

FMP NORTHEAST SKATE COMPLEX FMP
 STOCK(S) Northeast Skate Complex (7 species/stocks - Barndoor, Clearnose, Little, Rosette, Smooth, Thorny, Winter Skate)
 LAST ASSESSMENT Northeast Data Poor Stocks Working Group, 2008

				Aggregate specifications across all seven species			
Assessment Model, Terminal Year	Description of Assessment Model	Overfishing?/ Overfished?	In Rebuilding Program?	OFL	ABC/ABC CR	ACL	ACT
N/A	N/A	Thorny Skate: No/Yes; Other Skates: No/No	Only Thorny: 25 yr starting 2003 Barndoor: rebuilt in 2016 Smooth: rebuilt in 2019	Undetermined	Long-term median catch of each species adjusted by ratio of its short-term (3-year) over long-term survey biomass, summed across the complex.	ACL = ABC	ACT = 90% ACL
Major Management Issues/Challenges				MSY/OY	AMs	Dead discard deduction	State landings deduction
Overfishing definitions based on trawl survey, not fishing activity; gaps in survey coverage, particularly 2020. Speciation can be difficult in the field; species-specific landings and discard data are extrapolations. Most species- and gear-specific discard mortality rates are assumed to be 50% (without specific research). Last assessed in 2008. Thorny skate biomass remains low.				Catch resulting from the application of the long-term catch/biomass medias to the target skate biomass level, summed across the complex = 36,794 mt	In-season: if TALs exceeded >5%, in-season possession limit trigger point (85% wing fishery; bait fishery: 90% in seasons 1 & 2, 80% in season 3) is decreased proportional to the overage. Year-end: if ACL exceeded, buffer between ACL and ACT is increased proportional to the overage for the following year.	Apply the weighted discard mortality rate to the average discards from the most recent three fishing years (2017-2019; using observer and ASM data).	Average of the most recent three years (2017-2019) of landings by vessels that have never had a federal fishing permit (permit # = 0) from data reported to the federal database.
Availability of Biological and Assessment Data		<i>Used in Assessment:</i> Trawl survey, dealer landings, VTR transfers at sea (bait), observer discards. <i>Other Data:</i> Discard mortality rate estimates from external academic research.					
Recent Performance Against Harvest Control Rule		ACL has never been exceeded. Overfishing is not occurring on any species. Thorny skate shows no signs of rebuilding and continues to be overfished (at 4% of BMSYproxy after 17 years into rebuilding period; 2028 is rebuilding deadline). Barndoor skate was declared rebuilt in 2016 and possession has been allowed since 2018 (at 25% of wing possession limit). Smooth skate was declared rebuilt in 2019 (possession still prohibited).					
Current Management Program		Open access fishery - skate permit required. Largely an incidental fishery with possession limits: bait fishery = 25,000 lbs with skate bait letter of authorization, otherwise 8,000 lb incidental limit; wing fishery for vessels fishing on a DAS May 1 to Aug 31 = 3,000 lb, Sept 1 to Apr 30 = 5,000 lb, otherwise 500 lb incidental limit.					
Variability in Catch/Revenues?		Landings in the bait fishery are relatively stable because this fishery is more directed and based on need/orders of bait companies. The wing landings are more variable. Total skate revenue has ranged from \$5.1-9.1M, 2010-2019. Trends in total revenues are mainly influenced by the changes in wing landings.					
Data - Vessels, Permits, Dealers, Processors, Employment		Total active skate vessels (permits) declined from 550 in 2010 to 357 in 2019; 2-4% are bait-only vessels, 5-22% bait and wing, 73-92% wing only. Skates landed in broad range of fisheries. Dealers are active from Maine to North Carolina, but total active has declined from 124 in 2011 to 80 in 2020. Skates are landed (and processed) in the wing fishery primarily in Chatham, New Bedford and Point Judith. Total employment is unknown.					
% Food, % Recreational		The TAL is divided by fishery sector - bait is 33.5% and wing is 66.5%. The bait fishery provides bait to the lobster fishery. The wing fishery is for human consumption. Recreational catch has been 3-5% of ACL in recent years.					
Fishing Communities		There are eight primary ports in the skate fishery and 21 secondary ports from Massachusetts to North Carolina, with over 400 communities that have been a homeport or landing port to active skate vessels since 2010. Chatham, MA (\$1.7M); Point Judith, RI (\$1.3M); and New Bedford, MA (\$1.2M) had the highest average annual landings.					
Other Economic/Social Factors		Skate wings are mostly exported to Europe and Asia seafood markets. From 2017 to the first quarter of 2021, mean ex-vessel price for wings was \$0.61/lb. Skate bait has lower value (mean of \$0.15/lb), requiring higher volume of landings to make trips profitable. The pandemic shut down fishing operations for several months beginning March 2020; the closing of restaurants and collapse of lobster prices subsequently negatively affected skate bait prices. An uncertain future will continue to impact the industry, though sales are improving and there is cautious optimism for FY 2021. However, as of 6/26/2021, 17% of wing TAL was landed, down from FY 2020. Bait TAL was 22% landed, similar to FY 2020.					
Major Sources of Scientific Uncertainty		Species composition of the catch. Discard mortality is assumed for the majority of species and gear types. Some recent work has been done to provide estimates, e.g. winter skate discard mortality was reduced from 50% in trawl gear to 9%. The overfishing definitions are not based on fishing activity - they are solely based on changes in trawl survey indices. Distribution shifts may influence trawl survey biomass. There are life history gaps for some species in the complex.					
Major Sources of Management Uncertainty		Discards are decreasing but still > landings. 27-33% of discards are dead, which are difficult to monitor. Recreational catch and research landings have been 3-5% and 0.1%, respectively, of the ACL recently and included within the 10% uncertainty buffer.					
How is the probability of overfishing addressed?		The NEFSC provides annual updates on stock status. If the survey indices declines by a set percentage then a species is subject to overfishing. The uncertainty buffer takes 10% of the ABC off the top.					
What is the consequence of overfishing?		As stock complex biomass declines, the ABC control rule and associated catch limits are reduced accordingly.					
How are expected net benefits to the Nation currently measured/evaluated?		The FMP requires that management measures for skates minimize to the extent practicable the economic impact on other, related fisheries (FMP goals and objectives). Impacts are evaluated relative to the valued ecosystem components.					
Interactions with Other Fisheries/Stocks, Bycatch Issues		In the years FY 2012, FY 2015, FY 2017, and FY 2018, most of the skate wing landings were either from declared Northeast multispecies trips (41-49% of wing landings) or from declared monkfish trips (36-45% of wing landings) followed by undeclared trips (6-15% of wing landings). Most skate bait landings were from declared Northeast multispecies trips (29-63% of bait landings) and on undeclared trips (20-44% of bait landings). Discards primarily from scallop dredge and otter trawl gear.					
Ecosystem Considerations: Trophic Interactions		Skates are important meso-consumers on the northeast continental shelf. They prey on numerous species of demersal invertebrates and fish, and are prey for a variety of larger predatory fish (e.g., monkfish, sharks) and mammals (e.g., seals).					
Ecosystem Considerations: Habitat		Skates are generally widespread across habitat/sediment types (sand, gravel, mud). Species distribution not uniform (e.g., thorny primarily in Gulf of Maine, clearnose in the Mid-Atlantic).					
Ecosystem Considerations: Climate		Skates likely to shift distribution with warming conditions. Thorny skate population appears to be contracting and moving northward and into deeper waters. The status review report for thorny skate indicated that thorny skate is likely to be vulnerable to climate change but to date impacts were thought to be minor. Some evidence that egg survival could be reduced at high temperatures and lower pH.					
Other Important Considerations/Notes		As elasmobranchs, skates have comparatively low productivity/rebound potentials. Rebuilding timeframes are protracted (>20 years for some species). This warrants extra precaution when considering the risk of overfishing. The areas south of Rhode Island that are being considered for wind energy development are important skate fishing grounds.					