

TABLE 1B																										
RMERF, MOUNT LORETTE FALL COUNTS 1992-2017																										
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T
1992	33	280.4	0	0	194	3	194	36	136	3	0	29	0	16	2044	2	3	1	0	0	0	0	0	0	0	2661
1993	55	474.8	0	2	455	13	217	46	82	5	0	47	1	59	4532	1	4	8	4	1	2	0	0	1	0	5480
1994	83	737.2	0	1	370	8	210	40	32	15	1	63	0	42	3836	11	21	2	5	7	5	4	1	0	0	4674
1995	82	671.7	0	9	378	37	309	39	11	9	2	71	0	69	3704	4	16	4	4	3	1	5	0	1	0	4676
1996	83	701.5	0	6	297	20	219	42	9	27	0	59	1	65	3913	20	13	0	5	4	1	6	0	0	0	4707
1997*	85	37.25	0	2	10	1	38	4	2	1	0	2	0	10	164	0	3	0	1	0	6	0	0	0	2	246
1998	95	850	1	5	317	30	152	44	32	20	1	131	2	89	3395	18	8	6	3	4	8	5	1	2	4	4278
1999	101	1007	0	14	312	35	238	41	30	26	4	76	0	70	3475	7	12	13	6	1	15	3	1	2	13	4394
2000	94	623.6	0	2	510	15	175	25	140	3	0	17	0	68	4587	1	12	2	1	1	7	0	1	1	6	5574
2001	101	1112	0	9	448	15	291	41	118	5	1	109	0	56	3683	9	22	6	7	2	15	2	0	3	2	4844
2002	14	83.75	0	0	54	4	35	12	4	0	0	1	0	10	1522	1	5	0	0	0	3	2	1	0	1	1655
2003	82	896.9	0	11	276	17	198	46	61	6	3	62	0	34	3783	6	19	1	5	1	20	4	2	0	13	4568
2004	96	1095	0	18	418	24	179	50	69	6	1	41	0	71	3774	14	13	9	14	4	19	2	5	1	20	4752
2005	75	844.2	0	5	304	7	96	22	46	6	1	18	1	80	3949	2	7	3	2	3	16	2	2	2	10	4584
2006*	32	355.3	0	3	89	7	200	27	29	5	0	23	0	80	2263	1	11	0	0	1	3	1	4	0	1	2748
2007*	25	249.5	0	0	64	3	48	29	10	1	0	10	0	2	1953	0	3	1	3	3	8	1	3	7	1	2150
2008*	30	314.4	0	1	66	7	25	10	18	3	0	4	0	12	2047	1	6	0	1	1	2	6	13	4	7	2234
2009*	46	492.3	0	4	100	5	57	10	25	1	0	18	0	16	2367	1	4	1	4	2	3	0	1	1	3	2623
2010	55	577.2	0	4	165	6	67	15	34	1	0	44	1	23	3222	2	2	0	4	4	16	9	12	1	10	3642
2011	55	590.8	0	3	137	2	113	33	42	0	0	28	0	41	3466	2	6	2	10	2	3	2	2	3	2	3899
2012	52	530.1	0	2	128	6	63	10	30	1	0	26	0	61	2635	0	5	1	6	2	5	2	2	1	1	2987
2013	51	516.9	0	1	95	7	97	18	25	0	0	20	0	32	2782	1	6	0	4	1	6	5	5	3	2	3110
2014	56	583.4	0	5	157	17	96	20	35	5	0	53	0	48	2845	2	7	3	9	1	8	5	12	3	1	3332
2015	57	599.5	0	1	188	14	255	31	43	6	0	30	1	59	3388	2	22	5	9	4	16	15	13	1	3	4106
2016	56	577.1	0	5	213	9	134	11	32	5	1	27	1	24	2973	4	7	0	11	2	13	9	11	3	5	3500
2017	51	532.7	0	2	190	6	82	18	30	1	0	29	1	29	3233	3	5	4	7	6	3	10	8	3	2	3672
TOTAL	1645	15334	1	115	5935	318	3788	684	1125	161	15	1038	9	1166	79535	113	242	72	125	60	204	100	100	43	109	95096
1997*	main count at Plateau Mountain																									
2006-2009*	main count at Piitaistakis-South Livingstone																									

TABLE 2																														
Mount Lorette, Alberta, fall 2017																														
September 20 to November 15 (51 days, 532.7 hours)																														
day																														
#	Date	HRS	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ML	GY	PG	PR	UA	UB	UE	UF	UU	TOTAL				
1	2017/09/20	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	JDu	
	2017/09/21	NO OBSERVATION (weather)																									0	CL		
2	2017/09/22	12.67	0	1	0	0	3	0	1	0	0	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0	14	BWe		
3	2017/09/23	11.25	0	0	7	1	8	0	4	0	0	3	0	0	7	0	1	0	2	0	1	0	0	0	0	34	JDa	RM		
4	2017/09/24	13.42	0	0	3	1	3	0	2	0	0	1	0	0	38	0	0	0	0	0	0	0	0	0	0	48	BWi	LA		
5	2017/09/25	12.67	0	0	1	0	1	2	0	0	0	3	0	0	31	0	0	0	0	0	0	0	0	0	0	38	GH	DP		
6	2017/09/26	12.33	0	0	2	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1	11	CHa			
7	2017/09/27	11.5	0	0	1	0	6	2	1	0	0	2	0	0	35	0	0	0	0	0	0	1	2	0	0	50	JDu	CL		
8	2017/09/28	11.75	0	0	1	0	5	2	0	0	0	1	0	0	15	0	0	0	1	0	0	1	0	0	0	26	CL	RR		
9	2017/09/29	12.33	0	0	1	0	6	0	0	0	0	0	0	1	65	0	0	0	0	0	0	0	0	0	0	73	BWe			
10	2017/09/30	11.67	0	0	12	0	12	3	2	1	0	3	0	2	70	0	1	0	0	0	0	0	0	0	0	106	JDa	RM		
	September	120.59	0	1	28	2	44	9	10	1	0	15	0	3	276	0	2	0	3	0	1	2	2	0	1	400				
11	2017/10/01	11.67	0	0	4	1	6	0	0	0	0	2	0	1	13	0	0	0	0	2	0	1	0	0	1	31	BWe	LA		
	2017/10/02	NO OBSERVATION (weather)																									0	GH		
12	2017/10/03	8.5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	JDu	CHu		
13	2017/10/04	12	0	0	3	0	4	1	0	0	0	1	0	1	60	0	0	0	0	0	1	1	0	0	0	72	CHa	JDa		
14	2017/10/05	12	0	0	5	0	3	1	0	0	0	2	0	1	176	0	0	0	0	0	0	1	0	0	0	189	CL	RR		
15	2017/10/06	11.67	0	0	2	0	0	0	0	0	0	1	0	1	426	0	0	0	0	0	0	0	0	0	0	430	BWi	BWe, CL		
16	2017/10/07	12	0	0	5	0	5	2	1	0	0	4	1	0	165	0	1	0	0	0	0	2	0	1	0	187	JDa	RM		
17	2017/10/08	12.67	0	0	1	2	1	1	5	0	0	1	0	6	202	0	1	0	0	0	1	0	0	0	0	221	BWi	LA		
18	2017/10/09	11.67	0	0	0	0	2	0	0	0	0	0	0	0	178	0	0	0	0	0	0	0	0	0	0	180	GH	DP, CP		
19	2017/10/10	11	0	0	3	0	1	0	0	0	0	0	0	0	37	1	0	1	2	0	0	0	0	0	0	45	JDa	CHu		
20	2017/10/11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	CL			
21	2017/10/12	9.5	0	0	0	0	0	0	0	0	0	1	0	1	30	0	0	0	0	0	0	1	1	1	0	35	JDu	RR		
22	2017/10/13	11	0	0	2	0	3	0	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	0	0	16	BWe	LA, CL		
23	2017/10/14	11.5	0	0	4	0	2	1	2	0	0	1	0	2	210	0	0	0	0	1	0	0	0	0	0	223	JDa	RM		
24	2017/10/15	12.08	0	0	7	0	0	0	0	0	0	0	0	0	191	0	0	0	0	0	0	0	0	0	0	198	BWi	LA		
25	2017/10/16	9.75	0	0	2	0	0	0	0	0	0	0	0	0	106	0	0	1	1	0	0	0	0	0	0	110	GH	DP		
26	2017/10/17	9	0	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0	0	0	1	0	0	0	12	BWi,JDa	DP		
27	2017/10/18	9.75	0	0	1	0	0	1	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	36	CL			
	2017/10/19	NO OBSERVATION (weather)																									0	JDu	RR	
28	2017/10/20	10.5	0	0	5	0	0	0	1	0	0	0	0	1	52	0	0	0	0	1	0	0	0	0	0	60	BWe	CL		
29	2017/10/21	10	0	0	8	0	1	0	1	0	0	0	0	0	337	2	1	0	0	0	0	0	0	0	0	350	JDa	RM		
30	2017/10/22	11.33	0	0	2	0	0	1	2	0	0	0	0	0	44	0	0	0	0	0	0	0	1	0	0	50	BWi	LA		
31	2017/10/23	11.25	0	0	1	0	4	1	0	0	0	1	0	0	82	0	0	0	0	0	0	0	0	0	0	89	GH	DP,MW		
32	2017/10/24	10.25	0	0	0	0	1	0	0	0	0	0	0	0	58	0	0	0	0	2	0	0	1	0	0	62	CHa	DP		
33	2017/10/25	10	0	0	1	0	0	0	0	0	0	0	0	1	13	0	0	0	0	0	0	0	1	0	0	16	JDu	PKF		
34	2017/10/26	10.08	0	0	4	0	0	0	1	0	0	0	0	0	10	0	0	0	0	0	0	1	0	0	0	16	CL	RR		
35	2017/10/27	10	0	0	15	1	3	0	0	0	0	0	0	2	90	0	0	0	1	0	0	0	0	1	0	113	BWe	CHa		
36	2017/10/28	10.25	0	1	17	0	1	0	1	0	0	0	0	1	287	0	0	2	0	0	0	0	0	0	0	310	JDa	RM		

TABLE 3																
MOUNT LORETTE, FALL 2017																
SUMMARY WEATHER																
											% TIME					
											RIDGES		#	SITE		
	TEMP			RIDGE		WIND		CLOUD		PRECIPITATION & NOTES			OBSCURED		migrant	
Day #		Max	Min	Direction	Velocity	Max%	Min%	type				East	West	raptors		
1	Sep 20	8	5	SW	M-S	100	80	Cu,Ac,As				5	60	0	HM	
	Sep 21	NO OBSERVATION					100	100	St	wet snow and rain all day		100	100	no		
2	Sep 22	6	1	NW	L-M	100	10	St,Cu,As,Ac			70	80	14	HM		
3	Sep 23	10	0	N	L-M	90	40	St,Cu				20	34	HM		
4	Sep 24	14	-2	WSW-SW	L-M	100	0	As,Ac,Ci						48	HM	
5	Sep 25	16	-2	SW	L-M	90	0	St,Cu,Ci	brief light rain showers in pm					38	HM	
6	Sep 26	16	2	SW	L-M	70	10	Cu,Ac,As,Cs						11	HM	
7	Sep 27	19	0	SW	M	30	10	Ci						50	HM	
8	Sep 28	21	0	SW	L	0	0							26	HM	
9	Sep 29	21	5	W-SW	L-M	10	0	Ci						73	HM	
10	Sep 30	14	5	SW-SSW	L-M	100	60	Sc,Cu,As,Ci						106	HM	
11	Oct 1	8	4	NW	L-M	100	80	Cu,Ac,As,Ci			50	80	31	HM		
	Oct 2	NO OBSERVATION					100	100	low St	snow all day (12 cm)		100	100	no		
12	Oct 3	5	-5	SW	L	10	0	Ci						2	HM	
13	Oct 4	11	-5	NE	L	90	10	Ac,Ci						72	HM	
14	Oct 5	15	-2	SW	L	0	0							189	HM	
15	Oct 6	13	2	SW	S	100	30	Cu, St, As			tr	10	430	HM		
16	Oct 7	7	0	W	M	80	20	Cu,Cs			tr	tr	187	HM		
17	Oct 8	6	-3	WNW	M	100	10	Cu,St			5	5	221	HM		
18	Oct 9	9	2	SW	S	100	80	Cs,As,Cu						180	HM	
19	Oct 10	11	-3	SW	L-M	100	20	As,Cs						45	HM	
20	Oct 11	0	-2	NE	L	100	100	St	snow after 1030, heavy after 1200 (8 cm)		80	100	0	HM		
21	Oct 12	1	-4	SW	M-S	80	10	Sc,Cu			5	30	35	HM		
22	Oct 13	1	-3	NW	L-M	100	40	St, Cu,Ac			80	90	16	HM		
23	Oct 14	5	-1	SW-NW-W	VS	70	30	Cu,Cs, lent,Ci				20	223	HM		
24	Oct 15	11	4	WSW	M-S	100	50	As,Cu						198	HM	
25	Oct 16	12.5	9.5	SW	VS	80	50	Cu,St,Cs,As						110	HM	
26	Oct 17	14	9	SW	VS	100	10	St,Cu	rain after 1300, heavy after 1600		10	30	12	HM		
27	Oct 18	6	2	SW	M-S	100	20	St,Cu,As,Cs				30	36	HM		
	Oct 19	NO OBSERVATION					100	100	St	steady rain all day		100	100	no	HM, LC	
28	Oct 20	6	1	SW	M-S	100	70	Cu,Ac,As	rain 1300-1400		20	10	60	HM		
29	Oct 21	5	1	W-SW	VS-S	80	40	Cu,Cs,As				20	350	HM		
30	Oct 22	6	2	WSW-NNW	S-M	100	80	St	occasional rain/snow showers all day		40	80	50	HM		
31	Oct 23	8	-1.5	SW	L-M	50	30	Cu,lent						89	HM	
32	Oct 24	14	6	SW	S	100	50	As,Cu,Ci	Chinook arch to 1300					62	HM	
33	Oct 25	14	4	SW-NW	S-M	100	20	Sc,Cu,Ac,As,Cs	cold front passing at 1630		20	20	16	HM		
34	Oct 26	8	-4	SW-NW	M-S	100	0	As,Cs						16	HM	
35	Oct 27	11	-2	NW	L	90	20	Ac,Ci						113	HM	
36	Oct 28	17	0	NW	L-M	90	0	St,Cu						310	HM	
37	Oct 29	4	0	NNW	M-S	100	10	Cu,St,As				tr	55	HM		
38	Oct 30	5	-12	SW	L	100	0	Ci,As,Cs						34	HM	
39	Oct 31	7	2	NW	L-M	100	90	Cu,As,Ci,Ac	light rain after 1300, moderate rain at 1700		20	40	25	HM		

TABLE 4																										
MOUNT LORETTE SUMMARY TOTALS, September 20 - November 15, 1993-1996, 1998-2001, 2003-2005, 2009-2017																										
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T
1993	55	474.8	0	2	455	13	217	46	82	5	0	47	1	59	4532	1	4	8	4	1	2	0	0	1	0	5480
1994	56	516.8	0	0	294	7	175	29	25	15	0	39	0	37	3788	2	15	2	5	4	1	2	1	0	0	4441
1995	54	463.3	0	2	296	27	251	31	11	5	2	52	0	67	3591	4	12	3	4	2	1	3	0	1	0	4365
1996	53	485.6	0	2	271	11	173	23	8	25	0	32	1	65	3881	8	9	0	5	2	0	4	0	0	0	4520
1998	52	483.2	1	1	174	12	80	20	28	14	0	59	1	82	3209	8	2	5	5	1	6	2	0	1	3	3714
1999	57	596.6	0	4	193	13	134	21	25	18	1	32	0	67	3302	1	6	5	8	1	5	1	1	2	7	3847
2000	57	623.6	0	2	510	15	175	25	140	3	0	17	0	68	4587	1	12	2	2	1	7	0	1	1	6	5575
2001	57	646.5	0	4	330	11	183	18	101	3	0	43	0	52	3592	2	9	5	6	0	4	2	0	3	0	4368
2003	55	615.6	0	3	258	4	131	25	59	1	1	40	0	33	3744	3	8	1	5	1	11	2	2	0	10	4342
2004	57	658.7	0	4	338	15	125	26	57	5	1	14	0	70	3610	2	8	9	11	4	10	1	4	1	16	4331
2005	57	662.1	0	3	242	6	89	19	41	6	1	16	1	78	3821	2	3	1	2	3	14	2	2	2	8	4362
2009*	46	492.3	0	4	100	5	57	10	25	1	0	18	0	16	2367	1	4	1	4	2	3	0	1	1	3	2623
2010	55	577.2	0	4	165	6	67	15	34	1	0	44	1	23	3222	2	2	0	4	4	16	9	12	1	10	3642
2011	55	590.8	0	3	137	2	113	33	42	0	0	28	0	41	3466	2	6	2	10	2	3	2	2	3	2	3899
2012	52	530.1	0	2	128	6	63	10	30	1	0	26	0	61	2635	0	5	1	6	2	5	2	2	1	1	2987
2013	51	516.9	0	1	95	7	97	18	25	0	0	20	0	32	2782	1	6	0	4	1	6	5	5	3	2	3110
2014	56	583.4	0	5	157	17	96	20	35	5	0	53	0	48	2845	2	7	3	9	1	8	5	12	3	1	3332
2015	57	599.5	0	1	188	14	255	31	43	6	0	30	1	59	3388	2	22	5	9	4	16	15	13	1	3	4106
2016	56	577.1	0	5	213	9	133	11	32	5	1	27	1	24	2973	4	8	0	10	2	13	9	11	3	5	3499
2017	51	532.7	0	2	190	6	82	18	30	1	0	29	1	29	3233	3	5	4	7	6	3	10	8	3	2	3672
TOTAL	1089	11227	1	54	4734	206	2696	449	873	120	7	666	8	1011	68568	51	153	57	120	44	134	76	77	31	79	80215
Av 93-16	54.6	562.8	0.0526	2.74	239	10.5	138	22.7	44.4	6.263	0.3684	33.5	0.3684	51.7	3438.7	2.53	7.789	2.789	5.95	2	6.895	3.474	3.632	1.474	4.05	4028.579
17 cf Av	-6.6	-5.4	-100.0	-26.9	-20.6	-43.0	-40.4	-20.6	-32.4	-84.0	-100.0	-13.5	171.4	-43.9	-6.0	18.8	-35.8	43.4	17.7	200.0	-56.5	187.9	120.3	103.6	-50.6	-8.9
*	Count ended Nov 9, but considered valid																									
1992	short reconnaissance count																									
1997	count at Plateau Mountain																									
2002	no systematic count																									
2006-08	anomalously low, short counts																									

TABLE 5A																										
SEPTEMBER 20-30, SUMMARY TOTALS, MOUNT LORETTE (excluding 1992,1997,2002,2006,2007,2008)																										
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T
1993	10	102.6	0	2	31	6	98	37	7	0	0	40	1	10	1004	1	1	0	1	0	2	0	0	0	0	1241
1994	11	108.4	0	0	11	1	100	15	6	1	0	21	0	0	218	2	8	0	1	3	1	0	0	0	0	388
1995	11	105.8	0	2	36	20	75	22	1	2	2	26	0	2	222	1	4	0	0	0	1	2	0	0	0	418
1996	10	89.99	0	2	13	3	103	13	1	17	0	19	1	2	131	6	4	0	4	0	0	1	0	0	0	320
1998	10	100.8	1	1	8	7	40	14	10	10	0	44	1	0	170	6	1	0	0	1	6	1	0	0	2	323
1999	11	110.1	0	3	5	7	47	11	1	2	1	22	0	2	278	1	4	2	0	0	2	1	0	0	4	393
2000	11	118.6	0	1	33	7	63	9	1	0	0	5	0	1	497	0	5	1	0	0	6	0	0	0	2	631
2001	11	134	0	4	25	3	52	9	2	0	0	18	0	3	363	1	5	0	2	0	1	1	0	1	0	490
2003	11	132.6	0	3	23	1	69	18	14	1	1	29	0	1	433	3	5	0	3	0	6	0	0	0	5	615
2004	11	141.7	0	4	29	11	76	18	22	1	0	9	0	5	954	1	2	0	6	1	1	1	2	0	6	1149
2005	11	133.7	0	2	13	2	45	9	3	5	1	10	0	0	379	0	1	0	0	1	9	1	0	1	3	485
2009	11	133.3	0	3	10	3	38	7	11	0	0	15	0	3	355	1	0	0	0	2	0	0	0	0	1	449
2010	11	117.2	0	2	30	2	34	4	10	0	0	22	1	1	223	1	0	0	0	1	3	1	0	0	2	337
2011	11	134.6	0	1	11	2	25	3	3	0	0	5	0	1	169	2	0	0	4	0	1	0	0	0	1	228
2012	11	124.5	0	2	17	4	16	4	6	0	0	11	0	0	273	0	4	0	1	0	2	0	1	0	1	342
2013	10	112.8	0	1	10	2	12	4	5	0	0	12	0	0	162	0	2	0	2	0	2	1	1	0	1	217
2014	11	121.1	0	5	9	5	35	9	9	0	0	14	0	0	92	0	3	0	4	0	5	2	0	1	1	194
2015	11	126.4	0	0	14	4	73	4	14	1	0	5	1	1	611	1	4	1	3	2	6	4	3	0	1	753
2016	11	121.3	0	3	17	4	85	6	19	3	1	17	0	2	459	3	2	0	2	0	9	3	1	1	3	640
2017	10	120.6	0	1	28	2	44	9	10	1	0	15	0	3	276	0	2	0	3	0	1	2	2	0	1	400
TOTAL	215	2390	1	42	373	96	1130	225	155	44	6	359	5	37	7269	30	57	4	36	11	64	21	10	4	34	10013
Av 93-16	10.8	119.4	0.1	2.2	18.2	4.9	57.2	11.4	7.6	2.3	0.3	18.1	0.3	1.8	368.1	1.6	2.9	0.2	1.7	0.6	3.3	1.0	0.4	0.2	1.7	505.9
17 cf Av	-7.3	1.0	-100	-53.7	54.2	-59.6	-23.0	-20.8	31.0	-55.8	-100	-17.2	-100	67.6	-25.0	-100	-30.9	-100	72.7	-100	-69.8	100	375.0	-100	-42.4	-20.9
TABLE 5B																										
OCTOBER SUMMARY TOTALS, MOUNT LORETTE (excluding 1992,1997,2002,2006,2007)																										
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T
1993	30	263.8	0	0	342	6	119	9	60	5	0	7	0	46	3347	0	2	3	3	0	0	0	0	1	0	3950
1994	30	284.8	0	0	187	5	75	14	14	14	0	16	0	22	3404	0	6	1	4	1	0	2	0	0	0	3765
1995	29	254.3	0	0	125	6	174	8	8	3	0	25	0	51	3052	3	8	3	2	2	0	1	0	1	0	3472
1996	31	313.6	0	0	193	8	70	10	5	8	0	13	0	63	3552	2	5	0	1	2	0	3	0	0	0	3935
1998	30	287.5	0	0	95	4	40	4	10	3	0	14	0	61	2837	2	0	1	4	0	0	1	0	1	1	3078
1999	31	336.1	0	1	126	6	85	10	21	15	0	9	0	58	2752	0	2	5	6	1	3	0	1	2	3	3106
2000	31	353.4	0	1	337	7	112	15	110	3	0	12	0	65	3817	1	7	1	1	1	1	0	0	1	3	4495
2001	31	354.4	0	0	208	8	126	9	66	3	0	23	0	48	2903	0	4	3	4	0	2	1	0	2	0	3410
2003	30	342.5	0	0	150	3	60	5	42	0	0	11	0	31	3216	0	3	0	2	1	5	2	1	0	5	3537
2004	31	358.1	0	0	175	3	49	8	34	4	1	5	0	63	2588	1	4	6	4	3	9	0	1	0	9	2967
2005	31	369.4	0	1	188	4	44	10	32	1	0	6	1	73	3297	1	2	0	0	2	5	1	2	1	5	3676

2008	30	314.4	0	1	66	7	25	10	18	3	0	4	0	12	2047	1	6	0	1	1	2	6	13	4	7	2234	
2009	29	307.2	0	1	77	2	19	3	13	1	0	2	0	13	1831	0	4	1	4	0	3	0	2	1	2	1979	
2010	29	318.5	0	2	78	4	27	8	16	1	0	21	1	20	2648	1	2	0	4	3	11	8	9	1	5	2870	
2011	29	324.1	0	1	90	0	84	28	38	0	0	21	0	31	3168	0	5	2	6	0	1	2	2	3	1	3483	
2012	28	287.9	0	0	50	1	45	6	20	1	0	13	0	56	2045	0	1	1	4	2	3	2	1	0	0	2251	
2013	29	300.1	0	0	60	5	82	14	19	0	0	8	0	32	2573	1	4	0	2	1	2	3	4	3	1	2814	
2014	30	324.5	0	0	95	12	56	10	26	5	0	37	0	39	2365	2	3	0	4	1	3	1	11	2	0	2672	
2015	31	340.1	0	1	131	10	179	25	28	5	0	25	0	41	2575	1	18	3	6	2	10	11	8	1	2	3082	
2016	30	312.8	0	2	91	5	42	3	9	2	0	9	1	17	1923	1	5	0	6	1	3	3	2	1	2	2128	
2017	29	305.7	0	1	126	4	37	9	17	0	0	14	1	24	2896	3	3	4	4	6	2	8	4	3	1	3167	
TOTAL	629	6653	0	12	2990	110	1550	218	606	77	1	295	4	866	58836	20	94	34	72	30	65	55	61	28	47	66071	
Av 93-16	30	317.4	0	0.55	143.2	5.3	75.7	10.45	29.45	3.85	0.05	14.05	0.2	42.1	2797	0.85	4.55	1.5	3.4	1.2	3.15	2.35	2.85	1.25	2.3	3145.2	
17 cf Av	-3.33	-3.685		81.82	-12.01	-24.528	-51.1	-13.88	-42.3	-100	-100	-0.356	567	-42.99	3.5395	253	-34.07	167	17.647	400	-36.51	240	40.351	140	-56.52	0.6931	
TABLE 5C																											
NOVEMBER 1-15, SUMMARY TOTALS, MOUNT LORETTE (excluding 1992,1997,2002,2006,2007,2008,2009)																											
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T	
1993	15	108.4	0	0	82	1	0	0	15	0	0	0	0	3	181	0	1	5	0	1	0	0	0	0	0	289	
1994	15	123.6	0	0	96	1	0	0	5	0	0	2	0	15	166	0	1	1	0	0	0	0	1	0	0	288	
1995	14	103.2	0	0	135	1	2	1	2	0	0	1	0	14	317	0	0	0	2	0	0	0	0	0	0	475	
1996	12	81.99	0	0	65	0	0	0	2	0	0	0	0	0	198	0	0	0	0	0	0	0	0	0	0	265	
1998	12	94.9	0	0	69	1	0	2	4	0	0	1	0	17	201	0	1	1	1	0	0	0	0	0	0	298	
1999	15	150.4	0	0	62	0	2	0	3	1	0	1	0	7	272	0	0	0	0	0	0	0	0	0	0	348	
2000	15	151.7	0	0	140	1	0	1	23	0	0	0	0	2	273	0	0	0	0	0	0	0	1	0	1	442	
2001	15	158.1	0	0	97	0	5	0	33	0	0	2	0	1	326	1	0	2	0	0	1	0	0	0	0	468	
2003	14	140.6	0	0	85	0	2	2	3	0	0	0	0	1	95	0	0	1	0	0	0	0	1	0	0	190	
2004	15	158.9	0	0	134	1	0	0	1	0	0	0	0	2	68	0	2	3	1	0	0	0	1	1	1	215	
2005	15	159	0	0	41	0	0	0	6	0	0	0	0	5	145	1	0	1	2	0	0	0	0	0	0	201	
2010	15	142.7	0	0	57	0	6	3	8	0	0	0	0	2	351	0	0	0	0	0	2	0	3	0	3	435	
2011	15	132.1	0	1	36	0	4	2	1	0	0	2	0	9	129	0	1	0	0	2	1	0	0	0	0	188	
2012	13	117.8	0	0	61	1	2	0	4	0	0	2	0	5	317	0	0	0	1	0	0	0	0	1	0	394	
2013	12	104	0	0	25	0	3	0	1	0	0	0	0	0	47	0	0	0	0	0	2	1	0	0	0	79	
2014	15	137.8	0	0	53	0	5	1	0	0	0	2	0	9	388	0	1	3	1	0	0	2	1	0	0	466	
2015	15	133	0	0	43	0	3	2	1	0	0	0	0	17	202	0	0	1	0	0	0	0	2	0	0	271	
2016	15	142.9	0	0	105	0	6	2	4	0	0	1	0	5	591	0	1	0	2	1	1	3	8	1	0	731	
2017	12	106.4	0	0	36	0	1	0	3	0	0	0	0	2	61	0	0	0	0	0	0	0	2	0	0	105	
TOTAL	269	2447	0	1	1422	7	41	16	119	1	0	14	0	116	4328	2	8	18	10	4	7	6	20	3	5	6148	
Av 93-16	14.3	130.1	0.0	0.1	77.0	0.4	2.2	0.9	6.4	0.1	0.0	0.8	0.0	6.3	237.1	0.1	0.4	1.0	0.6	0.2	0.4	0.3	1.0	0.2	0.3	335.7	
17 cf Av	-16.0	-18.2		-100	-53.2	-100.0	-55.0	-100	-53.4	-100		-100		-68.4	-74.3	-100	-100	-100	-100	-100	-100	-100	100	-100	-100	-68.7	

TABLE 6																
MOUNT LORETTE: GOLDEN EAGLE: PASSAGE BY HOUR, FALL 2017																
	MST	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	n	T
		10	101	228	288	408	362	356	356	281	261	328	225	29		
-	MDT	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		
SEP	20	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0
	21	W	W	W	W	W	W	W	W	W	W	W	W	W	0	0
	22	W	W	W	W	W	W	W	1	1	1	2	2	0	7	7
	23	0	0	0	0	2	0	5	0	0	0	0	0	-	7	14
	24	0	0	3	3	2	2	3	2	2	3	12	5	1	38	52
	25	0	1	0	0	2	2	4	3	3	0	2	14	0	31	83
	26	0	0	0	0	1	1	3	0	0	1	1	1	0	8	91
	27	-	0	0	0	1	6	10	12	2	0	0	4	0	35	126
	28	0	0	0	0	0	0	4	5	2	3	1	0	0	15	141
	29	0	2	2	6	5	6	2	4	4	4	12	17	1	65	206
	30	0	1	1	8	0	11	8	5	14	11	3	3	5	70	276
OCT	1	W	W	W	W	W	W	1	4	4	0	0	4	(W)	13	289
	2	W	W	W	W	W	W	W	W	W	W	W	W	W	0	289
	3	-	-	-	0	0	0	0	0	0	2	0	0	-	2	291
	4	0	0	0	0	0	0	0	1	9	8	13	29	0	60	351
	5	0	0	0	5	9	11	9	12	13	25	36	38	18	176	527
	6	8	44	56	48	74	45	43	72	30	6	0	0	(w)	426	953
	7	1	9	55	6	4	26	10	15	4	6	19	10	0	165	1118
	8	0	0	1	15	25	53	44	33	1	4	14	12	0	202	1320
	9	0	11	11	14	24	7	23	48	25	7	8	0	-	178	1498
	10	-	0	0	0	7	7	7	0	4	8	3	1	-	37	1535
	11	(w)	(W)	(W)	W	W	w	w	w	w	w	w	w	w	0	1535
	12	-	-	-	0	2	1	0	5	6	7	7	2	0	30	1565
	13	w	W	W	W	W	(W)	(W)	2	2	(W)	5	0	w	9	1574
	14	0	0	4	3	9	7	10	8	18	32	59	60	-	210	1784
	15	1	15	19	26	29	38	21	9	3	14	14	2	0	191	1975
	16	0	1	26	13	13	13	16	9	9	6	-	-	-	106	2081
	17	0	3	2	0	0	1	2	2	W	w	w	w	w	10	2091
	18	-	0	4	4	5	4	6	3	1	1	6	0	-	34	2125
	19	W	W	W	W	W	W	W	W	W	W	w	w	w	0	2125
	20	-	0	7	0	2	1	0	2	19	14	7	0	-	52	2177
	21	-	0	0	12	67	24	46	47	33	35	63	10	-	337	2514
	22	0	4	4	0	6	15	3	1	7	0	4	0	-	44	2558
	23	0	5	18	10	5	8	9	6	15	3	3	0	-	82	2640
	24	-	5	2	7	5	12	11	4	1	5	6	0	-	58	2698
	25	-	0	2	1	4	0	2	1	3	(W)	W	W	(w)	13	2711
	26	-	0	1	1	6	2	0	0	0	0	0	0	-	10	2721
	27	-	0	0	2	1	7	16	18	19	20	7	0	-	90	2811
	28	-	0	9	101	72	35	30	4	6	21	7	2	-	287	3098
	29	0	0	0	2	7	8	1	7	3	0	0	0	-	28	3126
	30	0	0	0	0	5	0	0	0	0	0	8	9	4	26	3152
	31	-	0	0	1	7	7	5	0	0	0	(W)	w	w	20	3172
NOV	1	w	W	W	W	W	W	W	w	w	w	w	w	w	0	3172
	2	w	w	w	w	w	w	w	w	w	w	w	w	w	0	3172
	3	w	w	w	w	w	w	w	w	w	w	w	w	w	0	3172
	4	-	0	0	0	0	0	0	1	(W)	w	w	w	w	1	3173
	MDT	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		
	MST	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19		
	5	0	0	0	0	0	0	(W)	5	13	5	(W)	(W)	-	23	3196
	6	-	-	0	0	1	0	0	0	0	2	3	0	-	6	3202
	7	-	0	0	0	0	0	0	0	0	1	0	-	-	1	3203
	8	w	w	W	W	W	(W)	0	0	0	0	0	0	-	0	3203
	9	-	-	0	0	2	0	0	2	1	1	2	0	-	8	3211
	10	-	-	1	0	3	2	1	2	3	1	0	-	-	13	3224
	11	-	-	0	0	0	0	0	0	0	0	0	-	-	0	3224
	12	0	0	0	0	1	0	0	1	1	2	1	0	-	6	3230
	13	-	-	0	0	0	W	1	W	W	W	W	w	w	1	3231
	14	-	-	0	0	0	0	0	0	0	0	0	-	-	0	3231
	15	-	-	0	0	0	0	0	0	0	2	(W)	-	-	2	3233
TOTALS		10	101	228	288	408	362	356	356	281	261	328	225	29	3233	
W	weather not conducive to raptor migration, directly observed.															
w	weather not conducive to raptor migration, not directly observed.															

TABLE 7								
MEDIAN PASSAGE DATES AND AGE RATIOS, MOUNT LORETTE, FALL 2017								
	Species		Adults		Immatures		imm:adult	
OSPREY	(Insufficient numbers)							
BALD EAGLE	27-Oct	4 days late	28-Oct	4 days late	20-Oct	average	0.41	-24.4 %
NORTHERN HARRIER	03-Oct	2 days early						
SHARP-SHINNED HAWK	30-Sep	2 days early	04-Oct	4 days early	30-Sep	7 days early	0.19	-52.8%
COOPER'S HAWK	30-Sep	1 day early						
NORTHERN GOSHAWK	08-Oct	3 days early	14-Oct	3 days late	07-Oct	4 days late	0.4	+62.5%
BROAD-WINGED HAWK	(Insufficient numbers)							
RED-TAILED HAWK	29-Sep	1 day late	29-Sep	1 day late			0.17	-63.5 %
ROUGH-LEGGED HAWK	13-Oct	5 days early						
GOLDEN EAGLE	14-Oct	2 days late	15-Oct	1 day late	08-Oct	1 day early	0.49	+69.0 %
MERLIN	07-Oct	2 days late						
GYRFALCON	29-Oct	6 days late						
PEREGRINE FALCON	10-Oct	5 days late						
COMBINED SPECIES	14-Oct	2 days late						
(Note: statistics are not calculated for less than 4 birds)								

TABLE 8																													
Vicki Ridge, Alberta, fall 2017																													
September 20 to November 15																													
day																													
#	Date	HRS	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ML	GY	PG	PR	UA	UB	UE	UF	UU	TOTAL	spp.	SITES	
1	2017/09/20	9	0	0	2	0	14	3	1	0	1	9	1	0	5	1	1	0	0	0	0	0	0	0	0	38	10	VR	
2	2017/09/21	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	VR	
3	2017/09/22	5.75	0	1	1	1	2	2	1	0	0	0	0	0	2	2	0	1	0	0	0	0	0	0	0	13	9	VR	
4	2017/09/23	9.5	0	2	3	1	32	7	5	4	0	16	0	0	8	4	1	0	1	0	0	0	0	0	0	84	12	VR	
5	2017/09/24	9.33	0	0	0	0	50	7	6	2	0	11	0	0	6	1	1	0	1	0	0	0	0	0	0	85	9	VR	
6	2017/09/25	9.25	0	0	0	0	53	6	6	3	0	0	1	0	7	0	3	0	1	0	0	0	0	0	0	80	8	VR	
7	2017/09/26	9	0	1	1	0	39	6	3	0	0	4	0	1	5	0	2	0	2	0	0	0	0	0	0	64	10	VR	
8	2017/09/27	10	0	1	0	1	10	4	2	1	0	3	0	0	8	0	1	0	0	0	0	0	0	0	0	31	9	VR	
9	2017/09/28	9.5	0	1	2	1	13	2	1	1	0	5	0	0	14	0	1	0	1	0	0	0	0	0	0	42	11	VR	
10	2017/09/29	9.5	0	1	2	5	133	9	5	3	0	18	2	0	32	5	0	0	1	0	1	2	0	0	0	219	12	VR	
11	2017/09/30	8	0	0	0	0	22	1	3	0	0	4	0	0	25	3	1	0	0	0	0	0	0	0	0	59	7	VR	
	September	90.83	0	7	11	9	368	48	33	14	1	70	4	1	112	16	11	1	7	0	1	2	0	0	0	716			
12	2017/10/01	4.25	0	1	0	1	9	3	2	1	0	11	0	1	4	1	0	0	1	0	0	2	0	0	0	37	11	WS	
	2017/10/02	NO OBSERVATION (weather)																									0	no	
13	2017/10/03	9	0	0	4	0	24	2	2	4	0	12	0	0	66	1	1	0	0	0	0	0	0	0	0	116	9	VR	
14	2017/10/04	8.5	0	0	2	0	23	8	6	5	0	43	1	5	10	0	0	0	0	0	1	2	0	0	0	106	9	VR	
15	2017/10/05	9.25	0	0	4	1	38	5	1	6	0	11	0	2	114	0	0	0	0	0	1	0	0	0	0	183	9	VR	
16	2017/10/06	9.25	0	1	4	1	11	2	2	0	0	8	0	4	159	1	2	0	0	1	0	4	0	1	0	201	12	WS	
17	2017/10/07	9.33	0	0	5	1	35	6	1	0	0	6	0	5	202	1	0	0	1	0	2	1	0	0	0	266	10	WS	
18	2017/10/08	9.25	0	0	4	0	6	1	2	0	0	11	0	28	49	0	0	0	0	0	0	2	0	0	0	103	7	VR	
19	2017/10/09	9	0	0	3	0	35	1	3	0	0	5	0	13	84	0	0	0	0	0	0	0	0	0	0	144	7	WS	
20	2017/10/10	9.5	0	0	3	1	36	1	2	0	0	9	0	18	46	0	1	0	2	0	0	0	0	0	0	119	10	VR	
21	2017/10/11	5.16	0	0	2	0	4	1	0	0	0	3	0	8	5	0	0	0	0	0	0	0	0	0	0	23	6	VR	
22	2017/10/12	6.25	0	0	2	0	7	0	2	0	0	4	0	16	9	0	1	0	1	0	0	0	0	0	0	42	8	VR	
	2017/10/13	NO OBSERVATION (weather)																									0	no	
23	2017/10/14	9.25	0	0	2	0	2	0	0	0	0	4	0	3	47	0	0	0	1	0	0	1	0	0	0	60	6	WS	
24	2017/10/15	9.75	0	0	4	0	10	0	3	0	0	8	0	14	99	0	0	0	0	0	0	1	0	0	0	139	6	WS	
25	2017/10/16	9.5	0	0	1	0	24	1	0	1	0	4	0	23	107	0	0	0	0	1	0	2	0	0	0	164	8	WS	
26	2017/10/17	8	0	0	0	0	2	0	1	0	0	1	0	0	15	0	0	0	0	0	0	0	0	0	0	19	4	WS	
27	2017/10/18	7.25	0	0	6	0	11	0	1	1	0	3	0	9	40	0	1	0	0	0	0	0	0	0	0	72	8	WS	
28	2017/10/19	3.5	0	0	0	0	2	0	1	0	0	0	0	8	9	0	0	1	0	0	0	0	0	0	0	21	5	WS	
29	2017/10/20	8.5	0	0	2	1	16	0	1	0	0	3	0	44	23	0	0	0	1	0	0	0	0	0	0	91	8	WS	
30	2017/10/21	9	0	0	3	0	16	1	1	0	0	4	0	16	60	0	3	0	2	0	0	0	0	0	0	106	9	WS	
31	2017/10/22	8.75	0	1	6	0	10	1	1	0	0	0	0	22	73	0	0	0	1	0	0	0	0	0	0	115	8	WS	
32	2017/10/23	9	0	0	12	0	27	4	3	1	0	3	0	30	37	0	0	0	0	0	0	0	0	0	0	117	8	WS	
33	2017/10/24	9.33	0	0	4	0	7	2	3	0	0	0	0	12	18	1	0	0	0	0	0	0	0	0	0	47	7	WS	
34	2017/10/25	9	0	0	13	0	12	1	1	0	0	1	1	54	30	0	0	0	0	1	0	0	0	0	0	114	9	WS	
35	2017/10/26	9.33	0	0	4	1	6	2	2	0	0	3	0	41	21	0	0	0	0	1	0	1	0	0	0	82	9	WS	
36	2017/10/27	9	0	0	6	1	3	1	5	0	0	4	0	16	33	0	0	0	0	0	0	0	1	0	0	70	8	VR	
37	2017/10/28	8.83	0	1	34	0	6	1	8	0	0	1	0	63	209	0	0	0	0	0	1	0	6	1	0	331	9	VR	
38	2017/10/29	8.5	0	0	21	1	0	2	4	0	0	0	0	26	40	0	0	1	0	0	0	0	0	0	0	95	7	WS	
39	2017/10/30	8.75	0	0	28	1	0	0	4	0	0	1	0	3	31	0	0	0	0	0	0	0	7	0	0	75	6	VR	
40	2017/10/31	8	0	0	7	0	0	0	3	0	0	1	0	2	54	0	0	0	0	0	0	0	0	0	0	67	5	WS	

	October	241.98	0	4	186	10	382	46	65	19	0	164	2	486	1694	5	9	2	10	4	5	16	14	2	0	3125						
	2017/11/01	NO OBSERVATION (weather)																								0	no					
	2017/11/02	NO OBSERVATION (weather)																								0	no					
	2017/11/03	NO OBSERVATION (weather)																								0	no					
41	2017/11/04	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	WS	
42	2017/11/05	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	WS	E
43	2017/11/06	6.5	0	0	8	0	0	0	0	0	0	0	0	2	61	0	0	0	0	0	0	0	0	0	0	0	0	71	3	WS		
44	2017/11/07	8	0	0	6	0	0	0	1	0	0	0	0	2	23	0	0	0	0	1	0	0	0	0	0	0	33	5	WS			
45	2017/11/08	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	WS		
46	2017/11/09	8	0	0	0	0	0	0	1	0	0	0	0	2	3	0	0	0	0	0	0	0	1	1	0	0	8	3	WS			
47	2017/11/10	9.08	0	0	41	0	0	0	3	0	0	0	0	7	33	0	0	1	0	0	0	0	2	0	0	0	87	5	WS			
48	2017/11/11	9	0	0	22	0	0	0	1	0	0	0	0	2	20	0	0	0	0	0	0	0	0	0	0	0	45	4	WS			
49	2017/11/12	9	0	0	23	0	1	0	3	0	0	0	0	4	27	0	0	1	0	0	0	0	0	0	0	0	59	6	WS			
50	2017/11/13	6	0	0	9	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	20	2	WS			
51	2017/11/14	8.75	0	0	15	0	0	0	2	0	0	0	0	5	10	0	0	0	0	0	0	0	0	0	0	0	32	4	WS			
52	2017/11/15	9.25	0	0	29	0	0	0	0	0	0	0	0	4	7	0	0	0	0	0	0	0	0	1	0	0	41	3	WS			
	November	86.08	0	0	153	0	1	0	11	0	0	0	0	28	195	0	0	2	0	1	0	1	4	0	0	396						
	TOTALS	418.89	0	11	350	19	751	94	109	33	1	234	6	515	2001	21	20	5	17	5	6	19	18	2	0	4237						
	Date	HRS	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ML	GY	PG	PR	UA	UB	UE	UF	UU	TOTAL						
	VR	Vicky Ridge: ridge-top																														
	KR	Kyllo Ridge: western edge north of Waterton 68 wellsite																														
	WS	Vicky Ridge: Waterton 61 wellsite on western flank of ridge																														
	E	East of Vicky Ridge on Seven Gates Road																														

TABLE 9												
VICKI RIDGE, FALL 2017												
SUMMARY WEATHER												
Day #			TEMP		RIDGE	WIND	CLOUD		PRECIPITATION & NOTES	SITE	#	
			Max	Min	Direction	Velocity	%	type		migrant raptors		
1	Sep	20	7	4	W	30-49 g60	50-70	Cu		VR	38	
2	Sep	21	4	3	C-E	0-5	100	St	rain and wet snow after 1100	VR	1	
3	Sep	22	4	3	C-E	0-4	100-80	St, Cu	wet snow, flurries, showers to 1550	VR	13	
4	Sep	23	10.5	3	WSW	10-15 g23	100-10	Cu	cloud thinning after 1500	VR	84	
5	Sep	24	13	5	W	18-25 g32	0-70	Ci, Cu	cloudless to 1030	VR	85	
6	Sep	25	16	8	WSW	15-20 g30	40-90	Cu, Sc		VR	80	
7	Sep	26	17	9	W-SW	10-20 g40	100-30	Sc, Cu, Ci	light drizzle in am	VR	64	
8	Sep	27	18	10	W-E/NE	2-5	0-30	Ci	E/NE after 1400; cloudless to 1500	VR	31	
9	Sep	28	22	12	W-E-SW	10-15 g25	0			VR	42	
10	Sep	29	21	12	SW-W	20-40 g50	0-30	Ci	cloud only 1300-1500	VR,KR	219	
11	Sep	30	12	11	WSW-W	28-40 g50	100	As, Cu	cloud broken at 1700	VR	59	
12	Oct	1	6	2	var	0-5	100	St	rain, snow to 1130, rain 1415-1530	WS	37	
	Oct	2	NO OBSERVATION					100	St	heavy wet snow all day (25 cm)		no
13	Oct	3	5	-8	WSW-W	5-20 g26	0		winds light to 1300	VR	116	
14	Oct	4	10	1	E-E/NE	0-10	30-100	Ac, As		VR	106	
15	Oct	5	15	6	WSW	10-20 g30	90-0	As	cloudless after 1200	VR	183	
16	Oct	6	15	10	W-NW	50-65 g90	100-0	As, Ac, Ci, Cu	Chinook Arch to 1630	WS	201	
17	Oct	7	9	4	WNW-NW	10-15 g40	80-10	Cu, Ac	rain showers in am, flurries in pm	WS	266	
18	Oct	8	4	-2	E/SE- WSW	5-7 g20	20-80	Ac, Cu	WSW 1654-1800	VR	103	
19	Oct	9	9	3	W-WSW	25-40 g80	80-100	As,Ci, lent, Cu	hazy sun	WS	144	
20	Oct	10	11.5	3	WSW	15-30 g50	80-100	As,Ci, lent, Cu	sunny in pm	VR	119	
21	Oct	11	6	4	WSW-SW	35-30 g40	100-20	AS, Cu	sunny after 1330	VR	23	
22	Oct	12	6	2	WSW-WNW	20-35 g50	80-10	Cu	fog to 1100, snow squall after 1800	WS	42	
	Oct	13	NO OBSERVATION					100	low St	steady light snow all day		no
23	Oct	14	4	1	W-WSW	40-60 g90	20-90	As, Ac, lent, Cu, Ci		WS	60	
24	Oct	15	9	2	WSW-W	45-70 g90	60-100	As, Ac, lent, Cu	sunny periods	WS	139	
25	Oct	16	14	10	WSW-W	30-60 g90	20-70	As, Ac, Cu	thin cloud, mainly sunny	WS	164	
26	Oct	17	16	11	WSW-W	40-60 g100	0-100	Cu, Ac, lent, Sc	steady rain after 1700	WS, KR	19	
27	Oct	18	11	4	WSW	20-35 g70	60-100	As, Ac, Cu, lent	thin cloud, hazy sunshine	WS	72	
28	Oct	19	10	8	W/WNW-NNE	20-35 g45	100-70	Sc, Cu, As	rain to 1400, light rain to 1500	WS	21	
29	Oct	20	8	4.5	WSW-W	35-46 g60	100-70	As, Cu, Ac	light rain after 1400	WS	91	
30	Oct	21	5	2	W-WSW	40-50 g75	80-30	As, Cu, Ac		WS	106	
31	Oct	22	7	2.5	var-W/WSW	20-50 g80	100-40	Cu, St	steady rain to 1235, showers in pm	WS	115	
32	Oct	23	9	5	W-WSW	25-40 g60	5-100	As, Cu, lent	thin cloud, hazy sunshine	WS	117	
33	Oct	24	14	8	W-WSW	40-50 g85	100	AS, Cs	Chinook Arch to 1400	WS	47	
34	Oct	25	14	6	W/WSW-E/NE	20-60 g110	30-80	As, Ac, Cu, Sc	dark Sc in pm, rain after 1815	WS	114	
35	Oct	26	5	-5	C/E-W	0-20 g40	0-100	As, lent	4 cm fresh snow; cloudless to 1020	WS	82	
36	Oct	27	12	6	WNW-W	10-25 g44	0-100	Ci, As, Ac	cloudless to 1120	VR,KR	70	
37	Oct	28	14	10	W-WSW	30-50 g80	80-0	As, Ac	Chinook Arch to 1500, then cloudless	VR,KR	331	
38	Oct	29	3	2	N-NNE	5-10	100-30	St, Cu	100% St to 1500	WS	95	
39	Oct	30	5	-3	W	20-30 g40	0-100	Ci, As, lent	cloudless to 1100	VR,KR	75	
40	Oct	31	6	2	W	30-50 g70	70-100	lent, As, Cu		WS	67	
	Nov	1	NO OBSERVATION					100	low St	snow all day, ridges obscured		0
	Nov	2	NO OBSERVATION					100	low St	heavy snow all day, ridges obscured		0
	Nov	3	NO OBSERVATION					100	low St	snow to early pm; 50 cm fresh snow	WS	0
41	Nov	4	-15	-15	C-W	0-5	80-100	Cu	crystal haze; snow after 1330	WS/E	0	
42	Nov	5	-12	-12	C-SE	0-5	100	St	light snow all day, ridge obs. to 1330	WS	0	
43	Nov	6	-5	-11	W-WNW	0-10 g30	0				71	
44	Nov	7	-4	-7	W	35-45 g60	70-100	As, Ac	hazy sunshine to 1200	WS	33	
45	Nov	8	-7	-11	var	0-5	100-70	St, Ac, Ci, As		WS	0	
46	Nov	9	0	-9	C/var-W	0-14 g18	100-70	As, Cu, lent	light snow 1345-1445; Arch after 1440	WS	8	
47	Nov	10	2	-1	W-WSW	25-40 g50	80-10	Cu, lent Ac	sunny after 1400	WS	87	
48	Nov	11	1.5	-2	W-WSW	30-40 g55	0-100	Cu, Ci, Cs, As	cloudless to 0930; winds light after 1630	WS	45	
49	Nov	12	5	-1	W-WSW	10-35 g50	100-70	As, Cu	light rain/snow 1500-1515	WS	59	
50	Nov	13	6	0	W-WSW	20-40 g55	30-100	Cu, St	rain/snow after after 1215, obsc. at 1400	WS	20	
51	Nov	14	1	-1	WSW	30-40 g55	100-50	St, Cu	frequent light snow periods after 1400	WS	32	
52	Nov	15	3	-4	var-WSW	5-30 g45	100-0	As, Cu, lent, Cs	cloudless 1300-1500	WS	41	
											4237	
OBSERVATION SITES												
	VR		Vicky Ridge, ridge top									
	WS		Watertop 61 wellsite on western flank of Vicki Ridge (500 m W of VR site)									
	KR		Kyllo Ridge, western edge near Waterton 68 wellsite (2 km W of VR site)									
	E		Seven-Gates road east of Vicki Ridge									

TABLE 10																											
YEARLY SUMMARY FALL TOTALS, VICKI RIDGE 2014-2017																											
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T	raptors/hr
2014	11	37.28	0	1	33	4	62	15	32	2	0	28	0	103	114	1	0	0	1	1	7	1	0	0	0	405	10.86
2015	34	134.8	2	2	135	10	253	32	39	4	0	60	0	110	635	9	12	2	0	4	12	1	9	0	9	1340	9.94
2016	43	282.6	1	3	253	16	521	49	77	7	0	117	3	313	1424	17	22	1	13	5	6	4	15	1	0	2868	10.15
2017	52	418.9	0	11	350	19	751	94	109	33	1	234	6	515	2001	21	20	5	17	5	6	19	18	2	0	4237	10.20
TOTAL	140	874	3	17	771	49	1587	190	257	46	1	439	9	1041	4174	48	54	8	31	15	31	25	42	3	9	8850	

TABLE 11																													
Steeple, BC, fall 2017																													
September 20 to November 15																													
day	Date	HRS	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ML	GY	PG	PR	UA	UB	UE	UF	UU	TOTAL	SITES	OBSERVERS	
	2017/09/20	NO OBSERVATION																								0			
	2017/09/21	NO OBSERVATION (weather)																								0			
1	2017/09/22	5	0	0	0	2	12	0	1	0	0	0	0	0	5	5	0	0	1	0	0	0	0	0	0	0	26	BN	VM
2	2017/09/23	5.5	0	1	12	4	34	0	1	1	0	35	0	0	8	1	0	0	0	0	0	0	0	0	0	0	97	BN	VM
3	2017/09/24	5	0	0	8	0	5	0	1	1	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	20	BN	VM	
	2017/09/25	NO OBSERVATION																								0			
4	2017/09/26	4.5	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	BN	VM	
	2017/09/27	NO OBSERVATION																								0			
5	2017/09/28	3	0	0	5	0	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	BN	VM	
6	2017/09/29	4	0	1	4	0	7	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	BN	VM	
7	2017/09/30	5.5	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	BN	VM	
	September	32.5	1	2	31	6	61	1	5	4	0	39	0	0	16	6	1	0	1	0	0	0	0	0	0	174			
8	2017/10/01	3	0	0	4	3	9	0	1	0	0	0	0	1	8	2	1	0	0	0	0	0	0	0	0	29	BN	VM	
	2017/10/02	NO OBSERVATION																								0			
9	2017/10/03	5	0	0	8	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10	BN	VM	
	2017/10/04	NO OBSERVATION																								0			
10	2017/10/05	3	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	BN	VM	
11	2017/10/06	7	0	0	1	0	0	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0	0	0	10	BN	VM	
12	2017/10/07	6	0	0	4	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7	BM	VM	
13	2017/10/08	5	0	1	7	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11	BN	VM	
14	2017/10/09	5.5	0	0	10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	11	BN	VM	
15	2017/10/10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	BM	VM	
	2017/10/11	NO OBSERVATION																								0			
16	2017/10/12	4	0	0	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	11	BN	VM	
	2017/10/13	NO OBSERVATION (weather)																								0			
17	2017/10/14	6.5	0	0	18	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	21	BN	VM,VR,GZ	
18	2017/10/15	7	0	0	14	0	1	0	1	0	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	21	BN	VM	
19	2017/10/16	2	0	0	6	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	10	SL	VM	
20	2017/10/17	5	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	BN	VM	
	2017/10/18	NO OBSERVATION																								0			
	2017/10/19	NO OBSERVATION (weather)																								0			
21	2017/10/20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	BN	VM	
22	2017/10/21	7	0	0	15	0	2	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0	0	0	26	BN	VM	
23	2017/10/22	6.5	0	0	29	0	0	0	0	1	0	2	0	3	13	0	0	0	0	0	0	1	1	0	0	50	BN	VM, VR	
24	2017/10/23	2	0	0	1	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	SL	VM	
25	2017/10/24	6	0	0	10	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	12	BN	VM	
26	2017/10/25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	BN	VM	
27	2017/10/26	5	0	1	9	0	3	0	0	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0	0	21	SL	VM	
28	2017/10/27	5.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	BN	VM	
29	2017/10/28	5.25	0	0	3	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7	BN	VM	
30	2017/10/29	4.5	0	1	22	1	0	0	3	0	0	2	0	2	21	0	0	0	0	0	0	0	0	0	0	52	BN	VM	
31	2017/10/30	2	0	0	5	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	11	SL	VM	
32	2017/10/31	4.75	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	BN	VM	

TABLE 12											
STEEPLES, FALL 2017											
STEEPLES, SUMMARY WEATHER											
Day #		TEMP	RIDGE WIND		CLOUD		PRECIPITATION & NOTES	RIDGES	#	SITE	
			Direction	Velocity	%	type		migrant	raptors		
	Sep 20	NO OBSERVATION							no		
	Sep 21	NO OBSERVATION (weather)				100	low St	heavy overcast	obscured	no	
1	Sep 22	10	C	C	100	Cu, As	cloudy	clear after 1400	26	BN	
2	Sep 23	14	NE-E	L-M	50-30	Cu, Ac	sunny	clear	97	BN	
3	Sep 24	18	C-NE/E	C-L	30-100	Cu, Ac, As, Ci	partly sunny	clear	20	BN	
	Sep 25	NO OBSERVATION							no		
4	Sep 26	16-20	C	C	50-100	As, Ac	mainly cloudy	clear	3	BN	
	Sep 27	NO OBSERVATION							no		
5	Sep 28	19-24	C-W/SW	C-L	0		cloudless	clear	9	BN	
6	Sep 29	24	W	L-M	0		cloudless	clear	15	BN	
7	Sep 30	16-18	S-W	M-S	60-100	As, Cu, Ac	partly sunny; light rain 1300-1330	clear	4	BN	
8	Oct 1	12-9	C	C	70-100	St, Cu, Ci	steady rain after 1530	clear after 1500	29	BN	
	Oct 2	NO OBSERVATION							no		
9	Oct 3	7-18	C	C	0		cloudless	clear	10	BN	
	Oct 4	NO OBSERVATION							no		
10	Oct 5	17	C-W	C-L	0		cloudless	clear	3	BN	
11	Oct 6	10-16	S-SW	S	90-50	Cu, As	partly sunny	clear	10	BN	
12	Oct 7	10-15	W	M-S	50-70	As, Ac, Cu	partly sunny, brief rain showers	mainly clear	7	BM	
13	Oct 8	7-13	NE	M	70-90	Cu, As	partly sunny	clear	11	BN	
14	Oct 9	7-14	SW	C-M	50-70	Ci, As, Cu	partly sunny	clear	11	BN	
15	Oct 10	13	C	C	100	As	sunny breaks 1530-1630	clear	0	BM	
	Oct 11	NO OBSERVATION							no		
16	Oct 12	8-6	S	M-S	50-90	As, Cu	wet snow flurry 1430	clear	11	BN	
	Oct 13	NO OBSERVATION (weather)				100	low St	periodic light rain and snow	obscured	no	
17	Oct 14	7-5	S	M-S	100	As, Cu	cloudy	clear	21	BN	
18	Oct 15	9-11	S-SW	M-S	50-20	Cu, As, Ci	mainly sunny	clear	21	BN	
19	Oct 16	12	SW	S	40	Cu, Ac, As	sunny	clear	10	SL	
20	Oct 17	15-10	SW	VS	100	As, Cu	rain at 1545	mainly clear	4	BN	
	Oct 18	NO OBSERVATION							no		
	Oct 19	NO OBSERVATION (weather)				100	low St	rain and low overcast	obscured	no	
21	Oct 20	9	W	M	100	St, Cu, Ci	periodic light rain	obscured	0	BN	
22	Oct 21	8-6	S	M-S	100	St, As, Cu	light snow flurries 1200-1300	partly obscured	26	BN	
23	Oct 22	6-12	W-S	M-C	20-40	Cu, As	sunny	clear	50	BN	
24	Oct 23	12	W	L-C	20	Cu	sunny	clear	5	SL	
25	Oct 24	6-14	C	C	40-10	thin As, Cu	sunny	clear	12	BN	
26	Oct 25	12	SW	M-S	100	As, Cu	cloudy	clear	1	BN	
27	Oct 26	10-4	C	C	100-0	Ac	cloudless after 1530	clear	21	SL	
28	Oct 27	2-7	C	C	100-50	thin As, Cu, Ci	sunny	clear	1	BN	
29	Oct 28	3-12	C	C	0		cloudless after 1245	clear	7	BN	
30	Oct 29	2-10	C	C	40-50	Cu	light rain and obscured to 1430	partly obscured	52	BN	
31	Oct 30	7	C	C	60-0	As	cloudless after 1445	clear	11	SL	
32	Oct 31	-2 to 5	C	C	90-100	As, dark Cu	cloudy	clear	1	BN	
	Nov 1	NO OBSERVATION							no		
	Nov 2	NO OBSERVATION (weather)				100	low St	snow all day (30 cm)	obscured	no	
33	Nov 3	-6 to -2	C	C	60	As, Ac, lent	partially sunny over valley	obscured	54	KR	

TABLE 13																											
YEARLY SUMMARY FALL TOTALS, STEEPLES 2009-2017																											
	days	hrs.	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ME	GY	PG	PR	UA	UB	UE	UF	UU	T	raptors/hr
2009	41	148	2	1	146	7	37	4	5	0	0	9	0	13	226	1	1	0	0	0	0	0	1	0	0	453	3.06
2010	34	145.5	0	1	191	2	18	0	2	0	0	7	0	8	162	0	0	0	0	0	0	4	4	0	0	399	2.74
2011	23	73.5	0	1	130	0	15	0	2	0	0	18	0	1	93	1	0	0	1	0	0	0	1	0	0	263	3.58
2012	12	36	1	0	74	1	3	0	2	0	0	0	0	5	22	0	0	0	0	0	0	0	0	0	0	108	3.00
2013	16	43	0	0	21	0	12	0	2	0	0	6	0	3	106	0	0	0	0	0	0	0	0	0	0	150	3.49
2014	37	126.5	0	2	128	3	31	0	5	0	0	38	0	2	64	4	0	0	0	0	0	0	0	0	0	277	2.19
2015	35	123.3	0	4	230	3	35	2	2	0	0	12	0	3	96	1	0	0	0	0	0	0	0	0	0	388	3.15
2016	37	161.8	1	7	222	8	103	2	9	0	0	49	0	11	206	6	2	0	2	1	0	0	0	0	0	629	3.89
2017	41	185	1	7	276	16	78	1	13	5	0	51	0	15	146	8	2	0	2	0	0	1	3	0	0	625	3.38
TOTAL	276	1043	5	23	1418	40	332	9	42	5	0	190	0	61	1121	21	5	0	5	1	0	5	9	0	0	3292	
Av 09-16	29.4	107.2	0.5	2	143	3	31.8	1	3.63	0	0	17.4	0	5.75	121.88	1.63	0.38	0	0.38	0.13	0	0.5	0.75	0	0	333.38	3.14
17 cf Av	39.6	72.59	100	250	93.3	433	146	0	259			194		161	19.8	392	433		433	-100		100	300			87.48	7.75

TABLE 14																											
Comparison of the three RMERF sites, fall 2017																											
	DAYS	HRS	TV	OS	BE	NH	SS	CH	NG	BW	SW	RT	FH	RL	GE	AK	ML	GY	PG	PR	UA	UB	UE	UF	UU	TOTAL	raptors/hr
Mount Lorette	51	532.67	0	2	190	6	82	18	30	1	0	29	1	29	3233	3	5	4	7	6	3	10	8	3	2	3672	6.89
Vicki Ridge	52	418.89	0	11	350	19	751	94	109	33	1	234	6	515	2001	21	20	5	17	5	6	19	18	2	0	4237	10.20
Steeple	41	185	1	7	276	16	78	1	13	5	0	51	0	15	146	8	2	0	2	0	0	1	3	0	0	625	3.38
TOTALS	93	1136.6	1	20	816	41	911	113	152	39	1	314	7	559	5380	32	27	9	26	11	9	30	29	5	2	8534	

TABLE 15A							
		SPECIES MEDIAN PASSAGE DATES				IMMATURE:ADULT AGE RATIOS	
		VICKI RIDGE		MOUNT LORETTE		VICKI RIDGE	MOUNT LORETTE
TURKEY VULTURE							
OSPREY	28-Sep						
BALD EAGLE	30-Oct			27-Oct		0.57	0.41
NORTHERN HARRIER	01-Oct			01-Oct		1	
SHARP-SHINNED HAWK	01-Oct			30-Sep		0.07	0.19
COOPER'S HAWK	29-Sep			30-Sep		0.16	
NORTHERN GOSHAWK	12-Oct			08-Oct		0.33	0.4
BROAD-WINGED HAWK	03-Oct					0.76	
SWAINSON'S HAWK							
RED-TAILED HAWK	04-Oct			30-Sep		0.17	0.17
FERRUGINOUS HAWK	29-Sep					0.2	
ROUGH-LEGGED HAWK	23-Oct			13-Oct			
GOLDEN EAGLE	15-Oct			14-Oct		0.59	0.49
AMERICAN KESTREL	29-Sep			n/a			
MERLIN	28-Sep			07-Oct		1.38	
GYRFALCON	29-Oct			16-Oct			
PEREGRINE FALCON	07-Oct			10-Oct		0.25	1
PRAIRIE FALCON	25-Oct			14-Oct			
COMBINED SPECIES	15-Oct			14-Oct			
(Note: statistics are not calculated for less than 4 birds)							
TABLE 15B		PERCENTAGE OF RAPTOR GROUPS					
		LORETTE	VICKI RIDGE	STEEPLES			
TURKEY VULTURE		0	0	0.16			
OSPREY		0.05	0.26	1.12			
BALD EAGLE		5.17	8.26	44.16			
NORTHERN HARRIER		0.16	0.45	2.56			
ACCIPITERS		3.62	22.66	14.72			
BUTEOS		1.9	18.93	11.52			
GOLDEN EAGLE		88.04	47.23	23.36			
FALCONS		0.76	1.65	1.92			
EAGLES		93.44	55.91	68			
NON-EAGLE RAPTORS		6.56	44.09	32			