Snow Survey and Water Supply Bulletin – March 1st, 2018

The March 1st, 2018 snow survey is now complete. Data from 133 snow courses and 78 automated snow weather stations around the province, collected by the Ministry of Environment Snow Survey Program and partners, and climate data from Environment and Climate Change Canada forms the basis of the following report[1].

Weather

The weather in February was very cold with high precipitation for most of the province. Temperatures in the Interior were well below normal (-2 to -7˚C). Temperatures were not as cold on Vancouver Island or the South Coast, and ranged from normal to slightly below normal (0 to -2˚C). Precipitation was well above normal for most locations in the Interior. A major snow storm affected a large area of the province in the first week of February, and several moderate storms continued to add to the Interior snow pack. Conditions were drier than normal on Vancouver Island and the South Coast.

Snowpack

Snow basin indices for March 1st 2018 range from a low of 68% of normal in the Stikine to a high of 144% in the Similkameen (Table 1 and Figure 1). Overall, the province has an above normal snow pack for March 1st. The average of all snow measurements across the province is 119% of normal, increasing significantly from 108% of normal on February 1st. A well-below normal snow pack is present in the Stikine (68%) and Northwest (73%). Near normal snow packs (80-110%) have accumulated in the Liard, Peace, Skeena-Nass, Nechako, North Thompson and Upper Fraser East. Above normal snow packs (110-130%) are present in the Lower Fraser, South Thompson, Upper Columbia, West Kootenay, South Coast, Vancouver Island and Central Coast. Well-above normal snow packs (>130%) are present in the Upper Fraser West, Okanagan, Similkameen, Boundary and Skagit. The Fraser River snow index as an entire watershed is 110% of normal.

Table 1 - BC Snow Basin Indices – March 1, 2018

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	138	Boundary	136
Upper Fraser East	108	Similkameen	144
Nechako	95	South Coast	128
Middle Fraser	108	Vancouver Island	122
Lower Fraser	122	Central Coast	113
North Thompson	105	Skagit	135
South Thompson	111	Peace	90
Upper Columbia	112	Skeena-Nass	87
West Kootenay	127	Stikine	68
East Kootenay	120	Liard	80
Okanagan	141	Northwest	73

1. Every effort is made to ensure that data reported on these pages are accurate. However, in order to update the graphs and indices as quickly as possible, some data may have been estimated. Please note that data provided on these pages are preliminary and subject to revision upon review.

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Several large storm systems affected the North Coast and Interior in February, considerably increasing the snow pack. Most snow packs in the North Coast and Interior increased by 10% or more from February 1st values. Drier weather on Vancouver Island and the South Coast dropped snow pack indices by 10-30% of normal compared to February 1st.

Outlook

La Niña conditions in the equatorial Pacific Ocean have eased over the past month. The Climate Prediction Centre (CPC) at the U.S. National Weather Service/NOAA is forecasting a high likelihood transitioning to ENSO-neutral conditions into the spring. While La Niña is waning, it is not uncommon for the effects of La Nina to persist several months beyond the period of the defined La Niña event. For example, snow packs in previous La Niña events in British Columbia tended to grow more rapidly than normal through the March and April periods. Province-wide snow basin indices during La Niña years tend to increase by 3-5% over the March 1st to April 1st period, and increase by 5-10% over March 1st to May 1st. While there is still uncertainty over how weather patterns will play out over the next few months, continued increases in snow basin indices into April and May are likely to occur, given this year's La Niña context

Seasonal forecasts (March to May) from Environment and Climate Change Canada indicate an increased likelihood of normal temperatures across most of British Columbia. Short-to-medium term forecasts suggest some warming through the end of the current week, and a transition to cooler and wetter weather into the middle of the month.

Nearly 80% of the annual BC snow pack typically accumulates by early March. Very high snow packs (>135%) in the South Interior (including the Skagit, Similkameen, Okanagan, Boundary and Upper Fraser West), and high snow packs (>120%) in the Kootenay indicate an increased seasonal risk of flooding. Given this year's La Niña conditions, it is unlikely that the risk will ease much prior to the melt season. While the snow pack in the overall Fraser River basin is moderately above normal (110%), a high snow pack (122%) in the Lower Fraser, can contribute to increased spring flood risk on the Lillooet River and tributaries; increased seasonal runoff in the spring can also contribute higher local inflows to the lower reaches of the Fraser River. Given the potential for increasing snow packs over the next 4-8 weeks, there is the possibility of increasing seasonal flood risk in other areas of the province.

Seasonal volume runoff forecasts (see below) are near-normal (95-110%) for the Upper Fraser, Middle Fraser, Thompson and Skeena/Bulkley basins, and well above-normal (>130%) for areas of the South Interior, including the Okanagan, Similkameen and Nicola. Similarly, the snowmelt component of seasonal runoff on Vancouver Island, South Coast, Lower Fraser and Skagit is expected to be higher than normal given the high snow pack in those regions. Below normal snow packs in the North-west and Stikine are an early indication of the potential for below normal seasonal runoff.

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Snow pack is one element of seasonal flood risk during BC's freshet season. Weather patterns during the snow melt season play a critical role in whether or not flooding occurs. Intense or prolonged rainfall and extreme temperatures are important factors that can lead to flooding, even for areas with a near normal snow pack.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal flood risk forecast in the April 1st 2018 bulletin, which is scheduled for release on April 9th.

BC River Forecast Centre
March 8, 2018

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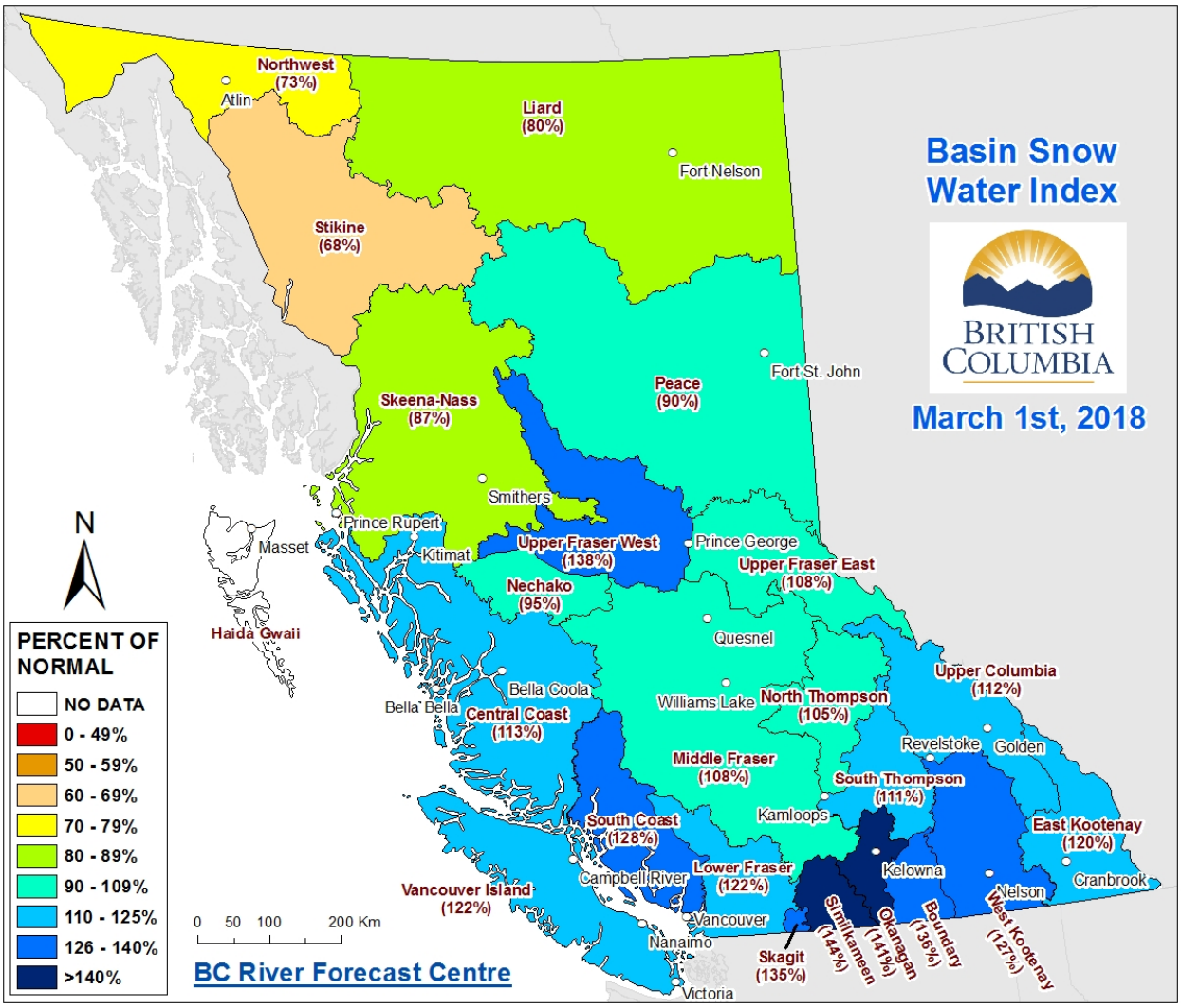
Figure 1: Basin Snow Water Index – March 1st, 2018



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2018 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2017 SWE (mm)	2016 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	Yellowhead Lake	Upper Fraser East	1847	2018-03-01	156	495		111%	321	398	254	720	445	21
1A02P	McBride Upper	Upper Fraser East	1608	2018-03-01	111	398		107%	275	338	198	562	372	26
1A03P	Barkerville	Upper Fraser East	1483	2018-03-01	127	290		99%	203	218	123	479	292	43
1A05	LONGWORTH (UPPER)	Upper Fraser East	1693	N	N	N	N		N		296	1104	676	63
1A05P	Longworth Upper	Upper Fraser East	1740	2018-03-01	260	654			379		379	379		1
1A06A	HANSARD	Upper Fraser East	622	2018-03-01	83	191		112%	101	64	44	396	170	45
1A10	PRINCE GEORGE A	Upper Fraser East	684	N	N	N	N		55	83	0	296	117	56
1A11	PACIFIC LAKE	Upper Fraser East	756	2018-02-26	248	660		121%	341	321	165	866	546	55
1A12	KAZA LAKE	Upper Fraser West	1247	2018-02-27	115	287		97%	162	257	132	478	295	54
1A12P	Kaza Lake	Upper Fraser West	1248	2018-03-01	110	269			199	257	199	257		2
1A14P	Hedrick Lake	Upper Fraser East	1118	2018-03-01	258	627		96%		366	214	1066	654	17
1A15	KNUDSEN LAKE	Upper Fraser East	1598	2018-02-26	254	787		114%	457	531	404	1098	692	48
1A15P	Knudsen Lake	Upper Fraser East	1601	2018-03-01		541			599		599	599		1
1A16	BURNS LAKE	Upper Fraser West	820	2018-02-28	84	200		154%	72	98	50	250	130	48
1A17P	Revolution Creek	Upper Fraser East	1676	2018-03-01	249	679		101%	398	621	326	1133	674	33
1A19P	Dome Mountain	Upper Fraser East	1768	2018-03-01		534		87%	405	502	298	912	611	12
1A23	BIRD CREEK	Upper Fraser West	1196	2018-03-02	123	296		226%	98	126	72	232	131	28
1B01	MOUNT WELLS	Nechako	1489	2018-03-02	206	531		117%	426	323	244	954	452	66
1B01P	Mount Wells	Nechako	1489	2018-03-01		533		113%	475	362	227	739	470	26
1B02	TAHTSA LAKE	Nechako	1319	2018-02-27	268	865		84%	961	866	571	1777	1034	66
1B02P	Tahtsa Lake	Nechako	1319	2018-03-01		1113		100%	1076	960	464	1725	1108	26
1B05	SKINS LAKE	Nechako	877	2018-02-27	82	176		171%	75	88	53	226	103	53
1B06	MOUNT SWANNELL	Nechako	1596	2018-03-02	130	314		125%	222		132	446	252	29
1B07	NUTLI LAKE	Nechako	1502	2018-03-02	176	444		97%	483	342	229	779	460	27
1B08P	Mount Pondosy	Nechako	1413	2018-03-01		692		101%	699	593	363	995	686	26
1C01	BROOKMERE	Middle Fraser	994	2018-02-28	80	229		137%	174	148	53	351	167	73
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2018-02-26	150	467		95%	468	406	222	1016	492	66
1C05P	McGillivray Pass	Middle Fraser	1766											
1C06	PAVILION	Middle Fraser	1209	2018-03-05	46	94		162%	70	60	0	168	58	61
1C08	NAZKO	Middle Fraser	1029	2018-03-01	57	112		175%	45	63	0	142	64	43
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	2018-03-05	67	156		203%	N	106	25	229	77	50
1C12P	Green Mountain	Middle Fraser	1766	2018-02-26	196	685		91%	574	758	429	1265	751	24
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	N	N	N	N		280	444	238	624	428	47
1C14	BRALORNE	Middle Fraser	1382	2018-02-26	65	171		115%	169	80	0	363	149	54
1C14P	Bralorne	Middle Fraser	1382											
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2018-03-02	106	258		97%	181	360	141	468	266	57
1C18P	Mission Ridge	Middle Fraser	1903	2018-03-01		557		117%	481	375	160	866	475	48

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1C19	GNAWED MOUNTAIN	Middle Fraser	1617	2018-03-01	79	191		199%	N	111	15	259	96	49
1C20P	Boss Mountain Mine	Middle Fraser	1477	2018-03-01	189	504		103%	327	572	255	739	487	24
1C21	BIG CREEK	Middle Fraser	1130	2018-02-27	46	94		196%	40	46	0	112	48	47
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2018-02-28	46	72		131%	46	44	0	128	55	48
1C23	PENFOLD CREEK	Middle Fraser	1687	NS	NS	NS	NS		N	778	453	1132	807	42
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2018-02-27	81	194		162%	132	178	13	213	120	45
1C28	DUFFEY LAKE	Middle Fraser	1253	2018-03-05	264	680	A	159%	366	434	194	762	428	40
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2018-02-27	104	298		138%	221	188	100	398	216	37
1C32	DEADMAN RIVER	Middle Fraser	1463	N	N	N	N		110	170	44	220	100	34
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2018-02-27	91	196		113%	N	154	116	211	173	11
1C37	BRALORNE(UPPER)	Middle Fraser	1980	N	N	N	N		550	560	268	944	543	23
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2018-02-26	186	652		88%	654	782	302	1250	737	23
1C38P	Downton Lake Upper	Middle Fraser	1829	2018-03-01		626			667	685	667	685		2
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2018-02-26	172	576		113%	516	584	146	954	508	23
1C40	TYAUGHTON	Middle Fraser	1946	2018-02-26	143	454		114%	332		138	916	399	23
1C40P	North Tyaughton	Middle Fraser	1969	2018-03-01		422			291	267	267	291		2
1C41P	Yanks Peak East	Middle Fraser	1683	2018-03-01	241	727		111%	488	661	365	904	655	21
1C42	CAVERHILL LAKE	Middle Fraser	1400	2018-03-01	113	280			148	246	60	270		13
1D06P	Tenquille Lake	Lower Fraser	1669	2018-03-01	307	1003		124%	912	945	518	1227	810	17
1D08	STAVE LAKE	Lower Fraser	1211	2018-03-03	378	1417		120%	1030	1026	120	2500	1178	51
1D09	WAHLEACH LAKE	Lower Fraser	1395	2018-03-03	158	463		99%	368	374	37	1072	468	51
1D09P	Wahleach Lake Upper	Lower Fraser	1408	2018-03-01		927		110%	430	565	251	1320	846	26
1D10	NAHATLATCH RIVER	Lower Fraser	1530	N	N	N	N		939	1028	400	2380	1092	49
1D16	DICKSON LAKE	Lower Fraser	1147	2018-03-04	432	1715		145%	1160	824	22	1814	1186	27
1D17P	Chilliwack River	Lower Fraser	1621	2018-03-01	367	1502		124%	1022	1307	506	2353	1208	26
1D19P	Spuzzum Creek	Lower Fraser	1197	2018-03-01	345	1388		106%	1076	1106	265	2615	1312	19
1E01B	BLUE RIVER	North Thompson	673	2018-02-28	132	336		120%	280	284	160	411	280	34
1E02P	Mount Cook	North Thompson	1574	2018-03-01	344	1072		104%	787	1260	684	1319	1028	18
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2018-02-27	176	532		118%	420	442	216	778	452	44
1E05	KNOUFF LAKE	North Thompson	1189	N	N	N	N		124	126	36	284	124	61
1E07	ADAMS RIVER	North Thompson	1769	2018-02-28	205	628		112%	534	728	262	892	560	47
1E08P	Azure River	North Thompson	1625	2018-03-01						931	528	1339	934	20
1E10P	Kostal Lake	North Thompson	1760	2018-03-01	207	706		99%	607	755	417	1023	712	33
1E14P	Cook Creek	North Thompson	1280	2018-03-01	198				0	0	308	686	466	11
1F01A	ABERDEEN LAKE	South Thompson	1262	2018-02-26	89	250		188%	140	171	51	231	133	61
1F02	ANGLEMONT	South Thompson	1168	2018-03-01	147	445		138%	N	299	160	635	323	59
1F03P	Park Mountain	South Thompson	1857	2018-03-01		869		122%		729	379	1021	714	32

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1F04P	Enderby	South Thompson	1950	2018-03-01	341	882			712		712	712		1
1F06P	Celista Mountain	South Thompson	1533	2018-03-01					545	908	506	923	739	13
2A01A	CANOE RIVER	Upper Columbia	866	N	N	N	N		76	132	19	251	89	77
2A02	GLACIER	Upper Columbia	1249	2018-02-27	188	682		117%	417	578	251	952	585	80
2A03A	FIELD	Upper Columbia	1310	2018-02-26	76	183		124%	113	162	53	248	147	78
2A06P	Mount Revelstoke	Upper Columbia	1770	2018-03-01		1089		110%	862	1059	537	1487	992	25
2A07	KICKING HORSE	Upper Columbia	1648	2018-02-28	122	367		132%	216	296	140	462	279	71
2A11	BEAVERFOOT	Upper Columbia	1924	2018-02-26	81	198		119%	160	194	80	333	167	69
2A14	MOUNT ABBOT	Upper Columbia	2031	2018-02-24	291	1077		108%	892	882	508	1448	1000	59
2A16	GOLDSTREAM	Upper Columbia	1914	2018-03-06	283	974		102%	895	920	553	1351	954	55
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2018-02-25	324	1146		110%	824	976	534	1703	1043	55
2A18	KEYSTONE CREEK	Upper Columbia	1839	2018-03-06	224	712		106%	649	679	357	1277	671	52
2A18P	Keystone Creek	Upper Columbia	1850	2018-03-01		821			762	779	762	779		2
2A19	VERMONT CREEK	Upper Columbia	1533	2018-02-26	138	408		115%	355	434	152	643	356	52
2A21P	Molson Creek	Upper Columbia	1930	2018-03-01		961		108%	755	800	437	1215	887	37
2A22	SUNBEAM LAKE	Upper Columbia	2066	2018-03-06	273	922		123%	713	683	389	1117	751	51
2A23	BUSH RIVER	Upper Columbia	1982	2018-03-06	218	715		105%	676	684	281	1078	682	50
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2018-03-06	310	1059		107%	952	1072	526	1476	990	46
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2018-03-06	210	646		105%	422	626	338	1018	618	41
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2018-03-06	337	1190		104%	990	1108	335	2120	1146	40
2A30P	Colpitti Creek	Upper Columbia	2131	2018-03-01		836			650	651	650	651		2
2A31P	Caribou Creek Upper	Upper Columbia	2201	2018-03-01		890			740	779	740	779		2
2A32P	Wildcat Creek	Upper Columbia	2122	2018-03-01		526			434	446	434	446		2
2B02A	FARRON	Lower Columbia	1229	2018-03-06	156	442	B	160%	276	320	79	450	276	45
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2018-03-05	223	730		128%	351	558	285	918	570	57
2B06P	Barnes Creek	Lower Columbia	1595	2018-03-01		632		145%	227	513	227	690	437	25
2B07	KOCH CREEK	Lower Columbia	1813	2018-03-05	241	736		122%	531	704	269	996	601	57
2B08P	St. Leon Creek	Lower Columbia	1822	2018-03-01		1114		124%	780	960	416	1392	900	25
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2018-03-03	257	734		122%	710	845	147	1136	601	43
2C01	SINCLAIR PASS	East Kootenay	1374	2018-02-27	56	134		130%	96	114	44	262	103	70
2C04	SULLIVAN MINE	East Kootenay	1580	2018-03-01	114	318		135%	230	206	53	465	235	72
2C07	FERNIE EAST	East Kootenay	1213	2018-03-03	133	334		124%	302	192	61	584	270	67
2C09Q	Morrissey Ridge	East Kootenay	1966	2018-03-01		545		95%	463	566	233	1074	571	38
2C10P	Moyie Mountain	East Kootenay	1840	2018-03-01	119	430		129%	381	357	149	653	333	39
2C14P	Floe Lake	East Kootenay	2110	2018-03-01		698		120%	601	529	257	889	581	25
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2018-02-26	166	506		120%	437	401	185	680	421	49
2C16	MOUNT JOFFRE	East Kootenay	1763	2018-02-26	117	308		106%	243	283	122	551	291	49

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2C17	THUNDER CREEK	East Kootenay	2062	2018-02-26	103	256		120%	226	266	91	378	214	49
2D02	FERGUSON	West Kootenay	929	N	N	N	N		400	612	283	796	502	64
2D03	SANDON	West Kootenay	1072	2018-03-01	139	438	B	137%	295		196	475	319	38
2D04	NELSON	West Kootenay	952	2018-03-01	124	362		110%	264	197	118	558	328	78
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2018-02-28	168	494		131%	316	385	201	663	378	69
2D06	CHAR CREEK	West Kootenay	1290	2018-02-25	164	537		120%	418	400	221	754	447	52
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	N	N	N	N		188	82	52	322	144	26
2D08P	East Creek	West Kootenay	2004	2018-03-01		803		110%	716	865	312	1167	732	37
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2018-03-05	296	1007		117%	775		490	1534	859	51
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2018-02-28	247	739		122%	570	645	343	955	607	49
2D14P	Redfish Creek	West Kootenay	2086	2018-03-01	397	1231		129%	1093	1296	751	1256	954	16
2E01	MONASHEE PASS	Kettle	1387	2018-03-05	141	406		144%	158	300	149	442	282	59
2E02	CARMI	Kettle	1254	2018-02-26	73	191		147%	47	120	47	274	130	55
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2018-02-26	187	514		128%	208	495	208	676	402	52
2E07P	Grano Creek	Kettle	1874	2018-03-01	176	504		123%	338	524	206	679	411	20
2F01A	TROUT CREEK (West)	Okanagan	1430	2018-02-27	104	271		138%	120	211	93	229	196	7
2F01P	Trout Creek West	Okanagan	1420	2018-03-01										0
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2018-02-27	122	311		164%	178	235	97	381	190	57
2F03	MC CULLOCH	Okanagan	1266	2018-02-28	94	238		163%	117	224	71	249	146	78
2F04	GRAYSTOKE LAKE	Okanagan	1818	N	N	N	N		216	336	128	605	285	35
2F05P	Mission Creek	Okanagan	1794	2018-03-01	184	552		141%	274	486	208	608	392	48
2F07	POSTILL LAKE	Okanagan	1358	2018-03-01	88	252		146%	N	190	98	274	173	67
2F08P	Greyback Reservoir	Okanagan	1550	2018-03-01	106	298			159		159	159		1
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2018-02-24	173	538		120%	362	677	180	809	450	63
2F10P	Silver Star Mountain	Okanagan	1839	2018-03-01		659			445	622	445	622		2
2F11	ISINTOK LAKE	Okanagan	1651	2018-02-28	100	245		186%	117	131	53	358	132	53
2F12	MOUNT KOBAU	Okanagan	1817	2018-02-25	114	336		133%	270	333	61	488	253	52
2F13	ESPERON CR (UPPER)	Okanagan	1634	2018-02-25	132	382		116%	270	398	157	635	330	49
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	2018-02-25	123	348		121%	206		132	513	287	26
2F18P	Brenda Mine	Okanagan	1453	2018-03-01		331		105%	212	373	184	431	315	25
2F19	OOYAMA LAKE	Okanagan	1365	2018-02-28	94	238		165%	124	174	73	241	144	49
2F20	VASEUX CREEK	Okanagan	1403	2018-02-24	77	180		159%	60	132	52	284	113	46
2F21	BOULEAU LAKE	Okanagan	1405	2018-02-25	134	318		119%	212	288	165	432	267	47
2F23	MACDONALD LAKE	Okanagan	1742	2018-03-02	163	508		138%	310	475	170	583	368	41
2F24	ISLAHT LAKE	Okanagan	1492	2018-03-01	134	184		65%	183	305	161	497	285	36
2F25	POSTILL LAKE UPPER	Okanagan	1500	2018-03-01	102	274			N	242	112	242		7
2G03P	Blackwall Peak	Similkameen	1934	2018-03-01	255	832		125%	544	736	228	1323	665	50

2018 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
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2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2018-02-23	113	301	B	169%	139	220	92	508	178	58
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2018-02-23	94	238	B	131%	158	178	76	363	182	57
2G06	HAMILTON HILL	Similkameen	1477	2018-02-24	103	289	B	108%	219	190	102	676	267	56
3A01	GROUSE MOUNTAIN	South Coast	1126	2018-03-01	373	1425		148%	1036	920	0	2320	966	68
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS	NS	NS	NS		NS		868	868	868	2
3A05	POWELL RIVER (LOWER)	South Coast	882	NS	NS	NS	NS		NS		588	588	588	2
3A09	PALISADE LAKE	South Coast	898	2018-03-06	340	1485		134%	952		0	3150	1106	66
3A10	DOG MOUNTAIN	South Coast	1007	2018-02-28	322	1250		131%	1029	792	0	2146	952	34
3A19	ORCHID LAKE	South Coast	1178	2018-03-06	430	1805		123%	1142		190	2960	1467	44
3A20	CALLAGHAN CREEK	South Coast	1009	2018-02-26	250	951		135%	632	772	40	1260	702	41
3A22P	Nostetuko River	South Coast	1457	2018-03-01	140	527		114%	357	475	165	876	462	29
3A24P	Mosley Creek Upper	South Coast	1655	2018-03-01	137	358		135%	227	204	98	555	266	29
3A25P	Squamish River Upper	South Coast	1387	2018-03-01	435	1567		120%	1101	1337	558	2301	1303	28
3A26	CHAPMAN CREEK	South Coast	1022	2018-02-27	343	1360			956		662	1412	267	8
3A27	EDWARDS LAKE	South Coast	1070	N	N	N	N		N		380	944	201	5
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2018-02-26	312	1353		112%	927	1168	101	2730	1203	63
3B02A	MOUNT COKELY	Vancouver Island	1267	N	N	N	N		N		14	1034	662	34
3B04	ELK RIVER	Vancouver Island	270	2018-02-26	20	56		97%	136	0	0	546	58	62
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2018-02-26	261	1016		90%	868	880	0	2440	1128	60
3B17P	Wolf River Upper	Vancouver Island	1422	2018-03-01		1149		106%	864	1022	195	2085	1085	36
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2018-02-26	112	382		75%	438	342	0	1344	509	48
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2018-02-26	87	286		95%	N	178	0	1064	301	47
3B23P	Jump Creek	Vancouver Island	1134	2018-03-01	297	1246		147%	494	564	20	2228	849	22
3B24P	Heather Mountain Upper	Vancouver Island	1190	2018-03-01	363	1557			1097	1062	1062	1097		2
3B26P	Mount Arrowsmith	Vancouver Island	1465	2018-03-01	321	1169								0
3C07	WEDEENE RIVER SOUTH	North Coast	196	2018-03-06	143	527		126%	N	288	45	945	418	30
3C08P	Burnt Bridge Creek	North Coast	1329	2018-03-01	203	694		100%	583	598	282	1245	691	20
3D01C	SUMALLO RIVER WEST	Skagit	801	2018-03-04	117	307		141%	251	63	0	442	218	26
3D02	LIGHTNING LAKE	Skagit	1254	2018-03-03	110	322	B	129%	186	296	36	497	250	45
3D03A	KLESILKWA	Skagit	1134	N	N	N			236	124	0	759	228	70
4A02P	Pine Pass	Peace	1386	2018-03-01	298	881		100%	636	773	363	1485	880	29
4A03	WARE (UPPER)	Peace	1563	2018-03-01	97	233		106%	136	138	90	360	220	57
4A03P	Ware Upper	Peace	1565	2018-03-01	98	223			145		145	145		1
4A04	WARE (LOWER)	Peace	969	2018-03-01	83	177		106%	66		66	246	167	57
4A04P	Ware Lower	Peace	971	2018-03-01	75	196			91		91	91		1
4A05	GERMANSEN (UPPER)	Peace	1489	2018-02-27	117	287		98%	184	259	156	520	293	57
4A06	TUTIZZI LAKE	Peace	1043	2018-02-27	98	244		106%	102	176	102	386	230	54

2018 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
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4A07	LADY LAURIER LAKE	Peace	1460	2018-03-03	145	399		88%	N	329	194	662	452	54
4A09	PULPIT LAKE	Peace	1331	2018-02-28	130	345		93%	239	308	152	531	372	54
4A09P	Pulpit Lake	Peace	1331	2018-03-01	114	287		75%	200	268	133	471	381	28
4A10	FREDRICKSON LAKE	Peace	1323	2018-02-27	88	179		84%	86	156	86	315	213	54
4A11	TRYGVE LAKE	Peace	1409	2018-02-28	107	267		84%	186	230	119	453	319	54
4A12	TSAYDAYCHI LAKE	Peace	1173	2018-02-27	124	333		98%	267	307	166	540	340	54
4A13	PHILIP LAKE	Peace	1013	2018-02-27	91	227		94%	118	226	118	400	242	54
4A16	MORFEE MOUNTAIN	Peace	1427	2018-02-27	199	623		86%	460	572	265	1166	725	50
4A18	MOUNT SHEBA	Peace	1480	2018-02-26	246	733		103%	536	601	369	1123	712	49
4A20	MONKMAN CREEK	Peace	1566	2018-02-26	173	554		117%	396		190	925	472	43
4A21	MOUNT STEARNS	Peace	1514	2018-03-03	67	122		98%	137	40	41	227	124	44
4A25	FORT ST. JOHN A	Peace	692	2018-03-05	78	152		154%	81	79	34	191	99	43
4A27P	Kwadacha North	Peace	1554	2018-03-01	120	258			158		158	158		1
4A30P	Aiken Lake	Peace	1061	2018-03-01	80	166		72%	136	181	90	363	232	33
4A31P	Crying Girl Prairie	Peace	1358	2018-03-01		220			206	124	124	206		2
4A33P	Muskwa-Kechika	Peace	1196	2018-03-01		74			96	33	33	96		2
4A34P	Dowling Creek	Peace	1456	2018-03-01		1199			836		836	836		1
4B01	KIDPRICE LAKE	Skeena-Nass	1415	2018-02-27	208	697		85%	807	528	429	1320	817	66
4B02	JOHANSON LAKE	Skeena-Nass	1480	2018-02-27	91	202		80%	160	227	108	368	253	54
4B03A	HUDSON BAY MTN.	Skeena-Nass	1452	2018-02-28	149	478		108%	369	308	168	719	443	46
4B04	CHAPMAN LAKE	Skeena-Nass	1485	2018-03-02	172	482		118%	339	276	266	691	407	52
4B06	TACHEK CREEK	Skeena-Nass	1133	2018-02-27	94	224		115%	140	172	117	332	195	49
4B07	MCKENDRICK CREEK	Skeena-Nass	1048	2018-03-02	144	326		133%	158	190	155	391	246	48
4B08	MOUNT CRONIN	Skeena-Nass	1491	2018-03-02	211	557		112%	420	363	345	869	498	48
4B10	NINGUNSAW PASS	Nass	647	2018-02-27	107	239		60%	N	289	210	629	397	42
4B11A	BEAR PASS	Nass	437	2018-03-05	139	383		67%	350	393	87	824	574	32
4B12P	Granduc Mine	Skeena-Nass	790	2018-03-01	342				80		80	80		1
4B13A	TERRACE A	Skeena-Nass	219	2018-03-02	80	194		138%	N	42	0	407	141	35
4B14	EQUITY MINE	Skeena-Nass	1434	2018-02-27	144	424		127%	346	264	190	546	333	40
4B15	LU LAKE	Skeena-Nass	1296	2018-02-27	118	322		127%	214	184	122	412	254	40
4B15P	Lu Lake	Skeena-Nass	1308	2018-03-01	155	374		169%	235	208	116	405	221	20
4B16P	Shedin Creek	Skeena-Nass	1320	2018-03-01	184	479		66%	393	423	195	957	723	22
4B17P	Tsai Creek	Skeena-Nass	1360	2018-03-01	220	850		88%	732	606	302	1618	969	20
4B18P	Cedar-Kiteen	Skeena-Nass	912	2018-03-01					360	375	178	956	582	17
4C01	SIKANNI LAKE	Liard	1390	2018-03-01	94	190		80%	106	142	78	335	238	54
4C01P	Sikanni Lake	Liard	1400	2018-03-01	114	283			114		114	114		1
4C02	SUMMIT LAKE	Liard	1291	2018-02-28	66	106		95%	79	61	0	190	111	53

2018 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
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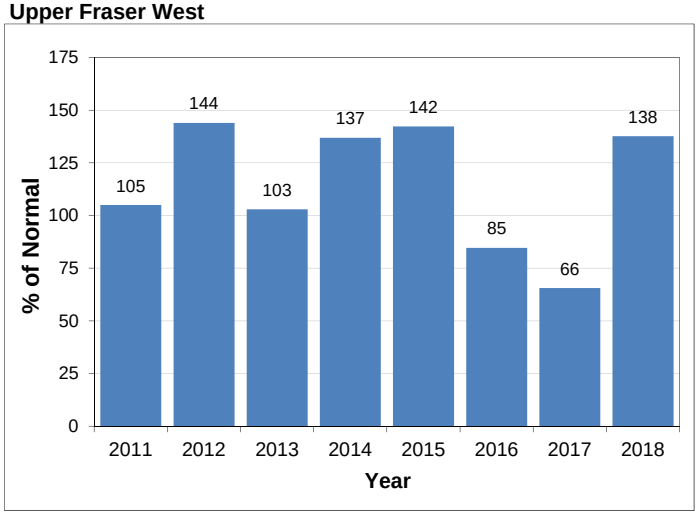
4C03	DEASE LAKE	Liard	805	N	N	N	N		N	63	45	229	124	52
4C05	FORT NELSON AIRPORT	Liard	368	2018-02-28	46	69		75%	57	64	38	177	92	50
4C15	JADE CITY	Liard	943	N	N	N	N		N	146	128	310	206	15
4D01	TELEGRAPH CREEK	Stikine	490	N	N	N	N		N	46	53	345	144	42
4D02	ISKUT	Stikine	931	N	N	N	N		N	35	33	176	105	42
4D11P	Kinaskan Lake	Stikine	1020	2018-03-01	54	148		43%	249	215	94	527	346	22
4E02B	ATLIN LAKE	Yukon	730	2018-02-27	38	70			85	87	68	166		12

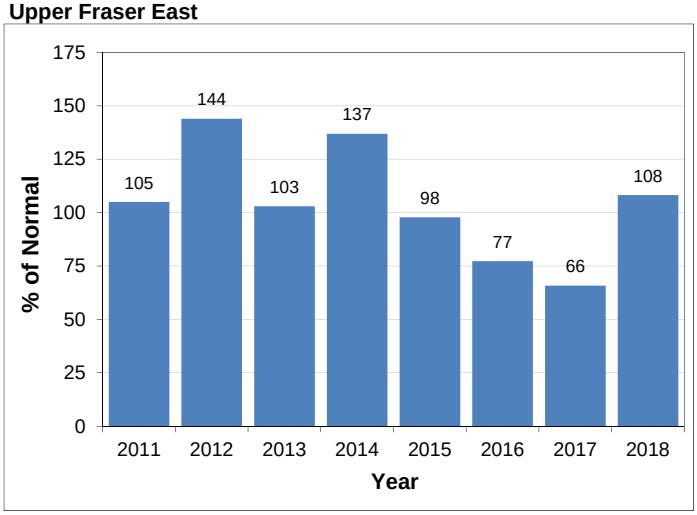
Code	Description
A	Sampling problems were encountered
B	Early or late sampling
C	Early or late sampling w/problems encountered
E	Estimate
N	Scheduled, but not sampled
NA	Not available
NS	Not scheduled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount

Snow Basin Index Graphs - March 1, 2018

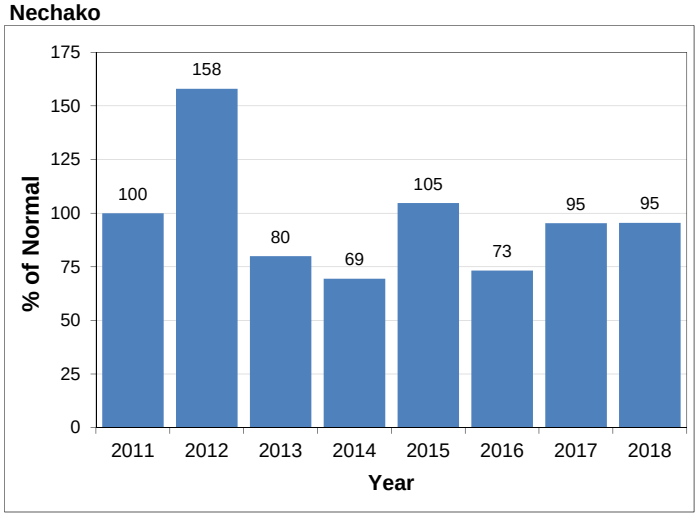
Upper Fraser West



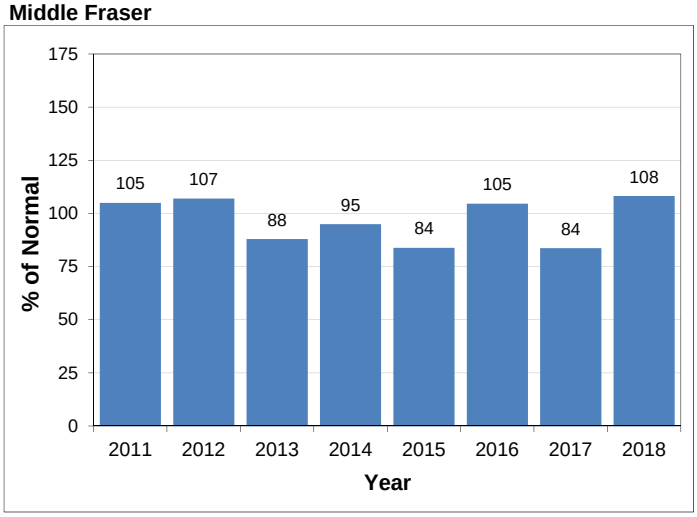
Upper Fraser East



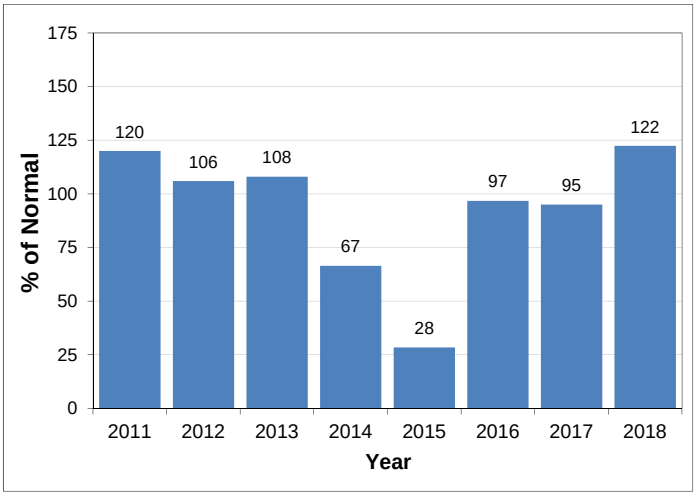
Nechako



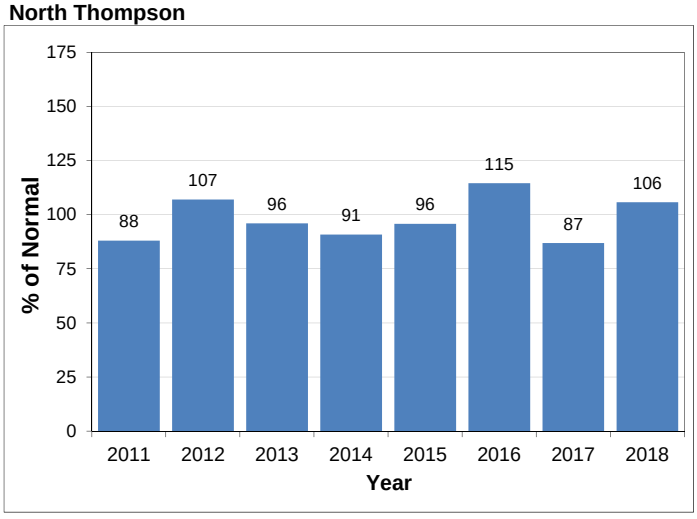
Middle Fraser



Lower Fraser

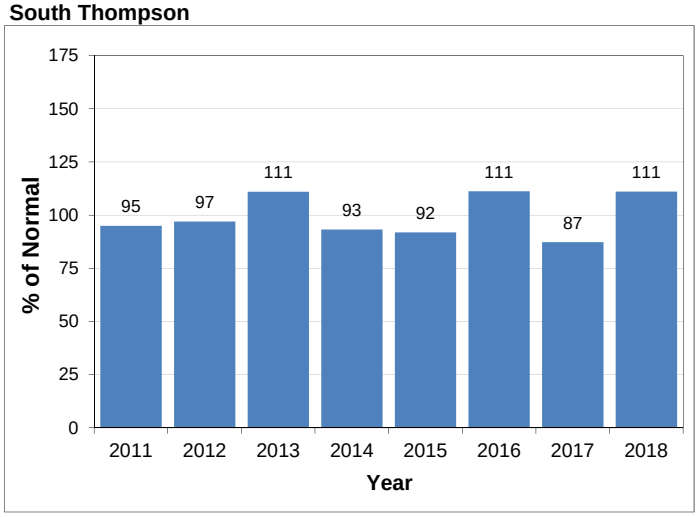


North Thompson

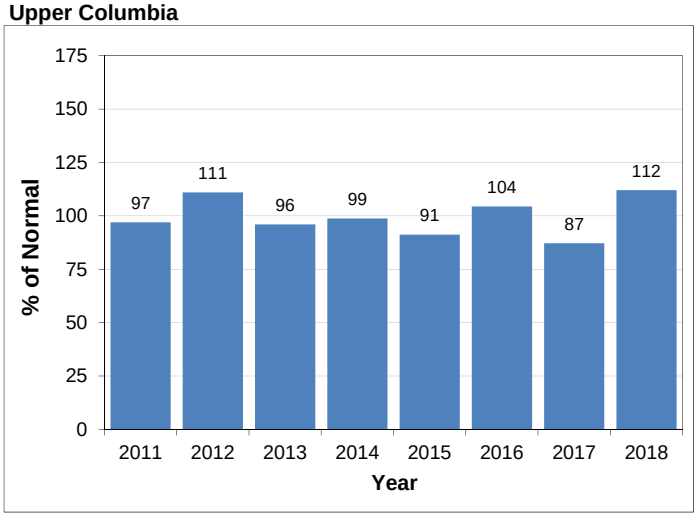


Snow Basin Index Graphs - March 1, 2018

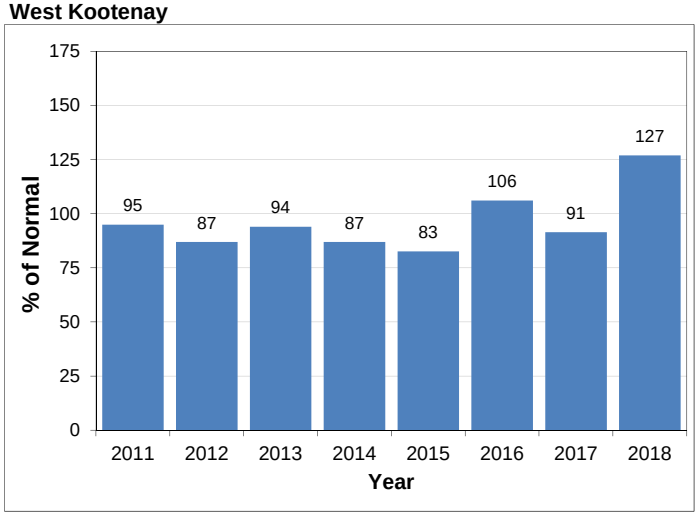
South Thompson



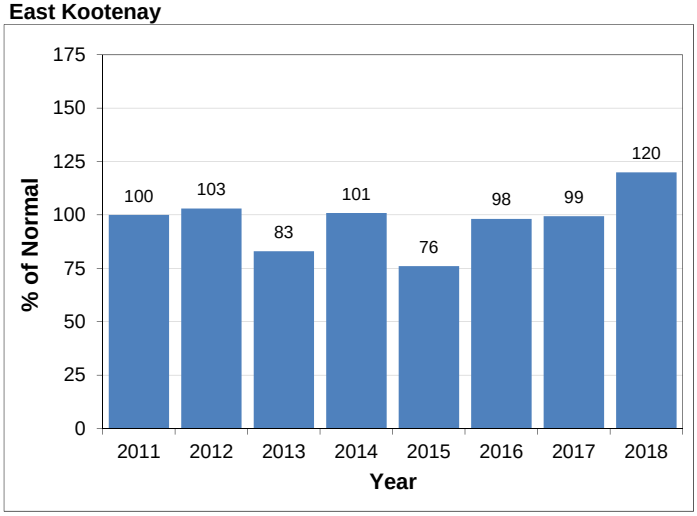
Upper Columbia



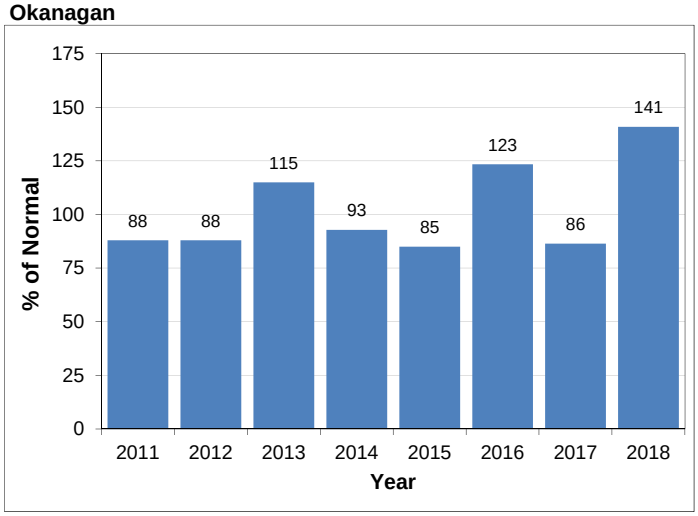
West Kootenay



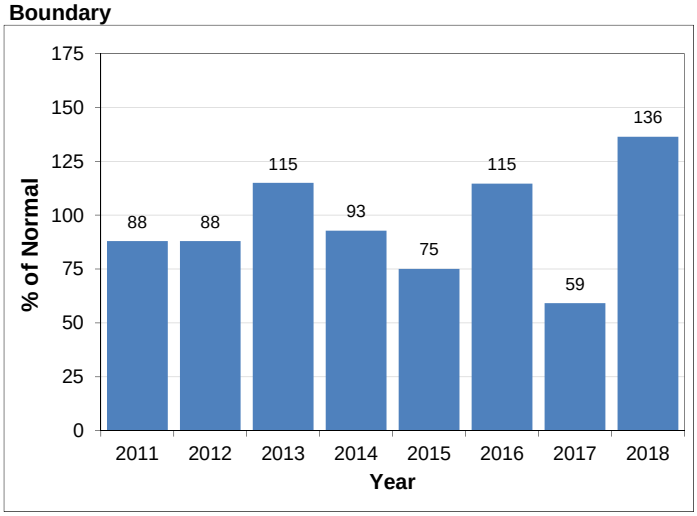
East Kootenay



Okanagan

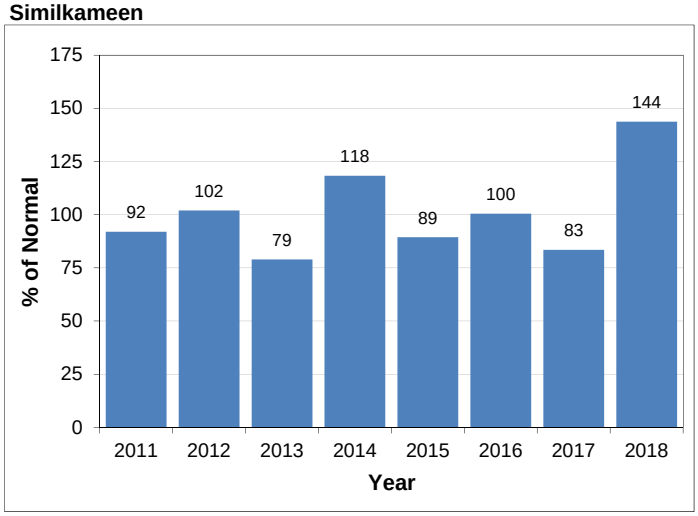


Boundary

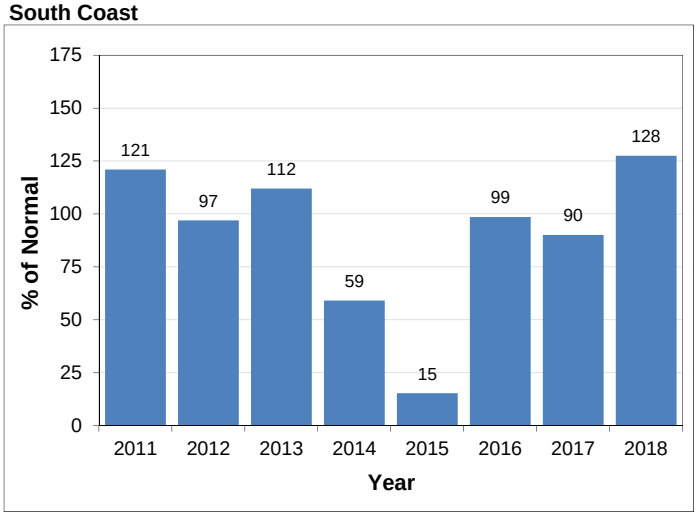


Snow Basin Index Graphs - March 1, 2018

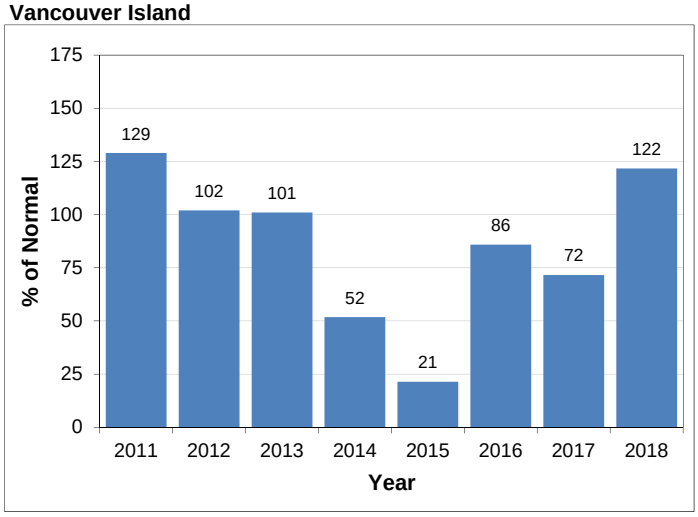
Similkameen



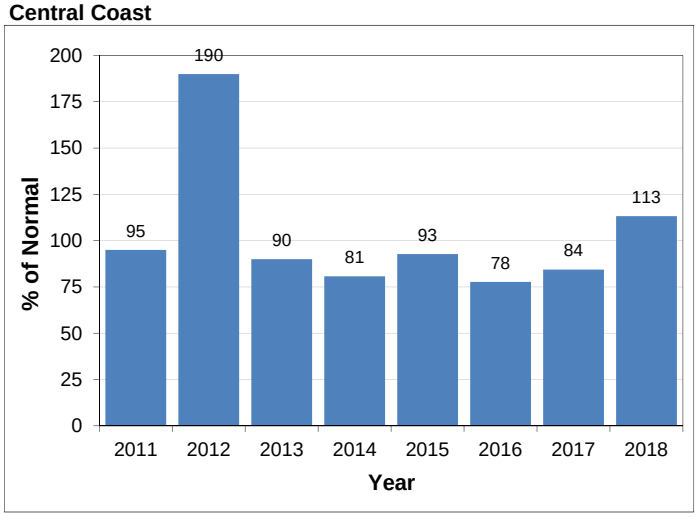
South Coast



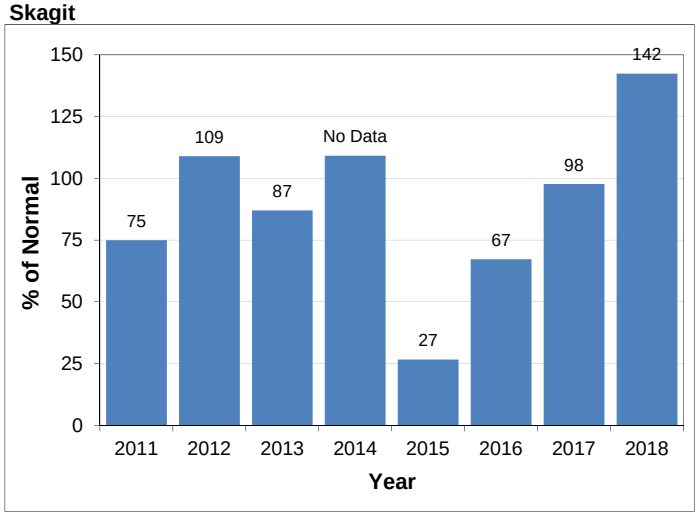
Vancouver Island



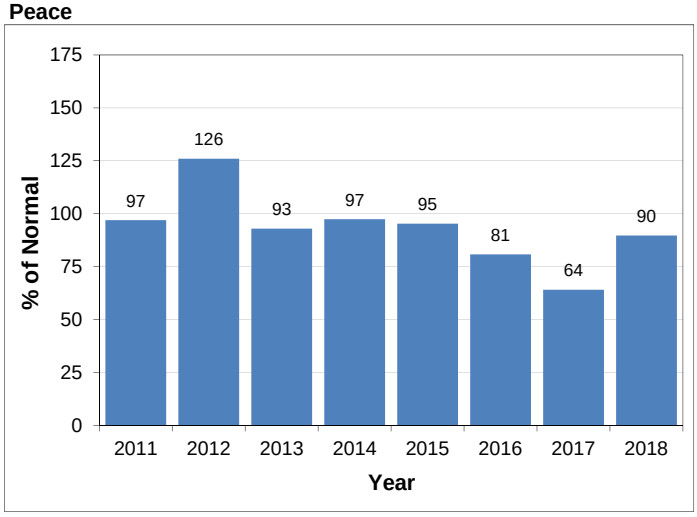
Central Coast



Skagit

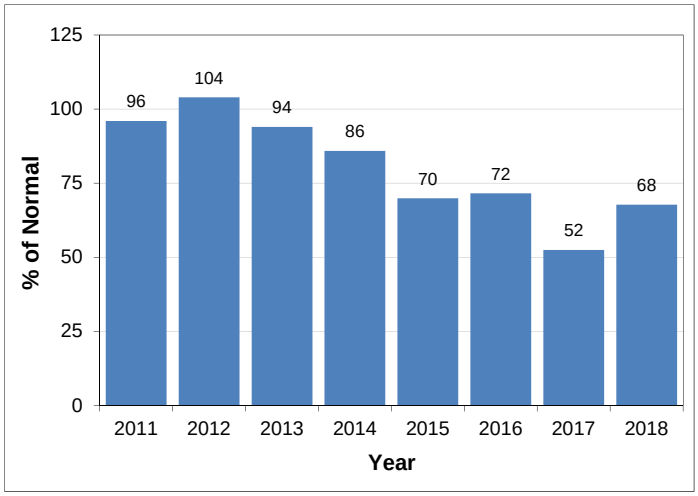


Peace

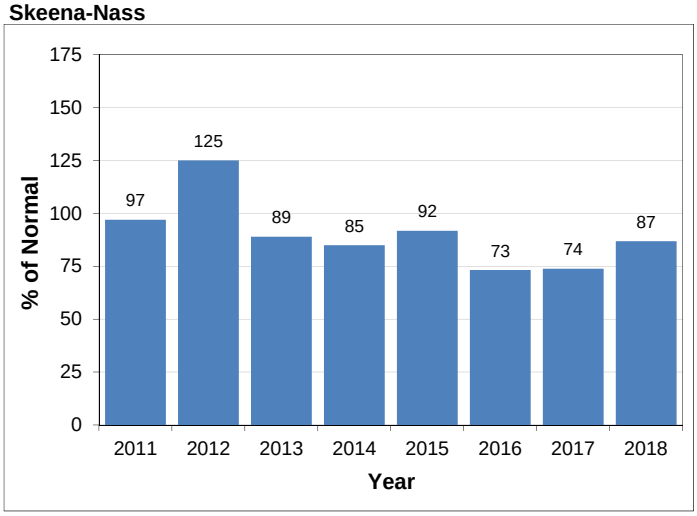


Snow Basin Index Graphs - March 1, 2018

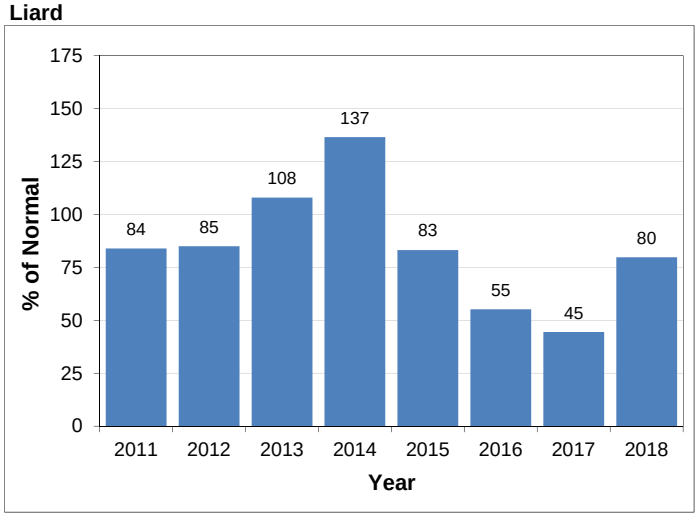
Stikine



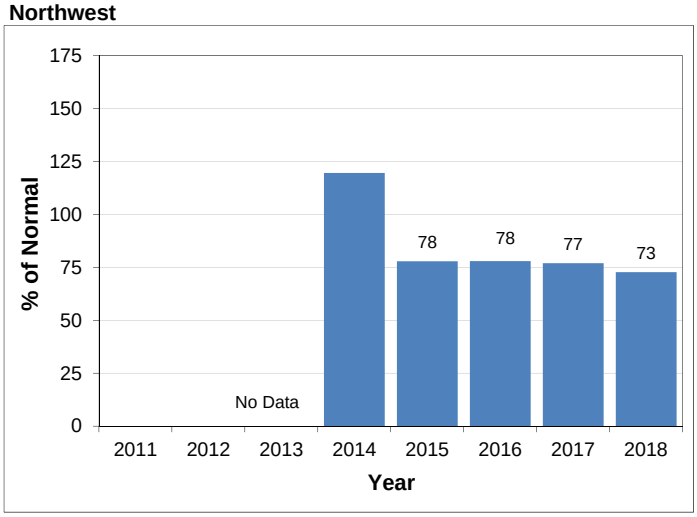
Skeena-Nass



Liard



Northwest



River Forecast Centre
Ministry of Forests, Lands and Natural Resource Operations
Volume Runoff Forecast March 2018

Location		Mar - Jun Runoff				Mar - Jul Runoff				Mar - Sep Runoff			
		Forecast ($kdam^3$)	Normal (1981-2010) ($kdam^3$)	% of Normal	Std. Error ($kdam^3$)	Forecast ($kdam^3$)	Normal (1981-2010) ($kdam^3$)	% of Normal	Std. Error ($kdam^3$)	Forecast ($kdam^3$)	Normal (1981-2010) ($kdam^3$)	% of Normal	Std. Error ($kdam^3$)
Upper Fraser Basin	Fraser at McBride					3872	3786	102	331	5444	5252	104	390
	McGregor at Lower Canyon					4052	4087	99	490	5140	5132	100	639
	Fraser at Shelley					15721	16310	96	1494	19988	20369	98	1832
Middle Fraser Basin	Quesnel River at Quesnel					4626	4747	97	510	5971	6078	98	670
Thompson Basin	N. Thompson at McLure					9681	9190	105	536	12086	11359	106	826
	S. Thompson at Chase					6342	6111	104	566	8037	7678	105	832
	Thompson at Spences Bridge					16851	15775	107	1174	21388	19755	108	1814
Bulkley and Skeena	Bulkley at Quick					2880	2709	106	1361	3498	3306	106	1939
	Skeena at Usk					20119	19187	105	1335	24533	23531	104	1809
Nicola Lake	Inflows	166	126	132	31	190	143	133	35				
Nicola River	at Spences Bridge	764	523	146	82	885	591	150	103				
Similkameen River	at Nighthawk	1726	1342	129	158					2156	1652	130	184
	at Hedley	1455	1045	139	134					1733	1233	141	151
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	667	470	142	89	719	497	145	110				
	Kalamalka-Wood Lake Inflow	44	31	140	12	47	33	144	15				

Note: 1 $kdam^3$=1,000,000 m^3
Note that missing values reflect that forecasts were not made for that time interval
Disclaimer: Seasonal forecasts were developed using a Principle Component Analysis of snow pack, climate and streamflow data.
There is inherent uncertainty in runoff forecasts including potential errors in data and the unpredictable nature of seasonal weather
Use at your own risk