

## 8 Supplemental material

**Table S1: Overview of the number of Avalanche Canada avalanche bulletin assessments included in the present analysis.**

<b>Region</b>	<b>Mountain Range</b>	<b>2009/ 10</b>	<b>2010/ 11</b>	<b>2011/ 12</b>	<b>2012/ 13</b>	<b>2013/ 14</b>	<b>2014/ 15</b>	<b>2015/ 16</b>	<b>2016/ 17</b>	<b>Total</b>
<i>North Shore*</i>	<i>Coast Mtn</i>	71	120	122	122	122	60	121	0	738
<i>South Coast*</i>	<i>Coast Mtn</i>	0	0	0	0	0	0	0	125 <sup>A</sup>	125
South Coast	Coast Mtn	90	119	0	0	0	0	0	0	209
Sea-to-Sky	Coast Mtn	0	0	123 <sup>B</sup>	122	122	122	123	127 <sup>C</sup>	739
South Coast – Inland	Coast Mtn	0	0	123 <sup>B</sup>	122	122	122	123	125	737
Northwest – BC	Coast Mtn	85	118	0	0	0	0	0	0	203
Northwest Inland	Coast Mtn	0	0	123 <sup>D</sup>	122	122	122	121	123	733
Northwest Coastal	Coast Mtn	0	0	122 <sup>D</sup>	122	122	122	123	123	734
<i>Whistler Blackcomb*</i>	<i>Coast Mtn</i>	0	0	2	0	0	0	121	0	123
North Columbia	Columbia Mtn	98	116	122 <sup>E</sup>	122	122	122	123	130	955
Cariboo	Columbia Mtn	0	0	123 <sup>E</sup>	122	122	122	123	125	737
South Columbia	Columbia Mtn	87	116	123 <sup>F</sup>	122	122	122	122	125	939
Purcells	Columbia Mtn	0	0	122 <sup>F</sup>	121	122	122	123	127	737
Kootenay Boundary	Columbia Mtn	85	120	123	122	122	121	123	129	945
South Rockies	Rocky Mtn	92	118	123 <sup>G</sup>	122	122	121	122	125	945
Lizard Range	Rocky Mtn	0	0	123	122	122	121	123	127	738
<i>Bighorn Country – AB*</i>	<i>Rocky Mtn</i>	6	17	0	0	0	0	0	0	23
<i>North Rockies – BC*</i>	<i>Rocky Mtn</i>	12	17	0	0	0	0	0	0	29
Kananaskis Country**	Rocky Mtn	0	0	72	121	119	114	112	117	655
<i>Yukon*</i>	<i>n/a</i>	0	0	41	0	36	18	13	0	108
	<b>Total</b>	<b>626</b>	<b>861</b>	<b>1586</b>	<b>1584</b>	<b>1619</b>	<b>1531</b>	<b>1716</b>	<b>1628</b>	<b>11152</b>

\* Forecast regions excluded from analysis because of inconsistent records

5 \*\* Bulletins produced by Kananaskis Country, but hosted by Avalanche Canada

A Boundaries of North Shore expanded and renamed to South Coast

B Boundaries of South Coast separated into Sea-to-Sky and South Coast Inland

C Boundaries of Sea-to-Sky reduced to accommodate North Shore expansion

10 D Boundaries of Northwest – BC separated into Northwest Coastal and Northwest Inland

E Boundaries of North Columbia separated into Cariboo and North Columbia

F Boundaries of South Columbia reduced to accommodate the Purcells

G Boundaries of the South Rockies reduced to accommodate the Lizard Range

**Table S2: Overview of the number of Parks Canada public avalanche bulletin assessments included in the analysis.**

<b>Region</b>	<b>Mountain Range</b>	<b>2009/ 10</b>	<b>2010/ 11</b>	<b>2011/ 12</b>	<b>2012/ 13</b>	<b>2013/ 14</b>	<b>2014/ 15</b>	<b>2015/ 16</b>	<b>2016/ 17</b>	<b>Total</b>
Glacier	Columbia	0	0	146	178	170	170	172	158	994
Banff, Yoho and Kootenay	Rocky	0	0	140	181	181	175 <sup>A</sup>	181	169	1027
<i>Little Yoho*</i>	<i>Rocky</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>136</i>	<i>175</i>	<i>164</i>	<i>475</i>
Jasper	Rocky	0	0	144	173	156	151	155	159	938
<i>Waterton Lakes*</i>	<i>Rocky</i>	<i>0</i>	<i>0</i>	<i>40</i>	<i>45</i>	<i>52</i>	<i>44</i>	<i>65</i>	<i>60</i>	<i>306</i>
<b>Total</b>		<b>0</b>	<b>0</b>	<b>470</b>	<b>577</b>	<b>559</b>	<b>676</b>	<b>748</b>	<b>710</b>	<b>3740</b>

\* Forecast regions excluded from analysis because of inconsistent records

A Boundaries of Banff, Yoho, and Kootenay reduced to accommodate Little Yoho

**Table S3: Overview of weather data included in the present analysis and number of observations from each station during the study period.**

<b>Site name</b>	<b>Elevation (relative location)</b>	<b>Lat.</b>	<b>Long.</b>	<b>Source</b>	<b>Forecast region</b>	<b>2009 /10</b>	<b>2010 /11</b>	<b>2011 /12</b>	<b>2012 /13</b>	<b>2013 /14</b>	<b>2014 /15</b>	<b>2015 /16</b>	<b>2016 /17</b>
<b>Coastal Mountains</b>													
Whistler Roundhouse	1835 m (mtn)	50.07	-122.95	EC	Sea-to-Sky	116	120	NA	NA	121	117	116	121
Blowdown	1890 m (mid mtn)	50.40	-122.47	MOTI	South Coast Inland	121	121	122	121	119	121	122	121
Little Bear	1660 m (mtn)	49.60	-121.18	MOTI	South Coast Inland	121	120	120	120	120	112	121	116
<b>Columbia Mountains</b>													
Sliding Mountain	1675 m (mtn)	53.16	-121.48	MOTI	Cariboos	120	121	122	116	121	121	89	78
Sun Peaks	2055 m (mtn)	50.90	-119.92	EC	North Columbia	NA	NA	117	107	116	113	115	119
Apex	1750 m (mid mtn)	49.40	-119.90	MOTI	Kootenay Boundary	119	121	122	121	121	121	121	121
London Ridge	2070 m (mtn)	50.04	-117.24	MOTI	South Columbia	119	119	122	NA	121	115	119	117
Whitewater	1950 m (mtn)	49.44	-117.15	InfoEx	Kootenay Boundary	NA	104	112	114	108	103	NA	113
Kootenay Pass	1780 m (mid mtn)	49.06	-117.04	MOTI	Kootenay Boundary	120	121	NA	NA	120	117	NA	107
<b>Rocky Mountains</b>													
Chatter Creek	1615 m (valley)	51.86	-117.60	InfoEx	-	112	NA	108	111	106	NA	NA	113
Panorama	2356 m (mtn)	50.43	-116.20	InfoEx	Purcells	114	118	119	113	118	119	121	121
Lake Louise	2200 m (mtn)	51.46	-116.12	InfoEx	Banff, Kootenay Yoho	79	77	NA	112	99	112	119	119
Kananaskis	1890 m (valley)	50.79	-115.31	InfoEx	Kananaskis Country	84	101	111	109	89	110	109	112

MOTI Ministry of Transportation and Infrastructure  
EC Environment Canada  
NA Forecast regions excluded from analysis because of inconsistent records  
mid mtn Mid-mountain  
5 mtn Mountain ridgetop