

regional quotas via rulemaking to ensure each region has an opportunity to fish.

Comment 9: NMFS 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: Spatial differences in fishery practices and catches warrant further consideration, and regional quotas provide a means of preventing 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. NMFS 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, NMFS should estimate MSY on a species-specific basis for all LCS. NMFS should establish a similar approach for pelagic sharks when a validated assessment is available.

Response: Amendment 1 uses MSY as a basis for establishing commercial quotas. NMFS must determine MSY as well as optimum yield (OY) and specify status determination criteria to determine 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 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. NMFS 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, NMFS 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, NMFS will re-evaluate the appropriateness of existing pelagic shark quotas and the basis for calculating commercial quotas for these species.

Comment 2: NMFS 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, NMFS 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 NMFS were to apply the 70-percent guide, the proposed reduction would be larger not smaller than 50 percent. Therefore, NMFS 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. NMFS reduced the 50 percent recommended reduction by five percent after considering 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) peer reviews of the 2002 LCS stock assessment indicated that the complex assessment may not be as accurate as individual species because of biological differences between species; (4) catch per unit effort (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 draft Amendment based upon public comment received during public hearings. The Southeast Fisheries Science Center has indicated that the combination of the preferred alternatives, namely the 45-percent quota reduction 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, further reductions in the

LCS commercial quota are not necessary at this time. However, NMFS will adjust the quota over time based upon future stock assessments to ensure that the LCS complex rebuilds within the 26-year rebuilding time frame.

Comment 3: NMFS 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 the same 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 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, NMFS 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 the fishing mortality at MSY (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 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.