



Snow Survey and Water Supply Bulletin – June 15th, 2015

The June 15th snow survey is now complete. Data from 2 snow courses and 49 snow pillows around the province and climate data from Environment Canada have been used to form the basis for the following report¹. This is the final Snow Survey report for the season.

Weather

June weather has continued to be warm across the province. This included a prolonged hot spell through the second week of the month which saw temperature records being broken in many areas of the province. Episodes of low pressure brought some wetter periods in the first half of June, particularly in the Kootenay, Prince George area and north-east. Coastal areas in the south-west and western parts of the province have seen limited precipitation in June.

Snow Pack

Rapid melt of the province's snow pack in May has left very little snow across the province as of June 15th. Snow basin indices are extremely low for June 15th (Table 1), and this reflects the rapid melt of the snow pack earlier this season. Snow basin indices range from 0% to 20% of normal, with a provincial average of snow observations of 5% of normal.

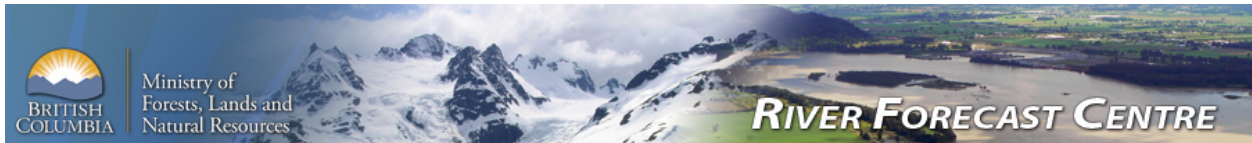
Most snow observation sites (automated snow pillows and manual snow surveys) are located in sub-alpine or forested areas at mid-elevation, and the lack of snow reported on June 15th reflects snow conditions in similar terrain across the province. Remaining snow is limited to the alpine terrain of the province's mountainous regions.

Table 1 - BC Snow Basin Indices – June 15, 2015

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	NO DATA*	Boundary	3
Upper Fraser East	10	Similkameen	0 [!]
Nechako	17	South Coast	0 [!]
Middle Fraser	8	Vancouver Island	0 [!]
Lower Fraser	0 [!]	Central Coast	0 [!]
North Thompson	20	Skagit	NO DATA*
South Thompson	7	Peace	0 [!]
Upper Columbia	5	Skeena-Nass	0 [!]
West Kootenay	11	Stikine	0 [!]
East Kootenay	1	Liard	NO DATA*
Okanagan	0 [!]	Northwest	NO DATA*

* Data is not available either because there were no scheduled snow surveys or no snow surveys were completed.

! Zero values are the result of no snow being observed at snow basin index survey locations. Snow may still be present at higher, unsampled, locations



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Streamflow Runoff

With earlier than normal melt of the snow pack across the province, most rivers are now on the receding end of the snow melt freshet. With waning influence of snow melt on river flow, many rivers in the province have declined to below normal flows for this time of year. In lower elevation areas, and areas that had limited initial snow packs this season, river levels have dropped to extremely low levels for mid-June. Flows are at or near minimum levels for this time of year in most rivers on Vancouver Island, Haida Gwaii and South Coast. Current flows in these regions are below levels normally observed in late-summer.

Well below normal flows are also present through the South Interior, Central Interior, Kootenay, and areas of the Peace. Current flows in these regions are at levels more typically observed in mid-July to August.

The Fraser River at Hope (08MF005) has seen 65% of the forecasted April to September runoff volume passed as of June 18th, and flows have dropped to 5200 m³/s from a peak of 7950 m³/s earlier this month. Flows are at approximately 75% of normal levels for this time of year. There is now a limited supply of snow in the watershed that flood risk has now subsided.

Elsewhere in the province, current flows are variable, with most rivers at near-normal levels, with localized areas of above-normal (particularly around the Nechako River) and below-normal flows. A flood warning remains for the Nechako River with current flows at Vanderhoof (08JC001) of approximately 651 m³/s (5.29m) and at Isle Pierre (08JC002) of 1030 m³/s (4.97m).

Outlook

Short-term weather forecasts indicate the potential for rainfall over the next week, with wet conditions across central British Columbia, and moderate rainfall elsewhere. Long-term weather forecasts from Environment Canada continue to indicate a high likelihood of above-normal temperatures across the province through the summer. Warm sea surface temperature anomalies in the North Pacific Ocean, and building El Niño conditions along the equatorial Pacific reinforce the high likelihood of a warmer than normal summer. Seasonal precipitation forecasts indicate a modest likelihood of below normal precipitation in south-east BC. Elsewhere in the province, normal to below normal precipitation is forecast to be more likely than above normal conditions.

With the emergence of low flow patterns already this season and the forecast for a warmer than normal summer, there is a high risk of extreme low flows this summer. Areas where extreme low flows are expected include southern BC, Vancouver Island, and Haida Gwaii and potentially in other regions including the Peace and South Interior. Summer rainfall can contribute significantly to streamflow and will be a determinant in the extent of low flows

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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later in the summer. Given the likelihood for normal or below normal precipitation, there is an increased risk that low flow conditions will continue to deteriorate across the province; wetter than normal conditions through the summer may alleviate some of this risk.

The River Forecast Centre will continue to monitor weather and streamflow across the province and will provide [Water Supply Bulletins](#) and low streamflow advisories as needed. The Flood Watch currently posted for the Nechako River will be revised as conditions warrant.

BC River Forecast Centre
June 18, 2015

2015 Automated Snow Pillow/Manual Snow Survey Data			June 15th							Historic Snow Water Equivalent					
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2014 SWE (mm)	2013 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
1A01P	YELLOWHEAD LAKE	Upper Fraser East	1847	2015-06-15	2	23		17%	122	29	0	641	135	16	
1A02P	MC BRIDE (UPPER)	Upper Fraser East	1608	2015-06-15	N/A	0		0%	18	0	0	159	1	21	
1A03P	BARKERVILLE	Upper Fraser East	1483	2015-06-15	1	1		33%	0	1	0	37	3	38	
1A05	LONGWORTH (UPPER)	Upper Fraser East	1693	NS						NS	N/A	N/A	388		
1A06A	HANSARD	Upper Fraser East	622	NS						NS	N/A	N/A	0		
1A10	PRINCE GEORGE A	Upper Fraser East	684	NS						NS	N/A	N/A	0		
1A11	PACIFIC LAKE	Upper Fraser East	756	NS						NS	N/A	N/A	0		
1A12	KAZA LAKE	Upper Fraser West	1247	NS						NS	N/A	N/A	0		
1A14P	HEDRICK LAKE	Upper Fraser East	1118	2015-06-15	0	9		24%	624	375	0	587	38	13	
1A15	KNUDSEN LAKE	Upper Fraser East	1598	NS						NS	N/A	N/A	714		
1A16	BURNS LAKE	Upper Fraser West	820	NS						NS	N/A	N/A	0		
1A17P	REVOLUTION CREEK	Upper Fraser East	1676	2015-06-15	37	26		12%	727	436	0	927	223	28	
1A19P	DOME MOUNTAIN	Upper Fraser East	1768	2015-06-15	16	84		23%	612	388	0	925	367	7	
1A23	BIRD CREEK	Upper Fraser West	1196	NS						NS	N/A	N/A	0		
1B01	MOUNT WELLS	Nechako	1489	NS						NS	N/A	N/A	0		
1B01P	MOUNT WELLS	Nechako	1489	2015-06-15	N/A	0		0%	0	0	0	321	44	21	
1B02	TAHTSA LAKE	Nechako	1319	NS						NS	N/A	N/A	0		
1B02P	TAHTSA LAKE	Nechako	1319	2015-06-15	N/A	264		43%	29	44	0	1870	617	21	
1B05	SKINS LAKE	Nechako	877	NS						NS	N/A	N/A	0		
1B06	MOUNT SWANNELL	Nechako	1596	NS						NS	N/A	N/A	0		
1B07	NUTLI LAKE	Nechako	1502	NS						NS	N/A	N/A	0		
1B08P	MOUNT PONDOSY	Nechako	1413	2015-06-15	N/A	7		9%	7	0	0	520	75	21	
1C01	BROOKMERE	Middle Fraser	994	NS						NS	N/A	N/A	0		
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	NS						NS	N/A	N/A	0		
1C06	PAVILION	Middle Fraser	1209	NS						NS	N/A	N/A	0		
1C08	NAZKO	Middle Fraser	1029	NS						NS	N/A	N/A	0		
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	NS						NS	N/A	N/A	0		
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2015-06-15	N/A	2		1%	2	14	0	887	272	19	
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	NS						NS	N/A	N/A	0		
1C14	BRALORNE	Middle Fraser	1382	NS						NS	N/A	N/A	0		
1C17	MOUNT TIMOTHY	Middle Fraser	1632	NS						NS	N/A	N/A	126		
1C18P	MISSION RIDGE	Middle Fraser	1903	2015-06-15	N/A	0		0%	0	0	0	387	15	43	
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	NS						NS	N/A	N/A	0		
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2015-06-15	0	0		0%	0	0	0	83	6	19	
1C21	BIG CREEK	Middle Fraser	1130	NS						NS	N/A	N/A	0		
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	NS						NS	N/A	N/A	0		
1C23	PENFOLD CREEK	Middle Fraser	1687	NS						NS	N/A	N/A	643		
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	NS						NS	N/A	N/A	0		
1C28	DUFFEY LAKE	Middle Fraser	1253	NS						NS	N/A	N/A	0		
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	NS						NS	N/A	N/A	0		
1C32	DEADMAN RIVER	Middle Fraser	1463	NS						NS	N/A	N/A	0		
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	NS						NS	N/A	N/A	0		
1C37	BRALORNE(UPPER)	Middle Fraser	1980	NS						NS	N/A	N/A	0		
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	NS						NS	N/A	N/A	0		
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	NS						NS	N/A	N/A	0		
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	NS						NS	N/A	N/A	0		
1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2015-06-15	0	0		0%	577	211	0	698	191	16	
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	NS						NS	N/A	N/A	0		
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2015-06-15	222	0		0%	1	181	0	1177	434	12	
1D08	STAVE LAKE	Lower Fraser	1211	NS						NS	N/A	N/A	0		
1D09	WAHLEACH LAKE	Lower Fraser	1395	NS						NS	N/A	N/A	71		
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2015-06-15	N/A	8		1%	620	751	0	1281	643	21	
1D10	NAHATLATCH RIVER	Lower Fraser	1530	NS						NS	N/A	N/A	697		
1D16	DICKSON LAKE	Lower Fraser	1147	NS						NS	N/A	N/A	0		
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2015-06-15	1	0	E	0%	1424	1263	0	2022	797	21	
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2015-06-15	0	0		0%	632	764	0	2320	886	14	
1E01B	BLUE RIVER	North Thompson	673	NS						NS	N/A	N/A	0		
1E02P	MOUNT COOK	North Thompson	1574	2015-06-15	4	206		30%	866	892	281	1155	681	13	
1E03A	TROPHY MOUNTAIN	North Thompson	1907	NS						NS	N/A	N/A	0		
1E05	KNOUFF LAKE	North Thompson	1189	NS						NS	N/A	N/A	0		
1E07	ADAMS RIVER	North Thompson	1769	NS						NS	N/A	N/A	255		
1E08P	AZURE RIVER	North Thompson	1625	2015-06-15	15	150		30%	405	583	75	1500	499	16	
1E10P	KOSTAL LAKE	North Thompson	1760	2015-06-15	0	1		0%	563	539	0	1248	351	28	
1F01A	ABERDEEN LAKE	South Thompson	1262	NS						NS	N/A	N/A	0		
1F02	ANGLEMONT	South Thompson	1168	NS						NS	N/A	N/A	0		
1F03P	PARK MOUNTAIN	South Thompson	1857	2015-06-15	12	31		7%	751	591	0	1095	458	28	
1F04	ENDERBY	South Thompson	1948	NS						NS	N/A	N/A	684		
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2015-06-15	7			4%	284	143	0	573	179	8	
2A01A	CANOE RIVER	Upper Columbia	866	NS						NS	N/A	N/A	0		
2A02	GLACIER	Upper Columbia	1249	NS						NS	N/A	N/A	47		
2A03A	FIELD	Upper Columbia	1310	NS						NS	N/A	N/A	0		
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2015-06-15	N/A	0		0%	808	679	0	1801	700	20	
2A07	KICKING HORSE	Upper Columbia	1648	NS						NS	N/A	N/A	0		
2A11	BEAVERFOOT	Upper Columbia	1924	NS						NS	N/A	N/A	0		
2A14	MOUNT ABBOT	Upper Columbia	2031	NS						NS	N/A	N/A	841		
2A16	GOLDSTREAM	Upper Columbia	1914	NS						NS	N/A	N/A	0		
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	NS						NS	N/A	N/A	816		
2A18	KEYSTONE CREEK	Upper Columbia	1839	NS						NS	N/A	N/A	0		
2A19	VERMONT CREEK	Upper Columbia	1533	NS						NS	N/A	N/A	0		
2A21P	MOLSON CREEK	Upper Columbia	1930	2015-06-15	N/A	53		9%	683	740	0	1136	575	32	
2A22	SUNBEAM LAKE	Upper Columbia	2066	NS						NS	N/A	N/A	0		
2A23	BUSH RIVER	Upper Columbia	1982	NS						NS	N/A	N/A	0		
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	NS						NS	N/A	N/A	0		

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2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	NS						NS	N/A	N/A		0
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	NS						NS	N/A	N/A	540	
2B02A	FARRON	West Kootenay	1229	NS						NS	N/A	N/A	0	
2B05	WHATSHAN (UPPER)	West Kootenay	1476	NS						NS	N/A	N/A	0	
2B06	BARNES CREEK	West Kootenay	1598	NS						NS	N/A	N/A	0	
2B06P	BARNES CREEK	West Kootenay	1595	2015-06-15	N/A	0		0%	0	0	0	211	10	20
2B07	KOCH CREEK	West Kootenay	1813	NS						NS	N/A	N/A	0	
2B08	ST. LEON CREEK	West Kootenay	1828	NS						NS	N/A	N/A	0	
2B08P	ST. LEON CREEK	West Kootenay	1822	2015-06-15	N/A	48		9%	874	597	0	1336	509	20
2B09	RECORD MOUNTAIN	West Kootenay	1906	2015-06-15	0	0		0%	N/A	36	N/A	N/A	127	
2C01	SINCLAIR PASS	East Kootenay	1374	NS						NS	N/A	N/A	0	
2C04	SULLIVAN MINE	East Kootenay	1580	NS						NS	N/A	N/A	0	
2C07	FERNIE EAST	East Kootenay	1213	NS						NS	N/A	N/A	0	
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2015-06-15	N/A	0		0%	21	0	0	458	34	33
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2015-06-15	2	0		0%	0	0	0	69	1	34
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS						NS	N/A	N/A	0	
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS						NS	N/A	N/A	0	
2C14	FLOE LAKE	East Kootenay	2087	NS						NS	N/A	N/A	0	
2C14P	FLOE LAKE	East Kootenay	2110	2015-06-15	N/A	6		2%	484	470	0	866	334	20
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	NS						NS	N/A	N/A	0	
2C16	MOUNT JOFFRE	East Kootenay	1763	NS						NS	N/A	N/A	0	
2C17	THUNDER CREEK	East Kootenay	2062	NS						NS	N/A	N/A	0	
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS						NS	N/A	N/A	0	
2D02	FERGUSON	West Kootenay	929	NS						NS	N/A	N/A	30	
2D03	SANDON	West Kootenay	1072	NS						NS	N/A	N/A	0	
2D04	NELSON	West Kootenay	952	NS						NS	N/A	N/A	0	
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	NS						NS	N/A	N/A	28	
2D06	CHAR CREEK	West Kootenay	1290	NS						NS	N/A	N/A	32	
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	NS						NS	N/A	N/A	0	
2D08P	EAST CREEK	West Kootenay	2004	2015-06-15	N/A	42	E	9%	634	351	0	1163	464	32
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	NS						NS	N/A	N/A	0	
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	NS						NS	N/A	N/A	201	
2D14P	REDFISH CREEK	West Kootenay	2086	2015-06-15	39	292		35%	996	991	645	1722	831	11
2E01	MONASHEE PASS	Boundary	1387	NS						NS	N/A	N/A	0	
2E02	CARMI	Boundary	1254	NS						NS	N/A	N/A	0	
2E03	BIG WHITE MOUNTAIN	Boundary	1672	NS						NS	N/A	N/A	46	
2E06	BLUEJOINT MOUNTAIN	Boundary	1990	NS						NS	N/A	N/A	0	
2E07P	GRANO CREEK	Boundary	1874	2015-06-15	0	5	E	6%	179	61	0	509	84	15
2F01A	TROUT CREEK (WEST)	Okanagan	1430	NS						NS	N/A	N/A	0	
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	NS						NS	N/A	N/A	0	
2F03	MC CULLOCH	Okanagan	1266	NS						NS	N/A	N/A	0	
2F04	GRAYSTOKE LAKE	Okanagan	1818	NS						NS	N/A	N/A	78	
2F05P	MISSION CREEK	Okanagan	1794	2015-06-15	0	0		0%	225	0	0	424	53	43
2F07	POSTILL LAKE	Okanagan	1358	NS						NS	N/A	N/A	0	
2F08	GRAYBACK RESERVOIR	Okanagan	1548	NS						NS	N/A	N/A	0	
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	NS						NS	N/A	N/A	26	
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	NS						NS	N/A	N/A	195	
2F11	ISINTOK LAKE	Okanagan	1651	NS						NS	N/A	N/A	0	
2F12	MOUNT KOBAN	Okanagan	1817	NS						NS	N/A	N/A	72	
2F13	ESPERON CR (UPPER)	Okanagan	1634	NS						NS	N/A	N/A	0	
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	NS						NS	N/A	N/A	0	
2F18P	BRENDA MINE	Okanagan	1453	2015-06-15	N/A	0		0%	0	8	0	8	3	20
2F19	OYAMA LAKE	Okanagan	1365	NS						NS	N/A	N/A	0	
2F20	VASEUX CREEK	Okanagan	1403	NS						NS	N/A	N/A	0	
2F21	BOULEAU LAKE	Okanagan	1405	NS						NS	N/A	N/A	0	
2F23	MACDONALD LAKE	Okanagan	1742	NS						NS	N/A	N/A	0	
2F24	ISLAHT LAKE	Okanagan	1492	NS						NS	N/A	N/A	0	
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	NS						0				
2G03P	BLACKWALL PEAK	Similkameen	1934	2015-06-15	0	0		0%	438	175	0	1031	218	45
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	NS						NS	N/A	N/A	25	
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	NS						NS	N/A	N/A	0	
2G06	HAMILTON HILL	Similkameen	1477	NS						NS	N/A	N/A	0	
3A01	GROUSE MOUNTAIN	South Coast	1126	NS						NS	N/A	N/A	0	
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS						NS	N/A	N/A	0	
3A05	POWELL RIVER (LOWER)	South Coast	882	NS						NS	N/A	N/A	0	
3A09	PALISADE LAKE	South Coast	898	NS						NS	N/A	N/A	0	
3A10	DOG MOUNTAIN	South Coast	1007	NS						520	N/A	N/A	399	
3A19	ORCHID LAKE	South Coast	1178	NS						880	N/A	N/A	1002	
3A20	CALLAGHAN CREEK	South Coast	1009	NS						NS	N/A	N/A	0	
3A22P	NOSTETUKO RIVER	South Coast	1457	2015-06-15	0	0		0%	0	0	0	266	20	24
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2015-06-15	0	0		0%	0	0	0	0	1	24
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2015-06-15	0	0	E	0%	11	732	131	2505	786	23
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	NS						NS	N/A	N/A	830	
3B02A	MT. COKELY	Vancouver Island	1267	NS						NS	N/A	N/A	0	
3B04	ELK RIVER	Vancouver Island	270	NS						NS	N/A	N/A	0	
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	NS						NS	N/A	N/A	0	
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	NS						0				
3B17P	WOLF RIVER	Vancouver Island	1422	2015-06-15	N/A	0		0%	1	346	0	2183	609	31
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	NS						NS	N/A	N/A	0	
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	NS						NS	N/A	N/A	0	

