

January 13, 2009

**Skate Complex  
Skate Appendix 1**

by

Data Poor Stocks Working Group  
National Marine Fisheries Service  
Northeast Fisheries Science Center

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**Table 1. Discard estimates by stratum for the longline fishery.**

		mean within areaf	mean within combined region (ie sne-ma)			average across year	average - 1993-2004
YEAR	QTR	areaf	kept	discards	dkratio	mt kept	total discards
1991	1	GBK	15961.0	12350.0	0.7738	970.0	750.53
1991	2	GBK	18109.7	5863.3	0.3296	485.1	159.90
1991	3	GBK	18109.7	5863.3	0.3296	442.3	145.79
1991	4	GBK	27562.0	4796.0	0.1740	393.9	68.55
1991	1	GOM	18109.7	5863.3	0.3296	359.8	118.61
1991	2	GOM	18109.7	5863.3	0.3296	122.1	40.24
1991	3	GOM	18109.7	5863.3	0.3296	131.6	43.38
1991	4	GOM	10806.0	444.0	0.0411	141.7	5.82
1991	1	MA	18109.7	5863.3	0.3296	164.1	54.08
1991	2	MA	18109.7	5863.3	0.3296	58.6	19.32
1991	3	MA	18109.7	5863.3	0.3296	26.5	8.72
1991	4	MA	18109.7	5863.3	0.3296	124.5	41.02
1991	1	SNE	18109.7	5863.3	0.3296	84.9	27.99
1991	2	SNE	18109.7	5863.3	0.3296	32.2	10.60
1991	3	SNE	18109.7	5863.3	0.3296	15.5	5.10
1991	4	SNE	18109.7	5863.3	0.3296	28.1	9.25
1992	1	GBK	30379.5	27527.0	0.9061	1116.6	1011.79
1992	2	GBK	1922.0	426.0	0.2216	632.5	140.19
1992	3	GBK	16579.3	7918.8	0.3095	460.6	142.54
1992	4	GBK	16579.3	7918.8	0.3095	499.4	154.55
1992	1	GOM	33786.8	3722.0	0.1102	800.8	88.22
1992	2	GOM	16579.3	7918.8	0.3095	93.9	29.05
1992	3	GOM	16579.3	7918.8	0.3095	176.6	54.66
1992	4	GOM	16579.3	7918.8	0.3095	386.0	119.45
1992	1	MA	16579.3	7918.8	0.3095	226.1	69.98
1992	2	MA	229.0	0.0	0.0000	64.9	0.00
1992	3	MA	16579.3	7918.8	0.3095	111.6	34.55
1992	4	MA	16579.3	7918.8	0.3095	124.0	38.38
1992	1	SNE	16579.3	7918.8	0.3095	330.0	102.11
1992	2	SNE	16579.3	7918.8	0.3095	200.3	62.00
1992	3	SNE	16579.3	7918.8	0.3095	151.1	46.76
1992	4	SNE	16579.3	7918.8	0.3095	403.4	124.83
1993	1	GBK	32995.7	394.5	0.0679	1220.1	82.89
1993	2	GBK	32995.7	394.5	0.0679	579.3	39.36
1993	3	GBK	32995.7	394.5	0.0679	587.7	39.93
1993	4	GBK	32995.7	394.5	0.0679	606.0	41.17
1993	1	GOM	296.0	26.0	0.0878	380.0	33.38
1993	2	GOM	32995.7	394.5	0.0679	193.9	13.17
1993	3	GOM	32995.7	394.5	0.0679	247.8	16.84
1993	4	GOM	32995.7	394.5	0.0679	404.4	27.47
1993	1	MA	4205.0	0.0	0.0000	138.0	0.00
1993	2	MA	32995.7	394.5	0.0679	96.8	6.57
1993	3	MA	578.0	0.0	0.0000	45.3	0.00
1993	4	MA	32995.7	394.5	0.0679	116.7	7.93
1993	1	SNE	32995.7	394.5	0.0679	569.6	38.70

Table 1. cont.

1993	2	SNE	32995.7	394.5	0.0679	434.8	29.54
1993	3	SNE	32995.7	394.5	0.0679	146.9	9.98
1993	4	SNE	32995.7	394.5	0.0679	239.3	16.26
1994	1	GBK	481.0	0.0	0.0000	989.6	0.00
1994	2	GBK	32995.7	394.5	0.0679	568.2	38.60
1994	3	GBK	32995.7	394.5	0.0679	512.1	34.79
1994	4	GBK	32995.7	394.5	0.0679	676.0	45.92
1994	1	GOM	32995.7	394.5	0.0679	268.2	18.22
1994	2	GOM	32995.7	394.5	0.0679	365.9	24.86
1994	3	GOM	32995.7	394.5	0.0679	649.2	44.10
1994	4	GOM	32995.7	394.5	0.0679	314.0	21.33
1994	1	MA	64.4	0.0	0.0000	101.9	0.00
1994	2	MA	32995.7	394.5	0.0679	50.3	3.42
1994	3	MA	32995.7	394.5	0.0679	3.0	0.20
1994	4	MA	32995.7	394.5	0.0679	1.5	0.11
1994	1	SNE	32995.7	394.5	0.0679	382.1	25.96
1994	2	SNE	32995.7	394.5	0.0679	104.5	7.10
1994	3	SNE	32995.7	394.5	0.0679	69.4	4.71
1994	4	SNE	32995.7	394.5	0.0679	160.6	10.91
1995	1	GBK	32995.7	394.5	0.0679	948.1	64.41
1995	2	GBK	32995.7	394.5	0.0679	691.6	46.98
1995	3	GBK	32995.7	394.5	0.0679	436.9	29.68
1995	4	GBK	32995.7	394.5	0.0679	811.2	55.11
1995	1	GOM	32995.7	394.5	0.0679	221.9	15.08
1995	2	GOM	32995.7	394.5	0.0679	297.2	20.19
1995	3	GOM	32995.7	394.5	0.0679	463.0	31.45
1995	4	GOM	32995.7	394.5	0.0679	529.8	35.99
1995	1	MA	0.0	0.0		135.2	0.00
1995	2	MA	32995.7	394.5	0.0679	64.3	4.37
1995	3	MA	32995.7	394.5	0.0679	43.5	2.96
1995	4	MA	32995.7	394.5	0.0679	46.3	3.14
1995	1	SNE	32995.7	394.5	0.0679	186.3	12.66
1995	2	SNE	32995.7	394.5	0.0679	15.5	1.05
1995	3	SNE	32995.7	394.5	0.0679	30.3	2.06
1995	4	SNE	32995.7	394.5	0.0679	223.0	15.15
1996	1	GBK	32995.7	394.5	0.0679	649.6	44.13
1996	2	GBK	32995.7	394.5	0.0679	576.0	39.13
1996	3	GBK	32995.7	394.5	0.0679	380.5	25.85
1996	4	GBK	32995.7	394.5	0.0679	841.8	57.19
1996	1	GOM	32995.7	394.5	0.0679	325.5	22.11
1996	2	GOM	32995.7	394.5	0.0679	263.6	17.91
1996	3	GOM	32995.7	394.5	0.0679	171.4	11.64
1996	4	GOM	32995.7	394.5	0.0679	394.5	26.80
1996	1	MA	32995.7	394.5	0.0679	120.9	8.21
1996	2	MA	32995.7	394.5	0.0679	79.5	5.40
1996	3	MA	32995.7	394.5	0.0679	76.5	5.20
1996	4	MA	32995.7	394.5	0.0679	109.2	7.42
1996	1	SNE	32995.7	394.5	0.0679	319.5	21.70
1996	2	SNE	32995.7	394.5	0.0679	74.9	5.09

Table 1 cont.

1996	3	SNE	32995.7	394.5	0.0679	86.0	5.84
1996	4	SNE	32995.7	394.5	0.0679	221.9	15.08
1997	1	GBK	32995.7	394.5	0.0679	416.1	28.27
1997	2	GBK	32995.7	394.5	0.0679	662.5	45.01
1997	3	GBK	32995.7	394.5	0.0679	306.6	20.83
1997	4	GBK	32995.7	394.5	0.0679	645.3	43.84
1997	1	GOM	32995.7	394.5	0.0679	342.2	23.25
1997	2	GOM	32995.7	394.5	0.0679	336.1	22.83
1997	3	GOM	32995.7	394.5	0.0679	292.0	19.84
1997	4	GOM	32995.7	394.5	0.0679	563.6	38.29
1997	1	MA	32995.7	394.5	0.0679	86.7	5.89
1997	2	MA	32995.7	394.5	0.0679	113.0	7.68
1997	3	MA	32995.7	394.5	0.0679	98.4	6.68
1997	4	MA	32995.7	394.5	0.0679	134.7	9.15
1997	1	SNE	32995.7	394.5	0.0679	463.8	31.51
1997	2	SNE	32995.7	394.5	0.0679	185.6	12.61
1997	3	SNE	32995.7	394.5	0.0679	119.8	8.14
1997	4	SNE	32995.7	394.5	0.0679	370.9	25.20
1998	1	GBK	32995.7	394.5	0.0679	661.8	44.96
1998	2	GBK	32995.7	394.5	0.0679	276.2	18.77
1998	3	GBK	32995.7	394.5	0.0679	358.4	24.35
1998	4	GBK	32995.7	394.5	0.0679	1137.5	77.27
1998	1	GOM	32995.7	394.5	0.0679	254.2	17.27
1998	2	GOM	32995.7	394.5	0.0679	271.8	18.46
1998	3	GOM	32995.7	394.5	0.0679	205.0	13.93
1998	4	GOM	32995.7	394.5	0.0679	384.4	26.12
1998	1	MA	32995.7	394.5	0.0679	173.2	11.77
1998	2	MA	32995.7	394.5	0.0679	62.7	4.26
1998	3	MA	115.0	10.0	0.0870	43.3	3.77
1998	4	MA	32995.7	394.5	0.0679	255.6	17.36
1998	1	SNE	32995.7	394.5	0.0679	322.8	21.93
1998	2	SNE	32995.7	394.5	0.0679	133.3	9.06
1998	3	SNE	32995.7	394.5	0.0679	94.1	6.39
1998	4	SNE	32995.7	394.5	0.0679	127.8	8.69
1999	1	GBK	32995.7	394.5	0.0679	805.6	54.73
1999	2	GBK	32995.7	394.5	0.0679	589.2	40.02
1999	3	GBK	32995.7	394.5	0.0679	482.1	32.75
1999	4	GBK	32995.7	394.5	0.0679	1145.9	77.85
1999	1	GOM	32995.7	394.5	0.0679	84.0	5.71
1999	2	GOM	32995.7	394.5	0.0679	177.1	12.03
1999	3	GOM	32995.7	394.5	0.0679	64.3	4.37
1999	4	GOM	32995.7	394.5	0.0679	112.8	7.66
1999	1	MA	32995.7	394.5	0.0679	103.8	7.05
1999	2	MA	32995.7	394.5	0.0679	57.4	3.90
1999	3	MA	32995.7	394.5	0.0679	37.4	2.54
1999	4	MA	32995.7	394.5	0.0679	112.4	7.64
1999	1	SNE	32995.7	394.5	0.0679	109.1	7.41
1999	2	SNE	32995.7	394.5	0.0679	70.4	4.78
1999	3	SNE	32995.7	394.5	0.0679	42.0	2.86

Table 1 cont.

1999	4	SNE	32995.7	394.5	0.0679	54.1	3.67
2000	1	GBK	32995.7	394.5	0.0679	474.0	32.20
2000	2	GBK	32995.7	394.5	0.0679	309.0	20.99
2000	3	GBK	32995.7	394.5	0.0679	1545.6	105.00
2000	4	GBK	32995.7	394.5	0.0679	200.5	13.62
2000	1	GOM	32995.7	394.5	0.0679	64.0	4.35
2000	2	GOM	32995.7	394.5	0.0679	65.6	4.46
2000	3	GOM	32995.7	394.5	0.0679	98.6	6.70
2000	4	GOM	32995.7	394.5	0.0679	80.5	5.47
2000	1	MA	32995.7	394.5	0.0679	108.4	7.36
2000	2	MA	32995.7	394.5	0.0679	36.7	2.49
2000	3	MA	32995.7	394.5	0.0679	43.3	2.94
2000	4	MA	32995.7	394.5	0.0679	168.6	11.45
2000	1	SNE	32995.7	394.5	0.0679	79.3	5.38
2000	2	SNE	32995.7	394.5	0.0679	60.6	4.12
2000	3	SNE	32995.7	394.5	0.0679	65.6	4.46
2000	4	SNE	32995.7	394.5	0.0679	54.5	3.71
2001	1	GBK	32995.7	394.5	0.0679	446.2	30.31
2001	2	GBK	32995.7	394.5	0.0679	739.7	50.25
2001	3	GBK	32995.7	394.5	0.0679	438.0	29.76
2001	4	GBK	32995.7	394.5	0.0679	805.7	54.73
2001	1	GOM	32995.7	394.5	0.0679	34.8	2.36
2001	2	GOM	32995.7	394.5	0.0679	53.5	3.64
2001	3	GOM	32995.7	394.5	0.0679	21.9	1.48
2001	4	GOM	32995.7	394.5	0.0679	87.4	5.94
2001	1	MA	32995.7	394.5	0.0679	177.3	12.04
2001	2	MA	32995.7	394.5	0.0679	124.3	8.45
2001	3	MA	32995.7	394.5	0.0679	109.9	7.47
2001	4	MA	32995.7	394.5	0.0679	304.8	20.71
2001	1	SNE	32995.7	394.5	0.0679	123.9	8.42
2001	2	SNE	32995.7	394.5	0.0679	32.6	2.22
2001	3	SNE	32995.7	394.5	0.0679	47.2	3.21
2001	4	SNE	32995.7	394.5	0.0679	91.9	6.24
2002	1	GBK	32995.7	394.5	0.0679	619.8	42.10
2002	2	GBK	32995.7	394.5	0.0679	451.4	30.67
2002	3	GBK	683.0	145.0	0.2123	113.1	24.00
2002	4	GBK	6362.0	208.0	0.0327	527.0	17.23
2002	1	GOM	32995.7	394.5	0.0679	105.1	7.14
2002	2	GOM	32995.7	394.5	0.0679	246.4	16.74
2002	3	GOM	32995.7	394.5	0.0679	36.7	2.49
2002	4	GOM	1.5	0.0	0.0000	63.6	0.00
2002	1	MA	32995.7	394.5	0.0679	204.3	13.88
2002	2	MA	32995.7	394.5	0.0679	78.7	5.34
2002	3	MA	32995.7	394.5	0.0679	70.4	4.78
2002	4	MA	32995.7	394.5	0.0679	163.9	11.13
2002	1	SNE	32995.7	394.5	0.0679	53.2	3.62
2002	2	SNE	32995.7	394.5	0.0679	45.7	3.11
2002	3	SNE	32995.7	394.5	0.0679	69.3	4.71
2002	4	SNE	937.0	427.0	0.4557	135.3	61.64

Table 1 cont.

2003	1	GBK	4138.0	643.0	0.1554	140.9	21.89
2003	2	GBK	32995.7	394.5	0.0679	16.6	1.13
2003	3	GBK	32995.7	394.5	0.0679	195.3	13.26
2003	4	GBK	6300.0	0.0	0.0000	747.4	0.00
2003	1	GOM	9886.9	567.0	0.0573	170.8	9.79
2003	2	GOM	32995.7	394.5	0.0679	17.7	1.20
2003	3	GOM	32995.7	394.5	0.0679	47.8	3.24
2003	4	GOM	32995.7	394.5	0.0679	110.9	7.53
2003	1	MA	32995.7	394.5	0.0679	205.0	13.93
2003	2	MA	32995.7	394.5	0.0679	141.6	9.62
2003	3	MA	32995.7	394.5	0.0679	145.2	9.86
2003	4	MA	32995.7	394.5	0.0679	215.0	14.60
2003	1	SNE	32995.7	394.5	0.0679	137.4	9.34
2003	2	SNE	32995.7	394.5	0.0679	41.2	2.80
2003	3	SNE	32995.7	394.5	0.0679	26.5	1.80
2003	4	SNE	32995.7	394.5	0.0679	85.6	5.81
2004	1	GBK	684.0	9.0	0.0132	105.8	1.39
2004	2	GBK	32995.7	394.5	0.0679	4.5	0.31
2004	3	GBK	18336.1	638.0	0.0348	87.0	3.03
2004	4	GBK	533137.1	4358.3	0.0082	669.8	5.48
2004	1	GOM	6638.8	70.0	0.0105	142.1	1.50
2004	2	GOM	32995.7	394.5	0.0679	4.1	0.28
2004	3	GOM	32995.7	394.5	0.0679	66.1	4.49
2004	4	GOM	32995.7	394.5	0.0679	62.0	4.21
2004	1	MA	32995.7	394.5	0.0679	148.2	10.07
2004	2	MA	32995.7	394.5	0.0679	43.2	2.94
2004	3	MA	32995.7	394.5	0.0679	61.7	4.19
2004	4	MA	1144.0	0.0	0.0000	218.6	0.00
2004	1	SNE	32995.7	394.5	0.0679	316.8	21.52
2004	2	SNE	32995.7	394.5	0.0679	23.6	1.61
2004	3	SNE	32995.7	394.5	0.0679	38.0	2.58
2004	4	SNE	14802.0	0.0	0.0000	161.3	0.00
2005	1	GBK	25875.8	2416.0	0.0934	276.1	25.78
2005	2	GBK	103532.8	29924.0	0.2890	130.7	37.79
2005	3	GBK	52318.8	5492.0	0.1050	216.7	22.75
2005	4	GBK	625960.6	21498.1	0.0343	850.2	29.20
2005	1	GOM	36869.1	1932.0	0.0524	465.7	24.40
2005	2	GOM	4250.0	101.0	0.0238	132.7	3.15
2005	3	GOM	5209.4	62.0	0.0119	128.5	1.53
2005	4	GOM	12918.0	11.5	0.0009	154.8	0.14
2005	1	MA	24285.0	0.0	0.0000	930.0	0.00
2005	2	MA	24285.0	0.0	0.0000	315.1	0.00
2005	3	MA	24285.0	0.0	0.0000	381.1	0.00
2005	4	MA	11009.0	0.0	0.0000	325.1	0.00
2005	1	SNE	37561.0	0.0	0.0000	733.2	0.00
2005	2	SNE	24285.0	0.0	0.0000	62.4	0.00
2005	3	SNE	24285.0	0.0	0.0000	124.5	0.00
2005	4	SNE	13904.0	0.0	0.0000	251.3	0.00
2006	1	GBK	5382.3	2678.0	0.4976	329.8	164.08

Table 1 cont.

2006	2	GBK	15863.0	3717.0	0.2343	77.5	18.16
2006	3	GBK	725.0	0.0	0.0000	20.6	0.00
2006	4	GBK	122382.7	6628.4	0.0542	282.3	15.29
2006	1	GOM	29380.8	1181.6	0.0402	251.9	10.13
2006	2	GOM	11947.3	469.9	0.0264	11.4	0.30
2006	3	GOM	591.0	0.0	0.0000	9.3	0.00
2006	4	GOM	5870.0	228.0	0.0388	49.7	1.93
2006	1	MA	26623.8	1.5	0.0001	190.4	0.01
2006	2	MA	25933.5	3.0	0.0001	120.0	0.01
2006	3	MA	25392.0	48.0	0.0015	161.2	0.24
2006	4	MA	27314.0	0.0	0.0000	354.7	0.00
2006	1	SNE	36898.8	281.0	0.0076	206.0	1.57
2006	2	SNE	23469.9	96.0	0.0030	63.5	0.19
2006	3	SNE	28359.0	0.0	0.0000	74.9	0.00
2006	4	SNE	5152.0	7.0	0.0014	171.9	0.23
2007	1	GBK	19980.8	7508.0	0.3758	40.3	15.15
2007	2	GBK	13550.6	618.0	0.0456	85.2	3.89
2007	3	GBK	704.0	57.0	0.0810	94.2	7.62
2007	4	GBK	162247.8	8277.1	0.0510	302.4	15.43
2007	1	GOM	15599.3	1455.8	0.0933	292.0	27.25
2007	2	GOM	1315.8	45.0	0.0342	3.7	0.13
2007	3	GOM	679.2	61.8	0.0910	37.8	3.44
2007	4	GOM	15414.0	78.1	0.0051	88.5	0.45
2007	1	MA	13696.6	0.0	0.0000	148.8	0.00
2007	2	MA	13696.6	0.0	0.0000	111.8	0.00
2007	3	MA	21468.9	0.0	0.0000	192.4	0.00
2007	4	MA	2793.0	0.0	0.0000	480.6	0.00
2007	1	SNE	13696.6	0.0	0.0000	188.6	0.00
2007	2	SNE	13696.6	0.0	0.0000	77.3	0.00
2007	3	SNE	13696.6	0.0	0.0000	38.3	0.00
2007	4	SNE	16828.0	0.0	0.0000	85.9	0.00

Table 2. Discard estimates by stratum for the otter trawl fishery.

YEAR	QTR	areaf	ksums	dsums	dkratio	cf_totalmt	disc
1989	1	GBK	117519.0	94262.0	0.8021	15772.5	12651.1
1989	2	GBK	210790.2	57319.0	0.2719	10299.5	2800.7
1989	3	GBK	454241.8	129818.0	0.2858	8532.2	2438.4
1989	4	GBK	252775.0	97525.0	0.3858	11330.0	4371.3
1989	1	GOM	48544.0	16810.0	0.3463	6779.9	2347.8
1989	2	GOM	27026.8	4486.0	0.1660	4201.0	697.3
1989	3	GOM	50683.0	6507.0	0.1284	3824.7	491.0
1989	4	GOM	42992.8	8354.0	0.1943	7340.8	1426.4
1989	1	MA	203087.8	43259.0	0.2130	19939.2	4247.2
1989	2	MA	52984.0	1248.0	0.0236	4127.6	97.2
1989	3	MA	11208.1	5721.0	0.5104	6179.5	3154.2
1989	4	MA	109527.0	15869.0	0.1449	12396.1	1796.0
1989	1	SNE	80602.4	136040.0	1.6878	7660.9	12930.0
1989	2	SNE	64276.6	19099.0	0.2971	6365.3	1891.4
1989	3	SNE	20408.4	23176.0	1.1356	2033.9	2309.8
1989	4	SNE	157064.6	89395.0	0.5692	7514.9	4277.2
1990	1	GBK	169125.7	175388.0	1.0370	16371.4	16977.6
1990	2	GBK	200458.5	67116.0	0.3348	12978.9	4345.5
1990	3	GBK	140104.7	17486.0	0.1248	11239.0	1402.7
1990	4	GBK	198538.0	55702.0	0.2806	16617.9	4662.3
1990	1	GOM	1822.0	448.0	0.2459	5568.7	1369.3
1990	2	GOM	23842.0	3089.0	0.1296	6045.3	783.2
1990	3	GOM	27414.7	765.0	0.0279	7291.1	203.5
1990	4	GOM	75133.5	21051.0	0.2802	12997.3	3641.6
1990	1	MA	262107.9	37787.0	0.1442	16534.5	2383.7
1990	2	MA	18160.1	1863.0	0.1026	4986.0	511.5
1990	3	MA	11400.1	4375.0	0.3838	7225.0	2772.7
1990	4	MA	107716.6	45878.0	0.4259	15494.3	6599.2
1990	1	SNE	95622.5	246951.0	2.5826	9198.6	23755.8
1990	2	SNE	234679.7	18902.0	0.0805	4201.0	338.4
1990	3	SNE	24171.4	3174.0	0.1313	2545.7	334.3
1990	4	SNE	77514.8	141495.0	1.8254	8822.3	16104.1
1991	1	GBK	286394.1	98774.0	0.3449	16731.6	5770.5
1991	2	GBK	81042.4	32320.0	0.3988	12068.2	4812.8
1991	3	GBK	265911.0	19991.0	0.0752	9653.7	725.8
1991	4	GBK	321971.0	166273.0	0.5164	12115.9	6256.9
1991	1	GOM	29317.0	3598.0	0.1227	6247.8	766.8
1991	2	GOM	44616.2	1855.0	0.0416	6581.6	273.6
1991	3	GOM	31819.0	2640.0	0.0830	7495.0	621.9
1991	4	GOM	300163.0	25951.0	0.0865	12435.0	1075.1
1991	1	MA	638472.8	6016.0	0.0094	26490.5	249.6
1991	2	MA	19918.0	8849.0	0.4443	5490.1	2439.1
1991	3	MA	7639.0	12186.0	1.5952	8983.1	14330.0
1991	4	MA	1221565.0	255263.0	0.2090	15782.6	3298.0
1991	1	SNE	144929.0	102308.0	0.7059	9132.3	6446.7
1991	2	SNE	104618.7	47207.0	0.4512	4703.6	2122.4



Table 2 cont.

1991	3	SNE	76042.7	27575.0	0.3626	3685.5	1336.4
1991	4	SNE	269344.8	69244.0	0.2571	8602.9	2211.7
1992	1	GBK	211715.5	100398.0	0.4742	12897.5	6116.1
1992	2	GBK	127642.0	12823.0	0.1005	11609.2	1166.3
1992	3	GBK	109207.0	3158.0	0.0289	9223.0	266.7
1992	4	GBK	224868.0	38302.0	0.1703	11227.9	1912.5
1992	1	GOM	219231.0	22429.0	0.1023	6679.5	683.4
1992	2	GOM	51966.3	728.0	0.0140	6444.1	90.3
1992	3	GOM	42787.0	1023.0	0.0239	7549.5	180.5
1992	4	GOM	107219.0	5166.0	0.0482	10138.2	488.5
1992	1	MA	432338.9	47195.0	0.1092	27963.5	3052.6
1992	2	MA	3688.0	75.0	0.0203	7562.2	153.8
1992	3	MA	4008.1	850.0	0.2121	10730.1	2275.5
1992	4	MA	264680.4	161108.0	0.6087	16932.3	10306.5
1992	1	SNE	260659.6	6965.0	0.0267	9872.3	263.8
1992	2	SNE	25181.0	9938.0	0.3947	4122.2	1626.9
1992	3	SNE	157759.0	36466.0	0.2312	2338.8	540.6
1992	4	SNE	114864.2	67854.0	0.5907	6158.5	3638.0
1993	1	GBK	134660.8	15600.0	0.1158	9861.9	1142.5
1993	2	GBK	127030.0	32601.0	0.2566	9047.7	2322.0
1993	3	GBK	160014.0	3233.0	0.0202	9184.4	185.6
1993	4	GBK	79910.0	59777.0	0.7481	13966.0	10447.3
1993	1	GOM	36155.0	5288.0	0.1463	5540.6	810.4
1993	2	GOM	53969.0	2862.0	0.0530	4782.4	253.6
1993	3	GOM	18086.0	446.0	0.0247	5934.0	146.3
1993	4	GOM	69066.0	5482.0	0.0794	8854.3	702.8
1993	1	MA	292580.3	7047.0	0.0241	24397.6	587.6
1993	2	MA	871.0	39.0	0.0448	5242.9	234.8
1993	3	MA	4335.0	205.0	0.0473	12974.8	613.6
1993	4	MA	65343.2	29027.0	0.4442	13454.6	5976.8
1993	1	SNE	128829.0	7757.0	0.0602	6354.0	382.6
1993	2	SNE	22059.2	14224.0	0.6448	3506.2	2260.8
1993	3	SNE	43748.0	37881.0	0.8659	1693.1	1466.0
1993	4	SNE	280056.4	72207.0	0.2578	8737.8	2252.9
1994	1	GBK	436769.0	88920.0	0.2036	8945.5	1821.2
1994	2	GBK	72759.5	33874.0	0.4656	5641.3	2626.4
1994	3	GBK	46292.5	11055.0	0.2388	6584.7	1572.5
1994	4	GBK	35845.9	31958.0	0.8915	8935.1	7966.0
1994	1	GOM	24887.0	738.0	0.0297	5544.9	164.4
1994	2	GOM	3141.0	220.0	0.0700	4287.4	300.3
1994	3	GOM	14080.0	1000.0	0.0710	5197.5	369.1
1994	4	GOM	21317.4	554.0	0.0260	8638.0	224.5
1994	1	MA	381053.6	37798.0	0.0992	20620.1	2045.4
1994	2	MA	6763.5	36765.0	5.4358	9182.5	49914.0
1994	3	MA	23752.0	1130.0	0.0476	11546.8	549.3
1994	4	MA	138197.2	18468.6	0.1336	15207.5	2032.3
1994	1	SNE	294069.2	1267.0	0.0043	8344.8	36.0
1994	2	SNE	1871.0	4222.0	2.2565	3447.9	7780.2
1994	3	SNE	2871.0	204.0	0.0711	3812.2	270.9

Table 2 cont.

1994	4	SNE	47233.3	15154.0	0.3208	9931.6	3186.4
1995	1	GBK	398782.6	165691.7	0.4155	7122.9	2959.5
1995	2	GBK	100454.1	76175.0	0.7583	5439.9	4125.1
1995	3	GBK	42319.5	5071.0	0.1198	4323.4	518.1
1995	4	GBK	106802.9	25099.0	0.2350	6558.7	1541.3
1995	1	GOM	177529.2	8604.4	0.0485	5299.9	256.9
1995	2	GOM	37469.2	1324.0	0.0353	4249.4	150.2
1995	3	GOM	73591.3	818.2	0.0111	4344.0	48.3
1995	4	GOM	127430.2	3981.0	0.0312	6542.1	204.4
1995	1	MA	265025.8	167568.1	0.6323	17081.4	10800.0
1995	2	MA	38774.2	11692.0	0.3015	6733.4	2030.4
1995	3	MA	155938.2	16521.1	0.1059	9038.7	957.6
1995	4	MA	175000.0	96826.8	0.5533	12480.0	6905.1
1995	1	SNE	38708.1	3904.0	0.1009	8666.6	874.1
1995	2	SNE	4411.8	2159.0	0.4894	3399.2	1663.5
1995	3	SNE	9451.3	1015.0	0.1074	4432.9	476.1
1995	4	SNE	88329.5	12063.0	0.1366	7074.4	966.1
1996	1	GBK	184663.6	113637.0	0.6154	7858.4	4835.9
1996	2	GBK	117595.1	37819.0	0.3216	7171.7	2306.4
1996	3	GBK	0.0	0.0		6840.9	0.0
1996	4	GBK	209964.4	16941.0	0.0807	11369.5	917.3
1996	1	GOM	61714.6	2034.0	0.0330	4742.3	156.3
1996	2	GOM	69868.1	3330.0	0.0477	4379.7	208.7
1996	3	GOM	63234.1	6.2	0.0001	4269.6	0.4
1996	4	GOM	141362.8	4941.7	0.0350	7532.8	263.3
1996	1	MA	479520.5	107702.1	0.2246	24713.8	5550.8
1996	2	MA	264761.7	9485.0	0.0358	6571.0	235.4
1996	3	MA	965224.6	3855.3	0.0040	7059.7	28.2
1996	4	MA	944748.5	69812.6	0.0739	11609.4	857.9
1996	1	SNE	10668.2	1410.0	0.1322	7603.4	1004.9
1996	2	SNE	48753.8	14780.0	0.3032	4140.8	1255.3
1996	3	SNE	5599.4	11266.0	2.0120	3906.9	7860.7
1996	4	SNE	77863.0	112269.0	1.4419	10028.6	14460.1
1997	1	GBK	227488.1	54825.9	0.2410	7139.8	1720.7
1997	2	GBK	170456.4	34555.0	0.2186	6615.0	1446.1
1997	3	GBK	222203.6	32189.0	0.1449	4697.8	680.5
1997	4	GBK	61677.5	16650.0	0.2700	8173.5	2206.4
1997	1	GOM	95497.2	12207.0	0.1278	4563.5	583.3
1997	2	GOM	542.0	6.0	0.0111	3408.8	37.7
1997	3	GOM	16785.2	71.0	0.0042	2774.3	11.7
1997	4	GOM	37608.1	4094.7	0.0477	6084.7	290.3
1997	1	MA	565473.0	44438.5	0.0786	19625.7	1542.3
1997	2	MA	1007214.8	17920.1	0.0326	3915.8	127.6
1997	3	MA	2280771.0	6448.3	0.0028	11231.8	31.8
1997	4	MA	175400.4	2873.5	0.0164	16504.1	270.4
1997	1	SNE	107043.1	13335.0	0.1246	8470.6	1055.2
1997	2	SNE	19773.8	1151.0	0.0582	4338.8	252.6
1997	3	SNE	148705.0	78903.0	0.5306	4355.4	2311.0
1997	4	SNE	74102.4	3041.0	0.0410	8380.8	343.9

Table 2 cont.

1998	1	GBK	114649.0	19374.5	0.1690	9249.6	1563.1
1998	2	GBK	54096.1	17653.8	0.4888	6539.3	3196.5
1998	3	GBK	21141.4	3131.0	0.1481	6382.8	945.3
1998	4	GBK	26497.8	30456.0	1.1494	10561.3	12138.9
1998	1	GOM	20993.4	1933.0	0.0921	4942.6	455.1
1998	2	GOM	3021.6	71.0	0.0235	2594.6	61.0
1998	3	GOM	19.0	11.0	0.5789	2411.0	1395.9
1998	4	GOM	8011.3	671.7	0.2315	5630.4	1303.5
1998	1	MA	395451.2	20314.5	0.0514	23801.8	1222.7
1998	2	MA	733.3	1455.0	1.9842	9736.8	19319.3
1998	3	MA	348354.9	39500.0	0.1134	14521.9	1646.6
1998	4	MA	111097.6	12894.0	0.1161	10795.8	1253.0
1998	1	SNE	74163.6	5339.0	0.0720	10848.1	780.9
1998	2	SNE	507.4	93.0	0.1833	4171.6	764.6
1998	3	SNE	28215.2	1813.0	0.0643	4222.3	271.3
1998	4	SNE	11191.0	2065.0	0.1845	9238.2	1704.7
1999	1	GBK	89278.8	383.0	0.0043	11941.5	51.2
1999	2	GBK	70345.7	26052.0	0.3703	7255.9	2687.2
1999	3	GBK	41587.0	16863.0	0.4055	7114.1	2884.7
1999	4	GBK	126953.2	53410.0	0.4207	9847.4	4142.8
1999	1	GOM	27103.3	275.2	0.0229	3908.0	89.5
1999	2	GOM	454.9	9.0	0.0198	2124.4	42.0
1999	3	GOM	7163.2	300.5	0.0420	1932.4	81.1
1999	4	GOM	73691.8	516.1	0.0070	5311.1	37.2
1999	1	MA	1013097.0	10230.0	0.0101	17301.2	174.7
1999	2	MA	35400.0	4903.0	0.1385	4809.8	666.2
1999	3	MA	178663.2	1582.0	0.0089	7405.0	65.6
1999	4	MA	249211.4	27940.0	0.1121	13499.0	1513.4
1999	1	SNE	152117.7	918.0	0.0060	8584.7	51.8
1999	2	SNE	37805.6	297.0	0.0079	3448.9	27.1
1999	3	SNE	73651.9	1449.0	0.0383	3281.6	125.6
1999	4	SNE	31032.6	3132.0	0.1009	6597.4	665.8
2000	1	GBK	501596.7	61654.5	0.1229	13462.5	1654.8
2000	2	GBK	83110.4	24463.0	0.2943	6144.5	1808.6
2000	3	GBK	151326.8	29832.0	0.1971	5143.5	1014.0
2000	4	GBK	389648.5	211490.0	0.5428	11464.9	6222.8
2000	1	GOM	61838.6	9326.0	0.1508	4204.0	634.0
2000	2	GOM	75118.8	8142.0	0.1084	3622.9	392.7
2000	3	GOM	121344.3	1973.0	0.0163	3294.2	53.6
2000	4	GOM	88946.2	4701.0	0.0529	5555.4	293.6
2000	1	MA	1383068.8	54066.0	0.0391	15666.5	612.4
2000	2	MA	224847.0	27600.0	0.1228	4468.3	548.5
2000	3	MA	867161.0	9318.0	0.0107	8165.7	87.7
2000	4	MA	129964.5	57963.0	0.4460	11506.8	5131.9
2000	1	SNE	26945.5	2520.0	0.0935	6498.4	607.7
2000	2	SNE	27953.0	4273.0	0.1529	3743.4	572.2
2000	3	SNE	289.9	54.0	0.1863	4355.6	811.5
2000	4	SNE	50400.0	23473.0	0.4657	6211.3	2892.8
2001	1	GBK	502325.9	567152.5	1.1291	15645.4	17664.5

Table 2 cont.

2001	2	GBK	163268.7	23552.0	0.1443	7396.8	1067.0
2001	3	GBK	179922.9	29426.0	0.1635	6675.5	1091.8
2001	4	GBK	429590.9	132451.0	0.3083	15368.5	4738.4
2001	1	GOM	39995.0	2465.0	0.0616	4963.4	305.9
2001	2	GOM	87230.2	4889.0	0.0560	3651.8	204.7
2001	3	GOM	50757.2	3269.0	0.0644	2783.3	179.3
2001	4	GOM	271527.6	9978.0	0.0367	6863.4	252.2
2001	1	MA	3117272.2	13786.0	0.0044	12403.5	54.9
2001	2	MA	53707.4	3795.0	0.0707	3036.1	214.5
2001	3	MA	586146.4	7925.5	0.0135	4713.0	63.7
2001	4	MA	236560.3	14662.5	0.0620	9509.3	589.4
2001	1	SNE	118525.2	4803.0	0.0405	9405.5	381.1
2001	2	SNE	4475.0	1444.0	0.3227	3407.2	1099.5
2001	3	SNE	3995.0	456.0	0.1141	3987.4	455.1
2001	4	SNE	33110.6	7189.0	0.2171	4054.6	880.3
2002	1	GBK	285255.2	130977.0	0.4592	16750.6	7691.2
2002	2	GBK	321494.8	135567.5	0.4217	7098.2	2993.1
2002	3	GBK	853066.8	263641.2	0.3091	5735.8	1772.6
2002	4	GBK	1850673.9	534334.8	0.2887	11038.8	3187.2
2002	1	GOM	211295.9	6556.0	0.0310	6421.0	199.2
2002	2	GOM	16769.4	1546.0	0.0922	2186.5	201.6
2002	3	GOM	230292.9	16668.9	0.0724	3351.7	242.6
2002	4	GOM	292352.7	27891.6	0.0954	5858.3	558.9
2002	1	MA	636320.1	41276.0	0.0649	10552.9	684.5
2002	2	MA	14028.4	1118.5	0.0797	2976.1	237.3
2002	3	MA	217428.1	12693.0	0.0584	5233.4	305.5
2002	4	MA	88761.5	19159.0	0.2158	9490.7	2048.5
2002	1	SNE	36892.0	3.0	0.0001	6232.9	0.5
2002	2	SNE	30767.5	1388.0	0.0451	2814.1	126.9
2002	3	SNE	2765.5	224.0	0.0810	2226.0	180.3
2002	4	SNE	36505.7	12143.0	0.3326	3566.9	1186.5
2003	1	GBK	2025154.8	1165520.9	0.5755	14506.5	8348.8
2003	2	GBK	913155.6	287681.7	0.3150	8159.6	2570.6
2003	3	GBK	764077.2	360934.0	0.4724	6512.7	3076.5
2003	4	GBK	1488066.9	671086.7	0.4510	13722.5	6188.6
2003	1	GOM	816958.4	62916.9	0.0770	7344.1	565.6
2003	2	GOM	296503.7	23768.3	0.0802	2477.7	198.6
2003	3	GOM	206323.8	17607.8	0.0853	2939.0	250.8
2003	4	GOM	491413.8	27891.4	0.0568	5860.4	332.6
2003	1	MA	264353.0	49131.7	0.1859	12727.0	2365.4
2003	2	MA	44843.7	7188.0	0.1603	2450.4	392.8
2003	3	MA	2116191.0	10965.9	0.0052	3789.2	19.6
2003	4	MA	805656.0	84646.5	0.1051	8999.7	945.6
2003	1	SNE	66694.2	47740.5	0.7158	4730.9	3386.5
2003	2	SNE	24570.5	864.0	0.0352	1580.9	55.6
2003	3	SNE	2574.3	5833.5	2.2660	1960.4	4442.3
2003	4	SNE	71582.1	24892.0	0.3477	6158.4	2141.5
2004	1	GBK	1906366.7	850612.0	0.4462	13896.7	6200.6
2004	2	GBK	1196759.3	679946.0	0.5682	7900.6	4488.8

Table 2 cont.

2004	3	GBK	1310535.8	812051.2	0.6196	9243.2	5727.4
2004	4	GBK	2329145.1	1308189.5	0.5617	11898.2	6682.7
2004	1	GOM	663041.1	32656.5	0.0493	5842.7	287.8
2004	2	GOM	111970.8	13358.7	0.1193	4420.4	527.4
2004	3	GOM	140897.7	5950.6	0.0422	8207.7	346.6
2004	4	GOM	789168.0	93840.7	0.1189	9043.0	1075.3
2004	1	MA	1315546.7	84251.6	0.0640	13442.2	860.9
2004	2	MA	309818.9	24332.0	0.0785	10123.4	795.1
2004	3	MA	1688970.5	38723.0	0.0229	16252.8	372.6
2004	4	MA	2167080.6	96405.2	0.0445	14202.6	631.8
2004	1	SNE	163708.3	18157.0	0.1109	6955.0	771.4
2004	2	SNE	103306.4	17879.5	0.1731	2524.4	436.9
2004	3	SNE	39012.3	28424.5	0.7286	2811.4	2048.4
2004	4	SNE	111008.8	96013.5	0.8649	5290.5	4575.9
2005	1	GBK	7807344.5	4202547.8	0.5383	9767.2	5257.5
2005	2	GBK	4814352.4	2749110.2	0.5710	6521.3	3723.8
2005	3	GBK	2242281.5	1610769.3	0.7184	5950.3	4274.5
2005	4	GBK	5070013.8	3456805.2	0.6818	10262.1	6996.8
2005	1	GOM	1460432.0	86059.9	0.0589	5309.4	312.9
2005	2	GOM	366527.9	22120.3	0.0604	2874.2	173.5
2005	3	GOM	363672.6	24488.2	0.0673	4164.6	280.4
2005	4	GOM	905399.7	157153.5	0.1736	7443.5	1292.0
2005	1	MA	1406306.4	63760.8	0.0453	16560.4	750.8
2005	2	MA	150171.1	49163.0	0.3274	4843.3	1585.6
2005	3	MA	293991.1	45674.3	0.1554	7761.4	1205.8
2005	4	MA	1050916.6	115930.0	0.1103	10842.3	1196.0
2005	1	SNE	575564.0	96978.0	0.1685	5434.7	915.7
2005	2	SNE	59569.3	56647.1	0.9509	1451.7	1380.5
2005	3	SNE	167366.8	105007.1	0.6274	1783.4	1118.9
2005	4	SNE	279194.2	181264.2	0.6492	3996.5	2594.7
2006	1	GBK	3424697.6	2457176.4	0.7175	7699.6	5524.4
2006	2	GBK	1622453.8	731960.0	0.4511	4057.1	1830.3
2006	3	GBK	1933865.4	1412239.9	0.7303	4459.1	3256.3
2006	4	GBK	1578415.8	1128798.5	0.7151	7837.4	5604.9
2006	1	GOM	711124.0	75375.0	0.1060	4452.7	472.0
2006	2	GOM	19006.0	3383.0	0.1780	1211.8	215.7
2006	3	GOM	92619.0	7354.8	0.0794	2978.2	236.5
2006	4	GOM	198574.3	15191.4	0.0765	3213.8	245.9
2006	1	MA	1871943.9	62970.2	0.0336	32892.0	1106.5
2006	2	MA	1647404.2	59383.5	0.0360	4259.7	153.5
2006	3	MA	1991620.9	40898.7	0.0205	9085.0	186.6
2006	4	MA	1096588.4	87026.7	0.0794	13777.2	1093.4
2006	1	SNE	860190.4	149848.5	0.1742	6488.1	1130.2
2006	2	SNE	87581.6	6228.5	0.0711	1913.9	136.1
2006	3	SNE	85786.2	23498.0	0.2739	2553.5	699.4
2006	4	SNE	227163.2	52487.5	0.2311	3750.6	866.6
2007	1	GBK	2716869.7	1847037.5	0.6798	10413.1	7079.3
2007	2	GBK	2002073.1	1113493.0	0.5562	5199.6	2891.8
2007	3	GBK	1385278.3	1471099.1	1.0620	4478.8	4756.3

Table 2 cont.

2007	4	GBK	3181301.6	2050467.9	0.6445	9427.9	6076.6
2007	1	GOM	732365.3	112054.9	0.1530	4161.4	636.7
2007	2	GOM	290266.9	17910.3	0.0617	1546.3	95.4
2007	3	GOM	358148.5	10986.0	0.0307	2091.2	64.1
2007	4	GOM	611896.9	49552.7	0.0810	3220.8	260.8
2007	1	MA	962031.0	104525.7	0.1087	11354.0	1233.6
2007	2	MA	93576.9	51220.5	0.5474	1957.8	1071.6
2007	3	MA	1939160.2	97902.8	0.0505	4913.8	248.1
2007	4	MA	1735005.5	369938.7	0.2132	10653.6	2271.6
2007	1	SNE	564348.9	100567.6	0.1782	5368.0	956.6
2007	2	SNE	102264.1	42452.0	0.4151	1569.1	651.3
2007	3	SNE	260652.2	124886.5	0.4791	2211.9	1059.8
2007	4	SNE	251575.7	96107.7	0.3820	4593.7	1754.9

Table 3. Discard estimates by stratum for the shrimp trawl fishery.




		 average within areaf across mesh	 average across comb region (ie sne-ma)	 Average 1995-2007			
YEAR	QTR	areaf	kept	discards	dkratio	mt kept	Total discards
1989	1	GBK	761.0	0.0	0.0000		0.0000
1989	1	GOM	37722.0	763.0	0.0202	3213.4194	64.9976
1989	2	GOM	8980.0	380.0	0.0423	198.7805	8.4117
1989	4	GOM	12558.0	227.0	0.0181	931.1231	16.8311
1990	1	GBK	17384.3	917.7	0.0582	16.6527	0.9694
1990	2	GBK	17384.3	917.7	0.0582	37.1733	2.1640
1990	1	GOM	37744.0	1877.0	0.0497	4014.9878	199.6644
1990	2	GOM	7437.0	82.0	0.0110	478.8901	5.2802
1990	4	GOM	6972.0	794.0	0.1139	619.7042	70.5745
1991	1	GBK	691.0	200.0	0.2894	51.3303	14.8568
1991	1	GOM	54049.0	3704.0	0.0685	3144.6289	215.5025
1991	2	GOM	8673.0	330.0	0.0380	339.8328	12.9303
1991	4	GOM	6233.0	807.0	0.1295	340.0274	44.0241
1992	1	GBK	27845.0	2040.7	0.0263	49.5051	1.3012
1992	1	GOM	78834.0	6117.0	0.0776	3137.5987	243.4570
1992	2	GOM	725.0	0.0	0.0000	98.3130	0.0000
1992	4	GOM	3976.0	5.0	0.0013	161.2525	0.2028
1993	1	GBK	2300.0	0.0	0.0000		0.0000
1993	1	GOM	62135.0	1145.0	0.0184	1885.0247	34.7365
1993	2	GOM	33122.5	579.5	0.0109	5.0068	0.0547
1993	4	GOM	4110.0	14.0	0.0034	316.2319	1.0772
1994	1	GBK	41229.5	168.5	0.0027	23.0974	0.0618
1994	4	GBK	41229.5	168.5	0.0027	0.0454	0.0001
1994	1	GOM	72823.0	329.0	0.0045	2419.8023	10.9322
1994	3	GOM	41229.5	168.5	0.0027	9.1372	0.0244
1994	4	GOM	9636.0	8.0	0.0008	897.0524	0.7448
1995	1	GBK	48706.0	67.9	0.0010	22.2133	0.0233
1995	4	GBK	48706.0	67.9	0.0010	5.4626	0.0057
1995	1	GOM	74054.0	126.8	0.0017	4426.6070	7.5795
1995	2	GOM	48706.0	67.9	0.0010	5.4390	0.0057
1995	3	GOM	48706.0	67.9	0.0010	12.4094	0.0130
1995	4	GOM	23358.0	9.0	0.0004	1359.4640	0.5238
1996	1	GBK	15813.3	53.7	0.0032	42.2716	0.1340
1996	1	GOM	32304.0	128.7	0.0040	6560.2339	26.1361
1996	2	GOM	9342.0	0.7	0.0001	979.4293	0.0734
1996	4	GOM	5794.0	31.6	0.0055	1416.1748	7.7237
1997	1	GBK	1590.0	1.0	0.0006	24.8224	0.0156
1997	4	GBK	10800.0	63.5	0.0035	3.0699	0.0106
1997	1	GOM	20010.0	125.9	0.0063	4761.5655	29.9591
1997	2	GOM	10800.0	63.5	0.0035	629.2601	2.1775
1997	3	GOM	10800.0	63.5	0.0035	15.0107	0.0519
1997	4	GOM	10800.0	63.5	0.0035	630.9021	2.1832
1998	1	GOM	26486.6	53.8	0.0026	2875.1596	7.4407
1998	2	GOM	26486.6	53.8	0.0026	219.7514	0.5687
1998	3	GOM	26486.6	53.8	0.0026	9.0877	0.0235

Table 3 cont.

1998	4	GOM	26486.6	53.8	0.0026	159.0295	0.4116
1999	1	GBK	26486.6	53.8	0.0026	12.9020	0.0334
1999	1	GOM	26486.6	53.8	0.0026	1177.4074	3.0470
1999	2	GOM	26486.6	53.8	0.0026	229.1803	0.5931
1999	3	GOM	26486.6	53.8	0.0026	32.2999	0.0836
1999	4	GOM	26486.6	53.8	0.0026	0.9453	0.0024
2000	1	GOM	26486.6	53.8	0.0026	2067.9439	5.3517
2000	3	GOM	26486.6	53.8	0.0026	22.0582	0.0571
2000	4	GOM	26486.6	53.8	0.0026	12.6198	0.0327
2001	1	GBK	26486.6	53.8	0.0026	0.2155	0.0006
2001	1	GOM	4950.0	0.0	0.0000	812.8656	0.0000
2001	2	GOM	26486.6	53.8	0.0026	0.0408	0.0001
2002	1	GOM	26486.6	53.8	0.0026	307.5170	0.7958
2003	1	GOM	14519.3	135.6	0.0093	855.2058	7.9870
2003	2	GOM	26486.6	53.8	0.0026	0.2572	0.0007
2004	1	GBK	21444.0	84.7	0.0039	0.2132	0.0008
2004	1	GOM	21444.0	84.7	0.0039	1065.2263	4.2075
2004	2	GOM	21444.0	84.7	0.0039	3.5045	0.0138
2004	3	GOM	21444.0	84.7	0.0039	1.8715	0.0074
2004	4	GOM	21444.0	84.7	0.0039	42.6259	0.1684
2005	1	GOM	27219.2	78.8	0.0029	835.6192	2.4191
2005	4	GOM	27219.2	78.8	0.0029	39.6508	0.1148
2006	4	GBK	43012.6	12.1	0.0007	1.6806	0.0012
2006	1	GOM	77625.1	14.1	0.0002	846.9831	0.1538
2006	3	GOM	43012.6	12.1	0.0007	1.4678	0.0010
2006	4	GOM	8400.0	10.1	0.0012	445.9153	0.5362
2007	2	GBK	50203.0	6.6	0.0001	26.7878	0.0035
2007	3	GBK	50203.0	6.6	0.0001	17.6080	0.0023
2007	4	GBK	50203.0	6.6	0.0001	1.8538	0.0002
2007	1	GOM	50203.0	6.6	0.0001	1828.3506	0.2404
2007	2	GOM	50203.0	6.6	0.0001	40.7557	0.0054
2007	3	GOM	50203.0	6.6	0.0001	57.4321	0.0076
2007	4	GOM	50203.0	6.6	0.0001	281.7607	0.0370



Table 4. Discard estimates by stratum for the sink gill net fishery.

		average within areaf	average across comb region (ie sne-ma)				
YEAR	QTR	areaf	ksums	dsums	dkratio	cf_totalmt	disc
1989	1	GBK	22453.7	245.0	0.0084	586.7	5.0
1989	2	GBK	3410.0	11.0	0.0032	1039.2	3.4
1989	3	GBK	30690.0	140.0	0.0046	2108.0	9.6
1989	4	GBK	33261.1	584.0	0.0176	1194.9	21.0
1989	1	GOM	98651.0	716.5	0.0055	2085.5	11.5
1989	2	GOM	98651.0	716.5	0.0055	3209.8	17.7
1989	3	GOM	13516.0	47.0	0.0035	4023.2	14.0
1989	4	GOM	183786.0	1386.0	0.0075	6232.1	47.0
1989	1	MA	106.3	0.0	0.0000	1079.2	0.0
1989	2	MA	106.3	0.0	0.0000	769.4	0.0
1989	3	MA	106.3	0.0	0.0000	820.8	0.0
1989	4	MA	106.3	0.0	0.0000	1222.8	0.0
1989	1	SNE	106.3	0.0	0.0000	324.1	0.0
1989	2	SNE	106.3	0.0	0.0000	38.1	0.0
1989	3	SNE	106.3	0.0	0.0000	83.9	0.0
1989	4	SNE	106.3	0.0	0.0000	264.0	0.0
1990	1	GBK	4037.0	58.0	0.0144	306.3	4.4
1990	2	GBK	8856.0	119.0	0.0134	1017.9	13.7
1990	3	GBK	104237.1	29.0	0.0003	1598.3	0.4
1990	4	GBK	59828.1	122.0	0.0020	869.0	1.8
1990	1	GOM	31339.0	3354.0	0.1070	1775.3	190.0
1990	2	GOM	23717.0	1114.0	0.0470	2967.6	139.4
1990	3	GOM	94015.6	323.0	0.0034	6385.8	21.9
1990	4	GOM	72931.2	655.0	0.0090	5447.0	48.9
1990	1	MA	2261.4	0.0	0.0000	1180.8	0.0
1990	2	MA	255.7	0.0	0.0000	541.7	0.0
1990	3	MA	2261.4	0.0	0.0000	670.5	0.0
1990	4	MA	4267.1	0.0	0.0000	1384.0	0.0
1990	1	SNE	1138.4	0.0	0.0000	363.8	0.0
1990	2	SNE	1138.4	0.0	0.0000	1060.2	0.0
1990	3	SNE	1138.4	0.0	0.0000	238.4	0.0
1990	4	SNE	1138.4	0.0	0.0000	1155.4	0.0
1991	1	GBK	6139.0	32.0	0.0052	166.8	0.9
1991	2	GBK	100725.3	730.0	0.0072	833.0	6.0
1991	3	GBK	221500.1	4243.0	0.0192	1248.6	23.9
1991	4	GBK	78760.0	3517.0	0.0447	539.7	24.1
1991	1	GOM	21516.0	882.0	0.0410	1258.5	51.6
1991	2	GOM	338493.2	4779.0	0.0141	2867.9	40.5
1991	3	GOM	1032744.5	8763.0	0.0085	4929.0	41.8
1991	4	GOM	576265.9	3962.0	0.0069	3354.7	23.1
1991	1	MA	1947.7	0.0	0.0000	1441.7	0.0
1991	2	MA	3226.6	0.0	0.0000	1042.6	0.0
1991	3	MA	2587.1	0.0	0.0000	894.0	0.0
1991	4	MA	2587.1	0.0	0.0000	2591.0	0.0
1991	1	SNE	657.0	0.0	0.0000	1954.6	0.0
1991	2	SNE	657.0	0.0	0.0000	1629.6	0.0
1991	3	SNE	1057.0	0.0	0.0000	110.3	0.0

Table 4 cont.

1991	4	SNE	257.0	0.0	0.0000	2105.3	0.0
1992	1	GBK	8797.0	466.0	0.0530	119.9	6.4
1992	2	GBK	64292.0	805.0	0.0125	582.4	7.3
1992	3	GBK	257302.9	558.0	0.0022	1262.9	2.7
1992	4	GBK	26579.0	1041.0	0.0392	480.8	18.8
1992	1	GOM	83433.0	8691.0	0.1042	1018.6	106.1
1992	2	GOM	327513.2	5495.0	0.0168	2507.2	42.1
1992	3	GOM	619171.0	2005.0	0.0032	5062.0	16.4
1992	4	GOM	422764.0	1933.0	0.0046	3928.4	18.0
1992	1	MA	159421.1	0.0	0.0000	1552.6	0.0
1992	2	MA	159421.1	0.0	0.0000	1284.1	0.0
1992	3	MA	159421.1	0.0	0.0000	855.9	0.0
1992	4	MA	159421.1	0.0	0.0000	2243.4	0.0
1992	1	SNE	24339.0	381.0	0.0157	994.4	15.6
1992	2	SNE	158927.0	8499.0	0.0535	1717.9	91.9
1992	3	SNE	12277.0	824.0	0.0671	63.8	4.3
1992	4	SNE	116631.4	2077.0	0.0178	2636.8	47.0
1993	1	GBK	10907.0	190.0	0.0174	134.9	2.4
1993	2	GBK	35533.1	177.0	0.0050	604.0	3.0
1993	3	GBK	184496.5	419.0	0.0023	994.0	2.3
1993	4	GBK	79788.8	1556.0	0.0195	1368.6	26.7
1993	1	GOM	65333.1	3277.0	0.0502	1164.5	58.4
1993	2	GOM	195803.4	3330.0	0.0170	3220.8	54.8
1993	3	GOM	220513.3	474.0	0.0021	6614.9	14.2
1993	4	GOM	322639.1	1296.0	0.0040	5316.5	21.4
1993	1	MA	88819.2	0.0	0.0000	2446.1	0.0
1993	2	MA	39302.1	19.0	0.0007	1684.6	1.2
1993	3	MA	1798.0	0.0	0.0000	1248.5	0.0
1993	4	MA	27289.0	57.0	0.0021	3380.6	7.1
1993	1	SNE	17184.0	759.0	0.0442	491.1	21.7
1993	2	SNE	66155.0	2719.0	0.0411	1719.1	70.7
1993	3	SNE	7014.0	1190.0	0.1697	135.3	23.0
1993	4	SNE	116496.0	1243.0	0.0107	1419.2	15.1
1994	1	GBK	11743.0	78.0	0.0066	117.4	0.8
1994	2	GBK	50530.1	0.0	0.0000	803.0	0.0
1994	3	GBK	102328.1	7.0	0.0001	1897.1	0.1
1994	4	GBK	32304.7	501.0	0.0155	1330.6	20.6
1994	1	GOM	12656.0	1302.0	0.1029	1172.1	120.6
1994	2	GOM	9843.3	30.0	0.0030	2806.3	8.6
1994	3	GOM	47074.7	24.0	0.0005	6382.9	3.3
1994	4	GOM	64128.1	814.0	0.0127	3814.1	48.4
1994	1	MA	424842.9	2959.0	0.0070	2214.1	15.4
1994	2	MA	62247.1	206.0	0.0033	1410.4	4.7
1994	3	MA	46100.8	31.0	0.0007	1614.0	1.1
1994	4	MA	290493.6	3790.5	0.0130	3221.9	42.0
1994	1	SNE	15407.0	216.0	0.0140	653.6	9.2
1994	2	SNE	1780.0	122.0	0.0685	1542.2	105.7
1994	3	SNE	39030.0	2901.7	0.0554	282.8	15.7
1994	4	SNE	99903.1	8367.0	0.0838	1085.2	90.9

Table 4 cont.

1995	1	GBK	5379.6	165.0	0.0307	239.6	7.3
1995	2	GBK	107372.2	350.0	0.0033	1658.3	5.4
1995	3	GBK	154650.9	432.0	0.0028	1825.6	5.1
1995	4	GBK	44697.3	597.0	0.0134	1793.9	24.0
1995	1	GOM	16330.9	1583.1	0.0969	1365.0	132.3
1995	2	GOM	29104.0	532.5	0.0183	3486.5	63.8
1995	3	GOM	80281.6	216.0	0.0027	6267.8	16.9
1995	4	GOM	39633.4	1990.0	0.0502	4241.2	213.0
1995	1	MA	755815.3	10447.5	0.0138	2503.3	34.6
1995	2	MA	125150.4	1229.0	0.0098	1809.5	17.8
1995	3	MA	52056.3	216.0	0.0041	847.1	3.5
1995	4	MA	262332.0	3379.3	0.0129	3991.1	51.4
1995	1	SNE	8833.0	678.0	0.0768	595.0	45.7
1995	2	SNE	31651.4	1999.0	0.0632	2150.8	135.8
1995	3	SNE	3936.0	447.0	0.1136	172.4	19.6
1995	4	SNE	33918.5	468.0	0.0138	1204.2	16.6
1996	1	GBK	10373.0	365.0	0.0352	200.0	7.0
1996	2	GBK	25715.0	64.0	0.0025	1371.7	3.4
1996	3	GBK	112924.3	861.0	0.0076	1572.6	12.0
1996	4	GBK	33751.5	361.1	0.0107	1875.5	20.1
1996	1	GOM	22662.2	4893.8	0.2159	1081.5	233.6
1996	2	GOM	15555.1	266.0	0.0171	2323.0	39.7
1996	3	GOM	32440.7	140.0	0.0043	6154.5	26.6
1996	4	GOM	75904.3	111.9	0.0015	4372.9	6.4
1996	1	MA	800368.3	12530.5	0.0157	5261.4	82.4
1996	2	MA	148496.3	1423.4	0.0096	3097.0	29.7
1996	3	MA	42831.4	280.0	0.0065	1745.6	11.4
1996	4	MA	214088.6	1649.0	0.0077	5262.4	40.5
1996	1	SNE	18515.5	75.0	0.0041	386.4	1.6
1996	2	SNE	9094.5	116.0	0.0128	1681.4	21.4
1996	3	SNE	1277.3	0.0	0.0000	216.0	0.0
1996	4	SNE	1110.9	15.0	0.0135	1044.4	14.1
1997	1	GBK	20931.9	102.0	0.0049	428.3	2.1
1997	2	GBK	5213.2	44.0	0.0084	1641.7	13.9
1997	3	GBK	5882.0	3.0	0.0005	1166.1	0.6
1997	4	GBK	7335.2	59.0	0.0080	978.7	7.9
1997	1	GOM	4971.0	236.7	0.0476	1335.0	63.6
1997	2	GOM	25021.5	311.7	0.0125	2471.6	30.8
1997	3	GOM	29352.1	3.0	0.0001	4699.3	0.5
1997	4	GOM	44359.9	78.6	0.0018	3821.1	6.8
1997	1	MA	711796.5	13753.7	0.0193	7893.1	152.5
1997	2	MA	138710.4	6381.0	0.0460	2791.0	128.4
1997	3	MA	54975.6	11.0	0.0002	1862.2	0.4
1997	4	MA	176529.4	1573.0	0.0089	5587.1	49.8
1997	1	SNE	22081.1	47.5	0.0022	398.9	0.9
1997	2	SNE	7321.8	0.0	0.0000	1130.0	0.0
1997	3	SNE	3082.4	94.0	0.0305	160.5	4.9
1997	4	SNE	22597.5	470.0	0.0208	989.9	20.6
1998	1	GBK	13254.0	289.0	0.0218	428.2	9.3

Table 4 cont.

1998	2	GBK	13539.2	21.0	0.0016	1012.1	1.6
1998	3	GBK	103634.0	2259.0	0.0218	783.5	17.1
1998	4	GBK	81759.1	317.4	0.0039	1880.9	7.3
1998	1	GOM	8246.3	173.1	0.0210	1544.7	32.4
1998	2	GOM	65996.6	216.0	0.0033	2135.8	7.0
1998	3	GOM	49801.2	34.0	0.0007	5544.6	3.8
1998	4	GOM	193863.8	1266.7	0.0065	4330.9	28.3
1998	1	MA	748403.1	6338.5	0.0085	7460.2	63.2
1998	2	MA	76002.7	1863.0	0.0245	3902.1	95.6
1998	3	MA	2258.0	64.0	0.0283	1692.5	48.0
1998	4	MA	77028.3	1279.1	0.0166	7274.9	120.8
1998	1	SNE	1614.1	3.0	0.0019	408.4	0.8
1998	2	SNE	20995.3	120.0	0.0057	1211.2	6.9
1998	3	SNE	19049.8	229.0	0.0080	162.2	1.3
1998	4	SNE	34540.0	563.9	0.0163	1486.6	24.3
1999	1	GBK	17467.9	1572.2	0.0900	605.4	54.5
1999	2	GBK	41630.0	126.0	0.0030	1612.3	4.9
1999	3	GBK	58207.3	189.0	0.0032	1217.7	4.0
1999	4	GBK	28471.6	114.0	0.0040	1695.2	6.8
1999	1	GOM	22623.7	188.7	0.0083	1176.5	9.8
1999	2	GOM	33414.6	507.9	0.0152	1910.8	29.0
1999	3	GOM	94138.0	271.1	0.0029	2414.2	7.0
1999	4	GOM	176380.0	6468.1	0.0367	2529.0	92.7
1999	1	MA	63037.4	1342.0	0.0213	8640.0	183.9
1999	2	MA	18830.8	1496.5	0.0795	3584.5	284.9
1999	3	MA	5370.5	0.0	0.0000	1480.7	0.0
1999	4	MA	25202.0	383.5	0.0152	4889.5	74.4
1999	1	SNE	8739.8	122.0	0.0140	885.0	12.4
1999	2	SNE	8818.0	119.0	0.0135	1406.2	19.0
1999	3	SNE	7389.7	169.0	0.0284	338.3	9.6
1999	4	SNE	4611.2	266.0	0.0577	973.9	56.2
2000	1	GBK	21170.1	331.8	0.0157	709.6	11.1
2000	2	GBK	17915.7	683.3	0.0381	976.1	37.2
2000	3	GBK	19154.2	9308.0	0.4860	1119.1	543.8
2000	4	GBK	51549.7	4942.1	0.0959	1504.5	144.2
2000	1	GOM	23536.8	341.9	0.0145	1103.9	16.0
2000	2	GOM	30212.8	957.8	0.0317	1776.8	56.3
2000	3	GOM	34168.9	242.6	0.0071	2376.4	16.9
2000	4	GOM	38219.2	446.7	0.0117	2964.0	34.6
2000	1	MA	49061.9	16.0	0.0003	6565.2	2.1
2000	2	MA	15007.2	79.0	0.0053	2654.3	14.0
2000	3	MA	12557.5	0.0	0.0000	1958.7	0.0
2000	4	MA	62224.3	533.0	0.0086	4986.7	42.7
2000	1	SNE	9597.0	222.0	0.0231	918.0	21.2
2000	2	SNE	22779.3	738.0	0.0324	697.5	22.6
2000	3	SNE	13675.7	355.3	0.0226	100.6	2.3
2000	4	SNE	8650.7	106.0	0.0123	579.9	7.1
2001	1	GBK	23497.4	1354.3	0.0576	875.6	50.5
2001	2	GBK	20554.2	380.0	0.0185	953.7	17.6

Table 4 cont.

2001	3	GBK	8626.2	81.0	0.0094	1118.3	10.5
2001	4	GBK	21143.6	1650.0	0.0780	1180.4	92.1
2001	1	GOM	4458.5	88.0	0.0197	913.8	18.0
2001	2	GOM	24667.5	1391.0	0.0564	1802.7	101.7
2001	3	GOM	27845.6	314.0	0.0113	2129.1	24.0
2001	4	GOM	15130.2	145.5	0.0096	2701.6	26.0
2001	1	MA	73646.7	287.0	0.0039	4166.3	16.2
2001	2	MA	26561.1	168.9	0.0064	2656.1	16.9
2001	3	MA	4520.2	0.0	0.0000	1374.3	0.0
2001	4	MA	27136.9	143.0	0.0053	5366.6	28.3
2001	1	SNE	3451.0	0.0	0.0000	296.6	0.0
2001	2	SNE	4886.0	896.0	0.1834	992.5	182.0
2001	3	SNE	55.0	0.0	0.0000	162.7	0.0
2001	4	SNE	5146.0	82.0	0.0159	1455.3	23.2
2002	1	GBK	9228.4	308.0	0.0334	960.7	32.1
2002	2	GBK	32100.7	3809.0	0.1187	691.9	82.1
2002	3	GBK	10484.5	235.0	0.0224	986.8	22.1
2002	4	GBK	23319.1	701.4	0.0301	1696.6	51.0
2002	1	GOM	34205.3	55.0	0.0016	1337.1	2.2
2002	2	GOM	27988.8	441.1	0.0158	1198.4	18.9
2002	3	GOM	21374.4	1106.5	0.0518	1789.4	92.6
2002	4	GOM	45843.6	611.0	0.0133	2488.4	33.2
2002	1	MA	37080.4	1069.0	0.0288	4219.3	121.6
2002	2	MA	5868.0	90.0	0.0153	2569.0	39.4
2002	3	MA	2315.9	0.0	0.0000	1376.1	0.0
2002	4	MA	29532.6	95.0	0.0032	4375.4	14.1
2002	1	SNE	10840.5	381.0	0.0351	1141.9	40.1
2002	2	SNE	9468.0	428.0	0.0452	1186.8	53.6
2002	3	SNE	963.0	20.0	0.0208	169.1	3.5
2002	4	SNE	6070.0	10329.0	1.7016	1307.3	2224.5
2003	1	GBK	4577.5	1311.1	0.2864	652.0	186.8
2003	2	GBK	43470.1	818.8	0.0188	356.4	6.7
2003	3	GBK	88411.1	3181.0	0.0360	1988.6	71.5
2003	4	GBK	177024.0	3756.3	0.0212	1881.1	39.9
2003	1	GOM	16371.3	481.0	0.0294	1262.1	37.1
2003	2	GOM	88920.5	1586.0	0.0178	1282.3	22.9
2003	3	GOM	140135.5	1562.9	0.0112	1866.6	20.8
2003	4	GOM	169528.6	1429.1	0.0084	2504.9	21.1
2003	1	MA	19277.5	483.0	0.0251	3761.1	94.2
2003	2	MA	22960.6	85.5	0.0037	3871.1	14.4
2003	3	MA	15101.8	0.0	0.0000	1356.5	0.0
2003	4	MA	27781.5	671.0	0.0242	4402.7	106.3
2003	1	SNE	21451.2	1487.0	0.0693	1023.0	70.9
2003	2	SNE	95480.1	4352.0	0.0456	1948.2	88.8
2003	3	SNE	28536.0	1581.1	0.0554	317.6	17.6
2003	4	SNE	135270.5	13896.6	0.1027	1608.6	165.3
2004	1	GBK	81315.1	5199.0	0.0639	3067.2	196.1
2004	2	GBK	129247.6	2860.5	0.0221	822.7	18.2
2004	3	GBK	374557.7	17328.5	0.0463	1744.6	80.7

Table 4 cont.

2004	4	GBK	270667.2	18566.0	0.0686	868.8	59.6
2004	1	GOM	85320.3	2177.7	0.0255	1491.0	38.1
2004	2	GOM	50461.3	907.2	0.0180	927.6	16.7
2004	3	GOM	383048.0	3395.8	0.0089	1855.8	16.5
2004	4	GOM	702958.2	14946.0	0.0213	2891.6	61.5
2004	1	MA	3046.2	0.0	0.0000	4538.0	0.0
2004	2	MA	3174.0	0.0	0.0000	1957.1	0.0
2004	3	MA	24512.5	1109.5	0.0165	1198.8	19.8
2004	4	MA	67317.3	3328.4	0.0494	3915.3	193.6
2004	1	SNE	207015.0	7432.5	0.0359	3361.1	120.7
2004	2	SNE	145289.2	6361.6	0.0438	1347.6	59.0
2004	3	SNE	3084.4	77.5	0.0251	131.5	3.3
2004	4	SNE	76143.0	4066.9	0.0534	579.3	30.9
2005	1	GBK	23149.2	17751.8	0.7668	395.2	303.0
2005	2	GBK	8228.8	56.0	0.0068	326.5	2.2
2005	3	GBK	387916.7	17402.0	0.0449	1476.1	66.2
2005	4	GBK	260812.3	30642.3	0.1175	816.7	96.0
2005	1	GOM	78700.7	3997.6	0.0508	1268.2	64.4
2005	2	GOM	39841.1	1358.5	0.0341	857.1	29.2
2005	3	GOM	473344.6	4407.0	0.0093	2259.6	21.0
2005	4	GOM	721567.1	5408.5	0.0075	2766.7	20.7
2005	1	MA	22404.2	555.0	0.0248	5461.8	135.3
2005	2	MA	163104.8	17011.0	0.1043	2885.5	300.9
2005	3	MA	9684.2	366.0	0.0378	1627.0	61.5
2005	4	MA	58178.3	3033.5	0.0521	4218.2	219.9
2005	1	SNE	28835.0	1689.0	0.0586	779.4	45.7
2005	2	SNE	85795.2	7663.3	0.0893	1700.7	151.9
2005	3	SNE	74307.2	7851.0	0.1057	357.9	37.8
2005	4	SNE	104448.1	6386.0	0.0611	569.0	34.8
2006	1	GBK	44571.9	1004.2	0.0225	505.5	11.4
2006	2	GBK	3979.8	911.0	0.2289	427.2	97.8
2006	3	GBK	96432.4	5581.0	0.0579	2044.7	118.3
2006	4	GBK	90164.1	8982.2	0.0996	1449.4	144.4
2006	1	GOM	82164.8	4076.8	0.0496	928.5	46.1
2006	2	GOM	11490.3	348.8	0.0304	598.9	18.2
2006	3	GOM	35246.8	271.1	0.0077	1835.5	14.1
2006	4	GOM	177169.4	992.2	0.0056	3050.9	17.1
2006	1	MA	41258.2	1454.5	0.0353	3138.0	110.6
2006	2	MA	18235.7	1563.0	0.0857	1662.8	142.5
2006	3	MA	20961.0	55.0	0.0026	666.8	1.7
2006	4	MA	34747.8	776.0	0.0223	2173.8	48.5
2006	1	SNE	59437.3	3969.0	0.0668	1173.6	78.4
2006	2	SNE	9257.0	3059.0	0.3305	1042.1	344.4
2006	3	SNE	3466.3	438.0	0.1264	130.5	16.5
2006	4	SNE	4979.8	7.5	0.0015	539.4	0.8
2007	1	GBK	13029.1	8109.6	0.6224	497.4	309.6
2007	2	GBK	27562.6	902.0	0.0327	1017.4	33.3
2007	3	GBK	471464.1	32418.6	0.0688	2927.8	201.3
2007	4	GBK	327498.6	27336.1	0.0835	1174.2	98.0

Table 4 cont.

2007	1	GOM	95553.5	1742.9	0.0182	976.4	17.8
2007	2	GOM	19165.0	358.5	0.0187	918.0	17.2
2007	3	GOM	54180.0	699.2	0.0129	1723.1	22.2
2007	4	GOM	226349.7	2411.7	0.0107	3896.9	41.5
2007	1	MA	24863.2	629.3	0.0253	5147.9	130.3
2007	2	MA	30796.9	3589.5	0.1166	3028.1	352.9
2007	3	MA	11744.1	154.5	0.0132	1726.3	22.7
2007	4	MA	35426.4	668.2	0.0189	4732.4	89.3
2007	1	SNE	101559.1	12113.1	0.1193	845.4	100.8
2007	2	SNE	25749.0	1942.5	0.0754	1014.5	76.5
2007	3	SNE	3710.3	149.0	0.0402	222.5	8.9
2007	4	SNE	32680.2	13702.3	0.4193	679.9	285.1

Table 5. Discard estimates by stratum for the scallop dredge fishery.

YEAR	QTR	areaf	trp	average within areaf			average across comb region (ie sne-ma)		total discards
				kept	discards	dkratio	mt kept	discards	
1992	1	GBK	GEN	50291.2	14561.0	0.2508	31.6	7.9	
1992	2	GBK	GEN	50291.2	14561.0	0.2508	5.9	1.5	
1992	3	GBK	GEN	50291.2	14561.0	0.2508	7.6	1.9	
1992	4	GBK	GEN	50291.2	14561.0	0.2508	45.2	11.3	
1992	1	GBK	LIM	37455.6	6519.0	0.1740	21901.7	3811.9	
1992	2	GBK	LIM	86300.4	23051.0	0.2671	16714.3	4464.4	
1992	3	GBK	LIM	6944.1	1275.0	0.1836	18107.8	3324.8	
1992	4	GBK	LIM	111608.7	39436.0	0.3533	18596.8	6571.0	
1992	1	GOM	GEN	50291.2	14561.0	0.2508	47.7	12.0	
1992	2	GOM	GEN	50291.2	14561.0	0.2508	24.7	6.2	
1992	3	GOM	GEN	50291.2	14561.0	0.2508	24.1	6.0	
1992	4	GOM	GEN	50291.2	14561.0	0.2508	43.4	10.9	
1992	1	GOM	LIM	50291.2	14561.0	0.2508	2086.3	523.3	
1992	2	GOM	LIM	50291.2	14561.0	0.2508	62.5	15.7	
1992	3	GOM	LIM	50291.2	14561.0	0.2508	187.2	46.9	
1992	4	GOM	LIM	9147.1	2524.0	0.2759	3429.0	946.2	
1992	1	MA	GEN	26547.6	9060.2	0.4585	29.3	13.4	
1992	2	MA	GEN	26547.6	9060.2	0.4585	26.8	12.3	
1992	3	MA	GEN	26547.6	9060.2	0.4585	18.0	8.3	
1992	4	MA	GEN	26547.6	9060.2	0.4585	43.6	20.0	
1992	1	MA	LIM	19225.3	5127.0	0.2667	13260.1	3536.2	
1992	2	MA	LIM	38383.6	4037.0	0.1052	8296.8	872.6	
1992	3	MA	LIM	41502.6	4989.0	0.1202	8151.2	979.9	
1992	4	MA	LIM	42997.7	23748.0	0.5523	9604.1	5304.4	
1992	1	SNE	GEN	26547.6	9060.2	0.4585	14.7	6.7	
1992	4	SNE	GEN	26547.6	9060.2	0.4585	2.4	1.1	
1992	1	SNE	LIM	3488.0	2360.0	0.6766	245.0	165.8	
1992	2	SNE	LIM	26547.6	9060.2	0.4585	117.7	54.0	
1992	3	SNE	LIM	26547.6	9060.2	0.4585	108.5	49.7	
1992	4	SNE	LIM	13688.2	14100.0	1.0301	790.1	813.9	
1993	1	GBK	GEN	69938.1	14547.0	0.2001	20.4	4.1	
1993	2	GBK	GEN	69938.1	14547.0	0.2001	18.8	3.8	
1993	3	GBK	GEN	69938.1	14547.0	0.2001	1.4	0.3	
1993	4	GBK	GEN	69938.1	14547.0	0.2001	2.7	0.5	
1993	1	GBK	LIM	66175.0	15317.0	0.2315	12972.9	3002.7	
1993	2	GBK	LIM	80588.9	7761.0	0.0963	8057.1	775.9	
1993	3	GBK	LIM	43354.5	6788.0	0.1566	8084.3	1265.8	
1993	4	GBK	LIM	89633.9	28322.0	0.3160	9741.0	3077.9	
1993	1	GOM	GEN	69938.1	14547.0	0.2001	68.5	13.7	
1993	2	GOM	GEN	69938.1	14547.0	0.2001	1.9	0.4	
1993	3	GOM	GEN	69938.1	14547.0	0.2001	3.9	0.8	
1993	4	GOM	GEN	69938.1	14547.0	0.2001	50.8	10.2	
1993	1	GOM	LIM	69938.1	14547.0	0.2001	3048.1	609.9	
1993	2	GOM	LIM	69938.1	14547.0	0.2001	505.6	101.2	
1993	3	GOM	LIM	69938.1	14547.0	0.2001	134.0	26.8	
1993	4	GOM	LIM	69938.1	14547.0	0.2001	2725.3	545.3	



Table 5 cont.

1993	1	MA	GEN	38607.5	18893.3	0.7720	17.5	13.5
1993	2	MA	GEN	38607.5	18893.3	0.7720	3.5	2.7
1993	3	MA	GEN	38607.5	18893.3	0.7720	20.7	16.0
1993	4	MA	GEN	38607.5	18893.3	0.7720	53.8	41.5
1993	1	MA	LIM	96891.4	51649.0	0.5331	7909.9	4216.4
1993	2	MA	LIM	71762.1	14807.0	0.2063	4591.2	947.3
1993	3	MA	LIM	23586.3	12465.0	0.5285	4652.4	2458.7
1993	4	MA	LIM	31743.4	24792.0	0.7810	5251.9	4101.8
1993	1	SNE	GEN	38607.5	18893.3	0.7720	9.0	6.9
1993	2	SNE	GEN	38607.5	18893.3	0.7720	22.8	17.6
1993	3	SNE	GEN	38607.5	18893.3	0.7720	5.7	4.4
1993	4	SNE	GEN	38607.5	18893.3	0.7720	2.8	2.1
1993	1	SNE	LIM	3955.1	1147.0	0.2900	346.9	100.6
1993	2	SNE	LIM	38607.5	18893.3	0.7720	78.7	60.7
1993	3	SNE	LIM	38607.5	18893.3	0.7720	68.4	52.8
1993	4	SNE	LIM	3707.0	8500.0	2.2929	254.0	582.4
1994	1	GBK	GEN	37743.1	7367.8	0.2589	4.8	1.3
1994	2	GBK	GEN	37743.1	7367.8	0.2589	1.0	0.3
1994	4	GBK	GEN	37743.1	7367.8	0.2589	1.0	0.3
1994	1	GBK	LIM	6226.1	1147.0	0.1842	3979.7	733.2
1994	2	GBK	LIM	43256.7	7210.0	0.1667	2855.3	475.9
1994	3	GBK	LIM	33287.5	12404.0	0.3726	3220.2	1199.9
1994	4	GBK	LIM	132915.5	20306.0	0.1528	2961.9	452.5
1994	1	GOM	GEN	37743.1	7367.8	0.2589	46.7	12.1
1994	2	GOM	GEN	37743.1	7367.8	0.2589	17.1	4.4
1994	3	GOM	GEN	37743.1	7367.8	0.2589	7.5	2.0
1994	4	GOM	GEN	37743.1	7367.8	0.2589	1117.0	289.2
1994	1	GOM	LIM	4347.1	2530.0	0.5820	1754.9	1021.4
1994	2	GOM	LIM	37743.1	7367.8	0.2589	176.0	45.6
1994	3	GOM	LIM	37743.1	7367.8	0.2589	86.7	22.4
1994	4	GOM	LIM	6426.1	610.0	0.0949	1437.5	136.5
1994	1	MA	GEN	109751.8	19117.9	0.5178	220.0	113.9
1994	2	MA	GEN	109751.8	19117.9	0.5178	586.9	303.9
1994	3	MA	GEN	109751.8	19117.9	0.5178	295.0	152.8
1994	4	MA	GEN	109751.8	19117.9	0.5178	343.9	178.1
1994	1	MA	LIM	291785.5	52137.0	0.1787	13240.8	2365.9
1994	2	MA	LIM	40392.6	5693.0	0.1409	8982.1	1266.0
1994	3	MA	LIM	86889.7	883.1	0.0102	8358.9	85.0
1994	4	MA	LIM	122573.3	22078.5	0.1801	12326.9	2220.4
1994	1	SNE	GEN	109751.8	19117.9	0.5178	7.2	3.7
1994	2	SNE	GEN	109751.8	19117.9	0.5178	50.9	26.3
1994	1	SNE	LIM	109751.8	19117.9	0.5178	195.2	101.1
1994	2	SNE	LIM	109751.8	19117.9	0.5178	24.4	12.6
1994	4	SNE	LIM	7118.0	14798.0	2.0790	295.1	613.5
1995	1	GBK	GEN	35218.7	4671.0	0.1330	1.1	0.1
1995	1	GBK	LIM	6959.1	1098.0	0.1578	868.0	136.9
1995	2	GBK	LIM	35218.7	4671.0	0.1330	425.7	56.6
1995	3	GBK	LIM	44731.1	11497.0	0.2570	4489.5	1153.9
1995	4	GBK	LIM	62540.7	5166.0	0.0826	3713.5	306.7

Table 5 cont.

1995	1	GOM	GEN	35218.7	4671.0	0.1330	737.5	98.1
1995	2	GOM	GEN	35218.7	4671.0	0.1330	18.1	2.4
1995	3	GOM	GEN	35218.7	4671.0	0.1330	5.5	0.7
1995	4	GOM	GEN	35218.7	4671.0	0.1330	553.6	73.6
1995	1	GOM	LIM	35218.7	4671.0	0.1330	367.4	48.9
1995	2	GOM	LIM	35218.7	4671.0	0.1330	411.4	54.7
1995	3	GOM	LIM	35218.7	4671.0	0.1330	547.1	72.8
1995	4	GOM	LIM	26643.9	923.0	0.0346	1140.0	39.5
1995	1	MA	GEN	162275.3	54457.4	0.7607	356.6	271.3
1995	2	MA	GEN	162275.3	54457.4	0.7607	232.9	177.1
1995	3	MA	GEN	162275.3	54457.4	0.7607	118.8	90.4
1995	4	MA	GEN	162275.3	54457.4	0.7607	101.6	77.3
1995	1	MA	LIM	424321.9	83199.8	0.1961	17547.8	3440.7
1995	2	MA	LIM	107649.9	32633.8	0.3031	15124.0	4584.8
1995	3	MA	LIM	78172.3	5807.0	0.0743	6990.4	519.3
1995	4	MA	LIM	38957.1	96189.0	2.4691	7096.1	17521.0
1995	2	SNE	GEN	162275.3	54457.4	0.7607	0.1	0.1
1995	3	SNE	GEN	162275.3	54457.4	0.7607	66.4	50.5
1995	4	SNE	GEN	162275.3	54457.4	0.7607	0.4	0.3
1995	1	SNE	LIM	162275.3	54457.4	0.7607	232.4	176.8
1995	2	SNE	LIM	162275.3	54457.4	0.7607	102.9	78.3
1995	3	SNE	LIM	162275.3	54457.4	0.7607	74.6	56.8
1995	4	SNE	LIM	162275.3	54457.4	0.7607	102.9	78.3
1996	1	GBK	GEN				78.4	0.0
1996	2	GBK	GEN	91775.8	11306.1	0.1461	11.8	1.7
1996	3	GBK	GEN	91775.8	11306.1	0.1461	14.5	2.1
1996	4	GBK	GEN	91775.8	11306.1	0.1461	79.8	11.7
1996	1	GBK	LIM	193963.0	18448.6	0.0951	2333.8	222.0
1996	2	GBK	LIM	73941.0	9214.4	0.1246	2869.5	357.6
1996	3	GBK	LIM	140909.2	13983.1	0.0992	5825.1	578.1
1996	4	GBK	LIM	82763.7	19698.7	0.2380	8059.0	1918.1
1996	1	GOM	GEN	91775.8	11306.1	0.1461	350.1	51.2
1996	2	GOM	GEN	91775.8	11306.1	0.1461	45.3	6.6
1996	3	GOM	GEN	91775.8	11306.1	0.1461	217.7	31.8
1996	4	GOM	GEN	91775.8	11306.1	0.1461	323.5	47.3
1996	1	GOM	LIM	58226.0	6312.0	0.1084	794.6	86.1
1996	2	GOM	LIM	91775.8	11306.1	0.1461	763.3	111.5
1996	3	GOM	LIM	91775.8	11306.1	0.1461	531.9	77.7
1996	4	GOM	LIM	851.7	180.0	0.2113	1711.8	361.8
1996	1	MA	GEN	103404.7	40576.2	0.7423	143.5	106.5
1996	2	MA	GEN	103404.7	40576.2	0.7423	242.2	179.8
1996	3	MA	GEN	103404.7	40576.2	0.7423	85.0	63.1
1996	4	MA	GEN	103404.7	40576.2	0.7423	135.7	100.7
1996	1	MA	LIM	254269.2	51641.0	0.2031	12247.5	2487.4
1996	2	MA	LIM	139290.9	52641.5	0.3779	12782.6	4830.8
1996	3	MA	LIM	133185.7	32433.2	0.2435	8449.0	2057.5
1996	4	MA	LIM	83422.2	93504.9	1.1209	4974.9	5576.1
1996	1	SNE	GEN	103404.7	40576.2	0.7423	24.1	17.9
1996	2	SNE	GEN	103404.7	40576.2	0.7423	9.3	6.9

Table 5 cont.

1996	4	SNE	GEN	103404.7	40576.2	0.7423	5.3	3.9
1996	1	SNE	LIM	103404.7	40576.2	0.7423	111.8	83.0
1996	2	SNE	LIM	103404.7	40576.2	0.7423	34.6	25.7
1996	3	SNE	LIM	1867.1	2236.0	1.1976	184.5	221.0
1996	4	SNE	LIM	8393.0	11000.8	1.3107	398.3	522.0
1997	1	GBK	GEN	71654.1	13615.5	0.1640	62.5	10.2
1997	2	GBK	GEN	71654.1	13615.5	0.1640	2.2	0.4
1997	3	GBK	GEN	71654.1	13615.5	0.1640	2.8	0.5
1997	4	GBK	GEN	71654.1	13615.5	0.1640	33.7	5.5
1997	1	GBK	LIM	118384.4	12318.9	0.1041	6089.8	633.7
1997	2	GBK	LIM	97509.7	13445.1	0.1379	5545.3	764.6
1997	3	GBK	LIM	79412.4	32942.9	0.4148	4835.8	2006.0
1997	4	GBK	LIM	97398.0	18331.6	0.1882	5211.2	980.8
1997	1	GOM	GEN	71654.1	13615.5	0.1640	516.5	84.7
1997	2	GOM	GEN	71654.1	13615.5	0.1640	64.8	10.6
1997	3	GOM	GEN	71654.1	13615.5	0.1640	63.4	10.4
1997	4	GOM	GEN	71654.1	13615.5	0.1640	246.8	40.5
1997	1	GOM	LIM	34113.0	4646.7	0.1362	1698.9	231.4
1997	2	GOM	LIM	71654.1	13615.5	0.1640	417.6	68.5
1997	3	GOM	LIM	71654.1	13615.5	0.1640	709.9	116.4
1997	4	GOM	LIM	3107.0	8.0	0.0026	2049.2	5.3
1997	1	MA	GEN	1017.1	795.0	0.7816	75.3	58.8
1997	2	MA	GEN	280.0	550.0	1.9643	182.7	358.9
1997	3	MA	GEN	63184.8	28637.5	1.1428	135.4	154.8
1997	4	MA	GEN	63184.8	28637.5	1.1428	149.1	170.4
1997	1	MA	LIM	185187.6	96703.0	0.5222	7755.5	4049.9
1997	2	MA	LIM	97013.5	58382.0	0.6018	6919.4	4164.1
1997	3	MA	LIM	59890.5	14226.0	0.2375	4788.9	1137.5
1997	4	MA	LIM	98861.3	29649.3	0.2999	5276.8	1582.5
1997	1	SNE	GEN	63184.8	28637.5	1.1428	11.7	13.3
1997	3	SNE	GEN	63184.8	28637.5	1.1428	36.1	41.3
1997	4	SNE	GEN	63184.8	28637.5	1.1428	33.7	38.5
1997	1	SNE	LIM	63184.8	28637.5	1.1428	118.1	134.9
1997	2	SNE	LIM	43.7	157.0	3.5926	149.9	538.5
1997	3	SNE	LIM	63184.8	28637.5	1.1428	194.9	222.7
1997	4	SNE	LIM	63184.8	28637.5	1.1428	377.2	431.1
1998	1	GBK	GEN	54814.9	16487.8	0.2686	13.6	3.6
1998	2	GBK	GEN	54814.9	16487.8	0.2686	13.8	3.7
1998	3	GBK	GEN	54814.9	16487.8	0.2686	1.2	0.3
1998	4	GBK	GEN	54814.9	16487.8	0.2686	10.6	2.9
1998	1	GBK	LIM	54814.9	16487.8	0.2686	4903.1	1316.9
1998	2	GBK	LIM	46777.6	6201.0	0.1326	4105.2	544.2
1998	3	GBK	LIM	20064.1	7128.0	0.3553	4911.3	1744.8
1998	4	GBK	LIM	124771.5	46771.0	0.3749	5428.4	2034.9
1998	1	GOM	GEN	54814.9	16487.8	0.2686	350.0	94.0
1998	2	GOM	GEN	54814.9	16487.8	0.2686	55.9	15.0
1998	3	GOM	GEN	54814.9	16487.8	0.2686	50.0	13.4
1998	4	GOM	GEN	54814.9	16487.8	0.2686	149.2	40.1
1998	1	GOM	LIM	54814.9	16487.8	0.2686	1255.2	337.1

Table 5 cont.

1998	2	GOM	LIM	54814.9	16487.8	0.2686	228.0	61.2
1998	3	GOM	LIM	54814.9	16487.8	0.2686	57.5	15.5
1998	4	GOM	LIM	27646.3	5851.0	0.2116	1179.8	249.7
1998	1	MA	GEN	27193.7	10898.2	0.4998	149.5	74.7
1998	2	MA	GEN	209.1	240.0	1.1477	127.9	146.8
1998	3	MA	GEN	27193.7	10898.2	0.4998	192.8	96.4
1998	4	MA	GEN	16905.3	13181.0	0.7797	139.6	108.8
1998	1	MA	LIM	24099.0	5711.0	0.2370	7089.8	1680.2
1998	2	MA	LIM	112632.5	41451.5	0.3680	5633.0	2073.1
1998	3	MA	LIM	17567.8	6319.0	0.3597	3980.5	1431.8
1998	4	MA	LIM	18657.1	9355.0	0.5014	5213.8	2614.3
1998	1	SNE	GEN	27193.7	10898.2	0.4998	121.8	60.9
1998	2	SNE	GEN	27193.7	10898.2	0.4998	18.0	9.0
1998	3	SNE	GEN	27193.7	10898.2	0.4998	56.3	28.2
1998	4	SNE	GEN	27193.7	10898.2	0.4998	3.5	1.7
1998	1	SNE	LIM	27193.7	10898.2	0.4998	235.3	117.6
1998	2	SNE	LIM	27193.7	10898.2	0.4998	275.5	137.7
1998	3	SNE	LIM	27193.7	10898.2	0.4998	144.5	72.2
1998	4	SNE	LIM	285.0	30.0	0.1053	181.3	19.1
1999	1	GBK	GEN	369905.3	32992.6	0.0851	86.5	7.4
1999	2	GBK	GEN	369905.3	32992.6	0.0851	216.7	18.4
1999	3	GBK	GEN	369905.3	32992.6	0.0851	208.2	17.7
1999	4	GBK	GEN	369905.3	32992.6	0.0851	27.4	2.3
1999	1	GBK	LIM	369905.3	32992.6	0.0851	5313.5	452.2
1999	2	GBK	LIM	195274.1	13165.0	0.0674	9508.8	641.1
1999	3	GBK	LIM	614597.1	57555.3	0.0936	13175.9	1233.9
1999	4	GBK	LIM	299844.6	28257.5	0.0942	16243.1	1530.8
1999	1	GOM	GEN	369905.3	32992.6	0.0851	244.8	20.8
1999	2	GOM	GEN	369905.3	32992.6	0.0851	37.7	3.2
1999	3	GOM	GEN	369905.3	32992.6	0.0851	689.6	58.7
1999	4	GOM	GEN	369905.3	32992.6	0.0851	470.3	40.0
1999	1	GOM	LIM	369905.3	32992.6	0.0851	723.5	61.6
1999	2	GOM	LIM	369905.3	32992.6	0.0851	32.7	2.8
1999	3	GOM	LIM	369905.3	32992.6	0.0851	13.3	1.1
1999	4	GOM	LIM	369905.3	32992.6	0.0851	848.4	72.2
1999	1	MA	GEN	40167.7	12772.8	0.3235	63.2	20.4
1999	2	MA	GEN	40167.7	12772.8	0.3235	100.5	32.5
1999	3	MA	GEN	7301.1	3450.0	0.4725	65.0	30.7
1999	4	MA	GEN	6453.1	268.0	0.0415	195.3	8.1
1999	1	MA	LIM	40167.7	12772.8	0.3235	11180.6	3617.1
1999	2	MA	LIM	128464.8	27604.0	0.2149	10468.4	2249.4
1999	3	MA	LIM	40581.7	21755.0	0.5361	4921.5	2638.3
1999	4	MA	LIM	36516.6	21910.0	0.6000	3704.5	2222.7
1999	1	SNE	GEN	40167.7	12772.8	0.3235	0.7	0.2
1999	3	SNE	GEN	40167.7	12772.8	0.3235	7.4	2.4
1999	4	SNE	GEN	40167.7	12772.8	0.3235	0.4	0.1
1999	1	SNE	LIM	40167.7	12772.8	0.3235	287.0	92.9
1999	2	SNE	LIM	21688.8	1650.0	0.0761	133.6	10.2
1999	3	SNE	LIM	40167.7	12772.8	0.3235	204.2	66.1

Table 5 cont.

1999	4	SNE	LIM	40167.7	12772.8	0.3235	66.8	21.6
2000	1	GBK	GEN	3457047.2	186667.1	0.0746	92.6	6.9
2000	2	GBK	GEN	3457047.2	186667.1	0.0746	175.4	13.1
2000	3	GBK	GEN	3457047.2	186667.1	0.0746	200.9	15.0
2000	4	GBK	GEN	21015.3	152.0	0.0072	370.3	2.7
2000	1	GBK	LIM	3457047.2	186667.1	0.0746	4192.9	312.7
2000	2	GBK	LIM	1177880.0	218514.9	0.1855	9072.3	1683.0
2000	3	GBK	LIM	4167318.0	354352.8	0.0850	12036.1	1023.4
2000	4	GBK	LIM	8461975.4	173648.5	0.0205	15449.1	317.0
2000	1	GOM	GEN	3457047.2	186667.1	0.0746	126.1	9.4
2000	2	GOM	GEN	3457047.2	186667.1	0.0746	156.0	11.6
2000	3	GOM	GEN	3457047.2	186667.1	0.0746	133.1	9.9
2000	4	GOM	GEN	3457047.2	186667.1	0.0746	37.1	2.8
2000	1	GOM	LIM	3457047.2	186667.1	0.0746	559.5	41.7
2000	2	GOM	LIM	3457047.2	186667.1	0.0746	95.5	7.1
2000	3	GOM	LIM	3457047.2	186667.1	0.0746	17.1	1.3
2000	4	GOM	LIM	3457047.2	186667.1	0.0746	192.9	14.4
2000	1	MA	GEN	6530.1	625.0	0.0957	320.2	30.6
2000	2	MA	GEN	11461.2	3415.0	0.2980	516.4	153.9
2000	3	MA	GEN	117173.4	16514.3	0.1416	282.2	39.9
2000	4	MA	GEN	29437.1	6616.0	0.2248	430.0	96.6
2000	1	MA	LIM	413530.5	65296.3	0.1579	19122.7	3019.5
2000	2	MA	LIM	648.1	0.0	0.0000	19744.1	0.0
2000	3	MA	LIM	170769.5	6511.8	0.0381	12072.2	460.3
2000	4	MA	LIM	187837.4	33136.0	0.1764	15440.1	2723.8
2000	1	SNE	GEN	2001.7	88.7	0.0554	98.7	5.5
2000	4	SNE	GEN	2001.7	88.7	0.0554	0.4	0.0
2000	1	SNE	LIM	2001.7	88.7	0.0554	567.1	31.4
2000	2	SNE	LIM	1381.8	115.0	0.0832		0.0
2000	3	SNE	LIM	1762.5	138.0	0.0783	175.7	13.8
2000	4	SNE	LIM	2860.9	13.0	0.0045	61.6	0.3
2001	1	GBK	GEN	730341.6	17320.0	0.0249	443.5	11.0
2001	2	GBK	GEN	730341.6	17320.0	0.0249	494.3	12.3
2001	3	GBK	GEN	730341.6	17320.0	0.0249	280.5	7.0
2001	4	GBK	GEN	730341.6	17320.0	0.0249	95.3	2.4
2001	1	GBK	LIM	1368169.2	32211.0	0.0235	10806.5	254.4
2001	2	GBK	LIM	92514.0	2429.0	0.0263	7261.0	190.6
2001	3	GBK	LIM	730341.6	17320.0	0.0249	12396.2	308.7
2001	4	GBK	LIM	730341.6	17320.0	0.0249	9160.7	228.1
2001	1	GOM	GEN	730341.6	17320.0	0.0249	216.6	5.4
2001	2	GOM	GEN	730341.6	17320.0	0.0249	1535.0	38.2
2001	3	GOM	GEN	730341.6	17320.0	0.0249	538.2	13.4
2001	4	GOM	GEN	730341.6	17320.0	0.0249	408.6	10.2
2001	1	GOM	LIM	730341.6	17320.0	0.0249	74.0	1.8
2001	2	GOM	LIM	730341.6	17320.0	0.0249	146.9	3.7
2001	3	GOM	LIM	730341.6	17320.0	0.0249	81.9	2.0
2001	4	GOM	LIM	730341.6	17320.0	0.0249	412.4	10.3
2001	1	MA	GEN	1680313.3	67121.0	0.0477	450.6	21.5
2001	2	MA	GEN	1680313.3	67121.0	0.0477	430.1	20.5

Table 5 cont.

2001	3	MA	GEN	1680313.3	67121.0	0.0477	518.2	24.7
2001	4	MA	GEN	1680313.3	67121.0	0.0477	265.9	12.7
2001	1	MA	LIM	207896.6	17123.0	0.0824	27830.9	2292.2
2001	2	MA	LIM	3522211.6	107337.1	0.0305	30088.7	916.9
2001	3	MA	LIM	2152093.3	81877.5	0.0380	21323.6	811.3
2001	4	MA	LIM	2516352.0	129157.5	0.0513	36061.8	1851.0
2001	1	SNE	GEN	1680313.3	67121.0	0.0477	0.2	0.0
2001	2	SNE	GEN	1680313.3	67121.0	0.0477	2.6	0.1
2001	3	SNE	GEN	1680313.3	67121.0	0.0477	0.0	0.0
2001	4	SNE	GEN	1680313.3	67121.0	0.0477	8.3	0.4
2001	1	SNE	LIM	3013.0	110.0	0.0365	131.4	4.8
2001	2	SNE	LIM	1680313.3	67121.0	0.0477	84.2	4.0
2001	3	SNE	LIM	1680313.3	67121.0	0.0477	10.5	0.5
2001	4	SNE	LIM	1680313.3	67121.0	0.0477	7.3	0.3
2002	1	GBK	GEN	318272.9	16620.7	0.0620	129.0	8.0
2002	2	GBK	GEN	318272.9	16620.7	0.0620	155.5	9.6
2002	3	GBK	GEN	318272.9	16620.7	0.0620	223.7	13.9
2002	4	GBK	GEN	318272.9	16620.7	0.0620	112.0	6.9
2002	1	GBK	LIM	318272.9	16620.7	0.0620	5761.6	356.9
2002	2	GBK	LIM	318272.9	16620.7	0.0620	9314.7	577.1
2002	3	GBK	LIM	368114.9	28007.5	0.0761	18366.3	1397.4
2002	4	GBK	LIM	581835.7	21500.1	0.0370	15534.0	574.0
2002	1	GOM	GEN	318272.9	16620.7	0.0620	756.8	46.9
2002	2	GOM	GEN	318272.9	16620.7	0.0620	406.6	25.2
2002	3	GOM	GEN	318272.9	16620.7	0.0620	251.4	15.6
2002	4	GOM	GEN	4868.1	354.5	0.0728	147.3	10.7
2002	1	GOM	LIM	318272.9	16620.7	0.0620	1144.7	70.9
2002	2	GOM	LIM	318272.9	16620.7	0.0620	11.7	0.7
2002	3	GOM	LIM	318272.9	16620.7	0.0620	108.6	6.7
2002	4	GOM	LIM	318272.9	16620.7	0.0620	82.3	5.1
2002	1	MA	GEN	1479173.1	122872.0	0.1024	420.7	43.1
2002	2	MA	GEN	1479173.1	122872.0	0.1024	818.0	83.7
2002	3	MA	GEN	1479173.1	122872.0	0.1024	762.8	78.1
2002	4	MA	GEN	9769.2	1792.0	0.1834	1715.0	314.6
2002	1	MA	LIM	1622662.7	122137.0	0.0753	39750.2	2992.0
2002	2	MA	LIM	1654031.2	100861.0	0.0610	33889.7	2066.6
2002	3	MA	LIM	1691190.7	174917.1	0.1034	23042.3	2383.2
2002	4	MA	LIM	2418211.5	214653.0	0.0888	32696.2	2902.3
2002	1	SNE	GEN	1479173.1	122872.0	0.1024	1.0	0.1
2002	2	SNE	GEN	1479173.1	122872.0	0.1024	4.1	0.4
2002	3	SNE	GEN	1479173.1	122872.0	0.1024	2.2	0.2
2002	4	SNE	GEN	1479173.1	122872.0	0.1024	1.7	0.2
2002	1	SNE	LIM	1479173.1	122872.0	0.1024	35.7	3.7
2002	3	SNE	LIM	1479173.1	122872.0	0.1024	106.1	10.9
2002	4	SNE	LIM	1479173.1	122872.0	0.1024	11.5	1.2
2003	1	GBK	GEN	183288.2	13948.4	0.0888	188.7	16.8
2003	2	GBK	GEN	183288.2	13948.4	0.0888	392.9	34.9
2003	3	GBK	GEN	183288.2	13948.4	0.0888	663.4	58.9
2003	4	GBK	GEN	19728.3	2844.0	0.1442	431.6	62.2



Table 5 cont.

2003	1	GBK	LIM	249438.1	4599.0	0.0184	8836.7	162.9
2003	2	GBK	LIM	159227.5	24910.0	0.1564	9834.4	1538.5
2003	3	GBK	LIM	98491.0	9761.3	0.0991	13445.5	1332.6
2003	4	GBK	LIM	572128.5	41546.2	0.0726	6749.3	490.1
2003	1	GOM	GEN	716.0	30.0	0.0419	665.4	27.9
2003	2	GOM	GEN	183288.2	13948.4	0.0888	309.2	27.4
2003	3	GOM	GEN	183288.2	13948.4	0.0888	164.8	14.6
2003	4	GOM	GEN	183288.2	13948.4	0.0888	131.2	11.6
2003	1	GOM	LIM	183288.2	13948.4	0.0888	100.7	8.9
2003	2	GOM	LIM	183288.2	13948.4	0.0888	206.3	18.3
2003	3	GOM	LIM	183288.2	13948.4	0.0888	8.7	0.8
2003	4	GOM	LIM	183288.2	13948.4	0.0888	43.3	3.8
2003	1	MA	GEN	13839.7	681.0	0.0492	2210.3	108.8
2003	2	MA	GEN	2864.0	475.0	0.1658	1038.3	172.2
2003	3	MA	GEN	16803.3	6195.0	0.3687	1609.2	593.3
2003	4	MA	GEN	28628.5	315.0	0.0110	2055.3	22.6
2003	1	MA	LIM	1738457.1	169608.8	0.0976	33207.8	3239.8
2003	2	MA	LIM	1809350.1	112134.5	0.0620	41415.9	2566.8
2003	3	MA	LIM	1912523.4	125992.5	0.0659	29962.6	1973.9
2003	4	MA	LIM	3431011.6	254800.5	0.0743	46569.2	3458.4
2003	1	SNE	GEN	914442.6	67316.9	0.1299	8.1	1.1
2003	2	SNE	GEN	914442.6	67316.9	0.1299	1.5	0.2
2003	3	SNE	GEN	914442.6	67316.9	0.1299	3.6	0.5
2003	4	SNE	GEN	914442.6	67316.9	0.1299	21.5	2.8
2003	1	SNE	LIM	187199.1	1481.0	0.0079	265.3	2.1
2003	2	SNE	LIM	914442.6	67316.9	0.1299	35.8	4.6
2003	4	SNE	LIM	3749.0	1486.0	0.3964	142.7	56.6
2004	1	GBK	GEN	903834.1	41687.0	0.0599	347.4	20.8
2004	2	GBK	GEN	903834.1	41687.0	0.0599	478.6	28.7
2004	3	GBK	GEN	903834.1	41687.0	0.0599	219.3	13.1
2004	4	GBK	GEN	34306.1	2300.2	0.0670	574.1	38.5
2004	1	GBK	LIM	145522.9	6479.0	0.0445	4375.4	194.8
2004	2	GBK	LIM	903834.1	41687.0	0.0599	736.0	44.1
2004	3	GBK	LIM	903834.1	41687.0	0.0599	2782.7	166.7
2004	4	GBK	LIM	4320027.3	197057.4	0.0456	18164.4	828.6
2004	1	GOM	GEN	696.0	2.0	0.0029	126.6	0.4
2004	2	GOM	GEN	903834.1	41687.0	0.0599	69.2	4.1
2004	3	GOM	GEN	903834.1	41687.0	0.0599	44.8	2.7
2004	4	GOM	GEN	18618.0	2596.5	0.1395	62.4	8.7
2004	1	GOM	LIM	903834.1	41687.0	0.0599	13.6	0.8
2004	2	GOM	LIM	903834.1	41687.0	0.0599	4.8	0.3
2004	3	GOM	LIM	903834.1	41687.0	0.0599	7.6	0.5
2004	4	GOM	LIM	903834.1	41687.0	0.0599	17.9	1.1
2004	1	MA	GEN	1850198.5	88558.9	0.1417	2108.4	298.7
2004	2	MA	GEN	11665.2	1152.0	0.0988	1469.8	145.1
2004	3	MA	GEN	51917.9	6628.5	0.1277	1746.8	223.0
2004	4	MA	GEN	75295.0	7013.5	0.0931	2082.7	194.0
2004	1	MA	LIM	3512382.0	218198.2	0.0621	52059.4	3234.1
2004	2	MA	LIM	4242871.1	152827.9	0.0360	40819.4	1470.3

Table 5 cont

2004	3	MA	LIM	3747024.5	140658.8	0.0375	28934.5	1086.2
2004	4	MA	LIM	5005748.4	270046.3	0.0539	27941.7	1507.4
2004	1	SNE	GEN	1850198.5	88558.9	0.1417	121.9	17.3
2004	2	SNE	GEN	1850198.5	88558.9	0.1417	18.2	2.6
2004	3	SNE	GEN	1850198.5	88558.9	0.1417	179.7	25.5
2004	4	SNE	GEN	4403.1	155.0	0.0352	162.2	5.7
2004	1	SNE	LIM	1850198.5	88558.9	0.1417	59.7	8.5
2004	2	SNE	LIM	1850198.5	88558.9	0.1417	8.7	1.2
2004	3	SNE	LIM	1850198.5	88558.9	0.1417	235.7	33.4
2004	4	SNE	LIM	479.0	350.0	0.7307	33.0	24.1
2005	1	GBK	GEN	41555.5	907.1	0.0218	156.3	3.4
2005	2	GBK	GEN	21770.8	260.5	0.0120	761.2	9.1
2005	3	GBK	GEN	33530.6	1006.0	0.0300	1251.3	37.5
2005	4	GBK	GEN	6791.4	148.0	0.0218	1262.2	27.5
2005	1	GBK	LIM	1555423.6	45189.8	0.0291	11253.2	326.9
2005	2	GBK	LIM	506638.5	28918.0	0.0571	4017.4	229.3
2005	3	GBK	LIM	3279688.8	158732.0	0.0484	25084.8	1214.1
2005	4	GBK	LIM	4234053.2	177304.3	0.0419	21842.3	914.7
2005	1	GOM	GEN	11563.2	586.9	0.0508	261.5	13.3
2005	2	GOM	GEN	11563.2	586.9	0.0508	128.6	6.5
2005	3	GOM	GEN	11563.2	586.9	0.0508	162.7	8.3
2005	4	GOM	GEN	11563.2	586.9	0.0508	165.1	8.4
2005	1	GOM	LIM	11563.2	586.9	0.0508	86.0	4.4
2005	2	GOM	LIM	11563.2	586.9	0.0508	16.2	0.8
2005	3	GOM	LIM	11563.2	586.9	0.0508	8.7	0.4
2005	4	GOM	LIM	11563.2	586.9	0.0508	18.7	1.0
2005	1	MA	GEN	61095.5	13888.0	0.2273	2243.3	509.9
2005	2	MA	GEN	49746.3	3487.0	0.0701	1595.9	111.9
2005	3	MA	GEN	105742.2	7938.0	0.0751	2087.8	156.7
2005	4	MA	GEN	198930.7	30837.0	0.1550	2610.5	404.7
2005	1	MA	LIM	2664400.4	179014.5	0.0672	32820.5	2205.1
2005	2	MA	LIM	1606428.9	97359.5	0.0606	37930.8	2298.8
2005	3	MA	LIM	1041484.0	92504.5	0.0888	10527.7	935.1
2005	4	MA	LIM	911974.9	58671.5	0.0643	10021.0	644.7
2005	1	SNE	GEN	5845.1	1536.0	0.2628	225.5	59.3
2005	2	SNE	GEN	3141.7	920.7	0.3310	321.8	106.5
2005	3	SNE	GEN	3141.7	920.7	0.3310	292.9	97.0
2005	4	SNE	GEN	3076.1	1026.0	0.3335	251.7	84.0
2005	1	SNE	LIM	3141.7	920.7	0.3310	200.2	66.3
2005	2	SNE	LIM	3141.7	920.7	0.3310	499.1	165.2
2005	3	SNE	LIM	504.0	200.0	0.3968	73.0	29.0
2005	4	SNE	LIM	3141.7	920.7	0.3310	204.2	67.6
2006	1	GBK	GEN	1512131.0	50721.1	0.0430	830.6	35.8
2006	2	GBK	GEN	26456.1	274.4	0.0104	1566.4	16.2
2006	3	GBK	GEN	26567.8	2245.6	0.0845	1082.4	91.5
2006	4	GBK	GEN	45981.8	2645.6	0.0575	1305.6	75.1
2006	1	GBK	LIM	1052972.5	43136.0	0.0410	11703.4	479.4
2006	2	GBK	LIM	1776873.6	29162.4	0.0164	31707.2	520.4
2006	3	GBK	LIM	4908723.7	59263.8	0.0121	44152.5	533.1



Table 5 cont.

2006	4	GBK	LIM	2747341.3	218319.9	0.0795	21441.8	1703.9
2006	1	GOM	GEN	1512131.0	50721.1	0.0430	228.7	9.8
2006	2	GOM	GEN	1512131.0	50721.1	0.0430	314.2	13.5
2006	3	GOM	GEN	1512131.0	50721.1	0.0430	64.3	2.8
2006	4	GOM	GEN	1512131.0	50721.1	0.0430	36.7	1.6
2006	1	GOM	LIM	1512131.0	50721.1	0.0430	107.0	4.6
2006	2	GOM	LIM	1512131.0	50721.1	0.0430	128.6	5.5
2006	3	GOM	LIM	1512131.0	50721.1	0.0430	1.7	0.1
2006	4	GOM	LIM	1512131.0	50721.1	0.0430	11.4	0.5
2006	1	MA	GEN	19798.3	1046.5	0.0529	3376.0	178.5
2006	2	MA	GEN	262927.9	39213.7	0.1556	2295.4	357.3
2006	3	MA	GEN	11021.8	2654.0	0.2408	1999.7	481.5
2006	4	MA	GEN	167288.2	61724.6	0.3690	2107.8	777.7
2006	1	MA	LIM	201969.6	19943.0	0.0987	24214.1	2391.0
2006	2	MA	LIM	262927.9	39213.7	0.1556	9894.9	1540.1
2006	3	MA	LIM	66415.1	2655.0	0.0400	1594.3	63.7
2006	4	MA	LIM	1111074.6	147259.0	0.1325	7411.1	982.2
2006	1	SNE	GEN	4205.3	620.7	0.1641	321.2	52.7
2006	2	SNE	GEN	4205.3	620.7	0.1641	613.7	100.7
2006	3	SNE	GEN	5919.8	897.0	0.1515	697.4	105.7
2006	4	SNE	GEN	2826.0	959.0	0.3393	81.8	27.8
2006	1	SNE	LIM	4205.3	620.7	0.1641	200.0	32.8
2006	2	SNE	LIM	4205.3	620.7	0.1641	138.3	22.7
2006	3	SNE	LIM	4205.3	620.7	0.1641	285.5	46.9
2006	4	SNE	LIM	4205.3	620.7	0.1641	132.6	21.8
2007	1	GBK	GEN	3870.1	6.0	0.0016	532.5	0.8
2007	2	GBK	GEN	358236.7	4589.8	0.0128	1451.1	18.6
2007	3	GBK	GEN	288991.1	7412.7	0.0257	1733.7	44.5
2007	4	GBK	GEN	1247.0	384.0	0.3079	757.2	233.2
2007	1	GBK	LIM	593878.9	41340.9	0.0696	6329.5	440.6
2007	2	GBK	LIM	2849421.4	46885.3	0.0165	23308.7	383.5
2007	3	GBK	LIM	3884526.0	140290.9	0.0361	27790.1	1003.6
2007	4	GBK	LIM	2561393.5	380441.5	0.1485	14195.1	2108.4
2007	1	GOM	GEN	2047.0	161.8	0.0764	233.1	17.8
2007	2	GOM	GEN	1866.0	87.0	0.0466	118.9	5.5
2007	3	GOM	GEN	2047.0	161.8	0.0764	67.9	5.2
2007	4	GOM	GEN	2228.0	236.5	0.1061	97.4	10.3
2007	1	GOM	LIM	2047.0	161.8	0.0764	49.1	3.7
2007	2	GOM	LIM	2047.0	161.8	0.0764	8.3	0.6
2007	3	GOM	LIM	2047.0	161.8	0.0764	110.6	8.4
2007	4	GOM	LIM	2047.0	161.8	0.0764	56.2	4.3
2007	1	MA	GEN	70251.7	10615.7	0.1511	4568.1	690.3
2007	2	MA	GEN	29147.2	1961.5	0.0673	3812.6	256.6
2007	3	MA	GEN	78997.6	5916.0	0.0749	3056.1	228.9
2007	4	MA	GEN	85023.5	9005.0	0.1059	3266.0	345.9
2007	1	MA	LIM	2004191.4	123968.2	0.0619	42576.1	2633.5
2007	2	MA	LIM	2129420.5	79156.8	0.0372	31869.6	1184.7
2007	3	MA	LIM	1126763.4	68026.4	0.0604	13663.4	824.9
2007	4	MA	LIM	2908179.8	194294.7	0.0668	24775.2	1655.2

Table 5 cont.

2007	1	SNE	GEN	2468.6	518.0	0.8185	68.3	55.9
2007	2	SNE	GEN	1926.0	240.0	0.1246	299.0	37.3
2007	3	SNE	GEN	2468.6	518.0	0.8185	361.5	295.9
2007	4	SNE	GEN	7787.3	1657.0	0.2128	395.9	84.2
2007	1	SNE	LIM	126.0	100.0	0.7936	19.2	15.3
2007	2	SNE	LIM	2468.6	518.0	0.8185	440.7	360.7
2007	3	SNE	LIM	2468.6	518.0	0.8185	225.0	184.1
2007	4	SNE	LIM	35.0	75.0	2.1428	252.8	541.7