

Supplement 3 Models compared to estimate seal behavioral state (resident or transiting) based on habitat covariates described in Table 1 of manuscript. All model also included the random effects of year and seal within year, as well as a first-order autocorrelation parameter.

Model	AIC	weight	Marginal R^2
$Dist_land \times Season + Depth \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13467.03	0.48	0.006
$Dist_land \times Season + Depth \times Season + ICE \times Season + Dist_edge \times Season \times ICEcat$	13469.12	0.17	0.005
$Depth \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat - Depth - ICEcat$	13469.17	0.16	0.005
$Dist_land + Depth \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat - Depth - ICEcat$	13470.23	0.09	0.005
$Dist_land \times Season + Depth \times Season + ICE \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13471.25	0.06	0.006
$Depth \times Season + ICE \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13473.41	0.02	0.005
$Dist_land \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13483.06	0.00	0.003
$Dist_land \times Season + Depth + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13483.21	0.00	0.003
$Depth + ICE + ICE^2$	13495.42	0.00	0.001
$Depth + ICE + ICE^2 + Dist_edge \times ICEcat$	13496.10	0.00	0.001
$Dist_land + Depth + ICE + ICE^2 + Dist_edge \times ICEcat$	13496.14	0.00	0.001
$Depth + Dist_edge \times ICEcat$	13497.86	0.00	0.001
$Dist_land + ICE + ICE^2 + Dist_edge \times ICEcat$	13497.96	0.00	0.001
$Dist_edge$	13498.59	0.00	0.001
$Depth$	13499.86	0.00	<0.001
$ICE + ICE^2$	13500.10	0.00	<0.001
$ICE + ICE^2 + Dist_edge \times ICEcat$	13500.46	0.00	0.001
$ICE \times Season + ICE^2 \times Season + Dist_edge \times Season \times ICEcat$	13500.47	0.00	0.003
$Dist_edge \times Season \times ICEcat$	13501.62	0.00	0.002
$Dist_land$	13501.76	0.00	<0.001
$Dist_edge \times ICEcat$	13502.18	0.00	<0.001
ICE	13502.27	0.00	0.001
$Intercept\ only$	13504.58	0.00	0
$Season$	13507.67	0.00	0.001