

## BLACK SEA BASS TABLES

Table C1. Black sea bass commercial and recreational landings, ME-NC.

Year	Commercial landings 000s lbs	Commercial landings (mt)	Recreational landings (000 lbs)	Recreational landings (mt)	Total landings (mt)
1950	12,645	5,736			
1951	18,432	8,361			
1952	21,788	9,883			
1953	14,375	6,521			
1954	11,334	5,141			
1955	11,310	5,130			
1956	11,569	5,247			
1957	9,521	4,319			
1958	11,554	5,241			
1959	8,056	3,654			
1960	6,836	3,101			
1961	5,422	2,459			
1962	8,123	3,554			
1963	8,372	3,705			
1964	7,051	3,143			
1965	7,948	3,481			
1966	3,606	1,537			
1967	2,803	1,154			
1968	2,482	1,079			
1969	2,489	1,097			
1970	2,214	970			
1971	1,349	566			
1972	1,989	727			
1973	2,746	1,115			
1974	3,320	1,023			
1975	4,650	1,680			
1976	4,135	1,557			
1977	5,014	1,985			
1978	4,267	1,662			
1979	3,152	1,241			
1980	2,325	977			
1981	2,548	868	1,245	565	2,678
1982	2,960	1,004	9,898	4,490	15,392
1983	3,692	1,437	4,106	1,862	7,405
1984	3,786	1,641	1,294	587	3,522
1985	3,341	1,178	2,116	960	4,254
1986	3,984	1,594	12,391	5,621	19,606
1987	4,263	1,729	1,942	881	4,551
1988	3,466	1,473	2,864	1,299	5,636
1989	2,758	1,105	3,292	1,493	5,890
1990	3,178	1,334	2,770	1,257	5,361
1991	2,433	1,104	4,162	1,888	7,154
1992	2,594	1,177	2,620	1,189	4,985
1993	2,896	1,314	4,835	2,193	8,341
1994	2,094	950	2,940	1,333	5,223
1995	2,069	938	6,204	2,814	9,957
1996	3,458	1,569	3,986	1,808	7,363
1997	2,642	1,198	4,262	1,933	7,394
1998	2,583	1,171	1,143	518	2,833
1999	2,881	1,307	1,651	749	3,707
2000	2,658	1,206	4,006	1,817	7,028
2001	2,862	1,298	3,429	1,556	6,283
2002	3,499	1,587	4,380	1,987	7,955
2003	2,996	1,359	3,314	1,503	6,177
2004	3,002	1,362	1,675	760	3,796
2005	2,888	1,310	1,735	787	3,833

Table C2. Summary of number of black sea bass length measurements from commercial fisheries, 1998-2005.

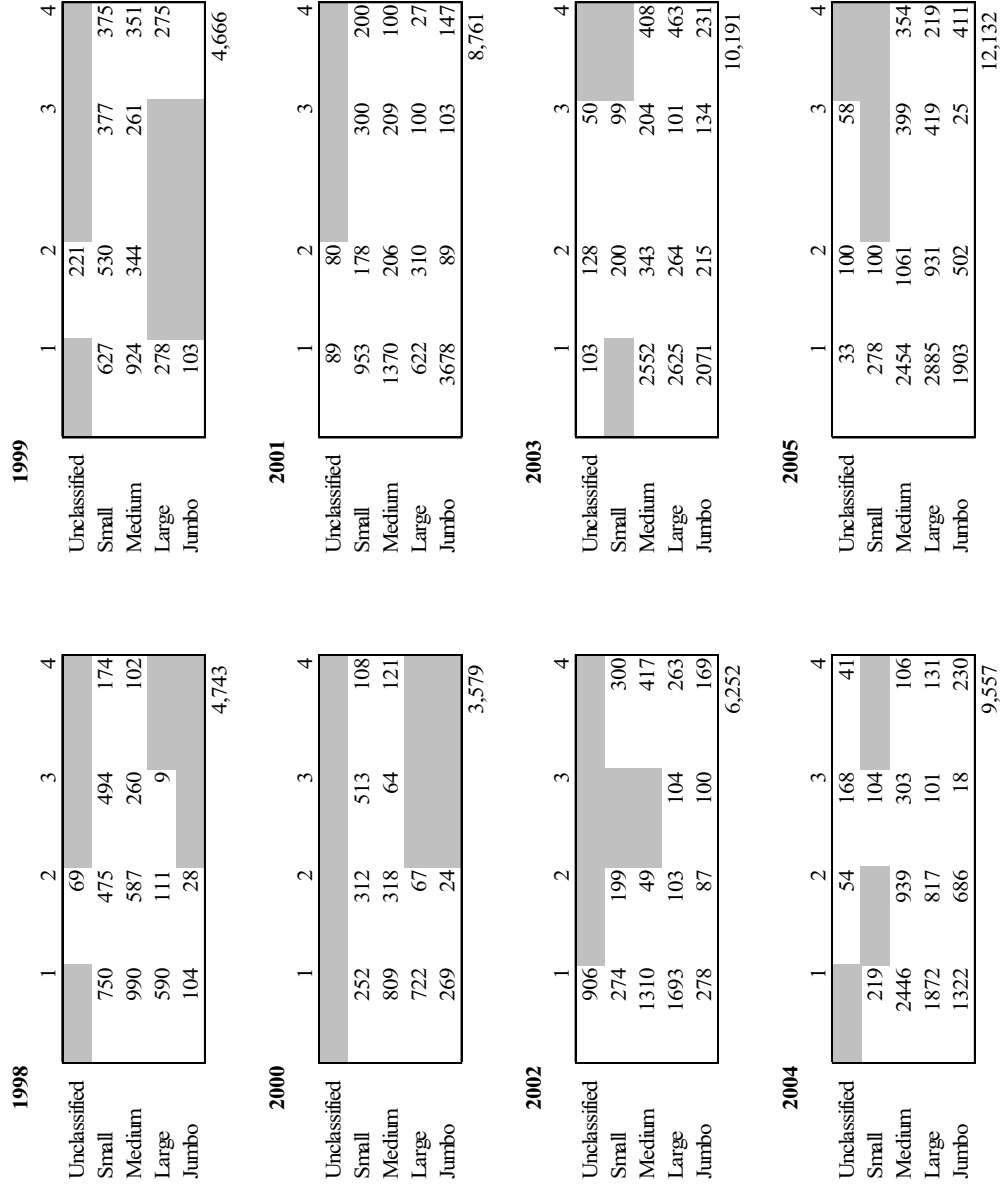


Table C3. Summary of total number, total weight, mean weight and mean lengths by year and market category of commercial black sea bass, 1998-2005.

	1998	1999	2000	2001	2002	2003	2004	2005
uncl	323,967	173,127	164,069	157,495	373,279	64,935	139,376	180,419
large	360,523	488,271	519,377	545,703	640,400	873,903	752,321	693,492
jumbo	70,841	105,361	186,302	220,932	429,998	268,934	290,911	258,768
med	1,049,440	962,946	623,481	926,165	988,376	892,235	833,155	739,007
small	1,297,322	995,057	763,540	706,149	344,846	225,718	241,028	152,660
total	3,102,093	2,724,762	2,256,770	2,556,445	2,776,898	2,325,726	2,256,792	2,024,346
	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>	<i>wt kg</i>
uncl	118,204	119,993	92,564	83,264	136,135	56,228	70,286	99,727
large	249,420	364,936	372,206	379,265	518,184	436,463	420,716	380,501
jumbo	88,119	143,652	226,116	192,660	366,878	377,954	410,063	417,214
med	364,681	387,143	286,839	422,354	446,842	409,077	366,690	321,047
small	350,997	290,876	227,814	220,816	119,283	79,450	92,030	56,890
mean wt	0.38	0.48	0.53	0.51	0.57	0.58	0.60	0.63
	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>	<i>x wt</i>
uncl	0.36	0.69	0.56	0.53	0.36	0.87	0.50	0.55
large	0.69	0.75	0.72	0.70	0.81	0.50	0.56	0.55
jumbo	1.24	1.36	1.21	0.87	0.85	1.41	1.41	1.61
med	0.35	0.40	0.46	0.46	0.45	0.46	0.44	0.43
small	0.27	0.29	0.30	0.31	0.35	0.35	0.38	0.37
	<i>x len</i>	<i>x len</i>	<i>x len</i>	<i>x len</i>	<i>x len</i>	<i>x len</i>	<i>x len</i>	<i>x len</i>
uncl		35.5		32.9	29.5	40.6	34.7	28.3
large	36.3	37.2	36.7	36.4	38.1	36.3	37.6	37.3
jumbo	44.0	45.2	43.7	38.6	38.3	45.6	45.5	47.5
med	28.9	30.4	31.8	31.8	31.7	31.7	31.3	31.1
small	26.8	27.4	27.7	28.1	29.1	29.2	29.8	29.6
mean length	29.3	31.4	32.6	32.4	33.6	35.1	35.3	34.9

Table C4. Summary of commercial black sea bass discards from vessel log books, prorated to total landings.

	lbs kept	lbs disc	% discard	total landings	% in VTR	total discard lbs	total discard mt
<b>2005</b>	2,424,560	117,439	5%	2,888,223	84%	139,898	63
<b>2004</b>	2,633,329	173,804	7%	3,001,888	88%	198,129	90
<b>2003</b>	2,484,244	209,349	8%	2,996,458	83%	252,514	115
<b>2002</b>	2,629,970	333,106	13%	3,499,448	75%	443,232	201
<b>2001</b>	2,297,375	268,104	12%	2,862,243	80%	334,024	152
<b>2000</b>	2,307,036	250,255	11%	2,657,944	87%	288,320	131
<b>1999</b>	2,521,161	205,336	8%	2,880,556	88%	234,607	106
<b>1998</b>	2,335,566	178,172	8%	2,582,541	90%	197,013	89
<b>1997</b>	2,315,661	64,185	3%	2,641,595	88%	73,219	33

Table C5. Recreational discards (B2) (000s) from 1981 to 2005 as estimated from MRFSS.

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC	Total
1981	-	-	79	3	11	79	142	12	144	1,249	41	1,760
1982	-	-	2	3	-	127	364	14	135	671	23	1,339
1983	-	-	9	-	-	166	800	26	170	1,481	370	3,023
1984	-	1	24	4	8	199	136	10	389	723	117	1,610
1985	-	-	8	1	41	227	929	26	172	1,151	96	2,651
1986	-	2	110	49	204	713	3,265	66	518	2,164	84	7,175
1987	-	-	119	42	2	247	280	62	425	879	388	2,444
1988	-	-	60	11	7	244	201	104	2,492	1,632	264	5,014
1989	-	1	18	18	20	184	584	148	442	714	107	2,235
1990	1	-	11	5	1	56	616	124	1,461	2,889	91	5,254
1991	1	-	8	5	39	230	2,019	277	1,280	1,622	131	5,610
1992	-	-	3	9	2	114	1,065	219	1,096	1,541	257	4,304
1993	-	-	9	9	2	30	956	178	546	1,256	239	3,223
1994	-	-	6	1	1	326	1,317	206	381	1,379	352	3,970
1995	-	0	16	41	10	343	2,570	314	1,832	2,012	418	7,556
1996	-	-	21	82	19	311	1,405	119	582	1,936	77	4,553
1997	-	0	29	36	18	523	2,811	272	586	1,533	207	6,015
1998	-	-	42	26	15	79	1,235	284	754	1,332	134	3,900
1999	-	0	26	121	174	731	1,728	213	1,487	1,242	29	5,751
2000	-	0	268	401	89	1,222	5,545	820	3,224	1,570	66	13,207
2001	-	0	143	151	17	641	4,371	1,003	2,324	2,180	56	10,886
2002	-	-	268	241	291	1,411	4,318	1,233	925	2,441	177	11,304
2003	-	-	197	205	55	739	4,295	832	773	1,742	38	8,877
2004	-	0	58	38	11	491	2,559	439	671	1,322	83	5,672
2005	-	-	68	50	42	967	2,536	286	767	962	89	5,767

Table C6a. Spring offshore survey mean number per tow and 95% confidence intervals of black sea bass  $\geq 22$  cm, 1968-2006.

Year	Spring offshore stratified		95% CI		ln re-transform 95% CI		
	mean #/tow ( $\geq 22$ cm)	std. error	High	Low	mean #/tow	Low	High
1968	0.269	0.233	0.725	-0.187	0.070	0.045	0.096
1969	0.937	0.854	2.611	-0.737	0.103	0.076	0.13
1970	0.118	0.032	0.180	0.056	0.111	0.073	0.15
1971	0.182	0.134	0.445	-0.081	0.105	0.059	0.154
1972	0.358	0.141	0.633	0.083	0.250	0.169	0.337
1973	0.696	0.351	1.383	0.009	0.337	0.212	0.475
1974	2.332	0.941	4.176	0.488	1.229	0.786	1.78
1975	1.83	1.251	4.283	-0.623	0.513	0.42	0.612
1976	1.223	0.420	2.046	0.400	0.688	0.525	0.867
1977	4.54	4.073	12.522	-3.442	0.604	0.458	0.765
1978	2.261	1.002	4.225	0.297	0.598	0.444	0.768
1979	4.634	4.114	12.697	-3.429	0.446	0.342	0.558
1980	1.006	0.441	1.871	0.141	0.462	0.326	0.611
1981	0.686	0.196	1.070	0.302	0.360	0.288	0.436
1982	0.102	0.049	0.197	0.007	0.073	0.045	0.102
1983	0.607	0.315	1.225	-0.011	0.339	0.221	0.469
1984	0.23	0.084	0.394	0.066	0.186	0.123	0.252
1985	0.376	0.111	0.594	0.158	0.268	0.193	0.347
1986	1.981	1.148	4.230	-0.268	0.755	0.515	1.032
1987	0.959	0.274	1.496	0.422	0.514	0.389	0.65
1988	1.229	0.413	2.038	0.420	0.602	0.457	0.76
1989	0.397	0.105	0.602	0.192	0.245	0.18	0.315
1990	0.458	0.197	0.844	0.072	0.270	0.177	0.37
1991	0.221	0.109	0.434	0.008	0.186	0.101	0.277
1992	1.154	0.427	1.992	0.316	0.665	0.505	0.842
1993	0.697	0.416	1.512	-0.118	0.201	0.137	0.268
1994	0.257	0.126	0.504	0.010	0.175	0.109	0.244
1995	0.431	0.159	0.742	0.120	0.314	0.221	0.413
1996	0.317	0.131	0.573	0.061	0.203	0.149	0.258
1997	1.201	0.659	2.492	-0.090	0.542	0.396	0.702
1998	0.401	0.249	0.889	-0.087	0.189	0.137	0.244
1999	1.026	0.708	2.413	-0.361	0.537	0.344	0.759
2000	0.343	0.095	0.528	0.158	0.301	0.202	0.407
2001	1.581	0.582	2.722	0.440	0.792	0.598	1.009
2002	2.274	0.478	3.210	1.338	1.253	1.024	1.508
2003	6.885	4.569	15.839	-2.069	1.614	1.181	2.134
2004	2.081	0.837	3.721	0.441	0.711	0.561	0.874
2005	1.803	0.965	3.695	-0.089	0.727	0.571	0.898
2006	0.913	0.478	1.849	-0.023	0.456	0.331	0.594

Table C6b. Winter survey mean number per tow and 95% confidence intervals of black sea bass  $\geq 22$  cm, 1992-2006.

Year	Winter stratified				ln re-transform		
	mean #/tow ( $\geq 22$ cm)	std. error	95% CI		mean #/tow	95% CI	
			Low	High		Low	High
1968							
1969							
1970							
1971							
1972							
1973							
1974							
1975							
1976							
1977							
1978							
1979							
1980							
1981							
1982							
1983							
1984							
1985							
1986							
1987							
1988							
1989							
1990							
1991							
1992	1.913	0.496	0.941	2.885	0.991	0.808	1.193
1993	2.521	0.916	0.725	4.317	0.951	0.755	1.169
1994	0.517	0.146	0.231	0.803	0.405	0.294	0.525
1995	1.247	0.347	0.566	1.928	0.847	0.639	1.081
1996	2.036	0.550	0.957	3.115	1.058	0.819	1.330
1997	0.809	0.384	0.057	1.561	0.422	0.325	0.527
1998	2.299	0.500	1.319	3.279	0.351	0.297	0.408
1999	0.805	0.149	0.514	1.096	0.612	0.495	0.738
2000	1.790	0.547	0.717	2.863	1.082	0.843	1.352
2001	4.869	1.825	1.291	8.447	1.866	1.487	2.302
2002	5.893	1.516	2.922	8.864	3.436	2.817	4.156
2003	7.591	3.339	1.046	14.136	3.160	2.351	4.164
2004	3.207	1.090	1.070	5.344	1.213	1.007	1.440
2005	2.182	0.759	0.695	3.669	0.558	0.450	0.674
2006	1.595	0.410	0.792	2.398	1.061	0.819	1.334

Table C7a. Spring offshore survey mean weight per tow and 95% confidence intervals of black sea bass  $\geq 22$  cm, 1968-2006.

Year	Spring offshore stratified mean kg/tow ( $\geq 22$ cm)			ln re-transform 95% CI		
	95% CI High	Low		95% CI Low	High	
1968	0.152	-0.113	0.417	0.040	0.026	0.055
1969	0.217	-0.178	0.613	0.024	0.018	0.030
1970	0.066	0.030	0.102	0.062	0.041	0.084
1971	0.063	-0.030	0.155	0.036	0.020	0.053
1972	0.155	0.034	0.277	0.108	0.073	0.146
1973	0.272	-0.001	0.545	0.131	0.083	0.185
1974	0.964	0.185	1.744	0.509	0.325	0.737
1975	0.846	-0.310	2.002	0.237	0.194	0.283
1976	0.631	0.198	1.064	0.355	0.271	0.447
1977	1.120	-0.891	3.130	0.149	0.113	0.189
1978	0.730	0.083	1.378	0.193	0.143	0.248
1979	1.078	-0.835	2.990	0.104	0.080	0.130
1980	0.292	0.036	0.547	0.134	0.094	0.177
1981	0.311	0.133	0.489	0.164	0.131	0.198
1982	0.027	0.001	0.053	0.019	0.012	0.027
1983	0.145	-0.005	0.296	0.081	0.053	0.112
1984	0.122	0.034	0.209	0.097	0.064	0.132
1985	0.164	0.068	0.260	0.116	0.084	0.150
1986	0.559	-0.088	1.206	0.213	0.145	0.291
1987	0.380	0.163	0.597	0.204	0.154	0.258
1988	0.407	0.133	0.680	0.199	0.151	0.251
1989	0.138	0.066	0.211	0.085	0.062	0.109
1990	0.144	0.021	0.268	0.085	0.055	0.116
1991	0.057	0.001	0.113	0.048	0.026	0.072
1992	0.362	0.094	0.629	0.208	0.158	0.263
1993	0.141	-0.027	0.309	0.041	0.028	0.054
1994	0.086	0.002	0.171	0.059	0.037	0.082
1995	0.148	0.040	0.256	0.107	0.075	0.141
1996	0.143	0.026	0.260	0.091	0.067	0.116
1997	0.300	-0.029	0.629	0.135	0.099	0.175
1998	0.111	-0.026	0.247	0.052	0.038	0.067
1999	0.424	-0.160	1.008	0.222	0.142	0.313
2000	0.156	0.070	0.242	0.137	0.092	0.185
2001	0.470	0.124	0.815	0.235	0.178	0.300
2002	1.121	0.650	1.591	0.617	0.505	0.743
2003	2.151	-0.703	5.004	0.504	0.369	0.666
2004	0.938	0.183	1.693	0.321	0.253	0.394
2005	0.927	-0.066	1.919	0.374	0.293	0.461
2006	0.548	-0.027	1.123	0.288	0.199	0.358



Table C7b. Winter survey mean weight per tow and 95% confidence intervals of black sea bass  $\geq 22$  cm, 1992-2006.

Year	Winter stratified			ln re-transform		
	mean kg/tow ( $\geq 22$ cm)	95% CI Low	High	mean kg/tow	95% CI Low	High
1968						
1969						
1970						
1971						
1972						
1973						
1974						
1975						
1976						
1977						
1978						
1979						
1980						
1981						
1982						
1983						
1984						
1985						
1986						
1987						
1988						
1989						
1990						
1991						
1992	0.455	0.224	0.686	0.236	0.192	0.284
1993	0.764	0.220	1.308	0.288	0.229	0.354
1994	0.139	0.062	0.217	0.109	0.079	0.142
1995	0.335	0.152	0.518	0.228	0.172	0.290
1996	0.539	0.253	0.824	0.280	0.217	0.352
1997	0.252	0.018	0.485	0.131	0.101	0.164
1998	0.602	0.346	0.859	0.092	0.078	0.107
1999	0.288	0.184	0.392	0.219	0.177	0.264
2000	0.488	0.196	0.781	0.295	0.230	0.369
2001	1.507	0.400	2.614	0.577	0.460	0.712
2002	2.276	1.128	3.423	1.327	1.088	1.605
2003	3.123	0.430	5.814	1.300	0.967	1.713
2004	1.184	0.395	1.973	0.448	0.372	0.532
2005	0.643	0.205	1.081	0.164	0.133	0.199
2006	0.568	0.282	0.855	0.378	0.292	0.476

Table C8. NEFSC Spring, Autumn and Winter survey indices of juvenile (<14 cm) black sea bass.

	Spring JI			Spring JI			Fall JI			Fall JI			Winter JI			Winter JI					
	#/tow	SE	ln re-trans mean#/tow	95% CI Low	95% CI High	#/tow	SE	ln re-trans mean#/tow	95% CI Low	95% CI High	#/tow	SE	ln re-trans mean#/tow	95% CI Low	95% CI High	#/tow	SE	ln re-trans mean#/tow	95% CI Low	95% CI High	
1968	0.408	0.408	0.085	0.040	0.133																
1969	0.000	0.000	0.000	0.000	0.000																
1970	0.000	0.000	0.000	0.000	0.000																
1971	0.000	0.000	0.000	0.000	0.000																
1972	0.243	0.200	0.143	0.062	0.231	0.033	0.020	0.034	0.007	0.061	0.020	0.020	0.034	0.007	0.061	0.033	0.020	0.034	0.007	0.061	
1973	0.000	0.000	0.000	0.000	0.000	0.624	0.294	0.482	0.316	0.668	0.624	0.294	0.482	0.316	0.668	0.624	0.294	0.482	0.316	0.668	
1974	0.000	0.000	0.000	0.000	0.000	0.525	0.189	0.493	0.320	0.688	0.525	0.189	0.493	0.320	0.688	0.525	0.189	0.493	0.320	0.688	
1975	0.069	0.069	0.061	-0.003	0.129	4.094	3.477	1.334	0.841	1.958	4.094	3.477	1.334	0.841	1.958	4.094	3.477	1.334	0.841	1.958	
1976	0.944	0.396	0.557	0.397	0.735	2.074	1.163	1.740	1.086	2.598	2.074	1.163	1.740	1.086	2.598	2.074	1.163	1.740	1.086	2.598	
1977	0.184	0.066	0.163	0.099	0.231	15.998	5.813	1.661	1.420	1.925	15.998	5.813	1.661	1.420	1.925	15.998	5.813	1.661	1.420	1.925	
1978	0.384	0.261	0.148	0.088	0.211	0.080	0.027	0.079	0.040	0.119	0.080	0.027	0.079	0.040	0.119	0.080	0.027	0.079	0.040	0.119	
1979	0.017	0.016	0.017	-0.004	0.039	0.463	0.095	0.386	0.299	0.479	0.463	0.095	0.386	0.299	0.479	0.463	0.095	0.386	0.299	0.479	
1980	1.018	0.538	0.482	0.304	0.685	0.856	0.416	0.646	0.407	0.925	0.856	0.416	0.646	0.407	0.925	0.856	0.416	0.646	0.407	0.925	
1981	0.045	0.021	0.045	0.016	0.074	0.302	0.267	0.252	0.082	0.448	0.302	0.267	0.252	0.082	0.448	0.302	0.267	0.252	0.082	0.448	
1982	0.003	0.003	0.003	0.000	0.006	0.381	0.092	0.387	0.263	0.523	0.381	0.092	0.387	0.263	0.523	0.381	0.092	0.387	0.263	0.523	
1983	0.009	0.007	0.009	-0.001	0.018	1.425	0.263	0.724	0.612	0.844	1.425	0.263	0.724	0.612	0.844	1.425	0.263	0.724	0.612	0.844	
1984	0.007	0.007	0.007	-0.002	0.016	0.542	0.504	0.257	0.131	0.398	0.542	0.504	0.257	0.131	0.398	0.542	0.504	0.257	0.131	0.398	
1985	0.097	0.058	0.085	0.034	0.138	3.464	0.113	1.035	0.866	1.220	3.464	0.113	1.035	0.866	1.220	3.464	0.113	1.035	0.866	1.220	
1986	0.182	0.116	0.149	0.068	0.237	7.910	4.634	2.337	1.641	3.216	7.910	4.634	2.337	1.641	3.216	7.910	4.634	2.337	1.641	3.216	
1987	0.031	0.020	0.030	0.004	0.055	0.453	0.236	0.363	0.232	0.508	0.453	0.236	0.363	0.232	0.508	0.453	0.236	0.363	0.232	0.508	
1988	0.497	0.420	0.232	0.109	0.370	3.011	0.438	2.210	1.528	3.076	3.011	0.438	2.210	1.528	3.076	3.011	0.438	2.210	1.528	3.076	
1989	0.079	0.063	0.070	0.016	0.126	0.378	0.177	0.383	0.204	0.589	0.378	0.177	0.383	0.204	0.589	0.378	0.177	0.383	0.204	0.589	
1990	0.396	0.373	0.171	0.065	0.288	0.961	0.474	0.845	0.499	1.271	0.961	0.474	0.845	0.499	1.271	0.961	0.474	0.845	0.499	1.271	
1991	0.761	0.413	0.499	0.322	0.699	1.062	0.366	0.889	0.607	1.220	1.062	0.366	0.889	0.607	1.220	1.062	0.366	0.889	0.607	1.220	
1992	0.382	0.362	0.164	0.060	0.279	0.501	0.158	0.505	0.314	0.724	0.501	0.158	0.505	0.314	0.724	0.501	0.158	0.505	0.314	0.724	
1993	0.007	0.007	0.007	-0.002	0.016	0.079	0.033	0.081	0.041	0.123	0.079	0.033	0.081	0.041	0.123	0.079	0.033	0.081	0.041	0.123	
1994	0.011	0.008	0.011	0.000	0.022	6.488	5.869	1.058	0.818	1.329	6.488	5.869	1.058	0.818	1.329	6.488	5.869	1.058	0.818	1.329	
1995	0.181	0.055	0.162	0.107	0.219	1.239	0.468	1.207	0.790	1.720	1.239	0.468	1.207	0.790	1.720	1.239	0.468	1.207	0.790	1.720	
1996	0.068	0.036	0.063	0.024	0.103	0.741	0.541	0.314	0.226	0.408	0.741	0.541	0.314	0.226	0.408	0.741	0.541	0.314	0.226	0.408	
1997	0.025	0.013	0.024	0.006	0.043	0.841	0.461	0.631	0.434	0.856	0.841	0.461	0.631	0.434	0.856	0.841	0.461	0.631	0.434	0.856	
1998	0.000	0.000	0.000	0.000	0.000	2.888	1.312	1.974	1.400	2.685	2.888	1.312	1.974	1.400	2.685	2.888	1.312	1.974	1.400	2.685	
1999	0.700	0.553	0.347	0.191	0.523	2.489	1.535	1.723	1.099	2.690	2.489	1.535	1.723	1.099	2.690	2.489	1.535	1.723	1.099	2.690	
2000	2.782	2.394	0.661	0.417	0.948	9.977	2.766	2.401	1.721	3.250	9.977	2.766	2.401	1.721	3.250	9.977	2.766	2.401	1.721	3.250	
2001	0.087	0.052	0.078	0.026	0.132	0.325	0.166	0.296	0.167	0.438	0.325	0.166	0.296	0.167	0.438	0.325	0.166	0.296	0.167	0.438	
2002	0.718	0.264	0.554	0.397	0.729	4.394	3.980	1.233	0.801	1.770	4.394	3.980	1.233	0.801	1.770	4.394	3.980	1.233	0.801	1.770	
2003	0.156	0.050	0.154	0.085	0.227	5.960	5.284	1.131	0.757	1.583	5.960	5.284	1.131	0.757	1.583	5.960	5.284	1.131	0.757	1.583	
2004	0.101	0.014	0.080	0.059	0.102	1.326	0.790	0.853	0.572	1.184	1.326	0.790	0.853	0.572	1.184	1.326	0.790	0.853	0.572	1.184	
2005	0.535	0.437	0.219	0.116	0.331	2.793	1.953	0.775	0.600	0.969	2.793	1.953	0.775	0.600	0.969	2.793	1.953	0.775	0.600	0.969	
2006	0.057	0.026	0.054	0.022	0.087																

Table C9. Massachusetts Division of Marine Fisheries autumn trawl survey stratified mean number per tow and spawning stock biomass per tow of black sea bass, 1978-2005.

Year	spring		fall	mean		SSB index
	index	mean	juv index	weight (kg)		
	# / tow	kg / tow	# / tow	per fish		
1978	1.96	1.40	79.3	0.72	1.40	
1979	0.99	0.73	73.2	0.74	0.73	
1980	1.00	0.79	93.1	0.79	0.79	
1981	2.23	1.26	62.9	0.56	1.26	
1982	2.16	0.90	397.2	0.42	0.90	
1983	4.53	1.42	185.7	0.31	1.42	
1984	1.60	0.69	201.3	0.43	0.69	
1985	1.21	0.57	198.5	0.47	0.57	
1986	1.58	0.74	80.4	0.47	0.74	
1987	0.71	0.20	35.3	0.29	0.20	
1988	0.42	0.20	60.4	0.48	0.20	
1989	0.55	0.23	6.5	0.42	0.23	
1990	0.70	0.45	4.3	0.64	0.45	
1991	0.38	0.43	9.5	1.12	0.43	
1992	0.09	0.04	10.8	0.43	0.04	
1993	0.11	0.08	1.1	0.72	0.08	
1994	0.22	0.19	45.0	0.87	0.19	
1995	0.47	0.15	32.6	0.33	0.15	
1996	0.15	0.09	23.6	0.58	0.09	
1997	0.45	0.18	5.3	0.40	0.18	
1998	0.22	0.08	9.9	0.35	0.08	
1999	1.26	0.78	22.1	0.62	0.78	
2000	4.00	1.93	195.5	0.48	1.93	
2001	1.75	1.04	87.9	0.59	1.04	
2002	1.88	1.14	118.9	0.61	1.14	
2003	0.83	0.72	178.2	0.87	0.72	
2004	1.25	0.68	241.0	0.54	0.68	
2005	1.10	0.93	432.5	0.85	0.93	
<b>Avg.</b>	1.21	0.64	103.29	0.57	0.64	

Table C10. Juvenile black sea bass indices from state agencies, MA to VA.

Year	MA	RI	CT	CT	NJ	VIMS	Lower CL	Upper CL
	Fall Mean #/tow age 0	Fall Mean #/tow age 0	Spring total catch age 1	Fall total catch age 0	Fall Mean #/tow age 0	May-July Mean #/tow age 1		
1978	79.3							
1979	73.2							
1980	93.1							
1981	62.9	29.15						
1982	397.2	0.20						
1983	185.7	1.38						
1984	201.3	8.68						
1985	198.5	7.97						
1986	80.4	11.72						
1987	35.3	0.41	0	2				
1988	60.4	1.50	1	0		1.58	1.08	2.20
1989	6.5	0.33	0	1	0.10	0.84	0.59	1.13
1990	4.3	0.76	1	2	0.06	2.36	1.70	3.17
1991	9.5	0.33	4	15	0.57	1.12	0.78	1.53
1992	10.8	1.14	0	0	0.50	1.28	0.91	1.72
1993	1.1	0.03	0	7	0.18	0.22	0.13	0.32
1994	45.0	0.17	0	9	0.18	1.05	0.74	1.42
1995	32.6	1.19	0	0	0.28	1.06	0.74	1.45
1996	23.6	1.15	0	2	0.44	0.50	0.33	0.69
1997	5.3	4.24	0	0	38.00	0.36	0.22	0.52
1998	9.9	0.07	0	1	3.77	0.46	0.31	0.63
1999	22.1	0.90	1	4	1.01	0.57	0.35	0.82
2000	195.5	9.40	17	1	0.98	0.58	0.41	0.77
2001	87.9	3.71	0	22	0.86	0.74	0.50	1.02
2002	118.9	2.38	48	32	4.41	1.29	0.85	1.84
2003	178.2	6.67	0	0	0.54	0.64	0.41	0.90
2004	241.0	1.74	0	67	1.34	0.12	0.06	0.18
2005	432.5	15.51	0	11	0.37	0.06	0.02	0.1

Table C11. Distance traveled for tagged black sea bass recovered since 2002. “DAL”: days at large.

<b>Region</b>	<b>Time</b>	<b>Months</b>	<b>Max Dist(nm)</b>	<b>Mean Dist(nm)</b>	<b>Max DAL</b>	<b>Mean DAL</b>
MA, RI, CT	Sum/Fall	7-12	354	16	1088	139
	Win/Spr	1-6	387	76	1000	338
NY, NJ, DE	Sum/Fall	7-12	146	7	1144	121
	Win/Spr	1-6	212	17	1028	174
MD, VA	Sum/Fall	7-12	90	7	1079	210
	Win/Spr	1-6	180	18	1269	269

Table C12. Black sea bass movements among areas based on region of release and recaptures by region and month.

Release Area	Recapture Area	Recapture Month											
		10	11	12	1	2	3	4	5	6	7	8	9
New England (NE) - MA, RI, CT	NE	227	32	1	-	-	-	1	38	69	20	44	33
	MAB	1	1	5	10	3	7	8	-	7	3	2	-
	MV	-	-	-	6	3	5	1	-	-	1	-	-
Mid Atl. Bight (MAB) - NY, NJ, DE	NE	-	-	-	-	-	-	-	-	-	1	-	-
	MAB	274	100	9	1	5	7	7	77	150	55	64	94
	MV	1	1	1	1	3	5	-	-	4	1	-	1
Maryland/Virginia (MV) - MD, VA	NE	-	-	-	-	-	-	-	-	-	-	-	-
	MAB	7	5	3	-	-	1	4	4	2	7	2	1
	MV	199	200	46	23	35	16	14	122	108	82	83	52

Table C13. Site fidelity of tagged sea bass as indicated by frequency of tagged fish returning to area of release. Recapture limited to inshore residency period.

Release State	# Released	May 15-Sept 30 Recaptures													Total Recaps	Recap North	No net Move	Recap South
		MA	RI	CT	NY	NJ	DE	MD	VA	NC								
		145	10	6	9	1	-	-	1	-								
MA	2607	145	10	6	9	1	-	-	-	-	-	-	-	172	0.0%	84.3%	15.7%	
RI	963	11	31	1	3	-	-	-	-	-	-	-	-	46	23.9%	67.4%	8.7%	
CT	31	-	-	-	2	-	-	-	-	-	-	-	-	2	0.0%	0.0%	100.0%	
NY	532	-	1	-	16	2	-	-	-	-	-	-	-	19	5.3%	84.2%	10.5%	
NJ	2398	-	-	-	6	265	61	4	-	-	-	-	-	336	1.8%	78.9%	19.3%	
DE	453	-	-	-	-	12	68	1	3	-	-	-	-	84	14.3%	81.0%	4.8%	
MD	3549	-	-	-	-	4	14	176	57	-	-	-	-	251	7.2%	70.1%	22.7%	
VA	3155	-	-	-	-	-	-	-	165	8	-	-	-	173	0.0%	95.4%	4.6%	

Table C14. Tag release/recapture matrix of black sea bass recaptured between September 2002 and April 2006.

**Regular Reward tags**

	releases	fall 2002- fall 2003	spr 2003 - spr 2004	fall 2003 - fall 2004	spr 2004 - spr 2005	fall 2004- fall 2005	spr 2005 - spr 2006
fall 2002	3143	289		63		23	
spr 2003	2199		256	60	60		18
fall 2003	2449			355		46	
fall 2004	2854					346	

**High Reward tags**

	releases	fall 2002- fall 2003	spr 2003 - spr 2004	fall 2003 - fall 2004	spr 2004 - spr 2005	fall 2004- fall 2005	spr 2005 - spr 2006
fall 2002	279	39		9		5	
spr 2003	68		13		4		1
fall 2003	232			49		3	
fall 2004	178					39	

Table C15. Tag retention results from experiments in MA, RI, NJ and VA.

Study Site			Initial	Tag induced
	# Tagged	# Shed	Tag Shedding	Mortality
Sandy Hook	30	3	10%	0%
RI DEP	30	4	13%	0%
VIMS	33	1	3%	0%
Woods Hole	7	0	0%	0%
	100	8	8%	0%



Table C16. Estimates of exploitation rates by year  $\pm$  80% confidence intervals, instantaneous fishing mortalities and natural mortalities from tagging data.

(EDITOR'S NOTE: TABLE OMITTED. RESULTS NOT ACCEPTED BY THE REVIEW PANEL. PANEL FELT THAT INCOMPLETE MIXING AND MIGRATION REQUIRE FURTHER INVESTIGATION)

Table C17. Results of Brownie model estimates of survival with annual and seasonal recoveries.

(EDITOR'S NOTE: TABLE OMITTED. RESULTS NOT ACCEPTED BY THE REVIEW PANEL. PANEL FELT THAT INCOMPLETE MIXING AND MIGRATION REQUIRE FURTHER INVESTIGATION.)

Table C18. Sensitivity of the full annual Brownie model to variation in the tag release and recovery matrix. Dispersion coefficient is an adjustment in recaptures in first year, with number recaptured reduced by the coefficient. Dispersion and reporting rate apply to recoveries, tag loss rate to releases.

(EDITOR'S NOTE: TABLE OMITTED. RESULTS NOT ACCEPTED BY THE REVIEW PANEL. PANEL FELT THAT INCOMPLETE MIXING AND MIGRATION REQUIRE FURTHER INVESTIGATION.)

Table C19. MRFSS estimated of recreational landings (AB1) and discards (B2) from Maine to Virginia, with  $\pm 2$  PSE.

	<b>Total #</b>	<b>Confidence Intervals</b>		<b>Total #</b>	<b>Confidence Intervals</b>	
	<b>AB1 (000s)</b>	<b>lower 95%</b>	<b>upper 95%</b>	<b>B2 (000s)</b>	<b>lower 95%</b>	<b>upper 95%</b>
<b>1981</b>	1,808	1,252	2,363	1,719	739	2,699
<b>1982</b>	10,030	3,046	17,013	1,316	856	1,777
<b>1983</b>	4,457	2,925	5,989	2,653	1,577	3,729
<b>1984</b>	1,592	1,189	1,996	1,493	888	2,099
<b>1985</b>	3,336	2,567	4,105	2,555	1,975	3,136
<b>1986</b>	21,723	12,531	30,915	7,091	5,300	8,881
<b>1987</b>	2,841	2,068	3,614	2,056	1,508	2,605
<b>1988</b>	3,048	2,136	3,959	4,750	3,759	5,741
<b>1989</b>	4,221	3,679	4,763	2,129	1,824	2,433
<b>1990</b>	3,853	3,221	4,486	5,165	4,378	5,951
<b>1991</b>	5,200	4,385	6,016	5,479	4,812	6,145
<b>1992</b>	3,507	2,987	4,027	4,048	3,354	4,741
<b>1993</b>	5,981	3,697	8,265	2,984	2,331	3,637
<b>1994</b>	3,409	2,622	4,196	3,618	3,111	4,126
<b>1995</b>	6,726	4,809	8,644	7,138	6,120	8,157
<b>1996</b>	3,610	2,840	4,379	4,476	3,749	5,202
<b>1997</b>	4,721	3,849	5,594	5,808	4,927	6,689
<b>1998</b>	1,126	850	1,402	3,766	3,125	4,407
<b>1999</b>	1,323	928	1,719	5,721	4,835	6,607
<b>2000</b>	3,608	2,853	4,363	13,142	11,573	14,711
<b>2001</b>	2,830	2,430	3,230	10,830	9,924	11,736
<b>2002</b>	3,337	2,879	3,795	11,128	9,899	12,356
<b>2003</b>	3,226	2,875	3,577	8,838	8,021	9,656
<b>2004</b>	1,637	1,344	1,930	5,589	4,836	6,343