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New England Fishery Management Council

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DRAFT MEMORANDUM

DATE: December 5, 2013 (VERSION 4)
TO: Groundfish PDT
FROM: Scallop PDT
SUBJECT: Summary of Scallop FW25 measures that related to GF, and preliminary input on measures under consideration in GF FW51 that relate to the scallop fishery

Both Scallop FW25 and GF FW51 include measures that potentially impact both fisheries. This memo is a brief summary of the issues that will need to be addressed by both PDTs in order to assess the potential impacts on both fisheries. The original purpose of this memo was to facilitate discussion on a GF PDT conference call on November 5. It has been updated since that call and redistributed to the GF PDT to use for FW51 analyses. Because final action for Scallop FW25 has been delayed until January 2014, the sections of this memo related to potential AMs for SNE/MA WP have been removed. The PDTs will pick that issue up again after final action for FW51. The remaining sections include: 1) a summary of the scallop fishery specification alternatives in FW25 and their associated estimates of YT and SNE catch; and 2) Scallop PDT input and supporting analyses of a measure in FW51 to prohibit LA scallop vessels from possessing YT. The information in this memo will be integrated into FW51 before submission, but has been kept separate for the December Council meeting.

First, Scallop FW25 includes fishery specifications for FY2014. The PDT uses a model to estimate projected scallop catch in discrete areas based on estimated catch rates per area. An estimate of projected bycatch is also completed for the three stocks the scallop fishery has a sub-ACL allocation for; GB YT, SNE/MA YT, and SNE/MA windowpane flounder. At the November 14 Scallop Committee meetings several new specification alternatives were recommended for consideration. The Scallop PDT has recently completed these projected catch estimates, and preliminary values are provided in Section 1.0 below. These estimated catch levels are intended to help assess the potential impacts of the various scallop specification alternatives on bycatch and other fisheries in Scallop FW25. The GF FMP is NOT considering modifying the sub-ACL allocation amounts for FY2014, or the method used to set the sub-ACLs.

Those decisions have been made in previous frameworks to the GF FMP. For FY2014 the scallop fishery sub-ACLs are described in Table 1.

Second, there is a measure under consideration in GF FW51 that involves the scallop fishery. The Council included an alternative at the September 2013 Council meeting that would eliminate the current requirement for limited access scallop vessels to retain legal sized YT flounder. An alternative is under consideration in FW51 that would prohibit the retention of YT flounder for all scallop vessels (zero possession). The Scallop PDT had a brief discussion of this issue at their meeting on October 29 and has provided some initial input primarily focused on how the estimate of bycatch could potentially change if the prohibition is implemented. The Scallop PDT has also pulled together some information about YT catch in the scallop fishery from observer data, summarized in Section 2.0.

1.0 Preliminary estimates of GF bycatch for Scallop FW25 alternatives

Currently there are three main scallop specification alternatives under consideration:

1. No Action – default measures (23 DAS for FT vessels)
2. Alternative 2 - open area catch set at Fmsy (23 DAS) and access area effort in Delmarva, CA2, and NL; and
3. Alternative 3 - open area catch set at Fmsy (23 DAS) and access area effort in the same three access areas, but vessels can choose to take one trip in Delmarva or fish 5 open area DAS.

The Committee met on November 14 and passed several motions that may add three new alternatives to the document.

4. Alternative 4 – open area F set higher to increase total catch to 2013 levels (31 DAS) and access area effort the same as Alt 3
5. Alternative 5 – open area F set above Fmsy but below 0.48 (28 DAS) and access area effort the same as Alt 3
6. Alternative 6 – open area F set higher to increase total catch to 2013 levels but Delmarva closed, so one access area trip per vessel (37 DAS)

All of these scenarios will have potentially different impacts on bycatch. The tables below have the final estimates of YT and WP catch for each alternative. The estimate of WP catch is higher than previous estimates reviewed by the PDT because an error was found in the calculation of the d:k ratio. The PDT has provided two estimates for YT because the rates in CA2 were very different in 2012 compared to 2013. The same overall method was used as previous estimates but the PDT looked at CY2012 and CY2013 to date (Jan-Aug) to develop two separate estimates.

The estimated bycatch rates for GB YT are in Table 1, and the projected catches are in Table 2. The range of projected catch for GB YT is 22.4 mt (No Action using 2013 bycatch rates) to 108.5 mt (Alternative 6 using 2012 bycatch rates). The projected catch for the basic run for FW25 (Alternative 2) is between 58.2 and 96.6 mt, depending on which year of observer data is used. If bycatch rates are similar to 2013 and the fishery fishes in areas the model predicts, then

catch may be closer to 58.2 mt, just above the 2014 sub-ACL of 50.9 mt. Projected catch is above the sub-ACL for all of the specification alternatives.

The estimated bycatch rates for SNE YT are in Table 1, and the projected catches are in Table 2. The range of projected catch for SNE/MA YT is 42.4 mt (No Action using 2013 bycatch rates) to 76.5 mt (Alternative 6 using 2012 bycatch rates). The projected catch for the basic run for FW25 (Alternative 2) is between 49.1 and 54.8 mt, depending on which year of observer data is used. If bycatch rates are similar to 2013 and the fishery fishes in areas the model predicts, then catch may be closer to 49.1mt, below the 2014 sub-ACL of 66 mt for Alternative 2. Projected catch is above the sub-ACL for some of the specification scenarios.

The estimated bycatch rates for WP are in Table 3, and the projected catches are in Table 4. The range of projected catch for SNE/MA WP is 25.2 mt (No Action) to 79.1 mt (Alternative 6). If bycatch rates are similar to 2012 and the fishery fishes in areas the model predicts, then catch of WP should be well below the 2014 sub-ACL of 183 mt under any of the specifications alternatives under consideration.

Table 1 – 2014 estimated bycatch rates by area based on both 2012 and 2013 observer data

	GBC2	GBOp	SNEOp	Maop	NLS
2012 Y:S	0.0675	0.0125	0.0059	0.0073	0.0065
2014 Y:S	0.0626	0.0104	0.0041	0.0083	0.0145
2013 Y:S	0.0298	0.0092	0.0044	0.0076	0.0098
2014 Y:S	0.0321	0.0088	0.0044	0.0077	0.0106

Table 2 – 2014 estimated YT catches based on both 2012 and 2013 observer data

Alternative		GBC2	GBOp	GB	MASNEOp	NLS	MA/SNE
NA	2014 YT (from 2012)	0.0	26.6	26.6	45.6	0.0	45.6
NA	2014 YT (from 2013)	0.0	22.4	22.4	42.4	0.0	42.4
Alt2 (23 DAS)	2014 YT (from 2012)	70.0	26.6	96.6	45.6	9.2	54.8
Alt2 (23 DAS)	2014 YT (from 2013)	35.9	22.4	58.2	42.4	6.7	49.1
Alt3 (23 DAS Del flex)	2014 YT (from 2012)	70.0	27.7	97.7	47.5	9.2	56.7
Alt3 (23 DAS Del flex)	2014 YT (from 2013)	35.9	23.3	59.2	44.3	6.7	50.9
Alt 4 (31DAS)	2014 YT (from 2012)	70.0	33.7	103.7	58.5	9.2	67.7
Alt 4 (31DAS)	2014 YT (from 2013)	35.9	28.4	64.2	54.5	6.7	61.1
Alt 5 (28DAS)	2014 YT (from 2012)	70.0	31.3	101.3	54.0	9.2	63.2
Alt 5 (28DAS)	2014 YT (from 2013)	35.9	26.3	62.2	50.3	6.7	57.0
Alt 6 (37DAS/DmvCI)	2014 YT (from 2012)	70.0	38.5	108.5	67.3	9.2	76.5
Alt 6 (37DAS/DmvCI)	2014 YT (from 2013)	35.9	32.4	68.2	62.7	6.7	69.3

Table 3 - 2014 estimated bycatch rates by area, as well as observed bycatch rates from 2012 and 2013 observer data

	2012	2013	2014
maop	0.011	0.014	0.012
sneop		0.001	0.001
dmv			3.50E-05
nls	0.042	0.063	0.066

Table 4 – 2014 estimated WP catches based on 2012 observer data

	maop	sne	nls	dmv	Total
Alt 1 NoAction	21.3	3.9	0	0	25.2
Alt 2 - 23DAS	21.3	3.9	41.9	0.1	67.2
Alt3	23.4	4	41.9	0.1	69.4
Alt4 - 31DAS	27.4	5	41.9	0.1	74.4
Alt 5 - 28DAS	25.2	4.6	41.9	0.1	71.8
Alt 6 - 37 DAS nodmv	31.4	5.8	41.9	0	79.1

Table 5 – Sub-ACL allocations to the scallop fishery under the GF FMP

	2014	2015
GB YT	50.9	Not available
SNE/MA YT	66	64
SNE/MA WP	183	183

Input from Scallop PDT on bycatch projections

GB YT

- NMFS NERO website - 2012 bycatch estimate: 164 mt and 2013 preliminary bycatch estimate: 32.8 mt (through Nov26). CL2 D:K on NMFS NERO website was about 0.054 and 2013 CL2 D:K is less than 0.02.
- Important to note that the NMFS NERO method for calculating the scallop fleet's total YT catch estimate is different than the Scallop PDT's method. To calculate total YT catch in the scallop fleet NMFS uses (observed YT discards / observed kept ALL) as a discard rate. This discard rate is then applied to the dealer kept all to get the total discards for the trip. Then NMFS adds in dealer kept YT to get the total YT catch for the trip. The Scallop PDT calculates a rate using: ALL YT/kept scallops. LA vessels are required to retain all legal sized YT, but it is unclear if that is happening on all trips. If vessels retain more YT on observed trips than on unobserved trips the current NMFS calculation would be underestimating total YT catch. If FW51 changes that regulation and prohibits retention of YT, the estimate of overall YT catch may increase as a result.
- If only consider 2012 D:K ratio 2014 YT catch projection may be overestimated – if drop in CL-2 rates observed in 2013 also applies to open areas, projected bycatch would drop.
- The Council needs to recognize that all of the alternatives under consideration have higher projected GB YT catch than the 2014 sub-ACL. In particular the alternatives that allocate potentially more DAS could be used within the GB stock area exacerbating the issue. Alternatives with higher projected catch values have a greater chance of exceeding the sub-ACL and overall ACL, thus potentially triggering AMs for the scallop fishery.
- The fishery will need to do as much as possible to avoid YT during the year to stay under the sub-ACL.

SNE/MA YT

- NMFS NERO website - 2012 bycatch estimate: 56.5 mt and 2013 preliminary bycatch estimate: 35 mt (through Nov26)

SNE/MA WP

- NMFS NERO website - Preliminary bycatch estimate for 2013: 84 mt (through Nov 26)
- Less WP catch is expected in 2014 compared to recent years because DAS are lower and HC will be closed. HC has been fished more heavily in recent years. The overall bycatch rate of WP was lower in 2012 compared to 2011 and 2010.

2.0 Zero possession limit of YT in GF FW51

The PDT discussed this measure very briefly at the October 29 Scallop PDT meeting. The major issue discussed was that whatever measure is adopted (No Action or zero possession) it will be important that the correct method for estimating discards is applied. For example, if scallop vessels are prohibited from keeping YT, the ratio of discarded YT to kept scallops will reflect total YT catch. On the other hand, currently vessels are required to keep legal size YT. So that kept catch is in the denominator of the d/k ratio used in the bycatch estimate. This makes sense if all scallop vessels are keeping all legal sized YT flounder. But the Scallop PDT is not sure this is the case and if time permits may explore if there is an observer effect in terms of kept YT on observed trips being higher than unobserved trips.

Minimum size for YT is 12 inches (30.5cm). LA scallop vessels have been required to retain legal sized YT since GF FW44 – about May 2010. In the past, LA vessels were restricted to a total possession limit of 300 lb per trip for all GF species combined. The last scallop assessment evaluated the full retention length of YT in scallop dredge gear – found to be 30-35cm. Therefore, YT less than 30cm are not fully retained in the gear.

To support the GF PDT analyses of this measure in FW51 the Scallop PDT:

- 1) summarized observer data on scallop trips since full retention of legal sized YT has been required (2011-2013) to get a better idea of the size distribution of YT bycatch and reason for discard in recent years;
- 2) summarized dealer data for scallop dredge gear landings of YT flounder to get a better sense of the total level of YT landings and potential impacts on the scallop fishery if FW51 prohibits possession of YT.

2.1 Disposition of YT catch from observed hauls (2011-2013)

In summary, most YT is discarded on observed hauls in the scallop fishery. Even fish that are required to be retained (YT larger than 30.5 cm) are discarded for a variety of reasons (Figure 1). Based on the distribution of YT catch on observed hauls, it does seem that smaller YT are not retained in the gear. Including all sizes observed, over 130,000 YT flounder were measured on observed hauls in the scallop fishery between 2011 and August 2013 (Table 6). Over 75% of those measured fish were discarded, and about 23% were kept.

Since the majority of these fish were legal size, it can be inferred that the majority of the scallop fishery has not been landing legal sized YT. Therefore, the potential benefits of the current requirement to land legal sized YT, in terms of reducing discards and improving estimates, has probably been lower than expected based on the relatively low level of compliance suggested by these data.

Figure 1 - YT length data from one haul per watch on all observed scallop trips

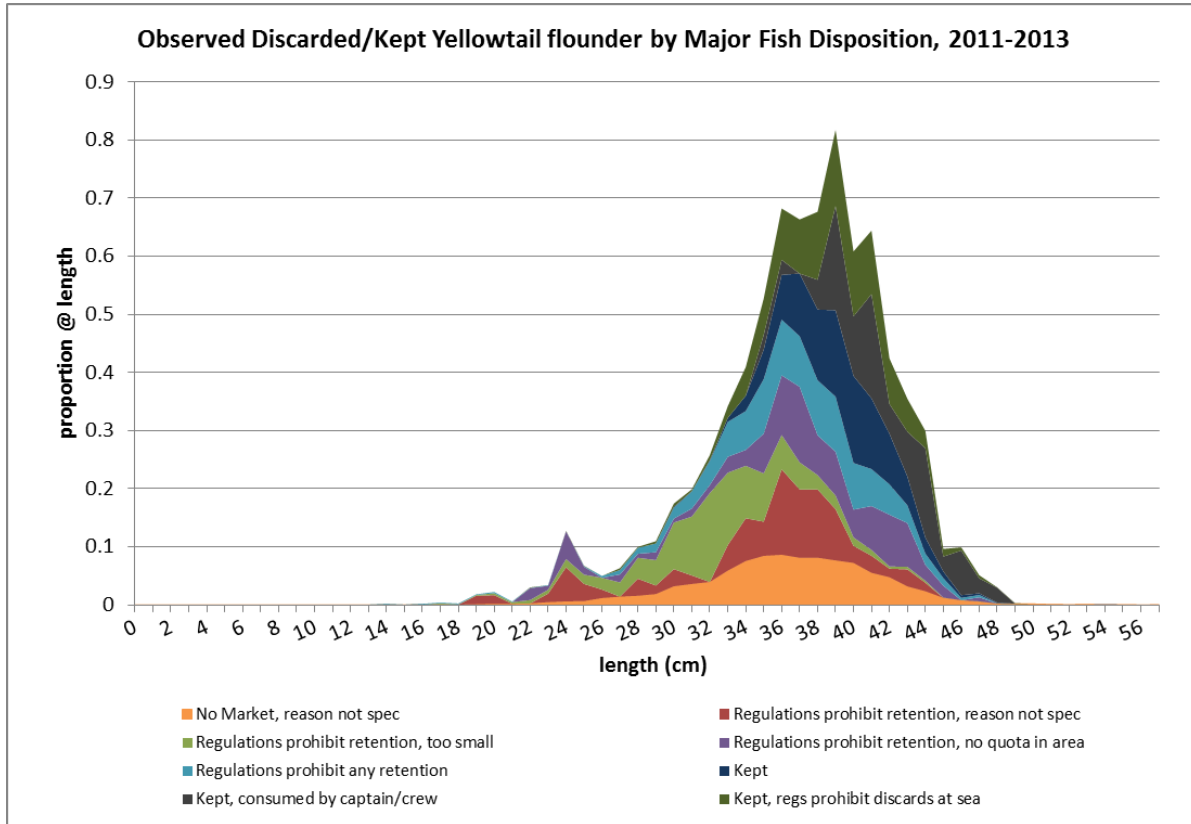


Table 6 – Number of YT measured by disposition category for all hauls where YT measured

Observer Data - Number of Yellowtail flounder Measured by Major Fish Disposition, 2011-2013										
YEAR	No Market, reason not spec	Regulations prohibit retention, reason not spec	Regulations prohibit retention, too small	Regulations prohibit retention, no quota in area	Regulations prohibit any retention	Kept	Kept, consumed by captain/crew	Kept, regs prohibit discards at sea	Grand Total	
2011	1531	60	582	146	585	690	2	589	4185	
2012	2763		1202		975	923	24	530	6417	
2013	1803	8	299		371	122	13	181	2797	
Grand Total	6097	68	2083	146	1931	1735	39	1300	13399	

Figure 2 - Disposition of YT DISCARDS on all observed scallop hauls by year and area

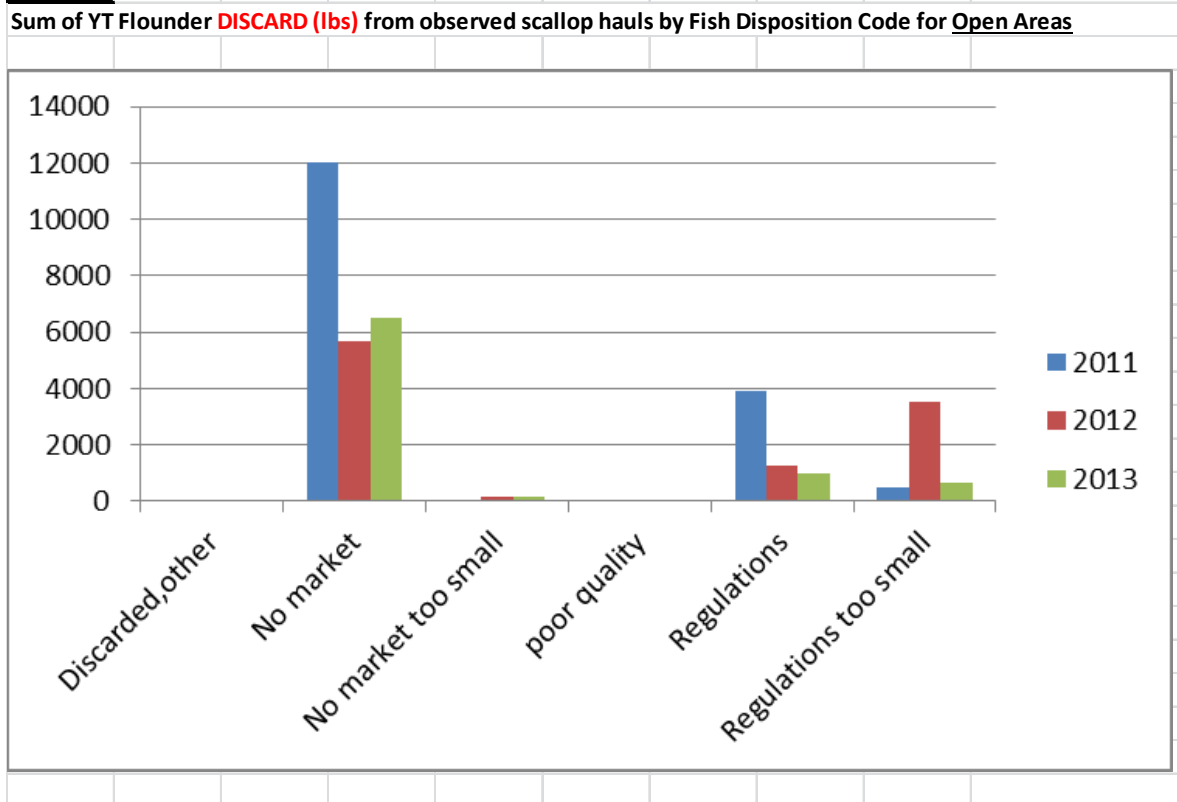
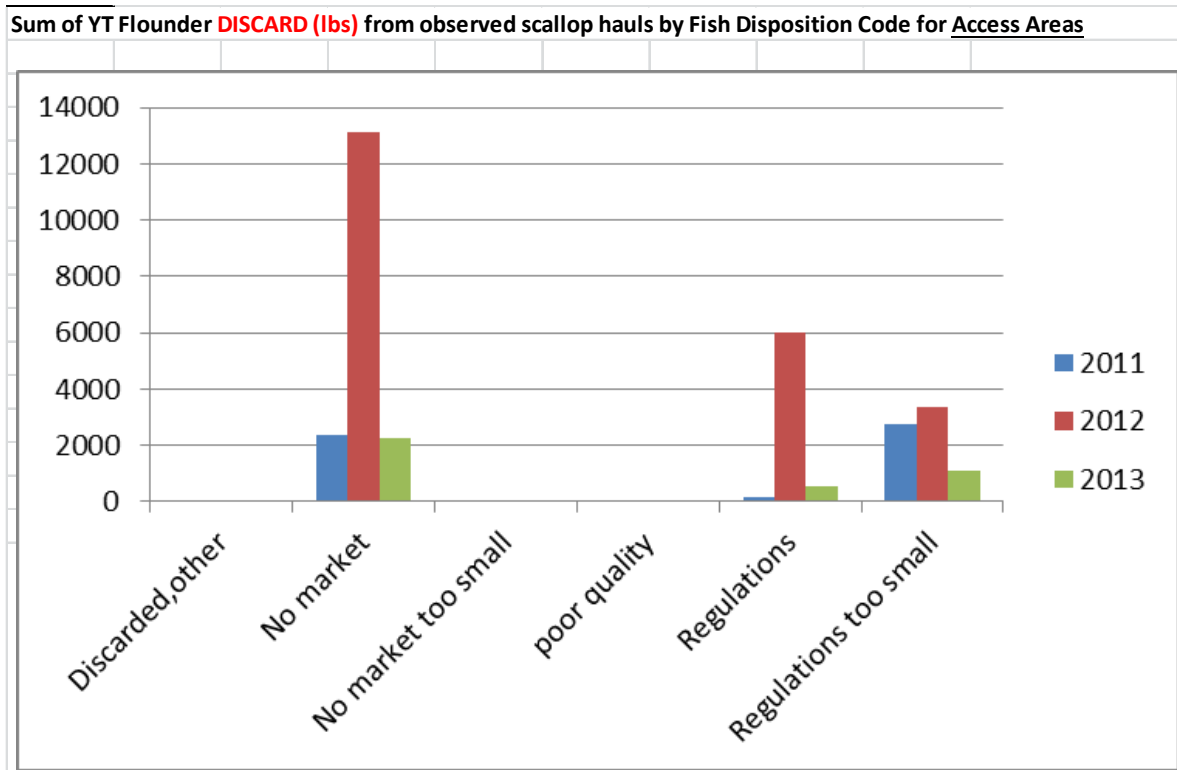
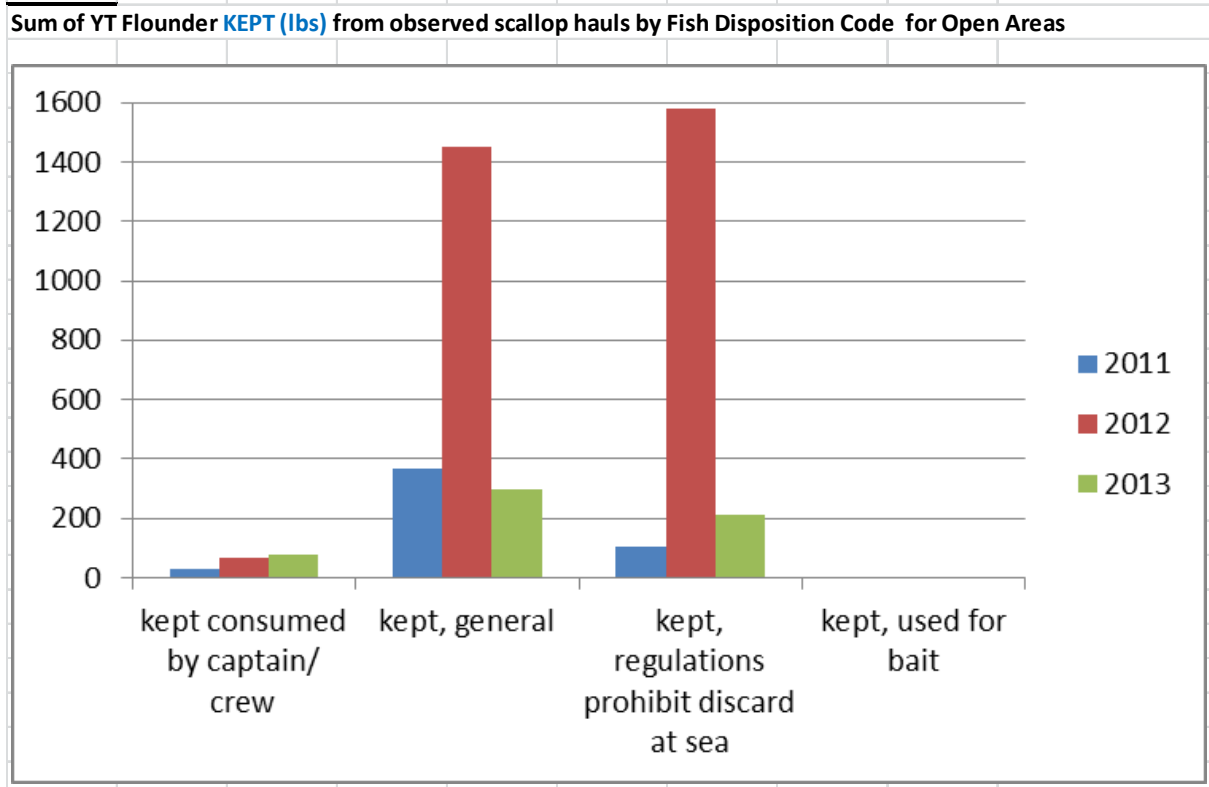
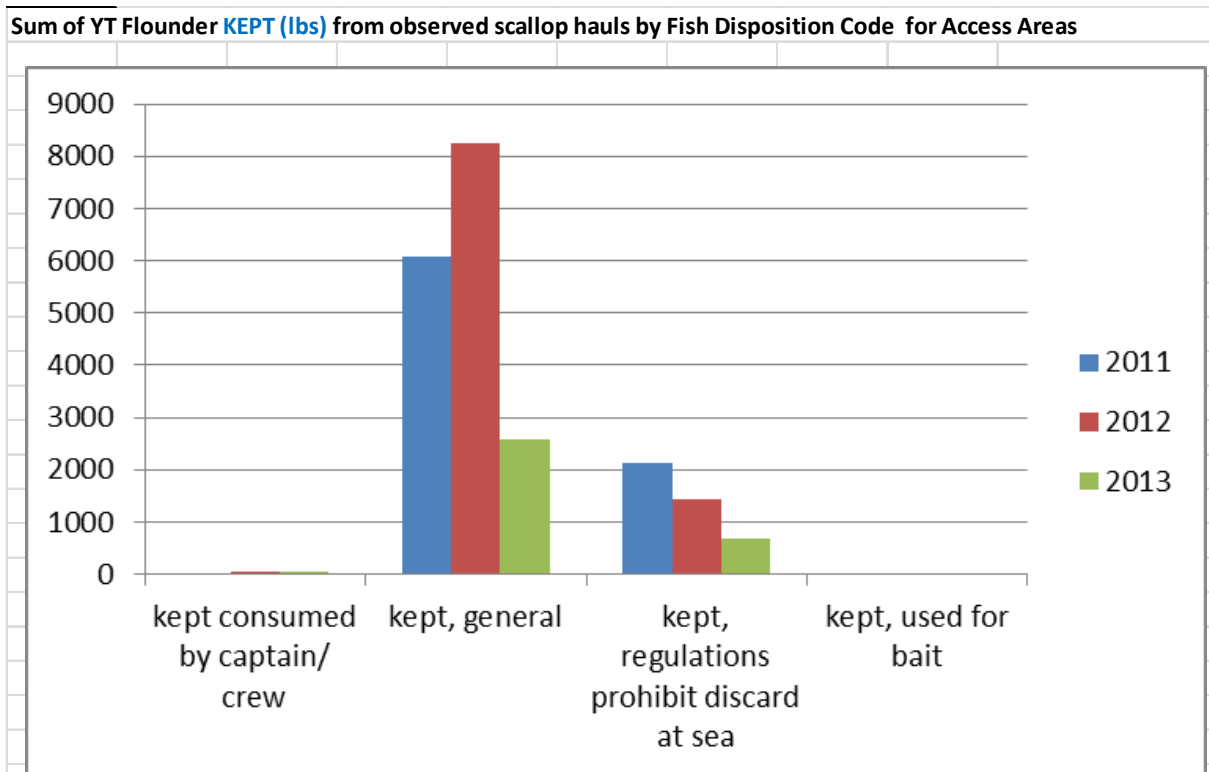


Figure 3 – Disposition of all observed YT KEPT on all observed scallop hauls by year and area



2.2 YT landings for LA scallop vessels

More recently the Scallop PDT summarized YT *landings*, or kept catch, in the scallop fishery. The following tables include all trips by LA scallop vessels from all areas. Only a small subset of these vessels landed any yellowtail in the 2009-2011 fishing years. The majority of the vessels that landed yellowtail had full-time permits (including FTSD and FTTRW permits). However, yellowtail landings more than tripled in 2011 even though the number of vessels that landed yellowtail remained the same. Then yellowtail landings declined, however, in 2012 fishing year by almost 30%, even though number of LA vessels with yellowtail landings increased from 61 in 2011 to 81 in 2012. The numbers for yellowtail catch was pretty low so far in the 2013 fishing year (**Table 7**).

Table 7. Scallop and yellowtail landings by scallop limited access vessels (Dealer data)

Fishyear	Values	Vessels with Yellowtail landings	No yellowtail landings	Grand Total
2009	Scallop lb.	2,752,848	49,348,949	52,101,797
	Yellowtail lb.	36,989	-	36,989
	Number of vessels	19	325	344
2010	Scallop lb.	9,604,501	43,879,121	53,483,622
	Yellowtail lb.	95,246	-	95,246
	Number of vessels	60	289	349
2011	Scallop lb.	10,057,520	44,317,622	54,375,142
	Yellowtail lb.	319,910	-	319,910
	Number of vessels	61	289	350
2012	Scallop lb.	13,855,255	39,269,166	53,124,421
	Yellowtail lb.	226,748	-	226,748
	Number of vessels	81	267	348
2013	Scallop lb.	4,593,347	29,744,058	34,337,405
(Preliminary)	Yellowtail lb.	34,045	-	34,045
(Mar-Nov)	Number of vessels	43	296	339

The trends for the yellowtail revenue for limited access vessels were similar to the trend in landings, revenues almost tripled from \$136,952 in 2010 to \$361,068 in 2011, but declined in 2012 and 2013 (Table 8). Table 9 shows the average landing and revenues by LA vessels that landed yellowtail. Average yellowtail revenue constituted less than 0.5% of the average scallop revenue in 2009-2013 fishing years, average of about \$2-6,000 dollars per vessel depending on the year.

Table 8. Scallop and yellowtail revenues for the scallop limited access vessels (Dealer data)

Fishyear	Values	Vessels with Yellowtail landings	No yellowtail landings	Grand Total
2009	Scallop Rev.	17,940,970	317,898,267	335,839,237
	Yellowtail Rev.	52,377	-	52,377
2010	Scallop Rev.	78,844,629	352,319,683	431,164,312
	Yellowtail Rev.	136,952	-	136,952
2011	Scallop Rev.	101,366,017	439,281,278	540,647,295
	Yellowtail Rev.	361,068	-	361,068
2012	Scallop Rev.	138,911,631	378,971,301	517,882,932
	Yellowtail Rev.	283,076	-	283,076
2013*	Scallop Rev.	52,819,011	333,755,591	386,574,602
	Yellowtail Rev.	45,039	-	45,039

***FY not complete**

Table 9. Average Scallop and yellowtail landings and revenues (limited access vessels that landed yellowtail, Dealer data)

Fishyear	Number of vessels	Avg.Scal.l b.	Avg.yel. Lb.	Avg.scal. rev.	Avg.yel. rev.	% of yel.rev.
2009	19	144,887	1,947	944,262	2,757	0.3%
2010	60	160,075	1,587	1,314,077	2,283	0.2%
2011	61	164,877	5,244	1,661,738	5,919	0.4%
2012	81	171,053	2,799	1,714,958	3,495	0.2%
2013*	43	106,822	792	1,228,349	1,047	0.1%

***FY not complete**

2.3 Overall input from Scallop PDT on zero retention in FW51

In summary, the requirement to land all legal sized YT under FW44 was expected to reduce discards of YT and improve estimates of scallop fishery catches of YT, to the extent vessels complied with the requirement. Based on observer data from 2011-2013 it does not appear that discards have been reduced substantially because the majority of legal sized YT is still being discarded. In addition, if most legal sized YT flounder are still being discarded, the overall estimates of scallop fishery catches have likely not improved as a result of this requirement. If compliance improves, some of these potential benefits may be more realized.

If scallop vessels are prohibited from retaining and landing YT there could be some economic loss for vessels that have been landings YT. Only a relatively small proportion of the LA fishery is currently landing YT, about 60-80 vessels depending on the year. The number of vessels landing YT does seem to have increased since the requirement to land legal sized YT went into

effect in May 2011, but the majority of LA vessels do not land YT. Total YT landings increased in 2011, but declined again in 2012 and 2013. Average revenue per vessel that has landed YT is about \$2,000-6,000 dollars, or less than 5% of total revenue. Therefore, the impact of zero possession would only impact a relatively small proportion of the fishery, and impacts would be expected to be small since YT revenue is a very small percentage of total revenue for these vessels.

Finally, if some LA vessels are targeting YT as a result of the current requirement to retain all legal sized YT, that could have potentially negative impacts on the overall scallop fishery if it increases YT catch and causes the ACL to be exceeded, triggering AMs for the scallop fishery.