



New England Fishery Management Council

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MEETING SUMMARY

Scallop PDT

Conference Call

September 12, 2017

The Scallop PDT met via a conference call on September 12, 2017 to: (1) review updated biomass estimates for the Nantucket Lightship, (2) discuss growth assumptions for the Nantucket Lightship and Elephant Trunk, (3) review shell height analysis, (4) receive updates on the Georges Bank winter flounder bycatch estimate, and (5) discuss other business.

MEETING ATTENDANCE: Jonathon Peros (PDT Chair), Dr. David Rudders, Dr. Dvora Hart, Dr. Demet Haksever, Dr. Bill DuPaul, Danielle Palmer, Dr. Cate O'Keefe, Tim Cardiasmenos, Chad Keith, Kevin Kelly, Travis Ford, Benjamin Galuardi, and Sam Ascì. Mark Alexander, Chair of the Scallop Committee was present on the call. Dr. Dave Bethoney was at sea on a research cruise and unable to join. There were approximately 5 members of public listening in on the call.

KEY OUTCOMES:

- The PDT received an updated version of the 2017 scallop survey biomass estimates. This included updates to the shell-height and meat-weight parameters in the Nantucket Lightship South and Nantucket Lightship No Access Habitat Management Area.
- The PDT recommends that a lower target F rate be set for open area fishing in FY2018. There were no signs of recruitment in open areas in the 2017 surveys, and FY2017 open-area fishing appears to be concentrated compared to previous years.
- Based on available analyses, the PDT recommended that growth assumptions be adjusted for SAMS areas where surveys have observed anomalously slow growth.

The meeting began at 1:03 pm. Council staff welcomed the PDT to the meeting and reviewed the agenda.

Updated NLS biomass estimates

Council staff informed the PDT that biomass estimates for the NLS SAMS areas had been recalculated so that consistent SH:MW parameter estimates were used by each survey group. Hennen and Hart (2012, also referred to as SARC50 parameter estimates) SH:MW parameter estimates were used for NLS-AC-N and NLS-ext, and the combined 2016/2017 VIMS parameter estimates with no interaction variable were used for NLS-AC-S and NLS-NA.

Survey groups saw a small, thickly settled aggregation of scallops was driving the biomass estimate for the NLS-ext. The PDT noted that scallops in the NLS-ext are generally in better condition than those in NLS-AC-S; however, notably increased standard error and uncertainty in SH:MW relationships make the NLS-ext biomass estimate highly uncertain.

Rationale for using SARC 50 SH:MW parameter estimates

For biomass estimates outside of the NLS, SARC 50 parameter estimates were used instead of SARC 59 parameter estimates because a small percentage (1-2%) of data used in the SARC59 SHMW estimates were data entry errors or outliers. It was noted that even 1-2% error can distort the estimates, especially because the estimation errors between slope and intercept are strongly correlated. A member of the PDT noted that entry error will no longer be a concern in the future because the NEFSC has begun using automated at-sea sampling equipment which enters meat weight measurements automatically. The PDT was informed that these issues will be discussed at the upcoming 2018 benchmark assessment.

The PDT reviewed the updated biomass estimates, and the combined survey estimates (mean biomass of each survey group) (Table 1).

Elephant Trunk growth trends

Following discussion at the August 29-30 PDT meeting, Dr. Dave Rudders used VIMS shell height data to investigate growth trends in the high density area of ET. A comparison of length-frequencies in ET-flex vs. ET-open suggested that the 2013 year-class was growing slower than expected in ET-flex between 2015-2017. Further analysis suggested that scallops in the highest density portion of ET-flex, “The Blob”, were growing slower than those in the rest of ET-flex. It was suggested that the very different growth trends observed within a relatively small portion of ET were likely a result of several oceanographic and biotic conditions (i.e. depth, hydrography, density). Dr. Rudders noted the importance of being careful when allocating to this area in the future because the majority of biomass in the ET is made up of the slower growing scallops within the ‘Blob’.

It was also noted that the SAMS model is projecting growth of scallops in the ET-flex to be faster than other areas. Dr. Dvora Hart noted that previous NEFSC growth studies did not correlate density dependence with slower growth; however, it was also noted that dredge data used in these studies did not encounter such high-density aggregations as what was seen in the 2016/2017 surveys. Dr. Hart informed the PDT that she will continue investigating growth in the ET and bring it up as a discussion point at the 2018 benchmark assessment.

Updates on 2017 survey data

Dr. Dvora Hart presented the updated biomass estimates and combined estimates (mean of all survey estimates) by SAMS area. It was pointed out that, when biomass estimates from high-density areas (NLS-AC-S, NLS-NA, ET-Closed) were removed, the total biomass estimates from each survey group were within 10% of each other.

Overall, an increase in mean meat weight was seen in 2017 compared to 2016. VIMS dredge and HabCam estimates seemed to show a decrease in biomass within high-density areas; Dr. Hart attributed this to dredge efficiency issues and potentially density-dependent mortality. Biomass estimates from the drop cam in high density areas seemed to increase between 2016 and

2017. It was suggested that the increase was due to visibility issues in NLS-AC-S in 2016; however, it was also noted that the difference in biomass could be attributed to SMAST changing NLS survey coverage between the 2016 and 2017 surveys.

A review of VIMS dredge survey length-frequencies of the Mid-Atlantic showed some recruitment in ET-closed, and to a lesser extent in DMV. Each SAMS area within the Mid-Atlantic showed some evidence of the 4 year-old class of scallops (scallops were ~100 mm), except for in ET-close where observed scallops were slightly smaller.

A review of observed length-frequency data from Georges Bank showed two distinct year classes in CL2-N-NA, 2-year-olds at ~50 mm and 3-year-olds at ~75 mm. CL1-NA-N showed both a 4 year-old class (~100 mm) and a 7 year-old class (~130 mm); it was noted that the 4 year-old class could substantially contribute to the 2019 exploitable biomass in this area. CL2-S-Ext showed a sizeable peak of ~90 mm scallops which will likely be recruited to the fishery in FY2018. Dr. Hart also noted that no recruitment was evident in the Great South Channel and that overall this area was not in great shape.

Log-scaled shell heights from the NLS were presented. Scallops in NLS-NA peaked at ~80 mm, scallops in NLS-S-AC peaked around 105 mm, and NLS-N-AC seemed to be holding a number of larger scallops. A comparison of 2016 observed, 2017 observed, and 2017 projected shell heights suggested that growth in NLS-NA was slightly faster than expected, and that growth in NLS-AC-S was faster than expected but still slower than normal (projected growth used $L_{\infty} = 90$ mm). Dr. Hart noted that this comparison of observed and projected shell heights will be done for scallops in ET-closed before the in-person PDT on September 25th.

Based on this analysis, it was proposed that growth assumptions be changed for the NLS-S-AC and ET-closed SAMS areas in the upcoming model runs. For The NLS-S where faster growth has been observed, the PDT plans to increase L_{∞} to 100-105mm. For the ET-Flex where slower growth has been observed, the PDT plans to fit the growth assumptions to observed growth. The PDT agreed with the proposed changes and will review SAMS model runs at the in-person PDT meeting on September 25th. Dr. Hart also noted that SAMS model outputs of projected exploitable biomass, OFL, and ABC for FY2018 will be prepared to review at the in-person PDT on September 25th.

PDT outlook on FY2018

The following bullets summarize the PDT's preliminary discussion of potential rotational management options for FY2018:

- The PDT discussed the pros and cons of maintain the ET-Flex area vs. removing the boundary and returning it to the MAAA "Megatron". Keeping the ET-flex area separate from the MAAA could help direct effort in a manner that reduces high discard mortality in areas of ET- flex with high densities of small scallops.
- Because no recruitment was evident in open areas in 2017 and open-area fishing was particularly concentrated compared to previous years, the PDT recommends that a lower target F rate be set for open area fishing in FY2018.
- In the face of unremarkable recruitment, the large 4 year old cohort may need to sustain open area fishing for multiple years.

- Though many potential options were discussed, a review of exploitable biomass estimates and input from the AP/Committee are needed to inform further discussion of NLS management.
- The PDT noted the management challenges presented by the large biomass of slow growing animals in the NLS-S.
- The PDT does not support combining NLS-N-AC with other areas (i.e. NLS-S-AC, NLS-ext) to justify higher overall landings that are anticipated to come from the NLS-N-AC.
- DMV scallops have diminished over time and are highly susceptible to nematode infection. AP and Committee input is needed to inform whether or not DMV should become part of the open area.

RSA compensation fishing

Council staff moved discussion towards where RSA compensation fishing is allowed (i.e. open-area and MAAA), and the disconnect in estimated market price vs. realized market price for FY2017. Rationale for limiting compensation fishing to open bottom and the MAAA in FY2017 was the concern of high yellowtail bycatch in CAII AA and because the NLS could not support additional removals beyond what was allocated to the fleet; PDT members agreed that this rationale was still valid. It was suggested that the AP/Committee discuss expectations of average market price to help inform setting the RSA compensation price for FY2018.

Other PDT updates

- The 2018/2019 Sea Scallop RSA FFO has been released and the deadline for proposals is November 6th, 2017.
- A memo was sent from the Scallop PDT to the Groundfish PDT re: scallop fishery catch of Georges Bank winter flounder. The memo provides an estimate of GB winter flounder catch by the scallop fishery in FY2017 which accounted for the difference in bycatch rates of open-area fishing vs. access area fishing (i.e. Closed Area I AA).

Other business

No other business was discussed. The meeting concluded at 3:36 pm.

Table 1. The updated 2017 biomass estimates by SAMS area from each survey group.

Georges Bank	Dredge				Drop Camera (Digital)				Habcam				Means					
	NumMil	BmsMT	SE	MeanWt	NumMil	BmsMT	SE	MeanWt	NumMil	BmsMT	SE	MeanWt	NumMil	BmsMT	SE	MeanWt	IVWMBms	SE
CL1ACC	45	1602	671	35.6	66	1647	358	24.9	66	883	6	13.3	59	1377	761	23.3	883	6
CL1NA	457	9588	4560	21.0	761	13904	4106	18.3	565	12829	604	22.7	594	12107	6165	20.4	12797	593
CL-2(N)	442	7407	2947	16.8	214	3187	1488	14.9	190	6122	118	32.2	282	5572	3304	19.8	6106	118
CL-2(S)	406	11218	656	27.6	465	7361	684	15.8	314	8979	129	28.6	395	9186	957	23.3	9006	124
CL2Ext	396	6721	538	17.0	545	5153	439	9.5	300	5354	46	17.9	414	5743	696	13.9	5362	45
NLSAccN	132	6428	510	48.5	260	8888	3393	34.2	222	10083	300	45.4	205	8466	3444	41.3	9143	258
NLSAccS	3152	31154	2380	9.9	11676	82984	25271	6.8	9315	77827	3174	8.4	8048	63988	25580	8.0	48146	1899
NLSNA	221	4843	1718	21.9	2597	46250	18029	16.7	2906	56066	1831	19.3	1908	35720	18203	18.7	28915	1250
NLSExt	15	674	145	45.8	967	16175	15043	16.1	171	7164	1176	42.0	384	8004	15090	20.8	773	144
NF	274	3355	954	12.2	39	636	261	16.2	78	1289	1037	16.5	131	1760	1433	13.5	851	245
SCH	459	8485	3596	18.5	631	6590	1256	10.5	339	6857	167	20.2	476	7311	3812	15.4	6856	165
SF	296	3588	1082	12.1	747	6799	1080	9.1	282	6061	59	21.5	442	5482	1530	12.4	6056	58
Total Rotational	4146	57797	2612	13.9	13979	122208	29615	8.7	10388	110289	3401	10.6	9504	96764	29923	10.2	77279	2072
Total EFH Closures	1120	21838	5695	19.5	3572	63341	18550	17.7	3661	75017	1932	20.5	2784	53399	19501	19.2	69530	1829
Total Open	1029	15428	3874	15.0	1417	14025	1677	9.9	700	14207	1052	20.3	1049	14553	4350	13.9	14291	1015
TOTAL	6295	95062	8409	11.6	18968	199574	8409	11.6	14748	199513	4050	13.5	13337	164716	35988	12.4	179844	3649
MidAtlantic																		
Block Island	122	1864	29	15.3	115	1267	495	11.0	113.8	1819.7	7.7	16.0	117	1650	496	14.1	1822	7
Long Island	597	14728	681	24.7	1168	20278	2889	17.4	731	18899	502	25.9	832	17968	3010	21.6	17486	400
NYB	628	13148	1344	20.9	34	463	70	13.7	336	8432	200	25.1	333	7348	1360	22.1	1361	66
MA inshore	100	1001	106	10.0	174	1558	358	8.9	75	537	2	7.1	117	1032	373	8.8	537	2
HCSAA	1275	22358	1312	17.5	801	10562	1671	13.2	957	18449	2662	19.3	1011	17123	3406	16.9	17938	962
ET Open	1214	21708	1034	17.9	2341	22023	2153	9.4	1588	19233	545	12.1	1715	20988	2450	12.2	19879	470
ET Flex	742	10618	1071	14.3	3620	48108	9963	13.3	2608	45232	3012	17.3	2324	34653	10463	14.9	14841	1004
DMV	257	2476	285	9.6	438	5010	636	11.4	253	3569	780	14.1	316	3685	1046	11.7	2967	247
Virginia	23	49	11	2.2									23	49	11	2.2	49	11
Total Access	2747	46542	2004	16.9	3580	37595	10349	10.5	2797	41251	4131	14.7	3041	76449	11321	25.1	45534	1803
Total Open	1470	30789	1511	20.9	1491	23566	2954	15.8	1256	29687	540	23.6	1421	28047	3361	19.7	29812	509
TOTAL	4959	87949	2510	17.7	8691	109269	10762	12.6	6661	116170	4166	17.4	6786	104495	11810	15.4	95464	2150
Total w/o ETF, NLSNA & S		136397				131501				136559								
OVERALL TOTAL	11254	183011	8775	16.3	27659	308843	13657	11.2	21410	315683	5810	14.7	20123	269212	37876	13.4	275248	4845
12-Sep-17																		
PRELIMINARY ESTIMATES FOR PDT DISCUSSION PURPOSES ONLY																		
DO NOT CIRCULATE OR CITE																		