



New England Fishery Management Council

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DRAFT MEMORANDUM

DATE: October 31, 2016
TO: Groundfish PDT
FROM: Scallop PDT
SUBJECT: **Projections of bycatch in Scallop Framework 28**

On October 28, 2016 the Scallop PDT reviewed preliminary bycatch projections for four individual groundfish stocks: Georges Bank Yellowtail Flounder, Southern New England Yellowtail Flounder, Southern Windowpane Flounder, and Northern Windowpane Flounder. The bycatch estimates in this memo are based on one of the specification options contained in FW28 (See Table 3, Section 2.3.2.1.1.1, Basic Run at 30 DAS). The Scallop PDT plans to continue to develop bycatch estimates for these stocks for all options contained in FW28, along with bycatch projection estimates for Cape Cod/Gulf of Maine yellowtail flounder.

Scallop Framework 28

Framework 28 is considering a range of allocations for FY2017 fishery specifications including ten (10) overall alternatives, which include slightly different DAS allocations and area closures (Table 3). The Council is considering changing how specification values are calculated for the IFQ component in this action. Under status quo, the IFQ component's quota would be allocated at 5.5% of the ACL. The Council is also considering allocating the IFQ quota based on projected landings associated with each specification run. Overall projected landings are expected to be about 52.4 million pounds if status quo is selected, or 51-47 million pounds if allocations are based on projected landings for all groups. Both options represent an increase from FY2016 levels. The No Action Alternative (2.3.1.1.4), is FY2017 default measures set in Scallop Framework 27, which are precautionary (limited access area effort for limited access vessels). This alternative is included in the analysis, but it is assumed that FW28 will replace those default measures. Status Quo (2.3.1.1.3) would carry forward the same specification configuration approved through FW27, which includes 34.55 DAS for FT LA vessels and three (3) access area trips in the MAAA. The Basic Run and Basic Run with Elephant Trunk Rotational Closure Flex (ETC Flex) Option are very similar overall, and only differ in terms of area closure options. Both options allocate four (4) 18,000 pound access area trips to FT LA vessels, with the same configuration of closures with the exception of the current ET Closure. Under the ETC flex option, FT LA vessels would have the choice to fish one of their AA trips in the Mid-Atlantic in either the current MAAA or in what is currently the Elephant Trunk Rotational Closure. All three DAS options use the same configuration on openings/closures, which includes the opening of the NLS extension as open bottom. While DAS values vary by option, the estimate of scallop removals from CA II is consistent across all alternatives (except Status Quo and No Action). Therefore, while the estimates of bycatch from open area fishing may vary in forthcoming estimates, the bycatch estimates from CA II for GB YT and Northern Windowpane are not

expected to change. Table 3 summarizes the range of specification alternatives under consideration in Scallop FW28 and Figure 1 shows the various area closure options under consideration.

Methods

Since bycatch sub-ACLs were first allocated to the scallop fishery in 2010 the Scallop PDT has calculated a projection of catch for the decision making process and evaluation of potential impacts. The methods have evolved slightly over time but in general there are three steps. First, a discard to kept ratio (D:K) is estimated from the most recent observer data available and applied to updated estimates of scallop and groundfish biomass. The estimates this year include a D:K ratio (fish catch / scallop retained) for all SAMS areas using observer data from July 2015 – June 2016, except for the Nantucket Lightship, Closed Area II, and Delmarva (Table 2). Data from FY2014 was used to generate D:K ratios for the NLS and CA II because this was the last year these areas were open to the entire fishery. All available observer records from FY2014 on were used to generate the D:K for Delmarva due to a low sample size. The D:K ratio was adjusted for projected changes in scallop exploitable biomass, based on the SAMS model. The D:K ratios were not adjusted for potential changes in bycatch biomass because no projections exist for the windowpane and GB YT flounder stocks. The scallop PDT discussed some of the results of the recent TRAC assessment for GB YT flounder, and noted the decline in survey catches since 2014. The PDT also had to make an estimate of D:K for the southern part of NLS extension since there is no observer data available for that area. VIMS completed a dredge survey in NLS extension in June 2016, and is funded to survey this area again in 2017. The PDT plans to review bycatch data from this survey next year. The preliminary flatfish bycatch projections for FY2017 assuming the Basic Run at 30 DAS are summarized in Table 1.

Table 1 – Preliminary yellowtail and windowpane flounder bycatch estimates for FY2017.

2.3.1.1.1 - Basic Run with 30 DAS (Projected Landings of 49.2 mil. Lbs)	
Georges Bank Yellowtail Flounder	
2017 Projections	Bycatch Estimate (mt)
<i>Georges Bank Open</i>	12.7
<i>Closed Area II South</i>	50.1
TOTAL GB YT ESTIMATE	62.8
Likely ABC (16% of US ABC)	~33 mt
Northern Windowpane Flounder	
2017 Projections	Bycatch Estimate (mt)
<i>Georges Bank Open</i>	27.6
<i>Closed Area II South</i>	79.8
TOTAL NWP ESTIMATE	107.4
Council considering sub-ACL	
SNE/MA Yellowtail Flounder	
	Bycatch Estimate (mt)
TOTAL SNE/MA YT ESTIMATE	11.9
Southern Windowpane Flounder	
	Bycatch Estimate (mt)
TOTAL SWP ESTIMATE	85.08

Table 2 – 2015 D:K ratios for yellowtail flounder and windowpane flounder by SAMS area. CAIIS and NLS based on FY2014 data. DMV based on data since FY2014.

Area	YT D:K	WP D:k
CLIIS	0.0343*	0.0586*
SF	0.0061	0.0067
Sch		0.0156
NEdge	0.0020	0.0201
NLS	0.0057*	0.0493*
SNE	0.0110	0.0402
LI	0.0014	0.0050
NYB	0.0001	0.0084
HCS	0.00003	0.0010
ET	0.0000	0.0003
DMV	0.0000	0.0005

Scallop PDT Discussion:

1. The flatfish bycatch projections are forecasts (with error) and should not be interpreted as precise estimates.
2. The GB YT estimate (62.8 mt) is roughly twice the expected scallop fishery allocation (~33 mt ABC) for the coming fishing year. The majority of the GB YT bycatch is anticipated to come from fishing effort in the Closed Area II S Access Area (all current specification alternatives have 1 AA trip per FT LA vessel at 18,000 lbs in CA II S this coming year). The D:K ratio being applied to the CA II S AA is from 2014, the last time the access area was opened. The PDT noted that the GB YT stock has been in poor condition, and that the average survey catches have declined annually since 2014. The PDT also noted that the TRAC assessment is based on an empirical approach resulting in unknown stock status for GB YT. With this in mind, the scallop PDT notes that the 50.1 mt projection of bycatch from CA II S AA in 2017 may be an overestimate. The group cited the decline in the average trawl surveys used in the TRAC assessment since 2014 as a potential way to adjust this estimate, but did recommend recalculating the projection using an ad-hoc method at this time.
3. The PDT also discussed the principles of rotational management, such as closing areas for multiple years to improve yield-per-recruit. In practice, F is reduced to zero in the years prior to an opening of an area. This leads to pulses of fishing effort in CA II AA where scallops and Georges Bank yellowtail co-exist, and results in lower bycatch when access areas are closed, and higher relative bycatch when the area re-opens for harvest. Low sub-ACLs of yellowtail and other species present significant challenges to rotational management, a cornerstone of the scallop FMP.
4. The Council has taken several steps in recent years to reduce/eliminate incentives for the scallop fishery to catch yellowtail, including the prohibition of possession/landing yellowtail. In addition to the use of a 10” twine top, there is a seasonal closure of CA II from Aug. 15 – Nov. 15 to reduce yellowtail bycatch. FW28 also contains measures to

prohibit RSA compensation fishing in CA II S to reduce potential impacts on yellowtail flounder.

5. The PDT noted that the University of Massachusetts Dartmouth's School for Marine Science and Technology (SMAST), in partnership with the Massachusetts Division of Marine Fisheries will be running the SMAST Bycatch Avoidance Program in CA II in FY2017. The voluntary program will be supported by scallop industry funding in 2017, and assists scallopers avoid areas with high bycatch of both yellowtail and windowpane flounder.
6. The PDT discussed the relatively large difference in the projected northern windowpane bycatch estimate from open areas on Georges Bank and the recent 2015 catch estimate. The PDT is concerned that the 2017 estimate for Georges Bank open may be underestimated because the estimate is generated using 2014 data and the status of northern windowpane improved at the last operational assessment. While the 2017 GB open estimate is smaller than 2015, the CA II South Extension (closed in 2016) was open in 2015. Effort and removals from this area may explain part of the difference in the estimates. The PDT plans to investigate this further as time allows.
7. The PDT had a limited discussion on southern windowpane and SNE/MA yellowtail. The group did note that the exploitable densities of scallops are expected to increase in the coming fishing year, which may help to reduce bycatch of these flatfish (less swept area).

Table 3 – Summary of Scallop Framework 28 fishery specification alternatives. Bycatch estimates based on 2.3.2.1.1.1, Basic Run and 30 DAS.

Approach to setting Specifications	Status Quo (IFQ at 5.5% of ACL) Section 2.3.1				Applying Spatial Management to Spec Setting (IFQ at 5.5% of PL) Section 2.3.2					
	Basic Run Options			Basic Run + ETC Flex Options						
FW 28 Measure	2.3.1.1.1	2.3.1.1.2	2.3.1.1.3	2.3.1.1.4	2.3.2.1.1.1	2.3.2.1.1.2	2.3.2.1.1.3	2.3.2.1.2.1	2.3.2.1.2.2	2.3.2.1.2.3
Description	Basic Run and 30 DAS	Basic Run + ETC Flex at 30 DAS	Status Quo From FY2016 (FW27)	No Action	Basic Run and 30 DAS	Basic Run and DAS set at F=0.4	Basic Run and DAS set at F=0.48	Basic Run + ETC Flex at 30 DAS	Basic+ETC Flex and DAS set at F=0.4	Basic+ETC Flex and DAS set at F=0.48
Landings	52.4	52.4	47.7	35.6	49.2	47.3	51.1	49.2	47.3	51.1
FT LA DAS	30	30	34.55	34.55	30	27.56	32.44	30	27.56	32.44
PT LA DAS	12	12	13.82	13.82	12	11.04	12.98	12	11.04	12.98
Total AA mt	12169	12170			11037	11037	11037	11038	11038	11038
Total AA lbs (mil. Lbs)	26.8	26.8			24.3	24.3	24.3	24.3	24.3	24.3
FT AA Allocation	72000	72000	51000	17000	72000	72000	72000	72000	72000	72000
(poss limit)	18000	18000	17000	17000	18000	18000	18000	18000	18000	18000
PT AA Allocation	28800	28800	20400	10200	28800	28800	28800	28800	28800	28800
(poss limit)	14400	14,400	10200	10200	14400	14400	14400	14400	14400	14400
MAAA	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
ETC Rotational	Closed	Open*	Closed	Closed	Closed	Closed	Closed	Open*	Open*	Open*
NLS	Open	Open	Closed**	Closed	Open	Open	Open	Open	Open	Open
CA II	Open	Open	Closed	Closed	Open	Open	Open	Open	Open	Open
IFQ Quota (mil. Lbs)	5.5	5.5	4.5	4.5	2.6	2.5	2.7	2.6	2.5	2.7
* Seasonal closure from July 1 - September 30										
** Same access as FY2016										

Figure 1 – Summary of specification alternatives under consideration in Scallop Framework 28.

