

1.0 EXECUTIVE SUMMARY

This document serves as Draft Amendment 3 to the Skate FMP, the Draft Environmental Impact Statement (DEIS) which updates and supplements the original EIS for the skate fishery (available at <http://www.nefmc.org/skates/fmp/fmp.htm>), and a Stock Assessment and Fishery Evaluation (SAFE) Report. The purpose of the amendment is to propose and consider modifications of existing management measures or new skate fishery management measures to address the following issues:

- Overfished status of smooth, thorny, and winter skates
- Overfishing of thorny skate
- Implementation of annual catch limits (ACLs) and accountability measures (AMs), a new mandate of the reauthorized Magnuson-Stevens Act, and
- A baseline review process that has become obsolete and less meaningful.

The amendment also includes a new discussion and quantification of maximum sustainable yield (MSY; Section 4.2) and optimum yield (OY; Section 4.3). Quantification of these variables was not previously possible in the Skate FMP, due to problems with catch data and missing life history information about skates. Some of these issues have been resolved, but others have not. However the analysis of rebuilding potential in Section 8.3.1.1 has implications for sustainable catches. The estimated values at the biomass targets can serve as interim estimates or proxy values for MSY and OY, at least until better information comes forth about the population dynamics of skate species and catch reporting improves.

Document organization

This is an integrated document that complies with the requirements of the Magnuson-Stevens Act, the National Environmental Policy Act, and the FMP. The SAFE Report updates the description of the skate fishery and the environment that is affected by the skate fishery. The SAFE Report is included as Section 7.0 of this document, which also serves as the Affected Environment section of the DEIS. This section describes the Biological Environment (Section 7.3 including a description of the biology and population dynamics of the seven managed skate species), the Physical Environment (Section 7.4), and the Human Environment (Section 7.5).

The document also includes a discussion of the Management Background (Section 4.1), the Purpose and Need for action (Section 3.0), a description of Proposed Alternatives (Section 5.2) and Considered And Rejected Alternatives (Section 5.3), an analysis of Environmental Consequences of the proposed alternatives (Sections 8.3 to 8.8), and a Cumulative Effects analysis (Section 8.1; including an evaluation of past, present, and reasonably foreseeable future actions). The Environmental Consequences evaluation includes an analysis of the direct and indirect impacts on skates and the skate fishery (Section 8.3), on protected species (Section 8.5), on essential fish habitat (EFH; Section 8.6), on the economy (Section 8.7), and on social and community factors (Section 8.8).

Alternatives

In addition a status quo alternative, Amendment 3 and this DEIS include six alternatives (labeled 1A, 1B, 2, 3A, 3B, and 4) that were developed to achieve the goals and objectives (described in Section 3.0). No preferred alternative is proposed, because the alternatives achieve similar objectives and one is not clearly superior to the other. Thus, public comment is very important for the purposes of identifying a final preferred alternative.

The proposed alternatives (Section 5.2) include various combinations of measures, which are comprehensively described in Section 5.1 (Management measures). Except for the proposed skate possession limits and the baseline review process, the proposed alternatives are intended to augment rather than substitute for existing skate management measures. All of the alternatives are intended to achieve the same skate catch limits (TALs) through a combination of skate possession limits (Section 5.1.5), time/area management (Section 5.1.4), and seasonal fishery quotas (Section 5.1.6). In addition, alternatives 1A, 3A, and 4 include a “Hard TAC” approach to manage annual catch limit (ACL) and implement accountability measures (AMs). The “Hard TAC” approach is described in Section 5.1.1.2. Alternatives 1B and 3B are exactly like Alternatives 1A and 3A, respectively, but would use a “Target TAC” (Section 5.1.1.3) approach to prevent the skate catches from exceeding the ACLs and for invoking AMs. Alternative 2 is similar to Alternative 3B, but uses time/area closures as an AM.

The No Action alternative is the same as the status quo and is described in Section 5.2.1. The No Action/status quo alternative would be a continuation of current management policies, which are a combination of multispecies regulations, exempted fisheries, a skate bait letter of authorization, a 10,000 lbs./day/ 20,000 lbs./trip skate possession limit, and a baseline review process. It does not include any numeric catch or landings limits, nor any accountability measures.

Each alternative also has two fishery allocation options and skate possession limits to achieve the associated TALs. One alternative is based on historic landings in the wing and bait fishery from 1994-2006, which includes most of the time since limited access and DAS management were introduced in the Multispecies, Monkfish, and Scallop FMPs. Since skate wing landings have been increasing in recent years, this option allocates more landings to the bait fishery (and conversely less to the wing fishery) than the second allocation option. This option is also more conservative for winter skate which has more landings and catch in the skate wing fishery than in the skate bait fishery. The second alternative is based on relative landings in the wing and bait fishery from 2005-2007 and as a result allocates a greater fraction of the landings to the wing fishery. This may have some economic advantages because the price derived from landing skate wings is greater than the price derived from landing whole skates for bait.

The table below summarizes the measures included in each alternative and a general approach or philosophy behind each alternative.

Table 1. Synopsis of proposed alternatives in Section 5.2.

Alternative	Proposed measures	Philosophy or rationale
No action/ Status quo (Section 5.2.1)	<ol style="list-style-type: none"> 1. Unless fishing in an exempted fishery defined by the Multispecies FMP, vessels fishing for skates must be on a Multispecies, Monkfish, or Scallop DAS. 2. Landings of barndoor, smooth, and thorny skates are prohibited. 3. A 10,000 lbs./day or 20,000 lbs./trip skate possession limit applies to all trips, except for vessels that obtain 4. A bait letter of authorization to allow vessels fishing for skates to exceed the skate possession limit (3) but must land whole skates not exceeding 23 inches (58 cm) in total length. 	These measures were intended to rebuild barndoor and thorny skates, while preventing overfishing particularly on larger skates (e.g. winter skate) that are targeted to supply the wing market.

Alternative	Proposed measures	Philosophy or rationale
1A (Section 5.2.2)	<ol style="list-style-type: none"> 1. Annual catch limit (ACL) of 27,809 mt; annual catch target (ACT) of 20,857 mt; total allowable landings (TAL) of 11,544 mt 2. Accountability measures via a “Hard TAC”; landings and discards are monitored and skate possession is prohibited when catch exceeds the ACL 3. Whole/bait skate possession limit 4. Skate wing possession limit 5. Skate time/area closures for vessels on declared skate trips 6. Prohibition on using Multispecies Category B DAS to fish for skates 7. Skate trip declaration requirements 8. Skate incidental possession limit for undeclared trips 9. Annual review and bi-ennial specification setting with SAFE Report 	A combination of skate possession limits, time/area closures, and a zero skate possession limit when catch exceeds the ACL prevents excessive skate mortality and promotes biomass rebuilding.
1B (Section 5.2.3)	<p>Measures are the same as Alternative 1A, except:</p> <ol style="list-style-type: none"> 2. Accountability measures via a “Target TAC”; landings are monitored and skate possession is limited to the incidental limit (500 lbs. of whole skates) when the landings exceed the TAL. 	A combination of skate possession limits, time/area closures, and an incidental skate possession limit when landings exceed the TALs prevent excessive skate mortality and promotes biomass rebuilding.
2 (Section 5.2.4)	<ol style="list-style-type: none"> 1. Annual catch limit (ACL) of 27,809 mt; annual catch target (ACT) of 20,857 mt; total allowable landings (TAL) of 11,544 mt 2. Accountability measures via a “Target TAC”; landings are monitored and skate possession is limited to the incidental limit (500 lbs. of whole skates) when the landings exceed the TAL. Time/area skate management applies when the landings exceed or approach the ACLs. 3. Whole/bait skate possession limit 4. Skate wing possession limit 5. Prohibition on using Multispecies Category B DAS to fish for skates 6. Skate trip declaration requirements 7. Skate incidental possession limit for undeclared trips 8. Annual review and bi-ennial specification setting with SAFE Report 	A combination of skate possession limits, time/area closures (as an accountability measure), and an incidental skate possession limit when landings exceed the TALs prevent excessive skate mortality and promotes biomass rebuilding.

Alternative	Proposed measures	Philosophy or rationale
3A (Section 5.2.5)	<ol style="list-style-type: none"> 1. Annual catch limit (ACL) of 27,809 mt; annual catch target (ACT) of 20,857 mt; total allowable landings (TAL) of 11,544 mt 2. Accountability measures via a “Hard TAC”; landings and discards are monitored and skate possession is prohibited when catch exceeds the ACL. 3. Whole/bait skate possession limit 4. Skate wing possession limit 5. Prohibition on using Multispecies Category B DAS to fish for skates 6. Skate trip declaration requirements 7. Skate incidental possession limit for undeclared trips 8. Annual review and bi-ennial specification setting with SAFE Report 	A combination of skate possession limits, and a zero skate possession limit when catch exceeds the ACL prevents excessive skate mortality and promotes biomass rebuilding. Lower skate possession limits than those in Alternatives 1A and 4 are needed to achieve the skate catch limits without the benefit of time/area closures.
3B (Section 5.2.6)	<p>Measures are the same as Alternative 3A, except:</p> <ol style="list-style-type: none"> 2. Accountability measures via a “Target TAC”; landings are monitored and skate possession is limited to the incidental limit (500 lbs. of whole skates) when the landings exceed the TAL. 	A combination of skate possession limits, and an incidental skate possession limit when landings exceed the TALs prevent excessive skate mortality and promotes biomass rebuilding. Lower skate possession limits than those in Alternatives 1B and 4 are needed to achieve the skate catch limits without the benefit of time/area closures.
4 (Section 5.2.7)	<p>Measures are the same as Alternative 1A, except:</p> <ol style="list-style-type: none"> 3. The landings for the skate bait fishery are limited by an annual or seasonal quota in lieu of whole skate possession limits. 	A combination of skate wing possession limits, a skate bait fishery quota, and a zero skate possession limit when catch exceeds the ACL prevents excessive skate mortality and promotes biomass rebuilding. Unique market characteristics in the skate bait fishery are more easily accommodated by a seasonal quota than by skate possession limits.

Conclusions

The landings and catch limits proposed by this amendment have an acceptable probability of promoting biomass growth and achieving the rebuilding (biomass) targets for smooth, thorny, and winter skates. Modest reductions in landings and a stabilization of total catch below the median relative exploitation ratio is expected to cause skate biomass and future yield to increase. Some short-term decreases in economic surpluses derived from the skate fishery can be expected (Section 10.3). With No Action (status quo), skate biomass is expected to decline further or remain at low, overfished levels. Due to

insufficient information about the population dynamics of skates, the rate of decline under No Action and the rate of increase under the proposed alternatives cannot be forecast. But No Action is not expected to achieve OY and the loss of future yield under No Action will be greater than the short-term reductions in economic surplus expected under any of the alternatives.

The expected impacts of the alternatives are largely identical to each other with respect to the probability of achieving rebuilding objectives and overall economic effects, because all alternatives have been developed to achieve the same TALs for the skate wing and bait fisheries. There are two TAL allocation options. Option 1 (Section 5.1.1.1) allocates more of the TAL to the wing fishery while Option 2 allocates a greater share to the skate bait fishery than does Option 1. It is unclear which option is clearly superior and provides greater economic benefits, but Option 1 reduces skate supply to a traditional US based lobster fishery while Option 2 reduces supply to an export market for skate wings. There is therefore little consumer surplus generated through higher wing landings, while producer surplus is affected by changes in the skate bait supply (Section 8.7.2.3).

Alternatives with time/area management (Alternatives 1A, 1B, and 4) allow for higher skate wing possession limits, which may be more efficient (i.e. cost-effective) since vessels could take longer trips than they would if the skate possession limits are lower (as in Alternatives 2, 3A and 3B). Also, alternatives with higher possession limits and time area closures (Alternatives 1A, 1B, and 4) would increase skate discards (see Section 8.3.1.10) less than alternatives with lower skate possession limits (Alternatives 2, 3A, and 3B). However, alternatives with time/area closures have greater impacts on adjacent ports (like Chatham, MA) and may cause a shift in fishing effort to areas where vessel target smaller skates for the bait market. Alternative 4 uses quotas to manage the skate bait fishery instead of possession limits. Although Alternative 4 may require seasonal fishery closures that would disrupt bait supply to the lobster fishery, it may give processors and vessels more flexibility to respond to short-term fluctuations in market demand. Alternative 2 only differs from Alternatives 1B and 3B in the way that time/area management is applied, as an accountability measure, and therefore its effects are dependent on the timing and implementation of the accountability measures.

