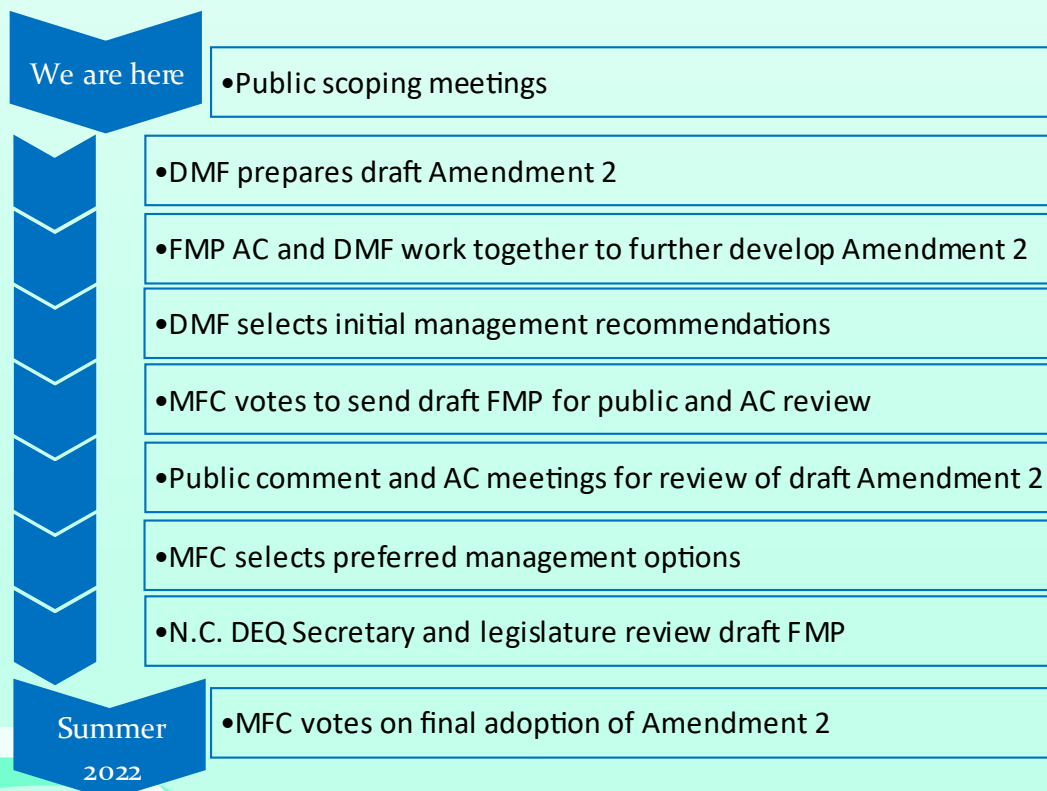
When a plan is opened for review, the first step of the formal amendment process begins with a stock assessment of the species when applicable, followed by the scoping period. After relevant strategies have been identified by the DMF, the public (during the scoping period), and by the MFC, the division's plan development team (PDT) develops a preliminary draft amendment. The first draft will be completed before the FMP AC is appointed. Once appointed, the AC will meet with the PDT at a series of workshops to assist in developing the FMP by further refining the draft amendment. Upon completion of this draft, the amendment is taken to the MFC for approval to go out for public comment and review by the MFC's standing and regional ACs. Following consideration of public and AC comment, the MFC selects its preferred management measures for Amendment 2. Next, draft Amendment 2 goes to the N.C. DEQ Secretary and the legislature for review before the MFC votes on final approval of the amendment.

In the case of a jointly managed species such as striped bass, the WRC consults throughout the FMP amendment process. WRC staff participate in the development of the stock assessment and serve on the PDT. Concurrent with MFC actions, the WRC board reviews the draft FMP, selects preferred management measures, considers its support of the final FMP recommendations, and initiates rulemaking as required.



WRC electrofishing spawning stock survey index of abundance
Roanoke River, Weldon, NC.

FMP Timeline



Why is this happening now?

The 2020 N.C. FMP Review Schedule shows the review of the N.C. Estuarine Striped Bass FMP is underway. To begin the development of Amendment 2 to the N.C. Estuarine Striped Bass FMP, the division conducted assessments of the Albemarle-Roanoke striped bass stock, and the striped bass stocks in the Tar-Pamlico, Neuse, and Cape Fear rivers.



Pictured: Adam B.
Cape Fear River, N.C.

Amendment 2 Background

There are two geographic management units and four striped bass stocks included in the North Carolina Estuarine Striped Bass FMP. The northern management unit is comprised of two harvest management areas: the Albemarle Sound Management Area (ASMA) and the Roanoke River Management Area (RRMA). The striped bass stock in these two harvest management areas is referred to as the Albemarle-Roanoke (A-R) stock, and its spawning grounds are in the Roanoke River in the vicinity of Weldon, NC. The southern geographic management unit is the Central Southern Management Area (CSMA) and includes all internal coastal, joint and contiguous inland waters of North Carolina south of the ASMA to the South Carolina state line. There are spawning stocks in each of the major river systems within the CSMA; the Tar-Pamlico, the Neuse, and the Cape Fear. Only the A-R stock is included in the management unit of Amendment 6 to the Atlantic States Marine Fisheries Commission's (ASMFC) Interstate FMP for Atlantic Striped Bass (ASMFC 2003).

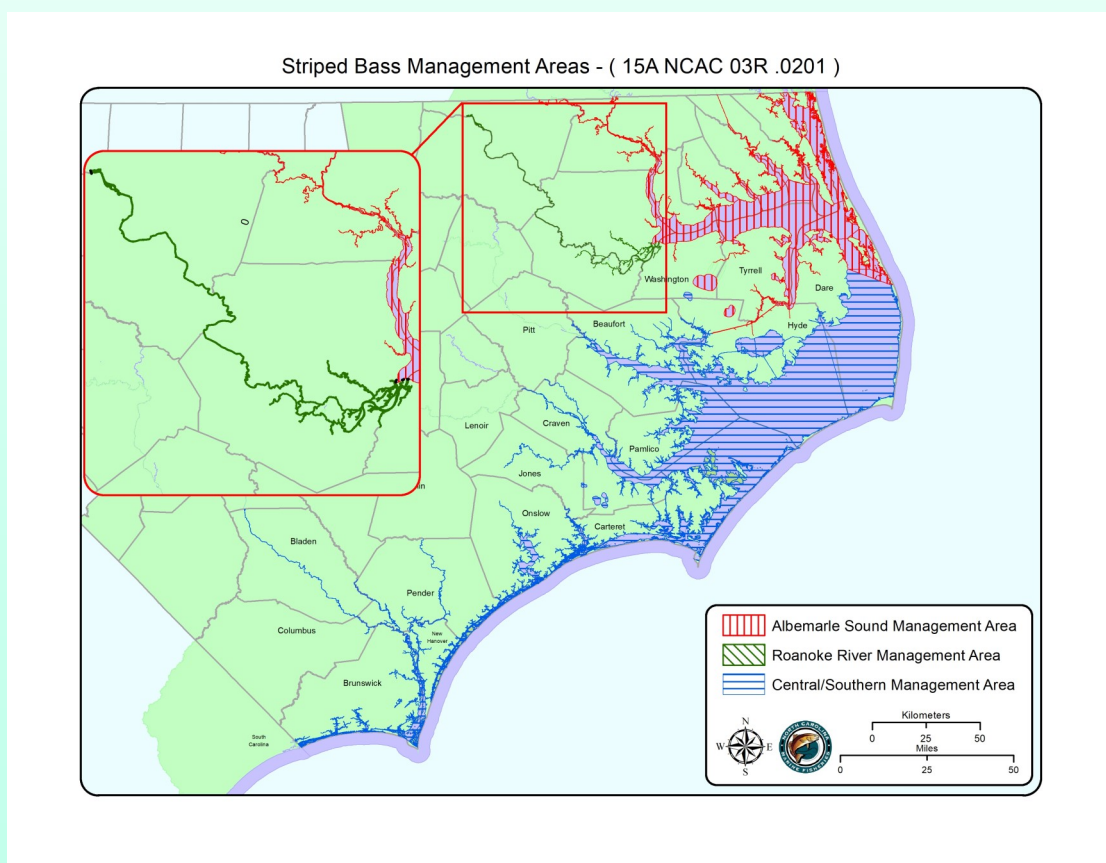


Figure 1. North Carolina's estuarine striped bass management areas.

Albemarle-Roanoke striped bass stock assessment and stock status

Results from the 2020 benchmark stock assessment indicate the A-R striped bass stock is overfished and overfishing is occurring in the terminal year of the assessment (2017) relative to the updated biological reference points (BRPs). These BRPs are based on spawning stock biomass (SSB) targets and thresholds of SSB 45%SPR Target = 350,371 lb and SSB 35%SPR Threshold = 267,390 lb respectively, and fishing mortality (F) targets and thresholds of F 45%SPR Target = 0.13 and F 35%SPR Threshold = 0.18 (Figures 2 and 3; Lee et al. 2020).

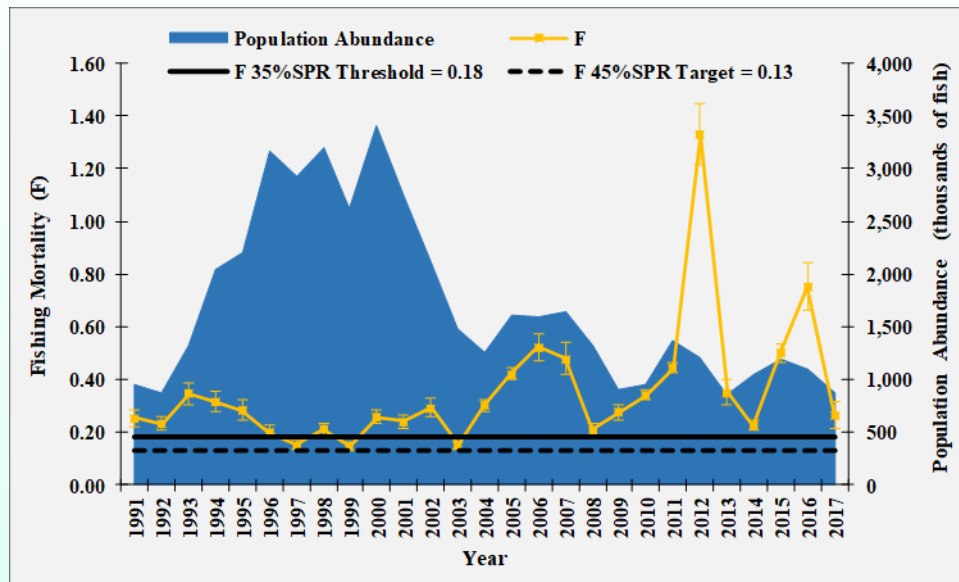


Figure 2. Estimates of fishing mortality (F) and population abundance for the Albemarle-Roanoke striped bass stock, 1991–2017. Source: Lee et al. 2020.

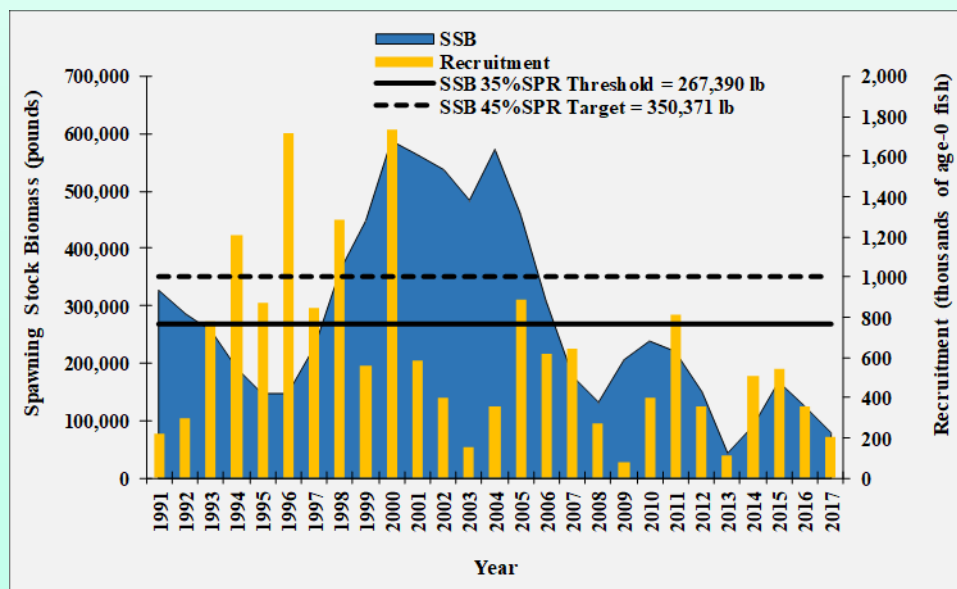


Figure 3. Estimates of spawning stock biomass (SSB) and recruitment of age-0 fish coming into the population each year for the Albemarle-Roanoke striped bass stock, 1991–2017. Source: Lee et al. 2020.

Albemarle-Roanoke Striped Bass in North Carolina

A-R striped bass have long supported recreational and commercial fisheries in the Albemarle Sound region and its tributaries and the northern Outer Banks. Commercial harvest of striped bass occurs throughout the fall and winter into the early spring. Since 1991 gill-nets are the main commercial harvest gear with minimal harvest also from pound nets. Recreational striped bass fishing occurs throughout the year, with harvest seasons allowed in the fall and winter and through the spring as striped bass migrate to the spawning grounds. During the late spring and summer, catch-and-release fishing is also popular.



Recreational anglers, Albemarle Sound bridge. Photo credit: DMF staff
Pictured: K.D. and Kenny Hewitt

Harvest has been controlled by a fixed annual poundage amount known as total allowable landings (TAL) since 1991. The TAL is split evenly between commercial and recreational sectors, and the recreational TAL is further divided evenly between the ASMA and RRMA (Figure 4). Since the last TAL increase to 550,000 lb in 2003, combined landings from all fisheries in the ASMA and RRMA have not exceeded 460,853 lb and have averaged 235,278 lb per year with a low of 108,432 lb in 2013. The commercial sector did not reach their TAL in any years from 2005 to 2013. Even with the 2014 reduction in the TAL to 275,000 lb the commercial and recreational sectors in the ASMA did not reach the TAL for years 2014–2017. Harvest in all sectors has increased since 2017, with the commercial sector reaching the TAL in 2019 causing the DMF to close the fall commercial harvest season before December 31 for the first time since 2010. This increase in harvest is likely due to the above-average year classes produced in 2014 and 2015 (Figures 3 and 4).

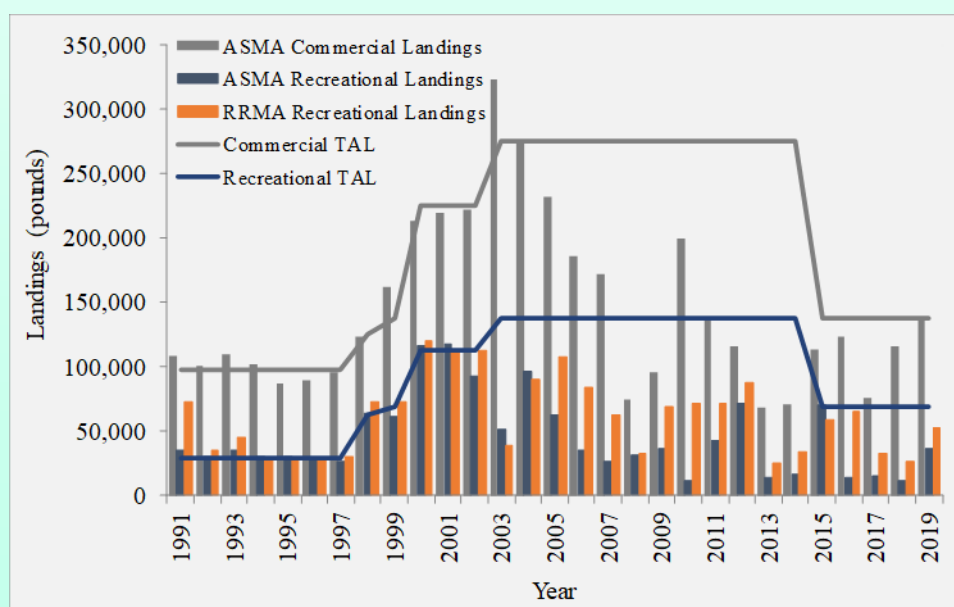


Figure 4. Striped bass landings from the Albemarle Sound Management Area commercial and recreational sectors and Roanoke River Management Area recreational sector, and the commercial and recreational total allowable landings, 1991–2019.



Pictured: Kaden

Based on results from the estimates of total abundance from the stock assessment (Figure 2), the reason for the decline in harvest is likely a decline in overall stock abundance due to poor recruitment starting in 2001 (Figure 3). The assessment noted the importance of river flow on recruitment and noted declining recruitment in the time series does not appear to result solely from reduced abundance due to amount harvested, as recruitment started declining when SSB was at high levels (Figure 3; Lee et. al 2020).

Average total removals in the fisheries (sector combined) during 2012–2017 were composed of 84% landings, with dead discards equaling 16% in numbers of fish (Figure 5). Discards in the ASMA commercial fishery from 2012 to 2017 were estimated using a generalized linear model framework based on on-board observer data combined with data from the DMF Trip Ticket Program. Discards in the recreational fishery are estimated by multiplying the number of fish released by a delayed mortality estimate of 6.4% (Nelson 1998).

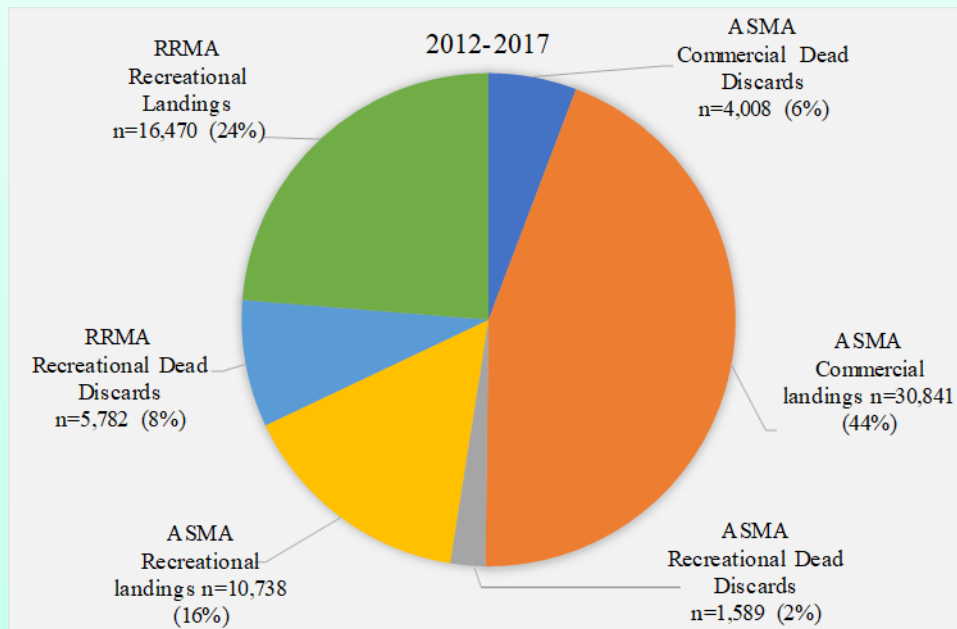


Figure 5. Average number of striped bass landed and discarded from the commercial and recreational fisheries in the Albemarle Sound Management Area (ASMA) and Roanoke River Management Area (RRMA), 2012-2017. Source: Lee et al. 2020.

Tar-Pamlico, Neuse, and Cape Fear river striped bass stocks review

There is no stock status determination for the CSMA striped bass stocks, comprised of the Tar-Pamlico, Neuse, and Cape Fear rivers. Continuous stocking efforts since 1980 and lack of natural recruitment in these waters prevent the use of traditional stock assessment techniques. The Central Southern Management Area Stock Report (Mathes et al. 2020) is a documentation of all data collected, management efforts, and major analyses completed for these river stocks.



Juvenile striped bass tagged for stocking into the Tar-Pamlico River
Photo By: Corrin Flora



Striped Bass Larvae
Photo By: Robert Michelson,
Coastal Review Online

The report also serves as a record of completed research efforts with implications for fishery management and as a guide for future research based on results and identified data gaps. It evaluates the likelihood of successful population rebuilding under various simulations of stocking and fishery management strategies such as different harvest levels and size limits. Tagging studies in the Cape Fear River showed a consistent decline in striped bass abundance estimates from 2012 to 2018 despite a no-possession regulation since 2008. The need for continued conservation to achieve a sustainable harvest is supported by the lack of recruitment, constrained size and age distributions, low abundance, the absence of older fish in all stocks, and the high percentage of stocked fish in the population (Cushman et al. 2018; Farrae and Darden 2018).

Tar-Pamlico, Neuse, and Cape Fear river striped bass in North Carolina

Striped bass have long supported recreational and commercial fisheries in the CSMA region and its tributaries. Since 2004 commercial landings in the CSMA have only been allowed in the spring of the year and have been constrained by an annual TAL of 25,000 pounds established in 1994. Over the past 10 years, landings have closely followed the annual TAL due to daily quota monitoring that allows the season to be closed each year when the TAL is reached, except for 2008 when less than half of the TAL was landed and the season stayed open through April 30. Since 2004 striped bass commercial landings in the CSMA have averaged 24,179 pounds and ranged from a low of 10,115 pounds in 2008 to a high of 32,479 pounds in 2004 (Figure 6).

Within the CSMA recreational harvest occurs in the fall and spring and there is a significant recreational catch-and-release fishery throughout the year. Since 2004 striped bass recreational landings have averaged 13,511 pounds but in 2016 and 2017 recreational harvest increased to just over 25,000 lb each year (Figure 6).

From 2012 to 2017 total removals in the commercial and recreational fisheries were composed of 73% landings and 27% dead discards (Figure 7). Discards in the CSMA commercial fishery from 2012 to 2017 were estimated using a generalized linear model framework using on-board observer data combined with data from the DMF trip ticket program. Discards in the recreational fishery are estimated by multiplying the number of fish released by a delayed mortality estimate of 6.4% (Nelson 1998).

There has been a commercial and recreational no-possession provision in the Cape Fear River since 2008. At the MFC's February 2019 business meeting, Supplement A to Amendment 1 to the North Carolina Estuarine Striped Bass FMP was approved instituting a recreational and commercial no-possession provision in the CSMA. On March 13, 2019, the MFC held an emergency meeting at which time they passed a motion requiring the Director to issue a proclamation prohibiting 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.



Pictured: DMF Staff. Roanoke River, Weldon, NC

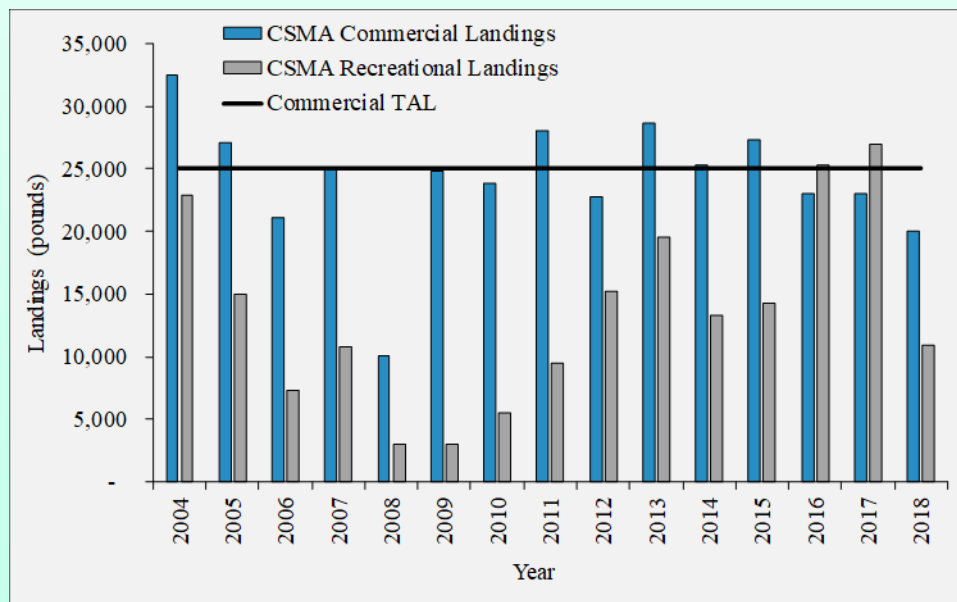


Figure 6. Striped bass landings from the Central Southern Management Area (CSMA) commercial and recreational sectors and the commercial total allowable landings (TAL), 2004–2018. Commercial landings were included for the Cape Fear River for 2004–2008. Recreational landings include the Tar-Pamlico and Neuse rivers only.

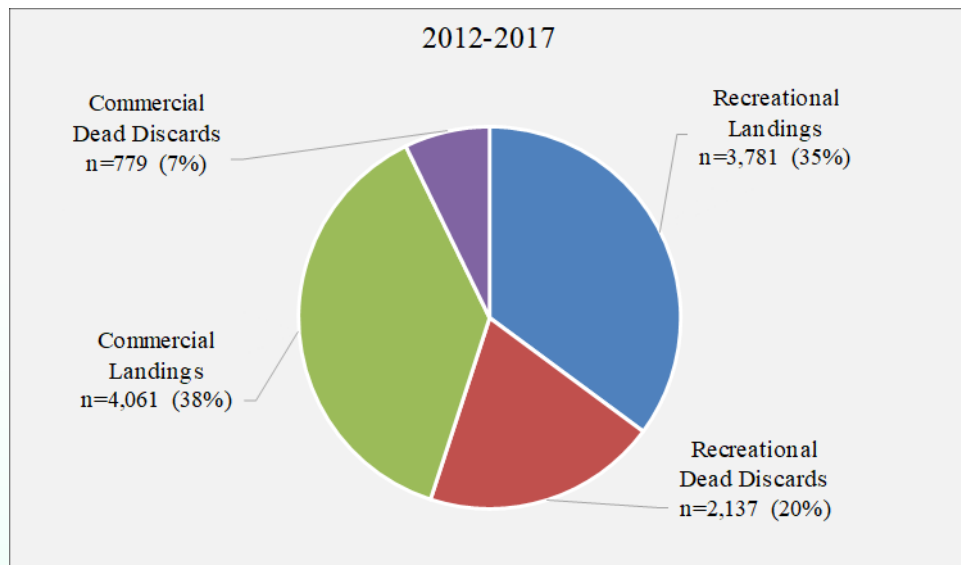


Figure 7. Average number of striped bass landed and discarded from the commercial and recreational fisheries in the Tar-Pamlico and Neuse rivers, 2012–2017.

Habitat and Fish Stocks

With the important relationship between habitat and fish populations, the goal to protect and enhance habitats supporting coastal fisheries comes from the implementation of the Coastal Habitat Protection Plans (NCDEQ. 2016; CHPP, G.S. 143B-279.8). While much of the concern over declining fish stocks has been directed at overfishing, habitat loss and water quality degradation make a stock more susceptible to decline and may hinder stock recovery efforts. The CHPP is undergoing its mandated five-year review, with adoption planned for summer 2021. One of the priority issues, “Submerged Aquatic Vegetation (SAV) Protection and Restoration, with Focus on Water Quality Improvements” has implications for North Carolina striped bass stocks. SAV is especially sensitive to water quality impairment from nutrient and sediment pollution and has been considered a “coastal canary”, serving as a valuable bio-indicator of the overall health of coastal ecosystems (Stevenson, 1998). The primary mechanism to restore and sustain SAV is by improving water quality. The CHPP strategy for SAV involves modifying water quality criteria, such as chlorophyll a levels and nutrient standards to reduce nutrient loading, allowing increased light penetration that is critical for submerged vegetation. This will not only benefit SAV but address the algal blooms in the Albemarle Sound area and other poor water quality impacts to fish like striped bass. It is imperative the fishing community actively participate in the ongoing CHPP review and add their voice to support the actions outlined in the CHPP.



Amendment 2 Management Strategies

Albemarle-Roanoke Striped Bass Stock Sustainable Harvest:

Background

Although this document is specific to the ongoing development of Amendment 2 to the N.C. Estuarine Striped Bass FMP, it is important to note under the existing Amendment 1 there is adaptive management language that states, “Should the target F be exceeded, then restrictive measures will be imposed to reduce F to the target level” (NCDMF 2013). Actions authorized in Amendment 1 are being considered to lower F to address sustainable harvest in the interim as Amendment 2 is completed. This action maintains compliance with Amendment 1 to the North Carolina Estuarine Striped Bass FMP and ASMFC’s Addendum IV to Amendment 6 to the Interstate FMP for Atlantic Striped Bass while the Amendment 2 sustainable harvest management strategy is developed.

Amendment 2 will focus on development of management strategies that address both the overfished and overfishing status of the A-R stock relative to the Fisheries Reform Act (FRA) of 1997, which states each plan “shall specify a time period, not to exceed two years from the date of the adoption of the plan, for ending overfishing...” and “specify a time period, not to exceed 10 years from the date of adoption of the plan, for achieving a sustainable harvest”. Projections from the terminal year of the stock assessment that model how SSB responds in the coming years to various levels of harvest are used to calculate a new TAL that will accomplish the dual mandate of the FRA. As shown in Figure 8, the actual level of recruitment occurring in future years is an important factor in the level of expected increase in SSB. Projections use multiple levels of recruitment to inform managers of the uncertainty associated with assumptions about future stock recruitment and the related increases in SSB.



Pictured: Jennifer Lewis



Tagging on the spawning grounds
Roanoke River, Weldon NC. DMF staff

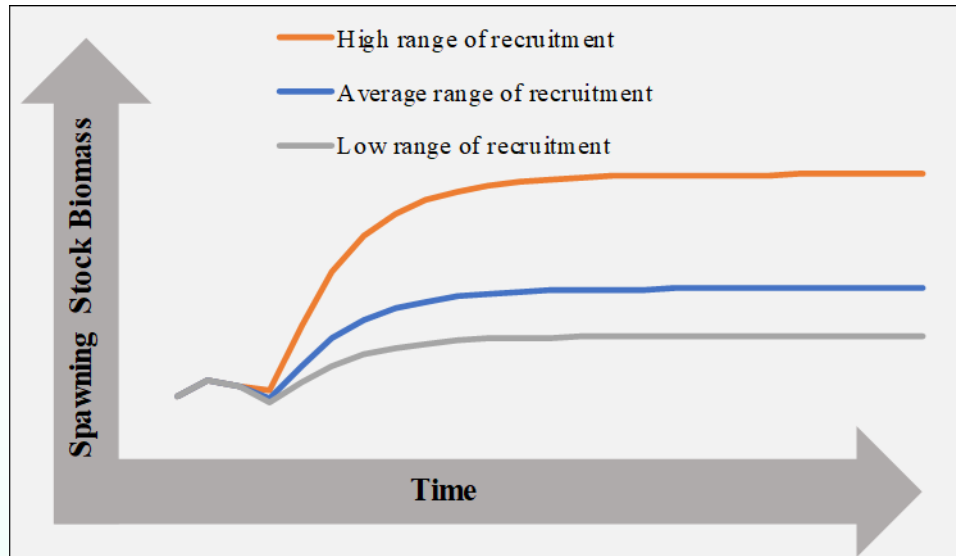


Figure 8. A graphical illustration of how assumptions about the level of future recruitment impacts stock projections of spawning stock biomass (SSB).

The necessary management measures currently in place in Amendment 1 to manage a TAL and prevent harvest from exceeding it each year include:

- adjust the TAL based on benchmark stock assessments and assessment updates
- daily quota monitoring of commercial harvest
- weekly quota monitoring of recreational harvest
- open and/or close harvest seasons to remain below the TAL
- authorize or restrict fishing methods and gear
- limit size, quantities taken or possessed (i.e., daily recreational creel limits and commercial limits)
- restrict fishing areas



Striped bass being tagged with commercial harvest tags
Frog Island fish house Weeksville, NC
Photo By: Chris Kelly



Pictured: Shane

Questions for the Public

- Which of the existing management measures do you support to maintain harvest within limits of the specified TAL?
- In the event of a low TAL that restricts the regular harvest seasons, would you prefer a short season of consecutive harvest days or slightly longer season with only selected harvest days each week? Which harvest days would you prefer?
- Do you support investigating size limit changes for A-R striped bass?
- What recreational and/or commercial gear or area restrictions would you support to reduce discard mortality to rebuild the A-R stock?

Tar-Pamlico, Neuse, and Cape Fear rivers striped bass stocks:

Sustainable Harvest:

Background

There has been a commercial and recreational no-possession provision in the Cape Fear River and its tributaries since 2008. This no-possession measure was implemented to help support specific goals of Amendment 1, which are to achieve sustainable harvest through science-based decision-making processes that conserves the resource. Prior to 2019, harvest in the CSMA was managed by commercial and recreational seasons, harvest and size limits, and gear restrictions, and constrained by an annual commercial TAL of 25,000 lb. Additionally, measures in Supplement A to Amendment 1 of the N.C. Estuarine Striped Bass FMP were implemented in March 2019 that implemented a no-possession provision in the commercial and recreational striped bass fisheries, as well as commercial set gill-net restrictions requiring tie-downs and distance from shore (DFS) measures to apply year-round, in the CSMA (NCDMF 2019). Supplement actions need to be contained within Amendment 2 management strategies in order to stay in effect.

Concurrent in timing but independent of the MFC's adoption of Supplement A is the MFC directed proclamation that 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. As in this case when the commission enacted the provision to direct issuance of a proclamation, the fisheries director has no discretion to choose another management option and is bound by law to follow the commission decision. The MFC may alter this directive at any time or as part of Amendment 2, and if they choose not to do so, the proclamation actions remain in effect.

Harvest will be allowed if the no-possession measure in Supplement A is not continued in Amendment 2, and other management strategies should be considered to rebuild the stock. Possible stocking and fishery management strategies for CSMA striped bass were evaluated using a demographic matrix model (Mathes et al. 2020). Model results indicated CSMA striped bass populations are depressed to an extent that sustainability is unlikely at any level of fishing mortality. Lack of natural reproduction in CSMA systems requires continuous stocking to maintain the populations unless environmental and biological characteristics are improved.



NCSU graduate student surgically implanting a acoustic tracking tag in a striped bass to be stocked in the Neuse river. Photo By: USFWS.

Management strategies could be implemented to expand the age structure of the population and increase abundance of older fish which, given appropriate environmental conditions, may promote natural reproduction. Some environmental conditions can be addressed through the CHPP while biological characteristics can be addressed by altering stocking strategies including consideration of stocking fish better suited to environmental conditions in the CSMA. However, if management strategies implemented through Amendment 2 are unsuccessful at achieving sustainable harvest and external factors are deemed to make establishment of sustainable striped bass populations in CSMA systems impossible, other management strategies, including returning to a hatchery-supported fishery, could be considered in future Amendments.

If the no-harvest provision in the CSMA remains in place, adaptive management could be used to determine under what conditions the fishery could re-open. For example, collecting young-of-year striped bass in juvenile sampling would indicate successful natural reproduction, decreased contribution of stocked fish could potentially indicate successful recruitment, an increase in the number of older fish would indicate expansion of the age structure of the stock, and increased abundance in the independent surveys could indicate population growth. Conversely, adaptive management could also be used as a means to reconsider management strategies if establishment of self-sustaining populations in CSMA systems is determined to be unattainable.



DMF staff conducting Independent Gill Net Index of Abundance Survey
Western Albemarle Sound

Questions for the Public

No-Possession Provision – Amendment 1 (applicable to Cape Fear River) and Supplement A Management Measures

If the No-Possession Provision is Continued

- Do you support continuing the no-possession provision in the CSMA? For how long?
- If the no-possession provision remains, what gear modifications or restrictions should be considered to reduce bycatch and discards?
- Do you support continued stocking in the CSMA?

If the No-Possession Provision is Not Continued

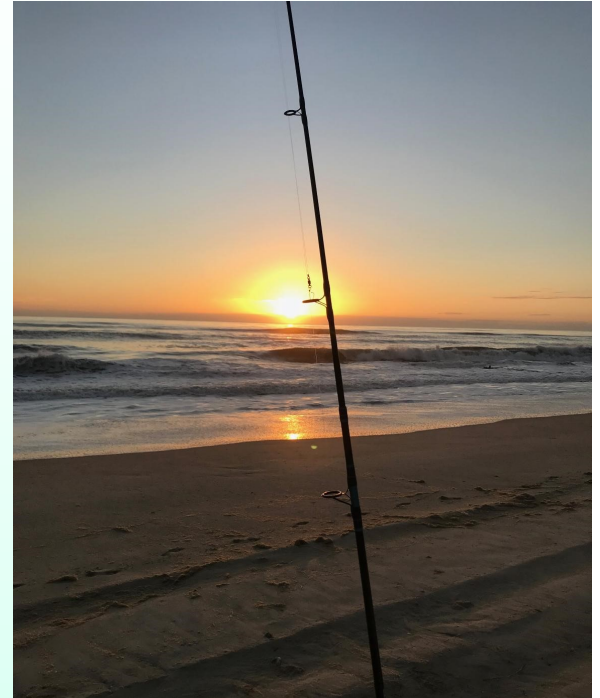
- What management measures should be considered to allow for sustainable harvest (i.e., TAL, closed and open harvest seasons, daily trip limits)?
- Do you support investigating size limit changes for CSMA striped bass?
- What gear modifications or restrictions should be considered to reduce bycatch and discards?
- Do you support continued stocking in the CSMA?

Applicable to all North Carolina's Striped Bass stocks:

Hook-and-line allowed as legal commercial gear in North Carolina's striped bass fisheries:

Background

Amendment 1 to the N.C. Estuarine Striped Bass FMP included an issue paper discussing hook-and-line as a legal commercial gear in the ASMA and CSMA commercial striped bass fisheries. The result was a recommendation by the DMF and MFC to maintain status quo with adaptive management – (Do not allow hook-and-line as commercial gear in the estuarine striped bass fishery unless the use of traditional gears is prohibited). However, through development of the Amendment 1 and discussing the issue paper, the ACs and the DMF recognized that while allowing hook-and-line as a commercial gear could potentially have some positive impacts to the striped bass resource and stakeholders, there would need to be additional discussion of how to best implement the measure. Therefore, the rule that specifically prohibited the use of hook-and-line as a commercial gear was repealed and now that gear is prohibited as a commercial gear in the striped bass fishery through proclamation. If through development of Amendment 2 the MFC votes to allow hook-and-line as a commercial gear, the tools are already in place to implement the measure.



Recreational angling, Outer Banks N.C.

Photo By: Rick Denton

Questions for the Public

- Do you support hook-and-line as a legal commercial gear in the striped bass commercial fishery?



Photo By: Mitchell Blake



Pictured: DMF Staff



Pictured: Adam B. Cape Fear River, N.C.

Questions for the Public about Potential Management Strategies



1. What management strategies already under consideration do you support for Amendment 2?
2. Are there other relevant strategies not included herein that should be consider for Amendment 2?

Additional management strategies may be considered in Amendment 2 dependent on statutory requirements, available data, research needs, and the degree of impact the management strategy would have and how effective the solution would be. If the division determines a management strategy raised during the scoping period might have positive impacts on the stocks, additional examination of the strategy may be undertaken in the development of the FMP Amendment 2.



Photo By: Adam B. Cape Fear River, N.C.

Literature Cited

ASMFC. 2003. Amendment # 6 to the interstate fishery management plan for Atlantic striped bass. ASMFC, Fisheries Management Report No. 41, Washington, DC.

NCDEQ (North Carolina Department of Environmental Quality) 2016. North Carolina Coastal habitat Protection Plan. Morehead City, NC. Division of Marine Fisheries. 33 p.

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Wild young-of-year striped bass,
DMF juvenile striped bass index
of abundance survey



Recreational anglers, Roanoke River, Weldon, N.C.

Scoping Document

Management Strategies for Amendment 2
to the N. C. Estuarine Striped Bass
Fishery Management Plan

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