Appendix 1

Table 1. Spearman's correlation matrix for variables at the 5 km scale (upper diagonal) and 10 km scale (lower diagonal).

	SPRINGSNOW	CARIBOU	logGOAT	logMARMOT	MOOSE	logFSR	OTHERROAD	logPROTECTED	HARVEST5	HARVEST17	HARVEST65
SPRINGSNOW	1.00	0.11	**0.60**	0.47	**-0.80**	**-0.68**	-0.58	0.31	0.16	0.26	0.28
CARIBOU	0.05	1.00	0.09	-0.09	-0.00	0.11	-0.06	-0.09	0.03	0.33	0.24
logGOAT	**0.74**	0.03	1.00	0.42	-0.47	-0.56	-0.40	0.31	0.09	0.22	0.18
logMARMOT	0.47	-0.12	0.45	1.00	-0.21	-0.47	-0.21	0.24	0.14	0.18	0.12
MOOSE	**-0.84**	0.01	-0.56	-0.23	1.00	0.56	**0.61**	-0.28	-0.02	-0.04	-0.11
logFSR	**-0.77**	0.15	**-0.63**	-0.51	**0.67**	1.00	0.58	-0.39	-0.16	-0.23	-0.21
OTHERROAD	**-0.77**	-0.06	-0.55	-0.22	**0.79**	**0.65**	1.00	-0.24	-0.06	-0.11	-0.13
logPROTECTED	0.39	-0.11	0.40	0.30	-0.35	-0.45	-0.27	1.00	0.21	0.02	-0.13
HARVEST5	0.24	0.09	0.17	0.23	-0.06	-0.22	-0.13	0.20	1.00	0.63	0.49
HARVEST17	0.30	0.34	0.31	0.26	-0.09	-0.30	-0.18	-0.01	**0.70**	1.00	**0.82**
HARVEST65	0.35	0.26	0.24	0.21	-0.18	-0.27	-0.27	-0.18	0.51	**0.80**	1.00

Table A2. All occupancy models for wolverine in the South Columbia Mountains 2012–2016 at the 5 km scale (combined sex). Degrees of freedom (df), log-likelihood value (LL), and Akaike information criteria values for small sample sizes (AICc) are reported. Models are ranked based on relative AICc values (ΔAICc).All models include p (SESSION+TRAPNIGHT), only occupancy variables are shown.

Model	df	LL	AICc	ΔAICc
logFSR+logMARMOT+logPROTECTED	7	-177.03	368.55	0
logFSR+logMARMOT+logPROTECTED+OTHERROAD	8	-176.15	368.94	0.39
CARIBOU+logFSR+logMARMOT+logPROTECTED	8	-176.17	368.97	0.43
CARIBOU+logFSR+logMARMOT+logPROTECTED+OTHERROAD	9	-175.53	369.85	1.3
logFSR+logGOAT+logMARMOT+logPROTECTED	8	-176.67	369.98	1.43
CARIBOU+logFSR+logGOAT+logMARMOT+logPROTECTED	9	-176.01	370.83	2.28
logFSR+logGOAT+logMARMOT+logPROTECTED+OTHERROAD	9	-176.04	370.88	2.33
logMARMOT+logPROTECTED+OTHERROAD	7	-178.55	371.6	3.05
CARIBOU+logFSR+logGOAT+logMARMOT+logPROTECTED+OTHERROAD	10	-175.49	371.96	3.41
logGOAT+logMARMOT+logPROTECTED+OTHERROAD	8	-177.86	372.35	3.8
logGOAT+logMARMOT+logPROTECTED	7	-179.03	372.56	4.01
CARIBOU+logFSR+logMARMOT	7	-179.11	372.72	4.17
CARIBOU+logMARMOT+logPROTECTED+OTHERROAD	8	-178.16	372.95	4.41
logFSR+logMARMOT	6	-180.3	372.96	4.41
logFSR+logMARMOT+OTHERROAD	7	-179.34	373.18	4.63
logFSR+logGOAT+logMARMOT	7	-179.45	373.39	4.84
CARIBOU+logFSR+logMARMOT+OTHERROAD	8	-178.44	373.51	4.96
CARIBOU+logFSR+logGOAT+logMARMOT	8	-178.65	373.93	5.39
CARIBOU+logGOAT+logMARMOT+logPROTECTED+OTHERROAD	9	-177.59	373.99	5.44
logMARMOT+logPROTECTED	6	-180.82	374.02	5.47
CARIBOU+logGOAT+logMARMOT+logPROTECTED	8	-178.73	374.09	5.54
logFSR+logGOAT+logMARMOT+OTHERROAD	8	-178.87	374.37	5.82
CARIBOU+logMARMOT+logPROTECTED	7	-180.17	374.84	6.29
logFSR+logGOAT+logPROTECTED	7	-180.28	375.05	6.5
CARIBOU+logFSR+logGOAT+logMARMOT+OTHERROAD	9	-178.18	375.15	6.61
logFSR+logPROTECTED	6	-181.42	375.2	6.65
logFSR+logPROTECTED+OTHERROAD	7	-180.56	375.61	7.06
logMARMOT+logPROTECTED+SPRINGSNOW	7	-180.61	375.71	7.16
CARIBOU+logFSR+logPROTECTED	7	-180.69	375.88	7.33
logFSR+logGOAT+logPROTECTED+OTHERROAD	8	-179.86	376.36	7.81
CARIBOU+logFSR+logGOAT+logPROTECTED	8	-179.9	376.43	7.88
CARIBOU+logFSR+logPROTECTED+OTHERROAD	8	-180.04	376.72	8.17
CARIBOU+logMARMOT+logPROTECTED+SPRINGSNOW	8	-180.1	376.84	8.3
CARIBOU+logFSR+logGOAT+logPROTECTED+OTHERROAD	9	-179.54	377.88	9.33
logGOAT+logMARMOT+OTHERROAD	7	-181.91	378.32	9.77
logGOAT+logMARMOT	6	-183.32	379	10.46
logFSR+logGOAT	6	-183.68	379.72	11.17
CARIBOU+logGOAT+logMARMOT+OTHERROAD	8	-181.75	380.15	11.6
logMARMOT+OTHERROAD	6	-184.14	380.65	12.1
CARIBOU+logFSR+logGOAT	7	-183.15	380.78	12.24
CARIBOU+logGOAT+logMARMOT	7	-183.14	380.78	12.23
logFSR+logGOAT+OTHERROAD	7	-183.29	381.08	12.53
CARIBOU+logFSR	6	-184.55	381.47	12.92
logFSR	5	-185.67	381.6	13.05
logFSR+OTHERROAD	6	-184.72	381.8	13.25
CARIBOU+logMARMOT+OTHERROAD	7	-183.76	382.02	13.47
CARIBOU+logFSR+OTHERROAD	7	-183.87	382.24	13.69
CARIBOU+logFSR+logGOAT+OTHERROAD	8	-182.83	382.3	13.76
logGOAT+logPROTECTED+OTHERROAD	7	-184.19	382.87	14.33
logGOAT+logPROTECTED	6	-185.46	383.28	14.73
logMARMOT+SPRINGSNOW	6	-186.18	384.74	16.19

CARIBOU+logGOAT+logPROTECTED+OTHERROAD	8	-184.07	384.78	16.23
CARIBOU+logGOAT+logPROTECTED	7	-185.31	385.12	16.57
logMARMOT	5	-187.62	385.49	16.95
CARIBOU+logMARMOT	6	-186.94	386.24	17.69
CARIBOU+logMARMOT+SPRINGSNOW	7	-185.88	386.26	17.71
logPROTECTED+OTHERROAD	6	-187.56	387.48	18.93
CARIBOU+logPROTECTED+OTHERROAD	7	-187.1	388.69	20.14
logPROTECTED+SPRINGSNOW	6	-188.31	388.99	20.44
CARIBOU+logPROTECTED+SPRINGSNOW	7	-188.09	390.68	22.13
logPROTECTED	5	-191.57	393.4	24.85
logGOAT+OTHERROAD	6	-190.55	393.47	24.92
CARIBOU+logPROTECTED	6	-190.77	393.91	25.36
logGOAT	5	-192.29	394.84	26.29
CARIBOU+logGOAT+OTHERROAD	7	-190.55	395.6	27.05
CARIBOU+logGOAT	6	-192.29	396.95	28.4
SPRINGSNOW	5	-195.85	401.96	33.41
CARIBOU+SPRINGSNOW	6	-195.85	404.06	35.51
OTHERROAD	5	-197.78	405.82	37.27
CARIBOU+OTHERROAD	6	-197.65	407.66	39.11
CARIBOU	5	-204.33	418.93	50.38
(Null)	4	-204.71	417.58	75.47

Table A3. All occupancy models for wolverine in the South Columbia Mountains 2012–2016 at the 10 km scale (combined sex). Degrees of freedom (df), log-likelihood value (LL), and Akaike information criteria values for small sample sizes (AICc) are reported. Models are ranked based on relative AICc values (ΔAICc). All models include *p* (SESSION+TRAPNIGHT), only occupancy variables are shown.

Model	df	LL	AICc	ΔAICc
CARIBOU+logFSR+logMARMOT+logPROTECTED	8	-173.05	362.74	0
CARIBOU+logFSR+logMARMOT	7	-175	364.5	1.76
logFSR+logMARMOT+logPROTECTED	7	-175.05	364.6	1.86
logFSR+logMARMOT	6	-176.91	366.19	3.45
logMARMOT+logPROTECTED+SPRINGSNOW	7	-176.54	367.57	4.83
CARIBOU+logMARMOT+logPROTECTED+SPRINGSNOW	8	-175.6	367.85	5.11
CARIBOU+logMARMOT+logPROTECTED	7	-177.48	369.45	6.71
logMARMOT+logPROTECTED	6	-179.11	370.58	7.84
logMARMOT+SPRINGSNOW	6	-179.17	370.71	7.97
CARIBOU+logMARMOT+logPROTECTED+OTHERROAD	8	-177.21	371.05	8.31
CARIBOU+logGOAT+logMARMOT+logPROTECTED	8	-177.47	371.58	8.84
logMARMOT+logPROTECTED+OTHERROAD	7	-178.57	371.64	8.9
CARIBOU+logMARMOT+SPRINGSNOW	7	-178.72	371.93	9.19
logGOAT+logMARMOT+logPROTECTED	7	-179.06	372.62	9.88
CARIBOU+logGOAT+logMARMOT+logPROTECTED+OTHERROAD	9	-177.07	372.94	10.2
logGOAT+logMARMOT+logPROTECTED+OTHERROAD	8	-178.54	373.71	10.97
CARIBOU+logFSR+logPROTECTED	7	-179.9	374.3	11.56
logFSR+logPROTECTED	6	-181.41	375.19	12.45
logGOAT+logMARMOT	6	-183.12	378.62	15.88
CARIBOU+logFSR	6	-183.13	378.63	15.89
CARIBOU+logMARMOT	6	-183.13	378.63	15.89
logMARMOT+OTHERROAD	6	-183.24	378.85	16.11
logMARMOT	5	-184.3	378.87	16.13
CARIBOU+logGOAT+logMARMOT	7	-182.35	379.19	16.45
CARIBOU+logMARMOT+OTHERROAD	7	-182.42	379.34	16.6
logFSR	5	-184.72	379.7	16.96
logGOAT+logMARMOT+OTHERROAD	7	-182.82	380.14	17.4
logPROTECTED+SPRINGSNOW	6	-184.12	380.6	17.86
CARIBOU+logGOAT+logMARMOT+OTHERROAD	8	-182.12	380.88	18.14
CARIBOU+logPROTECTED+SPRINGSNOW	7	-183.62	381.74	19
SPRINGSNOW	5	-188.84	387.93	25.19
CARIBOU+SPRINGSNOW	6	-188.77	389.91	27.17
logGOAT+logPROTECTED	6	-189.19	390.75	28.01
CARIBOU+logGOAT+logPROTECTED	7	-188.34	391.17	28.43
logPROTECTED+OTHERROAD	6	-189.61	391.58	28.84
CARIBOU+logPROTECTED+OTHERROAD	7	-188.58	391.65	28.91
logGOAT+logPROTECTED+OTHERROAD	7	-188.71	391.91	29.17
CARIBOU+logPROTECTED	6	-189.98	392.32	29.58
CARIBOU+logGOAT+logPROTECTED+OTHERROAD	8	-187.94	392.51	29.77
logPROTECTED	5	-191.55	393.37	30.63
logGOAT	5	-195.79	401.84	39.1
logGOAT+OTHERROAD	6	-195.43	403.24	40.5
CARIBOU+logGOAT	6	-195.66	403.69	40.95
CARIBOU+logGOAT+OTHERROAD	7	-195.34	405.18	42.44
OTHERROAD	5	-200.13	410.53	47.79
CARIBOU+OTHERROAD	6	-199.93	412.22	49.48
(Null)	4	-204.71	417.58	54.84
CARIBOU	5	-204.1	418.46	55.72