FMP NORTHEAST MULTISPECIES (GROUNDFISH)
STOCK(S) Georges Bank Yellowtail Flounder
LAST ASSESSMENT TRAC 2022 (July)

Assessment Model, Terminal Year	Description of Assessment Model	Overfishing?/ Overfished?	In Rebuilding Program?	OFL	ABC/ABC CR	ACL	ACT
Empirical, 2022	Averages estimates of biomass from the bottom trawl surveys and applies exploitation rate	Yes/Yes (determined by NOAA Fisheries)	Yes 2006-2032	unknown	Total ABC (US/CA TAC) of 200 mt and US ABC (US TAC) of 122 mt in 2022 and CA TAC of 78 mt	118 mt (US) in FY 2022	N/A for groundfish

	MSY/OY	AMs	Discards	State Waters
Low stock biomass, poor recruitment, record low catches, and bycatch issues. Transboundary stock co-managed by the U.S. and Canada.	Unknown	In season closures and lb-lb payback for commercial groundfish vessels; gear requirements for Atlantic sea scallop fishery; gear requirements for small-mesh fisheries	4.5 mt (US) in FY2020	0 mt

Availability of Biological and Assessment Data	*Updated data since last assessment:* survey (2021 NEFSC fall survey and 2022 NEFSC spring survey) and fisheries (U.S. and Canadian commercial catches) data; DFO spring 2022 unavailable due to new vessel and pending calibration work *Other Data:* independent research studies presented - Scallop surveys - VIMS, CFF, SMAST
Recent Performance Against Harvest Control Rule	Percent of US ACL caught: 14.7% in FY2018, 3.1% in FY2019, 6.7% in FY2020.
Current Management Program	The Total ACL is divided between several sub-ACLs and sub-components. The commercial sub-ACL is further divided between the sector sub-ACL and the common pool sub-ACL. The majority of commercial permits participate sectors, fishing under quotas. The common pool operates under days-at-sea, with trip limits and trimester TACs controlling catch. The Atlantic sea scallop fishery and small-mesh fisheries receive sub-ACLs for GB yellowtail flounder. State waters and the other sub-component round out the final components of the total ACL. Landings and discards from all fisheries count against the applicable sub-ACL or sub-component, which are monitored throughout the year. If an overage occurs, an accountability measure is triggered for a subsequent fishing year. The scallop fishery cannot possess GB yellowtail flounder. GB yellowtail flounder is jointly managed with Canada under the United States/Canada Resource Sharing Understanding. Each year, the Transboundary Management Guidance Committee (TMGC) and Steering Committee (SC) recommends a shared quota for GB yellowtail flounder based on the most recent stock information and the TMGC's harvest strategy. The shared quotas are allocated between the United States and Canada based on a formula that considers historical catch (10-percent weighting) and the current resource distribution (90-percent weighting).
Variability in Catch/Revenues?	Commercial Groundfish Revenue for GB flounder (2020$): $0.1 million in FY2018, <$0.1 million in FY2019, <$0.1 million in FY2020; $0.1 million 5-year average GB yellowtail flounder ex-vessel price/lb (2020$/lb): $1.73/lb in FY2018, $1.96/lb in FY2019, $1.34/lb in FY2020; $1.93/lb 5-year average Total groundfish landings: 44.28 million pounds in FY2018, 42.66 million pounds in FY2019, 50.66 million pounds in FY2020 GB yellowtail flounder catch (landings + discards): 40.5 mt in FY2018, 4.8 mt in FY2019, 9.7 mt in FY2020
Data - Vessels, Permits, Dealers, Processors, Employment	FY2020: 876 commercial groundfish permitted vessels, with 590 reporting landings. 99 dealers reported buying groundfish.
% Food, % Recreational	82% of the US ABC is allocated to the commercial groundfish fishery.
Fishing Communities	Commercial - The top 5 ports based on the Groundfish-Specific Commercial Engagement Indicator (2004-2020) are Gloucester, MA; New Bedford, MA; Boston, MA; Narragansett, RI; and Portland, ME.
Other Economic/Social Factors	Food consumption; market demand; ex-vessel price; sector ACE lease value (influenced by suite of ACLs for all groundfish stocks, market liquidity, transaction costs, operating rules)
Major Sources of Scientific Uncertainty	Evaluating sources of mortality; declining trend in survey biomass despite reductions in catch; lack of an analytic assessment model; variability and uncertainty in survey estimates. Low catches in the fishery make sampling challenging including catch and weight-at-age estimation (TRAC 2022).
Major Sources of Management Uncertainty	Management uncertainty is set at 3%.
How is the probability of overfishing addressed?	The GB yellowtail flounder stock status is unknown due to a lack of biological reference points. Because a stock assessment model framework is lacking, no historical estimates of biomass, fishing mortality rate, or recruitment can be calculated. Status determination relative to reference points is not possible because reference points cannot be defined. In the absence of an assessment model, an empirical approach based on survey catches indicates stock condition is poor, given a declining trend in survey biomass despite reductions in catch to historical low levels. 2022 stock assessment results for GB yellowtail flounder continue to indicate low stock biomass and poor productivity (TRAC 2022). Recent catches are at historic low amounts. NMFS determined that the stock status for GB yellowtail flounder is overfished, with overfishing occurring.
What is the consequence of overfishing?	Quota overages in the sector or common pool fisheries trigger accountability measures within season or in subsequent fishing years or fishing trimesters (common pool only). The measures are designed to correct the problems that caused the quota to be exceeded. For the scallop fishery and small-mesh fisheries, an overage can lead to gear-restrictions in the GB yellowtail flounder stock area in a year following the overage. Any US fishery overage of the EGB cod U.S. TAC is subtracted from the following year's U.S. TAC
How are expected net benefits to the Nation currently measured/evaluated?	Yield (mt and $)
Interactions with Other Fisheries/Stocks, Bycatch Issues	The scallop fishery and small-mesh fisheries each receive a sub-ACL of GB yellowtail flounder (16% and 2% of the total ABC, respectively).
Ecosystem Considerations: Trophic Interactions	Amphipods and polychaetes are the main prey of yellowtail flounder, with occasional consumption of other benthic invertebrates and small fish (Johnson et al., 1999; Klein-MacPhee, 2002). Predators include Spiny Dogfish, Atlantic Cod, several skate species, and several other benthic piscivores (Johnson et al., 1999; Klein-MacPhee, 2002) NOAA/NEFSC Northeast Vulnerability Assessment

Ecosystem Considerations: Habitat	Closures in place in the GB area include the GB Dedicated Habitat Research Area, Closed Area II, and a Seasonal Spawning Closure.
Ecosystem Considerations: Climate	Yellowtail flounder is considered to have a low vulnerability to climate change (high climate exposure risk and low biological sensitivity), yet high distributional vulnerability driven by temperature. "The effect of climate change on Yellowtail Flounder on the Northeast U.S. Shelf is very likely to be negative (>95% certainty in expert scores). Recruitment of the southern stock has decreased and this has been linked to warming. The species has also shifted northward in recent years as temperatures have warmed. Decreasing productivity and northward shifts will lead to negative consequences for Yellowtail Flounder in the coming years." NOAA/NEFSC Northeast Vulnerability Assessment
Other Important Considerations/Notes	Use of the GB Yellowtail Flounder Limiter approach to develop catch advice was recommended by the 2022 TRAC and Groundfish PDT.