

Committee Reports





ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

June 22, 2018

MEMORANDUM

TO: Marine Fisheries Commission

FROM: Jason Rock, Co-lead Blue Crab Plan Development Team
Corrin Flora, Co-lead Blue Crab Plan Development Team

SUBJECT: Blue Crab Fishery Management Plan Advisory Committee Meeting

The Blue Crab Fishery Management Plan Advisory Committee met on June 13, 2018 at 6 p.m., at the NCDEQ Washington Regional Office located at 943 Washington Square Mall in Washington, NC. The following attended:

Advisers: Perry Beasley, Joseph Romano, Kenneth Seigler, Mike Marshall, Robert Bruggeworth, Thomas Roller, Elizabeth Cox

Staff: Catherine Blum, Corrin Flora, Kathy Rawls, Jason Rock, Katy West, Odell Williams, Joey Williams

Public: Vic White, Mike Blanton, Jack Cox, Wayne Dunbar

Chairman Romano called the meeting to order at 6:02 p.m.

APPROVAL OF THE AGENDA AND MINUTES/PUBLIC COMMENT

Chairman Romano entertained a motion to approve the agenda. Marshall moved to approve the agenda as presented and Roller seconded the motion. The motion passed unanimously. Chairman Romano entertained a motion to approve the draft minutes from the May 2 meeting. Beasley moved to approve the minutes as presented and Marshall seconded the motion. The motion passed unanimously. No members of the public provided comment during the formal public comment period.



COMMISSION UPDATE

Staff informed the committee the stock assessment was presented to the Marine Fisheries Commission at their May 2018 meeting. The commission had general questions on habitat impact on the stock and working with fishermen to acquire better data. Staff noted the stock assessment results are approved and we will be moving fully into the fishery management plan development process.

FISHERY MANAGEMENT PLAN PRESENTATION: DESCRIPTION OF THE FISHERY

Division staff (Rock) gave a presentation to the committee on the fishery management plan description of the fishery section. Discussion covered the picking house labor force, public awareness of imported vs local products, tracking sources of crabmeat, coastal recreational fishing license requirements, other state requirements, pot usage, and using pounds vs number of crabs. The committee agreed with the noted 2008 increase in crab trawl landings and inquired how many permitted operations were picking crab meat as opposed to those that only package product. Staff noted that questions on peelers and other state requirements will be covered during the development of issue papers. The committee asked that language be added to the section clarifying number of pots fished on a trip ticket does not necessarily equate to number of pots in the water. Additionally, clarification on the differences in crabbing among regions in the state was requested.

FISHERY MANAGEMENT PLAN PRESENTATION: BIOLOGICAL PROFILE

Division staff (Flora) gave a presentation to the committee on the fishery management plan biological profile section. Committee members discussed age and growth and the apparent difference in maximum age with reports from Virginia. The predatory impact of black drum was also noted.

For both sections presented the committee agreed they represented the proper level of content to engage and educate the various stakeholders. They also suggested the division should continue to update various historical datasets so that information would be readily available if needed for committee discussion or issue paper development.

FISHERY MANAGEMENT PLAN GOAL AND OBJECTIVES

Staff and committee members discussed the goals and objectives for the fishery management plan. The committee noted the need to make sure the environment and the stock are being looked at and additionally the need for public awareness of the fishery and the resource. The committee did not amend the presented goals and objectives.

SOLICITATION OF ISSUES

Staff opened up discussion to the committee for substantive issues related to the fishery. It was noted that minor rule changes or clarifications can be handled outside the plan in order to not

slow the process with minor issue papers. Those fixes can be addressed between plans as they come up if not changing management strategy of the plan. The committee discussed cull rings, water quality, zygotes, derelict gear, pot limits, and seasonal closures. Division staff informed the committee that the majority of their discussed topics would be covered in research recommendations rather than issue papers. The committee agreed the primary issue was measures to address overfishing as stated in Objective One. One member also wanted to increase opportunities to remove derelict pots.

OTHER BUSINESS

Staff and committee members discussed the upcoming meeting schedule. Next meeting is scheduled for Wednesday August 8, 2018 and meetings will switch to Thursday beginning in October.

The meeting adjourned at 8:06 p.m.

cc:	Catherine Blum	Dee Lupton	Patricia Smith
	Anne Deaton	Stephen Murphey	District Managers
	Nancy Fish	Phillip Reynolds	Committee Staff Members
	Christine Goebel	Jerry Schill	Marine Patrol Captains
	Jess Hawkins	Section Chiefs	



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MEMORANDUM

TO: Marine Fisheries Commission
Southern Flounder FMP Advisory Committee

FROM: Michael Loeffler, Co-lead Southern Flounder Plan Development Team
Anne Markwith, Co-lead Southern Flounder Plan Development Team

DATE: July 19, 2018

SUBJECT: Southern Flounder FMP Advisory Committee Meeting

The Southern Flounder FMP Advisory Committee met on Wednesday, July 18, 2018 at 6 p.m. at the NCDEQ Washington Regional Office located at 943 Washington Square Mall in Washington, NC. The following attended:

Advisers: Fred Scharf (chairman), Michael Oppegaard, Tom Roller, Kurt Tressler, Robert Lee Cox, Mary Ellon Ballance, Keneth Johnson, Joe Romano, James Williams.

Absent: Bradley Styron

Staff: Michael Loeffler, Charlton Godwin, Steve Murphey, Katy West, Kathy Rawls, Trevor Scheffel, Lisa Hollensead, Donnie Twyne, Carter Witten

Public: Glenn Skinner, Greg Judy, Tim Ellis

Fred Scharf, serving as chair, called the meeting to order at 6:06 p.m.

APPROVAL OF AGENDA

Motion by Mary Ellon Balance to approve agenda, seconded by Joe Romano – motion was approved unanimously.

APPROVAL OF MINUTES

Motion by Joe Romano to approve meeting minutes from May 9, 2018, seconded by Kirk Tressler – motion was approved unanimously.

PUBLIC COMMENT

No members of the public provided comment.

PRESENTATION ON RESEARCH RECOMMENDATIONS

Division staff presented an overview on research needs from the 2013 Amendment 1 to the fishery management plan and the 2018 stock assessment and peer review panel. The need is for the advisory committee to provide recommendations critical to the southern flounder stock assessment. The Division will present these recommendations in a section of the FMP. The recommendations are ranked high, medium and low, as well as in categories such as habitat, by-catch, life history, etc. Some of the prior recommendations have been completed and some are in the process of completion.

A question was raised as to the recreational gig discards not being included in the discard research recommendations. Continued research into the recreational gig fishery will be included in Amendment 2 and is currently being worked on and in other research recommendations. There was group discussion on the recreational gig fishery. The data comes from a mail survey of CRFL holders that self-report about their use of gigs. Landings and effort from the gig fishery had increased, but now has leveled off. Mostly private recreational boats are gigging, not guides. Questions about identifying the different species of flounder were raised, as well as identifying flounder by area and fisheries. The committee indicated there is a need to make recreational identification of species a priority. Additional discussion occurred on where flounder are going, how far offshore, and how habitat changes with fish size. There was group discussion on sex ratio of the eggs produced and migration and size of male fish. The sex ratio of the eggs produced is assumed to be 50/50. Males tend to leave the first year and do not get as large as the females.

PRESENTATION ON THE MANAGEMENT HISTORY OF SOUTHERN FLOUNDER

Division staff presented the management history of southern flounder. The main management options implemented in North Carolina have been size limit changes, gear restrictions, creel limit changes, and seasonal and area closures. There was group discussion on what management options other states have implemented and how the regulation changes have or have not helped. It was noted that the stock must be given time to react to the regulatory changes that were implemented to know what worked. Even though the assessment was coastwide the group cannot worry about what the other states are doing, but should focus on what North Carolina can do. There was additional discussion on complying with the Atlantic States Marine Fisheries Commission (ASMFC) Summer Flounder, Black Sea Bass and Scup FMP regulations and conservation equivalency; as a committee it is necessary to know what the constraints are. Staff indicated that the equivalency evaluations are unknown; unless the committee comes up with options that would be less restrictive than those implemented through the ASMFC Summer Flounder, Black Sea Bass and Scup FMP, conservationally equivalent calculations would not be required.

OTHER QUESTIONS FROM THE ADVISORY COMMITTEE

Staff also discussed proclamation authority and what could and could not be done under that authority. The Director has proclamation authority for management of flounder, but that is only a part of the FMP process.

OTHER BUSINESS

Staff discussed the upcoming September meeting which will bring the first one or two sections of the FMP to the advisory committee. The November meeting will include a presentation on the updated stock assessment with data through 2017, including projections. At this meeting staff would also like to settle on the goals and objectives for Amendment 2 to present to the MFC at the February 2019 meeting.

The meeting adjourned at 8:18 p.m.

cc:	John Batherson	Chris Batsavage	Catherine Blum
	Ellie Davis	Anne Deaton	Nancy Fish
	Christine Goebel	Jess Hawkins	David Hilton
	Laura Lee	Dee Lupton	Shawn Maier
	Stephen Murphey	Hardy Plyler	Steve Poland
	Phillip Reynolds	Jerry Schill	Isaiah Smith
	Patricia Smith	Jason Walker	Biological Supervisors
	Committee Staff	District Managers	Marine Fisheries Commission
	Marine Patrol Captains	Section Chiefs	



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MEMORANDUM

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

FROM: Katy West
Michael S. Loeffler
Division of Marine Fisheries, NCDEQ

DATE: July 12, 2018

SUBJECT: Northern Regional Advisory Committee Meeting

The Northern Regional Advisory Committee met at Thursday, July 12, 2018 at 6 p.m. at the NCDEQ Washington Regional Office located at 943 Washington Square Mall in Washington, NC. The following attended:

Advisors: Glenn Barnes, Michael Blanton, Steven Bradshaw, Keith Bruno, Jim Rice, Gilbert Tripp, Sara Winslow

Absent: Everett Blake, Raymond Pugh Jr, Dell Newman, Sam Liverman Jr.

Staff: Katy West, Michael S. Loeffler, Dan Zapf, Tracey Bauer, Jason Rock, Kathy Rawls, Brian Long, Steve Anthony

Public: None

Sara Winslow, serving as chair, called the meeting to order.

APPROVAL OF THE AGENDA

Steve Bradshaw moved to approve the agenda; Jim Rice seconded the motion. The motion passed unanimously.

APPROVAL OF MINUTES

Jim Rice moved to approve the October 24, 2017 minutes to provide the Northern AC's recommendation for the 2018 cobia season and management measures to the Marine



Fisheries Commission; Steve Bradshaw seconded the motion. The motion passed unanimously with the stipulation to remove duplicate text from pages one and two.

STRIPED MULLET STOCK ASSESSMENT UPDATE

Dan Zapf provided an overview of the striped mullet stock assessment conducted by Laura Lee who could not attend the meeting. This assessment was an update of the benchmark completed in 2013. This update includes data through 2017, and all data sources and framework used were the same as in the benchmark assessment completed in 2013. Landings were higher in the earlier part of the time series, and levelled out in 2002. Landings were very low in 2016 (below one million pounds) which hit the threshold. Three independent indices were used in the model and were standardized to account for environmental factors. Zapf described the sampling programs and the indices they produced for the two multispecies independent gill net surveys and the electroshocking sampling program which targets striped mullet. Most indices had little variability throughout the time series, but showed declines in striped mullet abundance in the most recent part of the sampling period.

The unit stock was determined as all waters of North Carolina. All data included were in the time series from 1994 to 2017, a birthdate of January 1 was noted for ageing, and both sexes were included in the model. Selectivity for the commercial fisheries was domed shaped, the gill nets surveys were asymptotic (flat top), and electroshocking sampling selectivity was freely estimated by the model.

Zapf continued the presentation with the model fit to the standardized data sets, including the program indices, average body weights, and lengths. Fishing mortality was variable from 1994 through 2002, consistent from 2003 through 2016 without much variability and then showed a slight increase in 2017. The predicted catch at age showed the commercial catch was dominated by age 1 and 2 fish. Recruitment was variable among years with a decrease in the mid-2000 period and then a slight increase in 2017. The female spawning stock biomass showed an increasing trend early in the time series and then a decline starting at the middle through the end of the time series.

To determine stock status, an $F_{25\%}$ threshold and $F_{35\%}$ target were chosen in the 2013 benchmark assessment and continued for the update. Based on the selected biological reference F values, threshold and target, overfishing was not occurring during the entire time series. There is a poor stock recruit relationship with the data and biomass estimates were unreliable so it could not be determined whether the stock was overfished. The most recent abundance indices are the lowest on record in the times series. Poor model fits to survey indices, average body weights, length frequencies, along with lack of contrast in the observed data suggests model results are more uncertain than the 2013 benchmark assessment.

A committee member asked what was causing the decline in striped mullet? Zapf said it was tough to identify from the results and there are potential environmental variables that could be affecting the population. Zapf added to the discussion that the commercial landings have changed quite a bit over time. In the mid-1990s there was a high demand for roe to the Asian



markets and fishermen were getting good prices for the roe. There was a lot of effort directed at striped mullet in that period when their value was high, but that market is no longer prevalent. Today fishermen are putting their effort into other fisheries, such as shrimp that have a much higher value. Considerable discussion on hurricanes impacts to the striped mullet landings in a year. From the graph of landings, an advisor noted there are similar declines from hurricanes shown but in 2016 the trigger was hit because the prior year's landings were already at a low point (absolute hurricane decline in 2016 was similar to other hurricane years). Advisors also noted the month of the hurricane would have a differential impact because of the temporal differences in out migration down the coast.

Further discussions occurred on the limitations with the model and how it is predicting a decrease in recruitment in recent years and a decline stock abundance, even with low mortality (F) values. There are no juvenile abundance surveys included in the model. The one change in the model update is that the fishing mortality estimates were based on ages 1 through 5 through 2017 and the previous model looked at ages 2 through 5. The age range was changed because the update data show ages 1 to 5 were present; Zapf noted the fishing mortality rates with this change in the model showed the same trends between the two.

ADAPTIVE MANAGEMENT FRAMEWORK FOR THE N.C. STRIPED MULLET STOCK

Tracey Bauer provided a presentation on the adaptive management framework for striped mullet. She provided the timeline of how we came to this stock assessment update and issue paper development. Bauer explained the commercial landings triggers and the years when hurricanes occurred. Landings were 15% below the lower landings threshold in 2016 that started this adaptive management review. Results of the updated stock assessment determined with data through 2017 that overfishing is not occurring and overfished could not be determined.

The initial benchmark assessment used data from 1994 – 2011 and adopted in Amendment 1 in 2015. No overfishing was occurring through 2011 and an overfished status was not determined. For the assessment update through 2017 only limited adjustments could be made to the model parameters. Because the fishery is a roe mullet there is concern recruitment overfishing could occur, which led to the implementation of the current adaptive management framework in Amendment 1.

Bauer went over the options for recommendations to the Marine Fisheries Commission and the positive and negative attributes for each option. Information was also provided on the potential reductions for various scenarios on seasonal closures. The commercial fishery has shifted in the time series to peak later (November) in the calendar year.

The division recommendations are to retain the FMP schedule review for 2020, no management action, and continue to monitor trends in the striped mullet fishery fishery-independent indices.

A committee member confirmed the division's recommendation of no management measures. Another committee member stated that essentially the model is saying that overfishing is not an issue, although there is a decline in the population, fishing is not influencing the population.



Some committee members stated the commercial fishery is not part of the decline and therefore measures should not be put in place to impact the fishermen. One committee member said that maybe in the next benchmark assessment we can try to get a better understanding on what happens to these fish in other areas of the coast. The division's recommendations also include annual updates and if the population shows further decline or if effort increases on these fish between now and the full review we could still come back to implement management measures.

PUBLIC COMMENT

No public were in attendance

VOTE ON RECOMMENDATIONS TO THE MARINE FISHERIES COMMISSION ON THE ADAPTIVE MANAGEMENT OF THE STRIPED MULLET FISHERY

Steve Bradshaw moved to accept the division's recommendations; Keith Bruno seconded the motion. The motion passed with a vote of 6 in favor and one oppose.

No further discussion occurred.

MARINE FISHERIES COMMISSION UPDATE

Katy West provided updates from the May 2018 MFC meeting in New Bern. The MFC addressed shrimp bycatch with a recommendation to require the use of four gears in otter trawls in areas where 90 foot or greater headrope length are allowed to go into effect July 1, 2019, support funding for Industry workgroup, characterize shrimp gears and open shrimp FMP. The Marine Fisheries Commission also supported the nomination for Region 4 and recommended the creation of a MFC CRFL committee. West updated the committee on the FMP schedules for southern founder and blue crab with advisory committees' input, also staff continue to work on data on striped bass for benchmark assessments in the Central/Southern and Albemarle/Roanoke systems. She updated the group on the spotted seatrout harvest re-opening in June, the cobia amendment through the Atlantic States Marine Fisheries Commission to establish regulations in federal waters, and there is a Commercial Resource Fund meeting on July 19, 2018 in Washington. The fiscal note for rulemaking from the shrimp petition was sent to the Office of State Budget and Management for their input and review. And the new calibration changes to recreational harvest statistics (MRIP) were posted on July 9th which will change recreational landings for many species.

PLAN AGENDA ITEMS FOR NEXT MEETING

The next meeting will be upon request of the Marine Fisheries Commission but will likely be in October 2018.

Gilbert Tripp moved to adjourn; Steve Bradshaw seconded the motion. The motion passed unanimously.

The meeting adjourned at 8:00 p.m.





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MEMORANDUM

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

FROM: Tina Moore
Chris Stewart
Division of Marine Fisheries, NCDEQ

DATE: July 12, 2018

SUBJECT: Southern Regional Advisory Committee Meeting

The Southern Regional Advisory Committee met at 6 p.m. on Wed. July 11, 2018 at the Wilmington Regional Office, 127 Cardinal Drive Extension, Wilmington. The following attended:

Advisors: Adam Tyler, Dr. Fred Scharf, Ron McCoy, Randy Proctor, Pam Morris, Ruth King, Christopher Hunt, Chris Medlin, Phillip Smith, Tom Smith

Absent: Charles Griffin

Staff: Chris Stewart, Tina Moore, Carter Witten, Dan Zapf, Tracey Bauer

Public: None

Dr. Fred Scharf called the meeting to order.

APPROVAL OF THE AGENDA

Randy Proctor moved to approve the agenda; Ruth King seconded the motion. The motion passed unanimously.

APPROVAL OF MINUTES

Adam Tyler moved to approve the April 4, 2018 minutes to provide input to the Marine Fisheries Commission to approve Strategic Habitat Area Region 4 Nominations; Ruth King seconded the motion. The motion passed unanimously.



STRIPED MULLET STOCK ASSESSMENT UPDATE

Dan Zapf provided an overview of the striped mullet stock assessment conducted by Laura Lee who could not attend the meeting. This assessment was an update of the benchmark completed in 2013. This update takes the data through 2017; all data sources and framework used were the same as in the benchmark assessment completed in 2013. Landings were higher in the earlier part of the time series, and leveled out in 2003. Landings were very low in 2016 (below one million pounds) which hit the threshold. Three independent indices were used in the model and were standardized to account for environmental factors as well. Zapf described the sampling programs and the indices they produced for the two multispecies independent gill net surveys and the electroshocking sampling program which targets striped mullet. Most indices had little variability throughout the time series, but showed declines in striped mullet abundance in the later part of the sampling period.

The unit stock was determined as all waters of North Carolina. All data included were in the time series from 1994 to 2017, a birthdate of January 1 was noted for ageing, and both sexes were included in the model. Selectivity for the commercial fisheries was domed shaped, the gill net surveys were asymptotic (flat top), and electroshocking sampling selectivity was freely estimated by the model.

Zapf continued the presentation with the model fit to the standardized data sets, including the program indices, average body weights, and lengths. Fishing mortality was variable from 1994 through 2002, consistent from 2003 through 2016 without much variability and then showed a slight increase in 2017. The predicted catch at age showed the commercial catch was dominated by age 1 and 2 fish. Recruitment was variable among years with a decrease in the mid-2000 period and then a slight increase in 2017. The female spawning stock biomass showed an increasing trend early in the time series and then a decline starting at the middle through the end of the time series.

To determine stock status, an $F_{25\%}$ threshold and $F_{35\%}$ target were chosen in the 2013 benchmark assessment and continued for the update. Based on the selected threshold and target, overfishing was not occurring during the entire time series. There is a poor stock recruit relationship with the data and biomass estimates were unreliable so it could not be determined whether the stock was overfished or not overfished. The most recent abundance indices are the lowest on record in the time series. Poor model fits to survey indices, average body weights, length frequencies, along with lack of contrast in the observed data suggests model results are unreliable.

A committee member asked what was causing the decline in striped mullet? Zapf said it was tough to identify from the results and there are potential environmental variables that could be affecting the population. Discussions continued on the effects of the removal of the females for the roe market on the population and the abundance of striped mullet seen in the past in some areas no longer present now. Some committee members said striped mullet were very abundant right now in Core Sound. Zapf added to the discussion that the commercial landings have changed quite a bit over time. In the mid-1990s there was a high demand for roe to the Asian markets and fishermen were getting good prices for the roe. There was a lot of effort directed at striped mullet in that period when their value was high, but that market is no longer prevalent.



Today fishermen are putting their effort into other fisheries, such as shrimp that have a much higher value. Also hurricanes impact the striped mullet landings in a year.

Further discussions occurred on the limitations with the model and how it is predicting a decrease in recruitment in recent years. There are no juvenile abundance surveys included in the model. The one change in the model update is that the fishing mortality estimates were based on ages 1 through 5 through 2017 and the previous model looked at ages 2 through 5. The age range was changed because the data looked more like ages 1 to 5 were present, and Zapf determined the fishing mortality rates with this change showed the same trends between the two.

A committee member stated, that there is either something happening to recruitment causing it to be poor or something else is not allowing the fish grow to become adults. Zapf said that we do not know a lot about their spawning since it occurs offshore and we are not sure whether those fish that leave the estuary return to the estuary. Discussion continued on the history of the run around gill net fishery and effort currently occurring on striped mullet. Zapf added that ocean nearshore landings also from the stop net fishery are not as high as they were in the past. The ocean stop net fishery is heavily restricted and effort has declined considerably.

More discussion occurred on whether any of the surveys track with the landings. Zapf explained the specific trends for each survey and whether they tracked with the landings, and other factors that can affect the catch rates in these sampling programs.

ADAPTIVE MANAGEMENT FRAMEWORK FOR THE N.C. STRIPED MULLET STOCK

Tracey Bauer provided a presentation on the adaptive management framework for striped mullet. She provided the timeline of how we came to this stock assessment update and issue paper development. Bauer explained the commercial landings triggers and the years when hurricanes occurred. Landings were 15% below the lower landings threshold in 2016 that started this adaptive management review. Results of the updated stock assessment determined with data through 2017 that overfishing is not occurring and the overfished status could not be determined.

The initial benchmark assessment used data from 1994 – 2011 and was adopted in Amendment 1 in 2015. No overfishing was occurring through 2011 and an overfished status was not determined. For the assessment update through 2017 only limited adjustments could be made to the model parameters. Because the fishery is a roe mullet fishery, data will be reviewed annually and looked at closely.

Bauer went over the options for recommendations to the Marine Fisheries Commission and the positive and negative attributes for each option. Information was also provided on the potential reductions for various scenarios on seasonal closures. The commercial fishery has shifted in the time series to peak later in the calendar year.

The division recommendations are to retain the FMP schedule review for 2020, no management action, and continue to monitor trends in the striped mullet fishery and fishery-independent indices.



A committee member confirmed the division's recommendation of no management measures. Another committee member stated that essentially the model is saying that overfishing is not an issue, although there is a decline in the population, fishing is not having an effect on the population. One member asked if the assessment just included fish from North Carolina, and asked if fish were going or coming to other states? Zapf explained there is little commercial effort for striped mullet in South Carolina and Georgia, and there is a significant fishery in Florida. The Florida fishery is both a bait and roe fishery. A committee member also asked if there was any survey data from other states, particularly Florida. It is unknown how much movement occurs between states and whether striped mullet leaving the estuaries ever return. Tagging on striped mullet occurred in North Carolina in the early 2000s from the Neuse River and most returns came from the sounds and showed some southward migration. We don't know if the fish remain in the ocean or return when they go out to spawn.

Some committee members stated the commercial fishery is not part of the decline and therefore measures should not be put in place to impact the fishermen. One committee member said that maybe in the next benchmark assessment we can try to get a better understanding on what happens to these fish in other areas of the coast. The division's recommendations also include annual updates and if the population shows further decline or if effort increases on these fish between now and the full review we could still come back to implement management measures.

PUBLIC COMMENT

No public were in attendance

VOTE ON RECOMMENDATIONS TO THE MARINE FISHERIES COMMISSION ON THE ADAPTIVE MANAGEMENT OF THE STRIPED MULLET FISHERY

Pam Morris moved to accept the division's recommendations; Ruth King seconded the motion. The motion passed with a vote of 8 in favor and one abstention. One member left the meeting at 7:30 p.m. before the vote.

One committee member updated the committee that the Marine Fisheries Commission (MFC) has been asking about ways to collect better information on effort coupled with landings data. Because there are so many things that affect effort (i.e., environmental factors, shifts to other fisheries), any new information will help with understandings the commercial and recreational landings. Zapf stated an initial data analysis was brought to the MFC looking and value and effort on the striped mullet fisheries, which is available on the website under the MFC webpage February 2018 meeting.

MARINE FISHERIES COMMISSION UPDATE

Chris Stewart provided updates from the May 2018 MFC meeting in New Bern. The MFC addressed shrimp bycatch with a recommendation to require the use of four gears in otter trawls in areas where 90 foot or greater headrope length are allowed to go into effect July 1, 2019, support funding for Industry workgroup, characterize shrimp gears and open shrimp FMP. The Marine Fisheries Commission also supported the nomination for Region 4 and recommended the creation of a MFC CRFL committee. Stewart updated the committee on the FMP schedules for



southern founder and blue crab with advisory committees' input, also staff continue to work on data on striped bass for benchmark assessments in the Central/Southern and Albemarle/Roanoke systems. He updated the group on the spotted seatrout harvest re-opening in June, the cobia amendment through the Atlantic States Marine Fisheries Commission to establish regulations in federal waters, and there is a Commercial Resource Fund meeting on July 19, 2018 in Washington. The petition for rulemaking was sent to the Office of State Budget and Management for their input and review. And the new calibration changes to recreational harvest statistics (MRIP) were posted on July 9th which will change recreational landings for many species.

PLAN AGENDA ITEMS FOR NEXT MEETING

The next meeting will be upon request of the Marine Fisheries Commission, and is tentatively scheduled on October 3, 2018 in Morehead City at the Central District Office.

Pam Morris moved to adjourn; Tom Smith seconded the motion. The motion passed unanimously.

The meeting adjourned at 8:00 p.m.

cc:	John Batherson	Chris Batsavage	Catherine Blum
	Ellie Davis	Anne Deaton	Nancy Fish
	Christine Goebel	Jess Hawkins	Laura Lee
	Dee Lupton	Shawn Maier	Stephen Murphey
	Steve Poland	Phillip Reynolds	Jerry Schill
	Patricia Smith	Jason Walker	Biological Supervisors
	Committee Staff	District Managers	Marine Fisheries Commission
	Marine Patrol Captains	Section Chiefs	





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MEMORANDUM

TO: N.C. Marine Fisheries Commission
Finfish Advisory Committee

FROM: Lee Paramore
Kathy Rawls
Division of Marine Fisheries, NCDEQ

DATE: July 17, 2018

SUBJECT: Finfish Advisory Committee Meeting

The Finfish Advisory Committee met at 6 p.m. on Tue. July 10, 2018 at the Morehead City Central District Office, at 5285 Highway 70 W, Morehead City. The following attended:

Advisors: Thomas Brewer, Jeff Buckel, David Clem, Sammy Corbett, Brent Fulcher, Bradley Styron, Ken Siegler, Sara Winslow

Absent: Cameron Boltes, Melvin Shephard, Scott Whitley

Staff: Lee Paramore, Kathy Rawls, Carter Witten, Dan Zapf, Tracey Bauer, Catherine Blum, Steve Murphey, Katy West, Tina Moore, Jason Rock, Amanda Tong, Nancy Fish

Public: Glenn Skinner, Kathy Fulcher

Chairman Corbett called the meeting to order.

APPROVAL OF THE AGENDA

Chairman Corbett asked for any changes to agenda and hearing none, he asked for approval by consensus. Agenda was approved as written.

APPROVAL OF MINUTES

Chairman Corbett asked for any changes to October 26, 2017 minutes and hearing none, he asked for approval by consensus. October 26, 2017 minutes were approved as written.



STRIPED MULLET STOCK ASSESSMENT UPDATE

Dan Zapf provided an overview of the striped mullet stock assessment conducted by Laura Lee who could not attend the meeting. This assessment was an update of the benchmark completed in 2013. This update takes the data through 2017; all data sources and framework used were the same as in the benchmark assessment completed in 2013. Landings were higher in the earlier part of the time series, and levelled out in 2003. Landings were very low in 2016 (below one million pounds) which hit the threshold. Three independent indices were used in the model and were standardized to account for environmental factors as well. Zapf described the sampling programs and the indices they produced for the two multispecies independent gill net surveys and the electroshocking sampling program which targets striped mullet. Most indices had little variability throughout the time series, but showed declines in striped mullet abundance in the later part of the sampling period.

The unit stock was determined as all waters of North Carolina. All data included were in the time series from 1994 to 2017, a birthdate of January 1 was noted for ageing, and both sexes were included in the model. Selectivity for the commercial fisheries was domed shaped, the gill nets surveys were asymptotic (flat top), and electroshocking sampling selectivity was freely estimated by the model.

Zapf continued the presentation with the model fit to the standardized data sets, including the program indices, average body weights, and lengths. Fishing mortality was variable from 1994 through 2002, consistent from 2003 through 2016 without much variability and then showed a slight increase in 2017. The predicted catch at age showed the commercial catch was dominated by age 1 and 2 fish. Recruitment was variable among years with a decrease in the mid-2000 period and then a slight increase in 2017. The female spawning stock biomass showed an increasing trend early in the time series and then a decline starting at the middle through the end of the time series.

To determine stock status, an $F_{25\%}$ threshold and $F_{35\%}$ target were chosen in the 2013 benchmark assessment and continued for the update. Based on the selected threshold and target, overfishing was not occurring during the entire time series. There is a poor stock recruit relationship with the data and biomass estimates were unreliable so it could not be determined whether the stock was overfished or not overfished. The most recent abundance indices are the lowest on record in the time series. Poor model fits to survey indices, average body weights, length frequencies, along with lack of contrast in the observed data suggests model results are unreliable.

A committee member asked what was causing the large spikes in the Program 135 striped bass independent gill net survey in Albemarle Sound in 2014 and 2015. Dan Zapf noted that the index values in 2014 and 2015 had an associated large amount of error around the mean. He further explained that this likely indicated that the larger indices in those years were being driven by a few large catches. It was further noted that the model was not fitting these spikes, in part because of the large amount of error.



A committee member asked if the indices had been standardized. Dan Zapf explained the surveys used were standardized based on the influence of area, season and environmental factors that were available.

A committee member expounded on the low landings particularly in 2016. He noted several factors are in play each year including very good shrimping which shifts effort away from the mullet fishery, poor mullet prices from market conditions and impacts of hurricanes. Also, it was added that very good shrimping in 2017 likely impacted participation in the mullet fishery as well. Dan Zapf acknowledged these factors but also noted that hurricane years were not uncommon and historically have not caused landings below the threshold.

A committee member questioned if effort in the fishery had been down. Dan Zapf explained that effort data had recently been presented to the Marine Fisheries Commission in February. Some decline was seen in trips landing striped mullet and also trips that caught striped mullet were catching less. Committee member noted that in the last three year's effort and participants has been curtailed by shrimping and many of the best fisherman have not been active in fishery.

A committee member asked why the F values in current assessment have shifted so significantly from those reported in like years from the benchmark assessment. Dan Zapf explained that while the benchmark calculated F based on ages 2-5, current assessment uses F based on ages 1-5 because age-1 is a significant portion of the catch.

A committee member noted that selectivity from gillnet surveys were asymptotic while the industry gill net selectivity was dome shaped. It was questioned why an asymptotic shape was assumed for the surveys when gill nets are known to be dome shaped. Dan Zapf explained that this is what was assumed in the 2013 benchmark assessment so that is what had to be used for the update. He noted than an updated benchmark would certainly consider that change in the future.

ADAPTIVE MANAGEMENT FRAMEWORK FOR THE N.C. STRIPED MULLET STOCK

Tracey Bauer provided a presentation on the adaptive management framework for striped mullet. She provided the timeline of how we came to this stock assessment update and issue paper development. Bauer explained the commercial landings triggers and the years when hurricanes occurred. Landings were 15% below the lower landings threshold in 2016 that started this adaptive management review. Results of the updated stock assessment determined with data through 2017 that overfishing is not occurring and the overfished status could not be determined.

The initial benchmark assessment used data from 1994 – 2011 and was adopted in Amendment 1 in 2015. No overfishing was occurring through 2011 and an overfished status was not determined. For the assessment update through 2017 only limited adjustments could be made to the model parameters. Because the fishery is a roe mullet fishery and data will be reviewed annually and looked at closely.

Bauer went over the options for recommendations to the Marine Fisheries Commission and the positive and negative attributes for each option. Information was also provided on the potential



reductions for various scenarios on seasonal closures. The commercial fishery has shifted in the time series to peak later in the calendar year.

The division recommendations are to retain the FMP schedule review for 2020, no management action, and continue to monitor trends in the striped mullet fishery and fishery-independent indices.

Committee members stated that while the roe mullet fishery was strong beginning in the mid to late 1980's, since around 1998 the Japanese market that once supported our roe mullet fishery has fallen off, corresponding to when we have seen reductions in commercial landings. The market has never fully recovered in terms of the value of roe mullet fishery. It was further noted that the low landings in recent years have been exacerbated by hurricanes and good shrimping years.

The committee commended the division for taking into account environmental factors in standardizing the indices.

A committee member also asked about migration of striped mullet. Staff noted that fish move offshore to spawn and that tagging data indicate a southern movement. Committee members agreed that they leave in the fall, migrate south and are harvested by southern states. In the past, fishermen have typically followed fish as far south as Florida.

Sara Winslow moved to support the DMF recommendation of no action and retain the FMP schedule of a 2020 review and in the interim, continue to monitor trends in fishery and indices.

Discussion was halted to take public comment.

PUBLIC COMMENT

Glenn Skinner provided public comment. He noted that the committee discussion had covered most of his concerns. He emphasized the importance of salinity on the electroshocking survey that the division conducts. Fish tend to move upriver when salinity is higher. He wanted to make sure that the data used in the assessment accounts for variability in sampling due to environmental changes. He highly recommended that fishery be monitored instead of doing any management immediately. He thought we are beginning to see an uptick in the abundance of fish this year and would like to see if fishery shows some rebound.

The committee discussed that the stock may not be North Carolina specific, and stated that next benchmark assessment should probably consider if the model needs to be more regionally based similar to the change that was made for southern flounder.

VOTE ON RECOMMENDATIONS TO THE MARINE FISHERIES COMMISSION ON THE ADAPTIVE MANAGEMENT OF THE STRIPED MULLET FISHERY

Motion as stated by Sara was seconded by Bradley Styron. Motion passed unanimous.



MARINE FISHERIES COMMISSION UPDATE

Lee Paramore provided updates from the May 2018 MFC meeting in New Bern. The MFC addressed shrimp bycatch with a recommendation to require the use of four gears in otter trawls in areas where 90 foot or greater headrope length are allowed to go into effect July 1, 2019, support funding for Industry workgroup, characterize shrimp gears and open shrimp FMP. The committee was updated on the FMP progress for southern founder and estuarine striped bass. He updated the group on the spotted seatrout harvest re-opening in June, the cobia amendment through the Atlantic States Marine Fisheries Commission to establish regulations in federal waters, and there is a Commercial Resource Fund meeting on July 19, 2018 in Washington. The petition for rulemaking was sent to the Office of State Budget and Management for their input and review. And the new calibration changes to recreational harvest statistics (MRIP) were posted on July 9th which will change recreational landings for many species.

PLAN AGENDA ITEMS FOR NEXT MEETING

The next meeting will be upon request of the Marine Fisheries Commission, and is tentatively scheduled on October 17, 2018 in Washington at the Washington Regional Office.

A committee member noted that a federal aquaculture bill is being proposed in congress that will impact aquaculture in federal waters and may impact state waters. He noted that this bill is not being funneled through regional councils and their established guidelines. Wanted division to be aware. It was noted that the Director is aware and had sent a letter on this issue to the SAFMC.

Meeting was adjourned by the chairman.

The meeting adjourned at 7:02 p.m.





ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

MEMORANDUM

TO: N.C. Marine Fisheries Commission
N.C. Marine Fisheries Commission's Commercial Fishing Resource Fund Committee

FROM: Nancy Fish, Marine Fisheries Commission Liaison
Division of Marine Fisheries, NCDEQ

DATE: July 26, 2018

SUBJECT: Marine Fisheries Commission's Commercial Fishing Resource Fund Committee Meeting

The Marine Fisheries Commission's Commercial Fishing Resource Fund Committee met at 2 p.m. on Thursday, July 26, 2018 at the Division of Marine Fisheries Headquarters, 3441 Arendell Street, Morehead City. The following attended:

Committee Members: Sammy Corbett – chair, Allison Willis and Janet Rose
(all committee members participated via phone)

Staff: Dee Lupton, Nancy Fish, Beth Govoni, Wayne Johannessen and Patricia Smith

Public: Mike Shutak, Carteret News Times

Chairman Sammy Corbett called the meeting to order.

APPROVAL OF THE AGENDA

Alison Willis moved to approve the meeting agenda; Janet Rose seconded the motion. The motion passed unanimously.

APPROVAL OF MINUTES

Janet Rose moved to approve the Feb. 1, 2018 minutes; Alison Willis seconded the motion. The motion passed unanimously.

PUBLIC COMMENT

The committee was provided written comment from Chris McCaffity regarding proposed uses for fund expenditures. No public wished to speak at the meeting.



MEMORANDUM OF UNDERSTANDING BETWEEN THE N.C. MARINE FISHERIES COMMISSION AND THE FUNDING COMMITTEE FOR THE N.C. COMMERCIAL FISHING RESOURCE FUND

The committee approved a Memorandum of Understanding providing procedures for agreeing to and authorizing disbursement of certain funds from the N.C. Commercial Fishing Resource Fund. The Memorandum of Understanding is between the commission and a Funding Committee comprised of members from various commercial fishing associations. The Funding Committee had previously met on July 19, 2018 and approved the Memorandum of Understanding.

Alison Willis moved to approve the Memorandum of Understanding; Janet Rose seconded the motion. The motion passed unanimously.

ADMINISTRATIVE PROCEDURES FOR FUNDING FROM THE N.C. COMMERCIAL FISHING RESOURCE FUND AND STRATEGIC PLAN FOR THE N.C. COMMERCIAL FISHING RESOURCE FUND

Committee members also approved associated Administrative Procedures for funding from the N.C. Commercial Fishing Resource Fund and the Strategic Plan for the fund. The Funding Committee had also approved these documents at its July 19 meeting.

Alison Willis moved to approve the Administrative Procedures and Strategic Plan for the N.C. Commercial Fishing Resource Fund; Janet Rose seconded the motion. The motion passed unanimously.

OTHER BUSINESS

The committee was provided draft scopes of work for potential projects discussed by the Funding Committee at its July 19 meeting. The committee wanted time to evaluate these documents and discussed the need to meet at a future date, possibly in September, to begin deliberating about the types of proposals it would like to consider for funding.

The meeting adjourned at 2:12 p.m.





ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

MEMORANDUM

TO: N.C. Commercial Fishing Resource Funding Committee

FROM: Wayne Johannessen, Staff lead for the Commercial Fishing Resource Fund
Division of Marine Fisheries, NCDEQ

DATE: July 19, 2018

SUBJECT: Commercial Fishing Resource Funding Committee Meeting

The Commercial Fishing Resource Funding Committee met at 1:00 p.m. on Thursday, July 19, 2018 at the N.C. Department of Environmental Quality Washington Regional Office. The following attended:

Funding Committee: Glenn Skinner, Steve Weeks, Doug Todd, Gilbert Baccus

Absent: Ernie Doshier, Andrew Berry

Commissioners: Janet Rose

DMF Staff – Dee Lupton, Beth Govoni, Wayne Johannessen, Katy West

Public: None

APPROVAL OF AGENDA AND MINUTES

Glenn Skinner, serving as Chair in the absence of Chairman Doshier, called the meeting to order and gave a reminder of the duty of notification of conflict of interest.

Steve Weeks made a motion to approve the meeting agenda. Doug Todd seconded the motion. The motion carried unanimously.

Doug Todd made a motion to approve the February 1, 2018 meeting minutes. Steve Weeks seconded the motion. The motion carried unanimously.

PUBLIC COMMENT

None offered

Wayne Johannessen then read for the record public comment received by Mr. Chris McCaffity via email.

July 2018 Commercial Fishing Resource Funding Committee Meeting Public Comments

Please apply any extra money in the Commercial Fishing Resource Fund toward stocking native species and creating Hatchery Supported Quotas. River Herring and Striped Bass would be two good species to start with. Please also consider setting up a website where license holders can debate and vote on how our license fees are used.

I am happy to answer any questions and/or go into greater detail.

Thank you,

Chris McCaffity

Mr. Skinner opened discussion in regard to approval of the Memorandum of Understanding (MOU). All in attendance agreed it was acceptable as written.

Doug Todd made a motion to approve the Memorandum of Understanding.

Mr. Weeks requested discussion about the Administrative Procedures for Funding and the Strategic Plan documents at the same time since they are referenced in the MOU.

Mr. Todd tabled his motion for further discussion.

In response to a question by Mr. Weeks clarification was given by Mr. Johannessen that the Administrative Procedures for Funding document was mostly based on the Statute (§ 113-173.1) as well as State contracting and accounting procedures to issue a request for proposal or contract. Clarification was also given by Deputy Director Lupton that the updated version of the Strategic Plan removed items that were repetitive with the MOU and ensured it was focused on the purpose of the fund which is “development of sustainable commercial fishing.” Mr. Weeks inquired about modifications to the documents. Deputy Director Lupton explained the Funding Committee may modify the Administrative Procedures for Funding and the Strategic Plan. If they want to make changes to the MOU it would require vote/approve by the Funding Committee and the Marine Fisheries Commission (MFC) Commercial Fishing Resource Funding Committee. Mr. Johannessen pointed out section 7 of the MOU outlines the process for modifications to the MOU.

Doug Todd re-offered his motion to approve the Memorandum of Understanding along with the Administrative Procedures for Funding and the Strategic Plan. Steve Weeks seconded the motion. The motion carried unanimously.

Deputy Director Lupton advised that the next step will be to present the MOU to the MFC Commercial Fishing Resource Funding Committee for approval and signature by Chairman Corbett at the next Marine Fisheries Commission meeting August 15-16. Then the document will be sent to Chairman Doshier for signature.

Additional Items

Committee began discussion on funding opportunities. Katy West offered copies of the NC Division of Marine Fisheries Research Priorities for 2018 for information as to needs of the Division related to species in the Fisheries Management Plans (FMP) process.

Discussion began regarding the scopes of work requested by the Funding Committee at the February meeting.

1. Disease and Pathology Research and Monitoring

Designate funds, on an annual basis, for the division to collect, prepare, and send samples to pathology facility for analysis.

2. Sustainable Commercial Fishing Economic Impact Study

Funds would be used to hire contractor to collect data on expenses incurred by commercial fishermen and costs throughout the supply chain including dealer costs, processing and transporting costs, and overhead. Funds would also be used to conduct an economic analysis and impact study of the commercial fishing industry through the entire supply chain to the local, state, and national levels to provide the information necessary to maximize their overall economic benefits of sustainable commercial fishing in North Carolina. Mr. Weeks requested that this scope of work be used to develop a request for proposal by the state economist that could then be reviewed by an independent economist and the Funding Committee before being released to the public. The division would collect the proposals and forward them to the Funding Committee and MFC Commercial Fishing Resource Funding Committee for review and approval. The division would then handle the process of establishing a contract for the project.

3. Commercial Fishing Gear Research

Designate funds, on an annual basis, to support the division's commercial gear research program. The Funding Committee requested that the division develop a detailed project proposal outlining how the funds would be used.

4. Sustainable Commercial Fishing Public Relations

Develop a request for proposal for a public relations agency to develop a plan on North Carolina's sustainable fishing industry to help educate the fishing and general public and implement the plan. This scope of work would be used to develop a request for proposal that would be reviewed by the Funding Committee before being released to the public. The division would collect the proposals and forward them to the Funding Committee and MFC Commercial Fishing Resource Funding Committee for review and approval. The Division would then handle the process of establishing a contract for the project.

There was discussion about forwarding the scopes of work to the MFC Commercial Fishing Resource Funding Committee for review at their next meeting.

A fifth project was introduced by Deputy Director Lupton.

5. Commercial Fishery Statistics

The division uses several funding sources to fund the Trip Ticket Program, including commercial fishing receipts and federal grants. Current receipts and federal grants can no longer afford staff who are dedicated to the Trip Ticket Program. The division will develop a full proposal with funding needs.

Mr. Baccus expressed concern about the accuracy of landings and Deputy Director Lupton stressed the importance of the need to continue the funding to ensure accurate data.

Doug Todd offered a motion to forward the four scopes of work and to also include the trip ticket program requested by the division to the MFC Commercial Fishing Resource Funding Committee for review and approval. Steve Weeks seconded the motion adding the comment that the Committee will approve individual projects as full proposal are received and reviewed. Motion carried unanimously.

The Funding Committee would like to plan the next meeting for September to review the detailed project proposals related to the five scopes of work approved at this meeting. Mr. Johannessen inquired about best months for meeting of both committees since the MOU specifies at least two meetings a year. Members indicated the slowest time for their industry is approximately December through March.

Motion to adjourn by Mr. Baccus. Mr. Todd seconded. Motion carried unanimously.

Meeting adjourned at 2:10 pm.