

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**

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	Thorny: 25 yr starting 2003 Barndoor: 21 yr starting 2003 Smooth: 10 yr starting 2010	Undetermined	Aggregate ABC for all 7 species; Long-term median catch/biomass ratio x 3-year avg. biomass	Aggregate ACL = ABC	ACT = 75% ACL
Major management issues/challenges: Species identification. No species-specific discard information. Overfishing definitions not based on fishing activity Species- and gear-specific discard mortality rates.				MSY/OY	AMs	Discards	State Waters
				MSY estimates not available	If ACL exceeded, buffer between ACL and ACT is increased proportional to the overage. If TALs exceeded >5%, inseason possession limit trigger point (85% wing fishery, 90% bait fishery) is decreased proportional to the overage.	3-year moving avg. dead discard rate	Percentage set-aside currently 2.6%
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		Overfishing is not occurring on any species. Thorny skate shows no signs of rebuilding. Barndoor skate is rebuilding but this has leveled off in recent years. ACL has never been exceeded.					
Current Management Program		Open access fishery - skate permit required. Largely executed as an incidental fishery but possession limits are in effect: bait fishery - 25,000 lbs with skate bait letter of authorization; wing fishery has a seasonal possession limit - May 1 to Aug 31 = 2,600 lbs, Sept 1 to Apr 30 = 4,100 lbs for vessels fishing on a DAS. An incidental limit for the wing fishery of 500 lbs is triggered once 85% of the TAL is achieved. Wing fishery seasonal quotas will be modified if FW3 is approved.					
Variability in Catch/Revenues?		Landings in the bait fishery are relatively stable because this fishery is more directed and based on need/orders put in with bait company. The wing landings are more variable. Revenues vary accordingly. Trends in total revenues are mainly influenced by the changes in wing landings					
Data - Vessels, Permits, Dealers, Processors, Employment		Total skate revenue in FY2014 was \$9,292,251. Skates landed in broad range of fisheries - see A3 for full breakdown.					
% 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. Negligible recreational harvest.					
Fishing Communities							
Other Economic/Social Factors		Skate wings are mostly exported to Europe and Asia seafood markets. Mean ex-vessel price in FY2014 for wings = ~\$0.32/live lb. Skate bait has low value (~\$0.12/lb mean ex-vessel price), requires higher volume landings to make trips profitable.					
Major Sources of Scientific Uncertainty		Species composition of the discards. 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. Life history gaps for some species in the complex.					
Major Sources of Management Uncertainty		High percentage of the catch is discards, which are difficult to monitor					
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; There is a management uncertainty buffer that takes 25% of the ABC off the top					
What is the consequence of overfishing?		As stock complex biomass declines, the ABC 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)					
Interactions with Other Fisheries/Stocks, Bycatch Issues		Skates are caught in a number of fisheries: total skate landings by DAS program is provided in FW2 - a large portion of the landings had no declaration.					
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 in abundant habitat/sediment types (sand, gravel, mud).					
Ecosystem Considerations: Climate		Mostly unknown. Skates may be likely to exhibit distribution shifts in response to warming conditions. 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.					