ALTERNATIVES UNDER CONSIDERATION

4.1 Updates to Status Determination Criteria, and Annual Catch Limits

4.1.1 Revised Status Determination Criteria

4.1.1.1 Option 1: No Action

No Action. There would be no revisions to the status determination criteria (SDC) of groundfish stocks, and numerical estimates would not change (Table 1 and Table 2)

Table 1 - No Action status determination criteria.

Stock	Biomass Target (SSB_{MSY} or proxy)	Minimum Biomass Threshold	Maximum Fishing Mortality Threshold (F_{MSY} or proxy)
Georges Bank Cod	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Gulf of Maine Cod	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Haddock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Gulf of Maine Haddock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Yellowtail Flounder	Unknown	Unknown	Unknown
Southern New England/Mid-Atlantic Yellowtail Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Cape Cod/Gulf of Maine Yellowtail Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
American Plaice	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Witch Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Winter Flounder	SSB_{MSY}	½ Btarget	F_{MSY}
Gulf of Maine Winter Flounder	Unknown	Unknown	F40% MSP
Southern New England/Mid-Atlantic Winter Flounder	SSB_{MSY}	½ Btarget	F_{MSY}
Acadian Redfish	SSB_{MSY}: SSB/R (50% MSP)	½ Btarget	F50% MSP
White Hake	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Pollock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Northern Windowpane Flounder	External	½ Btarget	Rel F at replacement
Southern Windowpane Flounder	External	½ Btarget	Rel F at replacement
Ocean Pout	External	½ Btarget	Rel F at replacement
Atlantic Halibut	Internal	½ Btarget	$F_{0.1}$
Atlantic Wolffish	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP

Table 2 - No Action numerical estimates of SDCs.

Stock	Model/ Approach	B_{MSY} or Proxy (mt)	F_{MSY} or Proxy	MSY (mt)
Georges Bank Cod	ASAP	186,535	0.177	30,622
Gulf of Maine Cod	ASAP M=0.2	47,184	0.18	7,753
	ASAP M-ramp	69,621	0.18	11,388
Georges Bank Haddock	VPA	124,900	0.39	28,000
Gulf of Maine Haddock	ASAP	4,108	0.46	955
Georges Bank Yellowtail Flounder	empirical	NA	NA	NA
Southern New England/Mid-Atlantic Yellowtail Flounder	ASAP	2,995	0.32	773
Cape Cod/Gulf of Maine Yellowtail Flounder	VPA	7,080	0.259	1,600
American Plaice	VPA	18,398	0.179	3,385
Witch Flounder	VPA	10,051	0.27	2,075
Georges Bank Winter Flounder	VPA	8,100	0.44	3,200
Gulf of Maine Winter Flounder	empirical	NA	0.23 (exploitation rate)	NA
Southern New England/Mid-Atlantic Winter Flounder	ASAP	43,661	0.29	11,728
Acadian Redfish	ASAP	238,480	0.038	8,891
White Hake	ASAP	32,400	0.20	5,630
Pollock	ASAP	76,879	0.273	14,791
Northern Windowpane Flounder	AIM	1.60 kg/tow	0.44 c/i	700
Southern Windowpane Flounder	AIM	0.24 kg/tow	2.088 c/i	500
Ocean Pout	index	4.94 kg/tow	0.76 c/i	3,754
Atlantic Halibut	RYM	48,509	0.073	3,546
Atlantic Wolffish	SCALE	1,756	0.334	261

4.1.1.2 Option 2: Revised Status Determination Criteria

This option updates the numerical estimates of the status determination criteria for all groundfish stocks (Table 3). The M-S Act requires that every fishery management plan specify "objective and measureable criteria for identifying when the fishery to which the plan applies is overfished." Guidance on this requirement identifies two elements that must be specified: a maximum fishing mortality threshold (or reasonable proxy) and a minimum stock size threshold.

The M-S Act also requires that FMPs specify the maximum sustainable yield and optimum yield for the fishery.

The NEFSC conducted assessment for all groundfish stocks in 2015. The peer review recommended updated numerical values are provided in Table 4, for information purposes only.

Option 2 would also adopt revised status determination criteria for GB cod and Atlantic halibut (Table 3). The peer review concluded that the GB cod and Atlantic halibut models were not acceptable as a scientific basis for catch advice, and that stock status and catch advice should be based an alternative approach. Because a stock assessment model framework is lacking for GB cod and Atlantic halibut, no historical estimates of biomass, fishing mortality rate, or recruitment can be calculated for these stocks. Status determination relative to reference points is not

possible because reference points cannot be defined. Overfishing status is considered unknown (Table 4). In addition, the peer review concluded for both stocks that evidence suggests that these stocks should still be considered overfished.

Rationale: This option would update the status determination criteria for all groundfish stocks to reflect the best scientific information. This is consistent with M-S Act requirements.

Table 3 - Option 2 status determination criteria

Stock	Biomass Target (SSB_{MSY} or proxy)	Minimum Biomass Threshold	Maximum Fishing Mortality Threshold (F_{MSY} or proxy)
Georges Bank Cod	Unknown	Unknown	Unknown
Gulf of Maine Cod	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Haddock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Gulf of Maine Haddock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Yellowtail Flounder	Unknown	Unknown	Unknown
Southern New England/Mid-Atlantic Yellowtail Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Cape Cod/Gulf of Maine Yellowtail Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
American Plaice	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Witch Flounder	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Georges Bank Winter Flounder	SSB_{MSY}	½ Btarget	F_{MSY}
Gulf of Maine Winter Flounder	Unknown	Unknown	F40% MSP
Southern New England/Mid-Atlantic Winter Flounder	SSB_{MSY}	½ Btarget	F_{MSY}
Acadian Redfish	SSB_{MSY}: SSB/R (50% MSP)	½ Btarget	F50% MSP
White Hake	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Pollock	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP
Northern Windowpane Flounder	External	½ Btarget	Rel F at replacement
Southern Windowpane Flounder	External	½ Btarget	Rel F at replacement
Ocean Pout	External	½ Btarget	Rel F at replacement
Atlantic Halibut	Unknown	Unknown	Unknown
Atlantic Wolffish	SSB_{MSY}: SSB/R (40% MSP)	½ Btarget	F40% MSP

Table 4 - Option 2 numerical estimates of SDCs (provided for informational purposes only).

Stock	Model/ Approach	B_{MSY} or Proxy (mt)	F_{MSY} or Proxy	MSY (mt)
Georges Bank Cod	Recent catches reduced by trends in the surveys for catch advice	NA	NA	NA
Gulf of Maine Cod	ASAP M=0.2	40,187	0.185	6,797
	ASAP M-ramp	59,045	0.187	10,043
Georges Bank Haddock	VPA	108,300	0.39	24,900
Gulf of Maine Haddock	ASAP	4,623	0.468	1,083
Georges Bank Yellowtail Flounder	empirical	NA	NA	NA
Southern New England/Mid-Atlantic Yellowtail Flounder	ASAP	1,959	0.35	541
Cape Cod/Gulf of Maine Yellowtail Flounder	VPA	5,259	0.279	1,285
American Plaice	VPA	13,107	0.196	2,675
Witch Flounder	VPA	9,473	0.279	1,957
Georges Bank Winter Flounder	VPA	6,700	0.536	2,840
Gulf of Maine Winter Flounder	empirical	NA	0.23 (exploitation rate)	NA
Southern New England/Mid-Atlantic Winter Flounder	ASAP	26,928	0.325	7,831
Acadian Redfish	ASAP	281,112	0.038	10,466
White Hake	ASAP	32,550	0.188	5,422
Pollock	ASAP	105,226	0.277	19,678
Northern Windowpane Flounder	AIM	1.554 kg/tow	0.45 c/i	700
Southern Windowpane Flounder	AIM	0.247 kg/tow	2.027 c/i	500
Ocean Pout	index	4.94 kg/tow	0.76 c/i	3,754
Atlantic Halibut	Status quo as basis for catch advice	NA	NA	NA
Atlantic Wolffish	SCALE	1,663	0.243	244

4.1.2 Annual Catch Limits

4.1.2.1 Option 1: No Action

No Action. There would be no changes to the specifications for FY 2016 – FY 2017 that were adopted by FW 53 (Table 6). Default catch limits for stocks would remain in place until July 31st, 2016; none of the default specifications would need to be reduced since the SSC's recommended FY 2016 ABC's are greater than the default specifications (Table 5). A scallop fishery sub-ACL for SNE/MA yellowtail flounder would not be specified. There would be no FY

2016 quotas specified for the transboundary Georges Bank stocks (i.e. GB cod, GB haddock, GB yellowtail flounder), which are managed through the US/CA Resource Sharing Understanding. These quotas are specified annually.

Rationale: The No Action alternative would not be consistent with best available scientific information. Because not all stocks have specifications for FY2016 – FY2017 and default catch limits are set at 35% of the prior year's catch limit and expire on July 31st, 2016, this alternative would not address M-S act requirements to achieve OY requirements and consider the needs of fishing communities.

Table 5 - FY2016 Default Specifications compared to the SSC's recommended FY 2016 ABC's (mt).

	FY2016 Default Specifications						FY2016 - U.S. ABC
	U.S. ABC	Total ACL	Groundfish Sub-ACL	Sector Sub-ACL	Common pool sub-ACL	Midwater trawl fishery	
GB Cod	693	660	625	612	13	.....	762
GB Haddock	8,528	8,121	7,616	7,548	68	79	56,068
SNE/MA Yellowtail Flounder	245	232	195	155	40	.....	267
CC/GOM Yellowtail Flounder	192	184	161	153	8	.....	427
American Plaice	540	514	492	483	9	.....	1297
Witch Flounder	274	263	213	208	5	.....	394
SNE/MA Winter Flounder	587	563	457	402	56	.....	780
Redfish	4,191	3,988	3,862	3,840	22	.....	10,338
N. Windowpane Flounder	53	50	35	na	35	.....	182
S. Windowpane Flounder	192	184	36	na	36	.....	623
Ocean Pout	82	77	68	na	68	.....	165
Atlantic Halibut	35	34	22	na	22	.....	139
Atlantic Wolffish	25	23	22	na	22	.....	82

Table 6 - No Action/Option 1 Northeast Multispecies OFLs, ABCs, ACLs, and other ACL sub-components for FY 2016 (metric tons, live weight). Values are rounded to the nearest metric ton. Default specifications for FY 2016 are shown in italics, and remain in place through July 31st, 2016.

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
GB Cod	2016		*693*				*625*			*612*	*13*		*660*
	2017												
	2018												
GOM Cod	2016	514	386	26	13		328		121	201	6		366
	2017	514	386	26	13		328		121	201	6		366
	2018												
GB Haddock	2016		*8,528*				*7,616*	*7,616*		*7,548*	*68*	*79*	*8,121*
	2017												
	2018												
GOM Haddock	2016	2,270	1,772	13	26		1,620		453	1,155	12	16	1,675
	2017	2,707	2,125	26	31		1,943		543	1,386	14	20	2,009
	2018												
GB Yellowtail Flounder	2016		354		4	55				274	4	7	343
	2017												
	2018												
SNE/MA Yellowtail Flounder	2016		*245*				*195*			*155*	*40*		*232*
	2017												
	2018												
CC/GOM Yellowtail Flounder	2016		*192*				*161*			*153*	*8*		*184*
	2017												
	2018												
American Plaice	2016		*540*				*492*			*483*	*9*		*514*
	2017												
	2018												
Witch Flounder	2016		*274*				*213*			*208*	*5*		*263*
	2017												
	2018												

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
GB Winter Flounder	2016				63		1,982			1,967	15		2,046
	2017				65		2,051			2,035	16		
	2018												
GOM Winter Flounder	2016	3,383	2,107	87	10		392			375	18		489
	2017	3,511	2,180	87	10		392			375	18		489
	2018												
SNE/MA Winter Flounder	2016		587				457			402	56		563
	2017												
	2018												
Redfish	2016		*4,191*				*3,862*			*3,840*	*22*		*3,988*
	2017												
	2018												
White Hake	2016	6,314	4,645	46	93		4,280			4,250	30		4,420
	2017												
	2018												
Pollock	2016	21,864	16,600	996	1,162		13,720			13,628	92		15,878
	2017	24,598	16,600	996	1,162		13,720			13,628	92		15,878
	2018												
GOM/GB Windowpane Flounder	2016		*53*				*35*				*35*		*50*
	2017												
	2018												
SNE/MA Windowpane Flounder	2016		*192*				*184*				*36*		*184*
	2017												
	2018												
Ocean Pout	2016		*82*				*77*				*68*		*77*
	2017												
	2018												
Atlantic Halibut	2016		*35*				*34*				*22*		*34*
	2017												
	2018												

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
Atlantic Wolffish	2016 2017 2018		*25*				*23*				*22*		*23*

4.1.2.2 Option 2: Revised Annual Catch Limit Specifications

Under Option 2, the annual specification for FY 2016 – FY 2018 for all groundfish stocks and FY2016 – FY2017 for GB yellowtail flounder would be as specified in Table 10. Option 2 includes adjustments to the state waters and other sub-component values from those specified in FW 53 under the No Action (see Appendix TBD for additional information). Table 11 provides the Closed Area I Hook Gear Haddock SAP.

U.S./ Canada TACs

This alternative would specify TACs for the U.S./Canada Management Area for FY 2016 as indicated in Table 7. If NMFS determines that FY 2015 catch of GB cod, haddock, or yellowtail flounder from the U.S./Canada Management Area exceeded the respective 2015 TAC, the U.S./Canada Resource Sharing Understanding and the regulations require that the 2016 TAC be reduced by the amount of the overage. Any overage reduction would be applied to the components of the fishery that caused the overage of the U.S. TAC in 2015. In order to minimize any disruption to the fishing industry, NMFS would attempt to make any necessary TAC adjustment in the first quarter of the fishing year.

In addition under Option 2, a 2017 target TAC of 50,000 mt for EGB haddock is identified to be used as an upper bound with determining 2017 catch advice (Table 10). This number is expected to be reviewed in 2016 by the Transboundary Management Guidance Committee (TMGC).

A comparison of the proposed FY 2016 U.S. TACs and the FY 2015 U.S. TACs is shown in Table 8. Changes to the U.S. TACs reflect changes to the percentage shares, stock status, and the TMGC recommendations.

Table 7 - Proposed FY2016 U.S./Canada TACs (mt).

	Eastern GB Cod	Eastern GB Haddock	GB Yellowtail Flounder
Total Shared TAC	625	37,000	354 (*Total ABC)*
U.S. TAC	138	15,170	269 (*US ABC*)
Canada TAC	487	21,830	85

Table 8 - Comparison of the Proposed FY 2016 U.S. TACs and the FY 2015 U.S. TACs (mt).

Stock	U.S. TAC		Percent Change
	FY 2016	FY 2015	
Eastern GB cod	138	124	*+11.3%*
Eastern GB haddock	15,170	17,760	*-14.6%*
GB yellowtail flounder	269	248	*+8.5%*

Scallop Fishery Sub-ACL for SNE/MA Yellowtail Flounder

This option would specify scallop fishery sub-ACLs for SNE/MA yellowtail founder. A sub-ACL for SNE/MA yellowtail flounder for the scallop fishery was adopted through Amendment 16, and the Council selected an allocation for the scallop fishery though FW44 and FW50. Since FY 2011, the sub-ACL has been based on 90 percent of the estimated scallop fishery catch, though the Council is not bound by its earlier decisions. Table 9 describes projected SNE/MA yellowtail bycatch in the scallop fishery for Scallop FW27 alternatives, which range from 37.2 mt – 40.6 mt in FY 2016. Two potential scallop fishery SNE/MA yellowtail flounder sub-ACLs that are shown in Table 10, and are intended to provide the Council with a range of potential subs-ACLs.

In addition, this sub-ACL would continue to be managed in a manner that would prevent the loss of available yield of this stock. NMFS would evaluate catches of SNE/MA yellowtail flounder by the scallop fishery by January 15 of the fishing year. Should the estimate indicate that the scallop fishery will catch less than 90 percent of the entire sub-ACL, NMFS will reduce the scallop fishery sub-ACL to the amount expected to be caught and increase the groundfish sub-ACL by up to the difference between the original estimate and the revised estimate. The increase to groundfish sub-ACL will be distributed to sectors and the common pool. If the amount of yellowtail flounder projected to be caught by the scallop fishery exceeds the scallop fishery sub-ACL, there will not be any change to the sub-ACL.

Table 9 - Summary of projected SNE/MA YT bycatch estimates (mt) for Scallop Framework 27 alternatives and potential sub-ACL allocations (90% of estimated catch). The management uncertainty buffer for the scallop fishery SNE/MA yellowtail flounder sub-ACL is 7%, (i.e., a sub-ACL of 33.5mt would be reduced to 31.2mt).

SNE/MA YT – US ABC = 267 mt in FY 2016- FY 2018			
FY	Alt. 2 (BaseRun) Projection	Alt. 3 (CA2ext) Projection	Alt. 5 (NL-N access) Projection
2016	37.2 (90%= 33.5)	37.6 (90%=33.8)	38.3-40.6 (90%= 34.5 – 36.5)
2017	38.9 (90% = 35.0)	40.4 (90% = 36.4)	38.9 (90% = 35.0)
2018	40.4 (90% = 36.4)	43.9 (90% = 39.6)	40.5 (90% = 36.5)

Rationale: This measure would adopt new specifications for groundfish management units that are consistent with the most recent assessment information. For all stocks, only one alternative to No Action is shown. This is because the values in Option 2 represent the best scientific information, as determined by the Council's Scientific and Statistical Committee, and the M-S Act requires that catches not be set higher than these levels. Any catches below these levels

would not mitigate economic impact on fishing communities. This measure would also adjust state waters and other sub-component ACLs to reflect recent sub-component performance.

The U.S. and Canada coordinate management of three management units that overlap the boundary between the two countries on Georges Bank. Agreement on the amount to be caught is reached each year by the TMGC. This framework includes the recommendations of the TMGC, which are consistent with the most recent TRAC assessments.

Table 10 - Option 2 Revised OFLs, ABC, and ACLs. Stock underlined would be subject to adjustments in 2017 and 2018 based on US/CA quotas. SNE/MA scallop sub-ACLs are based on the highest estimated bycatch (high, 100%), and 90% of the lowest bycatch estimate (low, 90%) see Table 9.

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
GB Cod	2016	1,665	762	23	99		608	608		595	13		730
	2017	1,665	1,249	37	162		608	608		975	22		1,197
	2018	1,665	1,249	37	162		608	608		975	22		1,197
GOM Cod	2016	667	500	27	10		437	280	157	273	8		473
	2017	667	500	27	10		437	280	157	273	8		473
	2018	667	500	27	10		437	280	157	273	8		473
GB Haddock	2016	160,385	56,068	561	561		51,667	51,667		51,209	458	521	53,309
	2017	258,691	48,398	484	484		44,599	44,599		44,204	395	450	46,017
	2018	358,077	77,898	779	779		71,783	44,599		71,147	636	724	74,065
GOM Haddock	2016	4,717	3,630	26	26		3,344	2,416	928	2,385	31	34	3,430
	2017	5,873	4,534	33	33		4,177	3,017	1,160	2,979	39	42	4,285
	2018	6,218	4,815	35	35		4,436	3,204	1,231	3,163	41	45	4,550
GB Yellowtail Flounder	2016		269		3	42	211	211		207	4	5	261
	2017		354		4	55	278	278		273	5	7	343
	2018												
SNE/MA Yellowtail Flounder (high, 100%)	2016		267	5	29	*38*	182	182		145	37		255
	2017		267	5	29	*37*	182	182		145	37		255
	2018		267	5	29	*41*	179	179		142	37		255
SNE/MA Yellowtail Flounder (low, 90%)	2016		267	5	29	*31*	189	189		150	39		255
	2017		267	5	29	*33*	187	187		149	39		255
	2018		267	5	29	*34*	186	186		148	38		255
CC/GOM Yellowtail Flounder	2016	555	427	43	26		341	341		325	16		409
	2017	707	427	43	26		341	341		325	16		409
	2018	900	427	43	26		341	341		325	16		409

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
American Plaice	2016	1,695	1,297	26	26		1,183	1,183		1,160	23		1,235
	2017	1,748	1,336	27	27		1,218	1,218		1,195	23		1,272
	2018	1,840	1,404	28	28		1,280	1,280		1,256	24		1,337
Witch Flounder	2016	513	394	28	75		277	277		271	6		379
	2017	925	394	28	75		277	277		271	6		379
	2018	974	394	28	75		277	277		271	6		379
GB Winter Flounder	2016	957	668		60		590	590		584	6		650
	2017	1,056	668		60		590	590		584	6		650
	2018	1,459	668		60		590	590		584	6		650
GOM Winter Flounder	2016	1,080	810	122	16		639	639		604	35		776
	2017	1,080	810	122	16		639	639		604	35		776
	2018	1,080	810	122	16		639	639		604	35		776
SNE/MA Winter Flounder	2016	1,041	780	70	94		585	585		514	71		749
	2017	1,021	780	70	94		585	585		514	71		749
	2018	1,587	780	70	94		585	585		514	71		749
Redfish	2016	13,723	10,338	103	207		9,526	9,526		9,471	55		9,837
	2017	14,665	11,050	111	221		10,183	10,183		10,124	59		10,514
	2018	15,260	11,501	115	230		10,598	10,598		10,537	61		10,943
White Hake	2016	4,985	3,754	38	75		3,459	3,459		3,434	25		3,572
	2017	4,816	3,624	36	72		3,340	3,340		3,315	24		3,448
	2018	4,733	3,560	36	71		3,281	3,281		3,257	24		3,387
Pollock	2016	27,668	21,312	1,279	1,279		17,817	17,817		17,705	112		20,374
	2017	32,004	21,312	1,279	1,279		17,817	17,817		17,705	112		20,374
	2018	34,745	21,312	1,279	1,279		17,817	17,817		17,705	112		20,374
GOM/GB Windowpane Flounder	2016	243	182	2	109		66	66			66		177
	2017	243	182	2	109		66	66			66		177
	2018	243	182	2	109		66	66			66		177
SNE/MA Windowpane Flounder	2016	833	623	37	249	209	104	104			104		599
	2017	833	623	37	249	209	104	104			104		599
	2018	833	623	37	249	209	104	104			104		599

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallops	Groundfish Sub-ACL	Comm Ground-fish Sub-ACL	Rec Ground-fish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-sector Ground-fish Sub-ACL	MWT or Small mesh Sub-ACL	Total ACL
Ocean Pout	2016	220	165	2	17		137	137			137		155
	2017	220	165	2	17		137	137			137		155
	2018	220	165	2	17		137	137			137		155
Atlantic Halibut	2016	210	124	25	4		91	91			91		119
	2017	210	124	25	4		91	91			91		119
	2018	210	124	25	4		91	91			91		119
Atlantic Wolffish	2016	110	82	1	3		72	72			72		77
	2017	110	82	1	3		72	72			72		77
	2018	110	82	1	3		72	72			72		77

Table 11 - CAI Hook Gear Haddock SAP TACs (FY2014 - FY2016).

Year	*Exploitable Biomass (thousand mt)*	*WGB Exploitable Biomass*	*B(year)/B(2004)*	*TAC (mt, live weight)*
2016	428,303	149,906	5.488	6,202
2017	739,567	258,848	9.477	10,709
2018	1,145,309	400,858	14.677	16,584

4.2 Fishery Program Administration

4.2.1 Implementation on Additional Sector

4.2.1.1 Option 1: No Action

No Action. The list of operating sectors would be limited to the 24 sectors that have been authorized through prior actions.

4.2.1.2 Option 2: Implement a New Sector for FY 2016

One additional sector would be implemented and allowed to operate on May 1, 2016. This sector would be called the Sustainable Harvest Sector II, which would be comprised of active groundfish vessels, similar to the existing Sustainable Harvest Sectors. The proposed Sustainable Harvest Sector II operations plan is substantially similar to the Sustainable Harvest Sector III operations plan, and falls within the scope of the 2015 sector programmatic EA.

Rationale: The Council received one new sector application for consideration in FW 55. A sector that wishes to begin operating in a given fishing year is required to submit a proposal and preliminary operations plan one year prior to the beginning of that fishing year. The addition of this new sector would provide flexibility for fishery participants to adapt to changing regulatory and legal circumstances.

4.2.2 Sector Approval Process

4.2.2.1 Option 1: No Action

No Action. The process for creating a new sector, as described in Amendment 16, would not change. Under current regulations, an appropriate NEPA document must be prepared by a potential new sector and submitted to NMFS through the Council in an action that assesses the impacts of forming the sector.

Sector operations plans must be reviewed and approved before the sector can operate. A sector must submit its preliminary operations plan to the Council no less than one year prior to the date that it plans to begin operations. The Council must decide whether or not to approve the implementation of an additional sector through an action (Amendment or Framework). Any sector that is authorized by the Council must also submit an operations plan to NMFS. Final operations plans may cover a two-year period and must be submitted to NMFS no later than September 1 prior to the fishing year in which the sector will operate. NMFS may consult with the Council and will solicit public comment on the operations plan consistent with the Administrative Procedures Act (APA). Upon review of the public comments, the RA may approve or disapprove sector operations through a final determinate consistent with the APA.

4.2.2.2 Option 2: Revised Process for Approving New Northeast Groundfish Sectors

The process for approving new groundfish sectors would be changed, such that new sectors would not need to be approved through a Council action. A sector would be required to notify the Council and NMFS in writing of its intent to form a new sector no later than 30 days prior to the deadline to submit an operations plan for the following fishing year.

A sector would submit an operations plan consistent with the existing process for operations plan approval. The operations plan shall be accompanied by a cover letter requesting formation of the new sector and the approval of the operations plan. After the deadline to submit operations plans for new sectors, NMFS would notify the Council in writing of its intent to consider new sectors for approval. Prior to the approval of new sector(s), the Council would add review of new sectors to the agenda of the next available Council meeting (prior to NMFS final decision). Council comments would be submitted to NMFS prior to the end of the comment period for the proposed rule. The agency would explain any deviations from those recommendations when sectors are approved/disapproved.

The Council would also provide the Groundfish Committee an opportunity to discuss the proposals in a public meeting prior to the Council meeting.

NMFS would make a determination about formation of the proposed sector consistent with the APA, and would approve or disapprove the operations plan through the existing process.

Rationale: This option would add flexibility to the sector approval process, particularly with regard to the requirement for the Council to approve new sectors through a Council Action, and the requirement to submit a new sector formation proposal one year prior to when the sector wishes to begin operations. This option would continue to allow the Council to review new sector applications for consistency with the requirements and goals of the sector program in section 4.2.3 of Amendment 16 (p.98).

4.2.3 Modification to the Definition of the Haddock Separator Trawl

4.2.3.1 Option 1: No Action

If this option is adopted, there would be no change to the current definition of the haddock separator trawl at 50 CFR 648.85(a)(3)(iii)(A):

> *(A) Haddock Separator Trawl. A haddock separator trawl is defined as a groundfish trawl modified to a vertically oriented trouser trawl configuration, with two extensions arranged one over the other, where a codend shall be attached only to the upper extension, and the bottom extension shall be left open and have no codend attached. A horizontal large mesh separating panel constructed with a minimum of 6.0 inch (15.2 cm) diamond mesh must be installed between the selvedges joining the upper and lower panels, as described in paragraph (a)(3)(iii)(A) and (B) of this section, extending forward*

from the front of the trouser junction to the aft edge of the first belly behind the fishing circle.

(1) Two-seam bottom trawl nets—For two seam nets, the separator panel will be constructed such that the width of the forward edge of the panel is 80-85 percent of the width of the after edge of the first belly of the net where the panel is attached. For example, if the belly is 200 meshes wide (from selvedge to selvedge), the separator panel must be no wider than 160-170 meshes wide.

(2) Four-seam bottom trawl nets—For four seam nets, the separator panel will be constructed such that the width of the forward edge of the panel is 90-95 percent of the width of the after edge of the first belly of the net where the panel is attached. For example, if the belly is 200 meshes wide (from selvedge to selvedge), the separator panel must be no wider than 180-190 meshes wide. The separator panel will be attached to both of the side panels of the net along the midpoint of the side panels. For example, if the side panel is 100 meshes tall, the separator panel must be attached at the 50th mesh.

4.2.3.2 Option 2: Revised definition of the haddock separator trawl

The current definition of the haddock separator trawl would be changed, requiring that the horizontal large mesh separator panel must have mesh of a contrasting color to those sections of the net that it separates. All other net specifications would remain unchanged.

Rationale: Option 2 would make the separator panel in the trawl highly visible, thereby improving the identification of the separator panel in the net, facilitating enforcement of the haddock separator trawl. It is expected that a clearly recognizable separator panel would led to faster inspections by the United States Coast Guard, allowing vessels to continue on with normal fishing operations in a more timely manner.

4.3 Commercial and Recreational Fishery Measures

4.3.1 Groundfish Sector Monitoring Program

4.3.1.1 Option 1: No Action

No Action. The groundfish monitoring program would remain as defined in Amendment 16 and Framework 48, including the goals, objectives, and standards for monitoring the fishery, as well as the responsibility for funding monitoring, as outlined below.

The goals and objectives of the monitoring program (§ 648.11(l)) are as follows:

Goal 1: Improve documentation of catch

Objectives:

- Determine total catch and effort, for each sector and common pool, of target or regulated species.
- Achieve coverage level sufficient to minimize effects of potential monitoring bias to the extent possible while maintaining as much flexibility as possible to enhance fleet viability.

Goal 2: Reduce cost of monitoring

Objectives:

- Streamline data management and eliminate redundancy.
- Explore options for cost-sharing and deferment of cost to industry.
- Recognize opportunity costs of insufficient monitoring.

Goal 3: Incentivize reducing discards

Objectives:

- Determine discard rate by smallest possible strata while maintaining cost effectiveness.
- Collect information by gear type to accurately calculate discard rates.

Goal 4: Provide additional data streams for stock assessments

Objectives:

- Reduce management uncertainty and/or biological uncertainty.
- Perform biological sampling if it may be used to enhance accuracy of mortality or recruitment calculations.

Goal 5: Enhance safety of monitoring program

Goal 6: Perform periodic review of monitoring program effectiveness

Other Pertinent Program Elements:

- The primary goal of observers or at-sea monitors for sector monitoring is to verify area fished, catch, and discards by species and by gear type.
- For allocated groundfish stocks caught by sectors, the coefficient of variation must be met for each stock at the overall stock level.
- Sector operations plans will specify how a sector will monitor its catch to assure the sector catch does not exceed the sector allocation.
- Electronic monitoring may be used in place of actual observers or at-sea monitors if the technology is deemed sufficient for a specific trip based on gear type and area fished.
- Absent funding for NMFS at-sea monitoring (ASM) program, sectors are responsible for implementing industry-funded at-sea monitoring programs to monitor their fishing activities.
- Less than 100% electronic monitoring and at-sea observation will be required.

No Action would require that the groundfish sector ASM program would continue to be industry funded. Sectors are required to develop and implement independent ASM plans in their operations plans which are satisfactory to NMFS for monitoring catch and discards.

Methods to Set ASM Coverage Rates

ASM exemption for sector trips fishing 10" ELM gillnets on Monkfish DAS in SNE

The No Action alternative would maintain lower ASM coverage rates for sector trips on a Monkfish DAS in the SNE Broad Stock Area using 10" ELM gillnet gear. NMFS would continue to specify a lower coverage rate for these sector trips on an annual basis. Sector vessels operating on these trips are required to land all groundfish of legal size on all sector trips. Sector vessels that declare a monkfish DAS through Pre-trip notification system are prohibited from changing the declaration for that trip.

Coverage Needed to Achieve a CV30

The required ASM coverage level for each fishing year is based on realized stock-level CVs from the most recent year with complete data. Thus, for FY 2016, data from FY 2014 would be used (Table TBD).

The Council may select both Option 2 and Option 3.

4.3.1.2 Option 2: Lower ASM Coverage Requirements for sector trips fishing extra-large mesh (ELM) gillnet gear

ASM coverage would be removed for sector vessels fishing exclusively with extra-large mesh (ELM) gillnets of 10" or greater on a sector trip. Vessels making an ELM declaration would not be subject to ASM coverage. A vessel declaring an ELM trip would still be prohibited from changing its declaration for that trip, and would be required to retain and land all groundfish of legal size on the trip. This means that ELM gear can only be used on this type of trip (i.e., possession of, transiting with, or tending a smaller mesh on the same trip would be prohibited). NMFS would need to revise the PTNS to allow a vessel to indicate a trip would be fishing exclusively ELM gear while on either a groundfish DAS, a monkfish DAS, or both.

Rationale: Option 2 would reduce the cost of monitoring while maintaining coverage levels which are consistent with non-sector trips that target non-groundfish species. The majority of catch on sector trips using ELM gear is of non-groundfish stocks, such as skates, monkfish, and dogfish, while the ASM program was designed, primarily, to ensure that sectors do not exceed their sector allocation and to verify area fished, catch, discards by species, and gear type used. Removing the ASM requirement for trips fishing exclusively with ELM gear would reduce the cost of monitoring for sectors.

4.3.1.3 Option 3: Fishery Performance Criteria for Meeting CV Standard

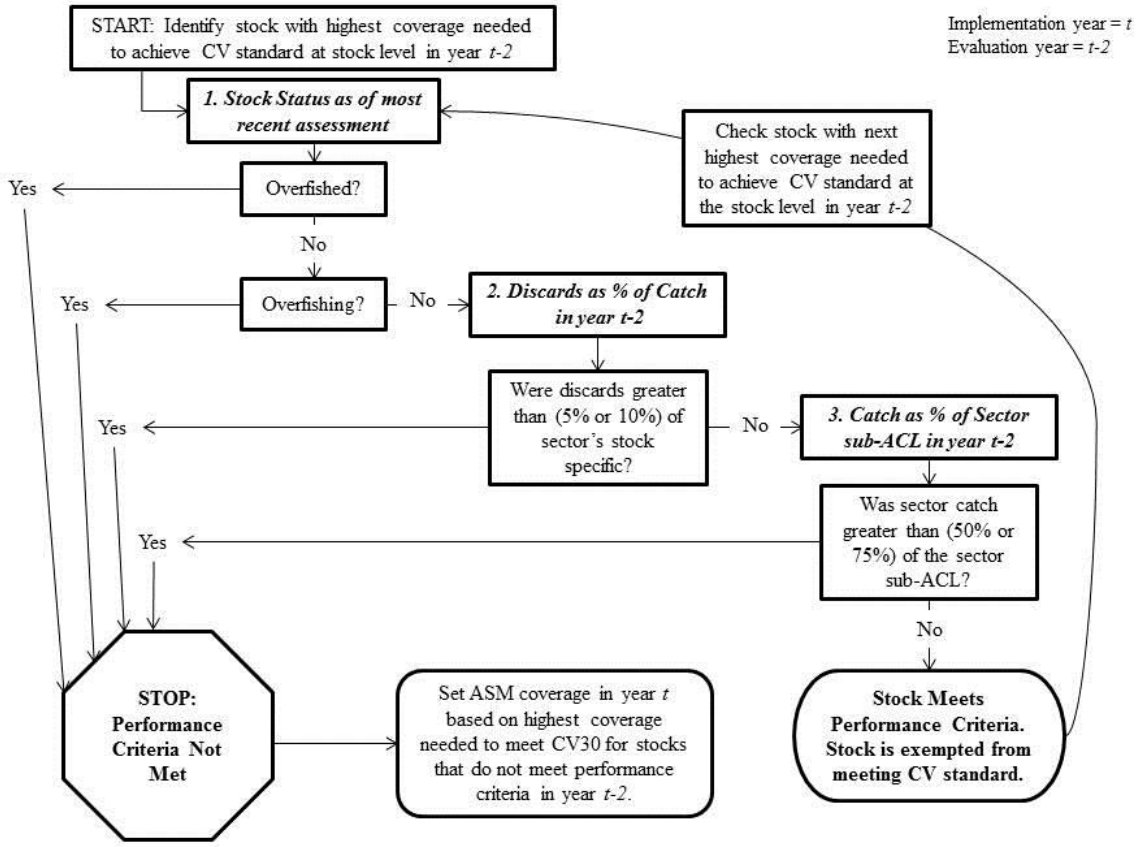
Fishery performance criteria would be used in setting groundfish sector ASM coverage levels. Stocks which meet all of the following performance criteria would not need to meet the CV standard. Realized ASM coverage levels would need to be consistent with the Goals and Objectives of groundfish monitoring program as adopted through FW48 (see 4.3.1.1).

The three fishery performance criteria would be:

1. Stock Condition – Not overfished and overfishing is not occurring.
2. The percentage of stock specific catch comprised of discards (5% - 10%).
3. The percentage of the sector sub-ACL harvested (50% - 75%).

In practice, ASM coverage levels would be set based on the stock with the highest coverage level needed to achieve the CV standard. Figure 1 describes the process for determining ASM coverage levels by iterating through each of the criteria.

Figure 1- Process for applying the performance criteria when setting ASM coverage rates.



Rationale: Option 3 reduces the cost of monitoring while maintaining ASM coverage levels sufficient to improve the documentation of catch, incentivize reducing discards, and provide additional data streams for stock assessments. By using performance criteria to identify healthy stocks for which percentage of the sub-ACL harvested and discards of stock-specific catch are low, the performance criteria reduce the chance that a realized stock specific CV above the standard would result in sectors exceeding their sub-ACL. In doing so, Option 3 seeks to balance the goals of minimizing the effects of potential monitoring bias to the extent possible while maintaining as much flexibility as possible to enhance fleet viability.

4.3.2 Management Measures for U.S./Canada TACs

This section considers changing fishery management measures as necessary to adjust catches of US/CA stocks. Eastern GB cod is a sub-unit of the overall GB cod stock, and the total ABC for GB cod includes the shared U.S./Canada TAC for the Eastern U.S./Canada Area. Sectors and state-operated permit banks receive two allocations of GB cod ACE, an Eastern GB cod ACE and a Western GB cod ACE.

4.3.2.1 Option 1: No Action

No Action. Eastern GB cod ACE can only be harvested in the Eastern U.S./Canada Area, and the remaining portion of a sector's total GB cod allocation can only be caught in the Western U.S./Canada Area. There would be no adjustment to the amount of the U.S. TAC for Eastern GB cod that is allocated to the Eastern U.S./Canada Management Area. Eastern GB cod is a sub-unit of the total GB cod stock. The amount of the shared U.S./Canada TAC for eastern GB cod is deducted from the total ABC for GB cod. Under the current regulations, the U.S. share of the eastern GB cod can only be caught in the eastern U.S./Canada Management Area, and the remaining portion of the total ABC is only available outside if the eastern U.S./Canada Management Area.

4.3.2.2 Option 2: Distribution of U.S. TACs for Eastern/Western Georges Bank Cod

A sector, or state-operated permit bank, may convert its Eastern GB cod ACE to Western GB cod ACE at any time during the fishing year, and up to two weeks into the following fishing year. A potential ACE conversion will be proposed to, and approved by, NMFS based on conditions such as (but not limited to) whether the applicant is complying with reporting or other administrative requirements. NMFS would notify the applicant if the conversion is approved or disapproved. Ensuring that sufficient ACE is available to cover the conversion is the responsibility of the sector or permit bank. Once a portion of Eastern GB cod ACE has been converted to Western GB cod ACE by a sector or permit bank, that portion of the ACE remains Western GB cod ACE for the remainder of the fishing year and may not be converted back. Western GB ACE may not be transferred to the Eastern U.S./Canada Area at any time.

Rationale: Option 2 would provide additional flexibility for sectors to harvest GB cod, while ensuring that the U.S. does not exceed its TAC for Eastern GB cod. Sectors and state run permit banks receive eastern GB allocations as a share of their overall GB cod allocation. This creates situations where vessels which have never fished in the Eastern U.S./Canada area have allocations of EGB cod. This limits the amount of cod that could be caught in the Western area, may unnecessarily reduce flexibility, and potentially limit fishing in the Western U.S./Canada Area even if a sector has not caught its entire allocation of GB cod. This alternative mirrors a provision adopted in FW 51, which allows sectors and state operated permit banks to move Eastern GB haddock ACE to the western GB fishery.

4.3.3 Modification to the Gulf of Maine Cod Protection Measures

4.3.3.1 No Action

No Action. There would be no changes to the Gulf of Maine Cod Protection Measures implemented on May 1, 2015 date through FW 53. For the recreational fishery, these measures include prohibiting the possession of GOM cod. The recreational possession limit for GOM cod would remain at zero, and could only be adjusted through a future Council action. For the commercial fishery, these measures include a suite of time and area closures (Table 3) that are subject to review when the GOM cod stock biomass reaches 50% of SSB_{MSY}. Commercial and

recreational vessels are not allowed to fish in the Whaleback cod spawning closure from April – June regardless of the status of the GOM cod stock

Table 12 – Timing and statistical areas of the Gulf of Maine Cod Protection Closures for the Commercial Fishery.

Month	***Sector Closures***	***Common Pool Closures***
May	132, 133, 138, 139, 140, and 125 north of 42° 20’	
June	132, 139, 140, 146, 147, and 125 north of 42° 20’	
July	*None*	*None*
August	*None*	*None*
September	*None*	*None*
October	*None*	124 and 125
November *December* *January*	125 and a portion of 124 defined by the following coordinates: 42° 00' N…70° 30' W 42° 00 N…70° 24' W 42° 15' N…70° 24' W 42° 15' N…70° 30' W	
February	*None*	*None*
March	*None*	121, 122, and 123
April	*None*	*None*

4.3.3.2 Option 2: Change in authority to modify GOM cod recreational possession limits

Allow the Regional Administrator to once again change the possession limit of GOM cod for the recreational fishery. The RA would be allowed to set the GOM cod possession limit for the recreational fishery as an accountability measure (AM) after consultation with the Council.

Rationale: Option 2 would increase flexibility in setting management measures for the recreational fishery by allowing recreational possession limits for GOM cod to be set by NMFS, and not through a Council action. FW 48 revised the recreational AM so that the regional administrator may adjust management measures to ensure that the recreational fishery will achieve, but not exceed, its sub-ACL, and Option 2 would return to this approach.

NMFS currently sets recreational management measures though consultation with the Council, and has the authority to modify bag limits, size limits, and seasons. Recreational measures are currently developed using a bio-economic model, which assumes that recreational anglers catch both cod and haddock while prosecuting the fishery. Removing the zero possession limit of GOM cod would expand the range of possible management outcomes based on the most recent scientific information.