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SEDAR 76 Update Projections

SSC May Online meeting

Background

- Updated SEDAR 76 assessment model with data through 2023
- Stock Status: overfished and overfishing is occurring
- Extensive discussion over high F in terminal year of assessment
- Ultimately decided that stock assessment was BSIA
- Requested P^* 20% projections
 - Start from assessment terminal abundance (i.e., first year is 2024)
 - Unclear which interim F was requested ($F_{2021-2023}$ or $F_{2020-2022}$)

Projections Setup

- Start projections in 2024, i.e., after terminal year of assessment
- Use geometric mean of F for interim years (2024-2026)
- Recruitment from Beverton-Holt SRR with mean recruitment deviate from 2014-2021 and a stochastic deviate
- OFL scenario: F_{MSY}
- ABC scenario: $P^*_{20\%} F_{MSY}$



F 2021-2023

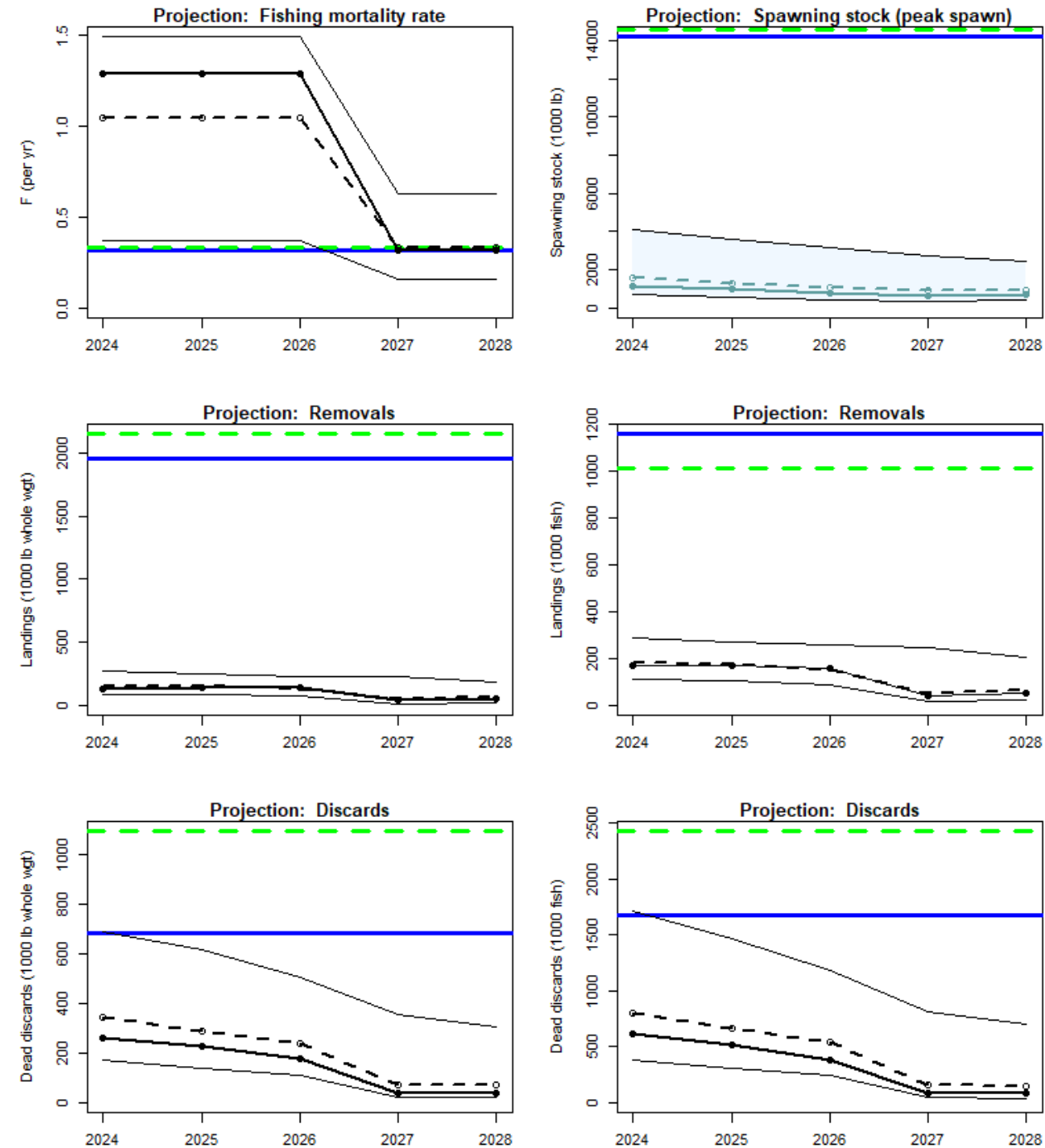
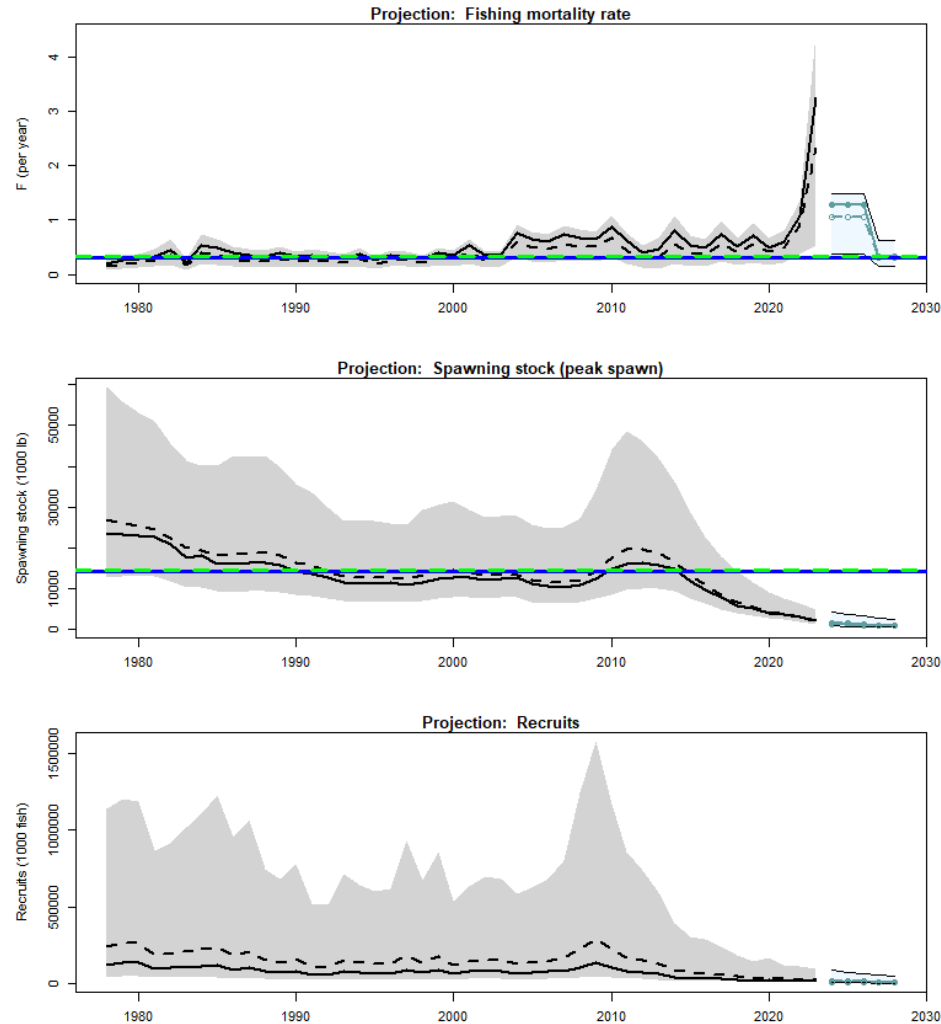


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OFL Scenario

F₂₀₂₁₋₂₀₂₃

Solid dot & lines = Base model
Circles & Dashed lines = Median MCBE



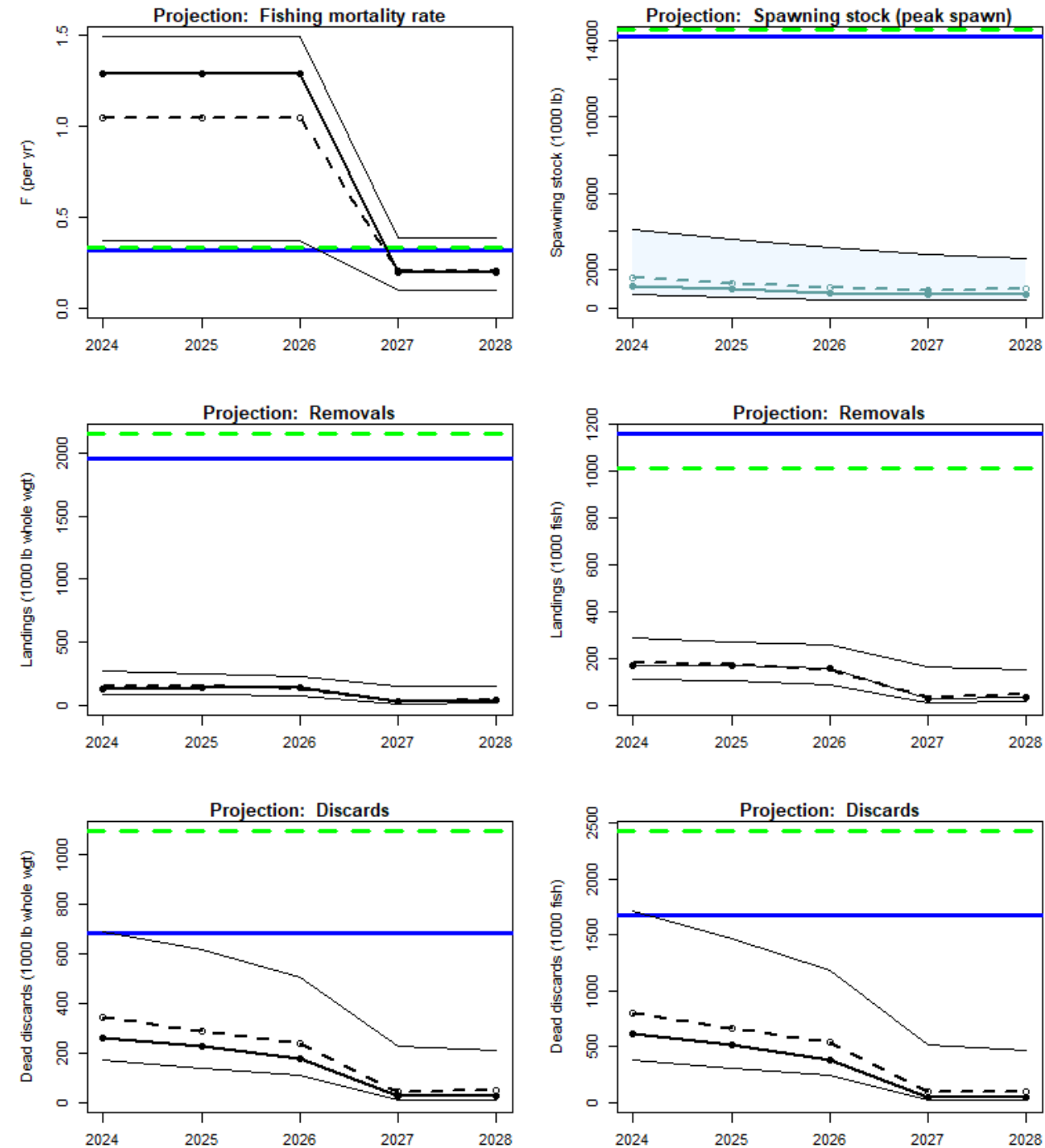
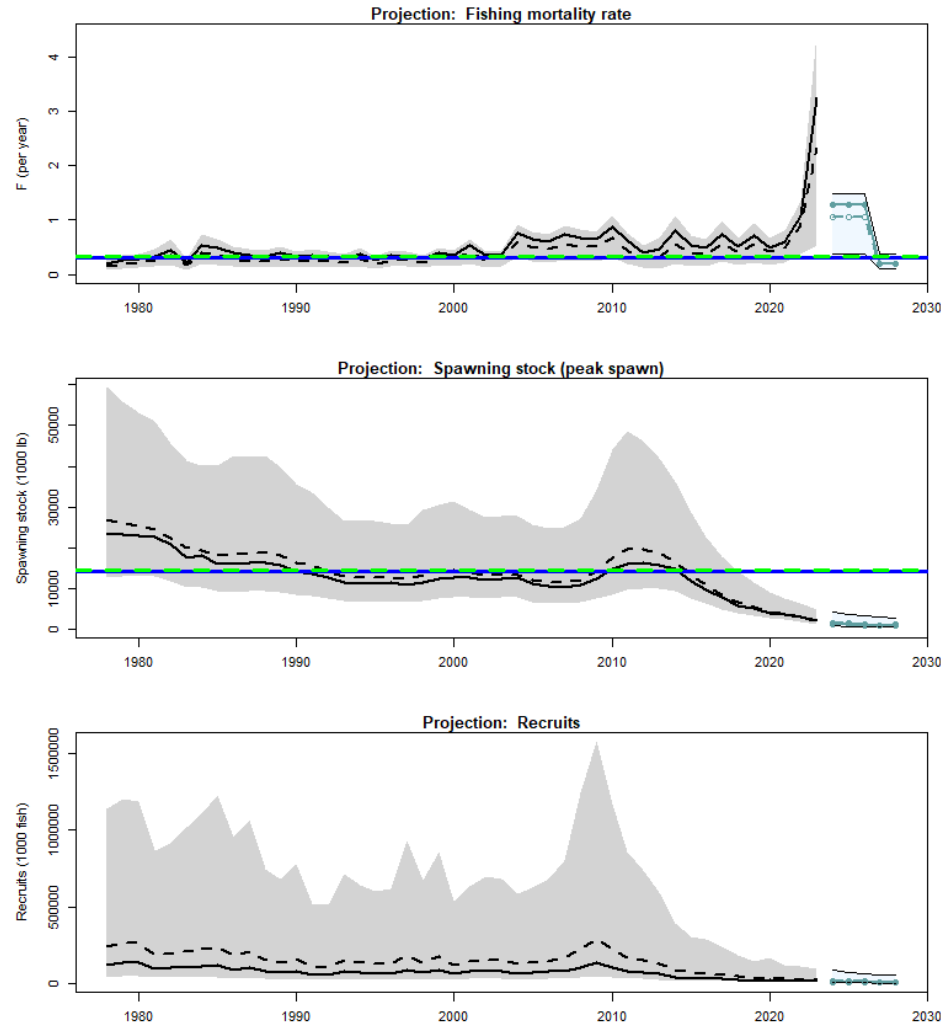
OFL Scenario Table F₂₀₂₁₋₂₀₂₃

year	R.Base (1000)	R.Med (1000)	F.base	F.med	S.Base (1000 lb)	S.Med (1000 lb)	L.Base (1000)	L.Med (1000)	L.Base (1000 lb)	L.Med (1000 lb)	D.Base (1000)	D.Med (1000)	D.Base (1000 lb)	D.Med (1000 lb)	pr.rebuild
2024	6	14	1.287	1.047	1114	1531	166	182	132	151	610	796	260	341	0
2025	5	11	1.287	1.047	959	1307	171	174	144	149	512	668	226	290	0
2026	4	9	1.287	1.047	763	1062	155	150	134	132	384	534	175	236	0
2027	4	7	0.316	0.334	659	928	42	52	38	46	82	159	38	71	0
2028	3	7	0.316	0.334	674	914	53	62	52	59	76	149	36	70	0

ABC Scenario

F₂₀₂₁₋₂₀₂₃

Solid dot & lines = Base model
Circles & Dashed lines = Median MCBE



ABC Scenario Table F₂₀₂₁₋₂₀₂₃

year	R.Base (1000)	R.Med (1000)	F.base	F.med	S.Base (1000 lb)	S.Med (1000 lb)	L.Base (1000)	L.Med (1000)	L.Base (1000 lb)	L.Med (1000 lb)	D.Base (1000)	D.Med (1000)	D.Base (1000 lb)	D.Med (1000 lb)	pr.rebuild
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2025	5	11	1.287	1.047	959	1307	171	174	144	149	512	668	226	290	0
2026	4	9	1.287	1.047	763	1062	155	150	134	132	384	534	175	236	0
2027	4	7	0.193	0.204	668	942	27	33	24	30	51	99	23	45	0
2028	3	7	0.193	0.204	710	970	36	43	35	41	48	95	23	45	0

F 2020-2022

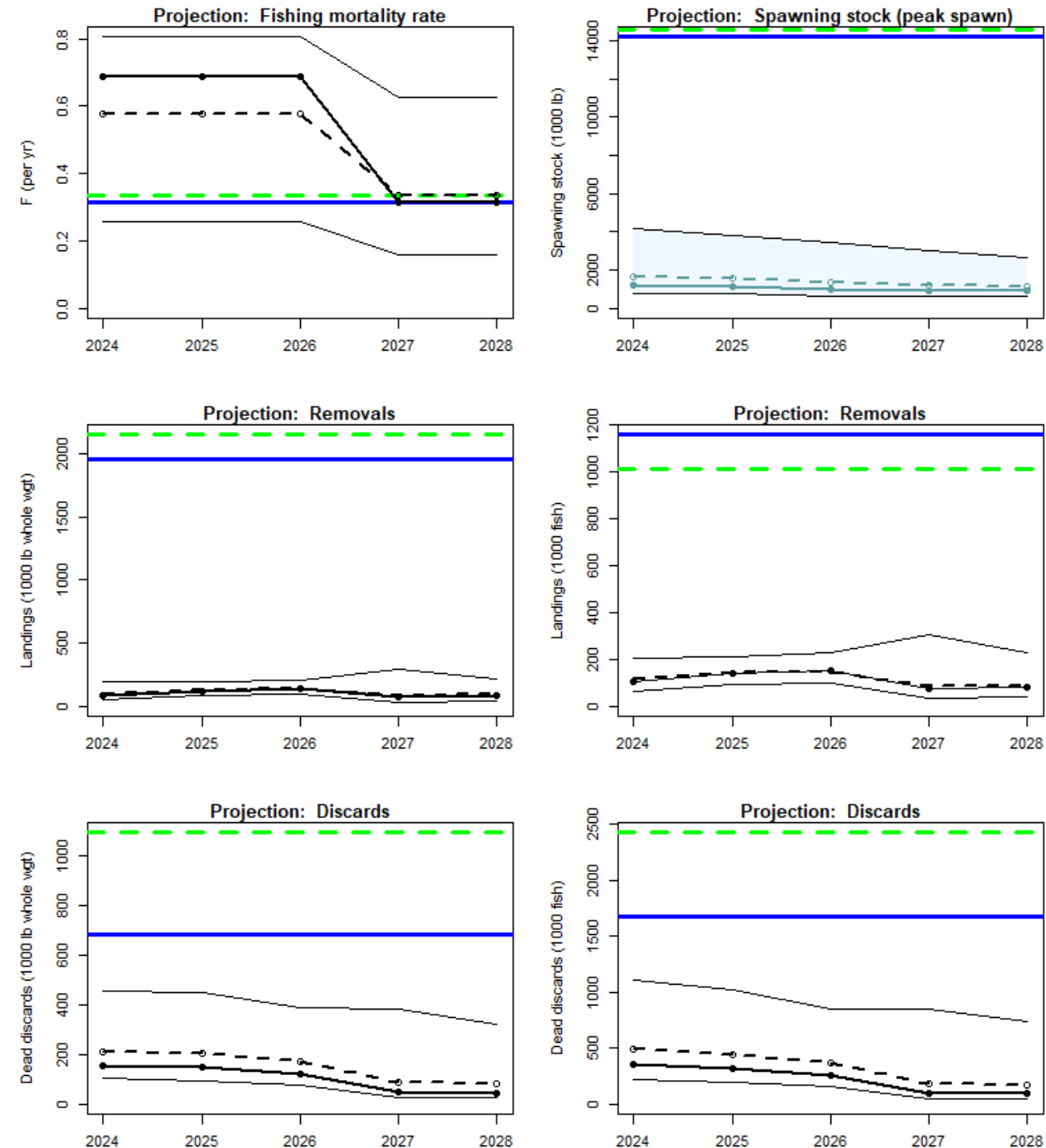
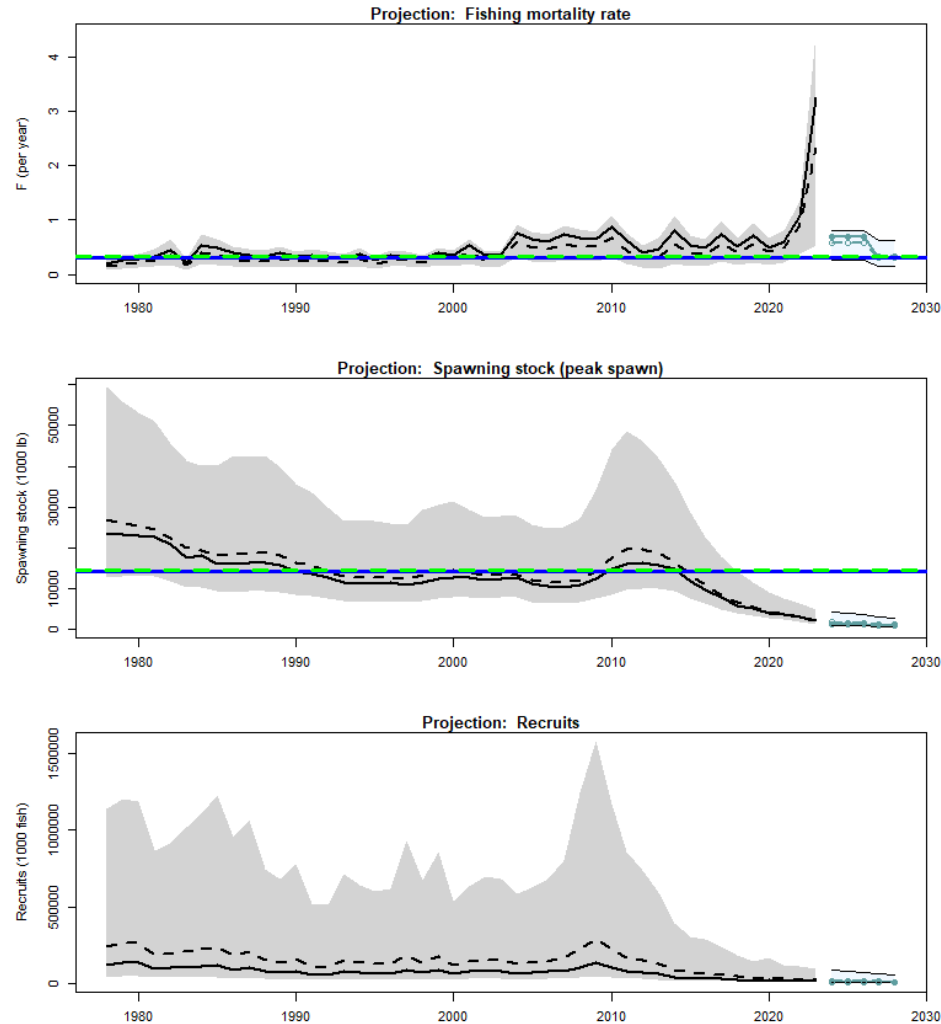


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OFL Scenario

F₂₀₂₀₋₂₀₂₂

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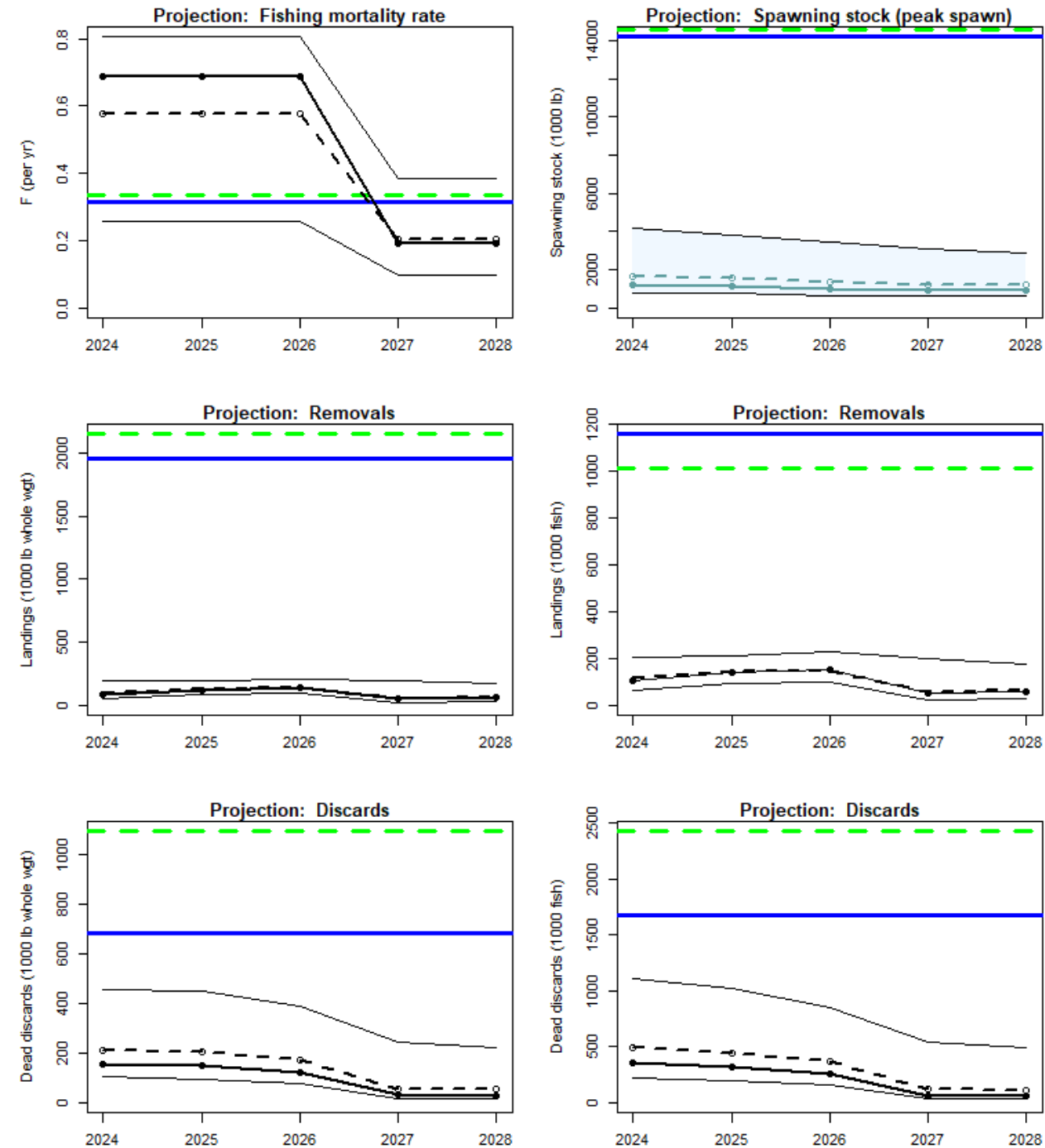
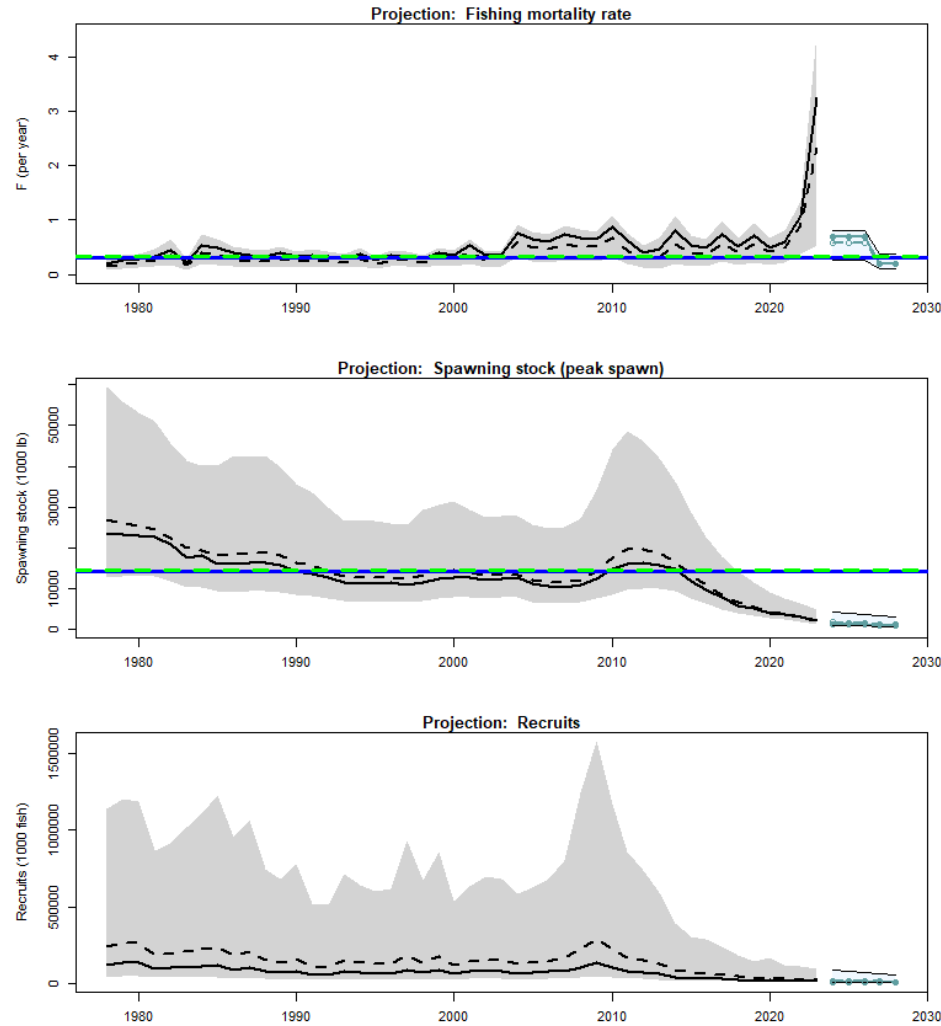
OFL Scenario Table F₂₀₂₀₋₂₀₂₂

year	R.Base (1000)	R.Med (1000)	F.base	F.med	S.Base (1000 lb)	S.Med (1000 lb)	L.Base (1000)	L.Med (1000)	L.Base (1000 lb)	L.Med (1000 lb)	D.Base (1000)	D.Med (1000)	D.Base (1000 lb)	D.Med (1000 lb)	pr.rebuild
2024	6	14	0.69	0.576	1170	1600	103	117	83	98	352	488	152	211	0
2025	5	11	0.69	0.576	1146	1528	139	142	122	127	320	443	148	201	0
2026	5	11	0.69	0.576	1010	1348	153	146	142	137	251	368	122	173	0
2027	5	9	0.316	0.334	902	1208	75	88	74	85	96	186	47	87	0
2028	4	8	0.316	0.334	878	1153	79	89	83	90	89	172	43	81	0

ABC Scenario

F₂₀₂₀₋₂₀₂₂

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ABC Scenario Table F₂₀₂₀₋₂₀₂₂

year	R.Base (1000)	R.Med (1000)	F.base	F.med	S.Base (1000 lb)	S.Med (1000 lb)	L.Base (1000)	L.Med (1000)	L.Base (1000 lb)	L.Med (1000 lb)	D.Base (1000)	D.Med (1000)	D.Base (1000 lb)	D.Med (1000 lb)	pr.rebuild
2024	6	14	0.69	0.576	1170	1600	103	117	83	98	352	488	152	211	0
2025	5	11	0.69	0.576	1146	1528	139	142	122	127	320	443	148	201	0
2026	5	11	0.69	0.576	1010	1348	153	146	142	137	251	368	122	173	0
2027	5	9	0.193	0.204	916	1229	48	56	48	54	60	116	29	55	0
2028	4	9	0.193	0.204	931	1228	54	62	58	64	57	110	27	53	0



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