Appendix 5 Comments and Responses to Public Comments Received on Amendment 1 to the HMS FMP.

Numerous comments were received on Amendment 1, which contains a draft Environmental Impact Statement, a draft Regulatory Impact Review, an Initial Regulatory Flexibility Analysis, and a draft Social Impact Analysis, and its proposed rule. Comments received were submitted either via letter or orally over the phone, at the public hearings, or at the HMS AP meeting. This appendix contains a summary of the major comments received and NOAA Fisheries' response. NOAA Fisheries would like to thank the all people and agencies who took the time to prepare written comments, attend public hearings, or call. A list of persons or agencies who submitted written comments are below. If you would like copies of one or more of the comments, please contact the HMS Management Division at (301) 713-2347.

1.	08/02/2003	Letter from B. Sachau
2.	08/11/2003	Letter from Carl Erickson, FV Southern Star
3.	08/24/2003	Letter from Shawn Dick, Aquatic Release Conservation
4.	08/27/2003	Letter from Phillip Frank, Florida Keys National Wildlife Refuges, U.S. Fish and Wildlife Service
5.	08/29/2003	Letter from Jason Berry
6.	09/08/2003	Letter from Eric Abrams
7.	09/09/2003	Letter from Tim Hobbs, National Coalition for Marine Conservation
8.	09/09/2003	Letter from Peter Schumann
9.	09/16/2003	Letter from Mark Reinfandt
10.	09/18/2003	Letter from Bobbi Walker, Chairman, Gulf of Mexico Fishery Management Council
11.	09/20/2003	Postcard from B. Sachau
12.	99/23/2003	Letter from Anne Norton Miller, U.S. Environmental Protection Agency
13.	09/23/2003	Letter from Duane Harris, Sea Georgia Adventures
14.	09/24/2003	Letter from Keith Aitken, Pre-paid Legal Services
15.	09/24/2003	Letter from Ricks Savage, Chairman, Mid-Atlantic Fishery Management Council
16.	09/25/2003	Letter from Pete Herber, Coastal Conservation Association of Georgia
17.	09/25/2003	Comments presented at public hearing - Georgia Department of Natural Resources
18.	09/25/2003	Letter from Russell Hudson, President, Directed Fisheries Inc.
19.	09/29/2003	Letter from Russell Hudson, President, Directed Fisheries Inc.
20.	09/30/2003	Letter from Marc Stettner, President, Northeast Hook Fisherman's Association
21.	09/30/2003	Letter form T. Edward Kotas, Chairman, Sharkfest/Key West Institute
22.	09/30/2003	Letter from Charlotte Gray Hudson, Oceana
23.	09/30/2003	Letter from Kristin Raabe, Aquatic Release Conservation
24.	10/01/2003	Letter from Al Ristori, Editor, Newark Star-Ledger, The Fisherman magazines, and Salt Water Sportsman

25.	10/02/2003	Letter from David Cupka, Chairman, South Atlantic Fishery Management Council
26.	10/02/2003	Letter from Samuel Baker, President, Southeast Florida Shark Driftnet Association, with attachments regarding proposals to the South Atlantic Fishery Management Council
27.	10/03/2003	Letter from Jerry F. Schill, President, North Carolina Fisheries Association, Inc.
28.	10/03/2003	Letter from Louis B. Daniel, III, Assistant to the Fisheries Director, State of North Carolina Department of Environment and Natural Resources Division of Marine Fisheries
29.	10/03/2003	Letter from Glen A. Hopkins
30.	10/03/2003	Letter from Elizabeth A. Babcock and Liz Lauck, Wildlife Conservation Society
31.	10/03/2003	Letter from Marydele Donnelly and Coby Dolan, The Ocean Conservancy
32.	10/03/2003	Letter from Sonja Fordham and Coby Dolan, The Ocean Conservancy
33.	10/03/2003	Letter from Nelson Beideman, Executive Director, Blue Water Fishermen's Association
34.	10/03/2003	Letter from Melissa Neiman-Kelting
35.	10/03/2003	Letter from Susan Shipman, Director, Georgia Department of Natural Resources, Coastal Resources Division
36.	10/03/2003	Letter from Russell Hudson, President, Directed Shark Fisheries, Inc.

A5.1 LCS Rebuilding Time frame

Comment 1: If prohibiting fishing for 10 years does not quite give a 70-percent chance of rebuilding the LCS complex to MSY, then prohibit fishing for 20 years.

Response: Prohibiting shark fishing for 20 years would give an 86-percent chance of rebuilding the LCS complex to MSY. This is greater than the 50-percent minimum required by the HMS FMP or the 70-percent that NOAA Fisheries uses as a guide for regarding shark management measures. However, prohibiting shark fishing for 20 years would not be consistent with the Magnuson-Stevens Act which allows NOAA Fisheries to consider a number of factors when determining the rebuilding time frame including impacts on fishing communities. If NOAA Fisheries were to prohibit fishing for 20 years, a number of businesses including fishermen, processors, and suppliers, could be forced out of business and a number of communities, including recreational fishing communities, would be adversely affected. Additionally, prohibiting fishing for 20 years would eliminate the fishery-dependent data that is needed to accurately assess the status of the stocks. Given these impacts, the objectives of the HMS FMP and this Amendment, the requirements of Magnuson-Stevens Act and other domestic law, and the results of the 2002 large and small coastal shark stock assessments, NOAA Fisheries does not believe that shark fishing should be prohibited for 20 years.

Comment 2: Our confidence in the 70-percent chance to rebuild figure is low given the number

of uncertainties and deficiencies in the plan particularly the fact that the quota is not reduced by 50 percent, the time/area closures to protect juveniles will not be implemented immediately, there is no size limit in place, and NOAA Fisheries has not accounted for all sources of mortality such as state landings.

Response: While there are a number of uncertainties and unquantifiable effects in the rebuilding plan outlined in Amendment 1, NOAA Fisheries is confident that the combination of management measures should have a 70-percent chance of rebuilding the LCS complex. The 2002 LCS stock assessment found that reducing the catches by 50 percent would have, on average, a 67-percent chance of rebuilding LCS in 30 years. While the rebuilding time frame in the amendment is shorter than 30 years and the commercial quota is reduced by 45 percent, not 50 percent, NOAA Fisheries is implementing a number of other management measures that should reduce fishing mortality and increase the reproductive potential of several stocks in the LCS complex. For example, the time/area closure will protect juvenile sharks as recommended by the 2002 LCS stock assessment. Numerous studies have shown that protecting this life stage provides the greatest benefit to increasing the population size. NOAA Fisheries feels that this time/area closure will be more effective at protecting juvenile sharks and rebuilding the population than a commercial minimum size because with a minimum size commercial fishermen would be forced to discard undersized sharks and those discarded sharks would not be counted against the commercial trip limit, which could allow for more sharks to be caught and potentially discarded. In the long-term, if dead discards were to increase as a result of a minimum size, then the commercial and recreational portions of the optimum yield would decrease and both the commercial quota level and recreational retention limit could be reduced. NOAA Fisheries does not have the same concerns for a minimum size in the recreational fishery because the recreational fishery is believed to have low post-release mortality rates and has already been limited to one shark per trip, not including the exception for Atlantic sharpnose and bonnethead sharks. NOAA Fisheries is also implementing management measures, such as the requirement for commercial fishermen to carry and use line cutters and dehooking devices, that should minimize the mortality of sharks that are caught and released. Together, these management measures, along with accounting for all sources of fishing mortality (including both Federal and State commercial landings, dead discards, and recreational catches), increasing and improving education and outreach, and increasing compliance with the recreational regulations, should give the LCS complex a 70-percent chance of rebuilding within the rebuilding time frame.

Additionally, the HMS FMP requires NOAA Fisheries to conduct periodic stock assessments for species or species-groups. If the results of future stock assessments and new information indicate that the LCS complex is not likely to be rebuilt within the revised time frame, NOAA Fisheries can adjust the reduction in the commercial quota or other management measures to ensure a 70-percent probability in rebuilding the stock over the course of the 26-year rebuilding period. Additionally, as more species-specific information becomes available, NOAA Fisheries will attempt to conduct species-specific assessments in order to ensure that any future management measure focuses on those species that are the most vulnerable or that need the most protection.

Comment 3: In considering the management options and probability of rebuilding sharks, having an additional set of alternatives with a higher probability of success would have been useful for comparison purposes. As it stands, the most conservative alternatives are the ones chosen as the preferred alternatives and may be insufficient to meet the management goals. As such, the preferred alternatives in the amendment should be considered the absolute minimum necessary to manage sharks consistent with the advice of the 2002 stock assessments.

Response: As required under NEPA, NOAA Fisheries considered a wide range of alternatives designed to rebuild LCS. The range of alternatives included those that could be considered risk-prone (e.g., removing the retention and/or size limits in the recreational fishery) to risk-averse (e.g., allowing no retention in the recreational fishery). From all the alternatives considered, NOAA Fisheries selected a group of alternatives that, consistent with the Magnuson-Stevens Act, is likely to rebuild the LCS complex within the revised rebuilding time frame while allowing for a viable shark fishery. If the results of future stock assessments indicate it is needed, NOAA Fisheries can adjust the commercial quota or other management measures to ensure a 70-percent probability of rebuilding the stock over the course of the 26-year rebuilding period.

Comment 4: The proposed rebuilding time frame is the maximum allowed under the National Standard guidelines and is set using the entire complex rather than considering the biology of each individual species. We encourage NOAA Fisheries to consider stratifying the time frame by considering the biology for individual species.

Response: NOAA Fisheries agrees that the revised rebuilding time frame is the maximum allowed under the National Standard guidelines. NOAA Fisheries would like to move toward more species-specific management in the future and will do so if fishermen can demonstrate a better ability to target and/or avoid certain species of sharks, if species-identification among commercial and recreational fishermen and commercial dealers improves, and if enough scientific data is collected that allows for more species-specific stock assessments. Thus, NOAA Fisheries will consider revising the basis for calculating the commercial quota and the classification scheme to consider a more species-specific approach to management when sufficient data are available to effectively do so.

Comment 5: The rebuilding time frame should be calculated from the time the fishery was declared overfished, in this case 1999. Restarting the clock based on new assessment information is not required by the Magnuson-Stevens Act.

Response: NOAA Fisheries had originally finalized a rebuilding plan in the 1999 HMS FMP that was designed to rebuild ridgeback LCS in 39 years and non-ridgeback LCS in 30 years. This rebuilding plan was based on the projections from the 1998 LCS stock assessment. Based on a peer review of that stock assessment, NOAA Fisheries determined that the projections from that stock assessment should not be used as the basis for management decisions. For this reason and as a result of the change in status of the two primary LCS species in the fishery, NOAA Fisheries determined it was necessary to revise the rebuilding plan. Under National Standard 1, a

rebuilding plan begins when the first measures to rebuild the stock are implemented. It is important to note that under this revised rebuilding plan, the LCS complex will be rebuilt by 2030 which coincides with the time period projected for rebuilding non-ridgeback LCS sharks under the 1999 HMS FMP (2029) and is less than the 1999 HMS FMP rebuilding time period projected for ridgeback LCS sharks (2038).

Comment 6: The proposed rebuilding time frame is illegal and runs counter to the precautionary approach. The LCS complex can and must be rebuilt within the 10-year time limit envisioned by Congress.

Response: NOAA Fisheries does not believe the revised 26-year rebuilding time frame is illegal. The Magnuson-Stevens Act specifies that if a stock can rebuild in less than 10 years, that the rebuilding time frame can be no longer than 10 years. Additionally, if a stock will take 10 years or more to rebuild, the rebuilding time frame can be as long as the time to rebuild with no fishing plus a mean generation time. Furthermore, the Magnuson-Stevens Act specifies a number of factors to consider regarding the rebuilding time frame. In 1997, NOAA Fisheries used a 50-percent probability of rebuilding to design interim management measures that would stabilize the fishery until a rebuilding plan could be finalized. In the HMS FMP, NOAA Fisheries finalized an alternative that specified that any rebuilding management measure should be at least 50-percent certain of rebuilding the stock for HMS in general, and, because of their slow growth and low reproductive potential, 70-percent certain of rebuilding the stock for sharks. After taking into account the biology of the stocks, the results of the 2002 LCS stock assessment, the requirements of the Magnuson-Stevens Act and the National Standard Guidelines, the criteria in the HMS FMP, and the status of the fishing communities that rely on economic activities involving the capture of these fish, NOAA Fisheries does not believe that a 10-year rebuilding period is appropriate for the LCS complex. If NOAA Fisheries decided to close the fishery in order to rebuild in the shortest amount of time, the fishery would need to be closed for more than 10 years in order to meet the 70-percent probability of rebuilding the stock. Under that scenario, NOAA Fisheries would have to close the commercial fishery, place a no-retention limitation on the recreational fishery, and work with all Councils and States to prevent any take of sharks in non-HMS fisheries or in areas under state jurisdiction. However, a 26-year rebuilding time frame will provide time for NOAA Fisheries to ensure all LCS will rebuild while also allowing for a viable shark fishery.

Comment 7: Applying a 70-percent probability to the setting of a time frame does nothing to enhance conservation and increases risk to the sharks. Choosing the 27-year time frame over a 10-year time frame is, at best, conservation neutral because the management measures, at least for 2004, are the same regardless of the rebuilding end date. At worst, choosing the longer time frame is riskier because it allows shark stocks to linger longer at lower biomass levels and could allow for inappropriate increases in fishing effort in future years before the complex is rebuilt.

Response: NOAA Fisheries disagrees that a 70-percent probability of achieving the rebuilding target will do nothing to enhance conservation and will increase the risk to the sharks.

Additionally, NOAA Fisheries disagrees that a 10-year time frame would be consistent with the same management measures as the revised 26-year time frame. In the HMS FMP, NOAA Fisheries decided to use a higher probability standard for sharks because the biology of sharks is different than other HMS and fish in that they take a number of years to mature, have few pups per brood, and generally only reproduce every other or every three years. This, combined with the fact that they are migratory and that some of their prey species are overfished, has led to the determination that a higher level of certainty is required when setting management actions for sharks. Thus, a 70-percent probability level is appropriate and will ultimately reduce the risk to sharks. If NOAA Fisheries were to choose a 10-year rebuilding time frame, NOAA Fisheries would need to close the fishery but would still not reach a 70-percent probability of rebuilding the LCS complex.

Comment 8: Probabilities of success should be applied only once a rebuilding time frame is set. The HMS FMP, other FMPs, and courts have all noted that management measures must have at least a 50-percent chance of success. The 2002 LCS stock assessment found that a 50-percent reduction in catch has a 50-percent chance of rebuilding the LCS complex within 10 years. Thus, the plan meets the minimum probability of success. Ironically, NOAA Fisheries does not apply the 70-percent guide to the selected time frame, noting instead that 64 percent is close enough.

Response: NOAA Fisheries disagrees that probabilities of success should be applied only once a rebuilding time frame is set. That approach is inconsistent with the Magnuson-Stevens Act and with the National Standard guidelines. Under that approach, NOAA Fisheries would have no basis for determining whether or not a stock could likely rebuild in less than 10 years or more than 10 years. This could result in unrealistic rebuilding time frames that could be so short as to leave no option other than closing the fishery or that could be so long as to never result in rebuilding the stock. Instead, NOAA Fisheries uses the probability of success both in setting the rebuilding time frame and in selecting all the alternatives to ensure that, taken together, the suite of alternatives will meet the probability standard. Thus, in Amendment 1, while reducing the overall catch by 45 percent does not give a 70-percent probability of success, the combination of catch reductions with other management actions that will likely reduce mortality of released catch or protect juvenile sharks does have a 70-percent probability of success.

A5.2 Commercial Management Measures

A. LCS Classification

Comment 1: NOAA Fisheries received a range of comments regarding the proposed classification. Comments received included: it is easier to comply with one closure date; violators can take advantage of two closure dates. We support the preferred alternative because it will simplify the regulations and reduce regulatory discards. We agree that species-specific quotas are not reasonable now and therefore support the re-aggregating the LCS complex; however, NOAA Fisheries should not abandon the goal of species-specific management. Because fishermen can actively target sandbar and blacktip sharks, we prefer the alternative that

allows for species-specific shark groupings (alternative A4) or, alternatively, the ridgeback/non-ridgeback species groupings (alternative A1). The stock assessment recommended that every effort be made to manage the LCS fishery on a species by species basis; thus, we support alternative A1, LCS groupings with different closure dates possible.

Response: NOAA Fisheries considered five different shark classifications for LCS in development of the proposed and final rule. The alternative which would implement an aggregate LCS classification with one closure date is preferred because, in combination with the other preferred alternatives, it is (1) expected to maintain historic fishing practices (since 1993) and food availability in the market place, (2) expected to reduce burden on fishermen for sorting, (3) expected to decrease, or at least not increase, the number of protected resource interactions; and (4) not expected to increase regulatory discards. During this rulemaking process NOAA Fisheries heard that many fishery participants cannot accurately identify or effectively target individual shark species. As such, NOAA Fisheries does not believe that a species-based classification is warranted at this time. However, NOAA may consider implementation of species-based LCS classifications when the ability to accurately identify and effectively target shark species improves.

Comment 2: The preferred alternative is the same classification that was in place from 1993 through 2002 but is not consistent with the rebuilt status of sandbar and blacktip shark or the economic needs of shark fishermen.

Response: The preferred alternative for LCS classification (i.e., aggregate LCS, one closure date; alternative A3) seeks to minimize bycatch (i.e., regulatory discards) of both rebuilt and overfished species of LCS, which would otherwise occur under separate closure dates or partial closures of a mixed fishery. While sandbar and blacktip sharks are no longer overfished and, in the case of blacktip sharks, may be able to withstand an increase in harvest, NOAA Fisheries also needs to rebuild overfished LCS. Based on comments that fisherman cannot identify or target specific species of shark, NOAA Fisheries does not believe species-specific management is feasible at this time. Additionally, NOAA Fisheries also believes that this alternative allows fishermen the opportunity to catch the entire quota without decreasing efficiency (i.e., increased time to sort catch, increased time at sea to make up for lost catch resulting from regulatory discards, etc.). Therefore the economic needs of fishermen are maximized with alternative A3, as compared with the other alternatives considered.

Comment 3: NOAA Fisheries should increase research, survey, and monitoring efforts to acquire the critical information on individual life histories, ecological requirements, and stock conditions to enable more species-specific management. NOAA Fisheries should develop a plan of action for moving towards species-specific management in the future.

Response: NOAA Fisheries is supportive of increasing scientific research, surveys, and monitoring efforts of shark populations, provided that funding is available to do so. Currently, NOAA Fisheries funds a number of shark focused research programs including, but not limited

to: (1) cooperative shark research (i.e., between SEFSC and Mote Marine Laboratory), (2) reducing blue shark bycatch in pelagic longline fisheries, (3) delineation of winter nursery grounds, migratory patterns, and critical habitat of juvenile sandbar sharks in the western Atlantic ocean, and (4) various observer programs in the shark fishery. NOAA Fisheries will review species-specific information and incorporate such information into stock assessments, as appropriate, as it becomes available and intends to pursue workshops to improve species identification by fishermen and dealers in the future. As such, NOAA Fisheries may consider implementation of species-based LCS classifications when the ability to accurately identify and effectively target shark species improves.

Comment 4: National Standard 1 requires NOAA Fisheries to adopt alternatives that result in the lowest quotas for vulnerable and overfished species and minimize bycatch to the greatest extent possible. Therefore, NOAA Fisheries should adopt alternative A5, which would aggregate LCS and close the fishery when the quota for the most vulnerable species is meet.

Response: National Standard 1 mandates that "conservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery for the United States fishing industry." NOAA Fisheries believes that the preferred alternative (i.e., A3) best complies with National Standard 1 of the other alternatives considered because it in combination with C2 will allow for LCS to rebuild while allowing optimum yield to be taken from the fishery. Additionally, the selected alternative is expected to decrease, or at least not increase, the number of protected resource interactions and not expected to increase regulatory discards, which is consistent with National Standard 9. As described in the Amendment, NOAA Fisheries did not feel alternative A5 was a viable alternative at this time because to date there is limited data available on individual LCS species beyond that of sandbar and blacktip. Without species-specific assessments, it is difficult to say which LCS species have highest vulnerability or even what the quota should be for any individual species. NOAA Fisheries may consider this alternative as more information becomes available in the future.

B. Shark Quota Administration

Comment 1: NOAA Fisheries received a range of comments regarding the combination of regional quotas and trimester seasons. Comments included: We support the proposed administration of regional and trimester seasons. We cannot support the proposed administration of regional and trimester seasons. Regional and trimester seasons will provide for more flexible management and improve quotas as a management tool. The regional quotas and trimester seasons will force vessels down to Florida for the January opening and will force them to fish for a shorter amount of time.

Response: NOAA Fisheries considered three separate alternatives regarding seasons and two alternatives pertaining to regional quotas. NOAA Fisheries believes that the combination of trimester seasons with regional quotas will (1) aggregate the majority of shark pupping into one fishing season (i.e., second trimester) as opposed to divide it into two or more seasons, which is

possible with either the semi-annual or quarterly season approaches, (2) provide managers with flexibility to adjust regional quotas, where necessary, to prevent mortality on juveniles and reproductive female sharks, (3) provide a higher degree of resolution on which to manage seasonal fisheries, (4) minimize the social and economic costs associated with switching gear more often (i.e., only three times as opposed to four per year), (5) give a higher percentage of the quota to each open season than would occur under a quarterly season approach, and (6) will increase the number of open seasons (i.e., three as opposed to two) and spread them across the calendar year, thereby promoting greater economic stability of fishery participants. For these reasons, NOAA Fisheries supports implementation of trimester seasons and regional quotas.

Comment 2: NOAA Fisheries received a range of comments regarding the proposed trimester approach. Comments included: The entire season, from January through November, should be closed to protect fish. The second semi-annual season closes too early. The trimester seasons will spread out the landings and avoid current price drops. The trimester approach will allow fishermen to catch sharks when grouper prices are lower and helps sharks be available year-round. Trimester seasons appear to have the greatest potential to accommodate shark pupping activities. The second trimester season should be closed to all shark fishing to reduce the catch of juveniles.

Response: NOAA Fisheries considered three different seasons for the shark fishery in the development of the proposed and final rule. Trimester seasons are preferred because they will allow managers the flexibility to open and close seasons to match species requirements such as aggregating shark pupping seasons into one fishing season, as opposed to spreading pupping time-frames over multiple open seasons. Trimesters will also avoid undesirable dates (i.e., July 1st) for market openings. Additionally, trimester seasons will give fishermen a greater chance to build new markets for sharks, given that there will be more open seasons (i.e., three as opposed to two) spread across the calendar year. Increasing the number of open seasons and effectively spreading open seasons out more evenly over the calendar year will, in the long-term, result in greater economic stability for fishermen and associated communities.

Comment 3: NOAA Fisheries should keep the semi-annual seasons and open the second season on July 15th each year.

Response: NOAA Fisheries believes that maintaining semi-annual seasons could have negative ecological, social, and/or economic impacts should semi-annual seasons continue to extend into pupping seasons. Given that LCS are overfished and overfishing is occurring, continued mortality levels on juvenile and reproductive females could cause the complex to decline further overtime. Further declines in LCS stock status could result in additional reductions in available quota and/or other management measures, which could impact fishermen and fishing communities both economically and socially. NOAA Fisheries agrees that the July 1st opening for the second semi-annual season makes it difficult for fishermen to establish markets with the forthcoming July 4th holiday. As such, NOAA Fisheries supports adoption of trimester seasons, which will aggregate the majority of shark pupping into one fishing season (i.e., second

trimester) and simultaneously avoid market problems associated with a July 1st opening, given that openings under a trimester approach would occur on January 1, May 1, and September 1 of each year.

Comment 4: NOAA Fisheries should start each season at the same time to help disperse fishing effort and promote equitable distribution of the allowable quota.

Response: While opening shark seasons at the same time for all regions may help to disperse fishing effort and promote equitable distribution of the allowable quota, NOAA Fisheries believes that allowing managers flexibility to determine alternative season opening dates (i.e., by region) will promote further consideration of safety at sea and give greater fishing opportunities based upon fish availability in each region.

Comment 5: August and September are not good times for shark fishing. Most of the effort should be in October through December. Therefore, the quota should be reapportioned from the first two trimesters to the last trimester.

Response: NOAA Fisheries recognizes that there are temporal differences in catch-per-unit-effort as well as catch composition in the shark fishery. As such, annual quotas need not be split equally between trimester seasons. Instead, trimester seasons will allow managers to establish quotas for each open season based on markets, pupping season, effort concerns, and other relevant factors. Initially, NOAA Fisheries will split the available quota equally between trimesters for the first year or two and will re-evaluate this approach via rulemaking, if necessary, based upon observed catch rates and other factors, such as stock status.

Comment 6: NOAA Fisheries received a range of comments specific to the proposed percentages for regional quotas. The comments included: the historical percentage of small coastal sharks in the Gulf of Mexico is incorrect due to improper identification and reporting. The regional quota proposed for the North Atlantic is below the actual take and would be filled quickly between the vessels fishing in the region. The North Atlantic proposed portion of the LCS quota is too large and should be reduced; the percentage was probably inflated due to misidentification of sandbar sharks. The South Atlantic proposed portion for SCS is too large due to misinformation and misidentification; there are just as many LCS reported in that region as SCS. We can only support regional quotas if one region does not prevent another region from having a fair shot at the fishery.

Response: NOAA Fisheries combined information from two separate databases containing regional landings information as reported by dealers and states to NOAA Fisheries. NOAA Fisheries believes that the landings reported by dealers and states represents the best available information pertaining to regional data. Given that implementation of regional quotas seeks to maintain historical landings, as opposed to reducing landings, NOAA Fisheries does not expect this alternative to change previous fishing practices or result in any significant economic impact. Fishery participants will be allowed to fish in any region, provided that the season for the region

in question is open and that the quota for that region has not been taken. Over time, this alternative may allow NOAA Fisheries the flexibility to manage quotas to each region's maximum economic advantage. NOAA Fisheries recognizes the need for more accurate species identification and as such, the agency will pursue mandatory workshops through a future rulemaking that will focus on improving species identification by fishery participants and possibly dealers and enforcement agents.

Comment 7: How will NOAA Fisheries enforce the regional quota approach? Will there be three separate permits for vessels fishing within the regions or can a vessel fish in an open region and land catch in a closed region? We are only supportive of the regional quota approach if permitted vessels can fish in any region.

Response: Federal fishery participants will be allowed to fish in any region, provided that the season for the region in question is open and that the quota for that region has not been taken. As such, NOAA Fisheries will not be issuing regional permits to vessels authorizing them to fish in a given region. Rather, each regional quota will be enforced by monitoring illegal fishing activity in each region, as is done in the Atlantic bluefin tuna fishery. As is current practice, the closure date for each region will be announced before the start of the season. Additionally, state agencies may have different permit and closure requirements. As such, fishery participants are encouraged to check with state agencies, where state permit and/or closure requirements are in question.

Comment 8: NOAA Fisheries should not use data from 1999 to 2001 to establish the regional quotas. Instead, NOAA Fisheries should use data from the 1980s (i.e., before management) in order to get an idea of where the fishery historically operated. If this is done, the North Atlantic will account for over half the landings.

Response: Calendar years 1999-2001 were used as the basis for establishing regional quotas because (1) they represent the period of time following the last major change in management of the shark fishery, (2) fall after implementation of limited access permits, and (3) represent the time-frame for which the best regional data is available. Using a longer timeframe or only data from the past may not provide an accurate representation of the current fishery. Over time, NOAA Fisheries may decide to adjust the regional quota, via rulemaking in order to ensure each region has an opportunity to fish.

Comment 9: NOAA Fisheries should pay particular attention to regional differences in shark pupping activity and use its discretion in allocating quotas and setting seasons so as to best prevent mortality of congregating pregnant females, pups, and juveniles.

Response: NOAA Fisheries agrees that spatial differences in fishery practices and catches warrant further consideration regional quotas as a means to prevent mortality of congregating reproductive females, pups, and juvenile sharks. Shark pupping data indicate that spatial differences exist between species utilization of various shark pupping grounds. For example,

species within the SCS complex utilize pupping grounds between South Carolina and the Gulf of Mexico, whereas some species within the LCS complex utilize only the Atlantic coast for pupping grounds. As such, NOAA Fisheries will periodically assess regional differences in shark pupping activity and should changes be required, quota adjustments will be carried out via framework action.

C. Shark Quota Basis

Comment 1: We support the preferred alternative of an MSY basis. In the future, NOAA Fisheries should estimate MSY on a species-specific basis for all LCS. NOAA Fisheries should establish a similar approach for pelagic sharks when a validated assessment is available.

Response: NOAA Fisheries supports using MSY as a basis for establishing commercial quotas. NOAA Fisheries must determine the maximum sustainable yield (MSY) as well as optimum yield (OY) and specify status determination criteria to allow a determination of the status of the stock. As such, the 1999 HMS FMP defined fishing mortality and biomass levels necessary to produce MSY and OY on a continuing basis. Given that these definitions are not subject to change in this amendment/final rule, MSY based quotas provide a direct means for determining appropriate fishery management action. MSY and OY estimates are readily available from stock assessment outputs and can be updated annually if necessary. NOAA Fisheries is currently limited in its ability to estimate MSY for all shark species within each of the management units. However, as new information becomes available, NOAA Fisheries will strive to integrate more species-specific information into stock assessments, where MSY could be calculated. Once the international stock assessment for pelagic sharks is complete, NOAA Fisheries will re-evaluate the appropriateness of existing pelagic shark quotas and the basis for calculating commercial quotas for these species.

Comment 2: NOAA Fisheries received several comments regarding the reduction in LCS quota by 40 percent instead of the recommended 50 percent. Comments included: Because the proposed alternative reduces MSY by only 40 percent instead of the recommended 50 percent, NOAA Fisheries should adopt other conservation methods such as gear restrictions and time/area closures whose effects can be quantified to show that they achieve the mortality goal of rebuilding with a 70-percent probability. The 40-percent reduction is not reasonable; there is no reliable basis to stray from the scientific advice. The assessment recommendation is based on a 50-percent probability of successful rebuilding; if NOAA Fisheries were to apply the 70 percent guide, the proposed reduction would be larger not smaller than 50 percent. Therefore, NOAA Fisheries should reduce the quota by a minimum of 50 percent.

Response: The preferred quota alternatives will implement an LCS aggregate quota based upon a 45-percent reduction of average maximum sustainable catch (MSC) for LCS, multiplied by the percentage of commercial catch attributable to the LCS complex. NOAA Fisheries reduced the 50 percent recommended reduction by five percent after consider the following factors: (1) while the stock assessment did say that the LCS complex should be reduced by 50 percent, it also said

that the reductions should be on species other than sandbar and blacktip; (2) observer data indicates that sandbar and blacktip sharks comprise approximately 67 percent of the LCS catch, indicating that a quota reduction would mostly apply to those species; (3) the peer reviews indicated that the complex assessment may not be as accurate as individual species because of biological differences between species; (4) CPUE data for silky, tiger, and scalloped hammerhead do not indicate a decline; and (5) the other preferred measures such as the time/area closure will reduce mortality and/or dead discards. Furthermore, the percent reduction has been revised upward from the 40-percent reduction originally proposed in the DEIS based upon public comment received during public hearings. NOAA Fisheries feels that a 45-percent reduction in addition to the other preferred alternatives is reasonable and will rebuild the LCS complex. The Southeast Fisheries Science Center has indicated that the combination of the preferred alternatives, namely the quota reductions and time/area closure, would increase compliance in the fishery and allow for the LCS complex to rebuild within the specified time-frame. As such, NOAA Fisheries does not believe that further reductions in LCS commercial quota are warranted at this time. However, NOAA Fisheries will adjust the quota over time based upon future stock assessments to ensure that the LCS complex rebuilds.

Comment 3: NOAA Fisheries must also account for state fisheries mortality estimates when setting quotas.

Response: State landings are included as part of the commercial landings percentage used to calculate the commercial quotas. Thus, the commercial quota is established to include landings by Federal and state fishermen. Any overharvests or underharvests will be accounted for in the same season of the following year.

Comment 4: We support the preferred alternative but the draft amendment is unclear on how information from future stock assessments will be used in setting quotas. Would 60 percent of MSY always be used regardless of the population level?

Response: The LCS aggregate quota is based upon a 45-percent reduction of average maximum sustainable catch (MSC) for LCS, multiplied by the percentage of commercial catch attributable to the LCS complex. As such, this percent reduction may not be used when setting future quotas. Instead, NOAA Fisheries will assess the appropriateness of percent reductions and/or increases as new information becomes available in future stock assessments in order to ensure that the LCS complex rebuilds within the rebuilding timeframe.

Comment 5: We support the proposed MSY basis as long as that calculation continues to incorporate a target fishing mortality rate at 75 percent of F_{MSY}. We would also support expanding this precautionary buffer by lowering the percent of F but not increasing the rate toward F_{MSY}.

Response: The 1999 HMS FMP defined fishing mortality and biomass levels necessary to produce MSY and OY on a continuing basis. In summary, a species is considered overfished

when the current biomass (B) is less than the minimum stock size threshold. The minimum stock size threshold is determined based on the natural mortality of the stock and the biomass at Maximum Sustainable Yield (B_{MSY}). The MSY is the maximum long-term average yield that can be produced by a stock on a continuing basis. Overfishing is occurring on a species if the current fishing mortality (F) is greater than the fishing mortality at MSY (F_{MSY}). When one or both of these measures occur, a species is declared overfished and action to rebuild the stock and/or prevent overfishing is needed within one year. A species is considered rebuilt when B is greater than B_{MSY} and F is less than F_{MSY}. A species is considered healthy when B is greater than or equal to the biomass at optimum yield (B_{OY}) and F is less than or equal to the fishing mortality at optimum yield (F_{OY}). NOAA Fisheries is not changing these definitions in this amendment, thus the target control rule for managing healthy stocks continues to be 75 percent of F_{MSY}. This definition is consistent with the National Standard guildelines.

D. Minimum Size Restrictions

Comment 1: NOAA Fisheries received a range of comments regarding what the minimum size should be. Comments included: We support the no commercial minimum size alternative. The minimum size in the HMS FMP was based on sandbar sharks but does not fit for all ridgeback LCS species. We support the proposed no minimum size because the minimum size was established for sandbar sharks which is no longer overfished and because it will help reduce regulatory discards. We support a minimum size for sharks. The minimum size of any shark should be 15 feet. If recreational fishermen have a minimum size to protect juveniles, commercial fishermen should have a minimum size as well. We could support no commercial minimum size if juveniles of all species were protected by time/area closures; the proposed time/area closure does not do this.

Response: NOAA Fisheries considered six different minimum size alternatives for possible implementation in the commercial fishery. The alternative which would not implement a minimum size for the commercial fishery is preferred because, in combination with the other preferred alternatives, most notably the time/area closure offshore North Carolina, it will minimize regulatory discards as well as minimize economic and social impacts to commercial fishermen. NOAA Fisheries believes that the time/area closure offshore North Carolina will provide adequate protection for juvenile and neonate sharks. Furthermore, NOAA Fisheries believes that commercial gear, unlike recreational gear, can have high post release mortality rates. Therefore commercial management measures, which are aimed at reducing (i.e., quota reductions) or preventing (i.e., via time/area closures) catch are better for protecting juvenile and neonate sharks.

Comment 2: NOAA Fisheries made a strong case in the HMS FMP for a minimum size based on protecting the age classes with the highest reproductive potential, demographic information, and the proportion of sharks brought to the boat dead. Now that NOAA Fisheries is backing away from a ridgeback LCS quota, this measure is needed to protect the most sensitive life stages of ridgeback LCS (sandbar and dusky sharks in particular). NOAA Fisheries should maintain the

minimum size, show quantitative analyses that indicate a minimum size is not needed, or replace it with more effective species-specific measures to protect juvenile dusky and sandbar sharks.

Response: NOAA Fisheries does not agree that maintenance of the minimum size under the no action alternative in the commercial fishery is warranted at this time. This Amendment selects several commercial management measures including, but not limited to, trimester seasons, regional quotas, reductions in the LCS quota, bycatch reduction measures, and a time/area closure, which are intended to reduce mortality of LCS. Scientific review and associated quantitative analyses performed by the Southeast Fisheries Science Center document that the combination of the preferred alternatives as outlined in the DEIS, would allow for the LCS complex to rebuild within the specified time-frame outlined. Furthermore, NOAA Fisheries has revised upward the percent reduction (i.e., from 40% to 45%) associated with commercial quotas for the LCS complex to further ensure that rebuilding goals are realized. As such, NOAA Fisheries does not believe that the addition of a minimum size in the commercial shark fishery is warranted at this time.

Comment 3: If NOAA Fisheries does not adopt a minimum size, it must adopt a time/area closure to reduce bycatch of juvenile and neonate sharks to levels at least as great as would be achieved with minimum sizes.

Response: NOAA Fisheries agrees that implementation of a time/area closure would reduce bycatch of juvenile and neonate sharks. However, implementation of the time/area closure alone would not be sufficient to meet the rebuilding target for the LCS complex. As such, NOAA Fisheries supports implementation of multiple management measures including, but not limited to reductions in the LCS quota, bycatch reduction measures, and time/area closures, which are intended reduce bycatch of juvenile and neonate sharks.

Comment 4: NOAA Fisheries should establish sub-group or species-specific minimum sizes within the LCS, SCS, and/or pelagic shark species groups as justified by new or updated research.

Response: NOAA Fisheries disagrees that at this time minimum sizes should be established for sub-groups or individual species within each management unit. While a commercial minimum size would seek to protect and reduce fishing mortality on juvenile sharks, any conservation benefits gained may be offset by increases in regulatory discards and associated post-release mortality given that commercial fishermen may be unable to avoid mixed-size aggregations of some shark species. For instance, while sandbar sharks tend to segregate by size, blacktip sharks and other species do not. Regulatory discards may also result in effort increases by fishermen in order to make up for lost catches, which could also result in increased interactions with protected (i.e., sea turtles and marine mammals) and non-targeted (i.e. prohibited sharks and other finfish) species. Additionally, regulatory discards of LCS are not counted against the 4,000 pound trip limit. Thus, if a fisherman should catch a set full of undersized sharks, those sharks would be discarded and the fisherman could set the gear again, possibly in another school of small sharks.

If the ability of fishermen to target certain species of sharks improves, then NOAA Fisheries may once again consider minimum sizes in the commercial fishery.

Comment 5: Commercial fishermen have long claimed that most sharks come in alive. Therefore, there does not seem to be any rationale for the insistence by NOAA Fisheries that the recreational minimum size is essential to protect the species while similar measures for commercial fisheries are eliminated. A commercial minimum size for mako sharks is overdue. Longliners are willing to compromise for a minimum size on mako sharks.

Response: Commercial fishery observer data indicate that a number of LCS exhibit low survivability following longline capture. These species include spinner (63 percent dead when brought to the vessel), dusky (81 percent), scalloped hammerhead (87 percent), blacktip (88 percent), silky (90 percent), and great hammerhead (95 percent) (Burgess and Morgan, 2003). As such, NOAA Fisheries believes that implementation of a minimum size in the commercial fishery would result in significant increases in regulatory discards of LCS.

E. Commercial Shark Quota: General

Comment 1: NOAA Fisheries received a range of comments regarding what the commercial quota level should be. Comments included: Commercial quota levels should be reduced or even eliminated until the complex recovers. Quotas should be reduced by 700 percent. We support the quota alternatives (classification, administration, and basis) insofar as that together they result in the lowest overall quotas to ensure sustainable levels for all species and protect juveniles.

Response: NOAA Fisheries did not propose a specific quota level. Instead, NOAA Fisheries considered a wide range of quotas that resulted from the combination of classification and quota basis alternatives. These alternatives resulted in the possibility of seven different commercial quotas for LCS and three different commercial quotas for SCS. Each quota alternative carefully considered the results of the 2002 stock assessments for LCS and SCS. The preferred quota alternatives will implement commercial quota levels of 1,017 mt dw for the LCS aggregate and 454 mt dw for the SCS aggregate. NOAA Fisheries believes these quota levels will rebuild the LCS complex within the necessary time-frame and prevent overfishing of SCS. If future stock assessments indicate adjustments are necessary to meet these goals, then the preferred quota basis alternative will allow NOAA Fisheries the flexibility to address such adjustments.

Comment 2: The most recent stock assessment called for a 50-percent reduction in catches for the LCS complex but the preferred alternatives combined result in a 34-percent reduction in commercial catch from recent years (1,692.7 mt dw to 1,109 mt dw). While the additional measures may result in further reductions in mortality, the other proposed measures could increase the quotas and undermine management.

Response: NOAA Fisheries believes that the combination of preferred alternatives including, but not limited to, a commercial quota with a 45-percent reduction in catches and a time/area closure

aimed at protecting juvenile and neonate sharks will rebuild the LCS complex. This is further substantiated by analyses performed by the Southeast Fisheries Science Center which document that the combination of the preferred alternatives as outlined in the DEIS would allow for the LCS complex to rebuild within the specified time-frame outlined. Furthermore, NOAA Fisheries does not believe that the other preferred alternatives (i.e., trimester seasons and regional quotas), as outlined in the FEIS, will result in an increase in quotas that would undermine management.

Comment 3: NOAA Fisheries received several comments regarding the apparent increase in quota from the total of 816 mt dw in the HMS FMP to the proposed 1,109 mt dw. Comments included: Even though LCS are overfished and overfishing is occurring, NOAA Fisheries is proposing to increase the LCS quota by 35 percent; this is hard to understand. NOAA Fisheries should move forward with the MSY quota basis but maintain the 816 mt dw quota level until a new, validated stock assessment can be carried out.

Response: The no action alternative would implement commercial quota levels for LCS (i.e., 620 mt dw for ridgeback LCS and 196 mt dw for non-ridgeback LCS) totaling 816 mt dw, which were approved in the 1999 HMS FMP based on projection models in the 1998 LCS stock assessment. These quota levels were never implemented due to a court approved settlement agreement. Taking into consideration the settlement agreement, the results of the 1998 stock assessment peer reviews, and other information, NOAA Fisheries maintained the 1997 commercial quotas for LCS (i.e., 1,285 mt dw) as an interim measure pending completion of this amendment. As such, except for 2003, commercial fishermen have been fishing under the LCS quota of 1,285 mt dw, since 1997. Therefore, the preferred alternatives, which would implement a LCS quota of 1,017, represent a 21-percent reduction in available quota compared to the 1,285 mt dw baseline.

Comment 4: The LCS quota component of the species-specific quota (alternative A4) is too low and should be doubled in order to reduce the potential for regulatory discards.

Response: NOAA Fisheries disagrees that the resulting species-specific quota alternative considered for LCS is too low. Both alternatives considered for species-specific quotas (i.e., MSY and average landings) incorporated an appropriate percent reduction, as recommended in the 2002 LCS stock assessment. Additionally, the 2002 stock assessment clearly indicated that LCS reductions should focus on species other than sandbar and blacktip. Because regulatory discards will occur as a result of implementing species-specific quotas in the LCS fishery, NOAA Fisheries selected alternatives, which in combination with one another will aggregate LCS species and establish one commercial quota for the complex.

Comment 5: Fishing pressure on all LCS species except sandbar and blacktip has been abated since the HMS FMP. Any need to reduce the potential for bycatch of the other species via the use of an aggregate quota at a low quota level is inconsistent with the status and biomass levels of the principal commercial species and subject to the practicability standard of National Standard 9. It is not practicable to reduce the commercial fishery now that the primary

commercial species are rebuilt.

Response: National Standard 9 states that "conservation and management measures shall, to the extent practicable (a) minimize bycatch and (b) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch." As such, NOAA Fisheries believes that the preferred alternatives, which would aggregate LCS species and establish one commercial quota for the complex, will minimize bycatch (i.e., regulatory discards of shark) resulting from partial closures (i.e., multiple closure dates by LCS grouping or individual species as a result of quotas being taken) of a mixed fishery and allow fishermen the opportunity to catch the entire quota. Additionally, the number of protected resource interactions may decrease, or at least not increase, if fishermen do not have to increase effort in order to make up for lost catch during partial closures and given that quotas will be lower for LCS as a result of combining preferred alternatives.

Comment 6: Mexican fishermen catch huge amounts of sharks. Why are U.S. fishermen limited? These limitations on U.S. fishermen has kept prices down.

Response: NOAA Fisheries has regulatory jurisdiction over the exclusive economic zone (i.e., from generally 3 nautical miles seaward to the 200 nautical mile limit) in U.S. waters but cannot regulate the fishing activities of other countries. However, consistent with the National Plan of Action and the Shark Finning Prohibition Act, NOAA Fisheries is continuing cooperative research efforts with other countries (e.g., Canada and Mexico) and engaging in deeper dialogues with international fishery management organizations such as ICCAT, FAO, and others as appropriate for shark management.

Comment 7: We need an adequate incidental quota to reduce/eliminate regulatory discards and cover the inevitable secondary catches in many fisheries.

Response: NOAA Fisheries agrees that such an alternative could be a viable alternative for reducing regulatory discards. As such, NOAA Fisheries will investigate this and similar alternatives further in a future rulemaking.

A5.3 Recreational Management Measures

A. Retention Limit

Comment 1: NOAA Fisheries received a range of comments regarding the appropriate recreational retention limit. These comments include: We support the preferred alternative and suggest that anglers also be allowed one additional blacktip shark because the stock is rebuilt; only one shark of any species per vessel per trip should be allowed because most recreational anglers cannot identify individual shark species; the proposed alternative is appropriate and precautionary because the recreational sector has been fishing under regulations based on a stock assessment that was overturned and, therefore, contributed more to rebuilding; we do not oppose

the proposed addition of bonnethead, but urge NOAA Fisheries to monitor this species to prevent overexploitation; South Carolina has already taken the proposed action based on the same stock assessment results; any additional catch reductions that may be required to meet management goals should come from the commercial sector before considering further cuts to the recreational sector; recreational fishermen kill sharks for no reason and cause numerous dead discards to wash up on the beach; and, recreational take levels should be reduced.

Response: NOAA Fisheries believes that alternative E2 (one shark per vessel per trip plus one Atlantic sharpnose and one bonnethead shark per person per trip) is appropriate for the recreational shark fishery. This alternative could reduce recreational harvest levels by the 80 - 85 percent required under this amendment's rebuilding plan if angler compliance increases. NOAA Fisheries analyzed other alternatives in this amendment that would have allowed the retention of additional LCS, SCS, and pelagic sharks (alternatives E3, E4, and E7). However, because the 2002 LCS stock assessment indicates that the LCS complex needs a reduction in fishing mortality and many recreational anglers cannot correctly identify sharks, NOAA Fisheries does not believe that those alternatives would achieve the level of reduction needed to rebuild LCS. With regard to discards and mortality in the recreational fishery, NOAA Fisheries urges anglers to comply with size and retention limits and release sharks in a manner that maximizes their survival. NOAA Fisheries may adjust size and retention limits in the future based on the results of future stock assessments.

Comment 2: NOAA Fisheries received several comments regarding methods of increasing compliance within the recreational fishery. These comments include: Any non-compliance by the recreational sector is due to confusion with the current regulations and, to a lesser extent, the proper identification of different shark species; NOAA Fisheries can solve these problems by increasing angler education and outreach; compliance and enforcement is not strong in Federal waters; and, NOAA Fisheries should increase outreach by using the internet, linking the HMS regulations to the NOAA weather page, and printing flyers for marinas, Sea Grant, port agents, and states to hand out.

Response: NOAA Fisheries agrees that compliance in the recreational fishery needs to be increased and is working to increase outreach and available educational materials. NOAA Fisheries will distribute a revised Atlantic shark recreational fishery brochure after the final rule for this amendment is published. It will contain information regarding HMS Angling category permits, HMS Charter/Headboat permits, bag limits and minimum sizes, release information, landing restrictions, the no sale provision, HMS tournament registration, tagging information, as well as species that may be retained, and species that must be released. Additional brochures on other HMS fisheries are available. NOAA Fisheries is also currently producing an identification guide for sharks, tunas, and billfishes of the Atlantic and Gulf of Mexico that should be available shortly. Further, NOAA Fisheries received public comment in favor of mandatory educational workshops for anglers and commercial fishermen discussing species identification, release techniques, and regulations. The Agency (NOAA Fisheries) intends to move forward with requiring participation in mandatory workshops in a future rulemaking and will attempt to make

voluntary workshops available to the public in the interim.

Comment 3: The one-shark per boat limit is not a problem except in tournaments where anglers may be forced to decide between keeping an eligible shark or taking a chance on catching a larger one. The difference between allowing one or two recreationally caught sharks would be minuscule on an annual basis, in comparison with what a longliner could kill during the same time period.

Response: NOAA Fisheries disagrees that allowing recreational anglers an additional shark each would have minor impacts compared to the commercial fleet. Currently, recreational fishermen take more sharks than commercial fishermen (142,000 LCS in 2001 versus 99,200 LCS in the commercial fishery). Additionally, recreational fishermen catch smaller sharks than commercial fishermen (average size of approximately 10 pounds versus 36 pounds in the commercial fishery). This information, combined with the facts that most anglers cannot correctly identify sharks and the LCS stock assessment recommended protecting juvenile LCS, has led NOAA Fisheries to the one shark limit. Further, the vast numbers of recreational anglers could lead to large numbers of LCS being taken. NOAA Fisheries analyzed an alternative (E4) that would have allowed vessels with HMS Angling category permits participating in registered tournaments, or HMS CHB permit holders on for hire trips, to retain one shark per person, up to two sharks per vessel, per trip, as well as one Atlantic sharpnose and one bonnethead per person per trip. NOAA Fisheries believes that this alternative would have resulted in mortality levels greater than those expected from alternatives E1, E2, and E3, and is not consistent with the 2002 LCS stock assessment which indicates that the LCS complex needs a reduction in fishing mortality. Additionally, without more information regarding the status of pelagic sharks, this alternative could have been detrimental to pelagic sharks. However, this alternative could be combined with other fishing controls (e.g., increased minimum sizes) so that overall mortality is not increased. NOAA Fisheries may consider this approach in the future.

Comment 4: Many tournaments have restricted eligible species only to makos and threshers in order to avoid the waste of sharks not normally taken for food.

Response: NOAA Fisheries appreciates and encourages conservation efforts by anglers and tournament organizers.

B. Minimum Size Restrictions

Comment 1: NOAA Fisheries received a range of comments regarding the recreational minimum size. The comments include: We support the proposed alternative because a minimum size helps to promote the live release of young sharks; the number of recreational fishermen who fish for sharks from Maine to Texas could number in the millions, which could significantly affect the mortality of juvenile sharks especially if there is no minimum size; South Carolina has already taken this proposed measure; most recreational anglers support a minimum size larger than is being proposed; because many fish are killed before they are measured, particularly if they are

dangerous, we cannot support a recreational minimum size; and, an exception to the minimum size for blacknose sharks should be added, because they are not overfished and do not reach the proposed minimum size.

Response: NOAA Fisheries believes that the alternative F2 (4.5 feet fork length for all sharks, no size limit for Atlantic sharpnose and bonnethead sharks) is appropriate for the recreational shark fishery. Sharks caught in recreational fisheries are thought to have low post-release mortality rates and the preferred 4.5 foot fork length minimum size limit should minimize fishing mortality on the stages that contribute the most to population growth by maintaining catch-and-release fishing on juvenile and subadult sharks. The allowances for the retention of Atlantic sharpnose and bonnethead sharks without a minimum size were preferred because these species are easily identified, not overfished or experiencing overfishing, do not commonly reach the current 4.5 foot fork length minimum size limit, and are important recreational catches is some regions. Exceptions for other SCS species were not analyzed in this amendment because of difficulties with identification (e.g., blacknose sharks) or because they are currently experiencing overfishing (e.g., finetooth sharks).

NOAA Fisheries received public comment concerning the safety of anglers who are required to measure live sharks in order to retain them. The Agency recommends that anglers mark areas on the outside of fishing vessel hulls (e.g., at the waterline or boot stripe) with the minimum size. If a shark is smaller than this measurement, it should be released. If a shark is larger than the measurement and not a prohibited species, it could be retained and killed before bringing it onboard.

Comment 2: Information on proper release techniques and equipment should be made available to the recreational sector.

Response: NOAA Fisheries agrees and believes that workshops (alternative J8) demonstrating proper handling and release techniques for finfish, sharks, and protected resources, and discussing regulations and species identification could reduce bycatch mortality, improve compliance with current regulations, and improve accuracy of reported data. NOAA Fisheries received public comment in favor of mandatory workshops discussing these issues. The Agency intends to move forward with requiring participation in mandatory workshops in a future rulemaking and will attempt to make voluntary workshops available to the public in the interim.

C. Authorized Gears

Comment 1: NOAA Fisheries received a range of comments regarding authorized gears. These comments include: We support the preferred alternative; recreational fishing techniques should be limited to rod and reel and handlines; spearfishing gear should also be added to the list of allowable recreational fishing gears; bandit gear is not appropriate for the recreational fishery; bandit gear should be an allowable gear; and, harpoon gear should be added to the list because many fishermen feel it is easier and safer to use harpoons than gaffs.

Response: NOAA Fisheries believes that alternative G2 (rod and reel and handline gear) is appropriate for the recreational shark fishery. This alternative will promote the use of gears with lower bycatch and bycatch mortality of sharks, finfish, and protected species, and will promote consistency within recreational HMS fisheries. Bandit gear was not selected as an allowable gear because it has traditionally been considered a commercial fishing gear and because the vast majority of recreational fishermen use rod and reel or handline gear. Spearfishing gear has not been an allowable gear in the recreational shark fishery and therefore was not included. However, implements used to secure rod and reel or handline catches alongside a vessel (e.g., gaffs and harpoons) are being allowed.

Comment 2: Limiting the recreational fishery to handline and rod and reel would prohibit landings by recreational gillnet fishermen.

Response: This is correct. All sharks caught recreationally with gears other than rod and reel and handline in Federal waters must be released. NOAA Fisheries does not believe that this measure will increase discards substantially, because the vast majority of recreational fishermen already use rod and reel or handline gear and recreational fishermen, including those using gillnets, have been limited to one shark per vessel per trip since 1999.

Comment 3: NOAA Fisheries should provide a provision that would allow disabled anglers who cannot hold the gear to fish.

Response: NOAA Fisheries agrees and will allow fishermen who are unable to hold or operate rod and reel or handline gear to apply for an exempted fishing permit that would allow them to fish for sharks recreationally with alternative gear.

A5.4 Bycatch Reduction Management Measures

A. Gear Restrictions

i. Authorized gear

Comment 1: NOAA Fisheries received a range of comments regarding the proposed regulation to ban drift gillnet fishing and allow strikenet fishing only. The comments include: Strikenetting and drift gillnetting should be stopped; no observations of these gear types is accurate; because of bycatch problems, many states have passed regulations banning drift gillnets, therefore, NOAA Fisheries should as well; gillnets should not be allowed because, in addition to unacceptable levels of bycatch of sea turtles, marine mammals, red drum, tarpon, and other game fish, the small shark gillnet fishery in Federal waters off Georgia drains limited law enforcement resources that are needed elsewhere; we support the preferred alternative allowing strikenets only, if observer coverage is maintained to document a reduction in bycatch; if there is no reduction, this gear type should be removed from the list of authorized gear types; there is no reason to close the shark gillnet fishery because bycatch of protected resources is within the

allowance for those species; NOAA Fisheries should not eliminate a viable fishery that has reliable observer science behind it; and, there are only five vessels remaining in the fishery, which is down from the historic twelve vessels that used to participate.

Response: The intent of this alternative (J3) was to allow the commercial shark gillnet fishery to operate while minimizing interactions with protected resources and reducing the bycatch of non-target species. It has been brought to the attention of the Agency that allowing the use of strikenets only would not accomplish this objective. Therefore, the final regulations permit the use of drift gillnets with possible gear modifications or other measures being implemented through a future rulemaking, based upon further study.

Comment 2: The State of Georgia has requested a ban on gillnets since 1992 and continues to request this ban. Because Georgia has banned gillnets, the presence of a gillnet fishery in adjacent Federal waters compromises State management and regulatory statutes and does not meet the standards for consistency required under Georgia's CZMA program. Using GPS technology, it may be possible for NOAA Fisheries to close the EEZ to gillnets adjacent to Georgia to alleviate ongoing consistency and enforcement problems.

Response: The Coastal Zone Management Act (CZMA, 1972, reauthorized 1996) requires that Federal actions be consistent with the enforceable policies of all state coastal zone management programs. NOAA Fisheries has determined that the list of current preferred alternatives which seek to rebuild the LCS complex, prevent overfishing of the LCS complex, and prevent overfishing of other species of sharks will be implemented in a manner consistent to the maximum extent practicable with the enforceable policies of the coastal states in the Atlantic, Gulf of Mexico, and Caribbean that have federally approved coastal zone management programs. NOAA Fisheries asked for states' concurrence with this determination during the proposed rule stage. As of October 31, 10 states had replied affirmatively regarding the consistency determination. NOAA Fisheries presumes that the remaining states that have not yet responded also concur with the determination. One state, Georgia, replied that allowing the use of gillnets, including the strikenet method, is not consistent with the State's CZM program.

The State of Georgia objects to the consistency determination due to the continuing operation of the shark gillnet fishery in Federal waters impacting resources shared by adjacent state waters. NOAA Fisheries shares the State of Georgia's concern regarding the impact of the shark gillnet fishery on protected resources and sport fish. However, data currently available indicate relatively low rates of bycatch and bycatch mortality of protected species and other finfish in this fishery. In the BiOp conducted for this rulemaking, NOAA Fisheries determined that the continued operation of the shark gillnet fishery would not jeopardize any endangered or threatened resources and issued a new incidental take statement for the fishery. Therefore, NOAA Fisheries is not prohibiting the use of this gear in this rulemaking. This finding is consistent with National Standard 2 which requires that management measures be based on the best scientific information available, including the conclusions of the BiOp. In this amendment, NOAA Fisheries is preferring a measure that will require all shark gillnet vessels to install and

activate a VMS during right whale calving season, and is making a commitment to examine gear modifications or other alternatives to reduce bycatch and bycatch mortality in future rulemakings. NOAA Fisheries will also work with existing take reduction teams and relevant Fishery Management Councils to examine methods of reducing bycatch. Thus, NOAA Fisheries finds that the final regulations implemented in Amendment 1 are consistent with Georgia's Coastal Zone Management Program to the maximum extent practicable.

Comment 3: If only strikenetting is allowed, the State of Georgia would continue to ask for 100 percent observer coverage because the reduction of bycatch using strikenet gear in or near Georgia waters has not been adequately investigated. Unlike the waters off Florida, the waters off Georgia are highly turbid. Without adequate observer data, allowing strikenetting for sharks is not a risk-averse strategy to reduce bycatch.

Response: NOAA Fisheries does not prefer an alternative that would limit or remove gillnet gear from the list of authorized gears in this rulemaking. The Agency understands the concerns about the need for adequate observer data documenting gillnet operations and catch near Georgia waters and will continue to monitor catch and bycatch, protected species interactions, and fishery characteristics through continued observer coverage. NOAA Fisheries will consider other alternatives to reduce bycatch and bycatch mortality in a future rulemaking.

Comment 4: Many states ban both longling and gillnetting without adequate data. If longlines are allowed in Federal waters, then gillnets should similarly be allowed.

Response: NOAA Fisheries has banned gear types (e.g., gillnets in the swordfish fishery) and restricted the use of other gear types (e.g., area closures in the pelagic longline fishery) for a variety of reasons including reducing bycatch and bycatch mortality. In this case, NOAA Fisheries is not removing gillnet gear from the list of authorized gears at this time. However, NOAA Fisheries will consider gear modifications or other measures, such as a closure, in a future rulemaking.

Comment 5: Blacktip and Atlantic sharpnose sharks make up the majority of our drift gillnet landings and are not overfished or experiencing overfishing according to the latest stock assessments. Our biggest discard species in the LCS fishery are rays. In the small coastal shark fishery, our biggest discard species is king mackerel and we have petitioned the South Atlantic Fishery Management Council to allow us to retain more of this catch per trip.

Response: NOAA Fisheries agrees that the latest LCS and SCS stock assessments indicate that Atlantic sharpnose and blacktip sharks are not overfished and overfishing is not occurring. In regard to the reduction of bycatch and discards, NOAA Fisheries supports the reduction of bycatch, including regulatory discards, in HMS fisheries.

According to 2002 shark gillnet fishery observer data, king mackerel was observed to be the species most commonly discarded from drift gillnet sets, with approximately 248 fish discarded.

While fishing with strikenet gear, great barracuda (approximately 4 fish) and cownose rays (one fish) were observed to be the most commonly discarded species. Little tunny, king mackerel, and great barracuda were the three non-target species most commonly observed caught in the shark gillnet fishery in 2002.

Comment 6: The preferred alternative allowing strikenet gear only appears as if the Agency is trying to supercede the actions of both the Atlantic Large Whale Take Reduction Plan and the Bottlenose Dolphin Take Reduction Plan. Negotiated actions with members working on these plans are about to become final. If NOAA Fisheries eliminates the use of gillnet gear, it would be wrong and set a dangerous precedent. Instead, NOAA Fisheries should start a buyout program for these vessels and regularly attend take reduction plan meetings. There is no support from either take reduction team to ban drift gillnetting.

Response: As part of this amendment, NOAA Fisheries analyzed the impacts of various bycatch alternatives on bycatch species and protected resources in an attempt to minimize bycatch and bycatch mortality in HMS fisheries to the extent practicable. In this final action, NOAA Fisheries is not implementing measures to limit or remove gillnet gear from the list of authorized gears. A buyout program is beyond the scope of this rulemaking, but could be considered in the future should funding become available.

Comment 7: The only way to fish for small sharpnose sharks is with a drift gillnet in deep water. Strikenet gear will not work because it only catches large coastal sharks.

Response: NOAA Fisheries has reviewed available shark gillnet fishery observer data and agrees that strikenet gear does not appear to be effective at catching Atlantic sharpnose sharks. For this reason, and reasons discussed above, drift gillnet gear will not be banned in this rulemaking.

Comment 8: Enforcement efforts in the EEZ could be complicated due to similarities between drift gillnet and strikenet gear. It is not clear what regulatory parameters will be used to allow clearly enforceable distinctions between the gear types.

Response: NOAA Fisheries agrees that enforcement efforts could be complicated due to similarities between drift gillnet and stikenet gear. For this reason, and reasons discussed above, drift gillnet gear will not be banned in this rulemaking.

Comment 9: The five vessels actively using drift gillnet should be given gillnet endorsements on their directed shark permits to limit entry into the fishery. NOAA Fisheries should consider allowing the five fishing vessels currently in the fishery to continue and prevent any new vessels from entering the fishery.

Response: NOAA Fisheries did not consider specific permit endorsements in this amendment, but may consider options to limit vessel participation in the shark gillnet fishery in the future.

Comment 10: NOAA Fisheries received several comments regarding the modification of shark gillnet gear to reduce protected resources interactions. The comments include: Instead of banning the gear, NOAA Fisheries should reduce the allowable length of the gear; NOAA Fisheries should consider gear modifications to reduce bycatch; my vessel accounted for a large number of interactions between marine mammals and sea turtles until I replaced a large section of my gear, while I still have some interactions with them, they swim away unharmed and are observed to be healthy; I used new gear this past summer with tighter mesh and this increased my sharpnose catch and decreased my interactions with protected species; fishermen who use shark drift gillnet gear have adapted their gear using corks to keep the gear high in the water and allow any entangled turtles to get to the surface and survive; fishermen who do not usually fish in the fishery or who use stab nets are the fishermen who catch dead turtles; and, instead of banning drift gillnets, NOAA Fisheries should consider the use of pingers to reduce interactions with protected species.

Response: Gear modifications have been shown to be effective in other fisheries. As such, NOAA Fisheries agrees that gear modifications could be effective at reducing bycatch in the shark gillnet fishery. However, many gear modification measures are difficult to enforce or can be circumvented by altering fishing patterns, resulting in no bycatch reduction. NOAA Fisheries continues to support research projects regarding effectiveness of gear modifications, to the extent that funding allows, and will consider the possibility gear modifications in a future rulemaking.

Comment 11: NOAA Fisheries received several comments regarding sea turtle interactions in the shark gillnet fishery. The comments include: In terms of actual numbers, relatively few sea turtles have been captured in the shark gillnet fisheries; while this fishery is supposed to have high levels of observer coverage, this is not always the case; as noted in the June 2001 BiOp, this fishery can have a large impact on leatherback sea turtles at a time when reproductive females are in the area; and, I have been fishing 18 years and carried an observer for 10 years. In those 10 years, I have only caught one sea turtle.

Response: The best available information indicates that relatively few sea turtles have been captured in the shark gillnet fishery. This has been substantiated by recent studies performed by NOAA's Southeast Fisheries Science Center and Protected Resources Division. In the October 2003 Biological Opinion, NOAA Fisheries Protected Resources Division estimated that over a five-year period the expected take of sea turtles in the shark gillnet fishery would be 10 total loggerhead sea turtle captures with one mortality, and 22 total leatherback sea turtles captures with three mortalities. The Opinion concluded that the continued operation of the shark fisheries are not likely to jeopardize the continued existence of the endangered Kemp's Ridley, green, hawksbill, and leatherback sea turtles, and the threatened loggerhead sea turtle. The Atlantic Large Whale Take Reduction Plan and the June 14, 2001, Biological Opinion mandate 100 percent observer coverage of the southeast shark gillnet fishery during right whale calving season. An interim final rule published in March 2001 (66 FR 17370) established a level of observer coverage outside of right whale calving season that would attain a sample size needed to provide estimates of sea turtle and marine mammal interactions. This rule was formalized with

the rule that closed the Northeast Distant Statistical Reporting Area (NED) (67 FR 45393, July 9, 2002). Although there were multiple interactions with leatherback turtles during 2001, NOAA Fisheries believes this was an anomalous event, possibly associated with changes in environmental conditions. NOAA Fisheries believes that events such as this can be mitigated through observer coverage, gear modifications, and enforcement.

Comment 12: I can strike at sharks without "striking" as you define it. I do not use the second vessel.

Response: NOAA Fisheries is aware that some vessels have experimented with setting strikenet without using a second vessel. To the extent that these methods are more economical for fishermen, NOAA Fisheries supports these methods. However, the use of shark strikenet gear in a method inconsistent with the current definitions inside the restricted area could constitute a violation. Requirements for strikenet vessels operating in the restricted area are described in the Atlantic Large Whale Take Reduction Plan regulations.

Comment 14: NOAA Fisheries says that only six vessels are in the drift gillnet fishery. There are actually about a dozen that would be affected.

Response: The best available information indicates that there are five vessels that actively target sharks in the shark gillnet fishery. NOAA Fisheries believes that there are a number of fishermen who land sharks incidental to their target species in other gillnet fisheries (e.g, bluefish, croaker, mackerel).

Comment 15: The bycatch of red drum in the shark gillnet fishery is of serious concern, given interstate effort to reduce bycatch of this species. Red drum is an overfished species whose harvest is strictly regulated with slot limits to promote its recovery.

Response: NOAA Fisheries is aware that red drum is caught incidentally in the shark gillnet fishery. However, the limited amounts of observed bycatch of this species in the shark gillnet fishery is not expected to impede recovery of the stock. Observer data indicate that the shark gillnet fishery does not catch large numbers of red drum. In 2002, 28 red drum were observed caught, of which, 50 percent were released alive.

Comment 16: Finetooth sharks are rare in trawl catches off Georgia. However, significant numbers are taken by the shark drift gillnet fishery. Elimination of the shark drift gillnet fishery would contribute towards reducing the overfishing of finetooth sharks.

Response: NOAA Fisheries is aware of observed catches of finetooth sharks in the shark gillnet fishery. However, the shark gillnet fishery has been observed to specifically target Atlantic sharpnose and blacktip sharks. NOAA Fisheries does not believe that the elimination of the shark drift gillnet fishery would significantly reduce overfishing of finetooth sharks, because they are not a target species. In 2002, 21,978 sharks were observed caught in the shark gillnet fishery.

Of those sharks observed caught, 1,615 (7.3 percent) were finetooth sharks.

Comment 17: The Atlantic sharpnose I catch have stomachs full of juvenile sea turtles. NOAA Fisheries should calculate how many sea turtles are saved by allowing the drift gillnet fishery to continue.

Response: NOAA Fisheries is concerned with all sources of mortality for protected resources and realizes that the ecosystem as a whole needs to be considered when rebuilding species. However, NOAA Fisheries' can only influence and mitigate anthropogenic sources of mortality, specifically, those due to interactions with fishing gear within NOAA Fisheries' jurisdiction.

ii. VMS

Comment 1: The use of VMS on bottom longline and gillnet vessels, combined with time/area closures to protect juveniles, may help reduce mortality of vulnerable shark stocks beyond what the quota cuts will achieve.

Response: The preferred time/area closure is designed to reduce bycatch and mortality of neonate and juvenile dusky and sandbar sharks in a known pupping and nursery area. The preferred time/area closure could reduce fishing mortality on the stages that contribute the most to population growth. The use of VMS on shark bottom longline and gillnet vessels will contribute to the enforcement of time/area closures and may enhance the rebuilding of LCS to maximum sustainable yield.

Comment 2: As a gillnet fisherman, I prefer observers over VMS.

Response: While NOAA Fisheries understands that individual fishermen may prefer using observers over VMS, the VMS alternative is preferred as an aid in enforcing time/area closures. Fishery observers are used to monitor catch and bycatch, protected species interactions, and fishery characteristics. They are not used specifically for enforcement purposes.

Comment 3: One commenter was concerned with the utilization of VMS to monitor activities when vessels are engaged in normal fishing operations and not operating illegally.

Response: Currently, VMS is used in many fisheries managed by NOAA Fisheries. VMS is the best technology at this time for monitoring vessel locations. It can be used by NOAA Fisheries to reduce observer program costs, improve the enforcement of time/area closures, to deter illegal fishing, and to increase the efficiency of surveillance patrols. With respect to the shark gillnet and bottom longline time/area closures in particular, the size of the closed areas significantly diminishes the likelihood of detection through conventional means. Traditional methods of surveillance in these areas would be cost prohibitive. Other possible benefits of the VMS include increased safety at sea and dependable and confidential communications.

Comment 4: If VMS is implemented, NOAA Fisheries should hold operators, not vessel owners, responsible for violations because the owner has little control over what the operator does with the vessel once it leaves the dock.

Response: NOAA Fisheries is aware of vessel owners' concerns, however, for enforcement purposes, both vessel owners and operators will continue to be subject to liability for violations. Vessel owners can employ or terminate operators based on their compliance with fishery regulations.

Comment 5: VMS should be phased in to reduce negative economic impacts and blended with a communication adaptation that the U.S. Coast Guard uses as a the homeland security technique for defense.

Response: The VMS requirement will only be required for five shark gillnet vessels and any shark bottom longline vessels operating near the time/area closure (approximately 14 vessels). NOAA Fisheries believes that, because this measure will be required for only a select few vessels, it can be implemented with minimal economic impacts and will not affect the vast majority of the shark fishing fleet. To minimize impacts and to give time to NOAA Fisheries to issue a type approval notice, NOAA Fisheries is delaying the effective date of VMS in the shark fishery. In regards to communications adaptions and uses of VMS for homeland security, NOAA Fisheries supports these uses.

Comment 6: NOAA Fisheries received several comments regarding the number of vessels required to install and activate a VMS unit. The comments include: VMS is required for all pelagic longline vessels, why would it only be required for a portion of the bottom longline fleet; and, VMS should be expanded to all vessels all-year round.

Response: VMS is required for all pelagic longline vessels to aid in the enforcement of multiple large scale closed areas in a highly mobile fishery. In addition to approximately five shark gillnet vessels, the VMS requirement analyzed in this amendment would require vessels operating near the time/area closure (approximately 14 vessels) to install and activate a VMS unit. Analyses indicate that while vessels in the pelagic longline fleet are highly mobile, vessels in the bottom longline fleet rarely fish far from their reported homeport. Thus, NOAA Fisheries believes that requiring VMS for only that sub-population of the shark fishing fleet that fishes in the vicinity of the time/area closures is appropriate because the intent of the measure is to monitor vessel activity to ensure that time/area closures are effective.

Comment 7: If gillnet gear remains authorized for use in the shark fishery, VMS must be mandatory to ensure compliance during right whale calving season and to facilitate cooperative state/Federal enforcement efforts to monitor this fishery.

Response: NOAA Fisheries is implementing an alternative (J4) that would require shark gillnet vessels to install and activate VMS units during the right whale calving season (November 15 -

March 31). This measure is expected to facilitate enforcement efforts.

iii. Other Gear Restrictions

Comment 1: We support all of the alternatives being considered including limited soak times, reducing the length of the gear, and, especially requiring circle hooks. Reducing soak time and requiring the use of circle hooks could be an effective means of protecting juvenile sharks. These measures could reduce discard mortality of dusky sharks, which remains a candidate for listing under ESA, and other bycatch species.

Response: NOAA Fisheries considered multiple gear restriction alternatives in this amendment. NOAA Fisheries has preferred alternatives J4 and J5 which would require VMS on a sub population of commercial shark fishing vessels as well as require shark bottom longline vessels to use corrodible hooks, possess release equipment, and move one nautical mile after an interaction with a protected species.

Comment 2: It is unclear from the analyses presented in the draft amendment whether the most effective measure to reduce mortality of small sharks would be a series of time/area closures, a minimum size combined with measures to reduce bycatch, or some other plan. Therefore, we express support for measures that seem likely to reduce juvenile shark mortality, especially area closures. However, we encourage NOAA Fisheries to do a more thorough analysis of the effectiveness of each bycatch reduction measure and to develop a comprehensive bycatch reduction plan.

Response: NOAA Fisheries believes that a combination of measures will be most effective in reducing bycatch and bycatch mortality of protected species and small sharks in the shark fishery. Thus, NOAA Fisheries is implementing a number of measures including a time/area closure, a requirement to possess and use release equipment, and a minimum size in the recreational fishery. NOAA Fisheries is also in the process of developing an implementation plan to improve upon, and possibly expand, current bycatch reduction efforts in HMS fisheries under the guidance of the 1998 NOAA Fisheries Report, Managing the Nation's Bycatch. This report contains the Agency's national bycatch goal, which is "to implement conservation and management measures for living marine resources that will minimize, the extent practicable, bycatch and the mortality of bycatch that cannot be avoided." The NOAA Fisheries National Bycatch Strategy and the HMS Bycatch Implementation Plan are discussed in Amendment 1.

Comment 3: The requirement of non-stainless steel corrodible hooks should be readily accepted by the industry and, because most vessels already use these hooks, there will be little or no economic hardships or changes in fishing practices. These hooks corrode in a much shorter period of time and would decrease impairment of feeding and wounding of sea turtles and thus, increase post-release survival.

Response: NOAA Fisheries agrees and is implementing a requirement (alternative J5) for their

use on shark bottom longline vessels.

Comment 4: NOAA Fisheries received several comments regarding the requirement for shark bottom longline vessels to move one nautical mile after an interaction with a marine mammal or sea turtle. The comments include: Requiring vessels to move one nautical mile after an interaction with a sea turtle or marine mammal should not significantly affect normal fishing operations because most vessels already move more than one mile after hauling their gear particularly if the set caught sea turtles or a lot of juvenile sharks; some vessels travel substantially further to dump carcasses from dressed fish in order to prevent contamination of the fishing grounds; requiring a vessel to move after an interaction with a protected species can be difficult to enforce unless enforcement personnel are on the scene when the gear is retrieved; and, if sea turtles are caught in gear, the vessel should move 20 nautical miles away, not one.

Response: NOAA Fisheries believes that the requirement for shark bottom longline vessels to move one nautical mile after an interaction with a protected species is appropriate for the shark bottom longline fishery. This requirement would reduce the probability of another interaction with a protected species because marine mammals, sawfish, and sea turtles often aggregate in clusters. By requiring vessels to move after an interaction, the vessel would increase the likelihood of avoiding additional animals in a cluster when setting subsequent gear. This requirement could increase fuel costs due to increased the time transiting to another fishing area and increase time needed to fish if alternate fishing grounds are not as productive for target species. However, because few marine mammals, sawfish, or sea turtles have been observed caught, NOAA Fisheries does not believe that this requirement would affect more than a few trips for all vessels combined, each year. Moreover, NOAA Fisheries expects that vessels will comply with the requirement because, during normal fishing practices, vessels may already move more than one mile after hauling their gear. Moving more than one mile increases the chance of a vessel encountering another cluster of protected species.

Comment 5: NOAA Fisheries received several comments regarding the possession of release equipment on shark bottom longline vessels. The comments include: The safe removal of hooks and line before release can dramatically increase the chances of survival of the released bycatch and has been endorsed by the U.S. pelagic longline fleet, ICCAT, IATTC, and various NGOs; the SEFSC has developed a line cutter that is safe and effective in removing line from entangled marine mammals and sea turtles in the pelagic longline fishery; vessels that can boat smaller sea turtles should boat them in order to better control their gear removal procedures; and, dehooking devices, line cutters, and dip nets are relatively simple to use and techniques can easily be transferred from fishery to fishery and nation to nation.

Response: NOAA Fisheries agrees that there are benefits of using release equipment and is implementing alternative J5 which will require the possession of release equipment on shark bottom longline vessels.

Comment 6: Requiring workshops to certify that a permit holder has passed a training course on

the proper use of release equipment would aid enforcement and be more cost effective as a whole. These workshops could also serve as an educational forum for fishermen to learn the latest research and regulations, share concepts for their fishery that could be transferred to other fisheries (e.g., recreational to commercial), gain a feeling of stewardship of the environment and their fishery, learn release techniques in a controlled environment, and develop and promote educational video tapes or literature. The workshops would also give fishermen a chance to talk to, and receive answers from, people in NOAA Fisheries about regulations they do not understand. This could lead to a better working relationship over time.

Response: NOAA Fisheries agrees and intends to move forward with this measure (alternative J8) in a future rulemaking in order to assure that all of the aspects of the alternative and implementation are fully analyzed. In the interim, NOAA Fisheries will attempt to make voluntary workshops available to the public.

Comment 7: We remain deeply concerned that NOAA Fisheries has failed to offer options for increasing compliance in the recreational fishery after repeatedly acknowledging that anglers do not adhere to the shark regulations and that this non-compliance may be inhibiting stock rebuilding. We urge NOAA Fisheries to develop programs for angler education in species identification and other efforts to improve compliance. Angler training should be a pre-requisite for obtaining an HMS Angling category permit.

Response: NOAA Fisheries agrees that angler education could significantly improve compliance in the recreational shark fishery. In this amendment NOAA Fisheries analyzed an alternative (J8) that would require commercial and recreational fishermen to attend mandatory workshops discussing shark (and possibly other) species identification, marine mammal, sawfish, and sea turtle release techniques, and current regulations. NOAA Fisheries received public comment in favor of mandatory workshops, and while it appears that mandatory workshops would be beneficial, outstanding implementation and operational issues remain that need to be addressed. Based on these issues, and the fact that NOAA Fisheries would need to delay the implementation of this measure to receive Paperwork Reduction Act (PRA) clearance and work through any implementation difficulties, NOAA Fisheries intends to move forward with this measure in a future rulemaking in order to assure that all of the aspects of the alternative are fully analyzed. In the interim, NOAA Fisheries will attempt to make voluntary workshops available to the public as well as distribute informational pamphlets and identification guides.

Comment 8: At this time, we cannot support mandatory workshops. Rather, increased fiscal and other agency resources need to be expanded to significantly increase the distribution and availability of educational materials such as improved printed materials, electronic media, and more. Specific instructional/training workshops should be developed to focus on commercial fishing fleets/organizations, charter fishermen, tournament organizers, MRFSS/other survey clerks, state/federal enforcement agencies, and more. Partnerships with other federal and state agencies to distribute this material should be explored.

Response: NOAA Fisheries is working to increase outreach and available educational materials. Currently, NOAA Fisheries is distributing Atlantic shark recreational fishery brochures containing information regarding HMS Angling category permits, HMS Charter/Headboat permits, bag limits and minimum sizes, release information, landing restrictions, the no sale provision, HMS tournament registration, tagging information, as well as species that may be retained, and species that must be released. NOAA Fisheries is also currently producing an identification guide for sharks, tunas, and billfishes of the Atlantic and Gulf of Mexico. Further, NOAA Fisheries received public comment in favor of mandatory workshops for anglers and commercial fishermen discussing species identification, release techniques, and regulations. NOAA Fisheries intends to move forward with requiring participation in mandatory workshops in a future rulemaking and will attempt to make voluntary workshops available to the public in the interim.

Comment 9: While the United States is trying to protect sea turtles, fishermen in Florida watch fishermen just outside the U.S. EEZ in Cuba and the Bahamas kill them. I recently watched one vessel in the Bahamas kill 39 sea turtles.

Response: Sea turtles are classified as endangered or threatened species in the United States and NOAA Fisheries has implemented many measures to conserve these species. However, NOAA Fisheries does not have the authority to determine how neighboring countries manage their resources. The Agency continues to pursue improvements in international sea turtle conservation measures.

Comment 10: Amendment 1 does not adequately address the incidental capture of threatened and endangered sea turtles in shark fisheries, especially shark bottom longlines. Reducing the rate of bycatch and reducing the mortality of sea turtles needs to be a primary priority. The impact of shark fisheries on sea turtles appears to be purposefully masked by key omissions in Amendment 1 about the level of sea turtle take and associated past-hooking mortality. The June 2001 BiOp estimates that 207 to 517 loggerheads are caught in the shark bottom longline fishery annually. Many of these animals probably die after release. Significantly more observer coverage is needed to improve confidence intervals. Amendment 1 fails to estimate and discuss the implications of post-hooking mortality of sea turtles. The June 2001 BiOp provides estimates of post-hooking mortality on pelagic longlines. This mortality rate in bottom longlines is expected to be higher because the turtles are trapped on the bottom unable to breathe. Because effort in shark fisheries has increased since 2001, many hundreds of sea turtles are being killed annually in shark longline fisheries.

Response: NOAA Fisheries Protected Resources Division has prepared a new Biological Opinion for Amendment 1 which analyzes the incidental capture of protected resources in the shark fisheries. An estimated 222 loggerhead sea turtles were incidentally caught in the shark bottom longline fishery from 1994 through 2002. Based on observer data and the reported effort in the shark bottom longline fishery, it is estimated that 51 loggerhead turtles will be killed as a result of an interaction with a bottom longline. The highest estimate of post release mortality for sea

turtles interacting with pelagic longlines is 42 percent for turtles ingesting hooks. Being conservative and assuming all loggerhead turtles that ingest a hook are subject to this mortality rate, results in another 72 loggerhead turtles will be killed. This gives a total of 123 loggerhead turtles killed per year as a result of an interaction with a bottom longline. An estimate of 30 leatherback sea turtles were incidentally caught from 1994 through 2002 in the shark bottom longline fishery. Using the same methodology for leatherback sea turtle interactions results in an estimate of 17 leatherback turtles killed each year in this fishery. The leatherback mortality is very conservative because it is known that leatherback turtles rarely ingest or bite hooks, most are usually foul hooked on their flippers or carapaces, reducing the likelihood of post-hooking release mortality. However, leatherback-specific data for this fishery are not available and therefore the most conservative estimate was used. NOAA Fisheries agrees that the precision of the estimates is likely to improve with greater observer coverage. One of the conditions of the Biological Opinion is that NOAA Fisheries must continue to implement an observer program at current or higher levels to monitor incidental takes of protected resources in Atlantic (including Gulf of Mexico) shark fisheries. NOAA Fisheries disagrees that effort in shark fisheries has increased since 2001. Based on reported effort in the logbook data and the observer programs, the total number of hooks set in the shark bottom longline fishery in 2000-2002, ranged from 2.5 to 2.7 million hooks per year. This level of effort is approximately 62 percent less than the reported effort in 1996. In addition, based on current and historical participation, implementation of limited access in the shark fisheries reduced the number of shark permit holders from over 2,200 before limited access to 584 in October of 2003.

Comment 11: Only alternative J5 addresses sea turtle bycatch by recommending that fishing vessels move one nautical mile after an interaction with a sea turtle. Dip nets and line cutters should also be required.

Response: NOAA Fisheries is implementing alternative J5, a preferred alternative, which will require vessels with shark bottom longline gear to use corrodible hooks, possess release equipment (line cutters, dip nets, and when approved, dehooking devices), as well as move one nautical mile after an interaction with a marine mammal or sea turtle. This is expected to be effective at reducing sea turtle mortality.

Comment 12: NOAA Fisheries needs to conduct experiments to determine if circle hooks are effective in reducing the number of turtles caught and the position of the hooks in captured animals.

Response: The June 14, 2001, Biological Opinion included a recommendation that NOAA Fisheries conduct a three-year experimental fishery in the northeast distant statistical reporting area (NED) to attempt to reduce the interactions between pelagic longline gear and sea turtles. In the fall of 2001, NOAA Fisheries conducted the first year of the experimental fishery. The measures that were examined included the use of blue-dyed bait and spacing the gangion lines farther away from the float lines.

In the summer and fall of 2002, NOAA Fisheries conducted the second year of the experimental fishery. The use of circle hooks, mackerel bait, and shortened daylight soak time were tested to examine their usefulness in reducing the capture of sea turtles. Although NOAA Fisheries has not conducted experiments specifically investigating the use of circle hooks to reduce interactions with sea turtles in the shark bottom longline fishery, NOAA Fisheries believes that information gathered from the NED experiments could be transferred to other fisheries.

Comment 13: We support the preferred alternatives of line cutters, dip nets, and dehooking devices and feel they would reduce mortality by recreational fishermen as well.

Response: NOAA Fisheries agrees that the use of release gear may be beneficial in recreational fisheries. However, requiring this equipment for anglers who generally do not use heavy monofilament line and rarely encounter protected species is not practical at this time. NOAA Fisheries does support the voluntary use of release gear in recreational shark fisheries.

Comment 14: NOAA Fisheries should consider a variation of alternative J7 (retention of all sharks, no discards allowed) in order to encourage reducing regulatory discards. This is possible but not practicable in today's marketplace and would be tough to enforce. Other portions of the regulations, such as no filleting at sea or the current trip limit, would need to be changed.

Response: NOAA Fisheries analyzed the no-discard alternative (J7) and determined that it could virtually eliminate the bycatch of sharks in the commercial shark fishery and reduce fishing effort needed to reach trip limits and fill quotas, thereby reducing potential interactions with prohibited species. However, this alternative could also increase the mortality of juvenile sharks, prohibited species, and other sharks not normally retained. Fishermen may also illegally high-grade and discard less marketable species to avoid reaching the trip limit, increasing waste. If no discards were allowed, trip limits and quotas could be reached more quickly, resulting in derby fishing conditions. Derby conditions may result in depressed ex-vessel prices, reduced revenues, market gluts, and concerns for the safety of fishermen at sea. Due to ecological, social, and economic concerns, NOAA Fisheries does not believe this alternative is appropriate for the commercial shark fishery at this time. NOAA Fisheries may consider a variation of this alternative in a future rulemaking.

Comment 15: NOAA Fisheries received several comments regarding bycatch of sharks and non-target species. The comments include: Amendment 1 does not contain a comprehensive strategy to avoid and reduce shark bycatch, as mandated by law; for years NOAA Fisheries has highlighted the shrimp trawl and menhaden purse seine fisheries as problem fisheries for shark bycatch, yet NOAA Fisheries has not offered any suggestion on how to address these bycatch sources; NOAA Fisheries must take action to address these continual problems; and, the non-targeted species and sub-legal bycatch that are routinely discarded as a result of indiscriminate gillnets and longlines is disturbing and a waste of our marine resources.

Response: NOAA Fisheries agrees that bycatch must be addressed and is working toward this

goal. The bycatch of sharks in trawl, set-net, and hook and line fisheries is discussed in Chapter 3 of Amendment 1. In this amendment, NOAA Fisheries specifically addresses shark bycatch in HMS fisheries by implementing several measures designed to reduce bycatch and bycatch mortality including; a time/area closure, VMS requirements for shark bottom longline and gillnet vessels, requiring the use of corrodible hooks, and requiring the possession of release equipment (line cutters, dipnets, and, when approved, dehooking devices).

NOAA Fisheries is also in the process of developing an implementation plan to improve upon and possibly expand current bycatch reduction efforts in HMS fisheries under the guidance of the 1998 NOAA Fisheries Report, Managing the Nation's Bycatch. This report contains the Agency's national bycatch goal, which is "to implement conservation and management measures for living marine resources that will minimize, the extent practicable, bycatch and the mortality of bycatch that cannot be avoided." The NOAA Fisheries National Bycatch Strategy and the HMS Bycatch Implementation Plan are discussed in Amendment 1.

Comment 16: NOAA Fisheries needs to examine the bycatch of sharks in monk fishing gear.

Response: NOAA Fisheries will investigate the bycatch of sharks in a number of fisheries to determine if measures are needed to minimize shark bycatch and bycatch mortality.

B. Time/Area Closure Comments

Comment 1: Comment: NOAA Fisheries received several comments regarding the use of time/area closures in general. These included: NOAA Fisheries should establish sanctuaries for all fish species. The entire fishery should be closed from January through July to protect pupping females and pups. NOAA Fisheries should implement seasonal closures to longlines and gillnets in coastal nursery grounds to protect all shark species.

Response: The time/area closure is based on specific information from the shark bottom longline observer program that indicates a high proportion of prohibited dusky shark and juvenile sandbar sharks being caught off North Carolina from January through July. NOAA Fisheries does not believe that closing the entire shark fishery from January through July is warranted. The closure will afford some protection to all species that are caught on bottom longline gear during that time of year.

Comment 2: NOAA Fisheries should implement alternative K3, time/area closure for all shark nursing and pupping grounds based on EFH for neonate and juvenile sharks, in order to protect juvenile sharks from indiscriminate commercial gears.

Response: NOAA Fisheries considered this alternative, but believes that it would result in the closure of nearly all coastal waters off the U.S. Atlantic coast and the Gulf of Mexico, and that a targeted time/area closure, for a specific time period such as the one off North Carolina is more appropriate. A closure of all coastal waters would have had a severe economic impact on fishing

communities.

Comment 3: Any delay in implementation of closures may undermine management objectives.

Response: NOAA Fisheries believes that commercial fishermen should be given an opportunity to adjust to the potential economic changes incurred by a time/area closure. Delayed effectiveness of time/area closures has been used in the past, and is believed to be a reasonable approach to allow fishermen to adjust to regulations that effect fishing areas.

Comment 4: NOAA Fisheries should consider time/area closures to protect adult dusky sharks as well as juveniles.

Response: The time/area closure is based on information relating to all life stages of dusky sharks, including adults. The time/area closure is expected to reduce the catch of all dusky sharks by approximately 79 percent and adult dusky sharks by 65 percent.

Comment 5: We cannot support the blanket alternative K3 because each proposal needs to be fully evaluated and based on acceptable understanding of stock status, life histories, and defined EFH for each species.

Response: Alternative K3 proposed closing all EFH identified nursery and pupping areas. The alternative was not selected because of the severe economic impact this alternative would have had, and because there is currently insufficient data to support a closure of all EFH pupping and nursery areas.

Comment 6: Any closure that is considered should be imposed on all commercial and recreational gear that interacts with sharks.

Response: Recreational gears have the capability to release sharks alive, whereas many sharks, and dusky sharks in particular, have low survival rates when caught with commercial gear. This is due in part to the longer soak times required in the commercial fishery. Dusky sharks, for example, have an at-vessel mortality rate of 82 percent. If data in the future indicates adverse impacts from other gears, NOAA Fisheries will consider closures for other gear types, including recreational.

Comment 7: The Environmental Protection Agency recommends marine protected areas (MPAs) for overfished stocks; marine protected areas for sharks that exhibit territorial behavior in breeding would likely benefit.

Response: NOAA Fisheries has selected an alternative that implements a targeted time/area closure to protect prohibited dusky sharks and juvenile sandbar sharks which are currently experiencing overfishing. Ths time/are closure is a type of MPA and is also an effective means to reduce fishing mortality and help rebuild stocks. Based on the best available scientific data,

NOAA Fisheries has taken steps to identify and protect EFH and Habitat Areas of Particular Concern (HAPCs) for both dusky and sandbar sharks. The time/area closure will prevent the catch of both pregnant females and neonates during the critical pupping stage.

Comment 8: Any regulations imposing a closure should have a clear scientific exit strategy to reduce and/or eliminate the closure when scientifically justified.

Response: NOAA Fisheries agrees that closed areas should be re-opened when scientifically justified and will thus be reviewing the status of both dusky and sandbar sharks, the two species most affected by the time/area closure, in the near future. Based on the status of those stock assessments and other information regarding the effectiveness of the closure, NOAA Fisheries may consider revising the size and scope of the closure, the duration of the closure, and potentially elimination of the closure.

Comment 9: NOAA Fisheries received several comments specific to the proposed time/area closure. These comments included: Closing nursery areas has always been seen as one of the most beneficial management measures possible for sharks and has been recommended by nearly every shark stock assessment group assembled; thus we support the proposed time/area closure and NOAA Fisheries efforts to work with the two Fishery Management Councils to protect important state nursery waters. NOAA Fisheries should close the proposed mid-Atlantic region to bottom longline fishing from January through July to protect nursery and pupping areas.

Response: NOAA Fisheries agrees that time/area closures are an important tool in reducing mortality of prohibited species and juvenile life stages of sharks, and that the current time/area closure will help to protect dusky sharks and rebuild sandbars sharks.

Comment 10: NOAA Fisheries should look at the fish being sold; this will show that the fishermen are not selling small sharks. NOAA Fisheries should look at the average carcass weight, not length.

Response: One of the principal reasons for the time/area closure was to protect prohibited dusky sharks, which are illegal to sell. Additionally, because dusky sharks do not mature until approximately 10 feet fork length (FL), even large dusky sharks are considered juveniles. For years, the shark observer program and many other researchers have been collecting length data for sharks because many sharks are released without being landed and weights would be difficult if not impossible to collect. The length-to-weight relationship is used by scientists to determine the life stage and sexual maturity of most fish species, including sharks. Shark bottom longline observer data show high rates of neonate and juvenile sandbar sharks less than 137 cm FL being caught and landed in the winter fishery off of North Carolina. The 137 cm FL corresponds to the recreational minimum size limit for sharks which is 4.5 feet FL. It also corresponds to the female smallest size at maturity. For instance, one data series for the winter fishery off North Carolina in 2001 shows approximately 83 percent of 1188 sandbar sharks observed caught were less than 137 cm, with an average length of approximately 120 cm. Sandbar shark pups are born from

March to early August and measure about 60 cm at birth.

Comment 11: The information used to support the time/area closure is flawed because shark observers are mis-identifying dusky sharks.

Response: The commercial shark bottom longline fishery observers are trained to identify all species of sharks, including dusky sharks. NOAA Fisheries acknowledges that some misidentification of sharks may occur, however, the preponderance of the data, including fishery independent data collected by researchers and trained biologists who participate in tagging efforts indicates that the area off North Carolina is a pupping and nursery area for dusky as well as sandbar sharks. NOAA Fisheries does not rely solely on information from the shark observer program to make its determination for a time/area closure, but relies on many other data sources as well.

Comment 12: Dusky shark catches before 1999 should not be considered because we could not land them then; since 1999, our catch of dusky sharks has decreased.

Response: Since dusky sharks were prohibited in June 2000, the data from that point forward has been analyzed separately from earlier data in the final Amendment. However, it is also important to examine data prior to 2000 because it helps to establish the high rate of historical bycatch and the importance of the area as a pupping and nursery ground for both dusky and sandbar sharks. In analyzing the shorter time period, NOAA Fisheries found that the number of dusky sharks being caught off North Carolina and elsewhere has declined since June 2000, but that a much higher percentage of dusky shark are observed caught in the time/area closure than in other areas, particularly when the relatively small size of the time/area closure is compared to all other open areas of the Atlantic and Gulf of Mexico.

Comment 13: We do not support the time/area closure at this time because of the significant economic and social impacts that would result in the affected fishing communities and the fact that the document does not sufficiently analyze the closure or enforcement of the closure. If done properly, a time/area closure can benefit all concerned; however, the proposed time/area closure is not reasonable. The decision to close the area seems to be driving the science.

Response: The original time/area closure proposed in the draft Amendment would have closed a large area (31,487 square nautical miles) and may have had severe economic and social impacts. Based on public comments, NOAA Fisheries re-analyzed the data and proposed a revised time/area closure of 4,490 square nautical miles in part to mitigate social and economic impacts on fishing communities in North Carolina. The revised time/area closure will still be effective at reducing dusky catch by 79 percent, and neonate and juvenile sandbar catch by 55 percent.

Comment 14: It is not clear if other measures are sufficient to rebuild sandbar and dusky sharks without the addition of time/area closures.

Response: Rebuilding of dusky and sandbar sharks is based on the combination of management measures including the reduction in quota, the time/area closure, gear restrictions that should reduce post-release mortality, and a minimum size on recreationally caught sharks. Without the time/area closure, NOAA Fisheries would need to implement other reductions or restrictions in order to ensure that LCS are rebuilt within the necessary time frame.

Comment 15: NOAA Fisheries received a number of comments regarding the depth of the closures. Comments included: most nursery grounds are in nearshore areas; closing areas 20 fathoms in depth to the shore should be suitable to protect neonates and juveniles. NOAA Fisheries does not need to close areas out to the 200 mile limit unless the desire is to fiercely impact these shark fishing entities. Regions outside of 20 fathoms should remain open. We question any justification for closing anything other than state waters during pupping seasons. We cannot support closures inside of 10, 20, or any other fathom mark at this time.

Response: NOAA Fisheries examined catches based on depth and found that both dusky sharks and juvenile sandbar sharks are caught at depths of up to 50 fathoms. Since large numbers of sharks appear to be caught in a line along the 50 fathom contour, a buffer of approximately two miles was included to extend the seaward boundary of the time/area closure to approximately 60 to 80 fathoms. The time/area closure is one of the few known areas where shark pupping and nursery grounds extend into Federal waters. It is also one of the only areas designated as a Habitat Area of Particular Concern (for sandbar sharks) in Federal waters.

Comment 16: NOAA Fisheries received several comments regarding the proposed time/area closure and the burden being placed on North Carolina fishermen. Comments included: Juvenile sharks are caught all along the coast and North Carolina fishermen are being targeted unfairly. If closures are needed to rebuild sharks, then fishermen in all states need to share the task, not just North Carolina fishermen. The time/area closure is payback for previous lawsuits by the commercial industry.

Response: Juvenile sharks are caught along much of the U.S. Atlantic and Gulf of Mexico coasts; however, the proportion of juvenile and neonate dusky and sandbar sharks being caught off North Carolina is substantially higher than in other areas. This is because the waters off North Carolina are pupping and nursery areas for these two species, and pregnant females, pups and juveniles aggregate in the area. EFH areas for both sandbar and dusky sharks, and HAPC areas for sandbar sharks have been designated off North Carolina. Data indicate that from 1994-2002, 1,099 or 79 percent of all dusky sharks were caught in the time/area closure from January through July. Of these, 1,016 or 92 percent were neonates or juveniles. Of the 12,445 sandbar sharks observed caught in the Atlantic from 1994-2002, 6,755 or 54 percent were caught in the time/area closure between January and July, of which 61 percent were juveniles and neonates. While there may be other nursery and pupping areas in coastal waters, this is one of the only areas where such a high proportion of neonate and juvenile sharks have been documented being caught in Federal waters.

Comment 17: The proposed time/area closure is absurd; the period should be April 1 through June 30 or maybe July 15. NOAA Fisheries should not close the area for the entire time from January through July because most fishermen do not see any pregnant females in the area after mid-July.

Response: Data from the commercial shark observer program indicates that there are substantial numbers of juvenile and neonate sharks being caught in all months from January through July, not just from April through July. This is because in addition to being a primary pupping area from May to August, the area is also a secondary nursery and overwintering ground for young-of-the-year and juvenile sharks.

Comment 18: The five vessels with a history of landing most of the juvenile sandbar sharks should be given some options on how to catch bigger sharks.

Response: NOAA Fisheries has not analyzed specific information regarding which vessels are catching small or large sharks, but has relied instead upon analysis of all data gathered in the time/area closure over various time periods to form the basis for the closure. Even if information were available to indicate that certain vessels were responsible for the majority of juvenile landings, options to remedy the problem would have to be made available to the entire fleet, not just selected vessels. Commercial shark fishery participants who fish in the area are encouraged to share information on fishing gears, methods, and locations that might reduce the catch of juvenile sharks. The intent of the closure is to reduce all interactions between commercial fishing operations and pupping and nursery grounds and hence reduce both the catch and mortality of dusky and juvenile sandbar sharks.

Comment 19: Shrimp nets catch more small sharks than the directed shark fishery in North Carolina.

Response: NOAA Fisheries agrees that the shrimp fishery is responsible for large catches of small coastal sharks. The bycatch of small coastal sharks (SCS) in the shrimp trawl fishery in the Gulf of Mexico has been documented and was taken into account during the latest 2002 SCS stock assessment which indicates that SCS are not overfished and overfishing is not occurring. The time/area closure is intended to reduce the catch of LCS such as the prohibited dusky sharks and juvenile sandbar sharks, and while there may be benefits to the SCS stock as a result of the closure, the intent was to reduce the catch of juvenile sandbar sharks and prohibited dusky sharks.

Comment 20: If an area is closed, landings should not be allowed in states adjacent to the area no matter where the fish are harvested.

Response: NOAA Fisheries does not agree that adjacent states should be closed as well, or that landings should not be allowed in adjacent states. The time/area closure is based on specific information about catches off North Carolina in a known pupping and nursery area. Although

there are pupping and nursery areas in state waters, most notably Chesapeake Bay, MD, and Delaware Bay, DE, fishing effort there has historically been low. Additionally, most other areas adjacent to the closure off North Carolina are not known pupping and nursery areas and have a much higher proportion of adult sandbar sharks, and far fewer dusky sharks. NOAA Fisheries is proposing to implement a Vessel Monitoring System (VMS) to aid in enforcement of the time/area closure. VMS will benefit fishermen by allowing them to traverse the closed area to offload.

Comment 21: The time/area closure will push more vessels into other areas such as the Florida East Coast. This combined with the regional quotas and trimester seasons will mean that all the vessels will be working for one sixth of the normal January opening quota. There is only a small area off of Florida where you can shark fish. If more vessels go to that area, there will not be enough room to set gear.

Response: The original time/area closure proposed in the draft Amendment would have closed all waters off North Carolina, and portions of Virginia and South Carolina to commercial bottom longline fishing. Based on public comments that the catch of dusky sharks has declined in recent years, and that the time/area closure would have severe economic impacts on commercial fishing entities in those states, NOAA Fisheries re-examined the data for the time/area closure, specifically by looking at a shorter time period of catches from 2001-2002. Based on an analysis of the data, NOAA Fisheries revised the time/area closure to close the portion of the original time/area closure which had the highest catch rate of dusky and juvenile sandbar sharks. NOAA Fisheries believes that the revised time/area closure will reduce the catch of dusky and juvenile sandbar sharks, while also mitigating the economic impact of the closure by allowing vessels to continue fishing in waters north and south of the time/area closure off North Carolina from January through July. This should prevent vessels from having to fish in Florida, and will allow the trimester quota to be harvested over a larger area.

Comment 22: NOAA Fisheries received several comments regarding how the proposed boundaries were established. Comments included: NOAA Fisheries needs to improve the transparency in how the time/area boundaries were established and include maps of all observed trips and research cruises, not just observed takes of sandbar and dusky sharks.

Response: The final Amendment provides a more thorough explanation and justification for the boundaries established for the revised time/area closure. The seaward boundary of the revised area follows the 60 to 80 fathom contour, and was selected to include all observed catches of dusky sharks and sandbar sharks. No dusky or sandbar sharks were observed caught east of approximately 50 fathoms. Since large numbers of sharks appear to be caught in a line along the 50 fathom contour, a buffer of approximately two miles was included thus extending the boundary to 60 to 80 fathoms. The northern boundary was selected to include the HAPC for sandbar sharks off Cape Hatteras, and because areas north of Cape Hatteras have historically had low catches of both dusky and sandbar sharks. The southern boundary was selected based on low numbers of dusky sharks that have been observed caught there in recent years, and because the

proportion of juvenile and neonate sandbar sharks is much lower there than in the time/area closure. In summary, the revised time/area closure will reduce the catch of dusky sharks by 79 percent vs. 85 percent under the original proposal, and will reduce the catch of sandbar sharks by 51 percent vs. 66 percent under the original proposal. Detailed maps of the revised time/area closure, all observed trips, and research cruises are provided in the final Amendment.

Comment 23: Why is Virginia closed? The marginal benefit of extending the closed area into Virginia does not appear as great as it would be off of Cape Canaveral, Florida. There appears to be another area of high sandbar and dusky abundance off central Atlantic Florida; NOAA Fisheries should have proposed a similar closed area in that region.

Response: Based on public comments received, NOAA Fisheries re-examined the data and concluded that the waters off Virginia did not warrant being closed at this time. The time/area closure boundary has been revised to include only waters south of the HAPC off Cape Hatteras. For the area near Cape Canaveral, Florida, NOAA Fisheries found that the area accounted for only 8 percent of the observed dusky shark catch from 1994-2002, and less than 14 percent of sandbar sharks, of which a very high proportion were adults. Given the low percentage of catch of prohibited dusky sharks from this area, and the high proportion of adult sandbar sharks, NOAA Fisheries did not feel it was appropriate to close the area at this time.

Comment 24: NOAA Fisheries must adopt alternative K5 which would establish a time/area closure for smalltooth sawfish critical habitat. The smalltooth sawfish is the first marine fish to be listed under ESA, and although critical habitat has not yet been designated, NOAA Fisheries should act immediately.

Response: NOAA Fisheries does not have the basis for implementing a time/area closure for smalltooth sawfish at this time. Without information about smalltooth sawfish critical habitat, NOAA Fisheries does not have sufficient information to identify an appropriate time/area closure. Once a recovery plan is developed and critical habitat identified, NOAA Fisheries will reconsider a closure to protect smalltooth sawfish.

Comment 25: The depths on the maps depicting the time/area closure are incorrect.

Response: NOAA Fisheries agrees that the depths used in the time/area closure maps were incorrect, and has provided updated maps showing the correct bathymetry in the final Amendment.

Comment 26: NOAA Fisheries needs to compare the number of dusky shark takes in the commercial and recreational fisheries. MRFSS data are not credible.

Response: NOAA Fisheries has provided estimates of the number of dusky sharks caught in the commercial and recreational fisheries in the final Amendment. The estimates show that the number of dusky sharks caught in the commercial fishery was considerably higher (18,867) than

in the recreational fishery (5,570) in 1999, but that the recreational fishery may have caught more dusky sharks in 2000-2001 (8,100 vs. 6,063). MRFSS data are not the only data used in calculating recreational catch estimates. Other data are obtained from the NMFS Headboat Survey (HBOAT) and the Texas Parks and Wildlife Recreational Fishing Survey (TXPWD).

Comment 27: The proposed time/area closure splits South Carolina. How will enforcement enforce the regulation?

Response: The revised time area closure is located entirely off the coast of North Carolina and enforcement should no longer be an issue off South Carolina. Other time/area closures have been implemented that did not fully encompass a state's waters, and NOAA Fisheries utilized VMS to ensure the effectiveness and enforcement of the closures. NOAA Fisheries intends to implement VMS for the current time/area closure as well. VMS will have the added benefit of allowing vessels to transit the closed area.

A5.5 Other Management Measures

A. Deepwater and Other Sharks

Comment 1: NOAA Fisheries received a range of comments regarding the alternatives for the deepwater and other species group. The comments include: Deepwater sharks should be protected; because there is little practical effect of leaving or removing them from the management unit, deepwater and other sharks should be left in the management unit; leaving the deepwater and other sharks in the management unit could decrease the time needed to act, if necessary; deepwater and other sharks should remain in the management unit because if any fishery should develop, it could take years to create an FMP following section 305(a) of the Magnuson-Stevens Act in terms of gear evaluation and notification of entry; we support the preferred alternative; NOAA Fisheries should continue to collect data on these species until such a time that they can be assessed or until a potential fishery develops; and, if needed, NOAA Fisheries should move to put them back in the management unit to protect them.

Response: NOAA Fisheries believes that maintaining data collection only on the deepwater and other sharks is sufficient because there are no known significant landings of the species in this group and no known fishermen target these species. If directed fisheries were to start, NOAA Fisheries would evaluate data available at that time to see if an FMP amendment or other regulatory measures would be warranted. NOAA Fisheries believes it can re-establish the deepwater/other species group in the management unit within a short time frame, if necessary.

Comment 2: Fishing for deepwater and other sharks should be prohibited because they are more likely to be overfished than coastal sharks.

Response: At this time, there are no known fishermen targeting deepwater and other sharks. Prohibiting these species would be precautionary, but it may not significantly reduce mortality

because these species are only caught rarely in non-HMS fisheries. Further, prohibiting landings of these species in HMS fisheries could reduce the availability of important data on them.

Comment 3: To the extent that deepwater sharks are a target of fisheries in the Caribbean, the complex should be assessed and managed.

Response: NOAA Fisheries will assess this species group when more biological and fishery information becomes available.

Comment 4: Deepwater and other sharks were added to the management unit not only to ban their finning, but also to preclude possession of species that may be vulnerable to overfishing and to help prevent development of directed fisheries or markets for uncommon or seriously depleted species.

Response: The species added to the prohibited species group in the HMS FMP were added because they were known to be vulnerable to overfishing, uncommon, or seriously depleted. The deepwater and other group was included in the management unit only to prohibit finning of these species. No other regulations were placed on this group (e.g., no permitting or reporting requirements). Presently, the only protection afforded under the HMS FMP, a ban on finning, is now afforded nationally under the Shark Finning Prohibition Act (February 11, 2002, 67 FR 6194). Given the national protection, NOAA Fisheries believes that maintaining data collection only on these species is sufficient.

B. Prohibited Species

Comment 1: Fishermen should be fined $10,000 for every prohibited species they capture.

Response: Currently, the possession and landing of prohibited species is illegal. Penalties and fines vary with the severity of the infraction. At this time, NOAA Fisheries does not believe a $10,000 fine for capturing a prohibited species would be appropriate under all circumstances.

Comment 2: NOAA Fisheries received a range of comments stating that dusky sharks should be removed from the prohibited species list in order to determine where and how many are caught. Alternatively, some commenters stated that NOAA Fisheries should not remove dusky sharks because they have suffered a severe population decline and all measures to reduce mortality should be imposed.

Response: Dusky shark catch rate data indicate large population declines since the early 1970s. Dusky sharks have a high bycatch mortality, approximately 80 percent, and are usually dead when gear is retrieved. Although commercial shark fishery observer data shows that dusky sharks comprise approximately one percent of total catch in recent years, removing dusky sharks from the prohibited species list could result in increased mortality of this overfished species by allowing the retention of individuals that may otherwise be released alive. NOAA Fisheries

determined that removing dusky sharks from the current prohibited species group would likely have significant ecological impacts.

Comment 3: NOAA Fisheries received several comments regarding the addition of the deepwater and other species to the prohibited species group. The comments include: Because they are slow growing and because new fisheries can spring up and deplete populations before action can be taken, deepwater and other sharks should be added to the prohibited species list; removing deepwater and other sharks reduces the chances for conserving slow growing deepwater sharks; and, NOAA Fisheries continues to assert the lack of a fishery for deepwater sharks and yet has failed to reconcile their previous finding in the National Plan of Action for Reducing Fishing Capacity that deepwater sharks are overcapitalized.

Response: NOAA Fisheries determined that adding the deepwater and other species to the prohibited species group would likely have only minor positive ecological impacts. Prohibiting these species takes a precautionary approach, but may not significantly reduce mortality because these species are only caught rarely in non-HMS fisheries. Further, prohibiting the landing of these species in HMS fisheries may limit the availability of data pertaining to them. If directed fisheries started, NOAA Fisheries would evaluate data available at that time to see if an FMP amendment or other regulatory measures would be warranted. NOAA Fisheries believes it can re-establish the deepwater/other species group in the management unit within a short time frame, if necessary. The draft National Plan of Action for Reducing Fishing Capacity stated that deepwater sharks are overcapitalized. NOAA Fisheries believes the deepwater and other species were given this designation because the management group was included along with other shark management groups which are overcapitalized. The Highly Migratory Species Management Division has recommended that this finding for the deepwater and other species be amended because there are no known fishermen who target these species.

Comment 4: We support adding finetooth sharks to the prohibited species list. Possession should be prohibited until effective management measures to stop overfishing are implemented.

Response: NOAA Fisheries agrees that measures need to be taken to prevent overfishing of finetooth sharks. NOAA Fisheries analyzed an alternative (I3) that would add the finetooth shark to the prohibited species group, but determined that this alternative would likely have limited positive ecological impacts as finetooth sharks are common bycatch in non-HMS fisheries and prohibiting them HMS fisheries will not prevent their capture. Additionally, finetooth sharks are not overfished and are commonly caught in HMS fisheries. As such, finetooth sharks do not appear to meet the criteria established in the selected alternative. As described in Amendment 1, NOAA Fisheries will take a long-term approach of identifying where finetooth sharks are caught and work with the appropriate Fishery Management Council to reduce fishing effort, as appropriate.

Comment 5: NOAA Fisheries received several comments regarding the preferred alternative for prohibited species. The comments include: We support the proposed alternative for prohibited

species; we support the proposed alternative but recommend removing the criterion of rarity in LCS catch; If a species is commonly caught in the LCS fishery, but is depleted and warrants protection according to the biological criteria, then the species should be prohibited; we support the proposed mechanism but note that the criteria and procedures in the draft Amendment 1 require further investigation and clarification regarding appropriateness before finalization; and, we support the proposed mechanism but suggest that the criterion for adding and removing species be separated because the action may be contrary.

Response: NOAA Fisheries believes the mechanism for adding and removing species to and from the prohibited species list and the associated criteria are appropriate for addressing the biological needs of individual shark species. In regard to concern over the second criterion, a species may be rarely caught in HMS fisheries (criterion 2) but stock assessments show few signs of depletion (e.g, HMS gear types are not efficient at catching the shark species or the species is caught in areas not fished by HMS fishermen). Before any species is added or removed from the list, NOAA Fisheries would issue a proposed and final rule that fully describes how and if the species meets the criteria. If adjustments to the criteria are found to be needed in the future, NOAA Fisheries can modify the criteria in a future rulemaking.

Comment 6: NOAA Fisheries should finalize alternative I2 (return to the original five species) and the preferred alternative. All LCS should be assessed. If they remain on the prohibited species list, NOAA Fisheries will not have the data they need to assess them. Similarly, we support the proposed mechanism but NOAA Fisheries should also remove any species that are logically not likely to be overfished (e.g., rarely caught species).

Response: The 1997 prohibition on the possession of whale, basking, sand tiger, bigeye sand tiger, and white sharks within Federal waters was a precautionary measure developed to ensure that directed fisheries did not develop for these species. These five species were identified as highly susceptible to over exploitation. In 1999, the HMS FMP prohibited the retention of the remainder of the prohibited species because they were known to be vulnerable to overfishing, uncommon, or seriously depleted. Although the preferred alternative includes a mechanism and lays out criteria for the inclusion and removal of species from the prohibited species group, NOAA Fisheries does not believe any changes to this group are warranted at this time. Each species will be considered on a case by case basis in future rulemakings. In the 2002 LCS stock assessment, there was sufficient information to assess the LCS complex as a whole, and sandbar and blacktip sharks individually. NOAA Fisheries will assess individual species as more biological and fishery information become available.

Comment 7: If the proposed mechanism is finalized, what type of request would we be required for NOAA Fisheries to start rulemaking to remove species?

Response: NOAA Fisheries would require a petition for rulemaking to alter the prohibited species list. A petition for rulemaking should contain sufficient information for NOAA Fisheries to consider the substance of the petition. For a petition regarding changes to the prohibited

species list, the petition should at a minimum:

- Indicate what species are proposed to be added to or removed from the list
- Identify which criteria warrant the addition or removal of the species
- Provide data, information, etc., relevant to those identified criteria
- State the resources necessary to develop the proposed regulations
- Explain the interest of the petitioner in the action requested
- Indicate the size of the population affected (i.e., who is affected by action)
- Indicate the public interest in the proposed regulation
- Explain the importance of the action requested to promoting established NOAA Fisheries' priorities and policies

Comment 8: If the proposed mechanism is finalized, will NOAA Fisheries conduct an annual assessment regarding which species will be placed on the prohibited species list?

Response: NOAA Fisheries will assess individual species as additional data becomes available and not necessarily on an annual basis.

C. Exempted Fishing Permits (EFPs)

Comment 1: We support the preferred alternative as long as NOAA Fisheries maintains some accountability on how the sharks are used, particularly the prohibited species. Any demographic information for age, growth, and offspring that evolves from aquarium use should be provided to NOAA Fisheries annually for use as a comparative database for life history analyses versus wild stocks.

Response: NOAA Fisheries maintains an exempted fishing permit (EFP) database which accounts for each highly migratory species requested, authorized, taken/collected, and/or tagged under an approved EFP. As for data reporting, each permitted individual is required to submit interim reports throughout the calendar as well as submit an annual report documenting the amount, composition, and disposition of the catch as well as information pertaining to fishing activities. Additionally, NOAA Fisheries is in the process of preparing a final rule to amend HMS reporting requirements under Exempted Fishing Permits (EFPs). Any issues or concerns which cannot be addressed in that rulemaking, will be addressed during forthcoming agency actions.

Comment 2: We support a separate display permitting system, apart form research or EFPs. NOAA Fisheries should overhaul the EFP system and establish separate classifications of permits for each specific use (e.g., public display, research, and other exempted activities).

Response: NOAA Fisheries agrees and is establishing display permits in this Amendment. Other purpose classifications of exempted fishing permits may be addressed in future rulemaking.

Comment 3: NOAA Fisheries received several comments regarding the issuance of permits. Comments included: NOAA Fisheries should not issue any more permits for scientific research. Background checks should be made of all permit holders; anyone with previous violations of any kind should be denied a permit. Requests for EFPs and SRPs need to be fully evaluated, taking into consideration past performance and other background, particularly for species that are already critically overfished.

Response: NOAA Fisheries does not believe that the agency should stop issuing scientific research permits. Valuable information is gathered from scientific research that would otherwise be prohibited. For example, the collection of life history, migration, and age and growth information from prohibited shark species would not occur without issuance of scientific research permits. NOAA Fisheries agrees that all permit applications should be carefully evaluated. As such, NOAA Fisheries will be investigating options for improving these evaluation processes (e.g., utilizing background checks as one possible means of permit denial/approval) in a future rulemaking.

Comment 4: Fishermen catching sharks for display purposes should be required to have a purchase order from an aquarium in hand before going out. Annual follow-up investigations to the aquarium should be made to ensure that the shark is cared for properly. If someone is caught without a purchase order, the fine should be $10,000 per shark.

Response: NOAA Fisheries will be investigating these issues further in a future rulemaking.

Comment 5: Several changes are needed to the EFP process including incorporating more public comment into the EFP allocation process and letting the public know what the final decision is and what the environmental impacts are of its decision.

Response: NOAA Fisheries will be investigating alternatives to improve the process in a future rulemaking and notes that information on the types of and number of permits issued are presented in the annual SAFE reports.

Comment 6: Efforts should continue with the Atlantic States Marine Fisheries Commission (ASMFC) regarding coordination between state and federal permits. There often appears to be too many permits and too little oversight.

Response: NOAA Fisheries supports continuing dialogues with the ASMFC regarding coordination between state and federal permits and has been working on improving its own database and collection methods, in part, to improve communication between NOAA Fisheries and state agencies.

Comment 7: While criteria for each EFP may vary, there should be uniform standards of performance, reporting, and accountability that are equally applicable to fishermen, aquariums, researchers, and educational institutions. Implementation of measures to ascertain the

educational need justifying the harvest of these animals and improving reporting should be investigated.

Response: NOAA Fisheries will be investigating these issues further in a future rulemaking.

A5.6 Essential Fish Habitat

Comment 1: EPA recommends including a discussion on whether shark EFH is being affected by other fishery practices. For example, if shark EFH is protected by limiting clamming or trawling in coastal bays, then the fishery may support higher quotas.

Response: Because sharks use both estuarine and coastal inshore habitats, their EFH may be negatively impacted by fisheries that target species other than sharks. These fisheries may be either state or Federally managed. In particular, shark pupping and nursery habitats may be subjected to fishing impacts from gears of other fisheries, e.g., shrimp trawling, but the degree of overlap between the various trawl fisheries and shark EFH, the extent to which habitat is altered by these gears, and the resulting impact on EFH are currently not known. Further research would be required to determine habitat-related production rates for sharks (the highest, most refined level of information available with which to identify EFH, and which is currently not available for sharks) and the potential impact of other fisheries on these production rates. Even if clamming or trawling were limited in some way to reduce impacts on shark EFH, the decision to raise quotas would only be made after appropriate stock assessments were conducted to determine whether the status of the stock had improved as a result of the conservation and enhancement actions.

Comment 2: NOAA Fisheries should identify EFH based on the entire geographic range of the species (alternative L2).

Response: The EFH final rule recommends distinguishing EFH from all habitats potentially used by a species (50 CFR 600.815(a)(1)(iv)(A)). NOAA Fisheries considered alternative L2, to identify EFH based on the entire geographic range of the species, but decided instead to use alternative L4 because specific information from scientists, observers, and tagging programs was available to identify EFH more precisely based on observed distributions and knowledge about habitat requirements of individual species. Alternative L4 identifies EFH based on an initial analysis of 100 percent of the observed distribution (alternative L3) which may then either be expanded or reduced based on the status of the stock. If new information is not available, the existing EFH identifications would be maintained. The basis for this alternative is to provide flexibility to increase or decrease the extent of EFH based on the status of the stock. Since overfished resources are considered to be at greater risk, the percentage of habitat identified as EFH for overfished species would be greater than that of fully fished or not overfished species. Alternative L2 could potentially have resulted in inclusion of the entire EEZ for certain species, which would include more than the range of areas necessary for spawning, feeding, breeding and growth to maturity as defined in the EFH regulations. NOAA Fisheries believes that the areas

currently identified as EFH are based upon the best available science and represent the most accurate identification of EFH.

Comment 3: We support the use of alternatives J3 and J4 to identify EFH as specifically as possible and the use of data to increase or decrease the identifications for each species.

Response: Alternative L4 is preferred because it provides an objective way of identifying EFH, and because it allows for the expansion or contraction of EFH based on the status of a particular species or life stage. For example, for overfished species, 90 percent of the range of distribution could hypothetically be identified as EFH, and for a species that is not overfished, 75 percent of the range of distribution might be identified as EFH.

Comment 4: Sandbar shark EFH should include areas in the northern Gulf of Mexico.

Response: Current sandbar shark EFH for all life stages includes areas in the northeastern Gulf of Mexico from Key West, Florida, as far west as Cape San Blas, Florida, on the Florida Gulf coast at 80^0 15' North, including Apalachicola Bay, Florida. NOAA Fisheries did not have sufficient information to include areas farther west at this time.

Comment 5: NOAA Fisheries should work with Mexico and Cuba to include their waters as EFH. Twenty percent of all dusky shark tags are returned from Mexico after having been tagged in the mid-Atlantic region. Expanding EFH would help present all information possible about EFH throughout the immediate range.

Response: Habitats that satisfy the criteria in the Magnuson-Stevens Act and the EFH regulations have been identified and described as EFH; some additional habitats may lie outside the U.S. Exclusive Economic Zone (EEZ), and therefore cannot be identified as EFH under the Magnuson-Stevens Act. Instead, these areas may be highlighted as particularly important habitats and actions that may adversely affect the habitat may be addressed through international agreements as recommended in the EFH regulations (50 CFR 600.805(b)(2)). The U.S. has engaged in discussions with Mexico regarding fisheries issues in the past, and met again October 22-24, 2003, for U.S. Mexico Bilateral Consultations in Mazatlan, Mexico. NOAA Fisheries is not aware whether shark habitat was on the list of topics that were discussed. Currently the U.S. does not have diplomatic relations with Cuba, and working cooperatively to determine shark habitat in Cuban waters would be difficult.

Comment 6: The Amendment discusses changes to EFH based on human impacts but does not discuss natural impacts such as red tide or rising temperatures.

Response: Both red tide and rising temperatures may influence EFH. Red tides may have a short term impact by altering distribution of organisms, and temperature rise may have a long term influence by changing the distribution and abundance of predators and prey, benthic and water column habitat characteristics, and a host of other related issues. Red tides and rising

temperatures have been linked to human activities, and as such, the final Amendment includes conservation recommendations aimed at reducing the runoff of coastal pollution which may influence or exacerbate red tides, and discusses many other influencing factors that are land-based and may have an impact on coastal waters and EFH.

A5.7 The Stock Assessment and the Status of the Sharks

Comment 1: NOAA Fisheries received a range of comments regarding the current abundance of sharks. One commenter noted that a research scientist told him that there are plenty of sharks and that the scientist has seen more in his research this year than in other years. Another commenter noted that he no longer sees as many large coastal sharks as he used to and that shark harvesting should be stopped.

Response: Because of a number of factors including, but not limited to, environmental changes, the gear used, the random sampling scheme used, and past experience of the fisherman, the number of sharks seen by one person or in one year of a time series compared to other years or other people can vary. The models used in the large and small coastal shark stock assessments take this variation into account when examining the data provided by fishermen and scientists. Thus, the measures of abundance determined by the stock assessment are deemed to be the best available science and an appropriate basis for management action.

Comment 2: How could blacktip sharks be overfished in 1998 and now be rebuilt?

Response: As a result of a settlement agreement with commercial fishermen, NOAA Fisheries had the 1998 LCS stock assessment peer reviewed. Those reviews found that the scientific conclusions and recommendations in the 1998 stock assessment were not based on scientifically reasonable uses of appropriate stock assessment techniques. As a result of these peer reviews, NOAA Fisheries went back to the 1998 stock assessment and conducted a number of sensitivity analyses on the data and the models used at that time. These analyses found that the data and models used for blacktip sharks were particularly sensitive to a number of factors and that changing some of the factors could lead to results that indicated the stock was either rebuilt or was well below sustainable levels. The sensitivity of the results (to computational issues) was largely attributed to the CPUE series within the analyses, which showed contradictory trends. As a result of these sensitivity analyses, before the actual 2002 stock assessment was conducted, scientists and other stakeholders examined each time series and model available and determined which ones were the most appropriate for use. Given these decisions on data inputs and modeling approaches, the condition of blacktip sharks was determined to be rebuilt. The peer review of the 2002 LCS stock assessment found that the models and data used were appropriate.

Comment 3: Given the short period of shark management and the long time required for sandbars to attain maturity, the assertion that sandbar sharks are restored is something of a scientific miracle. Sandbar sharks used to be so common in the mid-Atlantic that they could be counted upon to save almost every summer shark trip. After a few years of intense commercial shark

fishing, that species was practically wiped out. We still do not see them.

Response: The latest LCS stock assessment was conducted by some of the most respected shark and stock assessment scientists in the United States and, as is attested by the results of the peer review, used state-of-the-art models. Additionally, the data and models used in the stock assessment were examined and debated by scientists, environmentalists, and fishermen in a stock evaluation workshop before the stock assessment itself. Thus, based on the best scientific data available at this time, NOAA Fisheries believes that the latest LCS stock assessment is one of the most accurate shark stock assessments produced by the agency. This assessment found that sandbar sharks are no longer overfished but are experiencing overfishing. It is important to note that a change in status from overfished to rebuilt does not mean that the population is restored to levels of an unexploited or lightly exploited population. In general, a fish population that is capable of producing MSY on a continuous level (i.e., a population that is not overfished) is roughly half that of an unexploited population. Thus, NOAA Fisheries would not expect sandbar shark catch rates to return to the catch rates that occurred at the start-up phases of either the recreational or commercial fisheries.

Comment 4: How can a species have overfishing occurring but not be overfished?

Response: Overfishing relates to the rate of fishing mortality and indicates that the standing stock is being reduced because removals exceed the capacity of the stock to replace itself. Fishing pressure or fishing mortality needs to be reduced on a species that is experiencing overfishing or the species will become overfished. A species is overfished if the biomass or the number of fish in the population is too low to produce the desired level of harvest on a continuing basis. In the case of an overfished species, fishing mortality must be reduced in order to keep more individuals in the population and contributing to reproduction. An overfished population cannot rebuild unless overfishing is stopped.

Comment 5: NOAA Fisheries received several comments regarding the accuracy of species identification and its impact on data quality and the accuracy of stock assessments. Comments included: NOAA Fisheries needs to improve species identification and reporting by shark dealers. The data you are using is wrong because fishermen have normally listed everything as a "sandbar shark." NOAA Fisheries should work within the Atlantic Coastal Cooperative Statistics Program (ACCSP) to better standardize fishery-dependent survey data collection and address the tendency of dealers to simply categorize shark landings as "sharks."

Response: Since 1993, species-specific reporting has been required. However, some fishermen and dealers still report sharks as "shark" or as "large coastal." Both the small and large coastal shark stock assessments use a variety of data including fishery-dependent (e.g., self-reported data such as logbooks) and fishery-independent data (e.g., research cruises with a set sampling scheme). While some fishermen or dealers may report the incorrect species on logbooks, other fishermen and dealers do report the correct species, as is required by the regulations, and observers or scientists trained in species-identification report the correct species level data. Both

stock assessments conducted numerous sensitivity analyses to examine what happens to the results of the models if only relative abundance data reported by fishermen or only data reported by scientists are used. The overall results of the stock assessments consider these sensitivity analyses. Recognizing that the accuracy of stock assessments and management can be improved with correct species-identification, NOAA Fisheries will be releasing a species-identification guide shortly and will be examining, in a future rulemaking, methods of requiring mandatory workshops for both commercial and recreational fishermen in order to improve, among other things, species-identification. NOAA Fisheries continues to work within the ACCSP and other relevant forums to improve the reporting process of shark data.

Comment 6: How independent were the peer reviews?

Response: For the 1998 and 2002 LCS stock assessments, Natural Resources Consultants, Inc. (NRC) hired several non-NOAA Fisheries scientists to conduct the peer review. These non-NOAA Fisheries scientists provided information to show they had no conflict of interest. NOAA Fisheries provided NRC with all the supporting documentation the scientists required such as copies of the stock assessment and the related documents. However, pursuant to a court-approved settlement agreement, NRC did not disclose the identities of the peer reviewers to fisheries management staff at NOAA Fisheries until after the reviews were complete. No one in NOAA Fisheries knew who the peer reviewers were or had contact with them until after both the agency's and Plaintiffs' counsel determined that the peer review documents were complete.

Comment 7: All shark fishing should be stopped. The PEW Report and other reports by independent, unbiased scientists indicate that overfishing is occurring. NOAA Fisheries is not accurate when it says "sandbar sharks are no longer overfished."

Response: The latest LCS stock assessment was conducted by some of the most respected shark and stock assessment scientists in the United States and the methods and data used were examined by both industry and environmental representatives before the stock assessment was conducted. Independent (i.e., non-NOAA Fisheries) peer reviews of the stock assessment indicate that the models and data used were appropriate. The current LCS stock assessment is the best available science on the status of the stocks.

Comment 8: NOAA Fisheries received a range of comments regarding the menhaden fishery and shark bycatch. These comments included: The menhaden fishery catches a lot of sharks. Does NOAA Fisheries incorporate bycatch information from the mendhaden fishery in the stock assessment? NOAA Fisheries should monitor and control the bycatch in the menhaden fishery.

Response: The Gulf of Mexico menhaden purse seine fishery does have some bycatch of sharks. It is estimated that approximately 75 percent of the sharks encountered in the fishery die, and 97 percent of the sharks encountered are LCS while 3 percent are SCS. The 2002 LCS stock assessment included these discard estimates for LCS, blacktip, and sandbar in the Gulf of Mexico menhaden purse seine fishery from 1981 to 2001. Additionally, different sensitivity analyses

were conducted to determine how much the results would change if data extended back to1964. Results from those sensitivity analyses indicated that extending the series of menhaden discard estimates back in time had almost no effect. NOAA Fisheries will continue to work with the Gulf States Marine Fisheries Commission and the Gulf of Mexico Fishery Management Council to monitor the situation and, as needed, examine methods of reducing bycatch of sharks in this fishery.

Comment 9: The two species that have been assessed outside the LCS complex have been shown to be not overfished; NOAA Fisheries needs to assess the other 20 LCS species to find out what their status is. All LCS, except sandbar and blacktip sharks, are considered overfished. Some of these species are rare event animals in the ecosystem; they have never, nor will ever be, overfished because they cannot be targeted in U.S. waters. These species should not be considered overfished. Despite 10 years of management, NOAA Fisheries has failed to conduct species-specific assessments for all LCS. Similarly, some of the prohibited LCS are listed as overfished but should not be. For example the bigeye sand tiger and narrowtooth sharks. These animals are rarely caught or found in U.S. waters.

Response: NOAA Fisheries continues to collect species-specific data in support of species-specific stock assessments. To date, NOAA Fisheries has conducted individual stock assessments for sandbar, blacktip, Atlantic sharpnose, finetooth, blacknose, and bonnethead sharks. As additional biological and fishery-related data become available, NOAA Fisheries will conduct other species-specific stock assessments. As noted in the 2002 LCS stock assessment, NOAA Fisheries plans to conduct a dusky shark stock assessment in the near future. Until that time, NOAA Fisheries must use the best available data to conduct stock assessments. For many species of sharks, this means conducting group stock assessments of the entire complex. These results indicate that some species in the LCS complex are in apparent decline while other species are not. Until stock assessments can be conducted on individual shark species, NOAA Fisheries is implementing a mechanism that uses a number of criteria to determine if the species should be on the prohibited species list. If a species, such as narrowtooth sharks, is rarely caught but do not meet the other criteria, such as sufficient biological data to indicate a decline, then the species can be removed. However, if the species is rarely caught because its stock is depleted, the species would be added to, or maintained on, the prohibited species list.

Comment 10: NOAA Fisheries' dusky data is incorrect and is not a true indicator of what is being caught. Juvenile dusky sharks are not caught off the east coast of Florida. Only giant dusky sharks were reported in logbooks in the past.

Response: The data collected on dusky sharks is from a variety of sources including fishermen, dealers, observers, and scientists. While there may be some problems with species identification on the part of those individuals not trained to do so, observers and scientists who have been trained to identify sharks do provide species level data. These data indicate that juvenile dusky sharks (dusky sharks do not mature until they are approximately 9.5 feet fork length) are caught off the east coast of Florida.

Comment 11: NOAA Fisheries received several comments regarding the assessment results for finetooth sharks. Comments include: The data on finetooth sharks is flawed; I only land a few and there is only a small area where they are caught. Assessments for finetooth sharks can be improved with better landings and bycatch information. NOAA Fisheries states that overfishing is occurring for finetooth sharks because of excessive bycatch, yet according to the SCS stock assessment, no bycatch numbers were used in the model; NOAA Fisheries should improve the data on finetooth sharks.

Response: NOAA Fisheries agrees that results for finetooth sharks are uncertain and believes this is due to limited catch and CPUE series, lack of bycatch estimates, and no catches reported in some years. NOAA Fisheries is also examining which fisheries are actually landing the majority of the finetooth sharks. The majority of finetooth shark landings come from gillnets in the South Atlantic fishery; however, observer data indicate that the six gillnet vessels that are known to be targeting small coastal sharks, including finetooth sharks, do not land as many finetooth sharks as are reported. Given the uncertainty of the results of the models and the need to collect information on these non-HMS fisheries that are landing finetooth sharks, NOAA Fisheries intends prevent overfishing of finetooth sharks by improving species-identification, particularly with recreational fishermen, and working with the Fishery Management Councils to identify and improve monitoring of fisheries that land finetooth sharks.

Comment 12: NOAA Fisheries received several comments regarding future assessments. Comments included: NOAA Fisheries should use an assessment protocol similar to the South Atlantic Fishery Management Council's Southeast Data and Assessment Review (SEDAR) process for future stock assessments. Species level assessments for several of the primary LCS species need to be developed as soon as possible. NOAA Fisheries needs to schedule LCS and SCS stock assessments for 2004 to prepare plans for future shark issues of importance. An assessment for the pelagic shark group needs to be completed as soon as possible.

Response: The process for conducting shark stock assessments continues to evolve and improve over time. As new data and techniques become available, NOAA Fisheries makes every effort to examine the possibility of using those data and techniques for assessing the status of sharks. Additionally, NOAA Fisheries considers and will continue to consider the process of other fisheries stock assessments and the needs of the fishing communities to improve the overall stock assessment process. Under the HMS FMP, NOAA Fisheries committed to holding stock assessments for each complex every two to three years. At this time, NOAA Fisheries has not yet decided when the next SCS or LCS stock assessments will be conducted. However, NOAA Fisheries will make every effort to ensure interested parties can attend the shark evaluation workshop. As for pelagic sharks, because of their migratory nature, NOAA Fisheries is working with ICCAT to collect data and conduct an international stock assessment of several species of pelagic sharks. That stock assessment should occur in 2004.

Comment 13: NOAA Fisheries should make efforts to document fully landings in Mexican waters and to work with that country in coordinating shark management.

Response: NOAA Fisheries agrees and is working through international means and with Mexican scientists to improve communication and facilitate the exchange of data.

A5.7 The Stock Assessment and the Status of the Sharks

Comment 1: NOAA Fisheries received a range of comments regarding the current abundance of sharks. One commenter noted that a research scientist told him that there are plenty of sharks and that the scientist has seen more in his research this year than in other years. Another commenter noted that he no longer sees as many large coastal sharks as he used to and that shark harvesting should be stopped.

Response: Because of a number of factors including, but not limited to, environmental changes, the gear used, the random sampling scheme used, and past experience of the fisherman, the number of sharks seen by one person or in one year of a time series compared to other years or other people can vary. The models used in the large and small coastal shark stock assessments take this variation into account when examining the data provided by fishermen and scientists. Thus, the measures of abundance determined by the stock assessment are deemed to be the best available science and an appropriate basis for management action.

Comment 2: How could blacktip sharks be overfished in 1998 and now be rebuilt?

Response: As a result of a settlement agreement with commercial fishermen, NOAA Fisheries had the 1998 LCS stock assessment peer reviewed. Those reviews found that the scientific conclusions and recommendations in the 1998 stock assessment were not based on scientifically reasonable uses of appropriate stock assessment techniques. As a result of these peer reviews, NOAA Fisheries went back to the 1998 stock assessment and conducted a number of sensitivity analyses on the data and the models used at that time. These analyses found that the data and models used for blacktip sharks were particularly sensitive to a number of factors and that changing some of the factors could lead to results that indicated the stock was either rebuilt or was well below sustainable levels. The sensitivity of the results (to computational issues) was largely attributed to the CPUE series within the analyses, which showed contradictory trends. As a result of these sensitivity analyses, before the actual 2002 stock assessment was conducted, scientists and other stakeholders examined each time series and model available and determined which ones were the most appropriate for use. Given these decisions on data inputs and modeling approaches, the condition of blacktip sharks was determined to be rebuilt. The peer review of the 2002 LCS stock assessment found that the models and data used were appropriate.

Comment 3: Given the short period of shark management and the long time required for sandbars to attain maturity, the assertion that sandbar sharks are restored is something of a scientific miracle. Sandbar sharks used to be so common in the mid-Atlantic that they could be counted upon to save almost every summer shark trip. After a few years of intense commercial shark fishing, that species was practically wiped out. We still do not see them.

Response: The latest LCS stock assessment was conducted by some of the most respected shark and stock assessment scientists in the United States and, as is attested by the results of the peer review, used state-of-the-art models. Additionally, the data and models used in the stock assessment were examined and debated by scientists, environmentalists, and fishermen in a stock evaluation workshop before the stock assessment itself. Thus, based on the best scientific data available at this time, NOAA Fisheries believes that the latest LCS stock assessment is one of the most accurate shark stock assessments produced by the agency. This assessment found that sandbar sharks are no longer overfished but are experiencing overfishing. It is important to note that a change in status from overfished to rebuilt does not mean that the population is restored to levels of an unexploited or lightly exploited population. In general, a fish population that is capable of producing MSY on a continuous level (i.e., a population that is not overfished) is roughly half that of an unexploited population. Thus, NOAA Fisheries would not expect sandbar shark catch rates to return to the catch rates that occurred at the start-up phases of either the recreational or commercial fisheries.

Comment 4: How can a species have overfishing occurring but not be overfished?

Response: Overfishing relates to the rate of fishing mortality and indicates that the standing stock is being reduced because removals exceed the capacity of the stock to replace itself. Fishing pressure or fishing mortality needs to be reduced on a species that is experiencing overfishing or the species will become overfished. A species is overfished if the biomass or the number of fish in the population is too low to produce the desired level of harvest on a continuing basis. In the case of an overfished species, fishing mortality must be reduced in order to keep more individuals in the population and contributing to reproduction. An overfished population cannot rebuild unless overfishing is stopped.

Comment 5: NOAA Fisheries received several comments regarding the accuracy of species identification and its impact on data quality and the accuracy of stock assessments. Comments included: NOAA Fisheries needs to improve species identification and reporting by shark dealers. The data you are using is wrong because fishermen have normally listed everything as a "sandbar shark." NOAA Fisheries should work within the Atlantic Coastal Cooperative Statistics Program (ACCSP) to better standardize fishery-dependent survey data collection and address the tendency of dealers to simply categorize shark landings as "sharks."

Response: Since 1993, species-specific reporting has been required. However, some fishermen and dealers still report sharks as "shark" or as "large coastal." Both the small and large coastal shark stock assessments use a variety of data including fishery-dependent (e.g., self-reported data such as logbooks) and fishery-independent data (e.g., research cruises with a set sampling scheme). While some fishermen or dealers may report the incorrect species on logbooks, other fishermen and dealers do report the correct species, as is required by the regulations, and observers or scientists trained in species-identification report the correct species level data. Both stock assessments conducted numerous sensitivity analyses to examine what happens to the results of the models if only relative abundance data reported by fishermen or only data reported

by scientists are used. The overall results of the stock assessments consider these sensitivity analyses. Recognizing that the accuracy of stock assessments and management can be improved with correct species-identification, NOAA Fisheries will be releasing a species-identification guide shortly and will be examining, in a future rulemaking, methods of requiring mandatory workshops for both commercial and recreational fishermen in order to improve, among other things, species-identification. NOAA Fisheries continues to work within the ACCSP and other relevant forums to improve the reporting process of shark data.

Comment 6: How independent were the peer reviews?

Response: For the 1998 and 2002 LCS stock assessments, Natural Resources Consultants, Inc. (NRC) hired several non-NOAA Fisheries scientists to conduct the peer review. These non-NOAA Fisheries scientists provided information to show they had no conflict of interest. NOAA Fisheries provided NRC with all the supporting documentation the scientists required such as copies of the stock assessment and the related documents. However, pursuant to a court-approved settlement agreement, NRC did not disclose the identities of the peer reviewers to fisheries management staff at NOAA Fisheries until after the reviews were complete. No one in NOAA Fisheries knew who the peer reviewers were or had contact with them until after both the agency's and Plaintiffs' counsel determined that the peer review documents were complete.

Comment 7: All shark fishing should be stopped. The PEW Report and other reports by independent, unbiased scientists indicate that overfishing is occurring. NOAA Fisheries is not accurate when it says "sandbar sharks are no longer overfished."

Response: The latest LCS stock assessment was conducted by some of the most respected shark and stock assessment scientists in the United States and the methods and data used were examined by both industry and environmental representatives before the stock assessment was conducted. Independent (i.e., non-NOAA Fisheries) peer reviews of the stock assessment indicate that the models and data used were appropriate. The current LCS stock assessment is the best available science on the status of the stocks.

Comment 8: NOAA Fisheries received a range of comments regarding the menhaden fishery and shark bycatch. These comments included: The menhaden fishery catches a lot of sharks. Does NOAA Fisheries incorporate bycatch information from the mendhaden fishery in the stock assessment? NOAA Fisheries should monitor and control the bycatch in the menhaden fishery.

Response: The Gulf of Mexico menhaden purse seine fishery does have some bycatch of sharks. It is estimated that approximately 75 percent of the sharks encountered in the fishery die, and 97 percent of the sharks encountered are LCS while 3 percent are SCS. The 2002 LCS stock assessment included these discard estimates for LCS, blacktip, and sandbar in the Gulf of Mexico menhaden purse seine fishery from 1981 to 2001. Additionally, different sensitivity analyses were conducted to determine how much the results would change if data extended back to1964. Results from those sensitivity analyses indicated that extending the series of menhaden discard

estimates back in time had almost no effect. NOAA Fisheries will continue to work with the Gulf States Marine Fisheries Commission and the Gulf of Mexico Fishery Management Council to monitor the situation and, as needed, examine methods of reducing bycatch of sharks in this fishery.

Comment 9: The two species that have been assessed outside the LCS complex have been shown to be not overfished; NOAA Fisheries needs to assess the other 20 LCS species to find out what their status is. All LCS, except sandbar and blacktip sharks, are considered overfished. Some of these species are rare event animals in the ecosystem; they have never, nor will ever be, overfished because they cannot be targeted in U.S. waters. These species should not be considered overfished. Despite 10 years of management, NOAA Fisheries has failed to conduct species-specific assessments for all LCS. Similarly, some of the prohibited LCS are listed as overfished but should not be. For example the bigeye sand tiger and narrowtooth sharks. These animals are rarely caught or found in U.S. waters.

Response: NOAA Fisheries continues to collect species-specific data in support of species-specific stock assessments. To date, NOAA Fisheries has conducted individual stock assessments for sandbar, blacktip, Atlantic sharpnose, finetooth, blacknose, and bonnethead sharks. As additional biological and fishery-related data become available, NOAA Fisheries will conduct other species-specific stock assessments. As noted in the 2002 LCS stock assessment, NOAA Fisheries plans to conduct a dusky shark stock assessment in the near future. Until that time, NOAA Fisheries must use the best available data to conduct stock assessments. For many species of sharks, this means conducting group stock assessments of the entire complex. These results indicate that some species in the LCS complex are in apparent decline while other species are not. Until stock assessments can be conducted on individual shark species, NOAA Fisheries is implementing a mechanism that uses a number of criteria to determine if the species should be on the prohibited species list. If a species, such as narrowtooth sharks, is rarely caught but do not meet the other criteria, such as sufficient biological data to indicate a decline, then the species can be removed. However, if the species is rarely caught because its stock is depleted, the species would be added to, or maintained on, the prohibited species list.

Comment 10: NOAA Fisheries' dusky data is incorrect and is not a true indicator of what is being caught. Juvenile dusky sharks are not caught off the east coast of Florida. Only giant dusky sharks were reported in logbooks in the past.

Response: The data collected on dusky sharks is from a variety of sources including fishermen, dealers, observers, and scientists. While there may be some problems with species identification on the part of those individuals not trained to do so, observers and scientists who have been trained to identify sharks do provide species level data. These data indicate that juvenile dusky sharks (dusky sharks do not mature until they are approximately 9.5 feet fork length) are caught off the east coast of Florida.

Comment 11: NOAA Fisheries received several comments regarding the assessment results for

finetooth sharks. Comments include: The data on finetooth sharks is flawed; I only land a few and there is only a small area where they are caught. Assessments for finetooth sharks can be improved with better landings and bycatch information. NOAA Fisheries states that overfishing is occurring for finetooth sharks because of excessive bycatch, yet according to the SCS stock assessment, no bycatch numbers were used in the model; NOAA Fisheries should improve the data on finetooth sharks.

Response: NOAA Fisheries agrees that results for finetooth sharks are uncertain and believes this is due to limited catch and CPUE series, lack of bycatch estimates, and no catches reported in some years. NOAA Fisheries is also examining which fisheries are actually landing the majority of the finetooth sharks. The majority of finetooth shark landings come from gillnets in the South Atlantic fishery; however, observer data indicate that the six gillnet vessels that are known to be targeting small coastal sharks, including finetooth sharks, do not land as many finetooth sharks as are reported. Given the uncertainty of the results of the models and the need to collect information on these non-HMS fisheries that are landing finetooth sharks, NOAA Fisheries intends prevent overfishing of finetooth sharks by improving species-identification, particularly with recreational fishermen, and working with the Fishery Management Councils to identify and improve monitoring of fisheries that land finetooth sharks.

Comment 12: NOAA Fisheries received several comments regarding future assessments. Comments included: NOAA Fisheries should use an assessment protocol similar to the South Atlantic Fishery Management Council's Southeast Data and Assessment Review (SEDAR) process for future stock assessments. Species level assessments for several of the primary LCS species need to be developed as soon as possible. NOAA Fisheries needs to schedule LCS and SCS stock assessments for 2004 to prepare plans for future shark issues of importance. An assessment for the pelagic shark group needs to be completed as soon as possible.

Response: The process for conducting shark stock assessments continues to evolve and improve over time. As new data and techniques become available, NOAA Fisheries makes every effort to examine the possibility of using those data and techniques for assessing the status of sharks. Additionally, NOAA Fisheries considers and will continue to consider the process of other fisheries stock assessments and the needs of the fishing communities to improve the overall stock assessment process. Under the HMS FMP, NOAA Fisheries committed to holding stock assessments for each complex every two to three years. At this time, NOAA Fisheries has not yet decided when the next SCS or LCS stock assessments will be conducted. However, NOAA Fisheries will make every effort to ensure interested parties can attend the shark evaluation workshop. As for pelagic sharks, because of their migratory nature, NOAA Fisheries is working with ICCAT to collect data and conduct an international stock assessment of several species of pelagic sharks. That stock assessment should occur in 2004.

Comment 13: NOAA Fisheries should make efforts to document fully landings in Mexican waters and to work with that country in coordinating shark management.

Response: NOAA Fisheries agrees and is working through international means and with Mexican scientists to improve communication and facilitate the exchange of data.

A5.8 Economic Impacts

Comment 1: NOAA Fisheries received several comments regarding the range of economic impacts that should be analyzed. Comments included: NOAA Fisheries should focus on the probability of extinction of sharks instead of the economic impacts on commercial fishermen. NOAA Fisheries should not focus on the economic impacts on commercial fishermen but on U.S. citizens as a whole.

Response: NOAA Fisheries conducts economic analyses pursuant to the National Environmental Policy Act, 1969 (42 U.S.C. 4321 et seq.), Regulatory Flexibility Act, 1980 (5 U.S.C. 601 et seq.), Small Business Regulatory Enforcement Fairness Act, 1996 (5 U.S.C. 801 et seq.), Regulatory Planning and Review, 1993 (Executive Order 12866), and Proper Consideration of Small Entities in Agency Rulemaking, 2002 (Executive Order 13272). As such, NOAA Fisheries conducted economic analyses via completion of a Environmental Impact Statement, Initial Regulatory Flexibility Analysis (IRFA), Final Regulatory Flexibility Analysis (FRFA), and a Regulatory Impact Review (RIR), which document economic impacts on the affected fishery, small entities, and the nation as a whole.

Comment 2: The revised quotas will put fishermen out of business. The current quotas are good and the overall fishery is improving. NOAA Fisheries should leave well enough alone.

Response: According to the 2002 LCS stock assessment, the LCS complex is overfished and overfishing is occurring (Cortes, 2002). As such, the 2002 stock assessment recommends that adjustments to quotas be made in the form of percent reductions in catch. Economic analyses indicate that the LCS quota was worth $2,895,521 in 2001 under the baseline for comparison (i.e., 1285 mt dw). According to economic analyses, implementation of the preferred alternatives will result in a 21-percent reduction in total gross revenues for both the fishery as a whole as well as small entities. If NOAA Fisheries, did not act, the quotas from the 1999 HMS FMP would go into place. These quotas are lower than the quotas selected in Amendment 1 and would put additional fishermen out of business.

Comment 3: The combination of alternatives A4 and C2 would stabilize some of the economic impacts that have unfolded upon the directed shark participants since 1997 due to regulations and inadequate science.

Response: While the combination of alternatives A4 and C2 would increase total gross revenues by 33 percent to both the fishery as a whole as well as small entities, this economic benefit may be short-lived if the fishery continues to decline as a result of substantial increases of regulatory discards that are anticipated with multiple closures in a mixed LCS fishery. Fishermen would likely need to increase effort in order to make up for lost catches during partial closures. This

increase in effort may result in increased protected resource interactions and mortality on non-targeted species. Moreover, longer sorting times per set are likely to increase opportunity costs to fishery participants. Additionally, lengthening of trips may occur in order for fishermen to compensate for lost catches during a partial closure. Increased time at sea reduces the profits fishermen gain due to increased costs for fuel, bait and ice. Safety at sea concerns are also of interest, given that fishermen must fish longer or harder to counteract for lost revenues.

Comment 4: The regional quotas and estimates of catches by region are flawed and will put North Atlantic fishermen out of business. This regional quota and a trimester approach will give the North Atlantic 1.3 percent of the quota or 14.4 mt dw for each season. This is not sufficient to maintain a crew.

Response: NOAA Fisheries combined information from two separate databases containing regional landings information as reported by dealers and states to NOAA Fisheries. NOAA Fisheries believes that the landings reported by dealers and states represents the best available information pertaining to regional data. Given that regional quotas seek to maintain historical landings, as opposed to reducing landings, NOAA Fisheries does not expect that regional quotas would change previous fishing practices or result in any significant economic impact. To the extent that the quota itself is being reduced, fishermen in all regions will likely have reduced landings. However, NOAA Fisheries believes that having more open seasons (i.e., three as opposed to two) and spreading the open seasons out more evenly, will result in greater economic stability for fishery participants, including crew members. Additionally, over time, regional quotas may allow NOAA Fisheries the flexibility to manage quotas to each region's maximum economic advantage.

Comment 5: NOAA Fisheries received a range of comments regarding the economic impact of a trimester approach. Comments include: We cannot support the trimester season approach because it would hurt the market and because it could have economic costs for fishermen who would need to switch their gear types three times a year instead of two times. Grocers need at least a month to develop their advertising and know their potential supply and price; a trimester approach would not give enough time for grocers to advertise. I like the trimester approach because it would allow for more advertising and therefore a higher price. I do not need to switch my gear because I use the same gear for grouper, sharks, and tuna. NOAA Fisheries, as part of the Department of Commerce, should be more sensitive to seafood markets and should know that changing the seasons from biannual to trimesters will cause extreme harm to the established market routine for sharks.

Response: NOAA Fisheries recognizes that trimesters may take time for fishermen and associated communities (e.g., dealers, processors, retail agents) to adapt to, given that new markets will need to be established at different times of the year. Fishery participants will need time (i.e., between two weeks and a month) to work with grocers to advertise shark products and under trimester seasons the time available for such advertisements may be further limited, as compared with the no action alternative. Additionally, since fishermen may be able to land

sharks at the same time as other fish, there could be fluctuations in markets for other fisheries. Spreading open seasons out more evenly over the calendar year could, in the long-term, result in greater economic stability for fishermen and associated communities because the amount of time between open and closed seasons would be reduced and sharks would be available in the market more frequently throughout the year. In order to reduce the economic impacts associated with trimesters, NOAA Fisheries will implement a delay in effectiveness to give fishery participants an opportunity to work with dealers and grocers to enhance markets and advertising solutions in advance of season openings. NOAA Fisheries also recognizes that variation in open seasons could result in short-term social and economic burdens, given that fishermen will need to adjust fishing practices, including but not limited to, re-rigging gear more often to fish for shark, as opposed to other species, during what would otherwise be a closed season. Social and economic costs associated with switching gear more often may be minimized, if shark fishery participants use the same gear in other fisheries (e.g. similar gear is used to fish for shark, grouper, and tuna). Trimester seasons are preferred to quarterly seasons because trimesters will minimize the costs of switching gear (i.e., only three times as opposed to four per year) and give a higher percentage of the quota to each open season than would occur under a quarterly season approach.

Comment 6: I want a buyout if you are going to set the regional quotas and trimester seasons. My vessel is worth more than $200,000 to me.

Response: NOAA Fisheries has the authority to reduce capacity under the Magnuson-Stevens Act (Section 312(b)-(e)) and may investigate options to reduce capacity during a future rulemaking.

Comment 7: If NOAA Fisheries bans drift gillnet, all shark gillnet fishermen, including those already using strikenet gear, will go out of business because you can only use strikenet from January through April when the LCS are schooling and the season is open. You cannot use strikenet to target SCS which is what shark gillnet fishermen rely on when the LCS season is closed. You also cannot use strikenet gear in the summer because the sharks in this area are not schooling. Shark gillnet fishermen cannot fish for Mackerel due to the Florida net ban; therefore, most of their money comes from shark fishing. Strikenet fishing requires two large vessels to retrieve the gear, two small vessels to deploy the gear, and an airplane. Buying new gear itself costs at least $70 K. That is a large amount of capital investment and because it captures a large amount of blacktip sharks at a time, the gear can only support two vessels.

Response: NOAA Fisheries no longer prefers the alternative, which would allow only strikenet method in the shark gillnet fishery. Public comment received by NOAA Fisheries indicates that allowing the use of strikenets only would not accomplish the objective of allowing the gillnet fishery to continue while minimizing interactions with protected resources as well as reducing bycatch of non-target species. Therefore, the final regulations will permit the use of drift gillnets with possible gear modifications or other measures designed to reduce interactions and mortality of bycatch being implemented through a future rulemaking, based upon further study.

Comment 8: The complete prohibition of a gear in a fishery is not unusual in fisheries management, especially in regards to entanglement gear. Gillnets have been disallowed in other fisheries that are considerably larger and with more socioeconomic impact than the six to eight gillnet vessels in this fishery. Beside protected species, gillnets kill gamefish species such as tarpon and large red drum that support recreational and charter fisheries that contribute over $500 million to Georgia's economy. The kill of these premier gamefish in this gear presents a clear threat to Georgia's growing recreational and charter fishing fleets, with distinct economic implications to the State.

Response: While it may be true that prohibitions of gear types exist in other fisheries and that those actions may have resulted in economic impact to the concerned fishery as well as small entities, it is likely that the decision-making associated with why those prohibitions were originally considered and ultimately approved differs. In this instance, NOAA Fisheries proposed allowances for strikenet method only in the shark gillnet fishery in order to allow the commercial shark gillnet fishery to continue while minimizing interactions with protected resources as well as reducing bycatch of non-target species. Through public comment it has been brought to the attention of NOAA Fisheries that allowing the use of strikenets only would not accomplish this objective. Therefore, the final regulations will permit the use of drift gillnets with possible gear modifications or other measures being implemented through a future rulemaking.

Comment 9: I use small mesh monofilament stab nets to fish for whiting, bluefish, Spanish mackerel, and croakers. I normally land more than the incidental limit of sharks. If you allow only strikenets, I will go out of business.

Response: NOAA Fisheries originally proposed allowing the strikenet method only in the shark gillnet fishery in order to reduce bycatch of protected species. This alternative would have allowed incidental shark landings from vessels participating in other gillnet fisheries, such as those mentioned in the comment above. However, based upon public comment received during the comment period for draft Amendment 1, NOAA Fisheries has decided not to implement this alternative at this time.

Comment 10: The time/area closure off of North Carolina will put many fishermen out of business.

Response: NOAA Fisheries acknowledges that some fishermen may go out of business as a result of the time/area closure. Original economic analyses in the DEIS indicated that the time/area closure offshore of South Carolina, North Carolina, and Virginia could have a direct economic impact on a total of 34 vessels (out of 251 total directed permits issued in 2002 ~ 14%) with directed shark permits. Economic analyses, based on revisions to the time/area closure, indicate that 23 vessels (out of 256 total directed permits issued in 2003 ~ 9%) with directed shark permits may experience direct economic impacts. Additionally, original analyses pointed toward a total of 13 vessels with home ports located in South Carolina, North Carolina, and

Virginia as having reported shark landings during 2001. These vessels reported gross revenues totaling $351,600 during that year. Revised economic analyses indicate that only 8 vessels with home ports located in North Carolina reported shark landings during 2001. This revised analysis indicates that the time/area closure off of North Carolina will result in a 15-percent reduction in total gross revenues for the fishery as a whole and in a three-percent reduction of revenues for the small entities directly affected by the proposed closure. As such, the revised time/area closure mitigates the economic impacts by $17,956 in total gross revenues for the small entities directly affected by the closure as compared with the original preferred alternative as outlined in the DEIS.

Comment 11: NOAA Fisheries received several comments regarding VMS. Comments included statements that the proposed VMS is not as expensive as the program run out of the Northeast; therefore, we encourage your program. VMS is expensive and a violation of privacy. A VMS requirement would put bottom longline fishermen out of business.

Response: Economic analyses of the impacts associated with the VMS requirements indicate that only five percent of the fleet would be affected and that this will result in a eight-percent reduction in total gross revenues for the fishery as a whole and a 26-percent reduction in total gross revenues for the 12 vessels directly affected by this proposed requirement during the first year of implementation. For every year thereafter, economic analyses indicate that annual costs will result in a seven-percent reduction in total gross revenues for the fishery as a whole and a seven-percent reduction in total gross revenues for the 12 vessels directly affected by this proposed requirement.

Comment 12: Will the agency pay for VMS for this fishery?

Response: Implementation of the VMS requirement in this final rule will result in five gillnet vessel owners and seven bottom long-line vessel owners having to pay for VMS units and all associated costs. Specifically, the costs associated with implementing a VMS program in the Atlantic shark gillnet fishery include an initial average cost per vessel of approximately $2,275 (not including postage costs for returning certification statement), an average annual maintenance cost of approximately $500/year, and approximately $197.28/year for communications during the right whale calving season. Costs associated with implementing a VMS program in the directed shark bottom longline fishery include an initial average cost per vessel of approximately $2,275 (not including postage costs for returning certification statement), an average annual maintenance cost of approximately $500/year, and approximately $305.28/year for communications during the proposed 212 day shark bottom longline time/area closure.

Comment 13: The fuel that it takes to move one nautical mile after an interaction with a protected species is not significant and should not have a large economic impact.

Response: NOAA Fisheries believes that most fishing vessels will move at least one nautical mile during the course of normal operations. As such, fuel costs associated with a requirement to

move one nautical mile after an interaction with a protected species are insignificant and would have minimal, if any, economic impacts.

Comment 14: The retrieval of fishing gear (i.e., hooks, leaders, and crimps) saves the fisherman money replacing the lost gear and time and effort. Dehooking and disentanglement techniques would speed up, in most cases, their fishing operation and reduce CPUE. Additionally, line cutters and dehooking devices are relatively inexpensive and are a one-time cost that could be paid back with the savings from retrieved hooks from one or two trips.

Response: NOAA Fisheries agrees that costs associated with purchasing release equipment are minimal and that retrieval of fishing gear will reduce some of the costs associated with replacement of lost gear.

Comment 15: If HMS fishermen properly use release equipment, they would have the ability to call their target species "sea turtle friendly" at the marketplace. This would allow for a market edge for US-caught fish over imports.

Response: NOAA Fisheries agrees that economic costs associated with purchase of release equipment could be minimized if consumers perceive the shark fishery as conservation minded and correspondingly begin to support the sale of shark products in the market place. Examples of eco-labeling programs, such as those supported by the Marine Stewardship Council, illustrate this effect.

Comment 16: Private sector gear technologists, NGOs, educational grants, and other interested parties may be willing to help pay for educational workshops. Trainers could donate their time. Fishermen and anglers could absorb the costs of travel and time and contribute assistance in funding if necessary.

Response: NOAA Fisheries will pursue the requirement of mandatory workshops during a future rulemaking and intends to fully investigate these funding options at that time.

Comment 17: NOAA Fisheries is proposing a number of measures that may change the allocation methodology of potential future quotas and cause expensive and unnecessary negative impacts to the current commercial shark fleet. NOAA Fisheries should be patient with the shark fishing community and minimize the potential for socioeconomic impacts until further efforts to stabilize the fleet through better analysis, sufficient quotas, buyback program, etc., become more progressed. NOAA Fisheries should not be in a hurry to put fishermen out of business.

Response: The 2002 stock assessment for LCS documents that the complex is overfished and that overfishing is occurring. Under the Magnuson-Stevens Act, NOAA Fisheries must take action to prevent overfishing and rebuild overfished stocks. However, to the extent practicable, NOAA Fisheries is delaying implementation of certain measures such as VMS and the time/area

closure to give fishermen time to adjust and will implement relief restrictions such as the quota and commercial minimum size immediately. This delay in implementation is aimed at minimizing some of the economic impacts associated with VMS and the time/area closure.

Comment 18: NOAA Fisheries should consider some type of individual quota evolved from the current directed shark limited access permit holders. These quotas could reduce derby effects and seasonal market gluts.

Response: NOAA Fisheries agrees that ITQs may be a viable alternative to address those issues and may investigate those types of alternatives further in a future rulemaking.

Comment 19: NOAA Fisheries should consider restricting imports of shark products to help boost the domestic market.

Response: The Magnuson-Stevens Act authorizes use of import prohibitions under certain circumstances, most notably where another country is not complying with an applicable international fishery agreement. To date, no such agreement has been reached with regard to Atlantic sharks. As such, NOAA Fisheries cannot impose importation restrictions on other countries. However, NOAA Fisheries is supportive of continuing dialogues with international fishery management organizations such as ICCAT, FAO, and others as appropriate for developing international fishery agreements aimed at shark management.

Comment 20: The Sever Acute Respiratory Syndrome (SARS) epidemic has hurt fin prices.

Response: NOAA Fisheries is unaware of any link between the SARS epidemic and a decline in shark fin prices. However, NOAA Fisheries is aware of a dramatic increase (i.e., twice as much) in average shark fin prices between calendar years 2000 and 2001.

Comment 21: NOAA Fisheries shark management has been both an ecological disaster and a knife in the back of recreational shark fishermen. While NOAA Fisheries spends millions of taxpayer's money to buy out commercial fishermen who destroyed the stocks with overfishing, there is no offer to compensate those in the recreational fishing business who have been bankrupted by NOAA Fisheries policies.

Response: There are a variety of Federal programs, which provide economic relief to fishermen and other businesses affected by fishery management measures. A summary of these programs can be found in Chapter 8 of the FEIS. As such, NOAA Fisheries believes that equal opportunities are given to all members of the affected environment, where fishing regulations and economic relief are concerned.

A5.9 General

Comment 1: The EPA stated that in some cases it is unclear how the No Action alternative is

assessed for impacts and recommended that NOAA Fisheries substantiate claims of no impact. As an example, EPA refers back to the statement on page 4-10 of the draft environmental impact statement that semi-annual seasons would not have any ecological impacts because the fishery had been managed that way since 1993. EPA believes that the impacts of a continued course of action, such as continuing a semi-annual season, may have caused the fishery to decline to an unsustainable level.

Response: Based on this comment, NOAA Fisheries has tried to improve, in the final environmental impact statement, the description of No Action alternatives and the assessment of any impacts of continuing a particular course of action. In the case of the specific example cited by EPA, NOAA Fisheries does not agree that semi-annual seasons have caused the fishery to become overfished. Semi-annual seasons can have some ecological impacts if they extend into pupping seasons; however, it is unlikely that providing fishermen two fishing seasons caused the decline of the stock. Rather, it is likely that the overall level of fishing mortality, combined with environmental factors, led to the decline of the stock.

Comment 2: The EPA states that it would be useful for a baseline comparison if NOAA Fisheries could explain why a No Fishing alternative would be reasonable or unreasonable.

Response: In the case of Atlantic sharks, NOAA Fisheries does not believe that a No Fishing alternative is reasonable nor would such an alternative be consistent with the Magnuson-Stevens Act. The latest stock assessments indicate that the SCS complex is not overfished and overfishing is not occurring and that while the LCS complex is overfished, the two primary LCS species are not. Given the status of the SCS complex, there is no reason why NOAA Fisheries would consider a No Fishing alternative. For the LCS complex, alternatives are available that would allow fishing to continue while still allowing the stock to rebuild. As described in Chapters 1 and 4 in the Amendment, NOAA Fisheries feels a No Fishing alternative is not consistent with the Magnuson-Stevens Act in that it would not minimize social and economic impacts, to the extent practicable, nor would it be based on the best available science.

Comment 3: EPA notes that summary tables that provide clear and relevant background information and recommends including a glossary of terms, a list of acronyms, and other visual diagrams such as pie charts.

Response: In the final environmental impact statement, NOAA Fisheries has included a list of acronyms and several more diagrams and figures. Many of the tables presented in Amendment 1 come straight from the stock assessments or other supporting documents, and NOAA Fisheries feels it would be best to rely on the information as it was first presented rather than to convert it to an unfamiliar format. Regarding a glossary of terms, NOAA Fisheries did not include a glossary but did try to ensure that any fishing-related terms, such as maximum sustainable yield, are defined in context throughout the text.

Comment 4: EPA comments that NOAA Fisheries should clarify the effects of other fisheries on

the stocks of sharks and clearly connect relevant information throughout the document. As an example, EPA refers to a quote regarding the amount of commercial landings of SCS compared to bycatch (page 3-13 of DEIS) and compares this quote to other quotes regarding the amount of LCS bycatch in the menhaden fishery (page 3-75 of DEIS). Another example given by EPA is the need to clarify and expand upon the discussion of collection of sharks for public display.

Response: NOAA Fisheries has tried to clarify and connect relevant information throughout the final environmental impact statement in order to provide a context for any related analyses. Regarding the specific example given by EPA, NOAA Fisheries notes that the SCS and LCS fisheries are two different fisheries with different species of sharks and that bycatch of SCS is not necessarily related to bycatch of LCS. For example, while the menhaden fishery catch both SCS and LCS, 97 percent of the catch of sharks are LCS and only 3 percent are SCS. Regarding the example of public display, NOAA Fisheries has added details regarding the number of sharks taken for public display each year and the impact on the stocks.

Comment 5: EPA comments that NOAA Fisheries should clarify the impact of other fishery practices on sharks. If sharks are being significantly diminished by other fishery practices, the FEIS should contain a short discussion of what other FMPs are doing to minimize impacts on sharks and provide a webpage link to that other FMP.

Response: NOAA Fisheries agrees that knowledge regarding the relationship between shark catches in other fisheries and their impact on shark stocks needs to be examined and improved. For several years, NOAA Fisheries has been working on including this type of information in the stock assessments. For example, the 1998 LCS stock assessment included Mexican catches for the first time and the 2002 LCS stock assessment expanded upon the Mexican catches and included information regarding shark bycatch in the menhaden fishery. However, while the total number of sharks taken as bycatch in other fisheries might be large, most fishery managers consider the bycatch in individual fisheries under their purview to be a low priority, particularly compared to the target catch and bycatch of other managed or protected species. Thus, many FMPs do not analyze in detail the impacts of the specific target fisheries on sharks. However, NOAA Fisheries is in the process of developing and implementing a National Bycatch Strategy. Several of the draft implementation plans for other fisheries outline recommendations for improving monitoring of bycatch in these fisheries. The final bycatch implementation plans should be available to the public by the end of 2003. As information on shark bycatch in these fisheries becomes available, it will be incorporated in future stock assessments.

Comment 6: Draft Amendment 1 was too large. The document needs to be condensed to be easily understood.

Response: While the legal requirements dictate the content of fishery management plans and plan amendments, the analyses that are required, and the need to respond to public comments, NOAA Fisheries has provided an executive summary in the final Amendment. NOAA Fisheries will also be providing an updated one-page chart in the executive summary that outlines the all the

regulations and highlights major changes from the draft Amendment. NOAA Fisheries has also tried to provide summary and explanatory tables and figures throughout the document. Per the Regulatory Flexibility Act, NOAA Fisheries will also be providing a small entity compliance guide for the final rule. Additionally, NOAA Fisheries will be updating and revising the current recreational and commercial brochures based on the changes to the regulations.

Comment 7: NOAA Fisheries should accept comments via email.

Response: NOAA Fisheries is working towards a system that would allow the public to submit comments electronically over the web. In 2001, NOAA Fisheries issued the first "e-comment" pilot program for a proposed rule regarding issues in HMS charter/headboat fisheries. Based on the results from this pilot, NOAA Fisheries made a number of improvements and continues to test the program on other rules and fisheries in order to ensure that the final e-comment program is user-friendly and provides an adequate method of providing comments. A link to regulations that are accepting comments via the web can be found off the main NOAA Fisheries webpage at: http://www.nmfs.noaa.gov.

Comment 8: NOAA Fisheries received a range of comments on the rule and Amendment as a whole. Comments included: NOAA Fisheries should be commended for adhering to the scientific recommendations from recent stock assessments and proposing conservation measures that have a reasonable chance to protect all shark species. This proposed rule is an encouraging step forward in the long process of rebuilding; management is on the correct path to rebuilding and sustaining this fishery. The continued communication and cooperation between various stakeholders and the inclusion of interested parties and user groups from the inception of the process has helped to ensure the success of these management measures. NOAA Fisheries has proposed a rule that walks down the middle to allow for a viable commercial fishery while protecting the most vulnerable species; all the alternatives are linked to account for the 50-percent reduction that is needed. The proposed measures will not be enough catalyst to regain a healthy population across the whole spectrum of the shark species; the "collective impact of humanity" on the total population has to be addressed as well as the simplistic concept of the population being overfished. The stock assessments show that the current system is working; NOAA Fisheries should leave well enough alone.

Response: NOAA Fisheries agrees that implementation of the management measures in this document will be a step forward towards rebuilding and that the management measures are a result of the participation and cooperation of various stakeholders and user groups. NOAA Fisheries believes that the management measures in this document, consistent with the Magnuson-Stevens Act, are based on the best available science, will rebuild the LCS complex, prevent overfishing of Atlantic sharks, provide for commercial and recreational fisheries, and will clarify other shark-related management measures. Without these management measures, some management measures that are not based on the best available science, such as the 1999 commercial quotas, will go in place, contrary to the Magnuson-Stevens Act. NOAA Fisheries will continue to work with stakeholders on issues not addressed in this rulemaking during a

future rulemaking process.

Comment 9: NOAA Fisheries received a range of comments regarding who is influencing agency decisions. One commenter noted that NOAA Fisheries settled with the commercial fishing industry but is fighting the environmental groups tooth and nail in order to protect commercial fish profits. Another commenter was concerned that NOAA Fisheries is being overly influenced by environmentalists.

Response: Environmental groups, recreational fishermen, and commercial fishermen all had the chance to participate in the process and submit comments on the scoping documents and the Draft Amendment 1 and proposed rule. While NOAA Fisheries considers these comments in selecting the alternatives, the agency follows the mandates of the Magnuson-Stevens Act and other domestic law when finalizing actions, not the mandates of any particular stakeholder.

Comment 10: The purpose of the regulations should be to reduce the number of shark deaths. All other purposes are secondary.

Response: The Magnuson-Stevens Act and other domestic laws such as the Regulatory Flexibility Act requires NOAA Fisheries to consider not only the status of the stocks but also any social and economic impacts on fishermen and communities and any impacts on other species such as protected species or other fisheries.

Comment 11: While state waters are outside of NOAA Fisheries' jurisdiction, ensuring rebuilding of overfished sharks is not. NOAA Fisheries must develop a strategy for working with states and state commissions to implement cooperative shark management in nearshore waters.

Response: NOAA Fisheries will continue to work with states and the Fishery Management Councils with a goal of consistent management in mind. At the time of finalization of the HMS FMP, several states indicated their intent to develop more consistent regulations but decided to postpone their efforts due to the unstable legal environment for Federal shark management. Upon completion of this Amendment and during the scoping processes for future rulemakings, NOAA Fisheries hopes to work with those and other states, possibly through the implementation of Memorandum of Understandings, to ensure that, at the minimum, NOAA Fisheries can have access to all state shark landings and catches from all fisheries for use in future stock assessments.

Comment 12: NOAA Fisheries must reduce bycatch and mortality of sharks in both directed and non-directed fisheries; establish a standardized bycatch reporting methodology; account for all sources of mortality when determining shark quotas and closures; and allocate levels of observer coverage that are adequate to provide statistically significant estimates of catch and bycatch.

Response: NOAA Fisheries is in the process of developing a National Bycatch Strategy which

contains the Agency's national bycatch goal, "to implement conservation and management measures for living marine resources that will minimize, to the extent practicable, bycatch and the mortality of bycatch that cannot be avoided." As part of this effort, NOAA Fisheries' HMS Management Division is developing a Bycatch Implementation Plan to improve upon and possibly expand current bycatch reduction efforts in HMS fisheries, which includes shark fisheries, under this guidance. Sources of shark mortality other than the directed fishery landings are included as part of the stock assessments from which the quotas were developed. Levels of observer coverage are generally set at five percent of the total effort in each fishery unless there is a concern that more coverage would be beneficial. Such is the case for the shark gillnet fishery where 100 percent observer coverage is required during the right whale calving season.

Comment 13: NOAA Fisheries should identify and quantify the potential impacts of any HMS fisheries on seabirds so that appropriate protocols can be developed to alleviate potential chronic mortalities associated with the fishery or gear. This will be especially important in future actions associated with pelagic sharks and other components with the HMS FMP.

Response: NOAA Fisheries agrees that the potential impacts to seabird populations should continue to be monitored and where appropriate, protocols developed to alleviate bycatch problems. NOAA Fisheries notes that relatively few seabird interactions have been identified in shark fisheries addressed by Amendment 1. If a potential problem is identified with the pelagic longline fishery this can be addressed in a future rulemaking.

Comment 14: Draft documents need to ensure that detailed effort data is incorporated into the text and tables, especially regarding the bycatch of sea turtles, marine mammals, and sea birds. For example, draft Amendment 1 does not properly quantify the level of observer effort involved in documenting seabird bycatch in the Atlantic pelagic longline fishery (Table 3.38). Therefore, the conclusion that seabird interactions are relatively low holds little merit.

Response: NOAA Fisheries agrees that detailed effort data regarding observer programs is important to understanding the level of interaction with various bycatch species. The Final Amendment 1 provides an overview of the types of seabird interactions in the shark fishery. The conclusion regarding the level of seabird interactions in Amendment 1 is based on the take of a single seabird in nine years of observer data from the shark bottom longline fishery.

Comment 15: NOAA Fisheries should increase boat and catch monitoring efforts.

Response: NOAA Fisheries already requires 100 percent observer coverage for shark gillnet vessels operating during the right whale calving season and approximately 50 percent outside of the calving season. Observer coverage in the shark bottom longline fishery is targeted as five percent while pelagic longline vessels operating in the NED experimental area are required to carry an observer at all times. A target of five percent observer coverage for pelagic longline vessels fishing outside of the NED is in place. Additional resources would need to be identified in order to increase observer coverage.

Comment 16: I need time to prepare for other fisheries and hire crew between notice of the final rule and implementation.

Response: NOAA Fisheries is aware that for a number of regulations, such as implementation of the time/area closure and VMS requirement, fishermen will require time to adjust and prepare for any changes. In those cases, NOAA Fisheries will give sufficient time to adjust. However, in some cases, such as the commercial quota or the commercial minimum size, any delay in implementation would allow more restrictive management measures to go into place. Thus, commercial quotas, elimination of the commercial minimum size, and certain other measures will be effective at the start of the 2004 fishing year. NOAA Fisheries is providing the approximate dates of effectiveness for the requirements in the Executive Summary of Amendment 1.

Comment 17: Are you leaving the 4,000 lb LCS trip limit alone? NOAA Fisheries should consider some type of trip limit tolerance because the trip limit is not working well now that sandbar and blacktip sharks are not overfished.

Response: This Amendment and its rule will not change the 4,000 lb LCS directed trip limit. In the Issues and Options paper released during the public scoping phase of this Amendment, NOAA Fisheries indicated that changing the 4,000 lb LCS directed trip limit could be one of the management measures addressed in this Amendment. However, given the possible changes in this Amendment, NOAA Fisheries felt some of the items in the Issues and Options paper, including the 4,000 lb LCS trip limit were beyond the scope of this rulemaking. NOAA Fisheries may consider those issues in a future rule.

Comment 18: NOAA Fisheries should allow fishermen to fish until the quota is caught instead of scheduling closure dates. I am afraid that if we have a couple of years where we do not catch the quota because of weather, that the quota will be taken away from us. NOAA Fisheries should monitor landings and allow the season to remain open until the quota is filled.

Response: Before the HMS FMP, NOAA Fisheries monitored the landings and gave five days notice before closing the fishery. This technique led to the quota being exceeded, derby fishing, and to unreliable markets because no one knew when the fishery would be closing. Additionally, NOAA Fisheries knows of some dealers and fishermen that would delay sending in their reports in an effort to keep the fishery open longer. To address these concerns, in the HMS FMP, NOAA Fisheries decided to announce, based on previous catch rates, the closing date of the fishery before the fishery opened. Additionally, any over- or underharvest would come off of or be added to the same season's quota of the following year (e.g., first semi-annual season to first semi-annual season). This technique appears to be working (e.g., fewer seasonal quotas have been exceeded and fishing seasons have lengthened) and during scoping few fishermen wanted to change the current system. With the transition to trimester and regional quotas, there may be some adjustment needed in terms of calculating catch rates and estimating the length of the seasons in each region, however, NOAA Fisheries does not intend to "take quota away" because

of underharvests. In the future, NOAA Fisheries might adjust the percent of quota available in each fishing season (e.g., if one season is always exceeded while another season always has quota left, some of the quota may be moved to the first season from the second) or might adjust the percent of quota available to each region (e.g., if one region always exceeds its quota while another region does not land its full portion, some of the quota from the second region might be transferred to the first region). However, any such adjustment would require a rulemaking and would not change the overall total quota available.

Comment 19: NOAA Fisheries should be relying on an observer report from 1994 through 2002, not a report from recent years.

Response: NOAA Fisheries has requested such a report from the contractor who manages the observer program. However, until such a report is available, NOAA Fisheries must use the best available science which includes several observer reports that cover only one or two years each.

Comment 20: NOAA Fisheries should re-examine the five percent fin ratio rule. The legal percentage does not work accurately unless the sandbar shark catch is blended down by other LCS with smaller fins.

Response: NOAA Fisheries first implemented the five percent fin ratio in the 1993 Shark FMP. This ratio was based on research that indicated that the average ratio of fin weight (including first dorsal, pectorals, and lower caudal fins) to dressed weight of the carcass was 3.6 percent and the sandbar fin ratio was 5.1 percent. Observer data indicate that, except for a couple of years, the fin ratio for all observed sharks has been under five percent. In December 2000, the Shark Finning Prohibition Act was signed. This Act, which implements the five percent finning ratio for all shark fisheries in the United States, was fully implemented through a final rule released in February 2002. Thus, any changes to the five percent fin ratio would have to be the result of Congress modifying the Shark Finning Prohibition Act.

Comment 21: Because porbeagle sharks are often caught while pursuing cod, mackerel, and other New England finfish, northeast groundfish commercial fishermen should be allowed to keep one porbeagle shark per day per trip without a commercial shark fishing permit.

Response: Since 1993, fishermen who have caught and sold sharks in Federal waters have been required to have a Federal shark permit. In 1999, NOAA Fisheries implemented a limited access program for the Atlantic shark fisheries. Under this program, any fisherman who had a Federal shark permit and reported landing a limited number of sharks could qualify for either a directed or incidental Federal shark limited access permit. This program was implemented to reduce latent effort in the shark fishery and reduce overcapitalization in order to rebuild the LCS complex and prevent overfishing on other shark species. From past experience, NOAA Fisheries knows that porbeagle sharks are highly susceptible to overfishing. Until a stock assessment on porbeagle sharks indicates that the porbeagle shark is not overfished and is not experiencing overfishing, NOAA Fisheries does not want to re-open that sector of the shark fishery. However,

those fishermen wishing to land porbeagle sharks can either obtain a commercial permit from someone leaving the fishery or obtain a recreational permit. Any porbeagle sharks that are landed would have to be caught with an authorized gear type.

Comment 22: NOAA Fisheries should report weight in pounds not metric tons because commercial fishermen sell fish by the pound.

Response: In the future, NOAA Fisheries will report weight in pounds and metric tons on reports that are transmitted to fishermen or will provide the conversion factor to allow fishermen to convert numbers in metric tons to pounds.

Comment 23: NOAA Fisheries has not done one iota to protect mako sharks except limit recreational fishermen. While the proposed rule does have some positive proposals that limit commercial fishing, conservation of the most important recreational sharks left, pelagic sharks, continues to be ignored.

Response: NOAA Fisheries is not ignoring pelagic sharks. Rather, NOAA Fisheries is working with ICCAT to collect data in order to conduct an international stock assessment of pelagic sharks. Because pelagic sharks traverse the Atlantic Ocean, NOAA Fisheries is not able to conduct an accurate stock assessment without data from other countries. The international stock assessment is expected to occur in 2004. Once the international stock assessment is complete, NOAA Fisheries will consider the results and will modify the management measures for pelagic sharks, as appropriate.

Comment 24: NOAA Fisheries should consider converting directed shark permits that have been inactive since July 1999 to incidental permits. This could help reduce latent effort from becoming active during the rebuilding period.

Response: NOAA Fisheries is considering several options to could lead to changes in the current limited access program in a future rule. NOAA Fisheries will consider comments such as this one at that time.

Comment 25: The number of shark permits should be reduced to 10.

Response: In 1999, NOAA Fisheries implemented a limited access program in the commercial shark fishery to reduce latent effort and capitalization in the fishery. This program established two types of commercial shark permits: directed and incidental. The directed permits allow fishermen to target sharks while the incidental permits were designed to allow fishermen who target other species to land a limited number of sharks, thus reducing regulatory discards. At this time, NOAA Fisheries recently approved a Saltonstall-Kennedy Grant to researchers who are examining the feasibility of a buyout program for commercial shark fishermen. Additionally, NOAA Fisheries will consider other options, such as conversion of directed to incidental permits or individual transferable quotas, to revise and refine the current limited access program in a

future rule.

Comment 26: Enforcement personnel should be hired and trained to catch fishermen who illegally take and kill any fish species. The budget for enforcement is too small and should be increased by 800 percent.

Response: Enforcement personnel are trained to catch fishermen who illegally take and kill any fish species. If their budget were increased, more enforcement personnel could be hired and additional resources could be obtained that would allow them to more effectively enforce the regulations throughout their jurisdiction in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.

Comment 27: The more information NOAA Fisheries has, the more money fishermen lose.

Response: While it sometimes feels as though the more information fishermen report, the more regulations are placed on them, this is not always the case. For example, in the 1999 HMS FMP, NOAA Fisheries finalized commercial shark quotas that are much lower than those quotas selected in Amendment 1. However, based on additional information and new analyses, the latest stock assessment indicates that two species of LCS are no longer overfished. Thus, NOAA Fisheries is able to select the slightly higher quotas in Amendment 1 than those finalized in 1999. Ideally, as the status of LCS improves, the commercial quota should be able to increase. However, without data from the fishermen, NOAA Fisheries will not know if the status is improving and therefore would not be able to increase the quota. Indeed, with less data, NOAA Fisheries may decided that the best, most risk-averse, course of action would be to lower the quotas.

Comment 29: NOAA Fisheries should integrate the Large Pelagic Survey (LPS) within the Marine Recreational Fisheries Statistics Survey (MRFSS) in order to expand and improve the acquisition of recreational landings data for sharks and other HMS.

Response: NOAA Fisheries continues to explore improvements to the design of the LPS and has implemented some of these for the 2003 fishing year. The biggest change was integrating the charterboat and headboat sectors of the LPS and MRFSS into a single For-Hire Survey for the Atlantic Coast. A separate For-Hire Survey was implemented in 2001 for the Gulf of Mexico. Both of these efforts should provide improved estimates of recreational catch and landings of HMS as well as non-HMS. Evaluation of other modifications already implemented for the LPS are ongoing and may lead to additional changes to survey design and estimation procedures.

Comment 31: NOAA Fisheries received several comments regarding where public hearings should have been held because there are a lot of fishermen who could be affected by the proposed regulations. These areas included New Jersey, Virginia, and Fort Pierce, Florida. NOAA Fisheries also heard that Montauk, New York should not have had a public hearing because there are no fishermen in the area and it is too far to drive.

Response: NOAA Fisheries tries to schedule a number of public hearings along the Atlantic and Gulf of Mexico coasts in areas where there are a number of fishermen but understands that some areas with many fishermen will likely be unintentionally missed. For Amendment 1, NOAA Fisheries tried to coordinate public hearings with Fishery Management Council meetings in order to reduce travel for stakeholders who were interested in attending both meetings. In other cases, NOAA Fisheries scheduled hearings at areas where attendance at previous hearings has been large. People who are unable to attend a public hearing are always welcome to submit written comments or to call NOAA Fisheries and speak to someone directly. Comments provided over the phone during the comment period are considered part of the public record.

Comment 32: NOAA Fisheries needs to mail fishermen information about public hearings to notify permit holders. While we were mailed information about the hearings for the proposed rule, we did not hear about the scoping meetings.

Response: NOAA Fisheries announces its intentions in a variety of methods including automated infolines, the HMS Fax network, the HMS web page, the weekly electronic newsletter FishNews, and through mailings. Because some permit holders have told NOAA Fisheries that they feel many of the mailings sent are equivalent to junk mail, in this case NOAA Fisheries limited the mailing to information regarding the actual proposed rule and not the scoping meetings. However, for both the scoping and proposed rules, NOAA Fisheries used all other methods to announce relevant information. If you would like to be included on any of these automatic distributions (e.g., the HMS Fax network or FishNews) please call the HMS Management Division at (301) 713-2347 or visit the NOAA Fisheries home page at http://www.nmfs.noaa.gov for more information.