Atlantic Croaker Technical Committee
Conference Call Summary
June 24, 2005

TC Participants
Tina Moore (NC), Erik Williams (NMFS), Russ Allen (NJ), Charlie Wenner (SC), John Foster (GA), John Clark (DE), Harry Rickabaugh (MD).

Staff
Nancy Wallace (ASMFC)

There were two major issues that were discussed during this call.

1) A possible split of the Atlantic croaker management unit at Cape Hatteras.
2) Monitoring requirements to be included in Amendment 1.

1) Possible split of the Atlantic croaker management unit at Cape Hatteras.

An overview of landings in North Carolina was presented. The Trip Ticket Program was initiated in 1994 with mandatory reporting and landings before 1994 were on a voluntary basis. Landings were not split in the ocean North and South of Cape Hatteras until 2002. An inside waters split would be more difficult because the internal water bodies are not delineated along Cape Hatteras and there are questions on movement of Atlantic croaker in internal waters. A split in inside waters in the presentation provided by Tina Moore occurred in Core Sound. All waterbodies in inside waters north and including Core Sound were defined as the Northern inside area and all waterbodies south of Core Sound were separated into the Southern inside area.

The main gears used from 1975-1981 included long haul seines in inside waters and ocean trawls in the ocean. From 1982-1993 the main gear types were still long haul seines in inside waters but the ocean waters start a split between trawls and gill nets.

From 1994-2001 landings are found almost exclusively in ocean waters by trawls and gill nets, with only limited landings in inside waters. There were a lot of regulatory changes that occurred during this time period for weakfish that indirectly impacted Atlantic croaker. During this time period flynets were banned south of Cape Hatteras (1994), mesh size restrictions, and BRD's were introduced. Landings from the dominant inside water fisheries, long haul seines and sciaenid pound nets have almost disappeared since 1990s. From 2002-2004 the majority of the landings occurred in the north ocean waters (90%) and only 8.3% from the south ocean area. Landings in recent years in inside waters only contributed 2.82% (1994-2001) and 1.20% (2002-2004) to the overall commercial state landings. The southern waters including both inside (Beaufort inlet south) and ocean waters of NC only provided 8.42% of the landings from 2002-2004. Using the N/S ocean split from 2002-2004 to back calculate area separation of the landings for North Carolina in the past would not be appropriate due to regulatory changes shifting the fisheries over time. Two genetic papers sent out to the group in May indicated that there is no separation genetically of Atlantic croaker along the east coast. Also, tagging studies are

very limited to determine movement patterns in and around North Carolina and from the South Atlantic region.

Discussion began among group members about the split. Some of the group felt that the use of genetic studies to determine a stock should be used with caution and that microchemical analysis of otoliths may be a more appropriate method. A few in the group suggested that there should be no split in inside waters and lump all inside waters to the South Atlantic. Questions arose on length frequency distributions in inside waters. A fishery independent program in Pamlico Sound showed in 2003 that length frequencies of Atlantic croaker were as long as 420 mm TL. . Ultimately, the group agreed that the current NC/SC split was based more on data collection methods and less on biology of Atlantic croaker. The biology suggests a more appropriate split involves separating NC into north and south areas. The group agrees that the dividing line for Atlantic croaker into north and south management units is warranted, but its precise location needs to be further investigated.

The reason for the NC/SC border split in the stock assessment was because of data limitations. Landings data do not include a record of area of capture and only reflect the port of landing. Attempts to parse reported landings into finer spatial areas will increase uncertainty and introduce potential bias in the estimates of total catch for each area. Some of the group felt that the current split at the NC/SC border should continue since the precision of landings is compromised when landings are parsed out into smaller regions. Also the limited landings in both the inside waters and southern area of NC in recent years is very small to the overall landings. MRFSS data would also have to be split which would increase the PSE by going to smaller areas. The limited time period for the N/S split at Cape Hatteras does not reflect the distribution in the landings in past years because of regulatory changes. Spawning differences were also noted. Recruitment in the South Atlantic (December-March) is later than in the Mid-Atlantic region (July-December). The Technical Committee felt that they should recommend to the Management Board to continue the split at the NC/SC border with research recommendations to collect data on area of capture for Atlantic croaker and to validate how Atlantic croaker should be split in North Carolina.

2) Monitoring Requirements for Amendment 1

The TC felt that monitoring requirements were not necessary and that ongoing studies should continue in order to collect data on Atlantic croaker. The TC felt the following state and federal Young-of-Year and adult surveys should continue and be investigated for inclusion in the next stock assessment. These surveys include:

1) New Jersey-
    A) The Delaware Bay finfish trawl is a fixed station survey from April to October and has been ongoing since 1991.
    B) The ocean trawl is a random stratified survey every other month since 1989.
2) DE trawl surveys.

A) Adult finfish trawl survey – samples 9 stations monthly from March through December with a 30' trawl. Coverage: Delaware Bay
B) Juvenile finfish trawl survey – samples 39 stations monthly from April through October with a 16' trawl. Coverage: Wilmington to lower Delaware Bay.

3) Maryland

A) Maryland Summer Commercial pound net survey from June through September since 1993. Sampling conducted on the water with nets set and fished by commercial fishermen. Lengths and number of catch are taken when time permits. Otoliths are taken from a sub sample of croaker and aged by South Carolina. The weight and sex is recorded for each fish taken for age.

4) VIMS Survey (already included in the stock assessment (2^{nd} round).

5) North Carolina

A) Young-of-Year in internal waters since 1972.
B) Young-of-Year (comparable to SEAMAP) in Pamlico Sound since 1987.
C) An adult fishery independent survey using gill nets in Pamlico Sound since 2001 and in the Neuse and Pamlico River systems since June 2003.

6) South Carolina

A) SEAMAP Cruise- this survey occurs in the spring, summer, and fall from Cape Hatteras to Cape Canaveral.
B) State small boats recreational survey.

7) Georgia Data Collection

A) Data from 2002 on- 36 fixed stations across the coast of GA in nearshore and outside waters.
B) Recreational catches in carcass freezer project.
C) Young-of-Year survey

8) NMFS juvenile ingress study at Beaufort, NC laboratory since 1985. This study provides a measure of reproductive input if you have no correlation to recruitment.

2) Northeast Fishery Science Center Groundfish Survey (1982- present).
Collects catch rates, age composition and size (already included in stock assessment)

<u>Additional Research Needs</u>

1) Expand the Beaufort larval study along the coast (Chesapeake Bay, NC, GA ?)

2) Tagging studies combined with otolith microchemistry in North Carolina to determine where the split of Atlantic croaker should be.

3) Collect more age data from NJ, DE, and MD.

4) Better monitoring of shrimp bycatch in the South Atlantic region.