

At the September 13, 2011 Committee meeting the Committee discussed the 2010 observer data and the estimate of YT flounder catch in the scallop fishery relative to the YT sub-ACL.

The estimates presented at the meeting were:

78,526 pounds of GB YT, or 24.4% of the total sub-ACL; and  
290,849 pounds of SNE/MA YT, or 97.7% of the total sub-ACL.

The Advisors and Committee spent a substantial amount of time reviewing the data for the LAGC fishery in SNE/MA since FW23 is considering implementation of an AM for that segment of the fishery if the YT sub-ACL is exceeded.

Both the AP and Committee were surprised by the high bycatch estimate of SNE/MA YT for the LAGC fishery. The estimate is based on 106 observed LAGC trips with tows within the SNE/MA stock area; including ten within the existing YT AM area for SNE/MA (statistical areas 537, 539 and 613). It was noted that all LAGC observed trips within the SNE/MA YT AM area were in statistical area 613, none in 537 or 539.

During the meeting several speakers suggested that higher bycatch rates were likely from observed LAGC *trawl* trips in statistical area 613, and not LAGC trips using dredge gear. That could not be confirmed at the meeting because the data were not stratified by gear type. Immediately following the meeting all observed trips were stratified by gear type and the distribution of FY2010 observer trips by permit category, area, as well as gear type are summarized in Table 1.

**Table 1. Distribution of 2010 observed scallop trips by permit, area and gear type**

	GB		SNE/MA	
	Dredge	Trawl	Dredge	Trawl
Limited Access	8	0	214	1
General Category	0	0	75	31

*Source: Observer database, Northeast Fisheries Observer Program (report run on Sept. 15, 2011)*

Data were not originally stratified by gear because in the past there were fewer observer trips of the LAGC trawl fishery in open areas, and the YT assessment does not currently estimate discards from *scallop* trawl gear. The YT assessment does estimate discards from "fish trawl gear" used by LAGC vessels, but those discards are included as part of the total bycatch from all otter trawl fish gear. Therefore, when this estimate was originally completed all permit types and gear types were combined.

The table attached to this document, FY 2010 Yellowtail Flounder Catch in the Scallop Fishery, summarizes the final estimate of YT catch in the scallop fishery stratified by gear type. For SNE/MA, separate bycatch rates are estimated for the LA dredge fishery, the LAGC dredge fishery, and the LAGC trawl fishery. A separate rate for the LA trawl fishery could not be calculated because there were in-sufficient observer coverage (n=1) for that fleet.

For GB, the bycatch rate for the LA dredge fishery was used for the small amount of LAGC dredge fishing in that area because there were no observed LAGC dredge trips in GB. There were no observed LA or LAGC trawl trips in GB, and likely no or very little landings from that gear type in GB either. An estimate of YT catch in GOM/CC has been completed, but there is no sub-ACL of

GOM/CC YT allocated to the scallop fishery for that stock since the total catch of YT is less than 1% of the total GOM/CC YT ACL.

**To summarize, the final estimates are:**

**38,884 pounds of GB YT, or 12.1% of the total sub-ACL; and**  
**249,196 pounds of SNE/MA YT, or 83.7% of the total sub-ACL.**

This final estimate is lower than the previous estimate for two reasons. First, this is the first estimate that has used observer data for the full 2010 fishing year (March 1, 2010 – February 28, 2011). All previous estimates included data for the 2010 calendar year because observer data were not available for January and February 2011 until very recently. Second, this estimate stratifies the LAGC fishery by gear type (dredge and trawl separately).

Once the fleets are separated by gear type it is evident that the LAGC trawl fishery is the fleet with higher SNE/MA YT bycatch, and not the LAGC dredge fishery. The LAGC dredge fleet has a similar YT bycatch rate to the LA dredge fishery. Table 2 summarizes the various YT bycatch rates and catch estimates for SNE/MA. Overall, the LA fishery caught about 96% of all scallops in the SNE/MA area and 80% of the YT. The LAGC dredge fishery caught about 3% of all scallops in the SNE/MA area and 3% of the YT catch, and the LAGC trawl fishery caught about 1% of the scallop catch in SNE/MA and 17% of the YT. The fleets combined caught 83.7% of the allocated 2010 YT sub-ACL.

**Table 2. 2010 SNE/MA YT catch by permit and gear type**

	<b>LA (dredge and trawl)</b>	<b>LAGC dredge</b>	<b>LAGC trawl</b>	<b>Total YT</b>
Kept All	407,335,499	12,936,936	3,216,928	
YT discard rate	0.00047	0.00057	0.01323	
Estimate of TY discards	193,247	7,342	42,551	
Prorate SNE/MA LA YT catch	6,056	-	-	
<b>SNE/MA YT catch</b>	<b>199,303 (80%)</b>	<b>7,342 (3%)</b>	<b>42,551 (17%)</b>	<b>249,196 (83.7% of total sub-ACL)</b>

*Please note that these numbers are from the attached report run on September 15, 2011.*

To date, FW23 has only considered YT AM alternatives for the LAGC dredge fishery. Specific AMs for the LAGC trawl fishery was overlooked since data had not been stratified by gear until very recently. Therefore, the Council can:

1. Develop specific YT AMs for the LAGC trawl fishery and delay final action on FW23 until November Council meeting.

This would likely push back implementation of FW23 until May/June 2012, rather than March 2012. Developing, analyzing, and preparing final document for Council to take final action in November will be difficult and if complex measures are developed or other issues come up, final action could be pushed back as late as January 2012. If there is an overage of the FY2011 YT sub-ACL, AMs for the LA fleet would be effective on March 1, 2012. If FW23 is not effective until May 2012, that is the earliest that AMs could be effective for the LAGC fishery. In addition, other measures in FW23 would be delayed such as the turtle deflector dredge and revised YT AM schedule for the LA fishery.

2. Remove this issue from FW23 and wait to develop specific YT AMs for the LAGC trawl fishery until FW24.

Final action for FW24 is scheduled for September 2012. Current AMs effective until FW24 implemented. So if there is an overage in FY2011, the only YT AM in place would be the AM for the limited access fishery. If there is an overage in FY2012, FW24 should be in place to implement other AMs, if FW24 includes them and is not delayed.

In addition to deciding what to do about the LAGC trawl fishery in terms of YT AMs, the Council should decide if FW23 should include AMs for the LAGC *dredge* fishery. Both the AP and Committee ultimately supported adoption of the AM developed in FW23 for the LAGC dredge fishery, but that was based on analyses that combined the observer data for these fleets. There were still concerns about the distributional impacts of the proposed AM in FW23, and the Committee requested that staff work with industry to develop a different boundary for the YT AM, a sub-set of the area currently proposed. Staff has made some progress on this request, but stopped when updated results confirmed that the bycatch from the LAGC dredge fishery was relatively minor, about 3% of the total SNE/MA YT catch, compared to LAGC trawl vessels.

The Council can still make final recommendations at this meeting on the other issues in FW23: turtle deflector dredge; NGOM, VMS, and revising the YT AM schedule for the LA fishery.

## More detailed description of the LAGC trawl fishery

### ANNUAL DATA BY GEARCODE

Table 3. GEARCODES for VTR database

GEAR CODE	NEGEAR	GEAR NAME
OTF	50	OTTER TRAWL,BOTTOM,FISH OTTER
OTC	52	TRAWL,BOTTOM,SCALLOP DREDGE,OCEAN
DRC	400	QUAHOG/SURF CLAM
DRS	132	DREDGE,SCALLOP,SEA

Majority of the LAGC IFQ vessels are scallop dredge (DRS) vessels (106 in 2010) and a few (10 in 2010) are clam dredges (DRC). There were about 15 scallop trawls (OTC) and 47 fish trawls (OTF) that landed scallops in 2010. Scallop dredge vessels landed about 78% of the LAGC - IFQ scallop landings in 2010, while trawl vessels landed about 16% of the scallops in the same year.

Table 4. Number of LAGC-IFQ vessels and scallop landings by gear code (2010, VTR data)

Gear code	Data	2009	2010
DRC	Number of vessels	9	10
	% of Scallop landings	2%	3%
	Scallop landings (lb.)	75,828	61,838
DRS	Number of vessels	144	106
	% of Scallop landings	72%	78%
	Scallop landings (lb.)	2,604,892	1,550,149
OTC	Number of vessels	28	15
	% of Scallop landings	10%	9%
	Scallop landings (lb.)	372,907	172,600
OTF	Number of vessels	62	47
	% of Scallop landings	16%	10%
	Scallop landings (lb.)	587,863	203,174
Total number of vessels		243	178
% of Scallop landings		100%	100%
Total scallop landings (lb.)		3,641,490	1,987,761

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

## ANNUAL DATA BY GEARCODE and AREA

Most of the fish trawls (OTF) with LAGC IFQ permits are home ported in NY and NY while 9 are from MA and 12 are from other states. All of the OTC vessels (scallop trawl) are home ported in various Mid-Atlantic States. While OTF vessels landed considerable amounts of scallops in area 613 and in other Mid-Atlantic areas, OTC vessels landed scallops mostly in area 626 for scallops in 2010 (81% of total). About 72% of the scallop landings by the OTF vessels in areas other than 613 took place in statistical area 612. Figure 1 shows the boundaries of Northeast statistical areas.

**Table 5. Number of LAGC-IFQ vessels and scallop landings by gear code and area (2009, VTR data)**

Gear code	Data	537	539	613	Other	Grand Total
DRC	Number of vessels				8	9
	Scallop landings (lb.)				68,276	75,828
DRS	Number of vessels	28	16	14	134	144
	Scallop landings (lb.)	265,758	40,002	42,225	2,256,907	2,604,892
OTC	Number of vessels				28	28
	Scallop landings (lb.)				369,707	369,707
OTF	Number of vessels			14	57	47
	Scallop landings (lb.)			190,771	397,007	587,778

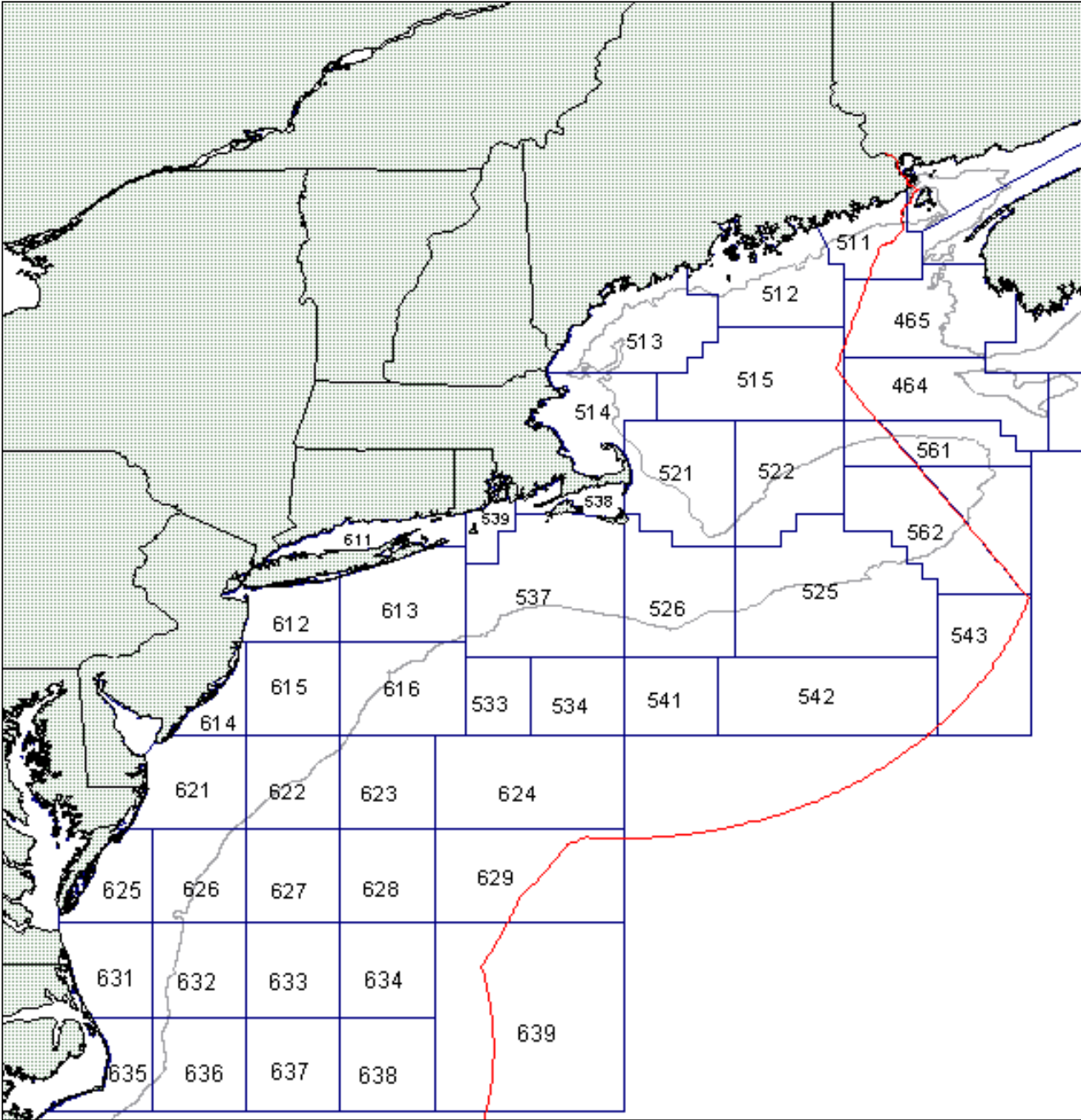
Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

**Table 6. Number of LAGC-IFQ vessels and scallop landings by gear code and area (2010, VTR data)**

Gear code	Data	537	539	613	Other	Grand Total
DRC	Number of vessels				10	10
	Scallop landings (lb.)				57,609	57,609
DRS	Number of vessels	16	13	7	98	106
	Scallop landings (lb.)	52,998	67,391	46,428	1,383,332	1,550,149
OTC	Number of vessels				15	15
	Scallop landings (lb.)				172,600	172,600
OTF	Number of vessels			13	44	47
	Scallop landings (lb.)			93,639	109,535	203,174

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

Figure 1. Northeast statistical areas



## ANNUAL DATA BY PORT

Majority of the OTF (fish otter trawls) with LAGC IFQ permits have a home state of NY and NY while 9 are from MA and 12 are from other areas. All of the OTC vessels (scallop trawls) are home ported in Mid-Atlantic states.

**Table 7. Number of OTF LAGC-IFQ vessels and scallop landings by homeport (2010, VTR data)**

Gear code	OTF
Year	2010

Home state	Data	Total
MA	Scallop landings	1,336
	Number of vessels	9
NY+NJ	Scallop landings	120,500
	Number of vessels	26
OTH-Mid.At	Scallop landings	81,338
	Number of vessels	12
Total scallop landings		203,174
Total number of vessels		47

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

**Table 8. Number of OTF vessels and scallop landings by homeport and area (2010, VTR data)**

Home state	Gear code	Data	613	Other Areas	Grand Total
MA	OTF	Scallop landings		1,336	1,336
		Number of vessels		9	
NY+NJ	OTF	Scallop landings	92,839	27,661	120,500
		Number of vessels	11	23	
OTH-Mid.At	OTF	Scallop landings	NA	80,538	80,538
		Number of vessels	NA	12	

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

## MONTHLY DATA

Scallop landings in area 613 are distributed around the year although largest landings occurred in January, April and November in 2010 (see also Table 10).

**Table 9. Number of active OTF vessels by month and area (2010 VTR data, LAGC-IFQ vessels)**

Month	Data	613	Other Areas	Grand Total
1	Number of vessels	9	13	22
	Scallop landings	15,114	6,195	21,309
2	Number of vessels			
	Scallop landings			
3	Number of vessels	6		6
	Scallop landings	7,856		7,856
4	Number of vessels	7	6	13
	Scallop landings	11,105	11,419	22,524
5	Number of vessels	7	11	18
	Scallop landings	6,042	20,262	26,304
6	Number of vessels	6	10	16
	Scallop landings	6,657	23,163	29,820
7	Number of vessels	6	9	15
	Scallop landings	7,785	9,352	17,137
8	Number of vessels	5	5	10
	Scallop landings	5,174	2,485	7,659
9	Number of vessels	8	17	25
	Scallop landings	8,570	13,758	22,328
10	Number of vessels	6	8	14
	Scallop landings	6,074	11,104	17,178
11	Number of vessels	8	10	18
	Scallop landings	10,421	7,109	17,531
12	Number of vessels	5	7	12
	Scallop landings	8,841	4,279	13,120

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.



**Table 10. Percentage composition of Scallop landings by fish trawls (OTF) month and area (VTR data)**

MONTH	612	613
1	3.10%	16.14%
2		
3		8.39%
4		11.86%
5	18.30%	6.50%
6	28.56%	7.11%
7	11.25%	8.31%
8		5.70%
9	17.02%	9.15%
10	13.78%	6.49%
11		11.13%
12		9.44%
<b>Grand Total</b>	<b>100.00%</b>	<b>100.00%</b>

Note: The data for 3 or less vessels are not shown to protect confidentiality. The trips with more than 1200lb. of scallop landings are excluded.

## DEPENDENCE ON SCALLOP REVENUE

Fish trawl (OTF) vessels primarily targeted scallops in statistical area 613 and the revenue from scallop generated on the average 73% of income in 2010 for a subset of vessels that landed more than 400lb. for the year in 2010. In other areas, summer flounder and squid are the primary species that generating approximately 59% of income and scallops rank third in terms of revenue generation with 17% of total as an annual average in 2010. IFQ scallop trawl vessels (OTC) derived on average 40% of their revenue from scallops and 32% of their revenue from summer flounder, although these proportions have varied from vessels to vessel.

Table 11. Percentage composition of Revenue by species (Averages for 8 OTF – LAGC IFQ vessels that landed more than 400 lb. in area 613 in year 2010)

AREA	Species	% of Total Revenue
613	ANGLER	3%
	FLOUNDER, SUMMER	11%
	SCALLOP, SEA	73%
	SQUID (LOLIGO)	5%
	Other species	7%
	<b>Grand Total</b>	<b>100%</b>
OTHER AREAS	ANGLER	2%
	BASS, STRIPED	5%
	FLOUNDER, SUMMER	30%
	SCALLOP, SEA	17%
	SCUP	4%
	SQUID (LOLIGO)	29%
	Other species	12%
	<b>Grand Total</b>	<b>100%</b>

Source: Dealer data

Table 12. Percentage composition of Revenue by species for scallop trawls vessels (Averages for 15 OTF – LAGC IFQ vessels that landed more than in year 2010)

Species	% of Total Revenue
DOGFISH SMOOTH	4%
FLOUNDER, SUMMER	32%
SCALLOP, SEA	40%
SHRIMP,BROWN	9%
Other species	15%
Grand Total	100%

## SUMMARY OF LAGC IFQ OBSERVED TRIPS USING TRAWL GEAR

In 2010 31 trips were observed on LAGC trawl vessels. Most trips had zero YT bycatch, but 5-10 trips caught between 50 to 350+ pounds of YT flounder per trip. These trips do seem to be targeting scallops as the primary species; other species are landed such as monkfish, fluke and skates, but the majority of catch and revenue is scallop (both scallop meats and in-shell scallops). The trips were primarily observed in statistical areas 626, 612, and 613. YT bycatch rates were an order of magnitude higher in statistical area 613 compared to 626 and 612.

Table 13 summarizes all observed trips on scallop vessels from 2005-2010 by permit, area and gear type.

Table 13. Summary of observed trips by Permit (LA or LAGC), Area (GB versus MA), Open Area or Access Area trip, and Gear code

Fishing mode	2006	2007	2008	2009	2010
GB scallop dredge Limited Access - Open Area	45 trips (427 days)	40 trips (461 days)	64 trips (681 days)	53 trips (630 days)	25 trips (254 days)
MA scallop dredge Limited Access - Open Area	33 trips (272 days)	41 trips (335 days)	71 trips (663 days)	88 trips (803 days)	89 trips (894 days)
GB scallop dredge Limited Access - Access Area	70 trips (585 days)	56 trips (394 days)	38 trips (268 days)	23 trips (199 days)	31 trips (235 days)
MA scallop dredge Limited Access - Access Area	6 trips (54 days)	89 trips (740 days)	196 trips (1678 days)	151 trips (1385 days)	101 trips (942 days)
GB scallop dredge General Category - Open Area	11 trips (23 days)	7 trips (10 days)	7 trips (12 days)	5 trips (5 days)	19 trips (20 days)
MA scallop dredge General Category - Open Area	53 trips (96 days)	26 trips (36 days)	21 trips (28 days)	29 trips (30 days)	42 trips (49 days)
GB scallop dredge General Category - Access Area	11 trips (21 days)	69 trips (149 days)	105 trips (255 days)	0 trips (0 days)	24 trips (46 days)
MA scallop dredge General Category - Access Area	0 trips (0 days)	2 trips (4 days)	142 trips (292 days)	144 trips (331 days)	9 trips (13 days)
MA scallop trawl Limited Access - Open Area	0 trips (0 days)	1 trip (7 days)	1 trip (7 days)	0 trips (0 days)	0 trips (0 days)
MA scallop trawl General Category - Open Area	32 trips (68 days)	30 trips (52 days)	28 trips (57 days)	1 trip (1 day)	21 trips (31 days)
MA scallop trawl Limited Access - Access Area	0 trips (0 days)	1 trip (10 days)	2 trips (20 days)	0 trips (0 days)	1 trip (5 days)
MA scallop trawl General Category - Access Area	0 trips (0 days)	0 trips (0 days)	9 trips (25 days)	7 trips (16 days)	11 trips (24 days)
<b>TOTAL</b>	<b>261 trips</b> <b>(1,546 days)</b>	<b>354 trips</b> <b>(2,011 days)</b>	<b>684 trips</b> <b>(3,986 days)</b>	<b>501 trips</b> <b>(3,400 days)</b>	<b>373 trips</b> <b>(2,513 days)</b>

Finally, the tables on the following page summarize the final estimate of YT bycatch in the scallop fishery in 2010.

## FY 2010 Yellowtail Flounder Catch in the Scallop Fishery

VTR data (for trips with > 2000 lbs scallops)		
Total VTR kept_all	447,961,381	1.000
GOM/CC kept_all	17,366,141	0.039
GB VTR kept_all	33,843,802	0.076
SNE/MA VTR kept_all	393,809,843	0.879
Other VTR kept_all	2,941,595	0.007

Dealer data (for trips with > 2000 lbs scallops)	
Kept_all	463,346,907
YT kept	6,889

Estimate of YT catch in GOM/CC	
Prorate GOM/CC LA kept_all	17,962,593
GOM/CC LA discard rate	0.00013
Estimate of GOM/CC LA YT discards	2,297
Prorate GOM/CC LA YT kept	267
GOM/CC LA YT catch	2,564

n = 20 observed trips, all dredge

GOM/CC LAGC kept scallops	3,018,445
GOM/CC LAGC discard rate	0.00453
Estimate of GOM/CC LAGC YT discards	13,682

n = 18 observed trips, all dredge

GOM/CC LA + LAGC YT catch	16,246
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Estimate of YT catch in GB	
Prorate GB LA kept_all	35,006,190
GB LA YT discard rate	0.00109
Estimate of GB LA YT discards	38,325
Prorate GB LA YT kept	520
GB LA YT catch	38,846

n = 8 observed trips, all dredge

GB LAGC kept scallops	35,088
GB LA YT discard rate	0.00109
Estimate of GB LAGC YT discards	38

no observed LAGC trips, use LA discard rate

GB LA + LAGC YT catch	38,884
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GB sub-component (146 mt)	321,875
Percentage of GB sub-component	12.1

Estimate of YT catch in SNE/MA	
Prorate SNE/MA LA kept_all	407,335,499
SNE/MA LA YT discard rate	0.00047
Estimate of SNE/MA LA YT discards	193,247
Prorate SNE/MA LA YT kept	6,056
SNE/MA LA YT catch	199,303

n = 215 observed trips, including 1 trawl trip

SNE/MA LAGC dredge kept scallops	12,936,936
SNE/MA LAGC dredge YT discard rate	0.00057
Estimate of SNE/MA LAGC dredge YT discards	7,342

n = 75 observed dredge trips

SNE/MA LAGC trawl kept scallops	3,216,928
SNE/MA LAGC trawl YT discard rate	0.01323
Estimate of SNE/MA LAGC trawl YT discards	42,551

n = 31 observed trawl trips

SNE/MA LA + LAGC YT catch	249,196
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SNE/MA sub-component (135 mt)	297,624
Percentage of SNE/MA sub-component	83.7

Report run on September 15, 2011

This estimate uses fishing year (March 2010 - February 2011) observer data and thus supersedes all previous estimates of yellowtail flounder catch in the scallop fishery for FY 2010.

These data are the best available to NOAA's National Marine Fisheries Service (NMFS) when this report was compiled. Data for this report are supplied to NMFS from vessels via the Vessel Monitoring System and Vessel Trip Reports, dealers via Dealer Electronic Reporting, and the Northeast Fisheries Observer Program. Data may be preliminary. Discrepancies with previous reports are due to corrections made to the database, use of the FY 2010 observer data, and alternate stratifications.

To minimize differences with the Northeast Fisheries Science Center estimate of yellowtail flounder catch in the scallop fishery the following protocols were used for calculating the discard rate:

1. Stratify by yellowtail stock area, i.e., Gulf of Maine/Cape Cod vs. Georges Bank vs. Southern New England/Mid-Atlantic
2. Pool open and access area (Nantucket Lightship, Elephant Trunk, Delmarva) observer data for Southern New England/Mid-Atlantic.
3. Stratify by fleet, i.e., a separate discard rate for limited access vs. LAGC IFQ vessels
4. Stratify the LAGC IFQ fleet by gear type, i.e., dredge vs. trawl
5. The limited access fleet was not stratified by gear type because there was only 1 observed trawl trip