

Snow Survey and Water Supply Bulletin – March 1st, 2019

The March 1st snow survey is now complete. Data from 141 manual snow courses and 80 automated snow weather stations around the province (collected by the Ministry of Environment Snow Survey Program, BC Hydro and partners), and climate data from Environment and Climate Change Canada and the provincial Climate Related Monitoring Program have been used to form the basis of the following report¹.

Weather

February was very cold through the entire province as a stable arctic airmass remained in place for most of the month. Many cities recorded the coldest or second coldest average temperature for February. Temperature anomalies along the coast were -4 to -5 °C below normal; anomalies in the southern interior were -6 to -9 °C below normal, and weather stations in the north were up to -12.5 °C below normal.

Precipitation was variable in February throughout Environment and Climate Change Canada's provincial climate stations. Some stations were dry (e.g. Terrace) and some had greater than normal precipitation (e.g. Williams Lake). However, higher elevation automated snow weather stations recorded very low precipitation relative to normal conditions. Many sites along the Coast and Vancouver Island also recorded much lower than normal precipitation amounts during February.

Snowpack

Snow basin indices for March 1st, 2019 range from a low of 59% of normal in the Stikine to a high of 106% in the Upper Fraser West (Table 1 and Figure 1). The province ranges from well below normal snowpack to normal snowpack for March 1st, with the average of all snow measurements across the province calculated to be 89% of normal. Well below normal snowpack (<60% of normal) is present in the Stikine, while below normal snowpack (60-80% of normal) exists in the Similkameen, Skagit, Central Coast and Nechako. The rest of the province has slightly below normal to normal snowpack (80-110% of normal). There are no regions of the province with exceptionally high snowpack. The March 1st snow basin index for the entire Fraser River is 91% of normal.

So far this season, snow accumulation has been dominated by persistent weather patterns. Most of this year's snowpack built up rapidly over a five to six-week period from early-December to early-January. Weather through February shifted into the dominance of Arctic air across the province, with extremely cold temperatures and limited snow accumulation. This pattern has continued into the beginning of March. Snowpack throughout the province remained relatively level through February. Most basins dropped by 5 to 15% relative to normal compared to February 1 due to the dry and cold conditions.

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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Table 1 - BC Snow Basin Indices – March 1, 2019

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	106	Boundary	68
Upper Fraser East	96	Similkameen	72
Nechako	79	South Coast	89
Middle Fraser	100	Vancouver Island	85
Lower Fraser	86	Central Coast	78
North Thompson	100	Skagit	75
South Thompson	83	Peace	103
Upper Columbia	100	Skeena-Nass	82
West Kootenay	90	Stikine	59
East Kootenay	88	Liard	76
Okanagan	81	Northwest	71
Nicola	81	Fraser	91

Outlook

The Climate Prediction Centre (CPC) at the U.S. National Weather Service/NOAA has declared that El Niño conditions are present and is forecasting a high likelihood of El Niño continuing through spring 2019. Sea surface temperature anomalies in the equatorial Pacific Ocean have strengthened since the beginning of February. Typically, El Niño is linked to warmer winters across British Columbia, with a trend towards lower than normal snowpack. Warmer temperatures were present throughout the province in December and January. However, a strong arctic airmass significantly influenced British Columbia in February and offset these typical El Niño impacts. February temperatures through the province were much lower than normal, reaching record lows in several regions. The impact of El Niño on winter snowpack in BC is highly variable and does not always mean lower snowpack - for example, 2006-07 had significant snowpack across the province. Seasonal weather forecasts from Environment and Climate Change Canada show an increased likelihood of below normal temperatures for most of the province over March to May. NOAA seasonal forecasts for the contiguous United States indicate an increased likelihood of above normal temperatures across Washington, Idaho, Montana and Alaska.

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By early March, nearly 80% of the annual BC snowpack has typically accumulated. Currently, the snow accumulation ranges from well below normal to normal for March 1st across the province. However, seasonal snowpack can still change significantly with one to two more months of possible snow accumulation left in winter/spring 2019.

At this stage in the season there is no elevated flood risk present in the current snowpack across the province. For example, peak flows at the Fraser River at Hope during normal snowpack years range between 7,000 and 12,000 m³/s. While snow is one significant aspect to seasonal flooding in BC, weather during the freshet season also plays a key role, and flooding is possible in years with near normal snowpack.

Seasonal volume runoff forecasts (see below) are near-normal (85-105%) for the Upper Fraser, Middle Fraser Thompson, Skeena/Bulkley, and Okanagan Lake basins, and below-normal (<85%) for the Similkameen, Nicola Lake and Kalamalka-Wood Lake. The snowmelt component of seasonal runoff for Vancouver Island, South Coast, and Lower Fraser is near normal. Well below normal snowpack in the Northwest and Stikine is an early indication of the potential for below normal seasonal runoff.

The River Forecast Centre will continue to monitor snowpack conditions and will provide an updated seasonal flood risk forecast in the April 1st, 2019 bulletin, which is scheduled for release on April 8th.

BC River Forecast Centre
March 8, 2019

River Forecast Centre
Ministry of Forests, Lands and Natural Resource Operations
Volume Runoff Forecast March 2019

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				3721	3786	98	331	5290	5252	101	390	
	McGregor at Lower Canyon				3797	4087	93	490	4871	5132	95	639	
	Fraser at Shelley				16021	16310	98	1494	20164	20369	99	1832	
Middle Fraser Basin	Quesnel River at Quesnel				5003	4747	105	510	6446	6078	106	670	
Thompson Basin	N. Thompson at McLure				8776	9190	95	536	10981	11359	97	826	
	S. Thompson at Chase				5123	6111	84	566	6435	7678	84	832	
	Thompson at Spences Bridge				13850	15775	88	1174	17481	19755	88	1814	
Bulkley and Skeena	Bulkley at Quick				2268	2709	84	1361	2822	3306	85	1939	
	Skeena at Usk				17646	19187	92	1335	21968	23531	93	1809	
Nicola Lake	Inflows	99	126	79	31	112	143	79	35				
Nicola River	at Spences Bridge	408	523	78	82	453	591	77	103				
Similkameen River	at Nighthawk	1085	1342	81	158					1291	1652	78	184
	at Hedley	770	1045	74	134					869	1233	71	151
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	432	470	92	89	455	497	92	110				
	Kalamalka-Wood Lake Inflow	23	31	73	12	23	33	71	15				

Note: 1 kdam³=1,000,000 m³

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

2019 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	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	Yellowhead Lake	Upper Fraser East	1847	2019-03-01	140				495	321	254	720	445	21
1A02P	McBride Upper	Upper Fraser East	1608	2019-03-01	120	360		97%	398	275	198	562	372	26
1A03P	Barkerville	Upper Fraser East	1483	2019-03-01	112	302		103%	290	203	123	479	292	43
1A05	LONGWORTH (UPPER)	Upper Fraser East	1693	2019-02-25	213	744		110%			296	1104	676	63
1A05P	Longworth Upper	Upper Fraser East	1740	2019-03-01	240	705			654	379	379	654		2
1A06A	HANSARD	Upper Fraser East	622	2019-03-04	78	148		87%	191	101	44	396	170	45
1A10	PRINCE GEORGE A	Upper Fraser East	684	2019-03-01	67	144		123%		55	0	296	117	55
1A11	PACIFIC LAKE	Upper Fraser East	756	2019-02-25	184	530		97%	660	341	165	866	546	55
1A12	KAZA LAKE	Upper Fraser West	1247	2019-02-26	104	300		102%	287	162	132	478	295	54
1A12P	Kaza Lake	Upper Fraser West	1248	2019-03-01	108	288			269	199	257	257		3
1A14P	Hedrick Lake	Upper Fraser East	1118	2019-03-01	183	550		84%	627		214	1066	654	18
1A15	KNUDSEN LAKE	Upper Fraser East	1598	2019-02-25	186	657		95%	787	457	404	1098	692	48
1A15P	Knudsen Lake	Upper Fraser East	1601	2019-03-01	171	444			541	599	541	599		2
1A16	BURNS LAKE	Upper Fraser West	820	2019-02-28	58	116		89%	200	72	50	250	130	48
1A17P	Revolution Creek	Upper Fraser East	1676	2019-03-01	188	633		94%	679	398	326	1133	674	33
1A19P	Dome Mountain	Upper Fraser East	1768	2019-03-01	161	531		87%	534	405	298	912	611	12
1A23	BIRD CREEK	Upper Fraser West	1196	2019-02-27	78	174		133%	296	98	72	296	131	28
1B01	MOUNT WELLS	Nechako	1489	2019-02-27	125	339		75%	531	426	244	954	452	66
1B01P	Mount Wells	Nechako	1489	2019-03-01		409		87%	533	475	227	739	470	26
1B02	TAHTSA LAKE	Nechako	1319	2019-02-27	226	780		75%	865	961	571	1777	1034	66
1B02P	Tahtsa Lake	Nechako	1319	2019-03-01		868		78%	1113	1076	464	1725	1108	26
1B05	SKINS LAKE	Nechako	877	2019-02-27	48	107		104%	176	75	53	226	103	53
1B06	MOUNT SWANNELL	Nechako	1596	2019-02-27	98	245		97%	314	222	132	446	252	29
1B07	NUTLI LAKE	Nechako	1502	2019-02-27	117	324		70%	444	483	229	779	460	27
1B08P	Mount Pondosy	Nechako	1413	2019-03-01		523		76%	692	699	363	995	686	26
1C01	BROOKMERE	Middle Fraser	994	2019-02-28	58	116		69%	229	174	53	351	167	73
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2019-03-01	143	445		90%	467	468	222	1016	492	66
1C05P	McGillivray Pass	Middle Fraser	1766	2019-03-01		464								
1C06	PAVILION	Middle Fraser	1209	2019-03-01	15	40		69%	94	70	0	168	58	61
1C08	NAZKO	Middle Fraser	1029	2019-02-26	37	81		127%	112	45	0	142	64	43
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	2019-02-28	49	90		117%	156		25	229	77	51
1C12P	Green Mountain	Middle Fraser	1766	2019-03-01		684		91%	685	574	429	1265	751	24
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2019-02-28	147	552		129%		280	238	624	428	46
1C14	BRALORNE	Middle Fraser	1382	2019-03-01	57	149		100%	171	169	0	363	149	54
1C14P	Bralorne	Middle Fraser	1382	2019-03-01	86	210								
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2019-03-03	102	280		105%	258	181	141	468	266	57
1C18P	Mission Ridge	Middle Fraser	1903	2019-03-01		392		83%	557	481	160	866	475	48

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1C19	GNAWED MOUNTAIN	Middle Fraser	1617	2019-02-28	59	130		135%	191		15	259	96	50
1C20P	Boss Mountain Mine	Middle Fraser	1477	2019-03-01	157	500		103%	504	327	255	739	487	24
1C21	BIG CREEK	Middle Fraser	1130	2019-02-25	20	31		65%	94	40	0	112	48	47
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2019-02-27	24	44		80%	72	46	0	128	55	48
1C23	PENFOLD CREEK	Middle Fraser	1687	2019-03-01	49	91		11%			453	1132	807	42
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2019-02-25	130	423		353%	194	132	13	213	120	45
1C28	DUFFEY LAKE	Middle Fraser	1253	2019-02-27	67	164		38%	680	366	194	762	428	40
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2019-03-01	52	110		51%	298	221	100	398	216	37
1C29P	Shovelnose Moutain	Middle Fraser	1460	2019-03-01	95	181								
1C32	DEADMAN RIVER	Middle Fraser	1463	2019-02-28	73	198		198%		110	44	220	100	33
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2019-03-01	158	526		304%	196		116	211	173	12
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2019-03-01	201	768		141%		550	268	944	543	22
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2019-03-01	161	556		75%	652	654	302	1250	737	23
1C38P	Downton Lake Upper	Middle Fraser	1829	2019-03-01		672			626	667	626	685		3
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2019-03-01	124	392		77%	576	516	146	954	508	23
1C40	TYAUGHTON	Middle Fraser	1946	2019-02-28	84	210		53%	454	332	138	916	399	23
1C40P	North Tyaughton	Middle Fraser	1969	2019-03-01		316			422	291	267	422		3
1C41P	Yanks Peak East	Middle Fraser	1683	2019-03-01	201	834		127%	727	488	365	904	655	21
1C42	CAVERHILL LAKE	Middle Fraser	1400	2019-03-01	279	1091			280	148	60	280		13
1D06P	Tenquille Lake	Lower Fraser	1669	2019-03-01	339	853		105%	1003	912	518	1227	810	17
1D08	STAVE LAKE	Lower Fraser	1211	2019-03-01	121	421	A	36%	1417	1030	120	2500	1178	51
1D09	WAHLEACH LAKE	Lower Fraser	1395	2019-03-01	253	1071		229%	463	368	37	1072	468	51
1D09P	Wahleach Lake Upper	Lower Fraser	1408	2019-03-01		562		66%	927	430	251	1320	846	26
1D10	NAHATLATCH RIVER	Lower Fraser	1530	2019-03-01	216	728		67%		939	400	2380	1092	48
1D16	DICKSON LAKE	Lower Fraser	1147	2019-02-26	281	1056		89%	1715	1160	22	1814	1186	27
1D17P	Chilliwack River	Lower Fraser	1621	2019-03-01	270	1148		95%	1502	1022	506	2353	1208	26
1D18P	Disappointment Lake	Lower Fraser	1050	2019-03-01	270	780								
1D19P	Spuzzum Creek	Lower Fraser	1197	2019-03-01	273	1083		83%	1388	1076	265	2615	1312	19
1E01B	BLUE RIVER	North Thompson	673	2019-02-24	106	276		99%	336	280	160	411	280	34
1E02P	Mount Cook	North Thompson	1574	2019-03-01	286	1090		106%	1072	787	684	1319	1028	18
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2019-02-23	136	430		95%	532	420	216	778	452	44
1E07	ADAMS RIVER	North Thompson	1769	2019-02-24	160	524		94%	628	534	262	892	560	47
1E08P	Azure River	North Thompson	1625	2019-03-01	212					848	528	1339	934	20
1E10P	Kostal Lake	North Thompson	1760	2019-03-01	176	724		102%	706	607	417	1023	712	33
1E14P	Cook Creek	North Thompson	1280	2019-03-01	151									1
1F01A	ABERDEEN LAKE	South Thompson	1262	2019-02-26	64	114		86%	250	140	51	231	133	61
1F02	ANGLEMONT	South Thompson	1168	2019-03-04	97	275		85%	445		160	635	323	60

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1F03P	Park Mountain	South Thompson	1857	2019-03-01	162	554		78%	869		379	1021	714	33
1F04P	Enderby	South Thompson	1950	2019-03-01	227	648			882	712	712	882		2
1F06P	Celista Mountain	South Thompson	1533	2019-03-01	198	702		95%		545	506	923	739	12
2A02	GLACIER	Upper Columbia	1249	2019-02-26	158	612		105%	682	417	251	952	585	80
2A03A	FIELD	Upper Columbia	1310	2019-02-27	66	163		111%	183	113	53	248	147	78
2A06P	Mount Revelstoke	Upper Columbia	1770	2019-03-01		898		91%	1089	862	537	1487	992	25
2A07	KICKING HORSE	Upper Columbia	1648	2019-02-27	102	292		105%	367	216	140	462	279	71
2A11	BEAVERFOOT	Upper Columbia	1924	2019-02-27	69	172		103%	198	160	80	333	167	69
2A14	MOUNT ABBOT	Upper Columbia	2031	2019-02-25	260	110		11%	1077	892	508	1448	1000	59
2A16	GOLDSTREAM	Upper Columbia	1914	2019-02-28	237	953		100%	974	895	553	1351	954	55
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2019-02-24	262	995		95%	1146	824	534	1703	1043	55
2A18	KEYSTONE CREEK	Upper Columbia	1839	2019-02-28	169	626		93%	712	649	357	1277	671	52
2A18P	Keystone Creek	Upper Columbia	1850	2019-03-01		733			821	762	779	821		3
2A19	VERMONT CREEK	Upper Columbia	1533	2019-02-27	110	355		100%	408	355	152	643	356	52
2A21P	Molson Creek	Upper Columbia	1930	2019-03-01		880		99%	961	755	437	1215	887	37
2A22	SUNBEAM LAKE	Upper Columbia	2066	2019-02-28	196	728		97%	922	713	389	1117	751	51
2A23	BUSH RIVER	Upper Columbia	1982	2019-02-28	192	699		102%	715	676	281	1078	682	50
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2019-02-28	256	1031		104%	1059	952	526	1476	990	46
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2019-02-28	163	590		95%	646	422	338	1018	618	41
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2019-02-28	280	1168		102%	1190	990	335	2120	1146	40
2A30P	Colpitti Creek	Upper Columbia	2131	2019-03-01		641			836	650	403	836		3
2A31P	Caribou Creek Upper	Upper Columbia	2201	2019-03-01		717			890	740	465	890		3
2A32P	Wildcat Creek	Upper Columbia	2122	2019-03-01		542			526	434	271	526		3
2B02A	FARRON	Lower Columbia	1229	2019-02-26	104	292		106%	442	276	79	450	276	45
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2019-02-25	132	412		72%	730	351	285	918	570	57
2B06P	Barnes Creek	Lower Columbia	1595	2019-03-01		410		94%	632	227	229	690	437	25
2B07	KOCH CREEK	Lower Columbia	1813	2019-02-25	N	N	N		736	531	269	996	601	57
2B08P	St. Leon Creek	Lower Columbia	1822	2019-03-01		845		94%	1114	780	416	1392	900	25
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2019-03-03	164	490		82%	734	710	147	1136	601	43
2C01	SINCLAIR PASS	East Kootenay	1374	2019-02-28	52	123		119%	134	96	44	262	103	70
2C04	SULLIVAN MINE	East Kootenay	1580	2019-02-28	84	210		89%	318	230	53	465	235	72
2C07	FERNIE EAST	East Kootenay	1213	2019-02-28	86	217		80%	334	302	61	584	270	67
2C09Q	Morrissey Ridge	East Kootenay	1966	2019-03-01		405		71%	545	463	233	1074	571	38
2C10P	Moyie Mountain	East Kootenay	1840	2019-03-01	100	298		89%	430	381	149	653	333	39
2C14P	Floe Lake	East Kootenay	2110	2019-03-01		510		88%	698	601	257	889	581	25
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2019-02-27	149	448		106%	506	437	185	680	421	49
2C16	MOUNT JOFFRE	East Kootenay	1763	2019-02-27	92	242		83%	308	243	122	551	291	49

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2C17	THUNDER CREEK	East Kootenay	2062	2019-02-27	76	192		90%	256	226	91	378	214	49
2D02	FERGUSON	West Kootenay	929							400	283	796	502	63
2D03	SANDON	West Kootenay	1072	2019-03-01	87	285		89%	438	295	196	475	319	38
2D04	NELSON	West Kootenay	952	2019-02-27	103	185	A	56%	362	264	118	558	328	78
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2019-02-25	106	304		80%	494	316	201	663	378	69
2D06	CHAR CREEK	West Kootenay	1290	2019-03-02	137	400		89%	537	418	221	754	447	52
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	2019-03-04	38	91		63%		188	52	322	144	25
2D08P	East Creek	West Kootenay	2004	2019-03-01		806		110%	803	716	312	1167	732	37
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2019-02-25	223	843		98%	1007	775	490	1534	859	51
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2019-02-25	159	487	A	80%	739	570	343	955	607	49
2D14P	Redfish Creek	West Kootenay	2086	2019-03-01	267	968		101%	1231	1093	751	1256	954	16
2E01	MONASHEE PASS	Kettle	1387	2019-02-25	85	221		78%	406	158	149	442	282	59
2E02	CARMI	Kettle	1254	2019-03-01	53	76	A	58%	191	47	56	274	130	55
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2019-03-01	127	272		68%	514	208	213	676	402	52
2E07P	Grano Creek	Kettle	1874	2019-03-01	119	263		64%	504	338	206	679	411	20
2F01A	TROUT CREEK (West)	Okanagan	1430	2019-02-28	59	99		51%	271	120	93	271	196	7
2F01P	Trout Creek West	Okanagan	1420	2019-03-01	68	156								
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2019-02-28	78	171		90%	311	178	97	381	190	57
2F03	MC CULLOCH	Okanagan	1266	2019-02-27	63	112		77%	238	117	71	249	146	78
2F04	GRAYSTOKE LAKE	Okanagan	1818	2019-03-01	101	270		95%		216	128	605	285	34
2F05P	Mission Creek	Okanagan	1794	2019-03-01	125	312		80%	552	274	208	608	392	48
2F07	POSTILL LAKE	Okanagan	1358	2019-02-27	72	160		92%	252		98	274	173	68
2F08P	Greyback Reservoir	Okanagan	1550	2019-03-01	69	158			298	159	159	298		2
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2019-02-24	134	428		95%	538	362	180	809	450	63
2F10P	Silver Star Mountain	Okanagan	1839	2019-03-01	177	569			659	445	445	659		3
2F11	ISINTOK LAKE	Okanagan	1651	2019-02-28	51	92		70%	245	117	53	358	132	53
2F12	MOUNT KOBAN	Okanagan	1817	2019-02-24	73	172		68%	336	270	61	488	253	52
2F13	ESPERON CR (UPPER)	Okanagan	1634	2019-02-24	91	248		75%	382	270	157	635	330	49
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	2019-02-24	85	234		82%	348	206	132	513	287	26
2F18P	Brenda Mine	Okanagan	1453	2019-03-01		214		68%	331	212	184	431	315	25
2F19	OOYAMA LAKE	Okanagan	1365	2019-03-01	65	114		79%	238	124	73	241	144	49
2F20	VASEUX CREEK	Okanagan	1403	2019-02-24	53	114		101%	180	60	52	284	113	46
2F21	BOULEAU LAKE	Okanagan	1405	2019-02-25	75	176		66%	318	212	165	432	267	47
2F23	MACDONALD LAKE	Okanagan	1742	2019-03-05	112	322		88%	508	310	170	583	368	41
2F24	ISLAHT LAKE	Okanagan	1492						184	183	161	497	285	36
2F25	POSTILL LAKE UPPER	Okanagan	1500						274		112	242		8
2G03P	Blackwall Peak	Similkameen	1934	2019-03-01	165	532		80%	832	544	228	1323	665	50

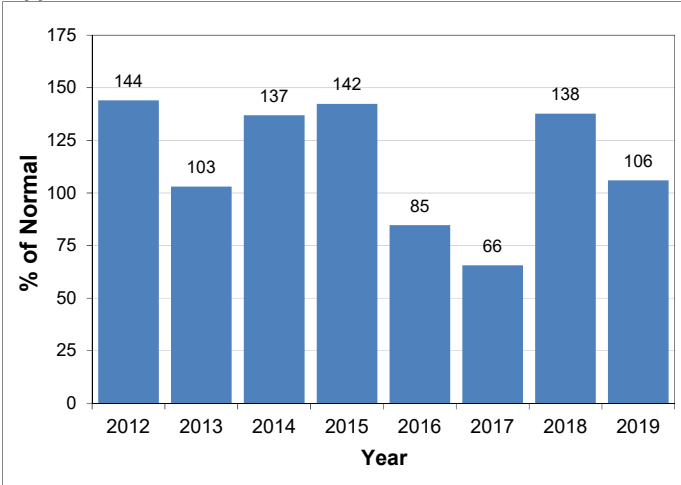
2019 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2019-02-26	68	135	B	76%	301	139	92	508	178	58
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2019-02-26	58	119	B	65%	238	158	76	363	182	57
2G06	HAMILTON HILL	Similkameen	1477	2019-02-25	63	142	B	53%	289	219	102	676	267	56
3A01	GROUSE MOUNTAIN	South Coast	1126	2019-02-25	248	840		87%	1425	1036		2320	966	68
3A02	POWELL RIVER (UPPER)	South Coast	1002		NS	NS	NS				868	868	868	1
3A05	POWELL RIVER (LOWER)	South Coast	882		NS	NS	NS				588	588	588	1
3A09	PALISADE LAKE	South Coast	898	2019-02-26	231	910		82%	1485	952	0	3150	1106	66
3A09P	Palisade Lake	South Coast	900	2019-03-01	211	585								
3A10	DOG MOUNTAIN	South Coast	1007	2019-02-28	209	672		71%	1250	1029	0	2146	952	34
3A19	ORCHID LAKE	South Coast	1178	2019-02-26	338	1364		93%	1805	1142	190	2960	1467	44
3A20	CALLAGHAN CREEK	South Coast	1009	2019-02-25	204	738		105%	951	632	40	1260	702	41
3A22P	Nostetuko River	South Coast	1457	2019-03-01	115	403		87%	527	357	165	876	462	29
3A24P	Mosley Creek Upper	South Coast	1655	2019-03-01	93	218		82%	358	227	98	555	266	29
3A25P	Squamish River Upper	South Coast	1387	2019-03-01	343	1335		102%	1567	1101	558	2301	1303	28
3A26	CHAPMAN CREEK	South Coast	1022	2019-02-26	254	940	A		1360	956	662	1412		8
3A27	EDWARDS LAKE	South Coast	1070	2019-02-26	167	540		269%			380	944	201	5
3A28P	Tetrahedron	South Coast	1420	2019-03-01	325	953								
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2019-02-25	297	1169		97%	1353	927	101	2730	1203	63
3B02A	MOUNT COKELY	Vancouver Island	1267								14	1034	662	34
3B04	ELK RIVER	Vancouver Island	270	2019-02-25	16	39		67%	56	136	0	546	58	62
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2019-02-25	220	820		73%	1016	868	0	2440	1128	60
3B17P	Wolf River Upper	Vancouver Island	1422	2019-03-01		959		88%	1149	864	195	2085	1085	36
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2019-02-25	84	240		47%	382	438	0	1344	509	48
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2019-02-25	123	390		130%	286		0	1064	301	48
3B23P	Jump Creek	Vancouver Island	1134	2019-03-01	158	741		87%	1246	494	20	2228	849	22
3B24P	Heather Mountain Upper	Vancouver Island	1190	2019-03-01	184	651			1557	1097	1062	1557		2
3B26P	Mount Arrowsmith	Vancouver Island	1465	2019-03-01	199				1169		1169	1169		1
3C07	WEDEENE RIVER SOUTH	Central Coast	196	2019-02-28	83	318		76%	527		45	945	418	31
3C08P	Burnt Bridge Creek	Central Coast	1329	2019-03-01	151	546		79%	694	583	282	1245	691	20
3D01C	SUMALLO RIVER WEST	Skagit	801	2019-03-01	59	141		65%	307	251	0	442	218	26
3D02	LIGHTNING LAKE	Skagit	1254	2019-03-03	76	186	B	74%	322	186	36	497	250	45
3D03A	KLESILKWA	Skagit	1134	2019-03-01	64	192		84%		236	0	759	228	69
4A02P	Pine Pass	Peace	1386	2019-03-01	253	890		101%	881	636	363	1485	880	29
4A03	WARE (UPPER)	Peace	1563	2019-02-27	89	216		98%	233	136	90	360	220	57
4A03P	Ware Upper	Peace	1565	2019-03-01	90	204			223	145	145	223		2
4A04	WARE (LOWER)	Peace	969	2019-02-27	77	184		110%	177	66	89	246	167	57
4A04P	Ware Lower	Peace	971	2019-03-01	73	185			196	91	91	196		2

2019 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	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
4A05	GERMANSEN (UPPER)	Peace	1489	2019-02-26	113	363		124%	287	184	156	520	293	57
4A06	TUTIZZI LAKE	Peace	1043	2019-02-26	91	240		104%	244	102	106	386	230	54
4A07	LADY LAURIER LAKE	Peace	1460	2019-02-28	127	390		86%	399		194	662	452	55
4A09	PULPIT LAKE	Peace	1331	2019-02-27	123	361		97%	345	239	152	531	372	54
4A09P	Pulpit Lake	Peace	1331	2019-03-01	103	305		80%	287	200	133	471	381	28
4A10	FREDRICKSON LAKE	Peace	1323	2019-02-26	90	235		110%	179	86	93	315	213	54
4A11	TRYGVE LAKE	Peace	1409	2019-02-27	103	296		93%	267	186	119	453	319	54
4A12	TSAYDAYCHI LAKE	Peace	1173	2019-02-26	125	395		116%	333	267	166	540	340	54
4A13	PHILIP LAKE	Peace	1013	2019-02-26	100	292		121%	227	118	137	400	242	54
4A16	MORFEE MOUNTAIN	Peace	1427	2019-02-26	224	816		113%	623	460	265	1166	725	50
4A18	MOUNT SHEBA	Peace	1480	2019-02-25	229	808		113%	733	536	369	1123	712	49
4A20	MONKMAN CREEK	Peace	1566	2019-02-25	144	468		99%	554	396	190	925	472	43
4A20P	Monkman Creek	Peace	1570	2019-03-01		390								
4A21	MOUNT STEARNS	Peace	1514	2019-02-28	66	150		121%	122	137	41	227	124	44
4A25	FORT ST. JOHN A	Peace	692	2019-03-04	69	124		125%	152	81	34	191	99	43
4A27P	Kwadacha North	Peace	1554	2019-03-01	102	234			258	158	158	258		2
4A30P	Aiken Lake	Peace	1061	2019-03-01	80	211		91%	166	136	90	363	232	33
4A31P	Crying Girl Prairie	Peace	1358	2019-03-01		209			220	206	124	220		3
4A33P	Muskwa-Kechika	Peace	1196	2019-03-01		92			74	96	23	96		3
4A34P	Dowling Creek	Peace	1456	2019-03-01		1288			1199	836	836	1199		2
4B01	KIDPRICE LAKE	Skeena-Nass	1415	2019-02-27	172	645		79%	697	807	429	1320	817	66
4B02	JOHANSON LAKE	Skeena-Nass	1480	2019-02-26	N	N	N		202	160	108	368	253	54
4B03A	HUDSON BAY MTN.	Skeena-Nass	1452	2019-02-28	135	419		95%	478	369	168	719	443	46
4B04	CHAPMAN LAKE	Skeena-Nass	1485	2019-02-27	134	421		103%	482	339	266	691	407	52
4B06	TACHEK CREEK	Skeena-Nass	1133	2019-02-28	82	196		101%	224	140	117	332	195	49
4B07	MCKENDRICK CREEK	Skeena-Nass	1048	2019-02-27	94	242		98%	326	158	155	391	246	48
4B08	MOUNT CRONIN	Skeena-Nass	1491	2019-02-27	147	486		98%	557	420	345	869	498	48
4B10	NINGUNSAW PASS	Nass	647	2019-02-25	93	296		75%	239		210	629	397	43
4B11A	BEAR PASS	Nass	437	2019-02-28	105	290		51%	383	350	87	824	574	32
4B12P	Granduc Mine	Skeena-Nass	790							80	80	80		1
4B13A	TERRACE A	Skeena-Nass	219	2019-02-28	27	88		62%	194		0	407	141	36
4B14	EQUITY MINE	Skeena-Nass	1434						424	346	190	546	333	40
4B15	LU LAKE	Skeena-Nass	1296						322	214	122	412	254	40
4B15P	Lu Lake	Skeena-Nass	1308	2019-03-01	89	236		107%	374	235	116	405	221	20
4B16P	Shedin Creek	Skeena-Nass	1320	2019-03-01	158	502		69%	479	393	195	957	723	22
4B17P	Tsai Creek	Skeena-Nass	1360	2019-03-01	222	821		85%	850	732	302	1618	969	20
4B18P	Cedar-Kiteen	Skeena-Nass	912	2019-03-01	132	420		72%		360	178	956	582	16

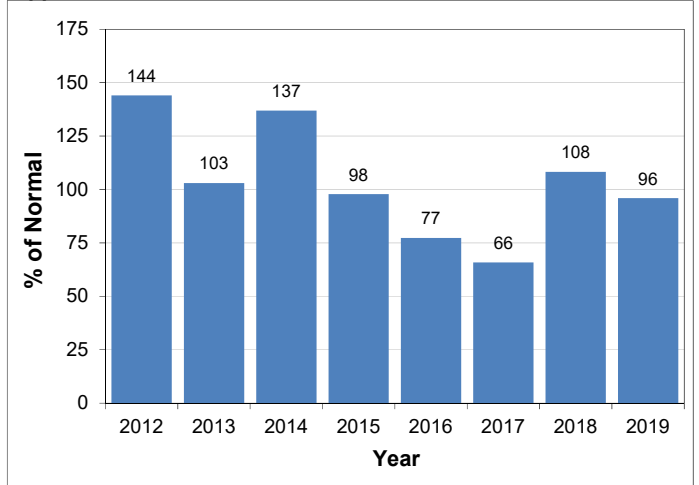
2019 Automated Snow Weather Station/Manual Snow Survey Data				March					Historic Snow Water Equivalent (mm)					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
4C01	SIKANNI LAKE	Liard	1390	2019-02-27	83	200		84%	190	106	78	335	238	54
4C01P	Sikanni Lake	Liard	1400	2019-03-01	92	192			283	114	114	283		2
4C02	SUMMIT LAKE	Liard	1291	2019-03-06	62	114		103%	106	79	0	190	111	53
4C03	DEASE LAKE	Liard	805	2019-02-24	56	90		73%			45	229	124	52
4C05	FORT NELSON AIRPORT	Liard	368	2019-03-07	50	70		76%	69	57	38	177	92	50
4C15	JADE CITY	Liard	943								128	310	206	15
4D01	TELEGRAPH CREEK	Stikine	490								53	345	144	42
4D02	ISKUT	Stikine	931	2019-02-24	36	60		57%			33	176	105	42
4D11P	Kinaskan Lake	Stikine	1020	2019-03-01	69	201		58%	148	249	94	527	346	22
4E02B	ATLIN LAKE	Yukon	730						70	85	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, 2019

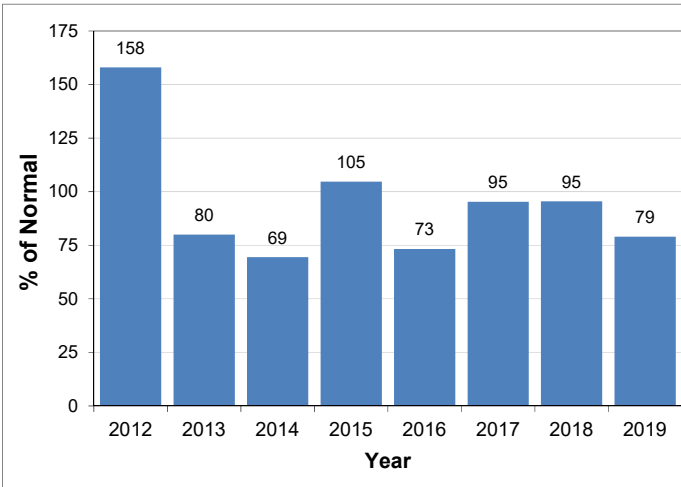
Upper Fraser West



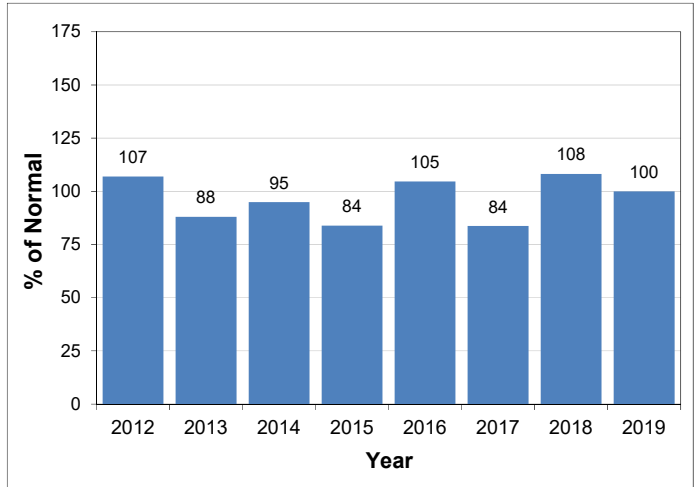
Upper Fraser East



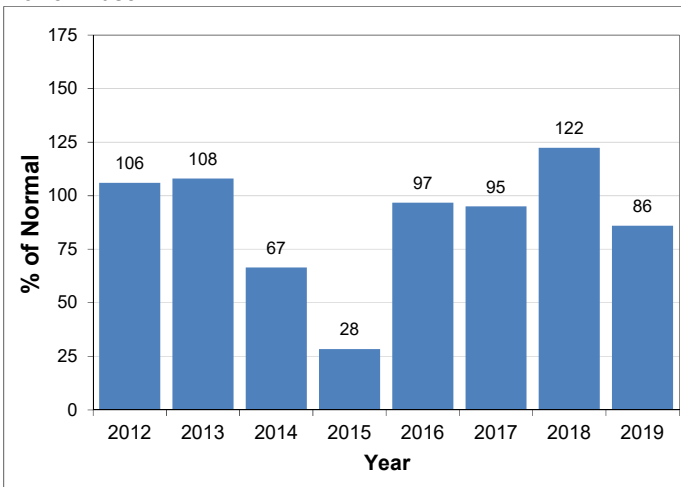
Nechako



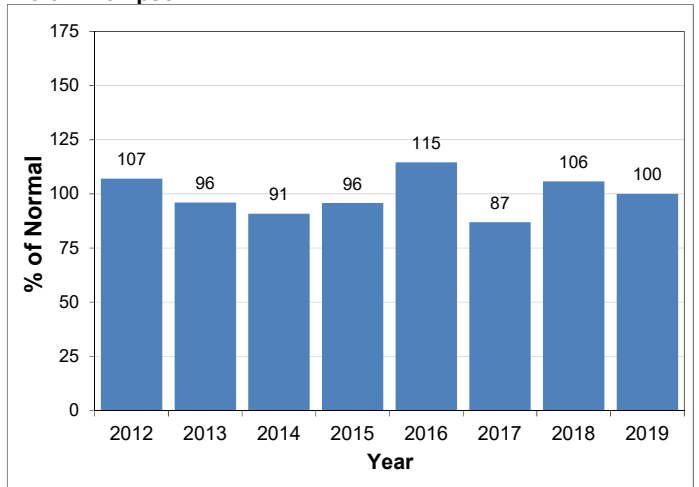
Middle Fraser



Lower Fraser

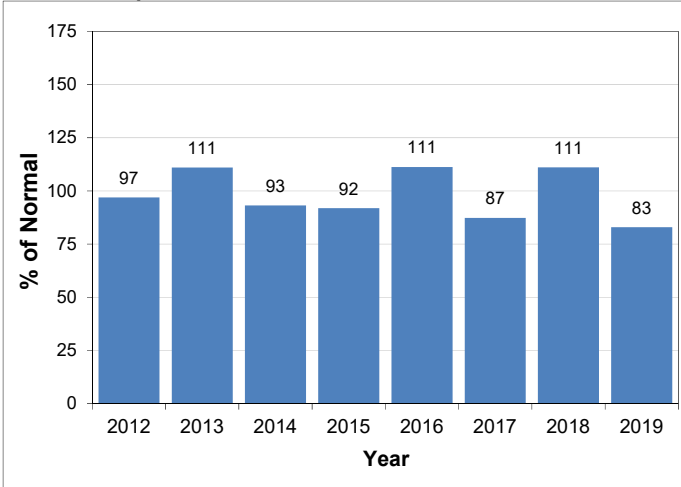


North Thompson

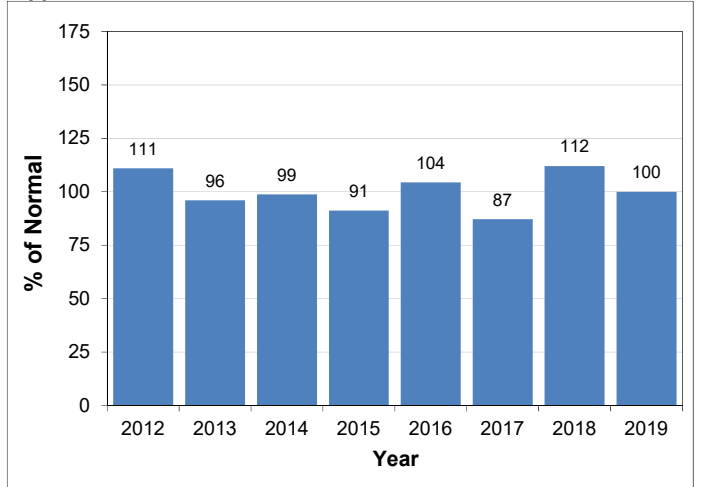


Snow Basin Index Graphs - March 1, 2019

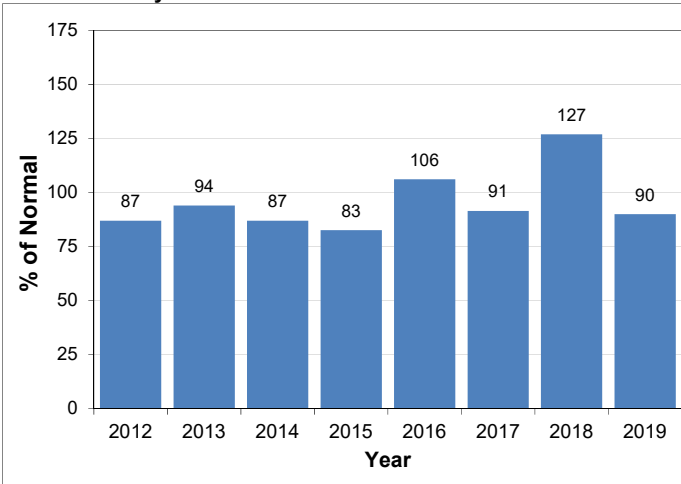
South Thompson



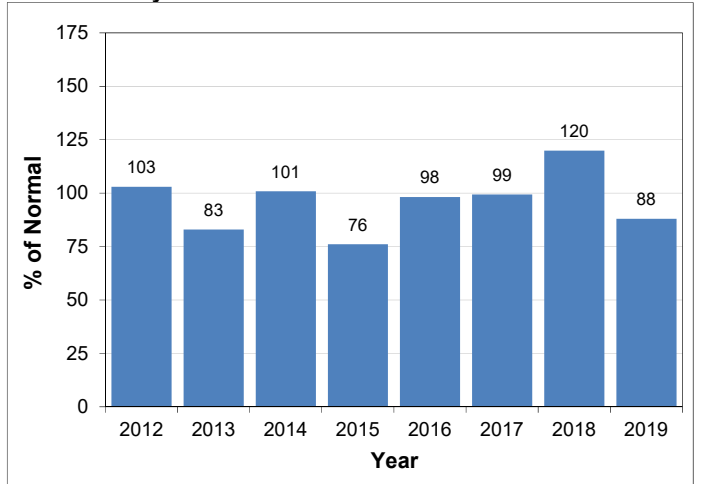
Upper Columbia



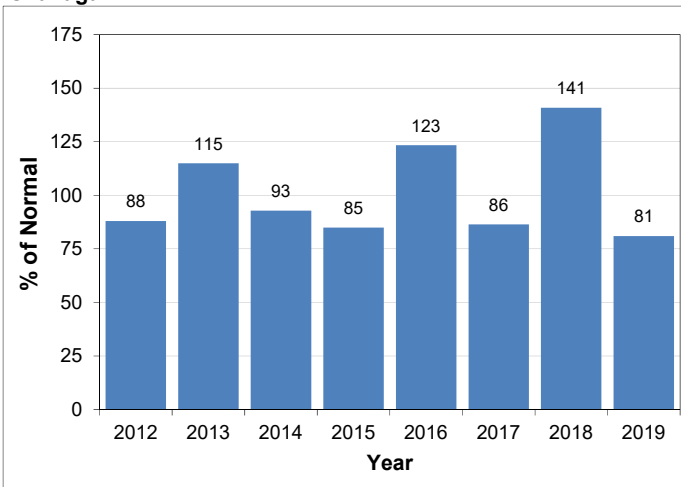
West Kootenay



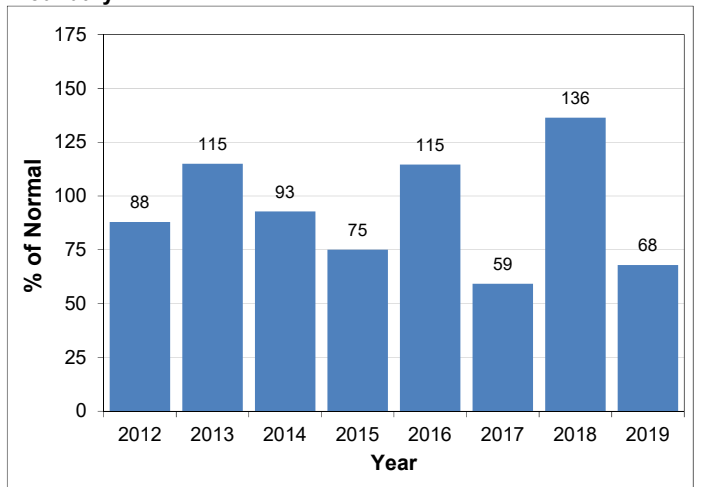
East Kootenay



Okanagan

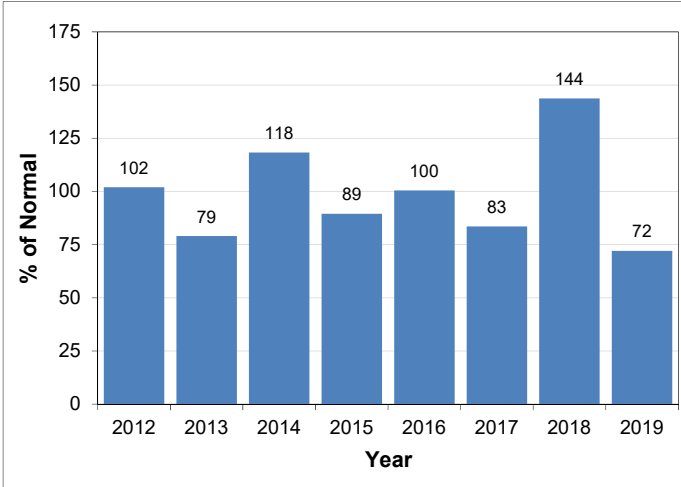


Boundary

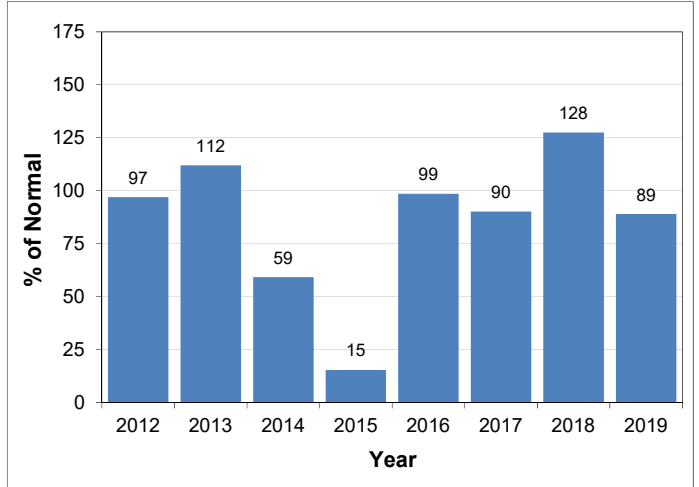


Snow Basin Index Graphs - March 1, 2019

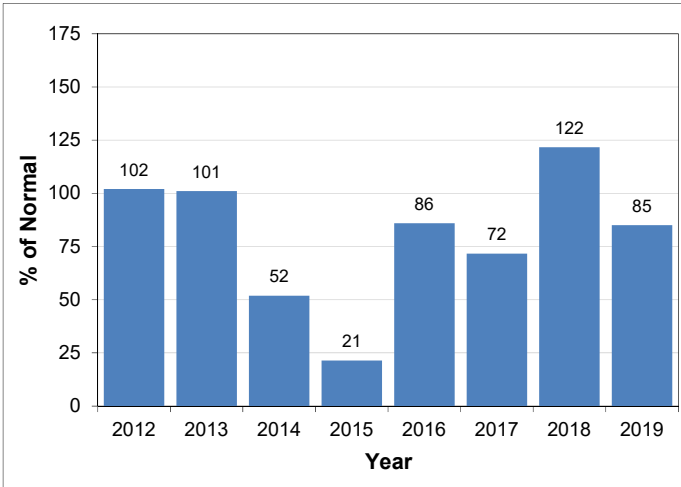
Similkameen



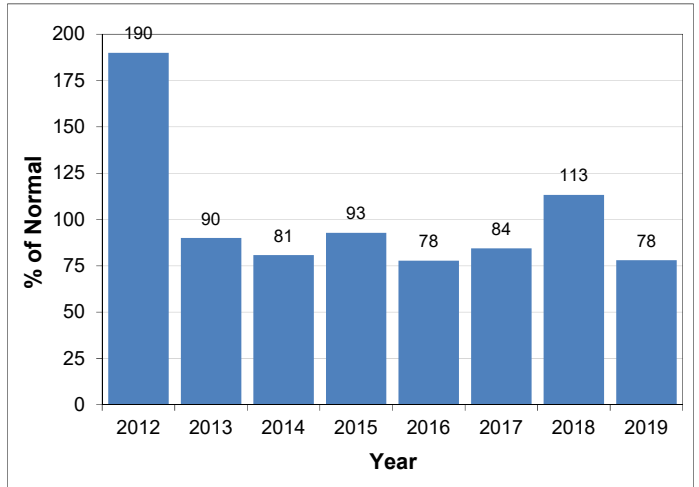
South Coast



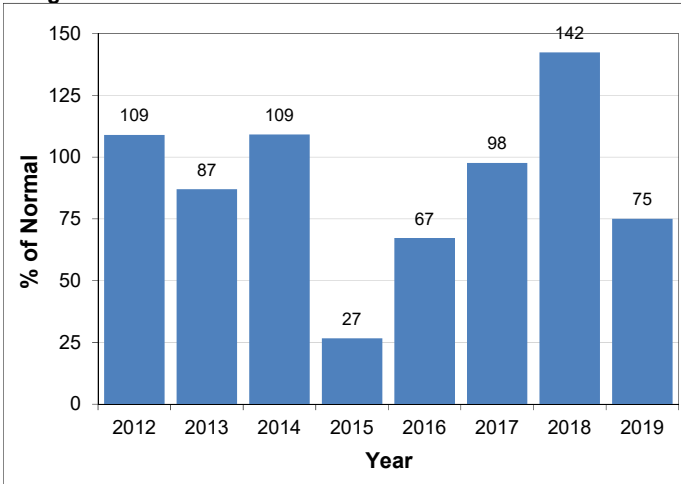
Vancouver Island



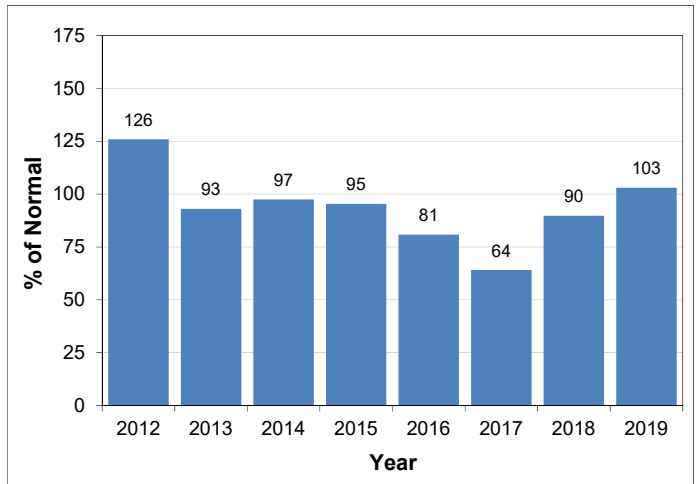
Central Coast



Skagit

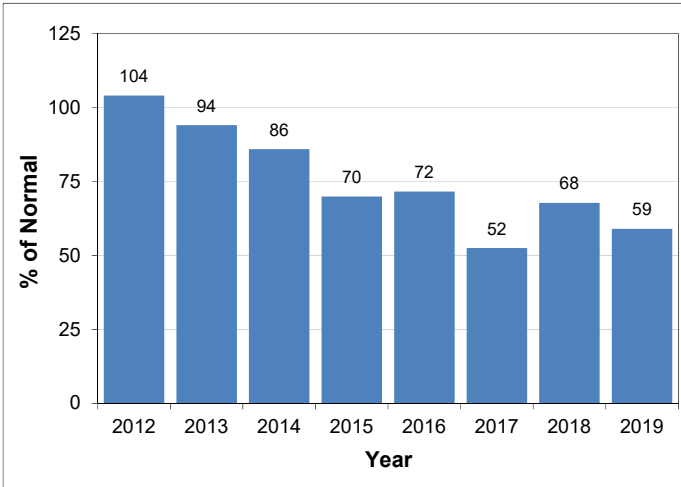


Peace

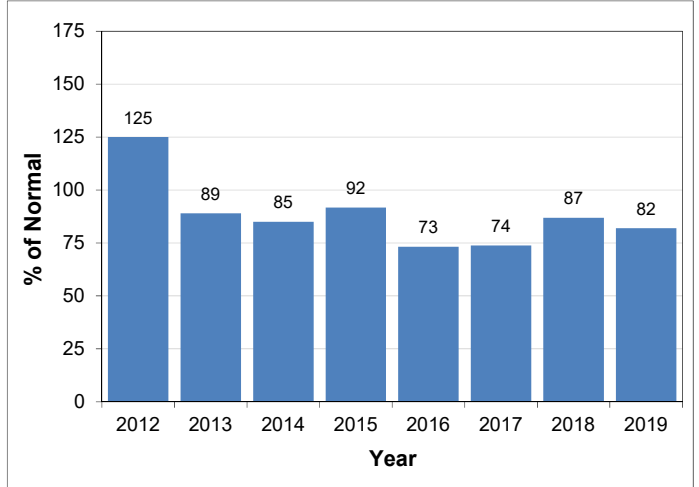


Snow Basin Index Graphs - March 1, 2019

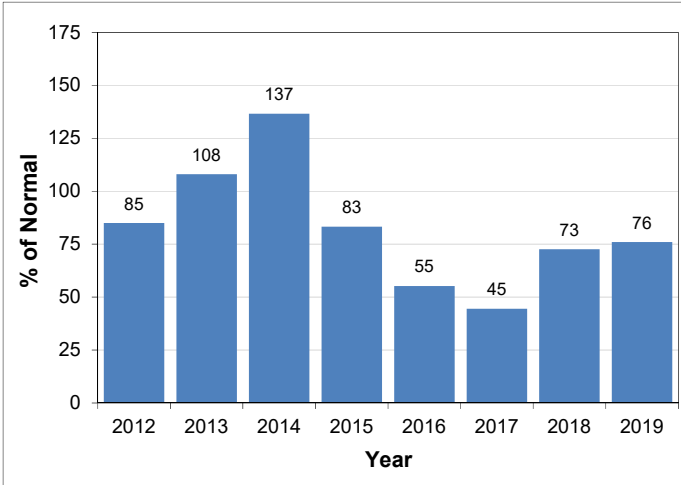
Stikine



Skeena-Nass



Liard



Northwest

