BACKGROUND FOR LAGC YT AM ALTERNATIVES

At the very end of the process for Framework 23 the Council learned that the YT bycatch rate for the LAGC trawl fishery is substantially higher than the LA and LAGC dredge fisheries. The Council wanted to take more time to develop specific accountability measures for this segment of the fleet since the measures in FW23 were for the LAGC fishery combined. As the process developed the Committee decided to expand the range of alternatives to include possible sub-divisions of the scallop fishery sub-ACL of YT, thus specific AMs have been developed for LAGC vessels that use dredge as well as trawl gear.

The LAGC fishery does catch YT in some areas and fisheries. However, it is limited to the SNE/MA YT stock and CC/GOM YT by dredge vessels only. In 2011 and 2012, the LAGC trawl fishery caught a substantial percent of the total SNE/MA YT caught by the scallop fishery; about 17% of the catch in 2011 and over 23% of the catch in FY2012 to date (**Table 1**). The LAGC dredge fishery has caught between 1-2% of the total SNE/MA YT catch. Therefore, the Committee requested that the PDT develop AMs focusing on LAGC trawl vessels fishing in SNE/MA. The PDT recommends that AMs only be implemented for the LAGC dredge fishery if their total catch exceeds a specific percent of the scallop sub-ACL (over 3%).

Table 1 – Estimate of YT catch by the scallop fishery by permit type for FY 2011 and FY2012 to date (March-October 10, 2012). Source: NOAA Fisheries Sea Scallop Fishery Monitoring website (http://www.nero.noaa.gov/ro/fso/scal.htm)

2011

	Limited Access Vessels				LAGC Vessels				Total		
	Kept	Discards	Catch	% of ACL	Dredge	Trawl	Dredge (%Total)	Trawl (%Total Catch)	Total catch	sub-ACL	% of ACL
GB	22399	162489	184888	41.8% (99.9% catch)	80	19	0.0%	0.0%	184987	442688	41.8
SNE/MA	2105	198705	200810	111% (82.2% catch)	2707	40958	1.5% (1.1% catch)	22.5% (16.8% catch)	244275	180779	135.2

2012 (March-Oct 24)

	LA Vessels		LAGC Vessels				Total		
	Catch	**% of ACL**	**Dredge**	**Trawl**	**Dredge %ACL**	**Trawl %ACL**	**Total catch**	**sub-ACL**	**% of subACL**
GB	340529	98.40%	73	0	0.02%	0.00%	340602	345905	98.50%
		(99.9% catch)							
SNE/MA	89751	32.00%	2323	28061	0.80%	10.00%	120136	279987	42.90%
		(75% catch)			(1.9% catch)	(23.4% catch)			

WHO IS THE LAGC FISHERY?

Table 2. Gear Codes for VTR database

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

Majority of the LAGC IFQ vessels are scallop dredge (DRS) vessels (89 in 2011) and a few (15 in 2011) are clam dredges (DRC). There were about 15 scallop trawls (OTC) and 44 fish trawls (OTF) that landed scallops in 2011. Scallop dredge vessels landed about 81% of the LAGC - IFQ scallop landings in 2011, while trawl vessels (OTF) landed about 11% of the scallops in the same Year.

Table 3. Number of LAGC-IFQ vessels and scallop landings by gear code (VTR data, all trips)

YEAR	Gear Code	Number of vessels	Scallop landings (lb.) (Trips: <1200 lb.)	Scallop landings (lb.) (All trips)	% of Total (All trips)
2009	DRC	9	75,828	75,828	2%
	DRS	133	2,538,588	2,685,777	68%
	OTC	28	371,707	376,907	10%
	OTF	60	586,203	804,238	20%
2009 Total		230	3,572,326	3,942,750	100%
2010	DRC	9	62,600	64,161	3%
	DRS	95	1,560,559	1,595,709	77%
	OTC	15	175,620	175,620	8%
	OTF	48	210,793	246,723	12%
2010 Total		167	2,009,572	2,082,213	100%
2011	DRC	9	75,701	75,701	2%
	DRS	89	2,207,157	2,456,147	81%
	OTC	15	189,802	189,802	6%
	OTF	44	284,488	328,168	11%
2011 Total		157	2,757,148	3,049,818	100%

ANNUAL DATA BY GEAR CODE and AREA

Trawls vessels (OTF) vessels landed considerable amounts of scallops in areas 612, 613 and in other Mid-Atlantic areas. In 2011, 26% Of their scallop landings came from area 612 and 52% from area 613. For OTC vessels the distribution of landings by varied during 2009-2011 and while most (91%) of their landings occurred in other mid-Atlantic areas in 2010, in 2011, they landed 78% of scallops in area 612 (

Table 4). There are more OTF vessels fishing in other areas of Mid-Atlantic, while the number of vessels that fish in 612 exceeded the number of vessels fish in 613 (***Table 5***). The numbers in ***Table 5*** are not additive because a vessel could fish in more than one area. Scallop landings by gear and area are shown in

Table 6 and ***Table 7***. The first Table includes all LAGC-IFQ trips even the ones greatly in excess of 400 lb. per trip, while the second Table excludes trips with scallop landings of 1200 lb. or more per trip. It is highly likely that the VTR records for trips especially greater than 1200 lb. are incorrect and those records are appear more often for OTF vessels than OTC or dredge vessels. Thus, the actual scallop landings in pounds are probably higher than shown in ***Table 6*** but lower than shown in ***Table 7***.

Table 4. Percentage Composition of Scallop landings (lb.) by LAGC-IFQ vessels by gear code and area (VTR data, all trips)

Year	Gear Code	537	539	612	613	Other	Grand Total
2009	DRC	NA	NA	39%	3%	51%	100%
	DRS	10%	2%	15%	2%	72%	100%
	OTC	0%	0%	67%	1%	32%	100%
	OTF	0%	0%	46%	36%	18%	100%
	OTS	0%	0%	0%	0%	100%	100%
2009 Total		7%	1%	27%	9%	57%	100%
2010	DRC	0%	0%	21%	NA	72%	100%
	DRS	3%	4%	7%	3%	82%	100%
	OTC	0%	0%	9%	0%	91%	100%
	OTF	0%	0%	37%	47%	16%	100%
2010 Total		3%	3%	11%	8%	75%	100%
2011	DRC	NA	NA	21%	NA	78%	100%
	DRS	3%	7%	15%	2%	72%	100%
	OTC	NA	NA	78%	3%	19%	100%
	OTF	NA	NA	26%	52%	22%	100%
2011 Total		2%	6%	20%	8%	64%	100%

Table 5. Number of LAGC-IFQ vessels by gear code and area (VTR data, all trips)

Year	Gear Code	537	539	612	613	Other	Grand Total
2009	DRC	NA	NA	3	3	8	16
	DRS	28	17	36	14	116	211
	OTC	NA	NA	20	3	21	44
	OTF	NA	NA	29	14	44	89
2009 Total		30	19	88	34	189	360
2010	DRC	NA	NA	4	NA	7	14
	DRS	16	14	18	7	82	137
	OTC	NA	NA	4	NA	13	18
	OTF	NA	NA	26	13	27	66
2010 Total		16	16	52	22	129	235
2011	DRC	NA	NA	6	NA	8	15
	DRS	10	14	26	11	78	139
	OTC	NA	NA	11	NA	9	23
	OTF	NA	NA	20	12	30	67
2011 Total		14	15	63	27	125	244

Table 6. Scallop landings(lb.) by LAGC-IFQ vessels by gear code and area (VTR data, all trips)

Year	Gear Code	537	539	612	613	Other	Grand Total
2009	DRC	NA	NA	29,050	2,357	38,831	75,433
	DRS	265,758	40,402	405,487	42,225	1,913,668	2,667,540
	OTC	NA	NA	254,032	3,200	119,275	376,507
	OTF	NA	NA	372,846	286,077	144,784	803,792
2009 Total		270,953	40,486	1,061,415	333,859	2,216,558	3,923,272
2010	DRC	NA	NA	13,492	NA	46,327	64,161
	DRS	52,598	68,088	114,749	47,718	1,309,429	1,592,582
	OTC	NA	NA	16,268	NA	158,952	175,620
	OTF	NA	NA	91,261	115,495	39,966	246,723
2010 Total		52,598	68,678	235,770	167,365	1,554,674	2,079,086
2011	DRC	NA	NA	16,059	NA	58,746	75,701
	DRS	74,153	174,637	374,974	56,411	1,773,022	2,453,197
	OTC	NA	NA	148,942	NA	36,068	189,802
	OTF	NA	NA	83,657	170,837	72,489	327,768
2011 Total		74,698	174,877	623,632	232,040	1,940,325	3,045,572

Table 7. Scallop landings(lb.) by LAGC-IFQ vessels by gear code and area (VTR data, including trips with <1200 lb. of scallops per trip)

Year	Gear Code	537	539	612	613	Other	Grand Total
2009	DRC	NA	NA	29,050	2,357	38,831	75,433
	DRS	265,758	40,402	362,787	42,225	1,809,179	2,520,351
	OTC	NA	NA	250,032	3,200	118,075	371,307
	OTF	NA	NA	303,296	189,571	92,804	585,756
2009 Total		270,953	40,486	945,165	237,354	2,058,889	3,552,847
2010	DRC	NA	NA	11,931	4,152	46,327	62,600
	DRS	52,598	68,088	114,749	45,718	1,276,279	1,557,432
	OTC	NA	NA	16,268	NA	158,952	175,620
	OTF	NA	NA	81,111	93,715	35,966	210,793
2010 Total		52,598	68,678	224,059	143,585	1,517,524	2,006,445
2011	DRC	NA	NA	16,059	NA	58,746	75,701
	DRS	74,153	158,904	315,517	56,411	1,599,222	2,204,207
	OTC	NA	NA	148,942	NA	36,068	189,802
	OTF	545	240	83,657	127,157	72,489	284,088
2011 Total		74,698	159,144	564,175	189,256	1,766,525	2,753,798

Table 8. Scallop landings(lb.) by LAGC-IFQ vessels by gear code and area (VTR data, including trips with <1200 lb. of scallops per trip)

Year	Gear Code	537	539	612	613	Other	Grand Total
2010	DRC	0%	0%	19%	7%	74%	100%
	DRS	3%	4%	7%	3%	82%	100%
	OTC	0%	0%	9%	0%	91%	100%
	OTF	0%	0%	38%	44%	17%	100%
2010 Total		3%	3%	11%	7%	76%	100%
2011	DRC	0%	0%	21%	1%	78%	100%
	DRS	3%	7%	14%	3%	73%	100%
	OTC	0%	0%	78%	3%	19%	100%
	OTF	0%	0%	29%	45%	26%	100%
2011 Total		3%	6%	20%	7%	64%	100%

ANNUAL DATA BY PORT

Most of the fish trawls (OTF) with LAGC IFQ permits are home ported in NY and NY (22 in 2011) while 9 are from MA and 13 are from other states (2011). All of the OTC vessels (scallop trawl) are home ported in various Mid-Atlantic States.

Table 9. Number of OTF LAGC-IFQ vessels and scallop landings by homeport (VTR data, all trips)

Year	Data	MA+RI	NJ+NY	Oth.MidAt	Grand Total
2009	Number of vessels	18	28	14	60
	Scallop Landings (lb.)	5,904	520,059	278,275	804,238
2010	Number of vessels	9	26	13	48
	Scallop Landings (lb.)	1,425	156,947	88,351	246,723
2011	Number of vessels	13	22	9	44
	Scallop Landings (lb.)	4,550	218,360	105,258	328,168

Note: The data for 3 or less vessels are not shown to protect confidentiality.

Table 10. Number of OTF vessels and scallop landings by homeport and area (VTR data, all trips)

Year	Area	Data	MA+RI	NY+NJ	Oth.MidAt
2009	612	Number of vessels		17	12
		Scallop Landings (lb.)		139,041	233,805
	613	Number of vessels		12	NA
		Scallop Landings (lb.)		284,877	NA
	Other	Number of vessels	17	16	11
		Scallop Landings (lb.)	5,589	95,925	43,270
2010	612	Number of vessels		21	5
		Scallop Landings (lb.)		28,444	62,817
	613	Number of vessels		11	NA
		Scallop Landings (lb.)		114,695	NA
	Other	Number of vessels	9	6	12
		Scallop Landings (lb.)	1,425	13,807	24,734
2011	612	Number of vessels		14	6
		Scallop Landings (lb.)		20,080	63,577
	613	Number of vessels		11	NA
		Scallop Landings (lb.)		170,037	NA
	Other	Number of vessels	12	10	8
		Scallop Landings (lb.)	4,170	27,838	40,481

Note: The data for 3 or less vessels are not shown to protect confidentiality.

Most of the fish trawls (OTC) with LAGC IFQ permits are home ported in NY and NY (5 in 2011) while 10 are from other Mid Atlantic States (2011). It should be noted that some of these vessels either used or were recorded as OTF in some trips (***Table 19***).

Table 11. Number of OTF LAGC-IFQ vessels and scallop landings by homeport (VTR data, all trips)

Year	Data	NJ+NY	Oth.MidAt	Grand Total
2009	Number of vessels	7	21	28
	Scallop Landings (lb.)	19,690	357,217	376,907
2010	Number of vessels		13	
	Scallop Landings (lb.)		166,681	
2011	Number of vessels	5	10	15
	Scallop Landings (lb.)	8,462	181,340	189,802

Note: The data for 3 or less vessels are not shown to protect confidentiality.

Table 12. Number of OTC vessels and scallop landings by homeport and area (VTR data, all trips)

Year	Area	Data	NJ+NY	Oth.MidAt
2009	612	Number of vessels	4	16
		Scallop Landings (lb.)	8,088	245,944
	613	Number of vessels		3
		Scallop Landings (lb.)		3,200
	Other	Number of vessels	3	18
		Scallop Landings (lb.)	11,202	108,073
2010	612	Number of vessels		3
		Scallop Landings (lb.)		11,579
	613	Number of vessels		12
		Scallop Landings (lb.)		154,702
	Other	Number of vessels		10
		Scallop Landings (lb.)		148,442
2011	612	Number of vessels	3	
		Scallop Landings (lb.)	4,792	
	613	Number of vessels		8
		Scallop Landings (lb.)		32,898
	Other	Number of vessels	4	16
		Scallop Landings (lb.)	8,088	245,944

Note: The data for 3 or less vessels are not shown to protect confidentiality.

MONTHLY DATA

The seasonal distribution of scallop landings by OTF vessels varied during 2009-2011. However, the majority of landings occurred in the months of May, June and October in 2011 (see also Table 25).

Table 13. Percentage Distribution of Scallop Landings by Fish Trawls (OTF) by month (VTR data, vessels with LAGC-IFQ permits)

MONTH	2009	2010	2011	Grand Total
1	0%	10%	9%	4%
2	0%	0%	6%	2%
3	10%	4%	8%	8%
4	20%	11%	6%	14%
5	6%	14%	13%	9%
6	33%	15%	16%	25%
7	17%	9%	6%	12%
8	0%	5%	8%	3%
9	12%	11%	3%	9%
10	0%	8%	13%	5%
11	0%	9%	5%	3%
12	4%	7%	7%	5%
Grand Total	100%	100%	100%	100%

Note: The trips with more than 1200lb. of scallop landings are excluded.

Table 14. Percentage composition of Scallop landings by fish trawls (OTF) month and area (VTR data, vessels with LAGC-IFQ permits)

Area	MONTHLND	2009	2010	2011	Grand Total
612	1	0%	1%	1%	0%
	2	0%	0%	3%	1%
	3	1%	0%	1%	1%
	4	9%	0%	1%	5%
	5	3%	7%	6%	5%
	6	17%	10%	8%	13%
	7	11%	4%	4%	8%
	8	0%	2%	3%	1%
	9	7%	6%	1%	5%
	10	0%	5%	1%	1%
	11	0%	1%	0%	0%
	12	2%	1%	0%	1%
612 Total		51%	39%	30%	43%
613	1	0%	7%	5%	3%
	2	0%	0%	3%	1%
	3	2%	3%	4%	3%
	4	5%	5%	3%	4%
	5	1%	3%	4%	2%
	6	14%	3%	4%	9%
	7	5%	4%	2%	4%
	8	0%	2%	3%	1%
	9	3%	4%	1%	3%
	10	0%	3%	5%	2%
	11	0%	5%	4%	2%
	12	2%	4%	6%	4%
613 Total		32%	44%	44%	38%
Other	1	0%	2%	3%	1%
	2	0%	0%	1%	0%
	3	6%	0%	2%	4%
	4	6%	5%	2%	5%
	5	1%	3%	2%	2%
	6	1%	1%	4%	2%
	7	0%	1%	0%	0%
	8	0%	0%	3%	1%
	9	1%	0%	1%	1%
	10	0%	0%	6%	2%
	11	0%	3%	0%	1%
	12	0%	2%	1%	1%
Other Total		16%	17%	26%	19%
Grand Total		100%	100%	100%	100%

Note: The trips with more than 1200lb. of scallop landings are excluded.

Table 15. Percentage Distribution of Scallop Landings by Fish Trawls (OTC) by month (VTR data, vessels with LAGC-IFQ permits)

MONTH	2009	2010	2011	Grand Total
1	0%	2%	1%	1%
2	0%	0%	4%	1%
3	15%	0%	0%	8%
4	21%	14%	0%	14%
5	6%	19%	12%	11%
6	25%	35%	28%	28%
7	20%	16%	24%	20%
8	0%	9%	13%	6%
9	11%	0%	7%	7%
10	0%	1%	9%	2%
11	0%	2%	2%	1%
12	1%	2%	1%	1%
Grand Total	100%	100%	100%	100%

Note: The trips with more than 1200lb. of scallop landings are excluded.

Table 16. Percentage composition of Scallop landings by fish trawls (OTF) month and area (VTR data, vessels with LAGC-IFQ permits)

AREA	MONTH	2009	2010	2011	Grand Total
612	1	0%	0%	0%	0%
	2	0%	0%	4%	1%
	3	4%	0%	0%	2%
	4	11%	0%	0%	5%
	5	3%	2%	10%	5%
	6	22%	4%	26%	19%
	7	17%	0%	23%	15%
	8	0%	0%	10%	3%
	9	9%	0%	5%	6%
	10	0%	1%	1%	0%
	11	0%	0%	0%	0%
	12	1%	1%	0%	1%
612 Total		67%	9%	78%	56%
613	1	0%	0%	0%	0%
	2	0%	0%	0%	0%
	4	0%	0%	0%	0%
	6	0%	0%	0%	0%
	7	0%	0%	0%	0%
	8	0%	0%	1%	0%
	9	1%	0%	0%	0%
	10	0%	0%	0%	0%
	11	0%	0%	0%	0%
	12	0%	0%	1%	0%
613 Total		1%	0%	2%	1%
800	1	0%	1%	1%	1%
	3	11%	0%	0%	6%
	4	10%	14%	0%	8%
	5	3%	17%	1%	6%
	6	3%	31%	2%	9%
	7	3%	16%	1%	5%
	8	0%	9%	2%	3%
	9	1%	0%	2%	1%
	10	0%	0%	8%	2%
	11	0%	2%	2%	1%
	12	0%	2%	0%	1%
800 Total		32%	91%	19%	42%
Grand Total		100%	100%	100%	100%

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 17. 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%
	Grand Total	**100%**
OTHER AREAS	ANGLER	2%
	BASS, STRIPED	5%
	FLOUNDER, SUMMER	30%
	SCALLOP, SEA	17%
	SCUP	4%
	SQUID (LOLIGO)	29%
	Other species	12%
	Grand Total	**100%**

Source: Dealer data

Table 18. 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%

UNIQUE NUMBER OF VESSELS BY GEARCODE

Table 1 shows the number of vessels that used either a single or multiple gears while fishing for scallops in 2009 - 2011 (Calendar Year).

While 32 vessels used fish trawl gear only, 5 vessels used both dredge and fish trawl (DRS+OTF), 8 vessels identified as fish trawl (OTF) in some and as scallop trawls (OTC) in other trips in 2011. Therefore, 44 vessels either used or identified as fish trawl in some trips when fishing for scallops in 2011.

Table 19. Number of active vessels with LAGC IFQ Permits by calendar year

GEARGRP	2009	2010	2011
DRS	112	86	84
DRS+OTC	5		
DRS+OTC+OTF	2		
DRS+OTF	14	9	5
OTC	15	9	8
OTC+OTF	6	6	7
OTF	38	33	32
Grand Total	192	143	136

LAGC OBSERVER DATA

Between 2006 and 2011 over 20 unique LAGC trawl vessels had observed tows of YT catch, primarily when fishing in open areas south of Long Island. The range of YT caught per haul varied from less than a pound to over 130 pounds per haul. Industry has informed the Council that there are concerns about how fish discards are recorded. Specifically, when observers measure bycatch using a "volume to volume" method, which measures a sample of a tow and extrapolates it for the full tow, there are concerns that overestimates bycatch because fish tend to be on the top. Some of the larger tows in this data set are from hauls using this method, but some are from tows that were weighed directly. Therefore, it is possible that some of the larger tows could be questionable, but some tows were completely measured so are more reliable. In any case, when the tows are plotted there does seem to be a general area with higher YT catch rates.

Statistical areas 612 and 613 contain most of the YT catch observed for this segment of the fleet. There does not seem to be a strong monthly trend for bycatch. The months with the highest bycatch from all tows combined from 2006-2011 are: December, August, June, and March.

MONTH	YT catch in 612 and 613
01	89.0
03	261.5
04	169.0
05	151.5
06	284.4
07	30.0
08	493.9
09	55.0

12	503.9
Grand Total	**2,038.2**

The bycatch rate for LAGC trawl vessels was much higher in 2010 than any previous year (Table **20**). Observer coverage for the LAGC trawl fishery has been about 30 trips each year, with the exception of 2009 when it was only 12 trips. Overall bycatch rates have fluctuated, but 2010 was much higher than any other year, followed by 2008. In 2010 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.

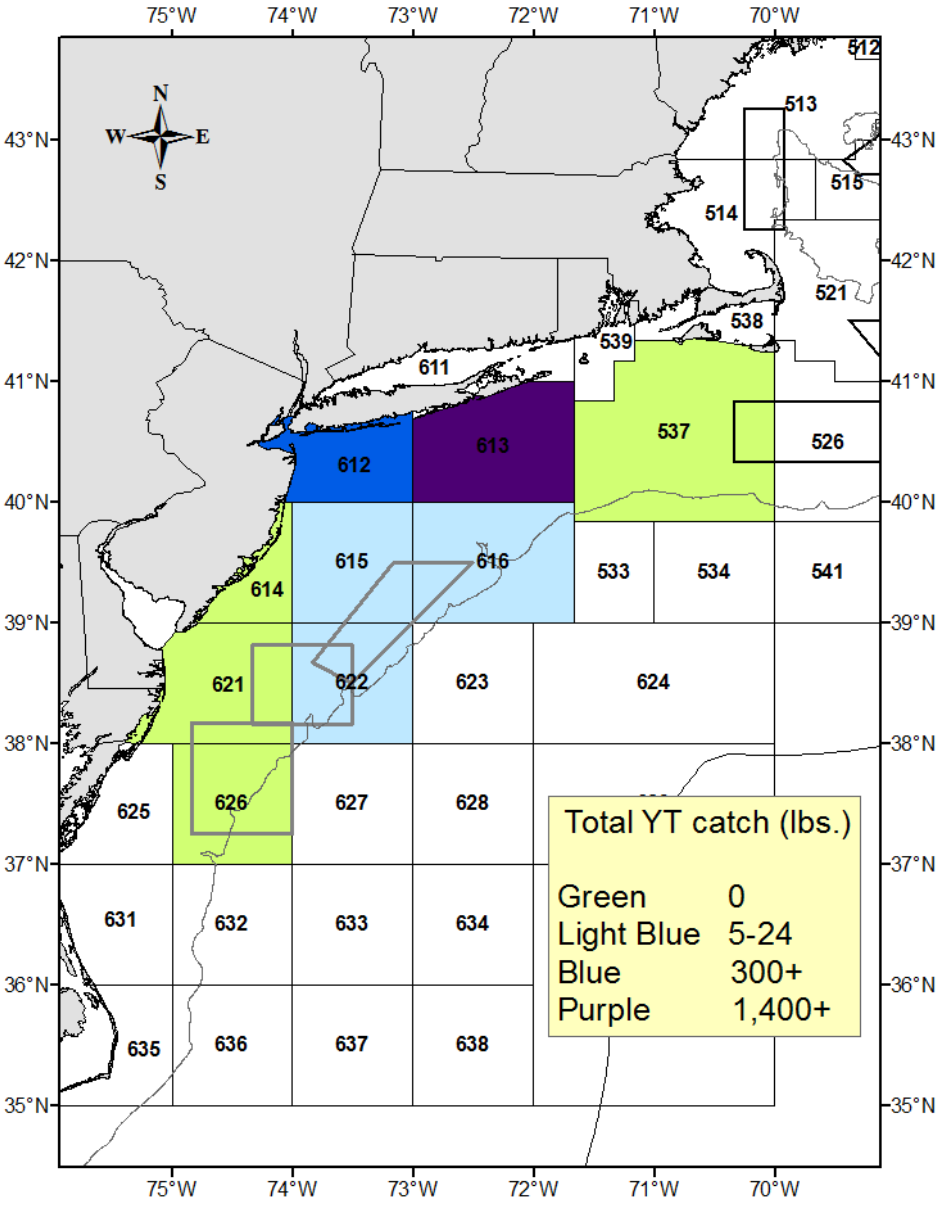
Figure 1 shows the total YT catch by statistical area. While the greatest number of trips has been observed in stat area 612, the greatest amount of YT catch has been observed from stat area 613.

Maps of all LAGC observed tows with YT are at the end of this document by ten-minute square.

Table 20 – Summary of observer coverage for LAGC trawl vessels from 2006-2010

	Total # observed trips	Types of trips	Months observed	Total Catch	Total YT	d/k
2006	30	OA, training	Aug-Oct	89,913	13	0.00014
2007	35	OA, training	Jun-Nov, Mar	70,585	50	0.00071
2008	36	OA, training, ET	Mar-Sept, Dec	134,850	225	0.00167
2009	12	1 OA, ET, Del	Mar, Apr, June	45,515	13	0.00027
2010	31	OA, training, Del	Apr-Dec	113,205	1,497	0.01323
Total	144			454,068	1,798	0.00396

Figure 1 – Total YT catch by LAGC trawl vessels from all observed trips combined-2006-2010



PRELIMINARY ANALYSIS OF POTENTIAL ECONOMIC IMPACTS

YT AMs for LAGC vessels using *trawl* gear

LAGC vessels may only use trawl gear on declared scallop trips in the MA. East of 72°30', LAGC vessels on a declared IFQ trip must fish in the scallop dredge exemption areas, requiring the use of dredges. If fishing on a declared groundfish trip (targeting groundfish and using trawl gear), an LAGC vessel may land up to 600 lb. of their scallop IFQ, but any YT catch would go against the vessel sector

ACE or common pool sub-ACL. Therefore, the amount of trawl effort on scallop trips is limited to the MA.

Southern New England / Mid-Atlantic YT AM

The only YT stock area that LAGC trawl vessels fish in is the SNE/MA YT stock area. For the last two years this component of the scallop fishery has caught a substantial percentage of the total YT catch.

LAGC trawl AM for SNE/MA YT – Option 1 – area restriction

If the overall SNE sub-ACL for the scallop fishery is exceeded the AM for LAGC vessels with trawl gear would be a prohibition on the use of trawl gear in statistical areas 612 and 613 for a specified period of time to account for the overage. A significant proportion (67.1%) of the scallop landings by these vessels took place in areas 612 and 613 in years 2010-2011 (Table 22). Vessels with trawl gear will NOT be permitted to switch to dredge gear and fish in areas closed by this AM.

The AM schedule will be the same as the LA AM schedule, except the closure will only apply to LAGC vessels up to a 15% overage. If the scallop fishery catch exceeds 15% the area would only remain closed to LA vessels. This modification was developed to recognize that these vessels are more limited in terms of areas they can fish. The AM area would be closed during the spring and winter when bycatch rates are typically higher, and the area would remain open for LAGC trawl vessels during part of the year they historically fish in this area to minimize impacts. Overall, the AM would be effective compared to No Action because it would eliminate LAGC trawl fishing during months with higher bycatch of YT. No matter what the overage is, LAGC trawl vessels would be allowed to fish in the AM area during the months of July –November. As ***Table 21*** shows, the seasonal distribution of scallop landings by OTF+OTC vessels varied, but in 2010 and 2011 the majority of landings occurred from May-July.

Table 21. Percentage composition of Scallop Landings by Trawls (OTF+OTC) by month from areas 612 and 613 (VTR data for 2010-2011 calendar years, vessels with LAGC-IFQ permits)

MONTH	612	613	Grand Total
1	0.71%	4.94%	5.65%
2	2.31%	1.18%	3.50%
3	0.61%	3.33%	3.94%
4	0.66%	6.66%	7.32%
5	9.05%	4.03%	13.08%
6	16.16%	4.47%	20.63%
7	9.96%	2.14%	12.10%
8	5.34%	4.12%	9.46%
9	4.73%	2.37%	7.10%
10	3.81%	3.76%	7.57%
11	0.67%	3.37%	4.04%
12	0.43%	5.18%	5.61%
Grand Total	54.45%	45.55%	100.00%

Note: The trips with more than 1200lb. of scallop landings are excluded.

In the event that bycatch rates are higher than expected, the SNE/AM area will close in accordance with the schedule shown on Table 22. The scallop catch associated with these time periods has been provided as well. The impacts of this option on LAGC fishery is analyzed in Table 22 below. It is assumed that

the distribution of scallop landings by area and season will be similar to the patterns observed in 2010-2011 calendar years.

If the overage rate is not high, these closures are not expected to have any significant impact on total scallop landings by the LAGC vessels since the effort will shift to other seasons and areas with lower YT bycatch rates. For example, if the yellowtail overage is 3% or less, the stat areas 612 and 613 will be closed for the months February to April and as result, total landings from these areas would be reduced by 14.8% during the closure period. However, the vessels will have the opportunity to shift their effort to the other months, minimizing revenue losses from closures. If the overage rate is higher, more effort will have to be shifted to other months, however. For example, a yellowtail ACL overage of 15% would result in closure of three-digit statistical areas 612+613 in all months with the exception of July to November. Because 59.7% of all scallops were landed in those closure period, the vessels would have to shift a significant portion of their effort to July to November, which could result in higher costs of fishing. As the effort shifts to other areas and/or months, the steaming time and duration of the trip for those vessels that normally fish in those areas at during the closure months will increase. If the scallop abundance in other areas is not sufficiently high enough to cover the extra costs of steaming or fishing longer, there will be negative impacts on crew income and profits. This increase in costs could be minimized to some extent by leasing of quota to vessels that fish in other areas. Leasing will too involve some costs, however, such as the transaction costs and the margins lessors will require to make fishing the leased quota profitable.

Table 22. The 2010-2011 landings in closed periods for SNE/MA AM schedule (3 Digit Areas 612+613, LAGC-IFQ vessels using trawl gear, i.e., OTF+OTC)

Schedule for Closure		Sum of scallop landings for 2010+2011 in 612+613	% of scallop landing in 3-digit areas612+613	Landings in 612+613 as % of scallop landings from all areas during the closure period	Landings in 612+613 in the closure period as a % of all scallop landings from all areas during the whole year
Overage	**LAGC Trawl Closure**				
2% or less	Mar-Apr	71,977	125,075	57.5%	11.3%
2.1-3%	Mar-Apr, and Feb	94,329	150,168	62.8%	14.8%
3.1-7%	Mar-May, and Feb	177,957	280,472	63.4%	27.8%
7.1-9%	Mar-May, and Jan-Feb	214,064	331,588	64.6%	33.5%
9.1-12%	Mar-May, and Dec-Feb	249,921	377,580	66.2%	39.1%
12.1-15%	Mar-June, and Dec-Feb	381,760	580,169	65.8%	59.7%
Open Period	July to November	257,388	372,522	69.1%	40.3%
	All Year	639,148	952,691	67.1%	100.0%

Although, the impacts on the overall LAGC fishery may be small at the low overage rates, there could be some distributional impacts on vessels from different states and ports. The closures will impact vessels home ported in New York and New Jersey most. LAGC vessels that are home-ported in those states landed majority of scallops in 612 and 613 (***Table 23***).

Table 23. Number of OTF+OTC vessels and Scallop landings by homeport and area (VTR data for 2010-2011, vessels with LAGC-IFQ permits, all trips including the ones>1200)

			Home state			
year	Area	Data	MA+RI	NY+NJ	Oth.MidAt	Grand Total
2010	612	Number of vessels		21	6	27
		Scallop lb.		33,133	74,396	107,529
	613	Number of vessels		11	NA	13
		Scallop lb.		114,695	NA	NA
	other	Number of vessels	NA	6	20	35
		Scallop lb.	NA	>15000	179,436	>185,000
Total Scallop lb.			NA	165,886	254,632	421,943
2011	612	Count of PERMIT		14	15	29
		Sum of SCALLB		20,580	212,019	232,599
	613	Count of PERMIT	NA	11	NA	NA
		Sum of SCALLB	NA	174,829	NA	175,629
	other	Count of PERMIT	12	10	14	36
		Sum of SCALLB	NA	>25000	73,379	108,557
Total Scallop lb.			4,170	226,417	286,198	516,785

LAGC trawl AM for SNE/MA YT – Option 2 – gear restriction in 613 and 612

If the overall SNE sub-ACL for the scallop fishery is exceeded the AM for LAGC vessels with trawl gear would be a prohibition on the use of trawl gear in statistical areas 612 and 613 according to the AM schedule specified in Option 1 above. However, in this case, vessels with trawl gear WOULD be permitted to switch to dredge gear and fish in areas closed by this AM, providing flexibility for these vessels to fish during months which are optimal, such as during those times when scallop prices go up or fuel prices go down- to would maximize their profits. Vessels would be permitted to switch back to trawl gear later in the year or when fishing in areas outside of the AM closure. These measures are expected to alleviate some of the negative economic impacts of any closures from the implementation of AMs for the LAGC trawl vessels.

LAGC trawl AM for SNE/MA YT – Option 3 – gear restriction

If the overall SNE sub-ACL for the scallop fishery is exceeded the AM for LAGC vessels with trawl gear would be a prohibition on the use of trawl gear in any part of that YT stock area for the following fishing year. Since 99% the fishing by LAGC-IFQ vessels using trawl gear takes place in the SNE-YT stock area, closing this area to fishing will have considerable negative economic impacts on those vessels compared to Option 1. For example, the revenue loss could have been more than $5 million if these areas were closed in fishing in 2011 (about 522,446 lb. of scallops were landed in those areas in 2011 calendar year) . However, provision to allow these vessels to fish with dredge gear in those areas will alleviate these impacts although not totally since switching to dredge gear comes with some costs ranging from about $2500 to $3000 for small dredges to $6000 for a regular dregde (Framework 23). Given the amount of revenue loss, the costs of installing a dredge could outweigh the loss of revenues from not fishing. If a vessel does convert to dredge gear it would be subject to any AMs the LAGC dredge vessels are subject to. The provision to allow those vessels to revert to a trawl vessel after the year an AM is effective or stay as a dredge vessel, will provide some flexibility with positive economic impacts.

Georges Bank YT AM

Since there is no trawl fishing on GB it is not necessary to have an AM for this segment of the fishery, therefore no economic impacts are expected.

YT AMs for LAGC vessels using *dredge* gear

Recent catches of GB YT by the LAGC dredge fishery are relatively minor, 1-2% of the total SNE/MA sub-ACL. Therefore, the PDT recommends that AMs be implemented for the LAGC dredge fishery, but only if that segment of the fishery catches more than a specified percentage of total catch.

Southern New England / Mid-Atlantic YT AM

If the total sub-ACL is exceeded and an AM is triggered for the scallop fishery, the LAGC dredge fishery would not have a specific AM unless their estimated catch was more than 3% of the total catch by the scallop fishery. If their catch is more than 3% of the SNE/MA YT sub-ACL the same LA AM area would close to LAGC vessels, but under a different schedule. The LA AM schedule was modified to recognize that LAGC dredge vessels are not as mobile and there are some vessels that would be disproportionally impacted by these measures. Therefore, a schedule was developed that leaves some of the AM area open for parts of the year when traditional fishing has occurred, but closes the areas during higher YT bycatch months. Specifically, area 539 could close all year if the overage is over 16% because that area has the highest bycatch rates historically. ***Table 25*****Error! Reference source not found.** shows that only 3% of the total scallop pounds were landed by scallop dredges in Area 539 in 2010-2011. Area 537 would never close to LAGC dredge vessels between July-October regardless of the overage, and area 613 would never close June – January. Given that only 3% of all scallop pounds were landed in area 539 and another 2.5% in 613 all year around in 2010-2011, these modifications to the schedule are expected to minimize impacts on smaller dredge vessels, but close the areas during higher YT bycatch months. Although, the amount of effort that could be shifted to other months and areas during the AM closures are not expected to be large, if the scallop abundance in other areas is not sufficiently high enough to cover the extra costs of steaming or fishing longer, there could be some negative impacts on crew income and profits. This increase in costs could be minimized to some extent by leasing of quota to vessels that fish in other areas. Leasing will too involve some costs, however, such as the transaction costs and the margins lessors will require to make fishing the leased quota profitable.

The 3% overage exemption was included to recognize that bycatch from this segment of the fishery is typically very small and these closures could impact some vessels disproportionally. However, 3% was viewed as a level that would still keep this segment of the fishery accountable for YT bycatch and provide incentive to reduce YT bycatch. ***Table 26*** shows, however, that the scallop landings by those scallop dredge vessels that only had LAGC-IFQ permits comprised about 6.35% of all the scallop landings in areas 537+539 and 613 in 2010-2011 indicating that 3% threshold wouldn't exclude these vessels from AM closures if their catch of SNE yellowtail TAC was similar to this percentage.

Table 24 – SNE/MA YT AM schedule for LAGC dredge vessels if scallop fishery AM is triggered and LAGC dredge catch is more than 3% of total catch

	AM closure area and duration		
Overage	539	537	613
2% or less	Mar-Apr	Mar-Apr	Mar-Apr
2.1% - 7%	Mar-May, Feb	Mar-May, Feb	Mar-May, Feb
7.1% - 12%	Mar-May, Dec-Feb	Mar-May, Dec-Feb	Mar-May, Feb
12.1% - 16%	Mar-Jun, Nov-Feb	Mar-Jun, Nov-Feb	Mar-May, Feb
16.1% or greater	All year	Mar-Jun, Nov-Feb	Mar-May, Feb

Table 25. Percentage composition of Scallop landings by scallop dredge vessels (DRS) by month and area (VTR data for 2010-2011, vessels with LAGC-IFQ permits)

MONTHLND	537	539	612	613	Other	Grand Total
1	0.3%	0.3%	0.6%	0.1%	6.6%	7.8%
2	0.1%	0.1%	0.7%	0.1%	2.1%	3.2%
3	0.3%	0.2%	0.8%	0.2%	4.2%	5.7%
4	0.3%	0.4%	0.8%	0.2%	6.1%	7.8%
5	0.6%	0.5%	1.7%	0.4%	7.6%	10.7%
6	0.4%	0.7%	1.9%	0.2%	7.7%	11.0%
7	0.3%	0.7%	2.1%	0.3%	8.6%	11.9%
8	0.3%	0.6%	1.3%	0.4%	8.7%	11.3%
9	0.2%	0.8%	1.3%	0.3%	6.9%	9.4%
10	0.1%	0.5%	0.9%	0.2%	6.4%	8.0%
11	0.1%	0.4%	0.5%	0.1%	5.1%	6.2%
12	0.1%	0.3%	1.4%	0.0%	5.0%	6.8%
Grand Total	3.0%	5.4%	14.0%	2.5%	75.2%	100.0%

Note: The trips with more than 1200lb. of scallop landings are excluded.

Table 26. Scallop landings by LAGC-IFQ vessels by gear code and permit as a % of total landings in areas 537+539+613 (VTR data, including trips (all trips).

LAGC category	GEAR	LA Permit	LAGC Permit	2010	2011	Grand Total
IFQ	**DRC**			0.1%	0.0%	0.07%
	DRS	YES	YES	2.7%	5.0%	3.97%
		NO	YES	5.0%	7.4%	6.35%
	DRS Total			**7.8%**	**12.4%**	**10.31%**
	DSC			0.0%	0.6%	0.36%
	OTC			0.0%	0.1%	0.07%
	OTF			3.5%	4.2%	3.85%
IFQ Total				**11.4%**	**17.3%**	**14.66%**
NGOM				9.2%	13.1%	11.35%
INCIDENTAL				28.4%	13.8%	20.31%
LA Permit only				51.0%	55.8%	53.68%
Grand Total				**100.0%**	**100.0%**	**100.00%**

Georges Bank YT AM

There is very little LAGC dredge effort in the GB YT stock area, mostly confined to CA1 access area trips. There is essentially no YT bycatch from this segment of the fleet, but if the Council wants to have an AM in place the measure should be the same as the LA fishery. If an AM is triggered, statistical area 562, including all of the access area within CA2, would close to LAGC dredge vessels under the same AM schedule (**Table 27**). Because the LAGC dredge landings in three-digit area 562 was close to 0% in 2010-2011, these AMs are not expected to have any significant impacts on those vessels.

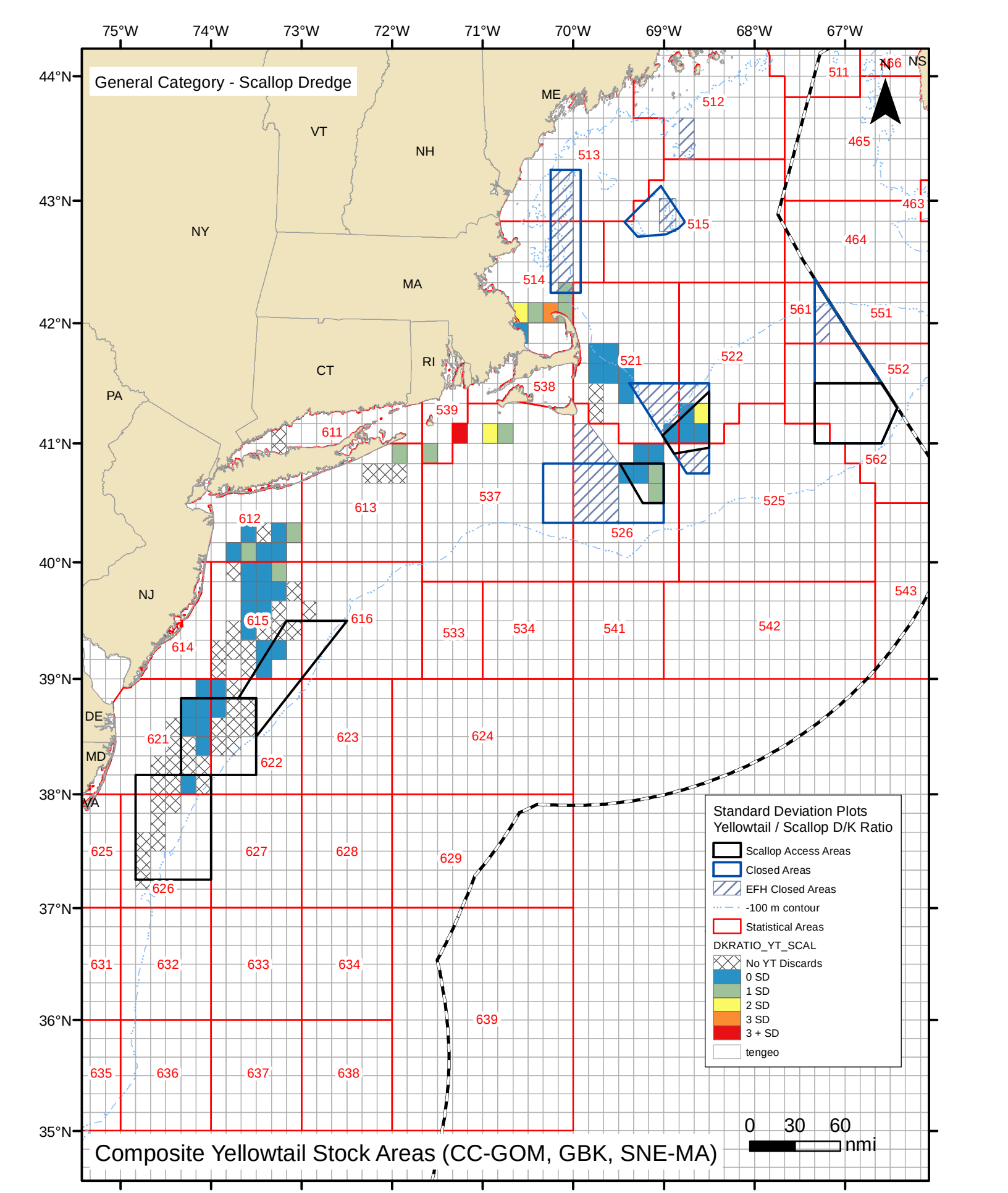
Table 27- GB YT AM Schedule – varies depending on whether CA2 is closed or open

GB YT AM Schedule – CA2 CLOSED		GB YT AM Schedule – CA2 OPEN	
Overage	LA Closure	Overage	LA Closure
1.9% or less	Sept-Nov	3% or less	Oct-Nov
2.0 - 2.9%	Aug-Jan	3.1-14%	Sept-Nov
3.0 – 3.9%	Mar, Aug-Feb	14.1-16%	Sept-Jan
4.0 – 4.9%	Mar, Jul-Feb	16.1-39%	Aug-Jan
5.0 – 5.9%	Mar-May, Jul-Feb	39.1-56%	Jul-Jan
6% or greater	All year	Greater than 56%	All year, Mar-Feb

Summary of YT catch, scallop discards, and percentages (1999-2012)

	US landings (CY)	US discards (CY)	US catch (CY)	US Target TAC (FY)	Scallop hardTAC / subACL (FY)	% scallop / target TAC	Sc Discards	% SC discards / allocation	%SC discards / US TTAC	% Sc discards / US catch	GB Openings
1999	1818	577	2395	2725	387	14.2%	566	146.3%	20.8%	23.6%	CA2 (3)
2000	3373	694	4067	4618	757	16.4%	669	88.4%	14.5%	16.4%	CA1 (2) CA2(3)
2001	3613	78	3691	6800	N/A	N/A	28	N/A	0.4%	0.8%	closed
2002	2476	53	2529	6805	N/A	N/A	29	N/A	0.4%	1.2%	closed
2003	3236	410	3646	7842	N/A	N/A	293	N/A	3.7%	8.0%	closed
2004	5837	460	6297	6000	600	10.0%	81	13.5%	1.4%	1.3%	CA2 (2)
2005	3161	414	3575	4260	426	10.0%	186	43.7%	4.4%	5.4%	CA1 (1) CA2 (1)
2006	1196	384	1580	2070	207	10.0%	251	121.3%	12.1%	16.1%	CA2 (3)
2007	1058	493	1551	900	90	10.0%	120	133.3%	13.3%	7.8%	CA1 (1) CA2 (1)
2008	937	409	1346	1950	N/A	N/A	128	N/A	6.6%	9.5%	closed
2009	959	759	1718	1200	120	10.0%	170	141.7%	14.2%	10.0%	CA2 (1)
2010	654	289	943	1021	146	14.3%	8	5.5%	0.8%	0.9%	closed
2011	904	192	1096	1458	201	13.8%	104	51.7%	7.1%	10.3%	CA1 (1.5) CA2 (0.5)
2012				564	307 (157*)	54%(28%)					CA1 (1) CA2 (1)

* Original allocation was 307 mt, but NMFS reduced it based on updated analysis of projected catch by the scallop fishery and request of NEFMC

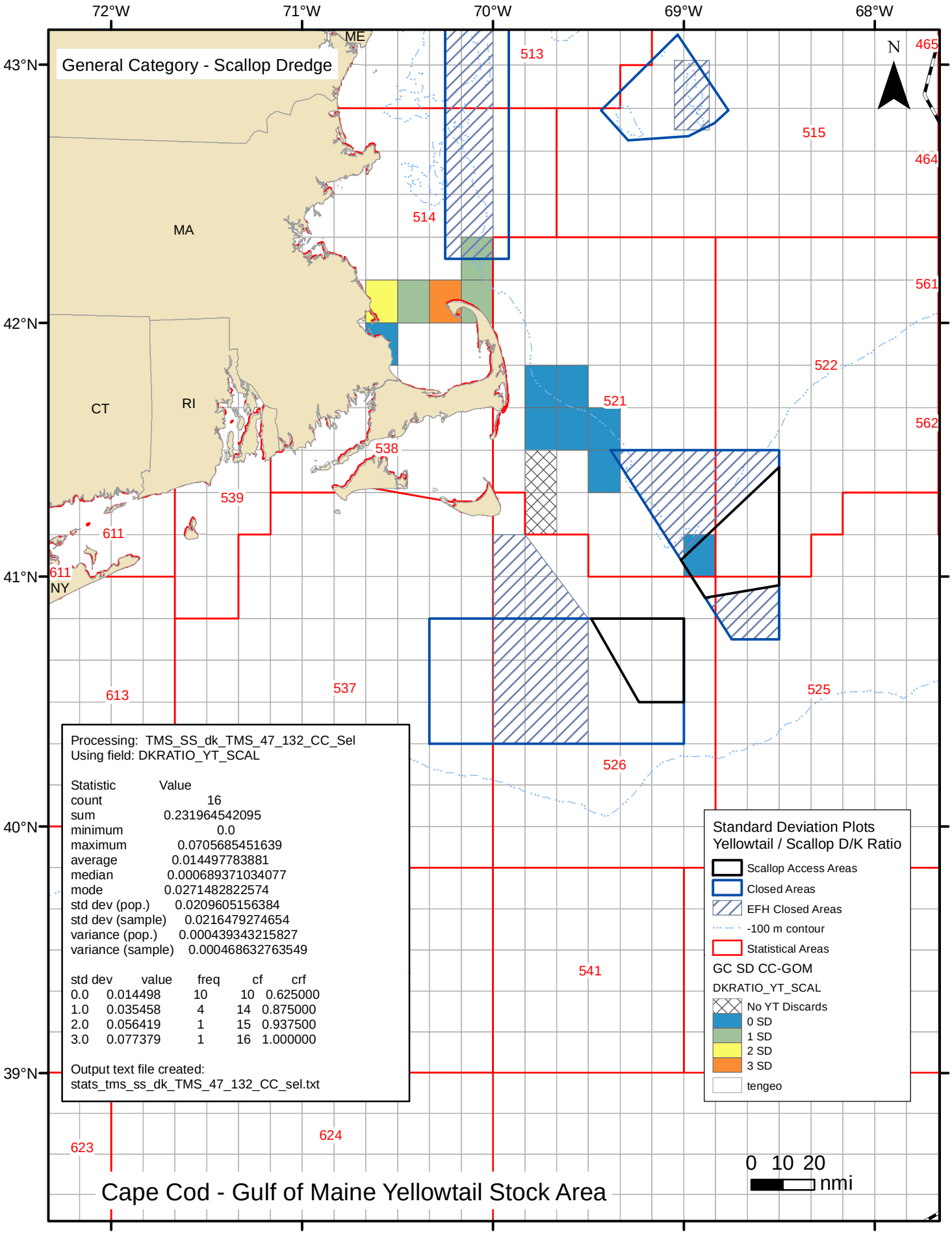


DRAFT

Observed yellowtail flounder discards to kept scallop catch (d/k ratio) summarized by ten minute quadrangle from 2006-2011, from the Northeast Fisheries Observer Program. Values are symbolized by the standard deviation of the data and where at least 3 unique vessels were observed.

LA = 046, GC = 047, Scal Dredge = 132, OT Scal Bot = 052

Date: 10/2/2012

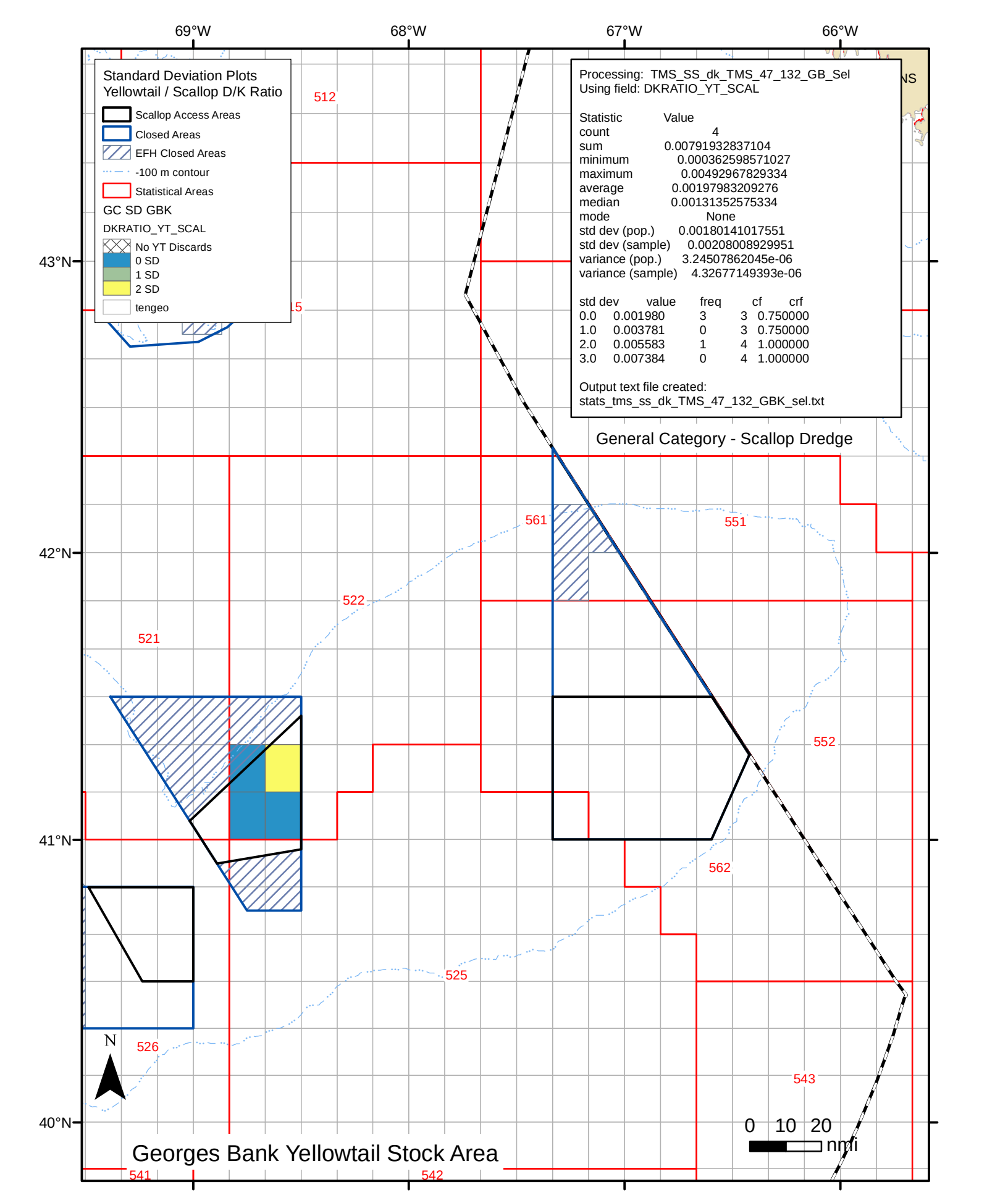


DRAFT

Observed yellowtail flounder discards to kept scallop catch (d/k ratio) summarized by ten minute quadrangle from 2006-2011, from the Northeast Fisheries Observer Program. Values are symbolized by the standard deviation of the data and where at least 3 unique vessels were observed.

Date: 10/2/2012

LA = 046, GC = 047, Scal Dredge = 132, OT Scal Bot = 052

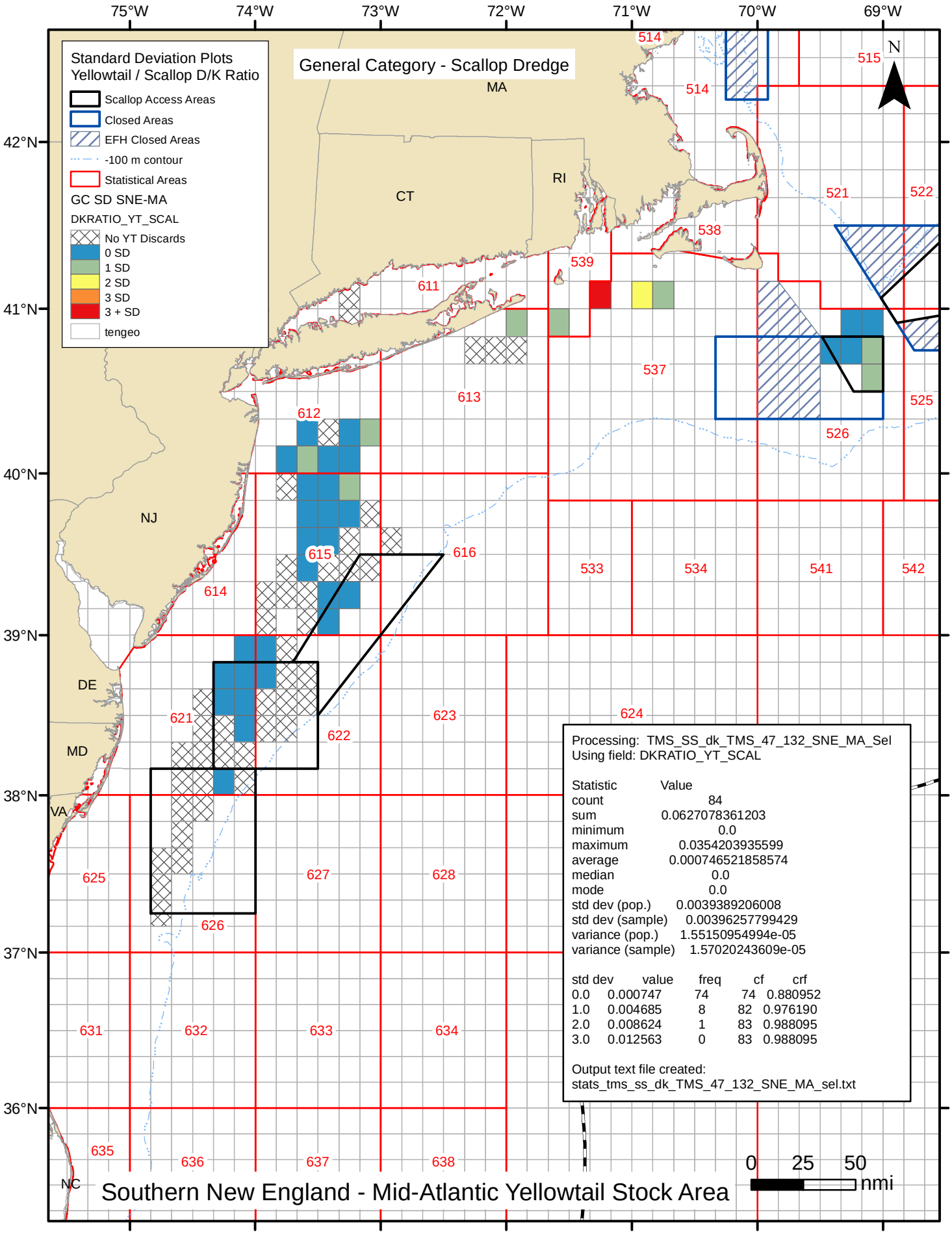


DRAFT

Observed yellowtail flounder discards to kept scallop catch (d/k ratio) summarized by ten minute quadrangle from 2006-2011, from the Northeast Fisheries Observer Program. Values are symbolized by the standard deviation of the data and where at least 3 unique vessels were observed.

LA = 046, GC = 047, Scal Dredge = 132, OT Scal Bot = 052

Date: 10/2/2012

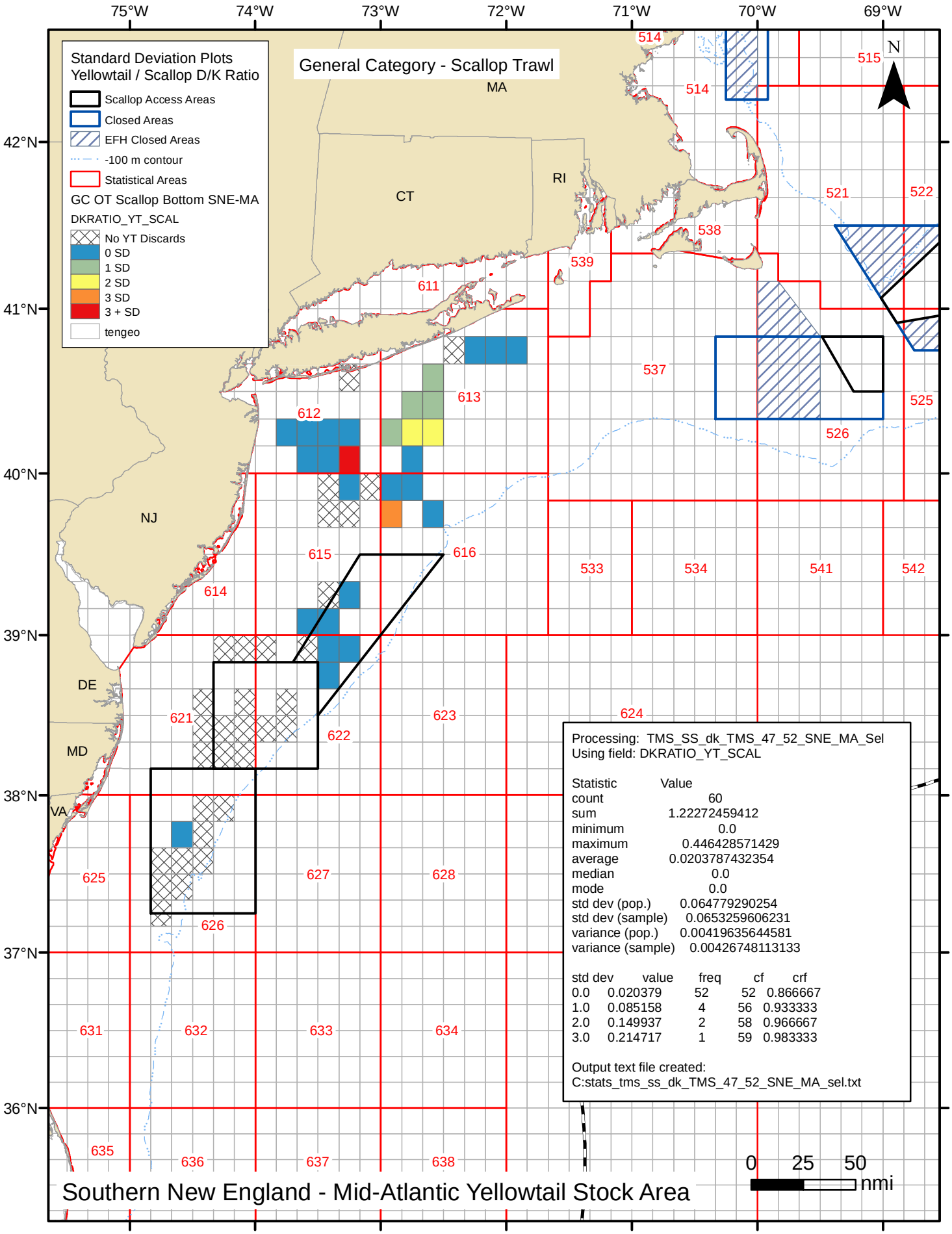


DRAFT

Observed yellowtail flounder discards to kept scallop catch (d/k ratio) summarized by ten minute quadrangle from 2006-2011, from the Northeast Fisheries Observer Program. Values are symbolized by the standard deviation of the data and where at least 3 unique vessels were observed.

Date: 10/2/2012

LA = 046, GC = 047, Scal Dredge = 132, OT Scal Bot = 052



DRAFT

Observed yellowtail flounder discards to kept scallop catch (d/k ratio) summarized by ten minute quadrangle from 2006-2011, from the Northeast Fisheries Observer Program. Values are symbolized by the standard deviation of the data and where at least 3 unique vessels were observed.

Date: 10/2/2012

LA = 046, GC = 047, Scal Dredge = 132, OT Scal Bot = 052