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**MEMORANDUM**

**CSMA SB 11-16**

**TO:** Marine Fisheries Commission  
**FROM:** Division of Marine Fisheries  
**SUBJECT:** Update on Central Southern Striped Bass

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Over the past several months the Marine Fisheries Commission and the Division of Marine Fisheries have received requests to implement emergency management measures for estuarine striped bass harvest in the Tar/Pamlico and Neuse rivers (Central Southern Management Area; note - the Cape Fear River is currently under a harvest moratorium). Public concern has increased due to previous genetic analyses that revealed nearly 100 percent of striped bass samples from the spawning grounds in these systems originated from hatchery-raised fish stocks, which would indicate a lack of annual spawning success in the Central Southern Management Area.

Public concerns have centered around high levels of fishing mortality. The division shares these concerns but does not have a sufficient quantitative basis or a peer-reviewed stock assessment to support a finding that: 1) there is a genetically distinct fish population(s) in the Central Southern Management Area; and 2) these stocks are presently “overfished” or are experiencing “overfishing” in accordance with definitions found in the Fisheries Reform Act and commission rules. Limited data for the Central Southern systems prevented a quantifiable stock determination in the 2013 Amendment 1 to the Estuarine Striped Bass Fishery Management Plan; therefore, the stock status is currently listed as “concern.” The division believes that other environmental parameters and fish migration also play significant roles in this region, in addition to fishing mortality.

Because this species is jointly managed with the Wildlife Resources Commission, a “Striped Bass Working Group” made up of staff from both agencies was formed this past spring. Given the concerns outlined above, in August 2016 the division recommended (with concurrence from the Wildlife Resources Commission) that the Marine Fisheries Commission expedite the schedule for the next review of the North Carolina Estuarine Striped Bass Fishery Management Plan to begin in 2017 instead of 2018, and that staff from both agencies continue to collaboratively prepare for this review and subsequent amendment. The commission approved this approach and the change to the fishery management plan review schedule at its August 2016 business meeting.

The Striped Bass Working Group met most recently on Oct. 25, 2016 to discuss these issues. To date, the workgroup has drafted potential revisions to the overall plan goals and objectives and agreed on stocking procedures for 2017 to be included in the North Carolina Inter-Jurisdictional Fisheries Cooperative Work Plan. Also, in order to make the overfishing/overfished determination, the first task is a peer-reviewed stock assessment. The assessment will provide the biological reference points needed to assess management actions and outcomes. The workgroup’s next meeting will focus on the stock assessment and will begin the division’s

process to provide a quantifiable stock status determination and biological reference points for each river system. Agency staff will be gathering additional datasets and other information for vetting, as well as discussing possible stock assessment models. With improved and longer time series of data, statistical catch-at-age models may be applicable.

The division is also actively investigating the percent hatchery contribution in the Central Southern stocks in areas other than the spawning grounds by collecting samples for genetic analysis from division sampling programs and the commercial and recreational fisheries (see most recent report from South Carolina Department of Natural Resources). Recent analysis of striped bass collected in the spring of 2016 show varying percent hatchery contribution across systems. The overall contribution was 84.5 percent hatchery/15.5 percent “wild.” Percent hatchery contribution for each system was: Pamlico 86.3 percent hatchery/13.7 percent “wild;” Pungo 39.0 percent hatchery/61.0 percent “wild;” and Neuse 95.3 percent hatchery/4.7 percent “wild.” There are several ongoing and proposed research projects designed to better understand the distribution of hatchery-raised vs. “wild” and hybrid striped bass in the Central Southern systems. This type of information will be incorporated in the drafting of the next fishery management plan amendment.

Concerns about the allocation of harvest between the commercial and recreational sectors, especially in light of the high hatchery contribution to the stocks, have also been raised. Under the existing joint fishery management plan, the commercial harvest has a total allowable landing of 25,000 pounds with a 10-fish-or-less trip limit during a spring-only season; while the recreational sector is constrained by an Oct. 1- April 30 season and two-fish daily bag limit. Both sectors have an 18-inch minimum size limit. Striped bass in these systems are 50-percent mature at 18.4 inches and 100-percent mature at 21.7 inches. The Wildlife Resources Commission has indicated a potential rule change for 2017, increasing the minimum size limit for striped bass in Inland Fishing Waters. The commercial harvest in pounds is greater than the estimated recreational take. However, when evaluated based on number of individuals removed from the system, the two sectors (landings plus dead discards) are nearly equal in some years and systems. In addition, significant numbers of hybrid striped bass have occasionally contributed to landings in both sectors. Allocation issues will be addressed through the fishery management plan amendment process, which includes presenting these issues to the Marine Fisheries Commission standing advisory committees and the North Carolina Estuarine Striped Bass Fishery Management Plan Advisory Committee.

At this time, the division does not recommend implementing immediate management measures. The role of fishing mortality, stock status, reference points, and allocation issues are most appropriately addressed through the upcoming, expedited review of the fishery management plan, and work on this has already begun in close coordination with the Wildlife Resources Commission.