THE 2011 PACIFIC WHITING OFL, DEPLETION RATE, AND REVISED DECISION TABLES AS RECOMMENDED BY THE SCIENTIFIC AND STATISTICAL COMMITTEE

At the request of the Scientific and Statistical Committee (SSC) the posterior distributions for management-related quantities from the SS and TINSS models were combined with equal weight in order to provide model-averaged estimates. These quantities, as well as the revised decision tables below also include small corrections made to the TINSS model subsequent to the assessment document provided in the briefing book.

Post-SSC Supplement 1 Management Quantities

	12.5^{th} percentile	Median	87.5^{th} percentile
2011 Depletion	69%	126%	231%
2011 OFL (mt)	530,115	973,727	1,726,125

Post-SSC Supplement 2. Decision table with three year projections of posterior distributions for Pacific hake female **spawning biomass** (millions mt, at the beginning of the year before fishing takes place). Catch alternatives are based on: 1) arbitrary constant catch levels of 50,000, 100,000, 150,000, 300,000, 400,000 and 500,000 mt (rows a-c, and e-g), 2) the status quo OY from 2010 (row d), and 3) the OY implied by the estimated F_{MSY} from the TINSS model (row h), and the values estimated via the 40:10 harvest control rule and the F40% overfishing limit/target for the base case SS (row i) and TINSS models (row j).

			States of nature					
	Model		SS			TINSS		
Within model probability			25%	50%	25%	25%	50%	25%
	Description		Low 2008 cohort	Modal density	High 2008 cohort	Low 2008 cohort	Modal density	High 2008 cohort
Management Action								
	Year	Catch (mt)						
	2011	50,000	1.053	1.873	3.232	1.358	2.174	3.534
a	2012	50,000	1.238	2.180	3.801	1.605	2.711	4.427
	2013	50,000	1.309	2.308	3.912	1.629	2.732	4.449
	2011	100,000	1.053	1.873	3.232	1.358	2.174	3.534
b	2012	100,000	1.215	2.157	3.777	1.581	2.686	4.403
	2013	100,000	1.262	2.261	3.866	1.584	2.685	4.403
	2011	150,000	1.053	1.873	3.232	1.358	2.174	3.534
c	2012	150,000	1.191	2.133	3.754	1.557	2.662	4.379
	2013	150,000	1.215	2.215	3.821	1.538	2.643	4.356
	2011	262,500	1.053	1.873	3.232	1.358	2.174	3.534
d	2012	262,500	1.138	2.081	3.701	1.503	2.608	4.325
	2013	262,500	1.110	2.110	3.718	1.439	2.539	4.252
	2011	300,000	1.053	1.873	3.232	1.358	2.174	3.534
e	2012	300,000	1.120	2.063	3.683	1.485	2.589	4.306
	2013	300,000	1.075	2.075	3.684	1.404	2.504	4.217
	2011	400,000	1.053	1.873	3.232	1.358	2.174	3.534
f	2012	400,000	1.073	2.016	3.636	1.437	2.541	4.258
	2013	400,000	0.982	1.982	3.593	1.313	2.409	4.124
	2011	500,000	1.053	1.873	3.232	1.358	2.174	3.534
g	2012	500,000	1.025	1.969	3.589	1.388	2.494	4.209
	2013	500,000	0.889	1.890	3.500	1.221	2.314	4.034
	2011	704,600	1.053	1.873	3.232	1.358	2.174	3.534
h	2012	781,000	0.928	1.879	3.493	1.292	2.398	4.107
	2013	784,200	0.662	1.671	3.280	0.998	2.083	3.820
	2011	840,000	1.053	1.873	3.232	1.355	2.174	3.534
i	2012	886,000	0.864	1.809	3.429	1.225	2.335	4.040
	2013	782,000	0.558	1.559	3.166	0.890	1.971	3.712
	2011	1,120,000	1.053	1.873	3.232	1.358	2.174	3.534
j	2012	1,107,000	0.734	1.683	3.297	1.080	2.201	3.900
	2013	1,007,000	0.369	1.333	2.943	0.450	1.742	3.485

Post-SSC Supplement 3. Decision table with three year projections of posterior distributions for Pacific hake relative **depletion** (at the beginning of the year before fishing takes place). Catch alternatives are based on: 1) arbitrary constant catch levels of 50,000, 100,000, 150,000, 300,000, 400,000 and 500,000 mt (rows a-c, and e-g), 2) the status quo OY from 2010 (row d), and 3) the OY implied by the estimated F_{MSY} from the TINSS model (row h), and the values estimated via the 40:10 harvest control rule and the F40% overfishing limit/target for the base case SS (row i) and TINSS models (row j).

			States of nature					
		Model	SS			TINSS		
Within model probability			25%	50%	25%	25%	50%	25%
		Description	Low 2008 cohort	Modal density	High 2008 cohort	Low 2008 cohort	Modal density	High 2008 cohort
Management Action								
	Year	Catch (mt)						
	2011	50,000	0.549	0.909	1.493	1.144	1.749	2.704
a	2012	50,000	0.649	1.066	1.740	1.412	2.155	3.327
	2013	50,000	0.693	1.116	1.782	1.437	2.213	3.292
	2011	100,000	0.549	0.909	1.493	1.144	1.749	2.704
b	2012	100,000	0.633	1.055	1.729	1.389	2.142	3.307
	2013	100,000	0.669	1.095	1.760	1.397	2.173	3.252
	2011	150,000	0.549	0.909	1.493	1.144	1.749	2.704
c	2012	150,000	0.618	1.042	1.719	1.367	2.125	3.289
	2013	150,000	0.645	1.074	1.740	1.360	2.134	3.217
	2011	262,500	0.549	0.909	1.493	1.144	1.749	2.704
d	2012	262,500	0.589	1.014	1.698	1.320	2.087	3.260
	2013	262,500	0.591	1.023	1.693	1.269	2.049	3.138
	2011	300,000	0.549	0.909	1.493	1.144	1.749	2.704
e	2012	300,000	0.580	1.006	1.691	1.302	2.071	3.251
	2013	300,000	0.572	1.007	1.680	1.235	2.018	3.106
	2011	400,000	0.549	0.909	1.493	1.144	1.749	2.704
f	2012	400,000	0.556	0.984	1.670	1.264	2.022	3.214
	2013	400,000	0.519	0.963	1.642	1.147	1.939	3.019
	2011	500,000	0.549	0.909	1.493	1.144	1.749	2.704
g	2012	500,000	0.533	0.961	1.648	1.221	1.979	3.175
	2013	500,000	0.474	0.918	1.602	1.058	1.864	2.950
	2011	704,600	0.549	0.909	1.493	1.144	1.749	2.704
h	2012	781,000	0.484	0.913	1.604	1.145	1.900	3.114
	2013	784,200	0.357	0.809	1.496	0.852	1.677	2.763
	2011	840,000	0.549	0.909	1.493	1.140	1.749	2.704
i	2012	886,000	0.451	0.878	1.569	1.088	1.847	3.072
	2013	782,000	0.298	0.753	1.437	0.741	1.572	2.685
	2011	1,120,000	0.549	0.909	1.493	1.144	1.749	2.704
j	2012	1,107,000	0.387	0.816	1.505	0.916	1.733	2.930
	2013	1,007,000	0.202	0.643	1.329	0.359	1.383	2.510

Post-SSC Supplement 4. Decision table with three year projections of posterior distributions for Pacific hake relative **spawning potential ratio** (1-SPR/1-SPRTarget=0.4; values greater than 1.0 denote overfishing). Catch alternatives are based on: 1) arbitrary constant catch levels of 50,000, 100,000, 150,000, 300,000, 400,000 and 500,000 mt (rows a-c, and e-g), 2) the status quo OY from 2010 (row d), and 3) the OY implied by the estimated F_{MSY} from the TINSS model (row h), and the values estimated via the 40:10 harvest control rule and the F40% overfishing limit/target for the base case SS (row i) and TINSS models (row j).

			States of nature					
		Model	SS			TINSS		
Within model probability			25%	50%	25%	25%	50%	25%
		Description	Low 2008 cohort	Modal density	High 2008 cohort	Low 2008 cohort	Modal density	High 2008 cohort
Management Action								
	Year	Catch (mt)						
	2011	50,000	0.225	0.129	0.075	0.174	0.122	0.080
a	2012	50,000	0.181	0.103	0.058	0.145	0.097	0.062
	2013	50,000	0.167	0.095	0.055	0.131	0.084	0.053
	2011	100,000	0.399	0.241	0.145	0.311	0.225	0.152
b	2012	100,000	0.334	0.197	0.113	0.266	0.184	0.120
	2013	100,000	0.316	0.184	0.107	0.247	0.162	0.103
	2011	150,000	0.538	0.340	0.209	0.421	0.313	0.216
c	2012	150,000	0.465	0.283	0.166	0.370	0.262	0.173
	2013	150,000	0.448	0.267	0.158	0.352	0.234	0.151
	2011	262,500	0.766	0.519	0.337	0.608	0.470	0.338
d	2012	262,500	0.699	0.451	0.274	0.560	0.411	0.282
	2013	262,500	0.699	0.437	0.266	0.551	0.379	0.250
	2011	300,000	0.823	0.569	0.374	0.657	0.513	0.373
e	2012	300,000	0.762	0.501	0.308	0.614	0.454	0.314
	2013	300,000	0.769	0.488	0.300	0.609	0.422	0.281
	2011	400,000	0.946	0.685	0.466	0.764	0.613	0.457
f	2012	400,000	0.905	0.620	0.392	0.740	0.557	0.395
	2013	400,000	0.933	0.615	0.387	0.748	0.529	0.359
	2011	500,000	1.038	0.780	0.546	0.851	0.695	0.529
g	2012	500,000	1.016	0.723	0.470	0.845	0.646	0.468
	2013	500,000	1.067	0.727	0.468	0.869	0.626	0.429
	2011	704,600	1.166	0.926	0.682	0.986	0.824	0.648
h	2012	781,000	1.214	0.932	0.650	1.055	0.835	0.631
	2013	784,200	1.307	0.973	0.664	1.139	0.843	0.599
	2011	840,000	1.226	1.000	0.755	1.056	0.891	0.712
i	2012	886,000	1.280	1.002	0.710	1.131	0.896	0.685
	2013	782,000	1.340	1.003	0.679	1.192	0.867	0.611
	2011	1,120,000	1.308	1.110	0.878	1.166	1.004	0.820
j	2012	1,107,000	1.359	1.118	0.822	1.325	1.014	0.786
	2013	1,007,000	1.378	1.116	0.815	1.664	1.027	0.733