Table C1. Summary of replacement ratio analyses for 19 stocks. Estimates of replacement ratios are based on robust regression of the model ln(RR)=a + b ln(relF). Replacement F is estimated as the point where the replacement ratio equals 1.0. Asymptotic standard errors of the estimate are approximate. Significance test is based on randomization test.

								Current Stock Condition		
Stock	Species	Survey	relF where	SE(F_replac	relF where	SE (F grow)	Significance	Average	Ratio of	Ratio of
Georges Bank	Cod	Fall	2.04	0.58	1.64	0.56	0.113	3.91	1.92	2.39
		Spring	1.10	0.30	0.93	0.29	0.112	1.29	1.17	1.38
	Haddock	Fall	0.72	0.08	0.65	0.08	0.001	0.44	0.61	0.68
		Spring	0.58	0.08	0.51	0.08	0.001	0.59	1.03	1.16
	N. Windowpane	Fall	0.37	0.48	0.17	0.32	0.197	0.20	0.54	1.17
	Winter Flounder	Fall	1.18	0.11	1.06	0.11	0.001	0.62	0.52	0.58
	Yellowtail	Fall	2.42	0.36	2.13	0.33	0.001	0.77	0.32	0.36
		Spring	1.96	0.40	1.68	0.36	0.003	0.72	0.37	0.43
Gulf of Maine	American Plaice	Fall	1.40	0.60	0.90	0.62	0.460	1.49	1.06	1.66
		Spring	2.56	0.59	2.06	0.55	0.132	2.43	0.95	1.18
	Cod	Fall	0.67	0.30	0.45	0.27	0.012	1.41	2.10	3.16
		Spring	0.94	0.35	0.70	0.35	0.269	0.99	1.05	1.40
	Haddock	Fall	0.23	0.05	0.20	0.05	0.004	0.15	0.67	0.76
		Spring	0.83	0.35	0.67	0.29	0.010	0.79	0.95	1.18
	Halibut	Fall	0.01	0.01	0.01	0.01	0.284	0.02	1.21	1.45
		Spring	0.02	0.01	0.02	0.01	0.665	0.01	0.29	0.33
	Pollock (all)	Fall	15.48	3.67	12.01	3.36	0.050	12.93	0.84	1.08
	Pollock (USA)	Fall	3.57	0.97	2.70	0.87	0.050	4.33	1.21	1.60
	Pollock (5&6)	Fall	5.88	1.05	4.83	1.00	0.024	5.56	0.94	1.15
	Redfish	Fall	0.83	0.35	0.51	0.23	0.005	0.06	0.08	0.13
		Spring	0.42	0.22	0.31	0.17	0.030	0.06	0.14	0.20
	White Hake	Fall	0.54	0.07	0.42	0.07	0.036	0.80	1.48	1.89
		Spring	0.57	0.15	0.48	0.15	0.040	1.54	2.68	3.19
	Witch flounder	Fall	1.34		0.92		0.346	3.27		
		Spring					0.554	2.26	1.68	2.45
	Yellowtail	Fall	0.44	0.19	0.34	0.18	0.472	0.25	0.57	0.75
		Spring	0.30	0.36	0.23	0.35	0.686	0.35	1.17	1.54
Southern New England	Mid Atl	Fall	0.33	0.16	0.30	0.15	0.108	1.19	3.60	4.02
		Spring	0.09	0.06	0.07	0.05	0.194	0.55	6.22	7.33
	Ocean pout	Spring	0.01	0.03	0.00	0.01	0.118	0.01	0.60	2.00
	Windowpane	Fall	0.98	0.45	0.73	0.42	0.101	0.70	0.72	0.96
	Winter Flounder	Fall	5.14	1.00	4.40	0.91	0.004	2.15	0.42	0.49
		Spring	6.97	0.53	6.51	0.52	0.001	4.44	0.64	0.68
	Yellowtail	Fall	0.47	0.61	0.35	0.52	0.461	1.10	2.33	3.12
		Spring	0.37	0.44	0.28	0.39	0.498	0.48	1.31	1.71

Table C2. Catch projections based on index model. Catches for 2002 represent status quo relative F, rel F at replacement, and rel F at 10% growth rate.

			Current Stock		Predicted Catch for 2002			Predicted Catches (mt) with rel F = F_grow and population growth of 10% per year.								
Stock	Species	Survey	Average	Average	Predicte	Catch at	Catch at	2003	2004	2005	2006	2007	2008	2009	average	Average
Georges Bank	Cod	Fall	2.4	3.91	9.4	4.9	3.9	4.3	4.8	5.2	5.8	6.3	7.0	7.7	5.6	9.30
		Spring	8.2	1.29	10.5	9.0	7.6	8.4	9.2	10.1	11.1	12.3	13.5	14.8	10.9	9.30
	Haddock	Fall	14.8	0.44	6.6	10.7	9.6	10.6	11.6	12.8	14.0	15.4	17.0	18.7	13.7	6.80
		Spring	10.6	0.59	6.3	6.1	5.4	5.9	6.5	7.2	7.9	8.7	9.6	10.5	7.7	6.80
	N. Windowpane	Fall	1.2	0.20	0.2	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.19
	Winter Flounder	Fall	2.3	0.62	1.4	2.7	2.4	2.7	2.9	3.2	3.6	3.9	4.3	4.7	3.5	1.41
	Yellowtail	Fall	6.1	0.77	4.7	14.7	12.9	14.2	15.6	17.2	18.9	20.8	22.8	25.1	18.4	4.81
		Spring	6.1	0.72	4.4	12.0	10.2	11.3	12.4	13.6	15.0	16.5	18.1	19.9	14.6	4.81
Gulf of Maine	American Plaice	Fall	2.5	1.49	3.8	3.5	2.3	2.5	2.7	3.0	3.3	3.7	4.0	4.4	3.2	3.69
		Spring	1.5	2.43	3.7	3.9	3.2	3.5	3.8	4.2	4.6	5.1	5.6	6.2	4.5	3.69
	Cod	Fall	3.2	1.41	4.6	2.2	1.4	1.6	1.7	1.9	2.1	2.3	2.6	2.8	2.1	4.34
		Spring	4.2	0.99	4.1	3.9	2.9	3.2	3.6	3.9	4.3	4.7	5.2	5.7	4.2	4.34
	Haddock	Fall	7.3	0.15	1.1	1.7	1.5	1.6	1.8	1.9	2.1	2.4	2.6	2.8	2.1	0.78
		Spring	1.0	0.79	0.8	0.8	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.0	0.78
	Halibut	Fall	1.5	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
		Spring	3.5	0.01	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02
	Pollock (all)	Fall	1.0	12.93	13.4	16.1	12.5	13.7	15.1	16.6	18.2	20.1	22.1	24.3	17.8	14.13
	Pollock (USA)	Fall	1.0	4.33	4.5	3.7	2.8	3.1	3.4	3.7	4.1	4.5	5.0	5.5	4.0	4.74
	Pollock (5 &6)	Fall	1.0	5.56	5.8	6.1	5.0	5.5	6.1	6.7	7.3	8.1	8.9	9.8	7.2	6.09
	Redfish	Fall	5.5	0.06	0.4	4.6	2.8	3.1	3.4	3.7	4.1	4.5	4.9	5.4	4.0	0.33
		Spring	5.7	0.06	0.3	2.4	1.7	1.9	2.1	2.3	2.5	2.8	3.1	3.4	2.5	0.33
	White Hake	Fall	4.8	0.80	3.8	2.6	2.0	2.2	2.5	2.7	3.0	3.3	3.6	4.0	2.9	3.73
		Spring	3.1	1.54	4.8	1.8	1.5	1.7	1.8	2.0	2.2	2.4	2.7	2.9	2.2	3.73
	Witch flounder	Fall	0.6	3.27												
		Spring	0.8	2.26	1.9	1.1	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.5	1.1	2.52
	Yellowtail	Fall	6.3	0.25	1.6	2.8	2.1	2.3	2.6	2.8	3.1	3.4	3.8	4.1	3.0	1.71
		Spring	6.6	0.35	2.3	2.0	1.5	1.6	1.8	2.0	2.2	2.4	2.6	2.9	2.1	1.71
Southern New England	Mid Atl	Fall	0.2	1.19	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.30
		Spring	0.5	0.55	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.30
	Ocean pout	Spring	2.1	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
	Windowpane	Fall	0.2	0.70	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.12
	Winter Flounder	Fall	2.0	2.15	4.2	10.2	8.7	9.6	10.5	11.6	12.7	14.0	15.4	16.9	12.4	4.23
		Spring	0.9	4.44	4.2	6.6	6.2	6.8	7.5	8.2	9.0	9.9	10.9	12.0	8.8	4.23
	Yellowtail	Fall	0.7	1.10	0.7	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.3	0.68
		Spring	1.4	0.48	0.7	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.5	0.68

Table C3. Catch projection estimates for index based stocks. Target index values are externally supplied and are based on analysis of the historical fishery and trends in research survey indices. Part A illustrates the initial projection from 2000 to 2002 based on the observed landings in 2001 and methodology described in the text. Part B summarizes the catch projections given the annual growth rates necessary to reach the biomass targets in 2009.

Part A

			Parameters ln(RR) =a+b ln(relF)		*Survey Estimates (kg/tow)*			*Projection of Stock from 2000 to 2002*				
Stock	*Species*	*Survey*	*a*	*b*	*1998*	*1999*	*2000*	*Average Relative F (last 3-yr)*	*Projected Relative Biomass in 2001 (kg/tow)*	*Observed Landings in 2001 (k mt)*	*relF estimate in 2001*	*Projected Relative Biomass in 2002 (kg/tow)*
Georges Bank	Winter Flounder	Fall	0.150	-0.892	1.57	2.64	2.66	0.616	3.13	2.67	0.95	3.20
	N. Windowpane	Fall	-0.121	-0.123	1.66	0.73	1.22	0.202	1.082	0.04	0.04	1.24
Gulf of Maine	Haddock	Fall	-1.083	-0.733	2.92	4.91	14.03	0.153	*9.57*	0.95	0.10	13.73
	Pollock (Area 5 & 6)	Fall	0.857	-0.483	0.76	1.52	0.83	5.556	1.14	4.90	4.21	1.11
	White Hake	Fall	-0.243	-0.393	4.27	3.44	6.72	0.798	*4.76*	**3.56**	0.72	5.24
		Spring	-0.301	-0.543	1.09	2.97	3.33	1.536	*2.71*	**3.56**	1.19	2.63
Southern New England	S.Windowpane	Fall	-0.008	-0.331	0.18	0.12	0.28	0.702	0.20	0.11	0.56	0.24
	SNE Yellowtail Fl	Fall	-0.243	-0.324	0.90	0.10	0.99	1.099	0.53	1.03	1.91	0.62
		Spring	-0.358	-0.358	0.97	1.76	1.44	0.481	1.48	1.03	0.66	1.38
	Ocean Pout	Spring	-0.337	-0.079	1.73	2.56	2.02	0.008	2.26	0.02	0.01	2.21
	MidAtl Yellowtail Fl	Fall	-0.959	-0.864	0.09	0.50	0.11	1.188	0.23	0.21	0.74	0.15

Part B

			Biological Targets			*Predicted Catch (k mt)*							
Stock	*Species*	*Survey*	*Target Relative Biomass (kg/tow)*	*Annual Growth rate necessary to rebuild by 2009*	*Relative F for Rebuild*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*
Georges Bank	Winter Flounder	Fall	2.74	0.978	1.183	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79
	N. Windowpane	Fall	0.94	0.962	0.373	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Gulf of Maine	Haddock	Fall	22.17	1.071	0.208	2.86	3.06	3.28	3.51	3.76	4.02	4.31	4.61
	Pollock (Area 5 & 6)	Fall	3.00	1.153	4.381	4.84	5.58	6.44	7.43	8.57	9.88	11.39	13.14
	White Hake	Fall	12.00	1.126	0.399	2.09	2.35	2.65	2.98	3.36	3.78	4.25	4.79
		Spring	12.00	1.242	0.385	1.01	1.26	1.56	1.94	2.41	2.99	3.72	4.62
Southern New England	S.Windowpane	Fall	0.92	1.210	0.550	0.13	0.16	0.20	0.24	0.29	0.35	0.42	0.51
	SNE Yellowtail Fl	Fall	15.00	1.577	0.116	0.07	0.11	0.18	0.28	0.44	0.70	1.10	1.74
		Spring	12.00	1.363	0.155	0.21	0.29	0.40	0.54	0.73	1.00	1.36	1.86
	Ocean Pout	Spring	4.90	1.120	0.003	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
	MidAtl Yellowtail Fl	Fall	12.91	1.887	0.158	0.02	0.05	0.09	0.16	0.30	0.57	1.08	2.04

Table C4. Catch projection estimates for stocks assessed with age structured models. Target index values are derived by multiplying the ratio of total biomass estimates B(2009):B(2002) defined in the AGEPRO projections by the projected index balue in 2002. Part A illustrates the initial projection from 2000 to 2002 based on the observed landings in 2001 and methodology described in the text. The last column represents the projected increase in between 2002 and 2009. Part B summarizes the catch projections given the annual growth rates necessary to reach the biomass targets in 2009.

Part A

			Parameters ln(RR) =a+b ln(relF)		*Survey Estimates (kg/tow)*			*Projection of Stock from 2000 to 2002*					Target Increase ratio in mean SSB between 2002 and 2010
Stock	*Species*	*Survey*	*a*	*b*	*1998*	*1999*	*2000*	*Average Relative F (last 3-yr)*	*Projected Relative Biomass in 2001 (kg/tow)*	*Observed Landings in 2001 (k mt)*	*relF estimate in 2001*	*Projected Relative Biomass in 2002 (kg/tow)*	
Georges Bank	Cod	Fall	0.310	-0.436	2.80	3.00	1.40	3.911	2.07	12.77	5.92	1.59	3.88
		Spring	0.053	-0.574	11.70	4.70	8.20	1.285	6.79	12.77	1.94	6.63	3.88
	Haddock	Fall	-0.281	-0.873	5.75	23.13	15.41	0.445	20.38	11.55	0.59	20.08	2.70
		Spring	-0.433	-0.785	6.12	7.75	17.88	0.592	11.99	11.55	0.92	12.72	2.70
	Yellowtail Fl.	Fall	0.651	-0.735	4.35	7.97	5.84	0.769	9.29	7.74	1.00	10.96	1.30
		Spring	0.406	-0.601	2.32	9.31	6.70	0.723	9.05	7.74	0.93	9.98	1.30
Gulf of Maine	Cod	Fall	-0.092	-0.233	1.50	3.50	4.70	1.413	3.64	7.99	2.03	3.72	4.05
		Spring	-0.019	-0.325	4.20	5.10	3.20	0.990	4.13	7.99	1.93	3.54	4.05
	Redfish	Fall	-0.036	-0.193	6.49	4.68	5.36	0.064	6.36	0.33	0.06	7.43	1.19
		Spring	-0.252	-0.293	1.60	3.89	11.46	0.060	8.45	0.33	0.04	12.20	1.19
	Witch flounder	Fall	0.075	-0.254	0.47	0.88	1.11	2.259	0.90	3.46	3.59	0.91	0.81
	C.C. Yellowtail Fl.	Fall	-0.280	-0.344	2.53	9.28	7.12	0.253	8.02	2.57	0.32	8.05	6.10
		Spring	-0.410	-0.340	1.81	2.85	15.15	0.350	8.09	2.57	0.30	10.46	6.10
	American Plaice	Fall	0.072	-0.214	2.22	2.57	2.80	1.488	2.62	5.37	2.02	2.62	1.89
		Spring	0.416	-0.444	1.11	1.20	2.30	2.427	1.69	5.37	3.10	1.85	1.89
S. New England	Winter Flounder	Fall	0.998	-0.610	2.23	1.55	2.14	2.148	2.35	4.75	2.36	2.76	1.65
		Spring	2.701	-1.391	0.85	1.25	1.12	4.439	1.38	4.75	3.80	1.91	1.65

Part B

			Biological Targets			*Predicted Catch (k mt)*							
Stock	*Species*	*Survey*	*Target Relative Biomass (kg/tow)*	*Annual Growth rate necessary to rebuild by 2009*	*Relative F for Rebuild*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*
Georges Bank	Cod	Fall	6.17	1.214	1.306	2.08	2.50	3.10	3.70	4.50	5.50	6.60	8.10
		Spring	25.74	1.214	0.782	5.18	6.29	7.64	9.27	11.25	13.66	16.58	20.13
	Haddock	Fall	54.17	1.152	0.616	12.37	14.25	16.43	18.93	21.81	25.13	28.96	33.38
		Spring	34.33	1.152	0.481	6.12	7.06	8.13	9.37	10.80	12.44	14.34	16.52
	Yellowtail Fl.	Fall	14.30	1.039	2.302	25.23	26.21	27.22	28.28	29.37	30.51	31.69	32.91
		Spring	13.02	1.039	1.844	18.41	19.12	19.86	20.63	21.43	22.26	23.12	24.01
Gulf of Maine	Cod	Fall	15.08	1.221	0.285	1.06	1.29	1.58	1.93	2.36	2.88	3.52	4.29
		Spring	14.34	1.221	0.511	1.81	2.21	2.70	3.29	4.02	4.91	6.00	7.33
	Redfish	Fall	8.87	1.026	0.726	5.39	5.53	5.67	5.82	5.97	6.12	6.28	6.44
		Spring	14.58	1.026	0.388	4.73	4.86	4.98	5.11	5.24	5.38	5.51	5.66
	Witch flounder	Fall	0.73	0.970	1.343	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
	C.C. Yellowtail Fl.	Fall	49.13	1.295	0.210	1.69	2.18	2.83	3.66	4.74	6.14	7.95	10.30
		Spring	63.80	1.295	0.140	1.46	1.90	2.46	3.18	4.12	5.33	6.90	8.94
	American Plaice	Fall	4.93	1.095	0.916	2.40	2.62	2.87	3.15	3.44	3.77	4.13	4.52
		Spring	3.48	1.095	2.084	3.85	4.22	4.61	5.05	5.53	6.06	6.63	7.26
S. New England	Winter Flounder	Fall	4.56	1.074	4.574	12.62	13.56	14.57	15.65	16.81	18.06	19.41	20.85
		Spring	3.15	1.074	6.621	12.63	13.56	14.57	15.66	16.82	18.07	19.41	20.85

Table C5. Commercial landings of summer flounder, autumn and spring NMFS research trawl abundance indices, and derived relative F and replacement ratios. Note that 2002 index is preliminary.

Year	Landings (000 mt)	NEFSC Autumn Survey Weight (kg) Per Tow Index	NEFSC Spring Survey Weight (kg) Per Tow Index	Relative F wrt fall survey (000 mt/(kg/tow))	Replacement index wrt fall survey (5yr)	Relative F wrt spr survey (000 mt/(kg/tow))	Replacement index wrt spr survey (5yr)
1965	4.6						
1966	6.4						
1967	5.9	1.25					
1968	4.1	1.00	0.16	4.31			
1969	3.0	0.61	0.16	5.24		22.22	
1970	4.0	0.13	0.09	11.94		22.75	
1971	4.2	0.27	0.28	18.99		21.94	
1972	4.2	0.27	0.21	10.73	0.41	12.18	
1973	7.3	0.63	0.54	7.97	1.38	10.94	3.00
1974	10.2	1.86	1.26	6.18	4.87	9.01	4.92
1975	11.9	2.48	1.61	6.90	3.92	7.35	3.38
1976	15.1	0.85	2.00	8.94	0.77	8.49	2.56
1977	13.6	1.75	1.74	13.58	1.44	7.88	1.55
1978	13.0	0.40	1.43	12.59	0.26	11.05	1.00
1979	17.9	0.94	0.35	28.19	0.64	21.03	0.22
1980	14.2	0.57	0.78	19.05	0.44	22.01	0.55
1981	9.6	0.72	0.80	13.08	0.80	10.65	0.63
1982	10.4	0.90	1.11	14.93	1.03	12.79	1.09
1983	13.4	0.47	0.53	19.91	0.67	19.91	0.59
1984	17.1	0.65	0.38	25.82	0.90	24.36	0.53
1985	14.7	0.87	1.20	22.35	1.31	18.34	1.67
1986	12.2	0.45	0.82	22.85	0.62	15.23	1.02
1987	12.3	0.28	0.38	43.83	0.42	19.58	0.47
1988	14.7	0.11	0.68	93.74	0.20	33.89	1.03
1989	8.1	0.08	0.24	64.14	0.17	20.48	0.35
1990	4.2	0.19	0.27	28.63	0.53	14.65	0.41
1991	6.2	0.17	0.35	21.97	0.77	17.29	0.73
1992	7.5	0.49	0.46	32.27	2.95	17.51	1.20
1993	5.7	0.04	0.48	19.48	0.19	12.25	1.20
1994	6.6	0.35	0.46	16.20	1.80	14.12	1.28
1995	7.0	0.83	0.46	12.84	3.35	13.16	1.14
1996	5.8	0.45	0.67	7.87	1.20	9.95	1.52
1997	4.0	0.92	0.61	4.06	2.13	5.87	1.21
1998	5.08	1.58	0.76	3.66	3.05	6.40	1.42
1999	4.82	1.66	1.01	2.86	2.01	4.17	1.71
2000	5.085	1.82	1.7	3.00	1.67	3.13	2.42
2001	4.916	1.61	2.16	2.87	1.25	2.40	2.27
2002			2.29				1.83

Table C6. Total catch of Scup with discard and recreational landings, autumn and spring NMFS research trawl abundance indices, and derived relative F and replacement ratios.

Year	Total Catch (k mt)	NEFSC Autumn Survey Weight (kg) Per Tow Index	NEFSC Spring Survey Weight (kg) Per Tow Index	Relative F wrt fall survey (000 mt/(kg/tow))	Replacement index wrt fall survey (5yr)	Relative F wrt spring survey (000 mt/(kg/tow))	Replacement index wrt spring survey (5yr)
1963	37.7852	1.21					
1964	29.6681	2.23		21.92			
1965	29.0885	0.62		26.77			
1966	21.2802	0.41		25.64			
1967	15.9281	1.46		19.83			
1968	13.6924	0.54	0.94	6.34	0.46		
1969	9.3341	4.48	0.39	5.34	4.26	10.65	
1970	8.0462	0.22	1.30	4.88	0.15	7.40	
1971	7.7174	0.25	1.57	8.24	0.18	6.14	
1972	8.7627	2.34	0.90	7.47	1.68	7.38	
1973	10.4546	0.93	1.09	7.33	0.59	7.74	1.07
1974	13.0307	1.01	2.06	7.32	0.61	6.79	1.96
1975	13.5500	3.40	2.61	3.46	3.58	7.82	1.89
1976	12.2494	7.35	0.53	2.95	4.63	4.91	0.32
1977	13.9511	1.71	4.35	4.03	0.57	5.60	3.03
1978	14.6948	1.32	2.59	12.11	0.46	5.30	1.22
1979	14.1065	0.61	1.38	14.85	0.21	8.36	0.57
1980	15.7914	0.92	1.09	10.43	0.32	14.06	0.48
1981	17.4571	3.01	0.90	10.27	1.26	17.40	0.45
1982	15.4484	1.17	1.02	10.25	0.77	23.77	0.49
1983	14.5551	0.34	0.03	15.99	0.24	31.64	0.02
1984	11.0530	1.22	0.33	6.48	1.01	45.42	0.37
1985	13.7290	3.56	0.37	6.40	2.67	20.29	0.55
1986	14.5320	1.66	1.33	8.12	0.89	14.83	2.51
1987	11.6570	0.15	1.24	18.41	0.09	10.60	2.01
1988	9.5670	0.09	0.73	53.15	0.06	14.54	1.11
1989	8.7170	0.30	0.004	21.44	0.22	25.05	0.01
1990	10.3640	0.83	0.31	19.93	0.72	40.70	0.42
1991	14.3620	0.43	0.45	18.10	0.71	44.42	0.62
1992	14.0560	1.12	0.21	26.52	3.11	43.47	0.38
1993	7.6380	0.04	0.31	18.04	0.07	41.66	0.91
1994	6.3940	0.11	0.03	18.10	0.20	41.70	0.12
1995	5.7480	0.91	0.12	13.80	1.80	101.44	0.46
1996	5.5290	0.23	0.02	8.21	0.44	66.35	0.09
1997	4.5350	0.88	0.11	7.56	1.83	75.58	0.80
1998	6.1331	0.69	0.05	5.05	1.59	73.60	0.42
1999	7.1876	2.07	0.09	2.86	3.67	86.25	1.36
2000	6.0561	4.79	0.11	2.25	5.01	24.55	1.41
2001	7.5446	1.2	0.54	2.52	0.69	23.21	7.11

Table C7. Summary of projected landings (k mt) and relative biomass levels (kg/tow) for summer flounder and scup

			Landings (000 mt)			
Basis	**Species**	**Survey**	**2002**	**2003**	**2004**	**2005**
comm Landings	Summer Flounder	Fall	7.47	10.33	14.62	20.62
comm Landings	Summer Flounder	Spring	8.60	12.48	17.59	24.91
Landing + Discard	Scup_ w/Disc	Fall	12.71	19.45	32.44	53.53
Landings Only	Scup_ w/oDisc	Fall	6.61	9.10	13.95	21.03
Total Catch	Summer Flounder	Fall	13.48	17.00	22.27	29.65
Total Catch	Summer Flounder	Spring	14.87	19.63	25.92	34.92
			Projected Index Biomass Levels (kg/tow)			
Basis	**Species**	**Survey**	**2002**	**2003**	**2004**	**2005**
comm Landings	Summer Flounder	Fall	2.57	3.55	5.03	7.09
comm Landings	Summer Flounder	Spring	2.66	3.86	5.44	7.70
Landing + Discard	Scup_ w/Disc	Fall	5.00	7.65	12.76	21.05
Landings Only	Scup_ w/oDisc	Fall	4.57	6.29	9.64	14.54