



New England Fishery Management Council

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DRAFT MEMORANDUM

DATE: October 28, 2016
TO: Groundfish Committee
FROM: Groundfish Plan Development Team
SUBJECT: Re: Development of alternatives for Framework Adjustment 56 and sub-component analysis, version 1

The Groundfish Plan Development Team (PDT) met on Oct. 25, 2016 to discuss the development of alternatives for Framework Adjustment 56 (FW 56) and address Groundfish Committee motions from Oct. 3, 2016. The PDT updated the draft alternatives to reflect the recommendations of the Committee in the document dated Oct. 27, 2016. In addition, the PDT completed additional analysis for the development of a sub-Annual Catch Limit for northern windowpane flounder for the scallop fishery.

Range of Alternatives

4.1 Updates to status determination criteria stock status and annual catch limits

4.1.1 Revised status determination criteria

4.1.2 Annual Catch Limits

- US/Canada stocks and witch flounder
- Establish a Sub-Annual Catch Limit for northern windowpane flounder for the scallop fishery
- Increase the Sub-Annual Catch Limit for Georges Bank haddock for the mid-water trawl Atlantic herring fishery
- Exception to the scallop fishery AM implementation policy for the Georges Bank yellowtail flounder stock

4.2 Recreational Fishery Management Measures

4.2.1 Revise the recreational management measures process

PDT Discussion on Development of the Alternatives

Sub-component analysis

- The PDT completed its analysis of most stocks for the sub-component analysis. The PDT worked with ASMFC staff to discuss Southern New England/Mid-Atlantic winter flounder and Gulf of Maine winter flounder and MAFMC staff to discuss large-mesh non-groundfish fisheries catches of southern windowpane flounder. The PDT also examined the Whiting PDT's Annual Monitoring Report for FY 2015 to discuss small-mesh fisheries with groundfish bycatch.
- In some instances, the PDT is recommending that the percentage for a sub-component be reduced to zero based on recent low catches and the low risk of the total ACL being exceeded. In other cases, the PDT is recommending that the percentage for a sub-component be significantly increased based recent increases in catches within the sub-component relative to the total ACL or total catches.
- A few exceptions include those stocks with scallop fishery bycatch. The PDT plans to revisit those stocks after discussing the Scallop PDT's projected catch estimates under specifications for Scallop FW 28.
- Summary information is provided in **Attachment 1**.

Establish a Sub-Annual Catch Limit for northern windowpane flounder for the scallop fishery

- **Groundfish Committee Motion 2** (Oct. 3, 2016)
Motion to have the PDT analyze dropping FY 2014 from the evaluation of the fixed percentage for the sub-options for northern windowpane flounder sub-ACL to the scallop fishery.
Motion 2 carried by consensus and without objection.
- The PDT conducted the analysis requested by the Committee in two ways:
 - 1) Dropping CY 2014 from the analysis and using the most recent 4 or 9 years
 - 2) Adjusting the window of years used after dropping CY 2014, for 5 or 10 years
- The analysis is summarized in **Attachment 2**.

Increase the Sub-Annual Catch Limit for Georges Bank haddock for the mid-water trawl Atlantic herring fishery

- **Groundfish Committee Consensus Statement 1** (Oct. 3, 2016)
By consensus in 4.1.2.2.2 (Sub Option 2: Increase the Midwater Trawl Atlantic Herring Fishery Sub-ACL for Georges Bank Haddock), the review of the sub-ACL would include a range of 1% (status quo) up to 2% of the U.S. ABC.
- The PDT added language to the alternative for the review process for a sub-ACL of up to 2% of the US ABC and clarified that there would be a lower bound in this alternative with respect to the review (e.g., the status quo of 1% of the US ABC).

Exception to the scallop fishery AM implementation policy for the Georges Bank yellowtail flounder stock

- **Groundfish Committee Motion 1** (Oct. 3, 2016)
To Modify 4.1.2.2.3 (Sub-Option 3: Exception to the scallop fishery AM implementation policy for the GB yellowtail flounder stock) to include a 2 year sunset provision.
Motion 1 carried (7/4/0).
- The PDT modified the alternative to include a two-year sunset provision.
- Further, the PDT suggests that the Committee add an alternative to modify the sub-ACL percentage for the scallop fishery for GB yellowtail flounder. This would allow for an additional alternative in the range under consideration to meet the objectives specified by the Council and Groundfish and Scallop Committee.

Revise the recreational management measures process

- The PDT worked on developing approaches.
- One idea was to have measures implemented with specifications for several years and the evaluation of catch performance occur over the same period. The PDT thought that perhaps the proactive and reactive AM process would need to be modified, including clarification of the consolation process.
- As an example, measures could be set for multiple years when possible any time the recreational sub-ACLs would be established (e.g., specifications) and a formulaic process could be developed for the adjustment of management measures. Gulf of Maine cod and haddock are scheduled to be assessed in FY 2018 and specifications could be set for FY 2018 – FY 2020. Measures could be developed for three years to match specifications, so for FY 2018 – FY 2020. Proactive management measures could be adjusted during the three year period if 1) new sub-ACLs would be established or as reactive measures if 2) the recreational fishery was projected to exceed its sub-ACL by greater than 50% (or some other percentage) in any single year.
- In addition, see Attachment 3 for an overview of performance and management in the recreational fishery for Gulf of Maine cod and haddock since FY 2010.

Attachment 1

PDT Sub-Component Analysis

ABC/ACL Distribution

Background

Groundfish ABCs and ACLs are distributed to various components of the fishery. First, expected catch by Canadian vessels is deducted from the total ABC, and the amount remaining is the portion of the ABC available to U.S. vessels (U.S. ABC). Expected catch from state waters and the other sub-component is then deducted from the U.S. ABC¹. These sub-components are not subject to specific catch controls by the Groundfish FMP. As a result, the state waters and other sub-components are not allocations, and these components of the fishery are not subject to accountability measures if the catch limits are exceeded. Because the state waters and other sub-component values are based on expected catch, there is no downward adjustment for management uncertainty that applies to fisheries with specific allocations and accountability measures.

After the state and other sub-components are deducted, the remaining portion of the U.S. ABC is the amount available to the fishery components that receive an allocation (i.e., subject to accountability measures). Allocation are made first to non-groundfish fisheries (e.g., scallop, midwater trawl, small-mesh fisheries), and the portion of the U.S. ABC remaining is the commercial groundfish allocation.

Once the U.S. ABC is distributed to the various fishery components, sub-annual catch limits (sub-ACLs) are set by reducing the amount of the ABC distributed to each component to account for management uncertainty (i.e., the likelihood that management measures will result in a level of catch greater than the catch target). For each stock, management uncertainty is estimated using the following criteria: Enforceability and precision of management measures, adequacy of catch monitoring, latent effort, and catch of groundfish in non-groundfish fisheries.

¹ For GOM cod and haddock, the state waters and other sub-component are deducted from the commercial portion of the U.S. ABC (after allocating to the recreational fishery).

Canadian Catch of Stocks not Jointly Managed

Since fishing year 2010, expected Canadian catch has only been considered for Eastern GB cod and haddock and GB yellowtail, which are jointly managed with Canada. However, based on the results of recent assessments in 2015 and 2016, some Canadian catch of GB winter flounder, white hake, Atlantic halibut, and witch flounder does occur. Although these stocks are not jointly managed, Canadian catch should be accounted for when distributing the ABC/ACLs to ensure that biological objectives are met and total catch does not exceed the overall ABC.

Consistent with the approach used in FW 53 and FW55, the PDT recommends using the average catch of the most recent three years available (CY 2013- CY 2015) as the expected Canadian catch. The PDT worked with NEFSC stock assessment leads to obtain catch estimates for CY 2015 to complete this evaluation and update estimates since the 2015 Groundfish Operational Assessments. This expected Canadian catch should be reduced from the total ABC for the respective stock before distributing the remaining portion of the ABC to U.S. vessels (Table 1 and Table 2).

In addition based on the results of the 2016 benchmark assessment of witch flounder, the PDT does not recommend that the same approach to estimating Canadian expected catch is applied for witch flounder. Recent Canadian catch of witch flounder remains low with an average of 1 mt for CY 2013- CY 2015 and less than 5 mt in each year since 2010, although past catches since 2000 have been as high as 53 mt. Therefore, the PDT recommends continuing to track Canadian catches of witch flounder but not accounting for those catches at present in the distribution of the ABC because the risk of exceeding the overall ABC is very low.

Table 1- Estimate of expected Canadian catch for several groundfish stocks, based on the three year average catch (CY 2013- CY 2015). Source: NEFSC personal communication, Nov. 11, 2016, and Draft 2016 witch flounder benchmark assessment, NEFSC, October 2016.

Stock	Expected Canadian Catch (mt)
GB winter flounder	53
White hake	42
Atlantic halibut	34

Table 2- Summary of Canadian catch estimates for halibut, white hake, and GB winter flounder. Source: NEFSC personal communication, Nov. 11, 2016.

year	<u>Halibut</u>		<u>White Hake</u>		Canadian Landings	<u>GB winter flounder</u>		
	Canadian Landings	3 yr moving Avg	Canadian Landings	3 yr moving Avg		Canadian scallop discards	total catch	3 yr moving Avg
2010	23		104		45	109	154	
2011	29		86		52	88	140	
2012	32	28.0	83	91.0	83	79	162	152.0
2013	38	30.5	43	79.0	12	29	41	114.3
2014	33	34.3	59	61.7	12	47	59	87.3
*2015	31	34.0	25	42.3	13	47	60	53.2

*2015 Canadian scallop discards of GB winter flounder were assumed to be the same as 2014

Review of State Waters and Other sub-Components

The state waters and other sub-components values were initially established in Framework 44, which implemented specifications for fishing years 2010-2012, and a few sub-components were adjusted in Framework 47 for the 2012 fishing year. The PDT completed a comprehensive review of the sub-components for Frameworks 50 and 53, and most recently reviewed and adjusted the sub-components in Framework 55.

Table x summarizes the major highlights from the FY 2015 final catch report. The PDT also reviewed proposed 2017 specifications to determine if additional adjustments to the sub-components are necessary in anticipation of any expected ACL changes.

Table x – Summary of FY 2015 sub-Component Catches (as percent of sub-component caught)

	Stock	State sub-Component	Other sub-Component
<i>Sub-component 'overages'</i>	GB Cod	230%	193%
	GOM Cod	181%	--
	GOM Haddock	-	117%
	CC/GOM Yellowtail	137%	102%
	Flounder		
	Witch Flounder	171%	-
	Northern Windowpane		
	Flounder	-	262%
	Southern Windowpane	-	138%
Halibut	137%	-	
<i>Sub-Components with High Utilization ($\geq 75\%$)</i>	GB Cod	98%	-
	Plaice	76%	71%
	GOM Winter Flounder	92%	-
	Northern Windowpane		
	Flounder	84%	-
	Ocean Pout	74%	95%
Wolffish	99%	-	
<i>Sub-Components with Low Utilization ($\leq 25\%$)</i>	GB Yellowtail Flounder	-	0%
	SNE/MA Yellowtail Flounder	15%	22%
	Redfish	4%	1%
	White Hake	2%	7%

PDT Recommendations for Changes to sub-Components

The PDT developed recommended changes to the state waters and other sub-components based on recent catch information (FY 2010-2015), expected ACL changes and management measures for 2016, stock abundance and availability, and other information. Table y summarizes the PDT's recommended changes for the 2017 fishing year.

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Table y – Summary of ABC Distribution to State and Other sub-Components (as percent of ABC)

Stock	State sub-Component						Other sub-Component					
	FW 47 (FY 12)	FW 50 (FY13-14)	FW51 (FY14)	FW53 (FY15-17)	FW55 (FY16-18)	FW56 (FY17-18)	FW 47 (FY 12)	FW 50 (FY13-14)	FW51 (FY14)	FW53 (FY15-17)	FW55 (FY16-18)	FW56 (FY17-18)
GB cod	0.01	0.01	0.01	0.01	0.03	0.05	0.04	0.04	0.04	0.04	0.13	0.19
GOM cod	0.10	0.10	0.10	0.10	0.08	0.13	0.05	0.05	0.05	0.05	0.03	0.03
GB Haddock	0.01	0.01	0.01	0.01	0.01	0.00	0.04	0.04	0.04	0.04	0.01	0.01
GOM Haddock	0.02	0.02	0.02	0.01	0.01	0.01	0.03	0.03	0.03	0.02	0.01	0.01
GB Yellowtail Flounder	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.02	0.01	0.01	0.00
SNE/MA Yellowtail Flounder	0.01	0.01	0.01	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.11	0.08
CC/GOM Yellowtail Flounder	0.03	0.06	0.06	0.07	0.10	0.11	0.02	0.02	0.02	0.05	0.06	0.06
Plaice	0.01	0.02	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02
Witch Flounder	0.03	0.03	0.03	0.03	0.07	3 yr avg	0.04	0.15	0.15	0.15	0.19	3 yr avg
GB Winter Flounder	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.03	0.03	0.09	0.05
GOM Winter Flounder	0.25	0.25	0.25	0.17	0.15	0.15	0.05	0.05	0.05	0.02	0.02	0.02
SNE/MA Winter Flounder	0.28	0.14	0.14	0.07	0.09	0.11	0.20	0.10	0.10	0.11	0.12	0.18
Redfish	0.01	0.01	0.01	0.01	0.01	0.00	0.04	0.02	0.02	0.02	0.02	0.00
White Hake	0.02	0.01	0.01	0.01	0.01	0.01	0.03	0.02	0.02	0.02	0.02	0.02
Pollock	0.05	0.06	0.06	0.06	0.06	0.03	0.09	0.07	0.07	0.07	0.06	0.06
Northern Windowpane	0.01	0.01	0.01	0.01	0.01	0.01	0.19	0.29	0.29	0.29	0.60	0.02 or 0.65
Southern Windowpane	0.10	0.10	0.10	0.10	0.06	0.05	0.70	0.34	0.34	0.34	0.40	0.50
Ocean Pout	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.09	0.09	0.1	0.14	0.14
Halibut	0.50	0.40	0.40	0.30	0.20	0.40	0.05	0.05	0.05	0.03	0.03	0.03
Wolffish	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.04	0.04	0.04	0.04	0.04

Note: Highlighted cells indicate changes from the previous specifications (RED = increase to sub-component percentage; GREEN = decrease to sub-component percentage).

REVISED Table 3 - Option 2 Revised Northeast Multispecies OFLs, ABC, ACLs, and other ACL sub-components for FY 2017-FY 2019 (metric tons, live weight), based on final sector rosters for 2016. Values are rounded to the nearest metric ton. Default specifications for FY 2019 are shown in italics, and remain in place through July 31st, 2019, published in the final rule to FW 55, May 2, 2016 and not adjusted for final sector rosters in 2016. Stocks which are underlined would be subject to adjustments in 2018 based on US/CA quotas. Sub-component values include adjustments for the PDT's annual sub-component review for most stocks except as noted.

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	2017	1,665	665	33	126		480	480		471	9		640
	2018	1,665	1,249	62	237		902	902		885	17		1,202
	2019		583				465			455	10		437
GOM Cod	2017	667	500	43	10		421	265	157	256	8		474
	2018	667	500	43	10		421	265	157	256	8		474
	2019		233				204			127	4		175
GB Haddock (MWT- 1%)	2017	258,691	57,398		574		53,438	53,438		53,087	351	534	54,545
	2018	358,077	77,898		779		72,523	72,523		72,047	476	724	74,026
	2019		125,327				5,007			4,963	44	51	27,264
GB Haddock (MWT - 2%)	2017	258,691	57,398		574		52,892	52,892		52,545	347	1,068	54,534
	2018	358,077	77,898		779		71,783	71,783		71,312	471	1,449	74,011
	2019		125,327				5,007			4,963	44	51	27,264
GOM Haddock	2017	5,873	4,534	33	33		4,177	3,017	1,160	2,985	32	42	4,285
	2018	6,218	4,815	35	35		4,436	3,204	1,231	3,170	34	45	4,550
	2019		2,176				1,552			1,107	14	16	1,685

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallop	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 Yellowtail Flounder	2017		207			32	165	165		162	2	4	201
	2018		354			55	282	282		277	4	7	343
	2019												
SNE/MA Yellowtail Flounder	2017		267	5	21	32	197	197		163	34		255
	2018		267	5	21	34	195	195		162	33		256
	2019						66			52	14		93
CC/GOM Yellowtail Flounder	2017	707	427	47	26		337	337		322	14		409
	2018	900	427	47	26		337	337		322	14		409
	2019		315				119			113	5		149
American Plaice	2017	1,748	1,336	27	27		1,218	1,218		1,198	21		1,272
	2018	1,840	1,404	28	28		1,280	1,280		1,259	22		1,337
	2019		644				448			439	9		491
Witch Flounder	2017	XXX	XXX	XXX	XXX		XXX			XXX	XXX		XXX
	2018	XXX	XXX	XXX	XXX		XXX			XXX	XXX		XXX
	2019	XXX	XXX	XXX	XXX		XXX			XXX	XXX		XXX
GB Winter Flounder	2017	1,056	702		35		647	647		642	5		682
	2018	1,459	702		35		647	647		642	5		682
	2019		511				233			231	2		264
GOM Winter	2017	1,080	810	122	16		639	639		607	32		776

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallop	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
Flounder	2018	1,080	810	122	16		639	639		607	32		776
	2019		378				224			212	12		284
SNE/MA Winter Flounder	2017	1,021	780	86	140		526	526		470	56		752
	2018	1,587	780	86	140		526	526		470	56		752
	2019		555				205			180	25		273
Redfish	2017	14,665	11,050				10,498	10,498		10,440	57		10,498
	2018	15,260	11,501				10,926	10,926		10,866	60		10,926
	2019		5,341				3,709			3,688	21		4,025
White Hake	2017	4,816	3,624	36	73		3,358	3,358		3,333	25		3,467
	2018	4,733	3,560	36	72		3,299	3,299		3,274	25		3,406
	2019		1,657				1,168			1,160	8		1,268
Pollock	2017	32,004	21,312	639	1,279		18,424	18,424		18,308	117		20,342
	2018	34,745	21,312	639	1,279		18,424	18,424		18,308	117		20,342
	2019		12,161				6,236			6,196	39		7,459
GOM/GB Windowpane Flounder (no Scallop sub-ACL, adjust sub-components)	2017	243	182	2	118		58	58			58		178
	2018	243	182	2	118		58	58			58		178
	2019		85				64				64		64

Stock	Year	OFL	US ABC	State Waters Sub-Component	Other sub-components	Scallop	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
GOM/GB Windowpane Flounder (Scallop – highest-46%)	2017	243	182	2	109	XXX	66	66			66		177
	2018	243	182	2	109	XXX	66	66			66		177
	2019		85				64				64		64
GOM/GB Windowpane Flounder (Scallop-lowest-2%)	2017	243	182	2	109	XXX	66	66			66		177
	2018	243	182	2	109	XXX	66	66			66		177
	2019		85				64				64		64
SNE/MA Windowpane Flounder	2017	833	623	31	312	209	52	52			52		603
	2018	833	623	31	312	209	52	52			52		603
	2019		292				218				218		218
Ocean Pout	2017	220	165	2	23		130	130			130		155
	2018	220	165	2	23		130	130			130		155
	2019		77				58				58		58
Atlantic Halibut	2017	210	124	50	4		67	67			67		120
	2018	210	124	50	4		67	67			67		120
	2019		74				55				55		55
Atlantic Wolffish	2017	110	82	1	3		72	72			72		77
	2018	110	82	1	3		72	72			72		77

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
	2019		39				29				29		29

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Attachment 2

Sensitivity analysis of dropping CY 2014 from the analysis to determine a scallop fishery sub-ACL for Northern windowpane flounder

Table 4- Evaluation of a fixed percentage when dropping CY 2014.

Calendar Year	<u>Catch Data</u>			<u>Calculation for Fixed percentages</u>	
	Scallop Limited Access Catch Estimate	Total catches for all fisheries	Scallop Gen. Cat. IFQ Catch estimate	2004-2015 (Ten years)	2010-2014 (Five years)
	X	Y	Z	(X+Z)/(Y+Z)	(X+Z)/(Y+Z)
2005	16.59	967.52	5	2.22%	
2006	73.07	682.92	5	11.35%	
2007	97.77	1091.46	3	9.21%	
2008	43.33	375.67	2	12.00%	
2009	15.45	439.56	5	4.60%	
2010	8.59	235.90	5	5.64%	5.64%
2011	32.72	179.84	1	18.65%	18.65%
2012	34.85	199.22	2	18.31%	18.31%
2013	63.37	354.81	3	18.55%	18.55%
		Number of years		9	4
		Mean (Average)		11.17%	15.29%
		Median		11.35%	18.43%
	Sub-Option 1A drop 2014	90th percentile		18.57%	18.62%
	Sub-Option 1B drop 2014	Range		2-19%	6-19%

Table 5- Evaluation of a fixed percentage when adjusting the window of years used after dropping CY 2014.

Calendar Year	<u>Catch Data</u>			<u>Calculation for Fixed percentages</u>	
	Scallop Limited Access Estimate	Catch	Total catches for all fisheries	Scallop Gen. Cat. IFQ Catch estimate	2004-2015 (Ten years)
	X	Y	Z	(X+Z)/(Y+Z)	(X+Z)/(Y+Z)
2004	6.94	327.52	9	4.74%	
2005	16.59	967.52	5	2.22%	
2006	73.07	682.92	5	11.35%	
2007	97.77	1091.46	3	9.21%	
2008	43.33	375.67	2	12.00%	
2009	15.45	439.56	5	4.60%	4.60%
2010	8.59	235.90	5	5.64%	5.64%
2011	32.72	179.84	1	18.65%	18.65%
2012	34.85	199.22	2	18.31%	18.31%
2013	63.37	354.81	3	18.55%	18.55%
			Number of years	10	5
			Mean (Average)	10.53%	13.15%
			Median	10.28%	18.31%
			90th percentile	18.56%	18.61%
			Range	2-19%	6-19%

Attachment 3

Recreational Fishery Catch Performance and Management Summary

Table 6- Summary of Gulf of Maine cod recreational catch performance and federal management (fishing year 2010 – 2016).

Fishing Year	Sub-Annual Catch Limit (mt)	Catch (mt)	Percent of catch limit taken (%)	Minimum Size (inches)	Bag Limit Fish per angler - daily	Season Open	Season Closed	Additional Notes
2010	2,673	1506.9	56.4	24	10	5/1/10 to 10/31/10 and 4/16/11 to 4/30/11	11/1/10 to 4/15/11	First year of sub-ACL 33.7% of ACL
2011	2,824	1640.3	58.1	24	10	5/1/11 to 10/31/11 and 4/16/12 to 4/30/12	11/1/11 to 4/15/12	First year of Gulf of Maine spawning protection area/ Whaleback each year closed 4/1 to 6/30 no recreational gear capable of catching groundfish
2012	2,215	937.4	42.3	19	9	5/1/12 to 10/31/12 and 4/16/13 to 4/30/13	11/1/12 to 4/15/13	
2013	486	639.3	131.5	19	9	5/1/13 to 10/31/13 and 4/16/14 to 4/30/14	11/1/13 to 4/15/14	
2014	486	623.3	128.3	21	9	5/1/14 to 8/31/14	9/1/14 to 11/14/14	Replaced by interim action on 11/15/14
				n/a	0	closed	11/15/14 to 4/30/15	2014 interim action: Seasonal 30-minute block closures, no recreational gear capable of catching groundfish in closures
2015	121	84.5	69.8	n/a	0	Closed year-round		Interim

Fishing Year	Sub-Annual Catch Limit (mt)	Catch (mt)	Percent of catch limit taken (%)	Minimum Size (inches)	Bag Limit Fish per angler - daily	Season Open	Season Closed	Additional Notes
								action Seasonal closures removed on 5/1/16
2016	157			24	1	8/1/16 to 9/30/16	5/1/16 to 7/31/16 and 10/1/16 to 4/30/17	

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Table 7- Gulf of Maine haddock recreational catch performance and federal management (fishing year 2010 – 2016).

Fishing Year	Sub-Annual Catch Limit (mt)	Catch (mt)	Percent of catch limit taken (%)	Minimum Size (inches)	Bag Limit Fish per angler - daily	Season Open	Season Closed	Additional Notes
2010	324	297.4	91.8	18	no limit		n/a	First year of sub-ACL 27.5% of ACL
2011	308	238.5	77.4	18	no limit	5/1/11 to 1/5/12	n/a	<i>See Cod Whaleback closure</i>
				19	9	1/6/12 to 4/19/12	n/a	Accountability Measure (AM) for 2010 overage
				18	no limit	4/20/12 to 4/30/12	n/a	AM lifted after re-evaluation of data showing no 2010 overage
2012	259	280.7	108.4	18	no limit		n/a	
2013	74	231.5	312.2	21	no limit		n/a	
2014	173	658.6	380.7	21	3	5/1/14 to 8/31/14 and 11/1/14 to 2/28/15	9/1/14 to 10/31/14 and 3/1/15 to 4/30/15	<i>See Cod interim action</i>
2015	372	381.9	102.7	17	3	5/1/15 to 8/31/15 and 11/1/15 to 2/29/16	9/1/15 to 10/31/15 and 3/1/16 to 4/30/16	
2016	928			17	15	5/1/16 to 2/28/17 and 4/15/17 to 4/30/17	3/1/17 to 4/14/17	