Model scenario	objective function value	max gradient	OFL (1000's t)	Fofl	projected MMB (1000's t)
B0	2,905.84	0.00009	25.42	0.75	43.32
B0q	2,966.31	0.00053	37.03	0.75	64.30
B0-Fr	905.96	0.00019	32.65	9.43	19.60
B0-McI	3,834.97	0.00001	28.65	0.80	46.04
B0a	2,979.45	0.00290	25.08	0.72	43.94
B0b	2,514.74	0.08414	27.11	0.74	47.35
B0c	2,526.45	0.00041	26.84	0.74	47.03
B1	2,887.31	0.00011	35.18	0.91	52.08
B1b	2,462.07	0.00010	30.14	0.76	51.71
B1c	2,471.08	0.00081	30.37	0.76	51.98
C0	3,690.43	0.00062	48.77	1.79	46.37
C0a	3,712.09	0.00078	50.51	1.82	47.48
C0b	3,313.87	0.00111	48.74	1.77	47.67
C0c	3,357.47	0.00171	37.88	1.35	43.54
C1	3,660.46	0.00059	54.78	1.82	51.44
C1b	3,253.82	0.00022	57.61	1.90	54.17
C1c	3,301.45	58.02755	43.06	1.41	48.00
D0	5,412.73	0.00221	47.53	1.92	41.09
D0a	5,430.87	0.00163	47.74	1.92	41.36
D0b	5,072.15	0.00082	43.35	1.86	38.96
D0c	5,257.62	44.34706	33.23	1.40	35.15
D1	5,381.85	15.57300	49.16	1.88	43.00
D1b	5,018.05	0.00020	47.79	1.92	42.16
D1c	5,174.30	0.00210	39.47	1.57	38.77
E0	6,353.98	144.46094	40.27	1.57	36.10
E0a	6,372.73	0.00150	40.76	1.59	36.36
E0b	5,984.60	0.00195	40.49	1.57	36.40
E0c	6,260.70	0.09729	27.84	1.22	30.30
E1	6,317.20	0.00104	43.73	1.60	38.63
E1b	5,971.60	0.00326	38.70	1.59	35.34
E1c	6,174.64	0.00067	30.97	1.31	31.92
F0	9,901.13	0.00174	43.86	2.18	33.18
F0a	9,922.74	0.00250	43.88	2.18	33.22
F0c	9,952.32	0.00850	33.33	1.74	29.29
G0	10,417.65	0.00185	44.17	2.09	33.34
G0a	10,109.68	0.00176	47.87	2.15	32.43

G0b	9,737.90	0.00411	48.80	2.36	33.21
G0bd	9,828.30	0.00041	42.83	2.27	28.10
G0bde	9,428.14	0.00263	44.96	2.34	29.56
G0bde-Fr	5,161.97	0.00054	13.66	0.46	25.27
G0bde-McI	9,538.26	0.00020	52.66	2.70	32.09

current MMB (1000's t)	Fmsy	Bmsy (1000's t)	MSY (1000's t)	B100 (1000's t)	average recruitment (millions)
80.58	0.75	29.17	12.26	83.34	213.96
117.29	0.75	38.00	14.85	108.58	279.95
58.52	14.77	29.04	10.25	82.98	600.22
88.19	0.80	30.90	13.49	88.27	238.52
80.68	0.72	29.21	12.08	83.47	197.68
86.89	0.74	30.35	12.27	86.72	215.00
86.17	0.74	30.26	12.21	86.47	212.60
102.99	0.91	33.53	14.61	95.81	278.80
95.58	0.76	32.09	13.01	91.70	230.75
96.20	0.76	32.17	13.08	91.92	233.37
115.02	1.79	35.53	17.60	101.51	381.10
118.51	1.82	36.21	17.99	103.45	391.81
116.05	1.77	35.28	16.74	100.81	361.71
97.38	1.35	31.38	14.44	89.66	278.36
128.33	1.82	38.30	18.97	109.43	409.56
134.59	1.90	39.02	18.51	111.50	407.81
109.05	1.41	33.66	15.56	96.17	309.30
110.56	1.92	34.83	19.76	99.52	389.97
111.14	1.92	34.89	19.78	99.68	388.70
102.35	1.86	32.27	17.65	92.20	347.84
84.37	1.40	27.93	14.77	79.79	239.37
114.76	1.88	35.75	20.16	102.15	389.17
111.85	1.92	34.45	18.86	98.43	373.59
96.97	1.57	30.82	16.62	88.05	301.25
97.97	1.57	29.02	18.14	82.93	343.12
98.94	1.59	29.22	18.28	83.48	345.91
98.56	1.57	28.87	17.83	82.49	337.59
73.43	1.22	23.26	13.43	66.45	213.75
105.70	1.60	30.75	19.30	87.86	365.75
94.61	1.59	27.92	16.89	79.79	317.74
79.88	1.31	24.59	14.50	70.26	251.55
98.91	2.18	29.03	18.30	82.94	355.25
98.99	2.18	29.02	18.30	82.93	354.53
79.73	1.74	24.31	14.45	69.46	236.43
99.04	2.09	29.04	18.32	82.96	357.01
107.16	2.15	31.59	23.41	90.27	587.81

108.45	2.36	32.04	22.80	91.55	520.12
96.43	2.29	28.30	21.77	80.85	472.61
100.90	2.35	29.71	22.52	84.90	503.73
50.53	0.46	16.83	10.26	48.08	867.05
114.29	2.70	32.05	24.12	91.58	573.22

Model scenario	objective function value	max gradient	average recruitment (millions)	B100 (1000's t)	Bmsy (1000's t)	current MMB (1000's t)
B0	2,905.84	0.00009	213.96	83.34	29.17	80.58
B0q	2,966.31	0.00053	279.95	108.58	38.00	117.29
B0-Fr	905.96	0.00019	600.22	82.98	29.04	58.52
B0-McI	3,834.97	0.00001	238.52	88.27	30.90	88.19
B0a	2,979.45	0.00290	197.68	83.47	29.21	80.68
B0b	2,514.74	0.08414	215.00	86.72	30.35	86.89
B0c	2,526.45	0.00041	212.60	86.47	30.26	86.17
B1	2,887.31	0.00011	278.80	95.81	33.53	102.99
B1b	2,462.07	0.00010	230.75	91.70	32.09	95.58
B1c	2,471.08	0.00081	233.37	91.92	32.17	96.20
C0	3,690.43	0.00062	381.10	101.51	35.53	115.02
C0a	3,712.09	0.00078	391.81	103.45	36.21	118.51
C0b	3,313.87	0.00111	361.71	100.81	35.28	116.05
C0c	3,357.47	0.00171	278.36	89.66	31.38	97.38
C1	3,660.46	0.00059	409.56	109.43	38.30	128.33
C1b	3,253.82	0.00022	407.81	111.50	39.02	134.59
C1c	3,301.45	58.02755	309.30	96.17	33.66	109.05
D0	5,412.73	0.00221	389.97	99.52	34.83	110.56
D0a	5,430.87	0.00163	388.70	99.68	34.89	111.14
D0b	5,072.15	0.00082	347.84	92.20	32.27	102.35
D0c	5,257.62	44.34706	239.37	79.79	27.93	84.37
D1	5,381.85	15.57300	389.17	102.15	35.75	114.76
D1b	5,018.05	0.00020	373.59	98.43	34.45	111.85
D1c	5,174.30	0.00210	301.25	88.05	30.82	96.97
E0	6,353.98	144.46094	343.12	82.93	29.02	97.97
E0a	6,372.73	0.00150	345.91	83.48	29.22	98.94
E0b	5,984.60	0.00195	337.59	82.49	28.87	98.56
E0c	6,260.70	0.09729	213.75	66.45	23.26	73.43
E1	6,317.20	0.00104	365.75	87.86	30.75	105.70
E1b	5,971.60	0.00326	317.74	79.79	27.92	94.61
E1c	6,174.64	0.00067	251.55	70.26	24.59	79.88
F0	9,901.13	0.00174	355.25	82.94	29.03	98.91
F0a	9,922.74	0.00250	354.53	82.93	29.02	98.99
F0c	9,952.32	0.00850	236.43	69.46	24.31	79.73
G0	10,417.65	0.00185	357.01	82.96	29.04	99.04
G0a	10,109.68	0.00176	587.81	90.27	31.59	107.16

G0b	9,737.90	0.00411	520.12	91.55	32.04	108.45
G0bd	9,828.30	0.00041	472.61	80.85	28.30	96.43
G0bde	9,428.14	0.00263	503.73	84.90	29.71	100.90
G0bde-Fr	5,161.97	0.00054	867.05	48.08	16.83	50.53
G0bde-McI	9,538.26	0.00020	573.22	91.58	32.05	114.29

Fofl	Fmsy	OFL (1000's t)	MSY (1000's t)	projected MMB (1000's t)
0.75	0.75	25.42	12.26	43.32
0.75	0.75	37.03	14.85	64.30
9.43	14.77	32.65	10.25	19.60
0.80	0.80	28.65	13.49	46.04
0.72	0.72	25.08	12.08	43.94
0.74	0.74	27.11	12.27	47.35
0.74	0.74	26.84	12.21	47.03
0.91	0.91	35.18	14.61	52.08
0.76	0.76	30.14	13.01	51.71
0.76	0.76	30.37	13.08	51.98
1.79	1.79	48.77	17.60	46.37
1.82	1.82	50.51	17.99	47.48
1.77	1.77	48.74	16.74	47.67
1.35	1.35	37.88	14.44	43.54
1.82	1.82	54.78	18.97	51.44
1.90	1.90	57.61	18.51	54.17
1.41	1.41	43.06	15.56	48.00
1.92	1.92	47.53	19.76	41.09
1.92	1.92	47.74	19.78	41.36
1.86	1.86	43.35	17.65	38.96
1.40	1.40	33.23	14.77	35.15
1.88	1.88	49.16	20.16	43.00
1.92	1.92	47.79	18.86	42.16
1.57	1.57	39.47	16.62	38.77
1.57	1.57	40.27	18.14	36.10
1.59	1.59	40.76	18.28	36.36
1.57	1.57	40.49	17.83	36.40
1.22	1.22	27.84	13.43	30.30
1.60	1.60	43.73	19.30	38.63
1.59	1.59	38.70	16.89	35.34
1.31	1.31	30.97	14.50	31.92
2.18	2.18	43.86	18.30	33.18
2.18	2.18	43.88	18.30	33.22
1.74	1.74	33.33	14.45	29.29
2.09	2.09	44.17	18.32	33.34
2.15	2.15	47.87	23.41	32.43

2.36	2.36	48.80	22.80	33.21
2.27	2.29	42.83	21.77	28.10
2.34	2.35	44.96	22.52	29.56
0.46	0.46	13.66	10.26	25.27
2.70	2.70	52.66	24.12	32.09