CFF additional biomass calculations per request by Scallop PDT

Methods used:

1. Inverse distance weighted interpolation (IDW) in ArcMap using built-in function in the Geostatistical Wizard (power=2, 15-neighbor weighted estimates) with 100x100m grid raster. Biomass totals by area calculated using Spatial Analyst zonal statistics. This method does not provide estimates of prediction error.
2. Tracks method. CFF tracks method was simplified from the method for stratified mean estimation in Chang et al. 2017 – tracks were not segmented by depth strata or by overall length (i.e. whole tracks were used). Only data from the predominant track orientations were included (N-S for CA2/SF and NLS, E-W for ET). Track lengths per area (SAMS or shellfish strata) and were estimated in ArcMap.

Table 1: Summary table for biomass in metric tons

SAMS Area	HabCam model CFF+NEFSC	HabCam model CFF only	SMAST	VIMS	HabCam CFF IDW	HabCam CFF Track means
CA2-Access	11710			20689	14969	13645
CA2-Ext	6714			5568	7390	6768
NLS-North	3066		4700	3369	4359	2915
NLS-South-Shallow	3420	3420	4650	1721	3856	3302
NLS-South-Deep	46060	46060	49700	11898	51382	51340
NLS-West	12575	12575	13450	3276	16265	16501
SF	8514			6438	6458	5592
ET-Open	17215	20564	18050	15105	23119	23001
ET-Flex	24357	16924	19650	13529	17740	17907

Table 2: Estimates using the tracks method. Percent coverage is the total of the combined track areas/SAMS or strata area. When this value is close to 1, the HabCam tracks covered most of the area under consideration. Scallop numbers and biomass were not adjusted based on percent coverage.

SAMS Area	Number (millions)	BMS MT	SE	MeanWt	Percent coverage
CA2-Access	1095	13645	1630	11.5	0.93
CA2-Ext	629	6768	584	10.7	0.87
NLS-North	67	2915	423	44.8	0.66
NLS-South-Shallow	230	3302	589	14.7	0.92
NLS-South-Deep	4625	51340	1740	11.2	0.98
NLS-West	965	16501	1942	17.2	0.79
SF	544	5592	1048	10.8	0.43
ET-Open	831	23001	2474	29.6	0.97
ET-Flex	608	17907	4602	27.2	1