



New England Fishery Management Council

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DATE: September 21, 2015
TO: Council
FROM: Skate Plan Development Team
SUBJECT: Northeast Skate Complex 2015 Annual Monitoring Report

Background

The regulations implementing the management measures for the Northeast Skate Complex Fisheries state that the Skate PDT shall meet at least annually to review the status of the species in the skate complex. At a minimum, this review shall include annual updates to survey indices, fishery landings and discards; a re-evaluation of stock status based on the updated survey indices and the FMP's overfishing definitions; and a determination of whether any of the accountability measures (AMs) specified under §648.323 were triggered. The review shall also include an analysis of changes to other FMPs (e.g., Northeast Multispecies, Monkfish, Atlantic Scallops, etc.) that may impact skate stocks, and describe the anticipated impacts of those changes on the skate fishery.

1. Annual updates to survey indices and a re-evaluation of stock status based on the updated survey indices and the FMP's overfishing definitions

The information in Attachment 1 summarizes skate stock status through spring 2015 (Memo from William Karp to John Bullard, July 27, 2015). It concludes that "Based on recent survey data collected through autumn 2014/spring 2015, one skate species remains overfished (thorny) and overfishing is no longer occurring for any of the seven skate species. For thorny skate, the 3-year average (2012-2014) survey catch/tow (0.13 kg/tow) was less than the $B_{\text{threshold}}$ (2.06 kg/tow)."

Rebuilding Stocks

For thorny skate, the 3-year average (2012-2014) survey biomass (0.13 kg/tow) represents an increase on the previous 3-year average, but is only 3.1% of the B_{MSY} target (4.13 kg/tow). The rebuilding deadline for this stock is 2028 (25 years from implementation of the Skate FMP), yet 12 years into the rebuilding period, the survey biomass has continued to decline with no signs of rebuilding. The skate regulations at §648.320(a)(3) require the Council to take management action when an overfished species declines in biomass to ensure that it will achieve target levels.

Thorny skate is a Species of Concern and was previously petitioned for listing under the Endangered Species Act (ESA) in 2011. NOAA Fisheries determined that a status review was not warranted at that time (76 FR 78891). However, a new ESA petition was submitted by Defenders of Wildlife and Animal Welfare Institute in May 2015. NOAA Fisheries is currently evaluating this new petition. The Council should consider management measures, beyond the continuing

possession prohibition, that will halt the declining biomass of thorny skate and lead to rebuilding. The Council should also prioritize research into the population dynamics of this species, which may provide insights into the cause of its ongoing biomass declines.

For barndoor skate, the 3-year average (2012-2014) survey biomass (1.41 kg/tow) was 81% above the overfished threshold (0.78 kg/tow), and 90% of the B_{MSY} target (1.57 kg/tow). The stock is not overfished. The rebuilding deadline is not clearly defined in the Skate FMP, due to uncertainties in basic life history parameters. In 2011, the Skate PDT recommended that it would be premature to remove the possession prohibition on barndoor skate unless it was either fully rebuilt or a new stock assessment was completed. It remains unknown whether a possession limit would convert dead discards into landings (i.e., discard mortality rates are currently assumed to be 50%, but it is not known how accurate this estimate is).

This recommendation could be reconsidered following the analysis of a recent EFP. Members of the Cape Cod Commercial Fishermen's Alliance received an EFP to sample and harvest prohibited barndoor skates in June 2014 (79 FR 26414) for a project entitled, "Research into life history characteristics, catch composition, and fishing mortality of barndoor skate (*Dipturus laevis*) in existing non-directed gillnet fisheries and initial analysis and development of market for barndoor skate seafood products." The goals of the study include assessing at-vessel mortality rates and condition, describing catch composition, biological sampling, and determining the potential for a premium market for barndoor skate wings, should the prohibition be removed in the future. NOAA Fisheries approved a total amount of 168,000 lb of barndoor skate wings for the study (a portion of estimated annual barndoor skate dead discards in sink gillnet gear), and a 500 lb trip limit. In the first year of the study, ~12,000 lb of barndoor skates were landed, and biological data were collected from over 1,100 individuals. The project is ongoing, and an EFP renewal is being reviewed by NOAA Fisheries.

For smooth skate, the 3-year average (2012-2014) survey biomass (0.19 kg/tow) was 46% above the overfished threshold (0.13 kg/tow), and 70% of the B_{MSY} target (0.27 kg/tow), which represents a decrease in the previous average. The rebuilding deadline for this species is 2020 (10 years from the implementation of Amendment 3), and it appears that it could be rebuilt before the deadline if the current biomass trend continues. Smooth skate (along with thorny, winter, and barndoor skate) was petitioned for listing under the ESA in 2011, but NOAA Fisheries determined that a status review was not warranted at that time (76 FR 78898).

2. Fishery landings and discards and determination of whether any of the accountability measures specified under §648.323 were triggered

Based upon the information detailed below, it appears that no ACL or TAL overages occurred in fishing year 2014, therefore, no AMs were triggered. Management specifications as well as landings and discards for fishing year 2014 are shown in Table 1 below. The ABC/ACL specifications for the 2014 fishing year were set using the specification process established by Amendment 3 to the Skate FMP, which became effective in July 2010. To set the ACT, the ABC/ACL was reduced by 25% to account for scientific and management uncertainty. The TALs were calculated by reducing the ACT by the estimated discard rate in 2010-2012, and allocating the remainder to allowable landings which were split 66.5/33.5% between the skate wing and bait fisheries, respectively. A small amount (6.7%) was set aside for skate landings by vessels fishing in state waters without a federal skate permit. Table 2 provides estimates of FY2013 skate complex revenue and landings for the wing and bait fishery.

Based on observer data, the Northeast Fisheries Science Center has estimated dead skate discards to have been 10,095 mt for calendar year 2014. This estimate, combined with the estimate for skate landings by vessels fishing in state waters without a federal skate permit is lower than the assumed discards and state landings of 10,224 mt. Dead discard estimates for fishing year 2014 were estimated to be 11,452 mt by the Greater Atlantic Regional Fisheries Office. Using fishing year discards and landings, estimated total skate catch for fishing year 2014 was 28,032 mt (105% of the ACT, 79% of the ACL). Therefore, it appears that the ACL was not exceeded. Total fishing year 2014 skate wing landings were 10,605 mt (97.3% of the Wing TAL), and bait landings were 4,499 mt (82% of the Bait TAL). Therefore, the fishery-level TAL was not exceeded and no in-season accountability measures (AMs) were triggered (i.e., automatic possession limit reductions) during fishing year 2014. As a result, no reactive AMs should be triggered as a result of catch levels for this fishing year.

Table 1 - FY 2014 Catch and Landings of Skates Compared to Management Specifications

Management Specification	Specification Amount	Catch/Landings (mt)	Percent Landed or Caught
ABC/ACL	35,479	28,032	79%
ACT (75% of ABC)	26,609	28,032	105%
Assumed Discards + State Landings	10,224	11,781	NA
TAL Bait	5,849	4,499	82%
TAL Wings	10,896	10,605	97.3%

Table 2 - FY2014 Skate complex price and landings by disposition

Disposition	Live weight (pounds)	Revenue	Average price per lb
Wing	24,642,900	\$ 7,861,515	\$0.32
Bait	9,386,666	\$ 1,149,535	\$0.12
Unknown	357,142	\$ 278,774	\$0.78
No market	32,979	\$ 2,427	\$0.07

3. Analysis of changes to other FMPs (i.e., Northeast Multispecies, Monkfish, Atlantic Scallops, Habitat) that may impact skate stocks, and description of the anticipated impacts of those changes on the skate fishery

Northeast Multispecies FMP

Amendment 16 to the Multispecies FMP, which took effect on May 1, 2010, greatly expanded the sector management program and set groundfish specifications for the 2010 and 2011 fishing years.

FW52, implemented on January 14, 2015, was intended to revise the accountability measures for the groundfish fishery for the northern and southern windowpane flounder stocks. Revisions to the AMs would be applied retroactively for FY 2014 or any overages that occurred prior to FY 2014 (i.e., AM would be revised in-season during FY 2014). The Cumulative Effects Analysis in Framework 52 did not specifically address impacts on skates; however, it stated, “The combined impacts of past federal fishery management actions have decreased fishing effort and improved habitat protection for non-target species. Current management measures, including those implemented through Amendment 16 to the FMP, are expected to continue to control effort, and decrease bycatch and discards. The action proposed by Framework 52 is expected to continue this trend. The primary mechanism is through the reduced ABCs/ACLs (reduced from recent years). The modifications in management measures are not expected to affect non-target

species. The past and present impacts, combined with the Preferred Alternative and future actions which are expected to continue rebuilding and strive to maintain sustainable stocks, should yield positive non-significant impacts to non-target species.”

FW53 became effective May 1, 2015 and set specifications for GOM winter flounder, GB winter flounder, GB yellowtail flounder, GB cod, GB haddock and pollock. It also established SNE/MA windowpane flounder sub-ACLs for sectors and the scallop fishery, modify GOM cod spawning area closures, prohibit possession of GOM cod, allow rollover of groundfish specifications and modify sector ACE carryover. The Cumulative Effects Analysis in Framework 52 did not specifically address impacts on skates; however, it stated, “the combined impacts of past federal fishery management actions have decreased fishing effort and improved habitat protection for non-target species. Current management measures, including those implemented through Amendment 16 to the FMP, are expected to continue to control effort, and decrease bycatch and discards. The action proposed by FW 53 is expected to continue this trend. The primary mechanism is through the reduced ABCs/ACLs (reduced from recent years). The modifications in management measures are expected to affect non-target species depending on fishing behavior. The past and present impacts, combined with the Preferred Alternative and future actions which are expected to continue rebuilding and strive to maintain sustainable stocks, should yield positive non-significant impacts to non-target species.”

FW55 is currently in development and would set specifications for groundfish stocks. It may also implement an additional sector and measures to modify the groundfish monitoring program. Any impacts of these proposed actions on the skate complex will be described in FW55.

Scallop FMP

Scallop Framework 25 set specifications for 2014 that allocated full-time limited access vessels 31 open area DAS and 12 for part-time vessels. Default specifications for 2015 result in 17 DAS for full-time limited access vessels and 7 DAS for part-time limited access vessels. Access areas available to the fishery in 2014 included: Nantucket Lightship, Closed Area II, and Delmarva. The cumulative impacts assessment concludes that “The cumulative impacts of past, present and reasonably foreseeable future actions should yield positive impacts for non-target species in the long-term.”

FW26 was implemented on May 1, 2015 and primarily set specifications for FY2015 and (default) FY2016. FW26 also closed a portion of the Elephant Trunk Access Area and extended the boundaries of the Nantucket Lightship Access Area to protect small scallops, adjusted the state waters Exemption Program, allowed for VMS declaration changes for vessels to steam home with product on board, implemented a proactive AM to protect windowpane flounder and yellowtail flounder, aligned two gear measures designed to protect sea turtles, and implemented other measures to improve the management of the scallop fishery. The cumulative impacts assessment concludes that “Actions taken by the Council in the Scallop FMP in the past and present are mostly positive on non-target species. Specific gear and area restrictions have reduced bycatch of various non-target species. Effort controls and increased efficiency of the fleet have also likely reduced impacts on non-target species. However, some non-target species are still overfished. Future actions are anticipated to continue rebuilding and maintaining sustainable stocks. There are several stocks that have been allocated a sub-ACL as bycatch in the scallop fishery (GB YT, SNE/MA YT and SNE/MA windowpane flounder). Having a sub-ACL and AMs likely reduces overall bycatch of these stocks in the scallop fishery. Therefore, the cumulative impacts of past, present and reasonably foreseeable future actions should yield positive impacts for non-target species in the long-term.”

Monkfish FMP

Monkfish Framework 8 revised existing monkfish DAS allocations and landing limits to more fully harvest monkfish catch levels specified in each area. Monkfish DAS allocations increased from 40 to 46 DAS with the limit of monkfish DAS that may be used in the SMA increased to 32 DAS. For vessels fishing under a

Northeast (NE) multispecies DAS in the NMA, monkfish landing limits would be increased to 600 lb tail weight/DAS for limited access monkfish Category C permits, and 500 lb tail weight/DAS for monkfish Category D permits. In the SMA, monkfish landing limits would be increased to 610 lb tail weight/DAS and 500 lb tail weight/DAS for Category A/C and B/D/H monkfish permits, respectively, when fishing under a monkfish DAS. This action would also allow vessels issued a limited access monkfish Category H permit to fish throughout the SMA, and enable vessels to use allocated monkfish-only DAS at any time throughout the fishing year. The cumulative effects states “While the increased opportunity to target monkfish will allow for effort to shift from other fisheries, particularly the groundfish fishery, as intended, there may be increased incidental catch of some species, particularly skates and dogfish. However, such an increase would likely be negligible and controlled by management measures in those fisheries that are designed to prevent overfishing and rebuild overfished stocks consistent with the requirements of the Magnuson-Stevens Act. Thus, the cumulative effect of this action would likely result in negligible changes to the sustainable management of those fisheries, with no anticipated significant impacts.”

Monkfish Framework 9 is currently being developed by the Council. It would allow Monkfish Category C and D permitted sector vessels to declare a NE multispecies DAS while at sea when fishing in the Northern Fishery Management Area, would eliminate the trip limit in the Northern Fishery Management Area when fishing on a NE multispecies and monkfish DAS, and would modify the minimum mesh requirements for standup gillnets on a monkfish DAS in the Southern Fishery Management Area. Any impacts of these proposed actions on the skate complex will be described in FW9.

The Council is developing a monkfish action which could tighten or loosen the monkfish regulations, including adoption of a catch shares management program which could eliminate the need for Monkfish DAS. At the present, it is unclear how these alternatives would affect the skate resource or the effectiveness of the Skate FMP, although, they are not likely to affect the skate catches or the Skate FMP in 2013.

Habitat Management Plan

The Omnibus Habitat Amendment 2 (OHA2) would designate Essential Fish Habitat (EFH), minimize the adverse effects of fishing on EFH to the extent practicable, potentially establish Habitat Areas of Particular Concern (HAPCs) or Dedicated Habitat Research Areas (DHRAs), improve protection of juvenile groundfish habitat, and improve protection of spawning groundfish. Final action on the amendment was taken at the June 2015 NEFMC meeting. Implementation of the amendment is expected in 2016. Fixed kernel utilization distribution analysis of NEFSC trawl survey data indicated a contraction of the thorny skate population into the western Gulf of Maine, which overlaps with the existing Western Gulf of Maine Closed Area. The preferred alternatives largely maintain the existing Gulf of Maine habitat protections, however, a portion of the eastern edge of the Western Gulf of Maine closed area would be opened to fishing activity. This may redistribute fishing effort along this eastern edge and allow fishing in an area previously designated as a closed area. The analysis contained in the Draft Environmental Impact Statement (DEIS) indicates that increased interactions with thorny skate could further compromise the rebuilding of the stock. However, it is unclear what impact the opening of the eastern edge would be on overall thorny skate interactions.

PDT Notes

Skate Advisory Panel members, Drs. John Mandelman (New England Aquarium) and James Sulikowski (University of New England), in addition to Dr. Jeff Kneebone and collaborators, were recently awarded 2015 Saltonstall-Kennedy Grant funds for their proposal entitled “Improving the management of an overfished, data poor species: Investigating the movements and stock structure of thorny skates using novel fishery-independent tagging technology.” The researchers will tag up to 120 thorny skates in different

portions of the Gulf of Maine with newly-developed mark-report pop-up satellite archival tags (mrPATs). Results are expected to provide new insights into the extent of thorny skate movements, habitat preferences, and potential stock boundaries. The project is expected to commence this fall.