

Appendix C

**Numbers of Fish Collected in the
Long River (1988-2004),
Fall Juvenile (1985-2004), and
Beach Seine (1985-2004) Surveys**

APPENDIX C
LIST OF TABLES

<u>Number</u>	<u>Title</u>
C-1	Total number of fish collected in the Long River Survey, 1988-2004
C-2	Total number of fish collected in the Fall Juvenile Survey, 1985-2004
C-3	Total number of fish collected in the Beach Seine Survey, 1985-2004

Table C-1 Total Number of Fish Collected in the Long River Survey, 1988-2004

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Anadromous																	
Alewife	8,200	624	60	2,727	555	1,275	1,679	293	1,787	171	235	10,231	320	5,284	183	537	641
Alosa spp.	258,802	423,742	714,369	250,755	465,613	191,558	206,819	122,644	460,957	58,794	128,111	124,710	391,708	180,190	145,643	141,877	126,035
American shad	51,162	62,755	49,242	25,128	30,345	15,867	31,213	12,120	23,378	6,744	8,887	12,185	11,567	14,048	6,732	15,676	4,711
Atlantic sturgeon	11	2	5	26	4	.	7	1	1	3	2	.	.	1	10	3	4
Atlantic tomcod	25,414	37,397	38,431	40,804	10,558	21,343	20,724	64,680	17,375	71,070	91,679	13,625	10,337	57,412	7,556	20,724	92,099
Blueback herring	4,992	2,568	1,230	28,397	30,496	3,290	9,315	1,412	18,354	2,358	246	4,367	1,907	1,100	578	8,760	801
Hickory shad	.	.	.	.	.	.	.	1	4	5	.	.	.	.	.	.	.
Rainbow smelt	24,693	767	6,838	2,494	23,035	12,002	59,829	2,354	.	.	4	.	1	1	.	.	.
Sea lamprey	.	.	.	.	.	.	.	.	.	1	4	.	.	.	.	.	.
Striped bass	61,072	225,498	264,907	359,994	462,382	459,384	674,881	383,781	962,335	272,329	443,766	790,358	1,376,173	1,192,084	151,199	732,410	416,917
Catadromous																	
American eel	789	917	848	1,372	827	1,505	921	1,388	1,230	527	519	294	468	708	262	476	365
Estuarine																	
Atlantic silverside	152	11	67	49	27	19	144	323	52	4	12	29	98	35	35	54	188
Banded killifish	5	2,274	1	.	5	3	4	24	2	.	2	2	.	1	.	.	.
Fat sleeper	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Fourspine stickleback	6	1	1	2	1	7	5	.	7	1	.	1	.	.	.	.	1
Hogchoker	301,192	589,469	13,591	908,378	44,337	87,673	159,013	130,281	51,986	22,814	36,279	23,050	24,894	13,417	28,225	17,313	36,061
Inland silverside	98	101	.	58	42	209	857	149	166	40	9	69	12	57	97	51	338
Lined sea horse	11	.	1	9	.	.	.	2	.	1	3	1	1	.	.	.	.
Mummichog	1	.	.	.	.	.	2	6	.	.	.	1	2	.	20	4	2
Northern pipefish	1,135	153	102	2,059	137	416	186	277	291	170	120	427	82	186	226	64	130
Shortnose sturgeon	3	.	2	3	3	14	8	7	38	2	5	1	4	13	1	4	4
Threespine stickleback	2	.	1	.	.	2	.	2	3	.	.	1	.	.	.	.	.
White catfish	77	100	87	76	52	25	214	196	205	96	70	172	70	80	56	78	38
White perch	138,753	198,953	157,348	147,232	265,656	221,021	172,995	115,842	287,690	69,844	130,785	136,518	267,801	134,744	142,260	140,645	138,513
Freshwater																	
Black bullhead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.
Black crappie	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Bluegill	.	.	.	5	.	.	1	1	.	.	.	.	3	.	.	1	1
Brown bullhead	1	12	33	30	4	7	18	25	31	11	8	3	8	22	1	48	36
Brown trout	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Carp	730	651	.	340	731	136	121	147	1,199	867	161	211	533	22	130	597	455
Catostomidae	.	.	.	1	1	.	.	.	.	.	.	.	.	4	.	.	.
Centrarchidae	30	66	46	40	132	40	125	11	152	26	100	16	137	552	155	50	136
Chain pickerel	.	.	.	.	.	.	.	.	2	1	.	1	.	.	1	.	.
Channel catfish	.	.	.	1	1	.	.	.	5	5	4	.	11	8	23	24	91
Common shiner	.	.	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Creek chub	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Cyprinidae	470	1,736	6,839	1,764	2,576	2,276	2,044	910	2,709	696	1,358	2,705	3,482	3,101	2,623	1,150	1,073
Emerald shiner	.	.	.	.	.	.	.	.	.	.	19	2	.	1	.	.	.
Fathead minnow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Freshwater drum	.	.	.	1	1	.	.	8	124	1	10	27	8	15	90	55	255
Gizzard shad	.	85	5	3	535	123	440	1,065	688	708	885	1,281	2,383	161	9,060	1,292	360
Golden shiner	.	1	7	.	.	1	2	11	1	.	1	.	2	1	.	.	.
Goldfish	113	217	.	97	22	7	18	.	5	2	2	.	.	.	.	.	.
Largemouth bass	.	1	.	2	.	1	1	.	.	.	1	.	.	.	.	.	2
Logperch	48	20	.	.	179	.	.	.	.	.	3	.	.	.	.	3	4

Table C-1 (Continued)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Freshwater (cont.)																		
Northern hog sucker	19
Percidae	2	15	.	18
Pumpkinseed	132	1	.	2	.	4	1	.	.	1	.	1	.	.	.	2	.	
Rock bass	1
Satinfin shiner	1
Silvery minnow	1
Slimy sculpin	1	.	.	.
Smallmouth bass	.	3	1	.	23	.	1	.	.	.	2	.	1	3	.	.	.	
Spottail shiner	60	98	55	83	45	33	62	94	156	89	53	45	62	87	9	42	23	
Tessellated darter	2,898	2,805	2,290	1,566	2,836	1,936	1,714	2,205	1,550	1,493	2,834	2,726	2,822	1,884	1,455	1,990	2,642	
Walleye	.	26	.	1	2	12	32	.	23	22	29	.	80	5	5	132	31	
White crappie	4
White sucker	.	10	44	.	1	.	.	1	13	5	24	6	11	3	3	2	3	
Yellow bullhead	2
Yellow perch	152	325	610	157	369	225	333	69	764	141	307	127	1,062	228	476	1,096	1,145	
Marine																		
American sand lance	48	8	2	4	4	.	1	42	6	.	7	2	11	119	2	49	47	
Atlantic cod	68	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.
Atlantic croaker	.	.	.	.	157	1	5	409	3	.	3,405	3,781	6,512	1,371	2,574	1,260	11,094
Atlantic herring	522	178	76	1,177	842	1,151	37	3,986	5,485	2,614	3,809	4,585	27	1,984	18	887	325	
Atlantic mackerel	4	.	.	1	2	.	.	.	1,968	1,076	9	141	6	1	603	32	4	
Atlantic menhaden	6	12	671	1,301	404	268	13,009	2,678	3,036	35,979	18,041	68,998	4,887	29,431	9,644	10,873	7,420	
Atlantic needlefish	.	.	3	.	.	1	.	1	.	.	.	.	.	.	.	.	.
Atlantic seasnail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Bay anchovy	2,852,331	444,854	900,354	3,831,982	1,341,076	1,849,143	3,051,491	1,271,339	1,337,747	795,707	698,247	339,031	215,316	146,897	671,428	363,737	1,749,221	
Black sea bass	.	.	.	.	.	.	4	.	.	1	3	6	.	.	.	.	.
Blackcheek tonguefish	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.
Blenniidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Bluefish	85	54	165	151	147	78	73	61	43	35	21	71	46	62	15	26	28	
Bothidae	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Butterfish	143	18	18	27	46	38	108	11	12	29	22	273	6	120	7	13	240	
Conger eel	132	72	54	29	124	195	175	45	117	14	10	1	71	22	29	42	3	
Cottidae	128	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Crevalle jack	1	4	.	1	.	.	.	.	1	.	2	1	.	.	.	.	.
Cunner	11,129	1,429	.	1,955	4,221	996	2,176	3,790	4,932	3,106	1,884	4,733	1,739	6,210	3,658	3,325	5,293	
Cusk	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
Feather blenny	.	.	.	.	.	.	.	.	.	.	1	23	3	.	5	.	.
Fourbeard rockling	108	209	2	404	691	4	4,157	6,487	571	7,586	3,116	391	184	2,319	2,205	389	1,360	
Fourspot flounder	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
Gadidae	6	.	.	.	.	10	.	1	.	.	.	.	.	.	.	.	.
Gobiidae	9,007	5,593	22,569	78,349	26,599	3,794	3,411	2,683	1,108	936	3,411	28,420	16,276	15,046	22,722	7,756	20,143	
Goosefish	.	.	.	8	12	.	.	.	1	.	.	.	.	.	.	.	.
Grubby	605	387	167	521	248	66	99	2,516	317	1,768	1,525	575	161	898	702	122	1,207	
Gulf stream flounder	.	.	.	.	.	.	.	.	.	3	1	1	.	.	2	.	1
Harvestfish	.	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.
Inshore lizardfish	8	8	.	3	14	1	2	1	.	4	36	4	2	8	.	.	.	
King mackerel	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Labridae	.	.	.	48	.	.	.	.	1	.	.	.	.	.	.	1	.
Longhorn sculpin	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
Lookdown	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Moonfish	.	.	.	.	.	.	1	.	.	.	.	.	.	2	.	.	.
Myoxocephalus spp.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Naked goby	279	44	1,619	8	73	9	1	3	6	.	5	369	107	6	169	72	8	
Northern kingfish	.	118	.	10	10	1	39	1	.	.	2	16	.	.	1	.	.	

Table C-1 (Continued)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Marine (cont.)																	
Northern puffer	1	5	32	279	.	2	.	4	14	2	.	11	1	3	.	.	4
Northern searobin	40	2	17	19	1	4	27	5	48	1	14	37	.	23	1	4	.
Northern stargazer	129	.	.	.	.	.	53	.	.	.	1	4	.	2	1	.	.
Oyster toadfish	.	1	.	.	.	.	.	.	.	.	1	1	1	.	.	1	.
Pinfish	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Pleuronectidae	.	.	.	144	.	.	.	.	.	16	2	3	.	.	.	.	.
Pleuronectiformes	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Pollack	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Radiated shanny	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Red hake	3	1	1	.	1	1	.	.	9	13	19	15	2	1	.	.	.
Rock gunnel	9	2	1	5	6	.	.	35	32	54	28	17	13	49	7	44	72
Rough silverside	110	19	.	41	44	30	447	218	37	33	4	26	66	12	22	7	4
Sciaenidae	.	3	.	.	.	2	65	.	.	.	.	.	.	.	.	.	.
Scup	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Seaboard goby	1	.	.	4	19	1	.	1	.	19	4	14	77	10	234	116	2
Searobin	8	.	312	26	.	16	.	.	.	8	1	399	.	4	65	70	33
Sharptail goby	.	.	1	.	.	.	.	.	.	.	.	2	.	.	.	.	.
Silver hake	1	3	.	.	.	.	.	.	2	.	.	1	.	2	.	.	1
Silver perch	.	.	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.
Smallmouth flounder	38	.	1	91	71	32	175	22	7	18	40	37	47	6	6	20	61
Spanish mackerel	.	.	.	20	.	2	1	.	.	.	.	.	.	.	.	.	.
Speckled worm eel	1	.	.	.	.	.	.	.	1	.	.	.	1	.	2	.	.
Spot	.	.	2	.	.	20	9	.	8	.	.	.	11	.	3	.	.
Spotted hake	62	1	1	19	40	13	6	146	186	76	49	52	38	90	35	193	111
Striped anchovy	.	.	.	.	.	.	.	5	35	6	3	5	.	.	.	.	65
Striped cuskeel	2	1	.	4	3	1	.	1	3	18	8	9	19	8	.	3	3
Striped killifish	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Striped searobin	43	4	.	234	5	41	671	3	4	112	45	85	15	1	39	21	27
Summer flounder	.	24	1	39	18	.	7	23	11	5	8	8	26	26	10	8	22
Tautog	1,205	3,432	.	969	488	241	439	3,171	3,396	3,009	490	2,908	2,028	6,129	4,192	4,483	8,668
Tetraodontidae	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Weakfish	1,586	2,602	122,082	6,821	1,206	1,621	2,804	623	59,707	13,345	145,785	224,618	50,800	83,380	51,266	57,429	94,647
Windowpane	8,866	5,162	49	1,500	14,953	166,221	6,917	17,602	7,074	13,902	1,635	3,210	1,816	13,095	1,563	4,134	2,192
Winter flounder	900	178	64	340	794	188	362	4,754	774	4,109	2,325	3,996	9,831	1,905	4,353	10,306	9,580
Witch flounder	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Yellowtail flounder	.	.	.	.	2	.	1	162	2	6	13	7	1	5	2	.	.
Unidentified																	
Acipenseridae	4	6	18	9	.	.	.	.	.	.	.	.	.	.	.	.	.
Atherinidae	.	1	.	259	.	16	45	19	26	44	1	4	1	.	.	1	.
Cyprinodontidae	.	8	.	.	.	5	.	.	.	5	.	.	.	.	1	.	.
Fundulus spp.	.	2	4	3	1	111	4	3	2	.	1	62	.	1	.	1	1
Gasterosteidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Menidia spp.	12	7	193	.	2	.	1	1	.	52	11	1	.	.	1	.	.
Morone unidentified	2,180	13,473	955	17,620	7,246	12,406	8,350	5,416	29,225	3,094	31,732	54,420	58,042	37,644	5,768	16,709	9,721
Unidentifiable	49,244	7,031	36,103	113,576	18,496	9,938	32,546	1,131	7,378	480	1,125	1,240	1,146	2,979	448	1,914	4,528

Table C-1 (Continued)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Sampling Statistics for Long River Survey, 1988-2004																	
Start Date	18-Apr	17-Apr	19-Apr	15-Apr	13-Apr	12-Apr	11-Apr	6-Mar	12-Mar	11-Mar	2-Mar	23-Mar	7-Mar	15-Mar	4-Mar	19-Mar	2-Mar
End Date	25-Aug	23-Aug	16-Aug	17-Oct	14-Oct	5-Oct	5-Oct	12-Oct	9-Oct	9-Oct	7-Oct	6-Oct	5-Oct	9-Oct	9-Oct	9-Oct	7-Oct
Volume Sampled (m3)	524,777	519,252	419,294	537,825	632,978	596,043	579,959	649,908	675,698	671,661	810,440	774,435	857,373	711,723	716,977	704,211	706,106
Sample Size	1,663	1,641	1,561	1,991	1,986	1,987	1,986	2,431	2,362	2,365	2,435	2,329	2,435	2,300	2,438	2,433	2,439

Table C-2 Total Number of Fish Collected in the Fall Juvenile Survey, 1985-2004

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Anadromous																				
Alewife	1,142	554	702	379	327	459	994	790	730	719	519	830	868	97	3,925	746	2,118	379	1,077	307
Alosa spp.	3,341	282	2,591	4,193	4,331	3,543	1,276	10,650	1,905	1,725	2,895	18,007	6,547	82	7,681	2,688	2,562	2,356	4,262	1,688
American shad	1,717	2,166	776	1,483	3,646	1,323	1,291	3,406	961	2,095	831	2,964	1,105	310	1,407	808	1,369	598	433	400
Atlantic sturgeon	96	184	149	117	63	6	10	11	7	15	15	8	40	30	18	5	23	37	39	22
Atlantic tomcod	5,083	10,046	7,908	8,210	14,060	1,105	4,914	7,299	3,664	1,679	3,649	4,632	10,645	1,928	1,798	6,528	5,910	581	1,456	4,802
Blueback herring	41,919	6,525	18,596	37,957	22,112	15,982	55,299	38,090	22,442	18,790	14,006	20,863	13,999	566	20,315	6,412	13,731	6,205	10,727	3,223
Hickory shad	.	3	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Rainbow smelt	126	389	429	576	34	216	256	2,549	757	363	136	.	.	1	.	.	.	.	.	.
Sea lamprey	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped bass	888	2,348	11,633	18,679	8,472	3,624	4,672	3,773	8,333	8,719	10,327	6,293	4,461	1,367	8,989	3,683	3,654	2,516	8,553	1,893
Catadromous																				
American eel	1,872	2,906	2,254	2,076	1,444	342	984	1,392	1,406	1,647	1,627	1,434	722	763	738	792	566	244	310	360
Estuarine																				
Atlantic silverside	.	2	.	3	1	2	18	2	29	25	33	42	19	20	19	82	13	33	10	62
Banded killifish	78	12	3	3	3	.	2	.	6	21	24	.	.	1	1	.	1	2	.	.
Fat sleeper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	.	.	.	.
Fourspine stickleback	1	9	.	1	1	.	.	.	2	.	1	1	.	1	.	.	.	.	2	1
Hogchoker	89,948	108,036	89,042	74,672	73,613	22,760	42,916	62,358	43,064	15,581	23,823	18,422	4,861	3,964	5,696	7,452	7,243	11,320	19,446	20,370
Inland silverside	.	.	.	1	.	2	.	.	2	.	4	.	.	.	1	.	.	.	.	.
Lined sea horse	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.
Mummichog	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Northern pipefish	40	13	22	25	12	4	16	14	65	15	24	3	27	10	9	9	12	15	3	17
Shortnose sturgeon	16	8	11	20	12	2	18	76	82	50	36	48	26	30	52	50	47	27	29	29
White catfish	721	677	775	806	740	352	547	172	939	1,363	1,077	967	235	840	494	337	371	155	228	147
White perch	19,721	31,771	27,008	25,760	20,106	5,381	11,019	13,832	8,341	9,007	10,272	8,569	3,655	3,474	8,955	6,225	5,775	4,715	11,131	5,426
Freshwater																				
Black bullhead	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Black crappie	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Bluegill	.	.	1	.	1	.	1	3	2	.	1	1	2	.	.	.	.	1	1	.
Brook trout	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Brown bullhead	37	127	109	171	172	17	125	177	92	278	211	251	97	167	524	549	460	501	600	476
Carp	4	13	5	4	10	1	6	7	7	3	6	2	5	.	11	2	6	5	2	1
Central mudminnow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Centrarchidae	1	4	1	5	3	.	.	.	.	4	.	.	4	2	1	1	.	8	7	2
Channel catfish	.	5	10	9	12	1	4	7	38	187	95	127	66	149	331	378	507	674	1,497	995
Cyprinidae	48	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Emerald shiner	.	.	.	.	1	.	.	.	.	.	.	.	.	11	2	1	.	.	.	.
Fall fish	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Freshwater drum	.	.	.	.	3	.	.	1	2	1	3	1	.	2	1	5	3	4	25	.
Gizzard shad	4	6	8	2	8	1	.	.	3	1	5	.	15	3	25	4	35	33	4	26
Golden shiner	.	1	.	.	.	.	.	29	.	.	.	2	3	.	.	4	.	5	1	1

Table C-2 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Freshwater																					
(cont.)																					
Goldfish	.	.	.	.	1	.	.	1	.	1	.	.	.	.	1	1	3	2	.	1
Largemouth bass	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.
Logperch	.	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	18	.
Margined madtom	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.
Pumpkinseed	57	2	13	5	1	6	12	2	16	12	49	20	9	1	10	2	1	5	4	7	
Redbreast sunfish	1	.	.	1	2	.	.	.	.	1	3	.	.	.	.	43	.	.	.	.
Rock bass	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Satinfin shiner	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Silvery minnow	.	1	.	.	.	.	.	.	.	.	.	56	.	.	.	.	.	.	.	.
Smallmouth bass	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spottail shiner	244	685	333	369	102	43	404	259	351	248	204	382	83	105	175	110	114	48	85	382	
Tesselated darter	89	747	197	370	120	10	187	225	306	684	228	148	100	96	131	25	26	20	153	81	
Walleye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
White sucker	1	8	4	2	1	.	.	.	.	1	.	1	2	1	6	1	.	4	1	9
Yellow bullhead	.	.	.	.	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow perch	.	.	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	8	2	.
Marine																					
Atlantic croaker	1	4	7	.	1	4	.	4	18	97	336	10	183	5,028	4,015	2,280	3,894	1,479	20	8,838	
Atlantic cutlassfish	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
Atlantic herring	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.
Atlantic menhaden	51	139	67	9	38	129	478	122	13	78	26	260	19	101	12,685	2,535	337	746	445	566	
Atlantic needlefish	.	.	.	1	.	1	1	.	.	.	3	.	1	3	2	.	.	.	1	.	
Bay anchovy	27,902	20,988	39,348	59,244	41,475	16,465	44,815	37,264	53,437	54,615	93,826	26,168	71,630	51,368	58,298	15,533	27,794	47,096	37,511	43,166	
Black sea bass	1	.	.	1	.	.	.	.	.	2	.	.	9	.	.	.	.	.	.	.
Bluefish	60	51	107	116	62	82	58	82	53	37	42	39	55	27	165	53	60	56	30	31	
Butterfish	61	106	48	110	81	43	35	141	121	109	21	18	90	177	74	9	25	26	16	106	
Conger eel	.	.	.	14	.	.	.	.	.	.	2	2	.	1	1	1	.	.	.	.
Crevalle jack	2	1	1	10	8	7	3	1	10	1	4	1	.	9	.	.	2	.	1	1	
Cunner	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.
Feather blenny	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Fourspot flounder	2	2	.	1	.	1	.	.	.	25	.	.	4	.	.	.	1	.	.	.	
Gobiidae	.	.	.	4	.	.	.	38	.	2	.	.	3	4	12	2	2	8	4	3	
Goosefish	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Gray snapper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Grubby	.	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.
Inshore lizardfish	1	.	.	1	4	.	1	4	8	1	.	.	.	.	.	71	1	.	.	.
Longhorn sculpin	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.
Lookdown	1	.	1	1	1	.	.	.	.	1	.	.	1	1	3	2	.	.	1	.
Moonfish	.	1	2	.	5	.	.	1	.	.	.	.	.	4	1	3	9	5	3	9
Naked goby	3	6	47	9	21	1	7	30	3	1	26	.	8	4	7	7	33	5	46	8	
Northern kingfish	9	6	.	20	3	3	10	2	4	16	7	.	2	.	3	.	.	.	.	1
Northern puffer	9	1	5	3	2	.	36	3	1	.	3	.	.	1	.	.	.	3	.	2	
Northern searobin	.	2	7	21	3	16	7	12	53	305	6	5	16	.	.	.	6	.	.	1	
Northern stargazer	1	.	.	20	.	4	3	10	2	7	.	.	6	.	2	1	3	5	1	1	
Oyster toadfish	.	.	.	.	.	.	.	1	.	.	.	4	.	2	3	2	1	1	1	11
Red hake	1	.	.	.	.	1	.	.	.	.	.	.	2	.	.	1	.	.	.	.
Rough silverside	1	.	3	1	.	.	.	3	2	.	4	.	4	1	1	2	.	.	.	.

Table C-2 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Marine (cont.)																				
Scup	1	.	.	.	.	.	3	.	.	.	8	.	.	.	.	2	5	1	8	2
Seaboard goby	.	.	.	12	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Searobin	.	.	.	.	.	.	.	.	.	.	.	.	339	.	69	8	2	.	12	7
Silver hake	.	3	.	.	.	1	1	.	.	.	.	.	5	.	1	3	.	1	.	1
Silver perch	.	.	.	13	.	.	1	.	7	11	36	1	1	.	.	.	.	.	.
Smallmouth flounder	.	.	.	8	.	.	.	1	1	9	3	.	.	1	1	.	.	2	.	
Spanish mackerel	.	.	.	.	.	1	17	.	7	.	.	.	.	.	.	.	.	.	.	1
Spot	5	14	1	1,257	.	.	2	1.	4	.	.	30	.	.	.	1	1	.	.	
Spotfin butterflyfish	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Spotted hake	2	1	.	.	.	.	3	32	7	3	3	224	54	9	7	15	106	12	34	20
Striped anchovy	.	.	.	.	.	.	.	1	.	.	2	.	.	.	.	.	.	.	1	1
Striped burrfish	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped cuskeel	3	.	.	1	.	.	1	1	.	.	.	.	.	1	.	1	.	.	.	
Striped searobin	321	148	10	101	25	26	310	54	96	648	15	.	416	294	1,498	8	123	189	236	121
Summer flounder	232	447	58	7	42	35	102	56	39	32	108	41	4	2	23	4	6	2	3	9
Tautog	.	.	.	2	.	3	.	1	.	.	.	.	1	.	.	.	.	.	.
Tetraodontidae	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Weakfish	2,214	1,482	749	3,777	2,842	770	5,878	756	2,332	2,416	3,773	2,202	2,713	2,039	7,412	7,147	3,567	3,806	1,952	686
Windowpane	1	1	5	17	.	5	9	32	1	5	19	2	12	5	46	4	7	3	4	1
Winter flounder	226	196	92	39	23	13	28	36	51	21	62	32	56	12	10	8	3	2	4	3
Unidentified																				
Morone unidentified	1	.	.	.	3	2	.	.	.	.	.	.	2	3	.	1	.	.	35	.
Unidentifiable	.	.	.	.	.	.	.	.	6	.	18	1	68	.	1	.	.	.	.	.

Sampling Statistics for Fall Juvenile Survey, 1985-2004

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Start Date	22-Jul	21-Jul	13-Jul	18-Jul	17-Jul	9-Jul	15-Jul	13-Jul	19-Jul	18-Jul	10-Jul	10-Jul	7-Jul	6-Jul	6-Jul	5-Jul	10-Jul	8-Jul	7-Jul	6-Jul
End Date	14-Nov	2-Dec	5-Nov	28-Oct	26-Oct	17-Oct	25-Oct	23-Oct	29-Oct	27-Oct	20-Oct	17-Oct	23-Nov	4-Dec	3-Dec	30-Nov	30-Nov	6-Dec	5-Dec	3-Dec
Volume Sampled (m3)	1,886,745	2,298,278	2,035,357	1,826,628	1,590,047	1,252,910	1,707,237	1,865,365	2,010,162	2,018,414	1,782,105	1,824,729	1,995,403	2,214,609	2,159,879	2,174,794	2,097,800	2,105,181	1,891,049	2,106,764
Sample Size	1,802	2,098	1,958	1,680	1,679	1,680	1,678	1,680	1,680	1,681	1,680	1,669	2,015	2,130	2,085	2,113	2,084	2,128	2,131	2,128

Table C-3 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
Freshwater (cont.)																					
Common shiner	.	.	.	1	.	.	.	1	1	.	.	.	.	.	.	.	2	.	.	.
Creek chub	1	.	.	.	.	.	4	.	1	.	2	.	1	.	2	.	.	.	1	.
Cyprinidae	1	6	6	.	.	.	134	.	5	2	18	.	1	1	5	.	1	.	4	.	
Emerald shiner	4	4	5	22	.	11	8	4	2	1	.	76	18	1,271	209	296	73	32	6	9	
Fall fish	.	2	.	.	.	.	9	3	2	11	2	3	1	6	1	.	.	.	18	1
Fathead minnow	1	10	.	.	1	.	.	.	.	2	.	7	.	.	3	3	.	.	.	1
Freshwater drum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	5
Gizzard shad	3	13	100	10	7	28	22	158	38	49	61	50	139	67	140	75	45	99	51	231	
Golden shiner	460	1,223	647	676	640	817	672	787	659	760	404	460	193	472	278	296	425	489	1,031	428	
Goldfish	14	25	16	97	1	3	33	1	29	3	16	3	1	1	4	.	3	4	9	4	
Grass pickerel	1
Green sunfish	.	.	.	1	1	.
Largemouth bass	44	71	44	57	51	34	85	55	55	74	169	29	53	120	221	46	39	67	270	78	
Logperch	.	.	.	.	.	.	.	1	1	.	.	1	.	1	4	.	4	4	11	1
Longear sunfish	10
Longnose dace	1
Mimic shiner	1
Northern hog sucker	.	.	1	3	.	1	4	2	.	.	.	1	.	.	.	1	.	.	2	3	
Northern pike	.	2	4	2	4	2	2	.	3	2	.	2	.	.	1	2	.	.	28	12	
Pugnose shiner	2
Pumpkinseed	740	496	609	1,070	633	724	1,195	602	774	1,535	1,648	284	619	555	771	281	647	1,084	2,039	1,271	
Redbreast sunfish	115	158	185	160	111	76	200	259	251	382	454	116	141	188	323	137	64	189	408	336	
Redfin pickerel	.	.	.	2	.	.	1	.	.	.	.	3	.	2	1	1	.	.	4	2
Rock bass	6	8	1	12	3	.	22	1	1	.	10	2	2	7	8	8	1	7	18	15	
Rudd	2
Satinfin shiner	1	2	.	1	.	2	.	.	1	.	6	5	12	10	10	.	1	40	36	4	
Silvery minnow	3	13	23	119	2	9	387	68	568	1,027	8	2,131	31	40	428	18	48	6	145	64	
Smallmouth bass	7	25	8	28	25	21	25	28	30	73	81	50	26	86	176	80	45	78	157	107	
Spotfin shiner	5	8	17	5	.	.	.	.	12	8	8	49	4	27	127	15	34	4	49	40
Spottail shiner	5,316	5,177	4,452	5,407	5,129	5,500	12,385	7,727	7,169	12,452	7,529	3,887	7,189	4,996	16,512	3,927	11,969	9,313	19,830	9,296	
Swallowtail shiner	.	.	.	.	.	.	.	3	.	.	.	.	.	2	1	.	2	.	10	.
Tesselated darter	1,198	1,372	820	1,697	415	479	2,385	929	1,251	1,669	700	663	1,767	1,359	3,858	760	2,140	948	4,657	2,969	
Tiger muskellunge	1
Trout perch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
Walleye	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	2	.	.	.	3
White crappie	.	4	1	3	.	1	2	1	.	.	.	.	.	1	.	.	.	.	.	.
White sucker	7	16	17	32	9	15	12	21	11	12	14	24	11	48	16	18	47	19	32	43	
Yellow perch	22	67	44	49	34	12	27	23	22	29	16	53	20	49	65	60	78	40	160	194	
Marine																					
Atlantic croaker	.	1	.	.	.	26	.	1	.	.	7	.	.	35	5	19	3	21	.	7	
Atlantic herring	.	.	.	.	.	.	.	.	.	.	.	.	1	.	4	.	.	.	.	.
Atlantic menhaden	118	834	30	99	159	1,063	678	415	16	1,637	56	1,526	117	331	50,419	16,025	130	2,481	3,586	8,465	
Atlantic needlefish	92	77	54	48	41	96	476	9	11	12	22	28	50	21	181	12	6	8	28	33	
Bay anchovy	4,081	4,155	3,746	3,989	9,507	4,134	4,669	8,729	8,106	10,447	17,615	3,544	16,980	11,333	6,662	2,617	3,275	13,862	6,431	2,330	
Bluefish	567	400	533	280	224	348	314	375	223	80	252	98	320	141	2,180	218	474	815	336	246	
Butterfish	.	.	.	4	.	1	.	1	9	.	.	.	.	2	.	.	.	.	.	.
Crevalle jack	71	10	3	22	40	32	58	53	30	2	2	1	.	45	3	24	4	9	10	.	

Table C-3 (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Marine (cont.)																				
Cunner	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Fourbeard rockling	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Goosefish	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Gray snapper	7	1	3	.	.	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.
Grubby	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Inshore lizardfish	.	.	.	1	1	.	14	8	11	5	1	.	3	4	7	.	.	3	.	.
Lookdown	18	1	.	.	10	1	.	.	.	.	.	.	2	.	.	2	.	.	.	.
Moonfish	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Naked goby	20	9	11	4	4	7	14	22	2	.	9	.	8	5	15	2	12	20	13	24
Northern kingfish	20	8	.	9	1	4	42	2	17	13	8	1	15	31	21	1	13	35	.	45
Northern puffer	2	1	.	1	.	.	10	.	4	.	2	.	2	.	6	.	.	4	.	.
Northern searobin	.	2	.	.	.	.	8	.	.	1	.	.	.	.	.	.	2	.	.	.
Northern stargazer	1	.	.	.	.	.	1	.	1	1	1	1	8	.	1	.	1	9	.	1
Orangespotted filefish	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Permit	.	.	.	.	.	.	.	1	2	.	.	.	.	2	.	7	5	.	.	.
Red hake	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	26	.
Rough silverside	35	4	23	258	9	4	.	2	.	1	1	.	36	.	.	.	.	.	.	.
Seaboard goby	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
Searobin	.	.	.	.	.	.	5	.	.	.	.	.	1	.	.	.	3	.	3	.
Silver hake	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Silver perch	13	1	.	19	.	.	29	8	61	25	5	5	25	4	1	1	.	.	.	60
Smallmouth flounder	1	.	.	.	.	.	.	.	.	.	1	.	12	.	.	.	.	.	.	.
Spanish mackerel	.	.	.	.	.	.	12	.	4	1	.	.	.	.	.	.	.	.	.	.
Spot	35	106	4	32	.	1	8	2	39	24	.	59	.	3	6	15	.	11	1	.
Spotfin mojarra	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.
Spotted goatfish	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	.	.	.	.
Spotted hake	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Striped anchovy	1	.	.	.	.	.	.	.	1	15	25	6	4	.	.	1	.	57	8	2
Striped mullet	2	6	1	1	.	.	5	.	.	.	2	.	.	.	.	1	.	1	.	.
Striped searobin	5	16	.	3	.	.	34	1	11	.	.	.	35	21	8	1	4	7	1	14
Summer flounder	48	45	4	1	2	2	46	26	20	18	10	2	.	7	4	5	5	11	5	10
Tautog	2	5	2	20	.	6	31	1	.	1	.	.	22	1	.	.	5	2	.	1
Weakfish	72	5	.	2	.	27	111	1	4	4	1	25	27	4	30	18	2	33	8	5
Windowpane	.	.	3	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.
Winter flounder	282	80	29	41	9	23	154	35	74	45	110	6	124	28	46	68	44	55	52	105
Unidentified																				
Morone unidentified	.	.	1	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	1
Unidentifiable	.	.	.	.	.	.	.	.	.	.	150	.	.	.	.	.	.	.	.	.
Sampling Statistics for Beach Seine Survey, 1985-2004																				
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Start Date	16-Jul	15-Jul	24-Jun	14-Jun	13-Jun	18-Jun	24-Jun	23-Jun	1-Jul	27-Jun	19-Jun	18-Jun	16-Jun	15-Jun	14-Jun	13-Jun	19-Jun	18-Jun	17-Jun	15-Jun
End Date	21-Nov	21-Nov	13-Nov	3-Nov	2-Nov	24-Oct	1-Nov	28-Oct	4-Nov	2-Nov	26-Oct	23-Oct	23-Oct	21-Oct	22-Oct	18-Oct	25-Oct	23-Oct	22-Oct	21-Oct
Sample Size	1,000	1,000	1,101	1,100	1,100	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	994	1,000	952	1,000	1,000	1,000