

FRAMEWORK ADJUSTMENT 33

to the

NORTHEAST MULTISPECIES FISHERY MANAGEMENT PLAN

**To achieve plan objectives in the
2000 fishing year and implement other measures**

Prepared by

New England Fishery Management Council

in consultation with

National Marine Fisheries Service

Mid-Atlantic Council

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1. Introduction

1.1 Executive Summary

The New England Fishery Management Council (Council) is taking action to implement measures under an ongoing rebuilding plan for northeast multispecies groundfish stocks. This action is the fourth iteration of the annual plan review and adjustment process established by Amendment 7 to the Northeast Multispecies Fishery Management Plan (FMP) to ensure that rebuilding plan goals are met on a continuing basis.

The primary purpose of this action is to reduce or maintain fishing mortality rates of the five critical stocks below rebuilding targets established by Amendment 7 ($F_{0.1}$ for Georges Bank cod, haddock and yellowtail flounder, and Southern New England yellowtail flounder, and F_{MAX} for Gulf of Maine cod). While fishing mortality rates on most of the critical stocks under the Amendment 7 plan are below the targets, the rates on cod stocks are above targets and need to be reduced. Fishing mortality on Georges Bank cod needs to be reduced by 36 percent from the 1998 level. For Gulf of Maine cod, fishing mortality needs to be reduced 56 percent from the 1998 level. Recent analysis of landings data indicates that if discarding did not appreciably increase in 1999 then the fishing mortality rate may be approaching the Amendment 7 target of F_{max} . However, given record low spawning stock biomass, poor recent recruitment and decline in the survival ratios (recruits/spawning stock biomass), F_{max} remains inappropriate for rebuilding Gulf of Maine cod.

The regulations governing the annual review and adjustment process require the Multispecies Monitoring Committee (MSMC) to calculate target total allowable catch levels (TACs) for the five key stocks. The TACs enable the Council and National Marine Fisheries Service (NMFS) to monitor the fishery during the year relative to the plan objectives. The TACs for the 1999 fishing year are provided in the following table.

Stock	2000 TAC (metric tons)
Georges Bank cod	4,145
Georges Bank haddock	6,252
Georges Bank yellowtail flounder	4,618
Southern New England yellowtail flounder	951
Gulf of Maine cod*	1,918

*NOTE: The plan objectives for Gulf of Maine cod specify that the TAC be based on a fishing mortality rate of F_{MAX} ($F=0.29$), however, scientific advice in 1998 was that the stock is collapsing. In response to this grave advice, and in consideration of the ineffectiveness of previous actions to achieve the plan target for GOM cod, the Council took a precautionary approach. In Framework 27, it drafted measures designed to achieve a more conservative fishing mortality target, $F_{0.1}=0.15$, as a benchmark to significantly increase the likelihood that the plan target will not be exceeded. The 1999 MSMC report advised that given current stock conditions, the F_{max} objective remains inappropriate for

rebuilding GOM cod. **The 2000 TAC calculated to achieve the more conservative $F_{0.1}$ target is 1,118 metric tons.**

The following is a summary of the proposed action:

Gulf of Maine Cod

Area closures: Status quo area closures as contained in Frameworks 27 and 31, plus if 50 percent of the target TAC, (759 metric tons based on the average between $F_{0.1}$ and F_{max} target) is landed by July 31, Cashes Ledge Closed Area will remain closed for one additional month (November) and Blocks 124 and 125 will close in January. The Western GOM Closed Area which is currently scheduled to end on April 30, 2001, would be extended for one additional year (expiring on April 30, 2002). (See Figure 2).

Trip Limit: Status quo trip limit as contained in Framework 31: 400 lbs./day with a maximum possession limit equal to ten times the daily limit (i.e. 4,000 pounds). Vessels may land a limited overage of cod as follows:

- Vessels not enrolled in the Gulf of Maine Cod Trip Limit Exemption Program are limited to 400 pounds for each day or part of a day on the trip. On trips under 24 hours a vessel may not land more than 400 pounds of cod, and may not land cod again until 24 hours have elapsed from the start of the prior trip, although the vessel may call-out of the DAS program before 24 hours have elapsed. On trips longer than 24 hours, a vessel may land 400 pounds of cod for each full day (24 hours) of the trip and 400 pounds for any part of a 24-hour period, provided it does not call out of the DAS program until the remainder of that 24-hour period has elapsed. A vessel on a trip longer than 24 hours and landing up to 400 pounds of cod for any part of a (24-hour) day, must call the hail line to report the overage and may not leave port or call out of the DAS program for the remaining part of the 24 hours.
- a vessel may not land more than 4,000 pounds, even if the trip duration exceeds ten days.

Party/charter closed area exemption program

Party and charter vessels would be required to obtain an exemption certificate from NMFS to fish in any of the Gulf of Maine closed areas. A limited access vessel in the exemption program would be prohibited from fishing on a DAS while in possession of the certificate. Enrollment in the program is for a minimum of three months.

Georges Bank Cod

Trip Limit: Status quo trip limit: 2,000 pounds per day, or part of a day; 20,000 pounds maximum possession limit. This action would eliminate the backstop adjustment mechanism authorizing the Regional Administrator to reduce the trip limit to prevent exceeding the TAC, and replace it with the following area closure.

Area closure: In addition to the year-round closures on Georges Bank, this action would close Blocks 109-114, 98 and 99 during May (see Figure 3). Limited Access and General Category scallop vessels and General tops are exempt from

the May closure within the parameters of existing regulations (8-inch twine top and 300 pound regulated species possession limit on limited access vessels, area and possession restriction on General Category vessels).

Large Mesh Permit Category

The Council proposes changing the conditions of the Large Mesh Permit Category as follows:

- the minimum mesh size for otter trawls is reduced from 8 inches to 7 inches,
- the increased DAS allocated to otter trawl vessels fishing in this category would be reduced from 36 percent to 25 percent, and
- both trawl and gillnet vessels that enroll in this permit category can exit the category after one month. The proportion of DAS used while enrolled in this category would be deducted, on a percentage basis, from the vessel's regular Fleet or Individual DAS allocation.

Scallop vessel access to Closed Areas I and II and the Nantucket Lightship Closed Area

The Council proposes a program to allow scallop dredge vessel access to groundfish closed areas. It will submit this action in a separate framework combining scallop management measures with the groundfish closed area exemption program (Multispecies Framework 34 and Scallop Framework 13).

The Council proposes that the measures in this framework be effective for the 2000 fishing year and that regulations be drafted such that they would remain in effect into the following fishing year pending the implementation of Amendment 13. Furthermore, the Council recommends that the action be implemented as a final rule considering the prior notice and opportunity for public comment in the development of alternatives and the timing of some of the measures relative to the start of the fishing year on May 1.

1.2 Background

1.2.1 Previous actions

Amendment 7: Amendment 7 became effective May 1, 1996. It established a rebuilding program for Georges Bank (GB) and Gulf of Maine (GOM) cod, GB haddock, and GB and Southern New England (SNE) yellowtail flounder stocks based primarily on days-at-sea (DAS) controls, area closures and minimum mesh size. As early as 1995, during the development of the amendment, the Council recognized issues that would have to be addressed after implementation and as the plan evolved. Amendment 7 created a program for reviewing the program annually and making changes to the regulations through the framework adjustment process to insure that the plan goals would be met continually.

Framework adjustments and interim rule: The Council has held three annual reviews and made seven adjustments to the FMP to address Amendment 7 rebuilding needs (Frameworks 20, 24, 25, 26, 27, 30 and 31). In 1999, the Council submitted Framework 27 as the primary annual adjustment framework. At the final framework meeting on January 27-28, the Council focused on the finalizing the severe restrictions necessary to achieve the plan objectives for GOM cod and was unable to complete development of the measures needed for GB cod. It followed immediately with the development of Framework 30 to address GB cod, which it submitted to NMFS on April 30.

Both Frameworks 27 and 30 contained cod trip limits, for GOM and GB cod, respectively. In both cases, the Regional Administrator was authorized to reduce the trip limit, when 75 percent of the target TAC for each stock was reached. On May 28, 1999, the Regional Administrator reduced the GOM cod limit implemented on May 1, 1999 of 200 pounds per day to 30 pounds per day, just three weeks into the fishing year. However, even before the trip limit was reduced, fishermen reported excessive discards of cod as seasonal closures ended.

On May 28, 1999, responding to widespread reports from the industry about the levels of cod discards in the western Gulf of Maine, the Council requested that the Secretary of Commerce increase the trip limit under the emergency action authority provided in §305 of the Magnuson-Stevens Act. On August 3, NMFS published an interim rule that increased the trip limit from 30 pounds per day to 100 pounds per day, with a maximum possession limit of 500 pounds and modifications to the running clock. The interim rule expires on January 30, 2000.

NMFS announced on July 29, 1999 that it disapproved the 30-day closure on Georges Bank proposed in Framework 30, but it approved the trip limit which took effect on August 15. Under Framework 30 there is a GB cod trip limit of 2,000 pounds per day/20,000 pounds maximum possession limit that the Regional Administrator may reduce when 75 percent of the target TAC is landed.

To address potential discarding in the GOM cod fishery upon expiration of the interim rule, and to prevent repeating on Georges Bank the discarding situation that occurred in

the Gulf of Maine when the trip limit was reduced, the Council submitted Framework 31 on October 14, 1999. NMFS approved the increased GOM cod trip limit on January 5, 2000, but it disapproved the change to the GB cod trip limit program that would have eliminated the authority of the Regional Administrator to make mid-season adjustments to the trip limit when 75 percent of the target TAC is reached.

1.2.2 Stock status and scientific advice

The last full stock assessment of the five principal stocks was SAW 27. Results were presented to the Council in August, 1998. The SAW's Northern Demersal Working Group held an inter-sessional meeting in July, 1999 and prepared updated assessments, with data through 1998, for 11 groundfish stocks, including GOM and GB cod, GOM haddock, GB and SNE yellowtail flounder. The Council reviewed the updated assessment on August 10, 1999, and the report was provided to the Multispecies Monitoring Committee (MSMC). The updated assessments formed the technical basis for the MSMC annual report and the measures in this framework adjustment.

1.2.2.1 Updated Assessment For 1999

The updated assessment report is summarized in Appendix II.

1.2.2.2 Multispecies Monitoring Committee Report (November, 1999)

The Council established the MSMC in Amendment 7 to annually review the rebuilding plan, identify options as needed to achieve plan goals, and to set annual TACs for the five focus stocks of cod, haddock and yellowtail flounder. The timetable for implementing measures to be effective at the start of the fishing year requires that the MSMC meet in the fall and project the impacts of measures in the current fishing year based on data for the first four months of the fishing year. The MSMC presented its report to the Council on November 16, 1999. The report is included as Appendix III. Excerpts from the Executive Summary follow:

DAS usage in 1998: DAS usage in 1998 increased to 52,025 in 1998, an 8% increase from 1997 and a 19% increase from the MSMC's prediction of 43,854. As in previous years, DAS greatly exceeded the actual usage in those years. In general, vessels with individual days-at-sea used 90% of their allocation while fleet category vessels used only 44% in fishing year 1998. Based on fishing year 1998 utilization rates, days-at-sea limits in 1998 are more constraining on individual vessels than fleet vessels. Utilization of DAS usage May-August 1999 is similar to utilization in May-August 1998.

Status relative to Amendment 7 objectives for 5 critical stocks: The Multispecies Monitoring Committee (MSMC) utilized assessment updates and projections provided by the NDWG to estimate TACs for Georges Bank cod, Georges Bank haddock, Georges Bank yellowtail, Southern New England yellowtail and Gulf of Maine cod in 2000 based on Amendment 7 target fishing mortality. Stock status has improved for the three Georges Bank stocks and Southern New England yellowtail. Calendar year 1998 fishing mortality rates are below the overfishing definitions for these stocks and below the more restrictive Amendment 7 targets for all but Georges Bank cod. The fishing mortality rate on Georges Bank cod increased slightly to 0.26 in calendar year 1998. Spawning stock

biomass has increased for these stocks but, with the exception of Georges Bank yellowtail, remains below the Amendment 7 biomass goals. In general, recruitment (incoming year classes) is below the long-term average with the exception of Georges Bank yellowtail.

Stock status in 1998 for Gulf of Maine cod is similar to stock status in 1997. The fishing mortality rate is projected to decreased slightly to 0.64 in 1998, and remains well above both the overfishing definition ($F_{20\%}=0.37$) and the Amendment 7 mortality target ($F_{Max}=0.27$). Recruitment is at record low levels and spawning stock biomass declined in 1998 to the lowest level ever observed. However, the reduction was not as large as the 37% predicted in the 1998 MSMC report. A sensitivity analysis suggests that if discarding did not appreciably increase in 1999, then the fishing mortality rate on Gulf of Maine cod may be approaching F_{MAX} . However, given record low spawning stock biomass, poor recent recruitment and decline in the survival ratios (recruit/ spawning stock biomass), **the Amendment 7 objective of F_{max} remains inappropriate for rebuilding Gulf of Maine cod.**

Target total allowable catches (TACs) were calculated for calendar year 2000 (January 1 2000 to December 31, 2000) based on MSMC projected stock sizes for January 1, 2000 and target fishing mortality rates. These target TACs are assumed to be the target TACs for the fishing year (May 1, 2000 to April 30, 2001). The USA TACs assume that the 1999 Canadian quota for the three Georges Bank stocks (GB cod, GB haddock and GB yellowtail) will be carried over in 2000. The assumed Canadian quota was subtracted from the Total TACs for transboundary stocks to obtain the USA target TAC. USA Target TACs are found in Table 1.

Stock	1998 Landings (metric tons)	TAC		
		1998	1999	2000
GB cod	6959	4700	5354	4145
GB Haddock	1841	4797	5600	6252
GB yellowtail	1800	2145	2725	4618
SNE yellowtail	369	814	1115	951
GOM cod (F_{max})	4156	1783	1340	1918
GOM cod ($F_{0.1}$)	NA	NA	782	1118

Table 1 1998 calendar year landings and 1998-2000 TACs (calendar year applied to the fishing year). USA TACs in 2000 assume Canadian quota of 1,900 mt (GB cod), 3,900 mt (GB haddock) and 2,000 mt (GB yellowtail) in 2000 based on 1999 quotas.

Fishing mortality needs to be reduced on Georges Bank cod (36%) and Gulf of Maine cod (56.2%) from the calendar year 1998 fishing mortality rates to achieve Amendment 7 target fishing mortality rates.

Fishing mortality reductions needed to achieve Amendment 9 rebuilding objectives: The MSMC examined projections for achieving Amendment 9 rebuilding targets for Georges Bank cod, Georges Bank haddock, Georges Bank yellowtail, Southern New England yellowtail, and Gulf of Maine cod. Two sets of target fishing mortality were used:

the fishing mortality rate derived from the literal interpretation of Amendment 9 control rule ($F_{\text{control rule}}$) and fishing mortality rate that achieves rebuilding to B_{msy} within the Amendment 9 specified time schedule (F_{MSMC}). Substantial reductions from 1998's fishing mortality are needed to achieve rebuilding within Amendment 9 timeframe for all stocks but Georges Bank yellowtail. Mean percent change in mortality (averages both positive and negative changes) is -21%. Mean reduction (average of all stocks needing reductions) is -57% to achieve F_{MSMC} and -78% to achieve $F_{\text{control rule}}$ for these five stocks. The Amendment 7 fishing mortality targets do not achieve rebuilding within the Amendment 9 rebuilding schedule for Georges Bank haddock, Southern New England yellowtail and Gulf of Maine cod.

The MSMC utilized assessment updates and projections provided by the NDWG to estimate TTAC in 2000 for white hake, American plaice, witch flounder, Georges Bank winter flounder, Southern New England winter flounder and Cape Cod yellowtail based on Amendment 9 control rules. Substantial reductions from 1998's fishing mortality are needed to achieve rebuilding within Amendment 9 (mean percent change in mortality is -48% to achieve F_{MSMC} and -71% to achieve $F_{\text{control rule}}$; a mean reduction of -78% is needed to achieve F_{MSMC} and -89% is needed to achieve $F_{\text{control rule}}$) for these six stocks. Of the 11 stocks examined, 9 out of 11 need reductions to achieve $F_{\text{control rule}}$ and 8 out of 11 need reductions in fishing mortality to achieve F_{MSMC} .

Reductions from 1998 landings to 2000 TTAC needed to achieve target fishing mortality rates for 11 stocks: The landings corresponding to the Amendment 9 target fishing mortality rates in 2000 are well below 1998 landings for most species. Despite a large increase in the 2000 Georges Bank yellowtail TTAC, the % change from 1998 landings to 2000 TTAC's for 11 stocks combined is -19% ($F_{\text{control rule}}$) to -36% (F_{MSMC}). The 2000 TTAC is less than 1998 landings for 9 out of 11 species to achieve $F_{\text{control rule}}$ and 8 out of 11 to achieve F_{MSMC} . Major reductions are needed for species in the Gulf of Maine, Georges Bank and Southern New England.

Status of other stocks without updated assessments or projections: Status of pollock, redfish, Gulf of Maine winter flounder, SNE/ MA windowpane flounder was updated through calendar year 1998 using research trawl survey indices, commercial landings and a relative exploitation index. Survey biomass is low for pollock and Southern New England windowpane and medium for redfish, Gulf of Maine winter flounder and Gulf of Maine/Georges Bank windowpane. The MSMC notes a downward trend in relative exploitation for these five species, but cautions that relative exploitation does not correlate directly with the magnitude of fishing mortality. Fishing mortality rates may be either above or below Amendment 9 target rates.

The following tables summarize the MSMC Report on stock status.

Table 5.3. Fishing mortality rates for 5 major stocks of groundfish along with target mortality rates. GB= Georges Bank, SNE= Southern New England GOM= Gulf of Maine, yt=yellowtail, hdk= haddock. F_{1997} , F_{1998} and biological reference points estimated from the NDWG assessments.

	<u>GB cod</u>	<u>GB hdk</u>	<u>GB yt</u>	<u>SNE yt</u>	<u>GOM cod</u>
F_{1997}	0.53	0.12	0.26	0.36	0.82
F_{1998}	0.28	0.15	0.17	0.20	0.64
Projected F_{1999}	0.28	0.15	0.17	0.20	0.64
Target F_{2000}	0.18	0.26	0.25	0.27	0.29
Overfishing F^1	0.41	0.45	0.69	0.94	0.41

¹Amendment 7 overfishing definitions

Table 5.4. Spawning stock biomass (000's metric tons) for 5 major stocks of groundfish. Projected SSB 1999 values assume achieving 1998 target F. GB=Georges Bank, SNE= Southern New England, GOM= Gulf of Maine, hdk= haddock, yt= yellowtail, SSB= spawning stock biomass. SSB_{1997} and SSB_{1998} values are from NDWG assessments.

	<u>GB cod</u>	<u>GB hdk</u>	<u>GB yt</u>	<u>SNE yt</u>	<u>GOM cod</u>
SSB_{1997}	26.4	34.6	13.1	1.7	9.9
SSB_{1998}	28.7	38.1	17.3	3.6	8.2
projected SSB_{1999}	32.5	44.7	28.0	5.5	8.8
Threshold	70.0	80.0	10.0	10.0	n/a
1999 SSB as %threshold	46%	56%	280%	55%	n/a
Projected SSB_{2000}	35.8	55.0	36.0	6.1	9.9
Mean SSB (years)	58.3 (78-98)	48.0 (63-98)	7.6 (73-98)	7.0 (73-98)	15.5 (82-98)

Table 5.5. Recent recruitment (millions) for Georges Bank cod, Georges Bank haddock and Gulf of Maine cod compared to long term means and medians.

Year class	GB cod (Age 1)	GB haddock (Age 1)	GB yt (Age 1)	SNE yt (Age 1)	GOM cod (Age 2)
1994	4.2	8.9	26.6	3.0	2.4
1995	7.6	8.2	19.2	4.3	1.6
1996	8.6	14.9	37.8	12.2	1.8
1997	2.3	8.3	79.5	7.6	x.x
Mean (94-97)	5.7	10.1	40.8	6.8	1.9
Longterm Mean	16.6	31.4	26.0	26.8	5.3
Median year classes	15.7 (77-97)	8.7 (62-97)	20.5 (72-97)	14.3 (72-96)	4.5 (80-96)

Table 5.6. Projected 2000 US target TACs in 000's of metric tons for Georges Bank cod, Georges Bank haddock, Georges yellowtail, Southern New England yellowtail and Gulf of Maine cod based on Amendment 7 mortality targets. US TACs assume that the 2000 Canadian quota will equal the 1999 Canadian quota for GB cod, haddock and GB yellowtail. n/a= not applicable.

	GB cod	GB hdk	GB yt	SNE yt	GOM Cod
1998 US landings	7.0	1.8	1.8	0.4	4.1
2000 Target TAC (entire stock)	6.0	10.1	6.6	1.0	1.9
Assumed 2000 Canadian quota	1.9	3.9	2.0	n/a	n/a
2000 US TTAC	4.1	6.3	4.6	1.0	1.9*
Mean US landings	22.8	11.9	5.4	3.9	9.9
Metric tons (years)	(78-98)	(63-98)	(73-98)	(73-98)	(82-98)

*Target TAC for GOM cod is 1,118 metric tons based on $F_{0.1}$ target mortality rate.

Table 5.8. Most recent assessments for 10 principle groundfish

species. Stock area abbreviations are SNE= Southern New England, GOM= Gulf of Maine, MA= Mid-Atlantic. N/a= not applicable. * = formal assessment does not exist or terminal year is earlier than 1990 and data are from the Status of Fishery Resources of the Northeastern United States for 1993.

Stock	Source	Assessment Type	Terminal year	Terminal Year F	Overfishing F ¹	Status ²	
						Biomass	exploitation
GOM-GB white hake	SAW 28	VPA	1997	1.15	F _{MSY} = 0.27	Low	overexploited
American plaice	SAW 28	VPA	1997	0.47	F _{MSY} = 0.19	Low	overexploited
GOM-GB witch fld	SAW 29	VPA	1998	0.37	F _{MSY} = 0.11	Near B _{MSY}	Near F _{MSY}
GB winter flounder	SAW 28	VPA	1997	0.41	F ⁴ = 1.12	Low	fully exploited
SNE -MA winter fld	SAW 28	VPA	1997	0.31	F _{MSY} ³ = 0.59	Medium	fully exploited
Cape Cod yellowtail fld	SAW 28	VPA	1997	0.44	F _{MSY} = 0.54	Medium	overexploited
Pollock	SAW 16	VPA	1992	0.72	F _{20%} = 0.65	Medium	fully exploited
GOM-GB redfish	SAW 15	VPA/ index	1992	<0.06	F _{20%} = 0.12	Low	overexploited
GOM winter flounder	SAW 21	Index	1994	1.20	unknown ²	Low	overexploited
GOM-GB windowpane fld	*	Index	1992	unknown	unknown	Med-low	likely overexploited
SNE-MA windowpane fld	*	Index	1992	unknown	unknown	Low	overexploited

¹ Amendment 9 overfishing definitions for all stocks except pollock and GOM-GB redfish, which have Amendment 7 definitions. Overfishing definition and terminal F for witch flounder is biomass weighted, all others are scaled to fully recruited F.

² Status at the time of the assessment. SAW 28 status taken from Draft Advisory Report.

³ The ASMFC plan has a rebuilding target of F40% for SNE-MA (F40%= 0.21) and Gulf of Maine (F40%=0.49) winter flounder stocks.

⁴ The proxy for F_{msy} is an exploitation index (landings/autumn NEFSC index). Amendment 7 overfishing definition was F_{20%}=.47.