

Smereka, C. A., Frame, P. F., Edwards, M. A., Frame, D. D., Slater, O. M. and Derocher, A. E. 2020. Seasonal habitat selection of cougars *Puma concolor* by sex and reproductive state in west–central Alberta, Canada. – Wildlife Biology 2020: wlb.00735

Appendix 1

Table A1. Table indicating model weights for the KS group of cougars in west–central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	24040.48	0.00	1.00	1.00	-12010.24
Anthropogenic	9	24057.60	17.13	0.00	1.00	-12019.80
Safety	8	24133.88	93.40	0.00	1.00	-12058.94
Habitat	11	24190.49	150.01	0.00	1.00	-12084.24
Null	2	24568.91	528.43	0.00	1.00	-12282.46

Table A2. Table indicating model weights for the KW group of cougars in west–central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	20951.31	0.00	1.00	1.00	-10465.65
Safety	8	21175.08	223.78	0.00	1.00	-10579.54
Habitat	11	21440.21	488.90	0.00	1.00	-10709.10
Anthropogenic	9	21529.20	577.89	0.00	1.00	-10755.60
Null	2	22408.45	1457.14	0.00	1.00	-11202.22

Table A3. Table indicating model weights for the MS group of cougars in west–central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	54133.44	0.00	1.00	1.00	-27056.72
Habitat	11	55150.88	1017.44	0.00	1.00	-27564.44
Safety	8	55733.05	1599.61	0.00	1.00	-27858.52
Anthropogenic	9	56547.48	2414.05	0.00	1.00	-28264.74
Null	2	57066.46	2933.02	0.00	1.00	-28531.23

Table A4. Table indicating model weights for the MW group of cougars in west-central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	35321.15	0.00	1.00	1.00	-17650.57
Safety	8	35617.06	295.91	0.00	1.00	-17800.53
Habitat	11	35793.98	472.84	0.00	1.00	-17885.99
Anthropogenic	9	35878.95	557.81	0.00	1.00	-17930.48
Null	2	36187.10	865.95	0.00	1.00	-18091.55

Table A5. Table indicating model weights for the SFS group of cougars in west-central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	105911.0	0.00	1.00	1.00	-52945.52
Safety	8	109774.5	3863.48	0.00	1.00	-54879.26
Anthropogenic	9	111253.9	5342.81	0.00	1.00	-55617.93
Prey	5	112727.6	6816.53	0.00	1.00	-56358.78
Null	2	113098.8	7187.75	0.00	1.00	-56547.39

Table A6. Table indicating model weights for the SFW group of cougars in west-central Alberta, Canada.

Model	K	AICc	Δ AICc	AICc weight	Cumulative weight	LL
Combined	10	70710.29	0.00	1.00	1.00	-35345.14
Safety	8	71236.67	526.38	0.00	1.00	-35610.33
Habitat	11	71756.87	1046.58	0.00	1.00	-35867.44
Anthropogenic	9	72434.05	1723.76	0.00	1.00	-36208.03
Null	2	74253.60	3543.31	0.00	1.00	-37124.80

Table A7. Table comparing selection coefficients from mixed effects RSF (ME) and the inverse variance weighted means from two-step RSF with 4000 bootstrap iterations (IVW).

Variable	MW		MS		SFW		SFS		KW		KS	
	<u>IVW</u>	<u>ME</u>	<u>IVW</u>	<u>ME</u>	<u>IVW</u>	<u>ME</u>	<u>IVW</u>	<u>ME</u>	<u>IVW</u>	<u>ME</u>	<u>IVW</u>	<u>ME</u>
WL	-0.01	-0.06	0.46*	0.49*	-0.14*	-0.18*	0.28*	0.27*	0.06	-0.34	0.37*	0.34*
OAL	0.19	0.09	0.03	-0.04	-0.08	-0.30*	0.06	-0.17*	-0.61	-1.16	-0.09	-0.46*
FOR	0.40*	0.46*	0.18*	0.22*	0.94*	0.98*	0.43*	0.47*	0.46*	0.55*	0.07	0.15*
WAT100	0.24*	0.21*	0.47*	0.47*	0.21*	0.25*	0.52*	0.55*	0.05*	-0.14*	0.36*	0.31*
ED50	0.28*	0.27*	0.28*	0.28*	0.21*	0.21*	0.21*	0.21*	0.25*	0.24*	0.04	0.04*
LN_SLOPE	0.22*	0.22*	0.26*	0.28*	0.31*	0.30*	0.25*	0.26*	0.33*	0.44*	0.24	0.25*
RD170	-0.23*	-0.26*	-0.20	-0.22	-0.14*	-0.17*	-0.12*	-0.16*	-0.17	-0.30*	-0.1	-0.15*
LN_DEXT	-0.10*	-0.07*	<0.01	0.01	-0.04	<0.01	-0.05	0.07	0.06	0.14*	-0.18*	-0.13*

p-value < 0.05 indicated by *.