

Snow Survey and Water Supply Bulletin – March 1st, 2017

The March 1st snow survey is now complete. Data from 154 snow courses and 72 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 have been used to form the basis of the following report¹.

Weather

February was dominated by persistent high pressure over British Columbia and offshore which generally brought stable, dry, cold weather conditions across the province. This pattern of stable weather was interrupted at times with periods of instability which brought light to moderate precipitation, including snowfall at low elevations. A strong atmospheric river event in the middle of February brought heavy rain and seasonally warm temperatures to south-west BC, leading to the melt of low elevation snow.

For the month of February, temperatures were 1 to 4°C below-normal through most of BC, except in the north, where temperatures were slightly above-normal. Overall precipitation patterns for February were mixed across the province, with drier conditions in the north coast and west-central areas of BC, wetter conditions in the South Coast, South Interior and Kootenay, and near normal precipitation elsewhere in the province.

Weather across the entire winter period (December, January and February) tells a similar story, with persistent colder than normal temperatures (1-3°C) over the southern half of BC, and warmer than normal temperatures over the north. Dry conditions have been prevalent over most of the province this winter.

Snowpack

Weather patterns through February led to modest shifts in snow pack conditions across the province. In the South Interior and south-east BC, snow basin indices saw increases in values from February 1st. Declining snow basin indices occurred in coastal and northern BC, while indices in central locations were generally stable from February 1st values. The provincial average for all March 1st snow measurements is 85% of normal, which is an increase from the average of 79% in February.

Snow basin indices for March 1st 2017 range from a low of 45% of normal in the Liard to a high of 99% in the East Kootenay (Table 1 and Figure 1). Below normal snowpack (65-80%) is present in the Upper Fraser, Vancouver Island, Skeena-Nass and Northwest, and well below normal (<65%) in the Boundary, Stikine, Liard and Peace. Near-normal snowpack (80-100%) are present throughout the rest of the province. The March basin index for the entire Fraser River basin is at 83%, which is approximately a 1-in-15 year low snowpack or the 10th lowest March index in the past 65 years.

With cooler than normal temperatures through this winter, low elevation areas have been cold enough that they have experienced a greater proportion of precipitation as snow than normal. For example, most Environment and Climate Change Canada weather stations that

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record snow observed 2 to 8 times the normal snowfall amounts in February. This season's snowpack can be considered "upside-down", with higher than normal snowfall occurring at low elevations, but below-normal snow at high elevations. This is a result of colder than normal temperatures which have resulted in several low elevation precipitation events occurring as snow rather than rain. However, seasonally dry conditions have resulted in lower than normal snowpack at high elevations despite the colder conditions. Increased snow at low elevations plays a limited role in seasonal flood risk or water supply into the spring and summer.

Table 1 - BC Snow Basin Indices – March 1, 2017

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	66	Boundary	59
Upper Fraser East	66	Similkameen	83
Nechako	95	South Coast	90
Middle Fraser	84	Vancouver Island	72
Lower Fraser	95	Central Coast	84
North Thompson	87	Skagit	98
South Thompson	87	Peace	64
Fraser River – Entire	83	Nicola	83
Upper Columbia	87	Skeena-Nass	74
West Kootenay	91	Stikine	52
East Kootenay	99	Liard	45
Okanagan	86	Northwest	77

Outlook

La Niña conditions in the equatorial Pacific Ocean have ended, with the Climate Prediction Centre (CPC) at the U.S. National Weather Service/NOAA ending the La Niña Advisory in early February 2017. Neutral ENSO conditions are now present, and the CPC is forecasting an increased likelihood of neutral conditions persisting through the spring of 2017, with the potential for El Niño conditions into the summer-fall period. Negative sea surface temperature anomalies are present in the North Pacific Ocean west of British Columbia. Seasonal forecasts from Environment and Climate Change Canada reflect current ocean temperature conditions, with an increased likelihood of normal temperatures over the March-May period for most of the province, and below-normal temperatures over coastal BC and north into the Yukon.

Seasonal volume runoff forecasts (see below) are near normal for most basins across the province with below-normal seasonal runoff forecasted for the Kalamalka-Wood basin.

By early March, 80% of the annual BC snowpack has typically accumulated. At this stage in the season there is limited indication that any region of the province is developing increased



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seasonal flood risk due to high snowpack. While snowpack is an important factor in seasonal flooding, weather during the melt season, particularly extreme rainfall events, can also create flood risk even in years with low snowpack.

Well-below normal snowpack in the Stikine, Liard, Peace and Boundary, and below normal snowpack in the Upper Fraser, Skeena-Nass, Vancouver Island, and the Northwest indicate the potential for increased risk of low flows this summer. Summer weather is also an important factor in summer low flows, particularly on Vancouver Island and northeast BC, and wet or dry weather through the summer period can affect the risk of low streamflow.

With six to eight weeks remaining in the snow accumulation season, changes to the seasonal runoff outlook are possible, but at this stage would require extremely wet or cool conditions to make a significant impact on seasonal flood risk.

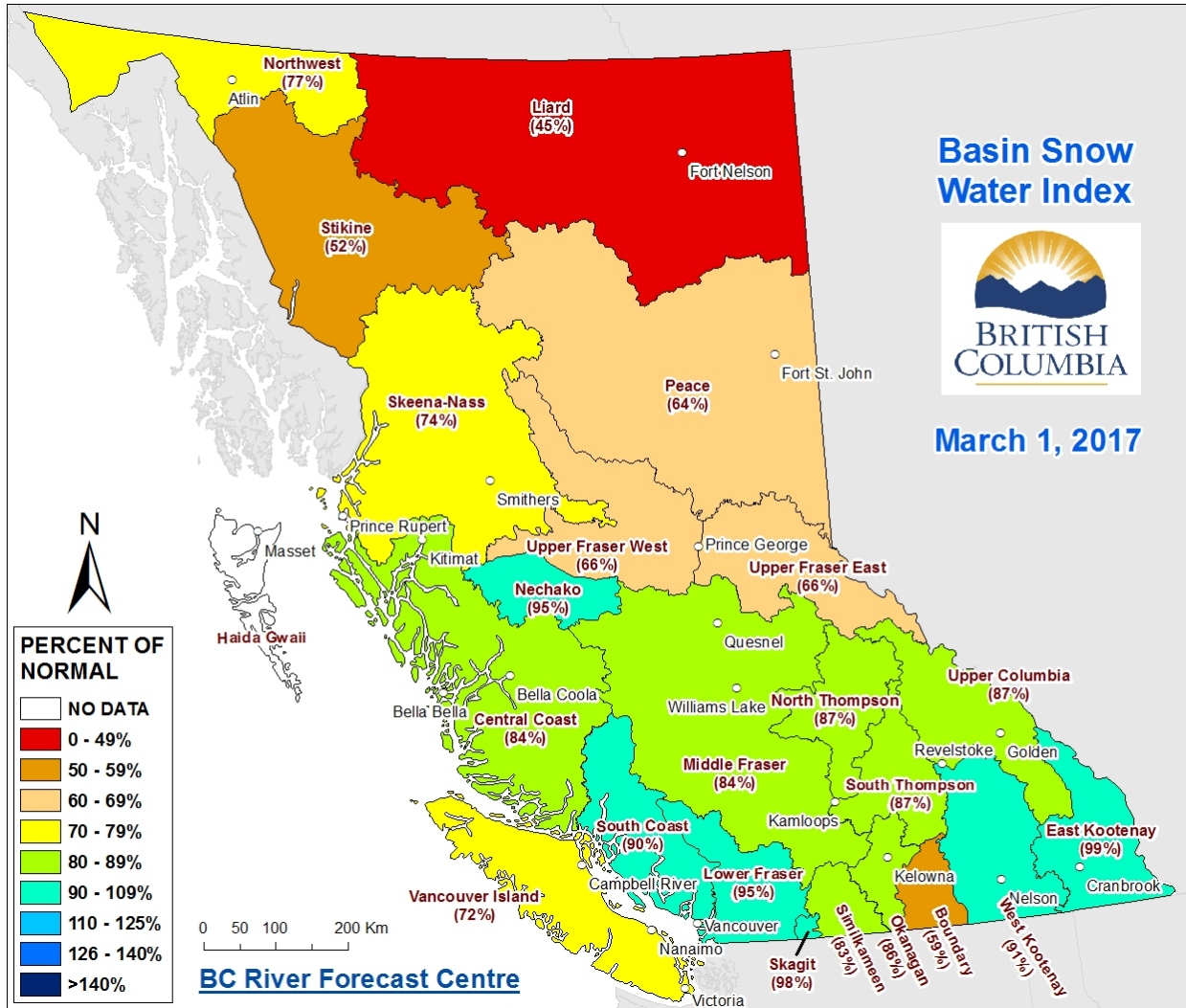
The River Forecast Centre will continue to monitor snowpack conditions and will provide an updated seasonal flood risk forecast in the April 1st 2017 bulletin, which is scheduled for release on April 6th.

BC River Forecast Centre
March 7, 2017



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Figure 1: Basin Snow Water Index – March 1st, 2017



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2017 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	2016 SWE (mm)	2015 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	Yellowhead Lake	Upper Fraser East	1847	2017-03-01		321		72%	398	428	254	720	445	20
1A02P	McBride Upper	Upper Fraser East	1608	2017-03-01	506	275		74%	338	414	198	562	372	25
1A03P	Barkerville	Upper Fraser East	1483	2017-03-01	94	203		70%	218	274	123	479	292	42
1A05	LONGWORTH (UPPER)	Upper Fraser East	1693		N	N	N			858	296	1104	676	63
1A05P	Longworth Upper	Upper Fraser East	1740	2017-03-01	165	379								0
1A06A	HANSARD	Upper Fraser East	622	2017-02-27	35	101		59%	64	218	44	396	170	44
1A10	PRINCE GEORGE A	Upper Fraser East	684	2017-02-28	26	55		47%	83	124	0	296	117	55
1A11	PACIFIC LAKE	Upper Fraser East	756	2017-02-27	106	341		62%	321	392	165	866	546	54
1A12	KAZA LAKE	Upper Fraser West	1247	2017-02-28	75	162		55%	257	299	132	478	295	53
1A12P	Kaza Lake	Upper Fraser West	1248	2017-03-01	89	199			257		257	257		1
1A14P	Hedrick Lake	Upper Fraser East	1118	2017-03-01					366	526	214	1066	654	17
1A15	KNUDSEN LAKE	Upper Fraser East	1598	2017-02-27	142	457		66%	531	627	404	1098	692	47
1A15P	Knudsen Lake	Upper Fraser East	1601	2017-03-01	156	599								0
1A16	BURNS LAKE	Upper Fraser West	820	2017-02-28	29	72		55%	98	194	50	250	130	47
1A17P	Revolution Creek	Upper Fraser East	1676	2017-03-01	166	398		59%	621	608	326	1133	674	32
1A19P	Dome Mountain	Upper Fraser East	1768	2017-03-01	151	405		66%	502	615	298	912	611	11
1A23	BIRD CREEK	Upper Fraser West	1196	2017-02-27	45	98		75%	126	231	72	232	131	27
1B01	MOUNT WELLS	Nechako	1489	2017-02-27	143	426		94%	323	533	244	954	452	65
1B01P	Mount Wells	Nechako	1489	2017-03-01		475		101%	362	585	227	739	470	25
1B02	TAHTSA LAKE	Nechako	1319	2017-02-27	253	961		93%	866	1017	571	1777	1034	65
1B02P	Tahtsa Lake	Nechako	1319	2017-03-01		1076		97%	960	999	464	1725	1108	25
1B05	SKINS LAKE	Nechako	877	2017-02-27	26	75		73%	88		53	226	103	52
1B06	MOUNT SWANNELL	Nechako	1596	2017-02-27	93	222		88%		359	132	446	252	28
1B07	NUTLI LAKE	Nechako	1502	2017-02-27	153	483		105%	342	439	229	779	460	26
1B08P	Mount Pondosy	Nechako	1413	2017-03-01		699		102%	593	798	363	995	686	25
1C01	BROOKMERE	Middle Fraser	994	2017-02-28	73	174		104%	148	135	53	351	167	72
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2017-02-27	146	468		95%	406	320	222	1016	492	65
1C06	PAVILION	Middle Fraser	1209	2017-03-02	25	70		121%	60		0	168	58	60
1C08	NAZKO	Middle Fraser	1029	2017-02-28	22	45		70%	63	132	0	142	64	42
1C09A	HIGHLAND VALLEY	Middle Fraser	1547		N	N	N		106	86	25	229	77	50
1C12P	Green Mountain	Middle Fraser	1766	2017-03-01		574		76%	758	591	429	1265	751	23
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2017-02-26	88	280		65%	444	412	238	624	428	46
1C14	BRALORNE	Middle Fraser	1382	2017-02-27	66	169		113%	80	54	0	363	149	53
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2017-03-01	79	181		68%	360	201	141	468	266	56
1C18P	Mission Ridge	Middle Fraser	1903	2017-03-01		481		101%	375	316	160	866	475	47
1C19	GNAWED MOUNTAIN	Middle Fraser	1617		N	N	N		111	90	15	259	96	49
1C20P	Boss Mountain Mine	Middle Fraser	1477	2017-03-01	124	327		67%	572	456	255	739	487	23

1C21	BIG CREEK	Middle Fraser	1130	2017-02-26	20	40		83%	46	74	0	112	48	46
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2017-02-28	21	46		84%	44	84	0	128	55	47
1C23	PENFOLD CREEK	Middle Fraser	1687		N	N	N		778	674	453	1132	807	42
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2017-03-01	70	132		110%	178	110	13	213	120	44
1C28	DUFFEY LAKE	Middle Fraser	1253	2017-03-01	129	366		86%	434	273	194	762	428	39
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2017-02-28	74	221		102%	188	121	100	398	216	36
1C32	DEADMAN RIVER	Middle Fraser	1463	2017-03-02	53	110		110%	170	110	44	220	100	33
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175		N	N	N		154	156	116	211	173	11
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2017-02-27	179	550		101%	560	448	268	944	543	22
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2017-02-27	217	654		89%	782	690	302	1250	737	22
1C38P	Downton Lake Upper	Middle Fraser	1829	2017-03-01		667			685		685	685		1
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2017-02-27	159	516		102%	584	412	146	954	508	22
1C40	TYAUGHTON	Middle Fraser	1946	2017-02-27	125	332		83%		300	138	916	399	22
1C40P	North Tyaughton	Middle Fraser	1969	2017-03-01		291			267		267	267		1
1C41P	Yanks Peak East	Middle Fraser	1683	2017-03-01	167	488		75%	661	684	365	904	655	20
1C42	CAVERHILL LAKE	Middle Fraser	1400	2017-03-01	73	148			246	184	60	270		12
1D06P	Tenquille Lake	Lower Fraser	1669	2017-03-01	285	912		113%	945	727	518	1227	810	16
1D08	STAVE LAKE	Lower Fraser	1211	2017-02-24	269	1030		87%	1026	120	120	2500	1178	50
1D09	WAHLEACH LAKE	Lower Fraser	1395	2017-02-24	105	368		79%	374	37	37	1072	468	50
1D09P	Wahleach Lake Upper	Lower Fraser	1408	2017-03-01		430		51%	565	251	251	1320	846	25
1D10	NAHATLATCH RIVER	Lower Fraser	1530	2017-02-24	230	939		86%	1028	426	400	2380	1092	48
1D16	DICKSON LAKE	Lower Fraser	1147	2017-02-24	281	1160		98%	824	22	22	1814	1186	26
1D17P	Chilliwack River	Lower Fraser	1621	2017-03-01	250	1022		85%	1307	607	506	2353	1208	25
1D19P	Spuzzum Creek	Lower Fraser	1197	2017-03-01	259	1076		82%	1106	265	265	2615	1312	18
1E01B	BLUE RIVER	North Thompson	673	2017-02-23	80	280		100%	284	267	160	411	280	33
1E02P	Mount Cook	North Thompson	1574	2017-03-01	248	787		77%	1260	988	684	1319	1028	17
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2017-02-24	134	420		93%	442	273	216	778	452	43
1E05	KNOUFF LAKE	North Thompson	1189	2017-02-27	45	124		100%	126	121	36	284	124	60
1E07	ADAMS RIVER	North Thompson	1769	2017-02-24	166	534		95%	728	504	262	892	560	46
1E08P	Azure River	North Thompson	1625	2017-03-01					931	982	528	1339	934	20
1E10P	Kostal Lake	North Thompson	1760	2017-03-01		607		85%	755	654	417	1023	712	32
1E14P	Cook Creek	North Thompson	1280	2017-03-01	130	0			0		0	0		1
1F01A	ABERDEEN LAKE	South Thompson	1262	2017-03-01	69	140		105%	171	160	51	231	133	60
1F02	ANGLEMONT	South Thompson	1168		N	N	N		299		160	635	323	59
1F03P	Park Mountain	South Thompson	1857	2017-03-01	178				729	646	379	1021	714	32
1F04P	Enderby	South Thompson	1950	2017-03-01	255	712								0
1F06P	Celista Mountain	South Thompson	1533	2017-03-01	180	545		74%	908	699	506	923	739	12
2A01A	CANOE RIVER	Upper Columbia	866	2017-03-03	37	76		85%	132	120	19	251	89	76
2A02	GLACIER	Upper Columbia	1249	2017-02-26	125	417		71%	578	490	251	952	585	79
2A03A	FIELD	Upper Columbia	1310	2017-02-28	54	113		77%	162	157	53	248	147	77
2A06P	Mount Revelstoke	Upper Columbia	1770	2017-03-01		862		87%	1059	851	537	1487	992	24
2A07	KICKING HORSE	Upper Columbia	1648	2017-02-28	86	216		77%	296	218	140	462	279	70

2A11	BEAVERFOOT	Upper Columbia	1924	2017-02-26	72	160		96%	194	150	80	333	167	68
2A14	MOUNT ABBOT	Upper Columbia	2031	2017-02-25	271	892		89%	882	784	508	1448	1000	58
2A16	GOLDSTREAM	Upper Columbia	1914	2017-02-28	246	895		94%	920	937	553	1351	954	54
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2017-02-26	249	824		79%	976	877	534	1703	1043	54
2A18	KEYSTONE CREEK	Upper Columbia	1839	2017-02-28	189	649		97%	679	630	357	1277	671	51
2A18P	Keystone Creek	Upper Columbia	1850	2017-03-01		762			779		779	779		1
2A19	VERMONT CREEK	Upper Columbia	1533	2017-02-27	128	355		100%	434	266	152	643	356	51
2A21P	Molson Creek	Upper Columbia	1930	2017-03-01		755		85%	800	773	437	1215	887	36
2A22	SUNBEAM LAKE	Upper Columbia	2066	2017-02-27	209	713		95%	683	699	389	1117	751	50
2A23	BUSH RIVER	Upper Columbia	1982	2017-02-27	203	676		99%	684	624	281	1078	682	49
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2017-02-28	261	952		96%	1072	965	526	1476	990	45
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2017-02-28	128	422		68%	626		338	1018	618	40
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2017-02-28	262	990		86%	1108	938	335	2120	1146	39
2A30P	Colpitti Creek	Upper Columbia	2131	2017-03-01		650			651		403	403		1
2A31P	Caribou Creek Upper	Upper Columbia	2201	2017-03-01		740			779		465	465		1
2A32P	Wildcat Creek	Upper Columbia	2122	2017-03-01		434			446		271	271		1
2B02A	FARRON	Lower Columbia	1229	2017-02-27	105	276		100%	320	166	79	450	276	44
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2017-02-23	127	351		62%	558	460	285	918	570	56
2B06P	Barnes Creek	Lower Columbia	1595	2017-03-01		227		52%	513	393	229	690	437	24
2B07	KOCH CREEK	Lower Columbia	1813	2017-02-23	186	531		88%	704	488	269	996	601	56
2B08P	St. Leon Creek	Lower Columbia	1822	2017-03-01		780		87%	960	858	416	1392	900	24
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2017-03-03	228	710		118%	845	416	147	1136	601	42
2C01	SINCLAIR PASS	East Kootenay	1374	2017-02-27	45	96		93%	114	80	44	262	103	69
2C04	SULLIVAN MINE	East Kootenay	1580	2017-02-28	102	230		98%	206	138	53	465	235	71
2C07	FERNIE EAST	East Kootenay	1213	2017-03-02	121	302		112%	192	120	61	584	270	66
2C09Q	Morrissey Ridge	East Kootenay	1966	2017-03-01		463		81%	566	372	233	1074	571	37
2C10P	Moyie Mountain	East Kootenay	1840	2017-03-01	515	381		114%	357	216	149	653	333	38
2C14P	Floe Lake	East Kootenay	2110	2017-03-01		601		103%	529	553	257	889	581	24
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2017-02-27	157	437		104%	401		185	680	421	48
2C16	MOUNT JOFFRE	East Kootenay	1763	2017-02-27	96	243		84%	283	292	122	551	291	48
2C17	THUNDER CREEK	East Kootenay	2062	2017-02-27	96	226		106%	266	165	91	378	214	48
2D02	FERGUSON	West Kootenay	929	2017-02-27	130	400		80%	612	488	283	796	502	63
2D03	SANDON	West Kootenay	1072	2017-03-01	102	295		92%		245	196	475	319	37
2D04	NELSON	West Kootenay	952	2017-03-01	102	264		80%	197	118	118	558	328	77
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2017-02-27	137	316		84%	385	258	201	663	378	68
2D06	CHAR CREEK	West Kootenay	1290	2017-02-25	146	418		94%	400	258	221	754	447	51
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	2017-02-26	57	188		131%	82	148	52	322	144	25
2D08P	East Creek	West Kootenay	2004	2017-03-01		716		98%	865	694	312	1167	732	36
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2017-02-23	255	775		90%		806	490	1534	859	50
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2017-02-27	218	570		94%	645	511	343	955	607	48
2D14P	Redfish Creek	West Kootenay	2086	2017-03-01	380	1093		115%	1296	1162	751	1256	954	15
2E01	MONASHEE PASS	Kettle	1387	2017-02-23	66	158		56%	300	251	149	442	282	58

2E02	CARMI	Kettle	1254	2017-02-28	24	47			36%	120	68	56	274	130	54
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2017-02-28	120	208			52%	495	305	213	676	402	51
2E07P	Grano Creek	Kettle	1874	2017-03-01		338			82%	524	323	206	679	411	19
2F01A	TROUT CREEK (West)	Okanagan	1430	2017-02-24	56	120			61%	211	139	93	229	196	6
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2017-02-28	76	178			94%	235	207	97	381	190	56
2F03	MC CULLOCH	Okanagan	1266	2017-02-27	60	117			80%	224	108	71	249	146	77
2F04	GRAYSTOKE LAKE	Okanagan	1818	2017-03-03	94	216			76%	336		128	605	285	34
2F05P	Mission Creek	Okanagan	1794	2017-03-01		274			70%	486	332	208	608	392	47
2F07	POSTILL LAKE	Okanagan	1358		N	N	N	N		190	133	98	274	173	67
2F08P	Greyback Reservoir	Okanagan	1550	2017-03-01	60	159									0
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2017-02-25	118	362			80%	677	355	180	809	450	62
2F10P	Silver Star Mountain	Okanagan	1839	2017-03-01	185	445				622		622	622		1
2F11	ISINTOK LAKE	Okanagan	1651	2017-02-28	57	117			89%	131	145	53	358	132	52
2F12	MOUNT KOBAN	Okanagan	1817	2017-02-28	98	270			107%	333	194	61	488	253	51
2F13	ESPERON CR (UPPER)	Okanagan	1634	2017-02-26	96	270			82%	398	218	157	635	330	48
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	2017-02-26	86	206			72%			132	513	287	25
2F18P	Brenda Mine	Okanagan	1453	2017-03-01		212			67%	373	243	184	431	315	24
2F19	OOYAMA LAKE	Okanagan	1365	2017-02-28	65	124			86%	174	76	73	241	144	48
2F20	VASEUX CREEK	Okanagan	1403	2017-02-28	40	60			53%	132	88	52	284	113	45
2F21	BOULEAU LAKE	Okanagan	1405	2017-02-26	86	212			79%	288	202	165	432	267	46
2F23	MACDONALD LAKE	Okanagan	1742	2017-03-01	118	310			84%	475	305	170	583	368	40
2F24	ISLAHT LAKE	Okanagan	1492	2017-02-28	95	183			64%	305	207	161	497	285	35
2F25	POSTILL LAKE UPPER	Okanagan	1500		N	N	N	N		242	112	112	242		7
2G03P	Blackwall Peak	Similkameen	1934	2017-03-01	184	544			82%	736	542	228	1323	665	49
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2017-02-27	68	139	B		78%	220	205	92	508	178	57
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2017-02-27	68	158	B		87%	178	142	76	363	182	56
2G06	HAMILTON HILL	Similkameen	1477	2017-02-28	86	219	B		82%	190	167	102	676	267	55
3A01	GROUSE MOUNTAIN	South Coast	1126	2017-02-27	252	1036			107%	920	0	0	2320	966	67
3A02	POWELL RIVER (UPPER)	South Coast	1002		NS	NS	NS	NS				868	868	868	2
3A05	POWELL RIVER (LOWER)	South Coast	882		NS	NS	NS	NS				588	588	588	2
3A09	PALISADE LAKE	South Coast	898	2017-02-28	221	952	P		86%		0	0	3150	1106	65
3A10	DOG MOUNTAIN	South Coast	1007	2017-02-28	239	1029			108%	792	0	0	2146	952	33
3A19	ORCHID LAKE	South Coast	1178	2017-02-28	289	1142	P		78%		190	190	2960	1467	43
3A20	CALLAGHAN CREEK	South Coast	1009	2017-03-01	167	632			90%	772	40	40	1260	702	40
3A22P	Nostetuko River	South Coast	1457	2017-03-01	96	357			77%	475	268	165	876	462	28
3A24P	Mosley Creek Upper	South Coast	1655	2017-03-01	85	227			85%	204	268	98	555	266	28
3A25P	Squamish River Upper	South Coast	1387	2017-03-01		1101			84%	1337	558	558	2301	1303	27
3A26	CHAPMAN CREEK	South Coast	1022	2017-02-28	258	956			358%			662	1412	267	7
3A27	EDWARDS LAKE	South Coast	1070		N	N	N	N				380	944	201	5
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2017-02-25	230	927			77%	1168	119	101	2730	1203	62
3B02A	MOUNT COKELY	Vancouver Island	1267		N	N	N	N			14	14	1034	662	34
3B04	ELK RIVER	Vancouver Island	270	2017-02-25	39	136			234%	0	0	0	546	58	61

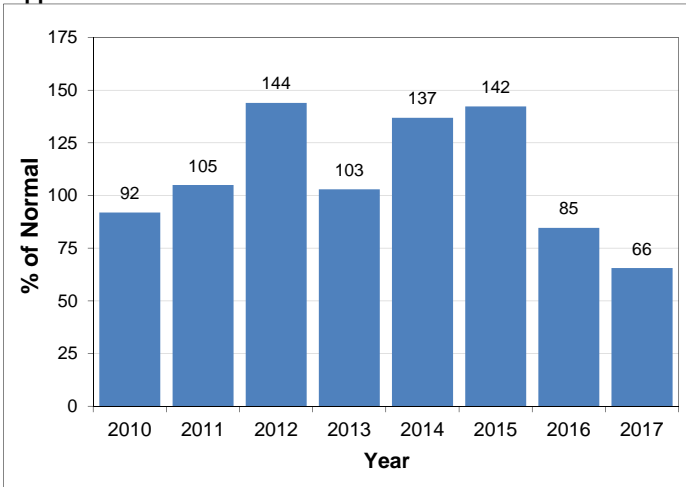
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2017-02-25	213	868		77%	880	0	0	2440	1128	59
3B17P	Wolf River Upper	Vancouver Island	1422	2017-03-01		864		80%	1022	358	195	2085	1085	35
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2017-02-25	112	438		86%	342	0	0	1344	509	47
3B19	WOLF RIVER (LOWER)	Vancouver Island	615		N	N	N		178	0	0	1064	301	47
3B23P	Jump Creek	Vancouver Island	1134	2017-03-01	211	494		58%	564	20	20	2228	849	21
3B24P	Heather Mountain Upper	Vancouver Island	1190	2017-03-01	247	1097			1062		1062	1062		1
3B26P	Mount Arrowsmith	Vancouver Island	1465	2017-03-01	189									0
3C07	WEDEENE RIVER SOUTH	North Coast	196		N	N	N		288	330	45	945	418	30
3C08P	Burnt Bridge Creek	North Coast	1329	2017-03-01	171	583		84%	598	737	282	1245	691	19
3D01C	SUMALLO RIVER WEST	Skagit	801	2017-02-24	71	251		115%	63	0	0	442	218	25
3D02	LIGHTNING LAKE	Skagit	1254	2017-02-28	75	186	B	74%	296	200	36	497	250	44
3D03A	KLESILKWA	Skagit	1134	2017-02-24	63	236		104%	124	0	0	759	228	69
4A02P	Pine Pass	Peace	1386	2017-03-01	211	636		72%	773	705	363	1485	880	28
4A03	WARE (UPPER)	Peace	1563	2017-03-01	66	136		62%	138	202	90	360	220	56
4A03P	Ware Upper	Peace	1565	2017-03-01	66	145								0
4A04	WARE (LOWER)	Peace	969	2017-03-01	48	66		40%		188	89	246	167	56
4A04P	Ware Lower	Peace	971	2017-03-01	53	91								0
4A05	GERMANSEN (UPPER)	Peace	1489	2017-02-28	77	184		63%	259	310	156	520	293	56
4A06	TUTIZZI LAKE	Peace	1043	2017-02-28	51	102		44%	176	232	106	386	230	53
4A07	LADY LAURIER LAKE	Peace	1460		N	N	N		329	407	194	662	452	54
4A09	PULPIT LAKE	Peace	1331	2017-03-01	98	239		64%	308	344	152	531	372	53
4A09P	Pulpit Lake	Peace	1331	2017-03-01	82	200		52%	268	331	133	471	381	27
4A10	FREDRICKSON LAKE	Peace	1323	2017-02-28	52	86		40%	156	239	93	315	213	53
4A11	TRYGVGE LAKE	Peace	1409	2017-03-01	85	186		58%	230	306	119	453	319	53
4A12	TSAYDAYCHI LAKE	Peace	1173	2017-02-28	96	267		79%	307	341	166	540	340	53
4A13	PHILIP LAKE	Peace	1013	2017-02-28	52	118		49%	226	235	137	400	242	53
4A16	MORFEE MOUNTAIN	Peace	1427	2017-02-27	143	460		63%	572	685	265	1166	725	49
4A18	MOUNT SHEBA	Peace	1480	2017-02-27	165	536		75%	601	687	369	1123	712	48
4A20	MONKMAN CREEK	Peace	1566	2017-02-27	128	396		84%		455	190	925	472	42
4A21	MOUNT STEARNS	Peace	1514	2017-03-01	65	137		110%	40	143	41	227	124	43
4A25	FORT ST. JOHN A	Peace	692	2017-03-01	35	81		82%	79	131	34	191	99	42
4A27P	Kwadacha North	Peace	1554	2017-03-01	91	158								0
4A30P	Aiken Lake	Peace	1061	2017-03-01	54	136		59%	181	217	90	363	232	32
4A31P	Crying Girl Prairie	Peace	1358	2017-03-01		206			124		124	124		1
4A33P	Muskwa-Kechika	Peace	1196	2017-03-01		96			33		23	23		1
4A34P	Dowling Creek	Peace	1456	2017-03-01		836								0
4B01	KIDPRICE LAKE	Skeena-Nass	1415	2017-02-27	224	807		99%	528	800	429	1320	817	65
4B02	JOHANSON LAKE	Skeena-Nass	1480	2017-02-28	71	160		63%	227	256	108	368	253	53
4B03A	HUDSON BAY MTN.	Skeena-Nass	1452	2017-03-01	120	369		83%	308	490	168	719	443	45
4B04	CHAPMAN LAKE	Skeena-Nass	1485	2017-03-01	106	339		83%	276	404	266	691	407	51
4B06	TACHEK CREEK	Skeena-Nass	1133	2017-03-01	58	140		72%	172	212	117	332	195	48
4B07	MCKENDRICK CREEK	Skeena-Nass	1048	2017-03-01	56	158		64%	190	274	155	391	246	47

4B08	MOUNT CRONIN	Skeena-Nass	1491	2017-03-01	132	420			84%	363	456	345	869	498	47
4B10	NINGUNSAW PASS	Nass	647		N	N	N	N		289	210	210	629	397	42
4B11A	BEAR PASS	Nass	437	2017-02-28	95	350			61%	393		87	824	574	31
4B12P	Granduc Mine	Skeena-Nass	790	2017-03-01	350	80									0
4B13A	TERRACE A	Skeena-Nass	219		N	N	N	N		42	106	0	407	141	35
4B14	EQUITY MINE	Skeena-Nass	1434	2017-02-28	119	346			104%	264	426	190	546	333	39
4B15	LU LAKE	Skeena-Nass	1296	2017-02-28	86	214			84%	184	334	122	412	254	39
4B15P	Lu Lake	Skeena-Nass	1308	2017-03-01	82	235			106%	208	388	116	405	221	19
4B16P	Shedin Creek	Skeena-Nass	1320	2017-03-01	154	393			54%	423	475	195	957	723	21
4B17P	Tsai Creek	Skeena-Nass	1360	2017-03-01		732			76%	606	921	302	1618	969	19
4B18P	Cedar-Kiteen	Skeena-Nass	912	2017-03-01	128	360			62%	375	416	178	956	582	16
4C01	SIKANNI LAKE	Liard	1390	2017-03-01	57	106			45%	142	212	78	335	238	53
4C01P	Sikanni Lake	Liard	1400	2017-03-01	59	114									0
4C02	SUMMIT LAKE	Liard	1291	2017-03-03	34	79			71%	61		0	190	111	52
4C03	DEASE LAKE	Liard	805		N	N	N	N		63	96	45	229	124	52
4C05	FORT NELSON AIRPORT	Liard	368	2017-03-03	24	57			62%	64		38	177	92	49
4C15	JADE CITY	Liard	943		N	N	N	N		146	156	128	310	206	15
4D01	TELEGRAPH CREEK	Stikine	490		N	N	N	N		46	82	53	345	144	42
4D02	ISKUT	Stikine	931		N	N	N	N		35	70	33	176	105	42
4D11P	Kinaskan Lake	Stikine	1020	2017-03-01	90	249			72%	215	236	94	236	346	21
4E02B	ATLIN LAKE	Yukon	730	2017-03-01	40	85				87	68	68	166		11

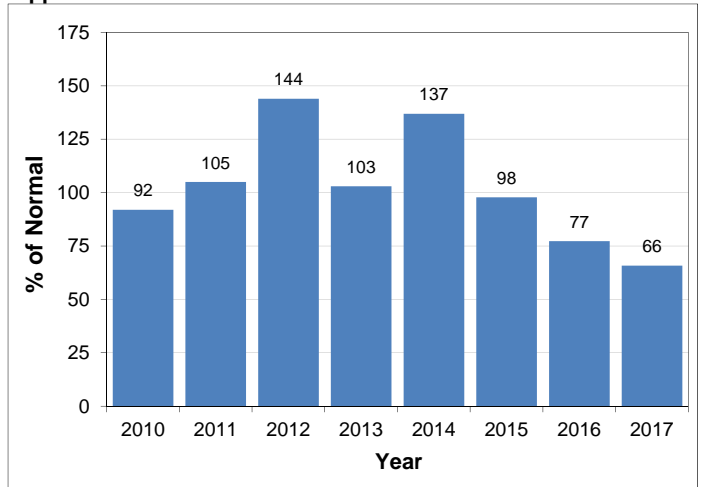
Code	Description
A	Sampling problems were encountered
B	Early or late sampling
C	Early or late sampling w/problems encountered
E	Estimate
N	Scheduled, but not sampled
NA	Not available
NS	Not scheduled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount

Snow Basin Index Graphs - March 1, 2017

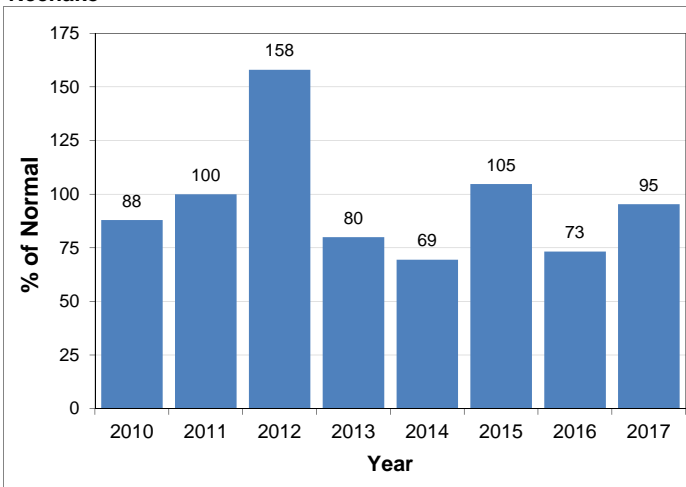
Upper Fraser West



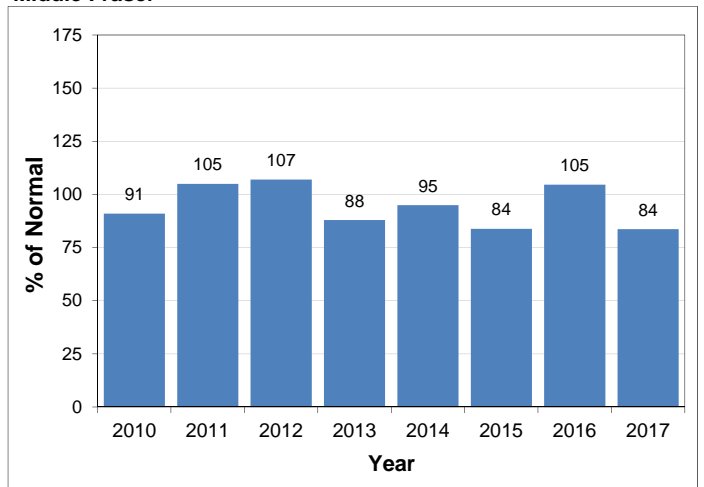
Upper Fraser East



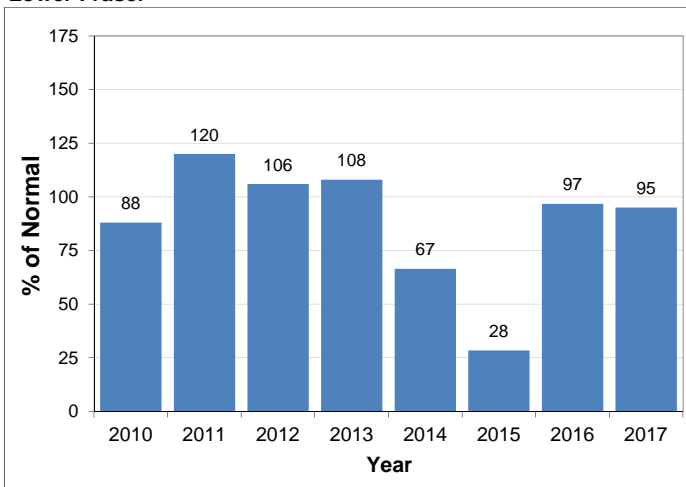
Nechako



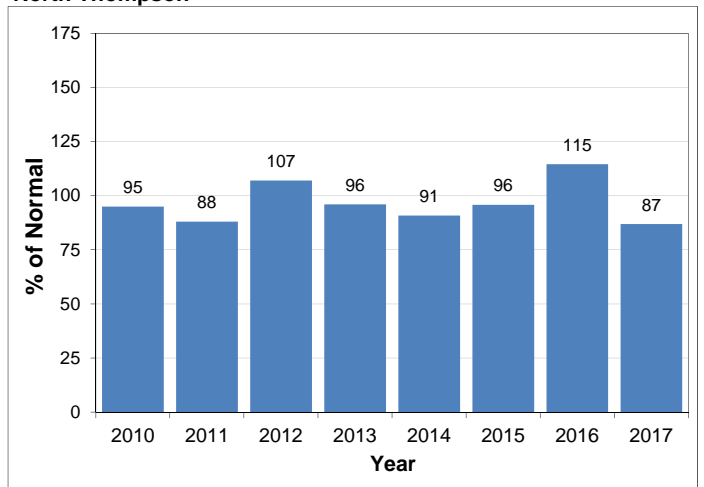
Middle Fraser



Lower Fraser

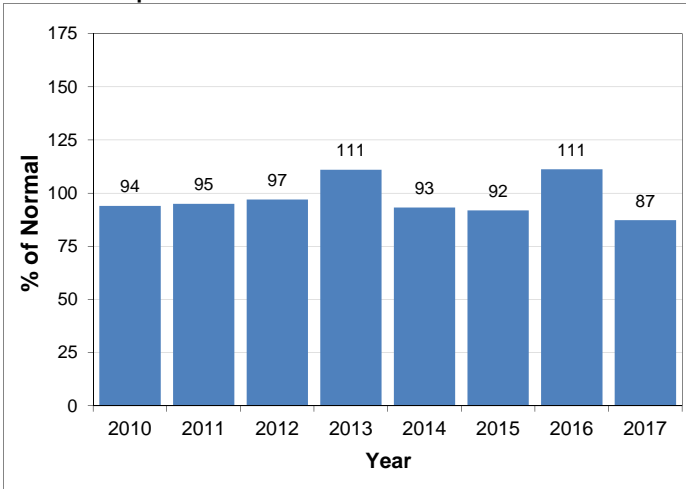


North Thompson

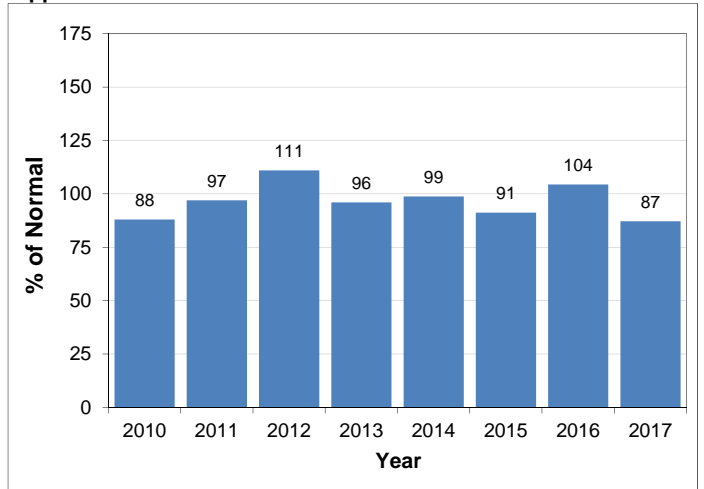


Snow Basin Index Graphs - March 1, 2017

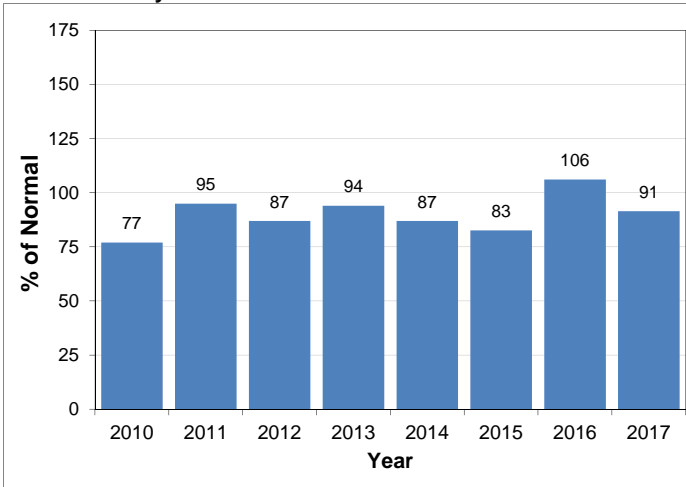
South Thompson



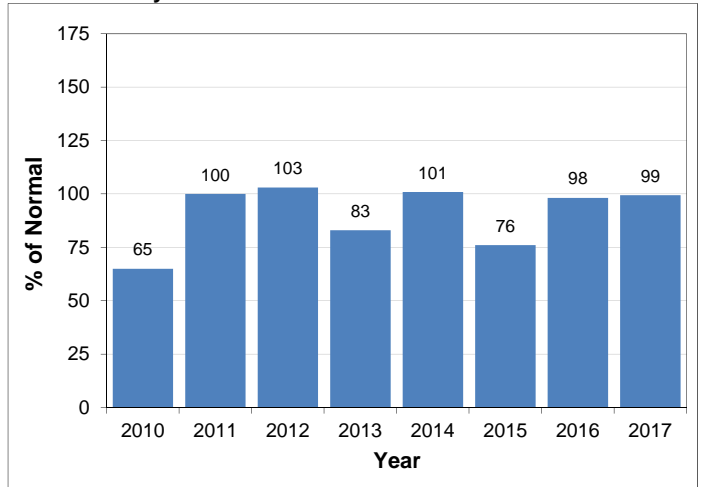
Upper Columbia



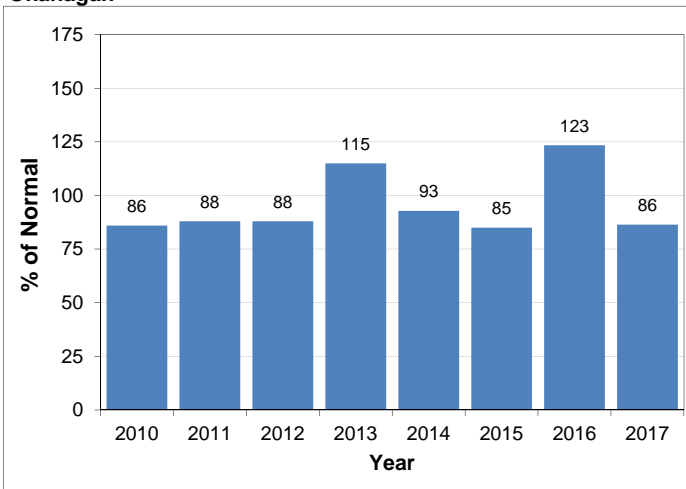
West Kootenay



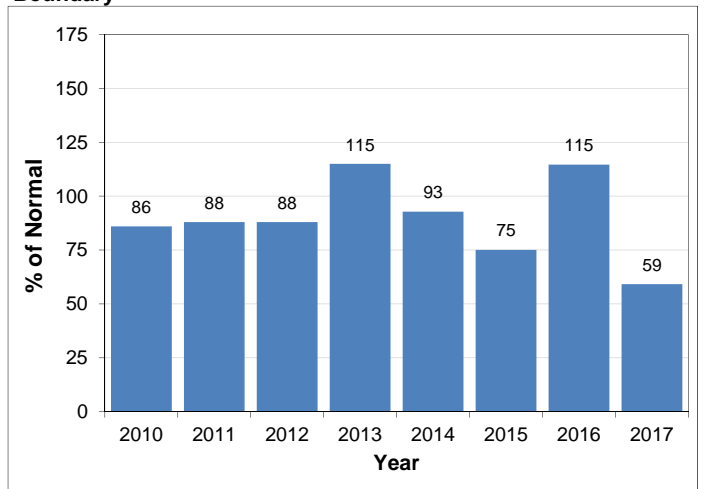
East Kootenay



Okanagan

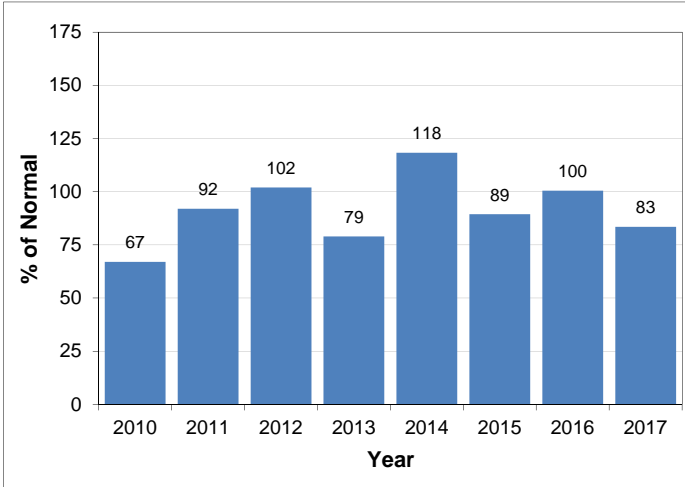


Boundary

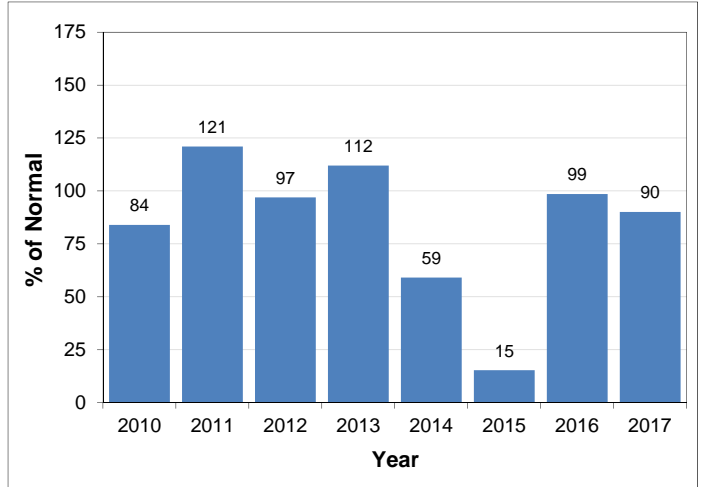


Snow Basin Index Graphs - March 1, 2017

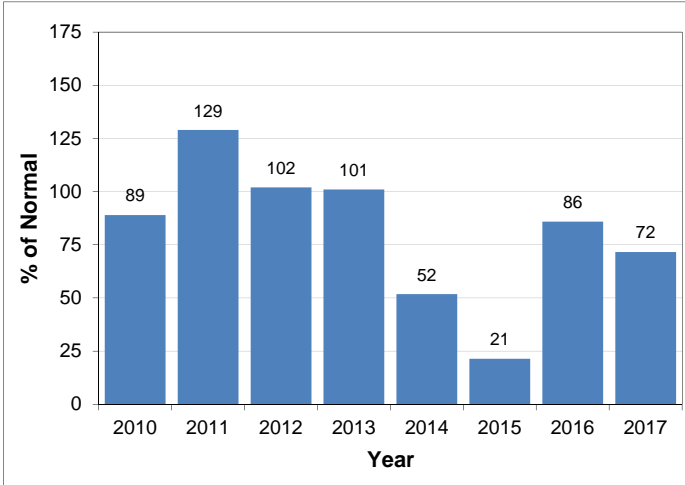
Similkameen



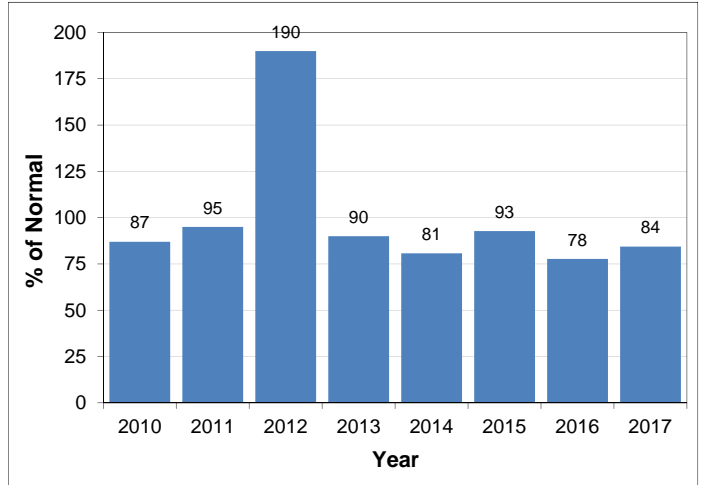
South Coast



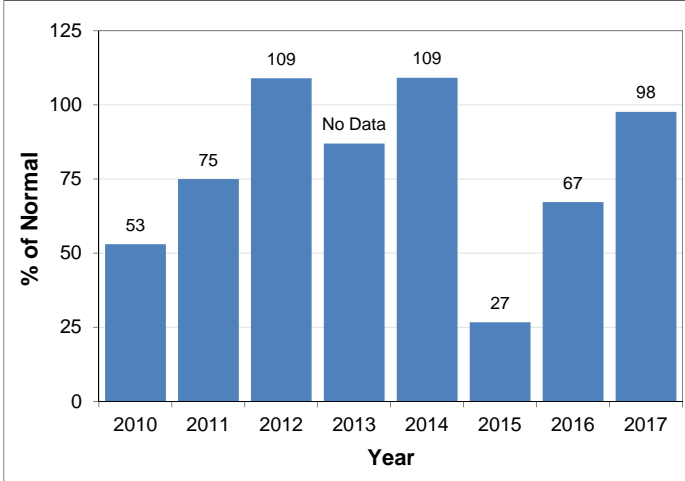
Vancouver Island



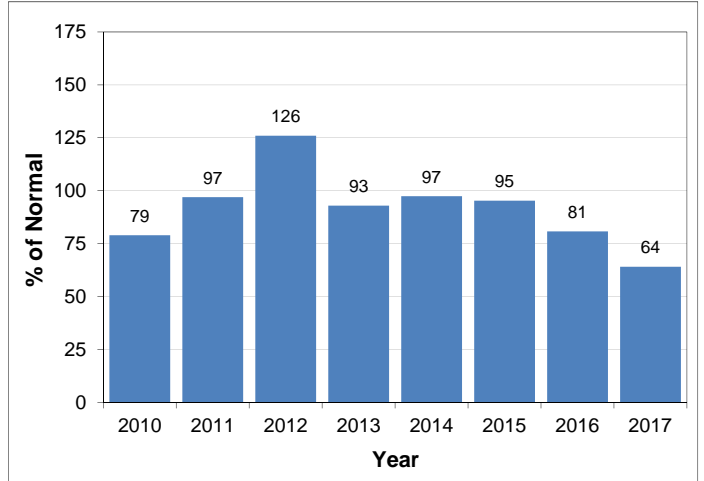
Central Coast



Skagit

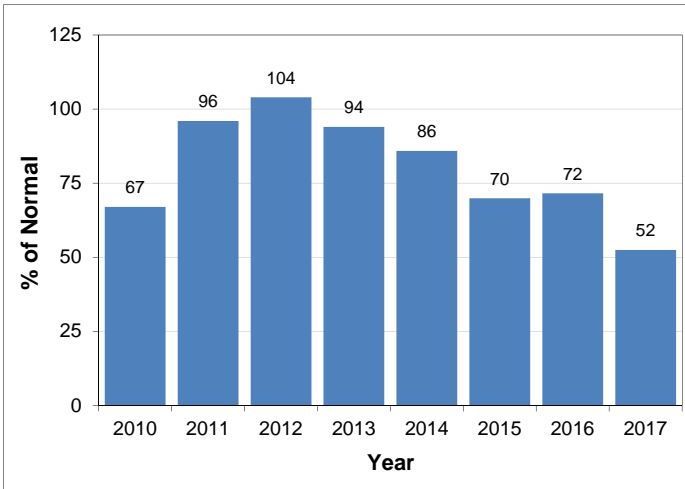


Peace

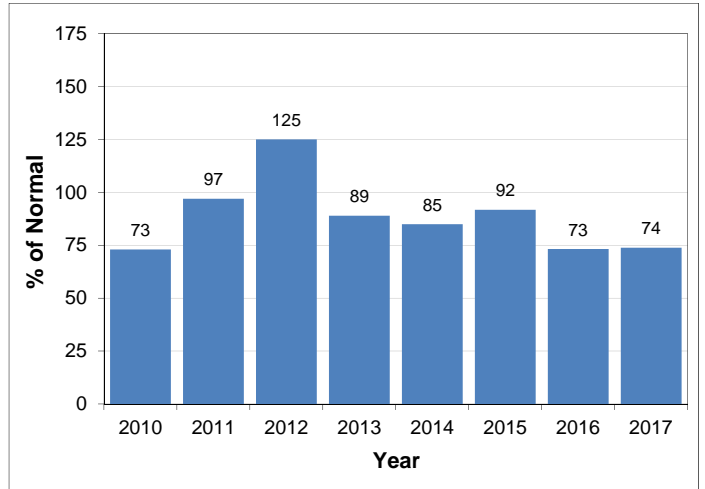


Snow Basin Index Graphs - March 1, 2017

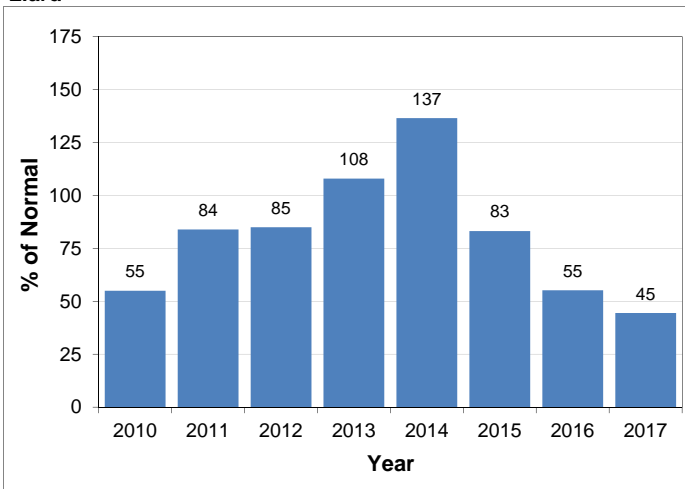
Stikine



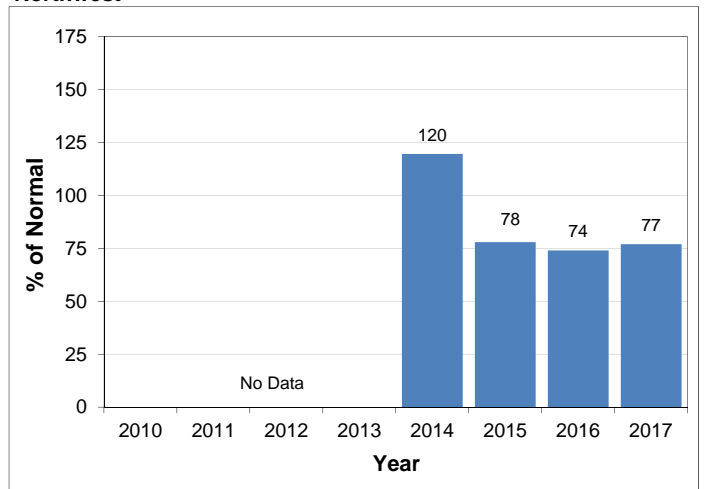
Skeena-Nass



Liard



Northwest



River Forecast Centre
Ministry of Forests, Lands and Natural Resource Operations
Volume Runoff Forecast March 2017

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				3509	3786	93	331	4951	5252	94	390	
	McGregor at Lower Canyon				3728	4087	91	490	4798	5132	93	639	
	Fraser at Shelley				13731	16310	84	1494	18277	20369	90	1832	
Middle Fraser Basin	Quesnel River at Quesnel				4031	4747	85	510	5219	6078	86	670	
Thompson Basin	N. Thompson at McLure				8604	9190	94	536	10771	11359	95	826	
	S. Thompson at Chase				5635	6111	92	566	7108	7678	93	832	
	Thompson at Spences Bridge				14858	15775	94	1174	18794	19755	95	1814	
Bulkley and Skeena	Bulkley at Quick				2507	2709	93	1361	3086	3306	93	1939	
	Skeena at Usk				17565	19187	92	1335	21884	23531	93	1809	
Nicola Lake	Inflows	127	126	101	31	145	143	101	35				
Nicola River	at Spences Bridge	557	523	106	82	634	591	107	103				
Similkameen River	at Nighthawk	1254	1342	93	158					1519	1652	92	184
	at Hedley	1027	1045	98	134					1193	1233	97	151
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	457	470	97	89	485	497	98	110				
	Kalamalka-Wood Lake Inflow	19	31	60	12	18	33	56	15				
Cowichan River	Cowichan Lake Inflows	406	423	96	70					453	467	97	74

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