Seasonal Patterns in Ocean Ambient Noise near Sachs Harbour, Northwest Territories

Stephen J. Insley,[1,2,3,] William D. Halliday[1,2] and Tyler de Jong[1]

APPENDIX 1: STATISTICAL TABLES

TABLE S1. Model selection (above) and final model output (below) for models examining patterns in sound pressure level (SPL) at 50–1000 Hz recorded by hydrophones near Sachs Harbour, Northwest Territories, during May 2015–July 2016. k is the number of parameters in a model, AIC is the Akaike information criterion value, and ΔAIC is the difference in AIC between a given model and the model with the lowest AIC. The lower section displays the analysis of variance table for the model with the lowest AIC.

Model	k	AIC	ΔAIC
SPL = Month + Unit	14	65642.46	0.00
SPL = Month + Time + Season : Time + Unit	50	65658.97	16.51
SPL = Season + Unit	5	71582.94	5940.48
SPL = Season + Time + Month : Time + Unit	14	71588.78	5946.32
SPL = Time + Unit	6	75454.47	9812.01

Parameter	df	Sum Sq	Mean Sq	F	p
Month	11	1003393	91218	2174	< 0.0001
Unit	1	54137	54137	1290	< 0.0001
Residuals	9969	418294	42		

TABLE S2. Model selection (above) and final model output (below) for models examining patterns in sound pressure level (SPL) × wind speed and ice concentration between 50 and 1000 Hz recorded by hydrophones near Sachs Harbour, Northwest Territories, during May 2015–July 2016. Symbols and definitions as in Table S1.

Model	k	AIC	ΔAIC
SPL = Wind + Ice Concentration (106.25 km) + interaction	5	67025.74	0.00
SPL = Wind + Ice Concentration (31.25 km) + interaction	5	67184.01	158.27
SPL = Wind + Ice Concentration (18.75 km) + interaction	5	67519.44	493.70
SPL = Wind + Ice Concentration (6.25 km) + interaction	5	68620.71	1594.97

Parameter	Estimate	SE	t	p
Intercept	88.58	0.24	368.52	< 0.0001
Wind	0.40	0.01	36.97	< 0.0001
Ice	−0.16	0.003	48.93	< 0.0001
Interaction	−0.003	0.0002	16.18	< 0.0001

TABLE S3. Model selection (above) and final model output (below) for models examining patterns in sound pressure level (SPL) × wind speed and ice concentration at 250 Hz recorded by hydrophones near Sachs Harbour, Northwest Territories, during May 2015–July 2016. Symbols and definitions as in Table S1.

Model	k	AIC	ΔAIC
SPL = Wind + Ice Concentration (106.25 km) + interaction	5	66260.39	0.00
SPL = Wind + Ice Concentration (31.25 km) + interaction	5	66297.08	36.69
SPL = Wind + Ice Concentration (18.75 km) + interaction	5	66549.53	289.14
SPL = Wind + Ice Concentration (6.25 km) + interaction	5	67567.05	1306.66

Parameter	Estimate	SE	t	p
Intercept	56.66	0.23	247.43	< 0.0001
Wind	0.43	0.01	42.01	< 0.0001
Ice	−0.13	0.003	42.48	< 0.0001
Interaction	−0.003	0.0002	19.38	< 0.0001

[1] Wildlife Conservation Society Canada, 169 Titanium Way, Whitehorse, Yukon Territory Y1A 0E9, Canada

[2] Department of Biology, University of Victoria, 3800 Finnerty Road, Victoria, British Columbia V8P 5C2, Canada

[3] Corresponding author: sinsley@wcs.org