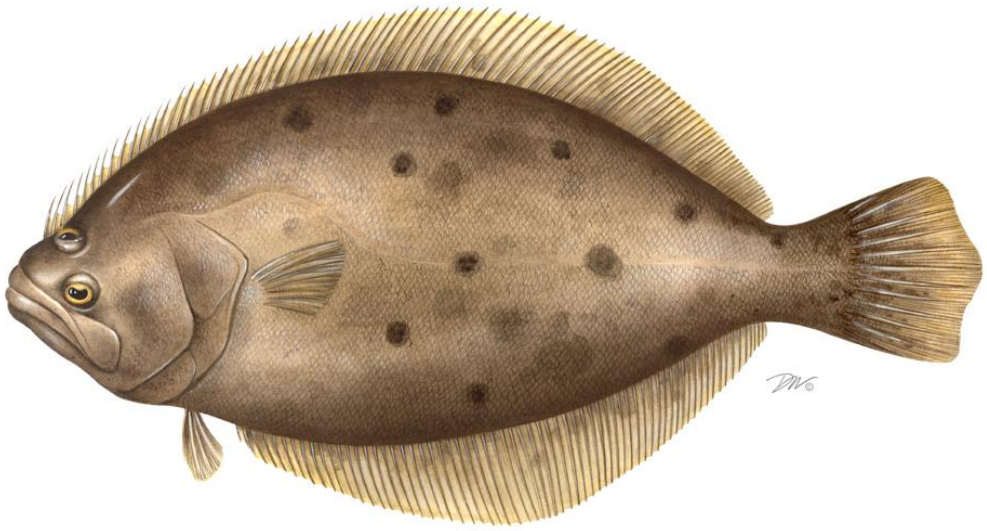
2013 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR THE 2012 SUMMER FLOUNDER FISHERY

SUMMER FLOUNDER
(Paralichthys dentatus)



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2010 REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN FOR SUMMER FLOUNDER *(Paralichthys dentatus)*

I. Status of the Fishery Management Plan

The summer flounder (*Paralichthys dentatus*) fishery of the Atlantic Coast is managed jointly by the ASMFC and the Mid-Atlantic Fishery Management Council (MAFMC). The original ASMFC Fishery Management Plan, established in 1982, recommended a 14 inch minimum size. The MAFMC Plan, prepared in 1988 and based on the ASMFC plan, established a 13" minimum size. Since then, fourteen amendments have been developed and approved, except Amendment 1 which would have required a 5–1/2" minimum mesh size in the codend of trawls and Amendment 11 which would have reallocated commercial quota shares.

Amendment 2 (approved in August 1992) provided a strategy for reducing fishing mortality to Fmax, balanced against reasonable impacts on the fishermen. Management measures included a federal (EEZ) moratorium on entry into the commercial fishery, vessel and dealer permitting and reporting requirements, an annual commercial quota, and minimum mesh requirements with an exemption program. Recreational fishery measures include size limits, possession limits, and seasonal closures.

The management system established under Amendment 2 has been modified by the following amendments. Amendment Three (approved in July 1993) revised the mesh requirement exemption program. Amendment Four (approved in September 1993) revised the state-specific shares of the coastwide quota allocation in response to a reporting issue in Connecticut. Amendment Five (approved in December 1993) allows states to transfer or combine their commercial quota shares. Amendment Six (approved in May 1994) allows properly stowed nets with a cod end mesh size less than that stipulated in the plan to be aboard vessels in the summer flounder fishery. Amendment 7 (approved May 1995) adjusted the stock rebuilding schedule and capped the 1996-1997 commercial quotas at 18.51 million pounds. There is no Amendment 8 or 9 to the ASMFC FMP. The MAFMC adopted Scup management measures as Amendment 8 and Black Sea Bass measures as amendment 9, while the ASMFC adopted separate Scup and Black Sea Bass Management Plans.

Amendment 10, approved by the ASMFC in May 1997, initially sought to examine the commercial quota management system. Its scope was expanded to address a number of federal and state issues in the fishery, including: 1) allow framework adjustments to the minimum mesh for any portion of the net; 2) require 5.5" diamond mesh between the wings and the codend of trawls; 3) continue the federal moratorium on entry; 4) remove the requirement that federally permitted vessels must land summer flounder every year; 5) modify the federal vessel replacement criteria; 6) implement state *de minimis* criteria; 7) prohibit transfer at sea; 8) require states to report summer flounder landings from state waters to the NMFS; and 9) allow states to implement a summer flounder filet at sea permit system. The amendment also proposed alternative commercial quota schemes, including 1) a trimester quota with state-by-state shares during summer, 2) a trimester coastwide quota of equal periods, and 3) a revision to the allocation formula. Ultimately, the Board and Council decided to maintain the current state-by-state quota allocation system.

Amendment 12, approved by the Commission in October 1998, was developed to bring the Summer Flounder, Scup, and Black Sea Bass Fishery management Plan in to compliance with the new and revised National Standards and other required provisions of the Sustainable Fisheries Act. Specifically, the amendment revised the overfishing definitions (National Standard 1) for summer flounder, scup and black sea bass and addressed the new and revised standards relative to the existing management measures (National Standard 8-consider effects on fishing communities, National Standard 9-reduce bycatch, National Standard 10-promote safety at sea). The Amendment also identified essential habitat for summer flounder, scup and black sea bass. Finally, Amendment 12 added a framework adjustment procedure that

allows the Council to add or modify management measures through a streamlined public review process. Amendment 12 was partially approved by NMFS on April 28, 1999.

Framework Adjustment 2 to the Summer Flounder, Scup and Black Sea Bass FMP, adopted in January 2001, provided the information and analyses necessary to implement a system of conservation equivalency for the recreational summer flounder fishery. Based on a coastwide recreational harvest limit, Framework 2 allows states to customize summer flounder recreational management measures in order to address issues associated with the availability of summer flounder on spatial and temporal scales.

Addenda III and IV were approved on January 29, 2001. Addendum IV provides that, upon the recommendation of the relevant monitoring committee and joint consideration with the Council, the Board will make a decision concerning what state regulations will be rather than forward a recommendation to NMFS. The states will then be responsible for implementing the Board's decision. Addendum III established specifications for the 2001 recreational summer flounder fishery.

In December 2000, the Commission approved Amendment 13. Although there were some management alternatives included in public hearing drafts of the document that could have resulted in changes to summer flounder management measures, none were approved for implementation. As a result, Amendment 13 will have no impact on the summer flounder fishery.

The commission approved Addendum VIII in December of 2003. Under this addendum, state-specific targets for recreational landings are derived from the coastwide harvest limit based on each state's proportion of landings reported in 1998.

The commission approved Addendum XIII in August of 2004. This addendum modifies the FMP so that, within a given year, TALs for the summer flounder, scup, and/or black sea bass can be specified for up to three years. Multi-year TALs do not have to be constant from year to year, but instead are based upon expectations of future stock conditions as indicated by the best available scientific information during the year in which specifications are set.

The commission approved Addendum XV in December of 2004. This Addendum has been developed to allow for a change in the allocation scheme for the increase commercial quota from 2004 to 2005, approximately 1.3 million pounds, as well as the additional quota from 2004 to 2006, approximately 1.6 million pounds. For the fishing years 2005 and 2006, the associated quota increases will be allocated to the following states as a bycatch allocation. 75,000 pounds of summer flounder will be allocated each to Maryland, New York, Connecticut, and Massachusetts; 15,000 lbs to Delaware; 5,000 lbs to Maine; and 90 lbs to New Hampshire.

The commission approved Addendum XVII in August of 2005. Addendum XVII establishes a program wherein the board could sub-divide the recreational summer flounder coastwide allocations into voluntary regions. This is an addition management tool in the management toolbox. This addendum also allows the averaging or combination of multiple years of data (i.e. landings-per-angler, length-frequency distributions) in analyses to determine the impacts of proposed recreational management programs. These programs may include minimum fish sizes, possession limits, and fishing seasons. The averaging of annual harvest estimates will not be allowed.

The commission approved Addendum XVIII in February of 2006. The addendum seeks to stabilize fishing rules as close to those that existed in 2005, in part, to minimize the drastic reductions

facing three states. The addendum allows the three states (NY, CT, and MA) facing large reductions in their harvest targets to capitalize on harvest opportunities that are foregone by states that choose to maintain their 2005 recreational fishing rules in 2006.

The objectives of the FMP have not changed and are to: 1) reduce fishing mortality of summer flounder to assure overfishing does not occur; 2) reduce fishing mortality on immature summer flounder to increase spawning stock biomass; 3) improve yield from the fishery; 4) promote compatible management regulations between State and Federal jurisdictions; 5) promote uniform and effective enforcement of regulations; and 6) minimize regulations to achieve the stated objectives.

The management unit includes summer flounder in US waters in the western Atlantic Ocean from the southern border of North Carolina northward to the US - Canadian border. States and jurisdictions with a declared interest in the summer flounder FMP include all those from North Carolina through Massachusetts except Pennsylvania and the District of Columbia, as well as NMFS and USFWS. An ASMFC plan review team, Technical Committee, and species board, and the MAFMC Demersal Species Committee are actively working on this plan. A joint ASMFC-MAFMC Technical Monitoring Committee provides annual framework adjustment advice.

Addendum XIX, approved in August 2007, broadens the descriptions of stock status determination criteria contained within the Summer Flounder, Scup, and Black Sea Bass FMP to allow for greater flexibility in those definitions, while maintaining objective and measurable status determination criteria for identifying when stocks or stock complexes covered by the FMP are overfished. It establishes acceptable categories of peer-review for stock status determination criteria. When these specific peer-review metrics are met and new or updated information is available, the new or revised stock status determination criteria may be incorporated by the Commission directly into the annual management measures for each species.

II. Status of the Stock

The most recent peer review of the summer flounder assessment was the June 2010 Stock Assessment Update. The working group updated the statistical catch at age model, ASAP, with the current years data.

Relative to the reference points the stock is not overfished and overfishing is not occurring, but is it not rebuilt. F has been declining since the 90s. In 1996 it dropped below 1.0 for the first time since management began. F is estimated to be 0.241 in 2012, below the threshold. SSB declined in the 80s and began to increase in the 90s. In 2012, SSB is estimated to be 125.7 million pounds or 95% of its target. Average recruitment (the number of juvenile fish that will be able to reproduce that year) since 1982 is 42 million fish. Previously, the largest class was in 1983 at 81.6 million fish and the lowest was in 1988 at 12.8 million fish. The 2009 year class is estimated to be about 82 million fish, about 40% above average, and its largest since 1986.

III. Status of the Fishery

During the late 1980's landings declined dramatically, reaching a low of 9.3 million pounds in the commercial fishery in 1990 and 3.2 million pounds in the recreational fishery in 1989. Following this record low, the commercial landings showed an increasing trend through 1995, but have varied without trend through 2009. For the past three years commercial landings have been over 10 million pounds, with last two years being over 15 million pounds (16.5 and 18.7 in 2010 and 2011). In 2012 commercial landings declined to 11.8 million pounds. The principle gear used in the fishery is the otter trawl.

Commercial discard losses in the otter trawl and scallop dredge fisheries are estimates from observer data and recently account for 5 to 10% of the total commercial catch.

Recreational landings in 1997 were 11.9 million pounds, double the estimate for 1995. The landings continued to increase through till 2000 when landings reached 16.5 million pounds. Since then landings have varied with a slight decreasing trend, with landings stable at 6.3 million pounds in 2012. Recreational losses have recently accounted for 15 to 20% of the total catch.

IV. Status of Assessment Advice

The summer flounder stock assessment model had historically exhibited a retrospective pattern of underestimation of F and overestimation of SSB; the causes of this pattern hav not been determined. A recent pattern of overestimation in recruitment is also evident. Over the last 7 years, the annual internal model retrospective error in F has ranged from +11% in the 2006 terminal year to -35% in 2003, while the annual internal model retrospective error in SSB has ranged from -13% in 2006 to =45% in 2003. Over the last 3 terminal years, the annual internal model retrospective error in recruitment has ranged from +54% for the 2008 year class to +80% for the 2006 year class. Comparison of the estimates for SSB, R, and F over the last three assessments indicates consistency of those estimates in line with the most recent internal retrospective pattern of the 2012 assessment update.

Landings that correspond to fishing at or near the threshold F rate (FMSY=F35%=0.310) may result in overfishing if the previous retrospective pattern of underestimation of F occurs in the future.

Biological Reference Points

- F Threshold=$F_{35\%}$ = 0.31
- F Target= $F_{40\%}$ = 0.255
- Current (2012) F=0.241 overfishing is not occurring
- Spawning Stock Biomass (SSB) threshold = 66.2 million lbs
- SSB target = 132.4 million lbs
- Current SSB (2012) =125.7 million lbs stock is not overfished

V. Status of Research and Monitoring

Several states and NMFS conduct seasonal sampling cruises using an otter trawl to assess the condition of summer flounder populations inshore and in the Exclusive Economic Zone (EEZ). Massachusetts collects sex and maturity samples and local abundance indices from spring and fall otter trawl surveys, as well as young of the year information in its winter flounder juvenile seine survey The Commonwealth monitored the commercial fishery through the observation of six directed trawl fishery trips, as well as through dealer Integrated Voice Response (IVR) systems and mandatory fishermen's logbook. Rhode Island monitors the commercial quota for summer flounder using an automated IVR system and dealers are required to provide weekly reports through the IVR of summer flounder landings. Connecticut commercial summer flounder landings are monitored through monthly commercial fishermen logbooks, and weekly and monthly dealer reports. These reports contain daily records of fishing and dealer purchase activity. There was no sea sampling or port sampling activity for summer flounder in 2004. New York conducts a survey of anglers on open boats on Great South Bay to collect data on age and size composition from which mortality rates are calculated. New Jersey collects data from the commercial trawl fishery and conducts an ocean trawl survey from which data on summer flounder are collected and catch-per-unit-of-effort and distribution information are generated for juveniles and adults. Delaware's commercial landings are monitored through a mandatory monthly harvest report from all state-licensed fishermen. Maryland constructs a juvenile index from trawl data collected in the ocean side bays and is also compiling data on population age, sex, and size from summer flounder taken in pound nets. A statewide voluntary angler survey is conducted and records location, time spent fishing, number of fish

caught, number kept, and lengths of the first 20 fish caught. Virginia prepares a young-of-the-year index from data collected from beach seine and trawl surveys. North Carolina conducts two otter trawl surveys for juvenile fluke, conducts tagging programs to determine migrations and to assess mortality, and collects information on age and growth and catch-per-unit-of-effort for the winter trawl fishery, the estuarine gill net fishery, pound net fisheries, the ocean sink net fishery and the long haul seine fishery.

VI. Status of Management Measures and Issues

Management measures imposed upon harvesters of summer flounder include an annual commercial quota and recreational harvest limit, minimum sizes, minimum mesh requirements for trawls, permits and administrative fees for dealers and vessels, a moratorium on entry into the fishery, mandated use of sea samplers, monitoring of sea turtles in the southern part of the management unit, and collection of data and record keeping by dealers and processors. Fishing mortality has been controlled by a Total Allowable Landings (TAL) since 1983, allocated into a commercial quota (60% of the TAL) and a recreational harvest limit (40% of the TAL). The commercial quota is allocated to each state based on landings during a baseline period, and any overages are subtracted from a state's quota for the following year.

Summer Flounder Compliance Criteria

The PRT found no compliance issues.

De Minimis

Delaware requests de minimis status. The PRT notes that they meet the requirement of de minimus.

COMMERCIAL FISHERY

The following measures may change annually. The 2012 measures are indicated.

Minimum size: 14"
Minimum mesh and threshold: 5.5 diamond, 6" square
Regulation of mesh beyond the codend: 5.5" throughout the mesh
2012 Commercial quota: 13.1 million pounds, 13.03 million lbs after adjustment for the research set a-sides.

In 1998 the Summer Flounder, Scup, and Black Sea Bass Management Board recommended that 15% of each state allocation must be set aside to mitigate discards after closure of the directed summer flounder commercial fishery. To be eligible to land this 15%, the state must adopt appropriate trip limits sufficiently restrictive to allow bycatch landings for the entire year without exceeding the state quota. Additionally, either the state or the fishermen must participate in collection of additional discard data.

The following measures are not subject to annual adjustment.

Quota management provisions: States are required to adopt appropriate measures to manage their quota shares. States may transfer or combine their quota shares as specified in Amendment 5. States must document through a vessel and dealer reporting system all landings that are not otherwise included in the federal monitoring of permit holders. States are required to forward all landings information to the NMFS for inclusion in quota reporting.

Transfer at Sea: States must prohibit permitted summer flounder vessels from transferring summer flounder from one vessel to another at sea. (As specified in Amendment 10)

De minimis status: States having commercial landings less than 0.1% of the coastwide total will be eligible for *de minims* status. (As specified in Amendment 10).

Delaware has requested de minimis status and meets the requirements.

RECREATIONAL FISHERY

The Management Board chose to adopt conservation equivalency for the 2012 recreational fishery under the provisions of Framework 2 (see table 3for state measures). The following measures are the coastwide non-preferred alternative that the Council recommended to NMFS as required by the FMP:

Minimum size of possession: 20”
Possession limit: 2
Season: May 1-September 30

The Board and Council also recommended precautionary default measures of an 21.5” minimum size and 2 fish possession limit, and a season from May 1-September 30 in the event that any state failed to implement conservation equivalent measures.

2012 recreational quota: 8.75 million pounds, 8.48 million lbs after adjustment for the research set a-sides.

OTHER MEASURES

Filet at sea permit: Party or charter vessels in state waters will be allowed to filet at sea if they obtain a state issued permit allowing such activity. (As specified in Amendment 10)

Reporting:

1. States must submit a commercial fishery management proposal by October 1 of each year. The proposal must detail the specific management measures that the state intends to use to manage their commercial quota allocation. The proposal must be reviewed and approved by the Management Board.

2, States must submit an annual compliance report to the Chairman of the Summer Flounder Plan Review Team by June 1 of each year. The report must detail the state’s management program for the current year and establish proof of compliance with all mandatory management measures and all framework changes specified for the current year. It should include landings information from the previous year, and the results of any monitoring or research program.

This summary of compliance criteria is intended to serve as a quick reference guide. It in no way alters or supersedes compliance criteria as contained in the Summer Flounder FMP and Amendments thereto.

VII. Current State-by-State Implementation of FMP Requirements

1997 - 2012 Summer Flounder FMP Compliance Schedule

COMMERCIAL:

14" minimum size	3/1/97
5.5" codend mesh	1/1/98
Ability to regulate mesh in any portion of the net	1/1/98
5.5” mesh, body	6/3/98
Prohibition of transfer at sea	1/1/98

Mandatory reporting to NMFS of landings from state waters	1/1/98
RECREATIONAL	
Conservation Equivalency to achieve a 40% reduction	TBD
GENERAL	
Submission of annual commercial management plan	10/1/97, annually thereafter
Submission of annual landings and compliance report	6/1/98, annually thereafter

Table 1. Summer Flounder Commercial Landings by State (2000-2012) in pounds.

Source: National Marine Fisheries service Commercial Landings Data & State Compliance Reports (2012)

State	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MA	706,782	811,640	788,998	693,982	1,009,472	925,686	1,192,602	1,274,429	920,549	659,784	644,404	731,174	851,889	1,132,192	891,495
RI	1,711,987	1,635,323	1,703,593	1,798,740	2,286,421		3,084,560	2,925,365	2,122,528	1,515,684	1,473,439	1,793,891	2,289,379	2,824,032	2,064,076
CT	262,732	245,219	245,148	247,099	356,685	316,845	406,038	448,594	316,533	205,115	220,510	256,768	308,341	401,377	
NY	821,500	801,361	811,917	751,778	1,052,839		1,594,345	1,798,830	1,219,842	941,790	855,830	1,139,872	1,363,543	1,517,032	1,237,120
NJ	1,862,798	1,916,964	1,848,119	1,745,488	2,406,904	2,385,157	2,629,895	2,349,091	2,379,801	1,696,817	1,540,812	1,798,731	2,165,325	2,830,688	2,269,375
DE	11,205	7,541	12,345	7,483	2,707	5,516	7,565	5,427	4,376	2,261	1,213	2,952	1,858	836	677
MD						329,343	262,492	337,652	247,743	228,809	208,219	213,564	263,302	259,392	139,824
VA	2,615,750	2,195,832	2,206,715	2,659,586	2,970,267	3,521,899	3,906,048	3,869,171	2,756,952	1,853,693	1,651,575	1,978,754	2,589,786	4,050,998	4,111,708
NC	2,983,133	2,870,331	3,386,592	2,784,751	4,129,133	3,572,462	4,844,136	4,064,474	3,981,430	2,670,122	2,406,611	2,859,048	6,622,004	5,708,254	1,087,427
Total	10,975,887	10,484,211	11,003,427	10,688,907	14,214,428	11,056,908	17,927,681	17,073,033	13,949,754	9,774,075	9,002,613	10,774,754	16,455,427	18,724,801	11,801,702

Table 2. Recreational Landings by State (1998-2012) in numbers of fish.

Source: "Personal Communication with National Marine Fisheries Division July 2013"

State	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH	0	0	147	0	0	364	0	0	717	0	562	0	0	0	0
MA	383,447	174,720	378,720	152,132	155,377	177,449	224,729	267,081	238,970	138,071	232,285	50,382	45,156	58,372	75,803
RI	394,907	432,087	807,170	268,244	190,741	205,435	248,988	164,909	264,142	175,778	203,745	71,739	118,455	161,125	103,102
CT	261,401	215,311	371,611	152,813	93,366	165,808	216,154	156,724	137,521	112,227	145,661	44,944	35,028	47,071	62,501
NY	1,230,402	759,640	1,671,470	699,625	696,343	1,539,115	1,024,670	1,163,329	752,388	865,957	608,925	298,634	334,491	376,198	509,123
NJ	2,728,286	1,502,689	3,022,809	2,070,234	988,878	1,784,356	1,616,811	1,300,223	1,556,151	1,067,404	761,843	824,887	552,401	736,848	1,130,407
DE	218,933	180,562	335,664	145,786	106,837	105,743	111,362	72,696	88,149	108,264	35,227	87,232	53,512	66,820	45,474
MD	206,057	226,912	258,211	139,392	68,891	41,201	42,261	117,021	37,471	103,849	57,895	64,647	25,215	15,347	22,617
VA	1,164,527	378,283	580,517	1,338,134	772,265	451,348	674,552	684,272	762,597	397,041	260,221	289,075	260,050	317,674	259,973
NC	391,136	236,791	374,756	327,249	189,458	87,851	156,967	101,212	112,176	138,989	43,510	74,641	77,157	60,422	63,135
Total	6,979,096	4,106,995	7,800,928	5,293,609	3,262,156	4,558,306	4,316,494	4,027,467	3,949,565	3,107,580	2,349,312	1,806,181	1,501,465	1,839,877	2,272,135

Table 3. 2012 recreational management measures for summer flounder by state.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	16.5	5 fish	May 22-September 30
Rhode Island	18.5	8 fish	May 1-December 31
Connecticut*	18	5 fish	May 15-October 31
*At 44 designated shore sites	16		
New York	19.5	4 fish	May 1-September 30
New Jersey	17.5	5 fish	May 5-September 28
Delaware	18	4 fish	January 1-October 23
Maryland	17	3 fish	April 14-December 16
PRFC	16.5	4 fish	All year
Virginia	16.5	4 fish	All year
North Carolina	15	6 fish	All Year

Table 4. 2013 Summer flounder recreational regulations.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	16	5 fish	May 22-September 30
Rhode Island	18	8 fish	May 1-December 31
Connecticut*	17.5	5 fish	May 15-October 31
*At 42 designated shore sites	16		
New York	19	4 fish	May 1-September 29
New Jersey	17.5	5 fish	May 18-September 16
Delaware	17	4 fish	All year
Maryland	16	4 fish	March 28-December 31
PRFC	16	4 fish	All year
Virginia	16	4 fish	All year
North Carolina	15	6 fish	All Year