

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

The May 1st snow survey is now complete. Data from 132 manual snow courses and 80 automated snow weather stations around the province (collected by the Ministry of Environment and Climate Change Strategy 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

Following a warm spell in mid- to late-March, weather transitioned towards more seasonal for April. Weather was variable across the province through the month of April, with generally cooler and unsettled weather being dominant.

April temperatures were generally near normal across the province, with areas of coastal BC seeing slightly above normal temperatures, and areas in north-eastern and eastern BC experiencing slightly below normal temperatures.

Precipitation patterns were also near normal for most areas of the province through April, with areas in central, northern and eastern BC experiencing some below-normal precipitation.

Within the general seasonal weather through April, several cooler weather systems impacted many areas with late-season snow accumulation, particularly in the Rocky Mountains.

Snowpack

Snow basin indices for May 1st, 2019 range from a low of 15% of normal in the Skagit to a high of 101% in the Liard (Table 1 and Figure 1) with the average of all snow measurements across the province calculated to be 79% of normal. A well-below normal snowpack (<60% of normal) is present in the Northwest, Vancouver Island, Similkameen, Nicola and Skagit. Below normal snowpack (60-80% of normal) exists in the Stikine, Skeena-Nass, Nechako, Central Coast, South Coast, Lower Fraser, Okanagan, Boundary and East Kootenay. The rest of the province has slightly below normal to normal snowpack (80-95% of normal). There are no regions in the province with above normal snowpacks. The May 1st snow basin index for the entire Fraser River is 79% of normal.

Snow basin indices for May 1st are fairly similar to those for April 1st. One significant pattern this year is the difference between low-to-mid elevation and upper elevation snow. Particularly through the South Interior, snow below 1600m has almost completely disappeared as of early-May. This trend is 2-3 weeks ahead of when these regions would normally be snow-free (for many locations this was near-record early melt). Conversely, cooler weather patterns have led to very limited melt at higher elevations (>1600m); upper elevation melt is 1-2 weeks behind normal. Snowpack gradients across elevation is unusual

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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this year, with a rapid change from no snow to deeper snow packs occurring over a few hundred meters of elevation difference in many regions. These conditions have developed due to extremely warm weather in late-March which kicked off ripening of mid-elevation snowpack, followed by cooler weather which has provided insufficient energy delivery to upper elevation snow to fully ripen and begin melting. In central, eastern and northern BC, this gradient is less pronounced, with current snowlines around the 1000-1200 m elevation level.

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

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	98	Boundary	71
Upper Fraser East	92	Similkameen	52
Nechako	72	South Coast	72
Middle Fraser	87	Vancouver Island	58
Lower Fraser	68	Central Coast	69
North Thompson	91	Skagit	15
South Thompson	82	Peace	94
Upper Columbia	89	Skeena-Nass	75
West Kootenay	82	Stikine	60
East Kootenay	70	Liard	101
Okanagan	69	Northwest	44
Nicola	43	Fraser	79

Streamflow

Streamflow early in the month was above-normal across most of the province as early-season snowmelt from low-to-mid elevation snowpack led to unusually early runoff. With the transition to more seasonal, or cooler, weather patterns through the month, runoff has not kept pace with normal seasonal rises due to a lack of the onset of upper elevation snowmelt. As a result, most rivers across the province have seen steady flows, which have resulted in below-normal flows, relative to normal for this time of year.

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In coastal areas which have less influence from snowmelt, such as Vancouver Island and Haida Gwaii, on-going drier weather has resulted in continued below normal streamflow.

Outlook

Seasonal forecasts from Environment and Climate Change Canada favor a high likelihood of above normal late-spring to early-summer temperatures (May-June-July) across western British Columbia, and no strong indication of favoured temperature patterns for elsewhere in the province. Forecasts have eased since last month which had been indicating a high likelihood of warmer spring and summer temperatures across the province. While warmer temperature patterns were not dominant in April, recent and current weather patterns have shifted towards ridging across BC, ushering in a period of warmer weather. This will see increased snowmelt, including the onset of melt from higher elevation areas across the province over the next week.

Annual snow accumulation in British Columbia usually reaches maximum levels in mid-April, therefore the May 1st survey usually provides a good snapshot of any anomalous late-season accumulation, or delays in the onset of freshet. This year, the May 1st surveys are indicating a slight delay in the melt at upper elevation locations, unseasonably early melt for low-to-mid elevation areas, and generally below normal snow pack across most of the province.

At this stage in the season there is no elevated flood risk present in the current snowpack across the province. Close to normal seasonal flood risk is expected in the Peace, Liard, Upper Fraser and North Thompson regions. Elsewhere, snowpacks pose below-normal risk for snowmelt driven flooding.

With diminished snowpack at low-to-mid elevation areas, seasonal flood risk is now subsiding in smaller and mid-elevation watersheds, particularly through the South Interior and Central Interior. In mid-sized watersheds in these regions, the peak of freshet season is expected over the next couple of weeks. This would include watersheds such as Mission Creek near Kelowna, Kettle River, and Similkameen River, and tributaries. Similarly, for medium-sized and mid-elevation watersheds through the Middle Fraser and west-central BC, including watersheds around Smithers, Burns Lake, Prince George, Quesnel and surrounding areas, snowmelt runoff is expected to peak around mid-May. For larger rivers, or watersheds with significant higher elevation terrain, peak freshet season is still expected to unfold over the next few weeks into early- to mid-June.

On the Fraser River, the overall basin index is 79% of normal; a peak flow in the range of 6500-8000 m³/s at Hope is likely with higher flows possible if adverse weather patterns, particularly heavy rainfall, emerge in the spring. Historically, flows above 8500 m³/s at Hope have been rare with snowpack conditions similar to this season's.



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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 or low snowpack. In areas with low snowpack, key flood risks shift towards heavy precipitation events, either short-duration events or prolonged periods of wet weather. It is important to note that May and June are wet months through the BC Interior with the potential for extreme precipitation. In the Rockies and north-east BC, upper-low weather patterns can extend the flood season into July. Therefore, it is important to note that precipitation poses a real flood risk through the spring even with limited snowpack.

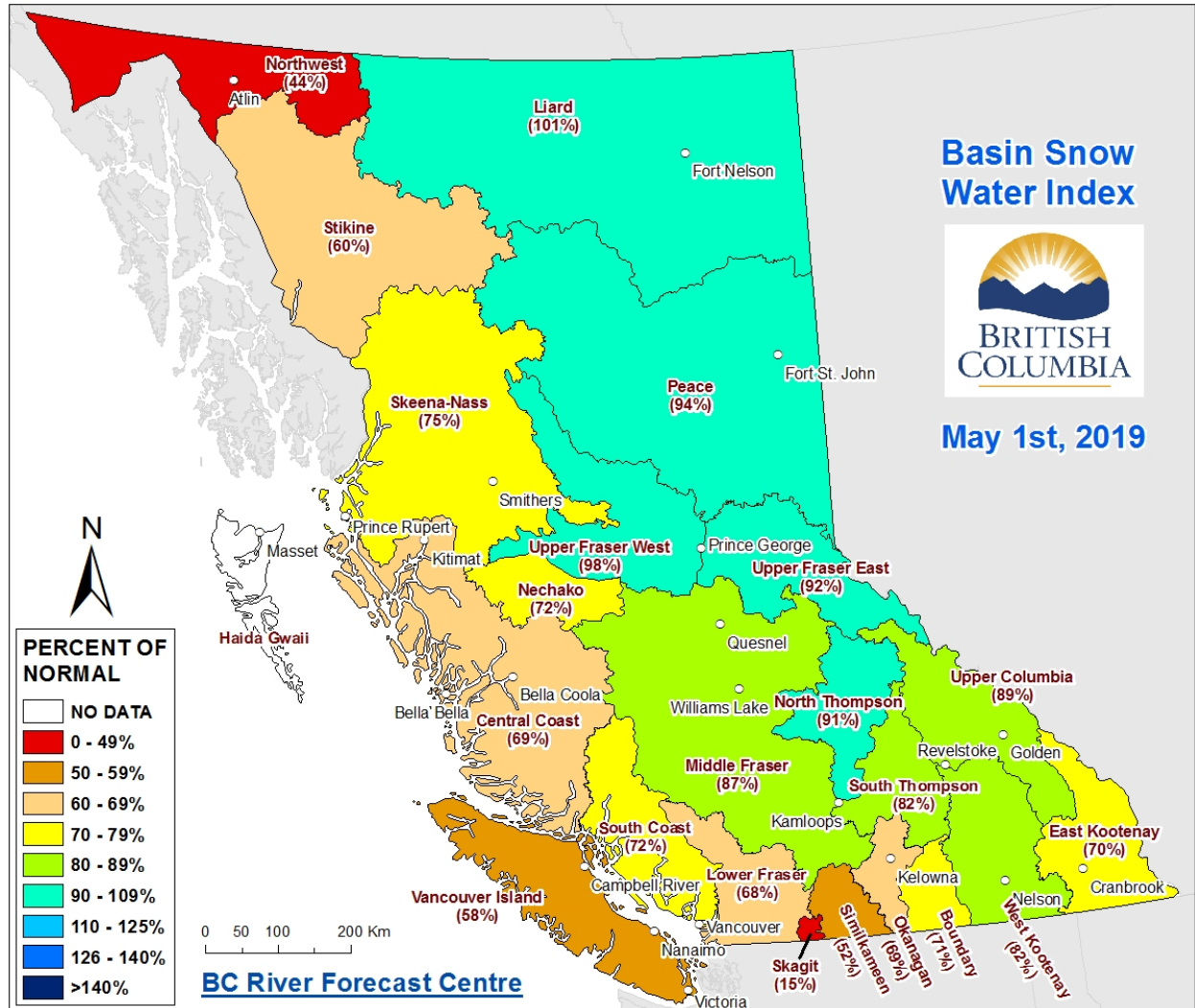
Seasonal volume runoff forecasts (see below) are near-normal (85-105%) for the Upper Fraser, Middle Fraser, North Thompson, Thompson, Bulkley and Skeena. Seasonal volume runoff forecasts are below-normal (<85%) for the South Thompson, Similkameen, Cowichan Lake, Okanagan Lake, Nicola Lake and Kalamalka-Wood Lake. The snowmelt component of seasonal runoff for Vancouver Island, South Coast, and Lower Fraser is below normal and may lead to low flow issues in the summer. 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 May 15th, 2019 bulletin, which is scheduled for release on May 22nd.

BC River Forecast Centre
May 8, 2019

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Figure 1: Basin Snow Water Index – May 1st, 2019



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

Location	May - Jun Runoff				May - Jul Runoff				May - 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				3177	3534	90%	297	4675	5000	93%	373
	McGregor at Lower Canyon				3252	3552	92%	376	4317	4598	94%	563
	Fraser at Shelley				12612	13672	92%	1070	16172	17732	91%	1657
Middle Fraser Basin	Quesnel River at Quesnel				4048	4117	98%	396	5405	5448	99%	574
Thompson Basin	N. Thompson at McLure				7275	8209	89%	425	9331	10379	90%	785
	S. Thompson at Chase				4284	5298	81%	403	5530	6865	81%	659
	Thompson at Spences Bridge				11936	13923	86%	825	15448	17903	86%	1510
Bulkley and Skeena	Bulkley at Quick				2026	2383	85%	185	2596	2980	88%	220
	Skeena at Usk				15278	17317	88%	964	19234	21661	89%	1463
Nicola Lake	Inflows	83	105	80%	28	112	122	92%	33			
Nicola River	at Spences Bridge	297	409	73%	76	338	476	71%	98			
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	271	349	78%	81	280	376	75%	103			
	Kalamalka-Wood Lake Inflow	15	19	77%	8	15	20	73%	11			
Similkameen River	Similkameen at Nighthawk	741	1101	67%	152				902	1411	64%	193
	Similkameen at Hedley	576	827	70%	91				677	1015	67%	105
Cowichan River	Cowichan Lake Inflows	66	118	56%	32				90	153	58%	50

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.

Cowichan Lake Inflows are based on a multi-variate regression analysis and reflects a normal scenario for summer weather conditions

The Standard Error in the Cowichan forecast reflects model error, and does not capture uncertainty over seasonal weather

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				May 1					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	2019-05-01	140				648	564	254	833	565	21	
1A02P	McBride Upper	Upper Fraser East	1608	2019-05-01	126	487		105%	490	430	198	749	462	26	
1A03P	Barkerville	Upper Fraser East	1483	2019-05-01	63	274		79%	281	328	123	604	346	43	
1A05	LONGWORTH (UPPER)	Upper Fraser East	1693	2019-04-29	219	988		119%	806		296	1370	830	64	
1A05P	Longworth Upper	Upper Fraser East	1740	2019-05-01	232	826			767	657	657	657		2	
1A06A	HANSARD	Upper Fraser East	622	2019-05-01	0	0	T		NS					0	2
1A10	PRINCE GEORGE A	Upper Fraser East	684	2019-05-02	0	0		0%	NS		0	216	10	41	
1A11	PACIFIC LAKE	Upper Fraser East	756	2019-04-29	100	419		83%	732	297	93	976	507	55	
1A12	KAZA LAKE	Upper Fraser West	1247	2019-04-28	86	298		91%	N	230	132	481	328	54	
1A12P	Kaza Lake	Upper Fraser West	1248	2019-05-01	94	331			334	241	193	241		3	
1A14P	Hedrick Lake	Upper Fraser East	1118	2019-05-01	157	560		68%	786	427	214	1279	820	18	
1A15	KNUDSEN LAKE	Upper Fraser East	1598	2019-04-29	173	741		85%	1001	679	501	1346	868	50	
1A15P	Knudsen Lake	Upper Fraser East	1601	2019-05-01	150	513			640	526	526	526		2	
1A16	BURNS LAKE	Upper Fraser West	820	2019-05-01	1	2		8%	124	0	0	148	26	40	
1A17P	Revolution Creek	Upper Fraser East	1676	2019-05-01	207	804		100%	871	673	326	1349	804	33	
1A19P	Dome Mountain	Upper Fraser East	1768	2019-05-01	200	728		90%	715	673	298	1163	810	12	
1A23	BIRD CREEK	Upper Fraser West	1196	2019-05-01	23	84		215%	218	58	0	204	39	27	
1B01	MOUNT WELLS	Nechako	1489	2019-05-01	108	380		78%	627	590	201	958	487	64	
1B01P	Mount Wells	Nechako	1489	2019-05-01		484		85%	725	672	227	919	569	26	
1B02	TAHTSA LAKE	Nechako	1319	2019-05-01	207	819		65%	1060	1265	701	2073	1256	65	
1B02P	Tahtsa Lake	Nechako	1319	2019-05-01		990		73%	1249	1359	464	2348	1362	26	
1B05	SKINS LAKE	Nechako	877	2019-05-01	0	0		0%	42	0	0	100	3	47	
1B06	MOUNT SWANNELL	Nechako	1596	2019-05-01	69	248		86%	337	312	109	499	287	28	
1B07	NUTLI LAKE	Nechako	1502	2019-05-01	92	349		68%	481	579	250	870	513	26	
1B08P	Mount Pondosy	Nechako	1413	2019-05-01		499		63%	824	1013	363	1277	794	26	
1C01	BROOKMERE	Middle Fraser	994	2019-04-30	0	0		0%	97	99	0	419	65	72	
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2019-04-26	92	414		72%	544	590	239	1118	573	66	
1C05P	McGillivray Pass	Middle Fraser	1766	2019-05-01		537			618					1	
1C06	PAVILION	Middle Fraser	1209						0		0	0	0	17	
1C08	NAZKO	Middle Fraser	1029	2019-05-01	0	0		0%	N		0	46	3	25	
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	2019-05-01	0	0	T	0%	181	101	0	142	20	49	
1C12P	Green Mountain	Middle Fraser	1766	2019-05-01		740		81%	774	788	429	1373	909	24	
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2019-04-29	118	518		127%	612	460	136	676	408	48	
1C14	BRALORNE	Middle Fraser	1382	2019-04-26	11	38		66%	133	161	0	255	58	54	
1C14P	Bralorne	Middle Fraser	1382	2019-05-01	7				58					1	
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2019-05-03	58	232		90%	370	235	118	536	257	57	
1C18P	Mission Ridge	Middle Fraser	1903	2019-05-01		336		68%	646	659	147	1028	496	48	

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1C19	GNAWED MOUNTAIN	Middle Fraser	1617	2019-05-01	0	0	T	0%	N	160	0	241	54	47
1C20P	Boss Mountain Mine	Middle Fraser	1477	2019-05-01	107	535		90%	619	574	255	821	597	24
1C21	BIG CREEK	Middle Fraser	1130	2019-04-29	0	0		0%	0	0	0	48	12	7
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2019-04-29	0	0			0		0	22	0	12
1C23	PENFOLD CREEK	Middle Fraser	1687	2019-05-01			N		991		525	1420	1064	48
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2019-04-30	13	37		123%	162		0	168	30	45
1C28	DUFFEY LAKE	Middle Fraser	1253	2019-04-29	51	230		61%	NS		206	624	377	14
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2019-04-30	0	0	T	0%	255		0	305	82	37
1C29P	Shovelnose Moutain	Middle Fraser	1460	2019-05-01	33	15								
1C32	DEADMAN RIVER	Middle Fraser	1463						N	0	0	194	32	33
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2019-04-30	13	53		60%	114		0	221	89	12
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2019-04-26	144	550		81%	N	764	290	1092	676	22
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2019-04-26	194	840		98%	N	888	450	1340	856	22
1C38P	Downton Lake Upper	Middle Fraser	1829	2019-05-01		718			687	869	807	869		3
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2019-04-26	138	598		100%	654	612	244	1018	600	23
1C40	TYAUGHTON	Middle Fraser	1946	2019-04-26	115	398		90%	532	394	198	806	443	23
1C40P	North Tyaughton	Middle Fraser	1969	2019-05-01		387			439	354	180	354		3
1C41P	Yanks Peak East	Middle Fraser	1683	2019-05-01	190	972		118%	923	818	365	1058	825	21
1C42	CAVERHILL LAKE	Middle Fraser	1400						NS		172	172		2
1D06P	Tenquille Lake	Lower Fraser	1669	2019-05-01	201	920		88%	1192	1401	526	1705	1047	17
1D08	STAVE LAKE	Lower Fraser	1211	2019-04-30	212	1026		68%	1721	1918	62	3120	1513	51
1D09	WAHLEACH LAKE	Lower Fraser	1395	2019-04-30	84	326		53%	N		4	709	615	50
1D09P	Wahleach Lake Upper	Lower Fraser	1408	2019-05-01		682		65%	1200	632	290	1757	1043	26
1D10	NAHATLATCH RIVER	Lower Fraser	1530	2019-04-30	201	1018		75%	N	1739	468	2720	1361	48
1D16	DICKSON LAKE	Lower Fraser	1147	2019-04-30	157	754		49%	2002		4	3180	1553	27
1D17P	Chilliwack River	Lower Fraser	1621	2019-05-01	229	1244		82%	1873	1769	675	2436	1513	26
1D18P	Disappointment Lake	Lower Fraser	1050	2019-05-01	180	630								
1D19P	Spuzzum Creek	Lower Fraser	1197	2019-05-01	182	1030		63%	1663	1881	162	2930	1635	19
1E01B	BLUE RIVER	North Thompson	673	2019-04-29	20	78		269%	186	146	0	265	29	34
1E02P	Mount Cook	North Thompson	1574	2019-05-01	264	1305		97%	1397	1327	684	1665	1346	18
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2019-05-02	162	596		98%	654	664	417	960	607	43
1E05	KNOUFF LAKE	North Thompson	1189						NS		0	142	45	10
1E07	ADAMS RIVER	North Thompson	1769	2019-04-30	165	670		92%	864	934	396	1173	726	47
1E08P	Azure River	North Thompson	1625	2019-05-01	219	930		77%	1034	1338	528	1635	1214	21
1E10P	Kostal Lake	North Thompson	1760	2019-05-01	164	809		91%	911	974	417	1268	891	33
1E14P	Cook Creek	North Thompson	1280	2019-05-01	46	311			710	64	120	604	372	2
1F01A	ABERDEEN LAKE	South Thompson	1262	2019-05-01	0	0		0%	114	47	0	165	19	61

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1F02	ANGLEMONT	South Thompson	1168	2019-05-01	25	108		68%	376		0	496	160	59
1F03P	Park Mountain	South Thompson	1857	2019-05-01	158	712		75%	1175	993	379	1343	955	33
1F04P	Enderby	South Thompson	1950	2019-05-01	231	835			1195	1146	1146	1146		2
1F06P	Celista Mountain	South Thompson	1533	2019-05-01	181	895		98%	1229	1114	506	1187	914	13
2A01A	CANOE RIVER	Upper Columbia	866						NS		0	147	5	26
2A02	GLACIER	Upper Columbia	1249	2019-04-27	121	612		95%	676	614	320	1247	643	72
2A03A	FIELD	Upper Columbia	1310						NS		0	178	20	52
2A06P	Mount Revelstoke	Upper Columbia	1770	2019-05-01		1105		87%	1316	1383	595	1625	1265	25
2A07	KICKING HORSE	Upper Columbia	1648	2019-04-29	75	265		90%	426	322	63	589	296	68
2A11	BEAVERFOOT	Upper Columbia	1924	2019-04-28	38	118		69%	238	238	0	495	170	69
2A14	MOUNT ABBOT	Upper Columbia	2031	2019-04-26	269	1143		85%	1460	1495	600	1885	1345	59
2A16	GOLDSTREAM	Upper Columbia	1914	2019-04-29	261	1114		93%	1193	1339	584	1781	1200	55
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2019-04-25	273	1210		93%	1420	1395	590	1986	1306	55
2A18	KEYSTONE CREEK	Upper Columbia	1839	2019-04-29	176	702		85%	903	1004	414	1421	823	51
2A18P	Keystone Creek	Upper Columbia	1850	2019-05-01		902			1069	1288	544	744		3
2A19	VERMONT CREEK	Upper Columbia	1533	2019-04-29	60	248		76%	449	424	0	1026	327	52
2A21P	Molson Creek	Upper Columbia	1930	2019-05-01		947		86%	1186	1144	481	1678	1100	37
2A22	SUNBEAM LAKE	Upper Columbia	2066	2019-04-29	216	833		89%	1083	1045	469	1562	939	51
2A23	BUSH RIVER	Upper Columbia	1982	2019-04-29	200	782		94%	870	993	483	1392	834	51
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2019-04-29	263	1167		94%	1341	1540	671	1797	1243	46
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2019-04-29	91	404		78%	698	584	0	910	517	40
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2019-04-29	289	1330		95%	1564	1640	335	2242	1402	40
2A30P	Colpitti Creek	Upper Columbia	2131	2019-05-01		754			1106	1122	602	1122		3
2A31P	Caribou Creek Upper	Upper Columbia	2201	2019-05-01		862			1189	1214	795	1214		3
2A32P	Wildcat Creek	Upper Columbia	2122	2019-05-01		692			690	751	442	751		3
2B02A	FARRON	Lower Columbia	1229	2019-04-30	34	130		71%	437	309	0	406	183	45
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2019-04-25	86	360		65%	831	596	255	983	557	57
2B06P	Barnes Creek	Lower Columbia	1595	2019-05-01		345		64%	794	549	272	821	541	25
2B07	KOCH CREEK	Lower Columbia	1813	2019-04-25	160	644		83%	974	971	391	1201	778	58
2B08P	St. Leon Creek	Lower Columbia	1822	2019-05-01		1017		91%	1403	1394	536	1501	1113	25
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2019-04-29	125	552		76%	914	1080	157	1278	727	43
2C01	SINCLAIR PASS	East Kootenay	1374	2019-04-29	0	0	T	0%	74	30	0	246	37	72
2C04	SULLIVAN MINE	East Kootenay	1580	2019-04-30	39	84		46%	416	288	0	518	182	71
2C07	FERNIE EAST	East Kootenay	1213	2019-04-28	0	0		0%	318	202	0	541	136	67
2C09Q	Morrissey Ridge	East Kootenay	1966	2019-05-01		389		58%	735	812	308	1332	670	38
2C10P	Moyie Mountain	East Kootenay	1840	2019-05-01	47	232		69%	534	583	18	689	338	39
2C14P	Floe Lake	East Kootenay	2110	2019-05-01		641		84%	951	994	331	1188	767	25

2019 Automated Snow Weather Station/Manual Snow Survey Data				May 1					Historic Snow Water Equivalent (mm)					
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2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2019-04-28	164	515		91%	650		270	930	566	48
2C16	MOUNT JOFFRE	East Kootenay	1763	2019-04-28	74	217	A	63%	447	362	36	772	346	49
2C17	THUNDER CREEK	East Kootenay	2062	2019-04-28	85	246	A	91%	362	360	163	556	271	49
2D02	FERGUSON	West Kootenay	929	2019-05-01			N		586		160	773	429	71
2D03	SANDON	West Kootenay	1072	2019-05-01	0	0	T	0%	266	132	0	399	45	68
2D04	NELSON	West Kootenay	952	2019-04-29	5	27		19%	299	67	0	508	143	60
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2019-04-30	86	359		84%	600	512	229	726	429	69
2D06	CHAR CREEK	West Kootenay	1290	2019-04-30	72	320		71%	660	549	79	838	449	52
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662						NS		0	42	14	5
2D08P	East Creek	West Kootenay	2004	2019-05-01		961		106%	1033	1164	480	1346	910	37
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2019-04-25			N		N	1240	520	1679	1075	50
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2019-04-30	152	627		82%	987	946	505	1300	767	48
2D14P	Redfish Creek	West Kootenay	2086	2019-05-01	233	1165		90%	1770	2035	751	2035	1298	16
2E01	MONASHEE PASS	Kettle	1387	2019-04-25	49	189		71%	487	305	67	505	266	60
2E02	CARMI	Kettle	1254	2019-04-30	0	0	T	0%	63	0	0	173	12	54
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2019-04-30	92	334		74%	723	547	237	762	451	52
2E07P	Grano Creek	Kettle	1874	2019-05-01	111	398		71%	878	708	285	814	561	20
2F01A	TROUT CREEK (West)	Okanagan	1430	2019-04-24	6	20		18%	298	160	93	292	112	7
2F01P	Trout Creek West	Okanagan	1420	2019-05-01	1	0			302					1
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2019-04-26	0	0		0%	305	185	0	368	84	53
2F03	MC CULLOCH	Okanagan	1266	2019-05-01	0	0		0%	82	42	0	188	12	70
2F04	GRAYSTOKE LAKE	Okanagan	1818	2019-05-01	91	308		90%	564	450	120	940	343	44
2F05P	Mission Creek	Okanagan	1794	2019-05-01	126	411		85%	804	590	141	784	481	48
2F07	POSTILL LAKE	Okanagan	1358	2019-05-01	0	0	T	0%	268	191	0	282	121	66
2F08P	Greyback Reservoir	Okanagan	1550	2019-05-01	0	52			270	270	270	270		2
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2019-04-28	100	415		88%	647	708	175	1013	470	47
2F10P	Silver Star Mountain	Okanagan	1839	2019-05-01	183	711			1238	809	784	809		3
2F11	ISINTOK LAKE	Okanagan	1651	2019-04-26	0	0		0%	318	174	0	437	98	53
2F12	MOUNT KOBAN	Okanagan	1817	2019-04-28	50	168		54%	568	468	53	597	309	52
2F13	ESPERON CR (UPPER)	Okanagan	1634	2019-04-26	65	256		74%	464	456	119	805	346	48
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	2019-04-26	43	198		92%	390	372	0	551	216	32
2F18P	Brenda Mine	Okanagan	1453	2019-05-01		2		2%	260	288	0	342	128	25
2F19	OOYAMA LAKE	Okanagan	1365	2019-05-01	0	0		0%	154	84	0	185	55	48
2F20	VASEUX CREEK	Okanagan	1403	2019-04-27	12	38		93%	186	96	0	192	41	46
2F21	BOULEAU LAKE	Okanagan	1405	2019-04-30			N		476	344	40	488	251	47
2F23	MACDONALD LAKE	Okanagan	1742	2019-05-01			N		N	590	198	650	421	39
2F24	ISLAHT LAKE	Okanagan	1492	2019-05-01	42	143		61%	428	320	64	433	234	36

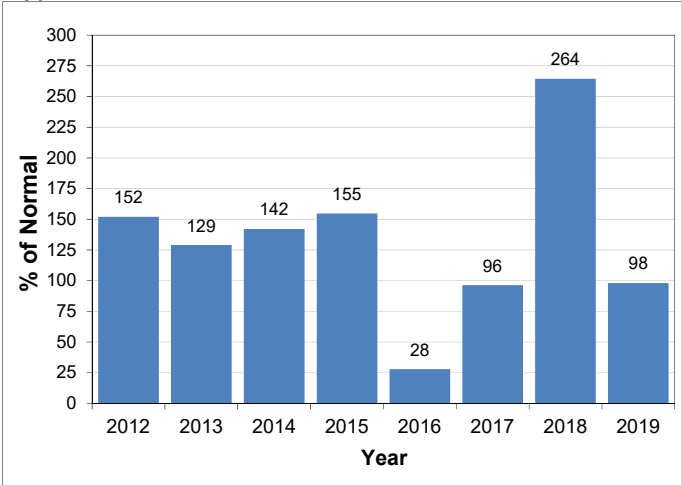
2019 Automated Snow Weather Station/Manual Snow Survey Data				May 1					Historic Snow Water Equivalent (mm)					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
2F25	POSTILL LAKE UPPER	Okanagan	1500						N		0	0		3
2G03P	Blackwall Peak	Similkameen	1934	2019-05-01	129	548		71%	1000	812	375	1569	768	50
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2019-05-01			N		455	236	64	554	215	58
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2019-05-01	0	0	B	0%	229	206	0	323	102	58
2G06	HAMILTON HILL	Similkameen	1477	2019-04-30	0	0	B	0%	304	254	0	838	190	58
3A01	GROUSE MOUNTAIN	South Coast	1126	2019-04-29	183	858		73%	1730	1730	0	2870	1170	68
3A02	POWELL RIVER (UPPER)	South Coast	1002						1110		533	1712	783	10
3A05	POWELL RIVER (LOWER)	South Coast	882						679		181	426	349	8
3A09	PALISADE LAKE	South Coast	898	2019-04-30	105	632		49%	1524	1648	0	3600	1291	68
3A09P	Palisade Lake	South Coast	900	2019-05-01	67	316								
3A10	DOG MOUNTAIN	South Coast	1007	2019-04-30	153	702		62%	1514	1762	0	2760	1137	34
3A19	ORCHID LAKE	South Coast	1178	2019-04-30	266	1350		72%	2240	2423	100	3845	1866	46
3A20	CALLAGHAN CREEK	South Coast	1009	2019-04-29	107	486		68%	990		0	1568	711	41
3A22P	Nostetuko River	South Coast	1457	2019-05-01	91	457		84%	609	527	201	1053	542	29
3A24P	Mosley Creek Upper	South Coast	1655	2019-05-01	47	203		80%	384	319	143	532	254	29
3A25P	Squamish River Upper	South Coast	1387	2019-05-01	284	1573		98%	1802	1775	695	2910	1597	28
3A26	CHAPMAN CREEK	South Coast	1022	2019-04-26	210	940			1873		756	1710	262	9
3A27	EDWARDS LAKE	South Coast	1070	2019-04-26	116	512		291%	NS		400	1180		6
3A28P	Tetrahedron	South Coast	1420	2019-05-01	317	1101								
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2019-04-26	225	1114		74%	1562	1507	0	3500	1507	61
3B02A	MOUNT COKELY	Vancouver Island	1267	2019-04-25	128	590		73%	962		0	2062	813	36
3B04	ELK RIVER	Vancouver Island	270	2019-04-26	0	0	E		0	0	0	40	0	34
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2019-04-26	152	716		48%	1248	1460	0	3560	1484	60
3B17P	Wolf River Upper	Vancouver Island	1422	2019-05-01		1040		77%	1300	1373	374	2691	1356	36
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2019-04-26	66	226		41%	422	586	0	1652	546	48
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2019-04-26	0	0	E	0%	54	62	0	1118	134	48
3B23P	Jump Creek	Vancouver Island	1134	2019-05-01	80	415		35%	1320	1432	0	3485	1180	22
3B24P	Heather Mountain Upper	Vancouver Island	1190	2019-05-01	144	822			1893	1933	1248	1933		3
3B26P	Mount Arrowsmith	Vancouver Island	1465	2019-05-01	154	781			1265					1
3C07	WEDEENE RIVER SOUTH	Central Coast	196	2019-04-26	7	30		22%	280	36	0	749	136	30
3C08P	Burnt Bridge Creek	Central Coast	1329	2019-05-01	122	602		78%	620	729	382	1464	776	20
3D01C	SUMALLO RIVER WEST	Skagit	801	2019-04-30	0	0	E	0%	N	96	0	371	66	25
3D02	LIGHTNING LAKE	Skagit	1254	2019-04-27	17	57	B	26%	332	213	7	599	223	46
3D03A	KLESILKWA	Skagit	1134	2019-04-30	0	0		0%	254	105	0	752	103	45
4A02P	Pine Pass	Peace	1386	2019-05-01	238	1072		100%	1052	959	363	1704	1072	29
4A03	WARE (UPPER)	Peace	1563	2019-04-27	90	241		88%	237	213	90	402	274	57
4A03P	Ware Upper	Peace	1565	2019-05-01	86	236			255	216	216	216		2

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4A04	WARE (LOWER)	Peace	969	2019-04-27	44	150		121%	104	71	0	229	124	56
4A04P	Ware Lower	Peace	971	2019-05-01	17	154			114	36	36	36		2
4A05	GERMANSEN (UPPER)	Peace	1489	2019-04-28	116	393		111%	295	238	156	597	355	57
4A06	TUTIZZI LAKE	Peace	1043	2019-04-28	23	86		55%	134	83	0	325	155	55
4A07	LADY LAURIER LAKE	Peace	1460	2019-04-26	131	450		81%	501	439	194	926	555	55
4A09	PULPIT LAKE	Peace	1331	2019-04-27	126	399		95%	N	325	152	623	418	54
4A09P	Pulpit Lake	Peace	1331	2019-05-01	96	360		88%	308	258	133	633	407	28
4A10	FREDRICKSON LAKE	Peace	1323	2019-04-28	79	236		102%	155	131	93	358	231	55
4A11	TRYGVE LAKE	Peace	1409	2019-04-27	106	335		88%	282	267	119	599	381	55
4A12	TSAYDAYCHI LAKE	Peace	1173	2019-04-28	100	402		104%	349	328	166	700	386	55
4A13	PHILIP LAKE	Peace	1013	2019-04-28	42	172		88%	109	89	0	406	196	55
4A16	MORFEE MOUNTAIN	Peace	1427	2019-04-29	166	788		97%	674	606	265	1181	812	49
4A18	MOUNT SHEBA	Peace	1480	2019-04-29	219	920		103%	958	805	369	1371	891	49
4A20	MONKMAN CREEK	Peace	1566	2019-04-29			N		768	603	190	1042	580	44
4A20P	Monkman Creek	Peace	1570	2019-05-01		467								
4A21	MOUNT STEARNS	Peace	1514	2019-04-26	52	148		101%	135	206	0	271	146	44
4A25	FORT ST. JOHN A	Peace	692						NS	0	0	56	0	27
4A27P	Kwadacha North	Peace	1554	2019-05-01	103	259			306	267	267	267		2
4A30P	Aiken Lake	Peace	1061	2019-05-01	23	143		79%	143	123	71	313	181	33
4A31P	Crying Girl Prairie	Peace	1358	2019-05-01		186			229	313	0	313		2
4A33P	Muskwa-Kechika	Peace	1196	2019-05-01		0			37	101	0	101		2
4A34P	Dowling Creek	Peace	1456	2019-05-01		1425			1254	444	444	444		2
4B01	KIDPRICE LAKE	Skeena-Nass	1415	2019-05-01	152	634		67%	913	997	551	1591	951	65
4B02	JOHANSON LAKE	Skeena-Nass	1480	2019-04-28	89	267		89%	187	226	108	433	301	55
4B03A	HUDSON BAY MTN.	Skeena-Nass	1452	2019-05-01	117	478	B	94%	585	443	168	795	509	46
4B04	CHAPMAN LAKE	Skeena-Nass	1485	2019-05-01	106	416	B	88%	630	463	308	749	473	51
4B06	TACHEK CREEK	Skeena-Nass	1133	2019-05-02	50	166		95%	288	130	55	363	175	49
4B07	MCKENDRICK CREEK	Skeena-Nass	1048	2019-05-01	65	233	B	104%	453	158	80	422	223	50
4B08	MOUNT CRONIN	Skeena-Nass	1491	2019-05-01	133	491	B	80%	789	595	422	1125	616	49
4B10	NINGUNSAW PASS	Nass	647	2019-05-02	0	0		0%	164		0	676	263	40
4B11A	BEAR PASS	Nass	437						N		256	860	541	25
4B12P	Granduc Mine	Skeena-Nass	790							82	82	82		1
4B13A	TERRACE A	Skeena-Nass	219	2019-04-26	0	0		0%	N	0	0	68	14	7
4B14	EQUITY MINE	Skeena-Nass	1434	2019-04-26	95	326		87%	N	434	212	690	373	40
4B15	LU LAKE	Skeena-Nass	1296	2019-04-26	78	258		97%	N	276	144	528	267	39
4B15P	Lu Lake	Skeena-Nass	1308	2019-05-01	71	278		122%	441	320	79	517	227	20
4B16P	Shedin Creek	Skeena-Nass	1320	2019-05-01	155	611		63%	593	514	195	1310	972	22

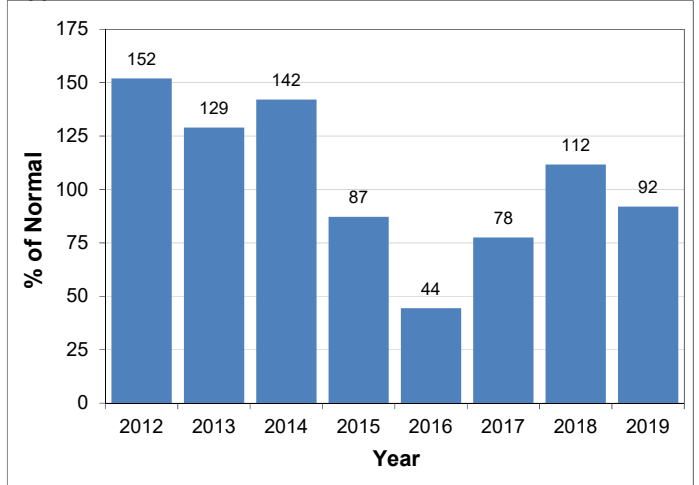
2019 Automated Snow Weather Station/Manual Snow Survey Data				May 1					Historic Snow Water Equivalent (mm)					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2018 SWE (mm)	2017 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
4B17P	Tsai Creek	Skeena-Nass	1360	2019-05-01	224	1026		79%	1185	1053	302	2081	1307	20
4B18P	Cedar-Kiteen	Skeena-Nass	912	2019-05-01	63	295		48%		267	178	1075	612	17
4C01	SIKANNI LAKE	Liard	1390	2019-04-27	86	246		92%	145	171	78	404	266	55
4C01P	Sikanni Lake	Liard	1400	2019-05-01	93	231			275	159	159	159		2
4C02	SUMMIT LAKE	Liard	1291	2019-05-01	46	116		264%	115	120	0	200	44	53
4C03	DEASE LAKE	Liard	805	2019-05-01	0	0		0%	NS		0	178	38	50
4C05	FORT NELSON AIRPORT	Liard	368	2019-05-01	0	0		0%	24		0	103	12	33
4C15	JADE CITY	Liard	943						NS		28	350	189	15
4D01	TELEGRAPH CREEK	Stikine	490						NS		0	163	23	42
4D02	ISKUT	Stikine	931						N		0	146	18	25
4D11P	Kinaskan Lake	Stikine	1020	2019-05-01	32	184		52%	112	262	0	305	352	22
4E02B	ATLIN LAKE	Yukon	730	2019-04-30	0	0			37		0	140		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 - May 1, 2019

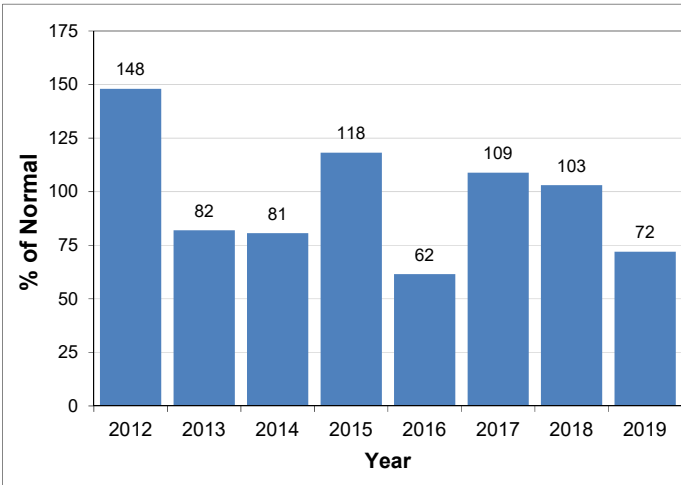
Upper Fraser West



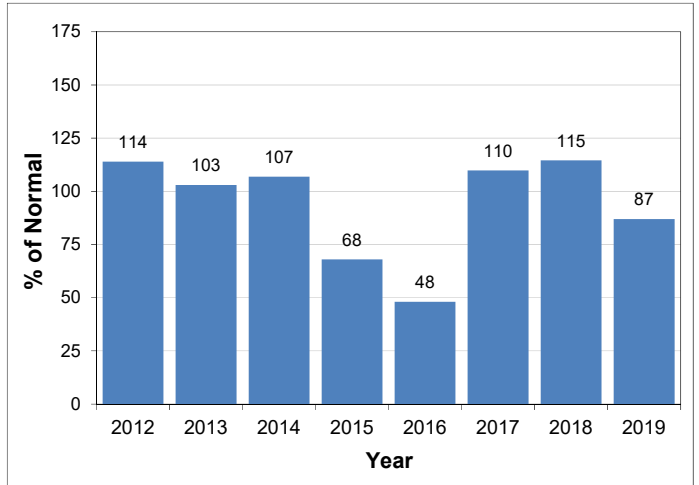
Upper Fraser East



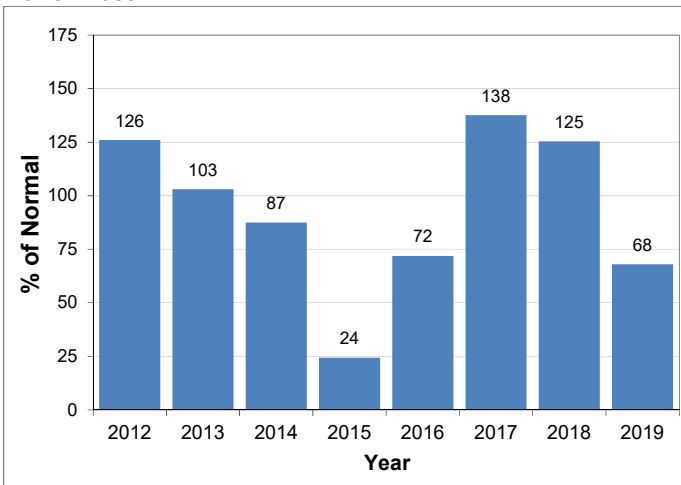
Nechako



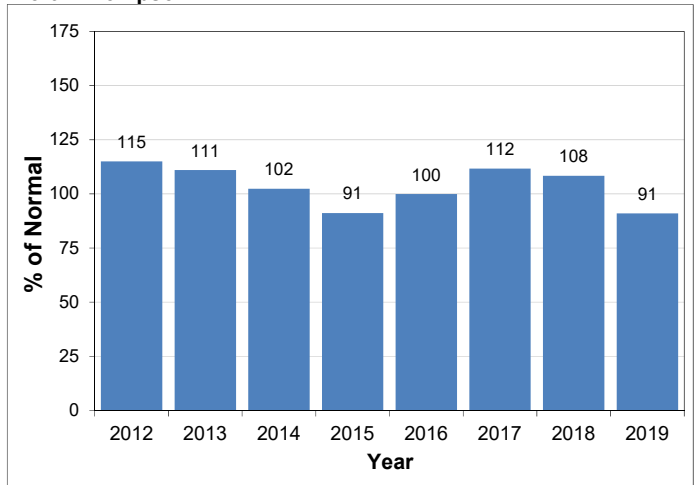
Middle Fraser



Lower Fraser

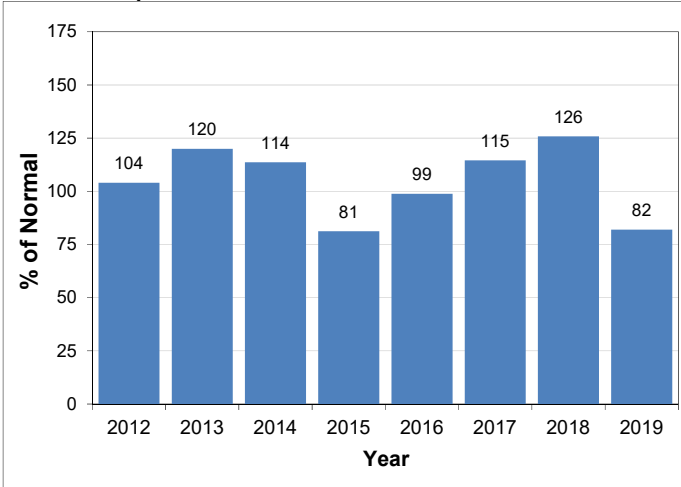


North Thompson

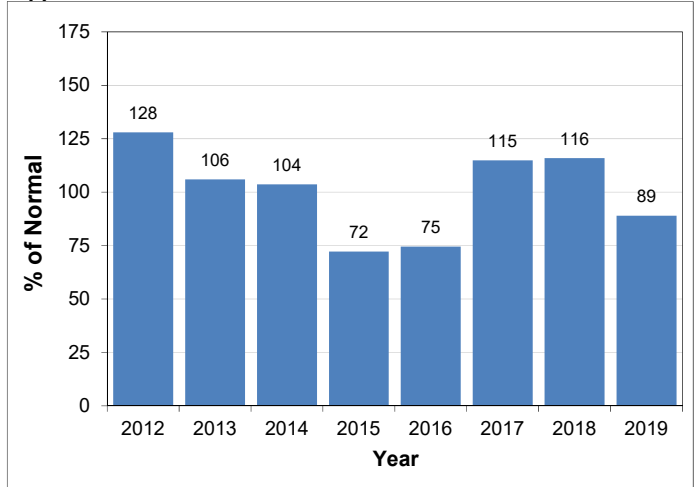


Snow Basin Index Graphs - May 1, 2019

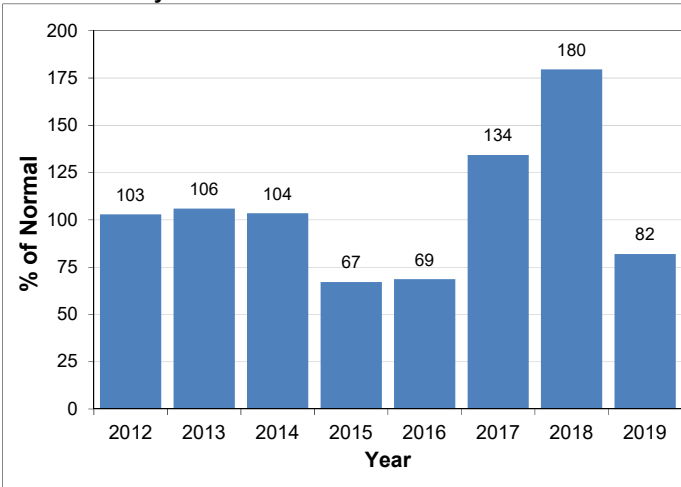
South Thompson



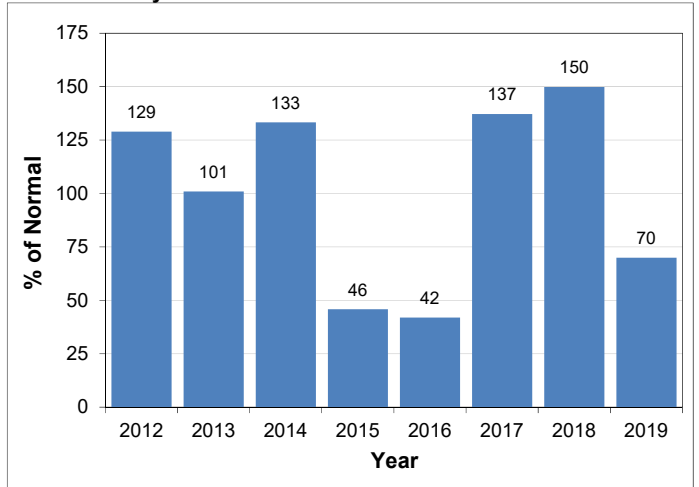
Upper Columbia



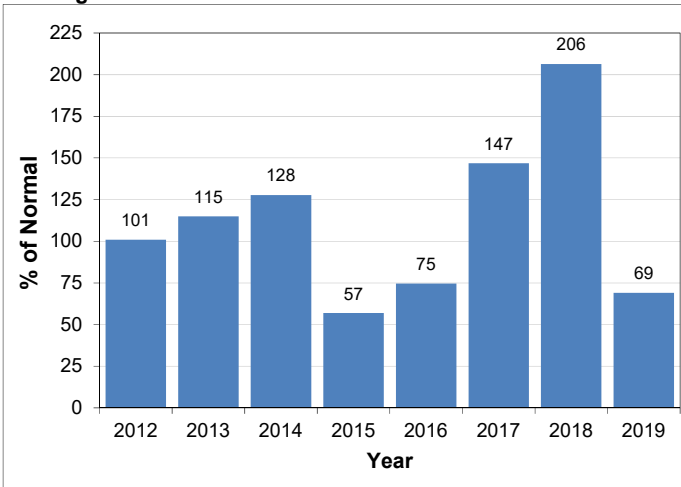
West Kootenay



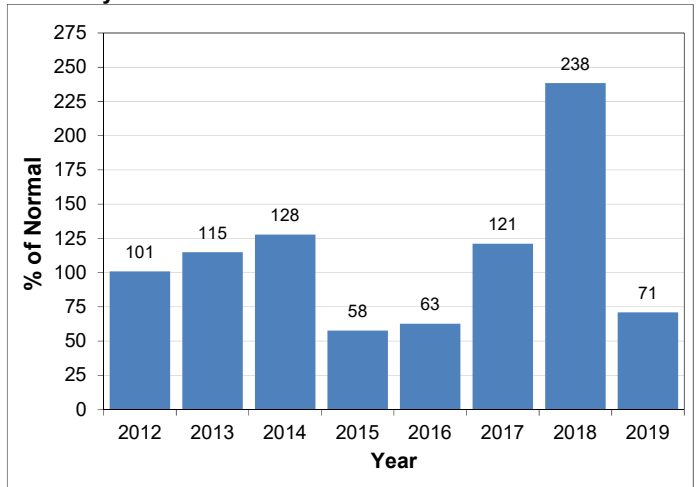
East Kootenay



Okanagan

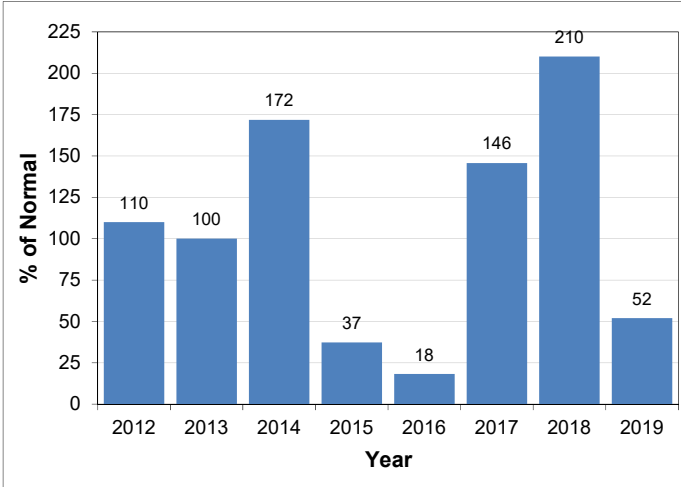


Boundary

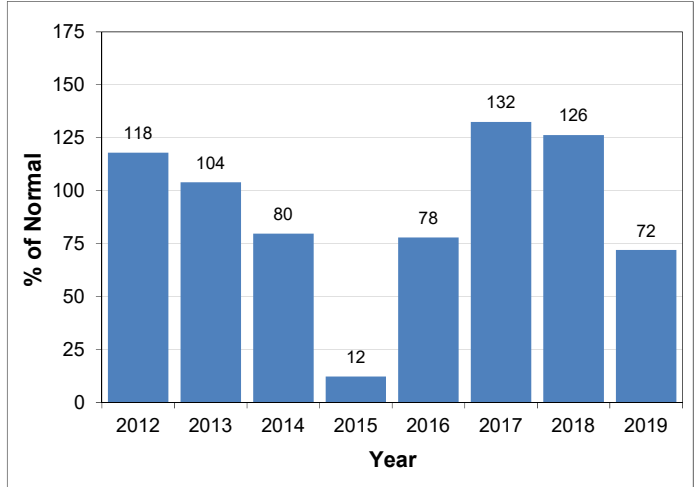


Snow Basin Index Graphs - May 1, 2019

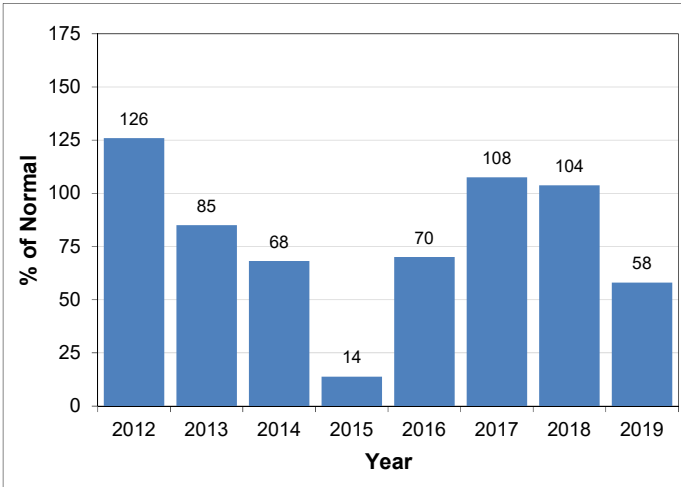
Similkameen



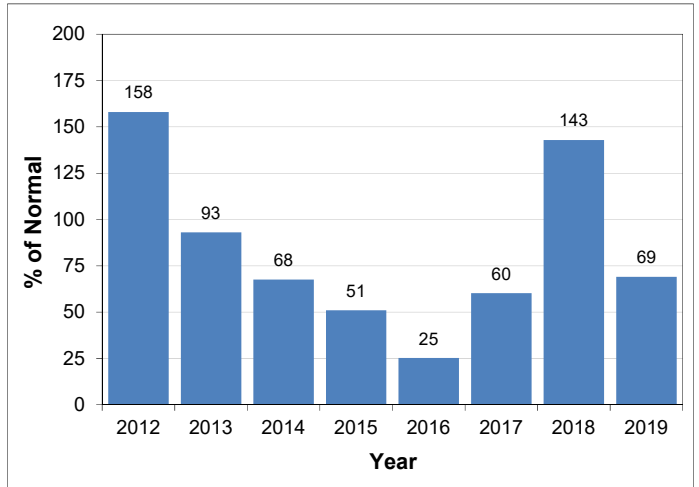
South Coast



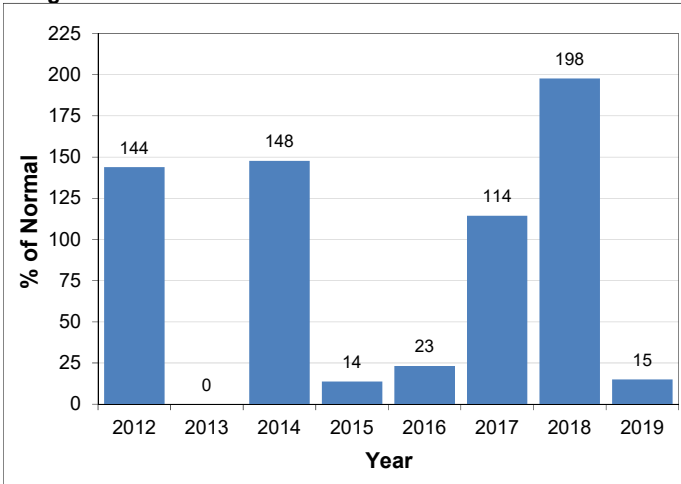
Vancouver Island



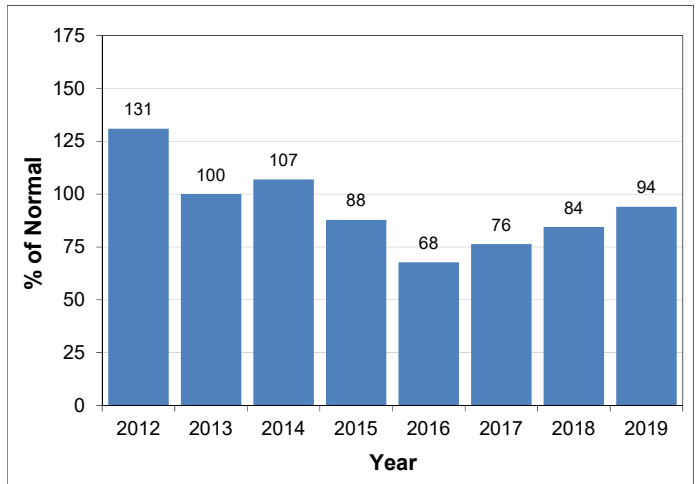
Central Coast



Skagit

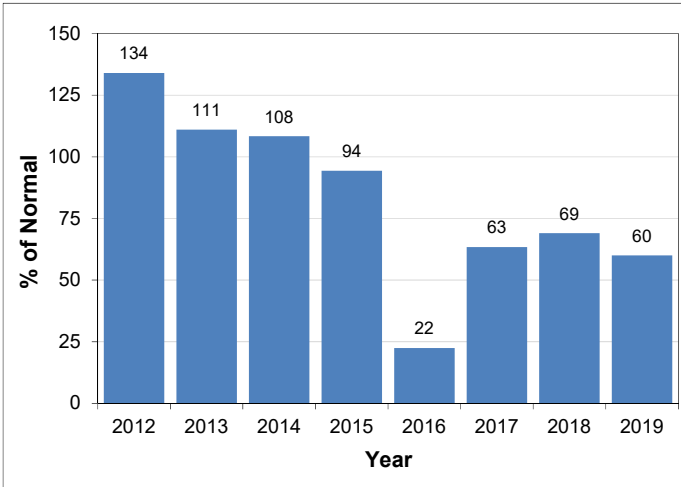


Peace

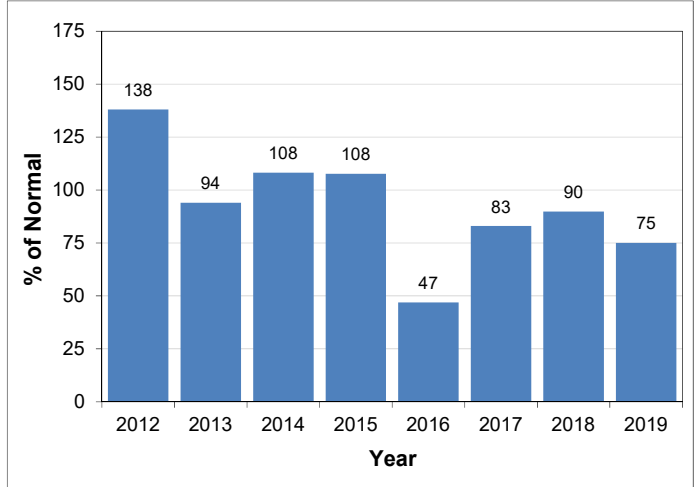


Snow Basin Index Graphs - May 1, 2019

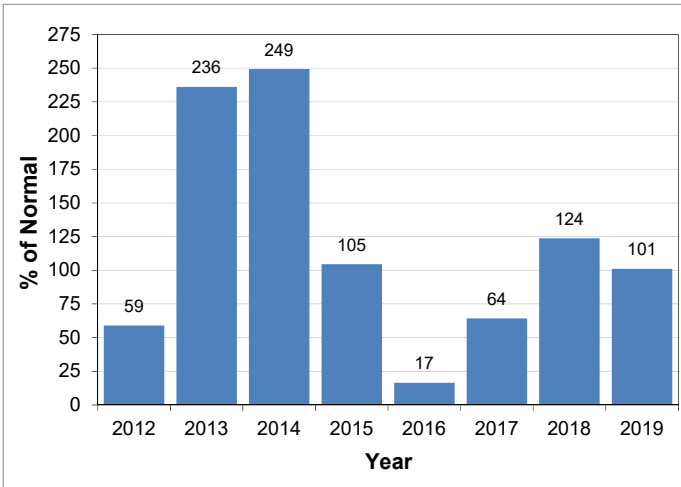
Stikine



Skeena-Nass



Liard



Northwest

