

Committee Reports





Marine Fisheries
ENVIRONMENTAL QUALITY

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Director

MEMORANDUM

TO: Marine Fisheries Commission
Sea Turtle Advisory Committee

FROM: Chris Batsavage
Division of Marine Fisheries

DATE: July 6, 2016

SUBJECT: Sea Turtle Advisory Committee Meeting

The Sea Turtle Advisory Committee met at 4 p.m. on Thursday, June 23, 2016 at the Department of Environmental Quality Regional Office at 943 Washington Square Mall, Washington, NC. The following attended:

Advisers: Adam Tyler (Vice Chair), Lynwood Odum, Craig Harms, Steven Everhart, Brent Fulcher, Troy Outland, Charles Aycock, Richard Peterson, and Chris Hickman

Absent: Bob Lorenz (Chair), and Matthew Godfrey

Staff: Chris Batsavage, Jacob Boyd, Brooke Wheatley, Katy West, and Garland Yopp

Public: Art Smith, David Bush, Jeremy O'Neal, and James Coulbourn

Adam Tyler, serving as chair, called the meeting to order. He recognized the newest member, Steven Everhart, and then asked all of the committee members to introduce themselves.

MODIFICATIONS TO THE AGENDA

No modifications were made.

Richard Peterson motioned to approve the agenda and was seconded by Craig Harms—motion passes unanimously.

APPROVAL OF MINUTES

Craig Harms commented that he did not appreciate Steve Weeks cross-examining the presenters, committee members, and staff during the public comment period at the last Sea Turtle Advisory Committee meeting and that should not be allowed to occur again.

Craig Harms motioned to approve the minutes of the March 17, 2016 Sea Turtle Advisory Committee meeting and was seconded by Richard Peterson —motion passes unanimously.

OPENING REMARKS

Tyler opened the floor for committee members to make opening remarks.

Chris Hickman commented on a variety of subjects such as the committee's opportunity to make a difference, data collected by the federal government that has not been analyzed, the substantial challenges for conducting research on sea turtles as well as down listing or delisting sea turtles, the misconceptions some members of the public have about commercial fishing, and the cumulative impacts these things are having on fishing communities.

Charles Aycock commented on the recommendations for recreational fishery from the 2006 Sea Turtle Advisory Committee report, which were circle hook research and outreach, and for the recreational fishing survey to ask anglers if they hooked a sea turtle while fishing. However, not all of these recommendations were completed. He also commented that although he sees sea turtles much more often while on the water and the incidence of sea turtles hooked on the fishing piers has increased, many of the anglers he knows have either never hooked or rarely hooked a sea turtle. He further commented on the large number of sea turtle strandings in New England in the context of the abundance of sea turtles and whether they are still considered endangered.

Harms responded that sea turtle strandings in New England are common events in the fall with Kemp's ridley sea turtles being more prevalent that happen earlier than the cold stun events in North Carolina with green sea turtles being more prevalent. He also commented that the lack of funding for research and surveys as well as legal barriers to conducting surveys from pound nets prevents researchers from estimating the abundance of sea turtles.

Brent Fulcher commented on a variety of subjects such as the difficult requirements needed to delist sea turtles, pound netters' fears over an incidental take permit based on the closures experienced by the gill net fishery, and how protected species interactions have changed the fishing behaviors for multiple commercial fisheries. He thinks that gear modifications to reduce sea turtle interactions should be explored and he attributes turtle excluder devices in shrimp trawls for the recovery of sea turtle populations.

Multiple committee members commented on the allowed sea turtle takes in the gill net incidental take permit, the numerous closures due to reaching the allowed take numbers, and how the increasing sea turtle populations will only make these problems worse.

Tyler added that he believes there were forces at work during the process of obtaining the incidental take permit to shut down the gill net fisheries by altering the numbers.

Batsavage disagreed with Tyler's statement and asked him if he thought the goal of the division was to get rid of gill nets by spending millions of dollars on observing and monitoring the gill net fishery, and spending countless personnel hours obtaining the incidental take permits when all the division needed to do was not challenge the lawsuit in 2010, which would have enjoined the fishery?

Tyler answered that the division had to challenge the lawsuit for political reasons, and further added that changes to Management Unit D1 that were made during the development to the incidental take permit cost him thousands of dollars.

Harms reminded the committee that there is much less management flexibility under an incidental take permit.

Fulcher asked Batsavage if the division is willing to consider gear modifications, soak times, and other options for amending the incidental take permits. Batsavage responded that the division would consider amending the incidental take permits and that the division is asking the commercial gill net fishery to provide us with items they would like to see amended. Batsavage added that the division recognizes the low amount of allowed takes the sea turtle ITP provides. The division will then contact National Marine Fisheries Service to inform them of our intent to amend the incidental take permits and to see which options are feasible in an amendment.

PUBLIC COMMENT

David Bush with the North Carolina Fisheries Association told the committee that he recently met with Jean Beasley (owner of the Karen Beasley Sea Turtle Hospital) and she wants to protect sea turtles without putting the commercial fishing industry out of business. He thinks that addressing the issues and concerns with the gill net incidental take permits should be done before working on a pound net incidental take permit. He asked Batsavage if a sea turtle research project could be conducted without impacting the incidental take permit, and Batsavage replied that research on protected species must be permitted. Bush then asked Batsavage if fishermen have to declare into the incidental take permit and he replied that they must have an Estuarine Gill Net Permit to participate in the fishery. Bush's final question to Batsavage was could an individual apply for an incidental take permit and would the division be able to assist with the application, and Batsavage responded that individuals can apply, but the application process is difficult.

OPENING REMARKS, CONTINUED

Fulcher commented that the main issue is the best way to legally interact with sea turtles while allowing the fishery to operate.

Brent Fulcher motioned for the division to work with the commercial fishing industry (specifically the North Carolina Fisheries Association) to educate them on the avenue they need to take to put together a working study group with academia to propose fishing gear modifications to allow interactions with sea turtles and to modify the present gill net incidental take permits and was seconded by Richard Peterson. —motion passes unanimously.

Fulcher said we need to figure out a mechanism to fix the existing incidental take permits before moving forward with incidental take permits for other gears. The commercial industry needs to move forward this since the division does not have the staff and resources to take the lead on this.

Fulcher added that future incidental take permits need to be based on the percentage of sea turtle interactions instead of number of allowed takes, and Harms reminded the committee that the denominator (number of sea turtles in the population) must be known in order to determine a percentage.

NEXT STEPS IN DISCUSSION OF POTENTIAL POUND NET INCIDENTAL TAKE PERMIT

Batsavage introduced this agenda item by reminding the committee that the comment he heard at the end of the last meeting was the committee needs to digest what they learned and heard. He asked the committee if there is a recommendation for the direction the committee wants to take.

Harms said that based on the comments received at the last meeting and the motion the committee just passed, it seems like it is not the time to pursue a pound net incidental take permit.

Fulcher commented that we should try to figure out these issues with the present incidental take permits without embarking on a new incidental take permit.

Richard Peterson suggested tabling the motion until the issues with the gill net incidental take permits are resolved.

Harms added that pursuing a pound net incidental take permit could be beneficial in the future.

Steven Everhart asked if there were any non-government organizations pushing for a pound net incidental take permit, and Batsavage said there may be interest by some individuals, but he was not aware of any organizations. Katy West added that the division receives general comments in opposition of new pound net sets whenever a proposed pound net set is advertised.

Outland commented that his family has been in the pound net fishery for many years and the pound net fishermen get the short end of the stick anytime they deal with the division so that is why the fishermen are worried about a pound net incidental take permit.

Richard Peterson motioned to table the discussion of a pound net incidental take permit and was seconded by Troy Outland. Motion passes unanimously.

RECREATIONAL HOOK AND LINE OBSERVER PROGRAM OVERVIEW

Jacob Boyd presented information on the Observer Program's efforts to observe the recreational hook and line fishery with an emphasis on work completed in 2015. The objective of these efforts was to collect discard and release information for managed species and protected species interaction data. Due to funding and logistical constraints, observer coverage was limited to Carteret County. The observations took place on division-owned vessels in close proximity to recreational fishing vessels. A total of 167 observations were conducted from July 2010 through December 2011, 246 observations from May 2013 through September 2013, and 552 observations from April 2015 through October 2015. Only one loggerhead sea turtle interaction was observed and one self-reported sea turtle interaction by an angler was documented, and both occurred in 2013. Flounder, sheepshead, cobia, and "anything" were among the top target species for anglers who were observed in 2015. A total of 2,380 fish were observed in 2015 with 16 percent of them kept, 52 percent released because they were unwanted, and 31 percent released due to being below the minimum size limit, exceeding the bag limit or were out of season.

Harms asked if observer coverage for the fishery was calculated and Boyd said that was not an objective of the study and that the observations were designed to characterize the recreational catch.

Harms asked if any anglers refused to be observed and interviewed, and Boyd said no.

Fulcher asked that since the recreational flounder fishery was open for all regulated flounder species, then the regulatory discards must have been because the fish were too small and Boyd confirmed that was the case.

Harms asked if there were any observations on fishing piers in 2015 and Boyd replied that all observations were from anglers on vessels.

Harms followed up by asking if the division had plans to continue observing this fishery and Boyd said that the division does not have funding to continue this work and that funding sources are very limited.

Harms commented that the number of interactions observed in the recreational hook and line fishery was miniscule, but the number of sea turtle interactions reported by anglers has increased. Boyd responded that the informational signs the division placed on ocean fishing piers has likely improved the reporting of these interactions.

Aycock commented that he thinks that most hook and line interactions with sea turtles are a result of anglers fishing with natural bait on the bottom as opposed to anglers targeting species such as red drum and speckled trout. Batsavage responded that sea turtles are more likely to eat natural bait than artificial bait.

GILL NET OBSERVER PROGRAM UPDATE

Boyd presented finalized 2015 observer coverage information as well as 2016 observer coverage information (through April) based on preliminary data. The overall observer coverage for large mesh gill nets in 2015 was 9.2 percent and was 3.5 percent for small mesh gill nets. The number of large mesh and small mesh gill net trips in 2015 was less than the average number of annual trips from 2011 to 2014. The overall observer coverage for large mesh gill nets from January through April 2016 was 7.6 percent and was 3.4 percent for small mesh gill nets. Boyd also updated the committee on the number of sea turtle interactions that occurred in 2016 as well as the management unit closures.

Harms requested more information on the closures that occurred and Boyd and Batsavage said they will provide that information.

Fulcher asked if Marine Patrol found the fishermen who owned the illegally-set gill nets that had sea turtle interactions, and Boyd replied that the owners were identified, and that one of the nets was reported as lost.

Harms asked how sea turtle interactions from illegally-set gill nets are accounted for in the incidental take permit and Batsavage explained that the interactions do not count against the allowed takes if they are not from an observed trip, but the interactions are reported to the National Marine Fisheries Service. Batsavage added that these are not the first interactions from illegally-set gill nets reported to the National Marine Fisheries Service, and the frequency of these interactions are below a level of concern.

OTHER BUSINESS

Batsavage asked the committee if they would be willing to occasionally meet in Morehead City as long as a call-in option was available for members, particularly the members who live in Dare County. Hickman and Outland said they prefer in-person meetings, and Harms stated that although he participates in many video conferences and webinars, he would rather travel to an in-person meeting.

FUTURE TOPICS AND PLAN NEXT MEETING AGENDA

Batsavage asked if the committee had any ideas for future meeting topics, and Aycock asked for a progress update on the motion made at this meeting for the division to work with the commercial fishing industry to educate them on the avenue they need to take to put together a working study group with academia to propose fishing gear modifications to allow interactions with sea turtles and to modify the present gill net incidental take permits.

MEETING ARRANGEMENTS

The next meeting is scheduled for Thursday September 15, 2016 at the Department of Environmental Quality Regional Office in Washington, NC.

The meeting adjourned at approximately 7:20 p.m.

Enclosures

Cc: Catherine Blum
Mike Bulleri
Scott Conklin
Dick Brame
Braxton Davis
Charlotte Dexter

Jess Hawkins
Dee Lupton
Nancy Marlette
Christy Goebel
Phillip Reynolds
Jerry Schill

Gerry Smith
District Managers
Committee Staff Members
Marine Patrol Captains
Section Chiefs



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MEMORANDUM

To: Marine Fisheries Commission

From: Wayne Johannessen

Subject: Coastal Recreational Fishing License Committee Meeting

Date: June 28, 2016

The Marine Fisheries Commission Coastal Recreational Fishing License Committee met at the Division of Marine Fisheries Central District Office on June 28, 2016 at 10 a.m.

The following attended:

Committee: Mark Gorges (call in), Joe Shute, Rick Smith, Braxton Davis

Advisory Members: Richard Sear, Jan Willis

Staff: Dee Lupton, Suzanne Guthrie, Beth Govoni, Nancy Fish, Laura Lee, Kathy Rawls, Trish Murphey, Wayne Johannessen, Michelle Duval, Anne Deaton

APPROVAL OF AGENDA AND MINUTES

Division of Marine Fisheries Director Braxton Davis called the meeting to order and stated the purpose for calling this special meeting of the CRFL Committee was to discuss selection process for the study projects assigned to students participating in Coastal Recreational Fishing License (CRFL) Grant funded Fellowship Programs as well as review and approve the updated *Administrative Procedures for Funding from The Marine Resources Fund and The Marine Resources Endowment Fund*.

The meeting agenda was approved by consensus with no modifications.

The minutes from the April 19, 2016 meeting were approved by consensus with no modifications.

Meeting synopsis was given by Director Davis.

This special meeting of the Committee was called to provide the Committee an opportunity to discuss the topics of study for the Fellowship Program grants. The Principle Investigators (PIs) from the current Fellowship Programs with North Carolina State University (NCSU) and University of North Carolina at Wilmington (UNCW) are here to present information on their programs as well as seek direction from the Committee and DMF in relation to topics of study for their students.

The CRFL Grant Program and the PIs involved in the Fellowship Program grants want to work with the Committee to make sure that the topics of study chosen for the students will enhance or improve the recreational fishing experience for North Carolinians (directly or indirectly), and/or educate anglers about recreational saltwater fishing in North Carolina.

We have also updated the verbiage in the *Administrative Procedure for Funding from the Marine Resources Fund and the Marine Resources Endowment Fund* document to include wording for the review of the Fellowship Program projects as well as verbiage for other processes that are laid out in the administrative procedures.

PUBLIC COMMENT

There was no public comment offered.

OVERVIEW FROM UNCW

Overview from UNCW was presented by Dr. Martin Posey Director of the Center for Marine Science & Professor. Also in attendance from UNCW was Troy Alphin Senior Research Associate.

OVERVIEW FROM NCSU

Overview from NCSU was presented by Dr. Jeff Buckel Professor, Department of Biology.

Director Davis asked the Committee to go to the revision in the Administrative Procedures on page 7 that is related to the Fellowship Programs. The following wording was added:

Fellowship or intern proposals which did not identify a specific topic of study with the initial proposal, will submit their topic for consideration in abstract format along with their current semi-annual report (if applicable). This abstract will be reviewed by the CJRT and if recommended for approval, will be submitted to the MFC CRFL Committee for their review/approval by April 30.

Director Davis asked for open discussion in relation to the current and future selection process for studies within the Fellowship Program Grants. There was discussion to ensure the abstracts along with the Semi Annual reports provide enough detail to gain sufficient understanding of the proposed next project for the Committee to make an informed decision.

Commissioner Smith requested adding the following to the paragraph.

Topics of study chosen for the students shall be projects that will enhance or improve the recreational fishing experience for North Carolinians (directly or indirectly), and/or educate anglers about recreational saltwater fishing in North Carolina.

Commissioner Chuck Laughridge, in attendance as general public and with the Committee's permission to speak, requested that it would be helpful to develop a definition of a "recreationally important species" and the parameters used to make that classification. Staff will look into clarification for the next editing cycle of the procedures.

Director Davis requested a motion to approve the abstracts provided by UNCW and NCSU Fellowship Programs to start the new process. UNCW is year 1 to start July 1. NCSU project would be starting in year 3 if year 2 was not reinstated (year 2 funding was not approved at the April 19, 2016 meeting).

After discussion it was determined that the UNCW study project did not require a vote for approval since this was a newly approved proposal. The NCSU proposed Sheepshead study project would be allowed to begin in year 2 reinstating the year 2 funding.

Motion by Rick Smith to fund the NCSU Sheepshead project as stated this year (year 2), seconded by Joe Shute, Mark Gorges approved - motion carried by consensus.

ADMINISTRATIVE PROCEDURES FOR FUNDING

Director Davis went through the edits the Administrative Procedures. Additions to the existing edits were as follows.

- Request was made to add verbiage to ensure all external reviewers satisfy the expertise as outlined by the CJRT.
- Addition of the following wording to Five Year Plan Process.
 - Proposed amendments can be reviewed/considered at the request of DMF Staff or the Committee during the Annual Status Report cycle.
- Make this edit from page 6 on page 17 step 10 as well.
 - The assigned Technical Monitor accepts the final project report and the CPC will release the final payment.

Motion by Rick Smith to accept the procedures as amended, seconded by Joe Shute, Mark Gorges approved - motion carried by consensus.

ADDITIONAL BUSINESS

No Additional Business offered.

MOTION TO ADJOURN

Motion by Rick Smith to adjourn, seconded by Joe Shute

Meeting adjourned at 11:46 a.m.



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MEMORANDUM

TO: Marine Fisheries Commission
Conservation Fund Committee

FROM: Randy Gregory
Division of Marine Fisheries

DATE: June 20, 2016

SUBJECT: Conservation Fund Committee Meeting

The Marine Fisheries Commission's Conservation Fund Committee met on Monday, June 20, 2016 at 4 p.m. at the Division of Marine Fisheries Headquarters, 3441 Arendell Street, Morehead City, N.C. The Conservation Fund Committee meeting was held to review a proposal from the Division of Marine Fisheries for a Central/Southern Striped Bass Genetic Study. The following attended:

Committee members: Mark Gorges (chair), Janet Rose, Rick Smith (absent)

Staff: Braxton Davis, Randy Gregory, Dee Lupton, Suzanne Guthrie, Kathy Rawls, Steve Murphey, Craig Alley, and Nancy Fish

Public: None

Chairman Mark Gorges called the meeting to order at 4 p.m.

MODIFICATIONS TO THE AGENDA

The agenda was approved by consensus.

APPROVAL OF THE MINUTES

The minutes were approved by consensus.

PUBLIC COMMENT

None.

FUND BALANCE

Division staff lead Randy Gregory advised the committee the unobligated Conservation Fund balance was \$135,928.79. Gregory explained that new funds deposited in the Conservation Fund currently come from the Governor's Cup and the Department of Transportation Easement Fund.

PROPOSAL FOR THE FOR A CENTRAL/SOUTHERN STRIPED BASS GENETIC STUDY

Division biologist Charlton Godwin reviewed the proposal to process genetic samples for a Central/Southern Striped Bass Genetic Study. Recent parentage based tagging analyses of Central Southern Management Area striped bass in the Tar/Pamlico, Neuse, and Cape Fear rivers indicates the stocks on the spawning grounds are near 100 percent hatchery origin. From 2010-2015, the majority of samples used in genetic analysis have been obtained by the North Carolina Wildlife Resources Commission from the spawning grounds in these systems. There is a need to obtain samples for genetic testing from fish from areas in the Central/Southern Management Area that are well away from the spawning grounds and harvested by the commercial and recreational sectors. This will give a more complete analysis of hatchery contribution to these stocks. The South Carolina Department of Natural Resources Population Genetics Lab is currently contracted to perform this work with the North Carolina Wildlife Resources Commission. These samples will also be sent to this lab if the proposal is funded. The division requested the North Carolina Marine Fisheries Commission’s Conservation Fund Committee recommend funding this proposal in the amount of \$21,412. Godwin was asked about considering in-state labs to conduct this type work. Godwin explained the South Carolina lab already possessed the broodstock information and was setup for this type work, but he would investigate using in-state labs in the future.

Mark Gorges moved to approve recommending funding the Central/Southern Striped Bass Genetic Study in the amount of \$21,412.00 and forward the proposal to the Marine Fisheries Commission for consideration, seconded by Janet Rose.

Motion carries 2-0.

OTHER BUSINESS

Gregory explained that two proposals may be coming forward in the future for the committee’s consideration. The first is a possible mediation issue in the Currituck Sound. The other is a proposal from Sea Grant for a pilot project to provide an education program to fishery stakeholders. There was no other business.

The meeting adjourned at approximately 4:30 p.m.

/ca

Enclosures

Cc:	Catherine Blum	Jess Hawkins	Gerry Smith
	Mike Bulleri	Dee Lupton	District Managers
	Scott Conklin	Nancy Marlette	Committee Staff Members
	Dick Brame	Katie Mills	Marine Patrol Captains
	Braxton Davis	Phillip Reynolds	Section Chiefs
	Charlotte Dexter	Jerry Schill	

Central Southern Management Area Striped Bass Genotyping and Parentage Analysis

North Carolina Division of Marine Fisheries Proposal
Conservation Fund Committee, June 20, 2016

NEED

Recent Parentage based tagging analyses of Central Southern Management Area (CSMA) striped bass in the Tar/Pamlico, Neuse, and Cape Fear rivers indicates the stocks on the spawning grounds are near 100% hatchery origin. From 2010-2015 the majority of samples used in genetic analysis have been obtained by the North Carolina Wildlife Resources Commission (NCWRC) from the spawning grounds in these systems. There is a need to obtain samples for genetic testing from fish from areas in the CSMA that are well away from the spawning grounds and harvested by the commercial and recreational sectors. This will give a more complete analysis of hatchery contribution to these stocks.

BACKGROUND

At the May 2015 N.C. Marine Fisheries Commission (NCMFC) business meeting, under the agenda topic of Issues for Commissioners, the status of the CSMA striped bass stocks was discussed. At that time two motions were passed:

To direct division staff to meet with the Wildlife Resources Commission staff, and bring joint recommendations to the August meeting in regards to addressing problems with striped bass reproduction in the Neuse and Tar rivers. Also, direct staff to expedite analysis of fin clip data on fin chip samples currently possessed by the division. The division should also provide a method of determining whether or not the old strain of stripers still exist in the Neuse and Tar rivers.

To request the Conservation Fund Committee to meet within the next 30 days to consider providing funding for DNA testing of fin clips already taken from the Central Southern Management Area in 2016 of striped bass 24 inches and smaller

In 2010 the NCWRC entered into a contract with the South Carolina Department of Natural Resources (SCDNR) Population Genetics lab to conduct genetic parentage based tagging analyses to determine what percent of the striped bass stocks in the CSMA are of hatchery origin. Previously a method of marking (stain) the ear bones (otoliths) of fry with a chemical while in the hatchery was used to determine the percent hatchery contribution to the CSMA striped bass stocks. Fish were collected at older ages, the ear bones removed, and examined to determine if the fish was of hatchery origin or not. Advanced genetic work over the last decade has shown that this method of marking the ear bones has very low mark retention rates and is not an effective method to determine hatchery contribution to a stock.

Geneticists with the SCDNR use a technique that determines hatchery origin of a fish with 99.9% accuracy. Since 2010 all the parent fish (called broodstock) used at the hatcheries to produce the hundreds of thousands of stocked fish each year are genotyped (makeup of specific genes as passed on from ancestors). This is done each year, so a genetic record now exists of all the broodstock fish since 2010 used to produce fish that are stocked in these systems each year. Also since 2010 the yearly hatchery progeny from each river system broodstock are kept separate and only restocked into the parent river system. Now, a small piece of fin can be clipped from fish and sent to the lab to determine its genetic makeup and

thus, if it was from the hatchery broodstock or not (as well as which original river). This technique is only good on fish that were spawned since 2010, in other words year-classes produced before 2010 are unknown via parentage based tagging. So in 2016, hatchery origin can be determined on all fish that are 6 years of age and younger.

OBJECTIVES

To provide a more spatially representative genetic sample in order to determine hatchery contribution to the striped bass stocks in the Tar/Pamlico, Neuse, and Cape Fear rivers.

SCOPE OF WORK

The SCDNR Population Genetics lab will conduct microsatellite genotyping for NCDMF submitted individual fin clips, hereinafter referred to as samples, using their suite of 12 microsatellite markers for striped bass. Analysis will determine if the sample was collected from a hatchery raised fish or not. A final report will be submitted by the Population Genetics lab to the NCDMF after all samples have been processed.

The North Carolina Division of Marine Fisheries (NCDMF) collected samples in the lower portions of the CSMA systems in the spring of 2016 for genetic analysis from the commercial and recreational harvest. Currently the NCDMF has approximately 400 samples collected during 2016. The SCDNR Population Genetics lab charges \$53.53 per sample to process. If NCDMF were to process all samples total cost would be approximately \$21,412. The SCDNR Population Genetics lab indicates that if they receive the samples soon, they should have them processed and the report written by October 28, 2016.

Therefore, per the motion made at the May 2015 NCMFC business meeting, the Division of Marine Fisheries is requesting the NCMFC Conservation Fund Committee to fund this proposal in the amount of \$21,412.

EXPECTED BENEFITS

Results of this work will address an important research needs as identified for the stocking issue in Amendment 1 to North Carolina Estuarine Striped Bass Fishery Management Plan:

- Survey stocked systems to determine percent contribution of wild versus stocked fish.
- Determine if fish produced from system-specific parentage will increase stocking contribution to spawning populations.
- Determine factors impacting survivability of stocked fish in each system.

Results of this work will also be a critical component informing the development of management measures and future research needs for the CSMA striped bass stocks when the next revision of the North Carolina Estuarine Striped Bass Fishery Management plan begins, which is scheduled to start in 2018.