Banner

May 15, 1999

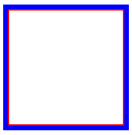
Fraser Basin Snow

Fraser Basin Snow Survey Measurements

UPPER FRASER AND NECHAKO

In contrast to last year when the first half of May was quite warm, the cool weather of the last two weeks has delayed any substantial melt. Several snow courses have actually gained water equivalent during the period. For example, Longworth Upper (1A05) which has 45 years of May 15 data, normally loses 59 mm of water in this period, but gained 108 mm this year.

River levels are generally below normal for this date. However, as a result of the lack of melt, the regional snowpack is now estimated to be 25% above normal. Rapid melting would result in sharp increases in water levels and flows.

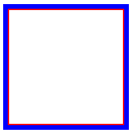


Data Graphs

MIDDLE AND LOWER FRASER

Depletions in the snowpack have been considerably below normal during the past two weeks and several snowcourses report record high readings for this date. For example Mount Timothy (1C17) and Penfold Creek (1C23) in the headwaters of the Williams Lake and Quesnel Rivers, respectively, each with 30 years of record, report record water equivalents for May 15.

River levels throughout the area are below normal for this date. Levels will rise quite rapidly as soon as there is any sustained warmth. It would take several days of warmth for rivers to reach flood stage, but a rapid melt could result in higher flows than have been seen for many years.



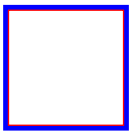
Data Graphs

NORTH AND SOUTH THOMPSON

Higher elevation snowpacks in the North and South Thompson basin have continued to accumulate snow during the first

half of May, when some depletion due to melt normally occurs. Several snow courses in the North Thompson basin report record high water equivalents for this date. The snowpack in the the South Thompson basin appears to be very similar to that reported in 1974 when most of the records were established.

River levels in the basin are generally below normal for this time of year and well below any damaging levels. With heavy and dense snowpacks, any rapid melting will bring river levels up very quickly. Under such conditions, it is quite possible that river levels could exceed the flows recorded in 1972, the last very high water year in the basin. However, no such sequence is foreseen in the weather forecasts for the next ten days or so.

 Data Graphs

May 1 Volume Runoff Forecasts- see May 1 Snow Bulletin

Bulletin Home Page

Groundwater Conditions

Snow Pillow Information

Banner

May 15, 1999

Columbia Basin Snow

Columbia Basin Snow Survey Measurements

UPPER AND LOWER COLUMBIA

A very limited snow survey indicates that snowpacks in the Columbia River basin remain well above normal for this date. Due to cool weather and the resulting delayed snowmelt, the overall basin snowpack water equivalent index is significantly higher than that reported May 1, at 38% above normal.

As reported May 1, there is still quite a difference between the eastern and western portions of the basin. While the eastern portions along the Rocky Mountains do have snowpacks generally above normal, record breaking snowpacks have been measured in the Selkirk Mountains from the West Kootenays to the Revelstoke area.

Rivers rose briefly in response to warmth in the third week in April, but have since dropped, due to the cool weather, to below normal levels. Any extended period of hot weather during the next month will bring a rapid melt of the snowpack.

Many of the main rivers in this basin are controlled by hydro-electric dams and should not be subject to damaging flooding. However, uncontrolled streams and rivers, particularly in the western parts of the basin, could see quite high water levels if there is a rapid melt.

Data Graphs

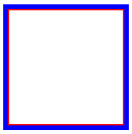
Data Graph

EAST AND WEST KOOTENAY

Due to a slower than normal snowmelt, there has been an increase in the regional snowpack index for the Kootenay basin since May 1 and the index is now estimated to be 58% above normal, compared to 38% at the beginning of May. As with the Columbia basin, this is a function of a lack of snowmelt rather than a substantial increase in snowpack. This makes the comparison to to other years, when the snowpack would normally be part way through the melt, appear more extreme.

There is a variation in general snowpack levels from east to west across the Kootenay region. The snowpack varies from being near normal in the Elk valley in the East Kootenays to showing many record levels for this date in the West Kootenays.

As noted above, many of the main rivers in this basin are controlled by hydro-electric dams and should not be subject to damaging flooding. However, uncontrolled streams and rivers, particularly in the western parts of the basin, could see high water levels if there is a rapid melt. A rapid melt could occur if temperatures rise to summer conditions for any extended period of time during the next month or six weeks.

 Data Graphs

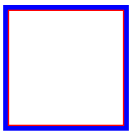
OKANAGAN, KETTLE AND SIMILKAMEEN

The snowpacks in the Okanagan, Kettle and Similkameen valleys are well above normal for this date. The May 15 regional snow water equivalent index in the Okanagan-Kettle region has climbed to 81% above normal, and in the Similkameen to 57% above normal. Some snowpacks which are usually partway through melt by this date are still showing slight increases in water equivalent.

Cooler weather has reduced the Similkameen and Kettle River flows, with slightly higher than normal flows in the third week of April dropping to well below normal flows during the first two weeks in May. The large snowpack could cause damaging river levels if there is a rapid melt.

Releases from Okanagan Lake dam in Penticton have been high all spring, and the lake is lower than normal in anticipation of high runoff. Unless there are significant rainfalls, there should be sufficient storage in Okanagan Lake that the normal upper level is not exceeded. High flows in Okanagan River can be anticipated for at least the next six to eight weeks.

Those living adjacent to snowmelt fed rivers and lakes should be aware that warm weather can cause rapid rises in water levels and that, with the above normal snowpack reported this year, this is a more likely scenario than many other years.

 Data Graphs

Volume Runoff Forecasts May 1 Volume Runoff Forecasts see May 1 Bulletin

---

Bulletin Home Page

Groundwater Conditions

Snow Pillow Information

Banner

May 15, 1999

Snow Survey Measureme Coastal Basin Snow Survey Measurements

SOUTH COASTAL AND VANCOUVER ISLAND

The cool weather during the first half of May has resulted in less than normal depletion of the snowpack throughout the area. As a result, the record-breaking snowpacks remain in the mountains. For example, on the coast, Orchid Lake (3A19) which has a 19-year record at this date sets a new record 57% greater than previously recorded. Similarly, on Vancouver Island Sno-Bird Lake (3B16) which has a 29-year record at this date reports 20% greater water equivalent than its previous highest reading on this date.

Those living in flood prone areas and adjacent to snowmelt-fed creeks should be aware that any warm weather will bring streams up very rapidly as the snowpack density is very high. Unless weather conditions are exceptional, it is not expected that the larger rivers will exceed previously recorded levels.

Data Graphs

May 1 Volume Runoff Forecasts May 1 Volume Runoff Forecasts-see May 1 Snow Bulletin

---

Bulletin Home Page

Groundwater Conditions

Snow Pillow Information

Banner

May 15, 1999

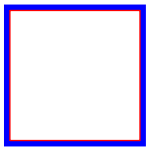
Snow Survey Measureme

Northern Basins Snow Survey Measurements

NORTHEASTERN

The snowpack in the Peace River basin, based on the very few courses sampled, is slightly above normal for this date. A delayed snowmelt has caused the near normal snowpack reported on May 1 to remain longer than usual.

There is insufficient data to accurately assess the snowpack in the Liard basin, however the few measurements available show the melt at lower elevations is near completion, while the single higher elevation snow pillow, Deadwood River (4C09P) shows a delayed melt. Melt in the Yukon basin also appears to be slower than normal.



Data Graphs

NORTHWESTERN

The slightly higher than normal snowpack reported on May 1 in the Skeena basin appears, from the small amount of data available, to have a slower than normal melt due to the cool weather. There is also little data available for the Stikine-Taku area, but the indications are that melt of the slightly below normal snowpack reported for May 1 is also somewhat delayed.

Water levels in the Skeena River, which were slightly above normal for the third week of April, dropped to well below normal for the first two weeks of May. As of May 15 the Skeena River flow is again increasing but still below normal for this date. Warmer weather and a more rapid melt of the snowpack could increase flows quickly.

FRASER

May 15, 1999

Snow Survey Measurements

Drainage Basin and Snow Course	Station Number	Elev m	Date of Survey	Snow Depth cm	WATER EQUIVALENT (mm) 1999	1998	1997	Max.	Min.	Normal	No. Years Record
UPPER FRASER											
PACIFIC LAKE	1A11	770	11	130	621	0	728	728	0	358	24
BARKERVILLE	1A03	1520	18	93	425	0	-	564	0	298	47
BARKERVILLE	1A03P	1520	15	-	450	0	326	503	0	282	21
MC BRIDE (UPPER)	1A02	1580	11	116	508	74	408	752	24	413	31
KNUDSEN LAKE	1A15	1580	11	207	1019	510	941	1205	359	873	24
NARROW LAKE	1A21	1650	12	271	1268	607	1238	1375	489	993	24
REVOLUTION CREEK	1A17P	1690	15	-	856	228	766	1161	228	757	13
LONGWORTH (UPPER)	1A05	1740	11	213	984	440	1204	1219	292	802	45
DOME MOUNTAIN	1A19	1820	11	219	1067	488	931	1168	385	859	26
YELLOWHEAD	1A01P	1860	15	-	825	139	326	326	139	233*	2
HOLMES RIVER	1A18	1900	11	202	952	411	903	1125	359	813	29
NECHAKO											
TAHTSA LAKE	1B02P	1300	15	-	1765	1116	1509	1509	732	1139*	6
MOUNT PONDOSY	1B08P	1400	15	-	960	524	850	850	314	576*	6
MOUNT WELLS	1B01P	1490	15	-	570	277	680	698	277	485	7
MIDDLE FRASER											
BROOKMERE	1C01	980	16	28	99	-	57	208	0	32*	23

LAC LE JEUNE (LOWER)	1C07	1370	14	4	14	-	0	0	0	-	4
BOSS MOUNTAIN MINE	1C20P	1460	15	-	761	184	521	709	184	502	5
LAC LE JEUNE (UPPER)	1C25	1460	14	18	67	-	0	0	0	-	3
BRENDA MINE	2F18P	1460	15	-	100	0	0	125	0	11	6
BARKERVILLE	1A03	1520	18	93	425	0	-	564	0	298	47
BARKERVILLE	1A03P	1520	15	-	450	0	326	503	0	282	21
MOUNT TIMOTHY	1C17	1660	13	106	466	22	244	437	0	225	30
YANKS PEAK EAST	1C41P	1670	15	-	1125	398	878	878	398	638*	2
PENFOLD CREEK	1C23	1680	12	284	1400	823	1225	1349	585	1008	29
GREEN MOUNTAIN	1C12P	1780	15	-	1366	573	978	1036	573	807*	5
MISSION RIDGE	1C18P	1850	15	-	878	6	372	701	0	468	12
PAVILION MOUNTAIN	1C36	1960	Not Measured			0	234	308	0	189*	4
LOWER FRASER											
BROOKMERE	1C01	980	16	28	99	-	57	208	0	32*	23
DISAPPOINTMENT LAKE	1D18P	1040	Not Available			-	-	1652	1652	1652*	1
DOG MOUNTAIN	3A10	1080	13	536	2920	703	1290	1507	0	1311	14
WAHLEACH LAKE	1D09P	1400	15	-	1624	683	1478	1478	335	730*	7
CHILLIWACK RIVER	1D17P	1600	Not Measured			934	-	1208	764	1443	5
GREAT BEAR	1D15P	1660	15	-	2363	1609	2436	2436	1181	1524	7
TENQUILLE LAKE	1D06	1680	16	361	1875	958	1372	1707	625	1182	42
NORTH THOMPSON											
COOK FORKS	1E06	1390	17	239	1193	274	878	1359	274	749	36
BOSS MOUNTAIN MINE	1C20P	1460	15	-	761	184	521	709	184	502	5
MOUNT COOK	1E02A	1580	17	371	1856	953	1485	1670	873	1292	24
AZURE RIVER	1E08P	1620	15	-	1665	1009	1496	1496	1009	1253*	2

ADAMS RIVER	1E07	1720	12	257	1158	523	861	1107	280	745	27
KOSTAL LAKE	1E10P	1770	15	-	1357	752	981	1120	588	914	14
TROPHY MOUNTAIN	1E03A	1860	15	248	1140	446	636	825	301	599*	17
NORTH CLEMINA CREEK	1E13	1860	Not Measured			606	990	1177	536	855*	9
SOUTH THOMPSON											
ANGLEMONT	1F02	1190	15	37	126	-	302	361	0	110	15
ADAMS RIVER	1E07	1720	12	257	1158	523	861	1107	280	745	27
SILVER STAR MOUNTAIN	2F10	1840	13	211	1009	386	848	1054	100	642	40
PARK MOUNTAIN	1F03P	1890	15	-	1298	584	1321	1321	474	916	14
ENDERBY	1F04	1900	15	315	1460	738	1437	1499	662	1099	36

A - SAMPLING PROBLEMS WERE ENCOUNTERED

B - EARLY OR LATE SAMPLING

C - EARLY OR LATE SAMPLING WITH PROBLEMS ENCOUNTERED

E - ESTIMATED BASED ON AREAL AVERAGE

* - PERIOD OF RECORD AVERAGE

COLUMBIA

May 15, 1999

Snow Survey Measurements

Drainage Basin and Snow Course	Station Number	Elev m	Date of Survey	Snow Depth cm	WATER EQUIVALENT (mm) 1999	1998	1997	Max.	Min.	Normal	No. Years Record
UPPER COLUMBIA											
AZURE RIVER	1E08P	1620	15	-	1665	1009	1496	1496	1009	1253*	2
KICKING HORSE	2A07	1650	12	82	354	-	362	521	0	230	44
MOUNT REVELSTOKE	2A06P	1830	15	-	1777	827	1458	1624	700	1221	6
NORTH CLEMINA CREEK	1E13	1860	Not Measured			606	990	1177	536	855*	9
MOLSON CREEK	2A21P	1980	15	-	1375E	710	1175	1294	602	1036	16
LOWER COLUMBIA											
FERGUSON	2D02	880	12	126	640	-	495	580B	20	213	34
FARRON	2B02A	1220	14	42	188	0	164	222	0	111	19
BARNES CREEK	2B06P	1620	15	-	761	94	679	758	94	374*	6
ST. LEON CREEK	2B08P	1800	15	-	1568	675	1219	1219	639	987	5
RECORD MOUNTAIN	2B09	1890	15	278	1367	368	1151	1151	83	732	24
EAST CREEK	2D08P	2030	15	-	1354	536	825	1387	461	877	17
EAST KOOTENAY											

FERNIE EAST	2C07	1250	14	16	70	0	90	290	0	61	37
SULLIVAN MINE	2C04	1550	14	57	255	0	272	457	0	123	47
MORRISSEY RIDGE	2C09Q	1800	15	-	873	30	749	971	0	580	15
MOYIE MOUNTAIN	2C10P	1930	15	-	500E	15	-	552	0	239*	18
FLOE LAKE	2C14P	2090	15	-	1088	304	893	1028	304	597	4
WEST KOOTENAY											
FERGUSON	2D02	880	12	126	640	-	495	580B	20	213	34
NELSON	2D04	930	14	50	243	-	184	184	0	24	38
CHAR CREEK	2D06	1310	15	148	715	26	607	676	0	248	29
GRAY CREEK (LOWER)	2D05	1550	11	143	658	-	-	709	0	385	46
GRAY CREEK (UPPER)	2D10	1910	11	231	1127	-	-	1194	311	770	27
EAST CREEK	2D08P	2030	15	-	1354	536	825	1387	461	877	17
KETTLE											
FARRON	2B02A	1220	14	42	188	0	164	222	0	111	19
BIG WHITE MOUNTAIN	2E03	1680	16	142	638	130	432	732	0	400	33
GRANO CREEK	2E07P	1860	15	-	855	308	-	308	308	308*	1
OKANAGAN											
SUMMERLAND RESERVOIR	2F02	1280	10	17	71	0	27	218	0	42	33
VASEUX CREEK	2F20	1400	13	No Snow		0	0	80	0	10*	27
TROUT CREEK	2F01	1430	14	4	14	0	0	307	0	39	46
ESPERON CR (MIDDLE)	2F14	1430	15	75	380	-	150	335	0	125	10
BRENDA MINE	2F18P	1460	15	-	100	0	0	125	0	11	6
ISLAHT LAKE	2F24	1480	14	71	352	-	181	181	181	181*	1
GREYBACK RESERVOIR	2F08	1550	13	41	151	0	52	323	0	122	27

ESPERON CR (UPPER)	2F13	1650	15	122	598	-	360	625	66	328*	8
ISINTOK LAKE	2F11	1680	11	38	145	0	50E	386	0	83	33
MISSION CREEK	2F05P	1780	15	-	829	176	-	706	0	399	27
MOUNT KOBAU	2F12	1810	14	127	516	250	323	513	0	260	32
WHITEROCKS MOUNTAIN	2F09	1830	12	186	909	200E	474	968	0	402	28
SILVER STAR MOUNTAIN	2F10	1840	13	211	1009	386	848	1054	100	642	40
SIMILKAMEEN											
BROOKMERE	1C01	980	16	28	99	-	57	208	0	32*	23
MISSEZULA MOUNTAIN	2G05	1550	17	28	124	0	8E	218	0	66	35
ISINTOK LAKE	2F11	1680	11	38	145	0	50E	386	0	83	33
LOST HORSE MOUNTAIN	2G04	1920	13	79	294	18	220	577	4	211	35
BLACKWALL PEAK	2G03P	1940	15	-	1279	356	960	1481	208	804	31

A - SAMPLING PROBLEMS WERE ENCOUNTERED

B - EARLY OR LATE SAMPLING

C - EARLY OR LATE SAMPLING WITH PROBLEMS ENCOUNTERED

E - ESTIMATED BASED ON AREAL AVERAGE

* - PERIOD OF RECORD AVERAGE

COASTAL

May 15, 1999

Snow Survey Measurements

Drainage Basin and Snow Course	Station Number	Elev m	Date of Survey	Snow Depth cm	WATER EQUIVALENT (mm) 1999	1998	1997	Max.	Min.	Normal	No. Years Record
SOUTH COASTAL											
PALISADE LAKE	3A09	880	10	661	3600	-	-	1626	336	1011*	3
PALISADE LAKE	3A09P	880	Not Available			-	-	-	-	-	0
DOG MOUNTAIN	3A10	1080	13	536	2920	703	1290	1507	0	1311	14
ORCHID LAKE	3A19	1190	10	704	3618	-	2099	2310A	774	1891	19
ORCHID LAKE	3A19P	1190	Not Available			-	-	2804	828	1909*	12
UPPER SQUAMISH RIVER	3A25P	1340	Not Measured			1361	1628	1781	949	1515	9
NOSTETUKO RIVER	3A22P	1500	15	-	860	-	387	494	21	282*	8
UPPER MOSELY CREEK	3A24P	1650	15	-	402	0	37	347	0	114	10
VANCOUVER ISLAND											
JUMP CREEK	3B23P	1160	Not Measured			623	1358	1358	251	744*	3
SNO-BIRD LAKE	3B16	1400	10	589	2912	-	1404	2426A	417	1343	29

WOLF RIVER (UPPER)	3B17P	1490	Not Measured		1567	1390	1726	507	1318	11
NORTH COASTAL											
TAHTSA LAKE	1B02P	1300	15	-	1765	1116	1509	1509	732	1139*	6
BURNT BRIDGE CREEK	3C08P	1330	15	-	934	210	-	210	210	210*	1
SKAGIT											

A - SAMPLING PROBLEMS WERE ENCOUNTERED

B - EARLY OR LATE SAMPLING

C - EARLY OR LATE SAMPLING WITH PROBLEMS ENCOUNTERED

E - ESTIMATED BASED ON AREAL AVERAGE

* - PERIOD OF RECORD AVERAGE

NORTH

May 15, 1999

Snow Survey Measurements

Drainage Basin and Snow Course	Station Number	Elev m	Date of Survey	Snow Depth cm	WATER EQUIVALENT (mm) 1999	1998	1997	Max.	Min.	Normal	No. Years Record
PEACE											
PACIFIC LAKE	1A11	770	11	130	621	0	728	728	0	358	24
AIKEN LAKE	4A30P	1040	15	-	62	0	8	188	0	42*	12
PULPIT LAKE	4A09P	1310	15	-	317	143	229	454	49	194*	8
PINE PASS	4A02P	1400	15	-	1210	878	1100	1471	813	1134	7
KWADACHA RIVER	4A27P	1620	15	-	443	-	251	468	109	329	13
SKEENA/ NASS											
TERRACE A	4B13A	180	14	No Snow		-	-	-	-	-	0
LU LAKE	4B15P	1310	15	-	225	11	-	11	11	11*	1
TSAI CREEK	4B17P	1360	15	-	1403	953	-	953	953	953*	1
HUDSON BAY MTN.	4B03A	1480	Not Available			160	467	752	160	463	26
SHEDIN CREEK	4B16P	1480	15	-	791	660	956	1159	660	925*	3
LIARD											
WATSON LAKE A	YK01	700	15	No Snow		-	-	45	0	3*	13
FRANCES RIVER	YK02	730	14	No Snow		-	-	120	0	16*	14

DEADWOOD RIVER	4C09P	1300	15	-	107	0	0	207	0	51*	5
STIKINE/ TAKU											
FORREST-KERR CREEK	4D08P	560	15	-	271	0	250	250	0	142*	7
KINASKAN LAKE	4D11P	1020	15	-	186	9	79	411	0	148*	8
TUMEKA CREEK	4D10P	1220	15	-	372	299	317	771	195	409	9
WADE LAKE	4D14P	1370	15	-	290	198	-	427	0	290	7
UPPER STIKINE	4D13P	1450	Not Measured			317	344	686	183	408*	9
YUKON											
LOG CABIN	4E01	880	12	57	227	-	-	420	4	239*	11
PINE LK AIRSTRIP	YK03	1010	13	49	158	-	-	284	0	98*	14
MONTANA MTN.	YK05	1020	11	29	81	-	-	142A	0	45*	12
TAGISH	YK04	1080	13	25	89	-	-	156	0	37*	14

A - SAMPLING PROBLEMS WERE ENCOUNTERED

B - EARLY OR LATE SAMPLING

C - EARLY OR LATE SAMPLING WITH PROBLEMS ENCOUNTERED

E - ESTIMATED BASED ON AREAL AVERAGE

* - PERIOD OF RECORD AVERAGE