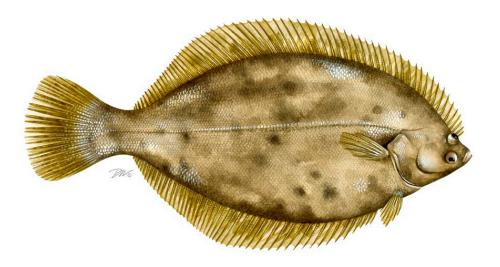
# ATLANTIC STATES MARINE FISHERIES COMMISSION

## **REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN**

## FOR WINTER FLOUNDER (Pseudopleuronectes americanus)

**2020 FISHING YEAR** 



Prepared by the Plan Review Team

Approved by the Winter Flounder Management Board February 2022



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

## **Table of Contents**

I.	Status of Fishery Management Plan	2
II.	Status of Stocks	4
III.	Status of the Fishery	5
IV.	Status of Research and Monitoring	7
V.	Status of Management Measures and Issues	9
VI.	Implementation of FMP Compliance Requirements and De Minimis	9
VII.	Research and Monitoring Recommendations	10
VIII.	Plan Review Team Comments and Recommendations	10
IX.	References	11
Х.	Figures and Tables	12

## I. Status of Fishery Management Plan

Date of FMP Approval	Original FMP (October 1988)
<u>Amendments</u>	Amendment 1 (November 2005)
<u>Addenda</u>	Addendum I (May 1992) Addendum II (February 1998) Addendum I to Amendment 1 (May 2009) Addendum II to Amendment 1 (October 2012) Addendum III to Amendment 1 (May 2013)
<u>Management Units</u>	Three stocks units: Gulf of Maine (GOM), Southern New England/ Mid-Atlantic (SNE/MA), and Georges Bank (GBK). Commission participates in management of GOM and SNE/MA stocks.
States with Declared Interest	Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey
Active Boards/Committees	Winter Flounder Management Board, Advisory Panel, Technical Committee, Plan Review Team

The Atlantic States Marine Fisheries Commission (Commission) and the New England Fishery Management Council (Council) manage winter flounder in state and federal waters. The Commission participates in the management of two inshore winter flounder stocks: 1) the Gulf of Maine (GOM) stock, which consists of waters north of Cape Cod; and 2) the Southern New England/Mid-Atlantic (SNE/MA) stock, which consists of waters south of Cape Cod to the Delaware-Maryland border. The decision to consider only inshore stocks of winter flounder was based upon the Commission's focus on fisheries in state waters, and the differences in biological characteristics from the offshore stock in Georges Bank.

#### Interstate Fishery Management Plan (1988)

The Commission authorized development of the first Fishery Management Plan (FMP) for Winter Flounder (*Pseudopleuronectes americanus*) in October 1988. The purpose of the plan was to: 1) address management of inshore stocks of winter flounder; and 2) prominently consider habitat and environmental quality as factors affecting the condition of the resource. The original FMP and Addendum I called for reductions in fishing mortality on winter flounder. It allowed states the flexibility to achieve those reductions based on the life history characteristics of the particular stocks inhabiting each region. Implementation of the plan required cooperation between state fishery management agencies, NOAA Fisheries, the Council, and the Commission. Although all states submitted plans that were approved by the Winter Flounder Management Board (Board), results from a 1995 stock assessment concluded that none of the states achieved a fishing mortality rate corresponding to F<sub>30</sub>. Subsequent analyses in early January 1997 indicated that fishing mortality on a coastwide basis was slightly higher than the F<sub>30</sub> target for the SNE/MA stock complex. Fishing mortality in the GOM stock was presumed to be higher than in the SNE/MA stock, and the spawning stock biomass was estimated to be at a low level, indicating that the GOM unit might be in greater need of rebuilding than the SNE/MA unit.

In February 1998, the Board approved Addendum II to the FMP. Addendum II adjusted the implementation schedule for management measures by the participating states and called for plans to reach the target fishing mortality goal for rebuilding (F<sub>40</sub>).

#### Amendment 1 (2005)

In May 1999, the Board acknowledged that it was necessary to update the Interstate FMP for Inshore Stocks of Winter Flounder through an amendment. The original plan and addenda did not prove successful in rebuilding inshore winter flounder populations. In addition, the FMP did not reflect the goals and objectives of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), which was established in 1993 after the original FMP was approved. The Board further noted that an upcoming stock assessment would likely provide new information on the status of winter flounder stock complexes. After the assessment was completed in late 2002, the Commission began development of Amendment 1 in February 2003.

Amendment 1 to the Interstate FMP for Inshore Stocks of Winter Flounder, approved in November 2005, replaced all previous Commission management plans. It focused on joint management of winter flounder between the Commission and Council, and was designed to rebuild and maintain spawning stock biomass at or near target biomass levels. In addition, Amendment 1 prioritized restoration and maintenance of essential winter flounder habitat.

Amendment I required a minimum size limit of 12 inches for commercial and recreational fisheries for both GOM and SNE/MA stock units. Recreational creel limits were ten (10) fish in the SNE/MA stock area and eight (8) fish in the GOM. There were no required closed recreational seasons in the GOM, while a closed season of 20 days during March and April was required in SNE/MA. The 60-day open season for recreational winter flounder fishing could be split into no more than 2 blocks. States were required to implement a minimum size of 6.5 inches square or diamond mesh for the cod-end in both GOM and SNE/MA inshore waters. Additionally, a 100-pound trip limit was required if smaller mesh was being used in the SNE/MA. This "mesh trigger" was intended for the landing of a small amount of winter flounder as bycatch in small-mesh fisheries.

## Addendum I to Amendment 1 (2009)

Addendum I was approved in May 2009, following the 2008 GARM III stock assessment which indicated that the SNE/MA spawning stock biomass was only 9% of the target and the GOM stock was likely to be overfished and experiencing overfishing. For the GOM commercial

fishery, Addendum I established a maximum possession limit of 250 pounds per vessel. This limit was estimated to reduce 2006-2007 harvest levels by 31% for state water fishing vessels. For the GOM recreational fishery, Addendum I required states to implement regulations to reduce fishing mortality by 11% from the average of 2006-2007 levels. This 11% reduction was estimated to reach F<sub>MSY</sub>. States were allowed to achieve reductions through possession limits, seasons, or a combination of both, and also had the option to submit conservation equivalency proposals to achieve the necessary reductions through alternative management measures, subject to approval by the Board.

For SNE/MA, Addendum I's management measures were designed to reach the lowest fishing mortality (F) rate possible with minimal economic and social impacts. The Addendum also sought to reduce dead discards and prevent an influx of effort into state waters. Non-federally permitted commercial vessels were allowed to possess a maximum of 50 pounds of winter flounder. This F rate was projected to reduce harvest by 65%, and was intended solely to allow for bycatch. Recreational fishermen were permitted to possess a maximum of two (2) winter flounder from inshore waters of the SNE/MA stock area. This bag limit was established with the expectation that it would reduce harvest by 46%.

#### Addendum II to Amendment 1 (2012)

In response to updated stock status information and federal action to substantially increase the GOM winter flounder state waters subcomponent, the Board initiated Addendum II to Amendment 1 of the Winter Flounder Interstate FMP. This Addendum changed commercial and recreational management measures for the state waters component of the GOM stock only. Specifically, it increased the maximum possession limit for non-federally permitted commercial vessels to 500 pounds. It also removed the 11% reduction in F for the recreational fishery and allowed states the option to open their recreational fishing season year-round.

#### Addendum III to Amendment 1 (2013)

Addendum III established an annual specification process to set commercial and recreational management measures for the GOM and SNE/MA fisheries. Each year, with advice from the Winter Flounder Technical Committee, the Board can adjust trip limits, size limits, and seasons for the commercial fishery; the Board can also adjust size limits, bag limits, and seasons for the recreational fishery. The Addendum enables the Commission to quickly respond to federal actions and changes in the winter flounder fishery.

## II. Status of Stocks

The most recent peer reviewed stock assessment for all three winter flounder stocks was conducted by the Northeast Fisheries Science Center in 2020. These management track stock assessments included data through 2019. These stock assessments were the first to incorporate the recalibrated Marine Recreational Information Program (MRIP) estimates.

#### **Gulf of Maine**

The 2020 management track stock assessment determined that GOM winter flounder stock biomass status is unknown and overfishing is not occurring. 2019 biomass (30+ cm) was estimated to be 2,862 metric tons (mt) and the exploitation rate was estimated to be 0.052, which was 23% of the overfishing exploitation threshold proxy (Figures 1 & 2). The assessment noted that there have been significant declines in commercial and recreational removals since the 1980's; the general lack of a response in survey indices and age/size structure are the primary sources of concern with catches remaining far below the overfishing level. Significant sources of uncertainty include gear catchability and deriving absolute estimates of biomass from trawl surveys. (Source: <u>Gulf of Maine Winter Flounder 2020 Assessment Update</u>)

## Southern New England/Mid-Atlantic

The SNE/MA management track assessment indicates the stock is overfished but overfishing did not occur in 2019. There has been an overall declining trend in spawning stock biomass with the current estimate, 3,638 (mt) at the time series low (Figure 3). The current SSB is 28% of the biomass target and 56% of the biomass threshold despite sustained low levels of fishing mortality (Figure 4). Recruitment, an important indicator of the stock's ability to rebuild, has declined sharply since the 1980s and remains near the time series low (Figure 5). The stock is in a rebuilding plan with a rebuild date of 2023. However, a projection using assumed catch in 2020 and F = 0 through 2023 indicated about a 5% chance of reaching the SSB target. The rebuilding potential of winter flounder in the southern most range is limited by sustained low levels of recruitment. Some research analyses indicate that low recruitment may be influenced by higher levels of natural mortality and unfavorable environmental conditions. The SNE/MA stock has continued to decline despite greatly reduced exploitation. (Source: <u>Southern New</u> <u>England/Mid-Atlantic Winter Flounder 2020 Assessment Update</u>)

## III. Status of the Fishery

#### **Stockwide**

Across all stocks (GOM, SNE/MA, and GBK), the winter flounder fisheries are a fraction of their historic productivity. Specifically, commercial and recreational landings have declined since the early 1980s (Table 1, Figure 6). Landings are reported for the 2020 calendar year unless otherwise stated.

**Commercial landings** peaked at 18,279 mt (40.3 million lbs) in 1981, the highest since 1950, but have generally declined throughout the 1990's and 2000's. In 2020, commercial landings were 489.2 mt (1.1 million lbs), a 16.1% decrease from 2019 landings of 583.7 mt (1.3 million lbs). A majority of the landings were taken in Massachusetts (Table 2). It is important to note that management action has impacted yearly landings as annual catch limits increased in 2011 and 2012, and a moratorium was in place for the SNE/MA stock between May 2009 and April 2013. (Landings source: NMFS, State Compliance Reports)

**Recreational harvest** was 63.8 mt (140,609 lbs) in 2020, a 61.0% increase from 2019 harvest of 39.5 mt (87,074 lbs) (Table 1). These recent recreational harvest values represent a significant decrease from the 17,535.1 mt (38,658,240 lbs) caught in 1981. In 2020, Massachusetts, Maine, New Jersey, and New Hampshire comprised the majority of coastwide recreational winter flounder landings, at 47.4%, 30.3%, 13.8%, and 7.7%, respectively. Generally, the percentage standard error (PSE) values around each state's recreational data are very high (>50) and indicate very imprecise estimates (Landings source: MRIP).

#### **Gulf of Maine**

**Commercial landings** of GOM winter flounder have substantially declined since the early 1980s, with recent landings being roughly 10% of harvest levels in the 1980s. From 1964 through the mid-1970s, commercial landings were near 1,000 mt. Productivity peaked at nearly 2,793 mt in 1982, and has steadily declined to 139 mt in 2010, the second lowest value in the time series. For the 2020 fishing year (May 1, 2020 – April 30, 2021), landings in the GOM winter founder stock were 103.3 mt, of which 46.0 mt were landed in state waters (Source: NMFS). The 2020 estimate for total dead discards is 7.5 mt (Source: NMFS).

**Recreational landings** have declined significantly since their peak in the 1980s. During the 2020 fishing year, the back-calibrated MRIP estimate for recreational harvest in the GOM was 9.6 mt. The Northeast Multispecies Fishery 2020 Year-End report listed landings values in back-calibrated MRIP units because the 2020 catch limits were set using old MRIP values. Recreational dead discards make up a small portion of catch and were estimated at 0.3 mt for the 2020 fishing year (NEFSC 2021).

#### Southern New England/Mid-Atlantic

**Commercial landings** of SNE/MA winter flounder generally declined throughout the time series from 1964 to 2020, with periodic peaks and dips. After reaching a historical peak of 11,977 mt in 1966 and then declining through the 1970s, total U.S. commercial landings again peaked at 11,176 mt in 1981. After 1981, SNE/MA commercial landings declined to 2,159 mt in 1994 and then increased to 4,672 mt in 2001. Commercial landings have generally decreased since the 2001 peak, and were just 134 mt in 2012 (in part due to the zero possession limit in federal waters). Landings in the 2020 fishing year (as opposed to calendar year) were 115.1 mt, of which 9.7 mt were landed in state waters (Source: NMFS). 2020 total commercial discard estimates were 118.3 mt (Source: NMFS).

**Recreational landings** of SNE/MA winter flounder peaked in 1984 and have declined substantially since. During the 2020 fishing year, the back-calibrated MRIP estimate for recreational harvest in the SNE/MA stock was 1.3 mt. Again, the Northeast Multispecies Fishery 2020 Year-End Report listed landings values in back-calibrated MRIP units because the 2020 catch limits were set using old MRIP values. Recreational dead discards make up a small portion of catch and were estimated at 0.5 mt for the 2020 fishing year (NEFSC 2021). The principal mode of fishing is private/rental boats, with most recreational landings occurring during May and June (Source: MRIP).

## IV. Status of Research and Monitoring

Amendment 1 to the Interstate Fishery Management Plan for Winter Flounder requires the following research and monitoring activities by certain states:

- Massachusetts, Rhode Island, and New York are required to conduct annual surveys of juvenile recruitment to develop an annual juvenile abundance index.
- Massachusetts, Rhode Island, Connecticut, and New Jersey are required to conduct annual trawl surveys to develop an index of spawning stock biomass.

In 2020, states with a declared interest in the winter flounder FMP conducted the fisheriesindependent surveys summarized below.

#### <u>Maine</u>

Maine Department of Marine Resources (MEDMR) conducts spring and fall bottom trawl surveys in cooperation with the New Hampshire Fish and Game Department (NHFG). The Maine-New Hampshire (MENH) Inshore Trawl Survey collects length, weight, maturity stage, and age samples for winter flounder. In 2020, the spring survey did not occur due to the Covid-19 pandemic. In the fall survey, 3,148 winter flounder were caught, but none were taken for maturity samples. Mean weight per tow in 2020 remained approximately the same as 2019 levels for the fall survey.

#### New Hampshire

NHFG conducts an annual seine survey of juvenile fish in its estuaries from June through November. Winter flounder encountered in the survey during 2020 ranged in size from 2.2 to 14.1 cm total length with a mean of 5.6 cm total length. The survey produces an index of relative abundance for each species encountered using a geometric mean catch per seine haul. The 2020 index value (0.85) for winter flounder increased from 2019 and is below the average (1.15) since 1997: the index has been highly variable. In addition, NHFG has worked with MEDMR since the fall of 2000 to conduct an inshore trawl survey off of Maine and New Hampshire. Winter flounder are regularly caught in this survey.

#### **Massachusetts**

The Massachusetts Division of Marine Fisheries (MA DMF) has conducted a biannual trawl survey covering MA territorial waters since 1978. Due to the COVID-19 global pandemic and associated health risks to scientists and crew, both spring and fall surveys were cancelled in 2020. Winter flounder biomass and abundance trends for spring GOM, spring SNE/MA, fall GOM, and fall SNE/MA have remained unchanged since 2019 due to the lack of 2020 data. Survey operations resumed in May of 2021 and those results will be included in the 2021 compliance report.

From June 15 – July 2, 2020, MA DMF conducted the 45<sup>th</sup> Nantucket Sound Estuarine Winter Flounder Young-of-the-Year (YOY) Seine Survey. The survey covers six Nantucket Sound

estuaries on the south side of Cape Cod: Great Pond, Waquoit Bay, Cotuit Bay, Lewis Bay, Bass River and Stage Harbor. 49 Stations were sampled in 2020. The 2020 pooled (all estuaries combined) winter flounder YOY index (0.238 YOY / m<sup>2</sup>) is just above the time series median.

#### Rhode Island

Rhode Island Division of Marine Fisheries (RI DMF) conducts five surveys to monitor juvenile and adult winter flounder in its state waters; spring and fall seasonal trawl surveys, a monthly trawl survey, a Narragansett Bay juvenile finfish seine survey, a coastal pond seine survey, and a coastal pond winter flounder spawning stock survey. The seasonal demersal trawl survey samples 42 fixed and random stations in the spring and fall. The spring seasonal trawl survey had a 2020 catch per unit effort (CPUE) of 1.84 winter flounder per tow, a decrease from the 2019 value, and well below the time series median. The fall seasonal trawl survey had a very low 2020 CPUE of 0.57 winter flounder, remaining below the time series median. The monthly demersal trawl survey samples 13 fixed stations each month. CPUE from this survey in 2020 was 0.60 winter flounder per tow, a value well below the time series median. The Narragansett Bay juvenile finfish seine survey samples 18 stations once a month from June through October. The 2020 CPUE was 1.59 winter flounder per seine haul, which remains below the time series median. The coastal pond seine survey samples 24 stations in 8 coastal ponds from May through October. The 2020 survey had a CPUE of 10.99 winter flounder per seine haul, an increase from 2019 but below the time series median. The coastal pond winter flounder spawning stock survey samples 6 stations with fyke nets from January to May in Point Judith and Ninigret Pond. The 2020 survey had a CPUE of 2.70 winter flounder per fyke set, which is a slight increase from 2019, but remains below the time series median. The overall trend in winter flounder abundance for all surveys indicates a declining abundance of this species in Rhode Island waters.

## **Connecticut**

Winter flounder have been monitored through the Long Island Sound Trawl Survey (LISTS) since 1984. Spring and fall surveys are conducted each year. However, the 2020 LISTS spring (April-May) index (geometric mean fish/tow) for all ages of winter flounder was not generated because the Covid-19 pandemic prevented the spring LISTS from occurring. Similarly, the 2020 spring index for age-4+ winter flounder is not available because the spring LISTS did not occur. Connecticut Department of Energy and Environmental Protection also conducts a fall estuarine seine survey that provides an index of abundance for young-of-year winter flounder. The geometric mean fish/tow in 2020 was not generated as the Covid-19 pandemic prevented staff from conducting this survey.

#### New York

The New York State Department of Environmental Conservation has been conducting a small mesh trawl survey targeting juvenile finfish since 1987. The weekly survey runs from May through October in Peconic Bay using a small mesh sixteen foot semi-balloon shrimp trawl. Sampling for 2020 was delayed and didn't start until June 29<sup>th</sup> due to COVID restrictions. In

2020, the YOY CPUE of winter flounder from June through July was 0.321, ranking it 27<sup>th</sup> out of 33 years available for this month range. Yearling (age 1) winter flounder CPUE was 0.016, the third lowest in survey history. No age 2+ winter flounder were caught during 2020 for the 2<sup>nd</sup> year in a row, the second time in this survey's 34-year history no adult winter flounder were encountered.

The Department also conducts a seine survey in western Long Island bays, which has been ongoing since 1986, using a 200 foot ¼ inch mesh seine. Sampling is conducted at multiple stations twice a month within Jamaica Bay, Manhasset Bay, Little Neck Bay, Hempstead Harbor, and Oyster Bay from May through October. YOY winter flounder catch per seine, aggregated for all 5 bays, was 2.59 for 2020, the third lowest CPUE in survey history. All winter flounder caught in the seine survey for 2020 were age-0 YOY. No age-1+ winter flounder were encountered by this survey in 2020.

## New Jersey

The Bureau of Marine Fisheries has conducted an Ocean Trawl program in nearshore ocean waters since 1988. Winter flounder are most abundant in New Jersey during April, and data from this survey cruise are used to develop an index of relative abundance in New Jersey waters. Due to the protocols in place for COVID19, the Ocean Trawl program did not run any cruises in 2021.

## V. Status of Management Measures and Issues

The Winter Flounder Management Board set status quo specifications for the 2021-2023 fishing years. The recreational and commercial regulations listed in tables 3 and 4 have remained consistent since 2014. The Board is concerned about the SNE/MA's low probability of rebuilding by 2023, however, the TC's 2018 commercial measures analysis indicates the SNE/MA region is essentially a bycatch fishery. Any further restriction in measures would likely increase regulatory discards and have a limited impact on fishing mortality. The Board intends to continue to work collaboratively with the Council to determine the best path forward in improving understanding of the biology of the winter flounder stock and determining the right management approach for this depleted stock.

## VI. Implementation of FMP Compliance Requirements and De Minimis

## De Minimis

Amendment I allows a state to be granted *de minimis* status if their fishery constitutes less than 1% of the coastwide commercial or recreational landings for the preceding three years for which data are available. A state that qualifies for *de minimis* status based on their commercial landings will qualify for exemptions in the commercial fishery only, and a state that qualifies for *de minimis* based on their recreational landings will qualify for exemptions in their recreational landings will qualify for exemptions in their recreational fishery only. States that apply for and are granted *de minimis* status are exempted from

biological monitoring/sub-sampling activities for the sector for which *de minimis* has been granted.

#### Request for *de minimis* status

New Jersey has requested *de minimis* status for its commercial fishery. New Jersey commercial landings have remained well below 1% of coastwide landings for the years 2018-2020, which meets the *de minimis* criteria.

#### State Compliance

All of the states with a declared interest in the management of winter flounder have implemented commercial and recreational regulations that are consistent with ASMFC's Winter Flounder FMP (Tables 3 and 4).

## VII. Research and Monitoring Recommendations

The 2020 Management Track Stock Assessments noted several data needs that would improve future population estimates.

## **Gulf of Maine**

- Additional studies on federal and state survey gear efficiency and catchability
- Quantifying the degree of herding between the doors and escapement under the footrope and/or above the headrope
- Studies quantifying winter flounder abundance and distribution among habitat types and within estuaries could improve the biomass estimate

## Southern New England/Mid-Atlantic

- Additional studies on maximum age
- Additional studies on recreational discard lengths
- Investigation of localized structure/genetics of the stock
- Shift to ASAP version 4 will provide the ability to model environmental factors that may influence survey catchability and help develop more informed population projections

## VIII. Plan Review Team Comments and Recommendations

- The PRT finds that all states implemented regulations consistent with the Winter Flounder FMP.
- The PRT had no additional comments or management recommendations this year.

## IX. References

- National Oceanic and Atmospheric Administration. Commercial Fisheries Statistics Tool. Access: <u>http://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index</u>
- National Oceanic and Atmospheric Administration. Marine Recreational Fisheries Program: Recreational Fisheries Statistics Tool.

Access: <u>http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-guery/index</u>

Northeast Fisheries Science Center. 2021. Northeast Multispecies Fishery Final Year-End Results for Fishing Year 2020.

Available online at

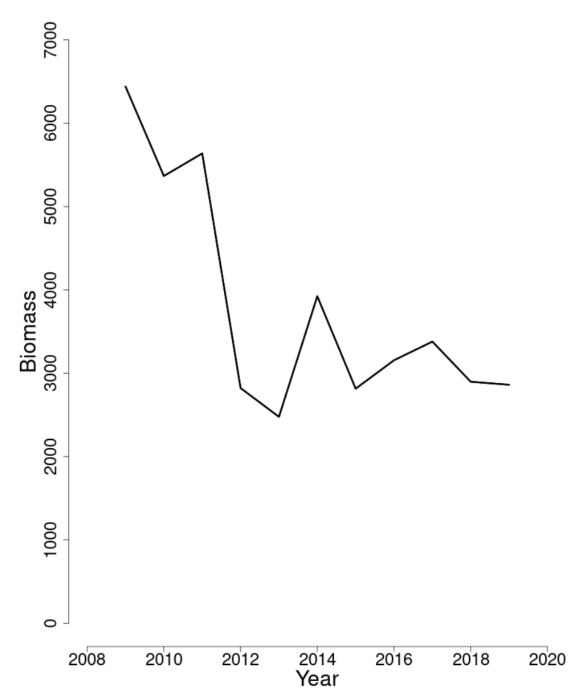
https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/Sector Monitoring/FY20 M ults Catch Estimates.pdf

Northeast Fisheries Science Center. 2020. Gulf of Maine Winter Flounder 2020 Assessment Update Report, Northeast Fisheries Science Center, Woods Hole, Massachusetts. US Department of Commerce, NOAA Fisheries; 8 p. Available online at <u>https://apps-</u> nefsc.fisheries.noaa.gov/saw/sasi/uploads/2020 FLW GM RPT Update report 08 26 09

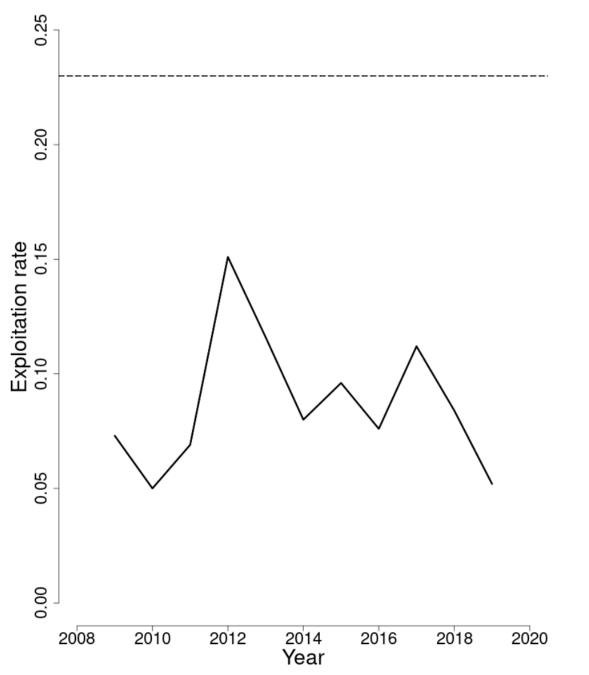
5440.pdf

Northeast Fisheries Science Center. 2020. Southern New England Mid-Atlantic Winter Flounder 2020 Assessment Update Report, Northeast Fisheries Science Center, Woods Hole, Massachusetts. US Department of Commerce, NOAA Fisheries; 11 p. Available online at <u>http://www.asmfc.org/uploads/file/6008bd822020\_SNE-</u> MA\_WinterFlounderAssessmentUpdate.pdf

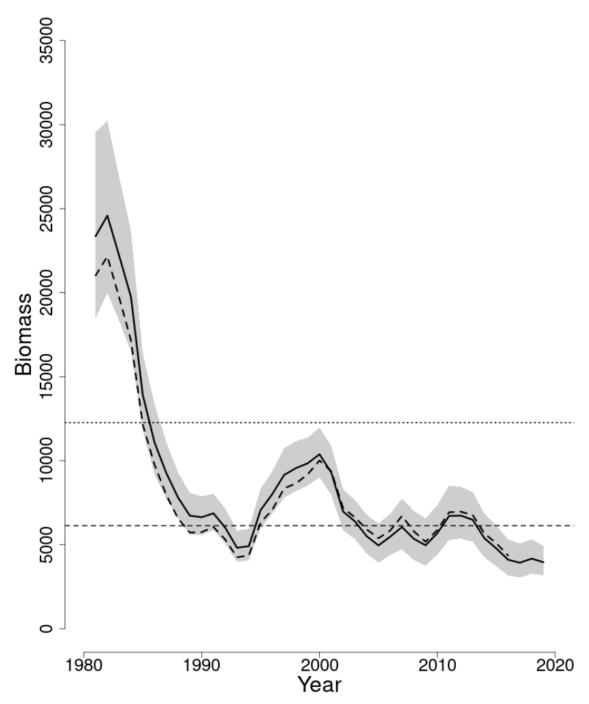
## X. Figures and Tables



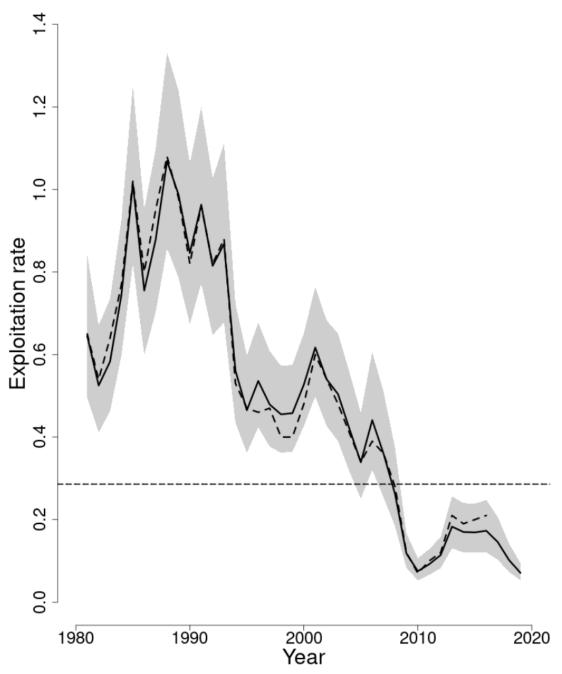
**Figure 1.** Estimates of exploitable biomass (30+ cm) for Gulf of Maine winter flounder between 2009 and 2019 as estimated from the fall MENH, MDMF, and NEFSC trawl surveys. (Source: 2020 Assessment Update of Southern New England Mid-Atlantic Winter Flounder)



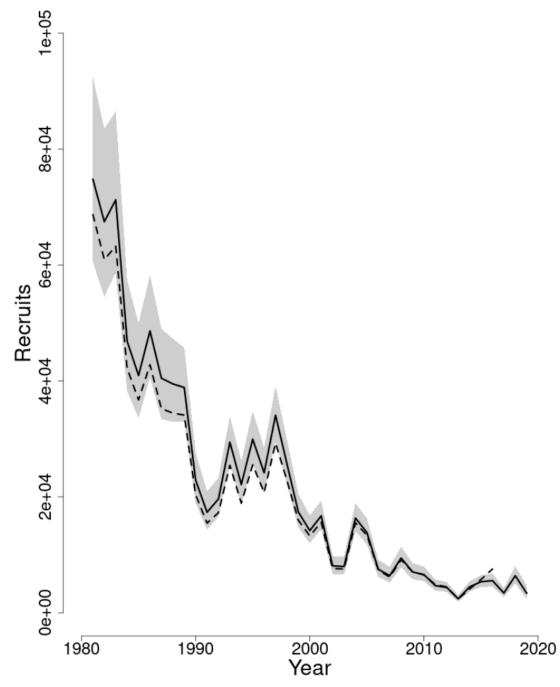
**Figure 2.** Gulf of Maine winter flounder exploitation rate between 2009 and 2019. The dashed line represents the corresponding F-Threshold from the 2020 assessment. (Source: 2020 Assessment Update of Southern New England Mid-Atlantic Winter Flounder)



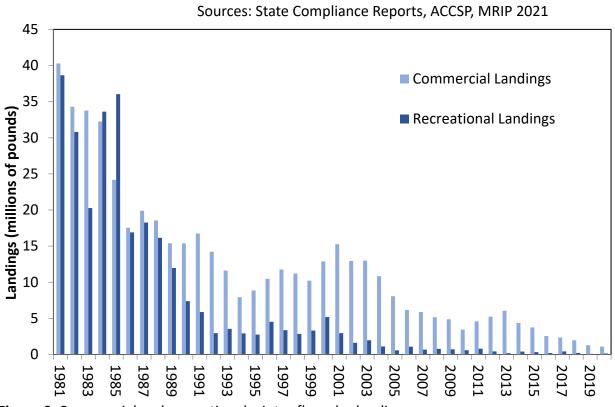
**Figure 3.** Southern New England/ Mid-Atlantic winter flounder spawning stock biomass between 1981 and 2019. The solid line represents results of the current assessment and the dotted line represents results from the previous assessment. The horizontal dotted line is the SSB-target and the horizontal dashed line is the SSB-threshold based on the 2020 assessment. The 90% confidence intervals are shown in grey. (Source: 2020 Assessment Update of Southern New England Mid-Atlantic Winter Flounder)



**Figure 4.** Southern New England/Mid-Atlantic winter flounder fishing mortality between 1981 and 2019. The solid line represents results of the current assessment and the dotted line represents results from the previous assessment. The horizontal dashed line is the F-threshold based on the 2020 assessment. The 90% confidence intervals are shown in grey. (Source: 2020 Assessment Update of Southern New England Mid-Atlantic Winter Flounder)



**Figure 5.** Southern New England/ Mid-Atlantic winter flounder trends in recruits (000s) between 1981 and 2019. The solid line represents results of the current assessment and the dotted line represents results from the previous assessment. The 90% confidence intervals are shown in grey. (Source: 2020 Assessment Update of Southern New England Mid-Atlantic Winter Flounder)



#### **Commercial and Recreational Winter Flounder Landings**

Figure 6. Commercial and recreational winter flounder landings.

	e: ACCSP, MRIP.	///		
Year	Commercial Landings (lbs)	Recreational Landings (lbs)	Total Harvest (lbs)	
1981	40,281,800	38,658,240	78,940,041	
1982	34,287,800	30,800,886	65,088,685	
1983	33,762,300	20,270,442	54,055,083	
1984	32,259,500	33,619,053	65,878,553	
1985	24,169,500	36,044,271	60,236,129	
1986	17,551,600	16,910,804	34,462,404	
1987	19,900,600	18,267,160	38,263,989	
1988	18,558,400	16,152,719	34,724,190	
1989	15,403,400	11,984,077	27,388,876	
1990	15,375,295	7,388,964	22,764,259	
1991	16,755,114	5,879,856	22,634,970	
1992	14,232,802	2,952,663	17,185,467	
1993	11,618,074	3,556,271	15,184,307	
1994	7,934,950	2,918,614	10,855,524	
1995	8,869,168	2,752,809	11,621,978	
1996	10,489,726	4,533,524	15,023,249	
1997	11,774,996	3,369,650	15,164,882	
1998	11,213,153	2,861,094	14,077,436	
1999	10,219,341	3,323,925	13,543,267	
2000	12,876,176	5,190,358	18,066,533	
2001	15,274,384	2,961,872	18,236,255	
2002	12,955,503	1,611,635	14,567,138	
2003	12,986,593	1,967,619	14,954,212	
2004	10,854,383	1,118,236	11,972,618	
2005	8,074,650	575,650	8,650,300	
2006	6,149,946	1,087,320	7,237,266	
2007	5,882,975	677,000	6,559,975	
2008	5,158,100	787,911	5,946,010	
2009	4,877,566	715,732	5,593,298	
2010	3,452,445	600,397	4,052,841	
2011	4,593,883	805,448	5,399,331	
2012	5,238,701	427,191	5,665,892	
2013	6,054,017	191,785	6,245,801	
2014	4,375,270	415,101	4,790,371	
2015	3,752,672	336,896	4,089,568	
2016	2,561,793	203,185	2,764,978	
2017	2,347,429	428,764	2,776,587	
2018	1,976,173	223,355	2,199,529	
2019	1,286,817	87,074	1,373,891	
2020	1,078,525	140,609	1,219,134	

 Table 1. Coastwide commercial and recreational landings of winter flounder.

 Source: ACCSP, MRIP.

Table 2. 2020 Winter flounder commercial landings and recreational harvest (A + B1) by weight (lbs) by state. "C" denotes confidential landings. (Source: State compliance reports, ACCSP, and MRIP)

	Comm	nercial	Recreational			
State	Pounds	Percent	Pounds	PSE	Percent	
Maine	С	С	42,657	64	30.3%	
New Hampshire	6,098	0.57%	10,781	63.5	7.7%	
Massachusetts	945,906	87.70%	66,651	47.4	47.4%	
Rhode Island	92,406	8.57%	143	64.2	0.1%	
Connecticut	22,150	2.05%	828	103.1	0.6%	
New York*	С	С	194	100.7	0.1%	
New Jersey*	С	С	19,355	61.8	13.8%	
Total	1,078,525		140,609			

\* New Jersey and New York's landings are not confidential, but have been removed to keep Maine's landings confidential

Table 3. Commercial winter flounder regulations.

State	Stock Unit	Size Limit	Trip Limit	Seasonal Closure (dates inclusive)	Recruitment Assessment	SSB Assessment	Min. Mesh Size	De minimis Request
Maine	GOM	12"	500 lbs	April 1 – June 30	N/A	N/A	6.5"	No
New Hampshire	GOM	12"	500 lbs	April 1 – June 30	N/A	N/A	6.5″	No
	GOM	12"	500 lbs	Open all year	N/A	Bottom Trawl Survey (May, Sept)	6.5″	No
Massachusetts	SNE/MA	12"	50 lbs	Open all year	YOY Seine Survey (June)	Bottom Trawl Survey (May, Sept)	6.5"	No
Rhode Island	SNE/MA	12"	50 lbs	Open all year	Narragansett Bay Juvenile Finfish Survey	Surveys	6.5″	No
Connecticut	SNE/MA	12"	50 lbs or 38 fish	March 1 – April 14	YOY Fall Estuarine Seine Survey	Long Island Sound Trawl Survey	6.5″	No
New York	SNE/MA	12"	50 lbs	June 14 – Nov 30 (for all gear besides fyke nets, pound and trap nets)	Small Mesh Trawl Survey, Seine Survey	N/A	6.5″	No
New Jersey	SNE/MA	12"	38 fish	June 1 – Nov 30 (all gear except for fyke nets)	N/A	Ocean Trawl Survey	6.5″	Yes
				Feb 20 – Oct 31 (Fyke net)				

Table 4. Recreational winter flounder regulations.

State	Stock Unit	Creel Limit	Size Limit	Seasonal Closure (dates inclusive)
Maine	GOM	8	12"	Open all year
New Hampshire	GOM	8	12"	Open all year
	GOM	8	12"	Open all year
Massachusetts	SNE/MA	2	12"	January 1- February 28
Rhode Island	SNE/MA	2	12"	January 1 – February 28
Connecticut	SNE/MA	2	12"	January 1 – March 31
New York	SNE/MA	2	12"	May 31 – March 31
New Jersey	SNE/MA	2	12"	January 1 – February 28