

2006 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR

SUMMER FLOUNDER
(Paralichthys dentatus)

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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, twelve 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 F_{max} , 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.

II. Status of the Stock

An update and peer review of the summer flounder assessment and reference points was conducted by the National Marine Fisheries Service (NMFS) Office of Science and Technology (S&T) during September 14-15, 2006. The 2006 S&T Peer Review Panel recommendations required revision to the summer flounder VPA, biological reference point, and projection calculations. The revised analytical results supersede those presented in the Terceiro (2006) assessment.

The summer flounder stock is not overfished but overfishing is occurring relative to the 2006 S&T Peer Review Panel updated biological reference points. Fishing mortality calculated from the average of the currently fully recruited ages (3-5) was very high during 1982-1997, varying between 0.9 and 2.2. The fishing mortality rate has declined since 1997 and was estimated to be about 0.4 during 2003-2005 (Figure 4). The estimate of F for 2005 (0.407) is 45% above the updated F_{MSY} proxy = $F_{max} = 0.280$; therefore overfishing is occurring. The estimate of F for 2005 may understate the actual fishing mortality, as retrospective analysis shows that the current assessment method tends to underestimate recent fishing mortality rates, continuing the pattern observed in recent assessments (NEFSC 2000, MAFMC 2001, NEFSC 2002, Terceiro 2003, SDWG 2004, NEFSC 2005, Terceiro 2006). Over the last 5 years, the annual retrospective increase in fishing mortality has averaged 34%.

Stock biomass (Jan 1; age 1+) increased substantially during the 1990s and through 2005 but decreased slightly in 2006 to 51,317 mt (Figure 5). Spawning stock biomass (SSB; Age 0+) declined 69% from 1983 to 1989 (22,582 mt to 7,025 mt), but with improved recruitment and decreased fishing mortality had increased to 47,498 mt by 2005 (Figure 5). The estimate of SSB for 2005 (47,498) is 53% of the updated B_{MSY} proxy = $SSB_{max} = 89,411$ mt; therefore the stock is not overfished. Retrospective analysis shows a tendency to overestimate the SSB in the most recent years, continuing the pattern observed in recent assessments (NEFSC 2000, MAFMC 2001, NEFSC 2002, Terceiro 2003, SDWG 2004, NEFSC 2005, Terceiro 2006). Over the last 5 years, the annual retrospective decrease in SSB has averaged 12%.

The 1982 and 1983 year classes were the largest of the VPA series, at 74 and 80 million fish, respectively. The 1988 year class was the smallest of the series, at only 13 million fish. The arithmetic average recruitment from 1982 to 2005 is 37 million fish at age 0, with a median of 33 million fish. The 2005 year class is estimated to be the smallest since 1988, at about 15 million fish (Figure 5). Retrospective analysis shows a variable pattern in the estimation of recruitment; over the last 5 years, the annual retrospective increase in recruitment has averaged 4%.

The precision and bias of the 2005 fishing mortality rates, 2006 stock sizes, and 2005 SSB estimates are presented in Appendix A. Bias was generally less than 10% for estimated parameters estimated. The bootstrap estimate of the 2005 SSB was relatively precise, with a corrected CV of 11%. There is an 80% chance that SSB in 2005 was between 39,900 and 57,200 mt. The bootstrap estimate of the 2005 F had a corrected CV of 43%. There is an 80% chance that F in 2005 was between about 0.33 and 0.57.

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 2005. For the past four years commercial landings have been over 13.8 million pounds, with 2005 landings at 17.14 million pounds.

Recreational landings in 1997 were 11.9 million pounds, double the estimate for 1995). The landings continued to increase through 2000, 16.5 million pounds. In 2002 landings dropped to 8.0 million pounds, but then increase to 11.6 million pounds in 2003. Landings have since declined to 10.02 million pounds in 2005. New York, New Jersey, and Virginia dominated the recreational fishery by landings again in 2005. Combined commercial and recreational landings were 27.16 million pounds in 2005.

IV. Status of Assessment Advice

An update and peer review of the summer flounder assessment and reference points was conducted by the National Marine Fisheries Service (NMFS) Office of Science and Technology (S&T) during September 14-15, 2006. The 2006 S&T Peer Review Panel recommendations required revision to the summer flounder VPA, biological reference point, and projection calculations. The revised analytical results supersede those presented in the Terceiro (2006) assessment. The updated VPA provided estimates of F for 2005 = 0.407 and SSB for 2005 = 47,498 mt (104.7 million lbs).

Biological Reference Points

The Panel recommended updated biological reference points from an empirical non-parametric approach (i.e., the product of a reference level of recruitment and yield and biomass per recruit). The updated yield per recruit analysis indicated that $F_{max} = 0.280$ (the FMP Amendment 12 proxy for FMSY). Yield per Recruit (Y/R) at F_{max} was estimated to be 0.579 kg and Spawning Stock Biomass per Recruit (SSB/R) at F_{max} was estimated to be 2.416 kg. Mean recruitment for 1982-2005 was estimated to be 37.010 million fish. The product of the mean recruitment and Y/R at F_{max} was 21,444 mt (47.276 million lbs; updated proxy for MSY); the product of the mean recruitment and SSB/R at F_{max} was 89,411 mt (197.118 million lbs; updated proxy for BMSY). The biomass threshold proxy of $0.5 * SSB_{max} = 0.5 * BMSY = 44,706$ mt (98.559 million lbs). The estimate of F for 2005 is 45% above the updated FMSY proxy; therefore overfishing is occurring. The estimate of SSB for 2005 is 53% of the updated BMSY proxy; therefore the 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 age 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. 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 (Table 3), 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 2004 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

2005 Commercial quota: 18.18 million pounds, 17.90 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 Commission and the Council are not recommending any changes to the commercial minimum size limit or the minimum mesh size for 2005.

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 minimis* status. (As specified in Amendment 10)

RECREATIONAL FISHERY

The Management Board chose to adopt conservation equivalency for the 2006 recreational fishery under the provisions of Framework 2 (see table 6 for 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: 17"

Possession limit: 4

Seasonal closure: Open Season

The Board and Council also recommended precautionary default measures of an 18" minimum size and one fish possession limit in the event that any state failed to implement conservationally equivalent measures.

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.

2005 and 2006 Management Measures Summary

The 2005 TAL was set at 30.3 million pounds for 2005, resulting in an initial commercial quota of 18.8 million pounds and a recreational harvest limit of 11.98 million pounds. After adjusting for the research set-aside program, the commercial quota dropped to 17.90 million pounds. To meet the recreational harvest limit in 2005, states chose to implement a conservation equivalency program specific to their states 2004 recreational landings. After the research set-aside program the 2005 recreational quota

dropped to 11.98 million pounds. The commercial fishery landed 17.14 million pounds in 2005 and the recreational fishery landed 10.02 million pounds in 2005.

The 2006 TAL was set at 23.6 million pounds, resulting in an initial commercial quota of 14.15 million pounds and a recreational harvest limit of 11.28 million pounds. After for the research set-aside program, the commercial quota dropped to 13.94 million pounds and the recreational quota dropped to 9.29 million pounds.

Developing Issues

Alternative Management Schemes

Despite failed efforts to change the quota management system in Amendment 10 and the reallocation proposed for Amendment 11, few are satisfied with the current state of summer flounder management. The Summer Flounder Advisory Panel continues to demand that a more equitable system be enacted to manage this resource. In the past few years a number of approaches have been proposed to change this allocation scheme, including:

- Disproportionately distributing the increase in quota as the population of summer flounder increases
- Developing a regional quota system
- Developing a days-at-sea program
- Establishing different permit categories
- A planning group composed of

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

1997 - 2005 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
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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 in pounds by state, 1991-2004 (data from compliance reports)

State	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ME	167	164	6,023	4,857	5,318	8,226	2,835	5,626	5,778	6,922
NH	87	14	0	0	0	0	0	0	0	0
MA	1,121,811	1,383,283	902,786	1,048,901	1,127,995	800,704	745,171	709,387	812,540	788,998
RI	1,672,565	2,531,506	1,942,451	2,570,819	2,365,465	1,766,482	1,557,867	1,716,463	1,636,528	1,703,593
CT	420,800	494,600	224,620	370,413	306,404	278,776	247,258	262,732	245,219	245,148
NY	731,484	1,239,488	849,376	1,270,012	1,248,078	940,313	815,741	823,093	803,903	811,917
NJ	2,340,745	2,870,945	2,466,452	2,413,761	2,298,303	2,369,134	1,319,446	1,862,800	1,917,973	1,848,119
DE	4,100	11,900	6,403	3,635	3,072	7,917	5,187	11,205	7,917	12,345
MD	233,678	318,944	254,081	160,380	136,167	264,886	214,948	250,786	193,624	0
VA	3,712,559	5,171,856	3,052,136	3,100,801	3,355,838	2,274,457	2,305,985	2,615,750	2,195,832	2,206,715
NC	3,516,000	2,576,000	2,894,835	3,571,188	4,566,766	4,227,052	1,673,345	2,987,996	2,870,234	3,386,592
Total	13,753,996	16,598,700	12,599,163	14,514,767	15,413,406	12,937,947	8,887,783	11,245,838	10,689,548	11,010,349

State	2001	2002	2003	2004	2005*
ME	22,052	0	0	252	0
NH	22	0	0	33	0
MA	693,982	938,842	925,686	1,131,113	1,272,181
RI	1,798,740	2,266,174	2,178,311	2,650,000	2,960,000
CT	278,737	339,079	316,845	406,038	unavailable
NY	752,348	1,044,988	1,073,207	1,594,345	1,444,261
NJ	1,745,488	2,429,919	2,385,157	2,830,565	
DE	7,483	1,450	5,516	7,565	5,559
MD	190,475	253,935	329,343	267,869	237,267
VA	2,659,581	2,849,421	3,521,899	3,909,080	3,693,288
NC	2,784,751	3,811,472	3,572,462	4,844,136	4,053,177
Total	10,933,659	13,935,280	14,308,426	17,087,282	

* preliminary numbers

Table 2. Summer flounder recreational landings in pounds by state ('000 lbs), 1985-2004 (data from the MRFSS)

State	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
ME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH	0	2	2	8	16	48	3	0	0	0	0	0	0	0	0
MA	88	2,500	583	281	36	64	79	118	203	243	227	213	277	776	509
RI	317	2,604	320	253	167	91	132	121	220	263	236	578	419	786	830
CT	339	775	434	170	97	31	141	192	129	475	395	432	362	448	389
NY	1,880	2,300	2,436	3,003	689	1,458	1,502	989	1,735	2,645	1,068	1,316	2,207	2,348	1,715
NJ	7,936	7,632	5,880	6,723	796	1,805	3,759	3,891	4,269	3,843	1,895	5,058	6,057	4,790	3,075
DE	230	162	188	752	208	167	205	401	524	338	193	721	332	387	293
MD	95	202	730	958	309	222	358	374	336	117	216	191	87	299	445
VA	742	522	1,400	1,866	557	724	1,547	804	949	943	1,022	1,448	1,758	2,161	827
NC	863	1,164	196	610	283	533	234	258	466	461	251	362	357	481	282
Total	12,490	17,861	12,167	14,624	3,158	5,143	7,961	7,148	8,831	9,327	5,503	10,319	11,856	12,476	8,365

State	2000	2001	2002	2003	2004	2005	2004
ME	0	0	0	0	0	0	0
NH	0	0	0	.99	0	0	0
MA	916	412	449	362	808	516	808
RI	1,945	719	609	566	871	574	871
CT	778	450	283	411	567	627	567
NY	4,068	2,018	1,889	4,302	2,331	3,824	2,331
NJ	5,916	4,266	2,407	4,163	4,139	3,421	4,139
DE	676	379	290	292	316	269	316
MD	482	319	156	121	146	199	146
VA	1,223	2,668	1,710	1,294	1,435	1,454	1,435
NC	463	406	216	126	245	181	245
Total	16,467	11,637	8,008	11,638	10,858	11,065	10,858

Table 3. Summer flounder commercial quota shares, initial quota allocations 1995-2005, and adjusted 2002-2005 in pounds (data from NMFS)

State	%	1995 initial	1996 initial	1997 initial	1998 initial	1999 initial	2000 initial	2001 initial	2002 initial	2002 adjusted
ME	0.04756	6,987	5,284	5,284	5,284	5,284	5,284	3,956	6,934	6,901
NH	0.00046	67	51	51	51	51	51	51	67	67
MA	6.82046	1,001,953	757,841	757,841	757,841	757,841	757,841	710,493	994,423	989,649
RI	15.68298	2,303,894	1,742,583	1,742,583	1,742,583	1,742,583	1,742,583	1,742,566	2,286,578	2,275,600
CT	2.25708	331,574	250,791	250,791	250,791	250,791	250,791	244,085	329,082	327,502
NY	7.64699	1,123,374	849,680	849,680	849,680	849,680	849,680	849,672	1,114,931	1,109,578
NJ	16.72499	2,456,969	1,858,363	1,858,363	1,858,363	1,858,363	1,858,363	1,794,540	2,438,504	2,426,796
DE	0.01779	2,614	1,977	1,977	1,977	1,977	1,977	1,977	2,594	2,581
MD	2.0391	299,551	226,570	226,570	226,570	226,570	226,570	194,564	297,301	295,873
VA	21.31676	3,131,519	2,368,569	2,368,569	2,368,569	2,368,569	2,368,569	2,293,410	3,107,984	3,093,062
NC	27.44584	4,031,905	3,049,589	3,049,589	3,049,589	3,049,589	3,049,589	3,049,560	4,001,603	3,982,391
Total	100.0	14,690,407	11,111,298	11,111,298	11,111,298	11,111,298	11,111,298	10,884,874	14,580,000	14,510,000

State	2003 initial	2003 adjusted	2004 initial	2004 adjusted	2005 initial	2005 adjusted*
ME	6,649	0	8,047	1,107	8,646	8,547
NH	64	64	78	77	84	83
MA	953,502	907,374	1,154,022	1,128,276	1,239,960	1,225,637
RI	2,192,485	2,183,907	2,653,560	2,637,117	2,851,166	2,818,232
CT	315,540	314,306	381,898	379,531	410,337	405,597
NY	1,069,051	1,064,869	1,293,871	1,285,853	1,390,223	1,374,164
NJ	2,338,158	2,329,010	2,829,868	2,812,332	3,040,603	3,005,481
DE	2,487	0	3,010	0	3,234	0
MD	285,067	283,951	345,016	313,658	370,708	366,246
VA	2,980,089	2,968,429	3,606,796	3,584,445	3,875,387	3,830,622
NC	3,836,936	3,821,924	4,643,836	4,615,059	4,989,654	4,932,017
Total	13,980,028	13,873,734	16,920,000	16,757,455	18,180,002	17,970,000

*This number does not include the quota transfer required by Addendum XV

Table 4. Summary of summer flounder management measures and landings in millions of pounds, 1993-2005 (data from MAFMC)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
TAL	20.73	26.68	19.40	18.52	18.52	18.52	18.52	18.52	17.91	24.3	23.3	28.2	30.3	23.6	30.3
Commercial Quota (Adjusted)	12.35	15.60*	14.61*	10.80*	8.38*	10.56*	10.73	10.88	10.06	14.46	13.87	16.76	17.90	13.94	17.9
Commercial Landings	12.54	14.51	15.41	12.94	8.98	11.25	10.69	11.25	10.891	13.89	14.23	17.26	17.14		17.1
Recreational Harvest (adjusted)	8.38	10.67	7.76	7.04	7.41	7.41	7.41	7.41	7.16	9.72	9.28	11.21	11.98	9.29	11.9
Recreational Landings	8.83	9.32	5.50	10.32	11.86	12.48	8.37	16.47	11.64	7.96	11.64	10.80	10.02		10.0

* Corrected for prior year overages. 1995 also includes 3.05 m lb. added by court order.

Table 5. State compliance with required commercial management measures as of August 2006.

State	COMMERCIAL	
	14" size	5 1/2" Mesh
ME	Y	Y
NH	Y	NA
MA	Y	Y
RI	Y	Y
CT	Y	Y
NY	Y	Y
NJ	Y	Y
DE	Y	Y
MD	Y	Y
VA	Y	Y
PRFC	Y	Y
NC	Y	Y

Table 6. 2006 recreational management measures for summer flounder by state.

STATE	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	17.5	7 fish	All Year
Rhode Island	17.5	7 fish	April 1-December 31
Connecticut	18	6 fish	April 30-December 31
New York	18	4 fish	May 6-September 12
New Jersey	16.5	8 fish	May 6 –October 9
Delaware	17	4 fish	All Year
Maryland:			
Atlantic & Coastal Bays	15.5	4 fish	All Year
Chesapeake Bay	15.0	2 fish	All Year
PRFC	15.0	2 fish	All year
Virginia	16.5	6 fish	All year
North Carolina	14	8 fish	All Year